

ATTACHMENT B

Health and Safety Plan

CH2M HILL HEALTH AND SAFETY PLAN

This Health and Safety Plan (HSP) will be kept on the site during field activities and will be reviewed as necessary. The plan will be amended or revised as project activities or conditions change or when supplemental information becomes available. The plan adopts, by reference, the Standards of Practice (SOPs) in the CH2M HILL *Corporate Health and Safety Program, Program and Training Manual*, as appropriate. In addition, this plan adopts procedures in the project Work Plan. The Safety Coordinator - Haz Waste (SC-HW) is to be familiar with these SOPs and the contents of this plan. CH2M HILL's personnel and subcontractors must sign Attachment 1.

Project Information and Description

PROJECT NO: 180171

CLIENT: WSDOT

PROJECT/SITE NAME: Phase II ESA Hoquiam/Aberdeen

SITE ADDRESS: 815 8th Street, Aberdeen, WA and 400 East Terminal Way, Aberdeen, WA

CH2M HILL PROJECT MANAGER: Rachel Chang/SEA

DATE HEALTH AND SAFETY PLAN PREPARED: December 2008

DATE(S) OF SITE WORK: December 9, 2008 through December 31, 2009

SITE ACCESS: No sign-in and training required. Notify client prior to fieldwork.

SITE SIZE: 55 and 60 acre parcels

SITE TOPOGRAPHY: Level ground

PREVAILING WEATHER: Wet winter, dry summer, mild temperatures

SITE DESCRIPTION AND HISTORY: The Aberdeen Log Yard Property consists of one parcel approximately 55 acres located in an industrial area on the north shore of the Chehalis River in Aberdeen. The property occupies the parcel east of East Terminal Road, south of the Northern Pacific Railroad, north of the Chehalis River, and west of the City of Aberdeen's Wastewater Treatment Plant (WWTP) located on State Street. No buildings exist on the property. The property contains asphalt paved road access from East Terminal Road in the west and State Street in the north. The property is currently used for log bucking and log storage. All utilities on the site were terminated prior to 1993 (Hazardous Materials Alternative Site Screening, CH2M HILL 2008).

The Aberdeen Log Yard Property past uses included lumber and saw mill companies [Hart-Wood Lumber Company and Western Lumber Company, early to mid-1900's, and Boise Cascade Corporation (Boise)]. Weyerhaeuser Company (Weyerhaeuser) has owned the property since 1985 when it was purchased from Boise Cascade Corporation. Most of the saw mill related structures were demolished in the late 1980s and early 1990s.

The Anderson & Middleton Property consist of approximately 60 acres located on the north shore of Grays Harbor in Hoquiam. The property occupies the parcel approximately east of 6th Street, south of railroad tracks, west of 10th Street, and north of Grays Harbor. No buildings exist on the property. The property contains an asphalt pad (former log storage area). Currently, the site is unused, vacant land that may occasionally be used to store or sort logs (Phase I ESA, WSDOT 2006).

The Anderson & Middleton Property is located in an industrial area that has historically supported the lumber industry. A sawmill, originally owned by Grays Harbor Lumber Company, was located on the property. The sawmill was active from the early 1900s through approximately the 1960s.

DESCRIPTION OF SPECIFIC TASKS TO BE PERFORMED: See Sections 1.1.1 and 1.1.2

Site Map

This page is reserved for a Site Map.

Note locations of Support, Decontamination, and Exclusion Zones; site telephone; first aid station; evacuation routes; and assembly areas.

Project HS&E Change Management Form

*This evaluation form should be reviewed on a **continuous** basis to determine if the current site health and safety plan adequately addresses ongoing project work, and should be completed whenever new tasks are contemplated or changed conditions are encountered..*

Project Task:

Project Number:

Project/Task Manager:

Name:

Employee #:

Evaluation Checklist

Yes No

1. Have the CH2MHILL staff listed in the original HSP/FSI changed?		
2. Has a new subcontractor been added to the project?		
3. Is any chemical or product to be used that is not listed in this plan?		
4. Have additional tasks been added to the project which were not originally addressed in the plan?		
5. Have new contaminants or higher than anticipated levels of original contaminants been encountered?		
6. Have other safety, equipment, activity or environmental hazards been encountered that are not addressed in the plan?		

If the answer is “YES” to Question 3, an HSP/FSI revision is NOT needed. Please take the following actions:

- ◆ Add the chemical to the FSI, and ensure employees handling the chemical are trained, and training documentation is attached as well.

If the answer is “YES” to Questions 1, 2 or 4-6, an HSP/FSI revision MAY BE NEEDED. Please contact HS&E directly.

1 Tasks to be Performed Under this Plan

1.1 Description of Tasks

(Reference Field Project Start-up Form)

Refer to project documents (i.e., Work Plan) for detailed task information. A health and safety risk analysis (Section 1.2) has been performed for each task and is incorporated in this plan through task-specific hazard controls and requirements for monitoring and protection. Tasks other than those listed below require an approved amendment or revision to this plan before tasks begin. Refer to Section 8.2 for procedures related to “clean” tasks that do not involve hazardous waste operations and emergency response (Hawwoper).

1.1.1 Hazwoper-Regulated Tasks

- Direct-push sampling
- Groundwater sampling
- Soil sampling
- IDW management

1.1.2 Non-Hazwoper-Regulated Tasks

Under specific circumstances, the training and medical monitoring requirements of federal or state Hazwoper regulations are not applicable. It must be demonstrated that the tasks can be performed without the possibility of exposure in order to use non-Hazwoper-trained personnel. **Prior approval from the Health and Safety Manager (HSM) is required before these tasks are conducted on regulated hazardous waste sites.**

TASKS	CONTROLS
<ul style="list-style-type: none">• Surveying	<ul style="list-style-type: none">• Brief on hazards, limits of access, and emergency procedures• Post contaminant areas as appropriate (refer to Section 8.2 for details)• Sample and monitor as appropriate (refer to Section 5.0)• Follow PPE guidelines in Section 4.0

1.2 Task Hazard Analysis (Refer to Section 2 for hazard controls)			
POTENTIAL HAZARDS	TASKS		
	Direct-push technology	Groundwater Sampling, Soil sampling	IDW management
Flying debris/objects	X		
Noise > 85dBA	X		
Electrical	X	X	
Suspended loads	X		
Buried utilities, drums, tanks	X		
Slip, trip, fall	X	X	X
Back injury	X	X	X
Confined space entry			X
Visible lightning	X	X	X
Fires	X		
Entanglement	X		
Drilling	X		
Heavy equipment	X		X

2 Hazard Controls

This section provides safe work practices and control measures used to reduce or eliminate potential hazards. These practices and controls are to be implemented by the party in control of either the site or the particular hazard. CH2M HILL employees and subcontractors must remain aware of the hazards affecting them regardless of who is responsible for controlling the hazards. CH2M HILL employees and subcontractors who do not understand any of these provisions should contact the SC-HW for clarification.

In addition to the controls specified in this section, Project-Activity Self-Assessment Checklists are contained in Attachment 5. These checklists are to be used to assess the adequacy of CH2M HILL and subcontractor site-specific safety requirements. The objective of the self-assessment process is to identify gaps in project safety performance, and prompt for corrective actions in addressing these gaps. Self-assessment checklists should be completed early in the project, when tasks or conditions change, or when otherwise specified by the HSM. The self-assessment checklists, including documented corrective actions, should be made part of the permanent project records, and be promptly submitted to the HSM.

Self Assessment Checklists: The self assessment checklist for the following tasks and exposures are required when the task or exposure is initiated and weekly while the task or exposure is taking place.

- Drilling/Direct-push

Project Specific Training

In addition to the basic training requirements for Construction sites the following specialty training is required for the following tasks.

Safety Coordinator Training – CH2M HILL SC must have current SC- Haz Waste

Hazardous Waste Training – CH2M HILL employees performing activities specified in Section 1.1.1 must have current Hazwoper training and be medically monitored.

Fire Extinguisher - The assigned SC-HW onsite must take the on-line fire extinguisher training course.

Blood-borne Pathogen Training - The assigned SC-HW onsite must take the CH2M HILL on-line BBP training course.

Dangerous Goods Shipping Training - The assigned SC-HW onsite must take the on-line DG training course

Contractor Safety Training – All personnel accessing this site will be required to attend the client’s contractor safety training.

Required Forms

The following forms are required to be completed by the drilling subcontractor as part of the Behavior Based Loss Prevention System for drilling operations.

Activity Hazard Analysis (AHA)

Pre Task Safety Plan (PTSP)

Safe Behavior Observation (SBO)

Behavior Based Loss Prevention System

A Behavior Based Loss Prevention System (BBLPS) is a system to prevent or reduce losses using behavior-based tools and proven management techniques to focus on behaviors or acts that could lead to losses.

The Safety Coordinator (SC) is responsible for implementing the BBLPS on the project site. The Safety Coordinator shall oversee the subcontractor's implementation of their AHAs and PTSPs processes on the project.

Activity Hazard Analysis

An Activity Hazard Analysis (AHA) defines the activity being performed, the hazards posed and control measures required to perform the work safely. Workers are briefed on the AHA before doing the work and their input is solicited prior, during and after the performance of work to further identify the hazards posed and control measures required.

Activity Hazard Analysis will be prepared before beginning drilling using the AHA form provided in **Attachment 6**. The AHA shall identify the work tasks required along with potential H&S hazards and recommended control measures for each work task. In addition, a listing of the equipment to be used, inspection requirements and training requirements for the safe operation of the equipment listed must be identified. Subcontractors are required to provide AHA's specific to drilling for acceptance by CH2M HILL. Additions or changes in field activities, equipment, tools or material to perform work or additional/different hazard encountered that require additional/different hazard control measures requires either a new AHA to be prepared or an existing AHA to be revised.

Pre-Task Safety Plans

Daily safety meetings are held with all project personnel in attendance to review the hazards posed and required H&S procedures/AHAs. The PTSPs serve the same purpose as these general assembly safety meetings, but the PTSPs are held between the crew supervisor and their work crews to focus on those hazards posed to individual work crews. At the start of each day's activities, the crew supervisor completes the PTSP, provided in Attachment 6, with input from the work crew, during their daily safety meeting. The day's tasks, personnel, tools and equipment that will be used to perform these tasks are listed, along with the hazards posed and required H&S procedures, as identified in the AHA. The use of PTSPs, better promotes worker participation in the hazard recognition and control process, while reinforcing the task-specific hazard and required H&S procedures with the crew each day. The use of PTSPs is a common safety practice in the construction industry. Project-Specific Hazards

Safe Behavior Observations

Safe Behavior Observations (SBO's) shall be conducted by the SC-HW for specific work tasks or operations comparing the actual work process against established safe work procedures identified in the project-specific HSP. SBO's are a tool to be used by supervisors to provide positive reinforcement for work practices performed correctly, while also identifying and eliminating deviations from safe work procedures that could result in a loss. SC-HW shall perform at least one SBO each week for a tasks/operations addressed in the project-specific HSP and involve 5 or more people working 3 or more days. The SC-HW shall complete the SBO form in **Attachment 6** for the task/operation being observed.

2.1 Project-Specific Hazards

2.1.1 Drilling/Direct-push

- Only authorized personnel are permitted to operate drill rigs.
- Stay clear of areas surrounding drill rigs during every startup.
- Stay clear of the rotating augers and other rotating components of drill rigs.
- Stay as clear as possible of all hoisting operations. Loads shall not be hoisted overhead of personnel.
- Do not wear loose-fitting clothing or other items such as rings or watches that could get caught in moving parts. Long hair should have it restrained.
- If equipment becomes electrically energized, personnel shall be instructed not to touch any part of the equipment or attempt to touch any person who may be in contact with the electrical current. The utility company or appropriate party shall be contacted to have line de-energized prior to approaching the equipment.
- Smoking around drilling operations is prohibited.

2.1.2 Noise Hazards (Reference CH2M HILL SOP HSE-108, Hearing Conservation Program)

Previous surveys indicate that heavy equipment such as drilling or excavation equipment may produce continuous and impact noise at or above the action level of 85 dBA. All CH2M HILL personnel within 25 feet of operating equipment, or near an operation that creates noise levels high enough to impair conversation, shall wear hearing protective devices (either muffs or plugs). Personnel will wash their hands with soap and water prior to inserting ear plugs to avoid initiating ear infections. Additional information regarding CH2M HILL's Hearing Conservation Program is located in the CH2M HILL Corporate Health and Safety Program, Program and Training Manual.

2.1.3 Uneven walking surfaces

- Employees walking in ditches, swales and other drainage structures adjacent to roads or across undeveloped land must use caution to prevent slips and falls which can result in twisted or sprained ankles, knees, and backs.
- Whenever possible observe the conditions from a flat surface and do not enter a steep ditch or side of a steep road bed.
- If steep terrain must be negotiated, sturdy shoes or boots that provide ankle support should be used. The need for ladders or ropes to provide stability should be evaluated.

2.2 General Hazards

2.2.1 General Practices and Housekeeping

- Site work should be performed during daylight hours whenever possible. Work conducted during hours of darkness require enough illumination intensity to read a newspaper without difficulty.
- Good housekeeping must be maintained at all times in all project work areas.
- Common paths of travel should be established and kept free from the accumulation of materials.
- Keep access to aisles, exits, ladders, stairways, scaffolding, and emergency equipment free from obstructions.
- Provide slip-resistant surfaces, ropes, and/or other devices to be used.
- Specific areas should be designated for the proper storage of materials.
- Tools, equipment, materials, and supplies shall be stored in an orderly manner.
- As work progresses, scrap and unessential materials must be neatly stored or removed from the work area.
- Containers should be provided for collecting trash and other debris and shall be removed at regular intervals.
- All spills shall be quickly cleaned up. Oil and grease shall be cleaned from walking and working surfaces.

2.2.2 Hazard Communication

- Confirm that an inventory of chemicals brought on site by CH2M HILL and subcontractors is available.
- Request or confirm locations of Material Safety Data Sheets (MSDSs) from the client, contractors, and subcontractors for chemicals to which CH2M HILL employees potentially are exposed.
- Before or as the chemicals arrive on site, obtain an MSDS for each hazardous chemical.
- Label chemical containers with the identity of the chemical and with hazard warnings, and store properly.
- Give employees required chemical-specific HAZCOM training using Attachment 3.
- Store all materials properly, giving consideration to compatibility, quantity limits, secondary containment, fire prevention, and environmental conditions.

2.2.3 Shipping and Transportation of Chemical Products

(Reference CH2M HILL's *Procedures for Shipping and Transporting Dangerous Goods*)

Chemicals brought to the site might be defined as hazardous materials by the U.S. Department of Transportation (DOT). All staff who ship the materials or transport them by road must receive CH2M HILL training in shipping dangerous goods. All hazardous materials that are shipped (e.g., via Federal Express) or are transported by road must be properly identified, labeled, packed, and documented by trained staff. Contact the HSM or the Equipment Coordinator for additional information.

2.2.4 Lifting

(Reference CH2M HILL SOP, *Lifting*)

- Proper lifting techniques must be used when lifting any object.
 - Split heavy loads into smaller loads.
 - Use mechanical lifting aids whenever possible.
 - Have someone assist with the lift -- especially for heavy or awkward loads.
 - Make sure the path of travel is clear prior to the lift.

2.2.5 Fire Prevention

(Reference CH2M HILL SOP, *Fire Prevention*)

- Fire extinguishers shall be provided so that the travel distance from any work area to the nearest extinguisher is less than 100 feet. When 5 gallons or more of a flammable or combustible liquid is being used, an extinguisher must be within 50 feet. Extinguishers must:
 - be maintained in a fully charged and operable condition,
 - be visually inspected each month, and
 - undergo a maintenance check each year.
- The area in front of extinguishers must be kept clear.
- Combustible materials stored outside should be at least 10 feet from any building.
- Solvent waste and oily rags must be kept in a fire resistant, covered container until removed from the site.
- Flammable/combustible liquids must be kept in approved containers, and must be stored in an approved storage cabinet.

2.2.6 Electrical

(Reference CH2M HILL SOP, *Electrical*)

- Do not tamper with electrical wiring and equipment unless **qualified** to do so. All electrical wiring and equipment must be considered energized until lockout/tagout procedures are implemented.
- Inspect electrical equipment, power tools, and extension cords for damage prior to use. Do not use defective electrical equipment, remove from service.
- All temporary wiring, including extension cords and electrical power tools, must have ground fault circuit interrupters (GFCIs) installed.
- Extension cords must be:
 - equipped with third-wire grounding.
 - covered, elevated, or protected from damage when passing through work areas.
 - protected from pinching if routed through doorways.
 - not fastened with staples, hung from nails, or suspended with wire.
- Electrical power tools and equipment must be effectively grounded or double-insulated UL approved.
- Operate and maintain electric power tools and equipment according to manufacturers' instructions.
- Maintain safe clearance distances between overhead power lines and any electrical conducting material unless the power lines have been de-energized and grounded, or where insulating barriers have been installed to prevent physical contact. Maintain at least 10 feet from overhead power lines for voltages of 50 kV or less, and 10 feet plus ½ inch for every 1 kV over 50 kV.
- Temporary lights shall not be suspended by their electric cord unless designed for suspension. Lights shall be protected from accidental contact or breakage.
- Protect all electrical equipment, tools, switches, and outlets from environmental elements.

2.2.7 Heat Stress

(Reference CH2M HILL SOP, *Heat and Cold Stress*)

- Drink 16 ounces of water before beginning work. Disposable cups and water maintained at 50°F to 60°F should be available. Under severe conditions, drink 1 to 2 cups every 20 minutes, for a total of 1 to 2 gallons per day. Do not use alcohol in place of water or other nonalcoholic fluids. Decrease your intake of coffee and caffeinated soft drinks during working hours.
- Acclimate yourself by slowly increasing workloads (e.g., do not begin with extremely demanding activities).
- Use cooling devices, such as cooling vests, to aid natural body ventilation. These devices add weight, so their use should be balanced against efficiency.
- Use mobile showers or hose-down facilities to reduce body temperature and cool protective clothing.
- Conduct field activities in the early morning or evening and rotate shifts of workers, if possible.
- Avoid direct sun whenever possible, which can decrease physical efficiency and increase the probability of heat stress. Take regular breaks in a cool, shaded area. Use a wide-brim hat or an umbrella when working under direct sun for extended periods.
- Provide adequate shelter/shade to protect personnel against radiant heat (sun, flames, hot metal).
- Maintain good hygiene standards by frequently changing clothing and showering.
- Observe one another for signs of heat stress. Persons who experience signs of heat syncope, heat rash, or heat cramps should consult the SC-HW to avoid progression of heat-related illness.

SYMPTOMS AND TREATMENT OF HEAT STRESS					
	Heat Syncope	Heat Rash	Heat Cramps	Heat Exhaustion	Heat Stroke
Signs and Symptoms	Sluggishness or fainting while standing erect or immobile in heat.	Profuse tiny raised red blister-like vesicles on affected areas, along with prickling sensations during heat exposure.	Painful spasms in muscles used during work (arms, legs, or abdomen); onset during or after work hours.	Fatigue, nausea, headache, giddiness; skin clammy and moist; complexion pale, muddy, or flushed; may faint on standing; rapid thready pulse and low blood pressure; oral temperature normal or low	Red, hot, dry skin; dizziness; confusion; rapid breathing and pulse; high oral temperature.
Treatment	Remove to cooler area. Rest lying down. Increase fluid intake. Recovery usually is prompt and complete.	Use mild drying lotions and powders, and keep skin clean for drying skin and preventing infection.	Remove to cooler area. Rest lying down. Increase fluid intake.	Remove to cooler area. Rest lying down, with head in low position. Administer fluids by mouth. Seek medical attention.	Cool rapidly by soaking in cool—but not cold—water. Call ambulance, and get medical attention immediately!

Monitoring Heat Stress

These procedures should be considered when the ambient air temperature exceeds 70°F, the relative humidity is high (>50 percent), or when workers exhibit symptoms of heat stress.

The heart rate (HR) should be measured by the radial pulse for 30 seconds, as early as possible in the resting period. The HR at the beginning of the rest period should not exceed 100 beats/minute, or 20 beats/minute above resting pulse. If the HR is higher, the next work period should be shortened by 33 percent, while the length of the rest period stays the same. If the pulse rate still exceeds 100 beats/minute at the beginning of the next rest period, the work cycle should be further shortened by 33 percent. The procedure is continued until the rate is maintained below 100 beats/minute, or 20 beats/minute above resting pulse.

2.2.8 Cold Stress

(Reference CH2M HILL SOP, *Heat and Cold Stress*)

- Be aware of the symptoms of cold-related disorders, and wear proper, layered clothing for the anticipated fieldwork. Appropriate rain gear is a must in cool weather.
- Persons who experience initial signs of immersion foot, frostbite, hypothermia should consult the SC-HW to avoid progression of cold-related illness.
- Observe one another for initial signs of cold-related disorders.
- Obtain and review weather forecast – be aware of predicted weather systems along with sudden drops in temperature, increase in winds, and precipitation.

SYMPTOMS AND TREATMENT OF COLD STRESS			
	Immersion (Trench) Foot	Frostbite	Hypothermia
Signs and Symptoms	Feet discolored and painful; infection and swelling present.	Blanched, white, waxy skin, but tissue resilient; tissue cold and pale.	Shivering, apathy, sleepiness; rapid drop in body temperature; glassy stare; slow pulse; slow respiration.
Treatment	Seek medical treatment immediately.	Remove victim to a warm place. Re-warm area quickly in warm—but not hot–water. Have victim drink warm fluids, but not coffee or alcohol. Do not break blisters. Elevate the injured area, and get medical attention.	Remove victim to a warm place. Have victim drink warm fluids, but not coffee or alcohol. Get medical attention.

2.2.9 Compressed Gas Cylinders

- Valve caps must be in place when cylinders are transported, moved, or stored.
- Cylinder valves must be closed when cylinders are not being used and when cylinders are being moved.
- Cylinders must be secured in an upright position at all times.
- Cylinders must be shielded from welding and cutting operations and positioned to avoid being struck or knocked over; contacting electrical circuits; or exposed to extreme heat sources.
- Cylinders must be secured on a cradle, basket, or pallet when hoisted; they may not be hoisted by choker slings.

2.2.10 Procedures for Locating Buried Utilities

Local Utility Mark-Out Service

Name: Applied Professional Services, Inc.
Phone: 206/571-1857

Name: One Call
Phone: 800/424-5555

- Where available, obtain utility diagrams for the facility.
- Review locations of sanitary and storm sewers, electrical conduits, water supply lines, natural gas lines, and fuel tanks and lines.
- Review proposed locations of intrusive work with facility personnel knowledgeable of locations of utilities. Check locations against information from utility mark-out service.
- Where necessary (e.g., uncertainty about utility locations), excavation or drilling of the upper depth interval should be performed manually
- Monitor for signs of utilities during advancement of intrusive work (e.g., sudden change in advancement of auger or split spoon).
- When the client or other onsite party is responsible for determining the presence and locations of buried utilities, the SC-HW should confirm that arrangement.

2.3 Biological Hazards and Controls

2.3.1 Snakes

Snakes typically are found in underbrush and tall grassy areas. If you encounter a snake, stay calm and look around; there may be other snakes. Turn around and walk away on the same path you used to approach the area. If a person is bitten by a snake, wash and immobilize the injured area, keeping it lower than the heart if possible. Seek medical attention immediately. **DO NOT** apply ice, cut the wound, or apply a tourniquet. Try to identify the type of snake: note color, size, patterns, and markings.

2.3.2 Poison Ivy and Poison Sumac

Poison ivy, poison oak, and poison sumac typically are found in brush or wooded areas. They are more commonly found in moist areas or along the edges of wooded areas. Become familiar with the identity of these plants. Wear protective clothing that covers exposed skin and clothes. Avoid contact with plants and the outside of protective clothing. If skin contacts a plant, wash the area with soap and water immediately. If the reaction is severe or worsens, seek medical attention.

2.3.3 Ticks

Ticks typically are in wooded areas, bushes, tall grass, and brush. Ticks are black, black and red, or brown and can be up to one-quarter inch in size. Wear tightly woven light-colored clothing with long sleeves and pant legs tucked into boots; spray **only outside** of clothing with permethrin or permethrin and spray skin with only DEET; and check yourself frequently for ticks. If bitten by a tick, grasp it at the point of attachment and carefully remove it. After removing the tick, wash your hands and disinfect and press the bite areas. Save the removed tick. Report the bite to human resources. Look for symptoms of Lyme disease or Rocky Mountain spotted fever (RMSF). Lyme: a rash might appear that looks like a bullseye with a small welt in the center. RMSF: a rash of red spots under the skin 3 to 10 days after the tick bite. In both cases, chills, fever, headache, fatigue, stiff neck, and bone pain may develop. If symptoms appear, seek medical attention.

2.3.4 Bees and Other Stinging Insects

Bee and other stinging insects may be encountered almost anywhere and may present a serious hazard, particularly to people who are allergic. Watch for and avoid nests. Keep exposed skin to a minimum. Carry a kit if you have had allergic reactions in the past, and inform the SC-HW and/or buddy. If a stinger is present, remove it carefully with tweezers. Wash and disinfect the wound, cover it, and apply ice. Watch for allergic reaction; seek medical attention if a reaction develops.

2.3.5 Bloodborne Pathogens

(Reference CH2M HILL SOP, *Bloodborne Pathogens*)

Exposure to bloodborne pathogens may occur when rendering first aid or CPR, or when coming into contact with landfill waste or waste streams containing potentially infectious material. Exposure controls and personal protective equipment (PPE) are required as specified in CH2M HILL SOP HS-36, *Bloodborne Pathogens*. Hepatitis B vaccination must be offered before the person participates in a task where exposure is a possibility.

2.4 Radiological Hazards and Controls

Refer to CH2M HILL's *Corporate Health and Safety Program, Program and Training Manual, and Corporate Health and Safety Program, Radiation Protection Program Manual*, for standards of practice in contaminated areas.

Hazards	Controls
None Known	None Required

2.5 Contaminants of Concern

(Refer to Project Files for more detailed contaminant information)

Contaminant	Location and Maximum ^a Concentration	Exposure Limit ^b	IDLH ^c	Symptoms and Effects of Exposure	PIP ^d (eV)
Arsenic	Potential	0.01 mg/m ³	5 Ca	Ulceration of nasal septum, respiratory irritation; dermatitis; gastrointestinal disturbances; peripheral neuropathy, hyperpigmentation	NA
Chromium (as Cr(II) & Cr (III))	Potential	0.5 mg/m ³	25	Irritated eyes, sensitization dermatitis, histologic fibrosis of lungs	NA
Copper	Potential	1 mg/m ³	100	Irritation to eyes, skin, nose, and pharynx; metallic taste; dermatitis	NA
Lead	Potential	0.05 mg/m ³	100	Weakness, lassitude; facial pallor; pal eye; weight loss, malnutrition; abdominal pain, constipation; anemia; gingival lead line; tremors; paralysis of wrist and ankles; encephalopathy; kidney disease; irritated eyes; hypotension	NA
Diesel Range Organics	Potential	100 mg/m ³ (REL)	NL	Primary system effect is CNS depression. Inhalation of vapors may cause nausea, confusion, drowsiness, convulsions, and coma. Liquid may cause skin and eye irritation.	NA
Gasoline Range Organics	Potential	300 ppm	ND Ca	Eye, skin and mucous membrane irritation; dermatitis, headache, fatigue, blurred vision, dizziness, slurred speech, confusion, convulsions, chemical pneumonia on aspiration, possible liver and kidney damage	NA
Zinc	Potential	5 mg/m ³	500	Chills; aches; nausea; fever; cough; dry throat; headache; blurred vision; vomit; fatigue	NA

Footnotes:

^a Specify sample-designation and media: SB (Soil Boring), A (Air), D (Drums), GW (Groundwater), L (Lagoon), TK (Tank), S (Surface Soil), SL (Sludge), SW (Surface Water).

^b Appropriate value of PEL, REL, or TLV listed.

^c IDLH = immediately dangerous to life and health (units are the same as specified "Exposure Limit" units for that contaminant); NL = No limit found in reference materials; CA = Potential occupational carcinogen.

^d PIP = photoionization potential; NA = Not applicable; UK = Unknown.

Polycyclic Aromatic Hydrocarbons (PAH)

- Polycyclic aromatic hydrocarbons (PAHs) are a group of over 100 different chemicals that are formed during the incomplete burning of coal, oil and gas, garbage, or other organic substances. PAHs are usually found as a mixture containing two or more of these compounds.
- The Department of Health and Human Services (DHHS) has determined that some PAHs may reasonably be expected to be carcinogens.
- Animal studies have also shown that PAHs can cause harmful effects on the skin, body fluids, and ability to fight disease after both short- and long-term exposure. But these effects have not been seen in people.
- In soils, PAHs are most likely to stick tightly to particles; protective gloves should be worn when contacting potentially contaminated sediment/soil/liquid.

2.6 Potential Routes of Exposure

Dermal: Contact with contaminated media. This route of exposure is minimized through proper use of PPE, as specified in Section 4.

Inhalation: Vapors and contaminated particulates. This route of exposure is minimized through proper respiratory protection and monitoring, as specified in Sections 4 and 5, respectively.

Other: Inadvertent ingestion of contaminated media. This route should not present a concern if good hygiene practices are followed (e.g., wash hands and face before drinking or smoking).

3 Project Organization and Personnel

3.1 CH2M HILL Employee Medical Surveillance and Training

(Reference CH2M HILL SOPs, *Medical Surveillance*, and *Health and Safety Training*)

The employees listed below are enrolled in the CH2M HILL Comprehensive Health and Safety Program and meet state and federal hazardous waste operations requirements for 40-hour initial training, 3-day on-the-job experience, and 8-hour annual refresher training. Employees designated “SC-HW” have completed a 12-hour Safety Coordinator - Haz Waste course, and have documented requisite field experience. An SC-HW with a level designation (D, C, B) equal to or greater than the level of protection being used must be present during all tasks performed in exclusion or decontamination zones. Employees designated “FA-CPR” are currently certified by the American Red Cross, or equivalent, in first aid and CPR. At least one FA-CPR designated employee must be present during all tasks performed in exclusion or decontamination zones. The employees listed below are currently active in a medical surveillance program that meets state and federal regulatory requirements for hazardous waste operations. Certain tasks (e.g., confined-space entry) and contaminants (e.g., lead) may require additional training and medical monitoring.

Pregnant employees are to be informed of and are to follow the procedures in CH2M HILL’s SOP HS-04, *Reproduction Protection*, including obtaining a physician’s statement of the employee’s ability to perform hazardous activities before being assigned fieldwork.

Employee Name	Office	Responsibility	SC-HW/FA-CPR
Brian Tracy	SEA	Field Team Leader/SC-HW	Level C SC-HW; FA-CPR
Nichole Badon	SEA	Field Team Member/Alt SC-HW	Level C SC-HW; FA-CPR
Marcella Ripich	SEA	Field Team Member	FA-CPR

3.2 Field Team Chain of Command and Communication Procedures

3.2.1 Client

Contact Name: Bill Hegge
Phone: 360/709-5415

3.2.2 CH2M HILL

Project Manager: Rachel Chang/SEA
Health and Safety Manager: John Culley/SPK
Field Team Leader/SC-HW: Brian Tracy/SEA

The SC-HW is responsible for contacting the Field Team Leader and Project Manager. In general, the Project Manager will contact the client. The Health and Safety Manager should be contacted as appropriate.

3.2.3 CH2M HILL Subcontractors

(Reference CH2M HILL SOP HS-215, *Subcontractor, Contractor, and Owner*)

Subcontractor: Cascade Drilling
Subcontractor Contact Name: Jim Nice
Telephone: 425/485-8908
Subcontractor Tasks: Direct-push

Safety Procedures Required: Subcontractor must have their company's safe drilling procedures onsite when field activities commence, or complete the AHA in Attachment 6.

Subcontractor: Applied Professional Services, Inc.
Subcontractor Contact Name: Bill Phillips
Telephone: 206/571-1857
Subcontractor Tasks:

Safety Procedures Required:

The subcontractors listed above are covered by this HSP and must be provided a copy of this plan. However, this plan does not address hazards associated with the tasks and equipment that the subcontractor has expertise in (e.g., drilling, excavation work, electrical). Subcontractors are responsible for the health and safety procedures specific to their work, and are required to submit these procedures to CH2M HILL for review before the start of field work. Subcontractors must comply with the established health and safety plan(s). The CH2M HILL SC-HW should verify that subcontractor employee training, medical clearance, and fit test records are current and must monitor and enforce compliance with the established plan(s). CH2M HILL's oversight does not relieve subcontractors of their responsibility for effective implementation and compliance with the established plan(s).

CH2M HILL should continuously endeavor to observe subcontractors' safety performance. This endeavor should be reasonable, and include observing for hazards or unsafe practices that are both readily observable and occur in common work areas. CH2M HILL is not responsible for exhaustive observation for hazards and unsafe practices. In addition to this level of observation, the SC-HW is responsible for confirming CH2M HILL subcontractor performance against both the subcontractor's safety plan and applicable self-assessment checklists. Self-assessment checklists contained in Attachment 6 are to be used by the SC-HW to review subcontractor performance.

Health and safety related communications with CH2M HILL subcontractors should be conducted as follows:

- Brief subcontractors on the provisions of this plan, and require them to sign the Employee Signoff Form included in Attachment 1.
- Request subcontractor(s) to brief the project team on the hazards and precautions related to their work.
- When apparent non-compliance/unsafe conditions or practices are observed, notify the subcontractor safety representative and require corrective action – the subcontractor is responsible for determining and implementing necessary controls and corrective actions.
- When repeat non-compliance/unsafe conditions are observed, notify the subcontractor safety representative and stop affected work until adequate corrective measures are implemented.
- When an apparent imminent danger exists, immediately remove all affected CH2M HILL employees and subcontractors, notify subcontractor safety representative, and stop affected work until adequate corrective measures are implemented. Notify the Project Manager and HSM as appropriate.
- Document all oral health and safety related communications in project field logbook, daily reports, or other records.

4 Personal Protective Equipment (PPE)

(Reference CH2M HILL SOP, *Personal Protective Equipment and Respiratory Protection*)

PPE Specifications ^a

Task	Level	Body	Head	Respirator ^b
<ul style="list-style-type: none"> General field surveying 	NA	Work clothes; steel-toe, leather work boots; work glove.	Hardhat ^c Safety glasses Ear protection ^d	None required
<ul style="list-style-type: none"> Direct-push Groundwater sampling Soil sampling IDW management 	Modified D	Coveralls: Cotton coveralls; or uncoated Tyvek if cotton cannot be kept clean. Boots: Steel-toe, chemical-resistant boots OR steel-toe, leather work boots with outer rubber boot covers Gloves: Inner surgical-style nitrile & outer chemical-resistant nitrile or butyl gloves.	Hardhat ^c Safety glasses Ear protection ^d	None required

Reasons for Upgrading or Downgrading Level of Protection

Upgrade ^c	Downgrade
<ul style="list-style-type: none"> Request from individual performing tasks. Change in work tasks that will increase contact or potential contact with hazardous materials. Occurrence or likely occurrence of gas or vapor emission. Known or suspected presence of dermal hazards. Instrument action levels (Section 5) exceeded. 	<ul style="list-style-type: none"> New information indicating that situation is less hazardous than originally thought. Change in site conditions that decreases the hazard. Change in work task that will reduce contact with hazardous materials.

^a Modifications are as indicated. CH2M HILL will provide PPE only to CH2M HILL employees.

^b No facial hair that would interfere with respirator fit is permitted.

^c Hardhat and splash-shield areas are to be determined by the SC-HW.

^d Ear protection should be worn when conversations cannot be held at distances of 3 feet or less without shouting.

^e Performing a task that requires an upgrade to a higher level of protection (e.g., Level D to Level C) is permitted only when the PPE requirements have been approved by the HSM, and an SC-HW qualified at that level is present.

5 Air Monitoring/Sampling

(Reference CH2M HILL SOP, *Air Monitoring*)

5.1 Air Monitoring Specifications

Instrument	Tasks	Action Levels ^a	Frequency ^b	Calibration
PID: MiniRAE or MultiRAE with 10.6eV lamp or equivalent	<ul style="list-style-type: none"> Direct-push Groundwater sampling Soil sampling IDW management 	<10 ppm → Level D ≥10 ppm → Stop work; reevaluate; contact HSM	Initially and periodically during task	Daily
H2S: MultiRAE or equivalent	<ul style="list-style-type: none"> Direct-push 	<5 ppm → Level D ≥5 ppm → Contact HSM	Initially and periodically during task	N/A
CGI: MultiRAE or equivalent	<ul style="list-style-type: none"> Direct-push 	0-10% : → No explosion hazard 10-25% LEL: → Potential explosion hazard >25% LEL: → Explosion hazard; evacuate or vent	Initially and periodically during task	Daily
O₂Meter: MultiRAE or equivalent	<ul style="list-style-type: none"> Direct-push 	>25% ^c O ₂ : → Explosion hazard; evacuate or vent 20.9% ^c O ₂ : → Normal O ₂ <19.5% ^c O ₂ : → O ₂ deficient; vent or use SCBA	Initially and periodically during task	Daily
Dust Monitor: Visual Assessment	<ul style="list-style-type: none"> All invasive tasks 	Visual Dust → Initiate dust control methods (e.g. apply water or mist immediately)	Initially and periodically during tasks	N/A

^a Action levels apply to **sustained** breathing-zone measurements above background **for more than 5 minutes**.

^b The exact frequency of monitoring depends on field conditions and is to be determined by the SSC; generally, every 5 to 15 minutes if acceptable; it may be appropriate to do so more frequently. Monitoring results should be recorded. Documentation should include instrument and calibration information, time, measurement results, personnel monitored, and place/location where measurement is taken (for example, "Breathing Zone/MW-3," "at surface/SB-2," etc.).

^c If the measured percent of O₂ is less than 10, an accurate LEL reading will not be obtained. Percent LEL and percent O₂ action levels apply only to ambient working atmospheres, and not to confined-space entry. More-stringent percent LEL and O₂ action levels are required for confined-space entry (refer to Section 2).

5.2 Calibration Specifications

(Refer to the respective manufacturer's instructions for proper instrument-maintenance procedures)

Instrument	Gas	Span	Reading	Method
PID: MiniRAE, 10.6 eV bulb	100 ppm isobutylene	CF = 100	100 ppm	1.5 lpm reg T-tubing
PID/H2S/CGI/O2: MultiRAE, 10.6 eV bulb	Per Manufacturer's Specifications			

5.3 Air Sampling

Method Description

None required at this time

6 Decontamination

(Reference CH2M HILL SOP, *Decontamination*)

The SC-HW must establish and monitor the decontamination procedures and their effectiveness. Decontamination procedures found to be ineffective will be modified by the SC-HW. The SC-HW must ensure that procedures are established for disposing of materials generated on the site.

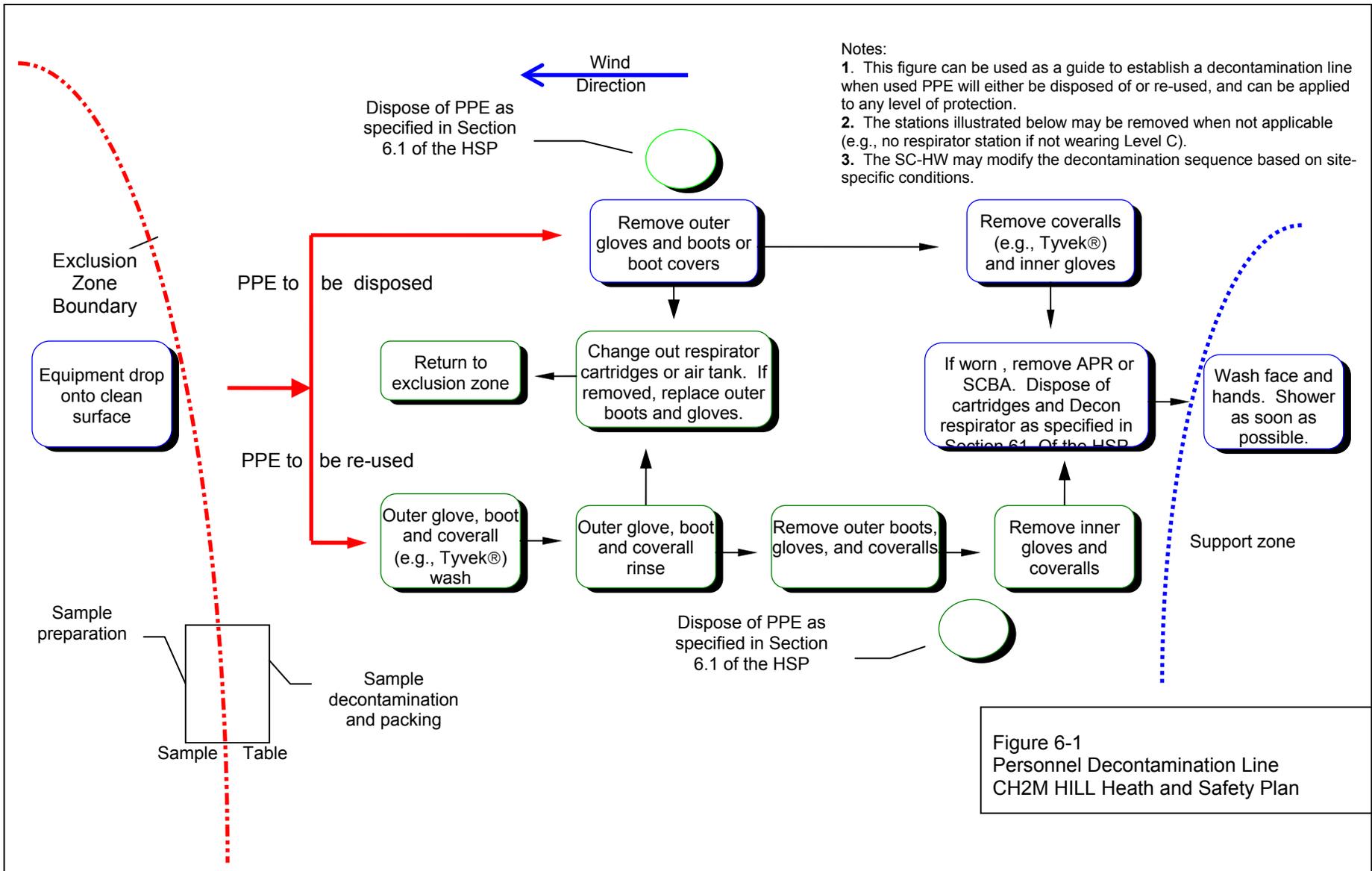
6.1 Decontamination Specifications

Personnel	Sample Equipment	Heavy Equipment
<ul style="list-style-type: none">• Boot wash/rinse• Glove wash/rinse• Outer-glove removal• Body-suit removal• Inner-glove removal• Respirator removal• Hand wash/rinse• Face wash/rinse• Shower ASAP• Dispose of PPE in municipal trash, or contain for disposal• Dispose of personnel rinse water to facility or sanitary sewer, or contain for offsite disposal	<ul style="list-style-type: none">• Wash/rinse equipment• Solvent-rinse equipment• Contain solvent waste for offsite disposal	<ul style="list-style-type: none">• Power wash• Steam clean• Dispose of equipment rinse water to facility or sanitary sewer, or contain for offsite disposal

6.2 Diagram of Personnel-Decontamination Line

No eating, drinking, or smoking is permitted in contaminated areas and in exclusion or decontamination zones. The SC-HW should establish areas for eating, drinking, and smoking. Contact lenses are not permitted in exclusion or decontamination zones.

Figure 6-1 illustrates a conceptual establishment of work zones, including the decontamination line. Work zones are to be modified by the SC-HW to accommodate task-specific requirements.



- Notes:
1. This figure can be used as a guide to establish a decontamination line when used PPE will either be disposed of or re-used, and can be applied to any level of protection.
 2. The stations illustrated below may be removed when not applicable (e.g., no respirator station if not wearing Level C).
 3. The SC-HW may modify the decontamination sequence based on site-specific conditions.

Figure 6-1
Personnel Decontamination Line
CH2M HILL Heath and Safety Plan

7 Spill-Containment Procedures

Sorbent material will be maintained in the support zone. Incidental spills will be contained with sorbent and disposed of properly.

8 Site-Control Plan

8.1 Site-Control Procedures

(Reference CH2M HILL SOP, *Site Control*)

- The SC-HW will conduct a site safety briefing (see below) before starting field activities or as tasks and site conditions change.
- Topics for briefing on site safety: general discussion of Health and Safety Plan, site-specific hazards, locations of work zones, PPE requirements, equipment, special procedures, emergencies.
- The SC-HW records attendance at safety briefings in a logbook and documents the topics discussed.
- Establish support, decontamination, and exclusion zones. Delineate with flags or cones as appropriate. Support zone should be upwind of the site. Use access control at entry and exit from each work zone.
- Establish onsite communication consisting of the following:
 - Line-of-sight and hand signals
 - Air horn
 - Two-way radio or cellular telephone if available
- Establish offsite communication.
- Establish and maintain the “buddy system.”
- Initial air monitoring is conducted by the SC-HW in appropriate level of protection.
- The SCC is to conduct periodic inspections of work practices to determine the effectiveness of this plan – refer to Sections 2 and 3. Deficiencies are to be noted, reported to the HSM, and corrected.

8.2 Hazwoper Compliance Plan

(Reference CH2M HILL SOP, *Site-Specific Written Safety Plans*)

Certain parts of the site work are covered by state or federal Hazwoper standards and therefore require training and medical monitoring. Anticipated Hazwoper tasks (Section 1.1.1) might occur consecutively or concurrently with respect to non-Hazwoper tasks. This section outlines procedures to be followed when approved activities specified in Section 1.1.2 do not require 24- or 40-hour training. Non-Hazwoper-trained personnel also must be trained in accordance with all other state and federal OSHA requirements.

- In many cases, air sampling, in addition to real-time monitoring, must confirm that there is no exposure to gases or vapors before non-Hazwoper-trained personnel are allowed on the site, or while non-Hazwoper-trained staff are working in proximity to Hazwoper activities. Other data (e.g., soil) also must document that there is no potential for exposure. The HSM must approve the interpretation of these data. Refer to subsections 2.5 and 5.3 for contaminant data and air sampling requirements, respectively.
- When non-Hazwoper-trained personnel are at risk of exposure, the SC-HW must post the exclusion zone and inform non-Hazwoper-trained personnel of the:
 - nature of the existing contamination and its locations
 - limitations of their access
 - emergency action plan for the site
- Periodic air monitoring with direct-reading instruments conducted during regulated tasks also should be used to ensure that non-Hazwoper-trained personnel (e.g., in an adjacent area) are not exposed to airborne contaminants.
- When exposure is possible, non-Hazwoper-trained personnel must be removed from the site until it can be demonstrated that there is no longer a potential for exposure to health and safety hazards.
- Remediation treatment system start-ups: Once a treatment system begins to pump and treat contaminated media, the site is, for the purposes of applying the Hazwoper standard, considered a treatment, storage, and disposal facility (TSDF). Therefore, once the system begins operation, only Hazwoper-trained personnel (minimum of 24 hour of training) will be permitted to enter the site. All non-Hazwoper-trained personnel must not enter the TSDF area of the site.

9 Emergency Response Plan

(Reference CH2M HILL SOP, *Emergency Response*)

9.1 Pre-Emergency Planning

The SC-HW performs the applicable pre-emergency planning tasks before starting field activities and coordinates emergency response with CH2M HILL onsite parties, the facility, and local emergency-service providers as appropriate.

- Review the facility emergency and contingency plans where applicable.
- Determine what onsite communication equipment is available (e.g., two-way radio, air horn).
- Determine what offsite communication equipment is needed (e.g., nearest telephone, cell phone).
- Confirm and post emergency telephone numbers, evacuation routes, assembly areas, and route to hospital; communicate the information to onsite personnel.
- Field Trailers: Post “Exit” signs above exit doors, and post “Fire Extinguisher” signs above locations of extinguishers. Keep areas near exits and extinguishers clear.
- Review changed site conditions, onsite operations, and personnel availability in relation to emergency response procedures.
- Where appropriate and acceptable to the client, inform emergency room and ambulance and emergency response teams of anticipated types of site emergencies.
- Designate one vehicle as the emergency vehicle; place hospital directions and map inside; keep keys in ignition during field activities.
- Inventory and check site emergency equipment, supplies, and potable water.
- Communicate emergency procedures for personnel injury, exposures, fires, explosions, and releases.
- Rehearse the emergency response plan before site activities begin, including driving route to hospital.
- Brief new workers on the emergency response plan.

The SC-HW will evaluate emergency response actions and initiate appropriate follow-up actions.

9.2 Emergency Equipment and Supplies

The SC-HW should mark the locations of emergency equipment on the site map and post the map.

Emergency Equipment and Supplies	Location
20 LB (or two 10-lb) fire extinguisher (A, B, and C classes)	Required w/ drill rig
First aid kit	Support Zone/Field Vehicle
Potable water	Support & Decon Zone/Field Vehicle
Bloodborne-pathogen kit	Support Zone/Field Vehicle
Cellular phone	Support Zone/Field Vehicle

9.3 Incident Response

In fires, explosions, or chemical releases, actions to be taken include the following:

- Shut down CH2M HILL operations and evacuate the immediate work area.
- Notify appropriate response personnel.
- Account for personnel at the designated assembly area(s).
- Assess the need for site evacuation, and evacuate the site as warranted.

Instead of implementing a work-area evacuation, note that small fires or spills posing minimal safety or health hazards may be controlled.

9.4 Emergency Medical Treatment

The procedures listed below may also be applied to non-emergency incidents. Injuries and illnesses (including overexposure to contaminants) must be reported to Human Resources. If there is doubt about whether medical treatment is necessary, or if the injured person is reluctant to accept medical treatment, contact the CH2M HILL medical consultant. During non-emergencies, follow these procedures as appropriate.

- Notify appropriate emergency response authorities listed in Section 9.8 (e.g., 911).
- The SC-HW will assume charge during a medical emergency until the ambulance arrives or until the injured person is admitted to the emergency room.
- Prevent further injury.
- Initiate first aid and CPR where feasible.
- Get medical attention immediately.
- Perform decontamination where feasible; lifesaving and first aid or medical treatment take priority.
- Make certain that the injured person is accompanied to the emergency room.
- When contacting the medical consultant, state that the situation is a CH2M HILL matter, and give your name and telephone number, the name of the injured person, the extent of the injury or exposure, and the name and location of the medical facility where the injured person was taken.
- Report incident as outlined in Section 9.7.

9.5 Evacuation

- Evacuation routes and assembly areas (and alternative routes and assembly areas) are specified on the site map.
- Evacuation route(s) and assembly area(s) will be designated by the SC-HW before work begins.
- Personnel will assemble at the assembly area(s) upon hearing the emergency signal for evacuation.
- The SC-HW and a “buddy” will remain on the site after the site has been evacuated (if safe) to assist local responders and advise them of the nature and location of the incident.
- The SC-HW will account for all personnel in the onsite assembly area.
- A designated person will account for personnel at alternate assembly area(s).
- The SC-HW will incident reporting as outlined in 9.7

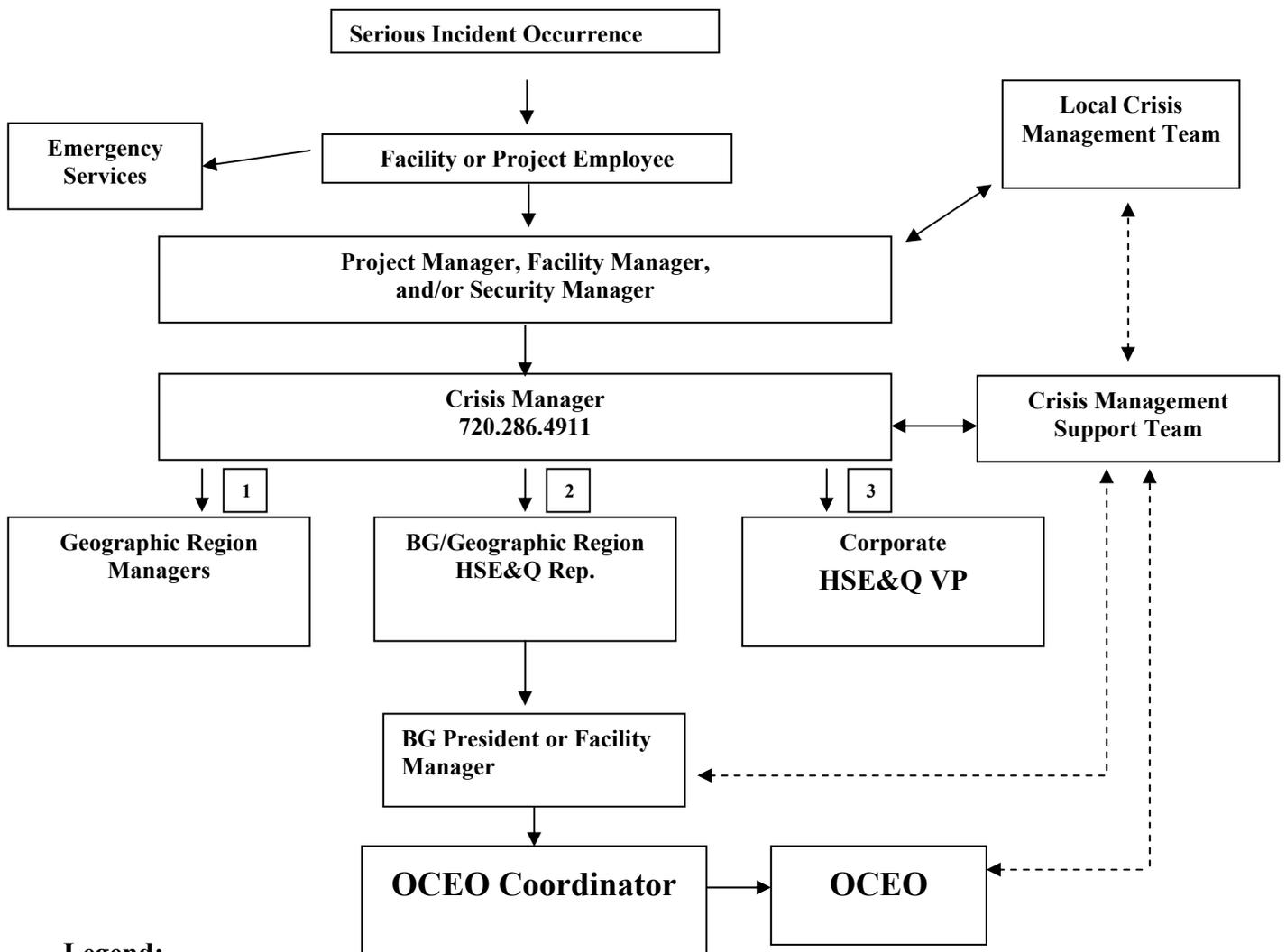
9.6 Evacuation Signals

Signal	Meaning
Grasping throat with hand	Emergency-help me.
Thumbs up	OK; understood.
Grasping buddy’s wrist	Leave area now.
Continuous sounding of horn	Emergency; leave site now.

9.7 Incident Notification and Reporting

- Upon minor project incidents (small fires, small spills, near miss, etc.), immediately notify the PM and HSM.
- For CH2M HILL work-related injuries or illnesses, contact and help Human Resources administrator complete an Hours and Incident Tracking System (HITS) form online. HITS must be completed within 24 hours of incident.
- For CH2M HILL subcontractor incidents, complete the Subcontractor Accident/Illness Report Form and submit to the HSM.
- Notify and submit reports to client as required in contract.
- If there is an injured CH2M HILL employee, call the company occupational nurse at 1-800-756-1130.
- Serious Incidents must be reported in accordance with CH2M HILL Standard of Practice, *Serious Incident Reporting Process*, immediately. Follow flow chart below. Serious incidents are those that involve any of the following:
 - Work related death, or life threatening situation to a CH2M HILL employee, subcontractor, or member of the public
 - Kidnap/missing person
 - Acts or threats of terrorism
 - Event that involves a major fire, explosion, or property damage that requires a site evacuation or is estimated to result in greater than \$ 500,000 in damage.
 - Spill or release of hazardous materials or substances that involves a significant threat of imminent harm to site workers, neighboring facilities, the community or the environment.

Serious Incident Notification Chart



Legend:

- > Direct line of communication
- ←-----> Indirect line of communication

9.8 Incident Notification and Reporting

- In the event of an emergency, immediately call..... **911**.
 - Severe Bleeding
 - Loss of consciousness
 - Chest Pain
 - Broken bones
- All other injuries or illness' (even those that are minor and may only require First Aid) which occur at work, while on business travel or commute must be reported to your supervisor immediately.
- **After informing their supervisor, the injured employee calls CH2M HILL's contracted Occupational Nurse.**

24-hour CH2M HILL Emergency Nurse Assistance 800/756-1130

- The Occupational Injury Nurse listens to the injured employee to understand the injury/illness.
- Employee is provided guidance on appropriate treatment options (triage).
- Appropriate treatment details are handled by the Occupational Injury Nurse, and Workers Compensation Groups.
- Nurse communicates and troubleshoots with and for employee through full recovery.

The flyer features the CH2M HILL logo at the top. The main text asks, "Experienced a work-related injury or illness?" and provides the phone number 1-800-756-1130. It includes three small images: a man in a white lab coat, a man in a white lab coat with a woman, and a man in a hard hat. The bottom of the flyer features the HSECG logo and the slogan "World-class safety starts with you." Small text at the bottom provides information about injury management and access to workers' compensation.

CH2MHILL

Experienced a work-related injury or illness?

Notify your supervisor, then contact the company Occupational Health Nurse:
1-800-756-1130

For more information about our Injury Management / Access to Workers' Compensation and on the TV in Company Resources / Corporate Groups / Health, Safety, Environment & Quality

World-class safety starts with you!

HSECG
CH2MHILL

10 Approval

This site-specific Health and Safety Plan has been written for use by CH2M HILL only. CH2M HILL claims no responsibility for its use by others unless that use has been specified and defined in project or contract documents. The plan is written for the specific site conditions, purposes, dates, and personnel specified and must be amended if those conditions change.

10.1 Original Plan

Written By: Brian Tracy/SEA

Date: December 10, 2008

Approved By: *John Culley*

Date: December 9, 2008

John Culley/SPK

10.2 Revisions

Revisions Made By:

Date:

Revisions to Plan:

Revisions Approved By:

Date:

11 Attachments

- Attachment 1: **Employee Signoff Form – Field Safety Instructions**
- Attachment 2: **Project-Specific Chemical Product Hazard Communication Form**
- Attachment 3: **Chemical-Specific Training Form**
- Attachment 4: **Emergency Contacts**
- Attachment 5: **Project Activity Self-Assessment Checklists**
- Attachment 6: **AHA's/PTSA/SBO**

CHEMICAL-SPECIFIC TRAINING FORM

Location:	Project # :
HCC:	Trainer:

TRAINING PARTICIPANTS:

NAME	SIGNATURE	NAME	SIGNATURE

REGULATED PRODUCTS/TASKS COVERED BY THIS TRAINING:

The HCC shall use the product MSDS to provide the following information concerning each of the products listed above.

- Physical and health hazards
- Control measures that can be used to provide protection (including appropriate work practices, emergency procedures, and personal protective equipment to be used)
- Methods and observations used to detect the presence or release of the regulated product in the workplace (including periodic monitoring, continuous monitoring devices, visual appearance or odor of regulated product when being released, etc.)

Training participants shall have the opportunity to ask questions concerning these products and, upon completion of this training, will understand the product hazards and appropriate control measures available for their protection.

Copies of MSDSs, chemical inventories, and CH2M HILL's written hazard communication program shall be made available for employee review in the facility/project hazard communication file.

Emergency Contacts

Medical Emergency – 911

Facility Medical Response #:
Local Ambulance #:

CH2M HILL Medical Consultant

Health Resources
Dr. Jerry H. Berke, M.D., M.P.H.
600 West Cummings Park, Suite 3400
Woburn, MA 01801-6350
1-800-350-4511 (0800-2300 EST, M-F)
all other times 1-800-978-7003
(After hours calls will be returned within 20 minutes)

Fire/Spill Emergency – 911

Facility Fire Response #:
Local Fire Dept #:

Regional Business Group Health and Safety Manager

Name: **Bret Clausen/DEN**
Phone: **720/286-2064**

Security & Police – 911

Facility Security #:
Local Police #:

Health & Safety Manager (HSM)

Name: John Culley/SPK
Phone: 509/623-1664 x228 or cell 206/660-3367

Utilities Emergency

Water:
Gas:
Electric:

Regional Human Resources Department

Name: Lisa Covey/SAC
Phone: 916-286-0253

Safety Coordinator - Haz Waste (SC-HW)

Name: Brian Tracy/SEA
Phone: 425/453-5000

Corporate Human Resources Department

Name: Pete Hannan/COR
Phone: 720-286-3077

Project Manager

Name: Rachel Chang
Phone: 425/453-5000

Federal Express Dangerous Goods Shipping

Phone: 800/238-5355

CH2M HILL Emergency Number for Shipping Dangerous Goods

Phone: 800/255-3924

Worker's Compensation and Auto Claims

Sterling Administration Services
Phone: 800/420-8926 After hours: 800/497-4566

Report fatalities AND report vehicular accidents involving pedestrians, motorcycles, or more than two cars.

Contact the Project Manager. Generally, the Project Manager will contact relevant government agencies.

Facility Alarms:

Evacuation Assembly Area(s):

Facility/Site Evacuation Route(s):

Hospital Name/Address: Grays Harbor Community Hospital
915 Anderson Drive, Aberdeen, WA

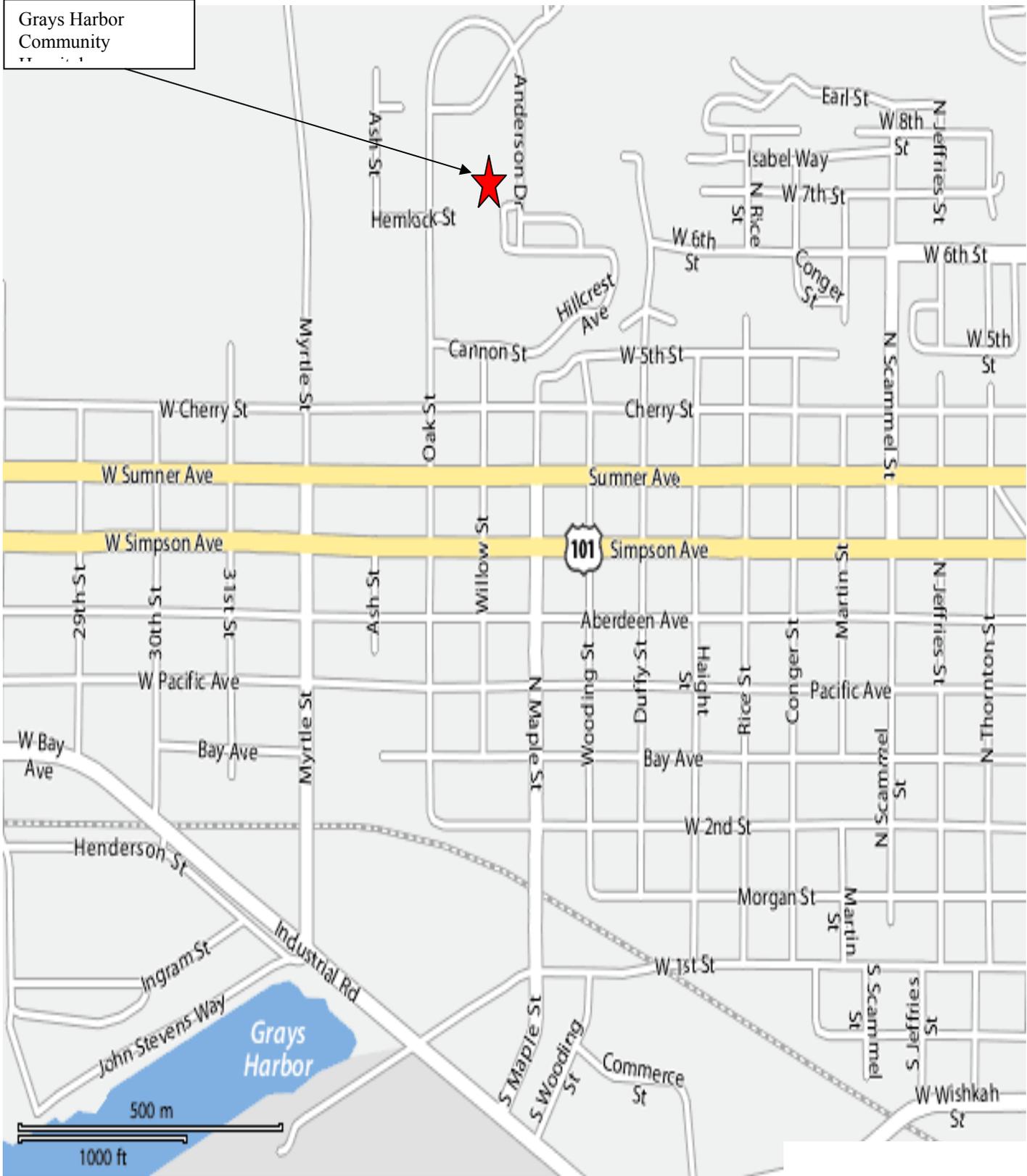
Hospital Phone #: (360) 532-8330

DIRECTIONS

Take most direct route

See map next page

Grays Harbor
Community



CH2M HILL HEALTH AND SAFETY PLAN

Attachment 5

Project Activity Self-Assessment Checklists

This checklist shall be used by CH2M HILL personnel **only** and shall be completed at the frequency specified in the project’s HSP/FSI.

This checklist is to be used at locations where: 1) CH2M HILL employees are potentially exposed to hazards associated with drilling operations (complete Sections 1 and 3), and/or 2) CH2M HILL oversight of a drilling subcontractor is required (complete entire checklist).

SC-HW may consult with drilling subcontractors when completing this checklist, but shall not direct the means and methods of drilling operations nor direct the details of corrective actions. Drilling subcontractors shall determine how to correct deficiencies and we must carefully rely on their expertise. Items considered to be imminently dangerous (possibility of serious injury or death) shall be corrected immediately or all exposed personnel shall be removed from the hazard until corrected.

Completed checklists shall be sent to the health and safety manager for review.

Project Name: _____ Project No.: _____
 Location: _____ PM: _____
 Auditor: _____ Title: _____ Date: _____

This specific checklist has been completed to:

Evaluate CH2M HILL employee exposures to drilling hazards
 Evaluate a CH2M HILL subcontractor’s compliance with drilling H&S requirements
 Subcontractors Name: _____

- Check “Yes” if an assessment item is complete/correct.
 - Check “No” if an item is incomplete/deficient. Deficiencies shall be brought to the immediate attention of the drilling subcontractor. Section 3 must be completed for all items checked “No.”
 - Check “N/A” if an item is not applicable.
 - Check “N/O” if an item is applicable but was not observed during the assessment.
- Numbers in parentheses indicate where a description of this assessment item can be found in Standard of Practice HS-35.

<u>SECTION 1</u>	<u>Yes</u>	<u>No</u>	<u>N/A</u>	<u>N/O</u>
PERSONNEL SAFE WORK PRACTICES (3.1)				
1. Only authorized personnel operating drill rig	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Personnel cleared during rig startup	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Personnel clear of rotating parts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Personnel not positioned under hoisted loads	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Loose clothing and jewelry removed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Personnel instructed not to approach equipment that has become electrically energized	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Smoking is prohibited around drilling operation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Personnel wearing appropriate PPE, per HSP/FSI	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Rev.0

<u>SECTION 2</u>	<u>Yes</u>	<u>No</u>	<u>N/A</u>	<u>N/O</u>
GENERAL (3.2.1)				
9. Daily safety briefing/meeting conducted with crew	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Daily inspection of drill rig and equipment conducted before use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DRILL RIG PLACEMENT (3.2.2)				
11. Location of underground utilities identified	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Safe clearance distance maintained from overhead powerlines	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Drilling pad established, when necessary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Drill rig leveled and stabilized	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DRILL RIG TRAVEL (3.2.3)				
15. Rig shut down and mast lowered and secured prior to rig movement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. Tools and equipment secured prior to rig movement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. Only personnel seated in cab are riding on rig during movement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. Safe clearance distance maintained while traveling under overhead powerlines	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. Backup alarm or spotter used when backing rig	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DRILL RIG OPERATION (3.2.4)				
20. Kill switch clearly identified and operational	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. All machine guards are in place	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. Rig ropes not wrapped around body parts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. Pressurized lines and hoses secured from whipping hazards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. Drill operation stopped during inclement weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. Air monitoring conducted per HSP/FSI for hazardous atmospheres	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26. Rig placed in neutral when operator not at controls	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DRILL RIG MAINTENANCE (3.2.5)				
27. Defective components repaired immediately	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28. Lockout/tagout procedures used prior to maintenance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29. Cathead in clean, sound condition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30. Drill rig ropes in clean, sound condition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31. Fall protection used for fall exposures of 6 feet or greater	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32. Rig in neutral and augers stopped rotating before cleaning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33. Good housekeeping maintained on and around rig	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DRILLING AT HAZARDOUS WASTE SITES (3.2.6)				
34. Waste disposed of according to HSP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35. Appropriate decontamination procedures being followed, per HSP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Rev.0

CH2M HILL FIELD SAFETY INSTRUCTIONS

Attachment 6

Behavior Based Loss Prevention System Forms

Activity Hazard Analysis

Pre-Task Safety Plans

Safe Behavior Observations

ACTIVITY HAZARD ANALYSIS

Activity: <hr/>	Date:
	Project:
Description of the work: 	Site Supervisor: <hr/>
	Site Safety Officer:
	Review for latest use: Before the job is performed.

Work Activity Sequence (Identify the principal steps involved and the sequence of work activities)	Potential Health and Safety Hazards (Analyze each principal step for potential hazards)	Hazard Controls (Develop specific controls for each potential hazard)

ACTIVITY HAZARD ANALYSIS

Work Task Sequence (Identify the principal steps involved and the sequence of work activities)	Identify & Analyze the Hazards (Analyze each principal step for potential hazards)	Hazard Controls (Develop specific controls for each potential hazard)

ACTIVITY HAZARD ANALYSIS

Equipment to be used (List equipment to be used in the work activity)	Inspection Requirements (List inspection requirements for the work activity)	Training Requirements (List training requirements including hazard communication)

ACTIVITY HAZARD ANALYSIS

PRINT

SIGNATURE

Supervisor Name: _____ Date/Time: _____

Safety Officer Name: _____ Date/Time: _____

Employee Name(s): _____ Date/Time: _____

Pre-Task Safety Plan

Project: _____ Location: _____ Date: _____

Supervisor: _____ Job Activity: _____

Task Personnel:

List Tasks:

Tools/Equipment required for Tasks (ladders, scaffolds, fall protection, cranes/rigging, heavy equipment, power tools):

Potential H&S Hazards, including chemical, physical, safety, biological and environmental (Check all that apply):

<input type="checkbox"/> Chemical burns/contact	<input type="checkbox"/> Trench, excavations, cave-ins	<input type="checkbox"/> Ergonomics
<input type="checkbox"/> Pressurized lines/equipment	<input type="checkbox"/> Overexertion	<input type="checkbox"/> Chemical splash
<input type="checkbox"/> Thermal burns	<input type="checkbox"/> Pinch points	<input type="checkbox"/> Poisonous plants/insects
<input type="checkbox"/> Electrical	<input type="checkbox"/> Cuts/abrasions	<input type="checkbox"/> Eye hazards/flying projectile
<input type="checkbox"/> Weather conditions	<input type="checkbox"/> Spills	<input type="checkbox"/> Inhalation hazard
<input type="checkbox"/> Heights/fall > 6'	<input type="checkbox"/> Overhead Electrical hazards	<input type="checkbox"/> Heat/cold stress
<input type="checkbox"/> Noise	<input type="checkbox"/> Elevated loads	<input type="checkbox"/> Water/drowning hazard
<input type="checkbox"/> Explosion/fire	<input type="checkbox"/> Slips, trip and falls	<input type="checkbox"/> Heavy equipment
<input type="checkbox"/> Radiation	<input type="checkbox"/> Manual lifting	<input type="checkbox"/> Aerial lifts/platforms
<input type="checkbox"/> Confined space entry	<input type="checkbox"/> Welding/cutting	<input type="checkbox"/> Demolition

Other Potential Hazards (Describe):

Hazard Control Measures (Check all that apply):

PPE ___ Thermal/lined ___ Eye ___ Dermal/hand ___ Hearing ___ Respiratory ___ Reflective vests ___ Flotation device	Protective Systems ___ Sloping ___ Shoring ___ Trench box ___ Barricades ___ Competent person ___ Locate buried utilities ___ Daily inspections	Fire Protection ___ Fire extinguishers ___ Fire watch ___ Non-spark tools ___ Grounding/bonding ___ Intrinsically safe equipment	Electrical ___ Lockout/tagout ___ Grounded ___ Panels covered ___ GFCI/extension cords ___ Power tools/cord inspected
Fall Protection ___ Harness/lanyards ___ Adequate anchorage ___ Guardrail system ___ Covered opening ___ Fixed barricades ___ Warning system	Air Monitoring ___ PID/FID ___ Detector tubes ___ Radiation ___ Personnel sampling ___ LEL/O2 ___ Other	Proper Equipment ___ Aerial lift/ladders/scaffolds ___ Forklift/ Heavy equipment ___ Backup alarms ___ Hand/power tools ___ Crane w/current inspection ___ Proper rigging ___ Operator qualified	Welding & Cutting ___ Cylinders secured/capped ___ Cylinders separated/upright ___ Flash-back arrestors ___ No cylinders in CSE ___ Flame retardant clothing ___ Appropriate goggles
Confined Space Entry ___ Isolation ___ Air monitoring ___ Trained personnel ___ Permit completed ___ Rescue	Medical/ER ___ First-aid kit ___ Eye wash ___ FA-CPR trained personnel ___ Route to hospital	Heat/Cold Stress ___ Work/rest regime ___ Rest area ___ Liquids available ___ Monitoring ___ Training	Vehicle/Traffic ___ Traffic control ___ Barricades ___ Flags ___ Signs
Permits ___ Hot work ___ Confined space ___ Lockout/tagout ___ Excavation ___ Demolition ___ Energized work	Demolition ___ Pre-demolition survey ___ Structure condition ___ Isolate area/utilities ___ Competent person ___ Hazmat present	Inspections: ___ Ladders/aerial lifts ___ Lanyards/harness ___ Scaffolds ___ Heavy equipment ___ Cranes and rigging	Training: ___ Hazwaste ___ Construction ___ Competent person ___ Task-specific (THA) ___ Hazcom

FieldNotes: _____

Safe Behavior Observation Form			
Project:	Observer:	Date:	
Position/Title of worker observed:		Background Information/ comments:	
Task/Observation Observed: _____			
<ul style="list-style-type: none"> ❖ Identify and reinforce safe work practices/behaviors ❖ Identify and improve on at-risk practices/acts ❖ Identify and improve on practices, conditions, controls, and compliance that eliminate or reduce hazards ❖ Proactive PM support facilitates eliminating/reducing hazards (do you have what you need?) ❖ Positive, corrective, cooperative, collaborative feedback/recommendations 			
Actions & Behaviors	Safe	At-Risk	Observations/Comments
Current & accurate Pre-Task Planning/Briefing (Project safety plan, STAC, AHA, PTSP, tailgate briefing, etc., as needed)			Positive Observations/Safe Work Practices:
Properly trained/qualified/experienced			
Tools/equipment available and adequate			
Proper use of tools			Questionable Activity/Unsafe Condition Observed:
Barricades/work zone control			
Housekeeping			
Communication			
Work Approach/Habits			
Attitude			
Focus/attentiveness			Observer's Corrective Actions/Comments:
Pace			
Uncomfortable/unsafe position			
Inconvenient/unsafe location			
Position/Line of fire			
Apparel (hair, loose clothing, jewelry)			Observed Worker's Corrective Actions/Comments:
Repetitive motion			
Other...			

APPENDIX B

Laboratory Analytical Reports

Amended Report

January 26, 2009

Brian Tracy
CH2M Hill - Bellevue
1100 112th Avenue NE, Suite 400
Bellevue, WA/USA 98004-4504

RE: WSDOT SR 520 - Pontoon Sites

Enclosed are the results of analyses for samples received by the laboratory on 12/18/08 08:45.
The following list is a summary of the Work Orders contained in this report, generated on 01/26/09 09:59.

If you have any questions concerning this report, please feel free to contact me.

Amended Report: All results reported here supercede any previously reported results.

<u>Work Order</u>	<u>Project</u>	<u>ProjectNumber</u>
BRL0200	WSDOT SR 520 - Pontoon Sit	180171.AR.X7.02

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.



Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AM-SB-1-1.0-2.0	BRL0200-01	Soil	12/15/08 12:40	12/18/08 08:45
AM-SB-1-4.0-6.0	BRL0200-02	Soil	12/15/08 13:00	12/18/08 08:45
AM-W-1	BRL0200-03	Water	12/15/08 13:30	12/18/08 08:45
AM-SB-2-1.0-2.0	BRL0200-04	Soil	12/15/08 14:23	12/18/08 08:45
AM-SB-2-4.0-6.0	BRL0200-05	Soil	12/15/08 14:40	12/18/08 08:45
AM-SB-3-0.0-1.0	BRL0200-06	Soil	12/15/08 15:15	12/18/08 08:45
AM-SB-3-4.0-5.0	BRL0200-07	Soil	12/15/08 15:20	12/18/08 08:45
AM-SB-7-1.5-3.0	BRL0200-08	Soil	12/15/08 15:40	12/18/08 08:45
AM-SB-7-6.0-7.0	BRL0200-09	Soil	12/15/08 15:55	12/18/08 08:45
AM-SB-10-0.0-3.0	BRL0200-10	Soil	12/15/08 16:20	12/18/08 08:45
AM-SB-10-10.0-11.0	BRL0200-11	Soil	12/15/08 16:32	12/18/08 08:45
AM-SB-11-1.0-2.0	BRL0200-12	Soil	12/16/08 08:10	12/18/08 08:45
AM-SB-11-4.0-6.0	BRL0200-13	Soil	12/16/08 08:22	12/18/08 08:45
AM-W-11	BRL0200-14	Water	12/16/08 08:45	12/18/08 08:45
AM-SB-8-1.0-2.0	BRL0200-15	Soil	12/16/08 09:47	12/18/08 08:45
AM-SB-8-8.0-10.0	BRL0200-16	Soil	12/16/08 10:00	12/18/08 08:45
AM-SB-6-1.0-2.0	BRL0200-17	Soil	12/16/08 10:24	12/18/08 08:45
AM-SB-6-6.0-8.0	BRL0200-18	Soil	12/16/08 10:35	12/18/08 08:45
AM-W-6	BRL0200-19	Water	12/16/08 11:00	12/18/08 08:45
AM-SB-5-1.0-2.0	BRL0200-20	Soil	12/16/08 11:35	12/18/08 08:45
AM-SB-5-3.0-4.0	BRL0200-21	Soil	12/16/08 11:40	12/18/08 08:45
AM-W-5	BRL0200-22	Water	12/16/08 12:15	12/18/08 08:45
AM-SB-4-1.0-2.0	BRL0200-23	Soil	12/16/08 12:25	12/18/08 08:45
AM-SB-4-7.0-8.0	BRL0200-24	Soil	12/16/08 12:47	12/18/08 08:45
AM-SB-9-1.0-3.0	BRL0200-25	Soil	12/16/08 13:25	12/18/08 08:45
AM-SB-9-4.0-5.0	BRL0200-26	Soil	12/16/08 13:40	12/18/08 08:45
AM-W-9	BRL0200-27	Water	12/16/08 14:00	12/18/08 08:45
AM-SB-12-1.0-2.0	BRL0200-28	Soil	12/16/08 14:22	12/18/08 08:45
AM-SB-12-9.0-10.0	BRL0200-29	Soil	12/16/08 14:32	12/18/08 08:45
ALY-SB-11-1.0-2.0	BRL0200-30	Soil	12/16/08 16:15	12/18/08 08:45
ALY-SB-11-3.0-4.0	BRL0200-31	Soil	12/16/08 16:23	12/18/08 08:45
ALY-W-11	BRL0200-32	Water	12/16/08 16:50	12/18/08 08:45
AM-W-12	BRL0200-33	Water	12/16/08 14:55	12/18/08 08:45
ALY-SB-3-1.0-3.0	BRL0200-34	Soil	12/17/08 08:02	12/18/08 08:45
ALY-SB-3-3.0-4.0	BRL0200-35	Soil	12/17/08 08:10	12/18/08 08:45

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue	Project Name: WSDOT SR 520 - Pontoon Sites	Report Created:
1100 112th Avenue NE, Suite 400	Project Number: 180171.AR.X7.02	01/26/09 09:59
Bellevue, WA/USA 98004-4504	Project Manager: Brian Tracy	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
ALY-W-3	BRL0200-36	Water	12/17/08 08:40	12/18/08 08:45
ALY-SB-9-1.0-2.0	BRL0200-37	Soil	12/17/08 09:25	12/18/08 08:45
ALY-SB-9-7.0-8.0	BRL0200-38	Soil	12/17/08 09:35	12/18/08 08:45
ALY-SB-12-1.0-2.0	BRL0200-39	Soil	12/17/08 09:55	12/18/08 08:45
ALY-SB-12-6.5-7.5	BRL0200-40	Soil	12/17/08 10:00	12/18/08 08:45
ALY-W-12	BRL0200-41	Water	12/17/08 10:30	12/18/08 08:45
ALY-SB-8-1.0-2.0	BRL0200-42	Soil	12/17/08 11:02	12/18/08 08:45
ALY-SB-8-3.0-4.0	BRL0200-43	Soil	12/17/08 11:10	12/18/08 08:45
ALY-SB-7-1.0-2.0	BRL0200-44	Soil	12/17/08 11:35	12/18/08 08:45
ALY-SB-7-10.0-11.0	BRL0200-45	Soil	12/17/08 11:52	12/18/08 08:45
ALY-W-7	BRL0200-46	Water	12/17/08 12:20	12/18/08 08:45
ALY-SB-6-1.0-2.0	BRL0200-47	Soil	12/17/08 12:45	12/18/08 08:45
ALY-SB-6-3.0-4.0	BRL0200-48	Soil	12/17/08 12:55	12/18/08 08:45
ALY-SB-2-1.0-3.0	BRL0200-49	Soil	12/17/08 13:24	12/18/08 08:45
ALY-SB-2-4.0-5.0	BRL0200-50	Soil	12/17/08 13:30	12/18/08 08:45
ALY-W-2	BRL0200-51	Water	12/17/08 14:00	12/18/08 08:45
ALY-SB-1-1.0-2.0	BRL0200-52	Soil	12/17/08 14:16	12/18/08 08:45
ALY-SB-1-3.0-4.0	BRL0200-53	Soil	12/17/08 14:22	12/18/08 08:45
ALY-SB-4-1.0-2.0	BRL0200-54	Soil	12/17/08 14:50	12/18/08 08:45
ALY-SB-4-3.0-4.0	BRL0200-55	Soil	12/17/08 14:55	12/18/08 08:45
ALY-SB-10-1.0-2.0	BRL0200-56	Soil	12/17/08 15:32	12/18/08 08:45
ALY-SB-10-6.0-8.0	BRL0200-57	Soil	12/17/08 15:42	12/18/08 08:45
ALY-SB-5-1.0-2.0	BRL0200-58	Soil	12/17/08 16:00	12/18/08 08:45
ALY-SB-5-3.0-4.0	BRL0200-59	Soil	12/17/08 16:10	12/18/08 08:45
Trip Blanks	BRL0200-60	Water	12/17/08 17:00	12/18/08 08:45
Trip Blanks	BRL0200-61	Soil	12/17/08 17:00	12/18/08 08:45

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue 1100 112th Avenue NE, Suite 400 Bellevue, WA/USA 98004-4504	Project Name: WSDOT SR 520 - Pontoon Sites Project Number: 180171.AR.X7.02 Project Manager: Brian Tracy	Report Created: 01/26/09 09:59
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Analytical Case Narrative
TestAmerica - Seattle, WA

BRL0200

SAMPLE RECEIPT

The samples were received 12/18/08 by TestAmerica - Seattle. The temperature of the samples at the time of receipt was 5.7 degrees Celsius.

PREPARATIONS AND ANALYSIS

No additional anomalies, discrepancies, or issues were associated with sample preparation, analysis and quality control other than those already qualified in the data and described in the Notes and Definitions page at the end of the report.

Amended Report issued 01/26/09
Total Metals by EPA 6000/7000 Series Methods

All samples were analyzed by ICPMS EPA 6020 due to data quality issues with previously reported ICP EPA 6010 data. Only the ICPMS data has been included in this amended report. No additional changes were made

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Petroleum Products by NWTPH-Gx
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-01 (AM-SB-1-1.0-2.0)		Soil		Sampled: 12/15/08 12:40						
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	8.21	mg/kg dry	1x	8L19010	12/19/08 11:47	12/19/08 17:58	
Surrogate(s): 4-BFB (FID)			94.1%		50 - 150 %	"				"
BRL0200-02 (AM-SB-1-4.0-6.0)		Soil		Sampled: 12/15/08 13:00						
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	14.2	mg/kg dry	1x	8L19010	12/19/08 11:47	12/19/08 18:30	
Surrogate(s): 4-BFB (FID)			117%		50 - 150 %	"				"
BRL0200-03 (AM-W-1)		Water		Sampled: 12/15/08 13:30						
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	50.0	ug/l	1x	8L18023	12/18/08 13:46	12/19/08 03:06	
Surrogate(s): 4-BFB (FID)			93.5%		58 - 144 %	"				"
BRL0200-04 (AM-SB-2-1.0-2.0)		Soil		Sampled: 12/15/08 14:23						
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	8.07	mg/kg dry	1x	8L19010	12/19/08 11:47	12/19/08 21:09	
Surrogate(s): 4-BFB (FID)			94.0%		50 - 150 %	"				"
BRL0200-05 (AM-SB-2-4.0-6.0)		Soil		Sampled: 12/15/08 14:40						
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	10.2	mg/kg dry	1x	8L19010	12/19/08 11:47	12/19/08 21:40	
Surrogate(s): 4-BFB (FID)			108%		50 - 150 %	"				"
BRL0200-06 (AM-SB-3-0.0-1.0)		Soil		Sampled: 12/15/08 15:15						
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	7.78	mg/kg dry	1x	8L19010	12/19/08 11:47	12/19/08 22:12	
Surrogate(s): 4-BFB (FID)			98.9%		50 - 150 %	"				"
BRL0200-07 (AM-SB-3-4.0-5.0)		Soil		Sampled: 12/15/08 15:20						
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	9.56	mg/kg dry	1x	8L19010	12/19/08 11:47	12/19/08 22:44	
Surrogate(s): 4-BFB (FID)			111%		50 - 150 %	"				"
BRL0200-08 (AM-SB-7-1.5-3.0)		Soil		Sampled: 12/15/08 15:40						
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	10.5	mg/kg dry	1x	8L19010	12/19/08 11:47	12/19/08 23:15	
Surrogate(s): 4-BFB (FID)			109%		50 - 150 %	"				"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue	Project Name: WSDOT SR 520 - Pontoon Sites	Report Created:
1100 112th Avenue NE, Suite 400	Project Number: 180171.AR.X7.02	01/26/09 09:59
Bellevue, WA/USA 98004-4504	Project Manager: Brian Tracy	

Volatile Petroleum Products by NWTPH-Gx
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-09 (AM-SB-7-6.0-7.0)		Soil		Sampled: 12/15/08 15:55						
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	12.3	mg/kg dry	1x	8L19010	12/19/08 11:47	12/19/08 23:47	
<i>Surrogate(s): 4-BFB (FID)</i>			109%		50 - 150 %	"				"
BRL0200-10 (AM-SB-10-0.0-3.0)		Soil		Sampled: 12/15/08 16:20						
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	8.96	mg/kg dry	1x	8L19010	12/19/08 11:47	12/20/08 00:19	
<i>Surrogate(s): 4-BFB (FID)</i>			101%		50 - 150 %	"				"
BRL0200-11 (AM-SB-10-10.0-11.0)		Soil		Sampled: 12/15/08 16:32						
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	10.6	mg/kg dry	1x	8L19010	12/19/08 11:47	12/20/08 00:51	
<i>Surrogate(s): 4-BFB (FID)</i>			114%		50 - 150 %	"				"
BRL0200-12 (AM-SB-11-1.0-2.0)		Soil		Sampled: 12/16/08 08:10						
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	8.26	mg/kg dry	1x	8L19010	12/19/08 11:47	12/20/08 01:22	
<i>Surrogate(s): 4-BFB (FID)</i>			99.2%		50 - 150 %	"				"
BRL0200-13 (AM-SB-11-4.0-6.0)		Soil		Sampled: 12/16/08 08:22						
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	9.19	mg/kg dry	1x	8L19010	12/19/08 11:47	12/20/08 01:54	
<i>Surrogate(s): 4-BFB (FID)</i>			107%		50 - 150 %	"				"
BRL0200-14 (AM-W-11)		Water		Sampled: 12/16/08 08:45						
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	50.0	ug/l	1x	8L18023	12/18/08 13:46	12/18/08 22:52	
<i>Surrogate(s): 4-BFB (FID)</i>			92.7%		58 - 144 %	"				"
BRL0200-15 (AM-SB-8-1.0-2.0)		Soil		Sampled: 12/16/08 09:47						
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	9.86	mg/kg dry	1x	8L19010	12/19/08 11:47	12/20/08 03:29	
<i>Surrogate(s): 4-BFB (FID)</i>			105%		50 - 150 %	"				"
BRL0200-16 (AM-SB-8-8.0-10.0)		Soil		Sampled: 12/16/08 10:00						
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	7.75	mg/kg dry	1x	8L19010	12/19/08 11:47	12/20/08 04:01	
<i>Surrogate(s): 4-BFB (FID)</i>			116%		50 - 150 %	"				"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue	Project Name: WSDOT SR 520 - Pontoon Sites	Report Created:
1100 112th Avenue NE, Suite 400	Project Number: 180171.AR.X7.02	01/26/09 09:59
Bellevue, WA/USA 98004-4504	Project Manager: Brian Tracy	

Volatile Petroleum Products by NWTPH-Gx
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-17 (AM-SB-6-1.0-2.0)		Soil		Sampled: 12/16/08 10:24						
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	6.53	mg/kg dry	1x	8L19010	12/19/08 11:47	12/20/08 04:33	
<i>Surrogate(s): 4-BFB (FID)</i>			99.0%		50 - 150 %	"				"
BRL0200-18 (AM-SB-6-6.0-8.0)		Soil		Sampled: 12/16/08 10:35						
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	10.5	mg/kg dry	1x	8L19010	12/19/08 11:47	12/20/08 05:04	
<i>Surrogate(s): 4-BFB (FID)</i>			110%		50 - 150 %	"				"
BRL0200-19 (AM-W-6)		Water		Sampled: 12/16/08 11:00						
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	50.0	ug/l	1x	8L18023	12/18/08 13:46	12/18/08 23:23	
<i>Surrogate(s): 4-BFB (FID)</i>			90.3%		58 - 144 %	"				"
BRL0200-20 (AM-SB-5-1.0-2.0)		Soil		Sampled: 12/16/08 11:35						
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	6.65	mg/kg dry	1x	8L19010	12/19/08 11:47	12/20/08 05:36	
<i>Surrogate(s): 4-BFB (FID)</i>			99.4%		50 - 150 %	"				"
BRL0200-21 (AM-SB-5-3.0-4.0)		Soil		Sampled: 12/16/08 11:40						
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	9.94	mg/kg dry	1x	8L19010	12/19/08 11:47	12/20/08 06:08	
<i>Surrogate(s): 4-BFB (FID)</i>			107%		50 - 150 %	"				"
BRL0200-22 (AM-W-5)		Water		Sampled: 12/16/08 12:15						
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	50.0	ug/l	1x	8L18023	12/18/08 13:46	12/18/08 23:55	
<i>Surrogate(s): 4-BFB (FID)</i>			91.2%		58 - 144 %	"				"
BRL0200-23 (AM-SB-4-1.0-2.0)		Soil		Sampled: 12/16/08 12:25						
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	9.20	mg/kg dry	1x	8L20009	12/20/08 13:06	12/20/08 16:22	
<i>Surrogate(s): 4-BFB (FID)</i>			103%		50 - 150 %	"				"
BRL0200-24 (AM-SB-4-7.0-8.0)		Soil		Sampled: 12/16/08 12:47						
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	13.1	mg/kg dry	1x	8L20009	12/20/08 13:06	12/20/08 17:25	
<i>Surrogate(s): 4-BFB (FID)</i>			124%		50 - 150 %	"				"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Petroleum Products by NWTPH-Gx
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-25 (AM-SB-9-1.0-3.0)		Soil		Sampled: 12/16/08 13:25						
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	11.4	mg/kg dry	1x	8L19010	12/19/08 11:47	12/19/08 15:51	
Surrogate(s): 4-BFB (FID)			103%		50 - 150 %	"				"
BRL0200-26 (AM-SB-9-4.0-5.0)		Soil		Sampled: 12/16/08 13:40						
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	16.1	mg/kg dry	1x	8L20009	12/20/08 13:06	12/20/08 17:57	
Surrogate(s): 4-BFB (FID)			108%		50 - 150 %	"				"
BRL0200-27 (AM-W-9)		Water		Sampled: 12/16/08 14:00						
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	50.0	ug/l	1x	8L18023	12/18/08 13:46	12/19/08 00:27	
Surrogate(s): 4-BFB (FID)			92.0%		58 - 144 %	"				"
BRL0200-28 (AM-SB-12-1.0-2.0)		Soil		Sampled: 12/16/08 14:22						
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	9.89	mg/kg dry	1x	8L20009	12/20/08 13:06	12/20/08 21:39	
Surrogate(s): 4-BFB (FID)			102%		50 - 150 %	"				"
BRL0200-29 (AM-SB-12-9.0-10.0)		Soil		Sampled: 12/16/08 14:32						
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	9.60	mg/kg dry	1x	8L20009	12/20/08 13:06	12/20/08 22:11	
Surrogate(s): 4-BFB (FID)			125%		50 - 150 %	"				"
BRL0200-30 (ALY-SB-11-1.0-2.0)		Soil		Sampled: 12/16/08 16:15						
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	6.32	mg/kg dry	1x	8L20009	12/20/08 13:06	12/20/08 22:43	
Surrogate(s): 4-BFB (FID)			105%		50 - 150 %	"				"
BRL0200-31 (ALY-SB-11-3.0-4.0)		Soil		Sampled: 12/16/08 16:23						
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	6.92	mg/kg dry	1x	8L20009	12/20/08 13:06	12/20/08 23:15	
Surrogate(s): 4-BFB (FID)			102%		50 - 150 %	"				"
BRL0200-32 (ALY-W-11)		Water		Sampled: 12/16/08 16:50						
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	50.0	ug/l	1x	8L18023	12/18/08 13:46	12/19/08 00:59	
Surrogate(s): 4-BFB (FID)			91.5%		58 - 144 %	"				"

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Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Petroleum Products by NWTPH-Gx
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-33 (AM-W-12)		Water			Sampled: 12/16/08 14:55					
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	50.0	ug/l	1x	8L18023	12/18/08 13:46	12/19/08 01:31	
Surrogate(s): 4-BFB (FID)			93.6%		58 - 144 %	"				"
BRL0200-34 (ALY-SB-3-1.0-3.0)		Soil			Sampled: 12/17/08 08:02					
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	6.03	mg/kg dry	1x	8L20009	12/20/08 13:06	12/20/08 23:47	
Surrogate(s): 4-BFB (FID)			103%		50 - 150 %	"				"
BRL0200-35 (ALY-SB-3-3.0-4.0)		Soil			Sampled: 12/17/08 08:10					
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	10.2	mg/kg dry	1x	8L20009	12/20/08 13:06	12/21/08 00:18	
Surrogate(s): 4-BFB (FID)			106%		50 - 150 %	"				"
BRL0200-36 (ALY-W-3)		Water			Sampled: 12/17/08 08:40					
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	50.0	ug/l	1x	8L18023	12/18/08 13:46	12/19/08 04:42	
Surrogate(s): 4-BFB (FID)			95.4%		58 - 144 %	"				"
BRL0200-37 (ALY-SB-9-1.0-2.0)		Soil			Sampled: 12/17/08 09:25					
Gasoline Range Hydrocarbons	NWTPH-Gx	43.0	----	13.0	mg/kg dry	1x	8L20009	12/20/08 13:06	12/21/08 00:50	
Surrogate(s): 4-BFB (FID)			155%		50 - 150 %	"				ZX
BRL0200-38 (ALY-SB-9-7.0-8.0)		Soil			Sampled: 12/17/08 09:35					
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	7.27	mg/kg dry	1x	8L20009	12/20/08 13:06	12/21/08 01:22	
Surrogate(s): 4-BFB (FID)			106%		50 - 150 %	"				"
BRL0200-39 (ALY-SB-12-1.0-2.0)		Soil			Sampled: 12/17/08 09:55					
Gasoline Range Hydrocarbons	NWTPH-Gx	46.6	----	10.5	mg/kg dry	1x	8L20009	12/20/08 13:06	12/21/08 01:54	
Surrogate(s): 4-BFB (FID)			99.2%		50 - 150 %	"				"
BRL0200-40 (ALY-SB-12-6.5-7.5)		Soil			Sampled: 12/17/08 10:00					
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	20.3	mg/kg dry	1x	8L20009	12/20/08 13:06	12/21/08 02:26	
Surrogate(s): 4-BFB (FID)			127%		50 - 150 %	"				"

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Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue	Project Name: WSDOT SR 520 - Pontoon Sites	Report Created:
1100 112th Avenue NE, Suite 400	Project Number: 180171.AR.X7.02	01/26/09 09:59
Bellevue, WA/USA 98004-4504	Project Manager: Brian Tracy	

Volatile Petroleum Products by NWTPH-Gx
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-41 (ALY-W-12)		Water			Sampled: 12/17/08 10:30					
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	50.0	ug/l	1x	8L18023	12/18/08 13:46	12/19/08 02:03	
<i>Surrogate(s): 4-BFB (FID)</i>			96.6%		58 - 144 %	"				"
BRL0200-42 (ALY-SB-8-1.0-2.0)		Soil			Sampled: 12/17/08 11:02					
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	12.2	mg/kg dry	1x	8L20009	12/20/08 13:06	12/21/08 04:02	
<i>Surrogate(s): 4-BFB (FID)</i>			98.5%		50 - 150 %	"				"
BRL0200-43 (ALY-SB-8-3.0-4.0)		Soil			Sampled: 12/17/08 11:10					
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	24.0	mg/kg dry	1x	8L20009	12/20/08 13:06	12/21/08 04:33	
<i>Surrogate(s): 4-BFB (FID)</i>			119%		50 - 150 %	"				"
BRL0200-44 (ALY-SB-7-1.0-2.0)		Soil			Sampled: 12/17/08 11:35					
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	9.55	mg/kg dry	1x	8L20009	12/20/08 13:06	12/21/08 05:05	
<i>Surrogate(s): 4-BFB (FID)</i>			110%		50 - 150 %	"				"
BRL0200-45 (ALY-SB-7-10.0-11.0)		Soil			Sampled: 12/17/08 11:52					
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	9.93	mg/kg dry	1x	8L20009	12/20/08 13:06	12/20/08 18:28	
<i>Surrogate(s): 4-BFB (FID)</i>			110%		50 - 150 %	"				"
BRL0200-46 (ALY-W-7)		Water			Sampled: 12/17/08 12:20					
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	50.0	ug/l	1x	8L18023	12/18/08 13:46	12/19/08 05:14	
<i>Surrogate(s): 4-BFB (FID)</i>			93.6%		58 - 144 %	"				"
BRL0200-47RE1 (ALY-SB-6-1.0-2.0)		Soil			Sampled: 12/17/08 12:45					
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	7.05	mg/kg dry	1x	8L21004	12/21/08 12:29	12/21/08 17:39	
<i>Surrogate(s): 4-BFB (FID)</i>			97.8%		50 - 150 %	"				"
BRL0200-48 (ALY-SB-6-3.0-4.0)		Soil			Sampled: 12/17/08 12:55					
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	7.75	mg/kg dry	1x	8L20009	12/20/08 13:06	12/21/08 05:37	
<i>Surrogate(s): 4-BFB (FID)</i>			100%		50 - 150 %	"				"

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Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue 1100 112th Avenue NE, Suite 400 Bellevue, WA/USA 98004-4504	Project Name: WSDOT SR 520 - Pontoon Sites Project Number: 180171.AR.X7.02 Project Manager: Brian Tracy	Report Created: 01/26/09 09:59
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Volatile Petroleum Products by NWTPH-Gx
TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-49 (ALY-SB-2-1.0-3.0)		Soil								Sampled: 12/17/08 13:24
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	12.2	mg/kg dry	1x	8L20009	12/20/08 13:06	12/21/08 06:09	
Surrogate(s): 4-BFB (FID)			99.9%		50 - 150 %	"				"
BRL0200-50 (ALY-SB-2-4.0-5.0)		Soil								Sampled: 12/17/08 13:30
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	12.3	mg/kg dry	1x	8L21004	12/21/08 12:29	12/21/08 15:32	
Surrogate(s): 4-BFB (FID)			125%		50 - 150 %	"				"
BRL0200-51 (ALY-W-2)		Water								Sampled: 12/17/08 14:00
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	50.0	ug/l	1x	8L18023	12/18/08 13:46	12/19/08 02:34	
Surrogate(s): 4-BFB (FID)			91.7%		58 - 144 %	"				"
BRL0200-52 (ALY-SB-1-1.0-2.0)		Soil								Sampled: 12/17/08 14:16
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	11.9	mg/kg dry	1x	8L21004	12/21/08 12:29	12/21/08 16:36	
Surrogate(s): 4-BFB (FID)			116%		50 - 150 %	"				"
BRL0200-53 (ALY-SB-1-3.0-4.0)		Soil								Sampled: 12/17/08 14:22
Gasoline Range Hydrocarbons	NWTPH-Gx	45.5	----	12.2	mg/kg dry	1x	8L21004	12/21/08 12:29	12/21/08 18:11	Q8
Surrogate(s): 4-BFB (FID)			126%		50 - 150 %	"				"
BRL0200-54 (ALY-SB-4-1.0-2.0)		Soil								Sampled: 12/17/08 14:50
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	7.06	mg/kg dry	1x	8L21004	12/21/08 12:29	12/21/08 18:43	
Surrogate(s): 4-BFB (FID)			98.8%		50 - 150 %	"				"
BRL0200-55 (ALY-SB-4-3.0-4.0)		Soil								Sampled: 12/17/08 14:55
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	13.1	mg/kg dry	1x	8L21004	12/21/08 12:29	12/21/08 23:30	
Surrogate(s): 4-BFB (FID)			110%		50 - 150 %	"				"
BRL0200-56 (ALY-SB-10-1.0-2.0)		Soil								Sampled: 12/17/08 15:32
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	11.1	mg/kg dry	1x	8L21004	12/21/08 12:29	12/21/08 21:23	
Surrogate(s): 4-BFB (FID)			96.5%		50 - 150 %	"				"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue 1100 112th Avenue NE, Suite 400 Bellevue, WA/USA 98004-4504	Project Name: WSDOT SR 520 - Pontoon Sites Project Number: 180171.AR.X7.02 Project Manager: Brian Tracy	Report Created: 01/26/09 09:59
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Volatile Petroleum Products by NWTPH-Gx
TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-57 (ALY-SB-10-6.0-8.0)		Soil		Sampled: 12/17/08 15:42						
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	13.1	mg/kg dry	1x	8L21004	12/21/08 12:29	12/21/08 21:54	
<i>Surrogate(s): 4-BFB (FID)</i>			112%		50 - 150 %	"				"
BRL0200-58 (ALY-SB-5-1.0-2.0)		Soil		Sampled: 12/17/08 16:00						
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	9.49	mg/kg dry	1x	8L21004	12/21/08 12:29	12/21/08 22:27	
<i>Surrogate(s): 4-BFB (FID)</i>			97.4%		50 - 150 %	"				"
BRL0200-59 (ALY-SB-5-3.0-4.0)		Soil		Sampled: 12/17/08 16:10						
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	7.90	mg/kg dry	1x	8L21004	12/21/08 12:29	12/21/08 22:58	
<i>Surrogate(s): 4-BFB (FID)</i>			102%		50 - 150 %	"				"
BRL0200-60 (Trip Blanks)		Water		Sampled: 12/17/08 17:00						
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	50.0	ug/l	1x	8L18023	12/18/08 13:46	12/18/08 22:19	
<i>Surrogate(s): 4-BFB (FID)</i>			92.6%		58 - 144 %	"				"
BRL0200-61 (Trip Blanks)		Soil		Sampled: 12/17/08 17:00						
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	----	5.00	mg/kg wet	1x	8L21004	12/21/08 12:29	12/21/08 20:51	
<i>Surrogate(s): 4-BFB (FID)</i>			92.6%		50 - 150 %	"				"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue	Project Name: WSDOT SR 520 - Pontoon Sites	
1100 112th Avenue NE, Suite 400	Project Number: 180171.AR.X7.02	Report Created:
Bellevue, WA/USA 98004-4504	Project Manager: Brian Tracy	01/26/09 09:59

Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-01 (AM-SB-1-1.0-2.0)		Soil			Sampled: 12/15/08 12:40					
Diesel Range Hydrocarbons	NWTPH-Dx	37.0	----	11.0	mg/kg dry	1x	8L18031	12/18/08 17:44	12/19/08 22:25	Q3
Surrogate(s): 2-FBP			91.6%		54 - 148 %	"				"
Octacosane			100%		62 - 142 %	"				"
BRL0200-01RE1 (AM-SB-1-1.0-2.0)		Soil			Sampled: 12/15/08 12:40					
Lube Oil Range Hydrocarbons	NWTPH-Dx	100	----	27.6	mg/kg dry	1x	8L18031	12/18/08 17:44	12/22/08 10:21	
Surrogate(s): 2-FBP			89.5%		54 - 148 %	"				"
Octacosane			97.5%		62 - 142 %	"				"
BRL0200-02 (AM-SB-1-4.0-6.0)		Soil			Sampled: 12/15/08 13:00					
Diesel Range Hydrocarbons	NWTPH-Dx	ND	----	16.0	mg/kg dry	1x	8L18031	12/18/08 17:44	12/19/08 22:47	
Lube Oil Range Hydrocarbons	"	ND	----	40.0	"	"	"	"	"	C
Surrogate(s): 2-FBP			93.5%		54 - 148 %	"				"
Octacosane			103%		62 - 142 %	"				"
BRL0200-03 (AM-W-1)		Water			Sampled: 12/15/08 13:30					
Diesel Range Hydrocarbons	NWTPH-Dx	ND	----	0.250	mg/l	1x	8L18029	12/19/08 14:39	12/22/08 19:25	
Lube Oil Range Hydrocarbons	"	ND	----	0.500	"	"	"	"	"	
Surrogate(s): 2-FBP			87.0%		53 - 125 %	"				"
Octacosane			90.9%		68 - 125 %	"				"
BRL0200-04 (AM-SB-2-1.0-2.0)		Soil			Sampled: 12/15/08 14:23					
Diesel Range Hydrocarbons	NWTPH-Dx	45.6	----	10.9	mg/kg dry	1x	8L18031	12/18/08 17:44	12/19/08 23:09	Q3
Surrogate(s): 2-FBP			93.2%		54 - 148 %	"				"
Octacosane			100%		62 - 142 %	"				"
BRL0200-04RE1 (AM-SB-2-1.0-2.0)		Soil			Sampled: 12/15/08 14:23					
Lube Oil Range Hydrocarbons	NWTPH-Dx	45.4	----	27.2	mg/kg dry	1x	8L18031	12/18/08 17:44	12/22/08 10:43	
Surrogate(s): 2-FBP			91.2%		54 - 148 %	"				"
Octacosane			98.2%		62 - 142 %	"				"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-05 (AM-SB-2-4.0-6.0)		Soil		Sampled: 12/15/08 14:40						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	----	13.4	mg/kg dry	1x	8L18031	12/18/08 17:44	12/19/08 23:31	
Lube Oil Range Hydrocarbons	"	ND	----	33.4	"	"	"	"	"	C
<i>Surrogate(s): 2-FBP</i>			94.4%		54 - 148 %	"			"	
<i>Octacosane</i>			103%		62 - 142 %	"			"	
BRL0200-06 (AM-SB-3-0.0-1.0)		Soil		Sampled: 12/15/08 15:15						
Diesel Range Hydrocarbons	NWTPH-Dx	183	----	11.1	mg/kg dry	1x	8L18031	12/18/08 17:44	12/19/08 23:53	Q6
<i>Surrogate(s): 2-FBP</i>			77.1%		54 - 148 %	"			"	
<i>Octacosane</i>			118%		62 - 142 %	"			"	
BRL0200-06RE1 (AM-SB-3-0.0-1.0)		Soil		Sampled: 12/15/08 15:15						
Lube Oil Range Hydrocarbons	NWTPH-Dx	1580	----	277	mg/kg dry	10x	8L18031	12/18/08 17:44	12/22/08 10:21	
<i>Surrogate(s): 2-FBP</i>			65.6%		54 - 148 %	"			"	
<i>Octacosane</i>			157%		62 - 142 %	"			"	ZX
BRL0200-07 (AM-SB-3-4.0-5.0)		Soil		Sampled: 12/15/08 15:20						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	----	13.2	mg/kg dry	1x	8L18031	12/18/08 17:44	12/20/08 01:21	
Lube Oil Range Hydrocarbons	"	ND	----	33.0	"	"	"	"	"	C
<i>Surrogate(s): 2-FBP</i>			92.0%		54 - 148 %	"			"	
<i>Octacosane</i>			105%		62 - 142 %	"			"	
BRL0200-08 (AM-SB-7-1.5-3.0)		Soil		Sampled: 12/15/08 15:40						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	----	13.3	mg/kg dry	1x	8L18031	12/18/08 17:44	12/20/08 01:43	
Lube Oil Range Hydrocarbons	"	ND	----	33.3	"	"	"	"	"	C
<i>Surrogate(s): 2-FBP</i>			94.2%		54 - 148 %	"			"	
<i>Octacosane</i>			102%		62 - 142 %	"			"	
BRL0200-09 (AM-SB-7-6.0-7.0)		Soil		Sampled: 12/15/08 15:55						
Diesel Range Hydrocarbons	NWTPH-Dx	106	----	14.0	mg/kg dry	1x	8L18031	12/18/08 17:44	12/20/08 02:04	
<i>Surrogate(s): 2-FBP</i>			80.8%		54 - 148 %	"			"	
<i>Octacosane</i>			94.3%		62 - 142 %	"			"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-09RE1 (AM-SB-7-6.0-7.0)		Soil		Sampled: 12/15/08 15:55						
Lube Oil Range Hydrocarbons	NWTPH-Dx	308	----	35.0	mg/kg dry	1x	8L18031	12/18/08 17:44	12/22/08 11:05	
Surrogate(s): 2-FBP		78.4%		54 - 148 %		"				"
Octacosane		90.4%		62 - 142 %		"				"
BRL0200-10 (AM-SB-10-0.0-3.0)		Soil		Sampled: 12/15/08 16:20						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	----	11.7	mg/kg dry	1x	8L18031	12/18/08 17:44	12/20/08 02:26	
Lube Oil Range Hydrocarbons	"	ND	----	29.2	"	"	"	"	"	C
Surrogate(s): 2-FBP		90.7%		54 - 148 %		"				"
Octacosane		103%		62 - 142 %		"				"
BRL0200-11 (AM-SB-10-10.0-11.0)		Soil		Sampled: 12/15/08 16:32						
Diesel Range Hydrocarbons	NWTPH-Dx	82.2	----	13.0	mg/kg dry	1x	8L18031	12/18/08 17:44	12/20/08 02:48	
Surrogate(s): 2-FBP		87.3%		54 - 148 %		"				"
Octacosane		93.8%		62 - 142 %		"				"
BRL0200-11RE1 (AM-SB-10-10.0-11.0)		Soil		Sampled: 12/15/08 16:32						
Lube Oil Range Hydrocarbons	NWTPH-Dx	203	----	32.6	mg/kg dry	1x	8L18031	12/18/08 17:44	12/31/08 13:48	
Surrogate(s): 2-FBP		86.1%		54 - 148 %		"				"
Octacosane		88.6%		62 - 142 %		"				"
BRL0200-12 (AM-SB-11-1.0-2.0)		Soil		Sampled: 12/16/08 08:10						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	----	11.2	mg/kg dry	1x	8L18031	12/18/08 17:44	12/20/08 03:10	
Lube Oil Range Hydrocarbons	"	ND	----	28.0	"	"	"	"	"	C
Surrogate(s): 2-FBP		90.4%		54 - 148 %		"				"
Octacosane		100%		62 - 142 %		"				"
BRL0200-13 (AM-SB-11-4.0-6.0)		Soil		Sampled: 12/16/08 08:22						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	----	12.4	mg/kg dry	1x	8L18031	12/18/08 17:44	12/20/08 03:32	
Lube Oil Range Hydrocarbons	"	ND	----	31.1	"	"	"	"	"	C
Surrogate(s): 2-FBP		89.9%		54 - 148 %		"				"
Octacosane		106%		62 - 142 %		"				"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue	Project Name: WSDOT SR 520 - Pontoon Sites	
1100 112th Avenue NE, Suite 400	Project Number: 180171.AR.X7.02	Report Created:
Bellevue, WA/USA 98004-4504	Project Manager: Brian Tracy	01/26/09 09:59

Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-14 (AM-W-11)		Water			Sampled: 12/16/08 08:45					
Diesel Range Hydrocarbons	NWTPH-Dx	ND	----	0.240	mg/l	1x	8L18029	12/19/08 14:39	12/22/08 19:47	
Lube Oil Range Hydrocarbons	"	ND	----	0.481	"	"	"	"	"	
<i>Surrogate(s): 2-FBP</i>			87.5%		53 - 125 %	"				"
<i>Octacosane</i>			94.3%		68 - 125 %	"				"
BRL0200-15 (AM-SB-8-1.0-2.0)		Soil			Sampled: 12/16/08 09:47					
Diesel Range Hydrocarbons	NWTPH-Dx	60.2	----	12.3	mg/kg dry	1x	8L18031	12/18/08 17:44	12/20/08 03:54	Q3
<i>Surrogate(s): 2-FBP</i>			91.4%		54 - 148 %	"				"
<i>Octacosane</i>			101%		62 - 142 %	"				"
BRL0200-15RE1 (AM-SB-8-1.0-2.0)		Soil			Sampled: 12/16/08 09:47					
Lube Oil Range Hydrocarbons	NWTPH-Dx	49.6	----	30.8	mg/kg dry	1x	8L18031	12/18/08 17:44	12/22/08 11:28	
<i>Surrogate(s): 2-FBP</i>			88.5%		54 - 148 %	"				"
<i>Octacosane</i>			98.6%		62 - 142 %	"				"
BRL0200-16 (AM-SB-8-8.0-10.0)		Soil			Sampled: 12/16/08 10:00					
Diesel Range Hydrocarbons	NWTPH-Dx	23.3	----	12.1	mg/kg dry	1x	8L18031	12/18/08 17:44	12/20/08 04:16	Q3
Lube Oil Range Hydrocarbons	"	ND	----	30.2	"	"	"	"	"	C
<i>Surrogate(s): 2-FBP</i>			95.8%		54 - 148 %	"				"
<i>Octacosane</i>			111%		62 - 142 %	"				"
BRL0200-17 (AM-SB-6-1.0-2.0)		Soil			Sampled: 12/16/08 10:24					
Diesel Range Hydrocarbons	NWTPH-Dx	38.1	----	11.0	mg/kg dry	1x	8L18031	12/18/08 17:44	12/20/08 04:38	Q6
<i>Surrogate(s): 2-FBP</i>			91.6%		54 - 148 %	"				"
<i>Octacosane</i>			102%		62 - 142 %	"				"
BRL0200-17RE1 (AM-SB-6-1.0-2.0)		Soil			Sampled: 12/16/08 10:24					
Lube Oil Range Hydrocarbons	NWTPH-Dx	144	----	27.6	mg/kg dry	1x	8L18031	12/18/08 17:44	12/22/08 11:50	
<i>Surrogate(s): 2-FBP</i>			91.3%		54 - 148 %	"				"
<i>Octacosane</i>			101%		62 - 142 %	"				"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue	Project Name: WSDOT SR 520 - Pontoon Sites	
1100 112th Avenue NE, Suite 400	Project Number: 180171.AR.X7.02	Report Created:
Bellevue, WA/USA 98004-4504	Project Manager: Brian Tracy	01/26/09 09:59

Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-18 (AM-SB-6-6.0-8.0)		Soil		Sampled: 12/16/08 10:35						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	----	13.7	mg/kg dry	1x	8L18031	12/18/08 17:44	12/20/08 06:05	
Lube Oil Range Hydrocarbons	"	ND	----	34.2	"	"	"	"	"	
<i>Surrogate(s): 2-FBP</i>			78.0%		54 - 148 %	"				"
<i>Octacosane</i>			91.4%		62 - 142 %	"				"
BRL0200-19 (AM-W-6)		Water		Sampled: 12/16/08 11:00						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	----	0.243	mg/l	1x	8L18029	12/19/08 14:39	12/22/08 20:10	
Lube Oil Range Hydrocarbons	"	ND	----	0.485	"	"	"	"	"	
<i>Surrogate(s): 2-FBP</i>			88.3%		53 - 125 %	"				"
<i>Octacosane</i>			91.3%		68 - 125 %	"				"
BRL0200-20 (AM-SB-5-1.0-2.0)		Soil		Sampled: 12/16/08 11:35						
Diesel Range Hydrocarbons	NWTPH-Dx	79.6	----	11.1	mg/kg dry	1x	8L18031	12/18/08 17:44	12/20/08 06:27	Q6
<i>Surrogate(s): 2-FBP</i>			76.2%		54 - 148 %	"				"
<i>Octacosane</i>			86.1%		62 - 142 %	"				"
BRL0200-20RE1 (AM-SB-5-1.0-2.0)		Soil		Sampled: 12/16/08 11:35						
Lube Oil Range Hydrocarbons	NWTPH-Dx	424	----	55.6	mg/kg dry	2x	8L18031	12/18/08 17:44	12/22/08 10:43	
<i>Surrogate(s): 2-FBP</i>			70.4%		54 - 148 %	"				"
<i>Octacosane</i>			90.7%		62 - 142 %	"				"
BRL0200-21 (AM-SB-5-3.0-4.0)		Soil		Sampled: 12/16/08 11:40						
Diesel Range Hydrocarbons	NWTPH-Dx	44.8	----	12.8	mg/kg dry	1x	8L18031	12/18/08 17:44	12/20/08 06:48	Q6
Lube Oil Range Hydrocarbons	"	117	----	31.9	"	"	"	"	"	
<i>Surrogate(s): 2-FBP</i>			83.0%		54 - 148 %	"				"
<i>Octacosane</i>			91.2%		62 - 142 %	"				"
BRL0200-22 (AM-W-5)		Water		Sampled: 12/16/08 12:15						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	----	0.248	mg/l	1x	8L18029	12/19/08 14:39	12/22/08 20:31	
Lube Oil Range Hydrocarbons	"	ND	----	0.495	"	"	"	"	"	
<i>Surrogate(s): 2-FBP</i>			86.5%		53 - 125 %	"				"
<i>Octacosane</i>			90.7%		68 - 125 %	"				"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-23 (AM-SB-4-1.0-2.0)		Soil		Sampled: 12/16/08 12:25						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	----	12.4	mg/kg dry	1x	8L18032	12/18/08 17:46	12/19/08 22:03	
Lube Oil Range Hydrocarbons	"	ND	----	31.1	"	"	"	"	"	
<i>Surrogate(s): 2-FBP</i>			89.7%		54 - 148 %	"				"
<i>Octacosane</i>			101%		62 - 142 %	"				"
BRL0200-24 (AM-SB-4-7.0-8.0)		Soil		Sampled: 12/16/08 12:47						
Diesel Range Hydrocarbons	NWTPH-Dx	76.7	----	14.7	mg/kg dry	1x	8L18032	12/18/08 17:46	12/19/08 22:25	Q3
Lube Oil Range Hydrocarbons	"	67.4	----	36.8	"	"	"	"	"	Q1
<i>Surrogate(s): 2-FBP</i>			86.9%		54 - 148 %	"				"
<i>Octacosane</i>			104%		62 - 142 %	"				"
BRL0200-25 (AM-SB-9-1.0-3.0)		Soil		Sampled: 12/16/08 13:25						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	----	12.3	mg/kg dry	1x	8L18031	12/18/08 17:44	12/20/08 07:10	
Lube Oil Range Hydrocarbons	"	ND	----	30.9	"	"	"	"	"	
<i>Surrogate(s): 2-FBP</i>			98.6%		54 - 148 %	"				"
<i>Octacosane</i>			110%		62 - 142 %	"				"
BRL0200-26 (AM-SB-9-4.0-5.0)		Soil		Sampled: 12/16/08 13:40						
Diesel Range Hydrocarbons	NWTPH-Dx	75.5	----	13.6	mg/kg dry	1x	8L18032	12/18/08 17:46	12/19/08 22:47	Q3
Lube Oil Range Hydrocarbons	"	42.3	----	34.1	"	"	"	"	"	Q1
<i>Surrogate(s): 2-FBP</i>			89.2%		54 - 148 %	"				"
<i>Octacosane</i>			109%		62 - 142 %	"				"
BRL0200-27 (AM-W-9)		Water		Sampled: 12/16/08 14:00						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	----	0.245	mg/l	1x	8L18029	12/19/08 14:39	12/22/08 20:54	
Lube Oil Range Hydrocarbons	"	ND	----	0.490	"	"	"	"	"	
<i>Surrogate(s): 2-FBP</i>			88.6%		53 - 125 %	"				"
<i>Octacosane</i>			96.1%		68 - 125 %	"				"
BRL0200-28 (AM-SB-12-1.0-2.0)		Soil		Sampled: 12/16/08 14:22						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	----	12.1	mg/kg dry	1x	8L18032	12/18/08 17:46	12/19/08 23:09	
Lube Oil Range Hydrocarbons	"	ND	----	30.2	"	"	"	"	"	
<i>Surrogate(s): 2-FBP</i>			94.6%		54 - 148 %	"				"
<i>Octacosane</i>			103%		62 - 142 %	"				"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue	Project Name: WSDOT SR 520 - Pontoon Sites	
1100 112th Avenue NE, Suite 400	Project Number: 180171.AR.X7.02	Report Created:
Bellevue, WA/USA 98004-4504	Project Manager: Brian Tracy	01/26/09 09:59

Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-29 (AM-SB-12-9.0-10.0)		Soil		Sampled: 12/16/08 14:32						
Diesel Range Hydrocarbons	NWTPH-Dx	117	----	13.4	mg/kg dry	1x	8L18032	12/18/08 17:46	12/19/08 23:31	Q6
Lube Oil Range Hydrocarbons	"	215	----	33.6	"	"	"	"	"	
<i>Surrogate(s): 2-FBP</i>			93.4%		54 - 148 %	"				
<i>Octacosane</i>			107%		62 - 142 %	"				
BRL0200-30 (ALY-SB-11-1.0-2.0)		Soil		Sampled: 12/16/08 16:15						
Diesel Range Hydrocarbons	NWTPH-Dx	12.0	----	11.2	mg/kg dry	1x	8L18032	12/18/08 17:46	12/19/08 23:53	Q6
Lube Oil Range Hydrocarbons	"	ND	----	28.0	"	"	"	"	"	
<i>Surrogate(s): 2-FBP</i>			91.3%		54 - 148 %	"				
<i>Octacosane</i>			107%		62 - 142 %	"				
BRL0200-31 (ALY-SB-11-3.0-4.0)		Soil		Sampled: 12/16/08 16:23						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	----	11.5	mg/kg dry	1x	8L18032	12/18/08 17:46	12/20/08 01:21	
Lube Oil Range Hydrocarbons	"	ND	----	28.8	"	"	"	"	"	
<i>Surrogate(s): 2-FBP</i>			92.7%		54 - 148 %	"				
<i>Octacosane</i>			99.2%		62 - 142 %	"				
BRL0200-32 (ALY-W-11)		Water		Sampled: 12/16/08 16:50						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	----	0.243	mg/l	1x	8L18029	12/19/08 14:39	12/22/08 21:16	
Lube Oil Range Hydrocarbons	"	ND	----	0.485	"	"	"	"	"	
<i>Surrogate(s): 2-FBP</i>			90.8%		53 - 125 %	"				
<i>Octacosane</i>			91.3%		68 - 125 %	"				
BRL0200-33 (AM-W-12)		Water		Sampled: 12/16/08 14:55						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	----	0.248	mg/l	1x	8L18029	12/19/08 14:39	12/22/08 21:38	
Lube Oil Range Hydrocarbons	"	ND	----	0.495	"	"	"	"	"	
<i>Surrogate(s): 2-FBP</i>			80.4%		53 - 125 %	"				
<i>Octacosane</i>			90.0%		68 - 125 %	"				
BRL0200-34 (ALY-SB-3-1.0-3.0)		Soil		Sampled: 12/17/08 08:02						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	----	11.0	mg/kg dry	1x	8L18032	12/18/08 17:46	12/20/08 01:43	
Lube Oil Range Hydrocarbons	"	ND	----	27.6	"	"	"	"	"	
<i>Surrogate(s): 2-FBP</i>			89.6%		54 - 148 %	"				
<i>Octacosane</i>			97.4%		62 - 142 %	"				

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-35 (ALY-SB-3-3.0-4.0)		Soil		Sampled: 12/17/08 08:10						
Diesel Range Hydrocarbons	NWTPH-Dx	19.1	----	12.1	mg/kg dry	1x	8L18032	12/18/08 17:46	12/20/08 02:04	Q6
Lube Oil Range Hydrocarbons	"	60.5	----	30.2	"	"	"	"	"	
<i>Surrogate(s): 2-FBP</i>		81.7%		54 - 148 %		"		"		
<i>Octacosane</i>		88.2%		62 - 142 %		"		"		
BRL0200-36 (ALY-W-3)		Water		Sampled: 12/17/08 08:40						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	----	0.248	mg/l	1x	8L18029	12/19/08 14:39	12/23/08 00:14	
Lube Oil Range Hydrocarbons	"	ND	----	0.495	"	"	"	"	"	
<i>Surrogate(s): 2-FBP</i>		95.6%		53 - 125 %		"		"		
<i>Octacosane</i>		100%		68 - 125 %		"		"		
BRL0200-37 (ALY-SB-9-1.0-2.0)		Soil		Sampled: 12/17/08 09:25						
Diesel Range Hydrocarbons	NWTPH-Dx	253	----	12.6	mg/kg dry	1x	8L18032	12/18/08 17:46	12/20/08 02:26	Q3
Lube Oil Range Hydrocarbons	"	107	----	31.5	"	"	"	"	"	Q1
<i>Surrogate(s): 2-FBP</i>		89.7%		54 - 148 %		"		"		
<i>Octacosane</i>		112%		62 - 142 %		"		"		
BRL0200-38 (ALY-SB-9-7.0-8.0)		Soil		Sampled: 12/17/08 09:35						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	----	11.4	mg/kg dry	1x	8L18032	12/18/08 17:46	12/20/08 02:48	
Lube Oil Range Hydrocarbons	"	ND	----	28.6	"	"	"	"	"	
<i>Surrogate(s): 2-FBP</i>		90.6%		54 - 148 %		"		"		
<i>Octacosane</i>		100%		62 - 142 %		"		"		
BRL0200-39 (ALY-SB-12-1.0-2.0)		Soil		Sampled: 12/17/08 09:55						
Diesel Range Hydrocarbons	NWTPH-Dx	170	----	11.0	mg/kg dry	1x	8L18032	12/18/08 17:46	12/20/08 03:10	Q6
Lube Oil Range Hydrocarbons	"	106	----	27.5	"	"	"	"	"	QP, Q1
<i>Surrogate(s): 2-FBP</i>		92.1%		54 - 148 %		"		"		
<i>Octacosane</i>		114%		62 - 142 %		"		"		
BRL0200-40 (ALY-SB-12-6.5-7.5)		Soil		Sampled: 12/17/08 10:00						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	----	19.2	mg/kg dry	1x	8L18032	12/18/08 17:46	12/20/08 03:32	
Lube Oil Range Hydrocarbons	"	ND	----	48.0	"	"	"	"	"	
<i>Surrogate(s): 2-FBP</i>		90.2%		54 - 148 %		"		"		
<i>Octacosane</i>		102%		62 - 142 %		"		"		

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-41 (ALY-W-12)		Water			Sampled: 12/17/08 10:30					
Diesel Range Hydrocarbons	NWTPH-Dx	ND	----	0.248	mg/l	1x	8L18029	12/19/08 14:39	12/23/08 00:36	
Lube Oil Range Hydrocarbons	"	ND	----	0.495	"	"	"	"	"	
Surrogate(s): 2-FBP			82.5%		53 - 125 %	"				
Octacosane			92.0%		68 - 125 %	"				
BRL0200-42 (ALY-SB-8-1.0-2.0)		Soil			Sampled: 12/17/08 11:02					
Diesel Range Hydrocarbons	NWTPH-Dx	41.6	----	11.1	mg/kg dry	1x	8L18032	12/18/08 17:46	12/20/08 03:54	Q6
Lube Oil Range Hydrocarbons	"	27.8	----	27.8	"	"	"	"	"	QP, Q1
Surrogate(s): 2-FBP			89.4%		54 - 148 %	"				
Octacosane			113%		62 - 142 %	"				
BRL0200-43 (ALY-SB-8-3.0-4.0)		Soil			Sampled: 12/17/08 11:10					
Diesel Range Hydrocarbons	NWTPH-Dx	454	----	18.0	mg/kg dry	1x	8L18032	12/18/08 17:46	12/20/08 04:16	Q6
Lube Oil Range Hydrocarbons	"	309	----	45.0	"	"	"	"	"	Q1, QP
Surrogate(s): 2-FBP			78.1%		54 - 148 %	"				
Octacosane			94.8%		62 - 142 %	"				
BRL0200-44 (ALY-SB-7-1.0-2.0)		Soil			Sampled: 12/17/08 11:35					
Diesel Range Hydrocarbons	NWTPH-Dx	36.0	----	11.4	mg/kg dry	1x	8L18032	12/18/08 17:46	12/20/08 04:38	Q6
Lube Oil Range Hydrocarbons	"	54.0	----	28.5	"	"	"	"	"	QP
Surrogate(s): 2-FBP			92.9%		54 - 148 %	"				
Octacosane			107%		62 - 142 %	"				
BRL0200-45 (ALY-SB-7-10.0-11.0)		Soil			Sampled: 12/17/08 11:52					
Diesel Range Hydrocarbons	NWTPH-Dx	16.1	----	13.1	mg/kg dry	1x	8L18032	12/18/08 17:46	12/20/08 06:05	Q6
Lube Oil Range Hydrocarbons	"	70.4	----	32.7	"	"	"	"	"	M2
Surrogate(s): 2-FBP			85.9%		54 - 148 %	"				
Octacosane			102%		62 - 142 %	"				
BRL0200-46 (ALY-W-7)		Water			Sampled: 12/17/08 12:20					
Diesel Range Hydrocarbons	NWTPH-Dx	ND	----	0.243	mg/l	1x	8L18029	12/19/08 14:39	12/23/08 00:58	
Lube Oil Range Hydrocarbons	"	ND	----	0.485	"	"	"	"	"	
Surrogate(s): 2-FBP			85.3%		53 - 125 %	"				
Octacosane			90.9%		68 - 125 %	"				

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue 1100 112th Avenue NE, Suite 400 Bellevue, WA/USA 98004-4504	Project Name: WSDOT SR 520 - Pontoon Sites Project Number: 180171.AR.X7.02 Project Manager: Brian Tracy	Report Created: 01/26/09 09:59
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Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up
TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-47 (ALY-SB-6-1.0-2.0)		Soil			Sampled: 12/17/08 12:45					
Diesel Range Hydrocarbons	NWTPH-Dx	123	----	10.7	mg/kg dry	1x	8L18032	12/18/08 17:46	12/20/08 06:27	Q6
Surrogate(s): 2-FBP			83.0%		54 - 148 %	"				"
Octacosane			117%		62 - 142 %	"				"
BRL0200-47RE1 (ALY-SB-6-1.0-2.0)		Soil			Sampled: 12/17/08 12:45					
Lube Oil Range Hydrocarbons	NWTPH-Dx	1310	----	134	mg/kg dry	5x	8L18032	12/18/08 17:46	12/22/08 11:05	
Surrogate(s): 2-FBP			73.6%		54 - 148 %	"				"
Octacosane			136%		62 - 142 %	"				"
BRL0200-48 (ALY-SB-6-3.0-4.0)		Soil			Sampled: 12/17/08 12:55					
Diesel Range Hydrocarbons	NWTPH-Dx	ND	----	11.7	mg/kg dry	1x	8L18032	12/18/08 17:46	12/20/08 06:48	
Lube Oil Range Hydrocarbons	"	ND	----	29.2	"	"	"	"	"	
Surrogate(s): 2-FBP			93.1%		54 - 148 %	"				"
Octacosane			106%		62 - 142 %	"				"
BRL0200-49 (ALY-SB-2-1.0-3.0)		Soil			Sampled: 12/17/08 13:24					
Diesel Range Hydrocarbons	NWTPH-Dx	60.6	----	11.2	mg/kg dry	1x	8L18032	12/18/08 17:46	12/20/08 07:10	Q6
Lube Oil Range Hydrocarbons	"	83.6	----	28.0	"	"	"	"	"	QP
Surrogate(s): 2-FBP			92.4%		54 - 148 %	"				"
Octacosane			108%		62 - 142 %	"				"
BRL0200-50 (ALY-SB-2-4.0-5.0)		Soil			Sampled: 12/17/08 13:30					
Diesel Range Hydrocarbons	NWTPH-Dx	21.3	----	14.8	mg/kg dry	1x	8L22027	12/22/08 12:50	12/22/08 19:47	Q3
Lube Oil Range Hydrocarbons	"	ND	----	37.1	"	"	"	"	"	C
Surrogate(s): 2-FBP			87.4%		54 - 148 %	"				"
Octacosane			102%		62 - 142 %	"				"
BRL0200-51 (ALY-W-2)		Water			Sampled: 12/17/08 14:00					
Diesel Range Hydrocarbons	NWTPH-Dx	ND	----	0.250	mg/l	1x	8L18029	12/19/08 14:39	12/23/08 01:20	
Lube Oil Range Hydrocarbons	"	ND	----	0.500	"	"	"	"	"	
Surrogate(s): 2-FBP			86.9%		53 - 125 %	"				"
Octacosane			92.0%		68 - 125 %	"				"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-52 (ALY-SB-1-1.0-2.0)		Soil		Sampled: 12/17/08 14:16						
Diesel Range Hydrocarbons	NWTPH-Dx	141	----	13.3	mg/kg dry	1x	8L22027	12/22/08 12:50	12/22/08 20:10	Q3
<i>Surrogate(s): 2-FBP</i>			74.1%		54 - 148 %	"				"
<i>Octacosane</i>			79.6%		62 - 142 %	"				"
BRL0200-52RE1 (ALY-SB-1-1.0-2.0)		Soil		Sampled: 12/17/08 14:16						
Lube Oil Range Hydrocarbons	NWTPH-Dx	217	----	33.3	mg/kg dry	1x	8L22027	12/22/08 12:50	12/23/08 12:07	
<i>Surrogate(s): 2-FBP</i>			74.1%		54 - 148 %	"				"
<i>Octacosane</i>			78.6%		62 - 142 %	"				"
BRL0200-53 (ALY-SB-1-3.0-4.0)		Soil		Sampled: 12/17/08 14:22						
Diesel Range Hydrocarbons	NWTPH-Dx	166	----	15.2	mg/kg dry	1x	8L22027	12/22/08 12:50	12/22/08 20:31	Q4
<i>Surrogate(s): 2-FBP</i>			98.6%		54 - 148 %	"				"
<i>Octacosane</i>			103%		62 - 142 %	"				"
BRL0200-53RE1 (ALY-SB-1-3.0-4.0)		Soil		Sampled: 12/17/08 14:22						
Lube Oil Range Hydrocarbons	NWTPH-Dx	132	----	38.0	mg/kg dry	1x	8L22027	12/22/08 12:50	12/23/08 12:29	Q4
<i>Surrogate(s): 2-FBP</i>			91.5%		54 - 148 %	"				"
<i>Octacosane</i>			101%		62 - 142 %	"				"
BRL0200-54 (ALY-SB-4-1.0-2.0)		Soil		Sampled: 12/17/08 14:50						
Diesel Range Hydrocarbons	NWTPH-Dx	30.2	----	11.0	mg/kg dry	1x	8L22027	12/22/08 12:50	12/22/08 20:54	Q3
Lube Oil Range Hydrocarbons	"	ND	----	27.6	"	"	"	"	"	C
<i>Surrogate(s): 2-FBP</i>			94.2%		54 - 148 %	"				"
<i>Octacosane</i>			107%		62 - 142 %	"				"
BRL0200-55 (ALY-SB-4-3.0-4.0)		Soil		Sampled: 12/17/08 14:55						
Diesel Range Hydrocarbons	NWTPH-Dx	196	----	14.2	mg/kg dry	1x	8L22027	12/22/08 12:50	12/22/08 21:16	Q4
<i>Surrogate(s): 2-FBP</i>			83.1%		54 - 148 %	"				"
<i>Octacosane</i>			98.9%		62 - 142 %	"				"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue	Project Name: WSDOT SR 520 - Pontoon Sites	
1100 112th Avenue NE, Suite 400	Project Number: 180171.AR.X7.02	Report Created:
Bellevue, WA/USA 98004-4504	Project Manager: Brian Tracy	01/26/09 09:59

Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-55RE1 (ALY-SB-4-3.0-4.0)		Soil		Sampled: 12/17/08 14:55						
Lube Oil Range Hydrocarbons	NWTPH-Dx	369	----	35.5	mg/kg dry	1x	8L22027	12/22/08 12:50	12/23/08 12:51	Q4
Surrogate(s): 2-FBP		85.1%		54 - 148 %		"				"
Octacosane		98.8%		62 - 142 %		"				"
BRL0200-56 (ALY-SB-10-1.0-2.0)		Soil		Sampled: 12/17/08 15:32						
Diesel Range Hydrocarbons	NWTPH-Dx	18.6	----	10.9	mg/kg dry	1x	8L22027	12/22/08 12:50	12/22/08 21:38	Q3
Surrogate(s): 2-FBP		89.4%		54 - 148 %		"				"
Octacosane		99.9%		62 - 142 %		"				"
BRL0200-56RE1 (ALY-SB-10-1.0-2.0)		Soil		Sampled: 12/17/08 15:32						
Lube Oil Range Hydrocarbons	NWTPH-Dx	33.6	----	27.3	mg/kg dry	1x	8L22027	12/22/08 12:50	12/23/08 13:13	
Surrogate(s): 2-FBP		90.2%		54 - 148 %		"				"
Octacosane		101%		62 - 142 %		"				"
BRL0200-57 (ALY-SB-10-6.0-8.0)		Soil		Sampled: 12/17/08 15:42						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	----	14.7	mg/kg dry	1x	8L22027	12/22/08 12:50	12/23/08 00:14	
Lube Oil Range Hydrocarbons	"	ND	----	36.8	"	"	"	"	"	C
Surrogate(s): 2-FBP		95.7%		54 - 148 %		"				"
Octacosane		105%		62 - 142 %		"				"
BRL0200-58 (ALY-SB-5-1.0-2.0)		Soil		Sampled: 12/17/08 16:00						
Diesel Range Hydrocarbons	NWTPH-Dx	52.4	----	10.8	mg/kg dry	1x	8L22027	12/22/08 12:50	12/23/08 00:36	Q3
Surrogate(s): 2-FBP		93.1%		54 - 148 %		"				"
Octacosane		109%		62 - 142 %		"				"
BRL0200-58RE1 (ALY-SB-5-1.0-2.0)		Soil		Sampled: 12/17/08 16:00						
Lube Oil Range Hydrocarbons	NWTPH-Dx	41.2	----	27.1	mg/kg dry	1x	8L22027	12/22/08 12:50	12/23/08 13:35	Q1
Surrogate(s): 2-FBP		92.7%		54 - 148 %		"				"
Octacosane		108%		62 - 142 %		"				"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue 1100 112th Avenue NE, Suite 400 Bellevue, WA/USA 98004-4504	Project Name: WSDOT SR 520 - Pontoon Sites Project Number: 180171.AR.X7.02 Project Manager: Brian Tracy	Report Created: 01/26/09 09:59
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Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up
TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-59 (ALY-SB-5-3.0-4.0)		Soil			Sampled: 12/17/08 16:10					
Diesel Range Hydrocarbons	NWTPH-Dx	139	----	11.6	mg/kg dry	1x	8L22027	12/22/08 12:50	12/23/08 00:58	Q3
Surrogate(s): 2-FBP		95.1%		54 - 148 %		"				"
Octacosane		104%		62 - 142 %		"				"
BRL0200-59RE1 (ALY-SB-5-3.0-4.0)		Soil			Sampled: 12/17/08 16:10					
Lube Oil Range Hydrocarbons	NWTPH-Dx	112	----	28.9	mg/kg dry	1x	8L22027	12/22/08 12:50	12/23/08 13:57	Q1
Surrogate(s): 2-FBP		95.0%		54 - 148 %		"				"
Octacosane		104%		62 - 142 %		"				"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Total Metals by EPA 6000/7000 Series Methods

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-01 (AM-SB-1-1.0-2.0)		Soil		Sampled: 12/15/08 12:40						
Antimony	EPA 6020	ND	----	1.58	mg/kg dry	1x	9A16024	01/16/09 13:38	01/19/09 08:39	M2
Arsenic	"	0.599	----	0.525	"	"	"	"	"	
Barium	"	36.9	----	5.25	"	"	"	"	"	M1
Beryllium	"	0.677	----	0.525	"	"	"	"	"	
Cadmium	"	ND	----	0.525	"	"	"	"	"	
Chromium	"	29.0	----	0.525	"	"	"	"	"	
Cobalt	"	34.0	----	0.525	"	"	"	"	"	
Copper	"	143	----	0.525	"	"	"	"	"	M1
Lead	"	0.793	----	0.525	"	"	"	"	"	R3
Mercury	EPA 7471A	ND	----	0.102	"	"	8L22031	12/22/08 15:17	12/23/08 08:58	
Molybdenum	EPA 6020	ND	----	2.63	"	"	9A16024	01/16/09 13:38	01/19/09 08:39	R3
Nickel	"	41.1	----	0.525	"	"	"	"	"	
Selenium	"	ND	----	1.05	"	"	"	"	"	
Silver	"	ND	----	0.525	"	"	"	"	"	
Strontium	"	105	----	0.525	"	"	"	"	"	M1
Thallium	"	ND	----	0.525	"	"	"	"	"	
Zinc	"	84.7	----	5.25	"	"	"	"	"	
BRL0200-01RE1 (AM-SB-1-1.0-2.0)		Soil		Sampled: 12/15/08 12:40						
Manganese	EPA 6020	1490	----	263	mg/kg dry	50x	9A16024	01/16/09 13:38	01/19/09 09:32	MHA
Titanium	"	4720	----	26.3	"	"	"	"	"	MHA
Vanadium	"	235	----	1.05	"	2x	"	"	01/19/09 09:26	
BRL0200-02 (AM-SB-1-4.0-6.0)		Soil		Sampled: 12/15/08 13:00						
Antimony	EPA 6020	ND	----	2.10	mg/kg dry	1x	9A16024	01/16/09 13:38	01/19/09 08:45	
Arsenic	"	7.73	----	0.702	"	"	"	"	"	
Barium	"	55.3	----	7.02	"	"	"	"	"	
Beryllium	"	0.751	----	0.702	"	"	"	"	"	
Cadmium	"	ND	----	0.702	"	"	"	"	"	
Chromium	"	48.7	----	0.702	"	"	"	"	"	
Cobalt	"	15.2	----	0.702	"	"	"	"	"	
Copper	"	71.8	----	0.702	"	"	"	"	"	
Lead	"	17.8	----	0.702	"	"	"	"	"	
Mercury	EPA 7471A	ND	----	0.139	"	"	8L22031	12/22/08 15:17	12/23/08 09:00	
Molybdenum	EPA 6020	ND	----	3.51	"	"	9A16024	01/16/09 13:38	01/19/09 08:45	
Nickel	"	31.8	----	0.702	"	"	"	"	"	
Selenium	"	ND	----	1.40	"	"	"	"	"	
Silver	"	0.702	----	0.702	"	"	"	"	"	
Strontium	"	53.1	----	0.702	"	"	"	"	"	
Thallium	"	ND	----	0.702	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Total Metals by EPA 6000/7000 Series Methods

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-02 (AM-SB-1-4.0-6.0)		Soil		Sampled: 12/15/08 13:00						
Vanadium	EPA 6020	97.6	----	0.702	mg/kg dry	1x	9A16024	01/16/09 13:38	01/19/09 08:45	
Zinc	"	104	----	7.02	"	"	"	"	"	
BRL0200-02RE1 (AM-SB-1-4.0-6.0)		Soil		Sampled: 12/15/08 13:00						
Manganese	EPA 6020	488	----	140	mg/kg dry	20x	9A16024	01/16/09 13:38	01/19/09 10:26	
Titanium	"	160	----	1.40	"	2x	"	"	"	
BRL0200-03 (AM-W-1)		Water		Sampled: 12/15/08 13:30						
Antimony	EPA 6020	ND	----	0.00300	mg/l	1x	9A14044	01/14/09 21:11	01/15/09 07:40	
Arsenic	"	0.0493	----	0.00100	"	"	"	"	"	
Barium	"	0.0294	----	0.0100	"	"	"	"	"	
Beryllium	"	ND	----	0.00100	"	"	"	"	"	
Cadmium	"	ND	----	0.00100	"	"	"	"	"	
Chromium	"	0.0312	----	0.00100	"	"	"	"	"	
Cobalt	"	0.00848	----	0.00100	"	"	"	"	"	
Copper	"	0.0450	----	0.00100	"	"	"	"	"	
Lead	"	0.00463	----	0.00100	"	"	"	"	"	
Mercury	EPA 7470A	ND	----	0.000200	"	"	8L22033	12/22/08 15:20	12/23/08 14:03	
Molybdenum	EPA 6020	0.00546	----	0.00500	"	"	9A14044	01/14/09 21:11	01/15/09 07:40	
Nickel	"	0.0164	----	0.00100	"	"	"	"	"	
Selenium	"	0.00180	----	0.00100	"	"	"	"	"	
Silver	"	ND	----	0.00100	"	"	"	"	"	M2
Strontium	"	0.325	----	0.00500	"	5x	9A16001	01/16/09 07:17	01/16/09 11:29	
Thallium	"	ND	----	0.00100	"	1x	9A14044	01/14/09 21:11	01/15/09 07:40	
Vanadium	"	0.0782	----	0.00100	"	"	"	"	"	
Zinc	"	0.0489	----	0.0100	"	"	"	"	"	
BRL0200-03RE1 (AM-W-1)		Water		Sampled: 12/15/08 13:30						
Manganese	EPA 6020	0.692	----	0.100	mg/l	10x	9A14044	01/14/09 21:11	01/15/09 11:32	
Titanium	"	1.36	----	0.0100	"	"	"	"	"	MHA

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Total Metals by EPA 6000/7000 Series Methods

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-04 (AM-SB-2-1.0-2.0)		Soil		Sampled: 12/15/08 14:23						
Antimony	EPA 6020	ND	----	1.35	mg/kg dry	1x	9A16024	01/16/09 13:38	01/19/09 08:51	
Arsenic	"	0.689	----	0.451	"	"	"	"	"	
Barium	"	52.6	----	4.51	"	"	"	"	"	
Beryllium	"	0.599	----	0.451	"	"	"	"	"	
Cadmium	"	ND	----	0.451	"	"	"	"	"	
Chromium	"	14.2	----	0.451	"	"	"	"	"	
Cobalt	"	27.2	----	0.451	"	"	"	"	"	
Lead	"	1.87	----	0.451	"	"	"	"	"	
Mercury	EPA 7471A	ND	----	0.0902	"	"	8L22031	12/22/08 15:17	12/23/08 09:03	
Molybdenum	EPA 6020	ND	----	2.25	"	"	9A16024	01/16/09 13:38	01/19/09 08:51	
Nickel	"	40.7	----	0.451	"	"	"	"	"	
Selenium	"	ND	----	0.901	"	"	"	"	"	
Silver	"	ND	----	0.451	"	"	"	"	"	
Thallium	"	ND	----	0.451	"	"	"	"	"	
Vanadium	"	137	----	0.451	"	"	"	"	"	
Zinc	"	75.3	----	4.51	"	"	"	"	"	
BRL0200-04RE1 (AM-SB-2-1.0-2.0)		Soil		Sampled: 12/15/08 14:23						
Copper	EPA 6020	174	----	0.901	mg/kg dry	2x	9A16024	01/16/09 13:38	01/19/09 10:32	
Manganese	"	1110	----	225	"	50x	"	"	01/19/09 10:38	
Strontium	"	216	----	0.901	"	2x	"	"	01/19/09 10:32	
Titanium	"	3700	----	22.5	"	50x	"	"	01/19/09 10:38	
BRL0200-05 (AM-SB-2-4.0-6.0)		Soil		Sampled: 12/15/08 14:40						
Antimony	EPA 6020	ND	----	1.72	mg/kg dry	1x	9A16024	01/16/09 13:38	01/19/09 08:56	
Arsenic	"	3.73	----	0.574	"	"	"	"	"	
Barium	"	28.3	----	5.74	"	"	"	"	"	
Beryllium	"	ND	----	0.574	"	"	"	"	"	
Cadmium	"	ND	----	0.574	"	"	"	"	"	
Chromium	"	31.9	----	0.574	"	"	"	"	"	
Cobalt	"	15.7	----	0.574	"	"	"	"	"	
Copper	"	37.7	----	0.574	"	"	"	"	"	
Lead	"	4.66	----	0.574	"	"	"	"	"	
Mercury	EPA 7471A	ND	----	0.112	"	"	8L22031	12/22/08 15:17	12/23/08 09:05	
Molybdenum	EPA 6020	ND	----	2.87	"	"	9A16024	01/16/09 13:38	01/19/09 08:56	
Nickel	"	28.7	----	0.574	"	"	"	"	"	
Selenium	"	ND	----	1.15	"	"	"	"	"	
Silver	"	ND	----	0.574	"	"	"	"	"	
Strontium	"	31.5	----	0.574	"	"	"	"	"	
Thallium	"	ND	----	0.574	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue	Project Name: WSDOT SR 520 - Pontoon Sites	Report Created:
1100 112th Avenue NE, Suite 400	Project Number: 180171.AR.X7.02	01/26/09 09:59
Bellevue, WA/USA 98004-4504	Project Manager: Brian Tracy	

Total Metals by EPA 6000/7000 Series Methods
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-05 (AM-SB-2-4.0-6.0)		Soil		Sampled: 12/15/08 14:40						
Vanadium	EPA 6020	81.0	----	0.574	mg/kg dry	1x	9A16024	01/16/09 13:38	01/19/09 08:56	
Zinc	"	65.5	----	5.74	"	"	"	"	"	
BRL0200-05RE1 (AM-SB-2-4.0-6.0)		Soil		Sampled: 12/15/08 14:40						
Manganese	EPA 6020	362	----	115	mg/kg dry	20x	9A16024	01/16/09 13:38	01/19/09 10:44	
Titanium	"	2080	----	11.5	"	"	"	"	"	
BRL0200-06 (AM-SB-3-0.0-1.0)		Soil		Sampled: 12/15/08 15:15						
Antimony	EPA 6020	ND	----	1.62	mg/kg dry	1x	9A16024	01/16/09 13:38	01/19/09 09:02	
Arsenic	"	1.49	----	0.540	"	"	"	"	"	
Barium	"	45.6	----	5.40	"	"	"	"	"	
Beryllium	"	ND	----	0.540	"	"	"	"	"	
Cadmium	"	ND	----	0.540	"	"	"	"	"	
Chromium	"	33.1	----	0.540	"	"	"	"	"	
Cobalt	"	22.1	----	0.540	"	"	"	"	"	
Copper	"	82.3	----	0.540	"	"	"	"	"	
Lead	"	2.47	----	0.540	"	"	"	"	"	
Mercury	EPA 7471A	ND	----	0.103	"	"	8L22031	12/22/08 15:17	12/23/08 09:07	
Molybdenum	EPA 6020	ND	----	2.70	"	"	9A16024	01/16/09 13:38	01/19/09 09:02	
Nickel	"	46.2	----	0.540	"	"	"	"	"	
Selenium	"	ND	----	1.08	"	"	"	"	"	
Silver	"	ND	----	0.540	"	"	"	"	"	
Strontium	"	88.9	----	0.540	"	"	"	"	"	
Thallium	"	ND	----	0.540	"	"	"	"	"	
Vanadium	"	118	----	0.540	"	"	"	"	"	
Zinc	"	59.7	----	5.40	"	"	"	"	"	
BRL0200-06RE1 (AM-SB-3-0.0-1.0)		Soil		Sampled: 12/15/08 15:15						
Manganese	EPA 6020	1030	----	108	mg/kg dry	20x	9A16024	01/16/09 13:38	01/19/09 10:50	
Titanium	"	2360	----	10.8	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue 1100 112th Avenue NE, Suite 400 Bellevue, WA/USA 98004-4504	Project Name: WSDOT SR 520 - Pontoon Sites Project Number: 180171.AR.X7.02 Project Manager: Brian Tracy	Report Created: 01/26/09 09:59
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Total Metals by EPA 6000/7000 Series Methods
TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-07 (AM-SB-3-4.0-5.0)		Soil								
		Sampled: 12/15/08 15:20								
Antimony	EPA 6020	ND	----	1.83	mg/kg dry	1x	9A16024	01/16/09 13:38	01/19/09 10:02	
Arsenic	"	1.61	----	0.609	"	"	"	"	"	
Barium	"	55.6	----	6.09	"	"	"	"	"	
Beryllium	"	0.706	----	0.609	"	"	"	"	01/19/09 17:05	
Cadmium	"	ND	----	0.609	"	"	"	"	01/19/09 10:02	
Chromium	"	46.9	----	0.609	"	"	"	"	"	
Cobalt	"	34.3	----	0.609	"	"	"	"	"	
Copper	"	115	----	0.609	"	"	"	"	"	
Lead	"	3.09	----	0.609	"	"	"	"	"	
Mercury	EPA 7471A	ND	----	0.115	"	"	8L22031	12/22/08 15:17	12/23/08 09:10	
Molybdenum	EPA 6020	ND	----	3.04	"	"	9A16024	01/16/09 13:38	01/19/09 10:02	
Nickel	"	48.0	----	0.609	"	"	"	"	"	
Selenium	"	ND	----	1.22	"	"	"	"	"	
Silver	"	ND	----	0.609	"	"	"	"	"	
Strontium	"	56.1	----	0.609	"	"	"	"	"	
Thallium	"	ND	----	0.609	"	"	"	"	"	
Vanadium	"	189	----	0.609	"	"	"	"	"	
Zinc	"	91.9	----	6.09	"	"	"	"	"	

BRL0200-07RE1 (AM-SB-3-4.0-5.0)		Soil								
		Sampled: 12/15/08 15:20								
Manganese	EPA 6020	1230	----	122	mg/kg dry	20x	9A16024	01/16/09 13:38	01/19/09 17:17	
Titanium	"	3550	----	12.2	"	"	"	"	"	

BRL0200-08 (AM-SB-7-1.5-3.0)		Soil								
		Sampled: 12/15/08 15:40								
Antimony	EPA 6020	ND	----	1.98	mg/kg dry	1x	9A16024	01/16/09 13:38	01/19/09 10:08	
Arsenic	"	ND	----	0.662	"	"	"	"	"	
Barium	"	73.5	----	6.62	"	"	"	"	"	
Beryllium	"	1.16	----	0.662	"	"	"	"	01/19/09 17:11	
Cadmium	"	0.787	----	0.662	"	"	"	"	01/19/09 10:08	
Chromium	"	69.2	----	0.662	"	"	"	"	"	
Cobalt	"	63.7	----	0.662	"	"	"	"	"	
Lead	"	1.36	----	0.662	"	"	"	"	"	
Mercury	EPA 7471A	ND	----	0.118	"	"	8L22031	12/22/08 15:17	12/23/08 09:12	
Molybdenum	EPA 6020	ND	----	3.31	"	"	9A16024	01/16/09 13:38	01/19/09 10:08	
Nickel	"	66.6	----	0.662	"	"	"	"	"	
Selenium	"	ND	----	1.32	"	"	"	"	"	
Silver	"	ND	----	0.662	"	"	"	"	"	
Strontium	"	82.4	----	0.662	"	"	"	"	"	
Thallium	"	ND	----	0.662	"	"	"	"	"	
Vanadium	"	229	----	0.662	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue	Project Name: WSDOT SR 520 - Pontoon Sites	Report Created:
1100 112th Avenue NE, Suite 400	Project Number: 180171.AR.X7.02	01/26/09 09:59
Bellevue, WA/USA 98004-4504	Project Manager: Brian Tracy	

Total Metals by EPA 6000/7000 Series Methods
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-08 (AM-SB-7-1.5-3.0)		Soil		Sampled: 12/15/08 15:40						
Zinc	EPA 6020	144	----	6.62	mg/kg dry	1x	9A16024	01/16/09 13:38	01/19/09 10:08	
BRL0200-08RE1 (AM-SB-7-1.5-3.0)		Soil		Sampled: 12/15/08 15:40						
Copper	EPA 6020	290	----	1.32	mg/kg dry	2x	9A16024	01/16/09 13:38	01/19/09 17:23	
Manganese	"	2590	----	331	"	50x	"	"	01/19/09 17:29	
Titanium	"	4590	----	33.1	"	"	"	"	"	
BRL0200-09 (AM-SB-7-6.0-7.0)		Soil		Sampled: 12/15/08 15:55						
Antimony	EPA 6020	ND	----	2.00	mg/kg dry	1x	9A16024	01/16/09 13:38	01/19/09 10:14	
Arsenic	"	8.53	----	0.667	"	"	"	"	"	
Barium	"	36.0	----	6.67	"	"	"	"	"	
Beryllium	"	ND	----	0.667	"	"	"	"	01/19/09 18:05	
Cadmium	"	ND	----	0.667	"	"	"	"	01/19/09 10:14	
Chromium	"	31.5	----	0.667	"	"	"	"	"	
Cobalt	"	14.4	----	0.667	"	"	"	"	"	
Copper	"	39.7	----	0.667	"	"	"	"	"	
Lead	"	22.8	----	0.667	"	"	"	"	"	
Mercury	EPA 7471A	ND	----	0.121	"	"	8L22031	12/22/08 15:17	12/23/08 09:20	
Molybdenum	EPA 6020	ND	----	3.33	"	"	9A16024	01/16/09 13:38	01/19/09 10:14	
Nickel	"	26.7	----	0.667	"	"	"	"	"	
Selenium	"	ND	----	1.33	"	"	"	"	"	
Silver	"	ND	----	0.667	"	"	"	"	"	
Strontium	"	37.0	----	0.667	"	"	"	"	"	
Thallium	"	ND	----	0.667	"	"	"	"	"	
Vanadium	"	78.5	----	0.667	"	"	"	"	"	
Zinc	"	77.1	----	6.67	"	"	"	"	"	
BRL0200-09RE1 (AM-SB-7-6.0-7.0)		Soil		Sampled: 12/15/08 15:55						
Manganese	EPA 6020	463	----	133	mg/kg dry	20x	9A16024	01/16/09 13:38	01/19/09 17:35	
Titanium	"	1930	----	13.3	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Total Metals by EPA 6000/7000 Series Methods

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-10 (AM-SB-10-0.0-3.0)		Soil		Sampled: 12/15/08 16:20						
Antimony	EPA 6020	ND	----	1.60	mg/kg dry	1x	9A16024	01/16/09 13:38	01/19/09 10:20	
Arsenic	"	ND	----	0.534	"	"	"	"	"	
Barium	"	39.2	----	5.34	"	"	"	"	"	
Beryllium	"	ND	----	0.534	"	"	"	"	01/19/09 18:11	
Cadmium	"	ND	----	0.534	"	"	"	"	01/19/09 10:20	
Chromium	"	55.6	----	0.534	"	"	"	"	"	
Cobalt	"	31.2	----	0.534	"	"	"	"	"	
Copper	"	119	----	0.534	"	"	"	"	"	
Lead	"	2.31	----	0.534	"	"	"	"	"	
Mercury	EPA 7471A	ND	----	0.112	"	"	8L22031	12/22/08 15:17	12/23/08 09:23	
Molybdenum	EPA 6020	ND	----	2.67	"	"	9A16024	01/16/09 13:38	01/19/09 10:20	
Nickel	"	78.9	----	0.534	"	"	"	"	"	
Selenium	"	ND	----	1.07	"	"	"	"	"	
Silver	"	ND	----	0.534	"	"	"	"	"	
Strontium	"	167	----	0.534	"	"	"	"	"	
Thallium	"	ND	----	0.534	"	"	"	"	"	
Vanadium	"	100	----	0.534	"	"	"	"	"	
Zinc	"	68.7	----	5.34	"	"	"	"	"	
BRL0200-10RE1 (AM-SB-10-0.0-3.0)		Soil		Sampled: 12/15/08 16:20						
Manganese	EPA 6020	971	----	107	mg/kg dry	20x	9A16024	01/16/09 13:38	01/19/09 17:41	
Titanium	"	2430	----	10.7	"	"	"	"	"	
BRL0200-11 (AM-SB-10-10.0-11.0)		Soil		Sampled: 12/15/08 16:32						
Antimony	EPA 6020	ND	----	1.55	mg/kg dry	1x	9A16024	01/16/09 13:38	01/19/09 18:17	
Arsenic	"	1.32	----	0.517	"	"	"	"	"	
Barium	"	129	----	5.17	"	"	"	"	"	
Beryllium	"	0.905	----	0.517	"	"	"	"	"	
Cadmium	"	0.548	----	0.517	"	"	"	"	"	
Chromium	"	90.2	----	0.517	"	"	"	"	"	
Cobalt	"	26.6	----	0.517	"	"	"	"	"	
Copper	"	57.9	----	0.517	"	"	"	"	"	
Lead	"	4.26	----	0.517	"	"	"	"	"	
Mercury	EPA 7471A	ND	----	0.115	"	"	8L22031	12/22/08 15:17	12/23/08 09:25	
Molybdenum	EPA 6020	ND	----	2.59	"	"	9A16024	01/16/09 13:38	01/19/09 18:17	
Nickel	"	34.8	----	0.517	"	"	"	"	"	
Selenium	"	ND	----	1.03	"	"	"	"	"	
Silver	"	ND	----	0.517	"	"	"	"	"	
Strontium	"	38.8	----	0.517	"	"	"	"	01/21/09 08:34	
Thallium	"	ND	----	0.517	"	"	"	"	01/19/09 18:17	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue	Project Name: WSDOT SR 520 - Pontoon Sites	Report Created:
1100 112th Avenue NE, Suite 400	Project Number: 180171.AR.X7.02	01/26/09 09:59
Bellevue, WA/USA 98004-4504	Project Manager: Brian Tracy	

Total Metals by EPA 6000/7000 Series Methods
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-11 (AM-SB-10-10.0-11.0)		Soil			Sampled: 12/15/08 16:32					
Vanadium	EPA 6020	164	----	0.517	mg/kg dry	1x	9A16024	01/16/09 13:38	01/19/09 18:17	
Zinc	"	63.2	----	5.17	"	"	"	"	01/20/09 08:34	
BRL0200-11RE1 (AM-SB-10-10.0-11.0)		Soil			Sampled: 12/15/08 16:32					
Manganese	EPA 6020	630	----	103	mg/kg dry	20x	9A16024	01/16/09 13:38	01/20/09 08:52	
Titanium	"	2320	----	10.3	"	"	"	"	"	
BRL0200-12 (AM-SB-11-1.0-2.0)		Soil			Sampled: 12/16/08 08:10					
Antimony	EPA 6020	ND	----	1.55	mg/kg dry	1x	9A16024	01/16/09 13:38	01/19/09 18:23	
Arsenic	"	3.23	----	0.517	"	"	"	"	"	
Barium	"	52.0	----	5.17	"	"	"	"	"	
Beryllium	"	ND	----	0.517	"	"	"	"	"	
Cadmium	"	ND	----	0.517	"	"	"	"	"	
Chromium	"	35.9	----	0.517	"	"	"	"	"	
Cobalt	"	15.3	----	0.517	"	"	"	"	"	
Copper	"	49.8	----	0.517	"	"	"	"	"	
Lead	"	3.94	----	0.517	"	"	"	"	"	
Mercury	EPA 7471A	ND	----	0.107	"	"	8L22031	12/22/08 15:17	12/23/08 09:28	
Molybdenum	EPA 6020	ND	----	2.58	"	"	9A16024	01/16/09 13:38	01/19/09 18:23	
Nickel	"	28.4	----	0.517	"	"	"	"	"	
Selenium	"	ND	----	1.03	"	"	"	"	"	
Silver	"	ND	----	0.517	"	"	"	"	"	
Strontium	"	52.0	----	0.517	"	"	"	"	01/21/09 08:40	
Thallium	"	ND	----	0.517	"	"	"	"	01/19/09 18:23	
Vanadium	"	65.9	----	0.517	"	"	"	"	"	
Zinc	"	68.4	----	5.17	"	"	"	"	01/20/09 08:40	
BRL0200-12RE1 (AM-SB-11-1.0-2.0)		Soil			Sampled: 12/16/08 08:10					
Manganese	EPA 6020	664	----	103	mg/kg dry	20x	9A16024	01/16/09 13:38	01/20/09 08:58	
Titanium	"	2510	----	10.3	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Total Metals by EPA 6000/7000 Series Methods

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-13 (AM-SB-11-4.0-6.0)		Soil		Sampled: 12/16/08 08:22						
Antimony	EPA 6020	ND	----	1.83	mg/kg dry	1x	9A16024	01/16/09 13:38	01/19/09 18:29	
Arsenic	"	4.24	----	0.609	"	"	"	"	"	
Barium	"	64.0	----	6.09	"	"	"	"	"	
Beryllium	"	ND	----	0.609	"	"	"	"	"	
Cadmium	"	ND	----	0.609	"	"	"	"	"	
Chromium	"	35.9	----	0.609	"	"	"	"	"	
Cobalt	"	14.1	----	0.609	"	"	"	"	"	
Copper	"	35.5	----	0.609	"	"	"	"	"	
Lead	"	9.24	----	0.609	"	"	"	"	"	
Mercury	EPA 7471A	ND	----	0.111	"	"	8L22032	12/22/08 15:19	12/23/08 09:53	
Molybdenum	EPA 6020	ND	----	3.05	"	"	9A16024	01/16/09 13:38	01/19/09 18:29	
Nickel	"	24.7	----	0.609	"	"	"	"	"	
Selenium	"	ND	----	1.22	"	"	"	"	"	
Silver	"	ND	----	0.609	"	"	"	"	"	
Strontium	"	54.6	----	0.609	"	"	"	"	01/21/09 08:46	
Thallium	"	ND	----	0.609	"	"	"	"	01/19/09 18:29	
Vanadium	"	59.1	----	0.609	"	"	"	"	"	
Zinc	"	76.1	----	6.09	"	"	"	"	01/20/09 08:46	
BRL0200-13RE1 (AM-SB-11-4.0-6.0)		Soil		Sampled: 12/16/08 08:22						
Manganese	EPA 6020	373	----	122	mg/kg dry	20x	9A16024	01/16/09 13:38	01/20/09 09:04	
Titanium	"	1100	----	12.2	"	"	"	"	"	
BRL0200-14 (AM-W-11)		Water		Sampled: 12/16/08 08:45						
Antimony	EPA 6020	ND	----	0.00300	mg/l	1x	9A14044	01/14/09 21:11	01/15/09 08:15	
Arsenic	"	0.0217	----	0.00100	"	"	"	"	"	
Barium	"	0.214	----	0.0100	"	"	"	"	"	
Beryllium	"	0.00173	----	0.00100	"	"	"	"	"	
Cadmium	"	0.00163	----	0.00100	"	"	"	"	"	
Chromium	"	0.205	----	0.00100	"	"	"	"	"	
Cobalt	"	0.0541	----	0.00100	"	"	"	"	"	
Copper	"	0.213	----	0.00100	"	"	"	"	"	
Lead	"	0.0561	----	0.00100	"	"	"	"	"	
Mercury	EPA 7470A	0.000275	----	0.000200	"	"	8L22033	12/22/08 15:20	12/23/08 14:06	
Molybdenum	EPA 6020	0.0233	----	0.00500	"	"	9A14044	01/14/09 21:11	01/15/09 08:15	
Nickel	"	0.114	----	0.00100	"	"	"	"	"	
Selenium	"	0.00281	----	0.00100	"	"	"	"	"	
Silver	"	ND	----	0.00100	"	"	"	"	"	
Strontium	"	0.634	----	0.00500	"	5x	9A16001	01/16/09 07:17	01/16/09 11:35	
Thallium	"	ND	----	0.00100	"	1x	9A14044	01/14/09 21:11	01/15/09 08:15	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Total Metals by EPA 6000/7000 Series Methods
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-14 (AM-W-11)		Water			Sampled: 12/16/08 08:45					
Vanadium	EPA 6020	0.261	----	0.00100	mg/l	1x	9A14044	01/14/09 21:11	01/15/09 08:15	
Zinc	"	0.547	----	0.0100	"	"	"	"	"	
BRL0200-14RE1 (AM-W-11)		Water			Sampled: 12/16/08 08:45					
Manganese	EPA 6020	3.85	----	0.500	mg/l	50x	9A14044	01/14/09 21:11	01/15/09 13:50	
Titanium	"	5.40	----	0.0500	"	"	"	"	"	
BRL0200-15 (AM-SB-8-1.0-2.0)		Soil			Sampled: 12/16/08 09:47					
Antimony	EPA 6020	ND	----	1.84	mg/kg dry	1x	9A16024	01/16/09 13:38	01/19/09 18:35	
Arsenic	"	ND	----	0.614	"	"	"	"	"	
Barium	"	95.5	----	6.14	"	"	"	"	"	
Beryllium	"	1.06	----	0.614	"	"	"	"	"	
Cadmium	"	0.976	----	0.614	"	"	"	"	"	
Chromium	"	65.5	----	0.614	"	"	"	"	"	
Cobalt	"	45.2	----	0.614	"	"	"	"	"	
Copper	"	207	----	0.614	"	"	"	"	"	
Lead	"	2.54	----	0.614	"	"	"	"	"	
Mercury	EPA 7471A	ND	----	0.112	"	"	8L22032	12/22/08 15:19	12/23/08 09:55	
Molybdenum	EPA 6020	ND	----	3.07	"	"	9A16024	01/16/09 13:38	01/19/09 18:35	
Nickel	"	55.8	----	0.614	"	"	"	"	"	
Selenium	"	ND	----	1.23	"	"	"	"	"	
Silver	"	ND	----	0.614	"	"	"	"	"	
Strontium	"	44.0	----	0.614	"	"	"	"	01/20/09 09:40	
Thallium	"	ND	----	0.614	"	"	"	"	01/19/09 18:35	
Vanadium	"	218	----	0.614	"	"	"	"	"	
Zinc	"	116	----	6.14	"	"	"	"	01/20/09 09:40	
BRL0200-15RE1 (AM-SB-8-1.0-2.0)		Soil			Sampled: 12/16/08 09:47					
Manganese	EPA 6020	1450	----	307	mg/kg dry	50x	9A16024	01/16/09 13:38	01/20/09 09:10	
Titanium	"	4740	----	30.7	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Total Metals by EPA 6000/7000 Series Methods
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-16 (AM-SB-8-8.0-10.0)		Soil		Sampled: 12/16/08 10:00						
Antimony	EPA 6020	ND	----	1.59	mg/kg dry	1x	9A16024	01/16/09 13:38	01/19/09 18:41	
Arsenic	"	3.44	----	0.531	"	"	"	"	"	
Barium	"	40.0	----	5.31	"	"	"	"	"	
Beryllium	"	ND	----	0.531	"	"	"	"	"	
Cadmium	"	ND	----	0.531	"	"	"	"	"	
Chromium	"	30.1	----	0.531	"	"	"	"	"	
Cobalt	"	21.1	----	0.531	"	"	"	"	"	
Copper	"	76.5	----	0.531	"	"	"	"	"	
Lead	"	4.49	----	0.531	"	"	"	"	"	
Mercury	EPA 7471A	ND	----	0.114	"	"	8L22032	12/22/08 15:19	12/23/08 09:58	
Molybdenum	EPA 6020	ND	----	2.65	"	"	9A16024	01/16/09 13:38	01/19/09 18:41	
Nickel	"	34.0	----	0.531	"	"	"	"	"	
Selenium	"	ND	----	1.06	"	"	"	"	"	
Silver	"	ND	----	0.531	"	"	"	"	"	
Strontium	"	50.1	----	0.531	"	"	"	"	01/20/09 09:46	
Thallium	"	ND	----	0.531	"	"	"	"	01/19/09 18:41	
Vanadium	"	93.6	----	0.531	"	"	"	"	"	
Zinc	"	75.7	----	5.31	"	"	"	"	01/20/09 09:46	
BRL0200-16RE1 (AM-SB-8-8.0-10.0)		Soil		Sampled: 12/16/08 10:00						
Manganese	EPA 6020	529	----	106	mg/kg dry	20x	9A16024	01/16/09 13:38	01/20/09 09:16	
Titanium	"	2500	----	10.6	"	"	"	"	"	
BRL0200-17 (AM-SB-6-1.0-2.0)		Soil		Sampled: 12/16/08 10:24						
Antimony	EPA 6020	ND	----	1.55	mg/kg dry	1x	9A16024	01/16/09 13:38	01/19/09 18:47	
Arsenic	"	1.02	----	0.516	"	"	"	"	"	
Barium	"	47.5	----	5.16	"	"	"	"	"	
Beryllium	"	0.568	----	0.516	"	"	"	"	"	
Cadmium	"	ND	----	0.516	"	"	"	"	"	
Chromium	"	22.9	----	0.516	"	"	"	"	"	
Cobalt	"	28.1	----	0.516	"	"	"	"	"	
Copper	"	124	----	0.516	"	"	"	"	"	
Lead	"	2.52	----	0.516	"	"	"	"	"	
Mercury	EPA 7471A	ND	----	0.0997	"	"	8L22032	12/22/08 15:19	12/23/08 10:00	
Molybdenum	EPA 6020	ND	----	2.58	"	"	9A16024	01/16/09 13:38	01/19/09 18:47	
Nickel	"	49.5	----	0.516	"	"	"	"	"	
Selenium	"	ND	----	1.03	"	"	"	"	"	
Silver	"	ND	----	0.516	"	"	"	"	"	
Strontium	"	174	----	0.516	"	"	"	"	01/20/09 09:52	
Thallium	"	ND	----	0.516	"	"	"	"	01/19/09 18:47	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue	Project Name: WSDOT SR 520 - Pontoon Sites	Report Created:
1100 112th Avenue NE, Suite 400	Project Number: 180171.AR.X7.02	01/26/09 09:59
Bellevue, WA/USA 98004-4504	Project Manager: Brian Tracy	

Total Metals by EPA 6000/7000 Series Methods
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-17 (AM-SB-6-1.0-2.0)		Soil			Sampled: 12/16/08 10:24					
Vanadium	EPA 6020	143	----	0.516	mg/kg dry	1x	9A16024	01/16/09 13:38	01/19/09 18:47	
Zinc	"	71.8	----	5.16	"	"	"	"	01/20/09 09:52	
BRL0200-17RE1 (AM-SB-6-1.0-2.0)		Soil			Sampled: 12/16/08 10:24					
Manganese	EPA 6020	1150	----	103	mg/kg dry	20x	9A16024	01/16/09 13:38	01/20/09 10:10	
Titanium	"	3160	----	10.3	"	"	"	"	"	
BRL0200-18 (AM-SB-6-6.0-8.0)		Soil			Sampled: 12/16/08 10:35					
Antimony	EPA 6020	ND	----	1.80	mg/kg dry	1x	9A16024	01/16/09 13:38	01/19/09 18:53	
Arsenic	"	3.13	----	0.599	"	"	"	"	"	
Barium	"	28.1	----	5.99	"	"	"	"	"	
Beryllium	"	ND	----	0.599	"	"	"	"	"	
Cadmium	"	ND	----	0.599	"	"	"	"	"	
Chromium	"	25.3	----	0.599	"	"	"	"	"	
Cobalt	"	11.1	----	0.599	"	"	"	"	"	
Copper	"	20.3	----	0.599	"	"	"	"	"	
Lead	"	3.56	----	0.599	"	"	"	"	"	
Mercury	EPA 7471A	ND	----	0.122	"	"	8L22032	12/22/08 15:19	12/23/08 10:03	
Molybdenum	EPA 6020	ND	----	2.99	"	"	9A16024	01/16/09 13:38	01/19/09 18:53	
Nickel	"	20.7	----	0.599	"	"	"	"	"	
Selenium	"	ND	----	1.20	"	"	"	"	"	
Silver	"	ND	----	0.599	"	"	"	"	"	
Strontium	"	27.3	----	0.599	"	"	"	"	01/20/09 09:58	
Thallium	"	ND	----	0.599	"	"	"	"	01/19/09 18:53	
Vanadium	"	54.9	----	0.599	"	"	"	"	"	
Zinc	"	58.6	----	5.99	"	"	"	"	01/20/09 09:58	
BRL0200-18RE1 (AM-SB-6-6.0-8.0)		Soil			Sampled: 12/16/08 10:35					
Manganese	EPA 6020	355	----	59.9	mg/kg dry	10x	9A16024	01/16/09 13:38	01/20/09 10:16	
Titanium	"	1400	----	5.99	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Total Metals by EPA 6000/7000 Series Methods
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-19 (AM-W-6)		Water		Sampled: 12/16/08 11:00						
Antimony	EPA 6020	ND	----	0.00300	mg/l	1x	9A14044	01/14/09 21:11	01/15/09 08:21	
Arsenic	"	0.00662	----	0.00100	"	"	"	"	"	
Barium	"	0.0292	----	0.0100	"	"	"	"	"	
Beryllium	"	ND	----	0.00100	"	"	"	"	"	
Cadmium	"	ND	----	0.00100	"	"	"	"	"	
Chromium	"	0.00919	----	0.00100	"	"	"	"	"	
Cobalt	"	0.00661	----	0.00100	"	"	"	"	"	
Copper	"	0.0119	----	0.00100	"	"	"	"	"	
Lead	"	0.00169	----	0.00100	"	"	"	"	"	
Mercury	EPA 7470A	ND	----	0.000200	"	"	8L22033	12/22/08 15:20	12/23/08 14:09	
Molybdenum	EPA 6020	ND	----	0.00500	"	"	9A14044	01/14/09 21:11	01/15/09 08:21	
Nickel	"	0.00835	----	0.00100	"	"	"	"	"	
Selenium	"	ND	----	0.00100	"	"	"	"	"	
Silver	"	ND	----	0.00100	"	"	"	"	"	
Strontium	"	0.415	----	0.00500	"	5x	9A16001	01/16/09 07:17	01/16/09 11:41	
Thallium	"	ND	----	0.00100	"	1x	9A14044	01/14/09 21:11	01/15/09 08:21	
Vanadium	"	0.0216	----	0.00100	"	"	"	"	"	
Zinc	"	0.0213	----	0.0100	"	"	"	"	"	
BRL0200-19RE1 (AM-W-6)		Water		Sampled: 12/16/08 11:00						
Manganese	EPA 6020	7.66	----	0.500	mg/l	50x	9A14044	01/14/09 21:11	01/15/09 11:38	
Titanium	"	0.606	----	0.0500	"	"	"	"	"	
BRL0200-20 (AM-SB-5-1.0-2.0)		Soil		Sampled: 12/16/08 11:35						
Antimony	EPA 6020	ND	----	1.57	mg/kg dry	1x	9A16024	01/16/09 13:38	01/19/09 18:58	
Arsenic	"	0.664	----	0.523	"	"	"	"	"	
Barium	"	102	----	5.23	"	"	"	"	"	
Beryllium	"	ND	----	0.523	"	"	"	"	"	
Cadmium	"	ND	----	0.523	"	"	"	"	"	
Chromium	"	10.1	----	0.523	"	"	"	"	"	
Cobalt	"	18.0	----	0.523	"	"	"	"	"	
Copper	"	53.2	----	0.523	"	"	"	"	"	
Lead	"	4.66	----	0.523	"	"	"	"	"	
Mercury	EPA 7471A	ND	----	0.0975	"	"	8L22032	12/22/08 15:19	12/23/08 10:05	
Molybdenum	EPA 6020	ND	----	2.61	"	"	9A16024	01/16/09 13:38	01/19/09 18:58	
Nickel	"	15.7	----	0.523	"	"	"	"	"	
Selenium	"	ND	----	1.05	"	"	"	"	"	
Silver	"	ND	----	0.523	"	"	"	"	"	
Strontium	"	57.5	----	0.523	"	"	"	"	01/20/09 10:04	
Thallium	"	ND	----	0.523	"	"	"	"	01/19/09 18:58	
Vanadium	"	86.9	----	0.523	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue	Project Name: WSDOT SR 520 - Pontoon Sites	Report Created:
1100 112th Avenue NE, Suite 400	Project Number: 180171.AR.X7.02	01/26/09 09:59
Bellevue, WA/USA 98004-4504	Project Manager: Brian Tracy	

Total Metals by EPA 6000/7000 Series Methods
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-20 (AM-SB-5-1.0-2.0)		Soil		Sampled: 12/16/08 11:35						
Zinc	"	66.6	----	5.23	"	"	"	"	01/20/09 10:04	
BRL0200-20RE1 (AM-SB-5-1.0-2.0)		Soil		Sampled: 12/16/08 11:35						
Manganese	EPA 6020	493	----	105	mg/kg dry	20x	9A16024	01/16/09 13:38	01/20/09 10:22	
Titanium	"	1960	----	10.5	"	"	"	"	"	
BRL0200-21 (AM-SB-5-3.0-4.0)		Soil		Sampled: 12/16/08 11:40						
Antimony	EPA 6020	ND	----	1.93	mg/kg dry	1x	9A16024	01/16/09 13:38	01/19/09 19:22	
Arsenic	"	2.88	----	0.644	"	"	"	"	"	
Barium	"	111	----	6.44	"	"	"	"	"	
Beryllium	"	ND	----	0.644	"	"	"	"	01/20/09 10:58	
Cadmium	"	ND	----	0.644	"	"	"	"	01/19/09 19:22	
Chromium	"	28.2	----	0.644	"	"	"	"	"	
Cobalt	"	18.5	----	0.644	"	"	"	"	"	
Copper	"	42.7	----	0.644	"	"	"	"	"	
Lead	"	8.34	----	0.644	"	"	"	"	"	
Mercury	EPA 7471A	ND	----	0.120	"	"	8L22032	12/22/08 15:19	12/23/08 10:08	
Molybdenum	EPA 6020	ND	----	3.22	"	"	9A16024	01/16/09 13:38	01/19/09 19:22	
Nickel	"	26.9	----	0.644	"	"	"	"	"	
Selenium	"	ND	----	1.29	"	"	"	"	"	
Silver	"	ND	----	0.644	"	"	"	"	"	
Strontium	"	42.2	----	0.644	"	"	"	"	01/20/09 10:58	
Thallium	"	ND	----	0.644	"	"	"	"	01/19/09 19:22	
Vanadium	"	88.0	----	0.644	"	"	"	"	"	
Zinc	"	74.1	----	6.44	"	"	"	"	01/20/09 10:58	
BRL0200-21RE1 (AM-SB-5-3.0-4.0)		Soil		Sampled: 12/16/08 11:40						
Manganese	EPA 6020	536	----	129	mg/kg dry	20x	9A16024	01/16/09 13:38	01/20/09 10:28	
Titanium	"	2070	----	12.9	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue 1100 112th Avenue NE, Suite 400 Bellevue, WA/USA 98004-4504	Project Name: WSDOT SR 520 - Pontoon Sites Project Number: 180171.AR.X7.02 Project Manager: Brian Tracy	Report Created: 01/26/09 09:59
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Total Metals by EPA 6000/7000 Series Methods
TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-22 (AM-W-5)		Water		Sampled: 12/16/08 12:15						
Antimony	EPA 6020	ND	----	0.00300	mg/l	1x	9A14044	01/14/09 21:11	01/15/09 08:27	
Arsenic	"	0.00367	----	0.00100	"	"	"	"	"	
Barium	"	0.0492	----	0.0100	"	"	"	"	"	
Beryllium	"	ND	----	0.00100	"	"	"	"	"	
Cadmium	"	ND	----	0.00100	"	"	"	"	"	
Chromium	"	0.00568	----	0.00100	"	"	"	"	"	
Cobalt	"	0.00352	----	0.00100	"	"	"	"	"	
Copper	"	0.00691	----	0.00100	"	"	"	"	"	
Lead	"	0.00113	----	0.00100	"	"	"	"	"	
Mercury	EPA 7470A	ND	----	0.000200	"	"	8L22033	12/22/08 15:20	12/23/08 14:11	
Molybdenum	EPA 6020	ND	----	0.00500	"	"	9A14044	01/14/09 21:11	01/15/09 08:27	
Nickel	"	0.00448	----	0.00100	"	"	"	"	"	
Selenium	"	0.00146	----	0.00100	"	"	"	"	"	
Silver	"	ND	----	0.00100	"	"	"	"	"	
Strontium	"	0.674	----	0.00500	"	5x	9A16001	01/16/09 07:17	01/16/09 11:47	
Thallium	"	ND	----	0.00100	"	1x	9A14044	01/14/09 21:11	01/15/09 08:27	
Titanium	"	0.293	----	0.00100	"	"	"	"	"	
Vanadium	"	0.0129	----	0.00100	"	"	"	"	"	
Zinc	"	0.0128	----	0.0100	"	"	"	"	"	

BRL0200-22RE1 (AM-W-5)		Water		Sampled: 12/16/08 12:15						
Manganese	EPA 6020	1.99	----	0.100	mg/l	10x	9A14044	01/14/09 21:11	01/15/09 12:14	

BRL0200-23 (AM-SB-4-1.0-2.0)		Soil		Sampled: 12/16/08 12:25						
Antimony	EPA 6020	ND	----	1.72	mg/kg dry	1x	9A16024	01/16/09 13:38	01/19/09 19:28	
Arsenic	"	0.678	----	0.574	"	"	"	"	"	
Barium	"	115	----	5.74	"	"	"	"	"	
Beryllium	"	0.913	----	0.574	"	"	"	"	01/20/09 11:04	
Cadmium	"	ND	----	0.574	"	"	"	"	01/19/09 19:28	
Chromium	"	84.6	----	0.574	"	"	"	"	"	
Cobalt	"	48.8	----	0.574	"	"	"	"	"	
Copper	"	186	----	0.574	"	"	"	"	"	
Lead	"	4.67	----	0.574	"	"	"	"	"	
Mercury	EPA 7471A	ND	----	0.109	"	"	8L22032	12/22/08 15:19	12/23/08 10:10	
Molybdenum	EPA 6020	ND	----	2.87	"	"	9A16024	01/16/09 13:38	01/19/09 19:28	
Nickel	"	71.0	----	0.574	"	"	"	"	"	
Selenium	"	ND	----	1.15	"	"	"	"	"	
Silver	"	ND	----	0.574	"	"	"	"	"	
Strontium	"	190	----	0.574	"	"	"	"	01/20/09 11:04	
Thallium	"	ND	----	0.574	"	"	"	"	01/19/09 19:28	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Total Metals by EPA 6000/7000 Series Methods
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-23 (AM-SB-4-1.0-2.0)		Soil		Sampled: 12/16/08 12:25						
Vanadium	EPA 6020	171	----	0.574	mg/kg dry	1x	9A16024	01/16/09 13:38	01/19/09 19:28	
Zinc	"	109	----	5.74	"	"	"	"	01/20/09 11:04	
BRL0200-23RE1 (AM-SB-4-1.0-2.0)		Soil		Sampled: 12/16/08 12:25						
Manganese	EPA 6020	1960	----	115	mg/kg dry	20x	9A16024	01/16/09 13:38	01/20/09 10:34	
Titanium	"	2880	----	11.5	"	"	"	"	"	
BRL0200-24 (AM-SB-4-7.0-8.0)		Soil		Sampled: 12/16/08 12:47						
Antimony	EPA 6020	ND	----	1.97	mg/kg dry	1x	9A16024	01/16/09 13:38	01/19/09 19:34	
Arsenic	"	0.925	----	0.656	"	"	"	"	"	
Barium	"	69.6	----	6.56	"	"	"	"	"	
Beryllium	"	ND	----	0.656	"	"	"	"	01/20/09 11:10	
Cadmium	"	0.715	----	0.656	"	"	"	"	01/19/09 19:34	
Chromium	"	29.6	----	0.656	"	"	"	"	"	
Cobalt	"	27.0	----	0.656	"	"	"	"	"	
Copper	"	126	----	0.656	"	"	"	"	"	
Lead	"	3.83	----	0.656	"	"	"	"	"	
Mercury	EPA 7471A	ND	----	0.134	"	"	8L22032	12/22/08 15:19	12/23/08 10:13	
Molybdenum	EPA 6020	ND	----	3.28	"	"	9A16024	01/16/09 13:38	01/19/09 19:34	
Nickel	"	38.1	----	0.656	"	"	"	"	"	
Selenium	"	ND	----	1.31	"	"	"	"	"	
Silver	"	ND	----	0.656	"	"	"	"	"	
Strontium	"	79.6	----	0.656	"	"	"	"	01/20/09 11:10	
Thallium	"	ND	----	0.656	"	"	"	"	01/19/09 19:34	
Vanadium	"	154	----	0.656	"	"	"	"	"	
Zinc	"	78.1	----	6.56	"	"	"	"	01/20/09 11:10	
BRL0200-24RE1 (AM-SB-4-7.0-8.0)		Soil		Sampled: 12/16/08 12:47						
Manganese	EPA 6020	1170	----	32.8	mg/kg dry	5x	9A16024	01/16/09 13:38	01/19/09 19:40	
Titanium	"	1660	----	13.1	"	20x	"	"	01/20/09 11:16	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Total Metals by EPA 6000/7000 Series Methods
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-25 (AM-SB-9-1.0-3.0)		Soil		Sampled: 12/16/08 13:25						
Antimony	EPA 6020	ND	----	1.75	mg/kg dry	1x	9A16025	01/16/09 13:44	01/19/09 20:16	M2
Arsenic	"	0.996	----	0.582	"	"	"	"	"	M2
Barium	"	192	----	5.82	"	"	"	"	"	M2
Beryllium	"	0.938	----	0.582	"	"	"	"	01/20/09 12:28	
Cadmium	"	0.740	----	0.582	"	"	"	"	01/19/09 20:16	
Chromium	"	88.2	----	0.582	"	"	"	"	"	M2
Cobalt	"	49.6	----	0.582	"	"	"	"	"	
Copper	"	170	----	0.582	"	"	"	"	"	
Lead	"	6.82	----	0.582	"	"	"	"	"	
Mercury	EPA 7471A	ND	----	0.109	"	"	8L23015	12/23/08 15:41	12/24/08 11:59	
Molybdenum	EPA 6020	ND	----	2.91	"	"	9A16025	01/16/09 13:44	01/19/09 20:16	M2
Nickel	"	75.2	----	0.582	"	"	"	"	"	
Selenium	"	ND	----	1.16	"	"	"	"	"	M2
Silver	"	ND	----	0.582	"	"	"	"	"	
Strontium	"	139	----	0.582	"	"	"	"	01/20/09 12:28	M2
Thallium	"	ND	----	0.582	"	"	"	"	01/19/09 20:16	
Vanadium	"	161	----	0.582	"	"	"	"	"	M2
Zinc	"	112	----	5.82	"	"	"	"	01/20/09 12:28	M2
BRL0200-25RE1 (AM-SB-9-1.0-3.0)		Soil		Sampled: 12/16/08 13:25						
Manganese	EPA 6020	2210	----	116	mg/kg dry	20x	9A16025	01/16/09 13:44	01/20/09 12:58	MHA
Titanium	"	3000	----	11.6	"	"	"	"	"	B1, MHA
BRL0200-26 (AM-SB-9-4.0-5.0)		Soil		Sampled: 12/16/08 13:40						
Antimony	EPA 6020	ND	----	1.98	mg/kg dry	1x	9A16025	01/16/09 13:44	01/19/09 20:40	
Arsenic	"	1.46	----	0.659	"	"	"	"	"	
Barium	"	81.1	----	6.59	"	"	"	"	"	
Beryllium	"	ND	----	0.659	"	"	"	"	01/20/09 12:34	
Cadmium	"	ND	----	0.659	"	"	"	"	01/19/09 20:40	
Chromium	"	16.3	----	0.659	"	"	"	"	"	
Cobalt	"	16.9	----	0.659	"	"	"	"	"	
Copper	"	39.3	----	0.659	"	"	"	"	"	
Lead	"	8.88	----	0.659	"	"	"	"	"	
Mercury	EPA 7471A	ND	----	0.131	"	"	8L22032	12/22/08 15:19	12/23/08 10:23	
Molybdenum	EPA 6020	ND	----	3.30	"	"	9A16025	01/16/09 13:44	01/19/09 20:40	
Nickel	"	18.4	----	0.659	"	"	"	"	"	
Selenium	"	ND	----	1.32	"	"	"	"	"	
Silver	"	ND	----	0.659	"	"	"	"	"	
Strontium	"	39.6	----	0.659	"	"	"	"	01/20/09 12:34	
Thallium	"	ND	----	0.659	"	"	"	"	01/19/09 20:40	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Total Metals by EPA 6000/7000 Series Methods
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-26 (AM-SB-9-4.0-5.0)		Soil		Sampled: 12/16/08 13:40						
Vanadium	EPA 6020	74.7	----	0.659	mg/kg dry	1x	9A16025	01/16/09 13:44	01/19/09 20:40	
Zinc	"	63.9	----	6.59	"	"	"	"	01/20/09 12:34	
BRL0200-26RE1 (AM-SB-9-4.0-5.0)		Soil		Sampled: 12/16/08 13:40						
Manganese	EPA 6020	632	----	132	mg/kg dry	20x	9A16025	01/16/09 13:44	01/20/09 13:04	
Titanium	"	2430	----	13.2	"	"	"	"	"	B1
BRL0200-27 (AM-W-9)		Water		Sampled: 12/16/08 14:00						
Antimony	EPA 6020	ND	----	0.00300	mg/l	1x	9A14044	01/14/09 21:11	01/15/09 08:33	
Arsenic	"	0.0394	----	0.00100	"	"	"	"	"	
Barium	"	0.0202	----	0.0100	"	"	"	"	"	
Beryllium	"	ND	----	0.00100	"	"	"	"	"	
Cadmium	"	ND	----	0.00100	"	"	"	"	"	
Chromium	"	0.0130	----	0.00100	"	"	"	"	"	
Cobalt	"	0.00647	----	0.00100	"	"	"	"	"	
Copper	"	0.0224	----	0.00100	"	"	"	"	"	
Lead	"	0.00426	----	0.00100	"	"	"	"	"	
Mercury	EPA 7470A	0.000384	----	0.000200	"	"	8L22033	12/22/08 15:20	12/23/08 14:01	
Molybdenum	EPA 6020	ND	----	0.00500	"	"	9A14044	01/14/09 21:11	01/15/09 08:33	
Nickel	"	0.0109	----	0.00100	"	"	"	"	"	
Selenium	"	ND	----	0.00100	"	"	"	"	"	
Silver	"	ND	----	0.00100	"	"	"	"	"	
Strontium	"	0.170	----	0.00100	"	"	9A16001	01/16/09 07:17	01/16/09 11:53	
Thallium	"	ND	----	0.00100	"	"	9A14044	01/14/09 21:11	01/15/09 08:33	
Vanadium	"	0.0322	----	0.00100	"	"	"	"	"	
Zinc	"	0.0256	----	0.0100	"	"	"	"	"	
BRL0200-27RE1 (AM-W-9)		Water		Sampled: 12/16/08 14:00						
Manganese	EPA 6020	0.684	----	0.0500	mg/l	5x	9A14044	01/14/09 21:11	01/15/09 12:20	
Titanium	"	0.910	----	0.00500	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

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Amended Report

CH2M Hill - Bellevue	Project Name: WSDOT SR 520 - Pontoon Sites	Report Created:
1100 112th Avenue NE, Suite 400	Project Number: 180171.AR.X7.02	01/26/09 09:59
Bellevue, WA/USA 98004-4504	Project Manager: Brian Tracy	

Total Metals by EPA 6000/7000 Series Methods
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-28 (AM-SB-12-1.0-2.0)		Soil		Sampled: 12/16/08 14:22						
Antimony	EPA 6020	ND	----	1.62	mg/kg dry	1x	9A16025	01/16/09 13:44	01/19/09 20:46	
Arsenic	"	ND	----	0.539	"	"	"	"	"	
Barium	"	27.9	----	5.39	"	"	"	"	"	
Beryllium	"	0.959	----	0.539	"	"	"	"	01/20/09 12:40	
Cadmium	"	0.830	----	0.539	"	"	"	"	01/19/09 20:46	
Chromium	"	36.4	----	0.539	"	"	"	"	"	
Cobalt	"	40.3	----	0.539	"	"	"	"	"	
Lead	"	0.878	----	0.539	"	"	"	"	"	
Mercury	EPA 7471A	ND	----	0.106	"	"	8L22032	12/22/08 15:19	12/23/08 10:26	
Molybdenum	EPA 6020	ND	----	2.69	"	"	9A16025	01/16/09 13:44	01/19/09 20:46	
Nickel	"	47.2	----	0.539	"	"	"	"	"	
Selenium	"	ND	----	1.08	"	"	"	"	"	
Silver	"	ND	----	0.539	"	"	"	"	"	
Strontium	"	76.0	----	0.539	"	"	"	"	01/20/09 12:40	
Thallium	"	ND	----	0.539	"	"	"	"	01/19/09 20:46	
Vanadium	"	156	----	0.539	"	"	"	"	"	
Zinc	"	99.9	----	5.39	"	"	"	"	01/20/09 12:40	

BRL0200-28RE1 (AM-SB-12-1.0-2.0)		Soil		Sampled: 12/16/08 14:22						
Copper	EPA 6020	208	----	1.08	mg/kg dry	2x	9A16025	01/16/09 13:44	01/20/09 13:10	
Manganese	"	740	----	108	"	20x	"	"	01/20/09 14:09	
Titanium	"	1800	----	10.8	"	"	"	"	"	B1

BRL0200-29 (AM-SB-12-9.0-10.0)		Soil		Sampled: 12/16/08 14:32						
Antimony	EPA 6020	ND	----	1.93	mg/kg dry	1x	9A16025	01/16/09 13:44	01/19/09 20:52	
Arsenic	"	1.92	----	0.644	"	"	"	"	"	
Barium	"	55.5	----	6.44	"	"	"	"	"	
Beryllium	"	ND	----	0.644	"	"	"	"	01/20/09 13:33	
Cadmium	"	0.760	----	0.644	"	"	"	"	01/19/09 20:52	
Chromium	"	26.9	----	0.644	"	"	"	"	"	
Cobalt	"	18.6	----	0.644	"	"	"	"	"	
Copper	"	84.0	----	0.644	"	"	"	"	"	
Lead	"	9.07	----	0.644	"	"	"	"	"	
Mercury	EPA 7471A	ND	----	0.125	"	"	8L22032	12/22/08 15:19	12/23/08 10:28	
Molybdenum	EPA 6020	ND	----	3.22	"	"	9A16025	01/16/09 13:44	01/19/09 20:52	
Nickel	"	31.3	----	0.644	"	"	"	"	"	
Selenium	"	ND	----	1.29	"	"	"	"	"	
Silver	"	ND	----	0.644	"	"	"	"	"	
Strontium	"	44.3	----	0.644	"	"	"	"	01/20/09 13:33	
Thallium	"	ND	----	0.644	"	"	"	"	01/19/09 20:52	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Total Metals by EPA 6000/7000 Series Methods
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-29 (AM-SB-12-9.0-10.0)		Soil		Sampled: 12/16/08 14:32						
Vanadium	EPA 6020	98.1	----	0.644	mg/kg dry	1x	9A16025	01/16/09 13:44	01/19/09 20:52	
Zinc	"	82.6	----	6.44	"	"	"	"	01/20/09 13:33	
BRL0200-29RE1 (AM-SB-12-9.0-10.0)		Soil		Sampled: 12/16/08 14:32						
Manganese	EPA 6020	520	----	129	mg/kg dry	20x	9A16025	01/16/09 13:44	01/20/09 14:15	
Titanium	"	2590	----	12.9	"	"	"	"	"	B1
BRL0200-30 (ALY-SB-11-1.0-2.0)		Soil		Sampled: 12/16/08 16:15						
Antimony	EPA 6020	ND	----	1.68	mg/kg dry	1x	9A16025	01/16/09 13:44	01/19/09 20:58	
Arsenic	"	1.70	----	0.558	"	"	"	"	"	
Barium	"	38.6	----	5.58	"	"	"	"	"	
Beryllium	"	ND	----	0.558	"	"	"	"	01/20/09 13:39	
Cadmium	"	ND	----	0.558	"	"	"	"	01/19/09 20:58	
Chromium	"	21.8	----	0.558	"	"	"	"	"	
Cobalt	"	15.0	----	0.558	"	"	"	"	"	
Copper	"	63.0	----	0.558	"	"	"	"	"	
Lead	"	2.67	----	0.558	"	"	"	"	"	
Mercury	EPA 7471A	ND	----	0.106	"	"	8L22032	12/22/08 15:19	12/23/08 10:31	
Molybdenum	EPA 6020	ND	----	2.79	"	"	9A16025	01/16/09 13:44	01/19/09 20:58	
Nickel	"	28.4	----	0.558	"	"	"	"	"	
Selenium	"	ND	----	1.12	"	"	"	"	"	
Silver	"	ND	----	0.558	"	"	"	"	"	
Strontium	"	27.9	----	0.558	"	"	"	"	01/20/09 13:39	
Thallium	"	ND	----	0.558	"	"	"	"	01/19/09 20:58	
Vanadium	"	76.1	----	0.558	"	"	"	"	"	
Zinc	"	50.9	----	5.58	"	"	"	"	01/20/09 13:39	
BRL0200-30RE1 (ALY-SB-11-1.0-2.0)		Soil		Sampled: 12/16/08 16:15						
Manganese	EPA 6020	345	----	112	mg/kg dry	20x	9A16025	01/16/09 13:44	01/20/09 14:21	
Titanium	"	1990	----	11.2	"	"	"	"	"	B1

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Total Metals by EPA 6000/7000 Series Methods
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-31 (ALY-SB-11-3.0-4.0)		Soil		Sampled: 12/16/08 16:23						
Antimony	EPA 6020	ND	----	1.54	mg/kg dry	1x	9A16025	01/16/09 13:44	01/19/09 21:04	
Arsenic	"	1.90	----	0.513	"	"	"	"	"	
Beryllium	"	0.908	----	0.513	"	"	"	"	01/20/09 13:45	
Cadmium	"	0.554	----	0.513	"	"	"	"	01/19/09 21:04	
Chromium	"	47.0	----	0.513	"	"	"	"	"	
Cobalt	"	20.5	----	0.513	"	"	"	"	"	
Copper	"	51.0	----	0.513	"	"	"	"	"	
Lead	"	4.26	----	0.513	"	"	"	"	"	
Mercury	EPA 7471A	ND	----	0.0990	"	"	8L22032	12/22/08 15:19	12/23/08 10:33	
Molybdenum	EPA 6020	ND	----	2.57	"	"	9A16025	01/16/09 13:44	01/19/09 21:04	
Nickel	"	32.1	----	0.513	"	"	"	"	"	
Selenium	"	ND	----	1.03	"	"	"	"	"	
Silver	"	ND	----	0.513	"	"	"	"	"	
Strontium	"	28.9	----	0.513	"	"	"	"	01/20/09 13:45	
Thallium	"	ND	----	0.513	"	"	"	"	01/19/09 21:04	
Vanadium	"	116	----	0.513	"	"	"	"	"	
Zinc	"	57.7	----	5.13	"	"	"	"	01/20/09 13:45	

BRL0200-31RE1 (ALY-SB-11-3.0-4.0)		Soil		Sampled: 12/16/08 16:23						
Barium	EPA 6020	191	----	10.3	mg/kg dry	2x	9A16025	01/16/09 13:44	01/20/09 14:27	
Manganese	"	631	----	103	"	20x	"	"	01/20/09 15:27	
Titanium	"	2190	----	10.3	"	"	"	"	"	B1

BRL0200-32 (ALY-W-11)		Water		Sampled: 12/16/08 16:50						
Antimony	EPA 6020	ND	----	0.00300	mg/l	1x	9A14044	01/14/09 21:11	01/15/09 08:39	
Arsenic	"	0.00358	----	0.00100	"	"	"	"	"	
Barium	"	0.142	----	0.0100	"	"	"	"	"	
Beryllium	"	ND	----	0.00100	"	"	"	"	"	
Cadmium	"	ND	----	0.00100	"	"	"	"	"	
Chromium	"	0.0355	----	0.00100	"	"	"	"	"	
Cobalt	"	0.0164	----	0.00100	"	"	"	"	"	
Copper	"	0.0623	----	0.00100	"	"	"	"	"	
Lead	"	0.00845	----	0.00100	"	"	"	"	"	
Mercury	EPA 7470A	ND	----	0.000200	"	"	8L22033	12/22/08 15:20	12/23/08 14:21	
Molybdenum	EPA 6020	ND	----	0.00500	"	"	9A14044	01/14/09 21:11	01/15/09 08:39	
Nickel	"	0.0299	----	0.00100	"	"	"	"	"	
Selenium	"	0.00116	----	0.00100	"	"	"	"	"	
Silver	"	ND	----	0.00100	"	"	"	"	"	
Strontium	"	0.430	----	0.00500	"	5x	9A16001	01/16/09 07:17	01/16/09 12:35	
Thallium	"	ND	----	0.00100	"	1x	9A14044	01/14/09 21:11	01/15/09 08:39	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Total Metals by EPA 6000/7000 Series Methods
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-32 (ALY-W-11)		Water			Sampled: 12/16/08 16:50					
Vanadium	EPA 6020	0.108	----	0.00100	mg/l	1x	9A14044	01/14/09 21:11	01/15/09 08:39	
Zinc	"	0.0683	----	0.0100	"	"	"	"	"	
BRL0200-32RE1 (ALY-W-11)		Water			Sampled: 12/16/08 16:50					
Manganese	EPA 6020	1.21	----	0.200	mg/l	20x	9A14044	01/14/09 21:11	01/15/09 12:26	
Titanium	"	3.16	----	0.0200	"	"	"	"	"	
BRL0200-33 (AM-W-12)		Water			Sampled: 12/16/08 14:55					
Antimony	EPA 6020	ND	----	0.00300	mg/l	1x	9A14044	01/14/09 21:11	01/15/09 08:45	
Arsenic	"	0.00437	----	0.00100	"	"	"	"	"	
Barium	"	0.274	----	0.0100	"	"	"	"	"	
Beryllium	"	ND	----	0.00100	"	"	"	"	"	
Cadmium	"	ND	----	0.00100	"	"	"	"	"	
Chromium	"	0.0234	----	0.00100	"	"	"	"	"	
Cobalt	"	0.00729	----	0.00100	"	"	"	"	"	
Copper	"	0.0354	----	0.00100	"	"	"	"	"	
Lead	"	0.0146	----	0.00100	"	"	"	"	"	
Mercury	EPA 7470A	ND	----	0.000200	"	"	8L22033	12/22/08 15:20	12/23/08 14:24	
Molybdenum	EPA 6020	ND	----	0.00500	"	"	9A14044	01/14/09 21:11	01/15/09 08:45	
Nickel	"	0.0145	----	0.00100	"	"	"	"	"	
Selenium	"	0.00396	----	0.00100	"	"	"	"	"	
Silver	"	ND	----	0.00100	"	"	"	"	"	
Strontium	"	1.46	----	0.0100	"	10x	9A16001	01/16/09 07:17	01/16/09 12:41	
Thallium	"	ND	----	0.00100	"	1x	9A14044	01/14/09 21:11	01/15/09 08:45	
Vanadium	"	0.0577	----	0.00100	"	"	"	"	"	
Zinc	"	0.0771	----	0.0100	"	"	"	"	"	
BRL0200-33RE1 (AM-W-12)		Water			Sampled: 12/16/08 14:55					
Manganese	EPA 6020	2.22	----	0.100	mg/l	10x	9A14044	01/14/09 21:11	01/15/09 12:32	
Titanium	"	1.23	----	0.0100	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue 1100 112th Avenue NE, Suite 400 Bellevue, WA/USA 98004-4504	Project Name: WSDOT SR 520 - Pontoon Sites Project Number: 180171.AR.X7.02 Project Manager: Brian Tracy	Report Created: 01/26/09 09:59
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Total Metals by EPA 6000/7000 Series Methods
TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-34 (ALY-SB-3-1.0-3.0)	Soil		Sampled: 12/17/08 08:02							
Antimony	EPA 6020	ND	----	1.50	mg/kg dry	1x	9A16025	01/16/09 13:44	01/19/09 21:10	
Arsenic	"	1.61	----	0.499	"	"	"	"	"	
Barium	"	85.2	----	4.99	"	"	"	"	"	
Beryllium	"	ND	----	0.499	"	"	"	"	01/20/09 13:51	
Cadmium	"	ND	----	0.499	"	"	"	"	01/19/09 21:10	
Chromium	"	17.3	----	0.499	"	"	"	"	"	
Cobalt	"	17.4	----	0.499	"	"	"	"	"	
Copper	"	55.6	----	0.499	"	"	"	"	"	
Lead	"	5.50	----	0.499	"	"	"	"	"	
Mercury	EPA 7471A	ND	----	0.0998	"	"	8L22032	12/22/08 15:19	12/23/08 10:36	
Molybdenum	EPA 6020	ND	----	2.50	"	"	9A16025	01/16/09 13:44	01/19/09 21:10	
Nickel	"	21.4	----	0.499	"	"	"	"	"	
Selenium	"	ND	----	0.999	"	"	"	"	"	
Silver	"	ND	----	0.499	"	"	"	"	"	
Strontium	"	31.1	----	0.499	"	"	"	"	01/20/09 13:51	
Thallium	"	ND	----	0.499	"	"	"	"	01/19/09 21:10	
Vanadium	"	78.6	----	0.499	"	"	"	"	"	
Zinc	"	55.3	----	4.99	"	"	"	"	01/20/09 13:51	

BRL0200-34RE1 (ALY-SB-3-1.0-3.0)	Soil		Sampled: 12/17/08 08:02							
Manganese	EPA 6020	470	----	99.9	mg/kg dry	20x	9A16025	01/16/09 13:44	01/20/09 15:33	
Titanium	"	1480	----	9.99	"	"	"	"	"	B1

BRL0200-35 (ALY-SB-3-3.0-4.0)	Soil		Sampled: 12/17/08 08:10							
Antimony	EPA 6020	ND	----	1.71	mg/kg dry	1x	9A16025	01/16/09 13:44	01/19/09 21:15	
Arsenic	"	1.63	----	0.570	"	"	"	"	"	
Barium	"	127	----	5.70	"	"	"	"	"	
Beryllium	"	ND	----	0.570	"	"	"	"	01/20/09 13:57	
Cadmium	"	ND	----	0.570	"	"	"	"	01/19/09 21:15	
Chromium	"	12.3	----	0.570	"	"	"	"	"	
Cobalt	"	15.5	----	0.570	"	"	"	"	"	
Copper	"	23.5	----	0.570	"	"	"	"	"	
Lead	"	4.07	----	0.570	"	"	"	"	"	
Mercury	EPA 7471A	ND	----	0.115	"	"	8L22032	12/22/08 15:19	12/23/08 10:38	
Molybdenum	EPA 6020	ND	----	2.85	"	"	9A16025	01/16/09 13:44	01/19/09 21:15	
Nickel	"	11.7	----	0.570	"	"	"	"	"	
Selenium	"	ND	----	1.14	"	"	"	"	"	
Silver	"	ND	----	0.570	"	"	"	"	"	
Strontium	"	47.6	----	0.570	"	"	"	"	01/20/09 13:57	
Thallium	"	ND	----	0.570	"	"	"	"	01/19/09 21:15	
Vanadium	"	75.2	----	0.570	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Total Metals by EPA 6000/7000 Series Methods

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-35 (ALY-SB-3-3.0-4.0)		Soil		Sampled: 12/17/08 08:10						
Zinc	"	50.9	----	5.70	"	"	"	"	01/20/09 13:57	
BRL0200-35RE1 (ALY-SB-3-3.0-4.0)		Soil		Sampled: 12/17/08 08:10						
Manganese	EPA 6020	425	----	114	mg/kg dry	20x	9A16025	01/16/09 13:44	01/20/09 15:39	
Titanium	"	1310	----	11.4	"	"	"	"	"	B1
BRL0200-36 (ALY-W-3)		Water		Sampled: 12/17/08 08:40						
Antimony	EPA 6020	ND	----	0.00600	mg/l	2x	9A14044	01/14/09 21:11	01/15/09 08:51	
Arsenic	"	0.0138	----	0.00200	"	"	"	"	"	
Barium	"	0.626	----	0.0200	"	"	"	"	"	
Beryllium	"	ND	----	0.00200	"	"	"	"	"	
Cadmium	"	ND	----	0.00200	"	"	"	"	"	
Chromium	"	0.130	----	0.00200	"	"	"	"	"	
Cobalt	"	0.0754	----	0.00200	"	"	"	"	"	
Copper	"	0.133	----	0.00200	"	"	"	"	"	
Lead	"	0.0388	----	0.00200	"	"	"	"	"	
Mercury	EPA 7470A	ND	----	0.000200	"	1x	8L22033	12/22/08 15:20	12/23/08 14:26	
Molybdenum	EPA 6020	0.0114	----	0.0100	"	2x	9A14044	01/14/09 21:11	01/15/09 08:51	
Nickel	"	0.0780	----	0.00200	"	"	"	"	"	
Selenium	"	0.00498	----	0.00200	"	"	"	"	"	
Silver	"	ND	----	0.00200	"	"	"	"	"	
Strontium	"	0.502	----	0.00500	"	5x	9A16001	01/16/09 07:17	01/16/09 12:47	
Thallium	"	ND	----	0.00200	"	2x	9A14044	01/14/09 21:11	01/15/09 08:51	
Vanadium	"	0.399	----	0.00200	"	"	"	"	"	
Zinc	"	0.309	----	0.0200	"	"	"	"	"	
BRL0200-36RE1 (ALY-W-3)		Water		Sampled: 12/17/08 08:40						
Manganese	EPA 6020	3.94	----	0.200	mg/l	20x	9A14044	01/14/09 21:11	01/15/09 12:38	
Titanium	"	8.29	----	0.0500	"	50x	"	"	01/15/09 13:57	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue 1100 112th Avenue NE, Suite 400 Bellevue, WA/USA 98004-4504	Project Name: WSDOT SR 520 - Pontoon Sites Project Number: 180171.AR.X7.02 Project Manager: Brian Tracy	Report Created: 01/26/09 09:59
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Total Metals by EPA 6000/7000 Series Methods
TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-37 (ALY-SB-9-1.0-2.0)		Soil		Sampled: 12/17/08 09:25						
Antimony	EPA 6020	ND	----	1.77	mg/kg dry	1x	9A16025	01/16/09 13:44	01/19/09 21:21	
Arsenic	"	1.35	----	0.590	"	"	"	"	"	
Barium	"	111	----	5.90	"	"	"	"	"	
Beryllium	"	ND	----	0.590	"	"	"	"	01/20/09 14:03	
Cadmium	"	ND	----	0.590	"	"	"	"	01/19/09 21:21	
Chromium	"	8.39	----	0.590	"	"	"	"	"	
Cobalt	"	13.3	----	0.590	"	"	"	"	"	
Copper	"	18.8	----	0.590	"	"	"	"	"	
Lead	"	4.83	----	0.590	"	"	"	"	"	
Mercury	EPA 7471A	ND	----	0.114	"	"	8L22032	12/22/08 15:19	12/23/08 10:41	
Molybdenum	EPA 6020	ND	----	2.95	"	"	9A16025	01/16/09 13:44	01/19/09 21:21	
Nickel	"	9.13	----	0.590	"	"	"	"	"	
Selenium	"	ND	----	1.18	"	"	"	"	"	
Silver	"	ND	----	0.590	"	"	"	"	"	
Strontium	"	52.2	----	0.590	"	"	"	"	01/20/09 14:03	
Thallium	"	ND	----	0.590	"	"	"	"	01/19/09 21:21	
Vanadium	"	75.0	----	0.590	"	"	"	"	"	
Zinc	"	42.5	----	5.90	"	"	"	"	01/20/09 14:03	
BRL0200-37RE1 (ALY-SB-9-1.0-2.0)		Soil		Sampled: 12/17/08 09:25						
Manganese	EPA 6020	862	----	59.0	mg/kg dry	10x	9A16025	01/16/09 13:44	01/20/09 15:45	
Titanium	"	1100	----	5.90	"	"	"	"	"	B1
BRL0200-38 (ALY-SB-9-7.0-8.0)		Soil		Sampled: 12/17/08 09:35						
Antimony	EPA 6020	ND	----	1.69	mg/kg dry	1x	9A16025	01/16/09 13:44	01/19/09 21:27	
Arsenic	"	1.82	----	0.563	"	"	"	"	"	
Barium	"	94.4	----	5.63	"	"	"	"	"	
Beryllium	"	ND	----	0.563	"	"	"	"	01/20/09 14:51	
Cadmium	"	ND	----	0.563	"	"	"	"	01/19/09 21:27	
Chromium	"	26.9	----	0.563	"	"	"	"	"	
Cobalt	"	12.7	----	0.563	"	"	"	"	"	
Copper	"	31.6	----	0.563	"	"	"	"	"	
Lead	"	4.13	----	0.563	"	"	"	"	"	
Mercury	EPA 7471A	ND	----	0.107	"	"	8L23015	12/23/08 15:41	12/24/08 12:02	
Molybdenum	EPA 6020	ND	----	2.82	"	"	9A16025	01/16/09 13:44	01/19/09 21:27	
Nickel	"	20.3	----	0.563	"	"	"	"	"	
Selenium	"	ND	----	1.13	"	"	"	"	"	
Silver	"	ND	----	0.563	"	"	"	"	"	
Strontium	"	27.7	----	0.563	"	"	"	"	01/20/09 14:51	
Thallium	"	ND	----	0.563	"	"	"	"	01/19/09 21:27	
Vanadium	"	62.4	----	0.563	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue	Project Name: WSDOT SR 520 - Pontoon Sites	Report Created:
1100 112th Avenue NE, Suite 400	Project Number: 180171.AR.X7.02	01/26/09 09:59
Bellevue, WA/USA 98004-4504	Project Manager: Brian Tracy	

Total Metals by EPA 6000/7000 Series Methods
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
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BRL0200-38 (ALY-SB-9-7.0-8.0) **Soil** **Sampled: 12/17/08 09:35**

Zinc	"	42.6	----	5.63	"	"	"	"	01/20/09 14:51	
------	---	------	------	------	---	---	---	---	----------------	--

BRL0200-38RE1 (ALY-SB-9-7.0-8.0) **Soil** **Sampled: 12/17/08 09:35**

Manganese	EPA 6020	293	----	56.3	mg/kg dry	10x	9A16025	01/16/09 13:44	01/20/09 16:39	
Titanium	"	1570	----	5.63	"	"	"	"	"	B1

BRL0200-39 (ALY-SB-12-1.0-2.0) **Soil** **Sampled: 12/17/08 09:55**

Antimony	EPA 6020	ND	----	1.54	mg/kg dry	1x	9A16025	01/16/09 13:44	01/19/09 21:33	
Arsenic	"	0.987	----	0.514	"	"	"	"	"	
Barium	"	131	----	5.14	"	"	"	"	"	
Beryllium	"	ND	----	0.514	"	"	"	"	01/20/09 14:57	
Cadmium	"	ND	----	0.514	"	"	"	"	01/19/09 21:33	
Chromium	"	8.29	----	0.514	"	"	"	"	"	
Cobalt	"	13.0	----	0.514	"	"	"	"	"	
Copper	"	11.0	----	0.514	"	"	"	"	"	
Lead	"	2.64	----	0.514	"	"	"	"	"	
Mercury	EPA 7471A	ND	----	0.101	"	"	8L23015	12/23/08 15:41	12/24/08 12:09	
Molybdenum	EPA 6020	ND	----	2.57	"	"	9A16025	01/16/09 13:44	01/19/09 21:33	
Nickel	"	6.23	----	0.514	"	"	"	"	"	
Selenium	"	ND	----	1.03	"	"	"	"	"	
Silver	"	ND	----	0.514	"	"	"	"	"	
Strontium	"	54.7	----	0.514	"	"	"	"	01/20/09 14:57	
Thallium	"	ND	----	0.514	"	"	"	"	01/19/09 21:33	
Vanadium	"	69.6	----	0.514	"	"	"	"	"	
Zinc	"	45.3	----	5.14	"	"	"	"	01/20/09 14:57	

BRL0200-39RE1 (ALY-SB-12-1.0-2.0) **Soil** **Sampled: 12/17/08 09:55**

Manganese	EPA 6020	633	----	51.4	mg/kg dry	10x	9A16025	01/16/09 13:44	01/20/09 16:45	
Titanium	"	1110	----	5.14	"	"	"	"	"	B1

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Total Metals by EPA 6000/7000 Series Methods
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-40 (ALY-SB-12-6.5-7.5)		Soil		Sampled: 12/17/08 10:00						
Antimony	EPA 6020	ND	----	2.34	mg/kg dry	1x	9A16025	01/16/09 13:44	01/19/09 21:57	
Arsenic	"	6.59	----	0.780	"	"	"	"	"	
Beryllium	"	ND	----	0.780	"	"	"	"	01/20/09 15:03	
Cadmium	"	ND	----	0.780	"	"	"	"	01/19/09 21:57	
Chromium	"	26.3	----	0.780	"	"	"	"	"	
Cobalt	"	8.40	----	0.780	"	"	"	"	"	
Copper	"	135	----	0.780	"	"	"	"	"	
Lead	"	87.7	----	0.780	"	"	"	"	"	
Mercury	EPA 7471A	ND	----	0.183	"	"	8L23015	12/23/08 15:41	12/24/08 12:12	
Molybdenum	EPA 6020	ND	----	3.90	"	"	9A16025	01/16/09 13:44	01/19/09 21:57	
Nickel	"	28.3	----	0.780	"	"	"	"	"	
Selenium	"	ND	----	1.56	"	"	"	"	"	
Silver	"	ND	----	0.780	"	"	"	"	"	
Thallium	"	ND	----	0.780	"	"	"	"	"	
Vanadium	"	48.4	----	0.780	"	"	"	"	"	
Zinc	"	250	----	7.80	"	"	"	"	01/20/09 15:03	
BRL0200-40RE1 (ALY-SB-12-6.5-7.5)		Soil		Sampled: 12/17/08 10:00						
Barium	EPA 6020	897	----	78.0	mg/kg dry	10x	9A16025	01/16/09 13:44	01/20/09 16:51	
Manganese	"	4630	----	390	"	50x	"	"	01/20/09 16:57	
Strontium	"	578	----	7.80	"	10x	"	"	01/20/09 16:51	
Titanium	"	1150	----	7.80	"	"	"	"	"	B1
BRL0200-41 (ALY-W-12)		Water		Sampled: 12/17/08 10:30						
Antimony	EPA 6020	0.00543	----	0.00300	mg/l	1x	9A14044	01/14/09 21:11	01/15/09 08:57	
Arsenic	"	0.00656	----	0.00100	"	"	"	"	"	
Beryllium	"	ND	----	0.00100	"	"	"	"	"	
Cadmium	"	ND	----	0.00100	"	"	"	"	"	
Chromium	"	0.0140	----	0.00100	"	"	"	"	"	
Cobalt	"	0.00653	----	0.00100	"	"	"	"	"	
Copper	"	0.0452	----	0.00100	"	"	"	"	"	
Lead	"	0.0199	----	0.00100	"	"	"	"	"	
Mercury	EPA 7470A	ND	----	0.000200	"	"	8L22033	12/22/08 15:20	12/23/08 14:29	
Molybdenum	EPA 6020	ND	----	0.00500	"	"	9A14044	01/14/09 21:11	01/15/09 08:57	
Nickel	"	0.0118	----	0.00100	"	"	"	"	"	
Selenium	"	0.00313	----	0.00100	"	"	"	"	"	
Silver	"	ND	----	0.00100	"	"	"	"	"	
Strontium	"	1.32	----	0.0100	"	10x	9A16001	01/16/09 07:17	01/16/09 12:53	
Thallium	"	ND	----	0.00100	"	1x	9A14044	01/14/09 21:11	01/15/09 08:57	
Vanadium	"	0.0593	----	0.00100	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Total Metals by EPA 6000/7000 Series Methods
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-41 (ALY-W-12)		Water			Sampled: 12/17/08 10:30					
Zinc	EPA 6020	0.0569	----	0.0100	mg/l	1x	9A14044	01/14/09 21:11	01/15/09 08:57	
BRL0200-41RE1 (ALY-W-12)		Water			Sampled: 12/17/08 10:30					
Barium	EPA 6020	0.538	----	0.200	mg/l	20x	9A14044	01/14/09 21:11	01/15/09 12:44	
Manganese	"	5.13	----	0.200	"	"	"	"	"	
Titanium	"	0.964	----	0.0200	"	"	"	"	"	
BRL0200-42 (ALY-SB-8-1.0-2.0)		Soil			Sampled: 12/17/08 11:02					
Antimony	EPA 6020	ND	----	1.64	mg/kg dry	1x	9A16025	01/16/09 13:44	01/19/09 22:03	
Arsenic	"	ND	----	0.548	"	"	"	"	"	
Barium	"	137	----	5.48	"	"	"	"	"	
Beryllium	"	ND	----	0.548	"	"	"	"	01/20/09 15:09	
Cadmium	"	ND	----	0.548	"	"	"	"	01/19/09 22:03	
Chromium	"	4.21	----	0.548	"	"	"	"	"	
Cobalt	"	18.3	----	0.548	"	"	"	"	"	
Copper	"	18.0	----	0.548	"	"	"	"	"	
Lead	"	3.01	----	0.548	"	"	"	"	"	
Mercury	EPA 7471A	ND	----	0.116	"	"	8L23015	12/23/08 15:41	12/24/08 12:14	
Molybdenum	EPA 6020	ND	----	2.74	"	"	9A16025	01/16/09 13:44	01/19/09 22:03	
Nickel	"	6.71	----	0.548	"	"	"	"	"	
Selenium	"	ND	----	1.10	"	"	"	"	"	
Silver	"	ND	----	0.548	"	"	"	"	"	
Strontium	"	45.0	----	0.548	"	"	"	"	01/20/09 15:09	
Thallium	"	ND	----	0.548	"	"	"	"	01/19/09 22:03	
Vanadium	"	75.0	----	0.548	"	"	"	"	"	
Zinc	"	51.2	----	5.48	"	"	"	"	01/20/09 15:09	
BRL0200-42RE1 (ALY-SB-8-1.0-2.0)		Soil			Sampled: 12/17/08 11:02					
Manganese	EPA 6020	438	----	110	mg/kg dry	20x	9A16025	01/16/09 13:44	01/20/09 17:03	
Titanium	"	1710	----	11.0	"	"	"	"	"	

B1

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Total Metals by EPA 6000/7000 Series Methods
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-43 (ALY-SB-8-3.0-4.0)		Soil		Sampled: 12/17/08 11:10						
Antimony	EPA 6020	ND	----	2.61	mg/kg dry	1x	9A16025	01/16/09 13:44	01/19/09 22:09	
Arsenic	"	1.33	----	0.869	"	"	"	"	"	
Barium	"	200	----	8.69	"	"	"	"	"	
Beryllium	"	ND	----	0.869	"	"	"	"	01/20/09 15:15	
Cadmium	"	ND	----	0.869	"	"	"	"	01/19/09 22:09	
Chromium	"	10.1	----	0.869	"	"	"	"	"	
Cobalt	"	12.3	----	0.869	"	"	"	"	"	
Copper	"	17.8	----	0.869	"	"	"	"	"	
Lead	"	4.85	----	0.869	"	"	"	"	"	
Mercury	EPA 7471A	ND	----	0.189	"	"	8L23015	12/23/08 15:41	12/24/08 12:17	
Molybdenum	EPA 6020	ND	----	4.35	"	"	9A16025	01/16/09 13:44	01/19/09 22:09	
Nickel	"	8.23	----	0.869	"	"	"	"	"	
Selenium	"	ND	----	1.74	"	"	"	"	"	
Silver	"	ND	----	0.869	"	"	"	"	"	
Strontium	"	48.6	----	0.869	"	"	"	"	01/20/09 15:15	
Thallium	"	ND	----	0.869	"	"	"	"	01/19/09 22:09	
Vanadium	"	86.1	----	0.869	"	"	"	"	"	
Zinc	"	57.5	----	8.69	"	"	"	"	01/20/09 15:15	
BRL0200-43RE1 (ALY-SB-8-3.0-4.0)		Soil		Sampled: 12/17/08 11:10						
Manganese	EPA 6020	269	----	86.9	mg/kg dry	10x	9A16025	01/16/09 13:44	01/20/09 18:09	
Titanium	"	1130	----	8.69	"	"	"	"	"	B1
BRL0200-44 (ALY-SB-7-1.0-2.0)		Soil		Sampled: 12/17/08 11:35						
Antimony	EPA 6020	ND	----	1.72	mg/kg dry	1x	9A16025	01/16/09 13:44	01/19/09 22:15	
Arsenic	"	0.596	----	0.573	"	"	"	"	"	
Barium	"	110	----	5.73	"	"	"	"	"	
Beryllium	"	ND	----	0.573	"	"	"	"	01/20/09 15:21	
Cadmium	"	ND	----	0.573	"	"	"	"	01/19/09 22:15	
Chromium	"	3.89	----	0.573	"	"	"	"	"	
Cobalt	"	16.0	----	0.573	"	"	"	"	"	
Copper	"	16.9	----	0.573	"	"	"	"	"	
Lead	"	2.73	----	0.573	"	"	"	"	"	
Mercury	EPA 7471A	ND	----	0.111	"	"	8L23015	12/23/08 15:41	12/24/08 12:19	
Molybdenum	EPA 6020	ND	----	2.86	"	"	9A16025	01/16/09 13:44	01/19/09 22:15	
Nickel	"	6.54	----	0.573	"	"	"	"	"	
Selenium	"	ND	----	1.15	"	"	"	"	"	
Silver	"	ND	----	0.573	"	"	"	"	"	
Strontium	"	41.2	----	0.573	"	"	"	"	01/20/09 15:21	
Thallium	"	ND	----	0.573	"	"	"	"	01/19/09 22:15	
Vanadium	"	77.2	----	0.573	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue 1100 112th Avenue NE, Suite 400 Bellevue, WA/USA 98004-4504	Project Name: WSDOT SR 520 - Pontoon Sites Project Number: 180171.AR.X7.02 Project Manager: Brian Tracy	Report Created: 01/26/09 09:59
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Total Metals by EPA 6000/7000 Series Methods
TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
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BRL0200-44 (ALY-SB-7-1.0-2.0) Soil Sampled: 12/17/08 11:35

Zinc	"	50.3	----	5.73	"	"	"	"	01/20/09 15:21	
------	---	------	------	------	---	---	---	---	----------------	--

BRL0200-44RE1 (ALY-SB-7-1.0-2.0) Soil Sampled: 12/17/08 11:35

Manganese	EPA 6020	609	----	115	mg/kg dry	20x	9A16025	01/16/09 13:44	01/20/09 18:15	
Titanium	"	2580	----	11.5	"	"	"	"	"	B1

BRL0200-45 (ALY-SB-7-10.0-11.0) Soil Sampled: 12/17/08 11:52

Antimony	EPA 6020	ND	----	1.97	mg/kg dry	1x	9A16025	01/16/09 13:44	01/19/09 22:21	
Arsenic	"	4.29	----	0.656	"	"	"	"	"	
Barium	"	88.3	----	6.56	"	"	"	"	"	
Beryllium	"	ND	----	0.656	"	"	"	"	01/20/09 16:09	
Cadmium	"	ND	----	0.656	"	"	"	"	01/19/09 22:21	
Chromium	"	28.8	----	0.656	"	"	"	"	"	
Cobalt	"	16.7	----	0.656	"	"	"	"	"	
Copper	"	44.8	----	0.656	"	"	"	"	"	
Lead	"	50.2	----	0.656	"	"	"	"	"	
Mercury	EPA 7471A	ND	----	0.132	"	"	8L23015	12/23/08 15:41	12/24/08 12:22	
Molybdenum	EPA 6020	ND	----	3.28	"	"	9A16025	01/16/09 13:44	01/19/09 22:21	
Nickel	"	24.7	----	0.656	"	"	"	"	"	
Selenium	"	ND	----	1.31	"	"	"	"	"	
Silver	"	ND	----	0.656	"	"	"	"	"	
Strontium	"	37.1	----	0.656	"	"	"	"	01/20/09 16:09	
Thallium	"	ND	----	0.656	"	"	"	"	01/19/09 22:21	
Vanadium	"	90.0	----	0.656	"	"	"	"	"	
Zinc	"	112	----	6.56	"	"	"	"	01/20/09 16:09	

BRL0200-45RE1 (ALY-SB-7-10.0-11.0) Soil Sampled: 12/17/08 11:52

Manganese	EPA 6020	353	----	65.6	mg/kg dry	10x	9A16025	01/16/09 13:44	01/20/09 18:21	
Titanium	"	1520	----	6.56	"	"	"	"	"	B1

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Total Metals by EPA 6000/7000 Series Methods
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes	
BRL0200-46 (ALY-W-7)		Water				Sampled: 12/17/08 12:20					
Antimony	EPA 6020	ND	----	0.00300	mg/l	1x	9A14044	01/14/09 21:11	01/15/09 09:03		
Arsenic	"	0.0297	----	0.00100	"	"	"	"	"		
Barium	"	0.221	----	0.0100	"	"	"	"	"		
Beryllium	"	0.00149	----	0.00100	"	"	"	"	"		
Cadmium	"	0.00115	----	0.00100	"	"	"	"	"		
Chromium	"	0.144	----	0.00100	"	"	"	"	"		
Cobalt	"	0.0391	----	0.00100	"	"	"	"	"		
Copper	"	0.131	----	0.00100	"	"	"	"	"		
Lead	"	0.0723	----	0.00200	"	2x	"	"	01/15/09 09:33		
Mercury	EPA 7470A	ND	----	0.000200	"	1x	8L22033	12/22/08 15:20	12/23/08 14:31		
Molybdenum	EPA 6020	0.0163	----	0.00500	"	"	9A14044	01/14/09 21:11	01/15/09 09:03		
Nickel	"	0.0610	----	0.00100	"	"	"	"	"		
Selenium	"	0.00999	----	0.00100	"	"	"	"	"		
Silver	"	ND	----	0.00100	"	"	"	"	"		
Strontium	"	0.806	----	0.00500	"	5x	9A16001	01/16/09 07:17	01/16/09 12:59		
Thallium	"	ND	----	0.00200	"	2x	9A14044	01/14/09 21:11	01/15/09 09:33		
Vanadium	"	0.350	----	0.00100	"	1x	"	"	01/15/09 09:03		
Zinc	"	0.227	----	0.0100	"	"	"	"	"		
BRL0200-46RE1 (ALY-W-7)		Water				Sampled: 12/17/08 12:20					
Manganese	EPA 6020	4.22	----	0.500	mg/l	50x	9A14044	01/14/09 21:11	01/15/09 12:50		
Titanium	"	6.08	----	0.0500	"	"	"	"	"		
BRL0200-47 (ALY-SB-6-1.0-2.0)		Soil				Sampled: 12/17/08 12:45					
Antimony	EPA 6020	ND	----	1.60	mg/kg dry	1x	9A16025	01/16/09 13:44	01/19/09 22:27		
Arsenic	"	1.03	----	0.535	"	"	"	"	"		
Barium	"	125	----	5.35	"	"	"	"	"		
Beryllium	"	ND	----	0.535	"	"	"	"	01/20/09 16:15		
Cadmium	"	ND	----	0.535	"	"	"	"	01/19/09 22:27		
Chromium	"	12.9	----	0.535	"	"	"	"	"		
Cobalt	"	13.8	----	0.535	"	"	"	"	"		
Copper	"	25.0	----	0.535	"	"	"	"	"		
Lead	"	6.96	----	0.535	"	"	"	"	"		
Mercury	EPA 7471A	ND	----	0.105	"	"	8L23015	12/23/08 15:41	12/24/08 12:24		
Molybdenum	EPA 6020	ND	----	2.67	"	"	9A16025	01/16/09 13:44	01/19/09 22:27		
Nickel	"	12.7	----	0.535	"	"	"	"	"		
Selenium	"	ND	----	1.07	"	"	"	"	"		
Silver	"	ND	----	0.535	"	"	"	"	"		
Strontium	"	35.2	----	0.535	"	"	"	"	01/20/09 16:15		
Thallium	"	ND	----	0.535	"	"	"	"	01/19/09 22:27		

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Total Metals by EPA 6000/7000 Series Methods
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-47 (ALY-SB-6-1.0-2.0)		Soil		Sampled: 12/17/08 12:45						
Vanadium	EPA 6020	78.4	----	0.535	mg/kg dry	1x	9A16025	01/16/09 13:44	01/19/09 22:27	
Zinc	"	54.2	----	5.35	"	"	"	"	01/20/09 16:15	
BRL0200-47RE1 (ALY-SB-6-1.0-2.0)		Soil		Sampled: 12/17/08 12:45						
Manganese	EPA 6020	385	----	107	mg/kg dry	20x	9A16025	01/16/09 13:44	01/20/09 19:21	
Titanium	"	2310	----	10.7	"	"	"	"	"	B1
BRL0200-48 (ALY-SB-6-3.0-4.0)		Soil		Sampled: 12/17/08 12:55						
Antimony	EPA 6020	ND	----	1.63	mg/kg dry	1x	9A16025	01/16/09 13:44	01/19/09 22:33	
Arsenic	"	0.657	----	0.543	"	"	"	"	"	
Barium	"	132	----	5.43	"	"	"	"	"	
Beryllium	"	0.576	----	0.543	"	"	"	"	01/20/09 16:21	
Cadmium	"	ND	----	0.543	"	"	"	"	01/19/09 22:33	
Chromium	"	30.9	----	0.543	"	"	"	"	"	
Cobalt	"	15.9	----	0.543	"	"	"	"	"	
Copper	"	50.6	----	0.543	"	"	"	"	"	
Lead	"	4.09	----	0.543	"	"	"	"	"	
Mercury	EPA 7471A	ND	----	0.111	"	"	8L23015	12/23/08 15:41	12/24/08 12:27	
Molybdenum	EPA 6020	ND	----	2.72	"	"	9A16025	01/16/09 13:44	01/19/09 22:33	
Nickel	"	24.7	----	0.543	"	"	"	"	"	
Selenium	"	ND	----	1.09	"	"	"	"	"	
Silver	"	ND	----	0.543	"	"	"	"	"	
Strontium	"	53.6	----	0.543	"	"	"	"	01/20/09 16:21	
Thallium	"	ND	----	0.543	"	"	"	"	01/19/09 22:33	
Vanadium	"	84.1	----	0.543	"	"	"	"	"	
Zinc	"	53.0	----	5.43	"	"	"	"	01/20/09 16:21	
BRL0200-48RE1 (ALY-SB-6-3.0-4.0)		Soil		Sampled: 12/17/08 12:55						
Manganese	EPA 6020	357	----	109	mg/kg dry	20x	9A16025	01/16/09 13:44	01/20/09 19:27	
Titanium	"	2240	----	10.9	"	"	"	"	"	B1

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Total Metals by EPA 6000/7000 Series Methods

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-49 (ALY-SB-2-1.0-3.0)		Soil		Sampled: 12/17/08 13:24						
Antimony	EPA 6020	ND	----	1.56	mg/kg dry	1x	9A16025	01/16/09 13:44	01/19/09 22:39	
Arsenic	"	0.736	----	0.518	"	"	"	"	"	
Barium	"	108	----	5.18	"	"	"	"	"	
Beryllium	"	ND	----	0.518	"	"	"	"	01/20/09 16:27	
Cadmium	"	ND	----	0.518	"	"	"	"	01/19/09 22:39	
Chromium	"	5.86	----	0.518	"	"	"	"	"	
Cobalt	"	11.9	----	0.518	"	"	"	"	"	
Copper	"	10.7	----	0.518	"	"	"	"	"	
Lead	"	2.50	----	0.518	"	"	"	"	"	
Mercury	EPA 7471A	ND	----	0.109	"	"	8L22032	12/22/08 15:19	12/23/08 10:43	
Molybdenum	EPA 6020	ND	----	2.59	"	"	9A16025	01/16/09 13:44	01/19/09 22:39	
Nickel	"	6.79	----	0.518	"	"	"	"	"	
Selenium	"	ND	----	1.04	"	"	"	"	"	
Silver	"	ND	----	0.518	"	"	"	"	"	
Strontium	"	40.1	----	0.518	"	"	"	"	01/20/09 16:27	
Thallium	"	ND	----	0.518	"	"	"	"	01/19/09 22:39	
Vanadium	"	62.4	----	0.518	"	"	"	"	"	
Zinc	"	41.1	----	5.18	"	"	"	"	01/20/09 16:27	
BRL0200-49RE1 (ALY-SB-2-1.0-3.0)		Soil		Sampled: 12/17/08 13:24						
Manganese	EPA 6020	272	----	51.8	mg/kg dry	10x	9A16025	01/16/09 13:44	01/20/09 20:09	
Titanium	"	1110	----	5.18	"	"	"	"	"	B1
BRL0200-50 (ALY-SB-2-4.0-5.0)		Soil		Sampled: 12/17/08 13:30						
Antimony	EPA 6020	ND	----	1.86	mg/kg dry	1x	9A16025	01/16/09 13:44	01/19/09 22:45	
Arsenic	"	4.93	----	0.621	"	"	"	"	"	
Barium	"	69.7	----	6.21	"	"	"	"	"	
Beryllium	"	ND	----	0.621	"	"	"	"	01/20/09 16:33	
Cadmium	"	ND	----	0.621	"	"	"	"	01/19/09 22:45	
Chromium	"	36.0	----	0.621	"	"	"	"	"	
Cobalt	"	14.8	----	0.621	"	"	"	"	"	
Copper	"	48.5	----	0.621	"	"	"	"	"	
Lead	"	10.3	----	0.621	"	"	"	"	"	
Mercury	EPA 7471A	ND	----	0.139	"	"	8L22032	12/22/08 15:19	12/23/08 10:51	
Molybdenum	EPA 6020	ND	----	3.11	"	"	9A16025	01/16/09 13:44	01/19/09 22:45	
Nickel	"	22.6	----	0.621	"	"	"	"	"	
Selenium	"	ND	----	1.24	"	"	"	"	"	
Silver	"	ND	----	0.621	"	"	"	"	"	
Strontium	"	43.1	----	0.621	"	"	"	"	01/20/09 16:33	
Thallium	"	ND	----	0.621	"	"	"	"	01/19/09 22:45	
Vanadium	"	80.0	----	0.621	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Total Metals by EPA 6000/7000 Series Methods
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-50 (ALY-SB-2-4.0-5.0)		Soil		Sampled: 12/17/08 13:30						
Zinc	"	85.5	----	6.21	"	"	"	"	01/20/09 16:33	
BRL0200-50RE1 (ALY-SB-2-4.0-5.0)		Soil		Sampled: 12/17/08 13:30						
Manganese	EPA 6020	356	----	62.1	mg/kg dry	10x	9A16025	01/16/09 13:44	01/20/09 20:15	
Titanium	"	1590	----	6.21	"	"	"	"	"	B1
BRL0200-51 (ALY-W-2)		Water		Sampled: 12/17/08 14:00						
Antimony	EPA 6020	ND	----	0.00300	mg/l	1x	9A14044	01/14/09 21:11	01/15/09 09:27	
Arsenic	"	0.0156	----	0.00100	"	"	"	"	"	
Barium	"	0.0222	----	0.0100	"	"	"	"	"	
Beryllium	"	ND	----	0.00100	"	"	"	"	"	
Cadmium	"	ND	----	0.00100	"	"	"	"	"	
Chromium	"	0.00743	----	0.00100	"	"	"	"	"	
Cobalt	"	0.00339	----	0.00100	"	"	"	"	"	
Copper	"	0.0107	----	0.00100	"	"	"	"	"	
Lead	"	0.00147	----	0.00100	"	"	"	"	"	
Mercury	EPA 7470A	0.00136	----	0.000200	"	"	8L22033	12/22/08 15:20	12/23/08 14:34	
Molybdenum	EPA 6020	ND	----	0.00500	"	"	9A14044	01/14/09 21:11	01/15/09 09:27	
Nickel	"	0.00522	----	0.00100	"	"	"	"	"	
Selenium	"	ND	----	0.00100	"	"	"	"	"	
Silver	"	ND	----	0.00100	"	"	"	"	"	
Strontium	"	0.316	----	0.00200	"	2x	9A16001	01/16/09 07:17	01/16/09 13:05	
Thallium	"	ND	----	0.00100	"	1x	9A14044	01/14/09 21:11	01/15/09 09:27	
Vanadium	"	0.0175	----	0.00100	"	"	"	"	"	
Zinc	"	0.0125	----	0.0100	"	"	"	"	"	
BRL0200-51RE1 (ALY-W-2)		Water		Sampled: 12/17/08 14:00						
Manganese	EPA 6020	2.08	----	0.100	mg/l	10x	9A14044	01/14/09 21:11	01/15/09 13:38	
Titanium	"	0.427	----	0.0100	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Total Metals by EPA 6000/7000 Series Methods

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-52 (ALY-SB-1-1.0-2.0)		Soil		Sampled: 12/17/08 14:16						
Antimony	EPA 6020	ND	----	1.80	mg/kg dry	1x	9A16026	01/16/09 13:52	01/19/09 23:45	M2
Arsenic	"	1.46	----	0.601	"	"	"	"	"	
Barium	"	135	----	6.01	"	"	"	"	"	M2
Beryllium	"	ND	----	0.601	"	"	"	"	01/20/09 18:45	
Cadmium	"	ND	----	0.601	"	"	"	"	01/19/09 23:45	
Chromium	"	12.3	----	0.601	"	"	"	"	"	
Cobalt	"	11.6	----	0.601	"	"	"	"	"	
Copper	"	16.6	----	0.601	"	"	"	"	"	
Lead	"	4.88	----	0.601	"	"	"	"	"	
Mercury	EPA 7471A	ND	----	0.137	"	"	8L23015	12/23/08 15:41	12/24/08 12:29	
Molybdenum	EPA 6020	ND	----	3.00	"	"	9A16026	01/16/09 13:52	01/19/09 23:45	M2, R3
Nickel	"	9.35	----	0.601	"	"	"	"	"	
Selenium	"	ND	----	1.20	"	"	"	"	"	
Silver	"	ND	----	0.601	"	"	"	"	"	
Strontium	"	60.8	----	0.601	"	"	"	"	01/20/09 18:45	M2
Thallium	"	ND	----	0.601	"	"	"	"	01/19/09 23:45	
Vanadium	"	71.4	----	0.601	"	"	"	"	"	
Zinc	"	60.8	----	6.01	"	"	"	"	01/20/09 18:45	M2
BRL0200-52RE1 (ALY-SB-1-1.0-2.0)		Soil		Sampled: 12/17/08 14:16						
Manganese	EPA 6020	403	----	60.1	mg/kg dry	10x	9A16026	01/16/09 13:52	01/20/09 20:39	MHA
Titanium	"	1030	----	6.01	"	"	"	"	"	MHA, B1
BRL0200-53 (ALY-SB-1-3.0-4.0)		Soil		Sampled: 12/17/08 14:22						
Antimony	EPA 6020	ND	----	2.17	mg/kg dry	1x	9A16026	01/16/09 13:52	01/19/09 23:51	
Arsenic	"	3.28	----	0.724	"	"	"	"	"	
Barium	"	74.6	----	7.24	"	"	"	"	"	
Beryllium	"	ND	----	0.724	"	"	"	"	01/20/09 18:51	
Cadmium	"	ND	----	0.724	"	"	"	"	01/19/09 23:51	
Chromium	"	30.1	----	0.724	"	"	"	"	"	
Cobalt	"	13.8	----	0.724	"	"	"	"	"	
Copper	"	38.0	----	0.724	"	"	"	"	"	
Lead	"	10.7	----	0.724	"	"	"	"	"	
Mercury	EPA 7471A	ND	----	0.145	"	"	8L23015	12/23/08 15:41	12/24/08 12:32	
Molybdenum	EPA 6020	ND	----	3.62	"	"	9A16026	01/16/09 13:52	01/19/09 23:51	
Nickel	"	22.1	----	0.724	"	"	"	"	"	
Selenium	"	ND	----	1.45	"	"	"	"	"	
Silver	"	ND	----	0.724	"	"	"	"	"	
Strontium	"	45.4	----	0.724	"	"	"	"	01/20/09 18:51	
Thallium	"	ND	----	0.724	"	"	"	"	01/19/09 23:51	
Vanadium	"	78.8	----	0.724	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Total Metals by EPA 6000/7000 Series Methods

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-53 (ALY-SB-1-3.0-4.0)		Soil		Sampled: 12/17/08 14:22						
Zinc	"	66.5	----	7.24	"	"	"	"	01/20/09 18:51	
BRL0200-53RE1 (ALY-SB-1-3.0-4.0)		Soil		Sampled: 12/17/08 14:22						
Manganese	EPA 6020	367	----	72.4	mg/kg dry	10x	9A16026	01/16/09 13:52	01/20/09 20:45	
Titanium	"	1460	----	7.24	"	"	"	"	"	B1
BRL0200-54 (ALY-SB-4-1.0-2.0)		Soil		Sampled: 12/17/08 14:50						
Antimony	EPA 6020	ND	----	1.62	mg/kg dry	1x	9A16026	01/16/09 13:52	01/19/09 23:57	
Arsenic	"	0.701	----	0.539	"	"	"	"	"	
Barium	"	92.6	----	5.39	"	"	"	"	"	
Beryllium	"	ND	----	0.539	"	"	"	"	01/20/09 18:57	
Cadmium	"	ND	----	0.539	"	"	"	"	01/19/09 23:57	
Chromium	"	4.51	----	0.539	"	"	"	"	"	
Cobalt	"	14.3	----	0.539	"	"	"	"	"	
Copper	"	10.0	----	0.539	"	"	"	"	"	
Lead	"	20.0	----	0.539	"	"	"	"	"	
Mercury	EPA 7471A	ND	----	0.111	"	"	8L23015	12/23/08 15:41	12/24/08 12:39	
Molybdenum	EPA 6020	ND	----	2.69	"	"	9A16026	01/16/09 13:52	01/19/09 23:57	
Nickel	"	5.92	----	0.539	"	"	"	"	"	
Selenium	"	ND	----	1.08	"	"	"	"	"	
Silver	"	ND	----	0.539	"	"	"	"	"	
Strontium	"	35.0	----	0.539	"	"	"	"	01/20/09 18:57	
Thallium	"	ND	----	0.539	"	"	"	"	01/19/09 23:57	
Vanadium	"	52.8	----	0.539	"	"	"	"	"	
Zinc	"	40.8	----	5.39	"	"	"	"	01/20/09 18:57	
BRL0200-54RE1 (ALY-SB-4-1.0-2.0)		Soil		Sampled: 12/17/08 14:50						
Manganese	EPA 6020	372	----	53.9	mg/kg dry	10x	9A16026	01/16/09 13:52	01/20/09 20:51	
Titanium	"	688	----	5.39	"	"	"	"	"	B1

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue 1100 112th Avenue NE, Suite 400 Bellevue, WA/USA 98004-4504	Project Name: WSDOT SR 520 - Pontoon Sites Project Number: 180171.AR.X7.02 Project Manager: Brian Tracy	Report Created: 01/26/09 09:59
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Total Metals by EPA 6000/7000 Series Methods
TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-55 (ALY-SB-4-3.0-4.0)		Soil		Sampled: 12/17/08 14:55						
Antimony	EPA 6020	ND	----	2.15	mg/kg dry	1x	9A16026	01/16/09 13:52	01/20/09 00:03	
Arsenic	"	1.91	----	0.718	"	"	"	"	"	
Barium	"	147	----	7.18	"	"	"	"	"	
Beryllium	"	ND	----	0.718	"	"	"	"	01/20/09 19:03	
Cadmium	"	ND	----	0.718	"	"	"	"	01/20/09 00:03	
Chromium	"	12.5	----	0.718	"	"	"	"	"	
Cobalt	"	15.4	----	0.718	"	"	"	"	"	
Copper	"	23.2	----	0.718	"	"	"	"	"	
Lead	"	6.44	----	0.718	"	"	"	"	"	
Mercury	EPA 7471A	ND	----	0.134	"	"	8L23015	12/23/08 15:41	12/24/08 12:42	
Molybdenum	EPA 6020	ND	----	3.59	"	"	9A16026	01/16/09 13:52	01/20/09 00:03	
Nickel	"	10.6	----	0.718	"	"	"	"	"	
Selenium	"	ND	----	1.44	"	"	"	"	"	
Silver	"	ND	----	0.718	"	"	"	"	"	
Strontium	"	48.7	----	0.718	"	"	"	"	01/20/09 19:03	
Thallium	"	ND	----	0.718	"	"	"	"	01/20/09 00:03	
Vanadium	"	110	----	0.718	"	"	"	"	"	
Zinc	"	51.7	----	7.18	"	"	"	"	01/20/09 19:03	
BRL0200-55RE1 (ALY-SB-4-3.0-4.0)		Soil		Sampled: 12/17/08 14:55						
Manganese	EPA 6020	375	----	71.8	mg/kg dry	10x	9A16026	01/16/09 13:52	01/20/09 20:57	
Titanium	"	1690	----	7.18	"	"	"	"	"	B1
BRL0200-56 (ALY-SB-10-1.0-2.0)		Soil		Sampled: 12/17/08 15:32						
Antimony	EPA 6020	ND	----	1.49	mg/kg dry	1x	9A16026	01/16/09 13:52	01/20/09 00:09	
Arsenic	"	0.706	----	0.497	"	"	"	"	"	
Barium	"	130	----	4.97	"	"	"	"	"	
Beryllium	"	ND	----	0.497	"	"	"	"	01/20/09 19:09	
Cadmium	"	ND	----	0.497	"	"	"	"	01/20/09 00:09	
Chromium	"	5.14	----	0.497	"	"	"	"	"	
Cobalt	"	11.4	----	0.497	"	"	"	"	"	
Copper	"	10.3	----	0.497	"	"	"	"	"	
Lead	"	1.86	----	0.497	"	"	"	"	"	
Mercury	EPA 7471A	ND	----	0.109	"	"	8L23015	12/23/08 15:41	12/24/08 12:44	
Molybdenum	EPA 6020	ND	----	2.48	"	"	9A16026	01/16/09 13:52	01/20/09 00:09	
Nickel	"	5.29	----	0.497	"	"	"	"	"	
Selenium	"	ND	----	0.994	"	"	"	"	"	
Silver	"	ND	----	0.497	"	"	"	"	"	
Strontium	"	69.6	----	0.497	"	"	"	"	01/20/09 19:09	
Thallium	"	ND	----	0.497	"	"	"	"	01/20/09 00:09	
Vanadium	"	61.1	----	0.497	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Total Metals by EPA 6000/7000 Series Methods

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-56 (ALY-SB-10-1.0-2.0)		Soil		Sampled: 12/17/08 15:32						
Zinc	"	38.9	----	4.97	"	"	"	"	01/20/09 19:09	
BRL0200-56RE1 (ALY-SB-10-1.0-2.0)		Soil		Sampled: 12/17/08 15:32						
Manganese	EPA 6020	300	----	49.7	mg/kg dry	10x	9A16026	01/16/09 13:52	01/20/09 21:21	
Titanium	"	1060	----	4.97	"	"	"	"	"	B1
BRL0200-57 (ALY-SB-10-6.0-8.0)		Soil		Sampled: 12/17/08 15:42						
Antimony	EPA 6020	ND	----	2.21	mg/kg dry	1x	9A16026	01/16/09 13:52	01/20/09 00:33	
Arsenic	"	4.95	----	0.735	"	"	"	"	"	
Barium	"	47.2	----	7.35	"	"	"	"	"	
Beryllium	"	ND	----	0.735	"	"	"	"	01/20/09 19:15	
Cadmium	"	ND	----	0.735	"	"	"	"	01/20/09 00:33	
Chromium	"	38.8	----	0.735	"	"	"	"	"	
Cobalt	"	11.5	----	0.735	"	"	"	"	"	
Copper	"	51.8	----	0.735	"	"	"	"	"	
Lead	"	9.82	----	0.735	"	"	"	"	"	
Mercury	EPA 7471A	ND	----	0.136	"	"	8L23015	12/23/08 15:41	12/24/08 12:47	
Molybdenum	EPA 6020	ND	----	3.68	"	"	9A16026	01/16/09 13:52	01/20/09 00:33	
Nickel	"	25.4	----	0.735	"	"	"	"	"	
Selenium	"	ND	----	1.47	"	"	"	"	"	
Silver	"	ND	----	0.735	"	"	"	"	"	
Strontium	"	43.8	----	0.735	"	"	"	"	01/20/09 19:15	
Thallium	"	ND	----	0.735	"	"	"	"	01/20/09 00:33	
Vanadium	"	73.8	----	0.735	"	"	"	"	"	
Zinc	"	78.1	----	7.35	"	"	"	"	01/20/09 19:15	
BRL0200-57RE1 (ALY-SB-10-6.0-8.0)		Soil		Sampled: 12/17/08 15:42						
Manganese	EPA 6020	285	----	73.5	mg/kg dry	10x	9A16026	01/16/09 13:52	01/20/09 21:27	
Titanium	"	1370	----	7.35	"	"	"	"	"	B1

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Total Metals by EPA 6000/7000 Series Methods
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-58 (ALY-SB-5-1.0-2.0)		Soil		Sampled: 12/17/08 16:00						
Antimony	EPA 6020	ND	----	1.50	mg/kg dry	1x	9A16026	01/16/09 13:52	01/20/09 00:39	
Arsenic	"	0.510	----	0.500	"	"	"	"	"	
Barium	"	88.7	----	5.00	"	"	"	"	"	
Beryllium	"	ND	----	0.500	"	"	"	"	01/20/09 19:33	
Cadmium	"	ND	----	0.500	"	"	"	"	01/20/09 00:39	
Chromium	"	6.03	----	0.500	"	"	"	"	"	
Cobalt	"	11.6	----	0.500	"	"	"	"	"	
Copper	"	14.2	----	0.500	"	"	"	"	"	
Lead	"	1.52	----	0.500	"	"	"	"	"	
Mercury	EPA 7471A	ND	----	0.101	"	"	8L23015	12/23/08 15:41	12/24/08 12:49	
Molybdenum	EPA 6020	ND	----	2.50	"	"	9A16026	01/16/09 13:52	01/20/09 00:39	
Nickel	"	6.41	----	0.500	"	"	"	"	"	
Selenium	"	ND	----	1.00	"	"	"	"	"	
Silver	"	ND	----	0.500	"	"	"	"	"	
Strontium	"	33.3	----	0.500	"	"	"	"	01/20/09 19:33	
Thallium	"	ND	----	0.500	"	"	"	"	01/20/09 00:39	
Vanadium	"	52.5	----	0.500	"	"	"	"	"	
Zinc	"	34.3	----	5.00	"	"	"	"	01/20/09 19:33	
BRL0200-58RE1 (ALY-SB-5-1.0-2.0)		Soil		Sampled: 12/17/08 16:00						
Manganese	EPA 6020	309	----	50.0	mg/kg dry	10x	9A16026	01/16/09 13:52	01/20/09 21:33	
Titanium	"	1480	----	5.00	"	"	"	"	"	B1
BRL0200-59 (ALY-SB-5-3.0-4.0)		Soil		Sampled: 12/17/08 16:10						
Antimony	EPA 6020	ND	----	1.73	mg/kg dry	1x	9A16026	01/16/09 13:52	01/20/09 00:44	
Arsenic	"	1.23	----	0.578	"	"	"	"	"	
Barium	"	143	----	5.78	"	"	"	"	"	
Beryllium	"	ND	----	0.578	"	"	"	"	01/20/09 19:39	
Cadmium	"	ND	----	0.578	"	"	"	"	01/20/09 00:44	
Chromium	"	7.46	----	0.578	"	"	"	"	"	
Cobalt	"	11.7	----	0.578	"	"	"	"	"	
Copper	"	9.09	----	0.578	"	"	"	"	"	
Lead	"	6.17	----	0.578	"	"	"	"	"	
Mercury	EPA 7471A	ND	----	0.114	"	"	8L23015	12/23/08 15:41	12/24/08 12:52	
Molybdenum	EPA 6020	ND	----	2.89	"	"	9A16026	01/16/09 13:52	01/20/09 00:44	
Nickel	"	5.85	----	0.578	"	"	"	"	"	
Selenium	"	ND	----	1.16	"	"	"	"	"	
Silver	"	ND	----	0.578	"	"	"	"	"	
Strontium	"	61.7	----	0.578	"	"	"	"	01/20/09 19:39	
Thallium	"	ND	----	0.578	"	"	"	"	01/20/09 00:44	
Vanadium	"	66.9	----	0.578	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue 1100 112th Avenue NE, Suite 400 Bellevue, WA/USA 98004-4504	Project Name: WSDOT SR 520 - Pontoon Sites Project Number: 180171.AR.X7.02 Project Manager: Brian Tracy	Report Created: 01/26/09 09:59
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Total Metals by EPA 6000/7000 Series Methods
TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-59 (ALY-SB-5-3.0-4.0)		Soil			Sampled: 12/17/08 16:10					
Zinc	"	46.3	----	5.78	"	"	"	"	01/20/09 19:39	
BRL0200-59RE1 (ALY-SB-5-3.0-4.0)		Soil			Sampled: 12/17/08 16:10					
Manganese	EPA 6020	729	----	57.8	mg/kg dry	10x	9A16026	01/16/09 13:52	01/20/09 21:39	
Titanium	"	728	----	5.78	"	"	"	"	"	B1

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue	Project Name: WSDOT SR 520 - Pontoon Sites	
1100 112th Avenue NE, Suite 400	Project Number: 180171.AR.X7.02	Report Created:
Bellevue, WA/USA 98004-4504	Project Manager: Brian Tracy	01/26/09 09:59

Polychlorinated Biphenyls by EPA Method 8082
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-08 (AM-SB-7-1.5-3.0)		Soil			Sampled: 12/15/08 15:40					
Aroclor 1016	EPA 8082	ND	----	33.0	ug/kg dry	1x	8L29019	12/29/08 12:43	12/30/08 15:12	
Aroclor 1221	"	ND	----	65.9	"	"	"	"	"	"
Aroclor 1232	"	ND	----	33.0	"	"	"	"	"	"
Aroclor 1242	"	ND	----	33.0	"	"	"	"	"	"
Aroclor 1248	"	ND	----	33.0	"	"	"	"	"	"
Aroclor 1254	"	ND	----	33.0	"	"	"	"	"	"
Aroclor 1260 [2C]	"	ND	----	33.0	"	"	"	"	"	"
Aroclor 1262	"	ND	----	33.0	"	"	"	"	"	"
Aroclor 1268	"	ND	----	33.0	"	"	"	"	"	"
<i>Surrogate(s): TCX</i>				87.8%		65 - 125 %	"			"
<i>Decachlorobiphenyl</i>				92.9%		40 - 150 %	"			"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-01 (AM-SB-1-1.0-2.0)		Soil					Sampled: 12/15/08 12:40			12
Acetone	EPA 8260B	ND	----	38.1	ug/kg dry	1x	8L18004	12/18/08 11:15	12/18/08 14:09	
Benzene	"	ND	----	1.43	"	"	"	"	"	
Bromobenzene	"	ND	----	4.76	"	"	"	"	"	
Bromochloromethane	"	ND	----	4.76	"	"	"	"	"	
Bromodichloromethane	"	ND	----	4.76	"	"	"	"	"	
Bromoform	"	ND	----	4.76	"	"	"	"	"	
Bromomethane	"	ND	----	9.52	"	"	"	"	"	
2-Butanone	"	ND	----	28.6	"	"	"	"	"	
n-Butylbenzene	"	ND	----	4.76	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	4.76	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	4.76	"	"	"	"	"	
Carbon disulfide	"	ND	----	2.86	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	4.76	"	"	"	"	"	
Chlorobenzene	"	ND	----	1.90	"	"	"	"	"	
Chloroethane	"	ND	----	4.76	"	"	"	"	"	
Chloroform	"	ND	----	2.38	"	"	"	"	"	
Chloromethane	"	ND	----	9.52	"	"	"	"	"	
2-Chlorotoluene	"	ND	----	4.76	"	"	"	"	"	
4-Chlorotoluene	"	ND	----	4.76	"	"	"	"	"	
Dibromochloromethane	"	ND	----	4.76	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	----	9.52	"	"	"	"	"	
1,2-Dibromoethane (EDB)	"	ND	----	4.76	"	"	"	"	"	
Dibromomethane	"	ND	----	4.76	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	4.76	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	----	4.76	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	----	4.76	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	----	4.76	"	"	"	"	"	
1,1-Dichloroethane	"	ND	----	1.90	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	1.19	"	"	"	"	"	
1,1-Dichloroethene	"	ND	----	2.86	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	2.86	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	2.38	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	4.76	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	4.76	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	9.52	"	"	"	"	"	
1,1-Dichloropropene	"	ND	----	4.76	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	4.76	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	1.19	"	"	"	"	"	
Ethylbenzene	"	ND	----	3.81	"	"	"	"	"	
Hexachlorobutadiene	"	ND	----	9.52	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	0.952	"	"	"	"	"	
n-Hexane	"	ND	----	4.76	"	"	"	"	"	
2-Hexanone	"	ND	----	28.6	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-01 (AM-SB-1-1.0-2.0)		Soil					Sampled: 12/15/08 12:40			12
Isopropylbenzene	EPA 8260B	ND	----	4.76	ug/kg dry	1x	8L18004	12/18/08 11:15	12/18/08 14:09	
p-Isopropyltoluene	"	ND	----	4.76	"	"	"	"	"	
4-Methyl-2-pentanone	"	ND	----	28.6	"	"	"	"	"	
Methylene chloride	"	ND	----	11.4	"	"	"	"	"	
Naphthalene	"	ND	----	9.52	"	"	"	"	"	
n-Propylbenzene	"	ND	----	4.76	"	"	"	"	"	
Styrene	"	ND	----	2.38	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	9.52	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	----	9.52	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	----	4.76	"	"	"	"	"	
1,1,1,2,2-Tetrachloroethane	"	ND	----	4.76	"	"	"	"	"	
Tetrachloroethene	"	ND	----	1.90	"	"	"	"	"	
Toluene	"	ND	----	1.43	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	----	2.38	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	----	1.90	"	"	"	"	"	
Trichloroethene	"	ND	----	2.38	"	"	"	"	"	
Trichlorofluoromethane	"	ND	----	4.76	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	4.76	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	4.76	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	4.76	"	"	"	"	"	
Vinyl chloride	"	ND	----	2.38	"	"	"	"	"	
o-Xylene	"	ND	----	4.76	"	"	"	"	"	
m,p-Xylene	"	ND	----	4.76	"	"	"	"	"	
Total Xylenes	"	ND	----	9.52	"	"	"	"	"	
<i>Surrogate(s): 1,2-DCA-d4</i>			<i>125%</i>		<i>70 - 140 %</i>	<i>"</i>				<i>"</i>
<i>Toluene-d8</i>			<i>101%</i>		<i>70 - 130 %</i>	<i>"</i>				<i>"</i>
<i>4-BFB</i>			<i>111%</i>		<i>70 - 130 %</i>	<i>"</i>				<i>"</i>

BRL0200-02 (AM-SB-1-4.0-6.0)		Soil					Sampled: 12/15/08 13:00			
Acetone	EPA 8260B	163	----	42.9	ug/kg dry	1x	8L18004	12/18/08 11:15	12/18/08 14:35	
Benzene	"	ND	----	1.61	"	"	"	"	"	
Bromobenzene	"	ND	----	5.36	"	"	"	"	"	
Bromochloromethane	"	ND	----	5.36	"	"	"	"	"	
Bromodichloromethane	"	ND	----	5.36	"	"	"	"	"	
Bromoform	"	ND	----	5.36	"	"	"	"	"	
Bromomethane	"	ND	----	10.7	"	"	"	"	"	
2-Butanone	"	36.9	----	32.2	"	"	"	"	"	
n-Butylbenzene	"	ND	----	5.36	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	5.36	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	5.36	"	"	"	"	"	
Carbon disulfide	"	ND	----	3.22	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	5.36	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-02 (AM-SB-1-4.0-6.0)										
		Soil					Sampled: 12/15/08 13:00			
Chlorobenzene	EPA 8260B	ND	----	2.14	ug/kg dry	1x	8L18004	12/18/08 11:15	12/18/08 14:35	
Chloroethane	"	ND	----	5.36	"	"	"	"	"	
Chloroform	"	ND	----	2.68	"	"	"	"	"	
Chloromethane	"	ND	----	10.7	"	"	"	"	"	
2-Chlorotoluene	"	ND	----	5.36	"	"	"	"	"	
4-Chlorotoluene	"	ND	----	5.36	"	"	"	"	"	
Dibromochloromethane	"	ND	----	5.36	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	----	10.7	"	"	"	"	"	
1,2-Dibromoethane (EDB)	"	ND	----	5.36	"	"	"	"	"	
Dibromomethane	"	ND	----	5.36	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	5.36	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	----	5.36	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	----	5.36	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	----	5.36	"	"	"	"	"	
1,1-Dichloroethane	"	ND	----	2.14	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	1.34	"	"	"	"	"	
1,1-Dichloroethene	"	ND	----	3.22	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	3.22	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	2.68	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	5.36	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	5.36	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	10.7	"	"	"	"	"	
1,1-Dichloropropene	"	ND	----	5.36	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	5.36	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	1.34	"	"	"	"	"	
Ethylbenzene	"	ND	----	4.29	"	"	"	"	"	
Hexachlorobutadiene	"	ND	----	10.7	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	1.07	"	"	"	"	"	
n-Hexane	"	ND	----	5.36	"	"	"	"	"	
2-Hexanone	"	ND	----	32.2	"	"	"	"	"	
Isopropylbenzene	"	ND	----	5.36	"	"	"	"	"	
p-Isopropyltoluene	"	ND	----	5.36	"	"	"	"	"	
4-Methyl-2-pentanone	"	ND	----	32.2	"	"	"	"	"	
Methylene chloride	"	ND	----	12.9	"	"	"	"	"	
Naphthalene	"	ND	----	10.7	"	"	"	"	"	
n-Propylbenzene	"	ND	----	5.36	"	"	"	"	"	
Styrene	"	ND	----	2.68	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	10.7	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	----	10.7	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	----	5.36	"	"	"	"	"	
1,1,1,2,2-Tetrachloroethane	"	ND	----	5.36	"	"	"	"	"	
Tetrachloroethene	"	ND	----	2.14	"	"	"	"	"	
Toluene	"	ND	----	1.61	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-02 (AM-SB-1-4.0-6.0)		Soil		Sampled: 12/15/08 13:00						
1,1,1-Trichloroethane	EPA 8260B	ND	----	2.68	ug/kg dry	1x	8L18004	12/18/08 11:15	12/18/08 14:35	
1,1,2-Trichloroethane	"	ND	----	2.14	"	"	"	"	"	
Trichloroethene	"	ND	----	2.68	"	"	"	"	"	
Trichlorofluoromethane	"	ND	----	5.36	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	5.36	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	5.36	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	5.36	"	"	"	"	"	
Vinyl chloride	"	ND	----	2.68	"	"	"	"	"	
o-Xylene	"	ND	----	5.36	"	"	"	"	"	
m,p-Xylene	"	ND	----	5.36	"	"	"	"	"	
Total Xylenes	"	ND	----	10.7	"	"	"	"	"	

Surrogate(s): 1,2-DCA-d4 116% 70 - 140 % "
 Toluene-d8 102% 70 - 130 % "
 4-BFB 114% 70 - 130 % "

BRL0200-04 (AM-SB-2-1.0-2.0)		Soil		Sampled: 12/15/08 14:23						
Acetone	EPA 8260B	ND	----	31.2	ug/kg dry	1x	8L18004	12/18/08 11:15	12/18/08 15:01	
Benzene	"	ND	----	1.17	"	"	"	"	"	
Bromobenzene	"	ND	----	3.90	"	"	"	"	"	
Bromochloromethane	"	ND	----	3.90	"	"	"	"	"	
Bromodichloromethane	"	ND	----	3.90	"	"	"	"	"	
Bromoform	"	ND	----	3.90	"	"	"	"	"	
Bromomethane	"	ND	----	7.80	"	"	"	"	"	
2-Butanone	"	ND	----	23.4	"	"	"	"	"	
n-Butylbenzene	"	ND	----	3.90	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	3.90	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	3.90	"	"	"	"	"	
Carbon disulfide	"	ND	----	2.34	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	3.90	"	"	"	"	"	
Chlorobenzene	"	ND	----	1.56	"	"	"	"	"	
Chloroethane	"	ND	----	3.90	"	"	"	"	"	
Chloroform	"	ND	----	1.95	"	"	"	"	"	
Chloromethane	"	ND	----	7.80	"	"	"	"	"	
2-Chlorotoluene	"	ND	----	3.90	"	"	"	"	"	
4-Chlorotoluene	"	ND	----	3.90	"	"	"	"	"	
Dibromochloromethane	"	ND	----	3.90	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	----	7.80	"	"	"	"	"	
1,2-Dibromoethane (EDB)	"	ND	----	3.90	"	"	"	"	"	
Dibromomethane	"	ND	----	3.90	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	3.90	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	----	3.90	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	----	3.90	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-04 (AM-SB-2-1.0-2.0)		Soil		Sampled: 12/15/08 14:23						
Dichlorodifluoromethane	EPA 8260B	ND	----	3.90	ug/kg dry	1x	8L18004	12/18/08 11:15	12/18/08 15:01	
1,1-Dichloroethane	"	ND	----	1.56	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	0.975	"	"	"	"	"	
1,1-Dichloroethene	"	ND	----	2.34	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	2.34	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	1.95	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	3.90	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	3.90	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	7.80	"	"	"	"	"	
1,1-Dichloropropene	"	ND	----	3.90	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	3.90	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	0.975	"	"	"	"	"	
Ethylbenzene	"	ND	----	3.12	"	"	"	"	"	
Hexachlorobutadiene	"	ND	----	7.80	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	0.780	"	"	"	"	"	
n-Hexane	"	ND	----	3.90	"	"	"	"	"	
2-Hexanone	"	ND	----	23.4	"	"	"	"	"	
Isopropylbenzene	"	ND	----	3.90	"	"	"	"	"	
p-Isopropyltoluene	"	ND	----	3.90	"	"	"	"	"	
4-Methyl-2-pentanone	"	ND	----	23.4	"	"	"	"	"	
Methylene chloride	"	ND	----	9.36	"	"	"	"	"	
Naphthalene	"	ND	----	7.80	"	"	"	"	"	
n-Propylbenzene	"	ND	----	3.90	"	"	"	"	"	
Styrene	"	ND	----	1.95	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	7.80	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	----	7.80	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	----	3.90	"	"	"	"	"	
1,1,1,2,2-Tetrachloroethane	"	ND	----	3.90	"	"	"	"	"	
Tetrachloroethene	"	ND	----	1.56	"	"	"	"	"	
Toluene	"	ND	----	1.17	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	----	1.95	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	----	1.56	"	"	"	"	"	
Trichloroethene	"	ND	----	1.95	"	"	"	"	"	
Trichlorofluoromethane	"	ND	----	3.90	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	3.90	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	3.90	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	3.90	"	"	"	"	"	
Vinyl chloride	"	ND	----	1.95	"	"	"	"	"	
o-Xylene	"	ND	----	3.90	"	"	"	"	"	
m,p-Xylene	"	ND	----	3.90	"	"	"	"	"	
Total Xylenes	"	ND	----	7.80	"	"	"	"	"	
<i>Surrogate(s): 1,2-DCA-d4</i>			129%		70 - 140 %	"			"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	-------	----------	----------	-------

BRL0200-04 (AM-SB-2-1.0-2.0)

Soil

Sampled: 12/15/08 14:23

Toluene-d8		99.8%		70 - 130 %		1x			12/18/08 15:01	
4-BFB		112%		70 - 130 %		"			"	

BRL0200-05RE1 (AM-SB-2-4.0-6.0)

Soil

Sampled: 12/15/08 14:40

Acetone	EPA 8260B	188	----	32.2	ug/kg dry	1x	8L22006	12/22/08 11:08	12/22/08 12:50	
Benzene	"	ND	----	1.21	"	"	"	"	"	
Bromobenzene	"	ND	----	4.02	"	"	"	"	"	
Bromochloromethane	"	ND	----	4.02	"	"	"	"	"	
Bromodichloromethane	"	ND	----	4.02	"	"	"	"	"	
Bromoform	"	ND	----	4.02	"	"	"	"	"	
Bromomethane	"	ND	----	8.04	"	"	"	"	"	
2-Butanone	"	33.8	----	24.1	"	"	"	"	"	
n-Butylbenzene	"	ND	----	4.02	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	4.02	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	4.02	"	"	"	"	"	
Carbon disulfide	"	ND	----	2.41	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	4.02	"	"	"	"	"	
Chlorobenzene	"	ND	----	1.61	"	"	"	"	"	
Chloroethane	"	ND	----	4.02	"	"	"	"	"	
Chloroform	"	ND	----	2.01	"	"	"	"	"	
Chloromethane	"	ND	----	8.04	"	"	"	"	"	
2-Chlorotoluene	"	ND	----	4.02	"	"	"	"	"	
4-Chlorotoluene	"	ND	----	4.02	"	"	"	"	"	
Dibromochloromethane	"	ND	----	4.02	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	----	8.04	"	"	"	"	"	
1,2-Dibromoethane (EDB)	"	ND	----	4.02	"	"	"	"	"	
Dibromomethane	"	ND	----	4.02	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	4.02	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	----	4.02	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	----	4.02	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	----	4.02	"	"	"	"	"	
1,1-Dichloroethane	"	ND	----	1.61	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	1.00	"	"	"	"	"	
1,1-Dichloroethene	"	3.21	----	2.41	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	2.41	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	2.01	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	4.02	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	4.02	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	8.04	"	"	"	"	"	
1,1-Dichloropropene	"	ND	----	4.02	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	4.02	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	1.00	"	"	"	"	"	

C5

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-05RE1 (AM-SB-2-4.0-6.0)		Soil		Sampled: 12/15/08 14:40						
Ethylbenzene	EPA 8260B	ND	----	3.22	ug/kg dry	1x	8L22006	12/22/08 11:08	12/22/08 12:50	
Hexachlorobutadiene	"	ND	----	8.04	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	0.804	"	"	"	"	"	
n-Hexane	"	ND	----	4.02	"	"	"	"	"	
2-Hexanone	"	ND	----	24.1	"	"	"	"	"	
Isopropylbenzene	"	ND	----	4.02	"	"	"	"	"	
p-Isopropyltoluene	"	ND	----	4.02	"	"	"	"	"	
4-Methyl-2-pentanone	"	ND	----	24.1	"	"	"	"	"	
Methylene chloride	"	ND	----	9.65	"	"	"	"	"	
Naphthalene	"	ND	----	8.04	"	"	"	"	"	
n-Propylbenzene	"	ND	----	4.02	"	"	"	"	"	
Styrene	"	ND	----	2.01	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	8.04	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	----	8.04	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	----	4.02	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	----	4.02	"	"	"	"	"	
Tetrachloroethene	"	ND	----	1.61	"	"	"	"	"	
Toluene	"	ND	----	1.21	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	----	2.01	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	----	1.61	"	"	"	"	"	
Trichloroethene	"	ND	----	2.01	"	"	"	"	"	
Trichlorofluoromethane	"	ND	----	4.02	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	4.02	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	4.02	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	4.02	"	"	"	"	"	
Vinyl chloride	"	ND	----	2.01	"	"	"	"	"	
o-Xylene	"	ND	----	4.02	"	"	"	"	"	
m,p-Xylene	"	ND	----	4.02	"	"	"	"	"	
Total Xylenes	"	ND	----	8.04	"	"	"	"	"	

Surrogate(s): 1,2-DCA-d4
 Toluene-d8
 4-BFB

112% 70 - 140 %
 102% 70 - 130 %
 111% 70 - 130 %

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-06 (AM-SB-3-0.0-1.0)										
		Soil					Sampled: 12/15/08 15:15			
Acetone	EPA 8260B	ND	----	27.0	ug/kg dry	1x	8L18004	12/18/08 11:15	12/18/08 15:52	
Benzene	"	ND	----	1.01	"	"	"	"	"	
Bromobenzene	"	ND	----	3.37	"	"	"	"	"	
Bromochloromethane	"	ND	----	3.37	"	"	"	"	"	
Bromodichloromethane	"	ND	----	3.37	"	"	"	"	"	
Bromoform	"	ND	----	3.37	"	"	"	"	"	
Bromomethane	"	ND	----	6.74	"	"	"	"	"	
2-Butanone	"	ND	----	20.2	"	"	"	"	"	
n-Butylbenzene	"	ND	----	3.37	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	3.37	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	3.37	"	"	"	"	"	
Carbon disulfide	"	ND	----	2.02	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	3.37	"	"	"	"	"	
Chlorobenzene	"	ND	----	1.35	"	"	"	"	"	
Chloroethane	"	ND	----	3.37	"	"	"	"	"	
Chloroform	"	ND	----	1.69	"	"	"	"	"	
Chloromethane	"	ND	----	6.74	"	"	"	"	"	
2-Chlorotoluene	"	ND	----	3.37	"	"	"	"	"	
4-Chlorotoluene	"	ND	----	3.37	"	"	"	"	"	
Dibromochloromethane	"	ND	----	3.37	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	----	6.74	"	"	"	"	"	
1,2-Dibromoethane (EDB)	"	ND	----	3.37	"	"	"	"	"	
Dibromomethane	"	ND	----	3.37	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	3.37	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	----	3.37	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	----	3.37	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	----	3.37	"	"	"	"	"	
1,1-Dichloroethane	"	ND	----	1.35	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	0.843	"	"	"	"	"	
1,1-Dichloroethene	"	ND	----	2.02	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	2.02	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	1.69	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	3.37	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	3.37	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	6.74	"	"	"	"	"	
1,1-Dichloropropene	"	ND	----	3.37	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	3.37	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	0.843	"	"	"	"	"	
Ethylbenzene	"	ND	----	2.70	"	"	"	"	"	
Hexachlorobutadiene	"	ND	----	6.74	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	0.674	"	"	"	"	"	
n-Hexane	"	ND	----	3.37	"	"	"	"	"	
2-Hexanone	"	ND	----	20.2	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-06 (AM-SB-3-0.0-1.0)		Soil		Sampled: 12/15/08 15:15						
Isopropylbenzene	EPA 8260B	ND	----	3.37	ug/kg dry	1x	8L18004	12/18/08 11:15	12/18/08 15:52	
p-Isopropyltoluene	"	ND	----	3.37	"	"	"	"	"	
4-Methyl-2-pentanone	"	ND	----	20.2	"	"	"	"	"	
Methylene chloride	"	ND	----	8.09	"	"	"	"	"	
Naphthalene	"	ND	----	6.74	"	"	"	"	"	
n-Propylbenzene	"	ND	----	3.37	"	"	"	"	"	
Styrene	"	ND	----	1.69	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	6.74	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	----	6.74	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	----	3.37	"	"	"	"	"	
1,1,1,2,2-Tetrachloroethane	"	ND	----	3.37	"	"	"	"	"	
Tetrachloroethene	"	ND	----	1.35	"	"	"	"	"	
Toluene	"	ND	----	1.01	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	----	1.69	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	----	1.35	"	"	"	"	"	
Trichloroethene	"	ND	----	1.69	"	"	"	"	"	
Trichlorofluoromethane	"	ND	----	3.37	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	3.37	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	3.37	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	3.37	"	"	"	"	"	
Vinyl chloride	"	ND	----	1.69	"	"	"	"	"	
o-Xylene	"	ND	----	3.37	"	"	"	"	"	
m,p-Xylene	"	ND	----	3.37	"	"	"	"	"	
Total Xylenes	"	ND	----	6.74	"	"	"	"	"	
<i>Surrogate(s): 1,2-DCA-d4</i>			<i>122%</i>	<i>70 - 140 %</i>						
<i>Toluene-d8</i>			<i>108%</i>	<i>70 - 130 %</i>						
<i>4-BFB</i>			<i>126%</i>	<i>70 - 130 %</i>						
BRL0200-07 (AM-SB-3-4.0-5.0)		Soil		Sampled: 12/15/08 15:20						
Acetone	EPA 8260B	ND	----	33.0	ug/kg dry	1x	8L22006	12/22/08 11:08	12/22/08 13:16	
Benzene	"	ND	----	1.24	"	"	"	"	"	
Bromobenzene	"	ND	----	4.12	"	"	"	"	"	12
Bromochloromethane	"	ND	----	4.12	"	"	"	"	"	
Bromodichloromethane	"	ND	----	4.12	"	"	"	"	"	
Bromoform	"	ND	----	4.12	"	"	"	"	"	
Bromomethane	"	ND	----	8.24	"	"	"	"	"	
2-Butanone	"	ND	----	24.7	"	"	"	"	"	
n-Butylbenzene	"	ND	----	4.12	"	"	"	"	"	12
sec-Butylbenzene	"	ND	----	4.12	"	"	"	"	"	12
tert-Butylbenzene	"	ND	----	4.12	"	"	"	"	"	12
Carbon disulfide	"	5.51	----	2.47	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	4.12	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-07 (AM-SB-3-4.0-5.0)										
		Soil					Sampled: 12/15/08 15:20			
Chlorobenzene	EPA 8260B	ND	----	1.65	ug/kg dry	1x	8L22006	12/22/08 11:08	12/22/08 13:16	
Chloroethane	"	ND	----	4.12	"	"	"	"	"	
Chloroform	"	ND	----	2.06	"	"	"	"	"	
Chloromethane	"	ND	----	8.24	"	"	"	"	"	
2-Chlorotoluene	"	ND	----	4.12	"	"	"	"	"	12
4-Chlorotoluene	"	ND	----	4.12	"	"	"	"	"	12
Dibromochloromethane	"	ND	----	4.12	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	----	8.24	"	"	"	"	"	12
1,2-Dibromoethane (EDB)	"	ND	----	4.12	"	"	"	"	"	
Dibromomethane	"	ND	----	4.12	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	4.12	"	"	"	"	"	12
1,3-Dichlorobenzene	"	ND	----	4.12	"	"	"	"	"	12
1,4-Dichlorobenzene	"	ND	----	4.12	"	"	"	"	"	12
Dichlorodifluoromethane	"	ND	----	4.12	"	"	"	"	"	C5
1,1-Dichloroethane	"	ND	----	1.65	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	1.03	"	"	"	"	"	
1,1-Dichloroethene	"	ND	----	2.47	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	2.47	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	2.06	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	4.12	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	4.12	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	8.24	"	"	"	"	"	
1,1-Dichloropropene	"	ND	----	4.12	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	4.12	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	1.03	"	"	"	"	"	
Ethylbenzene	"	ND	----	3.30	"	"	"	"	"	
Hexachlorobutadiene	"	ND	----	8.24	"	"	"	"	"	12
Methyl tert-butyl ether	"	ND	----	0.824	"	"	"	"	"	
n-Hexane	"	ND	----	4.12	"	"	"	"	"	
2-Hexanone	"	ND	----	24.7	"	"	"	"	"	
Isopropylbenzene	"	ND	----	4.12	"	"	"	"	"	
p-Isopropyltoluene	"	ND	----	4.12	"	"	"	"	"	12
4-Methyl-2-pentanone	"	ND	----	24.7	"	"	"	"	"	
Methylene chloride	"	ND	----	9.89	"	"	"	"	"	
Naphthalene	"	ND	----	8.24	"	"	"	"	"	12
n-Propylbenzene	"	ND	----	4.12	"	"	"	"	"	12
Styrene	"	ND	----	2.06	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	8.24	"	"	"	"	"	12
1,2,4-Trichlorobenzene	"	ND	----	8.24	"	"	"	"	"	12
1,1,1,2-Tetrachloroethane	"	ND	----	4.12	"	"	"	"	"	
1,1,1,2,2-Tetrachloroethane	"	ND	----	4.12	"	"	"	"	"	12
Tetrachloroethene	"	ND	----	1.65	"	"	"	"	"	
Toluene	"	ND	----	1.24	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-07 (AM-SB-3-4.0-5.0)		Soil		Sampled: 12/15/08 15:20						
1,1,1-Trichloroethane	EPA 8260B	ND	----	2.06	ug/kg dry	1x	8L22006	12/22/08 11:08	12/22/08 13:16	
1,1,2-Trichloroethane	"	ND	----	1.65	"	"	"	"	"	
Trichloroethene	"	ND	----	2.06	"	"	"	"	"	
Trichlorofluoromethane	"	ND	----	4.12	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	4.12	"	"	"	"	"	I2
1,2,4-Trimethylbenzene	"	ND	----	4.12	"	"	"	"	"	I2
1,3,5-Trimethylbenzene	"	ND	----	4.12	"	"	"	"	"	I2
Vinyl chloride	"	ND	----	2.06	"	"	"	"	"	
o-Xylene	"	ND	----	4.12	"	"	"	"	"	
m,p-Xylene	"	ND	----	4.12	"	"	"	"	"	
Total Xylenes	"	ND	----	8.24	"	"	"	"	"	

Surrogate(s): 1,2-DCA-d4

122%

70 - 140 %

"

"

Toluene-d8

98.1%

70 - 130 %

"

"

4-BFB

108%

70 - 130 %

"

"

I2

BRL0200-08 (AM-SB-7-1.5-3.0)

Soil

Sampled: 12/15/08 15:40

Acetone	EPA 8260B	ND	----	36.5	ug/kg dry	1x	8L18004	12/18/08 11:15	12/18/08 16:43	
Benzene	"	ND	----	1.37	"	"	"	"	"	
Bromobenzene	"	ND	----	4.56	"	"	"	"	"	
Bromochloromethane	"	ND	----	4.56	"	"	"	"	"	
Bromodichloromethane	"	ND	----	4.56	"	"	"	"	"	
Bromoform	"	ND	----	4.56	"	"	"	"	"	
Bromomethane	"	ND	----	9.13	"	"	"	"	"	
2-Butanone	"	ND	----	27.4	"	"	"	"	"	
n-Butylbenzene	"	ND	----	4.56	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	4.56	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	4.56	"	"	"	"	"	
Carbon disulfide	"	ND	----	2.74	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	4.56	"	"	"	"	"	
Chlorobenzene	"	ND	----	1.83	"	"	"	"	"	
Chloroethane	"	ND	----	4.56	"	"	"	"	"	
Chloroform	"	ND	----	2.28	"	"	"	"	"	
Chloromethane	"	ND	----	9.13	"	"	"	"	"	
2-Chlorotoluene	"	ND	----	4.56	"	"	"	"	"	
4-Chlorotoluene	"	ND	----	4.56	"	"	"	"	"	
Dibromochloromethane	"	ND	----	4.56	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	----	9.13	"	"	"	"	"	
1,2-Dibromoethane (EDB)	"	ND	----	4.56	"	"	"	"	"	
Dibromomethane	"	ND	----	4.56	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	4.56	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	----	4.56	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	----	4.56	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-08 (AM-SB-7-1.5-3.0)		Soil		Sampled: 12/15/08 15:40						
Dichlorodifluoromethane	EPA 8260B	ND	----	4.56	ug/kg dry	1x	8L18004	12/18/08 11:15	12/18/08 16:43	
1,1-Dichloroethane	"	ND	----	1.83	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	1.14	"	"	"	"	"	
1,1-Dichloroethene	"	ND	----	2.74	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	2.74	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	2.28	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	4.56	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	4.56	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	9.13	"	"	"	"	"	
1,1-Dichloropropene	"	ND	----	4.56	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	4.56	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	1.14	"	"	"	"	"	
Ethylbenzene	"	ND	----	3.65	"	"	"	"	"	
Hexachlorobutadiene	"	ND	----	9.13	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	0.913	"	"	"	"	"	
n-Hexane	"	ND	----	4.56	"	"	"	"	"	
2-Hexanone	"	ND	----	27.4	"	"	"	"	"	
Isopropylbenzene	"	ND	----	4.56	"	"	"	"	"	
p-Isopropyltoluene	"	ND	----	4.56	"	"	"	"	"	
4-Methyl-2-pentanone	"	ND	----	27.4	"	"	"	"	"	
Methylene chloride	"	ND	----	11.0	"	"	"	"	"	
Naphthalene	"	ND	----	9.13	"	"	"	"	"	
n-Propylbenzene	"	ND	----	4.56	"	"	"	"	"	
Styrene	"	ND	----	2.28	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	9.13	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	----	9.13	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	----	4.56	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	----	4.56	"	"	"	"	"	
Tetrachloroethene	"	ND	----	1.83	"	"	"	"	"	
Toluene	"	ND	----	1.37	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	----	2.28	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	----	1.83	"	"	"	"	"	
Trichloroethene	"	ND	----	2.28	"	"	"	"	"	
Trichlorofluoromethane	"	ND	----	4.56	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	4.56	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	4.56	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	4.56	"	"	"	"	"	
Vinyl chloride	"	ND	----	2.28	"	"	"	"	"	
o-Xylene	"	ND	----	4.56	"	"	"	"	"	
m,p-Xylene	"	ND	----	4.56	"	"	"	"	"	
Total Xylenes	"	ND	----	9.13	"	"	"	"	"	
<i>Surrogate(s): 1,2-DCA-d4</i>				118%		70 - 140 %	"		"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-08 (AM-SB-7-1.5-3.0)		Soil								Sampled: 12/15/08 15:40
<i>Toluene-d8</i>			101%		70 - 130 %	1x			12/18/08 16:43	
<i>4-BFB</i>			106%		70 - 130 %	"			"	
BRL0200-09 (AM-SB-7-6.0-7.0)		Soil								Sampled: 12/15/08 15:55
Benzene	EPA 8260B	ND	----	1.47	ug/kg dry	1x	8L18004	12/18/08 11:15	12/18/08 17:08	
Bromobenzene	"	ND	----	4.90	"	"	"	"	"	I2
Bromochloromethane	"	ND	----	4.90	"	"	"	"	"	I2
Bromodichloromethane	"	ND	----	4.90	"	"	"	"	"	I2
Bromoform	"	ND	----	4.90	"	"	"	"	"	I2
Bromomethane	"	ND	----	9.80	"	"	"	"	"	I2
2-Butanone	"	ND	----	29.4	"	"	"	"	"	I2
n-Butylbenzene	"	ND	----	4.90	"	"	"	"	"	I2
sec-Butylbenzene	"	ND	----	4.90	"	"	"	"	"	I2
tert-Butylbenzene	"	ND	----	4.90	"	"	"	"	"	I2
Carbon disulfide	"	ND	----	2.94	"	"	"	"	"	I2
Carbon tetrachloride	"	ND	----	4.90	"	"	"	"	"	I2
Chlorobenzene	"	ND	----	1.96	"	"	"	"	"	I2
Chloroethane	"	ND	----	4.90	"	"	"	"	"	I2
Chloroform	"	ND	----	2.45	"	"	"	"	"	I2
Chloromethane	"	ND	----	9.80	"	"	"	"	"	I2
2-Chlorotoluene	"	ND	----	4.90	"	"	"	"	"	I2
4-Chlorotoluene	"	ND	----	4.90	"	"	"	"	"	I2
Dibromochloromethane	"	ND	----	4.90	"	"	"	"	"	I2
1,2-Dibromo-3-chloropropane	"	ND	----	9.80	"	"	"	"	"	I2
1,2-Dibromoethane (EDB)	"	ND	----	4.90	"	"	"	"	"	I2
Dibromomethane	"	ND	----	4.90	"	"	"	"	"	I2
1,2-Dichlorobenzene	"	ND	----	4.90	"	"	"	"	"	I2
1,3-Dichlorobenzene	"	ND	----	4.90	"	"	"	"	"	I2
1,4-Dichlorobenzene	"	ND	----	4.90	"	"	"	"	"	I2
Dichlorodifluoromethane	"	ND	----	4.90	"	"	"	"	"	I2
1,1-Dichloroethane	"	ND	----	1.96	"	"	"	"	"	I2
1,2-Dichloroethane	"	ND	----	1.23	"	"	"	"	"	I2
1,1-Dichloroethene	"	ND	----	2.94	"	"	"	"	"	I2
cis-1,2-Dichloroethene	"	ND	----	2.94	"	"	"	"	"	I2
trans-1,2-Dichloroethene	"	ND	----	2.45	"	"	"	"	"	I2
1,2-Dichloropropane	"	ND	----	4.90	"	"	"	"	"	I2
1,3-Dichloropropane	"	ND	----	4.90	"	"	"	"	"	I2
2,2-Dichloropropane	"	ND	----	9.80	"	"	"	"	"	I2
1,1-Dichloropropene	"	ND	----	4.90	"	"	"	"	"	I2
cis-1,3-Dichloropropene	"	ND	----	4.90	"	"	"	"	"	I2
trans-1,3-Dichloropropene	"	ND	----	1.23	"	"	"	"	"	I2
Ethylbenzene	"	ND	----	3.92	"	"	"	"	"	I2

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue	Project Name: WSDOT SR 520 - Pontoon Sites	
1100 112th Avenue NE, Suite 400	Project Number: 180171.AR.X7.02	Report Created:
Bellevue, WA/USA 98004-4504	Project Manager: Brian Tracy	01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-09 (AM-SB-7-6.0-7.0)		Soil			Sampled: 12/15/08 15:55					
Hexachlorobutadiene	EPA 8260B	ND	----	9.80	ug/kg dry	1x	8L18004	12/18/08 11:15	12/18/08 17:08	I2
Methyl tert-butyl ether	"	ND	----	0.980	"	"	"	"	"	I2
n-Hexane	"	ND	----	4.90	"	"	"	"	"	I2
2-Hexanone	"	ND	----	29.4	"	"	"	"	"	I2
Isopropylbenzene	"	ND	----	4.90	"	"	"	"	"	I2
p-Isopropyltoluene	"	ND	----	4.90	"	"	"	"	"	I2
4-Methyl-2-pentanone	"	ND	----	29.4	"	"	"	"	"	I2
Methylene chloride	"	ND	----	11.8	"	"	"	"	"	I2
Naphthalene	"	ND	----	9.80	"	"	"	"	"	I2
n-Propylbenzene	"	ND	----	4.90	"	"	"	"	"	I2
Styrene	"	ND	----	2.45	"	"	"	"	"	I2
1,2,3-Trichlorobenzene	"	ND	----	9.80	"	"	"	"	"	I2
1,2,4-Trichlorobenzene	"	ND	----	9.80	"	"	"	"	"	I2
1,1,1,2-Tetrachloroethane	"	ND	----	4.90	"	"	"	"	"	I2
1,1,2,2-Tetrachloroethane	"	ND	----	4.90	"	"	"	"	"	I2
Tetrachloroethene	"	ND	----	1.96	"	"	"	"	"	I2
Toluene	"	ND	----	1.47	"	"	"	"	"	I2
1,1,1-Trichloroethane	"	ND	----	2.45	"	"	"	"	"	I2
1,1,2-Trichloroethane	"	ND	----	1.96	"	"	"	"	"	I2
Trichloroethene	"	ND	----	2.45	"	"	"	"	"	I2
Trichlorofluoromethane	"	ND	----	4.90	"	"	"	"	"	I2
1,2,3-Trichloropropane	"	ND	----	4.90	"	"	"	"	"	I2
1,2,4-Trimethylbenzene	"	ND	----	4.90	"	"	"	"	"	I2
1,3,5-Trimethylbenzene	"	ND	----	4.90	"	"	"	"	"	I2
Vinyl chloride	"	ND	----	2.45	"	"	"	"	"	I2
o-Xylene	"	ND	----	4.90	"	"	"	"	"	I2
m,p-Xylene	"	ND	----	4.90	"	"	"	"	"	I2
Total Xylenes	"	ND	----	9.80	"	"	"	"	"	I2
Surrogate(s): 1,2-DCA-d4			126%		70 - 140 %	"			"	
Toluene-d8			112%		70 - 130 %	"			"	I2
4-BFB			119%		70 - 130 %	"			"	I2

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-10 (AM-SB-10-0.0-3.0)										
		Soil					Sampled: 12/15/08 16:20			
Acetone	EPA 8260B	125	----	35.3	ug/kg dry	1x	8L18004	12/18/08 11:15	12/18/08 17:34	
Benzene	"	ND	----	1.32	"	"	"	"	"	
Bromobenzene	"	ND	----	4.41	"	"	"	"	"	
Bromochloromethane	"	ND	----	4.41	"	"	"	"	"	
Bromodichloromethane	"	ND	----	4.41	"	"	"	"	"	
Bromoform	"	ND	----	4.41	"	"	"	"	"	
Bromomethane	"	ND	----	8.82	"	"	"	"	"	
2-Butanone	"	ND	----	26.5	"	"	"	"	"	
n-Butylbenzene	"	ND	----	4.41	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	4.41	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	4.41	"	"	"	"	"	
Carbon disulfide	"	ND	----	2.65	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	4.41	"	"	"	"	"	
Chlorobenzene	"	ND	----	1.76	"	"	"	"	"	
Chloroethane	"	ND	----	4.41	"	"	"	"	"	
Chloroform	"	ND	----	2.20	"	"	"	"	"	
Chloromethane	"	ND	----	8.82	"	"	"	"	"	
2-Chlorotoluene	"	ND	----	4.41	"	"	"	"	"	
4-Chlorotoluene	"	ND	----	4.41	"	"	"	"	"	
Dibromochloromethane	"	ND	----	4.41	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	----	8.82	"	"	"	"	"	
1,2-Dibromoethane (EDB)	"	ND	----	4.41	"	"	"	"	"	
Dibromomethane	"	ND	----	4.41	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	4.41	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	----	4.41	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	----	4.41	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	----	4.41	"	"	"	"	"	
1,1-Dichloroethane	"	ND	----	1.76	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	1.10	"	"	"	"	"	
1,1-Dichloroethene	"	ND	----	2.65	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	2.65	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	2.20	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	4.41	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	4.41	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	8.82	"	"	"	"	"	
1,1-Dichloropropene	"	ND	----	4.41	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	4.41	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	1.10	"	"	"	"	"	
Ethylbenzene	"	ND	----	3.53	"	"	"	"	"	
Hexachlorobutadiene	"	ND	----	8.82	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	0.882	"	"	"	"	"	
n-Hexane	"	ND	----	4.41	"	"	"	"	"	
2-Hexanone	"	ND	----	26.5	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-10 (AM-SB-10-0.0-3.0)		Soil		Sampled: 12/15/08 16:20						
Isopropylbenzene	EPA 8260B	ND	----	4.41	ug/kg dry	1x	8L18004	12/18/08 11:15	12/18/08 17:34	
p-Isopropyltoluene	"	ND	----	4.41	"	"	"	"	"	
4-Methyl-2-pentanone	"	ND	----	26.5	"	"	"	"	"	
Methylene chloride	"	ND	----	10.6	"	"	"	"	"	
Naphthalene	"	ND	----	8.82	"	"	"	"	"	
n-Propylbenzene	"	ND	----	4.41	"	"	"	"	"	
Styrene	"	ND	----	2.20	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	8.82	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	----	8.82	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	----	4.41	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	----	4.41	"	"	"	"	"	
Tetrachloroethene	"	ND	----	1.76	"	"	"	"	"	
Toluene	"	ND	----	1.32	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	----	2.20	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	----	1.76	"	"	"	"	"	
Trichloroethene	"	ND	----	2.20	"	"	"	"	"	
Trichlorofluoromethane	"	ND	----	4.41	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	4.41	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	4.41	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	4.41	"	"	"	"	"	
Vinyl chloride	"	ND	----	2.20	"	"	"	"	"	
o-Xylene	"	ND	----	4.41	"	"	"	"	"	
m,p-Xylene	"	ND	----	4.41	"	"	"	"	"	
Total Xylenes	"	ND	----	8.82	"	"	"	"	"	

Surrogate(s): 1,2-DCA-d4 123% 70 - 140 % "
 Toluene-d8 98.9% 70 - 130 % "
 4-BFB 109% 70 - 130 % "

BRL0200-11 (AM-SB-10-10.0-11.0)		Soil		Sampled: 12/15/08 16:32						
Acetone	EPA 8260B	159	----	33.4	ug/kg dry	1x	8L18004	12/18/08 11:15	12/18/08 17:59	
Benzene	"	ND	----	1.25	"	"	"	"	"	
Bromobenzene	"	ND	----	4.18	"	"	"	"	"	
Bromochloromethane	"	ND	----	4.18	"	"	"	"	"	
Bromodichloromethane	"	ND	----	4.18	"	"	"	"	"	
Bromoform	"	ND	----	4.18	"	"	"	"	"	
Bromomethane	"	ND	----	8.36	"	"	"	"	"	
2-Butanone	"	ND	----	25.1	"	"	"	"	"	
n-Butylbenzene	"	ND	----	4.18	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	4.18	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	4.18	"	"	"	"	"	
Carbon disulfide	"	ND	----	2.51	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	4.18	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-11 (AM-SB-10-10.0-11.0)										
		Soil					Sampled: 12/15/08 16:32			
Chlorobenzene	EPA 8260B	ND	----	1.67	ug/kg dry	1x	8L18004	12/18/08 11:15	12/18/08 17:59	
Chloroethane	"	ND	----	4.18	"	"	"	"	"	
Chloroform	"	ND	----	2.09	"	"	"	"	"	
Chloromethane	"	ND	----	8.36	"	"	"	"	"	
2-Chlorotoluene	"	ND	----	4.18	"	"	"	"	"	
4-Chlorotoluene	"	ND	----	4.18	"	"	"	"	"	
Dibromochloromethane	"	ND	----	4.18	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	----	8.36	"	"	"	"	"	
1,2-Dibromoethane (EDB)	"	ND	----	4.18	"	"	"	"	"	
Dibromomethane	"	ND	----	4.18	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	4.18	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	----	4.18	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	----	4.18	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	----	4.18	"	"	"	"	"	
1,1-Dichloroethane	"	ND	----	1.67	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	1.04	"	"	"	"	"	
1,1-Dichloroethene	"	ND	----	2.51	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	2.51	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	2.09	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	4.18	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	4.18	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	8.36	"	"	"	"	"	
1,1-Dichloropropene	"	ND	----	4.18	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	4.18	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	1.04	"	"	"	"	"	
Ethylbenzene	"	ND	----	3.34	"	"	"	"	"	
Hexachlorobutadiene	"	ND	----	8.36	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	0.836	"	"	"	"	"	
n-Hexane	"	ND	----	4.18	"	"	"	"	"	
2-Hexanone	"	ND	----	25.1	"	"	"	"	"	
Isopropylbenzene	"	ND	----	4.18	"	"	"	"	"	
p-Isopropyltoluene	"	ND	----	4.18	"	"	"	"	"	
4-Methyl-2-pentanone	"	ND	----	25.1	"	"	"	"	"	
Methylene chloride	"	ND	----	10.0	"	"	"	"	"	
Naphthalene	"	ND	----	8.36	"	"	"	"	"	
n-Propylbenzene	"	ND	----	4.18	"	"	"	"	"	
Styrene	"	ND	----	2.09	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	8.36	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	----	8.36	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	----	4.18	"	"	"	"	"	
1,1,1,2,2-Tetrachloroethane	"	ND	----	4.18	"	"	"	"	"	
Tetrachloroethene	"	ND	----	1.67	"	"	"	"	"	
Toluene	"	ND	----	1.25	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-11 (AM-SB-10-10.0-11.0)		Soil		Sampled: 12/15/08 16:32						
1,1,1-Trichloroethane	EPA 8260B	ND	----	2.09	ug/kg dry	1x	8L18004	12/18/08 11:15	12/18/08 17:59	
1,1,2-Trichloroethane	"	ND	----	1.67	"	"	"	"	"	
Trichloroethene	"	ND	----	2.09	"	"	"	"	"	
Trichlorofluoromethane	"	ND	----	4.18	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	4.18	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	4.18	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	4.18	"	"	"	"	"	
Vinyl chloride	"	ND	----	2.09	"	"	"	"	"	
o-Xylene	"	ND	----	4.18	"	"	"	"	"	
m,p-Xylene	"	ND	----	4.18	"	"	"	"	"	
Total Xylenes	"	ND	----	8.36	"	"	"	"	"	

Surrogate(s): 1,2-DCA-d4 124% 70 - 140 % "
 Toluene-d8 97.4% 70 - 130 % "
 4-BFB 109% 70 - 130 % "

BRL0200-12 (AM-SB-11-1.0-2.0)		Soil		Sampled: 12/16/08 08:10							12
Benzene	EPA 8260B	ND	----	1.21	ug/kg dry	1x	8L18004	12/18/08 11:15	12/18/08 18:25		
Bromobenzene	"	ND	----	4.03	"	"	"	"	"		
Bromochloromethane	"	ND	----	4.03	"	"	"	"	"		
Bromodichloromethane	"	ND	----	4.03	"	"	"	"	"		
Bromoform	"	ND	----	4.03	"	"	"	"	"		
Bromomethane	"	ND	----	8.07	"	"	"	"	"		
2-Butanone	"	ND	----	24.2	"	"	"	"	"		
n-Butylbenzene	"	ND	----	4.03	"	"	"	"	"		
sec-Butylbenzene	"	ND	----	4.03	"	"	"	"	"		
tert-Butylbenzene	"	ND	----	4.03	"	"	"	"	"		
Carbon disulfide	"	ND	----	2.42	"	"	"	"	"		
Carbon tetrachloride	"	ND	----	4.03	"	"	"	"	"		
Chlorobenzene	"	ND	----	1.61	"	"	"	"	"		
Chloroethane	"	ND	----	4.03	"	"	"	"	"		
Chloroform	"	ND	----	2.02	"	"	"	"	"		
Chloromethane	"	ND	----	8.07	"	"	"	"	"		
2-Chlorotoluene	"	ND	----	4.03	"	"	"	"	"		
4-Chlorotoluene	"	ND	----	4.03	"	"	"	"	"		
Dibromochloromethane	"	ND	----	4.03	"	"	"	"	"		
1,2-Dibromo-3-chloropropane	"	ND	----	8.07	"	"	"	"	"		
1,2-Dibromoethane (EDB)	"	ND	----	4.03	"	"	"	"	"		
Dibromomethane	"	ND	----	4.03	"	"	"	"	"		
1,2-Dichlorobenzene	"	ND	----	4.03	"	"	"	"	"		
1,3-Dichlorobenzene	"	ND	----	4.03	"	"	"	"	"		
1,4-Dichlorobenzene	"	ND	----	4.03	"	"	"	"	"		
Dichlorodifluoromethane	"	ND	----	4.03	"	"	"	"	"		

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-12 (AM-SB-11-1.0-2.0)										
		Soil					Sampled: 12/16/08 08:10			12
1,1-Dichloroethane	EPA 8260B	ND	----	1.61	ug/kg dry	1x	8L18004	12/18/08 11:15	12/18/08 18:25	
1,2-Dichloroethane	"	ND	----	1.01	"	"	"	"	"	
1,1-Dichloroethene	"	ND	----	2.42	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	2.42	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	2.02	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	4.03	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	4.03	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	8.07	"	"	"	"	"	
1,1-Dichloropropene	"	ND	----	4.03	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	4.03	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	1.01	"	"	"	"	"	
Ethylbenzene	"	ND	----	3.23	"	"	"	"	"	
Hexachlorobutadiene	"	ND	----	8.07	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	0.807	"	"	"	"	"	
n-Hexane	"	ND	----	4.03	"	"	"	"	"	
2-Hexanone	"	ND	----	24.2	"	"	"	"	"	
Isopropylbenzene	"	ND	----	4.03	"	"	"	"	"	
p-Isopropyltoluene	"	ND	----	4.03	"	"	"	"	"	
4-Methyl-2-pentanone	"	ND	----	24.2	"	"	"	"	"	
Methylene chloride	"	ND	----	9.68	"	"	"	"	"	
Naphthalene	"	ND	----	8.07	"	"	"	"	"	
n-Propylbenzene	"	ND	----	4.03	"	"	"	"	"	
Styrene	"	ND	----	2.02	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	8.07	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	----	8.07	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	----	4.03	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	----	4.03	"	"	"	"	"	
Tetrachloroethene	"	ND	----	1.61	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	----	2.02	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	----	1.61	"	"	"	"	"	
Trichloroethene	"	ND	----	2.02	"	"	"	"	"	
Trichlorofluoromethane	"	ND	----	4.03	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	4.03	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	4.03	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	4.03	"	"	"	"	"	
Vinyl chloride	"	ND	----	2.02	"	"	"	"	"	
o-Xylene	"	ND	----	4.03	"	"	"	"	"	
m,p-Xylene	"	ND	----	4.03	"	"	"	"	"	
Total Xylenes	"	ND	----	8.07	"	"	"	"	"	
Surrogate(s):	1,2-DCA-d4		133%		70 - 140 %	"				"
	Toluene-d8		109%		70 - 130 %	"				"
	4-BFB		112%		70 - 130 %	"				"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-13 (AM-SB-11-4.0-6.0)										
		Soil					Sampled: 12/16/08 08:22			
Acetone	EPA 8260B	87.3	----	35.8	ug/kg dry	1x	8L18004	12/18/08 11:15	12/18/08 18:51	
Benzene	"	ND	----	1.34	"	"	"	"	"	
Bromobenzene	"	ND	----	4.47	"	"	"	"	"	
Bromochloromethane	"	ND	----	4.47	"	"	"	"	"	
Bromodichloromethane	"	ND	----	4.47	"	"	"	"	"	
Bromoform	"	ND	----	4.47	"	"	"	"	"	
Bromomethane	"	ND	----	8.94	"	"	"	"	"	
2-Butanone	"	ND	----	26.8	"	"	"	"	"	
n-Butylbenzene	"	ND	----	4.47	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	4.47	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	4.47	"	"	"	"	"	
Carbon disulfide	"	ND	----	2.68	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	4.47	"	"	"	"	"	
Chlorobenzene	"	ND	----	1.79	"	"	"	"	"	
Chloroethane	"	ND	----	4.47	"	"	"	"	"	
Chloroform	"	ND	----	2.24	"	"	"	"	"	
Chloromethane	"	ND	----	8.94	"	"	"	"	"	
2-Chlorotoluene	"	ND	----	4.47	"	"	"	"	"	
4-Chlorotoluene	"	ND	----	4.47	"	"	"	"	"	
Dibromochloromethane	"	ND	----	4.47	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	----	8.94	"	"	"	"	"	
1,2-Dibromoethane (EDB)	"	ND	----	4.47	"	"	"	"	"	
Dibromomethane	"	ND	----	4.47	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	4.47	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	----	4.47	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	----	4.47	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	----	4.47	"	"	"	"	"	
1,1-Dichloroethane	"	ND	----	1.79	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	1.12	"	"	"	"	"	
1,1-Dichloroethene	"	ND	----	2.68	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	2.68	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	2.24	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	4.47	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	4.47	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	8.94	"	"	"	"	"	
1,1-Dichloropropene	"	ND	----	4.47	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	4.47	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	1.12	"	"	"	"	"	
Ethylbenzene	"	ND	----	3.58	"	"	"	"	"	
Hexachlorobutadiene	"	ND	----	8.94	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	0.894	"	"	"	"	"	
n-Hexane	"	ND	----	4.47	"	"	"	"	"	
2-Hexanone	"	ND	----	26.8	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-13 (AM-SB-11-4.0-6.0)		Soil		Sampled: 12/16/08 08:22						
Isopropylbenzene	EPA 8260B	ND	----	4.47	ug/kg dry	1x	8L18004	12/18/08 11:15	12/18/08 18:51	
p-Isopropyltoluene	"	ND	----	4.47	"	"	"	"	"	
4-Methyl-2-pentanone	"	ND	----	26.8	"	"	"	"	"	
Methylene chloride	"	ND	----	10.7	"	"	"	"	"	
Naphthalene	"	ND	----	8.94	"	"	"	"	"	
n-Propylbenzene	"	ND	----	4.47	"	"	"	"	"	
Styrene	"	ND	----	2.24	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	8.94	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	----	8.94	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	----	4.47	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	----	4.47	"	"	"	"	"	
Tetrachloroethene	"	ND	----	1.79	"	"	"	"	"	
Toluene	"	ND	----	1.34	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	----	2.24	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	----	1.79	"	"	"	"	"	
Trichloroethene	"	ND	----	2.24	"	"	"	"	"	
Trichlorofluoromethane	"	ND	----	4.47	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	4.47	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	4.47	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	4.47	"	"	"	"	"	
Vinyl chloride	"	ND	----	2.24	"	"	"	"	"	
o-Xylene	"	ND	----	4.47	"	"	"	"	"	
m,p-Xylene	"	ND	----	4.47	"	"	"	"	"	
Total Xylenes	"	ND	----	8.94	"	"	"	"	"	
<i>Surrogate(s): 1,2-DCA-d4</i>			<i>129%</i>	<i>70 - 140 %</i>						
<i>Toluene-d8</i>			<i>101%</i>	<i>70 - 130 %</i>						
<i>4-BFB</i>			<i>113%</i>	<i>70 - 130 %</i>						

BRL0200-15 (AM-SB-8-1.0-2.0)		Soil		Sampled: 12/16/08 09:47						
Acetone	EPA 8260B	660	----	36.9	ug/kg dry	1x	8L18004	12/18/08 11:15	12/18/08 19:16	
Benzene	"	ND	----	1.38	"	"	"	"	"	
Bromobenzene	"	ND	----	4.62	"	"	"	"	"	
Bromochloromethane	"	ND	----	4.62	"	"	"	"	"	
Bromodichloromethane	"	ND	----	4.62	"	"	"	"	"	
Bromoform	"	ND	----	4.62	"	"	"	"	"	
Bromomethane	"	ND	----	9.23	"	"	"	"	"	
2-Butanone	"	37.1	----	27.7	"	"	"	"	"	
n-Butylbenzene	"	ND	----	4.62	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	4.62	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	4.62	"	"	"	"	"	
Carbon disulfide	"	ND	----	2.77	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	4.62	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-15	(AM-SB-8-1.0-2.0)									
		Soil					Sampled: 12/16/08 09:47			
Chlorobenzene	EPA 8260B	ND	----	1.85	ug/kg dry	1x	8L18004	12/18/08 11:15	12/18/08 19:16	
Chloroethane	"	ND	----	4.62	"	"	"	"	"	
Chloroform	"	ND	----	2.31	"	"	"	"	"	
Chloromethane	"	ND	----	9.23	"	"	"	"	"	
2-Chlorotoluene	"	ND	----	4.62	"	"	"	"	"	
4-Chlorotoluene	"	ND	----	4.62	"	"	"	"	"	
Dibromochloromethane	"	ND	----	4.62	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	----	9.23	"	"	"	"	"	
1,2-Dibromoethane (EDB)	"	ND	----	4.62	"	"	"	"	"	
Dibromomethane	"	ND	----	4.62	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	4.62	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	----	4.62	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	----	4.62	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	----	4.62	"	"	"	"	"	
1,1-Dichloroethane	"	ND	----	1.85	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	1.15	"	"	"	"	"	
1,1-Dichloroethene	"	ND	----	2.77	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	2.77	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	2.31	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	4.62	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	4.62	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	9.23	"	"	"	"	"	
1,1-Dichloropropene	"	ND	----	4.62	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	4.62	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	1.15	"	"	"	"	"	
Ethylbenzene	"	ND	----	3.69	"	"	"	"	"	
Hexachlorobutadiene	"	ND	----	9.23	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	0.923	"	"	"	"	"	
n-Hexane	"	ND	----	4.62	"	"	"	"	"	
2-Hexanone	"	ND	----	27.7	"	"	"	"	"	
Isopropylbenzene	"	ND	----	4.62	"	"	"	"	"	
p-Isopropyltoluene	"	ND	----	4.62	"	"	"	"	"	
4-Methyl-2-pentanone	"	ND	----	27.7	"	"	"	"	"	
Methylene chloride	"	ND	----	11.1	"	"	"	"	"	
Naphthalene	"	ND	----	9.23	"	"	"	"	"	
n-Propylbenzene	"	ND	----	4.62	"	"	"	"	"	
Styrene	"	ND	----	2.31	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	9.23	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	----	9.23	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	----	4.62	"	"	"	"	"	
1,1,1,2,2-Tetrachloroethane	"	ND	----	4.62	"	"	"	"	"	
Tetrachloroethene	"	ND	----	1.85	"	"	"	"	"	
Toluene	"	ND	----	1.38	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-15 (AM-SB-8-1.0-2.0)		Soil		Sampled: 12/16/08 09:47						
1,1,1-Trichloroethane	EPA 8260B	ND	----	2.31	ug/kg dry	1x	8L18004	12/18/08 11:15	12/18/08 19:16	
1,1,2-Trichloroethane	"	ND	----	1.85	"	"	"	"	"	
Trichloroethene	"	ND	----	2.31	"	"	"	"	"	
Trichlorofluoromethane	"	ND	----	4.62	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	4.62	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	4.62	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	4.62	"	"	"	"	"	
Vinyl chloride	"	ND	----	2.31	"	"	"	"	"	
o-Xylene	"	ND	----	4.62	"	"	"	"	"	
m,p-Xylene	"	ND	----	4.62	"	"	"	"	"	
Total Xylenes	"	ND	----	9.23	"	"	"	"	"	

Surrogate(s): 1,2-DCA-d4 126% 70 - 140 % "
 Toluene-d8 102% 70 - 130 % "
 4-BFB 107% 70 - 130 % "

BRL0200-16 (AM-SB-8-8.0-10.0)		Soil		Sampled: 12/16/08 10:00						
Acetone	EPA 8260B	335	----	28.6	ug/kg dry	1x	8L18004	12/18/08 11:15	12/18/08 19:42	
Benzene	"	ND	----	1.07	"	"	"	"	"	
Bromobenzene	"	ND	----	3.58	"	"	"	"	"	
Bromochloromethane	"	ND	----	3.58	"	"	"	"	"	
Bromodichloromethane	"	ND	----	3.58	"	"	"	"	"	
Bromoform	"	ND	----	3.58	"	"	"	"	"	12
Bromomethane	"	ND	----	7.15	"	"	"	"	"	
2-Butanone	"	30.6	----	21.5	"	"	"	"	"	
n-Butylbenzene	"	ND	----	3.58	"	"	"	"	"	12
sec-Butylbenzene	"	ND	----	3.58	"	"	"	"	"	12
tert-Butylbenzene	"	ND	----	3.58	"	"	"	"	"	12
Carbon disulfide	"	ND	----	2.15	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	3.58	"	"	"	"	"	
Chlorobenzene	"	ND	----	1.43	"	"	"	"	"	
Chloroethane	"	ND	----	3.58	"	"	"	"	"	
Chloroform	"	ND	----	1.79	"	"	"	"	"	
Chloromethane	"	ND	----	7.15	"	"	"	"	"	
2-Chlorotoluene	"	ND	----	3.58	"	"	"	"	"	12
4-Chlorotoluene	"	ND	----	3.58	"	"	"	"	"	12
Dibromochloromethane	"	ND	----	3.58	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	----	7.15	"	"	"	"	"	12
1,2-Dibromoethane (EDB)	"	ND	----	3.58	"	"	"	"	"	
Dibromomethane	"	ND	----	3.58	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	3.58	"	"	"	"	"	12
1,3-Dichlorobenzene	"	ND	----	3.58	"	"	"	"	"	12
1,4-Dichlorobenzene	"	ND	----	3.58	"	"	"	"	"	12

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-16 (AM-SB-8-8.0-10.0)		Soil		Sampled: 12/16/08 10:00						
Dichlorodifluoromethane	EPA 8260B	ND	----	3.58	ug/kg dry	1x	8L18004	12/18/08 11:15	12/18/08 19:42	
1,1-Dichloroethane	"	ND	----	1.43	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	0.894	"	"	"	"	"	
1,1-Dichloroethene	"	ND	----	2.15	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	2.15	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	1.79	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	3.58	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	3.58	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	7.15	"	"	"	"	"	
1,1-Dichloropropene	"	ND	----	3.58	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	3.58	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	0.894	"	"	"	"	"	
Ethylbenzene	"	ND	----	2.86	"	"	"	"	"	
Hexachlorobutadiene	"	ND	----	7.15	"	"	"	"	"	12
Methyl tert-butyl ether	"	ND	----	0.715	"	"	"	"	"	
n-Hexane	"	ND	----	3.58	"	"	"	"	"	
2-Hexanone	"	ND	----	21.5	"	"	"	"	"	
Isopropylbenzene	"	ND	----	3.58	"	"	"	"	"	
p-Isopropyltoluene	"	ND	----	3.58	"	"	"	"	"	12
4-Methyl-2-pentanone	"	ND	----	21.5	"	"	"	"	"	
Methylene chloride	"	ND	----	8.58	"	"	"	"	"	
Naphthalene	"	ND	----	7.15	"	"	"	"	"	12
n-Propylbenzene	"	ND	----	3.58	"	"	"	"	"	12
Styrene	"	ND	----	1.79	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	7.15	"	"	"	"	"	12
1,2,4-Trichlorobenzene	"	ND	----	7.15	"	"	"	"	"	12
1,1,1,2-Tetrachloroethane	"	ND	----	3.58	"	"	"	"	"	
1,1,1,2,2-Tetrachloroethane	"	ND	----	3.58	"	"	"	"	"	12
Tetrachloroethene	"	ND	----	1.43	"	"	"	"	"	
Toluene	"	1.69	----	1.07	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	----	1.79	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	----	1.43	"	"	"	"	"	
Trichloroethene	"	ND	----	1.79	"	"	"	"	"	
Trichlorofluoromethane	"	ND	----	3.58	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	3.58	"	"	"	"	"	12
1,2,4-Trimethylbenzene	"	ND	----	3.58	"	"	"	"	"	12
1,3,5-Trimethylbenzene	"	ND	----	3.58	"	"	"	"	"	12
Vinyl chloride	"	ND	----	1.79	"	"	"	"	"	
o-Xylene	"	ND	----	3.58	"	"	"	"	"	
m,p-Xylene	"	ND	----	3.58	"	"	"	"	"	
Total Xylenes	"	ND	----	7.15	"	"	"	"	"	
<i>Surrogate(s): 1,2-DCA-d4</i>			<i>129%</i>		<i>70 - 140 %</i>	"				"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	-------	----------	----------	-------

BRL0200-16 (AM-SB-8-8.0-10.0)

Soil

Sampled: 12/16/08 10:00

Toluene-d8			101%		70 - 130 %	1x			12/18/08 19:42	
4-BFB			114%		70 - 130 %	"			"	I2

BRL0200-17RE1 (AM-SB-6-1.0-2.0)

Soil

Sampled: 12/16/08 10:24

Acetone	EPA 8260B	107	----	23.4	ug/kg dry	1x	8L22006	12/22/08 11:08	12/22/08 14:33	
Benzene	"	ND	----	0.878	"	"	"	"	"	
Bromobenzene	"	ND	----	2.93	"	"	"	"	"	
Bromochloromethane	"	ND	----	2.93	"	"	"	"	"	
Bromodichloromethane	"	ND	----	2.93	"	"	"	"	"	
Bromoform	"	ND	----	2.93	"	"	"	"	"	
Bromomethane	"	ND	----	5.85	"	"	"	"	"	
2-Butanone	"	ND	----	17.6	"	"	"	"	"	
n-Butylbenzene	"	ND	----	2.93	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	2.93	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	2.93	"	"	"	"	"	
Carbon disulfide	"	ND	----	1.76	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	2.93	"	"	"	"	"	
Chlorobenzene	"	ND	----	1.17	"	"	"	"	"	
Chloroethane	"	ND	----	2.93	"	"	"	"	"	
Chloroform	"	ND	----	1.46	"	"	"	"	"	
Chloromethane	"	ND	----	5.85	"	"	"	"	"	
2-Chlorotoluene	"	ND	----	2.93	"	"	"	"	"	
4-Chlorotoluene	"	ND	----	2.93	"	"	"	"	"	
Dibromochloromethane	"	ND	----	2.93	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	----	5.85	"	"	"	"	"	
1,2-Dibromoethane (EDB)	"	ND	----	2.93	"	"	"	"	"	
Dibromomethane	"	ND	----	2.93	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	2.93	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	----	2.93	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	----	2.93	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	----	2.93	"	"	"	"	"	
1,1-Dichloroethane	"	ND	----	1.17	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	0.732	"	"	"	"	"	
1,1-Dichloroethene	"	2.10	----	1.76	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	1.76	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	1.46	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	2.93	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	2.93	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	5.85	"	"	"	"	"	
1,1-Dichloropropene	"	ND	----	2.93	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	2.93	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	0.732	"	"	"	"	"	

C5

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-17RE1 (AM-SB-6-1.0-2.0)		Soil		Sampled: 12/16/08 10:24						
Ethylbenzene	EPA 8260B	ND	----	2.34	ug/kg dry	1x	8L22006	12/22/08 11:08	12/22/08 14:33	
Hexachlorobutadiene	"	ND	----	5.85	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	0.585	"	"	"	"	"	
n-Hexane	"	ND	----	2.93	"	"	"	"	"	
2-Hexanone	"	ND	----	17.6	"	"	"	"	"	
Isopropylbenzene	"	ND	----	2.93	"	"	"	"	"	
p-Isopropyltoluene	"	ND	----	2.93	"	"	"	"	"	
4-Methyl-2-pentanone	"	ND	----	17.6	"	"	"	"	"	
Methylene chloride	"	ND	----	7.02	"	"	"	"	"	
Naphthalene	"	ND	----	5.85	"	"	"	"	"	
n-Propylbenzene	"	ND	----	2.93	"	"	"	"	"	
Styrene	"	ND	----	1.46	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	5.85	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	----	5.85	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	----	2.93	"	"	"	"	"	
1,1,1,2,2-Tetrachloroethane	"	ND	----	2.93	"	"	"	"	"	
Tetrachloroethene	"	ND	----	1.17	"	"	"	"	"	
Toluene	"	ND	----	0.878	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	----	1.46	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	----	1.17	"	"	"	"	"	
Trichloroethene	"	ND	----	1.46	"	"	"	"	"	
Trichlorofluoromethane	"	ND	----	2.93	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	2.93	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	2.93	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	2.93	"	"	"	"	"	
Vinyl chloride	"	ND	----	1.46	"	"	"	"	"	
o-Xylene	"	ND	----	2.93	"	"	"	"	"	
m,p-Xylene	"	ND	----	2.93	"	"	"	"	"	
Total Xylenes	"	ND	----	5.85	"	"	"	"	"	

Surrogate(s): 1,2-DCA-d4
 Toluene-d8
 4-BFB

128% 70 - 140 %
 99.5% 70 - 130 %
 108% 70 - 130 %

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-18RE1 (AM-SB-6-6.0-8.0)		Soil		Sampled: 12/16/08 10:35						
Benzene	EPA 8260B	ND	----	1.31	ug/kg dry	1x	8L22006	12/22/08 11:08	12/22/08 14:58	
Bromobenzene	"	ND	----	4.38	"	"	"	"	"	I2
Bromochloromethane	"	ND	----	4.38	"	"	"	"	"	I2
Bromodichloromethane	"	ND	----	4.38	"	"	"	"	"	
Bromoform	"	ND	----	4.38	"	"	"	"	"	
Bromomethane	"	ND	----	8.75	"	"	"	"	"	I2
n-Butylbenzene	"	ND	----	4.38	"	"	"	"	"	I2
sec-Butylbenzene	"	ND	----	4.38	"	"	"	"	"	I2
tert-Butylbenzene	"	ND	----	4.38	"	"	"	"	"	I2
Carbon disulfide	"	ND	----	2.63	"	"	"	"	"	I2
Carbon tetrachloride	"	ND	----	4.38	"	"	"	"	"	
Chlorobenzene	"	ND	----	1.75	"	"	"	"	"	
Chloroethane	"	ND	----	4.38	"	"	"	"	"	I2
Chloroform	"	ND	----	2.19	"	"	"	"	"	I2
Chloromethane	"	ND	----	8.75	"	"	"	"	"	I2
2-Chlorotoluene	"	ND	----	4.38	"	"	"	"	"	I2
4-Chlorotoluene	"	ND	----	4.38	"	"	"	"	"	I2
Dibromochloromethane	"	ND	----	4.38	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	----	8.75	"	"	"	"	"	I2
1,2-Dibromoethane (EDB)	"	ND	----	4.38	"	"	"	"	"	
Dibromomethane	"	ND	----	4.38	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	4.38	"	"	"	"	"	I2
1,3-Dichlorobenzene	"	ND	----	4.38	"	"	"	"	"	I2
1,4-Dichlorobenzene	"	ND	----	4.38	"	"	"	"	"	I2
Dichlorodifluoromethane	"	ND	----	4.38	"	"	"	"	"	CS, I2
1,1-Dichloroethane	"	ND	----	1.75	"	"	"	"	"	I2
1,2-Dichloroethane	"	ND	----	1.09	"	"	"	"	"	
1,1-Dichloroethene	"	ND	----	2.63	"	"	"	"	"	I2
cis-1,2-Dichloroethene	"	ND	----	2.63	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	2.19	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	4.38	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	4.38	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	8.75	"	"	"	"	"	I2
1,1-Dichloropropene	"	ND	----	4.38	"	"	"	"	"	I2
cis-1,3-Dichloropropene	"	ND	----	4.38	"	"	"	"	"	I2
trans-1,3-Dichloropropene	"	ND	----	1.09	"	"	"	"	"	I2
Ethylbenzene	"	ND	----	3.50	"	"	"	"	"	
Hexachlorobutadiene	"	ND	----	8.75	"	"	"	"	"	I2
Methyl tert-butyl ether	"	ND	----	0.875	"	"	"	"	"	I2
n-Hexane	"	ND	----	4.38	"	"	"	"	"	I2
2-Hexanone	"	ND	----	26.3	"	"	"	"	"	
Isopropylbenzene	"	ND	----	4.38	"	"	"	"	"	
p-Isopropyltoluene	"	ND	----	4.38	"	"	"	"	"	I2

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-18RE1 (AM-SB-6-6.0-8.0)		Soil		Sampled: 12/16/08 10:35						
4-Methyl-2-pentanone	EPA 8260B	ND	----	26.3	ug/kg dry	1x	8L22006	12/22/08 11:08	12/22/08 14:58	
Methylene chloride	"	ND	----	10.5	"	"	"	"	"	12
Naphthalene	"	ND	----	8.75	"	"	"	"	"	12
n-Propylbenzene	"	ND	----	4.38	"	"	"	"	"	12
Styrene	"	ND	----	2.19	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	8.75	"	"	"	"	"	12
1,2,4-Trichlorobenzene	"	ND	----	8.75	"	"	"	"	"	12
1,1,1,2-Tetrachloroethane	"	ND	----	4.38	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	----	4.38	"	"	"	"	"	12
Tetrachloroethene	"	ND	----	1.75	"	"	"	"	"	
Toluene	"	ND	----	1.31	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	----	2.19	"	"	"	"	"	12
1,1,2-Trichloroethane	"	ND	----	1.75	"	"	"	"	"	
Trichloroethene	"	ND	----	2.19	"	"	"	"	"	
Trichlorofluoromethane	"	ND	----	4.38	"	"	"	"	"	12
1,2,3-Trichloropropane	"	ND	----	4.38	"	"	"	"	"	12
1,2,4-Trimethylbenzene	"	ND	----	4.38	"	"	"	"	"	12
1,3,5-Trimethylbenzene	"	ND	----	4.38	"	"	"	"	"	12
Vinyl chloride	"	ND	----	2.19	"	"	"	"	"	12
o-Xylene	"	ND	----	4.38	"	"	"	"	"	
m,p-Xylene	"	ND	----	4.38	"	"	"	"	"	
Total Xylenes	"	ND	----	8.75	"	"	"	"	"	
<i>Surrogate(s): 1,2-DCA-d4</i>			<i>126%</i>	<i>70 - 140 %</i>						
<i>Toluene-d8</i>			<i>102%</i>	<i>70 - 130 %</i>						
<i>4-BFB</i>			<i>114%</i>	<i>70 - 130 %</i>						

BRL0200-21 (AM-SB-5-3.0-4.0)		Soil		Sampled: 12/16/08 11:40						
Acetone	EPA 8260B	275	----	33.1	ug/kg dry	1x	8L22006	12/22/08 11:08	12/22/08 15:50	
Benzene	"	ND	----	1.24	"	"	"	"	"	
Bromobenzene	"	ND	----	4.13	"	"	"	"	"	
Bromochloromethane	"	ND	----	4.13	"	"	"	"	"	
Bromodichloromethane	"	ND	----	4.13	"	"	"	"	"	
Bromoform	"	ND	----	4.13	"	"	"	"	"	
Bromomethane	"	ND	----	8.27	"	"	"	"	"	
2-Butanone	"	27.3	----	24.8	"	"	"	"	"	
n-Butylbenzene	"	ND	----	4.13	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	4.13	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	4.13	"	"	"	"	"	
Carbon disulfide	"	ND	----	2.48	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	4.13	"	"	"	"	"	
Chlorobenzene	"	ND	----	1.65	"	"	"	"	"	
Chloroethane	"	ND	----	4.13	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-21 (AM-SB-5-3.0-4.0)										
		Soil					Sampled: 12/16/08 11:40			
Chloroform	EPA 8260B	ND	----	2.07	ug/kg dry	1x	8L22006	12/22/08 11:08	12/22/08 15:50	
Chloromethane	"	ND	----	8.27	"	"	"	"	"	
2-Chlorotoluene	"	ND	----	4.13	"	"	"	"	"	
4-Chlorotoluene	"	ND	----	4.13	"	"	"	"	"	
Dibromochloromethane	"	ND	----	4.13	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	----	8.27	"	"	"	"	"	
1,2-Dibromoethane (EDB)	"	ND	----	4.13	"	"	"	"	"	
Dibromomethane	"	ND	----	4.13	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	4.13	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	----	4.13	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	----	4.13	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	----	4.13	"	"	"	"	"	C5
1,1-Dichloroethane	"	ND	----	1.65	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	1.03	"	"	"	"	"	
1,1-Dichloroethene	"	ND	----	2.48	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	2.48	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	2.07	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	4.13	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	4.13	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	8.27	"	"	"	"	"	
1,1-Dichloropropene	"	ND	----	4.13	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	4.13	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	1.03	"	"	"	"	"	
Ethylbenzene	"	ND	----	3.31	"	"	"	"	"	
Hexachlorobutadiene	"	ND	----	8.27	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	0.827	"	"	"	"	"	
n-Hexane	"	ND	----	4.13	"	"	"	"	"	
2-Hexanone	"	ND	----	24.8	"	"	"	"	"	
Isopropylbenzene	"	ND	----	4.13	"	"	"	"	"	
p-Isopropyltoluene	"	ND	----	4.13	"	"	"	"	"	
4-Methyl-2-pentanone	"	ND	----	24.8	"	"	"	"	"	
Methylene chloride	"	ND	----	9.92	"	"	"	"	"	
Naphthalene	"	ND	----	8.27	"	"	"	"	"	
n-Propylbenzene	"	ND	----	4.13	"	"	"	"	"	
Styrene	"	ND	----	2.07	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	8.27	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	----	8.27	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	----	4.13	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	----	4.13	"	"	"	"	"	
Tetrachloroethene	"	ND	----	1.65	"	"	"	"	"	
Toluene	"	ND	----	1.24	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	----	2.07	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	----	1.65	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-21 (AM-SB-5-3.0-4.0)		Soil		Sampled: 12/16/08 11:40						
Trichloroethene	EPA 8260B	ND	----	2.07	ug/kg dry	1x	8L22006	12/22/08 11:08	12/22/08 15:50	
Trichlorofluoromethane	"	ND	----	4.13	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	4.13	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	4.13	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	4.13	"	"	"	"	"	
Vinyl chloride	"	ND	----	2.07	"	"	"	"	"	
o-Xylene	"	ND	----	4.13	"	"	"	"	"	
m,p-Xylene	"	ND	----	4.13	"	"	"	"	"	
Total Xylenes	"	ND	----	8.27	"	"	"	"	"	
<i>Surrogate(s): 1,2-DCA-d4</i>			<i>124%</i>	<i>70 - 140 %</i>						
<i>Toluene-d8</i>			<i>104%</i>	<i>70 - 130 %</i>						
<i>4-BFB</i>			<i>120%</i>	<i>70 - 130 %</i>						
BRL0200-23 (AM-SB-4-1.0-2.0)		Soil		Sampled: 12/16/08 12:25						
Acetone	EPA 8260B	ND	----	31.3	ug/kg dry	1x	8L22006	12/22/08 11:08	12/22/08 16:15	
Benzene	"	ND	----	1.17	"	"	"	"	"	
Bromobenzene	"	ND	----	3.91	"	"	"	"	"	
Bromochloromethane	"	ND	----	3.91	"	"	"	"	"	
Bromodichloromethane	"	ND	----	3.91	"	"	"	"	"	
Bromoform	"	ND	----	3.91	"	"	"	"	"	
Bromomethane	"	ND	----	7.81	"	"	"	"	"	
2-Butanone	"	ND	----	23.4	"	"	"	"	"	
n-Butylbenzene	"	ND	----	3.91	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	3.91	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	3.91	"	"	"	"	"	
Carbon disulfide	"	ND	----	2.34	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	3.91	"	"	"	"	"	
Chlorobenzene	"	ND	----	1.56	"	"	"	"	"	
Chloroethane	"	ND	----	3.91	"	"	"	"	"	
Chloroform	"	ND	----	1.95	"	"	"	"	"	
Chloromethane	"	ND	----	7.81	"	"	"	"	"	
2-Chlorotoluene	"	ND	----	3.91	"	"	"	"	"	
4-Chlorotoluene	"	ND	----	3.91	"	"	"	"	"	
Dibromochloromethane	"	ND	----	3.91	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	----	7.81	"	"	"	"	"	
1,2-Dibromoethane (EDB)	"	ND	----	3.91	"	"	"	"	"	
Dibromomethane	"	ND	----	3.91	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	3.91	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	----	3.91	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	----	3.91	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	----	3.91	"	"	"	"	"	
1,1-Dichloroethane	"	ND	----	1.56	"	"	"	"	"	

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TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-23 (AM-SB-4-1.0-2.0)		Soil		Sampled: 12/16/08 12:25						
1,2-Dichloroethane	EPA 8260B	ND	----	0.977	ug/kg dry	1x	8L22006	12/22/08 11:08	12/22/08 16:15	
1,1-Dichloroethene	"	ND	----	2.34	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	2.34	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	1.95	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	3.91	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	3.91	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	7.81	"	"	"	"	"	
1,1-Dichloropropene	"	ND	----	3.91	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	3.91	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	0.977	"	"	"	"	"	
Ethylbenzene	"	ND	----	3.13	"	"	"	"	"	
Hexachlorobutadiene	"	ND	----	7.81	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	0.781	"	"	"	"	"	
n-Hexane	"	ND	----	3.91	"	"	"	"	"	
2-Hexanone	"	ND	----	23.4	"	"	"	"	"	
Isopropylbenzene	"	ND	----	3.91	"	"	"	"	"	
p-Isopropyltoluene	"	ND	----	3.91	"	"	"	"	"	
4-Methyl-2-pentanone	"	ND	----	23.4	"	"	"	"	"	
Methylene chloride	"	ND	----	9.38	"	"	"	"	"	
Naphthalene	"	ND	----	7.81	"	"	"	"	"	
n-Propylbenzene	"	ND	----	3.91	"	"	"	"	"	
Styrene	"	ND	----	1.95	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	7.81	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	----	7.81	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	----	3.91	"	"	"	"	"	
1,1,1,2,2-Tetrachloroethane	"	ND	----	3.91	"	"	"	"	"	
Tetrachloroethene	"	ND	----	1.56	"	"	"	"	"	
Toluene	"	ND	----	1.17	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	----	1.95	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	----	1.56	"	"	"	"	"	
Trichloroethene	"	ND	----	1.95	"	"	"	"	"	
Trichlorofluoromethane	"	ND	----	3.91	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	3.91	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	3.91	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	3.91	"	"	"	"	"	
Vinyl chloride	"	ND	----	1.95	"	"	"	"	"	
o-Xylene	"	ND	----	3.91	"	"	"	"	"	
m,p-Xylene	"	ND	----	3.91	"	"	"	"	"	
Total Xylenes	"	ND	----	7.81	"	"	"	"	"	
Surrogate(s):	1,2-DCA-d4		126%		70 - 140 %	"				"
	Toluene-d8		98.5%		70 - 130 %	"				"
	4-BFB		105%		70 - 130 %	"				"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-24 (AM-SB-4-7.0-8.0)										
		Soil					Sampled: 12/16/08 12:47			
Acetone	EPA 8260B	336	----	43.7	ug/kg dry	1x	8L22006	12/22/08 11:08	12/22/08 16:41	
Benzene	"	ND	----	1.64	"	"	"	"	"	
Bromobenzene	"	ND	----	5.46	"	"	"	"	"	I2
Bromochloromethane	"	ND	----	5.46	"	"	"	"	"	
Bromodichloromethane	"	ND	----	5.46	"	"	"	"	"	
Bromoform	"	ND	----	5.46	"	"	"	"	"	
Bromomethane	"	ND	----	10.9	"	"	"	"	"	
2-Butanone	"	67.0	----	32.8	"	"	"	"	"	
n-Butylbenzene	"	ND	----	5.46	"	"	"	"	"	I2
sec-Butylbenzene	"	ND	----	5.46	"	"	"	"	"	I2
tert-Butylbenzene	"	ND	----	5.46	"	"	"	"	"	I2
Carbon disulfide	"	ND	----	3.28	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	5.46	"	"	"	"	"	
Chlorobenzene	"	ND	----	2.19	"	"	"	"	"	
Chloroethane	"	ND	----	5.46	"	"	"	"	"	
Chloroform	"	ND	----	2.73	"	"	"	"	"	
Chloromethane	"	ND	----	10.9	"	"	"	"	"	
2-Chlorotoluene	"	ND	----	5.46	"	"	"	"	"	I2
4-Chlorotoluene	"	ND	----	5.46	"	"	"	"	"	I2
Dibromochloromethane	"	ND	----	5.46	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	----	10.9	"	"	"	"	"	I2
1,2-Dibromoethane (EDB)	"	ND	----	5.46	"	"	"	"	"	
Dibromomethane	"	ND	----	5.46	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	5.46	"	"	"	"	"	I2
1,3-Dichlorobenzene	"	ND	----	5.46	"	"	"	"	"	I2
1,4-Dichlorobenzene	"	ND	----	5.46	"	"	"	"	"	I2
Dichlorodifluoromethane	"	ND	----	5.46	"	"	"	"	"	C5
1,1-Dichloroethane	"	ND	----	2.19	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	1.37	"	"	"	"	"	
1,1-Dichloroethene	"	ND	----	3.28	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	3.28	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	2.73	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	5.46	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	5.46	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	10.9	"	"	"	"	"	
1,1-Dichloropropene	"	ND	----	5.46	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	5.46	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	1.37	"	"	"	"	"	
Ethylbenzene	"	ND	----	4.37	"	"	"	"	"	
Hexachlorobutadiene	"	ND	----	10.9	"	"	"	"	"	I2
Methyl tert-butyl ether	"	ND	----	1.09	"	"	"	"	"	
n-Hexane	"	ND	----	5.46	"	"	"	"	"	
2-Hexanone	"	ND	----	32.8	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-24 (AM-SB-4-7.0-8.0)		Soil		Sampled: 12/16/08 12:47						
Isopropylbenzene	EPA 8260B	ND	----	5.46	ug/kg dry	1x	8L22006	12/22/08 11:08	12/22/08 16:41	
p-Isopropyltoluene	"	ND	----	5.46	"	"	"	"	"	12
4-Methyl-2-pentanone	"	ND	----	32.8	"	"	"	"	"	
Methylene chloride	"	ND	----	13.1	"	"	"	"	"	
Naphthalene	"	ND	----	10.9	"	"	"	"	"	12
n-Propylbenzene	"	ND	----	5.46	"	"	"	"	"	12
Styrene	"	ND	----	2.73	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	10.9	"	"	"	"	"	12
1,2,4-Trichlorobenzene	"	ND	----	10.9	"	"	"	"	"	12
1,1,1,2-Tetrachloroethane	"	ND	----	5.46	"	"	"	"	"	
1,1,1,2,2-Tetrachloroethane	"	ND	----	5.46	"	"	"	"	"	12
Tetrachloroethene	"	ND	----	2.19	"	"	"	"	"	
Toluene	"	ND	----	1.64	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	----	2.73	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	----	2.19	"	"	"	"	"	
Trichloroethene	"	ND	----	2.73	"	"	"	"	"	
Trichlorofluoromethane	"	ND	----	5.46	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	5.46	"	"	"	"	"	12
1,2,4-Trimethylbenzene	"	ND	----	5.46	"	"	"	"	"	12
1,3,5-Trimethylbenzene	"	ND	----	5.46	"	"	"	"	"	12
Vinyl chloride	"	ND	----	2.73	"	"	"	"	"	
o-Xylene	"	ND	----	5.46	"	"	"	"	"	
m,p-Xylene	"	ND	----	5.46	"	"	"	"	"	
Total Xylenes	"	ND	----	10.9	"	"	"	"	"	
<i>Surrogate(s): 1,2-DCA-d4</i>			<i>125%</i>	<i>70 - 140 %</i>						
<i>Toluene-d8</i>			<i>111%</i>	<i>70 - 130 %</i>						
<i>4-BFB</i>			<i>129%</i>	<i>70 - 130 %</i>						

BRL0200-25 (AM-SB-9-1.0-3.0)		Soil		Sampled: 12/16/08 13:25						
Acetone	EPA 8260B	107	----	34.7	ug/kg dry	1x	8L22006	12/22/08 11:08	12/22/08 17:07	
Benzene	"	ND	----	1.30	"	"	"	"	"	
Bromobenzene	"	ND	----	4.34	"	"	"	"	"	
Bromochloromethane	"	ND	----	4.34	"	"	"	"	"	
Bromodichloromethane	"	ND	----	4.34	"	"	"	"	"	
Bromoform	"	ND	----	4.34	"	"	"	"	"	
Bromomethane	"	ND	----	8.67	"	"	"	"	"	
2-Butanone	"	ND	----	26.0	"	"	"	"	"	
n-Butylbenzene	"	ND	----	4.34	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	4.34	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	4.34	"	"	"	"	"	
Carbon disulfide	"	ND	----	2.60	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	4.34	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-25 (AM-SB-9-1.0-3.0)										
		Soil					Sampled: 12/16/08 13:25			
Chlorobenzene	EPA 8260B	ND	----	1.73	ug/kg dry	1x	8L22006	12/22/08 11:08	12/22/08 17:07	
Chloroethane	"	ND	----	4.34	"	"	"	"	"	
Chloroform	"	ND	----	2.17	"	"	"	"	"	
Chloromethane	"	ND	----	8.67	"	"	"	"	"	
2-Chlorotoluene	"	ND	----	4.34	"	"	"	"	"	
4-Chlorotoluene	"	ND	----	4.34	"	"	"	"	"	
Dibromochloromethane	"	ND	----	4.34	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	----	8.67	"	"	"	"	"	
1,2-Dibromoethane (EDB)	"	ND	----	4.34	"	"	"	"	"	
Dibromomethane	"	ND	----	4.34	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	4.34	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	----	4.34	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	----	4.34	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	----	4.34	"	"	"	"	"	
1,1-Dichloroethane	"	ND	----	1.73	"	"	"	"	"	C5
1,2-Dichloroethane	"	ND	----	1.08	"	"	"	"	"	
1,1-Dichloroethene	"	ND	----	2.60	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	2.60	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	2.17	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	4.34	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	4.34	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	8.67	"	"	"	"	"	
1,1-Dichloropropene	"	ND	----	4.34	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	4.34	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	1.08	"	"	"	"	"	
Ethylbenzene	"	ND	----	3.47	"	"	"	"	"	
Hexachlorobutadiene	"	ND	----	8.67	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	0.867	"	"	"	"	"	
n-Hexane	"	ND	----	4.34	"	"	"	"	"	
2-Hexanone	"	ND	----	26.0	"	"	"	"	"	
Isopropylbenzene	"	ND	----	4.34	"	"	"	"	"	
p-Isopropyltoluene	"	ND	----	4.34	"	"	"	"	"	
4-Methyl-2-pentanone	"	ND	----	26.0	"	"	"	"	"	
Methylene chloride	"	ND	----	10.4	"	"	"	"	"	
Naphthalene	"	ND	----	8.67	"	"	"	"	"	
n-Propylbenzene	"	ND	----	4.34	"	"	"	"	"	
Styrene	"	ND	----	2.17	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	8.67	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	----	8.67	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	----	4.34	"	"	"	"	"	
1,1,1,2,2-Tetrachloroethane	"	ND	----	4.34	"	"	"	"	"	
Tetrachloroethene	"	ND	----	1.73	"	"	"	"	"	
Toluene	"	ND	----	1.30	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
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Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-25 (AM-SB-9-1.0-3.0)		Soil		Sampled: 12/16/08 13:25						
1,1,1-Trichloroethane	EPA 8260B	ND	----	2.17	ug/kg dry	1x	8L22006	12/22/08 11:08	12/22/08 17:07	
1,1,2-Trichloroethane	"	ND	----	1.73	"	"	"	"	"	
Trichloroethene	"	ND	----	2.17	"	"	"	"	"	
Trichlorofluoromethane	"	ND	----	4.34	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	4.34	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	4.34	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	4.34	"	"	"	"	"	
Vinyl chloride	"	ND	----	2.17	"	"	"	"	"	
o-Xylene	"	ND	----	4.34	"	"	"	"	"	
m,p-Xylene	"	ND	----	4.34	"	"	"	"	"	
Total Xylenes	"	ND	----	8.67	"	"	"	"	"	

Surrogate(s): 1,2-DCA-d4 125% 70 - 140 % "
 Toluene-d8 96.1% 70 - 130 % "
 4-BFB 105% 70 - 130 % "

BRL0200-28 (AM-SB-12-1.0-2.0)		Soil		Sampled: 12/16/08 14:22						
Acetone	EPA 8260B	ND	----	33.4	ug/kg dry	1x	8L22006	12/22/08 11:08	12/22/08 17:58	
Benzene	"	ND	----	1.25	"	"	"	"	"	
Bromobenzene	"	ND	----	4.17	"	"	"	"	"	
Bromochloromethane	"	ND	----	4.17	"	"	"	"	"	
Bromodichloromethane	"	ND	----	4.17	"	"	"	"	"	
Bromoform	"	ND	----	4.17	"	"	"	"	"	
Bromomethane	"	ND	----	8.34	"	"	"	"	"	
2-Butanone	"	ND	----	25.0	"	"	"	"	"	
n-Butylbenzene	"	ND	----	4.17	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	4.17	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	4.17	"	"	"	"	"	
Carbon disulfide	"	ND	----	2.50	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	4.17	"	"	"	"	"	
Chlorobenzene	"	ND	----	1.67	"	"	"	"	"	
Chloroethane	"	ND	----	4.17	"	"	"	"	"	
Chloroform	"	ND	----	2.09	"	"	"	"	"	
Chloromethane	"	ND	----	8.34	"	"	"	"	"	
2-Chlorotoluene	"	ND	----	4.17	"	"	"	"	"	
4-Chlorotoluene	"	ND	----	4.17	"	"	"	"	"	
Dibromochloromethane	"	ND	----	4.17	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	----	8.34	"	"	"	"	"	
1,2-Dibromoethane (EDB)	"	ND	----	4.17	"	"	"	"	"	
Dibromomethane	"	ND	----	4.17	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	4.17	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	----	4.17	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	----	4.17	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

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 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-28 (AM-SB-12-1.0-2.0)		Soil		Sampled: 12/16/08 14:22						
Dichlorodifluoromethane	EPA 8260B	ND	----	4.17	ug/kg dry	1x	8L22006	12/22/08 11:08	12/22/08 17:58	C5
1,1-Dichloroethane	"	ND	----	1.67	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	1.04	"	"	"	"	"	
1,1-Dichloroethene	"	ND	----	2.50	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	2.50	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	2.09	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	4.17	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	4.17	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	8.34	"	"	"	"	"	
1,1-Dichloropropene	"	ND	----	4.17	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	4.17	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	1.04	"	"	"	"	"	
Ethylbenzene	"	ND	----	3.34	"	"	"	"	"	
Hexachlorobutadiene	"	ND	----	8.34	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	0.834	"	"	"	"	"	
n-Hexane	"	ND	----	4.17	"	"	"	"	"	
2-Hexanone	"	ND	----	25.0	"	"	"	"	"	
Isopropylbenzene	"	ND	----	4.17	"	"	"	"	"	
p-Isopropyltoluene	"	ND	----	4.17	"	"	"	"	"	
4-Methyl-2-pentanone	"	ND	----	25.0	"	"	"	"	"	
Methylene chloride	"	ND	----	10.0	"	"	"	"	"	
Naphthalene	"	ND	----	8.34	"	"	"	"	"	
n-Propylbenzene	"	ND	----	4.17	"	"	"	"	"	
Styrene	"	ND	----	2.09	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	8.34	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	----	8.34	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	----	4.17	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	----	4.17	"	"	"	"	"	
Tetrachloroethene	"	ND	----	1.67	"	"	"	"	"	
Toluene	"	ND	----	1.25	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	----	2.09	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	----	1.67	"	"	"	"	"	
Trichloroethene	"	ND	----	2.09	"	"	"	"	"	
Trichlorofluoromethane	"	ND	----	4.17	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	4.17	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	4.17	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	4.17	"	"	"	"	"	
Vinyl chloride	"	ND	----	2.09	"	"	"	"	"	
o-Xylene	"	ND	----	4.17	"	"	"	"	"	
m,p-Xylene	"	ND	----	4.17	"	"	"	"	"	
Total Xylenes	"	ND	----	8.34	"	"	"	"	"	
<i>Surrogate(s): 1,2-DCA-d4</i>				123%		70 - 140 %	"		"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-28 (AM-SB-12-1.0-2.0)		Soil								Sampled: 12/16/08 14:22
<i>Toluene-d8</i>			94.6%		70 - 130 %	1x			12/22/08 17:58	
<i>4-BFB</i>			106%		70 - 130 %	"			"	
BRL0200-30 (ALY-SB-11-1.0-2.0)		Soil								Sampled: 12/16/08 16:15
Acetone	EPA 8260B	324	----	27.3	ug/kg dry	1x	8L22006	12/22/08 11:08	12/22/08 18:49	
Benzene	"	ND	----	1.03	"	"	"	"	"	
Bromobenzene	"	ND	----	3.42	"	"	"	"	"	12
Bromochloromethane	"	ND	----	3.42	"	"	"	"	"	
Bromodichloromethane	"	ND	----	3.42	"	"	"	"	"	
Bromoform	"	ND	----	3.42	"	"	"	"	"	
Bromomethane	"	ND	----	6.84	"	"	"	"	"	
2-Butanone	"	90.2	----	20.5	"	"	"	"	"	
n-Butylbenzene	"	ND	----	3.42	"	"	"	"	"	12
sec-Butylbenzene	"	ND	----	3.42	"	"	"	"	"	12
tert-Butylbenzene	"	ND	----	3.42	"	"	"	"	"	12
Carbon disulfide	"	9.72	----	2.05	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	3.42	"	"	"	"	"	
Chlorobenzene	"	ND	----	1.37	"	"	"	"	"	
Chloroethane	"	ND	----	3.42	"	"	"	"	"	
Chloroform	"	ND	----	1.71	"	"	"	"	"	
Chloromethane	"	ND	----	6.84	"	"	"	"	"	
2-Chlorotoluene	"	ND	----	3.42	"	"	"	"	"	12
4-Chlorotoluene	"	ND	----	3.42	"	"	"	"	"	12
Dibromochloromethane	"	ND	----	3.42	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	----	6.84	"	"	"	"	"	12
1,2-Dibromoethane (EDB)	"	ND	----	3.42	"	"	"	"	"	
Dibromomethane	"	ND	----	3.42	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	3.42	"	"	"	"	"	12
1,3-Dichlorobenzene	"	ND	----	3.42	"	"	"	"	"	12
1,4-Dichlorobenzene	"	ND	----	3.42	"	"	"	"	"	12
Dichlorodifluoromethane	"	ND	----	3.42	"	"	"	"	"	C5
1,1-Dichloroethane	"	ND	----	1.37	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	0.854	"	"	"	"	"	
1,1-Dichloroethene	"	3.48	----	2.05	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	2.05	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	1.71	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	3.42	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	3.42	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	6.84	"	"	"	"	"	
1,1-Dichloropropene	"	ND	----	3.42	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	3.42	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	0.854	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-30 (ALY-SB-11-1.0-2.0)		Soil		Sampled: 12/16/08 16:15						
Ethylbenzene	EPA 8260B	ND	----	2.73	ug/kg dry	1x	8L22006	12/22/08 11:08	12/22/08 18:49	
Hexachlorobutadiene	"	ND	----	6.84	"	"	"	"	"	12
Methyl tert-butyl ether	"	ND	----	0.684	"	"	"	"	"	
n-Hexane	"	ND	----	3.42	"	"	"	"	"	
2-Hexanone	"	ND	----	20.5	"	"	"	"	"	
Isopropylbenzene	"	ND	----	3.42	"	"	"	"	"	
p-Isopropyltoluene	"	ND	----	3.42	"	"	"	"	"	12
4-Methyl-2-pentanone	"	ND	----	20.5	"	"	"	"	"	
Methylene chloride	"	ND	----	8.20	"	"	"	"	"	
Naphthalene	"	ND	----	6.84	"	"	"	"	"	12
n-Propylbenzene	"	ND	----	3.42	"	"	"	"	"	12
Styrene	"	ND	----	1.71	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	6.84	"	"	"	"	"	12
1,2,4-Trichlorobenzene	"	ND	----	6.84	"	"	"	"	"	12
1,1,1,2-Tetrachloroethane	"	ND	----	3.42	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	----	3.42	"	"	"	"	"	12
Tetrachloroethene	"	ND	----	1.37	"	"	"	"	"	
Toluene	"	ND	----	1.03	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	----	1.71	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	----	1.37	"	"	"	"	"	
Trichloroethene	"	ND	----	1.71	"	"	"	"	"	
Trichlorofluoromethane	"	ND	----	3.42	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	3.42	"	"	"	"	"	12
1,2,4-Trimethylbenzene	"	ND	----	3.42	"	"	"	"	"	12
1,3,5-Trimethylbenzene	"	ND	----	3.42	"	"	"	"	"	12
Vinyl chloride	"	ND	----	1.71	"	"	"	"	"	
o-Xylene	"	ND	----	3.42	"	"	"	"	"	
m,p-Xylene	"	ND	----	3.42	"	"	"	"	"	
Total Xylenes	"	ND	----	6.84	"	"	"	"	"	
Surrogate(s):	1,2-DCA-d4		123%		70 - 140 %	"			"	
	Toluene-d8		109%		70 - 130 %	"			"	
	4-BFB		126%		70 - 130 %	"			"	12

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-31 (ALY-SB-11-3.0-4.0)										
		Soil					Sampled: 12/16/08 16:23			
Acetone	EPA 8260B	174	----	21.9	ug/kg dry	1x	8L22006	12/22/08 11:08	12/22/08 19:15	
Benzene	"	ND	----	0.820	"	"	"	"	"	
Bromobenzene	"	ND	----	2.73	"	"	"	"	"	
Bromochloromethane	"	ND	----	2.73	"	"	"	"	"	
Bromodichloromethane	"	ND	----	2.73	"	"	"	"	"	
Bromoform	"	ND	----	2.73	"	"	"	"	"	
Bromomethane	"	ND	----	5.46	"	"	"	"	"	
2-Butanone	"	ND	----	16.4	"	"	"	"	"	
n-Butylbenzene	"	ND	----	2.73	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	2.73	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	2.73	"	"	"	"	"	
Carbon disulfide	"	ND	----	1.64	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	2.73	"	"	"	"	"	
Chlorobenzene	"	ND	----	1.09	"	"	"	"	"	
Chloroethane	"	ND	----	2.73	"	"	"	"	"	
Chloroform	"	ND	----	1.37	"	"	"	"	"	
Chloromethane	"	ND	----	5.46	"	"	"	"	"	
2-Chlorotoluene	"	ND	----	2.73	"	"	"	"	"	
4-Chlorotoluene	"	ND	----	2.73	"	"	"	"	"	
Dibromochloromethane	"	ND	----	2.73	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	----	5.46	"	"	"	"	"	
1,2-Dibromoethane (EDB)	"	ND	----	2.73	"	"	"	"	"	
Dibromomethane	"	ND	----	2.73	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	2.73	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	----	2.73	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	----	2.73	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	----	2.73	"	"	"	"	"	
1,1-Dichloroethane	"	ND	----	1.09	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	0.683	"	"	"	"	"	
1,1-Dichloroethene	"	2.43	----	1.64	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	1.64	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	1.37	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	2.73	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	2.73	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	5.46	"	"	"	"	"	
1,1-Dichloropropene	"	ND	----	2.73	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	2.73	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	0.683	"	"	"	"	"	
Ethylbenzene	"	ND	----	2.19	"	"	"	"	"	
Hexachlorobutadiene	"	ND	----	5.46	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	0.546	"	"	"	"	"	
n-Hexane	"	ND	----	2.73	"	"	"	"	"	
2-Hexanone	"	ND	----	16.4	"	"	"	"	"	

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TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-31 (ALY-SB-11-3.0-4.0)		Soil		Sampled: 12/16/08 16:23						
Isopropylbenzene	EPA 8260B	ND	----	2.73	ug/kg dry	1x	8L22006	12/22/08 11:08	12/22/08 19:15	
p-Isopropyltoluene	"	ND	----	2.73	"	"	"	"	"	
4-Methyl-2-pentanone	"	ND	----	16.4	"	"	"	"	"	
Methylene chloride	"	ND	----	6.56	"	"	"	"	"	
Naphthalene	"	ND	----	5.46	"	"	"	"	"	
n-Propylbenzene	"	ND	----	2.73	"	"	"	"	"	
Styrene	"	ND	----	1.37	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	5.46	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	----	5.46	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	----	2.73	"	"	"	"	"	
1,1,1,2,2-Tetrachloroethane	"	ND	----	2.73	"	"	"	"	"	
Tetrachloroethene	"	ND	----	1.09	"	"	"	"	"	
Toluene	"	ND	----	0.820	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	----	1.37	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	----	1.09	"	"	"	"	"	
Trichloroethene	"	ND	----	1.37	"	"	"	"	"	
Trichlorofluoromethane	"	ND	----	2.73	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	2.73	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	2.73	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	2.73	"	"	"	"	"	
Vinyl chloride	"	ND	----	1.37	"	"	"	"	"	
o-Xylene	"	ND	----	2.73	"	"	"	"	"	
m,p-Xylene	"	ND	----	2.73	"	"	"	"	"	
Total Xylenes	"	ND	----	5.46	"	"	"	"	"	

Surrogate(s): 1,2-DCA-d4 130% 70 - 140 % "
 Toluene-d8 96.2% 70 - 130 % "
 4-BFB 107% 70 - 130 % "

BRL0200-34 (ALY-SB-3-1.0-3.0)		Soil		Sampled: 12/17/08 08:02						
Acetone	EPA 8260B	204	----	21.9	ug/kg dry	1x	8L22006	12/22/08 11:08	12/22/08 19:40	
Benzene	"	ND	----	0.820	"	"	"	"	"	
Bromobenzene	"	ND	----	2.73	"	"	"	"	"	
Bromochloromethane	"	ND	----	2.73	"	"	"	"	"	
Bromodichloromethane	"	ND	----	2.73	"	"	"	"	"	
Bromoform	"	ND	----	2.73	"	"	"	"	"	
Bromomethane	"	ND	----	5.47	"	"	"	"	"	
2-Butanone	"	ND	----	16.4	"	"	"	"	"	
n-Butylbenzene	"	ND	----	2.73	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	2.73	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	2.73	"	"	"	"	"	
Carbon disulfide	"	ND	----	1.64	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	2.73	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-34 (ALY-SB-3-1.0-3.0)										
		Soil					Sampled: 12/17/08 08:02			
Chlorobenzene	EPA 8260B	ND	----	1.09	ug/kg dry	1x	8L22006	12/22/08 11:08	12/22/08 19:40	
Chloroethane	"	ND	----	2.73	"	"	"	"	"	
Chloroform	"	ND	----	1.37	"	"	"	"	"	
Chloromethane	"	ND	----	5.47	"	"	"	"	"	
2-Chlorotoluene	"	ND	----	2.73	"	"	"	"	"	
4-Chlorotoluene	"	ND	----	2.73	"	"	"	"	"	
Dibromochloromethane	"	ND	----	2.73	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	----	5.47	"	"	"	"	"	
1,2-Dibromoethane (EDB)	"	ND	----	2.73	"	"	"	"	"	
Dibromomethane	"	ND	----	2.73	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	2.73	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	----	2.73	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	----	2.73	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	----	2.73	"	"	"	"	"	
1,1-Dichloroethane	"	ND	----	1.09	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	0.683	"	"	"	"	"	
1,1-Dichloroethene	"	1.76	----	1.64	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	1.64	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	1.37	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	2.73	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	2.73	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	5.47	"	"	"	"	"	
1,1-Dichloropropene	"	ND	----	2.73	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	2.73	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	0.683	"	"	"	"	"	
Ethylbenzene	"	ND	----	2.19	"	"	"	"	"	
Hexachlorobutadiene	"	ND	----	5.47	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	0.547	"	"	"	"	"	
n-Hexane	"	ND	----	2.73	"	"	"	"	"	
2-Hexanone	"	ND	----	16.4	"	"	"	"	"	
Isopropylbenzene	"	ND	----	2.73	"	"	"	"	"	
p-Isopropyltoluene	"	ND	----	2.73	"	"	"	"	"	
4-Methyl-2-pentanone	"	ND	----	16.4	"	"	"	"	"	
Methylene chloride	"	ND	----	6.56	"	"	"	"	"	
Naphthalene	"	ND	----	5.47	"	"	"	"	"	
n-Propylbenzene	"	ND	----	2.73	"	"	"	"	"	
Styrene	"	ND	----	1.37	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	5.47	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	----	5.47	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	----	2.73	"	"	"	"	"	
1,1,1,2,2-Tetrachloroethane	"	ND	----	2.73	"	"	"	"	"	
Tetrachloroethene	"	ND	----	1.09	"	"	"	"	"	
Toluene	"	ND	----	0.820	"	"	"	"	"	

C5

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-34 (ALY-SB-3-1.0-3.0)		Soil		Sampled: 12/17/08 08:02						
1,1,1-Trichloroethane	EPA 8260B	ND	----	1.37	ug/kg dry	1x	8L22006	12/22/08 11:08	12/22/08 19:40	
1,1,2-Trichloroethane	"	ND	----	1.09	"	"	"	"	"	
Trichloroethene	"	ND	----	1.37	"	"	"	"	"	
Trichlorofluoromethane	"	ND	----	2.73	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	2.73	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	2.73	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	2.73	"	"	"	"	"	
Vinyl chloride	"	ND	----	1.37	"	"	"	"	"	
o-Xylene	"	ND	----	2.73	"	"	"	"	"	
m,p-Xylene	"	ND	----	2.73	"	"	"	"	"	
Total Xylenes	"	ND	----	5.47	"	"	"	"	"	

Surrogate(s): 1,2-DCA-d4 129% 70 - 140 % "
 Toluene-d8 101% 70 - 130 % "
 4-BFB 114% 70 - 130 % "

BRL0200-35 (ALY-SB-3-3.0-4.0)		Soil		Sampled: 12/17/08 08:10						
Acetone	EPA 8260B	44.1	----	36.3	ug/kg dry	1x	8L22006	12/22/08 11:08	12/22/08 20:06	
Benzene	"	ND	----	1.36	"	"	"	"	"	
Bromobenzene	"	ND	----	4.53	"	"	"	"	"	
Bromochloromethane	"	ND	----	4.53	"	"	"	"	"	
Bromodichloromethane	"	ND	----	4.53	"	"	"	"	"	
Bromoform	"	ND	----	4.53	"	"	"	"	"	
Bromomethane	"	ND	----	9.07	"	"	"	"	"	
2-Butanone	"	ND	----	27.2	"	"	"	"	"	
n-Butylbenzene	"	ND	----	4.53	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	4.53	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	4.53	"	"	"	"	"	
Carbon disulfide	"	ND	----	2.72	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	4.53	"	"	"	"	"	
Chlorobenzene	"	ND	----	1.81	"	"	"	"	"	
Chloroethane	"	ND	----	4.53	"	"	"	"	"	
Chloroform	"	ND	----	2.27	"	"	"	"	"	
Chloromethane	"	ND	----	9.07	"	"	"	"	"	
2-Chlorotoluene	"	ND	----	4.53	"	"	"	"	"	
4-Chlorotoluene	"	ND	----	4.53	"	"	"	"	"	
Dibromochloromethane	"	ND	----	4.53	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	----	9.07	"	"	"	"	"	
1,2-Dibromoethane (EDB)	"	ND	----	4.53	"	"	"	"	"	
Dibromomethane	"	ND	----	4.53	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	4.53	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	----	4.53	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	----	4.53	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-35 (ALY-SB-3-3.0-4.0)		Soil		Sampled: 12/17/08 08:10						
Dichlorodifluoromethane	EPA 8260B	ND	----	4.53	ug/kg dry	1x	8L22006	12/22/08 11:08	12/22/08 20:06	C5
1,1-Dichloroethane	"	ND	----	1.81	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	1.13	"	"	"	"	"	
1,1-Dichloroethene	"	ND	----	2.72	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	2.72	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	2.27	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	4.53	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	4.53	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	9.07	"	"	"	"	"	
1,1-Dichloropropene	"	ND	----	4.53	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	4.53	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	1.13	"	"	"	"	"	
Ethylbenzene	"	ND	----	3.63	"	"	"	"	"	
Hexachlorobutadiene	"	ND	----	9.07	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	0.907	"	"	"	"	"	
n-Hexane	"	ND	----	4.53	"	"	"	"	"	
2-Hexanone	"	ND	----	27.2	"	"	"	"	"	
Isopropylbenzene	"	ND	----	4.53	"	"	"	"	"	
p-Isopropyltoluene	"	ND	----	4.53	"	"	"	"	"	
4-Methyl-2-pentanone	"	ND	----	27.2	"	"	"	"	"	
Methylene chloride	"	ND	----	10.9	"	"	"	"	"	
Naphthalene	"	ND	----	9.07	"	"	"	"	"	
n-Propylbenzene	"	ND	----	4.53	"	"	"	"	"	
Styrene	"	ND	----	2.27	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	9.07	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	----	9.07	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	----	4.53	"	"	"	"	"	
1,1,1,2,2-Tetrachloroethane	"	ND	----	4.53	"	"	"	"	"	
Tetrachloroethene	"	ND	----	1.81	"	"	"	"	"	
Toluene	"	ND	----	1.36	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	----	2.27	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	----	1.81	"	"	"	"	"	
Trichloroethene	"	ND	----	2.27	"	"	"	"	"	
Trichlorofluoromethane	"	ND	----	4.53	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	4.53	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	4.53	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	4.53	"	"	"	"	"	
Vinyl chloride	"	ND	----	2.27	"	"	"	"	"	
o-Xylene	"	ND	----	4.53	"	"	"	"	"	
m,p-Xylene	"	ND	----	4.53	"	"	"	"	"	
Total Xylenes	"	ND	----	9.07	"	"	"	"	"	
<i>Surrogate(s): 1,2-DCA-d4</i>				133%		70 - 140 %	"		"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-35 (ALY-SB-3-3.0-4.0)		Soil		Sampled: 12/17/08 08:10						
Toluene-d8		103%		70 - 130 %	1x				12/22/08 20:06	
4-BFB		117%		70 - 130 %	"				"	
BRL0200-37 (ALY-SB-9-1.0-2.0)		Soil		Sampled: 12/17/08 09:25						
Benzene	EPA 8260B	ND	----	0.985	ug/kg dry	1x	8L30013	12/30/08 12:25	12/30/08 15:57	
Bromobenzene	"	ND	----	3.28	"	"	"	"	"	I2
Bromochloromethane	"	ND	----	3.28	"	"	"	"	"	I2
Bromodichloromethane	"	ND	----	3.28	"	"	"	"	"	
Bromoform	"	ND	----	3.28	"	"	"	"	"	I2
Bromomethane	"	ND	----	6.57	"	"	"	"	"	I2
n-Butylbenzene	"	ND	----	3.28	"	"	"	"	"	I2
sec-Butylbenzene	"	ND	----	3.28	"	"	"	"	"	I2
tert-Butylbenzene	"	ND	----	3.28	"	"	"	"	"	I2
Carbon tetrachloride	"	ND	----	3.28	"	"	"	"	"	
Chlorobenzene	"	ND	----	1.31	"	"	"	"	"	I2
Chloroethane	"	ND	----	3.28	"	"	"	"	"	I2
Chloroform	"	ND	----	1.64	"	"	"	"	"	I2
Chloromethane	"	ND	----	6.57	"	"	"	"	"	I2, C5
2-Chlorotoluene	"	ND	----	3.28	"	"	"	"	"	I2
4-Chlorotoluene	"	ND	----	3.28	"	"	"	"	"	I2
Dibromochloromethane	"	ND	----	3.28	"	"	"	"	"	I2
1,2-Dibromo-3-chloropropane	"	ND	----	6.57	"	"	"	"	"	I2
1,2-Dibromoethane (EDB)	"	ND	----	3.28	"	"	"	"	"	I2
Dibromomethane	"	ND	----	3.28	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	3.28	"	"	"	"	"	I2
1,3-Dichlorobenzene	"	ND	----	3.28	"	"	"	"	"	I2
1,4-Dichlorobenzene	"	ND	----	3.28	"	"	"	"	"	I2
Dichlorodifluoromethane	"	ND	----	3.28	"	"	"	"	"	I2, C5
1,1-Dichloroethane	"	ND	----	1.31	"	"	"	"	"	I2
1,2-Dichloroethane	"	ND	----	0.821	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	1.97	"	"	"	"	"	I2
trans-1,2-Dichloroethene	"	ND	----	1.64	"	"	"	"	"	I2
1,2-Dichloropropane	"	ND	----	3.28	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	3.28	"	"	"	"	"	I2
2,2-Dichloropropane	"	ND	----	6.57	"	"	"	"	"	I2
1,1-Dichloropropene	"	ND	----	3.28	"	"	"	"	"	I2
cis-1,3-Dichloropropene	"	ND	----	3.28	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	0.821	"	"	"	"	"	I2
Ethylbenzene	"	ND	----	2.63	"	"	"	"	"	I2
Hexachlorobutadiene	"	ND	----	6.57	"	"	"	"	"	I2
Methyl tert-butyl ether	"	ND	----	0.657	"	"	"	"	"	I2
n-Hexane	"	ND	----	3.28	"	"	"	"	"	I2

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-37 (ALY-SB-9-1.0-2.0)		Soil		Sampled: 12/17/08 09:25						
2-Hexanone	EPA 8260B	ND	----	19.7	ug/kg dry	1x	8L30013	12/30/08 12:25	12/30/08 15:57	I2
Isopropylbenzene	"	ND	----	3.28	"	"	"	"	"	I2
4-Methyl-2-pentanone	"	ND	----	19.7	"	"	"	"	"	I2
Methylene chloride	"	ND	----	7.88	"	"	"	"	"	I2
Naphthalene	"	ND	----	6.57	"	"	"	"	"	I2
n-Propylbenzene	"	ND	----	3.28	"	"	"	"	"	I2
Styrene	"	ND	----	1.64	"	"	"	"	"	I2
1,2,3-Trichlorobenzene	"	ND	----	6.57	"	"	"	"	"	I2
1,2,4-Trichlorobenzene	"	ND	----	6.57	"	"	"	"	"	I2
1,1,1,2-Tetrachloroethane	"	ND	----	3.28	"	"	"	"	"	I2
1,1,1,2,2-Tetrachloroethane	"	ND	----	3.28	"	"	"	"	"	I2
Tetrachloroethene	"	ND	----	1.31	"	"	"	"	"	I2
Toluene	"	ND	----	0.985	"	"	"	"	"	I2
1,1,1-Trichloroethane	"	ND	----	1.64	"	"	"	"	"	I2
1,1,2-Trichloroethane	"	ND	----	1.31	"	"	"	"	"	I2
Trichloroethene	"	ND	----	1.64	"	"	"	"	"	I2
1,2,3-Trichloropropane	"	ND	----	3.28	"	"	"	"	"	I2
1,2,4-Trimethylbenzene	"	ND	----	3.28	"	"	"	"	"	I2
1,3,5-Trimethylbenzene	"	ND	----	3.28	"	"	"	"	"	I2
Vinyl chloride	"	ND	----	1.64	"	"	"	"	"	I2
o-Xylene	"	ND	----	3.28	"	"	"	"	"	I2
m,p-Xylene	"	ND	----	3.28	"	"	"	"	"	I2
Total Xylenes	"	ND	----	6.57	"	"	"	"	"	I2
<i>Surrogate(s): 1,2-DCA-d4</i>			138%	70 - 140 %	"	"	"	"	"	
<i>Toluene-d8</i>			103%	70 - 130 %	"	"	"	"	"	I2
<i>4-BFB</i>			120%	70 - 130 %	"	"	"	"	"	I2

BRL0200-37RE1 (ALY-SB-9-1.0-2.0)		Soil		Sampled: 12/17/08 09:25						
Acetone	EPA 8260B	528	----	38.4	ug/kg dry	1x	8L31011	12/31/08 13:23	12/31/08 16:30	
2-Butanone	"	56.3	----	28.8	"	"	"	"	"	
Carbon disulfide	"	ND	----	2.88	"	"	"	"	"	
1,1-Dichloroethene	"	11.5	----	2.88	"	"	"	"	"	
Trichlorofluoromethane	"	7.42	----	4.80	"	"	"	"	"	
<i>Surrogate(s): 1,2-DCA-d4</i>			129%	70 - 140 %	"	"	"	"	"	
<i>Toluene-d8</i>			107%	70 - 130 %	"	"	"	"	"	I2
<i>4-BFB</i>			123%	70 - 130 %	"	"	"	"	"	I2

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-38RE1 (ALY-SB-9-7.0-8.0)		Soil		Sampled: 12/17/08 09:35						
Acetone	EPA 8260B	42.9	----	27.8	ug/kg dry	1x	8L31011	12/31/08 13:23	12/31/08 16:56	
Benzene	"	ND	----	1.04	"	"	"	"	"	
Bromobenzene	"	ND	----	3.48	"	"	"	"	"	
Bromochloromethane	"	ND	----	3.48	"	"	"	"	"	
Bromodichloromethane	"	ND	----	3.48	"	"	"	"	"	
Bromoform	"	ND	----	3.48	"	"	"	"	"	
Bromomethane	"	ND	----	6.96	"	"	"	"	"	
2-Butanone	"	ND	----	20.9	"	"	"	"	"	
n-Butylbenzene	"	ND	----	3.48	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	3.48	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	3.48	"	"	"	"	"	
Carbon disulfide	"	ND	----	2.09	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	3.48	"	"	"	"	"	
Chlorobenzene	"	ND	----	1.39	"	"	"	"	"	
Chloroethane	"	ND	----	3.48	"	"	"	"	"	
Chloroform	"	ND	----	1.74	"	"	"	"	"	
Chloromethane	"	ND	----	6.96	"	"	"	"	"	C5
2-Chlorotoluene	"	ND	----	3.48	"	"	"	"	"	
4-Chlorotoluene	"	ND	----	3.48	"	"	"	"	"	
Dibromochloromethane	"	ND	----	3.48	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	----	6.96	"	"	"	"	"	
1,2-Dibromoethane (EDB)	"	ND	----	3.48	"	"	"	"	"	
Dibromomethane	"	ND	----	3.48	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	3.48	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	----	3.48	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	----	3.48	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	----	3.48	"	"	"	"	"	C5
1,1-Dichloroethane	"	ND	----	1.39	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	0.870	"	"	"	"	"	
1,1-Dichloroethene	"	4.34	----	2.09	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	2.09	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	1.74	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	3.48	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	3.48	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	6.96	"	"	"	"	"	
1,1-Dichloropropene	"	ND	----	3.48	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	3.48	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	0.870	"	"	"	"	"	
Ethylbenzene	"	ND	----	2.78	"	"	"	"	"	
Hexachlorobutadiene	"	ND	----	6.96	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	0.696	"	"	"	"	"	
n-Hexane	"	ND	----	3.48	"	"	"	"	"	
2-Hexanone	"	ND	----	20.9	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-38RE1 (ALY-SB-9-7.0-8.0)		Soil		Sampled: 12/17/08 09:35						
Isopropylbenzene	EPA 8260B	ND	----	3.48	ug/kg dry	1x	8L31011	12/31/08 13:23	12/31/08 16:56	
p-Isopropyltoluene	"	ND	----	3.48	"	"	"	"	"	
4-Methyl-2-pentanone	"	ND	----	20.9	"	"	"	"	"	
Methylene chloride	"	ND	----	8.35	"	"	"	"	"	
Naphthalene	"	ND	----	6.96	"	"	"	"	"	
n-Propylbenzene	"	ND	----	3.48	"	"	"	"	"	
Styrene	"	ND	----	1.74	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	6.96	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	----	6.96	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	----	3.48	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	----	3.48	"	"	"	"	"	
Tetrachloroethene	"	ND	----	1.39	"	"	"	"	"	
Toluene	"	ND	----	1.04	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	----	1.74	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	----	1.39	"	"	"	"	"	
Trichloroethene	"	ND	----	1.74	"	"	"	"	"	
Trichlorofluoromethane	"	ND	----	3.48	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	3.48	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	3.48	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	3.48	"	"	"	"	"	
Vinyl chloride	"	ND	----	1.74	"	"	"	"	"	
o-Xylene	"	ND	----	3.48	"	"	"	"	"	
m,p-Xylene	"	ND	----	3.48	"	"	"	"	"	
Total Xylenes	"	ND	----	6.96	"	"	"	"	"	
<i>Surrogate(s): 1,2-DCA-d4</i>			<i>115%</i>		<i>70 - 140 %</i>	<i>"</i>				<i>"</i>
<i>Toluene-d8</i>			<i>92.6%</i>		<i>70 - 130 %</i>	<i>"</i>				<i>"</i>
<i>4-BFB</i>			<i>102%</i>		<i>70 - 130 %</i>	<i>"</i>				<i>"</i>

BRL0200-39RE1 (ALY-SB-12-1.0-2.0)

Soil

Sampled: 12/17/08 09:55

Acetone	EPA 8260B	530	----	38.6	ug/kg dry	1x	8L31011	12/31/08 13:23	12/31/08 17:21	
Benzene	"	ND	----	1.45	"	"	"	"	"	
Bromobenzene	"	ND	----	4.83	"	"	"	"	"	12
Bromochloromethane	"	ND	----	4.83	"	"	"	"	"	
Bromodichloromethane	"	ND	----	4.83	"	"	"	"	"	
Bromoform	"	ND	----	4.83	"	"	"	"	"	
Bromomethane	"	ND	----	9.65	"	"	"	"	"	
2-Butanone	"	29.0	----	29.0	"	"	"	"	"	
n-Butylbenzene	"	ND	----	4.83	"	"	"	"	"	12
sec-Butylbenzene	"	ND	----	4.83	"	"	"	"	"	12
tert-Butylbenzene	"	ND	----	4.83	"	"	"	"	"	12
Carbon disulfide	"	ND	----	2.90	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	4.83	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-39RE1 (ALY-SB-12-1.0-2.0)		Soil		Sampled: 12/17/08 09:55						
Chlorobenzene	EPA 8260B	ND	----	1.93	ug/kg dry	1x	8L31011	12/31/08 13:23	12/31/08 17:21	
Chloroethane	"	ND	----	4.83	"	"	"	"	"	
Chloroform	"	ND	----	2.41	"	"	"	"	"	
Chloromethane	"	ND	----	9.65	"	"	"	"	"	C5
2-Chlorotoluene	"	ND	----	4.83	"	"	"	"	"	I2
4-Chlorotoluene	"	ND	----	4.83	"	"	"	"	"	I2
Dibromochloromethane	"	ND	----	4.83	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	----	9.65	"	"	"	"	"	I2
1,2-Dibromoethane (EDB)	"	ND	----	4.83	"	"	"	"	"	
Dibromomethane	"	ND	----	4.83	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	4.83	"	"	"	"	"	I2
1,3-Dichlorobenzene	"	ND	----	4.83	"	"	"	"	"	I2
1,4-Dichlorobenzene	"	ND	----	4.83	"	"	"	"	"	I2
Dichlorodifluoromethane	"	ND	----	4.83	"	"	"	"	"	C5
1,1-Dichloroethane	"	ND	----	1.93	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	1.21	"	"	"	"	"	
1,1-Dichloroethene	"	12.6	----	2.90	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	2.90	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	2.41	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	4.83	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	4.83	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	9.65	"	"	"	"	"	
1,1-Dichloropropene	"	ND	----	4.83	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	4.83	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	1.21	"	"	"	"	"	
Ethylbenzene	"	14.8	----	3.86	"	"	"	"	"	
Hexachlorobutadiene	"	ND	----	9.65	"	"	"	"	"	I2
Methyl tert-butyl ether	"	ND	----	0.965	"	"	"	"	"	
n-Hexane	"	ND	----	4.83	"	"	"	"	"	
2-Hexanone	"	ND	----	29.0	"	"	"	"	"	
Isopropylbenzene	"	ND	----	4.83	"	"	"	"	"	
4-Methyl-2-pentanone	"	ND	----	29.0	"	"	"	"	"	
Methylene chloride	"	ND	----	11.6	"	"	"	"	"	
Naphthalene	"	ND	----	9.65	"	"	"	"	"	I2
n-Propylbenzene	"	ND	----	4.83	"	"	"	"	"	I2
Styrene	"	ND	----	2.41	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	9.65	"	"	"	"	"	I2
1,2,4-Trichlorobenzene	"	ND	----	9.65	"	"	"	"	"	I2
1,1,1,2-Tetrachloroethane	"	ND	----	4.83	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	----	4.83	"	"	"	"	"	I2
Tetrachloroethene	"	ND	----	1.93	"	"	"	"	"	
Toluene	"	10.8	----	1.45	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	----	2.41	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-39RE1 (ALY-SB-12-1.0-2.0)		Soil		Sampled: 12/17/08 09:55						
1,1,2-Trichloroethane	EPA 8260B	ND	----	1.93	ug/kg dry	1x	8L31011	12/31/08 13:23	12/31/08 17:21	
Trichloroethene	"	ND	----	2.41	"	"	"	"	"	
Trichlorofluoromethane	"	7.72	----	4.83	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	4.83	"	"	"	"	"	I2
1,2,4-Trimethylbenzene	"	ND	----	4.83	"	"	"	"	"	I2
1,3,5-Trimethylbenzene	"	ND	----	4.83	"	"	"	"	"	I2
Vinyl chloride	"	ND	----	2.41	"	"	"	"	"	
o-Xylene	"	ND	----	4.83	"	"	"	"	"	
m,p-Xylene	"	ND	----	4.83	"	"	"	"	"	
Total Xylenes	"	ND	----	9.65	"	"	"	"	"	
<i>Surrogate(s): 1,2-DCA-d4</i>			<i>136%</i>	<i>70 - 140 %</i>						
<i>Toluene-d8</i>			<i>102%</i>	<i>70 - 130 %</i>						
<i>4-BFB</i>			<i>118%</i>	<i>70 - 130 %</i>						

BRL0200-42RE1 (ALY-SB-8-1.0-2.0)		Soil		Sampled: 12/17/08 11:02						
Acetone	EPA 8260B	122	----	27.2	ug/kg dry	1x	8L31011	12/31/08 13:23	12/31/08 18:13	
Benzene	"	ND	----	1.02	"	"	"	"	"	
Bromobenzene	"	ND	----	3.40	"	"	"	"	"	
Bromochloromethane	"	ND	----	3.40	"	"	"	"	"	
Bromodichloromethane	"	ND	----	3.40	"	"	"	"	"	
Bromoform	"	ND	----	3.40	"	"	"	"	"	
Bromomethane	"	ND	----	6.81	"	"	"	"	"	
2-Butanone	"	ND	----	20.4	"	"	"	"	"	
n-Butylbenzene	"	ND	----	3.40	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	3.40	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	3.40	"	"	"	"	"	
Carbon disulfide	"	ND	----	2.04	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	3.40	"	"	"	"	"	
Chlorobenzene	"	ND	----	1.36	"	"	"	"	"	
Chloroethane	"	ND	----	3.40	"	"	"	"	"	
Chloroform	"	ND	----	1.70	"	"	"	"	"	
Chloromethane	"	ND	----	6.81	"	"	"	"	"	C5
2-Chlorotoluene	"	ND	----	3.40	"	"	"	"	"	
4-Chlorotoluene	"	ND	----	3.40	"	"	"	"	"	
Dibromochloromethane	"	ND	----	3.40	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	----	6.81	"	"	"	"	"	
1,2-Dibromoethane (EDB)	"	ND	----	3.40	"	"	"	"	"	
Dibromomethane	"	ND	----	3.40	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	3.40	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	----	3.40	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	----	3.40	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	----	3.40	"	"	"	"	"	C5

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
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Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-42RE1 (ALY-SB-8-1.0-2.0)		Soil		Sampled: 12/17/08 11:02						
1,1-Dichloroethane	EPA 8260B	ND	----	1.36	ug/kg dry	1x	8L31011	12/31/08 13:23	12/31/08 18:13	
1,2-Dichloroethane	"	ND	----	0.851	"	"	"	"	"	
1,1-Dichloroethene	"	3.43	----	2.04	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	2.04	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	1.70	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	3.40	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	3.40	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	6.81	"	"	"	"	"	
1,1-Dichloropropene	"	ND	----	3.40	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	3.40	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	0.851	"	"	"	"	"	
Ethylbenzene	"	ND	----	2.72	"	"	"	"	"	
Hexachlorobutadiene	"	ND	----	6.81	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	0.681	"	"	"	"	"	
n-Hexane	"	ND	----	3.40	"	"	"	"	"	
2-Hexanone	"	ND	----	20.4	"	"	"	"	"	
Isopropylbenzene	"	ND	----	3.40	"	"	"	"	"	
p-Isopropyltoluene	"	ND	----	3.40	"	"	"	"	"	
4-Methyl-2-pentanone	"	ND	----	20.4	"	"	"	"	"	
Methylene chloride	"	ND	----	8.17	"	"	"	"	"	
Naphthalene	"	ND	----	6.81	"	"	"	"	"	
n-Propylbenzene	"	ND	----	3.40	"	"	"	"	"	
Styrene	"	ND	----	1.70	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	6.81	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	----	6.81	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	----	3.40	"	"	"	"	"	
1,1,1,2,2-Tetrachloroethane	"	ND	----	3.40	"	"	"	"	"	
Tetrachloroethene	"	ND	----	1.36	"	"	"	"	"	
Toluene	"	ND	----	1.02	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	----	1.70	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	----	1.36	"	"	"	"	"	
Trichloroethene	"	ND	----	1.70	"	"	"	"	"	
Trichlorofluoromethane	"	ND	----	3.40	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	3.40	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	3.40	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	3.40	"	"	"	"	"	
Vinyl chloride	"	ND	----	1.70	"	"	"	"	"	
o-Xylene	"	ND	----	3.40	"	"	"	"	"	
m,p-Xylene	"	ND	----	3.40	"	"	"	"	"	
Total Xylenes	"	ND	----	6.81	"	"	"	"	"	
Surrogate(s): 1,2-DCA-d4			117%		70 - 140 %	"				"
Toluene-d8			98.6%		70 - 130 %	"				"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

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Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-42RE1 (ALY-SB-8-1.0-2.0)		Soil		Sampled: 12/17/08 11:02						
4-BFB			111%		70 - 130 %	1x			12/31/08 18:13	
BRL0200-43 (ALY-SB-8-3.0-4.0)		Soil		Sampled: 12/17/08 11:10						
Acetone	EPA 8260B	1280	----	72.6	ug/kg dry	1x	8L30013	12/30/08 12:25	12/30/08 18:06	
Benzene	"	ND	----	2.72	"	"	"	"	"	
Bromobenzene	"	ND	----	9.07	"	"	"	"	"	12
Bromochloromethane	"	ND	----	9.07	"	"	"	"	"	
Bromodichloromethane	"	ND	----	9.07	"	"	"	"	"	
Bromoform	"	ND	----	9.07	"	"	"	"	"	
Bromomethane	"	ND	----	18.1	"	"	"	"	"	
2-Butanone	"	183	----	54.4	"	"	"	"	"	
n-Butylbenzene	"	ND	----	9.07	"	"	"	"	"	12
sec-Butylbenzene	"	ND	----	9.07	"	"	"	"	"	12
tert-Butylbenzene	"	ND	----	9.07	"	"	"	"	"	12
Carbon disulfide	"	8.44	----	5.44	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	9.07	"	"	"	"	"	
Chlorobenzene	"	ND	----	3.63	"	"	"	"	"	
Chloroethane	"	ND	----	9.07	"	"	"	"	"	
Chloroform	"	ND	----	4.54	"	"	"	"	"	
Chloromethane	"	ND	----	18.1	"	"	"	"	"	C5
2-Chlorotoluene	"	ND	----	9.07	"	"	"	"	"	12
4-Chlorotoluene	"	ND	----	9.07	"	"	"	"	"	12
Dibromochloromethane	"	ND	----	9.07	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	----	18.1	"	"	"	"	"	12
1,2-Dibromoethane (EDB)	"	ND	----	9.07	"	"	"	"	"	
Dibromomethane	"	ND	----	9.07	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	9.07	"	"	"	"	"	12
1,3-Dichlorobenzene	"	ND	----	9.07	"	"	"	"	"	12
1,4-Dichlorobenzene	"	ND	----	9.07	"	"	"	"	"	12
Dichlorodifluoromethane	"	ND	----	9.07	"	"	"	"	"	C5
1,1-Dichloroethane	"	ND	----	3.63	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	2.27	"	"	"	"	"	
1,1-Dichloroethene	"	ND	----	5.44	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	5.44	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	4.54	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	9.07	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	9.07	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	18.1	"	"	"	"	"	
1,1-Dichloropropene	"	ND	----	9.07	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	9.07	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	2.27	"	"	"	"	"	
Ethylbenzene	"	57.9	----	7.26	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

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 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-43 (ALY-SB-8-3.0-4.0)		Soil		Sampled: 12/17/08 11:10						
Hexachlorobutadiene	EPA 8260B	ND	----	18.1	ug/kg dry	1x	8L30013	12/30/08 12:25	12/30/08 18:06	I2
Methyl tert-butyl ether	"	ND	----	1.81	"	"	"	"	"	
n-Hexane	"	ND	----	9.07	"	"	"	"	"	
2-Hexanone	"	ND	----	54.4	"	"	"	"	"	
Isopropylbenzene	"	12.5	----	9.07	"	"	"	"	"	
4-Methyl-2-pentanone	"	ND	----	54.4	"	"	"	"	"	
Methylene chloride	"	ND	----	21.8	"	"	"	"	"	
Naphthalene	"	ND	----	18.1	"	"	"	"	"	I2
n-Propylbenzene	"	ND	----	9.07	"	"	"	"	"	I2
Styrene	"	ND	----	4.54	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	18.1	"	"	"	"	"	I2
1,2,4-Trichlorobenzene	"	ND	----	18.1	"	"	"	"	"	I2
1,1,1,2-Tetrachloroethane	"	ND	----	9.07	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	----	9.07	"	"	"	"	"	I2
Tetrachloroethene	"	ND	----	3.63	"	"	"	"	"	
Toluene	"	3.54	----	2.72	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	----	4.54	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	----	3.63	"	"	"	"	"	
Trichloroethene	"	ND	----	4.54	"	"	"	"	"	
Trichlorofluoromethane	"	ND	----	9.07	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	9.07	"	"	"	"	"	I2
1,2,4-Trimethylbenzene	"	ND	----	9.07	"	"	"	"	"	I2
1,3,5-Trimethylbenzene	"	ND	----	9.07	"	"	"	"	"	I2
Vinyl chloride	"	ND	----	4.54	"	"	"	"	"	
o-Xylene	"	ND	----	9.07	"	"	"	"	"	
m,p-Xylene	"	75.3	----	9.07	"	"	"	"	"	
Total Xylenes	"	76.6	----	18.1	"	"	"	"	"	
<i>Surrogate(s): 1,2-DCA-d4</i>			<i>132%</i>	<i>70 - 140 %</i>						<i>"</i>
<i>Toluene-d8</i>			<i>111%</i>	<i>70 - 130 %</i>						<i>"</i>
<i>4-BFB</i>			<i>125%</i>	<i>70 - 130 %</i>						<i>"</i>

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-44RE1 (ALY-SB-7-1.0-2.0)		Soil		Sampled: 12/17/08 11:35						
Acetone	EPA 8260B	324	----	34.6	ug/kg dry	1x	8L31011	12/31/08 13:23	12/31/08 19:04	
Benzene	"	ND	----	1.30	"	"	"	"	"	
Bromobenzene	"	ND	----	4.32	"	"	"	"	"	
Bromochloromethane	"	ND	----	4.32	"	"	"	"	"	
Bromodichloromethane	"	ND	----	4.32	"	"	"	"	"	
Bromoform	"	ND	----	4.32	"	"	"	"	"	
Bromomethane	"	ND	----	8.64	"	"	"	"	"	
2-Butanone	"	ND	----	25.9	"	"	"	"	"	
n-Butylbenzene	"	ND	----	4.32	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	4.32	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	4.32	"	"	"	"	"	
Carbon disulfide	"	3.46	----	2.59	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	4.32	"	"	"	"	"	
Chlorobenzene	"	ND	----	1.73	"	"	"	"	"	
Chloroethane	"	ND	----	4.32	"	"	"	"	"	
Chloroform	"	ND	----	2.16	"	"	"	"	"	
Chloromethane	"	ND	----	8.64	"	"	"	"	"	C5
2-Chlorotoluene	"	ND	----	4.32	"	"	"	"	"	
4-Chlorotoluene	"	ND	----	4.32	"	"	"	"	"	
Dibromochloromethane	"	ND	----	4.32	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	----	8.64	"	"	"	"	"	
1,2-Dibromoethane (EDB)	"	ND	----	4.32	"	"	"	"	"	
Dibromomethane	"	ND	----	4.32	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	4.32	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	----	4.32	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	----	4.32	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	----	4.32	"	"	"	"	"	C5
1,1-Dichloroethane	"	ND	----	1.73	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	1.08	"	"	"	"	"	
1,1-Dichloroethene	"	6.11	----	2.59	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	2.59	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	2.16	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	4.32	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	4.32	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	8.64	"	"	"	"	"	
1,1-Dichloropropene	"	ND	----	4.32	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	4.32	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	1.08	"	"	"	"	"	
Ethylbenzene	"	ND	----	3.46	"	"	"	"	"	
Hexachlorobutadiene	"	ND	----	8.64	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	0.864	"	"	"	"	"	
n-Hexane	"	ND	----	4.32	"	"	"	"	"	
2-Hexanone	"	ND	----	25.9	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-44RE1 (ALY-SB-7-1.0-2.0)		Soil		Sampled: 12/17/08 11:35						
Isopropylbenzene	EPA 8260B	ND	----	4.32	ug/kg dry	1x	8L31011	12/31/08 13:23	12/31/08 19:04	
p-Isopropyltoluene	"	14.2	----	4.32	"	"	"	"	"	
4-Methyl-2-pentanone	"	ND	----	25.9	"	"	"	"	"	
Methylene chloride	"	ND	----	10.4	"	"	"	"	"	
Naphthalene	"	ND	----	8.64	"	"	"	"	"	
n-Propylbenzene	"	ND	----	4.32	"	"	"	"	"	
Styrene	"	ND	----	2.16	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	8.64	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	----	8.64	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	----	4.32	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	----	4.32	"	"	"	"	"	
Tetrachloroethene	"	ND	----	1.73	"	"	"	"	"	
Toluene	"	ND	----	1.30	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	----	2.16	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	----	1.73	"	"	"	"	"	
Trichloroethene	"	ND	----	2.16	"	"	"	"	"	
Trichlorofluoromethane	"	4.42	----	4.32	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	4.32	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	4.32	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	4.32	"	"	"	"	"	
Vinyl chloride	"	ND	----	2.16	"	"	"	"	"	
o-Xylene	"	ND	----	4.32	"	"	"	"	"	
m,p-Xylene	"	ND	----	4.32	"	"	"	"	"	
Total Xylenes	"	ND	----	8.64	"	"	"	"	"	
<i>Surrogate(s): 1,2-DCA-d4</i>			<i>129%</i>		<i>70 - 140 %</i>	"				"
<i>Toluene-d8</i>			<i>97.1%</i>		<i>70 - 130 %</i>	"				"
<i>4-BFB</i>			<i>118%</i>		<i>70 - 130 %</i>	"				"

BRL0200-45 (ALY-SB-7-10.0-11.0)

Soil

Sampled: 12/17/08 11:52

Acetone	EPA 8260B	151	----	30.9	ug/kg dry	1x	8L30013	12/30/08 12:25	12/30/08 18:57	
Benzene	"	ND	----	1.16	"	"	"	"	"	
Bromobenzene	"	ND	----	3.86	"	"	"	"	"	
Bromochloromethane	"	ND	----	3.86	"	"	"	"	"	
Bromodichloromethane	"	ND	----	3.86	"	"	"	"	"	
Bromoform	"	ND	----	3.86	"	"	"	"	"	
Bromomethane	"	ND	----	7.71	"	"	"	"	"	
2-Butanone	"	35.2	----	23.1	"	"	"	"	"	
n-Butylbenzene	"	ND	----	3.86	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	3.86	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	3.86	"	"	"	"	"	
Carbon disulfide	"	2.74	----	2.31	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	3.86	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-45 (ALY-SB-7-10.0-11.0)										
		Soil					Sampled: 12/17/08 11:52			
Chlorobenzene	EPA 8260B	ND	----	1.54	ug/kg dry	1x	8L30013	12/30/08 12:25	12/30/08 18:57	
Chloroethane	"	ND	----	3.86	"	"	"	"	"	
Chloroform	"	ND	----	1.93	"	"	"	"	"	
Chloromethane	"	ND	----	7.71	"	"	"	"	"	C5
2-Chlorotoluene	"	ND	----	3.86	"	"	"	"	"	
4-Chlorotoluene	"	ND	----	3.86	"	"	"	"	"	
Dibromochloromethane	"	ND	----	3.86	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	----	7.71	"	"	"	"	"	
1,2-Dibromoethane (EDB)	"	ND	----	3.86	"	"	"	"	"	
Dibromomethane	"	ND	----	3.86	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	3.86	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	----	3.86	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	----	3.86	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	----	3.86	"	"	"	"	"	C5
1,1-Dichloroethane	"	ND	----	1.54	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	0.964	"	"	"	"	"	
1,1-Dichloroethene	"	ND	----	2.31	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	2.31	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	1.93	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	3.86	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	3.86	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	7.71	"	"	"	"	"	
1,1-Dichloropropene	"	ND	----	3.86	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	3.86	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	0.964	"	"	"	"	"	
Ethylbenzene	"	6.23	----	3.09	"	"	"	"	"	
Hexachlorobutadiene	"	ND	----	7.71	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	0.771	"	"	"	"	"	
n-Hexane	"	ND	----	3.86	"	"	"	"	"	
2-Hexanone	"	ND	----	23.1	"	"	"	"	"	
Isopropylbenzene	"	ND	----	3.86	"	"	"	"	"	
p-Isopropyltoluene	"	ND	----	3.86	"	"	"	"	"	
4-Methyl-2-pentanone	"	ND	----	23.1	"	"	"	"	"	
Methylene chloride	"	ND	----	9.26	"	"	"	"	"	
Naphthalene	"	ND	----	7.71	"	"	"	"	"	
n-Propylbenzene	"	ND	----	3.86	"	"	"	"	"	
Styrene	"	ND	----	1.93	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	7.71	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	----	7.71	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	----	3.86	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	----	3.86	"	"	"	"	"	
Tetrachloroethene	"	ND	----	1.54	"	"	"	"	"	
Toluene	"	ND	----	1.16	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-45 (ALY-SB-7-10.0-11.0)		Soil		Sampled: 12/17/08 11:52						
1,1,1-Trichloroethane	EPA 8260B	ND	----	1.93	ug/kg dry	1x	8L30013	12/30/08 12:25	12/30/08 18:57	
1,1,2-Trichloroethane	"	ND	----	1.54	"	"	"	"	"	
Trichloroethene	"	ND	----	1.93	"	"	"	"	"	
Trichlorofluoromethane	"	ND	----	3.86	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	3.86	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	3.86	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	3.86	"	"	"	"	"	
Vinyl chloride	"	ND	----	1.93	"	"	"	"	"	
o-Xylene	"	ND	----	3.86	"	"	"	"	"	
m,p-Xylene	"	ND	----	3.86	"	"	"	"	"	
Total Xylenes	"	ND	----	7.71	"	"	"	"	"	

Surrogate(s): 1,2-DCA-d4 119% 70 - 140 % "
 Toluene-d8 99.0% 70 - 130 % "
 4-BFB 127% 70 - 130 % "

BRL0200-48 (ALY-SB-6-3.0-4.0)		Soil		Sampled: 12/17/08 12:55						
Acetone	EPA 8260B	71.4	----	26.8	ug/kg dry	1x	8L30013	12/30/08 12:25	12/30/08 19:48	
Benzene	"	ND	----	1.01	"	"	"	"	"	
Bromobenzene	"	ND	----	3.36	"	"	"	"	"	12
Bromochloromethane	"	ND	----	3.36	"	"	"	"	"	
Bromodichloromethane	"	ND	----	3.36	"	"	"	"	"	
Bromoform	"	ND	----	3.36	"	"	"	"	"	
Bromomethane	"	ND	----	6.71	"	"	"	"	"	
2-Butanone	"	ND	----	20.1	"	"	"	"	"	
n-Butylbenzene	"	ND	----	3.36	"	"	"	"	"	12
sec-Butylbenzene	"	ND	----	3.36	"	"	"	"	"	12
tert-Butylbenzene	"	ND	----	3.36	"	"	"	"	"	12
Carbon disulfide	"	ND	----	2.01	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	3.36	"	"	"	"	"	
Chlorobenzene	"	ND	----	1.34	"	"	"	"	"	
Chloroethane	"	ND	----	3.36	"	"	"	"	"	
Chloroform	"	ND	----	1.68	"	"	"	"	"	
Chloromethane	"	ND	----	6.71	"	"	"	"	"	C5
2-Chlorotoluene	"	ND	----	3.36	"	"	"	"	"	12
4-Chlorotoluene	"	ND	----	3.36	"	"	"	"	"	12
Dibromochloromethane	"	ND	----	3.36	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	----	6.71	"	"	"	"	"	12
1,2-Dibromoethane (EDB)	"	ND	----	3.36	"	"	"	"	"	
Dibromomethane	"	ND	----	3.36	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	3.36	"	"	"	"	"	12
1,3-Dichlorobenzene	"	ND	----	3.36	"	"	"	"	"	12
1,4-Dichlorobenzene	"	ND	----	3.36	"	"	"	"	"	12

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-48 (ALY-SB-6-3.0-4.0)		Soil		Sampled: 12/17/08 12:55						
Dichlorodifluoromethane	EPA 8260B	ND	----	3.36	ug/kg dry	1x	8L30013	12/30/08 12:25	12/30/08 19:48	C5
1,1-Dichloroethane	"	ND	----	1.34	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	0.839	"	"	"	"	"	
1,1-Dichloroethene	"	ND	----	2.01	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	2.01	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	1.68	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	3.36	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	3.36	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	6.71	"	"	"	"	"	
1,1-Dichloropropene	"	ND	----	3.36	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	3.36	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	0.839	"	"	"	"	"	
Ethylbenzene	"	ND	----	2.68	"	"	"	"	"	
Hexachlorobutadiene	"	ND	----	6.71	"	"	"	"	"	12
Methyl tert-butyl ether	"	ND	----	0.671	"	"	"	"	"	
n-Hexane	"	ND	----	3.36	"	"	"	"	"	
2-Hexanone	"	ND	----	20.1	"	"	"	"	"	
Isopropylbenzene	"	ND	----	3.36	"	"	"	"	"	
p-Isopropyltoluene	"	ND	----	3.36	"	"	"	"	"	12
4-Methyl-2-pentanone	"	ND	----	20.1	"	"	"	"	"	
Methylene chloride	"	ND	----	8.05	"	"	"	"	"	
Naphthalene	"	ND	----	6.71	"	"	"	"	"	12
n-Propylbenzene	"	ND	----	3.36	"	"	"	"	"	12
Styrene	"	ND	----	1.68	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	6.71	"	"	"	"	"	12
1,2,4-Trichlorobenzene	"	ND	----	6.71	"	"	"	"	"	12
1,1,1,2-Tetrachloroethane	"	ND	----	3.36	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	----	3.36	"	"	"	"	"	12
Tetrachloroethene	"	ND	----	1.34	"	"	"	"	"	
Toluene	"	ND	----	1.01	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	----	1.68	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	----	1.34	"	"	"	"	"	
Trichloroethene	"	ND	----	1.68	"	"	"	"	"	
Trichlorofluoromethane	"	ND	----	3.36	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	3.36	"	"	"	"	"	12
1,2,4-Trimethylbenzene	"	ND	----	3.36	"	"	"	"	"	12
1,3,5-Trimethylbenzene	"	ND	----	3.36	"	"	"	"	"	12
Vinyl chloride	"	ND	----	1.68	"	"	"	"	"	
o-Xylene	"	ND	----	3.36	"	"	"	"	"	
m,p-Xylene	"	ND	----	3.36	"	"	"	"	"	
Total Xylenes	"	ND	----	6.71	"	"	"	"	"	

Surrogate(s): 1,2-DCA-d4

127%

70 - 140 %

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TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report



Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-50 (ALY-SB-2-4.0-5.0)										
		Soil					Sampled: 12/17/08 13:30			
Ethylbenzene	EPA 8260B	ND	----	4.71	ug/kg dry	1x	8L30013	12/30/08 12:25	12/30/08 20:39	
Hexachlorobutadiene	"	ND	----	11.8	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	1.18	"	"	"	"	"	
n-Hexane	"	ND	----	5.89	"	"	"	"	"	
2-Hexanone	"	ND	----	35.4	"	"	"	"	"	
Isopropylbenzene	"	ND	----	5.89	"	"	"	"	"	
p-Isopropyltoluene	"	ND	----	5.89	"	"	"	"	"	
4-Methyl-2-pentanone	"	ND	----	35.4	"	"	"	"	"	
Methylene chloride	"	ND	----	14.1	"	"	"	"	"	
Naphthalene	"	ND	----	11.8	"	"	"	"	"	
n-Propylbenzene	"	ND	----	5.89	"	"	"	"	"	
Styrene	"	ND	----	2.95	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	11.8	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	----	11.8	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	----	5.89	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	----	5.89	"	"	"	"	"	
Tetrachloroethene	"	ND	----	2.36	"	"	"	"	"	
Toluene	"	ND	----	1.77	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	----	2.95	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	----	2.36	"	"	"	"	"	
Trichloroethene	"	ND	----	2.95	"	"	"	"	"	
Trichlorofluoromethane	"	ND	----	5.89	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	5.89	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	5.89	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	5.89	"	"	"	"	"	
Vinyl chloride	"	ND	----	2.95	"	"	"	"	"	
o-Xylene	"	ND	----	5.89	"	"	"	"	"	
m,p-Xylene	"	ND	----	5.89	"	"	"	"	"	
Total Xylenes	"	ND	----	11.8	"	"	"	"	"	

Surrogate(s): 1,2-DCA-d4 123% 70 - 140 % "
 Toluene-d8 99.0% 70 - 130 % "
 4-BFB 112% 70 - 130 % "

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-53 (ALY-SB-1-3.0-4.0)										
		Soil					Sampled: 12/17/08 14:22			
Acetone	EPA 8260B	100	----	42.5	ug/kg dry	1x	8L30013	12/30/08 12:25	12/30/08 21:30	
Benzene	"	ND	----	1.59	"	"	"	"	"	
Bromobenzene	"	ND	----	5.31	"	"	"	"	"	
Bromochloromethane	"	ND	----	5.31	"	"	"	"	"	
Bromodichloromethane	"	ND	----	5.31	"	"	"	"	"	
Bromoform	"	ND	----	5.31	"	"	"	"	"	
Bromomethane	"	ND	----	10.6	"	"	"	"	"	
2-Butanone	"	ND	----	31.9	"	"	"	"	"	
n-Butylbenzene	"	ND	----	5.31	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	5.31	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	5.31	"	"	"	"	"	
Carbon disulfide	"	ND	----	3.19	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	5.31	"	"	"	"	"	
Chlorobenzene	"	ND	----	2.13	"	"	"	"	"	
Chloroethane	"	ND	----	5.31	"	"	"	"	"	
Chloroform	"	ND	----	2.66	"	"	"	"	"	
Chloromethane	"	ND	----	10.6	"	"	"	"	"	C5
2-Chlorotoluene	"	ND	----	5.31	"	"	"	"	"	
4-Chlorotoluene	"	ND	----	5.31	"	"	"	"	"	
Dibromochloromethane	"	ND	----	5.31	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	----	10.6	"	"	"	"	"	
1,2-Dibromoethane (EDB)	"	ND	----	5.31	"	"	"	"	"	
Dibromomethane	"	ND	----	5.31	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	5.31	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	----	5.31	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	----	5.31	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	----	5.31	"	"	"	"	"	C5
1,1-Dichloroethane	"	ND	----	2.13	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	1.33	"	"	"	"	"	
1,1-Dichloroethene	"	ND	----	3.19	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	3.19	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	2.66	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	5.31	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	5.31	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	10.6	"	"	"	"	"	
1,1-Dichloropropene	"	ND	----	5.31	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	5.31	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	1.33	"	"	"	"	"	
Ethylbenzene	"	ND	----	4.25	"	"	"	"	"	
Hexachlorobutadiene	"	ND	----	10.6	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	1.06	"	"	"	"	"	
n-Hexane	"	ND	----	5.31	"	"	"	"	"	
2-Hexanone	"	ND	----	31.9	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-53 (ALY-SB-1-3.0-4.0)		Soil		Sampled: 12/17/08 14:22						
Isopropylbenzene	EPA 8260B	ND	----	5.31	ug/kg dry	1x	8L30013	12/30/08 12:25	12/30/08 21:30	
p-Isopropyltoluene	"	ND	----	5.31	"	"	"	"	"	
4-Methyl-2-pentanone	"	ND	----	31.9	"	"	"	"	"	
Methylene chloride	"	ND	----	12.8	"	"	"	"	"	
Naphthalene	"	ND	----	10.6	"	"	"	"	"	
n-Propylbenzene	"	ND	----	5.31	"	"	"	"	"	
Styrene	"	ND	----	2.66	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	10.6	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	----	10.6	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	----	5.31	"	"	"	"	"	
1,1,1,2,2-Tetrachloroethane	"	ND	----	5.31	"	"	"	"	"	
Tetrachloroethene	"	ND	----	2.13	"	"	"	"	"	
Toluene	"	ND	----	1.59	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	----	2.66	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	----	2.13	"	"	"	"	"	
Trichloroethene	"	ND	----	2.66	"	"	"	"	"	
Trichlorofluoromethane	"	ND	----	5.31	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	5.31	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	5.31	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	5.31	"	"	"	"	"	
Vinyl chloride	"	ND	----	2.66	"	"	"	"	"	
o-Xylene	"	ND	----	5.31	"	"	"	"	"	
m,p-Xylene	"	ND	----	5.31	"	"	"	"	"	
Total Xylenes	"	ND	----	10.6	"	"	"	"	"	
<i>Surrogate(s): 1,2-DCA-d4</i>			<i>118%</i>		<i>70 - 140 %</i>	<i>"</i>				<i>"</i>
<i>Toluene-d8</i>			<i>102%</i>		<i>70 - 130 %</i>	<i>"</i>				<i>"</i>
<i>4-BFB</i>			<i>115%</i>		<i>70 - 130 %</i>	<i>"</i>				<i>"</i>

BRL0200-54RE1 (ALY-SB-4-1.0-2.0)

Soil

Sampled: 12/17/08 14:50

Acetone	EPA 8260B	47.7	----	27.5	ug/kg dry	1x	8L31011	12/31/08 13:23	12/31/08 20:20	
Benzene	"	ND	----	1.03	"	"	"	"	"	
Bromobenzene	"	ND	----	3.44	"	"	"	"	"	
Bromochloromethane	"	ND	----	3.44	"	"	"	"	"	
Bromodichloromethane	"	ND	----	3.44	"	"	"	"	"	
Bromoform	"	ND	----	3.44	"	"	"	"	"	
Bromomethane	"	ND	----	6.88	"	"	"	"	"	
2-Butanone	"	ND	----	20.6	"	"	"	"	"	
n-Butylbenzene	"	ND	----	3.44	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	3.44	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	3.44	"	"	"	"	"	
Carbon disulfide	"	2.15	----	2.06	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	3.44	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-54RE1 (ALY-SB-4-1.0-2.0)		Soil		Sampled: 12/17/08 14:50						
Chlorobenzene	EPA 8260B	ND	----	1.38	ug/kg dry	1x	8L31011	12/31/08 13:23	12/31/08 20:20	
Chloroethane	"	ND	----	3.44	"	"	"	"	"	
Chloroform	"	ND	----	1.72	"	"	"	"	"	
Chloromethane	"	ND	----	6.88	"	"	"	"	"	C5
2-Chlorotoluene	"	ND	----	3.44	"	"	"	"	"	
4-Chlorotoluene	"	ND	----	3.44	"	"	"	"	"	
Dibromochloromethane	"	ND	----	3.44	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	----	6.88	"	"	"	"	"	
1,2-Dibromoethane (EDB)	"	ND	----	3.44	"	"	"	"	"	
Dibromomethane	"	ND	----	3.44	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	3.44	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	----	3.44	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	----	3.44	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	----	3.44	"	"	"	"	"	C5
1,1-Dichloroethane	"	ND	----	1.38	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	0.860	"	"	"	"	"	
1,1-Dichloroethene	"	5.90	----	2.06	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	2.06	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	1.72	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	3.44	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	3.44	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	6.88	"	"	"	"	"	
1,1-Dichloropropene	"	ND	----	3.44	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	3.44	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	0.860	"	"	"	"	"	
Ethylbenzene	"	ND	----	2.75	"	"	"	"	"	
Hexachlorobutadiene	"	ND	----	6.88	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	0.688	"	"	"	"	"	
n-Hexane	"	ND	----	3.44	"	"	"	"	"	
2-Hexanone	"	ND	----	20.6	"	"	"	"	"	
Isopropylbenzene	"	ND	----	3.44	"	"	"	"	"	
p-Isopropyltoluene	"	ND	----	3.44	"	"	"	"	"	
4-Methyl-2-pentanone	"	ND	----	20.6	"	"	"	"	"	
Methylene chloride	"	ND	----	8.25	"	"	"	"	"	
Naphthalene	"	ND	----	6.88	"	"	"	"	"	
n-Propylbenzene	"	ND	----	3.44	"	"	"	"	"	
Styrene	"	ND	----	1.72	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	6.88	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	----	6.88	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	----	3.44	"	"	"	"	"	
1,1,1,2,2-Tetrachloroethane	"	ND	----	3.44	"	"	"	"	"	
Tetrachloroethene	"	ND	----	1.38	"	"	"	"	"	
Toluene	"	ND	----	1.03	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-54RE1 (ALY-SB-4-1.0-2.0)		Soil		Sampled: 12/17/08 14:50						
1,1,1-Trichloroethane	EPA 8260B	ND	----	1.72	ug/kg dry	1x	8L31011	12/31/08 13:23	12/31/08 20:20	
1,1,2-Trichloroethane	"	ND	----	1.38	"	"	"	"	"	
Trichloroethene	"	ND	----	1.72	"	"	"	"	"	
Trichlorofluoromethane	"	4.06	----	3.44	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	3.44	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	3.44	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	3.44	"	"	"	"	"	
Vinyl chloride	"	ND	----	1.72	"	"	"	"	"	
o-Xylene	"	ND	----	3.44	"	"	"	"	"	
m,p-Xylene	"	ND	----	3.44	"	"	"	"	"	
Total Xylenes	"	ND	----	6.88	"	"	"	"	"	
<i>Surrogate(s): 1,2-DCA-d4</i>			<i>129%</i>		<i>70 - 140 %</i>	<i>"</i>			<i>"</i>	
<i>Toluene-d8</i>			<i>97.2%</i>		<i>70 - 130 %</i>	<i>"</i>			<i>"</i>	
<i>4-BFB</i>			<i>112%</i>		<i>70 - 130 %</i>	<i>"</i>			<i>"</i>	

BRL0200-56RE1 (ALY-SB-10-1.0-2.0)

Soil

Sampled: 12/17/08 15:32

Benzene	EPA 8260B	ND	----	1.33	ug/kg dry	1x	8L31011	12/31/08 13:23	12/31/08 20:46	
Bromobenzene	"	ND	----	4.43	"	"	"	"	"	12
Bromochloromethane	"	ND	----	4.43	"	"	"	"	"	12
Bromodichloromethane	"	ND	----	4.43	"	"	"	"	"	
Bromoform	"	ND	----	4.43	"	"	"	"	"	12
Bromomethane	"	ND	----	8.85	"	"	"	"	"	12
n-Butylbenzene	"	ND	----	4.43	"	"	"	"	"	12
sec-Butylbenzene	"	ND	----	4.43	"	"	"	"	"	12
tert-Butylbenzene	"	ND	----	4.43	"	"	"	"	"	12
Carbon tetrachloride	"	ND	----	4.43	"	"	"	"	"	
Chlorobenzene	"	ND	----	1.77	"	"	"	"	"	12
Chloroethane	"	ND	----	4.43	"	"	"	"	"	12
Chloroform	"	ND	----	2.21	"	"	"	"	"	12
Chloromethane	"	ND	----	8.85	"	"	"	"	"	CS, 12
2-Chlorotoluene	"	ND	----	4.43	"	"	"	"	"	12
4-Chlorotoluene	"	ND	----	4.43	"	"	"	"	"	12
Dibromochloromethane	"	ND	----	4.43	"	"	"	"	"	12
1,2-Dibromo-3-chloropropane	"	ND	----	8.85	"	"	"	"	"	12
1,2-Dibromoethane (EDB)	"	ND	----	4.43	"	"	"	"	"	12
Dibromomethane	"	ND	----	4.43	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	4.43	"	"	"	"	"	12
1,3-Dichlorobenzene	"	ND	----	4.43	"	"	"	"	"	12
1,4-Dichlorobenzene	"	ND	----	4.43	"	"	"	"	"	12
Dichlorodifluoromethane	"	ND	----	4.43	"	"	"	"	"	CS, 12
1,1-Dichloroethane	"	ND	----	1.77	"	"	"	"	"	12
1,2-Dichloroethane	"	ND	----	1.11	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-56RE1 (ALY-SB-10-1.0-2.0)		Soil		Sampled: 12/17/08 15:32						
cis-1,2-Dichloroethene	EPA 8260B	ND	----	2.66	ug/kg dry	1x	8L31011	12/31/08 13:23	12/31/08 20:46	I2
trans-1,2-Dichloroethene	"	ND	----	2.21	"	"	"	"	"	I2
1,2-Dichloropropane	"	ND	----	4.43	"	"	"	"	"	I2
1,3-Dichloropropane	"	ND	----	4.43	"	"	"	"	"	I2
2,2-Dichloropropane	"	ND	----	8.85	"	"	"	"	"	I2
1,1-Dichloropropene	"	ND	----	4.43	"	"	"	"	"	I2
cis-1,3-Dichloropropene	"	ND	----	4.43	"	"	"	"	"	I2
trans-1,3-Dichloropropene	"	ND	----	1.11	"	"	"	"	"	I2
Ethylbenzene	"	ND	----	3.54	"	"	"	"	"	I2
Hexachlorobutadiene	"	ND	----	8.85	"	"	"	"	"	I2
Methyl tert-butyl ether	"	ND	----	0.885	"	"	"	"	"	I2
n-Hexane	"	ND	----	4.43	"	"	"	"	"	I2
2-Hexanone	"	ND	----	26.6	"	"	"	"	"	I2
Isopropylbenzene	"	ND	----	4.43	"	"	"	"	"	I2
p-Isopropyltoluene	"	ND	----	4.43	"	"	"	"	"	I2
4-Methyl-2-pentanone	"	ND	----	26.6	"	"	"	"	"	I2
Methylene chloride	"	ND	----	10.6	"	"	"	"	"	I2
Naphthalene	"	ND	----	8.85	"	"	"	"	"	I2
n-Propylbenzene	"	ND	----	4.43	"	"	"	"	"	I2
Styrene	"	ND	----	2.21	"	"	"	"	"	I2
1,2,3-Trichlorobenzene	"	ND	----	8.85	"	"	"	"	"	I2
1,2,4-Trichlorobenzene	"	ND	----	8.85	"	"	"	"	"	I2
1,1,1,2-Tetrachloroethane	"	ND	----	4.43	"	"	"	"	"	I2
1,1,2,2-Tetrachloroethane	"	ND	----	4.43	"	"	"	"	"	I2
Tetrachloroethene	"	ND	----	1.77	"	"	"	"	"	I2
Toluene	"	ND	----	1.33	"	"	"	"	"	I2
1,1,1-Trichloroethane	"	ND	----	2.21	"	"	"	"	"	I2
1,1,2-Trichloroethane	"	ND	----	1.77	"	"	"	"	"	I2
Trichloroethene	"	ND	----	2.21	"	"	"	"	"	I2
Trichlorofluoromethane	"	ND	----	4.43	"	"	"	"	"	I2
1,2,3-Trichloropropane	"	ND	----	4.43	"	"	"	"	"	I2
1,2,4-Trimethylbenzene	"	ND	----	4.43	"	"	"	"	"	I2
1,3,5-Trimethylbenzene	"	ND	----	4.43	"	"	"	"	"	I2
Vinyl chloride	"	ND	----	2.21	"	"	"	"	"	I2
o-Xylene	"	ND	----	4.43	"	"	"	"	"	I2
m,p-Xylene	"	ND	----	4.43	"	"	"	"	"	I2
Total Xylenes	"	ND	----	8.85	"	"	"	"	"	I2
<i>Surrogate(s): 1,2-DCA-d4</i>			<i>136%</i>	<i>70 - 140 %</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>I2</i>
<i>Toluene-d8</i>			<i>108%</i>	<i>70 - 130 %</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>I2</i>
<i>4-BFB</i>			<i>127%</i>	<i>70 - 130 %</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	<i>I2</i>

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-57 (ALY-SB-10-6.0-8.0)		Soil		Sampled: 12/17/08 15:42						
Acetone	EPA 8260B	186	----	36.8	ug/kg dry	1x	8L31011	12/31/08 13:23	12/31/08 15:13	
Benzene	"	ND	----	1.38	"	"	"	"	"	
Bromobenzene	"	ND	----	4.61	"	"	"	"	"	
Bromochloromethane	"	ND	----	4.61	"	"	"	"	"	
Bromodichloromethane	"	ND	----	4.61	"	"	"	"	"	
Bromoform	"	ND	----	4.61	"	"	"	"	"	
Bromomethane	"	ND	----	9.21	"	"	"	"	"	
2-Butanone	"	49.1	----	27.6	"	"	"	"	"	
n-Butylbenzene	"	ND	----	4.61	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	4.61	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	4.61	"	"	"	"	"	
Carbon disulfide	"	ND	----	2.76	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	4.61	"	"	"	"	"	
Chlorobenzene	"	ND	----	1.84	"	"	"	"	"	
Chloroethane	"	ND	----	4.61	"	"	"	"	"	
Chloroform	"	ND	----	2.30	"	"	"	"	"	
Chloromethane	"	ND	----	9.21	"	"	"	"	"	C5
2-Chlorotoluene	"	ND	----	4.61	"	"	"	"	"	
4-Chlorotoluene	"	ND	----	4.61	"	"	"	"	"	
Dibromochloromethane	"	ND	----	4.61	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	----	9.21	"	"	"	"	"	
1,2-Dibromoethane (EDB)	"	ND	----	4.61	"	"	"	"	"	
Dibromomethane	"	ND	----	4.61	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	4.61	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	----	4.61	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	----	4.61	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	----	4.61	"	"	"	"	"	C5
1,1-Dichloroethane	"	ND	----	1.84	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	1.15	"	"	"	"	"	
1,1-Dichloroethene	"	ND	----	2.76	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	2.76	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	2.30	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	4.61	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	4.61	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	9.21	"	"	"	"	"	
1,1-Dichloropropene	"	ND	----	4.61	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	4.61	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	1.15	"	"	"	"	"	
Ethylbenzene	"	ND	----	3.68	"	"	"	"	"	
Hexachlorobutadiene	"	ND	----	9.21	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	0.921	"	"	"	"	"	
n-Hexane	"	ND	----	4.61	"	"	"	"	"	
2-Hexanone	"	ND	----	27.6	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-57 (ALY-SB-10-6.0-8.0)		Soil		Sampled: 12/17/08 15:42						
Isopropylbenzene	EPA 8260B	ND	----	4.61	ug/kg dry	1x	8L31011	12/31/08 13:23	12/31/08 15:13	
p-Isopropyltoluene	"	ND	----	4.61	"	"	"	"	"	
4-Methyl-2-pentanone	"	ND	----	27.6	"	"	"	"	"	
Methylene chloride	"	ND	----	11.1	"	"	"	"	"	
Naphthalene	"	ND	----	9.21	"	"	"	"	"	
n-Propylbenzene	"	ND	----	4.61	"	"	"	"	"	
Styrene	"	ND	----	2.30	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	9.21	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	----	9.21	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	----	4.61	"	"	"	"	"	
1,1,1,2,2-Tetrachloroethane	"	ND	----	4.61	"	"	"	"	"	
Tetrachloroethene	"	ND	----	1.84	"	"	"	"	"	
Toluene	"	ND	----	1.38	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	----	2.30	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	----	1.84	"	"	"	"	"	
Trichloroethene	"	ND	----	2.30	"	"	"	"	"	
Trichlorofluoromethane	"	ND	----	4.61	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	4.61	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	4.61	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	4.61	"	"	"	"	"	
Vinyl chloride	"	ND	----	2.30	"	"	"	"	"	
o-Xylene	"	ND	----	4.61	"	"	"	"	"	
m,p-Xylene	"	ND	----	4.61	"	"	"	"	"	
Total Xylenes	"	ND	----	9.21	"	"	"	"	"	
<i>Surrogate(s): 1,2-DCA-d4</i>			<i>119%</i>	<i>70 - 140 %</i>						
<i>Toluene-d8</i>			<i>96.9%</i>	<i>70 - 130 %</i>						
<i>4-BFB</i>			<i>108%</i>	<i>70 - 130 %</i>						

BRL0200-58 (ALY-SB-5-1.0-2.0)

Soil

Sampled: 12/17/08 16:00

Benzene	EPA 8260B	ND	----	1.25	ug/kg dry	1x	8L31011	12/31/08 13:23	12/31/08 15:39	
Bromobenzene	"	ND	----	4.18	"	"	"	"	"	12
Bromochloromethane	"	ND	----	4.18	"	"	"	"	"	12
Bromodichloromethane	"	ND	----	4.18	"	"	"	"	"	12
Bromoform	"	ND	----	4.18	"	"	"	"	"	12
Bromomethane	"	ND	----	8.36	"	"	"	"	"	12
n-Butylbenzene	"	ND	----	4.18	"	"	"	"	"	12
sec-Butylbenzene	"	ND	----	4.18	"	"	"	"	"	12
tert-Butylbenzene	"	ND	----	4.18	"	"	"	"	"	12
Carbon tetrachloride	"	ND	----	4.18	"	"	"	"	"	
Chlorobenzene	"	ND	----	1.67	"	"	"	"	"	12
Chloroethane	"	ND	----	4.18	"	"	"	"	"	12
Chloroform	"	ND	----	2.09	"	"	"	"	"	12

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-58 (ALY-SB-5-1.0-2.0)		Soil		Sampled: 12/17/08 16:00						
Chloromethane	EPA 8260B	ND	----	8.36	ug/kg dry	1x	8L31011	12/31/08 13:23	12/31/08 15:39	CS, 12
2-Chlorotoluene	"	ND	----	4.18	"	"	"	"	"	12
4-Chlorotoluene	"	ND	----	4.18	"	"	"	"	"	12
Dibromochloromethane	"	ND	----	4.18	"	"	"	"	"	12
1,2-Dibromo-3-chloropropane	"	ND	----	8.36	"	"	"	"	"	12
1,2-Dibromoethane (EDB)	"	ND	----	4.18	"	"	"	"	"	12
Dibromomethane	"	ND	----	4.18	"	"	"	"	"	12
1,2-Dichlorobenzene	"	ND	----	4.18	"	"	"	"	"	12
1,3-Dichlorobenzene	"	ND	----	4.18	"	"	"	"	"	12
1,4-Dichlorobenzene	"	ND	----	4.18	"	"	"	"	"	12
Dichlorodifluoromethane	"	ND	----	4.18	"	"	"	"	"	CS, 12
1,1-Dichloroethane	"	ND	----	1.67	"	"	"	"	"	12
1,2-Dichloroethane	"	ND	----	1.04	"	"	"	"	"	12
1,1-Dichloroethene	"	ND	----	2.51	"	"	"	"	"	12
cis-1,2-Dichloroethene	"	ND	----	2.51	"	"	"	"	"	12
trans-1,2-Dichloroethene	"	ND	----	2.09	"	"	"	"	"	12
1,2-Dichloropropane	"	ND	----	4.18	"	"	"	"	"	12
1,3-Dichloropropane	"	ND	----	4.18	"	"	"	"	"	12
2,2-Dichloropropane	"	ND	----	8.36	"	"	"	"	"	12
1,1-Dichloropropene	"	ND	----	4.18	"	"	"	"	"	12
cis-1,3-Dichloropropene	"	ND	----	4.18	"	"	"	"	"	12
trans-1,3-Dichloropropene	"	ND	----	1.04	"	"	"	"	"	12
Hexachlorobutadiene	"	ND	----	8.36	"	"	"	"	"	12
Methyl tert-butyl ether	"	ND	----	0.836	"	"	"	"	"	12
n-Hexane	"	ND	----	4.18	"	"	"	"	"	12
2-Hexanone	"	ND	----	25.1	"	"	"	"	"	12
Isopropylbenzene	"	ND	----	4.18	"	"	"	"	"	12
4-Methyl-2-pentanone	"	ND	----	25.1	"	"	"	"	"	12
Methylene chloride	"	ND	----	10.0	"	"	"	"	"	12
Naphthalene	"	ND	----	8.36	"	"	"	"	"	12
n-Propylbenzene	"	ND	----	4.18	"	"	"	"	"	12
Styrene	"	ND	----	2.09	"	"	"	"	"	12
1,2,3-Trichlorobenzene	"	ND	----	8.36	"	"	"	"	"	12
1,2,4-Trichlorobenzene	"	ND	----	8.36	"	"	"	"	"	12
1,1,1,2-Tetrachloroethane	"	ND	----	4.18	"	"	"	"	"	12
1,1,2,2-Tetrachloroethane	"	ND	----	4.18	"	"	"	"	"	12
Tetrachloroethene	"	ND	----	1.67	"	"	"	"	"	12
1,1,1-Trichloroethane	"	ND	----	2.09	"	"	"	"	"	12
1,1,2-Trichloroethane	"	ND	----	1.67	"	"	"	"	"	12
Trichloroethene	"	ND	----	2.09	"	"	"	"	"	12
Trichlorofluoromethane	"	ND	----	4.18	"	"	"	"	"	12
1,2,3-Trichloropropane	"	ND	----	4.18	"	"	"	"	"	12
1,2,4-Trimethylbenzene	"	ND	----	4.18	"	"	"	"	"	12

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-58 (ALY-SB-5-1.0-2.0)		Soil		Sampled: 12/17/08 16:00						
1,3,5-Trimethylbenzene	EPA 8260B	ND	----	4.18	ug/kg dry	1x	8L31011	12/31/08 13:23	12/31/08 15:39	I2
Vinyl chloride	"	ND	----	2.09	"	"	"	"	"	I2
o-Xylene	"	ND	----	4.18	"	"	"	"	"	I2
m,p-Xylene	"	ND	----	4.18	"	"	"	"	"	I2
Total Xylenes	"	ND	----	8.36	"	"	"	"	"	I2
<i>Surrogate(s): 1,2-DCA-d4</i>			<i>139%</i>		<i>70 - 140 %</i>	<i>"</i>			<i>"</i>	<i>I2</i>
<i>Toluene-d8</i>			<i>107%</i>		<i>70 - 130 %</i>	<i>"</i>			<i>"</i>	
<i>4-BFB</i>			<i>121%</i>		<i>70 - 130 %</i>	<i>"</i>			<i>"</i>	

BRL0200-59 (ALY-SB-5-3.0-4.0)		Soil		Sampled: 12/17/08 16:10						
Acetone	EPA 8260B	724	----	45.3	ug/kg dry	1x	8L31011	12/31/08 13:23	12/31/08 16:04	
Benzene	"	ND	----	1.70	"	"	"	"	"	
Bromobenzene	"	ND	----	5.67	"	"	"	"	"	I2
Bromochloromethane	"	ND	----	5.67	"	"	"	"	"	
Bromodichloromethane	"	ND	----	5.67	"	"	"	"	"	
Bromoform	"	ND	----	5.67	"	"	"	"	"	I2
Bromomethane	"	ND	----	11.3	"	"	"	"	"	
2-Butanone	"	71.8	----	34.0	"	"	"	"	"	
n-Butylbenzene	"	ND	----	5.67	"	"	"	"	"	I2
sec-Butylbenzene	"	ND	----	5.67	"	"	"	"	"	I2
tert-Butylbenzene	"	ND	----	5.67	"	"	"	"	"	I2
Carbon disulfide	"	ND	----	3.40	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	5.67	"	"	"	"	"	
Chlorobenzene	"	ND	----	2.27	"	"	"	"	"	I2
Chloroethane	"	ND	----	5.67	"	"	"	"	"	
Chloroform	"	ND	----	2.83	"	"	"	"	"	
Chloromethane	"	ND	----	11.3	"	"	"	"	"	C5
2-Chlorotoluene	"	ND	----	5.67	"	"	"	"	"	I2
4-Chlorotoluene	"	ND	----	5.67	"	"	"	"	"	I2
Dibromochloromethane	"	ND	----	5.67	"	"	"	"	"	I2
1,2-Dibromo-3-chloropropane	"	ND	----	11.3	"	"	"	"	"	I2
1,2-Dibromoethane (EDB)	"	ND	----	5.67	"	"	"	"	"	I2
Dibromomethane	"	ND	----	5.67	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	5.67	"	"	"	"	"	I2
1,3-Dichlorobenzene	"	ND	----	5.67	"	"	"	"	"	I2
1,4-Dichlorobenzene	"	ND	----	5.67	"	"	"	"	"	I2
Dichlorodifluoromethane	"	ND	----	5.67	"	"	"	"	"	C5
1,1-Dichloroethane	"	ND	----	2.27	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	1.42	"	"	"	"	"	
1,1-Dichloroethene	"	11.7	----	3.40	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	3.40	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	2.83	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-59 (ALY-SB-5-3.0-4.0)		Soil		Sampled: 12/17/08 16:10						
1,2-Dichloropropane	EPA 8260B	ND	----	5.67	ug/kg dry	1x	8L31011	12/31/08 13:23	12/31/08 16:04	
1,3-Dichloropropane	"	ND	----	5.67	"	"	"	"	"	I2
2,2-Dichloropropane	"	ND	----	11.3	"	"	"	"	"	
1,1-Dichloropropene	"	ND	----	5.67	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	5.67	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	1.42	"	"	"	"	"	I2
Ethylbenzene	"	ND	----	4.53	"	"	"	"	"	I2
Hexachlorobutadiene	"	ND	----	11.3	"	"	"	"	"	I2
Methyl tert-butyl ether	"	ND	----	1.13	"	"	"	"	"	
n-Hexane	"	ND	----	5.67	"	"	"	"	"	
2-Hexanone	"	ND	----	34.0	"	"	"	"	"	I2
4-Methyl-2-pentanone	"	ND	----	34.0	"	"	"	"	"	
Methylene chloride	"	ND	----	13.6	"	"	"	"	"	
Naphthalene	"	ND	----	11.3	"	"	"	"	"	I2
n-Propylbenzene	"	ND	----	5.67	"	"	"	"	"	I2
Styrene	"	ND	----	2.83	"	"	"	"	"	I2
1,2,3-Trichlorobenzene	"	ND	----	11.3	"	"	"	"	"	I2
1,2,4-Trichlorobenzene	"	ND	----	11.3	"	"	"	"	"	I2
1,1,1,2-Tetrachloroethane	"	ND	----	5.67	"	"	"	"	"	I2
1,1,2,2-Tetrachloroethane	"	ND	----	5.67	"	"	"	"	"	I2
Tetrachloroethene	"	ND	----	2.27	"	"	"	"	"	I2
Toluene	"	ND	----	1.70	"	"	"	"	"	I2
1,1,1-Trichloroethane	"	ND	----	2.83	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	----	2.27	"	"	"	"	"	I2
Trichloroethene	"	ND	----	2.83	"	"	"	"	"	
Trichlorofluoromethane	"	8.45	----	5.67	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	5.67	"	"	"	"	"	I2
1,2,4-Trimethylbenzene	"	ND	----	5.67	"	"	"	"	"	I2
1,3,5-Trimethylbenzene	"	ND	----	5.67	"	"	"	"	"	I2
Vinyl chloride	"	ND	----	2.83	"	"	"	"	"	
o-Xylene	"	ND	----	5.67	"	"	"	"	"	I2
m,p-Xylene	"	ND	----	5.67	"	"	"	"	"	I2
Total Xylenes	"	ND	----	11.3	"	"	"	"	"	I2
<i>Surrogate(s): 1,2-DCA-d4</i>				127%		70 - 140 %	"		"	
<i>Toluene-d8</i>				113%		70 - 130 %	"		"	I2
<i>4-BFB</i>				127%		70 - 130 %	"		"	I2

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds (Special List) by EPA Method 8260B
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-09 (AM-SB-7-6.0-7.0)		Soil		Sampled: 12/15/08 15:55						
Acetone	EPA 8260B	ND	----	12.1	mg/kg dry	1x	8L29027	12/29/08 16:23	12/29/08 18:53	
Surrogate(s):	1,2-DCA-d4	99.7%		75 - 125 %	"					"
	Toluene-d8	93.4%		75 - 125 %	"					"
	4-BFB	99.8%		75 - 125 %	"					"
BRL0200-12 (AM-SB-11-1.0-2.0)		Soil		Sampled: 12/16/08 08:10						
Acetone	EPA 8260B	ND	----	8.12	mg/kg dry	1x	8L29027	12/29/08 16:23	12/29/08 19:20	
Toluene	"	ND	----	0.162	"	"	"	"	"	
Surrogate(s):	1,2-DCA-d4	97.8%		75 - 125 %	"					"
	Toluene-d8	92.4%		75 - 125 %	"					"
	4-BFB	101%		75 - 125 %	"					"
BRL0200-18 (AM-SB-6-6.0-8.0)		Soil		Sampled: 12/16/08 10:35						
Acetone	EPA 8260B	ND	----	10.4	mg/kg dry	1x	8L29027	12/29/08 16:23	12/29/08 19:47	
2-Butanone	"	ND	----	10.4	"	"	"	"	"	
Surrogate(s):	1,2-DCA-d4	98.7%		75 - 125 %	"					"
	Toluene-d8	91.4%		75 - 125 %	"					"
	4-BFB	99.6%		75 - 125 %	"					"
BRL0200-20 (AM-SB-5-1.0-2.0)		Soil		Sampled: 12/16/08 11:35						
Acetone	EPA 8260B	ND	----	6.65	mg/kg dry	1x	8L30015	12/30/08 14:41	12/30/08 22:04	
Benzene	"	ND	----	0.0266	"	"	"	"	"	
Bromobenzene	"	ND	----	0.133	"	"	"	"	"	
Bromochloromethane	"	ND	----	0.133	"	"	"	"	"	
Bromodichloromethane	"	ND	----	0.133	"	"	"	"	"	
Bromoform	"	ND	----	0.133	"	"	"	"	"	
Bromomethane	"	ND	----	0.133	"	"	"	"	"	
2-Butanone	"	ND	----	6.65	"	"	"	"	"	
n-Butylbenzene	"	ND	----	0.665	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	0.665	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	0.133	"	"	"	"	"	
Carbon disulfide	"	ND	----	0.133	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	0.133	"	"	"	"	"	
Chlorobenzene	"	ND	----	0.133	"	"	"	"	"	
Chloroethane	"	ND	----	0.133	"	"	"	"	"	
Chloroform	"	ND	----	0.133	"	"	"	"	"	
Chloromethane	"	ND	----	0.665	"	"	"	"	"	
2-Chlorotoluene	"	ND	----	0.133	"	"	"	"	"	
4-Chlorotoluene	"	ND	----	0.133	"	"	"	"	"	
Dibromochloromethane	"	ND	----	0.133	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Volatile Organic Compounds (Special List) by EPA Method 8260B

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-20 (AM-SB-5-1.0-2.0)										
		Soil					Sampled: 12/16/08 11:35			
1,2-Dibromo-3-chloropropane	EPA 8260B	ND	----	0.665	mg/kg dry	1x	8L30015	12/30/08 14:41	12/30/08 22:04	
1,2-Dibromoethane	"	ND	----	0.133	"	"	"	"	"	
Dibromomethane	"	ND	----	0.133	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	0.133	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	----	0.133	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	----	0.133	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	----	0.133	"	"	"	"	"	
1,1-Dichloroethane	"	ND	----	0.133	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	0.133	"	"	"	"	"	
1,1-Dichloroethene	"	ND	----	0.133	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	0.133	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	0.133	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	0.133	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	0.133	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	0.133	"	"	"	"	"	
1,1-Dichloropropene	"	ND	----	0.133	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	0.133	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	0.133	"	"	"	"	"	
Ethylbenzene	"	ND	----	0.133	"	"	"	"	"	
Hexachlorobutadiene	"	ND	----	2.66	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	0.665	"	"	"	"	"	
n-Hexane	"	ND	----	0.665	"	"	"	"	"	
2-Hexanone	"	ND	----	2.66	"	"	"	"	"	
Isopropylbenzene	"	ND	----	0.133	"	"	"	"	"	
p-Isopropyltoluene	"	ND	----	0.133	"	"	"	"	"	
4-Methyl-2-pentanone	"	ND	----	1.33	"	"	"	"	"	
Methylene chloride	"	ND	----	2.66	"	"	"	"	"	
Naphthalene	"	ND	----	2.66	"	"	"	"	"	
n-Propylbenzene	"	ND	----	0.133	"	"	"	"	"	
Styrene	"	ND	----	0.133	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	2.66	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	----	1.33	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	----	0.133	"	"	"	"	"	
1,1,1,2,2-Tetrachloroethane	"	ND	----	0.133	"	"	"	"	"	
Tetrachloroethene	"	ND	----	0.133	"	"	"	"	"	
Toluene	"	ND	----	0.133	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	----	0.133	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	----	0.133	"	"	"	"	"	
Trichloroethene	"	ND	----	0.133	"	"	"	"	"	
Trichlorofluoromethane	"	ND	----	0.133	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	0.133	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	0.133	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	0.133	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Volatile Organic Compounds (Special List) by EPA Method 8260B

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-20 (AM-SB-5-1.0-2.0)		Soil		Sampled: 12/16/08 11:35						
Vinyl chloride	EPA 8260B	ND	----	0.133	mg/kg dry	1x	8L30015	12/30/08 14:41	12/30/08 22:04	
o-Xylene	"	ND	----	0.133	"	"	"	"	"	
m,p-Xylene	"	ND	----	0.266	"	"	"	"	"	
Total Xylenes	"	ND	----	0.399	"	"	"	"	"	
<i>Surrogate(s): 1,2-DCA-d4</i>			<i>91.1%</i>		<i>75 - 125 %</i>	"				"
<i>Toluene-d8</i>			<i>110%</i>		<i>75 - 125 %</i>	"				"
<i>4-BFB</i>			<i>104%</i>		<i>75 - 125 %</i>	"				"

BRL0200-26 (AM-SB-9-4.0-5.0)		Soil		Sampled: 12/16/08 13:40						
Acetone	EPA 8260B	ND	----	16.1	mg/kg dry	1x	8L30015	12/30/08 14:41	12/30/08 22:31	
Benzene	"	0.353	----	0.0642	"	"	"	"	"	
Bromobenzene	"	ND	----	0.321	"	"	"	"	"	
Bromochloromethane	"	ND	----	0.321	"	"	"	"	"	
Bromodichloromethane	"	ND	----	0.321	"	"	"	"	"	
Bromoform	"	ND	----	0.321	"	"	"	"	"	
Bromomethane	"	ND	----	0.321	"	"	"	"	"	
2-Butanone	"	ND	----	16.1	"	"	"	"	"	
n-Butylbenzene	"	ND	----	1.61	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	1.61	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	0.321	"	"	"	"	"	
Carbon disulfide	"	ND	----	0.321	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	0.321	"	"	"	"	"	
Chlorobenzene	"	ND	----	0.321	"	"	"	"	"	
Chloroethane	"	ND	----	0.321	"	"	"	"	"	
Chloroform	"	ND	----	0.321	"	"	"	"	"	
Chloromethane	"	ND	----	1.61	"	"	"	"	"	
2-Chlorotoluene	"	ND	----	0.321	"	"	"	"	"	
4-Chlorotoluene	"	ND	----	0.321	"	"	"	"	"	
Dibromochloromethane	"	ND	----	0.321	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	----	1.61	"	"	"	"	"	
1,2-Dibromoethane	"	ND	----	0.321	"	"	"	"	"	
Dibromomethane	"	ND	----	0.321	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	0.321	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	----	0.321	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	----	0.321	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	----	0.321	"	"	"	"	"	
1,1-Dichloroethane	"	ND	----	0.321	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	0.321	"	"	"	"	"	
1,1-Dichloroethene	"	ND	----	0.321	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	0.321	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	0.321	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	0.321	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Volatile Organic Compounds (Special List) by EPA Method 8260B

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-26 (AM-SB-9-4.0-5.0)										
		Soil					Sampled: 12/16/08 13:40			
1,3-Dichloropropane	EPA 8260B	ND	----	0.321	mg/kg dry	1x	8L30015	12/30/08 14:41	12/30/08 22:31	
2,2-Dichloropropane	"	ND	----	0.321	"	"	"	"	"	
1,1-Dichloropropene	"	ND	----	0.321	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	0.321	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	0.321	"	"	"	"	"	
Ethylbenzene	"	ND	----	0.321	"	"	"	"	"	
Hexachlorobutadiene	"	ND	----	6.42	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	1.61	"	"	"	"	"	
n-Hexane	"	ND	----	1.61	"	"	"	"	"	
2-Hexanone	"	ND	----	6.42	"	"	"	"	"	
Isopropylbenzene	"	ND	----	0.321	"	"	"	"	"	
p-Isopropyltoluene	"	0.401	----	0.321	"	"	"	"	"	
4-Methyl-2-pentanone	"	ND	----	3.21	"	"	"	"	"	
Methylene chloride	"	ND	----	6.42	"	"	"	"	"	
Naphthalene	"	ND	----	6.42	"	"	"	"	"	
n-Propylbenzene	"	ND	----	0.321	"	"	"	"	"	
Styrene	"	ND	----	0.321	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	6.42	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	----	3.21	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	----	0.321	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	----	0.321	"	"	"	"	"	
Tetrachloroethene	"	ND	----	0.321	"	"	"	"	"	
Toluene	"	1.21	----	0.321	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	----	0.321	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	----	0.321	"	"	"	"	"	
Trichloroethene	"	ND	----	0.321	"	"	"	"	"	
Trichlorofluoromethane	"	ND	----	0.321	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	0.321	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	0.321	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	0.321	"	"	"	"	"	
Vinyl chloride	"	ND	----	0.321	"	"	"	"	"	
o-Xylene	"	ND	----	0.321	"	"	"	"	"	
m,p-Xylene	"	ND	----	0.642	"	"	"	"	"	
Total Xylenes	"	ND	----	0.963	"	"	"	"	"	
<i>Surrogate(s): 1,2-DCA-d4</i>				95.4%		75 - 125 %	"		"	
<i>Toluene-d8</i>				107%		75 - 125 %	"		"	
<i>4-BFB</i>				104%		75 - 125 %	"		"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Volatile Organic Compounds (Special List) by EPA Method 8260B
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-29 (AM-SB-12-9.0-10.0)										
		Soil					Sampled: 12/16/08 14:32			
Acetone	EPA 8260B	ND	----	9.59	mg/kg dry	1x	8L30015	12/30/08 14:41	12/30/08 22:58	
Benzene	"	0.129	----	0.0384	"	"	"	"	"	
Bromobenzene	"	ND	----	0.192	"	"	"	"	"	
Bromochloromethane	"	ND	----	0.192	"	"	"	"	"	
Bromodichloromethane	"	ND	----	0.192	"	"	"	"	"	
Bromoform	"	ND	----	0.192	"	"	"	"	"	
Bromomethane	"	ND	----	0.192	"	"	"	"	"	
2-Butanone	"	ND	----	9.59	"	"	"	"	"	
n-Butylbenzene	"	ND	----	0.959	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	0.959	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	0.192	"	"	"	"	"	
Carbon disulfide	"	ND	----	0.192	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	0.192	"	"	"	"	"	
Chlorobenzene	"	ND	----	0.192	"	"	"	"	"	
Chloroethane	"	ND	----	0.192	"	"	"	"	"	
Chloroform	"	ND	----	0.192	"	"	"	"	"	
Chloromethane	"	ND	----	0.959	"	"	"	"	"	
2-Chlorotoluene	"	ND	----	0.192	"	"	"	"	"	
4-Chlorotoluene	"	ND	----	0.192	"	"	"	"	"	
Dibromochloromethane	"	ND	----	0.192	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	----	0.959	"	"	"	"	"	
1,2-Dibromoethane	"	ND	----	0.192	"	"	"	"	"	
Dibromomethane	"	ND	----	0.192	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	0.192	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	----	0.192	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	----	0.192	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	----	0.192	"	"	"	"	"	
1,1-Dichloroethane	"	ND	----	0.192	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	0.192	"	"	"	"	"	
1,1-Dichloroethene	"	ND	----	0.192	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	0.192	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	0.192	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	0.192	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	0.192	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	0.192	"	"	"	"	"	
1,1-Dichloropropene	"	ND	----	0.192	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	0.192	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	0.192	"	"	"	"	"	
Ethylbenzene	"	ND	----	0.192	"	"	"	"	"	
Hexachlorobutadiene	"	ND	----	3.84	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	0.959	"	"	"	"	"	
n-Hexane	"	ND	----	0.959	"	"	"	"	"	
2-Hexanone	"	ND	----	3.84	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Volatile Organic Compounds (Special List) by EPA Method 8260B
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-29 (AM-SB-12-9.0-10.0)										
		Soil					Sampled: 12/16/08 14:32			
Isopropylbenzene	EPA 8260B	ND	----	0.192	mg/kg dry	1x	8L30015	12/30/08 14:41	12/30/08 22:58	
p-Isopropyltoluene	"	ND	----	0.192	"	"	"	"	"	
4-Methyl-2-pentanone	"	ND	----	1.92	"	"	"	"	"	
Methylene chloride	"	ND	----	3.84	"	"	"	"	"	
Naphthalene	"	ND	----	3.84	"	"	"	"	"	
n-Propylbenzene	"	ND	----	0.192	"	"	"	"	"	
Styrene	"	ND	----	0.192	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	3.84	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	----	1.92	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	----	0.192	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	----	0.192	"	"	"	"	"	
Tetrachloroethene	"	ND	----	0.192	"	"	"	"	"	
Toluene	"	0.770	----	0.192	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	----	0.192	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	----	0.192	"	"	"	"	"	
Trichloroethene	"	ND	----	0.192	"	"	"	"	"	
Trichlorofluoromethane	"	ND	----	0.192	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	0.192	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	0.192	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	0.192	"	"	"	"	"	
Vinyl chloride	"	ND	----	0.192	"	"	"	"	"	
o-Xylene	"	0.207	----	0.192	"	"	"	"	"	
m,p-Xylene	"	ND	----	0.384	"	"	"	"	"	
Total Xylenes	"	ND	----	0.576	"	"	"	"	"	
<i>Surrogate(s): 1,2-DCA-d4</i>				96.8%		75 - 125 %	"		"	
<i>Toluene-d8</i>				106%		75 - 125 %	"		"	
<i>4-BFB</i>				103%		75 - 125 %	"		"	

BRL0200-37 (ALY-SB-9-1.0-2.0)

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
p-Isopropyltoluene	EPA 8260B	1.17	----	0.269	mg/kg dry	1x	8L31013	12/31/08 00:09	12/31/08 15:47	
<i>Surrogate(s): 1,2-DCA-d4</i>				94.1%		75 - 125 %	"		"	
<i>Toluene-d8</i>				108%		75 - 125 %	"		"	
<i>4-BFB</i>				105%		75 - 125 %	"		"	

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Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Volatile Organic Compounds (Special List) by EPA Method 8260B
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-39 (ALY-SB-12-1.0-2.0)		Soil		Sampled: 12/17/08 09:55						
p-Isopropyltoluene	EPA 8260B	7.16	----	0.216	mg/kg dry	1x	8L31013	12/31/08 00:09	12/31/08 16:41	
Surrogate(s):	1,2-DCA-d4	98.0%		75 - 125 %	"					"
	Toluene-d8	105%		75 - 125 %	"					"
	4-BFB	103%		75 - 125 %	"					"
BRL0200-40 (ALY-SB-12-6.5-7.5)		Soil		Sampled: 12/17/08 10:00						
Acetone	EPA 8260B	ND	----	20.9	mg/kg dry	1x	8L31013	12/31/08 00:09	12/31/08 17:08	
Benzene	"	ND	----	0.0835	"	"	"	"	"	
Bromobenzene	"	ND	----	0.417	"	"	"	"	"	
Bromochloromethane	"	ND	----	0.417	"	"	"	"	"	
Bromodichloromethane	"	ND	----	0.417	"	"	"	"	"	
Bromoform	"	ND	----	0.417	"	"	"	"	"	
Bromomethane	"	ND	----	0.417	"	"	"	"	"	
2-Butanone	"	ND	----	20.9	"	"	"	"	"	
n-Butylbenzene	"	ND	----	2.09	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	2.09	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	0.417	"	"	"	"	"	
Carbon disulfide	"	ND	----	0.417	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	0.417	"	"	"	"	"	
Chlorobenzene	"	ND	----	0.417	"	"	"	"	"	
Chloroethane	"	ND	----	0.417	"	"	"	"	"	
Chloroform	"	ND	----	0.417	"	"	"	"	"	
Chloromethane	"	ND	----	2.09	"	"	"	"	"	
2-Chlorotoluene	"	ND	----	0.417	"	"	"	"	"	
4-Chlorotoluene	"	ND	----	0.417	"	"	"	"	"	
Dibromochloromethane	"	ND	----	0.417	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	----	2.09	"	"	"	"	"	
1,2-Dibromoethane	"	ND	----	0.417	"	"	"	"	"	
Dibromomethane	"	ND	----	0.417	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	0.417	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	----	0.417	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	----	0.417	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	----	0.417	"	"	"	"	"	
1,1-Dichloroethane	"	ND	----	0.417	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	0.417	"	"	"	"	"	
1,1-Dichloroethene	"	ND	----	0.417	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	0.417	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	0.417	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	0.417	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	0.417	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	0.417	"	"	"	"	"	
1,1-Dichloropropene	"	ND	----	0.417	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Volatile Organic Compounds (Special List) by EPA Method 8260B
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-40 (ALY-SB-12-6.5-7.5)		Soil		Sampled: 12/17/08 10:00						
cis-1,3-Dichloropropene	EPA 8260B	ND	----	0.417	mg/kg dry	1x	8L31013	12/31/08 00:09	12/31/08 17:08	
trans-1,3-Dichloropropene	"	ND	----	0.417	"	"	"	"	"	
Ethylbenzene	"	ND	----	0.417	"	"	"	"	"	
Hexachlorobutadiene	"	ND	----	8.35	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	2.09	"	"	"	"	"	
n-Hexane	"	ND	----	2.09	"	"	"	"	"	
2-Hexanone	"	ND	----	8.35	"	"	"	"	"	
Isopropylbenzene	"	ND	----	0.417	"	"	"	"	"	
p-Isopropyltoluene	"	ND	----	0.417	"	"	"	"	"	
4-Methyl-2-pentanone	"	ND	----	4.17	"	"	"	"	"	
Methylene chloride	"	ND	----	8.35	"	"	"	"	"	
Naphthalene	"	ND	----	8.35	"	"	"	"	"	
n-Propylbenzene	"	ND	----	0.417	"	"	"	"	"	
Styrene	"	ND	----	0.417	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	8.35	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	----	4.17	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	----	0.417	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	----	0.417	"	"	"	"	"	
Tetrachloroethene	"	ND	----	0.417	"	"	"	"	"	
Toluene	"	ND	----	0.417	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	----	0.417	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	----	0.417	"	"	"	"	"	
Trichloroethene	"	ND	----	0.417	"	"	"	"	"	
Trichlorofluoromethane	"	ND	----	0.417	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	0.417	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	0.417	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	0.417	"	"	"	"	"	
Vinyl chloride	"	ND	----	0.417	"	"	"	"	"	
o-Xylene	"	ND	----	0.417	"	"	"	"	"	
m,p-Xylene	"	ND	----	0.835	"	"	"	"	"	
Total Xylenes	"	ND	----	1.25	"	"	"	"	"	
<i>Surrogate(s): 1,2-DCA-d4</i>			<i>94.8%</i>		<i>75 - 125 %</i>	"				"
<i>Toluene-d8</i>			<i>105%</i>		<i>75 - 125 %</i>	"				"
<i>4-BFB</i>			<i>105%</i>		<i>75 - 125 %</i>	"				"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Volatile Organic Compounds (Special List) by EPA Method 8260B
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-43 (ALY-SB-8-3.0-4.0)		Soil		Sampled: 12/17/08 11:10						
p-Isopropyltoluene	EPA 8260B	0.697	----	0.498	mg/kg dry	1x	8L31013	12/31/08 00:09	12/31/08 18:02	
Surrogate(s):	1,2-DCA-d4	96.6%		75 - 125 %	"					"
	Toluene-d8	104%		75 - 125 %	"					"
	4-BFB	104%		75 - 125 %	"					"
BRL0200-47 (ALY-SB-6-1.0-2.0)		Soil		Sampled: 12/17/08 12:45						
Acetone	EPA 8260B	ND	----	7.11	mg/kg dry	1x	8L31013	12/31/08 00:09	12/31/08 18:56	
Benzene	"	ND	----	0.0285	"	"	"	"	"	"
Bromobenzene	"	ND	----	0.142	"	"	"	"	"	"
Bromochloromethane	"	ND	----	0.142	"	"	"	"	"	"
Bromodichloromethane	"	ND	----	0.142	"	"	"	"	"	"
Bromoform	"	ND	----	0.142	"	"	"	"	"	"
Bromomethane	"	ND	----	0.142	"	"	"	"	"	"
2-Butanone	"	ND	----	7.11	"	"	"	"	"	"
n-Butylbenzene	"	ND	----	0.711	"	"	"	"	"	"
sec-Butylbenzene	"	ND	----	0.711	"	"	"	"	"	"
tert-Butylbenzene	"	ND	----	0.142	"	"	"	"	"	"
Carbon disulfide	"	ND	----	0.142	"	"	"	"	"	"
Carbon tetrachloride	"	ND	----	0.142	"	"	"	"	"	"
Chlorobenzene	"	ND	----	0.142	"	"	"	"	"	"
Chloroethane	"	ND	----	0.142	"	"	"	"	"	"
Chloroform	"	ND	----	0.142	"	"	"	"	"	"
Chloromethane	"	ND	----	0.711	"	"	"	"	"	"
2-Chlorotoluene	"	ND	----	0.142	"	"	"	"	"	"
4-Chlorotoluene	"	ND	----	0.142	"	"	"	"	"	"
Dibromochloromethane	"	ND	----	0.142	"	"	"	"	"	"
1,2-Dibromo-3-chloropropane	"	ND	----	0.711	"	"	"	"	"	"
1,2-Dibromoethane	"	ND	----	0.142	"	"	"	"	"	"
Dibromomethane	"	ND	----	0.142	"	"	"	"	"	"
1,2-Dichlorobenzene	"	ND	----	0.142	"	"	"	"	"	"
1,3-Dichlorobenzene	"	ND	----	0.142	"	"	"	"	"	"
1,4-Dichlorobenzene	"	ND	----	0.142	"	"	"	"	"	"
Dichlorodifluoromethane	"	ND	----	0.142	"	"	"	"	"	"
1,1-Dichloroethane	"	ND	----	0.142	"	"	"	"	"	"
1,2-Dichloroethane	"	ND	----	0.142	"	"	"	"	"	"
1,1-Dichloroethene	"	ND	----	0.142	"	"	"	"	"	"
cis-1,2-Dichloroethene	"	ND	----	0.142	"	"	"	"	"	"
trans-1,2-Dichloroethene	"	ND	----	0.142	"	"	"	"	"	"
1,2-Dichloropropane	"	ND	----	0.142	"	"	"	"	"	"
1,3-Dichloropropane	"	ND	----	0.142	"	"	"	"	"	"
2,2-Dichloropropane	"	ND	----	0.142	"	"	"	"	"	"
1,1-Dichloropropene	"	ND	----	0.142	"	"	"	"	"	"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue	Project Name: WSDOT SR 520 - Pontoon Sites	Report Created:
1100 112th Avenue NE, Suite 400	Project Number: 180171.AR.X7.02	01/26/09 09:59
Bellevue, WA/USA 98004-4504	Project Manager: Brian Tracy	

Volatile Organic Compounds (Special List) by EPA Method 8260B
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-47 (ALY-SB-6-1.0-2.0)		Soil			Sampled: 12/17/08 12:45					
cis-1,3-Dichloropropene	EPA 8260B	ND	----	0.142	mg/kg dry	1x	8L31013	12/31/08 00:09	12/31/08 18:56	
trans-1,3-Dichloropropene	"	ND	----	0.142	"	"	"	"	"	
Ethylbenzene	"	ND	----	0.142	"	"	"	"	"	
Hexachlorobutadiene	"	ND	----	2.85	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	0.711	"	"	"	"	"	
n-Hexane	"	ND	----	0.711	"	"	"	"	"	
2-Hexanone	"	ND	----	2.85	"	"	"	"	"	
Isopropylbenzene	"	ND	----	0.142	"	"	"	"	"	
p-Isopropyltoluene	"	ND	----	0.142	"	"	"	"	"	
4-Methyl-2-pentanone	"	ND	----	1.42	"	"	"	"	"	
Methylene chloride	"	ND	----	2.85	"	"	"	"	"	
Naphthalene	"	ND	----	2.85	"	"	"	"	"	
n-Propylbenzene	"	ND	----	0.142	"	"	"	"	"	
Styrene	"	ND	----	0.142	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	2.85	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	----	1.42	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	----	0.142	"	"	"	"	"	
1,1,1,2,2-Tetrachloroethane	"	ND	----	0.142	"	"	"	"	"	
Tetrachloroethene	"	ND	----	0.142	"	"	"	"	"	
Toluene	"	ND	----	0.142	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	----	0.142	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	----	0.142	"	"	"	"	"	
Trichloroethene	"	ND	----	0.142	"	"	"	"	"	
Trichlorofluoromethane	"	ND	----	0.142	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	0.142	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	0.142	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	0.142	"	"	"	"	"	
Vinyl chloride	"	ND	----	0.142	"	"	"	"	"	
o-Xylene	"	ND	----	0.142	"	"	"	"	"	
m,p-Xylene	"	ND	----	0.285	"	"	"	"	"	
Total Xylenes	"	ND	----	0.427	"	"	"	"	"	
<i>Surrogate(s):</i>	<i>1,2-DCA-d4</i>		<i>97.0%</i>		<i>75 - 125 %</i>	"				"
	<i>Toluene-d8</i>		<i>103%</i>		<i>75 - 125 %</i>	"				"
	<i>4-BFB</i>		<i>102%</i>		<i>75 - 125 %</i>	"				"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Volatile Organic Compounds (Special List) by EPA Method 8260B

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-49 (ALY-SB-2-1.0-3.0)										
		Soil					Sampled: 12/17/08 13:24			
Acetone	EPA 8260B	ND	----	12.5	mg/kg dry	1x	8L31013	12/31/08 00:09	12/31/08 19:23	
Benzene	"	ND	----	0.0499	"	"	"	"	"	
Bromobenzene	"	ND	----	0.249	"	"	"	"	"	
Bromochloromethane	"	ND	----	0.249	"	"	"	"	"	
Bromodichloromethane	"	ND	----	0.249	"	"	"	"	"	
Bromoform	"	ND	----	0.249	"	"	"	"	"	
Bromomethane	"	ND	----	0.249	"	"	"	"	"	
2-Butanone	"	ND	----	12.5	"	"	"	"	"	
n-Butylbenzene	"	ND	----	1.25	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	1.25	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	0.249	"	"	"	"	"	
Carbon disulfide	"	ND	----	0.249	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	0.249	"	"	"	"	"	
Chlorobenzene	"	ND	----	0.249	"	"	"	"	"	
Chloroethane	"	ND	----	0.249	"	"	"	"	"	
Chloroform	"	ND	----	0.249	"	"	"	"	"	
Chloromethane	"	ND	----	1.25	"	"	"	"	"	
2-Chlorotoluene	"	ND	----	0.249	"	"	"	"	"	
4-Chlorotoluene	"	ND	----	0.249	"	"	"	"	"	
Dibromochloromethane	"	ND	----	0.249	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	----	1.25	"	"	"	"	"	
1,2-Dibromoethane	"	ND	----	0.249	"	"	"	"	"	
Dibromomethane	"	ND	----	0.249	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	0.249	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	----	0.249	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	----	0.249	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	----	0.249	"	"	"	"	"	
1,1-Dichloroethane	"	ND	----	0.249	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	0.249	"	"	"	"	"	
1,1-Dichloroethene	"	ND	----	0.249	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	0.249	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	0.249	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	0.249	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	0.249	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	0.249	"	"	"	"	"	
1,1-Dichloropropene	"	ND	----	0.249	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	0.249	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	0.249	"	"	"	"	"	
Ethylbenzene	"	ND	----	0.249	"	"	"	"	"	
Hexachlorobutadiene	"	ND	----	4.99	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	1.25	"	"	"	"	"	
n-Hexane	"	ND	----	1.25	"	"	"	"	"	
2-Hexanone	"	ND	----	4.99	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.



Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Volatile Organic Compounds (Special List) by EPA Method 8260B

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-49 (ALY-SB-2-1.0-3.0)										
			Soil				Sampled: 12/17/08 13:24			
Isopropylbenzene	EPA 8260B	ND	----	0.249	mg/kg dry	1x	8L31013	12/31/08 00:09	12/31/08 19:23	
p-Isopropyltoluene	"	ND	----	0.249	"	"	"	"	"	
4-Methyl-2-pentanone	"	ND	----	2.49	"	"	"	"	"	
Methylene chloride	"	ND	----	4.99	"	"	"	"	"	
Naphthalene	"	ND	----	4.99	"	"	"	"	"	
n-Propylbenzene	"	ND	----	0.249	"	"	"	"	"	
Styrene	"	ND	----	0.249	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	4.99	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	----	2.49	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	----	0.249	"	"	"	"	"	
1,1,1,2,2-Tetrachloroethane	"	ND	----	0.249	"	"	"	"	"	
Tetrachloroethene	"	ND	----	0.249	"	"	"	"	"	
Toluene	"	ND	----	0.249	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	----	0.249	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	----	0.249	"	"	"	"	"	
Trichloroethene	"	ND	----	0.249	"	"	"	"	"	
Trichlorofluoromethane	"	ND	----	0.249	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	0.249	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	0.249	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	0.249	"	"	"	"	"	
Vinyl chloride	"	ND	----	0.249	"	"	"	"	"	
o-Xylene	"	ND	----	0.249	"	"	"	"	"	
m,p-Xylene	"	ND	----	0.499	"	"	"	"	"	
Total Xylenes	"	ND	----	0.748	"	"	"	"	"	
<i>Surrogate(s): 1,2-DCA-d4</i>			<i>99.0%</i>		<i>75 - 125 %</i>	<i>"</i>				<i>"</i>
<i>Toluene-d8</i>			<i>103%</i>		<i>75 - 125 %</i>	<i>"</i>				<i>"</i>
<i>4-BFB</i>			<i>102%</i>		<i>75 - 125 %</i>	<i>"</i>				<i>"</i>

BRL0200-52 (ALY-SB-1-1.0-2.0)

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
			Soil				Sampled: 12/17/08 14:16			
Acetone	EPA 8260B	ND	----	11.9	mg/kg dry	1x	8L30015	12/30/08 14:41	12/31/08 01:13	
Benzene	"	ND	----	0.0477	"	"	"	"	"	
Bromobenzene	"	ND	----	0.238	"	"	"	"	"	
Bromochloromethane	"	ND	----	0.238	"	"	"	"	"	
Bromodichloromethane	"	ND	----	0.238	"	"	"	"	"	
Bromoform	"	ND	----	0.238	"	"	"	"	"	
Bromomethane	"	ND	----	0.238	"	"	"	"	"	
2-Butanone	"	ND	----	11.9	"	"	"	"	"	
n-Butylbenzene	"	ND	----	1.19	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	1.19	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	0.238	"	"	"	"	"	
Carbon disulfide	"	ND	----	0.238	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	0.238	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Volatile Organic Compounds (Special List) by EPA Method 8260B

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-52 (ALY-SB-1-1.0-2.0)										
		Soil					Sampled: 12/17/08 14:16			
Chlorobenzene	EPA 8260B	ND	----	0.238	mg/kg dry	1x	8L30015	12/30/08 14:41	12/31/08 01:13	
Chloroethane	"	ND	----	0.238	"	"	"	"	"	
Chloroform	"	ND	----	0.238	"	"	"	"	"	
Chloromethane	"	ND	----	1.19	"	"	"	"	"	
2-Chlorotoluene	"	ND	----	0.238	"	"	"	"	"	
4-Chlorotoluene	"	ND	----	0.238	"	"	"	"	"	
Dibromochloromethane	"	ND	----	0.238	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	----	1.19	"	"	"	"	"	
1,2-Dibromoethane	"	ND	----	0.238	"	"	"	"	"	
Dibromomethane	"	ND	----	0.238	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	0.238	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	----	0.238	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	----	0.238	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	----	0.238	"	"	"	"	"	
1,1-Dichloroethane	"	ND	----	0.238	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	0.238	"	"	"	"	"	
1,1-Dichloroethene	"	ND	----	0.238	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	0.238	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	0.238	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	0.238	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	0.238	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	0.238	"	"	"	"	"	
1,1-Dichloropropene	"	ND	----	0.238	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	0.238	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	0.238	"	"	"	"	"	
Ethylbenzene	"	ND	----	0.238	"	"	"	"	"	
Hexachlorobutadiene	"	ND	----	4.77	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	1.19	"	"	"	"	"	
n-Hexane	"	ND	----	1.19	"	"	"	"	"	
2-Hexanone	"	ND	----	4.77	"	"	"	"	"	
Isopropylbenzene	"	ND	----	0.238	"	"	"	"	"	
p-Isopropyltoluene	"	ND	----	0.238	"	"	"	"	"	
4-Methyl-2-pentanone	"	ND	----	2.38	"	"	"	"	"	
Methylene chloride	"	ND	----	4.77	"	"	"	"	"	
Naphthalene	"	ND	----	4.77	"	"	"	"	"	
n-Propylbenzene	"	ND	----	0.238	"	"	"	"	"	
Styrene	"	ND	----	0.238	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	4.77	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	----	2.38	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	----	0.238	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	----	0.238	"	"	"	"	"	
Tetrachloroethene	"	ND	----	0.238	"	"	"	"	"	
Toluene	"	ND	----	0.238	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds (Special List) by EPA Method 8260B
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-52 (ALY-SB-1-1.0-2.0)		Soil		Sampled: 12/17/08 14:16						
1,1,1-Trichloroethane	EPA 8260B	ND	----	0.238	mg/kg dry	1x	8L30015	12/30/08 14:41	12/31/08 01:13	
1,1,2-Trichloroethane	"	ND	----	0.238	"	"	"	"	"	
Trichloroethene	"	ND	----	0.238	"	"	"	"	"	
Trichlorofluoromethane	"	ND	----	0.238	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	0.238	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	0.238	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	0.238	"	"	"	"	"	
Vinyl chloride	"	ND	----	0.238	"	"	"	"	"	
o-Xylene	"	ND	----	0.238	"	"	"	"	"	
m,p-Xylene	"	ND	----	0.477	"	"	"	"	"	
Total Xylenes	"	ND	----	0.715	"	"	"	"	"	

Surrogate(s): 1,2-DCA-d4 92.5% 75 - 125 % "
 Toluene-d8 111% 75 - 125 % "
 4-BFB 108% 75 - 125 % "

BRL0200-55 (ALY-SB-4-3.0-4.0)		Soil		Sampled: 12/17/08 14:55						
Acetone	EPA 8260B	ND	----	13.3	mg/kg dry	1x	8L31013	12/31/08 00:09	12/31/08 19:50	
Benzene	"	ND	----	0.0533	"	"	"	"	"	
Bromobenzene	"	ND	----	0.267	"	"	"	"	"	
Bromochloromethane	"	ND	----	0.267	"	"	"	"	"	
Bromodichloromethane	"	ND	----	0.267	"	"	"	"	"	
Bromoform	"	ND	----	0.267	"	"	"	"	"	
Bromomethane	"	ND	----	0.267	"	"	"	"	"	
2-Butanone	"	ND	----	13.3	"	"	"	"	"	
n-Butylbenzene	"	ND	----	1.33	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	1.33	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	0.267	"	"	"	"	"	
Carbon disulfide	"	ND	----	0.267	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	0.267	"	"	"	"	"	
Chlorobenzene	"	ND	----	0.267	"	"	"	"	"	
Chloroethane	"	ND	----	0.267	"	"	"	"	"	
Chloroform	"	ND	----	0.267	"	"	"	"	"	
Chloromethane	"	ND	----	1.33	"	"	"	"	"	
2-Chlorotoluene	"	ND	----	0.267	"	"	"	"	"	
4-Chlorotoluene	"	ND	----	0.267	"	"	"	"	"	
Dibromochloromethane	"	ND	----	0.267	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	----	1.33	"	"	"	"	"	
1,2-Dibromoethane	"	ND	----	0.267	"	"	"	"	"	
Dibromomethane	"	ND	----	0.267	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	0.267	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	----	0.267	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	----	0.267	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Volatile Organic Compounds (Special List) by EPA Method 8260B

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-55 (ALY-SB-4-3.0-4.0)										
		Soil					Sampled: 12/17/08 14:55			
Dichlorodifluoromethane	EPA 8260B	ND	----	0.267	mg/kg dry	1x	8L31013	12/31/08 00:09	12/31/08 19:50	
1,1-Dichloroethane	"	ND	----	0.267	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	0.267	"	"	"	"	"	
1,1-Dichloroethene	"	ND	----	0.267	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	0.267	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	0.267	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	0.267	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	0.267	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	0.267	"	"	"	"	"	
1,1-Dichloropropene	"	ND	----	0.267	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	0.267	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	0.267	"	"	"	"	"	
Ethylbenzene	"	ND	----	0.267	"	"	"	"	"	
Hexachlorobutadiene	"	ND	----	5.33	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	1.33	"	"	"	"	"	
n-Hexane	"	ND	----	1.33	"	"	"	"	"	
2-Hexanone	"	ND	----	5.33	"	"	"	"	"	
Isopropylbenzene	"	ND	----	0.267	"	"	"	"	"	
p-Isopropyltoluene	"	ND	----	0.267	"	"	"	"	"	
4-Methyl-2-pentanone	"	ND	----	2.67	"	"	"	"	"	
Methylene chloride	"	ND	----	5.33	"	"	"	"	"	
Naphthalene	"	ND	----	5.33	"	"	"	"	"	
n-Propylbenzene	"	ND	----	0.267	"	"	"	"	"	
Styrene	"	ND	----	0.267	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	5.33	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	----	2.67	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	----	0.267	"	"	"	"	"	
1,1,1,2,2-Tetrachloroethane	"	ND	----	0.267	"	"	"	"	"	
Tetrachloroethene	"	ND	----	0.267	"	"	"	"	"	
Toluene	"	ND	----	0.267	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	----	0.267	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	----	0.267	"	"	"	"	"	
Trichloroethene	"	ND	----	0.267	"	"	"	"	"	
Trichlorofluoromethane	"	ND	----	0.267	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	0.267	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	0.267	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	0.267	"	"	"	"	"	
Vinyl chloride	"	ND	----	0.267	"	"	"	"	"	
o-Xylene	"	ND	----	0.267	"	"	"	"	"	
m,p-Xylene	"	ND	----	0.533	"	"	"	"	"	
Total Xylenes	"	ND	----	0.800	"	"	"	"	"	

Surrogate(s): 1,2-DCA-d4

96.2%

75 - 125 %

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds (Special List) by EPA Method 8260B
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	-------	----------	----------	-------

BRL0200-55 (ALY-SB-4-3.0-4.0) Soil Sampled: 12/17/08 14:55

<i>Toluene-d8</i>			102%		75 - 125 %	1x			12/31/08 19:50	
<i>4-BFB</i>			104%		75 - 125 %	"			"	

BRL0200-56 (ALY-SB-10-1.0-2.0) Soil Sampled: 12/17/08 15:32

Acetone	EPA 8260B	ND	----	10.9	mg/kg dry	1x	8L30015	12/30/08 14:41	12/31/08 03:00	
2-Butanone	"	ND	----	10.9	"	"	"	"	"	
Carbon disulfide	"	ND	----	0.219	"	"	"	"	"	
1,1-Dichloroethene	"	ND	----	0.219	"	"	"	"	"	
<i>Surrogate(s): 1,2-DCA-d4</i>			93.0%		75 - 125 %	"			"	
<i>Toluene-d8</i>			109%		75 - 125 %	"			"	
<i>4-BFB</i>			105%		75 - 125 %	"			"	

BRL0200-58 (ALY-SB-5-1.0-2.0) Soil Sampled: 12/17/08 16:00

Acetone	EPA 8260B	ND	----	9.80	mg/kg dry	1x	8L30015	12/30/08 14:41	12/31/08 03:54	
2-Butanone	"	ND	----	9.80	"	"	"	"	"	
Carbon disulfide	"	ND	----	0.196	"	"	"	"	"	
Ethylbenzene	"	ND	----	0.196	"	"	"	"	"	
p-Isopropyltoluene	"	ND	----	0.196	"	"	"	"	"	
Toluene	"	ND	----	0.196	"	"	"	"	"	
<i>Surrogate(s): 1,2-DCA-d4</i>			92.4%		75 - 125 %	"			"	
<i>Toluene-d8</i>			109%		75 - 125 %	"			"	
<i>4-BFB</i>			106%		75 - 125 %	"			"	

BRL0200-59 (ALY-SB-5-3.0-4.0) Soil Sampled: 12/17/08 16:10

Isopropylbenzene	EPA 8260B	ND	----	0.158	mg/kg dry	1x	8L30015	12/30/08 14:41	12/31/08 04:21	
p-Isopropyltoluene	"	ND	----	0.158	"	"	"	"	"	
<i>Surrogate(s): 1,2-DCA-d4</i>			92.7%		75 - 125 %	"			"	
<i>Toluene-d8</i>			108%		75 - 125 %	"			"	
<i>4-BFB</i>			106%		75 - 125 %	"			"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Volatile Organic Compounds (Special List) by EPA Method 8260B

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-61 (Trip Blanks)										
		Soil					Sampled: 12/17/08 17:00			
Acetone	EPA 8260B	ND	----	5.00	mg/kg wet	1x	8L30015	12/30/08 14:41	12/30/08 23:52	
Benzene	"	ND	----	0.0200	"	"	"	"	"	
Bromobenzene	"	ND	----	0.100	"	"	"	"	"	
Bromochloromethane	"	ND	----	0.100	"	"	"	"	"	
Bromodichloromethane	"	ND	----	0.100	"	"	"	"	"	
Bromoform	"	ND	----	0.100	"	"	"	"	"	
Bromomethane	"	ND	----	0.100	"	"	"	"	"	
2-Butanone	"	ND	----	5.00	"	"	"	"	"	
n-Butylbenzene	"	ND	----	0.500	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	0.500	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	0.100	"	"	"	"	"	
Carbon disulfide	"	ND	----	0.100	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	0.100	"	"	"	"	"	
Chlorobenzene	"	ND	----	0.100	"	"	"	"	"	
Chloroethane	"	ND	----	0.100	"	"	"	"	"	
Chloroform	"	ND	----	0.100	"	"	"	"	"	
Chloromethane	"	ND	----	0.500	"	"	"	"	"	
2-Chlorotoluene	"	ND	----	0.100	"	"	"	"	"	
4-Chlorotoluene	"	ND	----	0.100	"	"	"	"	"	
Dibromochloromethane	"	ND	----	0.100	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	----	0.500	"	"	"	"	"	
1,2-Dibromoethane	"	ND	----	0.100	"	"	"	"	"	
Dibromomethane	"	ND	----	0.100	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	0.100	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	----	0.100	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	----	0.100	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	----	0.100	"	"	"	"	"	
1,1-Dichloroethane	"	ND	----	0.100	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	0.100	"	"	"	"	"	
1,1-Dichloroethene	"	ND	----	0.100	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	0.100	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	0.100	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	0.100	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	0.100	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	0.100	"	"	"	"	"	
1,1-Dichloropropene	"	ND	----	0.100	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	0.100	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	0.100	"	"	"	"	"	
Ethylbenzene	"	ND	----	0.100	"	"	"	"	"	
Hexachlorobutadiene	"	ND	----	2.00	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	0.500	"	"	"	"	"	
n-Hexane	"	ND	----	0.500	"	"	"	"	"	
2-Hexanone	"	ND	----	2.00	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Volatile Organic Compounds (Special List) by EPA Method 8260B

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-61 (Trip Blanks)		Soil		Sampled: 12/17/08 17:00						
Isopropylbenzene	EPA 8260B	ND	----	0.100	mg/kg wet	1x	8L30015	12/30/08 14:41	12/30/08 23:52	
p-Isopropyltoluene	"	ND	----	0.100	"	"	"	"	"	
4-Methyl-2-pentanone	"	ND	----	1.00	"	"	"	"	"	
Methylene chloride	"	ND	----	2.00	"	"	"	"	"	
Naphthalene	"	ND	----	2.00	"	"	"	"	"	
n-Propylbenzene	"	ND	----	0.100	"	"	"	"	"	
Styrene	"	ND	----	0.100	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	2.00	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	----	1.00	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	----	0.100	"	"	"	"	"	
1,1,1,2,2-Tetrachloroethane	"	ND	----	0.100	"	"	"	"	"	
Tetrachloroethene	"	ND	----	0.100	"	"	"	"	"	
Toluene	"	ND	----	0.100	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	----	0.100	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	----	0.100	"	"	"	"	"	
Trichloroethene	"	ND	----	0.100	"	"	"	"	"	
Trichlorofluoromethane	"	ND	----	0.100	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	0.100	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	0.100	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	0.100	"	"	"	"	"	
Vinyl chloride	"	ND	----	0.100	"	"	"	"	"	
o-Xylene	"	ND	----	0.100	"	"	"	"	"	
m,p-Xylene	"	ND	----	0.200	"	"	"	"	"	
Total Xylenes	"	ND	----	0.300	"	"	"	"	"	
<i>Surrogate(s): 1,2-DCA-d4</i>			99.7%		75 - 125 %	"				"
<i>Toluene-d8</i>			105%		75 - 125 %	"				"
<i>4-BFB</i>			102%		75 - 125 %	"				"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue	Project Name: WSDOT SR 520 - Pontoon Sites	
1100 112th Avenue NE, Suite 400	Project Number: 180171.AR.X7.02	Report Created:
Bellevue, WA/USA 98004-4504	Project Manager: Brian Tracy	01/26/09 09:59

Volatile Organic Compounds by EPA Method 8260B
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-03 (AM-W-1)		Water			Sampled: 12/15/08 13:30					
Acetone	EPA 8260B	ND	----	10.0	ug/l	1x	8L18006	12/18/08 13:02	12/18/08 14:08	
Benzene	"	ND	----	0.200	"	"	"	"	"	
Bromobenzene	"	ND	----	0.500	"	"	"	"	"	
Bromochloromethane	"	ND	----	0.250	"	"	"	"	"	
Bromodichloromethane	"	ND	----	0.200	"	"	"	"	"	
Bromoform	"	ND	----	0.250	"	"	"	"	"	
Bromomethane	"	ND	----	2.00	"	"	"	"	"	
2-Butanone	"	ND	----	2.00	"	"	"	"	"	
n-Butylbenzene	"	ND	----	0.200	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	0.200	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	0.500	"	"	"	"	"	
Carbon disulfide	"	ND	----	0.500	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	0.200	"	"	"	"	"	C
Chlorobenzene	"	ND	----	0.200	"	"	"	"	"	
Chloroethane	"	ND	----	1.00	"	"	"	"	"	
Chloroform	"	ND	----	0.200	"	"	"	"	"	
Chloromethane	"	ND	----	1.00	"	"	"	"	"	
2-Chlorotoluene	"	ND	----	0.500	"	"	"	"	"	
4-Chlorotoluene	"	ND	----	0.500	"	"	"	"	"	
Dibromochloromethane	"	ND	----	0.200	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	----	1.00	"	"	"	"	"	
1,2-Dibromoethane	"	ND	----	0.200	"	"	"	"	"	
Dibromomethane	"	ND	----	0.200	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	0.200	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	----	0.200	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	----	0.200	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	----	0.500	"	"	"	"	"	C5
1,1-Dichloroethane	"	ND	----	0.200	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	0.200	"	"	"	"	"	
1,1-Dichloroethene	"	ND	----	0.200	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	0.200	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	0.200	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	0.200	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	0.200	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	0.500	"	"	"	"	"	C
1,1-Dichloropropene	"	ND	----	0.200	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	0.200	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	0.200	"	"	"	"	"	
Ethylbenzene	"	ND	----	0.200	"	"	"	"	"	
Hexachlorobutadiene	"	ND	----	2.50	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	1.00	"	"	"	"	"	
n-Hexane	"	ND	----	1.00	"	"	"	"	"	
2-Hexanone	"	ND	----	2.00	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds by EPA Method 8260B
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-03 (AM-W-1)		Water		Sampled: 12/15/08 13:30						
Isopropylbenzene	EPA 8260B	ND	----	0.500	ug/l	1x	8L18006	12/18/08 13:02	12/18/08 14:08	
p-Isopropyltoluene	"	ND	----	0.200	"	"	"	"	"	
4-Methyl-2-pentanone	"	ND	----	2.00	"	"	"	"	"	
Methylene chloride	"	ND	----	5.00	"	"	"	"	"	
Naphthalene	"	ND	----	2.50	"	"	"	"	"	
n-Propylbenzene	"	ND	----	0.500	"	"	"	"	"	
Styrene	"	ND	----	0.500	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	1.00	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	----	1.00	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	----	0.200	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	----	0.500	"	"	"	"	"	
Tetrachloroethene	"	ND	----	0.200	"	"	"	"	"	
Toluene	"	ND	----	0.200	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	----	0.200	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	----	0.200	"	"	"	"	"	
Trichloroethene	"	ND	----	0.200	"	"	"	"	"	
Trichlorofluoromethane	"	ND	----	0.500	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	0.500	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	0.200	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	0.500	"	"	"	"	"	
Vinyl chloride	"	ND	----	0.200	"	"	"	"	"	
o-Xylene	"	ND	----	0.250	"	"	"	"	"	
m,p-Xylene	"	ND	----	0.500	"	"	"	"	"	
Total Xylenes	"	ND	----	0.750	"	"	"	"	"	
<i>Surrogate(s): 1,2-DCA-d4</i>				117%		76 - 138 %	"			"
<i>Toluene-d8</i>				101%		80 - 120 %	"			"
<i>4-BFB</i>				98.6%		80 - 120 %	"			"

BRL0200-14 (AM-W-11)

Water

Sampled: 12/16/08 08:45

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
Acetone	EPA 8260B	16.2	----	10.0	ug/l	1x	8L18006	12/18/08 13:02	12/18/08 14:37	
Benzene	"	ND	----	0.200	"	"	"	"	"	
Bromobenzene	"	ND	----	0.500	"	"	"	"	"	
Bromochloromethane	"	ND	----	0.250	"	"	"	"	"	
Bromodichloromethane	"	ND	----	0.200	"	"	"	"	"	
Bromoform	"	ND	----	0.250	"	"	"	"	"	
Bromomethane	"	ND	----	2.00	"	"	"	"	"	
2-Butanone	"	ND	----	2.00	"	"	"	"	"	
n-Butylbenzene	"	ND	----	0.200	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	0.200	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	0.500	"	"	"	"	"	
Carbon disulfide	"	ND	----	0.500	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	0.200	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Volatile Organic Compounds by EPA Method 8260B
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-14 (AM-W-11)		Water		Sampled: 12/16/08 08:45						
Chlorobenzene	EPA 8260B	ND	----	0.200	ug/l	1x	8L18006	12/18/08 13:02	12/18/08 14:37	
Chloroethane	"	ND	----	1.00	"	"	"	"	"	
Chloroform	"	ND	----	0.200	"	"	"	"	"	
Chloromethane	"	ND	----	1.00	"	"	"	"	"	
2-Chlorotoluene	"	ND	----	0.500	"	"	"	"	"	
4-Chlorotoluene	"	ND	----	0.500	"	"	"	"	"	
Dibromochloromethane	"	ND	----	0.200	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	----	1.00	"	"	"	"	"	
1,2-Dibromoethane	"	ND	----	0.200	"	"	"	"	"	
Dibromomethane	"	ND	----	0.200	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	0.200	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	----	0.200	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	----	0.200	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	----	0.500	"	"	"	"	"	C5
1,1-Dichloroethane	"	ND	----	0.200	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	0.200	"	"	"	"	"	
1,1-Dichloroethene	"	ND	----	0.200	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	0.200	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	0.200	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	0.200	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	0.200	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	0.500	"	"	"	"	"	C
1,1-Dichloropropene	"	ND	----	0.200	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	0.200	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	0.200	"	"	"	"	"	
Ethylbenzene	"	ND	----	0.200	"	"	"	"	"	
Hexachlorobutadiene	"	ND	----	2.50	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	1.00	"	"	"	"	"	
n-Hexane	"	ND	----	1.00	"	"	"	"	"	
2-Hexanone	"	ND	----	2.00	"	"	"	"	"	
Isopropylbenzene	"	ND	----	0.500	"	"	"	"	"	
p-Isopropyltoluene	"	ND	----	0.200	"	"	"	"	"	
4-Methyl-2-pentanone	"	ND	----	2.00	"	"	"	"	"	
Methylene chloride	"	ND	----	5.00	"	"	"	"	"	
Naphthalene	"	ND	----	2.50	"	"	"	"	"	
n-Propylbenzene	"	ND	----	0.500	"	"	"	"	"	
Styrene	"	ND	----	0.500	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	1.00	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	----	1.00	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	----	0.200	"	"	"	"	"	
1,1,1,2,2-Tetrachloroethane	"	ND	----	0.500	"	"	"	"	"	
Tetrachloroethene	"	ND	----	0.200	"	"	"	"	"	
Toluene	"	0.470	----	0.200	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds by EPA Method 8260B
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-14 (AM-W-11)		Water		Sampled: 12/16/08 08:45						
1,1,1-Trichloroethane	EPA 8260B	ND	----	0.200	ug/l	1x	8L18006	12/18/08 13:02	12/18/08 14:37	
1,1,2-Trichloroethane	"	ND	----	0.200	"	"	"	"	"	
Trichloroethene	"	ND	----	0.200	"	"	"	"	"	
Trichlorofluoromethane	"	ND	----	0.500	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	0.500	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	0.200	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	0.500	"	"	"	"	"	
Vinyl chloride	"	ND	----	0.200	"	"	"	"	"	
o-Xylene	"	ND	----	0.250	"	"	"	"	"	
m,p-Xylene	"	ND	----	0.500	"	"	"	"	"	
Total Xylenes	"	ND	----	0.750	"	"	"	"	"	

Surrogate(s): 1,2-DCA-d4 117% 76 - 138 % "
 Toluene-d8 102% 80 - 120 % "
 4-BFB 96.5% 80 - 120 % "

BRL0200-19 (AM-W-6)		Water		Sampled: 12/16/08 11:00						
Acetone	EPA 8260B	ND	----	10.0	ug/l	1x	8L18006	12/18/08 13:02	12/18/08 15:06	
Benzene	"	ND	----	0.200	"	"	"	"	"	
Bromobenzene	"	ND	----	0.500	"	"	"	"	"	
Bromochloromethane	"	ND	----	0.250	"	"	"	"	"	
Bromodichloromethane	"	ND	----	0.200	"	"	"	"	"	
Bromoform	"	ND	----	0.250	"	"	"	"	"	
Bromomethane	"	ND	----	2.00	"	"	"	"	"	
2-Butanone	"	ND	----	2.00	"	"	"	"	"	
n-Butylbenzene	"	ND	----	0.200	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	0.200	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	0.500	"	"	"	"	"	
Carbon disulfide	"	ND	----	0.500	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	0.200	"	"	"	"	"	
Chlorobenzene	"	ND	----	0.200	"	"	"	"	"	
Chloroethane	"	ND	----	1.00	"	"	"	"	"	
Chloroform	"	ND	----	0.200	"	"	"	"	"	
Chloromethane	"	ND	----	1.00	"	"	"	"	"	
2-Chlorotoluene	"	ND	----	0.500	"	"	"	"	"	
4-Chlorotoluene	"	ND	----	0.500	"	"	"	"	"	
Dibromochloromethane	"	ND	----	0.200	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	----	1.00	"	"	"	"	"	
1,2-Dibromoethane	"	ND	----	0.200	"	"	"	"	"	
Dibromomethane	"	ND	----	0.200	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	0.200	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	----	0.200	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	----	0.200	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds by EPA Method 8260B
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-19 (AM-W-6)		Water		Sampled: 12/16/08 11:00						
Dichlorodifluoromethane	EPA 8260B	ND	----	0.500	ug/l	1x	8L18006	12/18/08 13:02	12/18/08 15:06	C5
1,1-Dichloroethane	"	ND	----	0.200	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	0.200	"	"	"	"	"	
1,1-Dichloroethene	"	ND	----	0.200	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	0.200	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	0.200	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	0.200	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	0.200	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	0.500	"	"	"	"	"	C
1,1-Dichloropropene	"	ND	----	0.200	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	0.200	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	0.200	"	"	"	"	"	
Ethylbenzene	"	ND	----	0.200	"	"	"	"	"	
Hexachlorobutadiene	"	ND	----	2.50	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	1.00	"	"	"	"	"	
n-Hexane	"	ND	----	1.00	"	"	"	"	"	
2-Hexanone	"	ND	----	2.00	"	"	"	"	"	
Isopropylbenzene	"	ND	----	0.500	"	"	"	"	"	
p-Isopropyltoluene	"	0.380	----	0.200	"	"	"	"	"	
4-Methyl-2-pentanone	"	ND	----	2.00	"	"	"	"	"	
Methylene chloride	"	ND	----	5.00	"	"	"	"	"	
Naphthalene	"	ND	----	2.50	"	"	"	"	"	
n-Propylbenzene	"	ND	----	0.500	"	"	"	"	"	
Styrene	"	ND	----	0.500	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	1.00	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	----	1.00	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	----	0.200	"	"	"	"	"	
1,1,1,2,2-Tetrachloroethane	"	ND	----	0.500	"	"	"	"	"	
Tetrachloroethene	"	ND	----	0.200	"	"	"	"	"	
Toluene	"	0.550	----	0.200	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	----	0.200	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	----	0.200	"	"	"	"	"	
Trichloroethene	"	ND	----	0.200	"	"	"	"	"	
Trichlorofluoromethane	"	ND	----	0.500	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	0.500	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	0.200	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	0.500	"	"	"	"	"	
Vinyl chloride	"	ND	----	0.200	"	"	"	"	"	
o-Xylene	"	ND	----	0.250	"	"	"	"	"	
m,p-Xylene	"	ND	----	0.500	"	"	"	"	"	
Total Xylenes	"	ND	----	0.750	"	"	"	"	"	

Surrogate(s): 1,2-DCA-d4

115%

76 - 138 %

"

"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds by EPA Method 8260B
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-19 (AM-W-6)		Water		Sampled: 12/16/08 11:00						
Toluene-d8		106%		80 - 120 %	1x				12/18/08 15:06	
4-BFB		96.1%		80 - 120 %	"				"	
BRL0200-22 (AM-W-5)		Water		Sampled: 12/16/08 12:15						
Acetone	EPA 8260B	ND	----	10.0	ug/l	1x	8L18006	12/18/08 13:02	12/18/08 15:35	
Benzene	"	ND	----	0.200	"	"	"	"	"	
Bromobenzene	"	ND	----	0.500	"	"	"	"	"	
Bromochloromethane	"	ND	----	0.250	"	"	"	"	"	
Bromodichloromethane	"	ND	----	0.200	"	"	"	"	"	
Bromoform	"	ND	----	0.250	"	"	"	"	"	
Bromomethane	"	ND	----	2.00	"	"	"	"	"	
2-Butanone	"	ND	----	2.00	"	"	"	"	"	
n-Butylbenzene	"	ND	----	0.200	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	0.200	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	0.500	"	"	"	"	"	
Carbon disulfide	"	ND	----	0.500	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	0.200	"	"	"	"	"	
Chlorobenzene	"	ND	----	0.200	"	"	"	"	"	C
Chloroethane	"	ND	----	1.00	"	"	"	"	"	
Chloroform	"	ND	----	0.200	"	"	"	"	"	
Chloromethane	"	ND	----	1.00	"	"	"	"	"	
2-Chlorotoluene	"	ND	----	0.500	"	"	"	"	"	
4-Chlorotoluene	"	ND	----	0.500	"	"	"	"	"	
Dibromochloromethane	"	ND	----	0.200	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	----	1.00	"	"	"	"	"	
1,2-Dibromoethane	"	ND	----	0.200	"	"	"	"	"	
Dibromomethane	"	ND	----	0.200	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	0.200	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	----	0.200	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	----	0.200	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	----	0.500	"	"	"	"	"	C5
1,1-Dichloroethane	"	ND	----	0.200	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	0.200	"	"	"	"	"	
1,1-Dichloroethene	"	ND	----	0.200	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	0.200	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	0.200	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	0.200	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	0.200	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	0.500	"	"	"	"	"	C
1,1-Dichloropropene	"	ND	----	0.200	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	0.200	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	0.200	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds by EPA Method 8260B
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-22 (AM-W-5)		Water		Sampled: 12/16/08 12:15						
Ethylbenzene	EPA 8260B	ND	----	0.200	ug/l	1x	8L18006	12/18/08 13:02	12/18/08 15:35	
Hexachlorobutadiene	"	ND	----	2.50	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	1.00	"	"	"	"	"	
n-Hexane	"	ND	----	1.00	"	"	"	"	"	
2-Hexanone	"	ND	----	2.00	"	"	"	"	"	
Isopropylbenzene	"	ND	----	0.500	"	"	"	"	"	
p-Isopropyltoluene	"	ND	----	0.200	"	"	"	"	"	
4-Methyl-2-pentanone	"	ND	----	2.00	"	"	"	"	"	
Methylene chloride	"	ND	----	5.00	"	"	"	"	"	
Naphthalene	"	ND	----	2.50	"	"	"	"	"	
n-Propylbenzene	"	ND	----	0.500	"	"	"	"	"	
Styrene	"	ND	----	0.500	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	1.00	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	----	1.00	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	----	0.200	"	"	"	"	"	
1,1,1,2,2-Tetrachloroethane	"	ND	----	0.500	"	"	"	"	"	
Tetrachloroethene	"	ND	----	0.200	"	"	"	"	"	
Toluene	"	ND	----	0.200	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	----	0.200	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	----	0.200	"	"	"	"	"	
Trichloroethene	"	ND	----	0.200	"	"	"	"	"	
Trichlorofluoromethane	"	ND	----	0.500	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	0.500	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	0.200	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	0.500	"	"	"	"	"	
Vinyl chloride	"	ND	----	0.200	"	"	"	"	"	
o-Xylene	"	ND	----	0.250	"	"	"	"	"	
m,p-Xylene	"	ND	----	0.500	"	"	"	"	"	
Total Xylenes	"	ND	----	0.750	"	"	"	"	"	
Surrogate(s):	1,2-DCA-d4		118%		76 - 138 %	"				"
	Toluene-d8		103%		80 - 120 %	"				"
	4-BFB		96.1%		80 - 120 %	"				"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds by EPA Method 8260B
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-27 (AM-W-9)		Water					Sampled: 12/16/08 14:00			
Acetone	EPA 8260B	ND	----	10.0	ug/l	1x	8L18006	12/18/08 13:02	12/18/08 16:04	
Benzene	"	ND	----	0.200	"	"	"	"	"	
Bromobenzene	"	ND	----	0.500	"	"	"	"	"	
Bromochloromethane	"	ND	----	0.250	"	"	"	"	"	
Bromodichloromethane	"	ND	----	0.200	"	"	"	"	"	
Bromoform	"	ND	----	0.250	"	"	"	"	"	
Bromomethane	"	ND	----	2.00	"	"	"	"	"	
2-Butanone	"	ND	----	2.00	"	"	"	"	"	
n-Butylbenzene	"	ND	----	0.200	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	0.200	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	0.500	"	"	"	"	"	
Carbon disulfide	"	ND	----	0.500	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	0.200	"	"	"	"	"	C
Chlorobenzene	"	ND	----	0.200	"	"	"	"	"	
Chloroethane	"	ND	----	1.00	"	"	"	"	"	
Chloroform	"	ND	----	0.200	"	"	"	"	"	
Chloromethane	"	ND	----	1.00	"	"	"	"	"	
2-Chlorotoluene	"	ND	----	0.500	"	"	"	"	"	
4-Chlorotoluene	"	ND	----	0.500	"	"	"	"	"	
Dibromochloromethane	"	ND	----	0.200	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	----	1.00	"	"	"	"	"	
1,2-Dibromoethane	"	ND	----	0.200	"	"	"	"	"	
Dibromomethane	"	ND	----	0.200	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	0.200	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	----	0.200	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	----	0.200	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	----	0.500	"	"	"	"	"	C5
1,1-Dichloroethane	"	ND	----	0.200	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	0.200	"	"	"	"	"	
1,1-Dichloroethene	"	ND	----	0.200	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	0.200	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	0.200	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	0.200	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	0.200	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	0.500	"	"	"	"	"	C
1,1-Dichloropropene	"	ND	----	0.200	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	0.200	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	0.200	"	"	"	"	"	
Ethylbenzene	"	ND	----	0.200	"	"	"	"	"	
Hexachlorobutadiene	"	ND	----	2.50	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	1.00	"	"	"	"	"	
n-Hexane	"	ND	----	1.00	"	"	"	"	"	
2-Hexanone	"	ND	----	2.00	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds by EPA Method 8260B
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-27 (AM-W-9)		Water		Sampled: 12/16/08 14:00						
Isopropylbenzene	EPA 8260B	ND	----	0.500	ug/l	1x	8L18006	12/18/08 13:02	12/18/08 16:04	
p-Isopropyltoluene	"	ND	----	0.200	"	"	"	"	"	
4-Methyl-2-pentanone	"	ND	----	2.00	"	"	"	"	"	
Methylene chloride	"	ND	----	5.00	"	"	"	"	"	
Naphthalene	"	ND	----	2.50	"	"	"	"	"	
n-Propylbenzene	"	ND	----	0.500	"	"	"	"	"	
Styrene	"	ND	----	0.500	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	1.00	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	----	1.00	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	----	0.200	"	"	"	"	"	
1,1,1,2,2-Tetrachloroethane	"	ND	----	0.500	"	"	"	"	"	
Tetrachloroethene	"	ND	----	0.200	"	"	"	"	"	
Toluene	"	ND	----	0.200	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	----	0.200	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	----	0.200	"	"	"	"	"	
Trichloroethene	"	ND	----	0.200	"	"	"	"	"	
Trichlorofluoromethane	"	ND	----	0.500	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	0.500	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	0.200	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	0.500	"	"	"	"	"	
Vinyl chloride	"	ND	----	0.200	"	"	"	"	"	
o-Xylene	"	ND	----	0.250	"	"	"	"	"	
m,p-Xylene	"	ND	----	0.500	"	"	"	"	"	
Total Xylenes	"	ND	----	0.750	"	"	"	"	"	
<i>Surrogate(s): 1,2-DCA-d4</i>			<i>120%</i>	<i>76 - 138 %</i>						
<i>Toluene-d8</i>			<i>105%</i>	<i>80 - 120 %</i>						
<i>4-BFB</i>			<i>99.0%</i>	<i>80 - 120 %</i>						

BRL0200-32 (ALY-W-11)

BRL0200-32 (ALY-W-11)		Water		Sampled: 12/16/08 16:50						
Acetone	EPA 8260B	ND	----	10.0	ug/l	1x	8L18006	12/18/08 13:02	12/18/08 16:32	
Benzene	"	ND	----	0.200	"	"	"	"	"	
Bromobenzene	"	ND	----	0.500	"	"	"	"	"	
Bromochloromethane	"	ND	----	0.250	"	"	"	"	"	
Bromodichloromethane	"	ND	----	0.200	"	"	"	"	"	
Bromoform	"	ND	----	0.250	"	"	"	"	"	
Bromomethane	"	ND	----	2.00	"	"	"	"	"	
2-Butanone	"	ND	----	2.00	"	"	"	"	"	
n-Butylbenzene	"	ND	----	0.200	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	0.200	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	0.500	"	"	"	"	"	
Carbon disulfide	"	ND	----	0.500	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	0.200	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds by EPA Method 8260B
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-32 (ALY-W-11)		Water		Sampled: 12/16/08 16:50						
Chlorobenzene	EPA 8260B	ND	----	0.200	ug/l	1x	8L18006	12/18/08 13:02	12/18/08 16:32	
Chloroethane	"	ND	----	1.00	"	"	"	"	"	
Chloroform	"	ND	----	0.200	"	"	"	"	"	
Chloromethane	"	ND	----	1.00	"	"	"	"	"	
2-Chlorotoluene	"	ND	----	0.500	"	"	"	"	"	
4-Chlorotoluene	"	ND	----	0.500	"	"	"	"	"	
Dibromochloromethane	"	ND	----	0.200	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	----	1.00	"	"	"	"	"	
1,2-Dibromoethane	"	ND	----	0.200	"	"	"	"	"	
Dibromomethane	"	ND	----	0.200	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	0.200	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	----	0.200	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	----	0.200	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	----	0.500	"	"	"	"	"	C5
1,1-Dichloroethane	"	ND	----	0.200	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	0.200	"	"	"	"	"	
1,1-Dichloroethene	"	ND	----	0.200	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	0.200	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	0.200	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	0.200	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	0.200	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	0.500	"	"	"	"	"	C
1,1-Dichloropropene	"	ND	----	0.200	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	0.200	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	0.200	"	"	"	"	"	
Ethylbenzene	"	ND	----	0.200	"	"	"	"	"	
Hexachlorobutadiene	"	ND	----	2.50	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	1.00	"	"	"	"	"	
n-Hexane	"	ND	----	1.00	"	"	"	"	"	
2-Hexanone	"	ND	----	2.00	"	"	"	"	"	
Isopropylbenzene	"	ND	----	0.500	"	"	"	"	"	
p-Isopropyltoluene	"	ND	----	0.200	"	"	"	"	"	
4-Methyl-2-pentanone	"	ND	----	2.00	"	"	"	"	"	
Methylene chloride	"	ND	----	5.00	"	"	"	"	"	
Naphthalene	"	ND	----	2.50	"	"	"	"	"	
n-Propylbenzene	"	ND	----	0.500	"	"	"	"	"	
Styrene	"	ND	----	0.500	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	1.00	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	----	1.00	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	----	0.200	"	"	"	"	"	
1,1,1,2,2-Tetrachloroethane	"	ND	----	0.500	"	"	"	"	"	
Tetrachloroethene	"	ND	----	0.200	"	"	"	"	"	
Toluene	"	ND	----	0.200	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds by EPA Method 8260B
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-32 (ALY-W-11)		Water		Sampled: 12/16/08 16:50						
1,1,1-Trichloroethane	EPA 8260B	ND	----	0.200	ug/l	1x	8L18006	12/18/08 13:02	12/18/08 16:32	
1,1,2-Trichloroethane	"	ND	----	0.200	"	"	"	"	"	
Trichloroethene	"	ND	----	0.200	"	"	"	"	"	
Trichlorofluoromethane	"	ND	----	0.500	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	0.500	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	0.200	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	0.500	"	"	"	"	"	
Vinyl chloride	"	ND	----	0.200	"	"	"	"	"	
o-Xylene	"	ND	----	0.250	"	"	"	"	"	
m,p-Xylene	"	ND	----	0.500	"	"	"	"	"	
Total Xylenes	"	ND	----	0.750	"	"	"	"	"	

Surrogate(s): 1,2-DCA-d4 122% 76 - 138 % "
 Toluene-d8 105% 80 - 120 % "
 4-BFB 97.6% 80 - 120 % "

BRL0200-33 (AM-W-12)		Water		Sampled: 12/16/08 14:55						
Acetone	EPA 8260B	ND	----	10.0	ug/l	1x	8L18006	12/18/08 13:02	12/18/08 17:01	
Benzene	"	ND	----	0.200	"	"	"	"	"	
Bromobenzene	"	ND	----	0.500	"	"	"	"	"	
Bromochloromethane	"	ND	----	0.250	"	"	"	"	"	
Bromodichloromethane	"	ND	----	0.200	"	"	"	"	"	
Bromoform	"	ND	----	0.250	"	"	"	"	"	
Bromomethane	"	ND	----	2.00	"	"	"	"	"	
2-Butanone	"	ND	----	2.00	"	"	"	"	"	
n-Butylbenzene	"	ND	----	0.200	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	0.200	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	0.500	"	"	"	"	"	
Carbon disulfide	"	ND	----	0.500	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	0.200	"	"	"	"	"	
Chlorobenzene	"	ND	----	0.200	"	"	"	"	"	
Chloroethane	"	ND	----	1.00	"	"	"	"	"	
Chloroform	"	ND	----	0.200	"	"	"	"	"	
Chloromethane	"	ND	----	1.00	"	"	"	"	"	
2-Chlorotoluene	"	ND	----	0.500	"	"	"	"	"	
4-Chlorotoluene	"	ND	----	0.500	"	"	"	"	"	
Dibromochloromethane	"	ND	----	0.200	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	----	1.00	"	"	"	"	"	
1,2-Dibromoethane	"	ND	----	0.200	"	"	"	"	"	
Dibromomethane	"	ND	----	0.200	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	0.200	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	----	0.200	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	----	0.200	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds by EPA Method 8260B
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-33 (AM-W-12)		Water		Sampled: 12/16/08 14:55						
Dichlorodifluoromethane	EPA 8260B	ND	----	0.500	ug/l	1x	8L18006	12/18/08 13:02	12/18/08 17:01	C5
1,1-Dichloroethane	"	ND	----	0.200	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	0.200	"	"	"	"	"	
1,1-Dichloroethene	"	ND	----	0.200	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	0.200	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	0.200	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	0.200	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	0.200	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	0.500	"	"	"	"	"	C
1,1-Dichloropropene	"	ND	----	0.200	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	0.200	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	0.200	"	"	"	"	"	
Ethylbenzene	"	ND	----	0.200	"	"	"	"	"	
Hexachlorobutadiene	"	ND	----	2.50	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	1.00	"	"	"	"	"	
n-Hexane	"	ND	----	1.00	"	"	"	"	"	
2-Hexanone	"	ND	----	2.00	"	"	"	"	"	
Isopropylbenzene	"	ND	----	0.500	"	"	"	"	"	
p-Isopropyltoluene	"	ND	----	0.200	"	"	"	"	"	
4-Methyl-2-pentanone	"	ND	----	2.00	"	"	"	"	"	
Methylene chloride	"	ND	----	5.00	"	"	"	"	"	
Naphthalene	"	ND	----	2.50	"	"	"	"	"	
n-Propylbenzene	"	ND	----	0.500	"	"	"	"	"	
Styrene	"	ND	----	0.500	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	1.00	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	----	1.00	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	----	0.200	"	"	"	"	"	
1,1,1,2,2-Tetrachloroethane	"	ND	----	0.500	"	"	"	"	"	
Tetrachloroethene	"	ND	----	0.200	"	"	"	"	"	
Toluene	"	ND	----	0.200	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	----	0.200	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	----	0.200	"	"	"	"	"	
Trichloroethene	"	ND	----	0.200	"	"	"	"	"	
Trichlorofluoromethane	"	ND	----	0.500	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	0.500	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	0.200	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	0.500	"	"	"	"	"	
Vinyl chloride	"	ND	----	0.200	"	"	"	"	"	
o-Xylene	"	ND	----	0.250	"	"	"	"	"	
m,p-Xylene	"	ND	----	0.500	"	"	"	"	"	
Total Xylenes	"	ND	----	0.750	"	"	"	"	"	
<i>Surrogate(s): 1,2-DCA-d4</i>				123%		76 - 138 %	"		"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds by EPA Method 8260B
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-33 (AM-W-12)		Water		Sampled: 12/16/08 14:55						
Toluene-d8		104%		80 - 120 %	1x				12/18/08 17:01	
4-BFB		96.4%		80 - 120 %	"				"	
BRL0200-36 (ALY-W-3)		Water		Sampled: 12/17/08 08:40						
Acetone	EPA 8260B	ND	----	10.0	ug/l	1x	8L18006	12/18/08 13:02	12/18/08 17:30	
Benzene	"	ND	----	0.200	"	"	"	"	"	
Bromobenzene	"	ND	----	0.500	"	"	"	"	"	
Bromochloromethane	"	ND	----	0.250	"	"	"	"	"	
Bromodichloromethane	"	ND	----	0.200	"	"	"	"	"	
Bromoform	"	ND	----	0.250	"	"	"	"	"	
Bromomethane	"	ND	----	2.00	"	"	"	"	"	
2-Butanone	"	ND	----	2.00	"	"	"	"	"	
n-Butylbenzene	"	ND	----	0.200	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	0.200	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	0.500	"	"	"	"	"	
Carbon disulfide	"	ND	----	0.500	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	0.200	"	"	"	"	"	
Chlorobenzene	"	ND	----	0.200	"	"	"	"	"	C
Chloroethane	"	ND	----	1.00	"	"	"	"	"	
Chloroform	"	ND	----	0.200	"	"	"	"	"	
Chloromethane	"	ND	----	1.00	"	"	"	"	"	
2-Chlorotoluene	"	ND	----	0.500	"	"	"	"	"	
4-Chlorotoluene	"	ND	----	0.500	"	"	"	"	"	
Dibromochloromethane	"	ND	----	0.200	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	----	1.00	"	"	"	"	"	
1,2-Dibromoethane	"	ND	----	0.200	"	"	"	"	"	
Dibromomethane	"	ND	----	0.200	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	0.200	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	----	0.200	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	----	0.200	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	----	0.500	"	"	"	"	"	C5
1,1-Dichloroethane	"	ND	----	0.200	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	0.200	"	"	"	"	"	
1,1-Dichloroethene	"	ND	----	0.200	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	0.200	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	0.200	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	0.200	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	0.200	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	0.500	"	"	"	"	"	C
1,1-Dichloropropene	"	ND	----	0.200	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	0.200	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	0.200	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds by EPA Method 8260B
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-36 (ALY-W-3)		Water		Sampled: 12/17/08 08:40						
Ethylbenzene	EPA 8260B	ND	----	0.200	ug/l	1x	8L18006	12/18/08 13:02	12/18/08 17:30	
Hexachlorobutadiene	"	ND	----	2.50	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	1.00	"	"	"	"	"	
n-Hexane	"	ND	----	1.00	"	"	"	"	"	
2-Hexanone	"	ND	----	2.00	"	"	"	"	"	
Isopropylbenzene	"	ND	----	0.500	"	"	"	"	"	
p-Isopropyltoluene	"	0.540	----	0.200	"	"	"	"	"	
4-Methyl-2-pentanone	"	ND	----	2.00	"	"	"	"	"	
Methylene chloride	"	ND	----	5.00	"	"	"	"	"	
Naphthalene	"	ND	----	2.50	"	"	"	"	"	
n-Propylbenzene	"	ND	----	0.500	"	"	"	"	"	
Styrene	"	ND	----	0.500	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	1.00	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	----	1.00	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	----	0.200	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	----	0.500	"	"	"	"	"	
Tetrachloroethene	"	ND	----	0.200	"	"	"	"	"	
Toluene	"	2.06	----	0.200	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	----	0.200	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	----	0.200	"	"	"	"	"	
Trichloroethene	"	ND	----	0.200	"	"	"	"	"	
Trichlorofluoromethane	"	ND	----	0.500	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	0.500	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	0.200	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	0.500	"	"	"	"	"	
Vinyl chloride	"	ND	----	0.200	"	"	"	"	"	
o-Xylene	"	ND	----	0.250	"	"	"	"	"	
m,p-Xylene	"	ND	----	0.500	"	"	"	"	"	
Total Xylenes	"	ND	----	0.750	"	"	"	"	"	
<i>Surrogate(s): 1,2-DCA-d4</i>			<i>118%</i>		<i>76 - 138 %</i>	<i>"</i>				<i>"</i>
<i>Toluene-d8</i>			<i>103%</i>		<i>80 - 120 %</i>	<i>"</i>				<i>"</i>
<i>4-BFB</i>			<i>95.8%</i>		<i>80 - 120 %</i>	<i>"</i>				<i>"</i>

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Volatile Organic Compounds by EPA Method 8260B
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-41 (ALY-W-12)		Water		Sampled: 12/17/08 10:30						
Acetone	EPA 8260B	ND	----	10.0	ug/l	1x	8L18006	12/18/08 13:02	12/18/08 17:58	
Benzene	"	ND	----	0.200	"	"	"	"	"	
Bromobenzene	"	ND	----	0.500	"	"	"	"	"	
Bromochloromethane	"	ND	----	0.250	"	"	"	"	"	
Bromodichloromethane	"	ND	----	0.200	"	"	"	"	"	
Bromoform	"	ND	----	0.250	"	"	"	"	"	
Bromomethane	"	ND	----	2.00	"	"	"	"	"	
2-Butanone	"	ND	----	2.00	"	"	"	"	"	
n-Butylbenzene	"	ND	----	0.200	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	0.200	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	0.500	"	"	"	"	"	
Carbon disulfide	"	ND	----	0.500	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	0.200	"	"	"	"	"	C
Chlorobenzene	"	ND	----	0.200	"	"	"	"	"	
Chloroethane	"	ND	----	1.00	"	"	"	"	"	
Chloroform	"	ND	----	0.200	"	"	"	"	"	
Chloromethane	"	ND	----	1.00	"	"	"	"	"	
2-Chlorotoluene	"	ND	----	0.500	"	"	"	"	"	
4-Chlorotoluene	"	ND	----	0.500	"	"	"	"	"	
Dibromochloromethane	"	ND	----	0.200	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	----	1.00	"	"	"	"	"	
1,2-Dibromoethane	"	ND	----	0.200	"	"	"	"	"	
Dibromomethane	"	ND	----	0.200	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	0.200	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	----	0.200	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	----	0.200	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	----	0.500	"	"	"	"	"	C5
1,1-Dichloroethane	"	ND	----	0.200	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	0.200	"	"	"	"	"	
1,1-Dichloroethene	"	ND	----	0.200	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	0.200	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	0.200	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	0.200	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	0.200	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	0.500	"	"	"	"	"	C
1,1-Dichloropropene	"	ND	----	0.200	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	0.200	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	0.200	"	"	"	"	"	
Ethylbenzene	"	ND	----	0.200	"	"	"	"	"	
Hexachlorobutadiene	"	ND	----	2.50	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	1.00	"	"	"	"	"	
n-Hexane	"	ND	----	1.00	"	"	"	"	"	
2-Hexanone	"	ND	----	2.00	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds by EPA Method 8260B
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-41 (ALY-W-12)		Water		Sampled: 12/17/08 10:30						
Isopropylbenzene	EPA 8260B	ND	----	0.500	ug/l	1x	8L18006	12/18/08 13:02	12/18/08 17:58	
p-Isopropyltoluene	"	10.4	----	0.200	"	"	"	"	"	
4-Methyl-2-pentanone	"	ND	----	2.00	"	"	"	"	"	
Methylene chloride	"	ND	----	5.00	"	"	"	"	"	
Naphthalene	"	ND	----	2.50	"	"	"	"	"	
n-Propylbenzene	"	ND	----	0.500	"	"	"	"	"	
Styrene	"	ND	----	0.500	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	1.00	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	----	1.00	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	----	0.200	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	----	0.500	"	"	"	"	"	
Tetrachloroethene	"	ND	----	0.200	"	"	"	"	"	
Toluene	"	ND	----	0.200	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	----	0.200	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	----	0.200	"	"	"	"	"	
Trichloroethene	"	ND	----	0.200	"	"	"	"	"	
Trichlorofluoromethane	"	ND	----	0.500	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	0.500	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	0.200	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	0.500	"	"	"	"	"	
Vinyl chloride	"	ND	----	0.200	"	"	"	"	"	
o-Xylene	"	ND	----	0.250	"	"	"	"	"	
m,p-Xylene	"	ND	----	0.500	"	"	"	"	"	
Total Xylenes	"	ND	----	0.750	"	"	"	"	"	
<i>Surrogate(s): 1,2-DCA-d4</i>			<i>121%</i>		<i>76 - 138 %</i>	"				"
<i>Toluene-d8</i>			<i>102%</i>		<i>80 - 120 %</i>	"				"
<i>4-BFB</i>			<i>92.0%</i>		<i>80 - 120 %</i>	"				"

BRL0200-46 (ALY-W-7)

Water

Sampled: 12/17/08 12:20

Acetone	EPA 8260B	ND	----	10.0	ug/l	1x	8L18006	12/18/08 13:02	12/18/08 18:27	
Benzene	"	ND	----	0.200	"	"	"	"	"	
Bromobenzene	"	ND	----	0.500	"	"	"	"	"	
Bromochloromethane	"	ND	----	0.250	"	"	"	"	"	
Bromodichloromethane	"	ND	----	0.200	"	"	"	"	"	
Bromoform	"	ND	----	0.250	"	"	"	"	"	
Bromomethane	"	ND	----	2.00	"	"	"	"	"	
2-Butanone	"	ND	----	2.00	"	"	"	"	"	
n-Butylbenzene	"	ND	----	0.200	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	0.200	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	0.500	"	"	"	"	"	
Carbon disulfide	"	ND	----	0.500	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	0.200	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Volatile Organic Compounds by EPA Method 8260B
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-46 (ALY-W-7)		Water		Sampled: 12/17/08 12:20						
Chlorobenzene	EPA 8260B	ND	----	0.200	ug/l	1x	8L18006	12/18/08 13:02	12/18/08 18:27	
Chloroethane	"	ND	----	1.00	"	"	"	"	"	
Chloroform	"	ND	----	0.200	"	"	"	"	"	
Chloromethane	"	ND	----	1.00	"	"	"	"	"	
2-Chlorotoluene	"	ND	----	0.500	"	"	"	"	"	
4-Chlorotoluene	"	ND	----	0.500	"	"	"	"	"	
Dibromochloromethane	"	ND	----	0.200	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	----	1.00	"	"	"	"	"	
1,2-Dibromoethane	"	ND	----	0.200	"	"	"	"	"	
Dibromomethane	"	ND	----	0.200	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	0.200	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	----	0.200	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	----	0.200	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	----	0.500	"	"	"	"	"	C5
1,1-Dichloroethane	"	ND	----	0.200	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	0.200	"	"	"	"	"	
1,1-Dichloroethene	"	ND	----	0.200	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	0.200	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	0.200	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	0.200	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	0.200	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	0.500	"	"	"	"	"	C
1,1-Dichloropropene	"	ND	----	0.200	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	0.200	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	0.200	"	"	"	"	"	
Ethylbenzene	"	ND	----	0.200	"	"	"	"	"	
Hexachlorobutadiene	"	ND	----	2.50	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	1.00	"	"	"	"	"	
n-Hexane	"	ND	----	1.00	"	"	"	"	"	
2-Hexanone	"	ND	----	2.00	"	"	"	"	"	
Isopropylbenzene	"	ND	----	0.500	"	"	"	"	"	
p-Isopropyltoluene	"	2.86	----	0.200	"	"	"	"	"	
4-Methyl-2-pentanone	"	ND	----	2.00	"	"	"	"	"	
Methylene chloride	"	ND	----	5.00	"	"	"	"	"	
Naphthalene	"	ND	----	2.50	"	"	"	"	"	
n-Propylbenzene	"	ND	----	0.500	"	"	"	"	"	
Styrene	"	ND	----	0.500	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	1.00	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	----	1.00	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	----	0.200	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	----	0.500	"	"	"	"	"	
Tetrachloroethene	"	ND	----	0.200	"	"	"	"	"	
Toluene	"	0.340	----	0.200	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds by EPA Method 8260B
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-46 (ALY-W-7)		Water		Sampled: 12/17/08 12:20						
1,1,1-Trichloroethane	EPA 8260B	ND	----	0.200	ug/l	1x	8L18006	12/18/08 13:02	12/18/08 18:27	
1,1,2-Trichloroethane	"	ND	----	0.200	"	"	"	"	"	
Trichloroethene	"	ND	----	0.200	"	"	"	"	"	
Trichlorofluoromethane	"	ND	----	0.500	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	0.500	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	0.200	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	0.500	"	"	"	"	"	
Vinyl chloride	"	ND	----	0.200	"	"	"	"	"	
o-Xylene	"	ND	----	0.250	"	"	"	"	"	
m,p-Xylene	"	ND	----	0.500	"	"	"	"	"	
Total Xylenes	"	ND	----	0.750	"	"	"	"	"	

Surrogate(s): 1,2-DCA-d4 123% 76 - 138 %
 Toluene-d8 102% 80 - 120 %
 4-BFB 93.0% 80 - 120 %

BRL0200-51 (ALY-W-2)		Water		Sampled: 12/17/08 14:00						
Acetone	EPA 8260B	ND	----	10.0	ug/l	1x	8L18006	12/18/08 13:02	12/18/08 18:56	
Benzene	"	ND	----	0.200	"	"	"	"	"	
Bromobenzene	"	ND	----	0.500	"	"	"	"	"	
Bromochloromethane	"	ND	----	0.250	"	"	"	"	"	
Bromodichloromethane	"	ND	----	0.200	"	"	"	"	"	
Bromoform	"	ND	----	0.250	"	"	"	"	"	
Bromomethane	"	ND	----	2.00	"	"	"	"	"	
2-Butanone	"	ND	----	2.00	"	"	"	"	"	
n-Butylbenzene	"	ND	----	0.200	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	0.200	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	0.500	"	"	"	"	"	
Carbon disulfide	"	ND	----	0.500	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	0.200	"	"	"	"	"	
Chlorobenzene	"	ND	----	0.200	"	"	"	"	"	
Chloroethane	"	ND	----	1.00	"	"	"	"	"	
Chloroform	"	ND	----	0.200	"	"	"	"	"	
Chloromethane	"	ND	----	1.00	"	"	"	"	"	
2-Chlorotoluene	"	ND	----	0.500	"	"	"	"	"	
4-Chlorotoluene	"	ND	----	0.500	"	"	"	"	"	
Dibromochloromethane	"	ND	----	0.200	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	----	1.00	"	"	"	"	"	
1,2-Dibromoethane	"	ND	----	0.200	"	"	"	"	"	
Dibromomethane	"	ND	----	0.200	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	0.200	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	----	0.200	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	----	0.200	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds by EPA Method 8260B
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-51 (ALY-W-2)		Water		Sampled: 12/17/08 14:00						
Dichlorodifluoromethane	EPA 8260B	ND	----	0.500	ug/l	1x	8L18006	12/18/08 13:02	12/18/08 18:56	C5
1,1-Dichloroethane	"	ND	----	0.200	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	0.200	"	"	"	"	"	
1,1-Dichloroethene	"	ND	----	0.200	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	0.200	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	0.200	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	0.200	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	0.200	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	0.500	"	"	"	"	"	C
1,1-Dichloropropene	"	ND	----	0.200	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	0.200	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	0.200	"	"	"	"	"	
Ethylbenzene	"	ND	----	0.200	"	"	"	"	"	
Hexachlorobutadiene	"	ND	----	2.50	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	1.00	"	"	"	"	"	
n-Hexane	"	ND	----	1.00	"	"	"	"	"	
2-Hexanone	"	ND	----	2.00	"	"	"	"	"	
Isopropylbenzene	"	ND	----	0.500	"	"	"	"	"	
p-Isopropyltoluene	"	ND	----	0.200	"	"	"	"	"	
4-Methyl-2-pentanone	"	ND	----	2.00	"	"	"	"	"	
Methylene chloride	"	ND	----	5.00	"	"	"	"	"	
Naphthalene	"	ND	----	2.50	"	"	"	"	"	
n-Propylbenzene	"	ND	----	0.500	"	"	"	"	"	
Styrene	"	ND	----	0.500	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	1.00	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	----	1.00	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	----	0.200	"	"	"	"	"	
1,1,1,2,2-Tetrachloroethane	"	ND	----	0.500	"	"	"	"	"	
Tetrachloroethene	"	ND	----	0.200	"	"	"	"	"	
Toluene	"	0.290	----	0.200	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	----	0.200	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	----	0.200	"	"	"	"	"	
Trichloroethene	"	ND	----	0.200	"	"	"	"	"	
Trichlorofluoromethane	"	ND	----	0.500	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	0.500	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	0.200	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	0.500	"	"	"	"	"	
Vinyl chloride	"	ND	----	0.200	"	"	"	"	"	
o-Xylene	"	ND	----	0.250	"	"	"	"	"	
m,p-Xylene	"	ND	----	0.500	"	"	"	"	"	
Total Xylenes	"	ND	----	0.750	"	"	"	"	"	
<i>Surrogate(s): 1,2-DCA-d4</i>				123%	76 - 138 %					

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Volatile Organic Compounds by EPA Method 8260B
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-51 (ALY-W-2)		Water								Sampled: 12/17/08 14:00
<i>Toluene-d8</i>			103%		80 - 120 %	1x				12/18/08 18:56
<i>4-BFB</i>			97.2%		80 - 120 %	"				"
BRL0200-60 (Trip Blanks)		Water								Sampled: 12/17/08 17:00
Acetone	EPA 8260B	ND	----	10.0	ug/l	1x	8L18006	12/18/08 13:02	12/18/08 19:24	
Benzene	"	ND	----	0.200	"	"	"	"	"	
Bromobenzene	"	ND	----	0.500	"	"	"	"	"	
Bromochloromethane	"	ND	----	0.250	"	"	"	"	"	
Bromodichloromethane	"	ND	----	0.200	"	"	"	"	"	
Bromoform	"	ND	----	0.250	"	"	"	"	"	
Bromomethane	"	ND	----	2.00	"	"	"	"	"	
2-Butanone	"	ND	----	2.00	"	"	"	"	"	
n-Butylbenzene	"	ND	----	0.200	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	0.200	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	0.500	"	"	"	"	"	
Carbon disulfide	"	ND	----	0.500	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	0.200	"	"	"	"	"	
Chlorobenzene	"	ND	----	0.200	"	"	"	"	"	C
Chloroethane	"	ND	----	1.00	"	"	"	"	"	
Chloroform	"	ND	----	0.200	"	"	"	"	"	
Chloromethane	"	ND	----	1.00	"	"	"	"	"	
2-Chlorotoluene	"	ND	----	0.500	"	"	"	"	"	
4-Chlorotoluene	"	ND	----	0.500	"	"	"	"	"	
Dibromochloromethane	"	ND	----	0.200	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	----	1.00	"	"	"	"	"	
1,2-Dibromoethane	"	ND	----	0.200	"	"	"	"	"	
Dibromomethane	"	ND	----	0.200	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	0.200	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	----	0.200	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	----	0.200	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	----	0.500	"	"	"	"	"	C5
1,1-Dichloroethane	"	ND	----	0.200	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	0.200	"	"	"	"	"	
1,1-Dichloroethene	"	ND	----	0.200	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	0.200	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	0.200	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	0.200	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	0.200	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	0.500	"	"	"	"	"	C
1,1-Dichloropropene	"	ND	----	0.200	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	0.200	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	0.200	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Volatile Organic Compounds by EPA Method 8260B
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-60 (Trip Blanks)		Water		Sampled: 12/17/08 17:00						
Ethylbenzene	EPA 8260B	ND	----	0.200	ug/l	1x	8L18006	12/18/08 13:02	12/18/08 19:24	
Hexachlorobutadiene	"	ND	----	2.50	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	1.00	"	"	"	"	"	
n-Hexane	"	ND	----	1.00	"	"	"	"	"	
2-Hexanone	"	ND	----	2.00	"	"	"	"	"	
Isopropylbenzene	"	ND	----	0.500	"	"	"	"	"	
p-Isopropyltoluene	"	ND	----	0.200	"	"	"	"	"	
4-Methyl-2-pentanone	"	ND	----	2.00	"	"	"	"	"	
Methylene chloride	"	ND	----	5.00	"	"	"	"	"	
Naphthalene	"	ND	----	2.50	"	"	"	"	"	
n-Propylbenzene	"	ND	----	0.500	"	"	"	"	"	
Styrene	"	ND	----	0.500	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	1.00	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	----	1.00	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	----	0.200	"	"	"	"	"	
1,1,1,2,2-Tetrachloroethane	"	ND	----	0.500	"	"	"	"	"	
Tetrachloroethene	"	ND	----	0.200	"	"	"	"	"	
Toluene	"	ND	----	0.200	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	----	0.200	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	----	0.200	"	"	"	"	"	
Trichloroethene	"	ND	----	0.200	"	"	"	"	"	
Trichlorofluoromethane	"	ND	----	0.500	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	0.500	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	0.200	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	0.500	"	"	"	"	"	
Vinyl chloride	"	ND	----	0.200	"	"	"	"	"	
o-Xylene	"	ND	----	0.250	"	"	"	"	"	
m,p-Xylene	"	ND	----	0.500	"	"	"	"	"	
Total Xylenes	"	ND	----	0.750	"	"	"	"	"	

Surrogate(s): 1,2-DCA-d4
 Toluene-d8
 4-BFB

120% 76 - 138 %
 105% 80 - 120 %
 100% 80 - 120 %

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Semivolatile Organic Compounds by EPA Method 8270C
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-33 (AM-W-12)		Water		Sampled: 12/16/08 14:55						
Hexachlorobenzene	EPA 8270C	ND	----	9.80	ug/l	1x	8L22017	12/22/08 11:18	12/28/08 19:30	
Hexachlorobutadiene	"	ND	----	9.80	"	"	"	"	"	
Hexachlorocyclopentadiene	"	ND	----	9.80	"	"	"	"	"	C5
Hexachloroethane	"	ND	----	9.80	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	----	9.80	"	"	"	"	"	
Isophorone	"	ND	----	9.80	"	"	"	"	"	
1-Methylnaphthalene	"	ND	----	9.80	"	"	"	"	"	
2-Methylnaphthalene	"	ND	----	9.80	"	"	"	"	"	
Naphthalene	"	ND	----	9.80	"	"	"	"	"	
2-Nitroaniline	"	ND	----	9.80	"	"	"	"	"	
3-Nitroaniline	"	ND	----	9.80	"	"	"	"	"	
4-Nitroaniline	"	ND	----	9.80	"	"	"	"	"	
Nitrobenzene	"	ND	----	9.80	"	"	"	"	"	
2-Nitrophenol	"	ND	----	9.80	"	"	"	"	"	
4-Nitrophenol	"	ND	----	9.80	"	"	"	"	"	
N-Nitrosodi-n-propylamine	"	ND	----	9.80	"	"	"	"	"	
Di-n-octyl phthalate	"	ND	----	9.80	"	"	"	"	"	
Pentachlorophenol	"	ND	----	9.80	"	"	"	"	"	
Phenanthrene	"	ND	----	9.80	"	"	"	"	"	
Phenol	"	ND	----	9.80	"	"	"	"	"	
Pyrene	"	ND	----	9.80	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	----	9.80	"	"	"	"	"	
2,4,5-Trichlorophenol	"	ND	----	9.80	"	"	"	"	"	
2,4,6-Trichlorophenol	"	ND	----	9.80	"	"	"	"	"	
<i>Surrogate(s): 2-FBP</i>			67.7%		50 - 120 %	"				"
<i>2-FP</i>			51.8%		45 - 120 %	"				"
<i>Nitrobenzene-d5</i>			62.2%		50 - 120 %	"				"
<i>Phenol-d6</i>			52.3%		45 - 120 %	"				"
<i>p-Terphenyl-d14</i>			50.2%		10 - 140 %	"				"
<i>2,4,6-TBP</i>			72.9%		30 - 120 %	"				"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Semivolatile Organic Compounds by EPA Method 8270C
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	-------	----------	----------	-------

BRL0200-33RE1 (AM-W-12)

Water

Sampled: 12/16/08 14:55

Benzoic Acid	EPA 8270C	ND	----	19.6	ug/l	1x	8L22017	12/22/08 11:18	01/05/09 09:10	
Surrogate(s):										
2-FBP		66.2%		50 - 120 %		"				"
2-FP		50.2%		45 - 120 %		"				"
Nitrobenzene-d5		64.2%		50 - 120 %		"				"
Phenol-d6		55.6%		45 - 120 %		"				"
p-Terphenyl-d14		38.1%		10 - 140 %		"				"
2,4,6-TBP		82.1%		30 - 120 %		"				"

BRL0200-41 (ALY-W-12)

Water

Sampled: 12/17/08 10:30

Acenaphthene	EPA 8270C	ND	----	9.80	ug/l	1x	8L22017	12/22/08 11:18	12/28/08 19:54	
Acenaphthylene	"	ND	----	9.80	"	"	"	"	"	
Aniline	"	ND	----	9.80	"	"	"	"	"	
Anthracene	"	ND	----	9.80	"	"	"	"	"	
Benzo (a) anthracene	"	ND	----	9.80	"	"	"	"	"	
Benzo (a) pyrene	"	ND	----	9.80	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	----	9.80	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	----	9.80	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	----	9.80	"	"	"	"	"	
Benzoic Acid	"	ND	----	19.6	"	"	"	"	"	
Benzyl alcohol	"	ND	----	9.80	"	"	"	"	"	
Bis(2-chloroethoxy)methane	"	ND	----	9.80	"	"	"	"	"	
Bis(2-chloroethyl)ether	"	ND	----	9.80	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	"	ND	----	9.80	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	"	ND	----	49.0	"	"	"	"	"	
4-Bromophenyl phenyl ether	"	ND	----	9.80	"	"	"	"	"	
Butyl benzyl phthalate	"	ND	----	9.80	"	"	"	"	"	
Carbazole	"	ND	----	9.80	"	"	"	"	"	
4-Chloroaniline	"	ND	----	9.80	"	"	"	"	"	
4-Chloro-3-methylphenol	"	ND	----	9.80	"	"	"	"	"	
2-Chloronaphthalene	"	ND	----	9.80	"	"	"	"	"	
2-Chlorophenol	"	ND	----	9.80	"	"	"	"	"	
4-Chlorophenyl phenyl ether	"	ND	----	9.80	"	"	"	"	"	
3 & 4-Methylphenol (m,p-Cresols)	"	ND	----	9.80	"	"	"	"	"	
2-Methylphenol (o-Cresol)	"	ND	----	9.80	"	"	"	"	"	
Chrysene	"	ND	----	9.80	"	"	"	"	"	
Di-n-butyl phthalate	"	ND	----	9.80	"	"	"	"	"	
Dibenz (a,h) anthracene	"	ND	----	9.80	"	"	"	"	"	
Dibenzofuran	"	ND	----	9.80	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	9.80	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	----	9.80	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	----	9.80	"	"	"	"	"	
3,3'-Dichlorobenzidine	"	ND	----	9.80	"	"	"	"	"	

C5

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Semivolatile Organic Compounds by EPA Method 8270C
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-41 (ALY-W-12)		Water		Sampled: 12/17/08 10:30						
2,4-Dichlorophenol	EPA 8270C	ND	----	9.80	ug/l	1x	8L22017	12/22/08 11:18	12/28/08 19:54	
Diethyl phthalate	"	ND	----	9.80	"	"	"	"	"	
2,4-Dimethylphenol	"	ND	----	9.80	"	"	"	"	"	
Dimethyl phthalate	"	ND	----	9.80	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	"	ND	----	9.80	"	"	"	"	"	
2,4-Dinitrophenol	"	ND	----	19.6	"	"	"	"	"	
2,4-Dinitrotoluene	"	ND	----	9.80	"	"	"	"	"	
2,6-Dinitrotoluene	"	ND	----	9.80	"	"	"	"	"	
N-Nitrosodiphenylamine	"	ND	----	9.80	"	"	"	"	"	
Fluoranthene	"	ND	----	9.80	"	"	"	"	"	
Fluorene	"	ND	----	9.80	"	"	"	"	"	
Hexachlorobenzene	"	ND	----	9.80	"	"	"	"	"	
Hexachlorobutadiene	"	ND	----	9.80	"	"	"	"	"	
Hexachlorocyclopentadiene	"	ND	----	9.80	"	"	"	"	"	C5
Hexachloroethane	"	ND	----	9.80	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	----	9.80	"	"	"	"	"	
Isophorone	"	ND	----	9.80	"	"	"	"	"	
1-Methylnaphthalene	"	ND	----	9.80	"	"	"	"	"	
2-Methylnaphthalene	"	ND	----	9.80	"	"	"	"	"	
Naphthalene	"	ND	----	9.80	"	"	"	"	"	
2-Nitroaniline	"	ND	----	9.80	"	"	"	"	"	
3-Nitroaniline	"	ND	----	9.80	"	"	"	"	"	
4-Nitroaniline	"	ND	----	9.80	"	"	"	"	"	
Nitrobenzene	"	ND	----	9.80	"	"	"	"	"	
2-Nitrophenol	"	ND	----	9.80	"	"	"	"	"	
4-Nitrophenol	"	ND	----	9.80	"	"	"	"	"	
N-Nitrosodi-n-propylamine	"	ND	----	9.80	"	"	"	"	"	
Di-n-octyl phthalate	"	ND	----	9.80	"	"	"	"	"	
Pentachlorophenol	"	ND	----	9.80	"	"	"	"	"	
Phenanthrene	"	ND	----	9.80	"	"	"	"	"	
Phenol	"	ND	----	9.80	"	"	"	"	"	
Pyrene	"	ND	----	9.80	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	----	9.80	"	"	"	"	"	
2,4,5-Trichlorophenol	"	ND	----	9.80	"	"	"	"	"	
2,4,6-Trichlorophenol	"	ND	----	9.80	"	"	"	"	"	
Surrogate(s):	2-FBP		81.8%		50 - 120 %	"				"
	2-FP		78.3%		45 - 120 %	"				"
	Nitrobenzene-d5		82.8%		50 - 120 %	"				"
	Phenol-d6		76.4%		45 - 120 %	"				"
	p-Terphenyl-d14		57.8%		10 - 140 %	"				"
	2,4,6-TBP		89.4%		30 - 120 %	"				"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Polynuclear Aromatic Hydrocarbons by GC/MS-SIM

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-02 (AM-SB-1-4.0-6.0)										
		Soil					Sampled: 12/15/08 13:00			
Acenaphthene	EPA 8270C-SIM	ND	----	0.0160	mg/kg dry	1x	8L23024	12/23/08 13:07	12/29/08 18:02	
Acenaphthylene	"	ND	----	0.0160	"	"	"	"	"	
Anthracene	"	ND	----	0.0160	"	"	"	"	"	
Benzo (a) anthracene	"	ND	----	0.0160	"	"	"	"	"	
Benzo (a) pyrene	"	ND	----	0.0160	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	----	0.0160	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	----	0.0160	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	----	0.0160	"	"	"	"	"	
Chrysene	"	ND	----	0.0160	"	"	"	"	"	
Dibenz (a,h) anthracene	"	ND	----	0.0160	"	"	"	"	"	
Fluoranthene	"	ND	----	0.0160	"	"	"	"	"	
Fluorene	"	ND	----	0.0160	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	----	0.0160	"	"	"	"	"	
1-Methylnaphthalene	"	ND	----	0.0160	"	"	"	"	"	
2-Methylnaphthalene	"	ND	----	0.0160	"	"	"	"	"	
Naphthalene	"	ND	----	0.0160	"	"	"	"	"	
Phenanthrene	"	ND	----	0.0160	"	"	"	"	"	
Pyrene	"	ND	----	0.0160	"	"	"	"	"	

Surrogate(s): *p-Terphenyl-d14*

88.3%

50 - 147 %

"

"

BRL0200-05 (AM-SB-2-4.0-6.0)										
		Soil					Sampled: 12/15/08 14:40			
Acenaphthene	EPA 8270C-SIM	ND	----	0.0131	mg/kg dry	1x	8L23024	12/23/08 13:07	12/29/08 18:29	
Acenaphthylene	"	ND	----	0.0131	"	"	"	"	"	
Anthracene	"	ND	----	0.0131	"	"	"	"	"	
Benzo (a) anthracene	"	0.0141	----	0.0131	"	"	"	"	"	
Benzo (a) pyrene	"	0.0178	----	0.0131	"	"	"	"	"	
Benzo (b) fluoranthene	"	0.0160	----	0.0131	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	----	0.0131	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	----	0.0131	"	"	"	"	"	
Chrysene	"	0.0181	----	0.0131	"	"	"	"	"	
Dibenz (a,h) anthracene	"	ND	----	0.0131	"	"	"	"	"	
Fluoranthene	"	0.0371	----	0.0131	"	"	"	"	"	
Fluorene	"	ND	----	0.0131	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	----	0.0131	"	"	"	"	"	
1-Methylnaphthalene	"	ND	----	0.0131	"	"	"	"	"	
2-Methylnaphthalene	"	ND	----	0.0131	"	"	"	"	"	
Naphthalene	"	ND	----	0.0131	"	"	"	"	"	
Phenanthrene	"	0.0193	----	0.0131	"	"	"	"	"	
Pyrene	"	0.0294	----	0.0131	"	"	"	"	"	

Surrogate(s): *p-Terphenyl-d14*

82.4%

50 - 147 %

"

"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Polynuclear Aromatic Hydrocarbons by GC/MS-SIM

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-07 (AM-SB-3-4.0-5.0)		Soil		Sampled: 12/15/08 15:20						
Acenaphthene	EPA 8270C-SIM	ND	----	0.0133	mg/kg dry	1x	8L23024	12/23/08 13:07	12/29/08 18:55	
Acenaphthylene	"	ND	----	0.0133	"	"	"	"	"	
Anthracene	"	ND	----	0.0133	"	"	"	"	"	
Benzo (a) anthracene	"	ND	----	0.0133	"	"	"	"	"	
Benzo (a) pyrene	"	ND	----	0.0133	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	----	0.0133	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	----	0.0133	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	----	0.0133	"	"	"	"	"	
Chrysene	"	ND	----	0.0133	"	"	"	"	"	
Dibenz (a,h) anthracene	"	ND	----	0.0133	"	"	"	"	"	
Fluoranthene	"	ND	----	0.0133	"	"	"	"	"	
Fluorene	"	ND	----	0.0133	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	----	0.0133	"	"	"	"	"	C
1-Methylnaphthalene	"	ND	----	0.0133	"	"	"	"	"	
2-Methylnaphthalene	"	ND	----	0.0133	"	"	"	"	"	
Naphthalene	"	ND	----	0.0133	"	"	"	"	"	
Phenanthrene	"	ND	----	0.0133	"	"	"	"	"	
Pyrene	"	ND	----	0.0133	"	"	"	"	"	
<i>Surrogate(s): p-Terphenyl-d14</i>			91.2%		50 - 147 %	"				

BRL0200-08 (AM-SB-7-1.5-3.0)		Soil		Sampled: 12/15/08 15:40						
Acenaphthene	EPA 8270C-SIM	ND	----	0.0133	mg/kg dry	1x	8L23024	12/23/08 13:07	12/29/08 19:21	
Acenaphthylene	"	ND	----	0.0133	"	"	"	"	"	
Anthracene	"	ND	----	0.0133	"	"	"	"	"	
Benzo (a) anthracene	"	ND	----	0.0133	"	"	"	"	"	
Benzo (a) pyrene	"	ND	----	0.0133	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	----	0.0133	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	----	0.0133	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	----	0.0133	"	"	"	"	"	
Chrysene	"	ND	----	0.0133	"	"	"	"	"	
Dibenz (a,h) anthracene	"	ND	----	0.0133	"	"	"	"	"	
Fluoranthene	"	ND	----	0.0133	"	"	"	"	"	
Fluorene	"	ND	----	0.0133	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	----	0.0133	"	"	"	"	"	C
1-Methylnaphthalene	"	ND	----	0.0133	"	"	"	"	"	
2-Methylnaphthalene	"	ND	----	0.0133	"	"	"	"	"	
Naphthalene	"	ND	----	0.0133	"	"	"	"	"	
Phenanthrene	"	ND	----	0.0133	"	"	"	"	"	
Pyrene	"	ND	----	0.0133	"	"	"	"	"	
<i>Surrogate(s): p-Terphenyl-d14</i>			88.7%		50 - 147 %	"				

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Polynuclear Aromatic Hydrocarbons by GC/MS-SIM
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-09 (AM-SB-7-6.0-7.0)										
		Soil					Sampled: 12/15/08 15:55			
Acenaphthene	EPA 8270C-SIM	ND	----	0.0140	mg/kg dry	1x	8L23024	12/23/08 13:07	12/31/08 12:54	
Acenaphthylene	"	ND	----	0.0140	"	"	"	"	"	
Anthracene	"	ND	----	0.0140	"	"	"	"	"	
Benzo (a) anthracene	"	0.0457	----	0.0140	"	"	"	"	"	
Benzo (a) pyrene	"	0.0403	----	0.0140	"	"	"	"	"	
Benzo (b) fluoranthene	"	0.0255	----	0.0140	"	"	"	"	"	
Benzo (k) fluoranthene	"	0.0291	----	0.0140	"	"	"	"	"	
Benzo (ghi) perylene	"	0.0147	----	0.0140	"	"	"	"	"	
Chrysene	"	0.0593	----	0.0140	"	"	"	"	"	
Dibenz (a,h) anthracene	"	ND	----	0.0140	"	"	"	"	"	
Fluoranthene	"	0.0223	----	0.0140	"	"	"	"	"	
Fluorene	"	ND	----	0.0140	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	0.0169	----	0.0140	"	"	"	"	"	
1-Methylnaphthalene	"	ND	----	0.0140	"	"	"	"	"	
2-Methylnaphthalene	"	ND	----	0.0140	"	"	"	"	"	
Naphthalene	"	ND	----	0.0140	"	"	"	"	"	
Phenanthrene	"	ND	----	0.0140	"	"	"	"	"	
Pyrene	"	0.0235	----	0.0140	"	"	"	"	"	
<i>Surrogate(s): p-Terphenyl-d14</i>			75.0%		50 - 147 %	"				"

BRL0200-11 (AM-SB-10-10.0-11.0)										
		Soil					Sampled: 12/15/08 16:32			
Acenaphthene	EPA 8270C-SIM	ND	----	0.0131	mg/kg dry	1x	8L23024	12/23/08 13:07	12/31/08 13:20	
Acenaphthylene	"	ND	----	0.0131	"	"	"	"	"	
Anthracene	"	ND	----	0.0131	"	"	"	"	"	
Benzo (a) anthracene	"	ND	----	0.0131	"	"	"	"	"	
Benzo (a) pyrene	"	ND	----	0.0131	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	----	0.0131	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	----	0.0131	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	----	0.0131	"	"	"	"	"	
Chrysene	"	ND	----	0.0131	"	"	"	"	"	
Dibenz (a,h) anthracene	"	ND	----	0.0131	"	"	"	"	"	
Fluoranthene	"	0.0152	----	0.0131	"	"	"	"	"	
Fluorene	"	ND	----	0.0131	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	----	0.0131	"	"	"	"	"	
1-Methylnaphthalene	"	ND	----	0.0131	"	"	"	"	"	
2-Methylnaphthalene	"	ND	----	0.0131	"	"	"	"	"	
Naphthalene	"	ND	----	0.0131	"	"	"	"	"	
Phenanthrene	"	ND	----	0.0131	"	"	"	"	"	
Pyrene	"	ND	----	0.0131	"	"	"	"	"	
<i>Surrogate(s): p-Terphenyl-d14</i>			72.9%		50 - 147 %	"				"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Polynuclear Aromatic Hydrocarbons by GC/MS-SIM

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-13 (AM-SB-11-4.0-6.0)		Soil		Sampled: 12/16/08 08:22						
Acenaphthene	EPA 8270C-SIM	ND	----	0.0125	mg/kg dry	1x	8L23024	12/23/08 13:07	01/04/09 19:35	
Acenaphthylene	"	ND	----	0.0125	"	"	"	"	"	
Anthracene	"	ND	----	0.0125	"	"	"	"	"	
Benzo (a) anthracene	"	ND	----	0.0125	"	"	"	"	"	
Benzo (a) pyrene	"	ND	----	0.0125	"	"	"	"	"	C
Benzo (b) fluoranthene	"	ND	----	0.0125	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	----	0.0125	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	----	0.0125	"	"	"	"	"	C
Chrysene	"	ND	----	0.0125	"	"	"	"	"	
Dibenz (a,h) anthracene	"	ND	----	0.0125	"	"	"	"	"	C
Fluoranthene	"	ND	----	0.0125	"	"	"	"	"	
Fluorene	"	ND	----	0.0125	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	----	0.0125	"	"	"	"	"	C
1-Methylnaphthalene	"	ND	----	0.0125	"	"	"	"	"	
2-Methylnaphthalene	"	ND	----	0.0125	"	"	"	"	"	
Naphthalene	"	ND	----	0.0125	"	"	"	"	"	
Phenanthrene	"	ND	----	0.0125	"	"	"	"	"	
Pyrene	"	ND	----	0.0125	"	"	"	"	"	

Surrogate(s): *p-Terphenyl-d14*

106%

50 - 147 %

"

"

BRL0200-16 (AM-SB-8-8.0-10.0)		Soil		Sampled: 12/16/08 10:00						
Acenaphthene	EPA 8270C-SIM	ND	----	0.0122	mg/kg dry	1x	8L23024	12/23/08 13:07	12/31/08 13:46	
Acenaphthylene	"	ND	----	0.0122	"	"	"	"	"	
Anthracene	"	ND	----	0.0122	"	"	"	"	"	
Benzo (a) anthracene	"	ND	----	0.0122	"	"	"	"	"	
Benzo (a) pyrene	"	0.0155	----	0.0122	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	----	0.0122	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	----	0.0122	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	----	0.0122	"	"	"	"	"	
Chrysene	"	0.0145	----	0.0122	"	"	"	"	"	
Dibenz (a,h) anthracene	"	ND	----	0.0122	"	"	"	"	"	
Fluoranthene	"	0.0299	----	0.0122	"	"	"	"	"	
Fluorene	"	ND	----	0.0122	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	----	0.0122	"	"	"	"	"	
1-Methylnaphthalene	"	ND	----	0.0122	"	"	"	"	"	
2-Methylnaphthalene	"	ND	----	0.0122	"	"	"	"	"	
Naphthalene	"	ND	----	0.0122	"	"	"	"	"	
Phenanthrene	"	0.0250	----	0.0122	"	"	"	"	"	
Pyrene	"	0.0277	----	0.0122	"	"	"	"	"	

Surrogate(s): *p-Terphenyl-d14*

75.9%

50 - 147 %

"

"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Polynuclear Aromatic Hydrocarbons by GC/MS-SIM

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-18 (AM-SB-6-6.0-8.0)		Soil		Sampled: 12/16/08 10:35						
Acenaphthene	EPA 8270C-SIM	ND	----	0.0137	mg/kg dry	1x	8L23024	12/23/08 13:07	12/31/08 14:12	
Acenaphthylene	"	ND	----	0.0137	"	"	"	"	"	"
Anthracene	"	ND	----	0.0137	"	"	"	"	"	"
Benzo (a) anthracene	"	ND	----	0.0137	"	"	"	"	"	"
Benzo (a) pyrene	"	ND	----	0.0137	"	"	"	"	"	"
Benzo (b) fluoranthene	"	ND	----	0.0137	"	"	"	"	"	"
Benzo (k) fluoranthene	"	ND	----	0.0137	"	"	"	"	"	"
Benzo (ghi) perylene	"	ND	----	0.0137	"	"	"	"	"	"
Chrysene	"	ND	----	0.0137	"	"	"	"	"	"
Dibenz (a,h) anthracene	"	ND	----	0.0137	"	"	"	"	"	"
Fluoranthene	"	ND	----	0.0137	"	"	"	"	"	"
Fluorene	"	ND	----	0.0137	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	"	ND	----	0.0137	"	"	"	"	"	"
1-Methylnaphthalene	"	ND	----	0.0137	"	"	"	"	"	"
2-Methylnaphthalene	"	ND	----	0.0137	"	"	"	"	"	"
Naphthalene	"	ND	----	0.0137	"	"	"	"	"	"
Phenanthrene	"	ND	----	0.0137	"	"	"	"	"	"
Pyrene	"	ND	----	0.0137	"	"	"	"	"	"

Surrogate(s): *p-Terphenyl-d14*

75.4%

50 - 147 %

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BRL0200-21 (AM-SB-5-3.0-4.0)		Soil		Sampled: 12/16/08 11:40						
Acenaphthene	EPA 8270C-SIM	ND	----	0.0128	mg/kg dry	1x	8L23024	12/23/08 13:07	12/31/08 14:39	
Acenaphthylene	"	ND	----	0.0128	"	"	"	"	"	"
Anthracene	"	ND	----	0.0128	"	"	"	"	"	"
Benzo (a) anthracene	"	ND	----	0.0128	"	"	"	"	"	"
Benzo (a) pyrene	"	ND	----	0.0128	"	"	"	"	"	"
Benzo (b) fluoranthene	"	ND	----	0.0128	"	"	"	"	"	"
Benzo (k) fluoranthene	"	ND	----	0.0128	"	"	"	"	"	"
Benzo (ghi) perylene	"	ND	----	0.0128	"	"	"	"	"	"
Chrysene	"	ND	----	0.0128	"	"	"	"	"	"
Dibenz (a,h) anthracene	"	ND	----	0.0128	"	"	"	"	"	"
Fluoranthene	"	0.0163	----	0.0128	"	"	"	"	"	"
Fluorene	"	ND	----	0.0128	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	"	ND	----	0.0128	"	"	"	"	"	"
1-Methylnaphthalene	"	ND	----	0.0128	"	"	"	"	"	"
2-Methylnaphthalene	"	ND	----	0.0128	"	"	"	"	"	"
Naphthalene	"	ND	----	0.0128	"	"	"	"	"	"
Phenanthrene	"	0.0152	----	0.0128	"	"	"	"	"	"
Pyrene	"	0.0178	----	0.0128	"	"	"	"	"	"

Surrogate(s): *p-Terphenyl-d14*

71.4%

50 - 147 %

"

"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Polynuclear Aromatic Hydrocarbons by GC/MS-SIM

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-24 (AM-SB-4-7.0-8.0)		Soil		Sampled: 12/16/08 12:47						
Acenaphthene	EPA 8270C-SIM	ND	----	0.0146	mg/kg dry	1x	8L23024	12/23/08 13:07	12/31/08 15:05	
Acenaphthylene	"	ND	----	0.0146	"	"	"	"	"	"
Anthracene	"	ND	----	0.0146	"	"	"	"	"	"
Benzo (a) anthracene	"	ND	----	0.0146	"	"	"	"	"	"
Benzo (a) pyrene	"	ND	----	0.0146	"	"	"	"	"	"
Benzo (b) fluoranthene	"	ND	----	0.0146	"	"	"	"	"	"
Benzo (k) fluoranthene	"	ND	----	0.0146	"	"	"	"	"	"
Benzo (ghi) perylene	"	ND	----	0.0146	"	"	"	"	"	"
Chrysene	"	ND	----	0.0146	"	"	"	"	"	"
Dibenz (a,h) anthracene	"	ND	----	0.0146	"	"	"	"	"	"
Fluoranthene	"	ND	----	0.0146	"	"	"	"	"	"
Fluorene	"	ND	----	0.0146	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	"	ND	----	0.0146	"	"	"	"	"	"
1-Methylnaphthalene	"	ND	----	0.0146	"	"	"	"	"	"
2-Methylnaphthalene	"	ND	----	0.0146	"	"	"	"	"	"
Naphthalene	"	ND	----	0.0146	"	"	"	"	"	"
Phenanthrene	"	ND	----	0.0146	"	"	"	"	"	"
Pyrene	"	ND	----	0.0146	"	"	"	"	"	"

Surrogate(s): *p-Terphenyl-d14*

72.5%

50 - 147 %

"

"

BRL0200-26 (AM-SB-9-4.0-5.0)		Soil		Sampled: 12/16/08 13:40						
Acenaphthene	EPA 8270C-SIM	ND	----	0.0137	mg/kg dry	1x	8L23024	12/23/08 13:07	12/31/08 15:31	
Acenaphthylene	"	ND	----	0.0137	"	"	"	"	"	"
Anthracene	"	ND	----	0.0137	"	"	"	"	"	"
Benzo (a) anthracene	"	ND	----	0.0137	"	"	"	"	"	"
Benzo (a) pyrene	"	ND	----	0.0137	"	"	"	"	"	"
Benzo (b) fluoranthene	"	ND	----	0.0137	"	"	"	"	"	"
Benzo (k) fluoranthene	"	ND	----	0.0137	"	"	"	"	"	"
Benzo (ghi) perylene	"	ND	----	0.0137	"	"	"	"	"	"
Chrysene	"	ND	----	0.0137	"	"	"	"	"	"
Dibenz (a,h) anthracene	"	ND	----	0.0137	"	"	"	"	"	"
Fluoranthene	"	ND	----	0.0137	"	"	"	"	"	"
Fluorene	"	ND	----	0.0137	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	"	ND	----	0.0137	"	"	"	"	"	"
1-Methylnaphthalene	"	ND	----	0.0137	"	"	"	"	"	"
2-Methylnaphthalene	"	ND	----	0.0137	"	"	"	"	"	"
Naphthalene	"	ND	----	0.0137	"	"	"	"	"	"
Phenanthrene	"	ND	----	0.0137	"	"	"	"	"	"
Pyrene	"	ND	----	0.0137	"	"	"	"	"	"

Surrogate(s): *p-Terphenyl-d14*

73.6%

50 - 147 %

"

"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Polynuclear Aromatic Hydrocarbons by GC/MS-SIM

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-29 (AM-SB-12-9.0-10.0)										
		Soil					Sampled: 12/16/08 14:32			
Acenaphthene	EPA 8270C-SIM	ND	----	0.0133	mg/kg dry	1x	8L23024	12/23/08 13:07	12/31/08 15:57	
Acenaphthylene	"	ND	----	0.0133	"	"	"	"	"	
Anthracene	"	ND	----	0.0133	"	"	"	"	"	
Benzo (a) anthracene	"	ND	----	0.0133	"	"	"	"	"	
Benzo (a) pyrene	"	ND	----	0.0133	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	----	0.0133	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	----	0.0133	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	----	0.0133	"	"	"	"	"	
Chrysene	"	ND	----	0.0133	"	"	"	"	"	
Dibenz (a,h) anthracene	"	ND	----	0.0133	"	"	"	"	"	
Fluoranthene	"	0.0252	----	0.0133	"	"	"	"	"	
Fluorene	"	ND	----	0.0133	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	----	0.0133	"	"	"	"	"	
1-Methylnaphthalene	"	ND	----	0.0133	"	"	"	"	"	
2-Methylnaphthalene	"	ND	----	0.0133	"	"	"	"	"	
Naphthalene	"	ND	----	0.0133	"	"	"	"	"	
Phenanthrene	"	0.0190	----	0.0133	"	"	"	"	"	
Pyrene	"	ND	----	0.0133	"	"	"	"	"	
<i>Surrogate(s): p-Terphenyl-d14</i>			74.9%		50 - 147 %	"				"

BRL0200-31 (ALY-SB-11-3.0-4.0)										
		Soil					Sampled: 12/16/08 16:23			
Acenaphthene	EPA 8270C-SIM	ND	----	0.0114	mg/kg dry	1x	8L23024	12/23/08 13:07	12/31/08 16:23	
Acenaphthylene	"	ND	----	0.0114	"	"	"	"	"	
Anthracene	"	ND	----	0.0114	"	"	"	"	"	
Benzo (a) anthracene	"	ND	----	0.0114	"	"	"	"	"	
Benzo (a) pyrene	"	ND	----	0.0114	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	----	0.0114	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	----	0.0114	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	----	0.0114	"	"	"	"	"	
Chrysene	"	ND	----	0.0114	"	"	"	"	"	
Dibenz (a,h) anthracene	"	ND	----	0.0114	"	"	"	"	"	
Fluoranthene	"	ND	----	0.0114	"	"	"	"	"	
Fluorene	"	ND	----	0.0114	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	----	0.0114	"	"	"	"	"	
1-Methylnaphthalene	"	ND	----	0.0114	"	"	"	"	"	
2-Methylnaphthalene	"	ND	----	0.0114	"	"	"	"	"	
Naphthalene	"	ND	----	0.0114	"	"	"	"	"	
Phenanthrene	"	ND	----	0.0114	"	"	"	"	"	
Pyrene	"	ND	----	0.0114	"	"	"	"	"	
<i>Surrogate(s): p-Terphenyl-d14</i>			75.6%		50 - 147 %	"				"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Polynuclear Aromatic Hydrocarbons by GC/MS-SIM
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-35 (ALY-SB-3-3.0-4.0)		Soil		Sampled: 12/17/08 08:10						
Acenaphthene	EPA 8270C-SIM	ND	----	0.0121	mg/kg dry	1x	8L23024	12/23/08 13:07	12/31/08 16:50	
Acenaphthylene	"	ND	----	0.0121	"	"	"	"	"	
Anthracene	"	0.0133	----	0.0121	"	"	"	"	"	
Benzo (a) anthracene	"	0.0496	----	0.0121	"	"	"	"	"	
Benzo (a) pyrene	"	0.0378	----	0.0121	"	"	"	"	"	
Benzo (b) fluoranthene	"	0.103	----	0.0121	"	"	"	"	"	
Benzo (k) fluoranthene	"	0.0569	----	0.0121	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	----	0.0121	"	"	"	"	"	
Chrysene	"	0.131	----	0.0121	"	"	"	"	"	
Dibenz (a,h) anthracene	"	ND	----	0.0121	"	"	"	"	"	
Fluoranthene	"	0.311	----	0.0121	"	"	"	"	"	
Fluorene	"	ND	----	0.0121	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	0.0164	----	0.0121	"	"	"	"	"	
1-Methylnaphthalene	"	ND	----	0.0121	"	"	"	"	"	
2-Methylnaphthalene	"	ND	----	0.0121	"	"	"	"	"	
Naphthalene	"	ND	----	0.0121	"	"	"	"	"	
Phenanthrene	"	0.0310	----	0.0121	"	"	"	"	"	
Pyrene	"	0.209	----	0.0121	"	"	"	"	"	
<i>Surrogate(s): p-Terphenyl-d14</i>		75.9%		50 - 147 %		"		"		

BRL0200-38 (ALY-SB-9-7.0-8.0)		Soil		Sampled: 12/17/08 09:35						
Acenaphthene	EPA 8270C-SIM	ND	----	0.0114	mg/kg dry	1x	8L23024	12/23/08 13:07	12/31/08 17:16	
Acenaphthylene	"	ND	----	0.0114	"	"	"	"	"	
Anthracene	"	ND	----	0.0114	"	"	"	"	"	
Benzo (a) anthracene	"	ND	----	0.0114	"	"	"	"	"	
Benzo (a) pyrene	"	ND	----	0.0114	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	----	0.0114	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	----	0.0114	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	----	0.0114	"	"	"	"	"	
Chrysene	"	ND	----	0.0114	"	"	"	"	"	
Dibenz (a,h) anthracene	"	ND	----	0.0114	"	"	"	"	"	
Fluoranthene	"	ND	----	0.0114	"	"	"	"	"	
Fluorene	"	ND	----	0.0114	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	----	0.0114	"	"	"	"	"	
1-Methylnaphthalene	"	ND	----	0.0114	"	"	"	"	"	
2-Methylnaphthalene	"	ND	----	0.0114	"	"	"	"	"	
Naphthalene	"	ND	----	0.0114	"	"	"	"	"	
Phenanthrene	"	ND	----	0.0114	"	"	"	"	"	
Pyrene	"	ND	----	0.0114	"	"	"	"	"	
<i>Surrogate(s): p-Terphenyl-d14</i>		75.1%		50 - 147 %		"		"		

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Polynuclear Aromatic Hydrocarbons by GC/MS-SIM
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-40 (ALY-SB-12-6.5-7.5)		Soil		Sampled: 12/17/08 10:00						
Acenaphthene	EPA 8270C-SIM	ND	----	0.0191	mg/kg dry	1x	8L23024	12/23/08 13:07	12/31/08 17:42	
Acenaphthylene	"	ND	----	0.0191	"	"	"	"	"	
Anthracene	"	ND	----	0.0191	"	"	"	"	"	
Benzo (a) anthracene	"	0.0201	----	0.0191	"	"	"	"	"	
Benzo (a) pyrene	"	0.0215	----	0.0191	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	----	0.0191	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	----	0.0191	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	----	0.0191	"	"	"	"	"	
Chrysene	"	0.0285	----	0.0191	"	"	"	"	"	
Dibenz (a,h) anthracene	"	ND	----	0.0191	"	"	"	"	"	
Fluoranthene	"	0.0351	----	0.0191	"	"	"	"	"	
Fluorene	"	ND	----	0.0191	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	----	0.0191	"	"	"	"	"	
1-Methylnaphthalene	"	ND	----	0.0191	"	"	"	"	"	
2-Methylnaphthalene	"	ND	----	0.0191	"	"	"	"	"	
Naphthalene	"	ND	----	0.0191	"	"	"	"	"	
Phenanthrene	"	0.0311	----	0.0191	"	"	"	"	"	
Pyrene	"	0.0484	----	0.0191	"	"	"	"	"	
<i>Surrogate(s): p-Terphenyl-d14</i>			73.9%		50 - 147 %	"				"

BRL0200-43 (ALY-SB-8-3.0-4.0)		Soil		Sampled: 12/17/08 11:10						
Acenaphthene	EPA 8270C-SIM	ND	----	0.0181	mg/kg dry	1x	8L23024	12/23/08 13:07	12/31/08 18:08	
Acenaphthylene	"	ND	----	0.0181	"	"	"	"	"	
Anthracene	"	ND	----	0.0181	"	"	"	"	"	
Benzo (a) anthracene	"	ND	----	0.0181	"	"	"	"	"	
Benzo (a) pyrene	"	ND	----	0.0181	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	----	0.0181	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	----	0.0181	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	----	0.0181	"	"	"	"	"	
Chrysene	"	ND	----	0.0181	"	"	"	"	"	
Dibenz (a,h) anthracene	"	ND	----	0.0181	"	"	"	"	"	
Fluoranthene	"	0.0605	----	0.0181	"	"	"	"	"	
Fluorene	"	0.0283	----	0.0181	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	----	0.0181	"	"	"	"	"	
1-Methylnaphthalene	"	0.0381	----	0.0181	"	"	"	"	"	
2-Methylnaphthalene	"	0.0253	----	0.0181	"	"	"	"	"	
Naphthalene	"	ND	----	0.0181	"	"	"	"	"	
Phenanthrene	"	0.0607	----	0.0181	"	"	"	"	"	
Pyrene	"	0.0682	----	0.0181	"	"	"	"	"	
<i>Surrogate(s): p-Terphenyl-d14</i>			147%		50 - 147 %	"				"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Polynuclear Aromatic Hydrocarbons by GC/MS-SIM

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-48 (ALY-SB-6-3.0-4.0)		Soil		Sampled: 12/17/08 12:55						
Acenaphthene	EPA 8270C-SIM	ND	----	0.0115	mg/kg dry	1x	8L23024	12/23/08 13:07	12/31/08 18:34	
Acenaphthylene	"	ND	----	0.0115	"	"	"	"	"	
Anthracene	"	ND	----	0.0115	"	"	"	"	"	
Benzo (a) anthracene	"	ND	----	0.0115	"	"	"	"	"	
Benzo (a) pyrene	"	ND	----	0.0115	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	----	0.0115	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	----	0.0115	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	----	0.0115	"	"	"	"	"	
Chrysene	"	ND	----	0.0115	"	"	"	"	"	
Dibenz (a,h) anthracene	"	ND	----	0.0115	"	"	"	"	"	
Fluoranthene	"	ND	----	0.0115	"	"	"	"	"	
Fluorene	"	ND	----	0.0115	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	----	0.0115	"	"	"	"	"	
1-Methylnaphthalene	"	ND	----	0.0115	"	"	"	"	"	
2-Methylnaphthalene	"	ND	----	0.0115	"	"	"	"	"	
Naphthalene	"	ND	----	0.0115	"	"	"	"	"	
Phenanthrene	"	ND	----	0.0115	"	"	"	"	"	
Pyrene	"	ND	----	0.0115	"	"	"	"	"	

Surrogate(s): *p-Terphenyl-d14*

80.9%

50 - 147 %

"

"

BRL0200-50 (ALY-SB-2-4.0-5.0)		Soil		Sampled: 12/17/08 13:30						
Acenaphthene	EPA 8270C-SIM	ND	----	0.0150	mg/kg dry	1x	8L23024	12/23/08 13:07	12/31/08 19:01	
Acenaphthylene	"	ND	----	0.0150	"	"	"	"	"	
Anthracene	"	ND	----	0.0150	"	"	"	"	"	
Benzo (a) anthracene	"	ND	----	0.0150	"	"	"	"	"	
Benzo (a) pyrene	"	ND	----	0.0150	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	----	0.0150	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	----	0.0150	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	----	0.0150	"	"	"	"	"	
Chrysene	"	ND	----	0.0150	"	"	"	"	"	
Dibenz (a,h) anthracene	"	ND	----	0.0150	"	"	"	"	"	
Fluoranthene	"	ND	----	0.0150	"	"	"	"	"	
Fluorene	"	ND	----	0.0150	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	----	0.0150	"	"	"	"	"	
1-Methylnaphthalene	"	ND	----	0.0150	"	"	"	"	"	
2-Methylnaphthalene	"	ND	----	0.0150	"	"	"	"	"	
Naphthalene	"	ND	----	0.0150	"	"	"	"	"	
Phenanthrene	"	ND	----	0.0150	"	"	"	"	"	
Pyrene	"	ND	----	0.0150	"	"	"	"	"	

Surrogate(s): *p-Terphenyl-d14*

74.7%

50 - 147 %

"

"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Polynuclear Aromatic Hydrocarbons by GC/MS-SIM
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-53 (ALY-SB-1-3.0-4.0)		Soil		Sampled: 12/17/08 14:22						
Acenaphthene	EPA 8270C-SIM	ND	----	0.0304	mg/kg dry	2x	8L26011	12/26/08 11:13	12/27/08 17:23	
Acenaphthylene	"	ND	----	0.0304	"	"	"	"	"	
Anthracene	"	ND	----	0.0304	"	"	"	"	"	C
Benzo (a) anthracene	"	ND	----	0.0304	"	"	"	"	"	
Benzo (a) pyrene	"	ND	----	0.0304	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	----	0.0304	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	----	0.0304	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	----	0.0304	"	"	"	"	"	
Chrysene	"	0.0979	----	0.0304	"	"	"	"	"	
Dibenz (a,h) anthracene	"	ND	----	0.0304	"	"	"	"	"	
Fluoranthene	"	ND	----	0.0304	"	"	"	"	"	
Fluorene	"	ND	----	0.0304	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	----	0.0304	"	"	"	"	"	
1-Methylnaphthalene	"	0.0727	----	0.0304	"	"	"	"	"	
2-Methylnaphthalene	"	0.0671	----	0.0304	"	"	"	"	"	
Naphthalene	"	ND	----	0.0304	"	"	"	"	"	
Phenanthrene	"	0.0470	----	0.0304	"	"	"	"	"	
Pyrene	"	0.0440	----	0.0304	"	"	"	"	"	
<i>Surrogate(s): p-Terphenyl-d14</i>			73.9%		50 - 147 %	"				"

BRL0200-55 (ALY-SB-4-3.0-4.0)		Soil		Sampled: 12/17/08 14:55						
Acenaphthene	EPA 8270C-SIM	0.0317	----	0.0143	mg/kg dry	1x	8L26011	12/26/08 11:13	12/27/08 15:41	
Acenaphthylene	"	ND	----	0.0143	"	"	"	"	"	
Anthracene	"	ND	----	0.0143	"	"	"	"	"	C
Benzo (a) anthracene	"	ND	----	0.0143	"	"	"	"	"	
Benzo (a) pyrene	"	0.0143	----	0.0143	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	----	0.0143	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	----	0.0143	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	----	0.0143	"	"	"	"	"	
Chrysene	"	0.0144	----	0.0143	"	"	"	"	"	
Dibenz (a,h) anthracene	"	ND	----	0.0143	"	"	"	"	"	
Fluoranthene	"	0.0451	----	0.0143	"	"	"	"	"	
Fluorene	"	0.0192	----	0.0143	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	----	0.0143	"	"	"	"	"	
1-Methylnaphthalene	"	ND	----	0.0143	"	"	"	"	"	
2-Methylnaphthalene	"	ND	----	0.0143	"	"	"	"	"	
Naphthalene	"	ND	----	0.0143	"	"	"	"	"	
Phenanthrene	"	0.0263	----	0.0143	"	"	"	"	"	
Pyrene	"	0.0222	----	0.0143	"	"	"	"	"	
<i>Surrogate(s): p-Terphenyl-d14</i>			68.3%		50 - 147 %	"				"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Polynuclear Aromatic Hydrocarbons by GC/MS-SIM

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-57 (ALY-SB-10-6.0-8.0)		Soil		Sampled: 12/17/08 15:42						
Acenaphthene	EPA 8270C-SIM	ND	----	0.0147	mg/kg dry	1x	8L26011	12/26/08 11:13	12/27/08 16:15	
Acenaphthylene	"	ND	----	0.0147	"	"	"	"	"	
Anthracene	"	ND	----	0.0147	"	"	"	"	"	C
Benzo (a) anthracene	"	ND	----	0.0147	"	"	"	"	"	
Benzo (a) pyrene	"	ND	----	0.0147	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	----	0.0147	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	----	0.0147	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	----	0.0147	"	"	"	"	"	
Chrysene	"	ND	----	0.0147	"	"	"	"	"	
Dibenz (a,h) anthracene	"	ND	----	0.0147	"	"	"	"	"	
Fluoranthene	"	0.0153	----	0.0147	"	"	"	"	"	
Fluorene	"	ND	----	0.0147	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	----	0.0147	"	"	"	"	"	
1-Methylnaphthalene	"	ND	----	0.0147	"	"	"	"	"	
2-Methylnaphthalene	"	ND	----	0.0147	"	"	"	"	"	
Naphthalene	"	ND	----	0.0147	"	"	"	"	"	
Phenanthrene	"	ND	----	0.0147	"	"	"	"	"	
Pyrene	"	ND	----	0.0147	"	"	"	"	"	

Surrogate(s): *p-Terphenyl-d14*

74.8%

50 - 147 %

"

"

BRL0200-59 (ALY-SB-5-3.0-4.0)		Soil		Sampled: 12/17/08 16:10						
Acenaphthene	EPA 8270C-SIM	ND	----	0.0115	mg/kg dry	1x	8L26011	12/26/08 11:13	12/27/08 16:49	
Acenaphthylene	"	ND	----	0.0115	"	"	"	"	"	
Anthracene	"	ND	----	0.0115	"	"	"	"	"	C
Benzo (a) anthracene	"	ND	----	0.0115	"	"	"	"	"	
Benzo (a) pyrene	"	ND	----	0.0115	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	----	0.0115	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	----	0.0115	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	----	0.0115	"	"	"	"	"	
Chrysene	"	ND	----	0.0115	"	"	"	"	"	
Dibenz (a,h) anthracene	"	ND	----	0.0115	"	"	"	"	"	
Fluoranthene	"	ND	----	0.0115	"	"	"	"	"	
Fluorene	"	ND	----	0.0115	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	----	0.0115	"	"	"	"	"	
1-Methylnaphthalene	"	ND	----	0.0115	"	"	"	"	"	
2-Methylnaphthalene	"	ND	----	0.0115	"	"	"	"	"	
Naphthalene	"	ND	----	0.0115	"	"	"	"	"	
Phenanthrene	"	ND	----	0.0115	"	"	"	"	"	
Pyrene	"	0.0308	----	0.0115	"	"	"	"	"	

Surrogate(s): *p-Terphenyl-d14*

71.0%

50 - 147 %

"

"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Polynuclear Aromatic Compounds by GC/MS with High Volume Injection
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-03 (AM-W-1)		Water			Sampled: 12/15/08 13:30					
Acenaphthene	EPA 8270C-HVI	ND	----	0.0980	ug/l	1x	8L18028	12/19/08 14:38	12/23/08 21:19	
Acenaphthylene	"	ND	----	0.0980	"	"	"	"	"	
Anthracene	"	ND	----	0.0980	"	"	"	"	"	
Benzo (a) anthracene	"	ND	----	0.00980	"	"	"	"	"	
Benzo (a) pyrene	"	ND	----	0.00980	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	----	0.00980	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	----	0.00980	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	----	0.0980	"	"	"	"	"	
Chrysene	"	ND	----	0.00980	"	"	"	"	"	
Dibenz (a,h) anthracene	"	ND	----	0.00980	"	"	"	"	"	
Fluoranthene	"	ND	----	0.0980	"	"	"	"	"	
Fluorene	"	ND	----	0.0980	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	----	0.00980	"	"	"	"	"	
1-Methylnaphthalene	"	ND	----	0.0980	"	"	"	"	"	
2-Methylnaphthalene	"	ND	----	0.0980	"	"	"	"	"	
Naphthalene	"	ND	----	0.0980	"	"	"	"	"	
Phenanthrene	"	ND	----	0.0980	"	"	"	"	"	
Pyrene	"	ND	----	0.0980	"	"	"	"	"	
<i>Surrogate(s): Benzo (a) pyrene-d12</i>			16.3%		20 - 125 %	"				Z6
<i>1-Methylnaphthalene-d10</i>			67.5%		39 - 125 %	"				

BRL0200-33 (AM-W-12)		Water			Sampled: 12/16/08 14:55					
Acenaphthene	EPA 8270C-HVI	ND	----	0.0990	ug/l	1x	8L18028	12/19/08 14:38	12/23/08 21:54	
Acenaphthylene	"	ND	----	0.0990	"	"	"	"	"	
Anthracene	"	ND	----	0.0990	"	"	"	"	"	
Benzo (a) anthracene	"	ND	----	0.00990	"	"	"	"	"	
Benzo (a) pyrene	"	ND	----	0.00990	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	----	0.00990	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	----	0.00990	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	----	0.0990	"	"	"	"	"	
Chrysene	"	ND	----	0.00990	"	"	"	"	"	
Dibenz (a,h) anthracene	"	ND	----	0.00990	"	"	"	"	"	
Fluoranthene	"	ND	----	0.0990	"	"	"	"	"	
Fluorene	"	ND	----	0.0990	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	----	0.00990	"	"	"	"	"	
1-Methylnaphthalene	"	ND	----	0.0990	"	"	"	"	"	
2-Methylnaphthalene	"	ND	----	0.0990	"	"	"	"	"	
Naphthalene	"	0.204	----	0.0990	"	"	"	"	"	
Phenanthrene	"	ND	----	0.0990	"	"	"	"	"	
Pyrene	"	ND	----	0.0990	"	"	"	"	"	
<i>Surrogate(s): Benzo (a) pyrene-d12</i>			22.2%		20 - 125 %	"				

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Polynuclear Aromatic Compounds by GC/MS with High Volume Injection
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-33 (AM-W-12)		Water						Sampled: 12/16/08 14:55		
<i>1-Methylnaphthalene-d10</i>			74.5%		39 - 125 %	1x			12/23/08 21:54	
BRL0200-41 (ALY-W-12)		Water						Sampled: 12/17/08 10:30		
Acenaphthene	EPA 8270C-HVI	ND	----	0.100	ug/l	1x	8L18028	12/19/08 14:38	12/23/08 22:29	
Acenaphthylene	"	ND	----	0.100	"	"	"	"	"	"
Anthracene	"	ND	----	0.100	"	"	"	"	"	"
Benzo (a) anthracene	"	ND	----	0.0100	"	"	"	"	"	"
Benzo (a) pyrene	"	ND	----	0.0100	"	"	"	"	"	"
Benzo (b) fluoranthene	"	ND	----	0.0100	"	"	"	"	"	"
Benzo (k) fluoranthene	"	ND	----	0.0100	"	"	"	"	"	"
Benzo (ghi) perylene	"	ND	----	0.100	"	"	"	"	"	"
Chrysene	"	ND	----	0.0100	"	"	"	"	"	"
Dibenz (a,h) anthracene	"	ND	----	0.0100	"	"	"	"	"	"
Fluoranthene	"	ND	----	0.100	"	"	"	"	"	"
Fluorene	"	ND	----	0.100	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	"	ND	----	0.0100	"	"	"	"	"	"
1-Methylnaphthalene	"	ND	----	0.100	"	"	"	"	"	"
2-Methylnaphthalene	"	ND	----	0.100	"	"	"	"	"	"
Naphthalene	"	ND	----	0.100	"	"	"	"	"	"
Phenanthrene	"	ND	----	0.100	"	"	"	"	"	"
Pyrene	"	ND	----	0.100	"	"	"	"	"	"
<i>Surrogate(s): Benzo (a) pyrene-d12</i>			20.1%		20 - 125 %	"				"
<i>1-Methylnaphthalene-d10</i>			83.5%		39 - 125 %	"				"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue 1100 112th Avenue NE, Suite 400 Bellevue, WA/USA 98004-4504	Project Name: WSDOT SR 520 - Pontoon Sites Project Number: 180171.AR.X7.02 Project Manager: Brian Tracy	Report Created: 01/26/09 09:59
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Physical Parameters by APHA/ASTM/EPA Methods
TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-01 (AM-SB-1-1.0-2.0)		Soil								Sampled: 12/15/08 12:40
Dry Weight	BSOPSPL003R0 8	90.7	----	1.00	%	1x	8L23032	12/23/08 15:41	12/24/08 00:00	
BRL0200-02 (AM-SB-1-4.0-6.0)		Soil								Sampled: 12/15/08 13:00
Dry Weight	BSOPSPL003R0 8	62.5	----	1.00	%	1x	8L23032	12/23/08 15:41	12/24/08 00:00	
BRL0200-04 (AM-SB-2-1.0-2.0)		Soil								Sampled: 12/15/08 14:23
Dry Weight	BSOPSPL003R0 8	91.7	----	1.00	%	1x	8L23032	12/23/08 15:41	12/24/08 00:00	
BRL0200-05 (AM-SB-2-4.0-6.0)		Soil								Sampled: 12/15/08 14:40
Dry Weight	BSOPSPL003R0 8	75.1	----	1.00	%	1x	8L23032	12/23/08 15:41	12/24/08 00:00	
BRL0200-06 (AM-SB-3-0.0-1.0)		Soil								Sampled: 12/15/08 15:15
Dry Weight	BSOPSPL003R0 8	89.1	----	1.00	%	1x	8L23032	12/23/08 15:41	12/24/08 00:00	
BRL0200-07 (AM-SB-3-4.0-5.0)		Soil								Sampled: 12/15/08 15:20
Dry Weight	BSOPSPL003R0 8	75.4	----	1.00	%	1x	8L23032	12/23/08 15:41	12/24/08 00:00	
BRL0200-08 (AM-SB-7-1.5-3.0)		Soil								Sampled: 12/15/08 15:40
Dry Weight	BSOPSPL003R0 8	74.8	----	1.00	%	1x	8L23032	12/23/08 15:41	12/24/08 00:00	
BRL0200-09 (AM-SB-7-6.0-7.0)		Soil								Sampled: 12/15/08 15:55
Dry Weight	BSOPSPL003R0 8	71.4	----	1.00	%	1x	8L23032	12/23/08 15:41	12/24/08 00:00	
BRL0200-10 (AM-SB-10-0.0-3.0)		Soil								Sampled: 12/15/08 16:20
Dry Weight	BSOPSPL003R0 8	85.9	----	1.00	%	1x	8L23032	12/23/08 15:41	12/24/08 00:00	
BRL0200-11 (AM-SB-10-10.0-11.0)		Soil								Sampled: 12/15/08 16:32
Dry Weight	BSOPSPL003R0 8	76.1	----	1.00	%	1x	8L23032	12/23/08 15:41	12/24/08 00:00	
BRL0200-12 (AM-SB-11-1.0-2.0)		Soil								Sampled: 12/16/08 08:10

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Physical Parameters by APHA/ASTM/EPA Methods
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-12	(AM-SB-11-1.0-2.0)	Soil		Sampled: 12/16/08 08:10						
Dry Weight	BSOPSP003R0 8	88.8	----	1.00	%	1x	8L23032	12/23/08 15:41	12/24/08 00:00	
BRL0200-13	(AM-SB-11-4.0-6.0)	Soil		Sampled: 12/16/08 08:22						
Dry Weight	BSOPSP003R0 8	79.7	----	1.00	%	1x	8L23032	12/23/08 15:41	12/24/08 00:00	
BRL0200-15	(AM-SB-8-1.0-2.0)	Soil		Sampled: 12/16/08 09:47						
Dry Weight	BSOPSP003R0 8	79.9	----	1.00	%	1x	8L23032	12/23/08 15:41	12/24/08 00:00	
BRL0200-16	(AM-SB-8-8.0-10.0)	Soil		Sampled: 12/16/08 10:00						
Dry Weight	BSOPSP003R0 8	81.9	----	1.00	%	1x	8L23032	12/23/08 15:41	12/24/08 00:00	
BRL0200-17	(AM-SB-6-1.0-2.0)	Soil		Sampled: 12/16/08 10:24						
Dry Weight	BSOPSP003R0 8	89.7	----	1.00	%	1x	8L23032	12/23/08 15:41	12/24/08 00:00	
BRL0200-18	(AM-SB-6-6.0-8.0)	Soil		Sampled: 12/16/08 10:35						
Dry Weight	BSOPSP003R0 8	72.6	----	1.00	%	1x	8L23032	12/23/08 15:41	12/24/08 00:00	
BRL0200-20	(AM-SB-5-1.0-2.0)	Soil		Sampled: 12/16/08 11:35						
Dry Weight	BSOPSP003R0 8	89.4	----	1.00	%	1x	8L23032	12/23/08 15:41	12/24/08 00:00	
BRL0200-21	(AM-SB-5-3.0-4.0)	Soil		Sampled: 12/16/08 11:40						
Dry Weight	BSOPSP003R0 8	77.6	----	1.00	%	1x	8L23033	12/23/08 15:42	12/24/08 00:00	
BRL0200-23	(AM-SB-4-1.0-2.0)	Soil		Sampled: 12/16/08 12:25						
Dry Weight	BSOPSP003R0 8	79.9	----	1.00	%	1x	8L23033	12/23/08 15:42	12/24/08 00:00	
BRL0200-24	(AM-SB-4-7.0-8.0)	Soil		Sampled: 12/16/08 12:47						
Dry Weight	BSOPSP003R0 8	68.1	----	1.00	%	1x	8L23033	12/23/08 15:42	12/24/08 00:00	
BRL0200-25	(AM-SB-9-1.0-3.0)	Soil		Sampled: 12/16/08 13:25						

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue 1100 112th Avenue NE, Suite 400 Bellevue, WA/USA 98004-4504	Project Name: WSDOT SR 520 - Pontoon Sites Project Number: 180171.AR.X7.02 Project Manager: Brian Tracy	Report Created: 01/26/09 09:59
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Physical Parameters by APHA/ASTM/EPA Methods
TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-25 (AM-SB-9-1.0-3.0)		Soil								Sampled: 12/16/08 13:25
Dry Weight	BSOPSP003R0 8	81.0	----	1.00	%	1x	8L23033	12/23/08 15:42	12/24/08 00:00	
BRL0200-26 (AM-SB-9-4.0-5.0)		Soil								Sampled: 12/16/08 13:40
Dry Weight	BSOPSP003R0 8	72.2	----	1.00	%	1x	8L23033	12/23/08 15:42	12/24/08 00:00	
BRL0200-28 (AM-SB-12-1.0-2.0)		Soil								Sampled: 12/16/08 14:22
Dry Weight	BSOPSP003R0 8	82.1	----	1.00	%	1x	8L23033	12/23/08 15:42	12/24/08 00:00	
BRL0200-29 (AM-SB-12-9.0-10.0)		Soil								Sampled: 12/16/08 14:32
Dry Weight	BSOPSP003R0 8	74.7	----	1.00	%	1x	8L23033	12/23/08 15:42	12/24/08 00:00	
BRL0200-30 (ALY-SB-11-1.0-2.0)		Soil								Sampled: 12/16/08 16:15
Dry Weight	BSOPSP003R0 8	88.7	----	1.00	%	1x	8L23033	12/23/08 15:42	12/24/08 00:00	
BRL0200-31 (ALY-SB-11-3.0-4.0)		Soil								Sampled: 12/16/08 16:23
Dry Weight	BSOPSP003R0 8	87.0	----	1.00	%	1x	8L23033	12/23/08 15:42	12/24/08 00:00	
BRL0200-34 (ALY-SB-3-1.0-3.0)		Soil								Sampled: 12/17/08 08:02
Dry Weight	BSOPSP003R0 8	89.4	----	1.00	%	1x	8L23033	12/23/08 15:42	12/24/08 00:00	
BRL0200-35 (ALY-SB-3-3.0-4.0)		Soil								Sampled: 12/17/08 08:10
Dry Weight	BSOPSP003R0 8	81.9	----	1.00	%	1x	8L23033	12/23/08 15:42	12/24/08 00:00	
BRL0200-37 (ALY-SB-9-1.0-2.0)		Soil								Sampled: 12/17/08 09:25
Dry Weight	BSOPSP003R0 8	78.5	----	1.00	%	1x	8L23033	12/23/08 15:42	12/24/08 00:00	
BRL0200-38 (ALY-SB-9-7.0-8.0)		Soil								Sampled: 12/17/08 09:35
Dry Weight	BSOPSP003R0 8	87.1	----	1.00	%	1x	8L23033	12/23/08 15:42	12/24/08 00:00	
BRL0200-39 (ALY-SB-12-1.0-2.0)		Soil								Sampled: 12/17/08 09:55

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Physical Parameters by APHA/ASTM/EPA Methods
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-39 (ALY-SB-12-1.0-2.0)		Soil								Sampled: 12/17/08 09:55
Dry Weight	BSOPSP003R0 8	90.9	----	1.00	%	1x	8L23033	12/23/08 15:42	12/24/08 00:00	
BRL0200-40 (ALY-SB-12-6.5-7.5)		Soil								Sampled: 12/17/08 10:00
Dry Weight	BSOPSP003R0 8	52.1	----	1.00	%	1x	8L23033	12/23/08 15:42	12/24/08 00:00	
BRL0200-42 (ALY-SB-8-1.0-2.0)		Soil								Sampled: 12/17/08 11:02
Dry Weight	BSOPSP003R0 8	89.5	----	1.00	%	1x	8L23033	12/23/08 15:42	12/24/08 00:00	
BRL0200-43 (ALY-SB-8-3.0-4.0)		Soil								Sampled: 12/17/08 11:10
Dry Weight	BSOPSP003R0 8	54.8	----	1.00	%	1x	8L23033	12/23/08 15:42	12/24/08 00:00	
BRL0200-44 (ALY-SB-7-1.0-2.0)		Soil								Sampled: 12/17/08 11:35
Dry Weight	BSOPSP003R0 8	87.3	----	1.00	%	1x	8L23033	12/23/08 15:42	12/24/08 00:00	
BRL0200-45 (ALY-SB-7-10.0-11.0)		Soil								Sampled: 12/17/08 11:52
Dry Weight	BSOPSP003R0 8	76.3	----	1.00	%	1x	8L23033	12/23/08 15:42	12/24/08 00:00	
BRL0200-47 (ALY-SB-6-1.0-2.0)		Soil								Sampled: 12/17/08 12:45
Dry Weight	BSOPSP003R0 8	92.6	----	1.00	%	1x	8L23033	12/23/08 15:42	12/24/08 00:00	
BRL0200-48 (ALY-SB-6-3.0-4.0)		Soil								Sampled: 12/17/08 12:55
Dry Weight	BSOPSP003R0 8	86.0	----	1.00	%	1x	8L26012	12/26/08 11:15	12/29/08 00:00	
BRL0200-49 (ALY-SB-2-1.0-3.0)		Soil								Sampled: 12/17/08 13:24
Dry Weight	BSOPSP003R0 8	88.5	----	1.00	%	1x	8L26012	12/26/08 11:15	12/29/08 00:00	
BRL0200-50 (ALY-SB-2-4.0-5.0)		Soil								Sampled: 12/17/08 13:30
Dry Weight	BSOPSP003R0 8	66.5	----	1.00	%	1x	8L26012	12/26/08 11:15	12/29/08 00:00	
BRL0200-52 (ALY-SB-1-1.0-2.0)		Soil								Sampled: 12/17/08 14:16

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue 1100 112th Avenue NE, Suite 400 Bellevue, WA/USA 98004-4504	Project Name: WSDOT SR 520 - Pontoon Sites Project Number: 180171.AR.X7.02 Project Manager: Brian Tracy	Report Created: 01/26/09 09:59
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Physical Parameters by APHA/ASTM/EPA Methods
TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-52 (ALY-SB-1-1.0-2.0)		Soil			Sampled: 12/17/08 14:16					
Dry Weight	BSOPSP003R0 8	75.0	----	1.00	%	1x	8L26012	12/26/08 11:15	12/29/08 00:00	
BRL0200-53 (ALY-SB-1-3.0-4.0)		Soil			Sampled: 12/17/08 14:22					
Dry Weight	BSOPSP003R0 8	65.8	----	1.00	%	1x	8L26012	12/26/08 11:15	12/29/08 00:00	
BRL0200-54 (ALY-SB-4-1.0-2.0)		Soil			Sampled: 12/17/08 14:50					
Dry Weight	BSOPSP003R0 8	90.1	----	1.00	%	1x	8L26012	12/26/08 11:15	12/29/08 00:00	
BRL0200-55 (ALY-SB-4-3.0-4.0)		Soil			Sampled: 12/17/08 14:55					
Dry Weight	BSOPSP003R0 8	69.7	----	1.00	%	1x	8L26012	12/26/08 11:15	12/29/08 00:00	
BRL0200-56 (ALY-SB-10-1.0-2.0)		Soil			Sampled: 12/17/08 15:32					
Dry Weight	BSOPSP003R0 8	90.6	----	1.00	%	1x	8L26012	12/26/08 11:15	12/29/08 00:00	
BRL0200-57 (ALY-SB-10-6.0-8.0)		Soil			Sampled: 12/17/08 15:42					
Dry Weight	BSOPSP003R0 8	67.4	----	1.00	%	1x	8L26012	12/26/08 11:15	12/29/08 00:00	
BRL0200-58 (ALY-SB-5-1.0-2.0)		Soil			Sampled: 12/17/08 16:00					
Dry Weight	BSOPSP003R0 8	91.8	----	1.00	%	1x	8L26012	12/26/08 11:15	12/29/08 00:00	
BRL0200-59 (ALY-SB-5-3.0-4.0)		Soil			Sampled: 12/17/08 16:10					
Dry Weight	BSOPSP003R0 8	86.5	----	1.00	%	1x	8L26012	12/26/08 11:15	12/29/08 00:00	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Polychlorinated Biphenyls by EPA Method 8082

TestAmerica Nashville

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-01 (AM-SB-1-1.0-2.0)		Soil		Sampled: 12/15/08 12:40						
PCB-1016	SW846 8082	ND	----	0.0364	mg/kg dry	1x	8123862	12/27/08 08:10	12/30/08 07:12	
PCB-1221	"	ND	----	0.0364	"	"	"	"	"	
PCB-1232	"	ND	----	0.0364	"	"	"	"	"	
PCB-1242	"	ND	----	0.0364	"	"	"	"	"	
PCB-1248	"	ND	----	0.0364	"	"	"	"	"	
PCB-1254	"	ND	----	0.0364	"	"	"	"	"	
PCB-1260	"	ND	----	0.0364	"	"	"	"	"	
PCB-1262	"	ND	----	0.0364	"	"	"	"	"	
PCB-1268	"	ND	----	0.0364	"	"	"	"	"	
<i>Surrogate(s): Tetrachloro-meta-xylene</i>			78%	15 - 150 %						
<i>Decachlorobiphenyl</i>			110%	10 - 150 %						

BRL0200-04 (AM-SB-2-1.0-2.0)		Soil		Sampled: 12/15/08 14:23						
PCB-1016	SW846 8082	ND	----	0.0358	mg/kg dry	1x	8123862	12/27/08 08:10	12/30/08 07:32	
PCB-1221	"	ND	----	0.0358	"	"	"	"	"	
PCB-1232	"	ND	----	0.0358	"	"	"	"	"	
PCB-1242	"	ND	----	0.0358	"	"	"	"	"	
PCB-1248	"	ND	----	0.0358	"	"	"	"	"	
PCB-1254	"	ND	----	0.0358	"	"	"	"	"	
PCB-1260	"	ND	----	0.0358	"	"	"	"	"	
PCB-1262	"	ND	----	0.0358	"	"	"	"	"	
PCB-1268	"	ND	----	0.0358	"	"	"	"	"	
<i>Surrogate(s): Tetrachloro-meta-xylene</i>			76%	15 - 150 %						
<i>Decachlorobiphenyl</i>			110%	10 - 150 %						

BRL0200-06 (AM-SB-3-0.0-1.0)		Soil		Sampled: 12/15/08 15:15						
PCB-1016	SW846 8082	ND	----	0.0370	mg/kg dry	1x	8123862	12/27/08 08:10	12/30/08 07:52	
PCB-1221	"	ND	----	0.0370	"	"	"	"	"	
PCB-1232	"	ND	----	0.0370	"	"	"	"	"	
PCB-1242	"	ND	----	0.0370	"	"	"	"	"	
PCB-1248	"	ND	----	0.0370	"	"	"	"	"	
PCB-1254	"	ND	----	0.0370	"	"	"	"	"	
PCB-1260	"	ND	----	0.0370	"	"	"	"	"	
PCB-1262	"	ND	----	0.0370	"	"	"	"	"	
PCB-1268	"	ND	----	0.0370	"	"	"	"	"	
<i>Surrogate(s): Tetrachloro-meta-xylene</i>			58%	15 - 150 %						
<i>Decachlorobiphenyl</i>			78%	10 - 150 %						

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue	Project Name: WSDOT SR 520 - Pontoon Sites	Report Created:
1100 112th Avenue NE, Suite 400	Project Number: 180171.AR.X7.02	01/26/09 09:59
Bellevue, WA/USA 98004-4504	Project Manager: Brian Tracy	

Polychlorinated Biphenyls by EPA Method 8082
 TestAmerica Nashville

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-10 (AM-SB-10-0.0-3.0)		Soil		Sampled: 12/15/08 16:20						
PCB-1016	SW846 8082	ND	----	0.0383	mg/kg dry	1x	8123862	12/27/08 08:10	12/30/08 08:13	
PCB-1221	"	ND	----	0.0383	"	"	"	"	"	
PCB-1232	"	ND	----	0.0383	"	"	"	"	"	
PCB-1242	"	ND	----	0.0383	"	"	"	"	"	
PCB-1248	"	ND	----	0.0383	"	"	"	"	"	
PCB-1254	"	ND	----	0.0383	"	"	"	"	"	
PCB-1260	"	ND	----	0.0383	"	"	"	"	"	
PCB-1262	"	ND	----	0.0383	"	"	"	"	"	
PCB-1268	"	ND	----	0.0383	"	"	"	"	"	

Surrogate(s): Tetrachloro-meta-xylene 68% 15 - 150 % "
 Decachlorobiphenyl 94% 10 - 150 % "

BRL0200-12 (AM-SB-11-1.0-2.0)		Soil		Sampled: 12/16/08 08:10						
PCB-1016	SW846 8082	ND	----	0.0371	mg/kg dry	1x	8123862	12/27/08 08:10	12/30/08 08:33	
PCB-1221	"	ND	----	0.0371	"	"	"	"	"	
PCB-1232	"	ND	----	0.0371	"	"	"	"	"	
PCB-1242	"	ND	----	0.0371	"	"	"	"	"	
PCB-1248	"	ND	----	0.0371	"	"	"	"	"	
PCB-1254	"	ND	----	0.0371	"	"	"	"	"	
PCB-1260	"	ND	----	0.0371	"	"	"	"	"	
PCB-1262	"	ND	----	0.0371	"	"	"	"	"	
PCB-1268	"	ND	----	0.0371	"	"	"	"	"	

Surrogate(s): Tetrachloro-meta-xylene 84% 15 - 150 % "
 Decachlorobiphenyl 96% 10 - 150 % "

BRL0200-15 (AM-SB-8-1.0-2.0)		Soil		Sampled: 12/16/08 09:47						
PCB-1016	SW846 8082	ND	----	0.0414	mg/kg dry	1x	8123862	12/27/08 08:10	12/30/08 08:54	
PCB-1221	"	ND	----	0.0414	"	"	"	"	"	
PCB-1232	"	ND	----	0.0414	"	"	"	"	"	
PCB-1242	"	ND	----	0.0414	"	"	"	"	"	
PCB-1248	"	ND	----	0.0414	"	"	"	"	"	
PCB-1254	"	ND	----	0.0414	"	"	"	"	"	
PCB-1260	"	ND	----	0.0414	"	"	"	"	"	
PCB-1262	"	ND	----	0.0414	"	"	"	"	"	
PCB-1268	"	ND	----	0.0414	"	"	"	"	"	

Surrogate(s): Tetrachloro-meta-xylene 98% 15 - 150 % "
 Decachlorobiphenyl 102% 10 - 150 % "

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Curtis D. Armstrong, Project Manager

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Amended Report

CH2M Hill - Bellevue	Project Name: WSDOT SR 520 - Pontoon Sites	Report Created:
1100 112th Avenue NE, Suite 400	Project Number: 180171.AR.X7.02	01/26/09 09:59
Bellevue, WA/USA 98004-4504	Project Manager: Brian Tracy	

Polychlorinated Biphenyls by EPA Method 8082
 TestAmerica Nashville

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-17 (AM-SB-6-1.0-2.0)		Soil		Sampled: 12/16/08 10:24						
PCB-1016	SW846 8082	ND	----	0.0369	mg/kg dry	1x	8123862	12/27/08 08:10	12/30/08 09:14	
PCB-1221	"	ND	----	0.0369	"	"	"	"	"	
PCB-1232	"	ND	----	0.0369	"	"	"	"	"	
PCB-1242	"	ND	----	0.0369	"	"	"	"	"	
PCB-1248	"	ND	----	0.0369	"	"	"	"	"	
PCB-1254	"	ND	----	0.0369	"	"	"	"	"	
PCB-1260	"	ND	----	0.0369	"	"	"	"	"	
PCB-1262	"	ND	----	0.0369	"	"	"	"	"	
PCB-1268	"	ND	----	0.0369	"	"	"	"	"	

Surrogate(s): Tetrachloro-meta-xylene 84% 15 - 150 % "
 Decachlorobiphenyl 96% 10 - 150 % "

BRL0200-20 (AM-SB-5-1.0-2.0)		Soil		Sampled: 12/16/08 11:35						
PCB-1016	SW846 8082	ND	----	0.0368	mg/kg dry	1x	8123862	12/27/08 08:10	12/30/08 09:34	
PCB-1221	"	ND	----	0.0368	"	"	"	"	"	
PCB-1232	"	ND	----	0.0368	"	"	"	"	"	
PCB-1242	"	ND	----	0.0368	"	"	"	"	"	
PCB-1248	"	ND	----	0.0368	"	"	"	"	"	
PCB-1254	"	ND	----	0.0368	"	"	"	"	"	
PCB-1260	"	ND	----	0.0368	"	"	"	"	"	
PCB-1262	"	ND	----	0.0368	"	"	"	"	"	
PCB-1268	"	ND	----	0.0368	"	"	"	"	"	

Surrogate(s): Tetrachloro-meta-xylene 70% 15 - 150 % "
 Decachlorobiphenyl 88% 10 - 150 % "

BRL0200-23 (AM-SB-4-1.0-2.0)		Soil		Sampled: 12/16/08 12:25						
PCB-1016	SW846 8082	ND	----	0.0412	mg/kg dry	1x	8123862	12/27/08 08:10	12/30/08 09:55	
PCB-1221	"	ND	----	0.0412	"	"	"	"	"	
PCB-1232	"	ND	----	0.0412	"	"	"	"	"	
PCB-1242	"	ND	----	0.0412	"	"	"	"	"	
PCB-1248	"	ND	----	0.0412	"	"	"	"	"	
PCB-1254	"	ND	----	0.0412	"	"	"	"	"	
PCB-1260	"	ND	----	0.0412	"	"	"	"	"	
PCB-1262	"	ND	----	0.0412	"	"	"	"	"	
PCB-1268	"	ND	----	0.0412	"	"	"	"	"	

Surrogate(s): Tetrachloro-meta-xylene 68% 15 - 150 % "
 Decachlorobiphenyl 88% 10 - 150 % "

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Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue	Project Name: WSDOT SR 520 - Pontoon Sites	Report Created:
1100 112th Avenue NE, Suite 400	Project Number: 180171.AR.X7.02	01/26/09 09:59
Bellevue, WA/USA 98004-4504	Project Manager: Brian Tracy	

Polychlorinated Biphenyls by EPA Method 8082
 TestAmerica Nashville

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-25 (AM-SB-9-1.0-3.0)		Soil			Sampled: 12/16/08 13:25					
PCB-1016	SW846 8082	ND	----	0.0410	mg/kg dry	1x	8123862	12/27/08 08:10	12/30/08 10:15	
PCB-1221	"	ND	----	0.0410	"	"	"	"	"	
PCB-1232	"	ND	----	0.0410	"	"	"	"	"	
PCB-1242	"	ND	----	0.0410	"	"	"	"	"	
PCB-1248	"	ND	----	0.0410	"	"	"	"	"	
PCB-1254	"	ND	----	0.0410	"	"	"	"	"	
PCB-1260	"	ND	----	0.0410	"	"	"	"	"	
PCB-1262	"	ND	----	0.0410	"	"	"	"	"	
PCB-1268	"	ND	----	0.0410	"	"	"	"	"	
<i>Surrogate(s): Tetrachloro-meta-xylene</i>			82%	15 - 150 %						
<i>Decachlorobiphenyl</i>			108%	10 - 150 %						

BRL0200-28 (AM-SB-12-1.0-2.0)		Soil			Sampled: 12/16/08 14:22					
PCB-1016	SW846 8082	ND	----	0.0397	mg/kg dry	1x	8123862	12/27/08 08:10	12/30/08 11:16	
PCB-1221	"	ND	----	0.0397	"	"	"	"	"	
PCB-1232	"	ND	----	0.0397	"	"	"	"	"	
PCB-1242	"	ND	----	0.0397	"	"	"	"	"	
PCB-1248	"	ND	----	0.0397	"	"	"	"	"	
PCB-1254	"	ND	----	0.0397	"	"	"	"	"	
PCB-1260	"	ND	----	0.0397	"	"	"	"	"	
PCB-1262	"	ND	----	0.0397	"	"	"	"	"	
PCB-1268	"	ND	----	0.0397	"	"	"	"	"	
<i>Surrogate(s): Tetrachloro-meta-xylene</i>			78%	15 - 150 %						
<i>Decachlorobiphenyl</i>			104%	10 - 150 %						

BRL0200-30 (ALY-SB-11-1.0-2.0)		Soil			Sampled: 12/16/08 16:15					
PCB-1016	SW846 8082	ND	----	0.0368	mg/kg dry	1x	8123862	12/27/08 08:10	12/30/08 11:37	
PCB-1221	"	ND	----	0.0368	"	"	"	"	"	
PCB-1232	"	ND	----	0.0368	"	"	"	"	"	
PCB-1242	"	ND	----	0.0368	"	"	"	"	"	
PCB-1248	"	ND	----	0.0368	"	"	"	"	"	
PCB-1254	"	ND	----	0.0368	"	"	"	"	"	
PCB-1260	"	ND	----	0.0368	"	"	"	"	"	
PCB-1262	"	ND	----	0.0368	"	"	"	"	"	
PCB-1268	"	ND	----	0.0368	"	"	"	"	"	
<i>Surrogate(s): Tetrachloro-meta-xylene</i>			88%	15 - 150 %						
<i>Decachlorobiphenyl</i>			104%	10 - 150 %						

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue	Project Name: WSDOT SR 520 - Pontoon Sites	Report Created:
1100 112th Avenue NE, Suite 400	Project Number: 180171.AR.X7.02	01/26/09 09:59
Bellevue, WA/USA 98004-4504	Project Manager: Brian Tracy	

Polychlorinated Biphenyls by EPA Method 8082
 TestAmerica Nashville

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-34 (ALY-SB-3-1.0-3.0)		Soil			Sampled: 12/17/08 08:02					
PCB-1016	SW846 8082	ND	----	0.0367	mg/kg dry	1x	8123862	12/27/08 08:10	12/30/08 11:57	
PCB-1221	"	ND	----	0.0367	"	"	"	"	"	
PCB-1232	"	ND	----	0.0367	"	"	"	"	"	
PCB-1242	"	ND	----	0.0367	"	"	"	"	"	
PCB-1248	"	ND	----	0.0367	"	"	"	"	"	
PCB-1254	"	ND	----	0.0367	"	"	"	"	"	
PCB-1260	"	ND	----	0.0367	"	"	"	"	"	
PCB-1262	"	ND	----	0.0367	"	"	"	"	"	
PCB-1268	"	ND	----	0.0367	"	"	"	"	"	

Surrogate(s): Tetrachloro-meta-xylene 86% 15 - 150 % "
 Decachlorobiphenyl 110% 10 - 150 % "

BRL0200-37 (ALY-SB-9-1.0-2.0)		Soil			Sampled: 12/17/08 09:25					
PCB-1016	SW846 8082	ND	----	0.0668	mg/kg dry	1x	8123862	12/27/08 08:10	12/30/08 12:17	
PCB-1221	"	ND	----	0.0668	"	"	"	"	"	
PCB-1232	"	ND	----	0.0668	"	"	"	"	"	
PCB-1242	"	ND	----	0.0668	"	"	"	"	"	
PCB-1248	"	ND	----	0.0668	"	"	"	"	"	
PCB-1254	"	ND	----	0.0668	"	"	"	"	"	
PCB-1260	"	ND	----	0.0668	"	"	"	"	"	
PCB-1262	"	ND	----	0.0668	"	"	"	"	"	
PCB-1268	"	ND	----	0.0668	"	"	"	"	"	

Surrogate(s): Tetrachloro-meta-xylene 88% 15 - 150 % "
 Decachlorobiphenyl 98% 10 - 150 % "

BRL0200-39 (ALY-SB-12-1.0-2.0)		Soil			Sampled: 12/17/08 09:55					
PCB-1016	SW846 8082	ND	----	0.0365	mg/kg dry	1x	8123862	12/27/08 08:10	12/30/08 12:38	
PCB-1221	"	ND	----	0.0365	"	"	"	"	"	
PCB-1232	"	ND	----	0.0365	"	"	"	"	"	
PCB-1242	"	ND	----	0.0365	"	"	"	"	"	
PCB-1248	"	ND	----	0.0365	"	"	"	"	"	
PCB-1254	"	ND	----	0.0365	"	"	"	"	"	
PCB-1260	"	ND	----	0.0365	"	"	"	"	"	
PCB-1262	"	ND	----	0.0365	"	"	"	"	"	
PCB-1268	"	ND	----	0.0365	"	"	"	"	"	

Surrogate(s): Tetrachloro-meta-xylene 90% 15 - 150 % "
 Decachlorobiphenyl 114% 10 - 150 % "

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Polychlorinated Biphenyls by EPA Method 8082
 TestAmerica Nashville

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-42 (ALY-SB-8-1.0-2.0)		Soil		Sampled: 12/17/08 11:02						
PCB-1016	SW846 8082	ND	----	0.0366	mg/kg dry	1x	8123862	12/27/08 08:10	12/30/08 12:58	
PCB-1221	"	ND	----	0.0366	"	"	"	"	"	
PCB-1232	"	ND	----	0.0366	"	"	"	"	"	
PCB-1242	"	ND	----	0.0366	"	"	"	"	"	
PCB-1248	"	ND	----	0.0366	"	"	"	"	"	
PCB-1254	"	ND	----	0.0366	"	"	"	"	"	
PCB-1260	"	ND	----	0.0366	"	"	"	"	"	
PCB-1262	"	ND	----	0.0366	"	"	"	"	"	
PCB-1268	"	ND	----	0.0366	"	"	"	"	"	

Surrogate(s): *Tetrachloro-meta-xylene*
Decachlorobiphenyl

98% 15 - 150 %
 104% 10 - 150 %

BRL0200-44 (ALY-SB-7-1.0-2.0)		Soil		Sampled: 12/17/08 11:35						
PCB-1016	SW846 8082	ND	----	0.0372	mg/kg dry	1x	8123862	12/27/08 08:10	12/30/08 13:19	
PCB-1221	"	ND	----	0.0372	"	"	"	"	"	
PCB-1232	"	ND	----	0.0372	"	"	"	"	"	
PCB-1242	"	ND	----	0.0372	"	"	"	"	"	
PCB-1248	"	ND	----	0.0372	"	"	"	"	"	
PCB-1254	"	ND	----	0.0372	"	"	"	"	"	
PCB-1260	"	ND	----	0.0372	"	"	"	"	"	
PCB-1262	"	ND	----	0.0372	"	"	"	"	"	
PCB-1268	"	ND	----	0.0372	"	"	"	"	"	

Surrogate(s): *Tetrachloro-meta-xylene*
Decachlorobiphenyl

88% 15 - 150 %
 104% 10 - 150 %

BRL0200-47 (ALY-SB-6-1.0-2.0)		Soil		Sampled: 12/17/08 12:45						
PCB-1016	SW846 8082	ND	----	0.0356	mg/kg dry	1x	8123862	12/27/08 08:10	12/30/08 13:39	
PCB-1221	"	ND	----	0.0356	"	"	"	"	"	
PCB-1232	"	ND	----	0.0356	"	"	"	"	"	
PCB-1242	"	ND	----	0.0356	"	"	"	"	"	
PCB-1248	"	ND	----	0.0356	"	"	"	"	"	
PCB-1254	"	ND	----	0.0356	"	"	"	"	"	
PCB-1260	"	ND	----	0.0356	"	"	"	"	"	
PCB-1262	"	ND	----	0.0356	"	"	"	"	"	
PCB-1268	"	ND	----	0.0356	"	"	"	"	"	

Surrogate(s): *Tetrachloro-meta-xylene*
Decachlorobiphenyl

74% 15 - 150 %
 78% 10 - 150 %

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

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Amended Report

CH2M Hill - Bellevue	Project Name: WSDOT SR 520 - Pontoon Sites	
1100 112th Avenue NE, Suite 400	Project Number: 180171.AR.X7.02	Report Created:
Bellevue, WA/USA 98004-4504	Project Manager: Brian Tracy	01/26/09 09:59

Polychlorinated Biphenyls by EPA Method 8082
TestAmerica Nashville

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-49 (ALY-SB-2-1.0-3.0)		Soil					Sampled: 12/17/08 13:24			
PCB-1016	SW846 8082	ND	----	0.0368	mg/kg dry	1x	8123862	12/27/08 08:10	12/30/08 13:59	
PCB-1221	"	ND	----	0.0368	"	"	"	"	"	
PCB-1232	"	ND	----	0.0368	"	"	"	"	"	
PCB-1242	"	ND	----	0.0368	"	"	"	"	"	
PCB-1248	"	ND	----	0.0368	"	"	"	"	"	
PCB-1254	"	ND	----	0.0368	"	"	"	"	"	
PCB-1260	"	ND	----	0.0368	"	"	"	"	"	
PCB-1262	"	ND	----	0.0368	"	"	"	"	"	
PCB-1268	"	ND	----	0.0368	"	"	"	"	"	
<i>Surrogate(s): Tetrachloro-meta-xylene</i>			78%	15 - 150 %	"					"
<i>Decachlorobiphenyl</i>			92%	10 - 150 %	"					"

BRL0200-52 (ALY-SB-1-1.0-2.0)		Soil					Sampled: 12/17/08 14:16			
PCB-1016	SW846 8082	ND	----	0.0442	mg/kg dry	1x	8123862	12/27/08 08:10	12/30/08 14:20	
PCB-1221	"	ND	----	0.0442	"	"	"	"	"	
PCB-1232	"	ND	----	0.0442	"	"	"	"	"	
PCB-1242	"	ND	----	0.0442	"	"	"	"	"	
PCB-1248	"	ND	----	0.0442	"	"	"	"	"	
PCB-1254	"	ND	----	0.0442	"	"	"	"	"	
PCB-1260	"	ND	----	0.0442	"	"	"	"	"	
PCB-1262	"	ND	----	0.0442	"	"	"	"	"	
PCB-1268	"	ND	----	0.0442	"	"	"	"	"	
<i>Surrogate(s): Tetrachloro-meta-xylene</i>			62%	15 - 150 %	"					"
<i>Decachlorobiphenyl</i>			82%	10 - 150 %	"					"

BRL0200-54 (ALY-SB-4-1.0-2.0)		Soil					Sampled: 12/17/08 14:50			
PCB-1016	SW846 8082	ND	----	0.0363	mg/kg dry	1x	8124064	12/27/08 07:15	12/30/08 22:09	
PCB-1221	"	ND	----	0.0363	"	"	"	"	"	
PCB-1232	"	ND	----	0.0363	"	"	"	"	"	
PCB-1242	"	ND	----	0.0363	"	"	"	"	"	
PCB-1248	"	ND	----	0.0363	"	"	"	"	"	
PCB-1254	"	ND	----	0.0363	"	"	"	"	"	
PCB-1260	"	ND	----	0.0363	"	"	"	"	"	
PCB-1262	"	ND	----	0.0363	"	"	"	"	"	
PCB-1268	"	ND	----	0.0363	"	"	"	"	"	
<i>Surrogate(s): Tetrachloro-meta-xylene</i>			82%	15 - 150 %	"					"
<i>Decachlorobiphenyl</i>			118%	10 - 150 %	"					"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue	Project Name: WSDOT SR 520 - Pontoon Sites	Report Created:
1100 112th Avenue NE, Suite 400	Project Number: 180171.AR.X7.02	01/26/09 09:59
Bellevue, WA/USA 98004-4504	Project Manager: Brian Tracy	

Polychlorinated Biphenyls by EPA Method 8082
 TestAmerica Nashville

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-56 (ALY-SB-10-1.0-2.0)		Soil			Sampled: 12/17/08 15:32					
PCB-1016	SW846 8082	ND	----	0.0366	mg/kg dry	1x	8124064	12/27/08 07:15	12/31/08 07:57	
PCB-1221	"	ND	----	0.0366	"	"	"	"	"	"
PCB-1232	"	ND	----	0.0366	"	"	"	"	"	"
PCB-1242	"	ND	----	0.0366	"	"	"	"	"	"
PCB-1248	"	ND	----	0.0366	"	"	"	"	"	"
PCB-1254	"	ND	----	0.0366	"	"	"	"	"	"
PCB-1260	"	ND	----	0.0366	"	"	"	"	"	"
PCB-1262	"	ND	----	0.0366	"	"	"	"	"	"
PCB-1268	"	ND	----	0.0366	"	"	"	"	"	"
<i>Surrogate(s): Tetrachloro-meta-xylene</i>			102%	15 - 150 %	"					"
<i>Decachlorobiphenyl</i>			124%	10 - 150 %	"					"

BRL0200-58 (ALY-SB-5-1.0-2.0)		Soil			Sampled: 12/17/08 16:00					
PCB-1016	SW846 8082	ND	----	0.0355	mg/kg dry	1x	8124064	12/27/08 07:15	12/31/08 08:18	
PCB-1221	"	ND	----	0.0355	"	"	"	"	"	"
PCB-1232	"	ND	----	0.0355	"	"	"	"	"	"
PCB-1242	"	ND	----	0.0355	"	"	"	"	"	"
PCB-1248	"	ND	----	0.0355	"	"	"	"	"	"
PCB-1254	"	ND	----	0.0355	"	"	"	"	"	"
PCB-1260	"	ND	----	0.0355	"	"	"	"	"	"
PCB-1262	"	ND	----	0.0355	"	"	"	"	"	"
PCB-1268	"	ND	----	0.0355	"	"	"	"	"	"
<i>Surrogate(s): Tetrachloro-meta-xylene</i>			100%	15 - 150 %	"					"
<i>Decachlorobiphenyl</i>			114%	10 - 150 %	"					"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Polyaromatic Hydrocarbons by EPA 8270C SIM
 TestAmerica Nashville

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-01 (AM-SB-1-1.0-2.0)			Soil				Sampled: 12/15/08 12:40			
Acenaphthene	SW846 8270CSIM	ND	----	0.00365	mg/kg dry	1x	8123865	12/26/08 10:05	12/30/08 00:13	
Acenaphthylene	"	ND	----	0.00365	"	"	"	"	"	
Anthracene	"	ND	----	0.00365	"	"	"	"	"	
Benzo (a) anthracene	"	ND	----	0.00365	"	"	"	"	"	
Benzo (a) pyrene	"	ND	----	0.00365	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	----	0.00365	"	"	"	"	"	
Benzo (g,h,i) perylene	"	ND	----	0.00365	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	----	0.00365	"	"	"	"	"	
Chrysene	"	0.00438	----	0.00365	"	"	"	"	"	
Dibenz (a,h) anthracene	"	ND	----	0.00365	"	"	"	"	"	
Fluoranthene	"	ND	----	0.00365	"	"	"	"	"	
Fluorene	"	ND	----	0.00365	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	----	0.00365	"	"	"	"	"	
1-Methylnaphthalene	"	ND	----	0.00365	"	"	"	"	"	
2-Methylnaphthalene	"	ND	----	0.00365	"	"	"	"	"	
Naphthalene	"	ND	----	0.00365	"	"	"	"	"	
Phenanthrene	"	ND	----	0.00365	"	"	"	"	"	
Pyrene	"	ND	----	0.00365	"	"	"	"	"	
<i>Surrogate(s): Nitrobenzene-d5</i>			<i>54%</i>		<i>22 - 104 %</i>	<i>"</i>				<i>"</i>
<i>2-Fluorobiphenyl</i>			<i>60%</i>		<i>19 - 109 %</i>	<i>"</i>				<i>"</i>
<i>Terphenyl-d14</i>			<i>63%</i>		<i>26 - 128 %</i>	<i>"</i>				<i>"</i>

BRL0200-04 (AM-SB-2-1.0-2.0)			Soil				Sampled: 12/15/08 14:23			
Acenaphthene	SW846 8270CSIM	ND	----	0.00358	mg/kg dry	1x	8123865	12/26/08 10:05	12/30/08 00:34	
Acenaphthylene	"	ND	----	0.00358	"	"	"	"	"	
Anthracene	"	ND	----	0.00358	"	"	"	"	"	
Benzo (a) anthracene	"	ND	----	0.00358	"	"	"	"	"	
Benzo (a) pyrene	"	ND	----	0.00358	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	----	0.00358	"	"	"	"	"	
Benzo (g,h,i) perylene	"	ND	----	0.00358	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	----	0.00358	"	"	"	"	"	
Chrysene	"	0.00359	----	0.00358	"	"	"	"	"	
Dibenz (a,h) anthracene	"	ND	----	0.00358	"	"	"	"	"	
Fluoranthene	"	ND	----	0.00358	"	"	"	"	"	
Fluorene	"	ND	----	0.00358	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	----	0.00358	"	"	"	"	"	
1-Methylnaphthalene	"	ND	----	0.00358	"	"	"	"	"	
2-Methylnaphthalene	"	ND	----	0.00358	"	"	"	"	"	
Naphthalene	"	ND	----	0.00358	"	"	"	"	"	
Phenanthrene	"	ND	----	0.00358	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Polyaromatic Hydrocarbons by EPA 8270C SIM

TestAmerica Nashville

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-04 (AM-SB-2-1.0-2.0)		Soil		Sampled: 12/15/08 14:23						
Pyrene	SW846 8270CSIM	ND	----	0.00358	mg/kg dry	1x	8123865	12/26/08 10:05	12/30/08 00:34	
<i>Surrogate(s): Nitrobenzene-d5</i>			56%	22 - 104 %						
<i>2-Fluorobiphenyl</i>			60%	19 - 109 %						
<i>Terphenyl-d14</i>			63%	26 - 128 %						
BRL0200-06 (AM-SB-3-0.0-1.0)		Soil		Sampled: 12/15/08 15:15						
Acenaphthene	SW846 8270CSIM	ND	----	0.0183	mg/kg dry	5x	8123865	12/26/08 10:05	12/30/08 00:54	RL1
Acenaphthylene	"	ND	----	0.0183	"	"	"	"	"	RL1
Anthracene	"	ND	----	0.0183	"	"	"	"	"	RL1
Benzo (a) anthracene	"	ND	----	0.0183	"	"	"	"	"	RL1
Benzo (a) pyrene	"	ND	----	0.0183	"	"	"	"	"	RL1
Benzo (b) fluoranthene	"	ND	----	0.0183	"	"	"	"	"	RL1
Benzo (g,h,i) perylene	"	ND	----	0.0183	"	"	"	"	"	RL1
Benzo (k) fluoranthene	"	ND	----	0.0183	"	"	"	"	"	RL1
Chrysene	"	ND	----	0.0183	"	"	"	"	"	RL1
Dibenz (a,h) anthracene	"	ND	----	0.0183	"	"	"	"	"	RL1
Fluoranthene	"	ND	----	0.0183	"	"	"	"	"	RL1
Fluorene	"	ND	----	0.0183	"	"	"	"	"	RL1
Indeno (1,2,3-cd) pyrene	"	ND	----	0.0183	"	"	"	"	"	RL1
1-Methylnaphthalene	"	ND	----	0.0183	"	"	"	"	"	RL1
2-Methylnaphthalene	"	ND	----	0.0183	"	"	"	"	"	RL1
Naphthalene	"	ND	----	0.0183	"	"	"	"	"	RL1
Phenanthrene	"	ND	----	0.0183	"	"	"	"	"	RL1
Pyrene	"	ND	----	0.0183	"	"	"	"	"	RL1
<i>Surrogate(s): Nitrobenzene-d5</i>			55%	22 - 104 %						
<i>2-Fluorobiphenyl</i>			60%	19 - 109 %						
<i>Terphenyl-d14</i>			60%	26 - 128 %						
BRL0200-10 (AM-SB-10-0.0-3.0)		Soil		Sampled: 12/15/08 16:20						
Acenaphthene	SW846 8270CSIM	ND	----	0.00385	mg/kg dry	1x	8123865	12/26/08 10:05	12/30/08 01:15	
Acenaphthylene	"	ND	----	0.00385	"	"	"	"	"	
Anthracene	"	ND	----	0.00385	"	"	"	"	"	
Benzo (a) anthracene	"	ND	----	0.00385	"	"	"	"	"	
Benzo (a) pyrene	"	ND	----	0.00385	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	----	0.00385	"	"	"	"	"	
Benzo (g,h,i) perylene	"	ND	----	0.00385	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	----	0.00385	"	"	"	"	"	
Chrysene	"	ND	----	0.00385	"	"	"	"	"	
Dibenz (a,h) anthracene	"	ND	----	0.00385	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Polyaromatic Hydrocarbons by EPA 8270C SIM
 TestAmerica Nashville

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-10 (AM-SB-10-0.0-3.0)		Soil		Sampled: 12/15/08 16:20						
Fluoranthene	SW846 8270CSIM	ND	----	0.00385	mg/kg dry	1x	8123865	12/26/08 10:05	12/30/08 01:15	
Fluorene	"	ND	----	0.00385	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	----	0.00385	"	"	"	"	"	
1-Methylnaphthalene	"	ND	----	0.00385	"	"	"	"	"	
2-Methylnaphthalene	"	ND	----	0.00385	"	"	"	"	"	
Naphthalene	"	ND	----	0.00385	"	"	"	"	"	
Phenanthrene	"	ND	----	0.00385	"	"	"	"	"	
Pyrene	"	ND	----	0.00385	"	"	"	"	"	
<i>Surrogate(s): Nitrobenzene-d5</i>			66%		22 - 104 %	"				"
<i>2-Fluorobiphenyl</i>			78%		19 - 109 %	"				"
<i>Terphenyl-d14</i>			65%		26 - 128 %	"				"
BRL0200-12 (AM-SB-11-1.0-2.0)		Soil		Sampled: 12/16/08 08:10						
Acenaphthene	SW846 8270CSIM	ND	----	0.00365	mg/kg dry	1x	8123865	12/26/08 10:05	01/05/09 18:47	
Acenaphthylene	"	ND	----	0.00365	"	"	"	"	"	
Anthracene	"	ND	----	0.00365	"	"	"	"	"	
Benzo (a) anthracene	"	ND	----	0.00365	"	"	"	"	"	
Benzo (a) pyrene	"	ND	----	0.00365	"	"	"	"	"	
Benzo (b) fluoranthene	"	0.00511	----	0.00365	"	"	"	"	"	
Benzo (g,h,i) perylene	"	ND	----	0.00365	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	----	0.00365	"	"	"	"	"	
Chrysene	"	0.00511	----	0.00365	"	"	"	"	"	
Dibenz (a,h) anthracene	"	ND	----	0.00365	"	"	"	"	"	
Fluoranthene	"	0.00402	----	0.00365	"	"	"	"	"	
Fluorene	"	ND	----	0.00365	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	----	0.00365	"	"	"	"	"	
1-Methylnaphthalene	"	ND	----	0.00365	"	"	"	"	"	
2-Methylnaphthalene	"	ND	----	0.00365	"	"	"	"	"	
Naphthalene	"	ND	----	0.00365	"	"	"	"	"	
Phenanthrene	"	ND	----	0.00365	"	"	"	"	"	
Pyrene	"	0.00548	----	0.00365	"	"	"	"	"	
<i>Surrogate(s): Nitrobenzene-d5</i>			54%		22 - 104 %	"				"
<i>2-Fluorobiphenyl</i>			62%		19 - 109 %	"				"
<i>Terphenyl-d14</i>			119%		26 - 128 %	"				"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Polyaromatic Hydrocarbons by EPA 8270C SIM
 TestAmerica Nashville

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-15 (AM-SB-8-1.0-2.0)										
			Soil				Sampled: 12/16/08 09:47			
Acenaphthene	SW846 8270CSIM	ND	----	0.00416	mg/kg dry	1x	8123865	12/26/08 10:05	12/30/08 01:58	
Acenaphthylene	"	ND	----	0.00416	"	"	"	"	"	
Anthracene	"	ND	----	0.00416	"	"	"	"	"	
Benzo (a) anthracene	"	ND	----	0.00416	"	"	"	"	"	
Benzo (a) pyrene	"	ND	----	0.00416	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	----	0.00416	"	"	"	"	"	
Benzo (g,h,i) perylene	"	ND	----	0.00416	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	----	0.00416	"	"	"	"	"	
Chrysene	"	0.00459	----	0.00416	"	"	"	"	"	
Dibenz (a,h) anthracene	"	ND	----	0.00416	"	"	"	"	"	
Fluoranthene	"	0.00417	----	0.00416	"	"	"	"	"	
Fluorene	"	ND	----	0.00416	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	----	0.00416	"	"	"	"	"	
1-Methylnaphthalene	"	ND	----	0.00416	"	"	"	"	"	
2-Methylnaphthalene	"	ND	----	0.00416	"	"	"	"	"	
Naphthalene	"	ND	----	0.00416	"	"	"	"	"	
Phenanthrene	"	0.00459	----	0.00416	"	"	"	"	"	
Pyrene	"	0.00417	----	0.00416	"	"	"	"	"	

Surrogate(s): Nitrobenzene-d5 60% 22 - 104 % "
 2-Fluorobiphenyl 58% 19 - 109 % "
 Terphenyl-d14 53% 26 - 128 % "

BRL0200-17 (AM-SB-6-1.0-2.0)										
			Soil				Sampled: 12/16/08 10:24			
Acenaphthene	SW846 8270CSIM	ND	----	0.00366	mg/kg dry	1x	8123865	12/26/08 10:05	12/30/08 02:19	
Acenaphthylene	"	ND	----	0.00366	"	"	"	"	"	
Anthracene	"	ND	----	0.00366	"	"	"	"	"	
Benzo (a) anthracene	"	ND	----	0.00366	"	"	"	"	"	
Benzo (a) pyrene	"	ND	----	0.00366	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	----	0.00366	"	"	"	"	"	
Benzo (g,h,i) perylene	"	ND	----	0.00366	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	----	0.00366	"	"	"	"	"	
Chrysene	"	0.0143	----	0.00366	"	"	"	"	"	
Dibenz (a,h) anthracene	"	ND	----	0.00366	"	"	"	"	"	
Fluoranthene	"	ND	----	0.00366	"	"	"	"	"	
Fluorene	"	ND	----	0.00366	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	----	0.00366	"	"	"	"	"	
1-Methylnaphthalene	"	ND	----	0.00366	"	"	"	"	"	
2-Methylnaphthalene	"	ND	----	0.00366	"	"	"	"	"	
Naphthalene	"	ND	----	0.00366	"	"	"	"	"	
Phenanthrene	"	0.00440	----	0.00366	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Polyaromatic Hydrocarbons by EPA 8270C SIM

TestAmerica Nashville

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	-------	----------	----------	-------

BRL0200-17 (AM-SB-6-1.0-2.0)

Soil

Sampled: 12/16/08 10:24

Pyrene	SW846 8270CSIM	0.00697	----	0.00366	mg/kg dry	1x	8123865	12/26/08 10:05	12/30/08 02:19	
<i>Surrogate(s): Nitrobenzene-d5</i>			68%		22 - 104 %	"				"
<i>2-Fluorobiphenyl</i>			73%		19 - 109 %	"				"
<i>Terphenyl-d14</i>			84%		26 - 128 %	"				"

BRL0200-20 (AM-SB-5-1.0-2.0)

Soil

Sampled: 12/16/08 11:35

Acenaphthene	SW846 8270CSIM	ND	----	0.0185	mg/kg dry	5x	8123865	12/26/08 10:05	12/30/08 02:39	
Acenaphthylene	"	ND	----	0.0185	"	"	"	"	"	"
Anthracene	"	ND	----	0.0185	"	"	"	"	"	"
Benzo (a) anthracene	"	0.0260	----	0.0185	"	"	"	"	"	"
Benzo (a) pyrene	"	ND	----	0.0185	"	"	"	"	"	"
Benzo (b) fluoranthene	"	ND	----	0.0185	"	"	"	"	"	"
Benzo (g,h,i) perylene	"	ND	----	0.0185	"	"	"	"	"	"
Benzo (k) fluoranthene	"	ND	----	0.0185	"	"	"	"	"	"
Chrysene	"	0.0408	----	0.0185	"	"	"	"	"	"
Dibenz (a,h) anthracene	"	ND	----	0.0185	"	"	"	"	"	"
Fluoranthene	"	0.0297	----	0.0185	"	"	"	"	"	"
Fluorene	"	ND	----	0.0185	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	"	ND	----	0.0185	"	"	"	"	"	"
1-Methylnaphthalene	"	0.0315	----	0.0185	"	"	"	"	"	"
2-Methylnaphthalene	"	0.0334	----	0.0185	"	"	"	"	"	"
Naphthalene	"	ND	----	0.0185	"	"	"	"	"	"
Phenanthrene	"	0.0593	----	0.0185	"	"	"	"	"	"
Pyrene	"	0.0519	----	0.0185	"	"	"	"	"	"
<i>Surrogate(s): Nitrobenzene-d5</i>			70%		22 - 104 %	"				"
<i>2-Fluorobiphenyl</i>			80%		19 - 109 %	"				"
<i>Terphenyl-d14</i>			70%		26 - 128 %	"				"

BRL0200-23 (AM-SB-4-1.0-2.0)

Soil

Sampled: 12/16/08 12:25

Acenaphthene	SW846 8270CSIM	ND	----	0.00408	mg/kg dry	1x	8123865	12/26/08 10:05	12/30/08 03:01	
Acenaphthylene	"	ND	----	0.00408	"	"	"	"	"	"
Anthracene	"	ND	----	0.00408	"	"	"	"	"	"
Benzo (a) anthracene	"	ND	----	0.00408	"	"	"	"	"	"
Benzo (a) pyrene	"	ND	----	0.00408	"	"	"	"	"	"
Benzo (b) fluoranthene	"	ND	----	0.00408	"	"	"	"	"	"
Benzo (g,h,i) perylene	"	ND	----	0.00408	"	"	"	"	"	"
Benzo (k) fluoranthene	"	ND	----	0.00408	"	"	"	"	"	"
Chrysene	"	ND	----	0.00408	"	"	"	"	"	"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Polyaromatic Hydrocarbons by EPA 8270C SIM
 TestAmerica Nashville

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-23 (AM-SB-4-1.0-2.0)		Soil		Sampled: 12/16/08 12:25						
Dibenz (a,h) anthracene	SW846 8270CSIM	ND	----	0.00408	mg/kg dry	1x	8123865	12/26/08 10:05	12/30/08 03:01	
Fluoranthene	"	0.00939	----	0.00408	"	"	"	"	"	
Fluorene	"	ND	----	0.00408	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	----	0.00408	"	"	"	"	"	
1-Methylnaphthalene	"	ND	----	0.00408	"	"	"	"	"	
2-Methylnaphthalene	"	ND	----	0.00408	"	"	"	"	"	
Naphthalene	"	ND	----	0.00408	"	"	"	"	"	
Phenanthrene	"	0.00817	----	0.00408	"	"	"	"	"	
Pyrene	"	0.00817	----	0.00408	"	"	"	"	"	
<i>Surrogate(s): Nitrobenzene-d5</i>				47%	22 - 104 %	"				"
<i>2-Fluorobiphenyl</i>				51%	19 - 109 %	"				"
<i>Terphenyl-d14</i>				57%	26 - 128 %	"				"

BRL0200-25 (AM-SB-9-1.0-3.0)		Soil		Sampled: 12/16/08 13:25						
Acenaphthene	SW846 8270CSIM	ND	----	0.00401	mg/kg dry	1x	8123865	12/26/08 10:05	12/30/08 03:22	
Acenaphthylene	"	ND	----	0.00401	"	"	"	"	"	
Anthracene	"	ND	----	0.00401	"	"	"	"	"	
Benzo (a) anthracene	"	ND	----	0.00401	"	"	"	"	"	
Benzo (a) pyrene	"	ND	----	0.00401	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	----	0.00401	"	"	"	"	"	
Benzo (g,h,i) perylene	"	ND	----	0.00401	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	----	0.00401	"	"	"	"	"	
Chrysene	"	ND	----	0.00401	"	"	"	"	"	
Dibenz (a,h) anthracene	"	ND	----	0.00401	"	"	"	"	"	
Fluoranthene	"	ND	----	0.00401	"	"	"	"	"	
Fluorene	"	ND	----	0.00401	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	----	0.00401	"	"	"	"	"	
1-Methylnaphthalene	"	ND	----	0.00401	"	"	"	"	"	
2-Methylnaphthalene	"	ND	----	0.00401	"	"	"	"	"	
Naphthalene	"	ND	----	0.00401	"	"	"	"	"	
Phenanthrene	"	ND	----	0.00401	"	"	"	"	"	
Pyrene	"	ND	----	0.00401	"	"	"	"	"	
<i>Surrogate(s): Nitrobenzene-d5</i>				69%	22 - 104 %	"				"
<i>2-Fluorobiphenyl</i>				73%	19 - 109 %	"				"
<i>Terphenyl-d14</i>				82%	26 - 128 %	"				"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Polyaromatic Hydrocarbons by EPA 8270C SIM
 TestAmerica Nashville

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-28 (AM-SB-12-1.0-2.0)		Soil		Sampled: 12/16/08 14:22						
Acenaphthene	SW846 8270CSIM	ND	----	0.00400	mg/kg dry	1x	8123865	12/26/08 10:05	12/30/08 03:43	
Acenaphthylene	"	ND	----	0.00400	"	"	"	"	"	"
Anthracene	"	ND	----	0.00400	"	"	"	"	"	"
Benzo (a) anthracene	"	ND	----	0.00400	"	"	"	"	"	"
Benzo (a) pyrene	"	ND	----	0.00400	"	"	"	"	"	"
Benzo (b) fluoranthene	"	ND	----	0.00400	"	"	"	"	"	"
Benzo (g,h,i) perylene	"	ND	----	0.00400	"	"	"	"	"	"
Benzo (k) fluoranthene	"	ND	----	0.00400	"	"	"	"	"	"
Chrysene	"	ND	----	0.00400	"	"	"	"	"	"
Dibenz (a,h) anthracene	"	ND	----	0.00400	"	"	"	"	"	"
Fluoranthene	"	ND	----	0.00400	"	"	"	"	"	"
Fluorene	"	ND	----	0.00400	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	"	ND	----	0.00400	"	"	"	"	"	"
1-Methylnaphthalene	"	ND	----	0.00400	"	"	"	"	"	"
2-Methylnaphthalene	"	ND	----	0.00400	"	"	"	"	"	"
Naphthalene	"	ND	----	0.00400	"	"	"	"	"	"
Phenanthrene	"	ND	----	0.00400	"	"	"	"	"	"
Pyrene	"	ND	----	0.00400	"	"	"	"	"	"
<i>Surrogate(s): Nitrobenzene-d5</i>			55%		22 - 104 %	"				"
<i>2-Fluorobiphenyl</i>			58%		19 - 109 %	"				"
<i>Terphenyl-d14</i>			74%		26 - 128 %	"				"

BRL0200-30 (ALY-SB-11-1.0-2.0)		Soil		Sampled: 12/16/08 16:15						
Acenaphthene	SW846 8270CSIM	0.00486	----	0.00374	mg/kg dry	1x	8123865	12/26/08 10:05	01/05/09 19:09	
Acenaphthylene	"	ND	----	0.00374	"	"	"	"	"	"
Anthracene	"	0.0438	----	0.00374	"	"	"	"	"	"
Benzo (a) anthracene	"	0.0674	----	0.00374	"	"	"	"	"	"
Benzo (a) pyrene	"	0.0423	----	0.00374	"	"	"	"	"	"
Benzo (b) fluoranthene	"	0.0329	----	0.00374	"	"	"	"	"	"
Benzo (g,h,i) perylene	"	0.0202	----	0.00374	"	"	"	"	"	"
Benzo (k) fluoranthene	"	0.0397	----	0.00374	"	"	"	"	"	"
Chrysene	"	0.0950	----	0.00374	"	"	"	"	"	"
Dibenz (a,h) anthracene	"	0.00748	----	0.00374	"	"	"	"	"	"
Fluoranthene	"	0.184	----	0.00374	"	"	"	"	"	"
Fluorene	"	0.00748	----	0.00374	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	"	0.0210	----	0.00374	"	"	"	"	"	"
1-Methylnaphthalene	"	ND	----	0.00374	"	"	"	"	"	"
2-Methylnaphthalene	"	ND	----	0.00374	"	"	"	"	"	"
Naphthalene	"	ND	----	0.00374	"	"	"	"	"	"
Phenanthrene	"	0.113	----	0.00374	"	"	"	"	"	"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Polyaromatic Hydrocarbons by EPA 8270C SIM

TestAmerica Nashville

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	-------	----------	----------	-------

BRL0200-30 (ALY-SB-11-1.0-2.0)

Soil

Sampled: 12/16/08 16:15

Pyrene	SW846 8270CSIM	0.314	----	0.00374	mg/kg dry	1x	8123865	12/26/08 10:05	01/05/09 19:09	
<i>Surrogate(s): Nitrobenzene-d5</i>			74%		22 - 104 %	"				
<i>2-Fluorobiphenyl</i>			77%		19 - 109 %	"				
<i>Terphenyl-d14</i>			149%		26 - 128 %	"				ZX

BRL0200-34 (ALY-SB-3-1.0-3.0)

Soil

Sampled: 12/17/08 08:02

Acenaphthene	SW846 8270CSIM	ND	----	0.00363	mg/kg dry	1x	8123865	12/26/08 10:05	12/30/08 04:25	
Acenaphthylene	"	ND	----	0.00363	"	"	"	"	"	
Anthracene	"	ND	----	0.00363	"	"	"	"	"	
Benzo (a) anthracene	"	ND	----	0.00363	"	"	"	"	"	
Benzo (a) pyrene	"	ND	----	0.00363	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	----	0.00363	"	"	"	"	"	
Benzo (g,h,i) perylene	"	ND	----	0.00363	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	----	0.00363	"	"	"	"	"	
Chrysene	"	ND	----	0.00363	"	"	"	"	"	
Dibenz (a,h) anthracene	"	ND	----	0.00363	"	"	"	"	"	
Fluoranthene	"	0.00655	----	0.00363	"	"	"	"	"	
Fluorene	"	ND	----	0.00363	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	----	0.00363	"	"	"	"	"	
1-Methylnaphthalene	"	ND	----	0.00363	"	"	"	"	"	
2-Methylnaphthalene	"	ND	----	0.00363	"	"	"	"	"	
Naphthalene	"	ND	----	0.00363	"	"	"	"	"	
Phenanthrene	"	0.0105	----	0.00363	"	"	"	"	"	
Pyrene	"	0.00473	----	0.00363	"	"	"	"	"	
<i>Surrogate(s): Nitrobenzene-d5</i>			59%		22 - 104 %	"				
<i>2-Fluorobiphenyl</i>			61%		19 - 109 %	"				
<i>Terphenyl-d14</i>			66%		26 - 128 %	"				

BRL0200-37 (ALY-SB-9-1.0-2.0)

Soil

Sampled: 12/17/08 09:25

Acenaphthene	SW846 8270CSIM	ND	----	0.00414	mg/kg dry	1x	8123865	12/26/08 10:05	12/30/08 04:46	
Acenaphthylene	"	ND	----	0.00414	"	"	"	"	"	
Anthracene	"	ND	----	0.00414	"	"	"	"	"	
Benzo (a) anthracene	"	ND	----	0.00414	"	"	"	"	"	
Benzo (a) pyrene	"	ND	----	0.00414	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	----	0.00414	"	"	"	"	"	
Benzo (g,h,i) perylene	"	ND	----	0.00414	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	----	0.00414	"	"	"	"	"	
Chrysene	"	ND	----	0.00414	"	"	"	"	"	
Dibenz (a,h) anthracene	"	ND	----	0.00414	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Polyaromatic Hydrocarbons by EPA 8270C SIM

TestAmerica Nashville

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-37 (ALY-SB-9-1.0-2.0)										
		Soil					Sampled: 12/17/08 09:25			
Fluoranthene	SW846 8270CSIM	ND	----	0.00414	mg/kg dry	1x	8123865	12/26/08 10:05	12/30/08 04:46	
Fluorene	"	ND	----	0.00414	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	----	0.00414	"	"	"	"	"	
1-Methylnaphthalene	"	ND	----	0.00414	"	"	"	"	"	
2-Methylnaphthalene	"	ND	----	0.00414	"	"	"	"	"	
Naphthalene	"	ND	----	0.00414	"	"	"	"	"	
Phenanthrene	"	0.0133	----	0.00414	"	"	"	"	"	
Pyrene	"	0.0995	----	0.00414	"	"	"	"	"	

<i>Surrogate(s): Nitrobenzene-d5</i>	76%	22 - 104 %	"	"
<i>2-Fluorobiphenyl</i>	70%	19 - 109 %	"	"
<i>Terphenyl-d14</i>	77%	26 - 128 %	"	"

BRL0200-39 (ALY-SB-12-1.0-2.0)										
		Soil					Sampled: 12/17/08 09:55			
Acenaphthene	SW846 8270CSIM	ND	----	0.00363	mg/kg dry	1x	8123865	12/26/08 10:05	01/05/09 15:01	
Acenaphthylene	"	ND	----	0.00363	"	"	"	"	"	
Anthracene	"	ND	----	0.00363	"	"	"	"	"	
Benzo (a) anthracene	"	ND	----	0.00363	"	"	"	"	"	
Benzo (a) pyrene	"	ND	----	0.00363	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	----	0.00363	"	"	"	"	"	
Benzo (g,h,i) perylene	"	ND	----	0.00363	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	----	0.00363	"	"	"	"	"	
Chrysene	"	ND	----	0.00363	"	"	"	"	"	
Dibenz (a,h) anthracene	"	ND	----	0.00363	"	"	"	"	"	
Fluoranthene	"	ND	----	0.00363	"	"	"	"	"	
Fluorene	"	ND	----	0.00363	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	----	0.00363	"	"	"	"	"	
1-Methylnaphthalene	"	ND	----	0.00363	"	"	"	"	"	
2-Methylnaphthalene	"	ND	----	0.00363	"	"	"	"	"	
Naphthalene	"	ND	----	0.00363	"	"	"	"	"	
Phenanthrene	"	ND	----	0.00363	"	"	"	"	"	
Pyrene	"	ND	----	0.00363	"	"	"	"	"	

<i>Surrogate(s): Nitrobenzene-d5</i>	102%	22 - 104 %	"	"
<i>2-Fluorobiphenyl</i>	64%	19 - 109 %	"	"
<i>Terphenyl-d14</i>	77%	26 - 128 %	"	"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Polyaromatic Hydrocarbons by EPA 8270C SIM
 TestAmerica Nashville

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-42 (ALY-SB-8-1.0-2.0)		Soil		Sampled: 12/17/08 11:02						
Acenaphthene	SW846 8270CSIM	ND	----	0.00366	mg/kg dry	1x	8123865	12/26/08 10:05	12/30/08 05:29	
Acenaphthylene	"	ND	----	0.00366	"	"	"	"	"	"
Benzo (a) anthracene	"	ND	----	0.00366	"	"	"	"	"	"
Benzo (a) pyrene	"	ND	----	0.00366	"	"	"	"	"	"
Benzo (b) fluoranthene	"	ND	----	0.00366	"	"	"	"	"	"
Benzo (g,h,i) perylene	"	ND	----	0.00366	"	"	"	"	"	"
Benzo (k) fluoranthene	"	ND	----	0.00366	"	"	"	"	"	"
Chrysene	"	ND	----	0.00366	"	"	"	"	"	"
Dibenz (a,h) anthracene	"	ND	----	0.00366	"	"	"	"	"	"
Fluorene	"	ND	----	0.00366	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	"	ND	----	0.00366	"	"	"	"	"	"
1-Methylnaphthalene	"	ND	----	0.00366	"	"	"	"	"	"
2-Methylnaphthalene	"	ND	----	0.00366	"	"	"	"	"	"
Naphthalene	"	ND	----	0.00366	"	"	"	"	"	"
Pyrene	"	ND	----	0.00366	"	"	"	"	"	"

Surrogate(s): Nitrobenzene-d5 52% 22 - 104 % "
 2-Fluorobiphenyl 58% 19 - 109 % "
 Terphenyl-d14 46% 26 - 128 % "

BRL0200-42RE1 (ALY-SB-8-1.0-2.0)		Soil		Sampled: 12/17/08 11:02						
Anthracene	SW846 8270CSIM	ND	----	0.00366	mg/kg dry	1x	8123865	12/26/08 10:05	01/06/09 13:33	
Fluoranthene	"	ND	----	0.00366	"	"	"	"	"	"
Phenanthrene	"	0.00366	----	0.00366	"	"	"	"	"	"

Surrogate(s): Nitrobenzene-d5 37% 22 - 104 % "
 2-Fluorobiphenyl 38% 19 - 109 % "
 Terphenyl-d14 48% 26 - 128 % "

BRL0200-44 (ALY-SB-7-1.0-2.0)		Soil		Sampled: 12/17/08 11:35						
Acenaphthene	SW846 8270CSIM	ND	----	0.00379	mg/kg dry	1x	8123865	12/26/08 10:05	12/30/08 05:50	
Acenaphthylene	"	ND	----	0.00379	"	"	"	"	"	"
Anthracene	"	ND	----	0.00379	"	"	"	"	"	"
Benzo (a) anthracene	"	ND	----	0.00379	"	"	"	"	"	"
Benzo (a) pyrene	"	ND	----	0.00379	"	"	"	"	"	"
Benzo (b) fluoranthene	"	ND	----	0.00379	"	"	"	"	"	"
Benzo (g,h,i) perylene	"	ND	----	0.00379	"	"	"	"	"	"
Benzo (k) fluoranthene	"	ND	----	0.00379	"	"	"	"	"	"
Chrysene	"	ND	----	0.00379	"	"	"	"	"	"
Dibenz (a,h) anthracene	"	ND	----	0.00379	"	"	"	"	"	"
Fluoranthene	"	ND	----	0.00379	"	"	"	"	"	"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Polyaromatic Hydrocarbons by EPA 8270C SIM

TestAmerica Nashville

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-44 (ALY-SB-7-1.0-2.0)		Soil		Sampled: 12/17/08 11:35						
Fluorene	SW846 8270CSIM	ND	----	0.00379	mg/kg dry	1x	8123865	12/26/08 10:05	12/30/08 05:50	
Indeno (1,2,3-cd) pyrene	"	ND	----	0.00379	"	"	"	"	"	
1-Methylnaphthalene	"	ND	----	0.00379	"	"	"	"	"	
2-Methylnaphthalene	"	ND	----	0.00379	"	"	"	"	"	
Naphthalene	"	ND	----	0.00379	"	"	"	"	"	
Phenanthrene	"	0.00493	----	0.00379	"	"	"	"	"	
Pyrene	"	ND	----	0.00379	"	"	"	"	"	
<i>Surrogate(s): Nitrobenzene-d5</i>			<i>61%</i>		<i>22 - 104 %</i>	<i>"</i>				<i>"</i>
<i>2-Fluorobiphenyl</i>			<i>66%</i>		<i>19 - 109 %</i>	<i>"</i>				<i>"</i>
<i>Terphenyl-d14</i>			<i>66%</i>		<i>26 - 128 %</i>	<i>"</i>				<i>"</i>
BRL0200-45 (ALY-SB-7-10.0-11.0)		Soil		Sampled: 12/17/08 11:52						
Acenaphthene	SW846 8270CSIM	0.0167	----	0.00429	mg/kg dry	1x	8123995	12/27/08 06:50	01/05/09 04:27	
Acenaphthylene	"	0.166	----	0.00429	"	"	"	"	"	M2
Anthracene	"	0.127	----	0.00429	"	"	"	"	"	
Benzo (a) anthracene	"	0.386	----	0.00429	"	"	"	"	"	M2
Benzo (a) pyrene	"	0.379	----	0.00429	"	"	"	"	"	M2
Benzo (b) fluoranthene	"	0.272	----	0.00429	"	"	"	"	"	
Benzo (g,h,i) perylene	"	0.290	----	0.00429	"	"	"	"	"	
Benzo (k) fluoranthene	"	0.317	----	0.00429	"	"	"	"	"	M2
Dibenz (a,h) anthracene	"	0.0686	----	0.00429	"	"	"	"	"	
Fluorene	"	0.0227	----	0.00429	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	0.242	----	0.00429	"	"	"	"	"	M1
1-Methylnaphthalene	"	0.0184	----	0.00429	"	"	"	"	"	
2-Methylnaphthalene	"	0.0236	----	0.00429	"	"	"	"	"	
Naphthalene	"	0.0759	----	0.00429	"	"	"	"	"	M2
Phenanthrene	"	0.265	----	0.00429	"	"	"	"	"	M2
<i>Surrogate(s): Nitrobenzene-d5</i>			<i>66%</i>		<i>22 - 104 %</i>	<i>"</i>				<i>"</i>
<i>2-Fluorobiphenyl</i>			<i>63%</i>		<i>19 - 109 %</i>	<i>"</i>				<i>"</i>
<i>Terphenyl-d14</i>			<i>114%</i>		<i>26 - 128 %</i>	<i>"</i>				<i>"</i>

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Polyaromatic Hydrocarbons by EPA 8270C SIM

TestAmerica Nashville

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-45RE1 (ALY-SB-7-10.0-11.0)		Soil		Sampled: 12/17/08 11:52						
Chrysene	SW846 8270CSIM	0.474	----	0.0214	mg/kg dry	5x	8123995	12/27/08 06:50	01/05/09 07:17	M2
Fluoranthene	"	0.751	----	0.0214	"	"	"	"	"	M2
Pyrene	"	1.16	----	0.0214	"	"	"	"	"	M2
BRL0200-47 (ALY-SB-6-1.0-2.0)		Soil		Sampled: 12/17/08 12:45						
Acenaphthene	SW846 8270CSIM	ND	----	0.0179	mg/kg dry	5x	8123865	12/26/08 10:05	12/30/08 06:10	
Acenaphthylene	"	ND	----	0.0179	"	"	"	"	"	
Anthracene	"	ND	----	0.0179	"	"	"	"	"	
Benzo (a) anthracene	"	ND	----	0.0179	"	"	"	"	"	
Benzo (a) pyrene	"	ND	----	0.0179	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	----	0.0179	"	"	"	"	"	
Benzo (g,h,i) perylene	"	ND	----	0.0179	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	----	0.0179	"	"	"	"	"	
Chrysene	"	0.0467	----	0.0179	"	"	"	"	"	
Dibenz (a,h) anthracene	"	ND	----	0.0179	"	"	"	"	"	
Fluoranthene	"	ND	----	0.0179	"	"	"	"	"	
Fluorene	"	ND	----	0.0179	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	----	0.0179	"	"	"	"	"	
1-Methylnaphthalene	"	ND	----	0.0179	"	"	"	"	"	
2-Methylnaphthalene	"	ND	----	0.0179	"	"	"	"	"	
Naphthalene	"	ND	----	0.0179	"	"	"	"	"	
Phenanthrene	"	ND	----	0.0179	"	"	"	"	"	
Pyrene	"	ND	----	0.0179	"	"	"	"	"	
<i>Surrogate(s): Nitrobenzene-d5</i>				55%		22 - 104 %	"			"
<i>2-Fluorobiphenyl</i>				60%		19 - 109 %	"			"
<i>Terphenyl-d14</i>				50%		26 - 128 %	"			"

BRL0200-49 (ALY-SB-2-1.0-3.0)		Soil		Sampled: 12/17/08 13:24						
Acenaphthene	SW846 8270CSIM	ND	----	0.00375	mg/kg dry	1x	8123865	12/26/08 10:05	12/30/08 06:32	
Acenaphthylene	"	ND	----	0.00375	"	"	"	"	"	
Anthracene	"	ND	----	0.00375	"	"	"	"	"	
Benzo (a) anthracene	"	ND	----	0.00375	"	"	"	"	"	
Benzo (a) pyrene	"	ND	----	0.00375	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	----	0.00375	"	"	"	"	"	
Benzo (g,h,i) perylene	"	ND	----	0.00375	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	----	0.00375	"	"	"	"	"	
Chrysene	"	ND	----	0.00375	"	"	"	"	"	
Dibenz (a,h) anthracene	"	ND	----	0.00375	"	"	"	"	"	
Fluoranthene	"	ND	----	0.00375	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Polyaromatic Hydrocarbons by EPA 8270C SIM
 TestAmerica Nashville

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-49 (ALY-SB-2-1.0-3.0)		Soil		Sampled: 12/17/08 13:24						
Fluorene	SW846 8270CSIM	ND	----	0.00375	mg/kg dry	1x	8123865	12/26/08 10:05	12/30/08 06:32	
Indeno (1,2,3-cd) pyrene	"	ND	----	0.00375	"	"	"	"	"	"
1-Methylnaphthalene	"	ND	----	0.00375	"	"	"	"	"	"
2-Methylnaphthalene	"	ND	----	0.00375	"	"	"	"	"	"
Naphthalene	"	ND	----	0.00375	"	"	"	"	"	"
Phenanthrene	"	0.00901	----	0.00375	"	"	"	"	"	"
Pyrene	"	ND	----	0.00375	"	"	"	"	"	"
<i>Surrogate(s): Nitrobenzene-d5</i>			94%	22 - 104 %		"				"
<i>2-Fluorobiphenyl</i>			82%	19 - 109 %		"				"
<i>Terphenyl-d14</i>			54%	26 - 128 %		"				"
BRL0200-52 (ALY-SB-1-1.0-2.0)		Soil		Sampled: 12/17/08 14:16						
Acenaphthene	SW846 8270CSIM	ND	----	0.00431	mg/kg dry	1x	8123865	12/26/08 10:05	12/30/08 06:53	
Acenaphthylene	"	ND	----	0.00431	"	"	"	"	"	"
Anthracene	"	ND	----	0.00431	"	"	"	"	"	"
Benzo (a) anthracene	"	ND	----	0.00431	"	"	"	"	"	"
Benzo (a) pyrene	"	ND	----	0.00431	"	"	"	"	"	"
Benzo (b) fluoranthene	"	ND	----	0.00431	"	"	"	"	"	"
Benzo (g,h,i) perylene	"	ND	----	0.00431	"	"	"	"	"	"
Benzo (k) fluoranthene	"	ND	----	0.00431	"	"	"	"	"	"
Chrysene	"	0.00474	----	0.00431	"	"	"	"	"	"
Dibenz (a,h) anthracene	"	ND	----	0.00431	"	"	"	"	"	"
Fluoranthene	"	ND	----	0.00431	"	"	"	"	"	"
Fluorene	"	ND	----	0.00431	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	"	ND	----	0.00431	"	"	"	"	"	"
1-Methylnaphthalene	"	ND	----	0.00431	"	"	"	"	"	"
2-Methylnaphthalene	"	ND	----	0.00431	"	"	"	"	"	"
Naphthalene	"	ND	----	0.00431	"	"	"	"	"	"
Phenanthrene	"	0.00948	----	0.00431	"	"	"	"	"	"
Pyrene	"	0.199	----	0.00431	"	"	"	"	"	"
<i>Surrogate(s): Nitrobenzene-d5</i>			68%	22 - 104 %		"				"
<i>2-Fluorobiphenyl</i>			83%	19 - 109 %		"				"
<i>Terphenyl-d14</i>			50%	26 - 128 %		"				"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

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Amended Report

CH2M Hill - Bellevue	Project Name: WSDOT SR 520 - Pontoon Sites	Report Created:
1100 112th Avenue NE, Suite 400	Project Number: 180171.AR.X7.02	01/26/09 09:59
Bellevue, WA/USA 98004-4504	Project Manager: Brian Tracy	

Polyaromatic Hydrocarbons by EPA 8270C SIM
TestAmerica Nashville

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-54RE1 (ALY-SB-4-1.0-2.0)		Soil		Sampled: 12/17/08 14:50						
Acenaphthene	SW846 8270CSIM	0.0239	----	0.0184	mg/kg dry	5x	8123995	12/27/08 06:50	01/05/09 11:10	
Acenaphthylene	"	ND	----	0.0184	"	"	"	"	"	
Anthracene	"	ND	----	0.0184	"	"	"	"	"	
Benzo (a) anthracene	"	ND	----	0.0184	"	"	"	"	"	
Benzo (a) pyrene	"	ND	----	0.0184	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	----	0.0184	"	"	"	"	"	
Benzo (g,h,i) perylene	"	ND	----	0.0184	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	----	0.0184	"	"	"	"	"	
Chrysene	"	0.0184	----	0.0184	"	"	"	"	"	
Dibenz (a,h) anthracene	"	ND	----	0.0184	"	"	"	"	"	
Fluoranthene	"	0.0331	----	0.0184	"	"	"	"	"	
Fluorene	"	ND	----	0.0184	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	----	0.0184	"	"	"	"	"	
1-Methylnaphthalene	"	ND	----	0.0184	"	"	"	"	"	
2-Methylnaphthalene	"	ND	----	0.0184	"	"	"	"	"	
Naphthalene	"	ND	----	0.0184	"	"	"	"	"	
Phenanthrene	"	ND	----	0.0184	"	"	"	"	"	
Pyrene	"	0.0571	----	0.0184	"	"	"	"	"	
<i>Surrogate(s): Nitrobenzene-d5</i>			55%		22 - 104 %	"				"
<i>2-Fluorobiphenyl</i>			60%		19 - 109 %	"				"
<i>Terphenyl-d14</i>			105%		26 - 128 %	"				"

BRL0200-56RE1 (ALY-SB-10-1.0-2.0)		Soil		Sampled: 12/17/08 15:32						
Acenaphthene	SW846 8270CSIM	ND	----	0.0184	mg/kg dry	5x	8123995	12/27/08 06:50	01/05/09 09:02	RL1
Acenaphthylene	"	ND	----	0.0184	"	"	"	"	"	RL1
Anthracene	"	ND	----	0.0184	"	"	"	"	"	RL1
Benzo (a) anthracene	"	ND	----	0.0184	"	"	"	"	"	RL1
Benzo (a) pyrene	"	ND	----	0.0184	"	"	"	"	"	RL1
Benzo (b) fluoranthene	"	ND	----	0.0184	"	"	"	"	"	RL1
Benzo (g,h,i) perylene	"	ND	----	0.0184	"	"	"	"	"	RL1
Benzo (k) fluoranthene	"	ND	----	0.0184	"	"	"	"	"	RL1
Chrysene	"	ND	----	0.0184	"	"	"	"	"	RL1
Dibenz (a,h) anthracene	"	ND	----	0.0184	"	"	"	"	"	RL1
Fluoranthene	"	ND	----	0.0184	"	"	"	"	"	RL1
Fluorene	"	ND	----	0.0184	"	"	"	"	"	RL1
Indeno (1,2,3-cd) pyrene	"	ND	----	0.0184	"	"	"	"	"	RL1
1-Methylnaphthalene	"	ND	----	0.0184	"	"	"	"	"	RL1
2-Methylnaphthalene	"	ND	----	0.0184	"	"	"	"	"	RL1
Naphthalene	"	ND	----	0.0184	"	"	"	"	"	RL1
Phenanthrene	"	ND	----	0.0184	"	"	"	"	"	RL1

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Polyaromatic Hydrocarbons by EPA 8270C SIM
 TestAmerica Nashville

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0200-56RE1 (ALY-SB-10-1.0-2.0)		Soil		Sampled: 12/17/08 15:32						
Pyrene	SW846 8270CSIM	ND	----	0.0184	mg/kg dry	5x	8123995	12/27/08 06:50	01/05/09 09:02	RL1
<i>Surrogate(s): Nitrobenzene-d5</i>			45%		22 - 104 %	"				"
<i>2-Fluorobiphenyl</i>			55%		19 - 109 %	"				"
<i>Terphenyl-d14</i>			100%		26 - 128 %	"				"
BRL0200-58 (ALY-SB-5-1.0-2.0)		Soil		Sampled: 12/17/08 16:00						
Acenaphthene	SW846 8270CSIM	ND	----	0.00355	mg/kg dry	1x	8123995	12/27/08 06:50	12/29/08 16:37	
Acenaphthylene	"	ND	----	0.00355	"	"	"	"	"	
Anthracene	"	ND	----	0.00355	"	"	"	"	"	
Benzo (a) anthracene	"	ND	----	0.00355	"	"	"	"	"	
Benzo (a) pyrene	"	ND	----	0.00355	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	----	0.00355	"	"	"	"	"	
Benzo (g,h,i) perylene	"	ND	----	0.00355	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	----	0.00355	"	"	"	"	"	
Chrysene	"	0.00498	----	0.00355	"	"	"	"	"	
Dibenz (a,h) anthracene	"	ND	----	0.00355	"	"	"	"	"	
Fluoranthene	"	0.00996	----	0.00355	"	"	"	"	"	
Fluorene	"	ND	----	0.00355	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	0.00427	----	0.00355	"	"	"	"	"	
1-Methylnaphthalene	"	ND	----	0.00355	"	"	"	"	"	
2-Methylnaphthalene	"	ND	----	0.00355	"	"	"	"	"	
Naphthalene	"	ND	----	0.00355	"	"	"	"	"	
Phenanthrene	"	0.00427	----	0.00355	"	"	"	"	"	
Pyrene	"	0.0206	----	0.00355	"	"	"	"	"	
<i>Surrogate(s): Nitrobenzene-d5</i>			77%		22 - 104 %	"				"
<i>2-Fluorobiphenyl</i>			70%		19 - 109 %	"				"
<i>Terphenyl-d14</i>			63%		26 - 128 %	"				"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

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Amended Report

CH2M Hill - Bellevue	Project Name: WSDOT SR 520 - Pontoon Sites	
1100 112th Avenue NE, Suite 400	Project Number: 180171.AR.X7.02	Report Created:
Bellevue, WA/USA 98004-4504	Project Manager: Brian Tracy	01/26/09 09:59

Volatile Petroleum Products by NWTPH-Gx - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8L18023 Water Preparation Method: EPA 5030B (P/T)

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8L18023-BLK1)													Extracted: 12/18/08 13:46	
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	---	50.0	ug/l	1x	--	--	--	--	--	--	12/18/08 15:17	
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 92.8%</i>		<i>Limits: 58-144%</i>		<i>"</i>							<i>12/18/08 15:17</i>	
LCS (8L18023-BS1)													Extracted: 12/18/08 13:46	
Gasoline Range Hydrocarbons	NWTPH-Gx	1080	---	50.0	ug/l	1x	--	1000	108%	(80-120)	--	--	12/18/08 15:48	
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 97.6%</i>		<i>Limits: 58-144%</i>		<i>"</i>							<i>12/18/08 15:48</i>	
Duplicate (8L18023-DUP1)													QC Source: BRL0195-02 Extracted: 12/18/08 13:46	
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	---	50.0	ug/l	1x	ND	--	--	--	NR (25)		12/18/08 17:33	
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 90.5%</i>		<i>Limits: 58-144%</i>		<i>"</i>							<i>12/18/08 17:33</i>	
Duplicate (8L18023-DUP2)													QC Source: BRL0195-03 Extracted: 12/18/08 13:46	
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	---	50.0	ug/l	1x	ND	--	--	--	NR (25)		12/18/08 18:37	
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 92.8%</i>		<i>Limits: 58-144%</i>		<i>"</i>							<i>12/18/08 18:37</i>	
Matrix Spike (8L18023-MS1)													QC Source: BRL0195-02 Extracted: 12/18/08 13:46	
Gasoline Range Hydrocarbons	NWTPH-Gx	1170	---	50.0	ug/l	1x	24.4	1000	115%	(75-131)	--	--	12/18/08 20:12	
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 98.4%</i>		<i>Limits: 58-144%</i>		<i>"</i>							<i>12/18/08 20:12</i>	
Matrix Spike Dup (8L18023-MSD1)													QC Source: BRL0195-02 Extracted: 12/18/08 13:46	
Gasoline Range Hydrocarbons	NWTPH-Gx	1120	---	50.0	ug/l	1x	24.4	1000	110%	(75-131)	4.48%	(25)	12/18/08 20:44	
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 96.9%</i>		<i>Limits: 58-144%</i>		<i>"</i>							<i>12/18/08 20:44</i>	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

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CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Petroleum Products by NWTPH-Gx - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8L19010 Soil Preparation Method: EPA 5030B (P/T)

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8L19010-BLK1)										Extracted: 12/19/08 11:47				
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	---	5.00	mg/kg wet	1x	--	--	--	--	--	--	12/19/08 14:28	
Surrogate(s): 4-BFB (FID)		Recovery: 92.3%		Limits: 50-150%		"		12/19/08 14:28						
LCS (8L19010-BS1)										Extracted: 12/19/08 11:47				
Gasoline Range Hydrocarbons	NWTPH-Gx	52.4	---	5.00	mg/kg wet	1x	--	50.0	105%	(75-125)	--	--	12/19/08 15:19	
Surrogate(s): 4-BFB (FID)		Recovery: 94.0%		Limits: 50-150%		"		12/19/08 15:19						
Duplicate (8L19010-DUP1)										QC Source: BRL0200-25		Extracted: 12/19/08 11:47		
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	---	11.4	mg/kg dry	1x	ND	--	--	--	NR (40)		12/19/08 16:23	
Surrogate(s): 4-BFB (FID)		Recovery: 99.6%		Limits: 50-150%		"		12/19/08 16:23						
Duplicate (8L19010-DUP2)										QC Source: BRL0197-02		Extracted: 12/19/08 11:47		
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	---	7.35	mg/kg dry	1x	ND	--	--	--	12.0% (40)		12/19/08 17:26	
Surrogate(s): 4-BFB (FID)		Recovery: 107%		Limits: 50-150%		"		12/19/08 17:26						
Matrix Spike (8L19010-MS1)										QC Source: BRL0200-25		Extracted: 12/19/08 11:47		
Gasoline Range Hydrocarbons	NWTPH-Gx	125	---	11.4	mg/kg dry	1x	1.67	102	121%	(60-175)	--	--	12/19/08 19:02	
Surrogate(s): 4-BFB (FID)		Recovery: 109%		Limits: 50-150%		"		12/19/08 19:02						
Matrix Spike Dup (8L19010-MSD1)										QC Source: BRL0200-25		Extracted: 12/19/08 11:47		
Gasoline Range Hydrocarbons	NWTPH-Gx	135	---	11.4	mg/kg dry	1x	1.67	102	130%	(60-175)	7.26% (40)		12/19/08 19:33	
Surrogate(s): 4-BFB (FID)		Recovery: 108%		Limits: 50-150%		"		12/19/08 19:33						

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue	Project Name: WSDOT SR 520 - Pontoon Sites	
1100 112th Avenue NE, Suite 400	Project Number: 180171.AR.X7.02	Report Created:
Bellevue, WA/USA 98004-4504	Project Manager: Brian Tracy	01/26/09 09:59

Volatile Petroleum Products by NWTPH-Gx - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8L20009 **Soil Preparation Method: EPA 5030B (P/T)**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8L20009-BLK1)										Extracted: 12/20/08 13:06				
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	---	5.00	mg/kg wet	1x	--	--	--	--	--	--	12/20/08 14:51	
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 92.3%</i>		<i>Limits: 50-150%</i>		<i>"</i>		<i>12/20/08 14:51</i>						
LCS (8L20009-BS1)										Extracted: 12/20/08 13:06				
Gasoline Range Hydrocarbons	NWTPH-Gx	54.0	---	5.00	mg/kg wet	1x	--	50.0	108%	(75-125)	--	--	12/20/08 15:23	
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 95.8%</i>		<i>Limits: 50-150%</i>		<i>"</i>		<i>12/20/08 15:23</i>						
Duplicate (8L20009-DUP1)										QC Source: BRL0200-23		Extracted: 12/20/08 13:06		
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	---	9.20	mg/kg dry	1x	ND	--	--	--	NR (40)		12/20/08 16:53	
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 105%</i>		<i>Limits: 50-150%</i>		<i>"</i>		<i>12/20/08 16:53</i>						
Duplicate (8L20009-DUP2)										QC Source: BRL0200-45		Extracted: 12/20/08 13:06		
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	---	9.93	mg/kg dry	1x	ND	--	--	--	17.6% (40)		12/20/08 19:00	
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 113%</i>		<i>Limits: 50-150%</i>		<i>"</i>		<i>12/20/08 19:00</i>						
Matrix Spike (8L20009-MS1)										QC Source: BRL0200-45		Extracted: 12/20/08 13:06		
Gasoline Range Hydrocarbons	NWTPH-Gx	117	---	9.93	mg/kg dry	1x	3.91	83.7	135%	(60-175)	--	--	12/20/08 19:32	
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 124%</i>		<i>Limits: 50-150%</i>		<i>"</i>		<i>12/20/08 19:32</i>						
Matrix Spike Dup (8L20009-MSD1)										QC Source: BRL0200-45		Extracted: 12/20/08 13:06		
Gasoline Range Hydrocarbons	NWTPH-Gx	110	---	9.93	mg/kg dry	1x	3.91	83.7	126%	(60-175)	6.06% (40)		12/20/08 20:04	
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 118%</i>		<i>Limits: 50-150%</i>		<i>"</i>		<i>12/20/08 20:04</i>						

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Petroleum Products by NWTPH-Gx - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8L21004 Soil Preparation Method: EPA 5030B (P/T)

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8L21004-BLK1)										Extracted: 12/21/08 12:29				
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	---	5.00	mg/kg wet	1x	--	--	--	--	--	--	12/21/08 14:28	
Surrogate(s): 4-BFB (FID)		Recovery: 91.1%	Limits: 50-150%		"		12/21/08 14:28							
LCS (8L21004-BS1)										Extracted: 12/21/08 12:29				
Gasoline Range Hydrocarbons	NWTPH-Gx	54.0	---	5.00	mg/kg wet	1x	--	50.0	108%	(75-125)	--	--	12/21/08 15:00	
Surrogate(s): 4-BFB (FID)		Recovery: 97.6%	Limits: 50-150%		"		12/21/08 15:00							
Duplicate (8L21004-DUP1)										QC Source: BRL0200-50		Extracted: 12/21/08 12:29		
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	---	12.3	mg/kg dry	1x	ND	--	--	--	42.1% (40)	--	12/21/08 16:04	R4
Surrogate(s): 4-BFB (FID)		Recovery: 122%	Limits: 50-150%		"		12/21/08 16:04							
Duplicate (8L21004-DUP2)										QC Source: BRL0200-52		Extracted: 12/21/08 12:29		
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	---	11.9	mg/kg dry	1x	ND	--	--	--	7.77% (40)	--	12/21/08 17:08	
Surrogate(s): 4-BFB (FID)		Recovery: 114%	Limits: 50-150%		"		12/21/08 17:08							
Matrix Spike (8L21004-MS1)										QC Source: BRL0200-50		Extracted: 12/21/08 12:29		
Gasoline Range Hydrocarbons	NWTPH-Gx	149	---	12.3	mg/kg dry	1x	3.19	98.2	149%	(60-175)	--	--	12/21/08 19:15	
Surrogate(s): 4-BFB (FID)		Recovery: 132%	Limits: 50-150%		"		12/21/08 19:15							

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Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue	Project Name: WSDOT SR 520 - Pontoon Sites	
1100 112th Avenue NE, Suite 400	Project Number: 180171.AR.X7.02	Report Created:
Bellevue, WA/USA 98004-4504	Project Manager: Brian Tracy	01/26/09 09:59

Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8L18029 Water Preparation Method: EPA 3520C

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8L18029-BLK1)													Extracted: 12/18/08 14:39	
Diesel Range Hydrocarbons	NWTPH-Dx	ND	---	0.250	mg/l	1x	--	--	--	--	--	--	12/22/08 17:56	
Lube Oil Range Hydrocarbons	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
<i>Surrogate(s): 2-FBP</i>		<i>Recovery: 89.4%</i>		<i>Limits: 53-125%</i>		<i>"</i>						<i>12/22/08 17:56</i>		
<i>Octacosane</i>		<i>96.8%</i>		<i>68-125%</i>		<i>"</i>						<i>"</i>		
LCS (8L18029-BS1)													Extracted: 12/18/08 14:39	
Diesel Range Hydrocarbons	NWTPH-Dx	1.98	---	0.250	mg/l	1x	--	2.00	99.2%	(61-132)	--	--	12/22/08 18:18	
Lube Oil Range Hydrocarbons	"	1.99	---	0.500	"	"	--	"	99.4%	(60-125)	--	--	"	
<i>Surrogate(s): 2-FBP</i>		<i>Recovery: 100%</i>		<i>Limits: 53-125%</i>		<i>"</i>						<i>12/22/08 18:18</i>		
<i>Octacosane</i>		<i>99.9%</i>		<i>68-125%</i>		<i>"</i>						<i>"</i>		
LCS Dup (8L18029-BSD1)													Extracted: 12/18/08 14:39	
Diesel Range Hydrocarbons	NWTPH-Dx	1.78	---	0.250	mg/l	1x	--	2.00	89.0%	(61-132)	10.8%	(35)	12/22/08 18:41	
Lube Oil Range Hydrocarbons	"	1.83	---	0.500	"	"	--	"	91.5%	(60-125)	8.33%	(50)	"	
<i>Surrogate(s): 2-FBP</i>		<i>Recovery: 92.1%</i>		<i>Limits: 53-125%</i>		<i>"</i>						<i>12/22/08 18:41</i>		
<i>Octacosane</i>		<i>95.6%</i>		<i>68-125%</i>		<i>"</i>						<i>"</i>		

QC Batch: 8L18031 Soil Preparation Method: EPA 3550B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8L18031-BLK1)													Extracted: 12/18/08 17:44	
Diesel Range Hydrocarbons	NWTPH-Dx	ND	---	10.0	mg/kg wet	1x	--	--	--	--	--	--	12/19/08 20:37	
Lube Oil Range Hydrocarbons	"	ND	---	25.0	"	"	--	--	--	--	--	--	"	
<i>Surrogate(s): 2-FBP</i>		<i>Recovery: 104%</i>		<i>Limits: 54-148%</i>		<i>"</i>						<i>12/19/08 20:37</i>		
<i>Octacosane</i>		<i>106%</i>		<i>62-142%</i>		<i>"</i>						<i>"</i>		
Blank (8L18031-BLK2)													Extracted: 12/18/08 17:44	
Diesel Range Hydrocarbons	NWTPH-Dx	ND	---	10.0	mg/kg wet	1x	--	--	--	--	--	--	12/31/08 13:27	
Lube Oil Range Hydrocarbons	"	ND	---	25.0	"	"	--	--	--	--	--	--	"	
<i>Surrogate(s): 2-FBP</i>		<i>Recovery: 102%</i>		<i>Limits: 54-148%</i>		<i>"</i>						<i>12/31/08 13:27</i>		
<i>Octacosane</i>		<i>102%</i>		<i>62-142%</i>		<i>"</i>						<i>"</i>		
LCS (8L18031-BS1)													Extracted: 12/18/08 17:44	
Diesel Range Hydrocarbons	NWTPH-Dx	64.1	---	10.0	mg/kg wet	1x	--	66.7	96.2%	(58-140)	--	--	12/19/08 20:58	
Lube Oil Range Hydrocarbons	"	67.9	---	25.0	"	"	--	"	102%	(63-125)	--	--	"	
<i>Surrogate(s): 2-FBP</i>		<i>Recovery: 91.9%</i>		<i>Limits: 54-148%</i>		<i>"</i>						<i>12/19/08 20:58</i>		
<i>Octacosane</i>		<i>103%</i>		<i>62-142%</i>		<i>"</i>						<i>"</i>		

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Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue	Project Name: WSDOT SR 520 - Pontoon Sites	
1100 112th Avenue NE, Suite 400	Project Number: 180171.AR.X7.02	Report Created:
Bellevue, WA/USA 98004-4504	Project Manager: Brian Tracy	01/26/09 09:59

Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8L18031 Soil Preparation Method: EPA 3550B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes	
Matrix Spike (8L18031-MS1)			QC Source: BRL0200-25				Extracted: 12/18/08 17:44								
Diesel Range Hydrocarbons	NWTPH-Dx	73.1	---	12.2	mg/kg dry	1x	ND	81.5	89.6%	(46-155)	--	--	12/19/08 21:20		
Lube Oil Range Hydrocarbons	"	40.5	---	30.6	"	"	9.87	"	37.6%	(26-150)	--	--	"		
Surrogate(s): 2-FBP		Recovery: 95.4%		Limits: 54-148%		"						12/19/08 21:20			
Octacosane		105%		62-142%		"						"			

Matrix Spike Dup (8L18031-MSD1)			QC Source: BRL0200-25				Extracted: 12/18/08 17:44								
Diesel Range Hydrocarbons	NWTPH-Dx	69.3	---	12.2	mg/kg dry	1x	ND	81.2	85.3%	(46-155)	5.28% (40)	--	12/19/08 21:41		
Lube Oil Range Hydrocarbons	"	37.9	---	30.5	"	"	9.87	"	34.5%	(26-150)	6.68%	"	"		
Surrogate(s): 2-FBP		Recovery: 90.5%		Limits: 54-148%		"						12/19/08 21:41			
Octacosane		97.4%		62-142%		"						"			

QC Batch: 8L18032 Soil Preparation Method: EPA 3550B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes	
Blank (8L18032-BLK1)							Extracted: 12/18/08 17:46								
Diesel Range Hydrocarbons	NWTPH-Dx	ND	---	10.0	mg/kg wet	1x	--	--	--	--	--	--	12/19/08 20:37		
Lube Oil Range Hydrocarbons	"	ND	---	25.0	"	"	--	--	--	--	--	--	"		
Surrogate(s): 2-FBP		Recovery: 99.2%		Limits: 54-148%		"						12/19/08 20:37			
Octacosane		102%		62-142%		"						"			

LCS (8L18032-BS1)							Extracted: 12/18/08 17:46								
Diesel Range Hydrocarbons	NWTPH-Dx	62.9	---	10.0	mg/kg wet	1x	--	66.7	94.3%	(58-140)	--	--	12/19/08 20:58		
Lube Oil Range Hydrocarbons	"	65.3	---	25.0	"	"	--	"	97.9%	(63-125)	--	--	"		
Surrogate(s): 2-FBP		Recovery: 90.5%		Limits: 54-148%		"						12/19/08 20:58			
Octacosane		102%		62-142%		"						"			

Matrix Spike (8L18032-MS1)			QC Source: BRL0200-45				Extracted: 12/18/08 17:46								
Diesel Range Hydrocarbons	NWTPH-Dx	75.9	---	13.1	mg/kg dry	1x	16.1	87.4	68.4%	(46-155)	--	--	12/19/08 21:20		
Lube Oil Range Hydrocarbons	"	78.4	---	32.8	"	"	70.4	48.1	16.6%	(26-150)	--	--	"	M2	
Surrogate(s): 2-FBP		Recovery: 80.9%		Limits: 54-148%		"						12/19/08 21:20			
Octacosane		95.4%		62-142%		"						"			

Matrix Spike Dup (8L18032-MSD1)			QC Source: BRL0200-45				Extracted: 12/18/08 17:46								
Diesel Range Hydrocarbons	NWTPH-Dx	73.9	---	13.1	mg/kg dry	1x	16.1	87.1	66.3%	(46-155)	2.75% (40)	--	12/19/08 21:41		
Lube Oil Range Hydrocarbons	"	70.3	---	32.7	"	"	70.4	47.9	-0.232	(26-150)	10.9%	"	"	M2	
Surrogate(s): 2-FBP		Recovery: 82.6%		Limits: 54-148%		"						12/19/08 21:41			
Octacosane		95.8%		62-142%		"						"			

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Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue	Project Name: WSDOT SR 520 - Pontoon Sites	
1100 112th Avenue NE, Suite 400	Project Number: 180171.AR.X7.02	Report Created:
Bellevue, WA/USA 98004-4504	Project Manager: Brian Tracy	01/26/09 09:59

Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8L22027 Soil Preparation Method: EPA 3550B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8L22027-BLK1)										Extracted: 12/22/08 12:50				
Diesel Range Hydrocarbons	NWTPH-Dx	ND	---	10.0	mg/kg wet	1x	--	--	--	--	--	--	12/22/08 17:56	
Lube Oil Range Hydrocarbons	"	ND	---	25.0	"	"	--	--	--	--	--	--	"	
Surrogate(s): 2-FBP		Recovery: 100%		Limits: 54-148%		"						12/22/08 17:56		
Octacosane		105%		62-142%		"						"		
LCS (8L22027-BS1)										Extracted: 12/22/08 12:50				
Diesel Range Hydrocarbons	NWTPH-Dx	61.9	---	10.0	mg/kg wet	1x	--	66.7	92.8%	(58-140)	--	--	12/22/08 18:18	
Lube Oil Range Hydrocarbons	"	34.2	---	25.0	"	"	--	36.7	93.2%	(63-125)	--	--	"	
Surrogate(s): 2-FBP		Recovery: 94.9%		Limits: 54-148%		"						12/22/08 18:18		
Octacosane		102%		62-142%		"						"		
Duplicate (8L22027-DUP1)										QC Source: BRL0200-50 Extracted: 12/22/08 12:50				
Diesel Range Hydrocarbons	NWTPH-Dx	30.5	---	15.0	mg/kg dry	1x	21.3	--	--	--	35.2% (50)		12/22/08 18:41	
Surrogate(s): 2-FBP		Recovery: 94.5%		Limits: 54-148%		"						12/22/08 18:41		
Octacosane		107%		62-142%		"						"		
Duplicate (8L22027-DUP2)										QC Source: BRL0203-10 Extracted: 12/22/08 12:50				
Diesel Range Hydrocarbons	NWTPH-Dx	ND	---	10.8	mg/kg dry	1x	ND	--	--	--	NR (50)		12/22/08 19:02	
Lube Oil Range Hydrocarbons	"	ND	---	27.1	"	"	ND	--	--	--	NR	"	"	
Surrogate(s): 2-FBP		Recovery: 94.9%		Limits: 54-148%		"						12/22/08 19:02		
Octacosane		102%		62-142%		"						"		
Duplicate (8L22027-DUP3)										QC Source: BRL0200-50 Extracted: 12/22/08 12:50				
Lube Oil Range Hydrocarbons	NWTPH-Dx	43.5	---	37.6	mg/kg dry	1x	ND	--	--	--	25.0% (50)		12/23/08 11:45	
Surrogate(s): 2-FBP		Recovery: 95.8%		Limits: 54-148%		"						12/23/08 11:45		
Octacosane		110%		62-142%		"						"		
Matrix Spike (8L22027-MS1)										QC Source: BRL0200-50 Extracted: 12/22/08 12:50				
Diesel Range Hydrocarbons	NWTPH-Dx	123	---	15.0	mg/kg dry	1x	21.3	99.9	102%	(46-155)	--	--	12/22/08 19:25	
Lube Oil Range Hydrocarbons	"	102	---	37.5	"	"	33.8	55.0	124%	(26-150)	--	--	"	
Surrogate(s): 2-FBP		Recovery: 87.9%		Limits: 54-148%		"						12/22/08 19:25		
Octacosane		105%		62-142%		"						"		

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Curtis D. Armstrong, Project Manager

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Amended Report

CH2M Hill - Bellevue 1100 112th Avenue NE, Suite 400 Bellevue, WA/USA 98004-4504	Project Name: WSDOT SR 520 - Pontoon Sites Project Number: 180171.AR.X7.02 Project Manager: Brian Tracy	Report Created: 01/26/09 09:59
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Total Metals by EPA 6000/7000 Series Methods - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8L22031 Soil Preparation Method: EPA 7471A

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8L22031-BLK1)								Extracted: 12/22/08 15:17						
Mercury	EPA 7471A	ND	---	0.0997	mg/kg wet	1x	--	--	--	--	--	--	12/23/08 08:23	
LCS (8L22031-BS1)								Extracted: 12/22/08 15:17						
Mercury	EPA 7471A	0.644	---	0.0996	mg/kg wet	1x	--	0.664	97.0%	(80-120)	--	--	12/23/08 08:25	
LCS Dup (8L22031-BSD1)								Extracted: 12/22/08 15:17						
Mercury	EPA 7471A	0.630	---	0.0989	mg/kg wet	1x	--	0.659	95.6%	(80-120)	2.17% (20)	--	12/23/08 08:28	
Matrix Spike (8L22031-MS1)				QC Source: BRL0200-01				Extracted: 12/22/08 15:17						
Mercury	EPA 7471A	0.668	---	0.101	mg/kg dry	1x	ND	0.675	98.9%	(80-125)	--	--	12/23/08 08:30	
Matrix Spike Dup (8L22031-MSD1)				QC Source: BRL0200-01				Extracted: 12/22/08 15:17						
Mercury	EPA 7471A	0.652	---	0.101	mg/kg dry	1x	ND	0.671	97.2%	(80-125)	2.34% (30)	--	12/23/08 08:33	

QC Batch: 8L22032 Soil Preparation Method: EPA 7471A

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8L22032-BLK1)								Extracted: 12/22/08 15:19						
Mercury	EPA 7471A	ND	---	0.100	mg/kg wet	1x	--	--	--	--	--	--	12/23/08 09:35	
LCS (8L22032-BS1)								Extracted: 12/22/08 15:19						
Mercury	EPA 7471A	0.646	---	0.0999	mg/kg wet	1x	--	0.666	97.0%	(80-120)	--	--	12/23/08 09:38	
LCS Dup (8L22032-BSD1)								Extracted: 12/22/08 15:19						
Mercury	EPA 7471A	0.635	---	0.0989	mg/kg wet	1x	--	0.659	96.3%	(80-120)	1.76% (20)	--	12/23/08 09:40	
Matrix Spike (8L22032-MS1)				QC Source: BRL0200-13				Extracted: 12/22/08 15:19						
Mercury	EPA 7471A	0.769	---	0.110	mg/kg dry	1x	0.0258	0.730	102%	(80-125)	--	--	12/23/08 09:43	
Matrix Spike Dup (8L22032-MSD1)				QC Source: BRL0200-13				Extracted: 12/22/08 15:19						
Mercury	EPA 7471A	0.782	---	0.114	mg/kg dry	1x	0.0258	0.757	99.9%	(80-125)	1.68% (30)	--	12/23/08 09:50	

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Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue	Project Name: WSDOT SR 520 - Pontoon Sites	
1100 112th Avenue NE, Suite 400	Project Number: 180171.AR.X7.02	Report Created:
Bellevue, WA/USA 98004-4504	Project Manager: Brian Tracy	01/26/09 09:59

Total Metals by EPA 6000/7000 Series Methods - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8L22033 Water Preparation Method: EPA 7470A

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes		
Blank (8L22033-BLK1)													Extracted: 12/22/08 15:20			
Mercury	EPA 7470A	ND	---	0.000200	mg/l	1x	--	--	--	--	--	--	12/23/08 13:48			
LCS (8L22033-BS1)													Extracted: 12/22/08 15:20			
Mercury	EPA 7470A	0.00504	---	0.000200	mg/l	1x	--	0.00500	101%	(80-120)	--	--	12/23/08 13:51			
LCS Dup (8L22033-BSD1)													Extracted: 12/22/08 15:20			
Mercury	EPA 7470A	0.00514	---	0.000200	mg/l	1x	--	0.00500	103%	(80-120)	1.86% (20)	--	12/23/08 13:53			
Matrix Spike (8L22033-MS1)													QC Source: BRL0200-03		Extracted: 12/22/08 15:20	
Mercury	EPA 7470A	0.00462	---	0.000200	mg/l	1x	0.0000780	0.00500	90.8%	(75-125)	--	--	12/23/08 13:56			
Matrix Spike Dup (8L22033-MSD1)													QC Source: BRL0200-03		Extracted: 12/22/08 15:20	
Mercury	EPA 7470A	0.00467	---	0.000200	mg/l	1x	0.0000780	0.00500	91.8%	(75-125)	1.08% (20)	--	12/23/08 13:58			

QC Batch: 8L23015 Soil Preparation Method: EPA 7471A

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes		
Blank (8L23015-BLK1)													Extracted: 12/23/08 15:41			
Mercury	EPA 7471A	ND	---	0.0997	mg/kg wet	1x	--	--	--	--	--	--	12/24/08 11:42			
LCS (8L23015-BS1)													Extracted: 12/23/08 15:41			
Mercury	EPA 7471A	0.672	---	0.0990	mg/kg wet	1x	--	0.660	102%	(80-120)	--	--	12/24/08 11:44			
LCS Dup (8L23015-BSD1)													Extracted: 12/23/08 15:41			
Mercury	EPA 7471A	0.687	---	0.101	mg/kg wet	1x	--	0.675	102%	(80-120)	2.28% (20)	--	12/24/08 11:47			
Matrix Spike (8L23015-MS1)													QC Source: BRL0200-25		Extracted: 12/23/08 15:41	
Mercury	EPA 7471A	0.894	---	0.119	mg/kg dry	1x	0.0756	0.791	103%	(80-125)	--	--	12/24/08 11:49			
Matrix Spike (8L23015-MS2)													QC Source: BRL0200-45		Extracted: 12/23/08 15:41	
Mercury	EPA 7471A	1.03	---	0.131	mg/kg dry	1x	0.0915	0.872	107%	(80-125)	--	--	12/24/08 11:54			
Matrix Spike Dup (8L23015-MSD1)													QC Source: BRL0200-25		Extracted: 12/23/08 15:41	
Mercury	EPA 7471A	0.912	---	0.121	mg/kg dry	1x	0.0756	0.806	104%	(80-125)	1.99% (30)	--	12/24/08 11:52			
Matrix Spike Dup (8L23015-MSD2)													QC Source: BRL0200-45		Extracted: 12/23/08 15:41	
Mercury	EPA 7471A	1.03	---	0.132	mg/kg dry	1x	0.0915	0.877	107%	(80-125)	0.785% (30)	--	12/24/08 11:57			

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Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue 1100 112th Avenue NE, Suite 400 Bellevue, WA/USA 98004-4504	Project Name: WSDOT SR 520 - Pontoon Sites Project Number: 180171.AR.X7.02 Project Manager: Brian Tracy	Report Created: 01/26/09 09:59
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Total Metals by EPA 6000/7000 Series Methods - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 9A14044 Water Preparation Method: EPA 3020A

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (9A14044-BLK1)										Extracted: 01/14/09 21:11				
Lead	EPA 6020	ND	---	0.00100	mg/l	1x	--	--	--	--	--	--	01/15/09 07:10	
Zinc	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Thallium	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Selenium	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Vanadium	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Titanium	"	ND	---	0.00100	"	"	--	--	--	--	--	--	01/15/09 14:15	
Antimony	"	ND	---	0.00300	"	"	--	--	--	--	--	--	01/15/09 07:10	
Molybdenum	"	ND	---	0.00500	"	"	--	--	--	--	--	--	01/15/09 08:09	
Nickel	"	ND	---	0.00100	"	"	--	--	--	--	--	--	01/15/09 07:10	
Manganese	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Chromium	"	ND	---	0.00100	"	"	--	--	--	--	--	--	01/15/09 08:09	
Beryllium	"	ND	---	0.00100	"	"	--	--	--	--	--	--	01/15/09 07:10	
Barium	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Arsenic	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Silver	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Cadmium	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Copper	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Cobalt	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	

LCS (9A14044-BS1)										Extracted: 01/14/09 21:11				
Molybdenum	EPA 6020	0.0620	---	0.00500	mg/l	1x	--	0.0600	103%	(80-120)	--	--	01/15/09 07:16	
Selenium	"	0.0785	---	0.00100	"	"	--	0.0800	98.1%	"	--	--	"	
Antimony	"	0.0570	---	0.00300	"	"	--	0.0600	95.0%	"	--	--	"	
Thallium	"	0.0752	---	0.00100	"	"	--	0.0800	94.0%	"	--	--	"	
Arsenic	"	0.0780	---	0.00100	"	"	--	"	97.5%	"	--	--	"	
Titanium	"	0.0795	---	0.00100	"	"	--	"	99.3%	"	--	--	"	
Silver	"	0.0777	---	0.00100	"	"	--	"	97.2%	"	--	--	"	
Barium	"	0.0776	---	0.0100	"	"	--	"	97.0%	"	--	--	"	
Zinc	"	0.0792	---	0.0100	"	"	--	"	99.0%	"	--	--	"	
Vanadium	"	0.0766	---	0.00100	"	"	--	"	95.8%	"	--	--	"	
Manganese	"	0.0788	---	0.0100	"	"	--	"	98.5%	"	--	--	"	
Lead	"	0.0768	---	0.00100	"	"	--	"	96.0%	"	--	--	"	
Nickel	"	0.0782	---	0.00100	"	"	--	"	97.8%	"	--	--	"	
Copper	"	0.0797	---	0.00100	"	"	--	"	99.6%	"	--	--	"	
Chromium	"	0.0780	---	0.00100	"	"	--	"	97.4%	"	--	--	"	
Cadmium	"	0.0773	---	0.00100	"	"	--	"	96.6%	"	--	--	"	
Beryllium	"	0.0772	---	0.00100	"	"	--	"	96.4%	"	--	--	"	
Cobalt	"	0.0766	---	0.00100	"	"	--	"	95.7%	"	--	--	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Total Metals by EPA 6000/7000 Series Methods - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 9A14044 Water Preparation Method: EPA 3020A

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Duplicate (9A14044-DUP1)			QC Source: BRL0200-03				Extracted: 01/14/09 21:11							
Lead	EPA 6020	0.00437	---	0.00100	mg/l	1x	0.00463	--	--	--	5.78%	(20)	01/15/09 07:34	
Molybdenum	"	0.00584	---	0.00500	"	"	0.00546	--	--	--	6.73%	"	"	
Chromium	"	0.0293	---	0.00100	"	"	0.0312	--	--	--	6.22%	"	"	
Copper	"	0.0423	---	0.00100	"	"	0.0450	--	--	--	6.23%	"	"	
Nickel	"	0.0153	---	0.00100	"	"	0.0164	--	--	--	6.68%	"	"	
Selenium	"	0.00185	---	0.00100	"	"	0.00180	--	--	--	2.74%	"	"	
Beryllium	"	ND	---	0.00100	"	"	ND	--	--	--	2.74%	"	"	
Arsenic	"	0.0464	---	0.00100	"	"	0.0493	--	--	--	5.97%	"	"	
Cobalt	"	0.00797	---	0.00100	"	"	0.00848	--	--	--	6.20%	"	"	
Antimony	"	ND	---	0.00300	"	"	ND	--	--	--	"	"	"	
Silver	"	ND	---	0.00100	"	"	ND	--	--	--	NR	"	"	
Cadmium	"	ND	---	0.00100	"	"	ND	--	--	--	NR	"	"	
Vanadium	"	0.0728	---	0.00100	"	"	0.0782	--	--	--	7.14%	"	"	
Barium	"	0.0268	---	0.0100	"	"	0.0294	--	--	--	9.23%	"	"	
Thallium	"	ND	---	0.00100	"	"	ND	--	--	--	NR	"	"	
Zinc	"	0.0458	---	0.0100	"	"	0.0489	--	--	--	6.65%	"	"	
Duplicate (9A14044-DUP2)			QC Source: BRL0200-03RE1				Extracted: 01/14/09 21:11							
Titanium	EPA 6020	1.35	---	0.0100	mg/l	10x	1.36	--	--	--	0.736%	(20)	01/15/09 11:14	
Manganese	"	0.774	---	0.100	"	"	0.692	--	--	--	11.1%	"	"	
Matrix Spike (9A14044-MS1)			QC Source: BRL0200-03				Extracted: 01/14/09 21:11							
Molybdenum	EPA 6020	0.0684	---	0.00500	mg/l	1x	0.00546	0.0600	105%	(75-125)	--	--	01/15/09 07:28	
Antimony	"	0.0505	---	0.00300	"	"	ND	"	84.1%	"	--	--	"	
Lead	"	0.0843	---	0.00100	"	"	0.00463	0.0800	99.6%	"	--	--	"	
Chromium	"	0.109	---	0.00100	"	"	0.0312	"	97.1%	"	--	--	"	
Cobalt	"	0.0831	---	0.00100	"	"	0.00848	"	93.3%	"	--	--	"	
Beryllium	"	0.0832	---	0.00100	"	"	0.000360	"	104%	"	--	--	"	
Copper	"	0.116	---	0.00100	"	"	0.0450	"	88.5%	"	--	--	"	
Cadmium	"	0.0775	---	0.00100	"	"	ND	"	96.9%	"	--	--	"	
Barium	"	0.106	---	0.0100	"	"	0.0294	"	96.3%	"	--	--	"	
Arsenic	"	0.125	---	0.00100	"	"	0.0493	"	95.1%	"	--	--	"	
Silver	"	0.0560	---	0.00100	"	"	ND	"	70.0%	"	--	--	"	
Selenium	"	0.0796	---	0.00100	"	"	0.00180	"	97.3%	"	--	--	"	
Thallium	"	0.0784	---	0.00100	"	"	ND	"	97.9%	"	--	--	"	
Nickel	"	0.0902	---	0.00100	"	"	0.0164	"	92.3%	"	--	--	"	
Vanadium	"	0.157	---	0.00100	"	"	0.0782	"	98.7%	"	--	--	"	
Zinc	"	0.122	---	0.0100	"	"	0.0489	"	91.8%	"	--	--	"	

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Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue 1100 112th Avenue NE, Suite 400 Bellevue, WA/USA 98004-4504	Project Name: WSDOT SR 520 - Pontoon Sites Project Number: 180171.AR.X7.02 Project Manager: Brian Tracy	Report Created: 01/26/09 09:59
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Total Metals by EPA 6000/7000 Series Methods - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 9A14044 Water Preparation Method: EPA 3020A

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	---------------	-----------	-------	----------	-------	----------	----------	-------

Matrix Spike (9A14044-MS2)			QC Source: BRL0200-03RE1					Extracted: 01/14/09 21:11						
Manganese	EPA 6020	0.776	---	0.100	mg/l	10x	0.692	0.0800	104%	(75-125)	--	--	01/15/09 11:02	
Titanium	"	0.781	---	0.0100	"	"	1.36	"	-728%	"	--	--	"	MHA

Post Spike (9A14044-PS1)			QC Source: BRL0200-03					Extracted: 01/14/09 21:11						
Silver	EPA 6020	0.0794	---		ug/ml	1x	0.0000700	0.100	79.4%	(80-120)	--	--	01/15/09 07:22	S3
Arsenic	"	0.153	---		"	"	0.0493	0.0995	104%	"	--	--	"	
Zinc	"	0.147	---		"	"	0.0489	0.100	97.2%	"	--	--	"	
Lead	"	0.112	---		"	"	0.00463	"	107%	"	--	--	"	
Selenium	"	0.102	---		"	"	0.00180	"	100%	"	--	--	"	
Copper	"	0.140	---		"	"	0.0450	"	94.3%	"	--	--	"	
Chromium	"	0.134	---		"	"	0.0312	"	102%	"	--	--	"	
Cadmium	"	0.101	---		"	"	0.000140	"	101%	"	--	--	"	
Barium	"	0.130	---		"	"	0.0294	"	101%	"	--	--	"	
Beryllium	"	0.107	---		"	"	0.000360	0.0995	107%	"	--	--	"	
Cobalt	"	0.105	---		"	"	0.00848	0.100	96.1%	"	--	--	"	
Antimony	"	0.0509	---		"	"	0.000500	0.0510	98.9%	"	--	--	"	
Nickel	"	0.111	---		"	"	0.0164	0.0995	95.2%	"	--	--	"	
Molybdenum	"	0.0621	---		"	"	0.00546	0.0495	114%	(75-125)	--	--	"	
Vanadium	"	0.183	---		"	"	0.0782	0.100	105%	(80-120)	--	--	"	
Thallium	"	0.104	---		"	"	0.0000600	"	104%	"	--	--	"	

Post Spike (9A14044-PS2)			QC Source: BRL0200-03RE1					Extracted: 01/14/09 21:11						
Manganese	EPA 6020	0.785	---		ug/ml	10x	0.692	0.100	92.5%	(80-120)	--	--	01/15/09 11:08	
Titanium	"	1.36	---		"	"	1.36	"	-1.00%	(75-125)	--	--	"	S3

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Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue 1100 112th Avenue NE, Suite 400 Bellevue, WA/USA 98004-4504	Project Name: WSDOT SR 520 - Pontoon Sites Project Number: 180171.AR.X7.02 Project Manager: Brian Tracy	Report Created: 01/26/09 09:59
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Total Metals by EPA 6000/7000 Series Methods - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 9A16001 Water Preparation Method: EPA 3020A

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (9A16001-BLK1)													Extracted: 01/16/09 07:17	
Strontium	EPA 6020	ND	---	0.00100	mg/l	1x	--	--	--	--	--	--	01/16/09 10:59	
LCS (9A16001-BS1)													Extracted: 01/16/09 07:17	
Strontium	EPA 6020	0.0797	---	0.00100	mg/l	1x	--	0.0800	99.6%	(80-120)	--	--	01/16/09 11:05	
Duplicate (9A16001-DUP1)													QC Source: BRL0200-03 Extracted: 01/16/09 07:17	
Strontium	EPA 6020	0.316	---	0.00500	mg/l	5x	0.325	--	--	--	2.79% (20)	--	01/16/09 11:23	
Matrix Spike (9A16001-MS1)													QC Source: BRL0200-03 Extracted: 01/16/09 07:17	
Strontium	EPA 6020	0.410	---	0.00500	mg/l	5x	0.325	0.0800	107%	(75-125)	--	--	01/16/09 11:17	
Post Spike (9A16001-PS1)													QC Source: BRL0200-03 Extracted: 01/16/09 07:17	
Strontium	EPA 6020	0.419	---		ug/ml	5x	0.325	0.100	93.7%	(75-125)	--	--	01/16/09 11:11	

QC Batch: 9A16024 Soil Preparation Method: EPA 3050B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (9A16024-BLK1)													Extracted: 01/16/09 13:38	
Strontium	EPA 6020	ND	---	0.500	mg/kg wet	1x	--	--	--	--	--	--	01/19/09 09:56	
Vanadium	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Zinc	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Beryllium	"	ND	---	0.500	"	"	--	--	--	--	--	--	01/19/09 16:59	
Molybdenum	"	ND	---	2.50	"	"	--	--	--	--	--	--	01/19/09 09:56	
Selenium	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Lead	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Thallium	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Titanium	"	ND	---	0.500	"	"	--	--	--	--	--	--	01/19/09 16:59	
Antimony	"	ND	---	1.50	"	"	--	--	--	--	--	--	01/19/09 09:56	
Nickel	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Manganese	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Cobalt	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Arsenic	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Silver	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Barium	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Cadmium	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Chromium	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Copper	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Total Metals by EPA 6000/7000 Series Methods - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 9A16024 Soil Preparation Method: EPA 3050B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
LCS (9A16024-BS1)													Extracted: 01/16/09 13:38	
Strontium	EPA 6020	40.6	---	0.500	mg/kg wet	1x	--	40.0	101%	(80-120)	--	--	01/19/09 07:39	
Manganese	"	41.2	---	5.00	"	"	--	"	103%	"	--	--	"	
Beryllium	"	39.6	---	0.500	"	"	--	"	98.9%	"	--	--	"	
Vanadium	"	40.7	---	0.500	"	"	--	"	102%	"	--	--	"	
Silver	"	40.2	---	0.500	"	"	--	"	100%	"	--	--	"	
Lead	"	39.9	---	0.500	"	"	--	"	99.8%	"	--	--	"	
Thallium	"	38.7	---	0.500	"	"	--	"	96.8%	"	--	--	"	
Copper	"	41.0	---	0.500	"	"	--	"	102%	"	--	--	"	
Zinc	"	40.9	---	5.00	"	"	--	"	102%	"	--	--	"	
Arsenic	"	39.9	---	0.500	"	"	--	"	99.8%	"	--	--	"	
Molybdenum	"	31.7	---	2.50	"	"	--	30.0	106%	"	--	--	"	
Cadmium	"	39.1	---	0.500	"	"	--	40.0	97.7%	"	--	--	"	
Titanium	"	42.1	---	0.500	"	"	--	"	105%	"	--	--	"	
Cobalt	"	40.2	---	0.500	"	"	--	"	100%	"	--	--	"	
Selenium	"	41.3	---	1.00	"	"	--	"	103%	"	--	--	"	
Chromium	"	40.7	---	0.500	"	"	--	"	102%	"	--	--	"	
Antimony	"	30.4	---	1.50	"	"	--	30.0	101%	"	--	--	"	
Nickel	"	40.8	---	0.500	"	"	--	40.0	102%	"	--	--	"	
Barium	"	40.5	---	5.00	"	"	--	"	101%	"	--	--	"	

Duplicate (9A16024-DUP1)

QC Source: BRL0200-01

Extracted: 01/16/09 13:38

Thallium	EPA 6020	ND	---	0.506	mg/kg dry	1x	ND	--	--	--	NR	(20)	01/19/09 07:57	
Copper	"	151	---	0.506	"	"	143	--	--	--	5.06%	"	"	
Molybdenum	"	ND	---	2.53	"	"	ND	--	--	--	53.8%	"	"	R3
Silver	"	ND	---	0.506	"	"	ND	--	--	--	12.3%	(40)	"	
Zinc	"	80.4	---	5.06	"	"	84.7	--	--	--	5.17%	(20)	"	
Cadmium	"	ND	---	0.506	"	"	ND	--	--	--	4.98%	"	"	
Selenium	"	ND	---	1.01	"	"	ND	--	--	--	12.9%	(40)	"	
Strontium	"	121	---	0.506	"	"	105	--	--	--	14.6%	(20)	"	
Nickel	"	38.3	---	0.506	"	"	41.1	--	--	--	6.87%	"	"	
Cobalt	"	32.4	---	0.506	"	"	34.0	--	--	--	4.65%	"	"	
Chromium	"	26.5	---	0.506	"	"	29.0	--	--	--	9.11%	"	"	
Arsenic	"	1.43	---	0.506	"	"	0.599	--	--	--	82.1%	(40)	"	R3
Barium	"	42.8	---	5.06	"	"	36.9	--	--	--	14.8%	(20)	"	
Antimony	"	ND	---	1.52	"	"	ND	--	--	--		(40)	"	
Beryllium	"	0.668	---	0.506	"	"	0.677	--	--	--	1.44%	"	"	
Lead	"	1.10	---	0.506	"	"	0.793	--	--	--	32.2%	(20)	"	R3

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue 1100 112th Avenue NE, Suite 400 Bellevue, WA/USA 98004-4504	Project Name: WSDOT SR 520 - Pontoon Sites Project Number: 180171.AR.X7.02 Project Manager: Brian Tracy	Report Created: 01/26/09 09:59
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Total Metals by EPA 6000/7000 Series Methods - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 9A16024 Soil Preparation Method: EPA 3050B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Duplicate (9A16024-DUP2)			QC Source: BRL0200-01RE1				Extracted: 01/16/09 13:38							
Manganese	EPA 6020	1520	---	253	mg/kg dry	50x	1490	--	--	--	1.38%	(20)	01/19/09 09:20	
Titanium	"	4420	---	25.3	"	"	4720	--	--	--	6.39%	"	"	
Vanadium	"	230	---	1.01	"	2x	235	--	--	--	2.14%	"	01/19/09 09:14	
Matrix Spike (9A16024-MS1)			QC Source: BRL0200-01				Extracted: 01/16/09 13:38							
Arsenic	EPA 6020	39.7	---	0.530	mg/kg dry	1x	0.599	42.4	92.1%	(59-125)	--	--	01/19/09 07:51	
Barium	"	96.1	---	5.30	"	"	36.9	"	139%	(75-125)	--	--	"	M1
Beryllium	"	42.9	---	0.530	"	"	0.677	"	99.7%	"	--	--	"	
Nickel	"	80.1	---	0.530	"	"	41.1	"	91.9%	"	--	--	"	
Selenium	"	39.7	---	1.06	"	"	0.656	"	91.9%	(73-120)	--	--	"	
Antimony	"	1.31	---	1.59	"	"	ND	31.8	4.13%	(10-120)	--	--	"	M2
Thallium	"	42.5	---	0.530	"	"	ND	42.4	100%	(75-125)	--	--	"	
Chromium	"	69.5	---	0.530	"	"	29.0	"	95.5%	"	--	--	"	
Zinc	"	127	---	5.30	"	"	84.7	"	101%	"	--	--	"	
Molybdenum	"	24.5	---	2.65	"	"	0.347	31.8	76.0%	"	--	--	"	
Lead	"	45.0	---	0.530	"	"	0.793	42.4	104%	"	--	--	"	
Cobalt	"	74.2	---	0.530	"	"	34.0	"	94.8%	"	--	--	"	
Cadmium	"	41.8	---	0.530	"	"	0.425	"	97.6%	"	--	--	"	
Silver	"	34.6	---	0.530	"	"	0.446	"	80.4%	(73-125)	--	--	"	
Matrix Spike (9A16024-MS2)			QC Source: BRL0200-01RE1				Extracted: 01/16/09 13:38							
Vanadium	EPA 6020	286	---	1.06	mg/kg dry	2x	235	42.4	121%	(75-125)	--	--	01/19/09 08:09	
Manganese	"	2010	---	265	"	50x	1490	"	1220%	"	--	--	01/19/09 08:15	MHA
Titanium	"	4570	---	26.5	"	"	4720	"	-343%	"	--	--	"	MHA
Copper	"	208	---	1.06	"	2x	143	"	154%	"	--	--	01/19/09 08:09	M1
Strontium	"	197	---	1.06	"	"	105	"	218%	"	--	--	"	M1
Post Spike (9A16024-PS1)			QC Source: BRL0200-01				Extracted: 01/16/09 13:38							
Antimony	EPA 6020	0.0508	---		ug/ml	1x	0.000130	0.0510	99.4%	(75-125)	--	--	01/19/09 07:45	
Zinc	"	0.256	---		"	"	0.161	0.100	94.1%	(80-120)	--	--	"	
Arsenic	"	0.102	---		"	"	0.00114	0.0995	102%	(75-125)	--	--	"	
Nickel	"	0.173	---		"	"	0.0782	"	95.1%	(80-120)	--	--	"	
Molybdenum	"	0.0545	---		"	"	0.000660	0.0495	109%	"	--	--	"	
Selenium	"	0.100	---		"	"	0.00125	0.100	98.7%	(75-125)	--	--	"	
Cobalt	"	0.160	---		"	"	0.0647	"	95.8%	(80-120)	--	--	"	
Lead	"	0.105	---		"	"	0.00151	"	103%	"	--	--	"	
Cadmium	"	0.101	---		"	"	0.000810	"	100%	"	--	--	"	
Silver	"	0.0953	---		"	"	0.000850	"	94.5%	(75-125)	--	--	"	
Barium	"	0.169	---		"	"	0.0703	"	98.8%	(80-120)	--	--	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue	Project Name: WSDOT SR 520 - Pontoon Sites	Report Created:
1100 112th Avenue NE, Suite 400	Project Number: 180171.AR.X7.02	01/26/09 09:59
Bellevue, WA/USA 98004-4504	Project Manager: Brian Tracy	

Total Metals by EPA 6000/7000 Series Methods - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 9A16024 Soil Preparation Method: EPA 3050B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	---------------	-----------	-------	----------	-------	----------	----------	-------

Post Spike (9A16024-PS1)			QC Source: BRL0200-01					Extracted: 01/16/09 13:38						
Strontium	EPA 6020	0.298	---		ug/ml	1x	0.200	0.100	97.8%	(80-120)	--	--	01/19/09 07:45	
Thallium	"	0.102	---		"	"	0.0000600	"	102%	"	--	--	"	
Beryllium	"	0.101	---		"	"	0.00129	0.0995	101%	(75-125)	--	--	"	
Chromium	"	0.154	---		"	"	0.0552	0.100	98.1%	(80-120)	--	--	"	

Post Spike (9A16024-PS2)			QC Source: BRL0200-01RE1					Extracted: 01/16/09 13:38						
Vanadium	EPA 6020	0.542	---		ug/ml	5x	0.448	0.100	94.9%	(80-120)	--	--	01/19/09 09:08	
Manganese	"	2.87	---		"	50x	2.85	"	28.4%	"	--	--	01/19/09 08:03	S3
Titanium	"	8.90	---		"	"	8.98	"	-75.0%	"	--	--	"	S3
Copper	"	0.385	---		"	5x	0.273	"	112%	"	--	--	01/19/09 09:08	

QC Batch: 9A16025 Soil Preparation Method: EPA 3050B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
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Blank (9A16025-BLK1)								Extracted: 01/16/09 13:44						
Lead	EPA 6020	ND	---	0.500	mg/kg wet	1x	--	--	--	--	--	--	01/19/09 19:46	
Vanadium	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Molybdenum	"	ND	---	2.50	"	"	--	--	--	--	--	--	"	
Cobalt	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Nickel	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Copper	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Titanium	"	0.695	---	0.500	"	"	--	--	--	--	--	--	01/20/09 11:22	
Strontium	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Thallium	"	ND	---	0.500	"	"	--	--	--	--	--	--	01/19/09 19:46	
Zinc	"	ND	---	5.00	"	"	--	--	--	--	--	--	01/20/09 11:22	
Selenium	"	ND	---	1.00	"	"	--	--	--	--	--	--	01/19/09 19:46	
Manganese	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Antimony	"	ND	---	1.50	"	"	--	--	--	--	--	--	"	
Beryllium	"	ND	---	0.500	"	"	--	--	--	--	--	--	01/20/09 11:22	
Chromium	"	ND	---	0.500	"	"	--	--	--	--	--	--	01/19/09 19:46	
Cadmium	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Silver	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Arsenic	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Barium	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Total Metals by EPA 6000/7000 Series Methods - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 9A16025 Soil Preparation Method: EPA 3050B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
LCS (9A16025-BS1)													Extracted: 01/16/09 13:44	
Vanadium	EPA 6020	39.8	---	0.500	mg/kg wet	1x	--	40.0	99.4%	(80-120)	--	--	01/19/09 19:52	
Arsenic	"	38.8	---	0.500	"	"	--	"	96.9%	"	--	--	"	
Zinc	"	39.9	---	5.00	"	"	--	"	99.8%	"	--	--	01/20/09 11:28	
Selenium	"	39.9	---	1.00	"	"	--	"	99.8%	"	--	--	01/19/09 19:52	
Lead	"	38.7	---	0.500	"	"	--	"	96.7%	"	--	--	"	
Thallium	"	38.8	---	0.500	"	"	--	"	97.0%	"	--	--	"	
Titanium	"	40.3	---	0.500	"	"	--	"	101%	"	--	--	"	
Strontium	"	39.1	---	0.500	"	"	--	"	97.7%	"	--	--	01/20/09 11:28	
Silver	"	39.2	---	0.500	"	"	--	"	97.9%	"	--	--	01/19/09 19:52	
Beryllium	"	38.8	---	0.500	"	"	--	"	97.0%	"	--	--	01/20/09 11:28	
Molybdenum	"	29.3	---	2.50	"	"	--	30.0	97.7%	"	--	--	01/19/09 19:52	
Barium	"	39.9	---	5.00	"	"	--	40.0	99.9%	"	--	--	"	
Manganese	"	41.4	---	5.00	"	"	--	"	104%	"	--	--	"	
Copper	"	40.0	---	0.500	"	"	--	"	100%	"	--	--	"	
Cobalt	"	39.8	---	0.500	"	"	--	"	99.6%	"	--	--	"	
Cadmium	"	38.6	---	0.500	"	"	--	"	96.6%	"	--	--	"	
Nickel	"	40.0	---	0.500	"	"	--	"	100%	"	--	--	"	
Chromium	"	39.7	---	0.500	"	"	--	"	99.3%	"	--	--	"	
Antimony	"	30.1	---	1.50	"	"	--	30.0	100%	"	--	--	"	

Duplicate (9A16025-DUP1)

QC Source: BRL0200-25

Extracted: 01/16/09 13:44

Vanadium	EPA 6020	169	---	0.519	mg/kg dry	1x	161	--	--	--	4.85%	(20)	01/19/09 20:10	
Silver	"	ND	---	0.519	"	"	ND	--	--	--	15.2%	(40)	"	
Beryllium	"	1.03	---	0.519	"	"	0.938	--	--	--	9.11%	"	01/20/09 12:22	
Arsenic	"	0.752	---	0.519	"	"	0.996	--	--	--	27.9%	"	01/19/09 20:10	
Strontium	"	95.3	---	0.519	"	"	139	--	--	--	37.2%	(20)	01/20/09 12:22	R3
Zinc	"	109	---	5.19	"	"	112	--	--	--	3.26%	"	"	
Chromium	"	117	---	0.519	"	"	88.2	--	--	--	28.1%	"	01/19/09 20:10	R3
Copper	"	166	---	0.519	"	"	170	--	--	--	2.42%	"	"	
Molybdenum	"	ND	---	2.59	"	"	ND	--	--	--	NR	"	"	
Selenium	"	ND	---	1.04	"	"	ND	--	--	--	2.49%	(40)	"	
Lead	"	4.80	---	0.519	"	"	6.82	--	--	--	34.8%	(20)	"	R3
Thallium	"	ND	---	0.519	"	"	ND	--	--	--	NR	"	"	
Antimony	"	ND	---	1.56	"	"	ND	--	--	--	NR	(40)	"	
Barium	"	130	---	5.19	"	"	192	--	--	--	38.6%	(20)	"	R3
Cadmium	"	0.752	---	0.519	"	"	0.740	--	--	--	1.69%	"	"	
Nickel	"	71.4	---	0.519	"	"	75.2	--	--	--	5.20%	"	"	
Cobalt	"	47.0	---	0.519	"	"	49.6	--	--	--	5.46%	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Total Metals by EPA 6000/7000 Series Methods - Laboratory Quality Control Results

TestAmerica Seattle

QC Batch: 9A16025

Soil Preparation Method: EPA 3050B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes	
Duplicate (9A16025-DUP2)			QC Source: BRL0200-25RE1					Extracted: 01/16/09 13:44							
Titanium	EPA 6020	3230	---	10.4	mg/kg dry	20x	3000	--	--	--	7.31% (20)		01/20/09 12:51		
Manganese	"	1700	---	104	"	"	2210	--	--	--	26.3%	"	"	R3	
Matrix Spike (9A16025-MS1)			QC Source: BRL0200-25					Extracted: 01/16/09 13:44							
Arsenic	EPA 6020	18.9	---	0.561	mg/kg dry	1x	0.996	44.9	39.9%	(59-125)	--	--	01/19/09 20:04	M2	
Cobalt	"	87.0	---	0.561	"	"	49.6	"	83.2%	(75-125)	--	--	"		
Cadmium	"	42.3	---	0.561	"	"	0.740	"	92.5%	"	--	--	"		
Silver	"	38.3	---	0.561	"	"	0.0757	"	85.2%	(73-125)	--	--	"		
Nickel	"	112	---	0.561	"	"	75.2	"	81.0%	(75-125)	--	--	"		
Chromium	"	121	---	0.561	"	"	88.2	"	72.9%	"	--	--	"	M2	
Beryllium	"	40.0	---	0.561	"	"	0.938	"	87.0%	"	--	--	01/20/09 12:16		
Molybdenum	"	4.22	---	2.81	"	"	ND	33.7	12.5%	"	--	--	01/19/09 20:04	M2	
Antimony	"	1.26	---	1.68	"	"	ND	"	3.75%	(10-120)	--	--	"	M2	
Selenium	"	19.3	---	1.12	"	"	0.309	44.9	42.4%	(73-120)	--	--	"	M2	
Vanadium	"	194	---	0.561	"	"	161	"	74.2%	(75-125)	--	--	"	M2	
Zinc	"	139	---	5.61	"	"	112	"	58.4%	"	--	--	01/20/09 12:16	M2	
Thallium	"	43.4	---	0.561	"	"	ND	"	96.7%	"	--	--	01/19/09 20:04		
Strontium	"	161	---	0.561	"	"	139	"	50.5%	"	--	--	01/20/09 12:16	M2	
Lead	"	49.2	---	0.561	"	"	6.82	"	94.3%	"	--	--	01/19/09 20:04		
Matrix Spike (9A16025-MS2)			QC Source: BRL0200-25RE1					Extracted: 01/16/09 13:44							
Titanium	EPA 6020	2970	---	11.2	mg/kg dry	20x	3000	44.9	-52.8%	(75-125)	--	--	01/20/09 12:45	MHA	
Manganese	"	2000	---	112	"	"	2210	"	-464%	"	--	--	"	MHA	
Copper	"	213	---	1.12	"	2x	170	"	94.8%	"	--	--	01/20/09 11:52		
Barium	"	204	---	11.2	"	"	192	"	25.8%	"	--	--	"	M2	
Post Spike (9A16025-PS1)			QC Source: BRL0200-25					Extracted: 01/16/09 13:44							
Cobalt	EPA 6020	0.178	---		ug/ml	1x	0.0852	0.100	92.7%	(80-120)	--	--	01/19/09 19:58		
Chromium	"	0.246	---		"	"	0.152	"	93.5%	"	--	--	"		
Molybdenum	"	0.0500	---		"	"	-0.0000800	0.0495	101%	"	--	--	"		
Antimony	"	0.0480	---		"	"	0.0000300	0.0510	94.0%	(75-125)	--	--	"		
Lead	"	0.109	---		"	"	0.0117	0.100	96.8%	(80-120)	--	--	"		
Thallium	"	0.0998	---		"	"	0.0000900	"	99.2%	"	--	--	"		
Zinc	"	0.280	---		"	"	0.193	"	87.0%	"	--	--	01/20/09 11:34		
Arsenic	"	0.0983	---		"	"	0.00171	0.0995	97.1%	(75-125)	--	--	01/19/09 19:58		
Beryllium	"	0.100	---		"	"	0.00161	"	98.9%	"	--	--	01/20/09 11:34		
Strontium	"	0.329	---		"	"	0.238	0.100	90.5%	(80-120)	--	--	"		
Silver	"	0.0933	---		"	"	0.000130	"	93.2%	(75-125)	--	--	01/19/09 19:58		
Cadmium	"	0.0976	---		"	"	0.00127	"	96.3%	(80-120)	--	--	"		

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue	Project Name: WSDOT SR 520 - Pontoon Sites	
1100 112th Avenue NE, Suite 400	Project Number: 180171.AR.X7.02	Report Created:
Bellevue, WA/USA 98004-4504	Project Manager: Brian Tracy	01/26/09 09:59

Total Metals by EPA 6000/7000 Series Methods - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 9A16025 Soil Preparation Method: EPA 3050B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Post Spike (9A16025-PS1)			QC Source: BRL0200-25				Extracted: 01/16/09 13:44							
Nickel	EPA 6020	0.218	---		ug/ml	1x	0.129	0.0995	88.8%	(80-120)	--	--	01/19/09 19:58	
Selenium	"	0.0962	---		"	"	0.000530	0.100	95.6%	(75-125)	--	--	"	
Post Spike (9A16025-PS2)			QC Source: BRL0200-25RE1				Extracted: 01/16/09 13:44							
Titanium	EPA 6020	5.29	---		ug/ml	20x	5.15	0.100	144%	(80-120)	--	--	01/20/09 11:46	S3
Manganese	"	3.91	---		"	"	3.80	"	105%	"	--	--	"	
Barium	"	0.426	---		"	2x	0.330	"	96.1%	"	--	--	01/20/09 11:40	
Copper	"	0.396	---		"	"	0.292	"	103%	"	--	--	"	
Vanadium	"	0.379	---		"	"	0.276	"	103%	"	--	--	"	

QC Batch: 9A16026 Soil Preparation Method: EPA 3050B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (9A16026-BLK1)							Extracted: 01/16/09 13:52							
Manganese	EPA 6020	ND	---	5.00	mg/kg wet	1x	--	--	--	--	--	--	01/19/09 23:15	
Copper	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Selenium	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Strontium	"	ND	---	0.500	"	"	--	--	--	--	--	--	01/20/09 17:27	
Titanium	"	ND	---	0.500	"	"	--	--	--	--	--	--	01/19/09 23:15	
Cobalt	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Thallium	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Antimony	"	ND	---	1.50	"	"	--	--	--	--	--	--	"	
Vanadium	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Nickel	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Zinc	"	ND	---	5.00	"	"	--	--	--	--	--	--	01/20/09 17:27	
Molybdenum	"	ND	---	2.50	"	"	--	--	--	--	--	--	01/19/09 23:15	
Arsenic	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Chromium	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Cadmium	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Beryllium	"	ND	---	0.500	"	"	--	--	--	--	--	--	01/20/09 17:27	
Lead	"	ND	---	0.500	"	"	--	--	--	--	--	--	01/19/09 23:15	
Barium	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Silver	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Total Metals by EPA 6000/7000 Series Methods - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 9A16026 Soil Preparation Method: EPA 3050B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
LCS (9A16026-BS1)										Extracted: 01/16/09 13:52				
Zinc	EPA 6020	40.0	---	5.00	mg/kg wet	1x	--	40.0	99.9%	(80-120)	--	--	01/20/09 17:33	
Antimony	"	30.1	---	1.50	"	"	--	30.0	100%	"	--	--	01/19/09 23:21	
Beryllium	"	41.5	---	0.500	"	"	--	40.0	104%	"	--	--	01/20/09 17:33	
Barium	"	39.9	---	5.00	"	"	--	"	99.8%	"	--	--	01/19/09 23:21	
Lead	"	38.7	---	0.500	"	"	--	"	96.8%	"	--	--	"	
Silver	"	39.0	---	0.500	"	"	--	"	97.5%	"	--	--	"	
Cadmium	"	38.8	---	0.500	"	"	--	"	96.9%	"	--	--	"	
Cobalt	"	40.0	---	0.500	"	"	--	"	100%	"	--	--	"	
Chromium	"	40.5	---	0.500	"	"	--	"	101%	"	--	--	"	
Copper	"	39.9	---	0.500	"	"	--	"	99.7%	"	--	--	"	
Arsenic	"	39.0	---	0.500	"	"	--	"	97.4%	"	--	--	"	
Titanium	"	41.0	---	0.500	"	"	--	"	102%	"	--	--	"	
Manganese	"	41.6	---	5.00	"	"	--	"	104%	"	--	--	"	
Molybdenum	"	29.5	---	2.50	"	"	--	30.0	98.4%	"	--	--	"	
Strontium	"	39.0	---	0.500	"	"	--	40.0	97.5%	"	--	--	01/20/09 17:33	
Thallium	"	38.8	---	0.500	"	"	--	"	97.1%	"	--	--	01/19/09 23:21	
Selenium	"	39.9	---	1.00	"	"	--	"	99.7%	"	--	--	"	
Nickel	"	40.4	---	0.500	"	"	--	"	101%	"	--	--	"	
Vanadium	"	39.8	---	0.500	"	"	--	"	99.5%	"	--	--	"	

Duplicate (9A16026-DUP1)

QC Source: BRL0200-52

Extracted: 01/16/09 13:52

Arsenic	EPA 6020	1.74	---	0.575	mg/kg dry	1x	1.46	--	--	--	17.3%	(40)	01/19/09 23:39	
Strontium	"	57.5	---	0.575	"	"	60.8	--	--	--	5.50%	(20)	01/20/09 17:51	
Chromium	"	10.5	---	0.575	"	"	12.3	--	--	--	16.1%	"	01/19/09 23:39	
Selenium	"	ND	---	1.15	"	"	ND	--	--	--	14.1%	(40)	"	
Lead	"	4.72	---	0.575	"	"	4.88	--	--	--	3.18%	(20)	"	
Molybdenum	"	ND	---	2.87	"	"	ND	--	--	--	55.2%	"	"	R3
Vanadium	"	71.2	---	0.575	"	"	71.4	--	--	--	0.287%	"	"	
Cobalt	"	13.9	---	0.575	"	"	11.6	--	--	--	17.8%	"	"	
Barium	"	133	---	5.75	"	"	135	--	--	--	1.03%	"	"	
Antimony	"	ND	---	1.72	"	"	ND	--	--	--	NR	(40)	"	
Copper	"	16.5	---	0.575	"	"	16.6	--	--	--	0.499%	(20)	"	
Cadmium	"	ND	---	0.575	"	"	ND	--	--	--	1.39%	"	"	
Nickel	"	8.33	---	0.575	"	"	9.35	--	--	--	11.6%	"	"	
Zinc	"	49.4	---	5.75	"	"	60.8	--	--	--	20.9%	"	01/20/09 17:51	R3
Beryllium	"	ND	---	0.575	"	"	ND	--	--	--	2.83%	(40)	"	
Thallium	"	1.21	---	0.575	"	"	ND	--	--	--		(20)	01/19/09 23:39	
Silver	"	ND	---	0.575	"	"	ND	--	--	--	NR	(40)	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Total Metals by EPA 6000/7000 Series Methods - Laboratory Quality Control Results

TestAmerica Seattle

QC Batch: 9A16026

Soil Preparation Method: EPA 3050B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Duplicate (9A16026-DUP2)			QC Source: BRL0200-52RE1				Extracted: 01/16/09 13:52							
Manganese	EPA 6020	466	---	57.5	mg/kg dry	10x	403	--	--	--	14.5%	(20)	01/20/09 20:33	
Titanium	"	1120	---	5.75	"	"	1030	--	--	--	8.32%	"	"	
Matrix Spike (9A16026-MS1)			QC Source: BRL0200-52				Extracted: 01/16/09 13:52							
Beryllium	EPA 6020	47.6	---	0.629	mg/kg dry	1x	0.240	50.3	94.1%	(75-125)	--	--	01/20/09 17:45	
Cadmium	"	45.9	---	0.629	"	"	0.402	"	90.4%	"	--	--	01/19/09 23:33	
Thallium	"	46.0	---	0.629	"	"	ND	"	91.3%	"	--	--	"	
Zinc	"	91.9	---	6.29	"	"	60.8	"	61.7%	"	--	--	01/20/09 17:45	M2
Silver	"	44.7	---	0.629	"	"	ND	"	88.8%	(73-125)	--	--	01/19/09 23:33	
Molybdenum	"	25.6	---	3.14	"	"	0.721	37.7	65.8%	(75-125)	--	--	"	M2
Nickel	"	51.9	---	0.629	"	"	9.35	50.3	84.6%	"	--	--	"	
Antimony	"	2.42	---	1.89	"	"	ND	37.7	6.40%	(10-120)	--	--	"	M2
Selenium	"	46.3	---	1.26	"	"	0.384	50.3	91.2%	(73-120)	--	--	"	
Strontium	"	95.9	---	0.629	"	"	60.8	"	69.8%	(75-125)	--	--	01/20/09 17:45	M2
Lead	"	49.2	---	0.629	"	"	4.88	"	88.1%	"	--	--	01/19/09 23:33	
Vanadium	"	118	---	0.629	"	"	71.4	"	93.2%	"	--	--	"	
Chromium	"	56.0	---	0.629	"	"	12.3	"	86.8%	"	--	--	"	
Arsenic	"	44.7	---	0.629	"	"	1.46	"	86.0%	(59-125)	--	--	"	
Cobalt	"	56.6	---	0.629	"	"	11.6	"	89.5%	(75-125)	--	--	"	
Barium	"	169	---	6.29	"	"	135	"	68.9%	"	--	--	"	M2
Copper	"	57.3	---	0.629	"	"	16.6	"	80.9%	"	--	--	"	
Matrix Spike (9A16026-MS2)			QC Source: BRL0200-52RE1				Extracted: 01/16/09 13:52							
Manganese	EPA 6020	384	---	62.9	mg/kg dry	10x	403	50.3	-36.6%	(75-125)	--	--	01/20/09 20:27	MHA
Titanium	"	1020	---	6.29	"	"	1030	"	-20.9%	"	--	--	"	MHA
Post Spike (9A16026-PS1)			QC Source: BRL0200-52				Extracted: 01/16/09 13:52							
Chromium	EPA 6020	0.120	---		ug/ml	1x	0.0205	0.100	99.0%	(80-120)	--	--	01/19/09 23:27	
Thallium	"	0.0974	---		"	"	0.000180	"	96.7%	"	--	--	"	
Zinc	"	0.179	---		"	"	0.101	"	77.0%	"	--	--	01/20/09 17:39	S3
Barium	"	0.323	---		"	"	0.224	"	99.4%	"	--	--	01/19/09 23:27	
Beryllium	"	0.100	---		"	"	0.000400	0.0995	100%	(75-125)	--	--	01/20/09 17:39	
Vanadium	"	0.218	---		"	"	0.119	0.100	99.2%	(80-120)	--	--	01/19/09 23:27	
Selenium	"	0.0987	---		"	"	0.000640	"	98.1%	(75-125)	--	--	"	
Cadmium	"	0.0984	---		"	"	0.000670	"	97.7%	(80-120)	--	--	"	
Cobalt	"	0.116	---		"	"	0.0193	"	96.4%	"	--	--	"	
Copper	"	0.122	---		"	"	0.0276	"	94.2%	"	--	--	"	
Molybdenum	"	0.0512	---		"	"	0.00120	0.0495	101%	"	--	--	"	
Lead	"	0.104	---		"	"	0.00812	0.100	95.6%	"	--	--	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue 1100 112th Avenue NE, Suite 400 Bellevue, WA/USA 98004-4504	Project Name: WSDOT SR 520 - Pontoon Sites Project Number: 180171.AR.X7.02 Project Manager: Brian Tracy	Report Created: 01/26/09 09:59
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Total Metals by EPA 6000/7000 Series Methods - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 9A16026 Soil Preparation Method: EPA 3050B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Post Spike (9A16026-PS1)			QC Source: BRL0200-52				Extracted: 01/16/09 13:52							
Arsenic	EPA 6020	0.102	---		ug/ml	1x	0.00243	0.0995	99.7%	(75-125)	--	--	01/19/09 23:27	
Antimony	"	0.0506	---		"	"	ND	0.0510	99.2%	"	--	--	"	
Strontium	"	0.196	---		"	"	0.101	0.100	94.7%	(80-120)	--	--	01/20/09 17:39	
Nickel	"	0.111	---		"	"	0.0156	0.0995	95.8%	"	--	--	01/19/09 23:27	
Silver	"	0.0943	---		"	"	0.0000300	0.100	94.3%	(75-125)	--	--	"	
Post Spike (9A16026-PS2)			QC Source: BRL0200-52RE1				Extracted: 01/16/09 13:52							
Manganese	EPA 6020	1.63	---		ug/ml	10x	0.670	0.100	953%	(80-120)	--	--	01/20/09 20:21	S3
Titanium	"	3.81	---		"	"	1.72	"	2100%	"	--	--	"	S3

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Polychlorinated Biphenyls by EPA Method 8082 - Laboratory Quality Control Results

TestAmerica Seattle

QC Batch: 8L29019

Soil Preparation Method: EPA 3550B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes					
Blank (8L29019-BLK1)										Extracted: 12/29/08 12:43									
Aroclor 1016	EPA 8082	ND	---	25.0	ug/kg wet	1x	--	--	--	--	--	--	12/30/08 13:04						
Aroclor 1221	"	ND	---	50.0	"	"	--	--	--	--	--	--	"						
Aroclor 1232	"	ND	---	25.0	"	"	--	--	--	--	--	--	"						
Aroclor 1242	"	ND	---	25.0	"	"	--	--	--	--	--	--	"						
Aroclor 1248	"	ND	---	25.0	"	"	--	--	--	--	--	--	"						
Aroclor 1254	"	ND	---	25.0	"	"	--	--	--	--	--	--	"						
Aroclor 1260 [2C]	"	ND	---	25.0	"	"	--	--	--	--	--	--	"						
Aroclor 1262	"	ND	---	25.0	"	"	--	--	--	--	--	--	"						
Aroclor 1268	"	ND	---	25.0	"	"	--	--	--	--	--	--	"						
Surrogate(s): TCX		Recovery: 84.3%		Limits: 65-125%		"						12/30/08 13:04							
Decachlorobiphenyl		92.3%		40-150%		"													
Matrix Spike (8L29019-MS1)										QC Source: BRL0200-08					Extracted: 12/29/08 12:43				
Aroclor 1016	EPA 8082	109	---	33.1	ug/kg dry	1x	ND	110	98.7%	(68-132)	--	--	12/30/08 14:08						
Aroclor 1260 [2C]	"	103	---	33.1	"	"	ND	"	93.8%	(59-131)	--	--	"						
Surrogate(s): TCX		Recovery: 87.4%		Limits: 65-125%		"						12/30/08 14:08							
Decachlorobiphenyl		95.3%		40-150%		"													
Matrix Spike Dup (8L29019-MSD1)										QC Source: BRL0200-08					Extracted: 12/29/08 12:43				
Aroclor 1016	EPA 8082	105	---	33.2	ug/kg dry	1x	ND	111	95.0%	(68-132)	3.45% (20)		12/30/08 14:24						
Aroclor 1260 [2C]	"	100	---	33.2	"	"	ND	"	90.8%	(59-131)	2.90% (35)		"						
Surrogate(s): TCX		Recovery: 82.9%		Limits: 65-125%		"						12/30/08 14:24							
Decachlorobiphenyl		91.5%		40-150%		"													

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8L18004 Soil Preparation Method: EPA 5035

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8L18004-BLK1)													Extracted: 12/18/08 09:15	
Acetone	EPA 8260B	ND	---	40.0	ug/kg wet	1x	--	--	--	--	--	--	12/18/08 12:02	
Benzene	"	ND	---	1.50	"	"	--	--	--	--	--	--	"	
Bromobenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Bromochloromethane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Bromodichloromethane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Bromoform	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Bromomethane	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
2-Butanone	"	ND	---	30.0	"	"	--	--	--	--	--	--	"	
n-Butylbenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
sec-Butylbenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
tert-Butylbenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Carbon disulfide	"	ND	---	3.00	"	"	--	--	--	--	--	--	"	
Carbon tetrachloride	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Chlorobenzene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
Chloroethane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Chloroform	"	ND	---	2.50	"	"	--	--	--	--	--	--	"	
Chloromethane	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
2-Chlorotoluene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
4-Chlorotoluene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Dibromochloromethane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
1,2-Dibromo-3-chloropropane	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
1,2-Dibromoethane (EDB)	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Dibromomethane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
1,2-Dichlorobenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
1,3-Dichlorobenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
1,4-Dichlorobenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Dichlorodifluoromethane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
1,1-Dichloroethane	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
1,2-Dichloroethane	"	4.07	---	1.25	"	"	--	--	--	--	--	--	"	B
1,1-Dichloroethene	"	ND	---	3.00	"	"	--	--	--	--	--	--	"	
cis-1,2-Dichloroethene	"	ND	---	3.00	"	"	--	--	--	--	--	--	"	
trans-1,2-Dichloroethene	"	ND	---	2.50	"	"	--	--	--	--	--	--	"	
1,2-Dichloropropane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
1,3-Dichloropropane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
2,2-Dichloropropane	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
1,1-Dichloropropene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
cis-1,3-Dichloropropene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
trans-1,3-Dichloropropene	"	ND	---	1.25	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	4.00	"	"	--	--	--	--	--	--	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8L18004 Soil Preparation Method: EPA 5035

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8L18004-BLK1)										Extracted: 12/18/08 09:15				
Hexachlorobutadiene	EPA 8260B	ND	---	10.0	ug/kg wet	1x	--	--	--	--	--	--	12/18/08 12:02	
Methyl tert-butyl ether	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
n-Hexane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
2-Hexanone	"	ND	---	30.0	"	"	--	--	--	--	--	--	"	
Isopropylbenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
p-Isopropyltoluene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
4-Methyl-2-pentanone	"	ND	---	30.0	"	"	--	--	--	--	--	--	"	
Methylene chloride	"	ND	---	12.0	"	"	--	--	--	--	--	--	"	
Naphthalene	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
n-Propylbenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Styrene	"	ND	---	2.50	"	"	--	--	--	--	--	--	"	
1,2,3-Trichlorobenzene	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
1,2,4-Trichlorobenzene	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
1,1,1,2-Tetrachloroethane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
1,1,2,2-Tetrachloroethane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Tetrachloroethene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
Toluene	"	ND	---	1.50	"	"	--	--	--	--	--	--	"	
1,1,1-Trichloroethane	"	ND	---	2.50	"	"	--	--	--	--	--	--	"	
1,1,2-Trichloroethane	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
Trichloroethene	"	ND	---	2.50	"	"	--	--	--	--	--	--	"	
Trichlorofluoromethane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
1,2,3-Trichloropropane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
1,2,4-Trimethylbenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
1,3,5-Trimethylbenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Vinyl chloride	"	ND	---	2.50	"	"	--	--	--	--	--	--	"	
o-Xylene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
m,p-Xylene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Total Xylenes	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
<i>Surrogate(s): 1,2-DCA-d4</i>		<i>Recovery:</i>	<i>96.0%</i>	<i>Limits:</i>	<i>70-140%</i>	<i>"</i>							<i>12/18/08 12:02</i>	
<i>Toluene-d8</i>			<i>102%</i>		<i>70-130%</i>	<i>"</i>							<i>"</i>	
<i>4-BFB</i>			<i>108%</i>		<i>70-130%</i>	<i>"</i>							<i>"</i>	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8L18004 Soil Preparation Method: EPA 5035

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
LCS (8L18004-BS1)													Extracted: 12/18/08 09:15	
Acetone	EPA 8260B	475	---	40.0	ug/kg wet	1x	--	500	95.1%	(60-140)	--	--	12/18/08 11:10	
Benzene	"	47.9	---	1.50	"	"	--	50.0	95.7%	(70-125)	--	--	"	
2-Butanone	"	559	---	30.0	"	"	--	500	112%	(60-140)	--	--	"	
Carbon disulfide	"	43.8	---	3.00	"	"	--	50.0	87.7%	(70-130)	--	--	"	
Chlorobenzene	"	45.9	---	2.00	"	"	--	"	91.8%	(70-125)	--	--	"	
1,1-Dichloroethane	"	47.5	---	2.00	"	"	--	"	95.1%	(75-125)	--	--	"	
1,1-Dichloroethene	"	46.8	---	3.00	"	"	--	"	93.6%	(70-130)	--	--	"	
cis-1,2-Dichloroethene	"	49.6	---	3.00	"	"	--	"	99.3%	(75-125)	--	--	"	
Ethylbenzene	"	48.2	---	4.00	"	"	--	"	96.5%	(70-125)	--	--	"	
Hexachlorobutadiene	"	48.6	---	10.0	"	"	--	"	97.3%	(70-130)	--	--	"	
4-Methyl-2-pentanone	"	552	---	30.0	"	"	--	500	110%	(60-140)	--	--	"	
Tetrachloroethene	"	47.4	---	2.00	"	"	--	50.0	94.8%	(70-125)	--	--	"	
Toluene	"	47.9	---	1.50	"	"	--	"	95.8%	"	--	--	"	
1,1,1-Trichloroethane	"	45.7	---	2.50	"	"	--	"	91.3%	(70-130)	--	--	"	
Trichloroethene	"	46.1	---	2.50	"	"	--	"	92.3%	(70-125)	--	--	"	
Surrogate(s): 1,2-DCA-d4		Recovery:	96.0%	Limits: 70-140%		"							12/18/08 11:10	
Toluene-d8			99.2%	70-130%		"							"	
4-BFB			104%	70-130%		"							"	

LCS Dup (8L18004-BSD1)

Extracted: 12/18/08 09:15

Acetone	EPA 8260B	447	---	40.0	ug/kg wet	1x	--	500	89.3%	(60-140)	6.24% (30)		12/18/08 11:36	
Benzene	"	51.0	---	1.50	"	"	--	50.0	102%	(70-125)	6.37%	"	"	
2-Butanone	"	555	---	30.0	"	"	--	500	111%	(60-140)	0.582%	"	"	
Carbon disulfide	"	44.6	---	3.00	"	"	--	50.0	89.2%	(70-130)	1.74%	"	"	
Chlorobenzene	"	51.0	---	2.00	"	"	--	"	102%	(70-125)	10.6%	"	"	
1,1-Dichloroethane	"	48.9	---	2.00	"	"	--	"	97.8%	(75-125)	2.78%	"	"	
1,1-Dichloroethene	"	48.5	---	3.00	"	"	--	"	97.0%	(70-130)	3.57%	"	"	
cis-1,2-Dichloroethene	"	51.8	---	3.00	"	"	--	"	104%	(75-125)	4.34%	"	"	
Ethylbenzene	"	54.2	---	4.00	"	"	--	"	108%	(70-125)	11.6%	"	"	
Hexachlorobutadiene	"	51.5	---	10.0	"	"	--	"	103%	(70-130)	5.79%	"	"	
4-Methyl-2-pentanone	"	531	---	30.0	"	"	--	500	106%	(60-140)	3.89%	"	"	
Tetrachloroethene	"	53.1	---	2.00	"	"	--	50.0	106%	(70-125)	11.4%	"	"	
Toluene	"	54.0	---	1.50	"	"	--	"	108%	"	12.0%	"	"	
1,1,1-Trichloroethane	"	46.7	---	2.50	"	"	--	"	93.3%	(70-130)	2.17%	"	"	
Trichloroethene	"	50.9	---	2.50	"	"	--	"	102%	(70-125)	9.75%	"	"	
Surrogate(s): 1,2-DCA-d4		Recovery:	89.3%	Limits: 70-140%		"							12/18/08 11:36	
Toluene-d8			102%	70-130%		"							"	
4-BFB			105%	70-130%		"							"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8L22006 Soil Preparation Method: EPA 5035

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8L22006-BLK1)										Extracted: 12/22/08 11:08				
Acetone	EPA 8260B	ND	---	40.0	ug/kg wet	1x	--	--	--	--	--	--	12/22/08 12:25	
Benzene	"	ND	---	1.50	"	"	--	--	--	--	--	--	"	
Bromobenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Bromochloromethane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Bromodichloromethane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Bromoform	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Bromomethane	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
2-Butanone	"	ND	---	30.0	"	"	--	--	--	--	--	--	"	
n-Butylbenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
sec-Butylbenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
tert-Butylbenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Carbon disulfide	"	ND	---	3.00	"	"	--	--	--	--	--	--	"	
Carbon tetrachloride	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Chlorobenzene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
Chloroethane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Chloroform	"	ND	---	2.50	"	"	--	--	--	--	--	--	"	
Chloromethane	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
2-Chlorotoluene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
4-Chlorotoluene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Dibromochloromethane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
1,2-Dibromo-3-chloropropane	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
1,2-Dibromoethane (EDB)	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Dibromomethane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
1,2-Dichlorobenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
1,3-Dichlorobenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
1,4-Dichlorobenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Dichlorodifluoromethane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	C5
1,1-Dichloroethane	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
1,2-Dichloroethane	"	ND	---	1.25	"	"	--	--	--	--	--	--	"	
1,1-Dichloroethene	"	ND	---	3.00	"	"	--	--	--	--	--	--	"	
cis-1,2-Dichloroethene	"	ND	---	3.00	"	"	--	--	--	--	--	--	"	
trans-1,2-Dichloroethene	"	ND	---	2.50	"	"	--	--	--	--	--	--	"	
1,2-Dichloropropane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
1,3-Dichloropropane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
2,2-Dichloropropane	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
1,1-Dichloropropene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
cis-1,3-Dichloropropene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
trans-1,3-Dichloropropene	"	ND	---	1.25	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	4.00	"	"	--	--	--	--	--	--	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8L22006 Soil Preparation Method: EPA 5035

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8L22006-BLK1)										Extracted: 12/22/08 11:08				
Hexachlorobutadiene	EPA 8260B	ND	---	10.0	ug/kg wet	1x	--	--	--	--	--	--	12/22/08 12:25	
Methyl tert-butyl ether	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
n-Hexane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
2-Hexanone	"	ND	---	30.0	"	"	--	--	--	--	--	--	"	
Isopropylbenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
p-Isopropyltoluene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
4-Methyl-2-pentanone	"	ND	---	30.0	"	"	--	--	--	--	--	--	"	
Methylene chloride	"	ND	---	12.0	"	"	--	--	--	--	--	--	"	
Naphthalene	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
n-Propylbenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Styrene	"	ND	---	2.50	"	"	--	--	--	--	--	--	"	
1,2,3-Trichlorobenzene	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
1,2,4-Trichlorobenzene	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
1,1,1,2-Tetrachloroethane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
1,1,2,2-Tetrachloroethane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Tetrachloroethene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
Toluene	"	ND	---	1.50	"	"	--	--	--	--	--	--	"	
1,1,1-Trichloroethane	"	ND	---	2.50	"	"	--	--	--	--	--	--	"	
1,1,2-Trichloroethane	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
Trichloroethene	"	ND	---	2.50	"	"	--	--	--	--	--	--	"	
Trichlorofluoromethane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
1,2,3-Trichloropropane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
1,2,4-Trimethylbenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
1,3,5-Trimethylbenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Vinyl chloride	"	ND	---	2.50	"	"	--	--	--	--	--	--	"	
o-Xylene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
m,p-Xylene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Total Xylenes	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
<i>Surrogate(s): 1,2-DCA-d4</i>		<i>Recovery:</i>	<i>106%</i>	<i>Limits:</i>	<i>70-140%</i>	<i>"</i>							<i>12/22/08 12:25</i>	
<i>Toluene-d8</i>			<i>95.7%</i>		<i>70-130%</i>	<i>"</i>							<i>"</i>	
<i>4-BFB</i>			<i>103%</i>		<i>70-130%</i>	<i>"</i>							<i>"</i>	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Laboratory Quality Control Results

TestAmerica Seattle

QC Batch: 8L22006

Soil Preparation Method: EPA 5035

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes		
LCS (8L22006-BS1)													Extracted: 12/22/08 11:08			
Acetone	EPA 8260B	438	---	40.0	ug/kg wet	1x	--	500	87.5%	(60-140)	--	--	12/22/08 11:33			
Benzene	"	51.5	---	1.50	"	"	--	50.0	103%	(70-125)	--	--	"			
2-Butanone	"	499	---	30.0	"	"	--	500	99.9%	(60-140)	--	--	"			
Carbon disulfide	"	48.6	---	3.00	"	"	--	50.0	97.1%	(70-130)	--	--	"			
Chlorobenzene	"	49.4	---	2.00	"	"	--	"	98.8%	(70-125)	--	--	"			
1,1-Dichloroethane	"	51.2	---	2.00	"	"	--	"	102%	(75-125)	--	--	"			
1,1-Dichloroethene	"	52.1	---	3.00	"	"	--	"	104%	(70-130)	--	--	"			
cis-1,2-Dichloroethene	"	55.1	---	3.00	"	"	--	"	110%	(75-125)	--	--	"			
Ethylbenzene	"	53.3	---	4.00	"	"	--	"	107%	(70-125)	--	--	"			
Hexachlorobutadiene	"	51.9	---	10.0	"	"	--	"	104%	(70-130)	--	--	"			
4-Methyl-2-pentanone	"	474	---	30.0	"	"	--	500	94.8%	(60-140)	--	--	"			
Tetrachloroethene	"	52.2	---	2.00	"	"	--	50.0	104%	(70-125)	--	--	"			
Toluene	"	51.7	---	1.50	"	"	--	"	103%	"	--	--	"			
1,1,1-Trichloroethane	"	52.1	---	2.50	"	"	--	"	104%	(70-130)	--	--	"			
Trichloroethene	"	52.2	---	2.50	"	"	--	"	104%	(70-125)	--	--	"			
<i>Surrogate(s): 1,2-DCA-d4</i>													<i>Recovery: 91.3%</i>	<i>Limits: 70-140%</i>	"	12/22/08 11:33
<i>Toluene-d8</i>													<i>97.9%</i>	<i>70-130%</i>	"	"
<i>4-BFB</i>													<i>101%</i>	<i>70-130%</i>	"	"

LCS Dup (8L22006-BS1)

Extracted: 12/22/08 11:08

Acetone	EPA 8260B	486	---	40.0	ug/kg wet	1x	--	500	97.2%	(60-140)	10.5% (30)		12/22/08 11:59			
Benzene	"	51.7	---	1.50	"	"	--	50.0	103%	(70-125)	0.446%	"	"			
2-Butanone	"	589	---	30.0	"	"	--	500	118%	(60-140)	16.6%	"	"			
Carbon disulfide	"	46.0	---	3.00	"	"	--	50.0	92.0%	(70-130)	5.44%	"	"			
Chlorobenzene	"	48.3	---	2.00	"	"	--	"	96.6%	(70-125)	2.27%	"	"			
1,1-Dichloroethane	"	52.2	---	2.00	"	"	--	"	104%	(75-125)	1.78%	"	"			
1,1-Dichloroethene	"	49.5	---	3.00	"	"	--	"	99.0%	(70-130)	5.12%	"	"			
cis-1,2-Dichloroethene	"	54.0	---	3.00	"	"	--	"	108%	(75-125)	2.13%	"	"			
Ethylbenzene	"	51.2	---	4.00	"	"	--	"	102%	(70-125)	4.08%	"	"			
Hexachlorobutadiene	"	50.1	---	10.0	"	"	--	"	100%	(70-130)	3.55%	"	"			
4-Methyl-2-pentanone	"	559	---	30.0	"	"	--	500	112%	(60-140)	16.4%	"	"			
Tetrachloroethene	"	50.3	---	2.00	"	"	--	50.0	101%	(70-125)	3.78%	"	"			
Toluene	"	49.7	---	1.50	"	"	--	"	99.5%	"	3.86%	"	"			
1,1,1-Trichloroethane	"	50.0	---	2.50	"	"	--	"	100%	(70-130)	4.11%	"	"			
Trichloroethene	"	51.4	---	2.50	"	"	--	"	103%	(70-125)	1.49%	"	"			
<i>Surrogate(s): 1,2-DCA-d4</i>													<i>Recovery: 96.3%</i>	<i>Limits: 70-140%</i>	"	12/22/08 11:59
<i>Toluene-d8</i>													<i>95.2%</i>	<i>70-130%</i>	"	"
<i>4-BFB</i>													<i>104%</i>	<i>70-130%</i>	"	"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8L30013 Soil Preparation Method: EPA 5035

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8L30013-BLK1)													Extracted: 12/30/08 10:25	
Acetone	EPA 8260B	ND	---	40.0	ug/kg wet	1x	--	--	--	--	--	--	12/30/08 14:15	
Benzene	"	ND	---	1.50	"	"	--	--	--	--	--	--	"	
Bromobenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Bromochloromethane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Bromodichloromethane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Bromoform	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Bromomethane	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
2-Butanone	"	ND	---	30.0	"	"	--	--	--	--	--	--	"	
n-Butylbenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
sec-Butylbenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
tert-Butylbenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Carbon disulfide	"	ND	---	3.00	"	"	--	--	--	--	--	--	"	
Carbon tetrachloride	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Chlorobenzene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
Chloroethane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Chloroform	"	ND	---	2.50	"	"	--	--	--	--	--	--	"	
Chloromethane	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	C5
2-Chlorotoluene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
4-Chlorotoluene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Dibromochloromethane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
1,2-Dibromo-3-chloropropane	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
1,2-Dibromoethane (EDB)	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Dibromomethane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
1,2-Dichlorobenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
1,3-Dichlorobenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
1,4-Dichlorobenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Dichlorodifluoromethane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	C5
1,1-Dichloroethane	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
1,2-Dichloroethane	"	ND	---	1.25	"	"	--	--	--	--	--	--	"	
1,1-Dichloroethene	"	ND	---	3.00	"	"	--	--	--	--	--	--	"	
cis-1,2-Dichloroethene	"	ND	---	3.00	"	"	--	--	--	--	--	--	"	
trans-1,2-Dichloroethene	"	ND	---	2.50	"	"	--	--	--	--	--	--	"	
1,2-Dichloropropane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
1,3-Dichloropropane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
2,2-Dichloropropane	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
1,1-Dichloropropene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
cis-1,3-Dichloropropene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
trans-1,3-Dichloropropene	"	ND	---	1.25	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	4.00	"	"	--	--	--	--	--	--	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8L30013 Soil Preparation Method: EPA 5035

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes																							
Blank (8L30013-BLK1)										Extracted: 12/30/08 10:25																											
Hexachlorobutadiene	EPA 8260B	ND	---	10.0	ug/kg wet	1x	--	--	--	--	--	--	12/30/08 14:15																								
Methyl tert-butyl ether	"	ND	---	1.00	"	"	--	--	--	--	--	--	"																								
n-Hexane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"																								
2-Hexanone	"	ND	---	30.0	"	"	--	--	--	--	--	--	"																								
Isopropylbenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"																								
p-Isopropyltoluene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"																								
4-Methyl-2-pentanone	"	ND	---	30.0	"	"	--	--	--	--	--	--	"																								
Methylene chloride	"	ND	---	12.0	"	"	--	--	--	--	--	--	"																								
Naphthalene	"	ND	---	10.0	"	"	--	--	--	--	--	--	"																								
n-Propylbenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"																								
Styrene	"	ND	---	2.50	"	"	--	--	--	--	--	--	"																								
1,2,3-Trichlorobenzene	"	ND	---	10.0	"	"	--	--	--	--	--	--	"																								
1,2,4-Trichlorobenzene	"	ND	---	10.0	"	"	--	--	--	--	--	--	"																								
1,1,1,2-Tetrachloroethane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"																								
1,1,2,2-Tetrachloroethane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"																								
Tetrachloroethene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"																								
Toluene	"	ND	---	1.50	"	"	--	--	--	--	--	--	"																								
1,1,1-Trichloroethane	"	ND	---	2.50	"	"	--	--	--	--	--	--	"																								
1,1,2-Trichloroethane	"	ND	---	2.00	"	"	--	--	--	--	--	--	"																								
Trichloroethene	"	ND	---	2.50	"	"	--	--	--	--	--	--	"																								
Trichlorofluoromethane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"																								
1,2,3-Trichloropropane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"																								
1,2,4-Trimethylbenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"																								
1,3,5-Trimethylbenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"																								
Vinyl chloride	"	ND	---	2.50	"	"	--	--	--	--	--	--	"																								
o-Xylene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"																								
m,p-Xylene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"																								
Total Xylenes	"	ND	---	10.0	"	"	--	--	--	--	--	--	"																								
<table border="0" style="width: 100%;"> <tr> <td style="width: 30%;">Surrogate(s):</td> <td style="width: 30%;">1,2-DCA-d4</td> <td style="width: 15%;">Recovery:</td> <td style="width: 15%;">107%</td> <td style="width: 10%;">Limits:</td> <td style="width: 10%;">70-140%</td> <td style="width: 10%;">"</td> <td style="width: 10%;"></td> </tr> <tr> <td></td> <td>Toluene-d8</td> <td></td> <td>94.9%</td> <td></td> <td>70-130%</td> <td>"</td> <td></td> </tr> <tr> <td></td> <td>4-BFB</td> <td></td> <td>101%</td> <td></td> <td>70-130%</td> <td>"</td> <td></td> </tr> </table>													Surrogate(s):	1,2-DCA-d4	Recovery:	107%	Limits:	70-140%	"			Toluene-d8		94.9%		70-130%	"			4-BFB		101%		70-130%	"		12/30/08 14:15 " "
Surrogate(s):	1,2-DCA-d4	Recovery:	107%	Limits:	70-140%	"																															
	Toluene-d8		94.9%		70-130%	"																															
	4-BFB		101%		70-130%	"																															

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8L30013 Soil Preparation Method: EPA 5035

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
LCS (8L30013-BS1)													Extracted: 12/30/08 10:25	
Acetone	EPA 8260B	514	---	40.0	ug/kg wet	1x	--	500	103%	(60-140)	--	--	12/30/08 12:33	
Benzene	"	54.1	---	1.50	"	"	--	50.0	108%	(70-125)	--	--	"	
2-Butanone	"	551	---	30.0	"	"	--	500	110%	(60-140)	--	--	"	
Carbon disulfide	"	48.5	---	3.00	"	"	--	50.0	97.0%	(70-130)	--	--	"	
Chlorobenzene	"	49.3	---	2.00	"	"	--	"	98.6%	(70-125)	--	--	"	
1,1-Dichloroethane	"	55.6	---	2.00	"	"	--	"	111%	(75-125)	--	--	"	
1,1-Dichloroethene	"	54.3	---	3.00	"	"	--	"	109%	(70-130)	--	--	"	
cis-1,2-Dichloroethene	"	58.1	---	3.00	"	"	--	"	116%	(75-125)	--	--	"	
Ethylbenzene	"	52.3	---	4.00	"	"	--	"	105%	(70-125)	--	--	"	
Hexachlorobutadiene	"	47.0	---	10.0	"	"	--	"	94.0%	(70-130)	--	--	"	
4-Methyl-2-pentanone	"	524	---	30.0	"	"	--	500	105%	(60-140)	--	--	"	
Tetrachloroethene	"	51.6	---	2.00	"	"	--	50.0	103%	(70-125)	--	--	"	
Toluene	"	50.7	---	1.50	"	"	--	"	101%	"	--	--	"	
1,1,1-Trichloroethane	"	58.3	---	2.50	"	"	--	"	117%	(70-130)	--	--	"	
Trichloroethene	"	56.5	---	2.50	"	"	--	"	113%	(70-125)	--	--	"	
<i>Surrogate(s): 1,2-DCA-d4</i>		<i>Recovery:</i>	<i>99.6%</i>	<i>Limits: 70-140%</i>		<i>"</i>							<i>12/30/08 12:33</i>	
<i>Toluene-d8</i>			<i>92.2%</i>	<i>70-130%</i>		<i>"</i>							<i>"</i>	
<i>4-BFB</i>			<i>97.5%</i>	<i>70-130%</i>		<i>"</i>							<i>"</i>	

LCS Dup (8L30013-BSD1)

Extracted: 12/30/08 10:25

Acetone	EPA 8260B	549	---	40.0	ug/kg wet	1x	--	500	110%	(60-140)	6.42% (30)		12/30/08 12:58	
Benzene	"	51.6	---	1.50	"	"	--	50.0	103%	(70-125)	4.79%	"	"	
2-Butanone	"	561	---	30.0	"	"	--	500	112%	(60-140)	1.77%	"	"	
Carbon disulfide	"	47.4	---	3.00	"	"	--	50.0	94.8%	(70-130)	2.31%	"	"	
Chlorobenzene	"	48.0	---	2.00	"	"	--	"	96.0%	(70-125)	2.67%	"	"	
1,1-Dichloroethane	"	55.3	---	2.00	"	"	--	"	111%	(75-125)	0.487%	"	"	
1,1-Dichloroethene	"	52.8	---	3.00	"	"	--	"	106%	(70-130)	2.95%	"	"	
cis-1,2-Dichloroethene	"	58.6	---	3.00	"	"	--	"	117%	(75-125)	0.925%	"	"	
Ethylbenzene	"	51.2	---	4.00	"	"	--	"	102%	(70-125)	2.20%	"	"	
Hexachlorobutadiene	"	49.6	---	10.0	"	"	--	"	99.3%	(70-130)	5.50%	"	"	
4-Methyl-2-pentanone	"	542	---	30.0	"	"	--	500	108%	(60-140)	3.26%	"	"	
Tetrachloroethene	"	48.7	---	2.00	"	"	--	50.0	97.4%	(70-125)	5.71%	"	"	
Toluene	"	48.8	---	1.50	"	"	--	"	97.6%	"	3.78%	"	"	
1,1,1-Trichloroethane	"	55.6	---	2.50	"	"	--	"	111%	(70-130)	4.76%	"	"	
Trichloroethene	"	53.6	---	2.50	"	"	--	"	107%	(70-125)	5.30%	"	"	
<i>Surrogate(s): 1,2-DCA-d4</i>		<i>Recovery:</i>	<i>104%</i>	<i>Limits: 70-140%</i>		<i>"</i>							<i>12/30/08 12:58</i>	
<i>Toluene-d8</i>			<i>94.2%</i>	<i>70-130%</i>		<i>"</i>							<i>"</i>	
<i>4-BFB</i>			<i>95.6%</i>	<i>70-130%</i>		<i>"</i>							<i>"</i>	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8L30013 Soil Preparation Method: EPA 5035

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes	
Matrix Spike (8L30013-MS1)			QC Source: BRL0200-45					Extracted: 12/30/08 10:25							
Acetone	EPA 8260B	993	---	52.5	ug/kg dry	1x	151	656	128%	(60-140)	--	--	12/30/08 13:24		
Benzene	"	60.2	---	1.97	"	"	0.941	65.6	90.4%	"	--	--	"		
2-Butanone	"	968	---	39.3	"	"	35.2	656	142%	"	--	--	"	M7	
Carbon disulfide	"	60.9	---	3.93	"	"	2.74	65.6	88.7%	"	--	--	"		
Chlorobenzene	"	42.1	---	2.62	"	"	ND	"	64.2%	"	--	--	"		
1,1-Dichloroethane	"	71.4	---	2.62	"	"	ND	"	109%	"	--	--	"		
1,1-Dichloroethene	"	74.1	---	3.93	"	"	0.548	"	112%	"	--	--	"		
cis-1,2-Dichloroethene	"	69.0	---	3.93	"	"	ND	"	105%	"	--	--	"		
Ethylbenzene	"	49.1	---	5.25	"	"	6.23	"	65.3%	"	--	--	"		
Hexachlorobutadiene	"	13.5	---	13.1	"	"	ND	"	20.6%	"	--	--	"	M8	
4-Methyl-2-pentanone	"	781	---	39.3	"	"	ND	656	119%	"	--	--	"		
Tetrachloroethene	"	45.1	---	2.62	"	"	ND	65.6	68.8%	"	--	--	"		
Toluene	"	52.0	---	1.97	"	"	0.532	"	78.4%	"	--	--	"		
1,1,1-Trichloroethane	"	68.4	---	3.28	"	"	ND	"	104%	"	--	--	"		
Trichloroethene	"	54.8	---	3.28	"	"	ND	"	83.6%	"	--	--	"		
Surrogate(s): 1,2-DCA-d4		Recovery:	129%	Limits: 70-140%		"							12/30/08 13:24		
Toluene-d8			95.6%	70-130%		"							"		
4-BFB			110%	70-130%		"							"		

Matrix Spike Dup (8L30013-MSD1)

QC Source: BRL0200-45

Extracted: 12/30/08 10:25

Acetone	EPA 8260B	921	---	52.5	ug/kg dry	1x	151	656	117%	(60-140)	7.52% (30)		12/30/08 13:49	
Benzene	"	54.4	---	1.97	"	"	0.941	65.6	81.6%	"	10.1%	"	"	
2-Butanone	"	819	---	39.3	"	"	35.2	656	119%	"	16.7%	"	"	
Carbon disulfide	"	48.1	---	3.93	"	"	2.74	65.6	69.2%	"	23.5%	"	"	
Chlorobenzene	"	40.1	---	2.62	"	"	ND	"	61.2%	"	4.82%	"	"	
1,1-Dichloroethane	"	59.7	---	2.62	"	"	ND	"	91.1%	"	17.8%	"	"	
1,1-Dichloroethene	"	59.5	---	3.93	"	"	0.548	"	89.8%	"	21.9%	"	"	
cis-1,2-Dichloroethene	"	58.7	---	3.93	"	"	ND	"	89.5%	"	16.1%	"	"	
Ethylbenzene	"	52.5	---	5.25	"	"	6.23	"	70.6%	"	6.79%	"	"	
Hexachlorobutadiene	"	15.4	---	13.1	"	"	ND	"	23.5%	"	13.0%	"	"	M8
4-Methyl-2-pentanone	"	672	---	39.3	"	"	ND	656	102%	"	15.0%	"	"	
Tetrachloroethene	"	43.5	---	2.62	"	"	ND	65.6	66.3%	"	3.73%	"	"	
Toluene	"	50.7	---	1.97	"	"	0.532	"	76.6%	"	2.40%	"	"	
1,1,1-Trichloroethane	"	57.4	---	3.28	"	"	ND	"	87.6%	"	17.4%	"	"	
Trichloroethene	"	49.3	---	3.28	"	"	ND	"	75.2%	"	10.6%	"	"	
Surrogate(s): 1,2-DCA-d4		Recovery:	120%	Limits: 70-140%		"							12/30/08 13:49	
Toluene-d8			100%	70-130%		"							"	
4-BFB			118%	70-130%		"							"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8L31011 Soil Preparation Method: EPA 5035

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8L31011-BLK1)													Extracted: 12/31/08 13:23	
Acetone	EPA 8260B	ND	---	40.0	ug/kg wet	1x	--	--	--	--	--	--	12/31/08 14:48	
Benzene	"	ND	---	1.50	"	"	--	--	--	--	--	--	"	
Bromobenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Bromochloromethane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Bromodichloromethane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Bromoform	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Bromomethane	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
2-Butanone	"	ND	---	30.0	"	"	--	--	--	--	--	--	"	
n-Butylbenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
sec-Butylbenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
tert-Butylbenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Carbon disulfide	"	ND	---	3.00	"	"	--	--	--	--	--	--	"	
Carbon tetrachloride	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Chlorobenzene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
Chloroethane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Chloroform	"	ND	---	2.50	"	"	--	--	--	--	--	--	"	
Chloromethane	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	C5
2-Chlorotoluene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
4-Chlorotoluene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Dibromochloromethane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
1,2-Dibromo-3-chloropropane	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
1,2-Dibromoethane (EDB)	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Dibromomethane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
1,2-Dichlorobenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
1,3-Dichlorobenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
1,4-Dichlorobenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Dichlorodifluoromethane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	C5
1,1-Dichloroethane	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
1,2-Dichloroethane	"	ND	---	1.25	"	"	--	--	--	--	--	--	"	
1,1-Dichloroethene	"	ND	---	3.00	"	"	--	--	--	--	--	--	"	
cis-1,2-Dichloroethene	"	ND	---	3.00	"	"	--	--	--	--	--	--	"	
trans-1,2-Dichloroethene	"	ND	---	2.50	"	"	--	--	--	--	--	--	"	
1,2-Dichloropropane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
1,3-Dichloropropane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
2,2-Dichloropropane	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
1,1-Dichloropropene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
cis-1,3-Dichloropropene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
trans-1,3-Dichloropropene	"	ND	---	1.25	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	4.00	"	"	--	--	--	--	--	--	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8L31011 Soil Preparation Method: EPA 5035

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8L31011-BLK1)										Extracted: 12/31/08 13:23				
Hexachlorobutadiene	EPA 8260B	ND	---	10.0	ug/kg wet	1x	--	--	--	--	--	--	12/31/08 14:48	
Methyl tert-butyl ether	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
n-Hexane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
2-Hexanone	"	ND	---	30.0	"	"	--	--	--	--	--	--	"	
Isopropylbenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
p-Isopropyltoluene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
4-Methyl-2-pentanone	"	ND	---	30.0	"	"	--	--	--	--	--	--	"	
Methylene chloride	"	ND	---	12.0	"	"	--	--	--	--	--	--	"	
Naphthalene	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
n-Propylbenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Styrene	"	ND	---	2.50	"	"	--	--	--	--	--	--	"	
1,2,3-Trichlorobenzene	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
1,2,4-Trichlorobenzene	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
1,1,1,2-Tetrachloroethane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
1,1,2,2-Tetrachloroethane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Tetrachloroethene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
Toluene	"	ND	---	1.50	"	"	--	--	--	--	--	--	"	
1,1,1-Trichloroethane	"	ND	---	2.50	"	"	--	--	--	--	--	--	"	
1,1,2-Trichloroethane	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
Trichloroethene	"	ND	---	2.50	"	"	--	--	--	--	--	--	"	
Trichlorofluoromethane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
1,2,3-Trichloropropane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
1,2,4-Trimethylbenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
1,3,5-Trimethylbenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Vinyl chloride	"	ND	---	2.50	"	"	--	--	--	--	--	--	"	
o-Xylene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
m,p-Xylene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Total Xylenes	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Surrogate(s):	1,2-DCA-d4	Recovery:	96.5%	Limits:	70-140%	"							12/31/08 14:48	
	Toluene-d8		95.8%		70-130%	"							"	
	4-BFB		103%		70-130%	"							"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8L31011 Soil Preparation Method: EPA 5035

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
LCS (8L31011-BS1)													Extracted: 12/31/08 13:23	
Acetone	EPA 8260B	409	---	40.0	ug/kg wet	1x	--	500	81.8%	(60-140)	--	--	12/31/08 13:57	
Benzene	"	49.2	---	1.50	"	"	--	50.0	98.4%	(70-125)	--	--	"	
2-Butanone	"	496	---	30.0	"	"	--	500	99.2%	(60-140)	--	--	"	
Carbon disulfide	"	39.3	---	3.00	"	"	--	50.0	78.7%	(70-130)	--	--	"	
Chlorobenzene	"	46.8	---	2.00	"	"	--	"	93.6%	(70-125)	--	--	"	
1,1-Dichloroethane	"	49.0	---	2.00	"	"	--	"	98.0%	(75-125)	--	--	"	
1,1-Dichloroethene	"	44.2	---	3.00	"	"	--	"	88.5%	(70-130)	--	--	"	
cis-1,2-Dichloroethene	"	51.7	---	3.00	"	"	--	"	103%	(75-125)	--	--	"	
Ethylbenzene	"	49.7	---	4.00	"	"	--	"	99.4%	(70-125)	--	--	"	
Hexachlorobutadiene	"	48.0	---	10.0	"	"	--	"	96.1%	(70-130)	--	--	"	
4-Methyl-2-pentanone	"	476	---	30.0	"	"	--	500	95.2%	(60-140)	--	--	"	
Tetrachloroethene	"	49.5	---	2.00	"	"	--	50.0	99.0%	(70-125)	--	--	"	
Toluene	"	48.8	---	1.50	"	"	--	"	97.7%	"	--	--	"	
1,1,1-Trichloroethane	"	46.9	---	2.50	"	"	--	"	93.8%	(70-130)	--	--	"	
Trichloroethene	"	49.9	---	2.50	"	"	--	"	99.9%	(70-125)	--	--	"	
<i>Surrogate(s): 1,2-DCA-d4</i>		<i>Recovery:</i>	<i>89.3%</i>	<i>Limits: 70-140%</i>		<i>"</i>							<i>12/31/08 13:57</i>	
<i>Toluene-d8</i>			<i>96.0%</i>	<i>70-130%</i>		<i>"</i>							<i>"</i>	
<i>4-BFB</i>			<i>103%</i>	<i>70-130%</i>		<i>"</i>							<i>"</i>	

LCS Dup (8L31011-BSD1)

Extracted: 12/31/08 13:23

Acetone	EPA 8260B	518	---	40.0	ug/kg wet	1x	--	500	104%	(60-140)	23.4% (30)		12/31/08 14:22	
Benzene	"	51.9	---	1.50	"	"	--	50.0	104%	(70-125)	5.26%	"	"	
2-Butanone	"	600	---	30.0	"	"	--	500	120%	(60-140)	19.0%	"	"	
Carbon disulfide	"	41.0	---	3.00	"	"	--	50.0	82.1%	(70-130)	4.28%	"	"	
Chlorobenzene	"	48.8	---	2.00	"	"	--	"	97.5%	(70-125)	4.12%	"	"	
1,1-Dichloroethane	"	52.8	---	2.00	"	"	--	"	106%	(75-125)	7.43%	"	"	
1,1-Dichloroethene	"	46.6	---	3.00	"	"	--	"	93.2%	(70-130)	5.17%	"	"	
cis-1,2-Dichloroethene	"	56.0	---	3.00	"	"	--	"	112%	(75-125)	8.00%	"	"	
Ethylbenzene	"	50.2	---	4.00	"	"	--	"	100%	(70-125)	0.981%	"	"	
Hexachlorobutadiene	"	43.8	---	10.0	"	"	--	"	87.7%	(70-130)	9.10%	"	"	
4-Methyl-2-pentanone	"	567	---	30.0	"	"	--	500	113%	(60-140)	17.4%	"	"	
Tetrachloroethene	"	48.7	---	2.00	"	"	--	50.0	97.3%	(70-125)	1.71%	"	"	
Toluene	"	51.0	---	1.50	"	"	--	"	102%	"	4.21%	"	"	
1,1,1-Trichloroethane	"	50.0	---	2.50	"	"	--	"	100%	(70-130)	6.36%	"	"	
Trichloroethene	"	52.2	---	2.50	"	"	--	"	104%	(70-125)	4.44%	"	"	
<i>Surrogate(s): 1,2-DCA-d4</i>		<i>Recovery:</i>	<i>93.6%</i>	<i>Limits: 70-140%</i>		<i>"</i>							<i>12/31/08 14:22</i>	
<i>Toluene-d8</i>			<i>94.0%</i>	<i>70-130%</i>		<i>"</i>							<i>"</i>	
<i>4-BFB</i>			<i>99.4%</i>	<i>70-130%</i>		<i>"</i>							<i>"</i>	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds (Special List) by EPA Method 8260B - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8L29027 Soil Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8L29027-BLK1)										Extracted: 12/29/08 16:23				
Acetone	EPA 8260B	ND	---	5.00	mg/kg wet	1x	--	--	--	--	--	--	12/29/08 18:26	
Benzene	"	ND	---	0.0200	"	"	--	--	--	--	--	--	"	
Bromobenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Bromochloromethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Bromodichloromethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Bromoform	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Bromomethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
2-Butanone	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
n-Butylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
sec-Butylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
tert-Butylbenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Carbon disulfide	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Carbon tetrachloride	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Chlorobenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Chloroethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Chloroform	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Chloromethane	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
2-Chlorotoluene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
4-Chlorotoluene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Dibromochloromethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,2-Dibromo-3-chloropropane	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
1,2-Dibromoethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Dibromomethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,2-Dichlorobenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,3-Dichlorobenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,4-Dichlorobenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Dichlorodifluoromethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,1-Dichloroethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,2-Dichloroethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,1-Dichloroethene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
cis-1,2-Dichloroethene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
trans-1,2-Dichloroethene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,2-Dichloropropane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,3-Dichloropropane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
2,2-Dichloropropane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,1-Dichloropropene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
cis-1,3-Dichloropropene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
trans-1,3-Dichloropropene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds (Special List) by EPA Method 8260B - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8L29027 Soil Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8L29027-BLK1)													Extracted: 12/29/08 16:23	
Hexachlorobutadiene	EPA 8260B	ND	---	2.00	mg/kg wet	1x	--	--	--	--	--	--	12/29/08 18:26	
Methyl tert-butyl ether	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
n-Hexane	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
2-Hexanone	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
Isopropylbenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
p-Isopropyltoluene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
4-Methyl-2-pentanone	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Methylene chloride	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
Naphthalene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
n-Propylbenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Styrene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,2,3-Trichlorobenzene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
1,2,4-Trichlorobenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,1,1,2-Tetrachloroethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,1,1,2-Tetrachloroethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Tetrachloroethene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Toluene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,1,1-Trichloroethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,1,2-Trichloroethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Trichloroethene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Trichlorofluoromethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,2,3-Trichloropropane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,2,4-Trimethylbenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,3,5-Trimethylbenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Vinyl chloride	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Total Xylenes	"	ND	---	0.300	"	"	--	--	--	--	--	--	"	

<i>Surrogate(s):</i>	1,2-DCA-d4	<i>Recovery:</i>	97.6%	<i>Limits:</i>	75-125%	"	12/29/08 18:26
	Toluene-d8		92.4%		75-125%	"	"
	4-BFB		98.4%		75-125%	"	"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue	Project Name: WSDOT SR 520 - Pontoon Sites	
1100 112th Avenue NE, Suite 400	Project Number: 180171.AR.X7.02	Report Created:
Bellevue, WA/USA 98004-4504	Project Manager: Brian Tracy	01/26/09 09:59

Volatile Organic Compounds (Special List) by EPA Method 8260B - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8L29027 Soil Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
LCS (8L29027-BS1)													Extracted: 12/29/08 16:23	
Benzene	EPA 8260B	4.13	---	0.0200	mg/kg wet	1x	--	4.00	103%	(75-125)	--	--	12/29/08 16:36	
Chlorobenzene	"	3.71	---	0.100	"	"	--	"	92.7%	"	--	--	"	
1,1-Dichloroethene	"	4.67	---	0.100	"	"	--	"	117%	(70-130)	--	--	"	
Trichloroethene	"	4.29	---	0.100	"	"	--	"	107%	(75-125)	--	--	"	
<i>Surrogate(s): 1,2-DCA-d4</i>		<i>Recovery: 99.7%</i>		<i>Limits: 75-125%</i>	<i>"</i>								<i>12/29/08 16:36</i>	
<i>Toluene-d8</i>		<i>90.5%</i>		<i>75-125%</i>	<i>"</i>								<i>"</i>	
<i>4-BFB</i>		<i>99.2%</i>		<i>75-125%</i>	<i>"</i>								<i>"</i>	

LCS Dup (8L29027-BSD1)

Extracted: 12/29/08 16:23

Benzene	EPA 8260B	4.27	---	0.0200	mg/kg wet	1x	--	4.00	107%	(75-125)	3.35% (20)		12/29/08 17:03	
Chlorobenzene	"	3.90	---	0.100	"	"	--	"	97.6%	"	5.15%	"	"	
1,1-Dichloroethene	"	4.84	---	0.100	"	"	--	"	121%	(70-130)	3.49%	"	"	
Trichloroethene	"	4.46	---	0.100	"	"	--	"	111%	(75-125)	3.70%	"	"	
<i>Surrogate(s): 1,2-DCA-d4</i>		<i>Recovery: 96.7%</i>		<i>Limits: 75-125%</i>	<i>"</i>								<i>12/29/08 17:03</i>	
<i>Toluene-d8</i>		<i>91.1%</i>		<i>75-125%</i>	<i>"</i>								<i>"</i>	
<i>4-BFB</i>		<i>100%</i>		<i>75-125%</i>	<i>"</i>								<i>"</i>	

QC Batch: 8L30015

Soil Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8L30015-BLK1)													Extracted: 12/30/08 14:41	
Acetone	EPA 8260B	ND	---	5.00	mg/kg wet	1x	--	--	--	--	--	--	12/30/08 23:25	
Benzene	"	ND	---	0.0200	"	"	--	--	--	--	--	--	"	
Bromobenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Bromochloromethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Bromodichloromethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Bromoform	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Bromomethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
2-Butanone	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
n-Butylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
sec-Butylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
tert-Butylbenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Carbon disulfide	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Carbon tetrachloride	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Chlorobenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Chloroethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Chloroform	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Chloromethane	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds (Special List) by EPA Method 8260B - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8L30015 Soil Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8L30015-BLK1)													Extracted: 12/30/08 14:41	
2-Chlorotoluene	EPA 8260B	ND	---	0.100	mg/kg wet	1x	--	--	--	--	--	--	12/30/08 23:25	
4-Chlorotoluene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Dibromochloromethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,2-Dibromo-3-chloropropane	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
1,2-Dibromoethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Dibromomethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,2-Dichlorobenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,3-Dichlorobenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,4-Dichlorobenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Dichlorodifluoromethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,1-Dichloroethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,2-Dichloroethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,1-Dichloroethene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
cis-1,2-Dichloroethene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
trans-1,2-Dichloroethene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,2-Dichloropropane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,3-Dichloropropane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
2,2-Dichloropropane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,1-Dichloropropene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
cis-1,3-Dichloropropene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
trans-1,3-Dichloropropene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Hexachlorobutadiene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
Methyl tert-butyl ether	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
n-Hexane	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
2-Hexanone	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
Isopropylbenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
p-Isopropyltoluene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
4-Methyl-2-pentanone	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Methylene chloride	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
Naphthalene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
n-Propylbenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Styrene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,2,3-Trichlorobenzene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
1,2,4-Trichlorobenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,1,1,2-Tetrachloroethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,1,1,2-Tetrachloroethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Tetrachloroethene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Toluene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds (Special List) by EPA Method 8260B - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8L30015 Soil Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes						
Blank (8L30015-BLK1)													Extracted: 12/30/08 14:41							
1,1,1-Trichloroethane	EPA 8260B	ND	---	0.100	mg/kg wet	1x	--	--	--	--	--	--	12/30/08 23:25							
1,1,2-Trichloroethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"							
Trichloroethene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"							
Trichlorofluoromethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"							
1,2,3-Trichloropropane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"							
1,2,4-Trimethylbenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"							
1,3,5-Trimethylbenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"							
Vinyl chloride	"	ND	---	0.100	"	"	--	--	--	--	--	--	"							
o-Xylene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"							
m,p-Xylene	"	ND	---	0.200	"	"	--	--	--	--	--	--	"							
Total Xylenes	"	ND	---	0.300	"	"	--	--	--	--	--	--	"							
<i>Surrogate(s): 1,2-DCA-d4</i>													<i>Recovery: 95.6%</i>		<i>Limits: 75-125%</i>		<i>"</i>		<i>12/30/08 23:25</i>	
<i>Toluene-d8</i>													<i>106%</i>		<i>75-125%</i>		<i>"</i>		<i>"</i>	
<i>4-BFB</i>													<i>104%</i>		<i>75-125%</i>		<i>"</i>		<i>"</i>	

LCS (8L30015-BS1)													Extracted: 12/30/08 14:41							
Benzene	EPA 8260B	4.74	---	0.0200	mg/kg wet	1x	--	4.00	118%	(75-125)	--	--	12/30/08 20:37							
Chlorobenzene	"	4.00	---	0.100	"	"	--	"	99.9%	"	--	--	"							
1,1-Dichloroethene	"	4.25	---	0.100	"	"	--	"	106%	(70-130)	--	--	"							
Trichloroethene	"	4.15	---	0.100	"	"	--	"	104%	(75-125)	--	--	"							
o-Xylene	"	4.04	---	0.100	"	"	--	"	101%	"	--	--	"							
<i>Surrogate(s): 1,2-DCA-d4</i>													<i>Recovery: 94.4%</i>		<i>Limits: 75-125%</i>		<i>"</i>		<i>12/30/08 20:37</i>	
<i>Toluene-d8</i>													<i>108%</i>		<i>75-125%</i>		<i>"</i>		<i>"</i>	
<i>4-BFB</i>													<i>103%</i>		<i>75-125%</i>		<i>"</i>		<i>"</i>	

LCS Dup (8L30015-BSD1)													Extracted: 12/30/08 14:41							
Benzene	EPA 8260B	4.60	---	0.0200	mg/kg wet	1x	--	4.00	115%	(75-125)	2.98% (20)	--	12/30/08 21:04							
Chlorobenzene	"	3.91	---	0.100	"	"	--	"	97.7%	"	2.28%	"	"							
1,1-Dichloroethene	"	4.15	---	0.100	"	"	--	"	104%	(70-130)	2.26%	"	"							
Trichloroethene	"	4.02	---	0.100	"	"	--	"	101%	(75-125)	3.06%	"	"							
o-Xylene	"	4.01	---	0.100	"	"	--	"	100%	"	0.969%	"	"							
<i>Surrogate(s): 1,2-DCA-d4</i>													<i>Recovery: 94.3%</i>		<i>Limits: 75-125%</i>		<i>"</i>		<i>12/30/08 21:04</i>	
<i>Toluene-d8</i>													<i>110%</i>		<i>75-125%</i>		<i>"</i>		<i>"</i>	
<i>4-BFB</i>													<i>104%</i>		<i>75-125%</i>		<i>"</i>		<i>"</i>	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue	Project Name: WSDOT SR 520 - Pontoon Sites	
1100 112th Avenue NE, Suite 400	Project Number: 180171.AR.X7.02	Report Created:
Bellevue, WA/USA 98004-4504	Project Manager: Brian Tracy	01/26/09 09:59

Volatile Organic Compounds (Special List) by EPA Method 8260B - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8L31013 Soil Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	---------------	-----------	-------	----------	-------	----------	----------	-------

Blank (8L31013-BLK1)													Extracted: 12/31/08 00:09	
Acetone	EPA 8260B	ND	---	5.00	mg/kg wet	1x	--	--	--	--	--	--	12/31/08 15:20	
Benzene	"	ND	---	0.0200	"	"	--	--	--	--	--	--	"	
Bromobenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Bromochloromethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Bromodichloromethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Bromoform	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Bromomethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
2-Butanone	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
n-Butylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
sec-Butylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
tert-Butylbenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Carbon disulfide	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Carbon tetrachloride	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Chlorobenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Chloroethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Chloroform	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Chloromethane	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
2-Chlorotoluene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
4-Chlorotoluene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Dibromochloromethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,2-Dibromo-3-chloropropane	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
1,2-Dibromoethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Dibromomethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,2-Dichlorobenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,3-Dichlorobenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,4-Dichlorobenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Dichlorodifluoromethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,1-Dichloroethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,2-Dichloroethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,1-Dichloroethene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
cis-1,2-Dichloroethene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
trans-1,2-Dichloroethene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,2-Dichloropropane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,3-Dichloropropane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
2,2-Dichloropropane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,1-Dichloropropene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
cis-1,3-Dichloropropene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
trans-1,3-Dichloropropene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds (Special List) by EPA Method 8260B - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8L31013 Soil Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8L31013-BLK1)										Extracted: 12/31/08 00:09				
Hexachlorobutadiene	EPA 8260B	ND	---	2.00	mg/kg wet	1x	--	--	--	--	--	--	12/31/08 15:20	
Methyl tert-butyl ether	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
n-Hexane	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
2-Hexanone	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
Isopropylbenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
p-Isopropyltoluene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
4-Methyl-2-pentanone	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Methylene chloride	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
Naphthalene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
n-Propylbenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Styrene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,2,3-Trichlorobenzene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
1,2,4-Trichlorobenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,1,1,2-Tetrachloroethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,1,2,2-Tetrachloroethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Tetrachloroethene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Toluene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,1,1-Trichloroethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,1,2-Trichloroethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Trichloroethene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Trichlorofluoromethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,2,3-Trichloropropane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,2,4-Trimethylbenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,3,5-Trimethylbenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Vinyl chloride	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
o-Xylene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
m,p-Xylene	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
Total Xylenes	"	ND	---	0.300	"	"	--	--	--	--	--	--	"	
<i>Surrogate(s): 1,2-DCA-d4</i>		<i>Recovery:</i>	<i>87.4%</i>	<i>Limits:</i>	<i>75-125%</i>	<i>"</i>							<i>12/31/08 15:20</i>	
<i>Toluene-d8</i>			<i>109%</i>		<i>75-125%</i>	<i>"</i>							<i>"</i>	
<i>4-BFB</i>			<i>105%</i>		<i>75-125%</i>	<i>"</i>							<i>"</i>	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue	Project Name: WSDOT SR 520 - Pontoon Sites	
1100 112th Avenue NE, Suite 400	Project Number: 180171.AR.X7.02	Report Created:
Bellevue, WA/USA 98004-4504	Project Manager: Brian Tracy	01/26/09 09:59

Volatile Organic Compounds (Special List) by EPA Method 8260B - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8L31013 Soil Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
LCS (8L31013-BS1)													Extracted: 12/31/08 00:09	
Benzene	EPA 8260B	4.78	---	0.0200	mg/kg wet	1x	--	4.00	119%	(75-125)	--	--	12/31/08 13:53	
Chlorobenzene	"	3.96	---	0.100	"	"	--	"	99.0%	"	--	--	"	
1,1-Dichloroethene	"	4.27	---	0.100	"	"	--	"	107%	(70-130)	--	--	"	
Trichloroethene	"	4.17	---	0.100	"	"	--	"	104%	(75-125)	--	--	"	
o-Xylene	"	4.03	---	0.100	"	"	--	"	101%	"	--	--	"	
<i>Surrogate(s): 1,2-DCA-d4</i>		<i>Recovery:</i>	<i>92.3%</i>	<i>Limits: 75-125%</i>		<i>"</i>							<i>12/31/08 13:53</i>	
<i>Toluene-d8</i>			<i>108%</i>	<i>75-125%</i>		<i>"</i>							<i>"</i>	
<i>4-BFB</i>			<i>104%</i>	<i>75-125%</i>		<i>"</i>							<i>"</i>	

LCS Dup (8L31013-BSD1)													Extracted: 12/31/08 00:09	
Benzene	EPA 8260B	4.62	---	0.0200	mg/kg wet	1x	--	4.00	116%	(75-125)	3.26% (20)		12/31/08 14:20	
Chlorobenzene	"	3.76	---	0.100	"	"	--	"	94.0%	"	5.16%	"	"	
1,1-Dichloroethene	"	4.00	---	0.100	"	"	--	"	100%	(70-130)	6.41%	"	"	
Trichloroethene	"	3.94	---	0.100	"	"	--	"	98.4%	(75-125)	5.63%	"	"	
o-Xylene	"	3.80	---	0.100	"	"	--	"	95.0%	"	6.00%	"	"	
<i>Surrogate(s): 1,2-DCA-d4</i>		<i>Recovery:</i>	<i>94.2%</i>	<i>Limits: 75-125%</i>		<i>"</i>							<i>12/31/08 14:20</i>	
<i>Toluene-d8</i>			<i>105%</i>	<i>75-125%</i>		<i>"</i>							<i>"</i>	
<i>4-BFB</i>			<i>105%</i>	<i>75-125%</i>		<i>"</i>							<i>"</i>	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds by EPA Method 8260B - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8L18006 Water Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8L18006-BLK1)													Extracted: 12/18/08 08:02	
Acetone	EPA 8260B	ND	---	10.0	ug/l	1x	--	--	--	--	--	--	12/18/08 13:27	
Benzene	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
Bromobenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Bromochloromethane	"	ND	---	0.250	"	"	--	--	--	--	--	--	"	
Bromodichloromethane	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
Bromoform	"	ND	---	0.250	"	"	--	--	--	--	--	--	"	
Bromomethane	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
2-Butanone	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
n-Butylbenzene	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
sec-Butylbenzene	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
tert-Butylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Carbon disulfide	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Carbon tetrachloride	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	C
Chlorobenzene	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
Chloroethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Chloroform	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
Chloromethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
2-Chlorotoluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
4-Chlorotoluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Dibromochloromethane	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
1,2-Dibromo-3-chloropropane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,2-Dibromoethane	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
Dibromomethane	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
1,2-Dichlorobenzene	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
1,3-Dichlorobenzene	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
1,4-Dichlorobenzene	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
Dichlorodifluoromethane	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	C5
1,1-Dichloroethane	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
1,2-Dichloroethane	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
1,1-Dichloroethene	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
cis-1,2-Dichloroethene	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
trans-1,2-Dichloroethene	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
1,2-Dichloropropane	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
1,3-Dichloropropane	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
2,2-Dichloropropane	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	C
1,1-Dichloropropene	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
cis-1,3-Dichloropropene	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
trans-1,3-Dichloropropene	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Volatile Organic Compounds by EPA Method 8260B - Laboratory Quality Control Results

TestAmerica Seattle

QC Batch: 8L18006

Water Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8L18006-BLK1)										Extracted: 12/18/08 08:02				
Hexachlorobutadiene	EPA 8260B	ND	---	2.50	ug/l	1x	--	--	--	--	--	--	12/18/08 13:27	
Methyl tert-butyl ether	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
n-Hexane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
2-Hexanone	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
Isopropylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
p-Isopropyltoluene	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
4-Methyl-2-pentanone	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
Methylene chloride	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Naphthalene	"	ND	---	2.50	"	"	--	--	--	--	--	--	"	
n-Propylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Styrene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
1,2,3-Trichlorobenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,2,4-Trichlorobenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,1,1,2-Tetrachloroethane	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
1,1,2,2-Tetrachloroethane	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Tetrachloroethene	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
Toluene	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
1,1,1-Trichloroethane	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
1,1,2-Trichloroethane	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
Trichloroethene	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
Trichlorofluoromethane	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
1,2,3-Trichloropropane	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
1,2,4-Trimethylbenzene	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
1,3,5-Trimethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Vinyl chloride	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
o-Xylene	"	ND	---	0.250	"	"	--	--	--	--	--	--	"	
m,p-Xylene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Total Xylenes	"	ND	---	0.750	"	"	--	--	--	--	--	--	"	
<i>Surrogate(s): 1,2-DCA-d4</i>		<i>Recovery:</i>	<i>111%</i>	<i>Limits:</i>	<i>76-138%</i>	<i>"</i>							<i>12/18/08 13:27</i>	
<i>Toluene-d8</i>			<i>102%</i>		<i>80-120%</i>	<i>"</i>							<i>"</i>	
<i>4-BFB</i>			<i>100%</i>		<i>80-120%</i>	<i>"</i>							<i>"</i>	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Volatile Organic Compounds by EPA Method 8260B - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8L18006 Water Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes		
LCS (8L18006-BS1)													Extracted: 12/18/08 08:02			
Benzene	EPA 8260B	40.6	---	0.200	ug/l	1x	--	40.0	101%	(80-120)	--	--	12/18/08 10:57			
Chlorobenzene	"	38.4	---	0.200	"	"	--	"	96.0%	"	--	--	"			
1,1-Dichloroethene	"	37.2	---	0.200	"	"	--	"	93.0%	"	--	--	"			
Methyl tert-butyl ether	"	37.5	---	1.00	"	"	--	"	93.7%	"	--	--	"			
Toluene	"	37.3	---	0.200	"	"	--	"	93.4%	(75-125)	--	--	"			
Trichloroethene	"	38.9	---	0.200	"	"	--	"	97.2%	(80-120)	--	--	"			
<i>Surrogate(s): 1,2-DCA-d4</i>		<i>Recovery: 112%</i>		<i>Limits: 76-138%</i>		<i>"</i>						<i>12/18/08 10:57</i>				
<i>Toluene-d8</i>		<i>99.3%</i>		<i>80-120%</i>		<i>"</i>						<i>"</i>				
<i>4-BFB</i>		<i>94.6%</i>		<i>80-120%</i>		<i>"</i>						<i>"</i>				
Matrix Spike (8L18006-MS1)													QC Source: BRL0194-01		Extracted: 12/18/08 08:02	
Benzene	EPA 8260B	39.8	---	0.200	ug/l	1x	ND	40.0	99.4%	(75-125)	--	--	12/18/08 11:27			
Chlorobenzene	"	39.4	---	0.200	"	"	ND	"	98.5%	"	--	--	"			
1,1-Dichloroethene	"	38.4	---	0.200	"	"	ND	"	96.1%	(61-120)	--	--	"			
Methyl tert-butyl ether	"	39.9	---	1.00	"	"	6.21	"	84.1%	(75-125)	--	--	"			
Toluene	"	38.2	---	0.200	"	"	ND	"	95.5%	(68-125)	--	--	"			
Trichloroethene	"	39.9	---	0.200	"	"	ND	"	99.6%	(75-125)	--	--	"			
<i>Surrogate(s): 1,2-DCA-d4</i>		<i>Recovery: 105%</i>		<i>Limits: 76-138%</i>		<i>"</i>						<i>12/18/08 11:27</i>				
<i>Toluene-d8</i>		<i>101%</i>		<i>80-120%</i>		<i>"</i>						<i>"</i>				
<i>4-BFB</i>		<i>97.4%</i>		<i>80-120%</i>		<i>"</i>						<i>"</i>				
Matrix Spike Dup (8L18006-MSD1)													QC Source: BRL0194-01		Extracted: 12/18/08 08:02	
Benzene	EPA 8260B	38.6	---	0.200	ug/l	1x	ND	40.0	96.6%	(75-125)	2.88%	(20)	12/18/08 11:56			
Chlorobenzene	"	36.4	---	0.200	"	"	ND	"	91.0%	"	7.92%	"	"			
1,1-Dichloroethene	"	34.6	---	0.200	"	"	ND	"	86.4%	(61-120)	10.7%	(30)	"			
Methyl tert-butyl ether	"	41.8	---	1.00	"	"	6.21	"	89.0%	(75-125)	4.78%	"	"			
Toluene	"	36.0	---	0.200	"	"	ND	"	90.0%	(68-125)	5.99%	(20)	"			
Trichloroethene	"	37.4	---	0.200	"	"	ND	"	93.4%	(75-125)	6.45%	"	"			
<i>Surrogate(s): 1,2-DCA-d4</i>		<i>Recovery: 105%</i>		<i>Limits: 76-138%</i>		<i>"</i>						<i>12/18/08 11:56</i>				
<i>Toluene-d8</i>		<i>100%</i>		<i>80-120%</i>		<i>"</i>						<i>"</i>				
<i>4-BFB</i>		<i>102%</i>		<i>80-120%</i>		<i>"</i>						<i>"</i>				

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Semivolatile Organic Compounds by EPA Method 8270C - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8L22017 Water Preparation Method: EPA 3520C

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8L22017-BLK1)										Extracted: 12/22/08 11:18				
Acenaphthene	EPA 8270C	ND	---	10.0	ug/l	1x	--	--	--	--	--	--	12/28/08 17:03	
Acenaphthylene	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Aniline	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Anthracene	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Benzo (a) anthracene	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Benzo (a) pyrene	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Benzo (b) fluoranthene	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Benzo (k) fluoranthene	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Benzo (ghi) perylene	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Benzoic Acid	"	ND	---	20.0	"	"	--	--	--	--	--	--	"	C5
Benzyl alcohol	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Bis(2-chloroethoxy)methane	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Bis(2-chloroethyl)ether	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Bis(2-chloroisopropyl)ether	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Bis(2-ethylhexyl)phthalate	"	ND	---	50.0	"	"	--	--	--	--	--	--	"	
4-Bromophenyl phenyl ether	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Butyl benzyl phthalate	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Carbazole	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
4-Chloroaniline	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
4-Chloro-3-methylphenol	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
2-Chloronaphthalene	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
2-Chlorophenol	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
4-Chlorophenyl phenyl ether	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
3 & 4-Methylphenol (m,p-Cresols)	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
2-Methylphenol (o-Cresol)	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Chrysene	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Di-n-butyl phthalate	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Dibenz (a,h) anthracene	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Dibenzofuran	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
1,2-Dichlorobenzene	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
1,3-Dichlorobenzene	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
1,4-Dichlorobenzene	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
3,3'-Dichlorobenzidine	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
2,4-Dichlorophenol	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Diethyl phthalate	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
2,4-Dimethylphenol	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Dimethyl phthalate	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
4,6-Dinitro-2-methylphenol	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
2,4-Dinitrophenol	"	ND	---	20.0	"	"	--	--	--	--	--	--	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Semivolatile Organic Compounds by EPA Method 8270C - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8L22017 Water Preparation Method: EPA 3520C

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8L22017-BLK1)										Extracted: 12/22/08 11:18				
2,4-Dinitrotoluene	EPA 8270C	ND	---	10.0	ug/l	1x	--	--	--	--	--	--	12/28/08 17:03	
2,6-Dinitrotoluene	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
N-Nitrosodiphenylamine	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Fluoranthene	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Fluorene	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Hexachlorobenzene	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Hexachlorobutadiene	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Hexachlorocyclopentadiene	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	C5
Hexachloroethane	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Indeno (1,2,3-cd) pyrene	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Isophorone	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
1-Methylnaphthalene	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
2-Methylnaphthalene	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Naphthalene	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
2-Nitroaniline	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
3-Nitroaniline	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
4-Nitroaniline	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Nitrobenzene	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
2-Nitrophenol	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
4-Nitrophenol	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
N-Nitrosodi-n-propylamine	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Di-n-octyl phthalate	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Pentachlorophenol	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Phenanthrene	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Phenol	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Pyrene	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
1,2,4-Trichlorobenzene	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
2,4,5-Trichlorophenol	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
2,4,6-Trichlorophenol	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	

Surrogate(s):	2-FBP	Recovery:	92.5%	Limits:	50-120%	"	12/28/08 17:03
	2-FP		86.2%		45-120%	"	"
	Nitrobenzene-d5		93.2%		50-120%	"	"
	Phenol-d6		85.2%		45-120%	"	"
	p-Terphenyl-d14		97.1%		10-140%	"	"
	2,4,6-TBP		73.5%		30-120%	"	"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Semivolatile Organic Compounds by EPA Method 8270C - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8L22017 Water Preparation Method: EPA 3520C

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	---------------	-----------	-------	----------	-------	----------	----------	-------

LCS (8L22017-BS1)

Extracted: 12/22/08 11:18

MNR1

Acenaphthene	EPA 8270C	84.5	---	10.0	ug/l	1x	--	100	84.5%	(60-120)	--	--	12/28/08 17:28	
4-Chloro-3-methylphenol	"	84.7	---	10.0	"	"	--	"	84.7%	(45-135)	--	--	"	
2-Chlorophenol	"	85.8	---	10.0	"	"	--	"	85.8%	(55-120)	--	--	"	
1,4-Dichlorobenzene	"	78.9	---	10.0	"	"	--	"	78.9%	(40-120)	--	--	"	
2,4-Dinitrotoluene	"	92.9	---	10.0	"	"	--	"	92.9%	(70-130)	--	--	"	
4-Nitrophenol	"	80.3	---	10.0	"	"	--	"	80.3%	(55-126)	--	--	"	
N-Nitrosodi-n-propylamine	"	99.1	---	10.0	"	"	--	"	99.1%	(55-125)	--	--	"	
Pentachlorophenol	"	95.8	---	10.0	"	"	--	"	95.8%	(75-160)	--	--	"	
Phenol	"	89.1	---	10.0	"	"	--	"	89.1%	(55-120)	--	--	"	
Pyrene	"	106	---	10.0	"	"	--	"	106%	(50-130)	--	--	"	
1,2,4-Trichlorobenzene	"	72.2	---	10.0	"	"	--	"	72.2%	(50-120)	--	--	"	

Surrogate(s):	2-FBP	Recovery:	86.3%	Limits:	50-120%	"							12/28/08 17:28	
	2-FP		83.6%		45-120%	"							"	
	Nitrobenzene-d5		79.1%		50-120%	"							"	
	Phenol-d6		82.5%		45-120%	"							"	
	p-Terphenyl-d14		88.8%		10-140%	"							"	
	2,4,6-TBP		92.6%		30-120%	"							"	

LCS Dup (8L22017-BSD1)

Extracted: 12/22/08 11:18

Acenaphthene	EPA 8270C	87.9	---	10.0	ug/l	1x	--	100	87.9%	(60-120)	4.01%	(25)	12/28/08 17:52	
4-Chloro-3-methylphenol	"	86.3	---	10.0	"	"	--	"	86.3%	(45-135)	1.89%	"	"	
2-Chlorophenol	"	87.9	---	10.0	"	"	--	"	87.9%	(55-120)	2.37%	(30)	"	
1,4-Dichlorobenzene	"	80.0	---	10.0	"	"	--	"	80.0%	(40-120)	1.43%	"	"	
2,4-Dinitrotoluene	"	90.7	---	10.0	"	"	--	"	90.7%	(70-130)	2.48%	(25)	"	
4-Nitrophenol	"	80.0	---	10.0	"	"	--	"	80.0%	(55-126)	0.374%	"	"	
N-Nitrosodi-n-propylamine	"	101	---	10.0	"	"	--	"	101%	(55-125)	1.92%	"	"	
Pentachlorophenol	"	99.1	---	10.0	"	"	--	"	99.1%	(75-160)	3.45%	"	"	
Phenol	"	93.1	---	10.0	"	"	--	"	93.1%	(55-120)	4.41%	(30)	"	
Pyrene	"	105	---	10.0	"	"	--	"	105%	(50-130)	1.20%	(25)	"	
1,2,4-Trichlorobenzene	"	75.4	---	10.0	"	"	--	"	75.4%	(50-120)	4.26%	"	"	

Surrogate(s):	2-FBP	Recovery:	91.2%	Limits:	50-120%	"							12/28/08 17:52	
	2-FP		87.0%		45-120%	"							"	
	Nitrobenzene-d5		81.6%		50-120%	"							"	
	Phenol-d6		85.6%		45-120%	"							"	
	p-Terphenyl-d14		88.0%		10-140%	"							"	
	2,4,6-TBP		95.0%		30-120%	"							"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

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Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Polynuclear Aromatic Hydrocarbons by GC/MS-SIM - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8L23024 Soil Preparation Method: EPA 3550B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes	
Blank (8L23024-BLK1)													Extracted: 12/23/08 13:07		
Acenaphthene	EPA 8270C-SIM	ND	---	0.0100	mg/kg wet	1x	--	--	--	--	--	--	12/29/08 16:18		
Acenaphthylene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"		
Anthracene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"		
Benzo (a) anthracene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"		
Benzo (a) pyrene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"		
Benzo (b) fluoranthene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"		
Benzo (k) fluoranthene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"		
Benzo (ghi) perylene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"		
Chrysene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"		
Dibenz (a,h) anthracene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"		
Fluoranthene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"		
Fluorene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"		
Indeno (1,2,3-cd) pyrene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	C	
1-Methylnaphthalene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"		
2-Methylnaphthalene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"		
Naphthalene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"		
Phenanthrene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"		
Pyrene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"		
<i>Surrogate(s): p-Terphenyl-d14</i>													<i>Recovery: 94.6%</i>	<i>Limits: 50-147%</i>	<i>12/29/08 16:18</i>

LCS (8L23024-BS1)

Extracted: 12/23/08 13:07

Acenaphthene	EPA 8270C-SIM	0.642	---	0.0100	mg/kg wet	1x	--	0.667	96.4%	(70-125)	--	--	12/29/08 16:44	
Acenaphthylene	"	0.751	---	0.0100	"	"	--	"	113%	(70-133)	--	--	"	
Anthracene	"	0.866	---	0.0100	"	"	--	"	130%	(70-152)	--	--	"	
Benzo (a) anthracene	"	0.713	---	0.0100	"	"	--	"	107%	(60-125)	--	--	"	
Benzo (a) pyrene	"	0.760	---	0.0100	"	"	--	"	114%	(64-134)	--	--	"	
Benzo (b) fluoranthene	"	0.739	---	0.0100	"	"	--	"	111%	(62-147)	--	--	"	
Benzo (k) fluoranthene	"	0.784	---	0.0100	"	"	--	"	118%	(60-144)	--	--	"	
Benzo (ghi) perylene	"	0.854	---	0.0100	"	"	--	"	128%	(57-137)	--	--	"	
Chrysene	"	0.754	---	0.0100	"	"	--	"	113%	(70-139)	--	--	"	
Dibenz (a,h) anthracene	"	0.749	---	0.0100	"	"	--	"	112%	(56-140)	--	--	"	
Fluoranthene	"	0.825	---	0.0100	"	"	--	"	124%	(70-141)	--	--	"	
Fluorene	"	0.780	---	0.0100	"	"	--	"	117%	(76-132)	--	--	"	
Indeno (1,2,3-cd) pyrene	"	0.745	---	0.0100	"	"	--	"	112%	(55-138)	--	--	"	C8
1-Methylnaphthalene	"	0.603	---	0.0100	"	"	--	"	90.4%	(46-128)	--	--	"	
2-Methylnaphthalene	"	0.580	---	0.0100	"	"	--	"	87.0%	(41-125)	--	--	"	
Naphthalene	"	0.545	---	0.0100	"	"	--	"	81.8%	(43-125)	--	--	"	
Phenanthrene	"	0.746	---	0.0100	"	"	--	"	112%	(73-125)	--	--	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Polynuclear Aromatic Hydrocarbons by GC/MS-SIM - Laboratory Quality Control Results

TestAmerica Seattle

QC Batch: 8L23024

Soil Preparation Method: EPA 3550B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	---------------	-----------	-------	----------	-------	----------	----------	-------

LCS (8L23024-BS1)

Extracted: 12/23/08 13:07

Pyrene	EPA 8270C-SIM	0.711	---	0.0100	mg/kg wet	1x	--	0.667	107%	(68-140)	--	--	12/29/08 16:44	
--------	---------------	-------	-----	--------	-----------	----	----	-------	------	----------	----	----	----------------	--

Surrogate(s): *p*-Terphenyl-d14 Recovery: 79.4% Limits: 50-147% " 12/29/08 16:44

Matrix Spike (8L23024-MS1)

QC Source: BRL0200-08

Extracted: 12/23/08 13:07

Acenaphthene	EPA 8270C-SIM	0.799	---	0.0133	mg/kg dry	1x	ND	0.885	90.3%	(67-132)	--	--	12/29/08 17:10	
Acenaphthylene	"	0.935	---	0.0133	"	"	ND	"	106%	(65-142)	--	--	"	
Anthracene	"	1.10	---	0.0133	"	"	ND	"	125%	(66-158)	--	--	"	
Benzo (a) anthracene	"	0.921	---	0.0133	"	"	ND	"	104%	(41-156)	--	--	"	
Benzo (a) pyrene	"	0.985	---	0.0133	"	"	ND	"	111%	(52-148)	--	--	"	
Benzo (b) fluoranthene	"	0.937	---	0.0133	"	"	ND	"	106%	(53-151)	--	--	"	
Benzo (k) fluoranthene	"	0.996	---	0.0133	"	"	ND	"	113%	(46-161)	--	--	"	
Benzo (ghi) perylene	"	1.12	---	0.0133	"	"	ND	"	126%	(26-154)	--	--	"	
Chrysene	"	0.975	---	0.0133	"	"	ND	"	110%	(55-155)	--	--	"	
Dibenz (a,h) anthracene	"	1.00	---	0.0133	"	"	ND	"	113%	(27-157)	--	--	"	
Fluoranthene	"	1.04	---	0.0133	"	"	ND	"	118%	(46-172)	--	--	"	
Fluorene	"	0.980	---	0.0133	"	"	ND	"	111%	(66-143)	--	--	"	
Indeno (1,2,3-cd) pyrene	"	0.985	---	0.0133	"	"	ND	"	111%	(24-159)	--	--	"	C8
1-Methylnaphthalene	"	0.718	---	0.0133	"	"	ND	"	81.1%	(39-140)	--	--	"	
2-Methylnaphthalene	"	0.690	---	0.0133	"	"	ND	"	77.9%	(32-139)	--	--	"	
Naphthalene	"	0.629	---	0.0133	"	"	ND	"	71.1%	(38-134)	--	--	"	
Phenanthrene	"	0.951	---	0.0133	"	"	ND	"	107%	(63-139)	--	--	"	
Pyrene	"	0.900	---	0.0133	"	"	ND	"	102%	(51-172)	--	--	"	

Surrogate(s): *p*-Terphenyl-d14 Recovery: 76.8% Limits: 50-147% " 12/29/08 17:10

Matrix Spike Dup (8L23024-MSD1)

QC Source: BRL0200-08

Extracted: 12/23/08 13:07

Acenaphthene	EPA 8270C-SIM	0.809	---	0.0134	mg/kg dry	1x	ND	0.891	90.8%	(67-132)	1.24%	(50)	12/29/08 17:36	
Acenaphthylene	"	0.949	---	0.0134	"	"	ND	"	107%	(65-142)	1.49%	"	"	
Anthracene	"	1.14	---	0.0134	"	"	ND	"	128%	(66-158)	3.09%	"	"	
Benzo (a) anthracene	"	0.944	---	0.0134	"	"	ND	"	106%	(41-156)	2.51%	"	"	
Benzo (a) pyrene	"	1.01	---	0.0134	"	"	ND	"	113%	(52-148)	2.36%	"	"	
Benzo (b) fluoranthene	"	0.997	---	0.0134	"	"	ND	"	112%	(53-151)	6.25%	"	"	
Benzo (k) fluoranthene	"	1.05	---	0.0134	"	"	ND	"	118%	(46-161)	5.13%	"	"	
Benzo (ghi) perylene	"	1.10	---	0.0134	"	"	ND	"	124%	(26-154)	1.35%	"	"	
Chrysene	"	1.00	---	0.0134	"	"	ND	"	113%	(55-155)	2.84%	(44)	"	
Dibenz (a,h) anthracene	"	0.985	---	0.0134	"	"	ND	"	111%	(27-157)	1.46%	(50)	"	
Fluoranthene	"	1.08	---	0.0134	"	"	ND	"	121%	(46-172)	3.45%	"	"	
Fluorene	"	0.971	---	0.0134	"	"	ND	"	109%	(66-143)	0.919%	(52)	"	
Indeno (1,2,3-cd) pyrene	"	0.977	---	0.0134	"	"	ND	"	110%	(24-159)	0.829%	(43)	"	C8

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Polynuclear Aromatic Hydrocarbons by GC/MS-SIM - Laboratory Quality Control Results

TestAmerica Seattle

QC Batch: 8L23024

Soil Preparation Method: EPA 3550B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Matrix Spike Dup (8L23024-MSD1)			QC Source: BRL0200-08				Extracted: 12/23/08 13:07							
1-Methylnaphthalene	EPA 8270C-SIM	0.734	---	0.0134	mg/kg dry	1x	ND	0.891	82.4%	(39-140)	2.23%	(50)	12/29/08 17:36	
2-Methylnaphthalene	"	0.717	---	0.0134	"	"	ND	"	80.4%	(32-139)	3.86%	"	"	
Naphthalene	"	0.656	---	0.0134	"	"	ND	"	73.6%	(38-134)	4.15%	"	"	
Phenanthrene	"	0.975	---	0.0134	"	"	ND	"	109%	(63-139)	2.46%	"	"	
Pyrene	"	0.955	---	0.0134	"	"	ND	"	107%	(51-172)	5.94%	"	"	
Surrogate(s): p-Terphenyl-d14		Recovery: 82.1%		Limits: 50-147%		"		12/29/08 17:36						

QC Batch: 8L26011

Soil Preparation Method: EPA 3550B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8L26011-BLK1)							Extracted: 12/26/08 11:13							
Acenaphthene	EPA 8270C-SIM	ND	---	0.0100	mg/kg wet	1x	--	--	--	--	--	--	12/27/08 12:50	
Acenaphthylene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Anthracene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Benzo (a) anthracene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Benzo (a) pyrene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Benzo (b) fluoranthene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Benzo (k) fluoranthene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Benzo (ghi) perylene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Chrysene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Dibenz (a,h) anthracene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Fluoranthene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Fluorene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Indeno (1,2,3-cd) pyrene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
1-Methylnaphthalene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
2-Methylnaphthalene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Naphthalene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Phenanthrene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Pyrene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Surrogate(s): p-Terphenyl-d14		Recovery: 76.0%		Limits: 50-147%		"		12/27/08 12:50						

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Polynuclear Aromatic Hydrocarbons by GC/MS-SIM - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8L26011 Soil Preparation Method: EPA 3550B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes			
LCS (8L26011-BS1)																	
Extracted: 12/26/08 11:13																	
Acenaphthene	EPA 8270C-SIM	0.636	---	0.0100	mg/kg wet	1x	--	0.667	95.4%	(70-125)	--	--	12/27/08 13:24				
Acenaphthylene	"	0.713	---	0.0100	"	"	--	"	107%	(70-133)	--	--	"				
Anthracene	"	0.863	---	0.0100	"	"	--	"	129%	(70-152)	--	--	"	C8			
Benzo (a) anthracene	"	0.639	---	0.0100	"	"	--	"	95.9%	(60-125)	--	--	"				
Benzo (a) pyrene	"	0.774	---	0.0100	"	"	--	"	116%	(64-134)	--	--	"				
Benzo (b) fluoranthene	"	0.692	---	0.0100	"	"	--	"	104%	(62-147)	--	--	"				
Benzo (k) fluoranthene	"	0.712	---	0.0100	"	"	--	"	107%	(60-144)	--	--	"				
Benzo (ghi) perylene	"	0.763	---	0.0100	"	"	--	"	114%	(57-137)	--	--	"				
Chrysene	"	0.710	---	0.0100	"	"	--	"	107%	(70-139)	--	--	"				
Dibenz (a,h) anthracene	"	0.819	---	0.0100	"	"	--	"	123%	(56-140)	--	--	"				
Fluoranthene	"	0.772	---	0.0100	"	"	--	"	116%	(70-141)	--	--	"				
Fluorene	"	0.696	---	0.0100	"	"	--	"	104%	(76-132)	--	--	"				
Indeno (1,2,3-cd) pyrene	"	0.770	---	0.0100	"	"	--	"	115%	(55-138)	--	--	"				
1-Methylnaphthalene	"	0.678	---	0.0100	"	"	--	"	102%	(46-128)	--	--	"				
2-Methylnaphthalene	"	0.625	---	0.0100	"	"	--	"	93.8%	(41-125)	--	--	"				
Naphthalene	"	0.623	---	0.0100	"	"	--	"	93.4%	(43-125)	--	--	"				
Phenanthrene	"	0.665	---	0.0100	"	"	--	"	99.8%	(73-125)	--	--	"				
Pyrene	"	0.546	---	0.0100	"	"	--	"	81.9%	(68-140)	--	--	"				
Surrogate(s): <i>p</i> -Terphenyl-d14													Recovery: 65.5%	Limits: 50-147%	"	12/27/08 13:24	

Matrix Spike (8L26011-MS1)

QC Source: BRL0200-59

Extracted: 12/26/08 11:13

Acenaphthene	EPA 8270C-SIM	0.752	---	0.0115	mg/kg dry	1x	ND	0.765	98.2%	(67-132)	--	--	12/27/08 13:58	
Acenaphthylene	"	0.847	---	0.0115	"	"	ND	"	111%	(65-142)	--	--	"	
Anthracene	"	0.981	---	0.0115	"	"	ND	"	128%	(66-158)	--	--	"	C8
Benzo (a) anthracene	"	0.749	---	0.0115	"	"	ND	"	97.9%	(41-156)	--	--	"	
Benzo (a) pyrene	"	0.835	---	0.0115	"	"	0.00161	"	109%	(52-148)	--	--	"	
Benzo (b) fluoranthene	"	0.976	---	0.0115	"	"	ND	"	127%	(53-151)	--	--	"	
Benzo (k) fluoranthene	"	0.655	---	0.0115	"	"	ND	"	85.5%	(46-161)	--	--	"	
Benzo (ghi) perylene	"	0.821	---	0.0115	"	"	ND	"	107%	(26-154)	--	--	"	
Chrysene	"	0.807	---	0.0115	"	"	ND	"	105%	(55-155)	--	--	"	
Dibenz (a,h) anthracene	"	0.818	---	0.0115	"	"	ND	"	107%	(27-157)	--	--	"	
Fluoranthene	"	0.808	---	0.0115	"	"	ND	"	106%	(46-172)	--	--	"	
Fluorene	"	0.823	---	0.0115	"	"	0.00191	"	107%	(66-143)	--	--	"	
Indeno (1,2,3-cd) pyrene	"	0.790	---	0.0115	"	"	ND	"	103%	(24-159)	--	--	"	
1-Methylnaphthalene	"	0.790	---	0.0115	"	"	0.00383	"	103%	(39-140)	--	--	"	
2-Methylnaphthalene	"	0.725	---	0.0115	"	"	0.00352	"	94.2%	(32-139)	--	--	"	
Naphthalene	"	0.707	---	0.0115	"	"	ND	"	92.4%	(38-134)	--	--	"	
Phenanthrene	"	0.762	---	0.0115	"	"	0.00712	"	98.6%	(63-139)	--	--	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Polynuclear Aromatic Hydrocarbons by GC/MS-SIM - Laboratory Quality Control Results

TestAmerica Seattle

QC Batch: 8L26011

Soil Preparation Method: EPA 3550B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes	
Matrix Spike (8L26011-MS1)			QC Source: BRL0200-59					Extracted: 12/26/08 11:13							
Pyrene	EPA 8270C-SIM	0.675	---	0.0115	mg/kg dry	1x	0.0308	0.765	84.1%	(51-172)	--	--	12/27/08 13:58		
<i>Surrogate(s): p-Terphenyl-d14</i>		<i>Recovery: 65.9%</i>		<i>Limits: 50-147%</i>		<i>"</i>		<i>12/27/08 13:58</i>							
Matrix Spike Dup (8L26011-MSD1)			QC Source: BRL0200-59					Extracted: 12/26/08 11:13							
Acenaphthene	EPA 8270C-SIM	0.746	---	0.0115	mg/kg dry	1x	ND	0.765	97.5%	(67-132)	0.746% (50)		12/27/08 14:32		
Acenaphthylene	"	0.836	---	0.0115	"	"	ND	"	109%	(65-142)	1.26%	"	"		
Anthracene	"	0.990	---	0.0115	"	"	ND	"	129%	(66-158)	0.955%	"	"	C8	
Benzo (a) anthracene	"	0.737	---	0.0115	"	"	ND	"	96.3%	(41-156)	1.65%	"	"		
Benzo (a) pyrene	"	0.848	---	0.0115	"	"	0.00161	"	111%	(52-148)	1.65%	"	"		
Benzo (b) fluoranthene	"	0.887	---	0.0115	"	"	ND	"	116%	(53-151)	9.52%	"	"		
Benzo (k) fluoranthene	"	0.731	---	0.0115	"	"	ND	"	95.4%	(46-161)	11.0%	"	"		
Benzo (ghi) perylene	"	0.846	---	0.0115	"	"	ND	"	111%	(26-154)	3.00%	"	"		
Chrysene	"	0.804	---	0.0115	"	"	ND	"	105%	(55-155)	0.342% (44)	"	"		
Dibenz (a,h) anthracene	"	0.893	---	0.0115	"	"	ND	"	117%	(27-157)	8.77% (50)	"	"		
Fluoranthene	"	0.748	---	0.0115	"	"	ND	"	97.7%	(46-172)	7.67%	"	"		
Fluorene	"	0.832	---	0.0115	"	"	0.00191	"	108%	(66-143)	0.990% (52)	"	"		
Indeno (1,2,3-cd) pyrene	"	0.844	---	0.0115	"	"	ND	"	110%	(24-159)	6.64% (43)	"	"		
1-Methylnaphthalene	"	0.783	---	0.0115	"	"	0.00383	"	102%	(39-140)	0.876% (50)	"	"		
2-Methylnaphthalene	"	0.718	---	0.0115	"	"	0.00352	"	93.3%	(32-139)	1.03%	"	"		
Naphthalene	"	0.687	---	0.0115	"	"	ND	"	89.7%	(38-134)	2.96%	"	"		
Phenanthrene	"	0.764	---	0.0115	"	"	0.00712	"	98.9%	(63-139)	0.291%	"	"		
Pyrene	"	0.647	---	0.0115	"	"	0.0308	"	80.5%	(51-172)	4.23%	"	"		
<i>Surrogate(s): p-Terphenyl-d14</i>		<i>Recovery: 62.4%</i>		<i>Limits: 50-147%</i>		<i>"</i>		<i>12/27/08 14:32</i>							

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Polynuclear Aromatic Compounds by GC/MS with High Volume Injection - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8L18028 Water Preparation Method: EPA 3520C

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8L18028-BLK1)													Extracted: 12/18/08 14:38	
Acenaphthene	EPA 8270C-HVI	ND	---	0.100	ug/l	1x	--	--	--	--	--	--	12/22/08 17:41	
Acenaphthylene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Anthracene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Benzo (a) anthracene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Benzo (a) pyrene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Benzo (b) fluoranthene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Benzo (k) fluoranthene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Benzo (ghi) perylene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Chrysene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Dibenz (a,h) anthracene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Fluoranthene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Fluorene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Indeno (1,2,3-cd) pyrene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
1-Methylnaphthalene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
2-Methylnaphthalene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Naphthalene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Phenanthrene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Pyrene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
<i>Surrogate(s): Benzo (a) pyrene-d12</i>		<i>Recovery: 46.8%</i>		<i>Limits: 20-125%</i>		<i>"</i>							<i>12/22/08 17:41</i>	
<i>1-Methylnaphthalene-d10</i>		<i>83.6%</i>		<i>39-125%</i>		<i>"</i>							<i>"</i>	

LCS (8L18028-BS1)

Extracted: 12/18/08 14:38

Acenaphthene	EPA 8270C-HVI	13.2	---	1.00	ug/l	10x	--	20.0	65.9%	(44-125)	--	--	12/22/08 17:06	
Acenaphthylene	"	14.0	---	1.00	"	"	--	"	70.1%	(51-125)	--	--	"	
Anthracene	"	13.8	---	1.00	"	"	--	"	69.1%	(50-125)	--	--	"	
Benzo (a) anthracene	"	14.7	---	0.100	"	"	--	"	73.4%	"	--	--	"	
Benzo (a) pyrene	"	14.4	---	0.100	"	"	--	"	72.0%	(47-125)	--	--	"	
Benzo (b) fluoranthene	"	13.1	---	0.100	"	"	--	"	65.6%	(50-125)	--	--	"	
Benzo (k) fluoranthene	"	19.6	---	0.100	"	"	--	"	98.2%	(46-125)	--	--	"	
Benzo (ghi) perylene	"	13.8	---	1.00	"	"	--	"	69.1%	(49-125)	--	--	"	
Chrysene	"	16.2	---	0.100	"	"	--	"	80.8%	(53-125)	--	--	"	
Dibenz (a,h) anthracene	"	13.2	---	0.100	"	"	--	"	66.0%	(47-125)	--	--	"	
Fluoranthene	"	14.5	---	1.00	"	"	--	"	72.4%	(55-125)	--	--	"	
Fluorene	"	13.8	---	1.00	"	"	--	"	69.2%	(52-125)	--	--	"	
Indeno (1,2,3-cd) pyrene	"	13.5	---	0.100	"	"	--	"	67.4%	(49-125)	--	--	"	
1-Methylnaphthalene	"	10.5	---	1.00	"	"	--	"	52.4%	(37-125)	--	--	"	
2-Methylnaphthalene	"	11.0	---	1.00	"	"	--	"	55.2%	(40-125)	--	--	"	
Naphthalene	"	10.6	---	1.00	"	"	--	"	53.2%	(42-125)	--	--	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Polynuclear Aromatic Compounds by GC/MS with High Volume Injection - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8L18028 Water Preparation Method: EPA 3520C

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	---------------	-----------	-------	----------	-------	----------	----------	-------

LCS (8L18028-BS1)

Extracted: 12/18/08 14:38

Phenanthrene	EPA 8270C-HVI	14.5	---	1.00	ug/l	10x	--	20.0	72.6%	(47-125)	--	--	12/22/08 17:06	
Pyrene	"	15.5	---	1.00	"	"	--	"	77.7%	"	--	--	"	
<i>Surrogate(s): Benzo (a) pyrene-d12</i>		<i>Recovery:</i>	<i>71.1%</i>			<i>Limits:</i>	<i>20-125%</i>	<i>"</i>					<i>12/22/08 17:06</i>	
<i>1-Methylnaphthalene-d10</i>		<i>60.3%</i>				<i>39-125%</i>	<i>"</i>						<i>"</i>	

Matrix Spike (8L18028-MS1)

QC Source: BRL0154-09

Extracted: 12/18/08 14:38

Acenaphthene	EPA 8270C-HVI	13.9	---	0.943	ug/l	10x	ND	18.9	73.8%	(43-125)	--	--	12/22/08 18:50	
Acenaphthylene	"	14.5	---	0.943	"	"	ND	"	76.9%	(29-125)	--	--	"	
Anthracene	"	12.1	---	0.943	"	"	ND	"	63.9%	(37-125)	--	--	"	
Benzo (a) anthracene	"	11.5	---	0.0943	"	"	ND	"	60.8%	(30-125)	--	--	"	
Benzo (a) pyrene	"	10.5	---	0.0943	"	"	ND	"	55.6%	(21-125)	--	--	"	
Benzo (b) fluoranthene	"	10.1	---	0.0943	"	"	ND	"	53.6%	(23-125)	--	--	"	
Benzo (k) fluoranthene	"	15.2	---	0.0943	"	"	ND	"	80.3%	(32-125)	--	--	"	
Benzo (ghi) perylene	"	10.0	---	0.943	"	"	ND	"	53.2%	(25-125)	--	--	"	
Chrysene	"	13.5	---	0.0943	"	"	ND	"	71.3%	(30-125)	--	--	"	
Dibenz (a,h) anthracene	"	8.92	---	0.0943	"	"	ND	"	47.3%	(24-125)	--	--	"	
Fluoranthene	"	13.6	---	0.943	"	"	ND	"	72.0%	(47-125)	--	--	"	
Fluorene	"	13.7	---	0.943	"	"	ND	"	72.8%	(44-125)	--	--	"	
Indeno (1,2,3-cd) pyrene	"	9.28	---	0.0943	"	"	ND	"	49.2%	(24-125)	--	--	"	
1-Methylnaphthalene	"	13.5	---	0.943	"	"	ND	"	71.7%	(26-125)	--	--	"	
2-Methylnaphthalene	"	13.3	---	0.943	"	"	ND	"	70.3%	(31-125)	--	--	"	
Naphthalene	"	13.5	---	0.943	"	"	ND	"	71.4%	(32-125)	--	--	"	
Phenanthrene	"	14.9	---	0.943	"	"	ND	"	78.9%	(39-125)	--	--	"	
Pyrene	"	13.9	---	0.943	"	"	ND	"	73.6%	(38-125)	--	--	"	
<i>Surrogate(s): Benzo (a) pyrene-d12</i>		<i>Recovery:</i>	<i>48.2%</i>			<i>Limits:</i>	<i>20-125%</i>	<i>"</i>					<i>12/22/08 18:50</i>	
<i>1-Methylnaphthalene-d10</i>		<i>81.1%</i>				<i>39-125%</i>	<i>"</i>						<i>"</i>	

Matrix Spike Dup (8L18028-MSD1)

QC Source: BRL0154-09

Extracted: 12/18/08 14:38

Acenaphthene	EPA 8270C-HVI	14.1	---	0.943	ug/l	10x	ND	18.9	74.5%	(43-125)	1.02%	(40)	12/22/08 19:24	
Acenaphthylene	"	14.9	---	0.943	"	"	ND	"	78.7%	(29-125)	2.36%	"	"	
Anthracene	"	13.0	---	0.943	"	"	ND	"	68.9%	(37-125)	7.47%	"	"	
Benzo (a) anthracene	"	12.2	---	0.0943	"	"	ND	"	64.4%	(30-125)	5.72%	"	"	
Benzo (a) pyrene	"	10.9	---	0.0943	"	"	ND	"	57.6%	(21-125)	3.50%	"	"	
Benzo (b) fluoranthene	"	9.03	---	0.0943	"	"	ND	"	47.9%	(23-125)	11.3%	"	"	
Benzo (k) fluoranthene	"	16.9	---	0.0943	"	"	ND	"	89.6%	(32-125)	11.0%	"	"	
Benzo (ghi) perylene	"	9.91	---	0.943	"	"	ND	"	52.5%	(25-125)	1.32%	"	"	
Chrysene	"	13.4	---	0.0943	"	"	ND	"	71.0%	(30-125)	0.419%	"	"	
Dibenz (a,h) anthracene	"	8.72	---	0.0943	"	"	ND	"	46.2%	(24-125)	2.18%	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue 1100 112th Avenue NE, Suite 400 Bellevue, WA/USA 98004-4504	Project Name: WSDOT SR 520 - Pontoon Sites Project Number: 180171.AR.X7.02 Project Manager: Brian Tracy	Report Created: 01/26/09 09:59
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Polynuclear Aromatic Compounds by GC/MS with High Volume Injection - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8L18028 Water Preparation Method: EPA 3520C

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Matrix Spike Dup (8L18028-MSD1)			QC Source: BRL0154-09				Extracted: 12/18/08 14:38							
Fluoranthene	EPA 8270C-HVI	13.0	---	0.943	ug/l	10x	ND	18.9	69.1%	(47-125)	4.09%	(40)	12/22/08 19:24	
Fluorene	"	14.2	---	0.943	"	"	ND	"	75.1%	(44-125)	3.15%	"	"	
Indeno (1,2,3-cd) pyrene	"	9.31	---	0.0943	"	"	ND	"	49.4%	(24-125)	0.357%	"	"	
1-Methylnaphthalene	"	13.9	---	0.943	"	"	ND	"	73.9%	(26-125)	3.05%	"	"	
2-Methylnaphthalene	"	13.9	---	0.943	"	"	ND	"	73.6%	(31-125)	4.50%	"	"	
Naphthalene	"	13.9	---	0.943	"	"	ND	"	73.5%	(32-125)	2.85%	"	"	
Phenanthrene	"	13.9	---	0.943	"	"	ND	"	73.4%	(39-125)	7.24%	"	"	
Pyrene	"	15.0	---	0.943	"	"	ND	"	79.3%	(38-125)	7.44%	"	"	
<i>Surrogate(s): Benzo (a) pyrene-d12</i>		<i>Recovery: 47.9%</i>		<i>Limits: 20-125%</i>		"		<i>12/22/08 19:24</i>						
<i>1-Methylnaphthalene-d10</i>		<i>76.0%</i>		<i>39-125%</i>		"		<i>"</i>						

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue 1100 112th Avenue NE, Suite 400 Bellevue, WA/USA 98004-4504	Project Name: WSDOT SR 520 - Pontoon Sites Project Number: 180171.AR.X7.02 Project Manager: Brian Tracy	Report Created: 01/26/09 09:59
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Physical Parameters by APHA/ASTM/EPA Methods - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8L23032 Soil Preparation Method: Dry Weight

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8L23032-BLK1)										Extracted: 12/23/08 15:41				
Dry Weight	BSOPSP00 3R08	100	---	1.00	%	1x	--	--	--	--	--	--	12/24/08 00:00	

QC Batch: 8L26012 Soil Preparation Method: Dry Weight

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8L26012-BLK1)										Extracted: 12/26/08 11:15				
Dry Weight	BSOPSP00 3R08	100	---	1.00	%	1x	--	--	--	--	--	--	12/29/08 00:00	

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Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Polychlorinated Biphenyls by EPA Method 8082 - Laboratory Quality Control Results

TestAmerica Nashville

QC Batch: 8123862

Soil Preparation Method: EPA 3550B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes		
Blank (8123862-BLK1)													Extracted: 12/27/08 08:10			
PCB-1016	SW846 8082	ND	---	0.0333	mg/kg wet	1x	--	--	--	--	--	--	12/30/08 05:50			
PCB-1221	"	ND	---	0.0333	"	"	--	--	--	--	--	--	"			
PCB-1232	"	ND	---	0.0333	"	"	--	--	--	--	--	--	"			
PCB-1242	"	ND	---	0.0333	"	"	--	--	--	--	--	--	"			
PCB-1248	"	ND	---	0.0333	"	"	--	--	--	--	--	--	"			
PCB-1254	"	ND	---	0.0333	"	"	--	--	--	--	--	--	"			
PCB-1260	"	ND	---	0.0333	"	"	--	--	--	--	--	--	"			
PCB-1262	"	ND	---	0.0333	"	"	--	--	--	--	--	--	"			
PCB-1268	"	ND	---	0.0333	"	"	--	--	--	--	--	--	"			
Surrogate(s): Tetrachloro-meta-xylene		Recovery: 82%		Limits: 15-150%		"						12/30/08 05:50				
Decachlorobiphenyl		114%		10-150%		"						"				
LCS (8123862-BS1)													Extracted: 12/27/08 08:10			
PCB-1254	SW846 8082	0.182	---	0.0333	mg/kg wet	1x	--	0.167	109%	(52-117)	--	--	12/30/08 06:11			
Surrogate(s): Tetrachloro-meta-xylene		Recovery: 92%		Limits: 15-150%		"						12/30/08 06:11				
Decachlorobiphenyl		120%		10-150%		"						"				
Matrix Spike (8123862-MS1)													QC Source: BRL0200-25		Extracted: 12/27/08 08:10	
PCB-1254	SW846 8082	0.143	---	0.0411	mg/kg dry	1x	ND	0.206	70%	(26-136)	--	--	12/30/08 06:31			
Surrogate(s): Tetrachloro-meta-xylene		Recovery: 58%		Limits: 15-150%		"						12/30/08 06:31				
Decachlorobiphenyl		78%		10-150%		"						"				
Matrix Spike Dup (8123862-MSD1)													QC Source: BRL0200-25		Extracted: 12/27/08 08:10	
PCB-1254	SW846 8082	0.211	---	0.0409	mg/kg dry	1x	ND	0.204	103%	(26-136)	38%	(50)	12/30/08 06:51			
Surrogate(s): Tetrachloro-meta-xylene		Recovery: 86%		Limits: 15-150%		"						12/30/08 06:51				
Decachlorobiphenyl		116%		10-150%		"						"				

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Polychlorinated Biphenyls by EPA Method 8082 - Laboratory Quality Control Results

TestAmerica Nashville

QC Batch: 8124064

Soil Preparation Method: EPA 3550B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8124064-BLK1)										Extracted: 12/27/08 07:15				
PCB-1016	SW846 8082	ND	---	0.0333	mg/kg wet	1x	--	--	--	--	--	--	12/30/08 20:27	
PCB-1221	"	ND	---	0.0333	"	"	--	--	--	--	--	--	"	
PCB-1232	"	ND	---	0.0333	"	"	--	--	--	--	--	--	"	
PCB-1242	"	ND	---	0.0333	"	"	--	--	--	--	--	--	"	
PCB-1248	"	ND	---	0.0333	"	"	--	--	--	--	--	--	"	
PCB-1254	"	ND	---	0.0333	"	"	--	--	--	--	--	--	"	
PCB-1260	"	ND	---	0.0333	"	"	--	--	--	--	--	--	"	
PCB-1262	"	ND	---	0.0333	"	"	--	--	--	--	--	--	"	
PCB-1268	"	ND	---	0.0333	"	"	--	--	--	--	--	--	"	

Surrogate(s): Tetrachloro-meta-xylene Recovery: 90% Limits: 15-150% " 12/30/08 20:27
 Decachlorobiphenyl 120% 10-150% " "

LCS (8124064-BS1)

Extracted: 12/27/08 07:15

PCB-1254	SW846 8082	0.185	---	0.0333	mg/kg wet	1x	--	0.167	111%	(52-117)	--	--	12/30/08 20:47	
Surrogate(s): Tetrachloro-meta-xylene Recovery: 92% Limits: 15-150% " 12/30/08 20:47 Decachlorobiphenyl 126% 10-150% " "														

Matrix Spike (8124064-MS1)

QC Source: BRL0200-45

Extracted: 12/27/08 07:15

PCB-1254	SW846 8082	0.202	---	0.0430	mg/kg dry	1x	ND	0.215	94%	(26-136)	--	--	12/30/08 21:07	
Surrogate(s): Tetrachloro-meta-xylene Recovery: 78% Limits: 15-150% " 12/30/08 21:07 Decachlorobiphenyl 110% 10-150% " "														

Matrix Spike Dup (8124064-MSD1)

QC Source: BRL0200-45

Extracted: 12/27/08 07:15

PCB-1254	SW846 8082	0.227	---	0.0434	mg/kg dry	1x	ND	0.217	105%	(26-136)	12%	(50)	12/30/08 21:28	
Surrogate(s): Tetrachloro-meta-xylene Recovery: 90% Limits: 15-150% " 12/30/08 21:28 Decachlorobiphenyl 112% 10-150% " "														

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Polyaromatic Hydrocarbons by EPA 8270C SIM - Laboratory Quality Control Results
 TestAmerica Nashville

QC Batch: 8123865 Soil Preparation Method: EPA 3550B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8123865-BLK1)													Extracted: 12/26/08 10:05	
Acenaphthene	SW846 8270CSIM	ND	---	0.00333	mg/kg wet	1x	--	--	--	--	--	--	12/29/08 22:49	
Acenaphthylene	"	ND	---	0.00333	"	"	--	--	--	--	--	--	"	
Anthracene	"	ND	---	0.00333	"	"	--	--	--	--	--	--	"	
Benzo (a) anthracene	"	ND	---	0.00333	"	"	--	--	--	--	--	--	"	
Benzo (a) pyrene	"	ND	---	0.00333	"	"	--	--	--	--	--	--	"	
Benzo (b) fluoranthene	"	ND	---	0.00333	"	"	--	--	--	--	--	--	"	
Benzo (g,h,i) perylene	"	ND	---	0.00333	"	"	--	--	--	--	--	--	"	
Benzo (k) fluoranthene	"	ND	---	0.00333	"	"	--	--	--	--	--	--	"	
Chrysene	"	ND	---	0.00333	"	"	--	--	--	--	--	--	"	
Dibenz (a,h) anthracene	"	ND	---	0.00333	"	"	--	--	--	--	--	--	"	
Fluoranthene	"	ND	---	0.00333	"	"	--	--	--	--	--	--	"	
Fluorene	"	ND	---	0.00333	"	"	--	--	--	--	--	--	"	
Indeno (1,2,3-cd) pyrene	"	ND	---	0.00333	"	"	--	--	--	--	--	--	"	
1-Methylnaphthalene	"	ND	---	0.00333	"	"	--	--	--	--	--	--	"	
2-Methylnaphthalene	"	ND	---	0.00333	"	"	--	--	--	--	--	--	"	
Naphthalene	"	ND	---	0.00333	"	"	--	--	--	--	--	--	"	
Phenanthrene	"	ND	---	0.00333	"	"	--	--	--	--	--	--	"	
Pyrene	"	ND	---	0.00333	"	"	--	--	--	--	--	--	"	
<i>Surrogate(s): Nitrobenzene-d5</i>		<i>Recovery:</i>	<i>59%</i>	<i>Limits:</i>	<i>22-104%</i>	<i>"</i>							<i>12/29/08 22:49</i>	
<i>2-Fluorobiphenyl</i>			<i>62%</i>		<i>19-109%</i>	<i>"</i>							<i>"</i>	
<i>Terphenyl-d14</i>			<i>75%</i>		<i>26-128%</i>	<i>"</i>							<i>"</i>	

LCS (8123865-BS1)

Extracted: 12/26/08 10:05

Acenaphthene	SW846 8270CSIM	0.0260	---	0.00333	mg/kg wet	1x	--	0.0333	78%	(43-120)	--	--	12/29/08 23:10	
Acenaphthylene	"	0.0263	---	0.00333	"	"	--	"	79%	(41-130)	--	--	"	
Anthracene	"	0.0283	---	0.00333	"	"	--	"	85%	(37-150)	--	--	"	
Benzo (a) anthracene	"	0.0267	---	0.00333	"	"	--	"	80%	(48-133)	--	--	"	
Benzo (a) pyrene	"	0.0260	---	0.00333	"	"	--	"	78%	(49-127)	--	--	"	
Benzo (b) fluoranthene	"	0.0370	---	0.00333	"	"	--	"	111%	(48-130)	--	--	"	
Benzo (g,h,i) perylene	"	0.0270	---	0.00333	"	"	--	"	81%	(34-140)	--	--	"	
Benzo (k) fluoranthene	"	0.0243	---	0.00333	"	"	--	"	73%	(53-130)	--	--	"	
Chrysene	"	0.0273	---	0.00333	"	"	--	"	82%	(50-131)	--	--	"	
Dibenz (a,h) anthracene	"	0.0267	---	0.00333	"	"	--	"	80%	(40-136)	--	--	"	
Fluoranthene	"	0.0293	---	0.00333	"	"	--	"	88%	(46-140)	--	--	"	
Fluorene	"	0.0260	---	0.00333	"	"	--	"	78%	(44-127)	--	--	"	
Indeno (1,2,3-cd) pyrene	"	0.0277	---	0.00333	"	"	--	"	83%	(38-132)	--	--	"	
1-Methylnaphthalene	"	0.0237	---	0.00333	"	"	--	"	71%	(33-123)	--	--	"	
2-Methylnaphthalene	"	0.0230	---	0.00333	"	"	--	"	69%	(37-129)	--	--	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue	Project Name: WSDOT SR 520 - Pontoon Sites	Report Created:
1100 112th Avenue NE, Suite 400	Project Number: 180171.AR.X7.02	01/26/09 09:59
Bellevue, WA/USA 98004-4504	Project Manager: Brian Tracy	

Polyaromatic Hydrocarbons by EPA 8270C SIM - Laboratory Quality Control Results
 TestAmerica Nashville

QC Batch: 8123865 Soil Preparation Method: EPA 3550B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Extracted: 12/26/08 10:05														
LCS (8123865-BS1)														
Naphthalene	SW846 8270CSIM	0.0247	---	0.00333	mg/kg wet	1x	--	0.0333	74%	(38-120)	--	--	12/29/08 23:10	
Phenanthrene	"	0.0280	---	0.00333	"	"	--	"	84%	(41-134)	--	--	"	
Pyrene	"	0.0290	---	0.00333	"	"	--	"	87%	(48-132)	--	--	"	
<i>Surrogate(s): Nitrobenzene-d5</i>		<i>Recovery: 63%</i>		<i>Limits: 22-104%</i>		<i>"</i>						<i>12/29/08 23:10</i>		
<i>2-Fluorobiphenyl</i>		<i>65%</i>		<i>19-109%</i>		<i>"</i>						<i>"</i>		
<i>Terphenyl-d14</i>		<i>74%</i>		<i>26-128%</i>		<i>"</i>						<i>"</i>		

Extracted: 12/26/08 10:05														
Matrix Spike (8123865-MS1)														
QC Source: BRL0200-25														
Acenaphthene	SW846 8270CSIM	0.0312	---	0.00400	mg/kg dry	1x	ND	0.0401	78%	(16-137)	--	--	12/29/08 23:31	
Acenaphthylene	"	0.0320	---	0.00400	"	"	ND	"	80%	(11-145)	--	--	"	
Anthracene	"	0.0344	---	0.00400	"	"	ND	"	86%	(18-156)	--	--	"	
Benzo (a) anthracene	"	0.0353	---	0.00400	"	"	ND	"	88%	(16-154)	--	--	"	
Benzo (a) pyrene	"	0.0320	---	0.00400	"	"	ND	"	80%	(17-141)	--	--	"	
Benzo (b) fluoranthene	"	0.0477	---	0.00400	"	"	ND	"	119%	(13-156)	--	--	"	
Benzo (g,h,i) perylene	"	0.0381	---	0.00400	"	"	ND	"	95%	(10-153)	--	--	"	
Benzo (k) fluoranthene	"	0.0324	---	0.00400	"	"	ND	"	81%	(19-150)	--	--	"	
Chrysene	"	0.0369	---	0.00400	"	"	ND	"	92%	(13-152)	--	--	"	
Dibenz (a,h) anthracene	"	0.0377	---	0.00400	"	"	ND	"	94%	(10-148)	--	--	"	
Fluoranthene	"	0.0344	---	0.00400	"	"	ND	"	86%	(10-171)	--	--	"	
Fluorene	"	0.0324	---	0.00400	"	"	ND	"	81%	(10-151)	--	--	"	
Indeno (1,2,3-cd) pyrene	"	0.0397	---	0.00400	"	"	ND	"	99%	(10-144)	--	--	"	
1-Methylnaphthalene	"	0.0288	---	0.00400	"	"	ND	"	72%	(18-127)	--	--	"	
2-Methylnaphthalene	"	0.0276	---	0.00400	"	"	ND	"	69%	(21-131)	--	--	"	
Naphthalene	"	0.0292	---	0.00400	"	"	ND	"	73%	(16-125)	--	--	"	
Phenanthrene	"	0.0344	---	0.00400	"	"	0.00321	"	78%	(10-156)	--	--	"	
Pyrene	"	0.0344	---	0.00400	"	"	ND	"	86%	(10-163)	--	--	"	
<i>Surrogate(s): Nitrobenzene-d5</i>		<i>Recovery: 61%</i>		<i>Limits: 22-104%</i>		<i>"</i>						<i>12/29/08 23:31</i>		
<i>2-Fluorobiphenyl</i>		<i>63%</i>		<i>19-109%</i>		<i>"</i>						<i>"</i>		
<i>Terphenyl-d14</i>		<i>73%</i>		<i>26-128%</i>		<i>"</i>						<i>"</i>		

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Polyaromatic Hydrocarbons by EPA 8270C SIM - Laboratory Quality Control Results

TestAmerica Nashville

QC Batch: 8123865

Soil Preparation Method: EPA 3550B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Matrix Spike Dup (8123865-MSD1)			QC Source: BRL0200-25				Extracted: 12/26/08 10:05							
Acenaphthene	SW846 8270CSIM	0.0331	---	0.00403	mg/kg dry	1x	ND	0.0404	82%	(16-137)	6%	(48)	12/29/08 23:52	
Acenaphthylene	"	0.0347	---	0.00403	"	"	ND	"	86%	(11-145)	8%	(45)	"	
Anthracene	"	0.0363	---	0.00403	"	"	ND	"	90%	(18-156)	5%	(50)	"	
Benzo (a) anthracene	"	0.0359	---	0.00403	"	"	ND	"	89%	(16-154)	2%	(45)	"	
Benzo (a) pyrene	"	0.0331	---	0.00403	"	"	ND	"	82%	(17-141)	3%	(50)	"	
Benzo (b) fluoranthene	"	0.0473	---	0.00403	"	"	ND	"	117%	(13-156)	0.9%	(49)	"	
Benzo (g,h,i) perylene	"	0.0384	---	0.00403	"	"	ND	"	95%	(10-153)	0.8%	"	"	
Benzo (k) fluoranthene	"	0.0327	---	0.00403	"	"	ND	"	81%	(19-150)	0.8%	(45)	"	
Chrysene	"	0.0368	---	0.00403	"	"	ND	"	91%	(13-152)	0.3%	(46)	"	
Dibenz (a,h) anthracene	"	0.0380	---	0.00403	"	"	ND	"	94%	(10-148)	0.8%	(43)	"	
Fluoranthene	"	0.0351	---	0.00403	"	"	ND	"	87%	(10-171)	2%	(50)	"	
Fluorene	"	0.0343	---	0.00403	"	"	ND	"	85%	(10-151)	6%	(49)	"	
Indeno (1,2,3-cd) pyrene	"	0.0392	---	0.00403	"	"	ND	"	97%	(10-144)	1%	(46)	"	
1-Methylnaphthalene	"	0.0307	---	0.00403	"	"	ND	"	76%	(18-127)	6%	(47)	"	
2-Methylnaphthalene	"	0.0299	---	0.00403	"	"	ND	"	74%	(21-131)	8%	(49)	"	
Naphthalene	"	0.0315	---	0.00403	"	"	ND	"	78%	(16-125)	7%	(50)	"	
Phenanthrene	"	0.0355	---	0.00403	"	"	0.00321	"	80%	(10-156)	3%	(49)	"	
Pyrene	"	0.0351	---	0.00403	"	"	ND	"	87%	(10-163)	2%	(46)	"	
Surrogate(s):	Nitrobenzene-d5	Recovery:	63%	Limits:	22-104%	"							12/29/08 23:52	
	2-Fluorobiphenyl		64%		19-109%	"							"	
	Terphenyl-d14		73%		26-128%	"							"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue	Project Name: WSDOT SR 520 - Pontoon Sites	
1100 112th Avenue NE, Suite 400	Project Number: 180171.AR.X7.02	Report Created:
Bellevue, WA/USA 98004-4504	Project Manager: Brian Tracy	01/26/09 09:59

Polyaromatic Hydrocarbons by EPA 8270C SIM - Laboratory Quality Control Results
 TestAmerica Nashville

QC Batch: 8123995 Soil Preparation Method: EPA 3550B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8123995-BLK1)													Extracted: 12/27/08 06:50	
Acenaphthene	SW846 8270CSIM	ND	---	0.00333	mg/kg wet	1x	--	--	--	--	--	--	01/05/09 00:16	
Acenaphthylene	"	ND	---	0.00333	"	"	--	--	--	--	--	--	"	
Anthracene	"	ND	---	0.00333	"	"	--	--	--	--	--	--	"	
Benzo (a) anthracene	"	ND	---	0.00333	"	"	--	--	--	--	--	--	"	
Benzo (a) pyrene	"	ND	---	0.00333	"	"	--	--	--	--	--	--	"	
Benzo (b) fluoranthene	"	ND	---	0.00333	"	"	--	--	--	--	--	--	"	
Benzo (g,h,i) perylene	"	ND	---	0.00333	"	"	--	--	--	--	--	--	"	
Benzo (k) fluoranthene	"	ND	---	0.00333	"	"	--	--	--	--	--	--	"	
Chrysene	"	ND	---	0.00333	"	"	--	--	--	--	--	--	"	
Dibenz (a,h) anthracene	"	ND	---	0.00333	"	"	--	--	--	--	--	--	"	
Fluoranthene	"	ND	---	0.00333	"	"	--	--	--	--	--	--	"	
Fluorene	"	ND	---	0.00333	"	"	--	--	--	--	--	--	"	
Indeno (1,2,3-cd) pyrene	"	ND	---	0.00333	"	"	--	--	--	--	--	--	"	
1-Methylnaphthalene	"	ND	---	0.00333	"	"	--	--	--	--	--	--	"	
2-Methylnaphthalene	"	ND	---	0.00333	"	"	--	--	--	--	--	--	"	
Naphthalene	"	ND	---	0.00333	"	"	--	--	--	--	--	--	"	
Phenanthrene	"	ND	---	0.00333	"	"	--	--	--	--	--	--	"	
Pyrene	"	ND	---	0.00333	"	"	--	--	--	--	--	--	"	
<i>Surrogate(s): Nitrobenzene-d5</i>		<i>Recovery: 64%</i>		<i>Limits: 22-104%</i>		<i>"</i>							<i>01/05/09 00:16</i>	
<i>2-Fluorobiphenyl</i>		<i>63%</i>		<i>19-109%</i>		<i>"</i>							<i>"</i>	
<i>Terphenyl-d14</i>		<i>83%</i>		<i>26-128%</i>		<i>"</i>							<i>"</i>	

LCS (8123995-BS1)													Extracted: 12/27/08 06:50	
Acenaphthene	SW846 8270CSIM	0.0263	---	0.00333	mg/kg wet	1x	--	0.0333	79%	(43-120)	--	--	01/05/09 00:37	
Acenaphthylene	"	0.0260	---	0.00333	"	"	--	"	78%	(41-130)	--	--	"	
Anthracene	"	0.0293	---	0.00333	"	"	--	"	88%	(37-150)	--	--	"	
Benzo (a) anthracene	"	0.0263	---	0.00333	"	"	--	"	79%	(48-133)	--	--	"	
Benzo (a) pyrene	"	0.0270	---	0.00333	"	"	--	"	81%	(49-127)	--	--	"	
Benzo (b) fluoranthene	"	0.0257	---	0.00333	"	"	--	"	77%	(48-130)	--	--	"	
Benzo (g,h,i) perylene	"	0.0277	---	0.00333	"	"	--	"	83%	(34-140)	--	--	"	
Benzo (k) fluoranthene	"	0.0257	---	0.00333	"	"	--	"	77%	(53-130)	--	--	"	
Chrysene	"	0.0277	---	0.00333	"	"	--	"	83%	(50-131)	--	--	"	
Dibenz (a,h) anthracene	"	0.0277	---	0.00333	"	"	--	"	83%	(40-136)	--	--	"	
Fluoranthene	"	0.0280	---	0.00333	"	"	--	"	84%	(46-140)	--	--	"	
Fluorene	"	0.0270	---	0.00333	"	"	--	"	81%	(44-127)	--	--	"	
Indeno (1,2,3-cd) pyrene	"	0.0273	---	0.00333	"	"	--	"	82%	(38-132)	--	--	"	
1-Methylnaphthalene	"	0.0243	---	0.00333	"	"	--	"	73%	(33-123)	--	--	"	
2-Methylnaphthalene	"	0.0240	---	0.00333	"	"	--	"	72%	(37-129)	--	--	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/26/09 09:59

Polyaromatic Hydrocarbons by EPA 8270C SIM - Laboratory Quality Control Results
 TestAmerica Nashville

QC Batch: 8123995 Soil Preparation Method: EPA 3550B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes		
LCS (8123995-BS1)													Extracted: 12/27/08 06:50			
Naphthalene	SW846 8270CSIM	0.0250	---	0.00333	mg/kg wet	1x	--	0.0333	75%	(38-120)	--	--	01/05/09 00:37			
Phenanthrene	"	0.0277	---	0.00333	"	"	--	"	83%	(41-134)	--	--	"			
Pyrene	"	0.0273	---	0.00333	"	"	--	"	82%	(48-132)	--	--	"			
<i>Surrogate(s): Nitrobenzene-d5</i>		<i>Recovery: 58%</i>		<i>Limits: 22-104%</i>		<i>"</i>						<i>01/05/09 00:37</i>				
<i>2-Fluorobiphenyl</i>		<i>60%</i>		<i>19-109%</i>		<i>"</i>						<i>"</i>				
<i>Terphenyl-d14</i>		<i>74%</i>		<i>26-128%</i>		<i>"</i>						<i>"</i>				
Matrix Spike (8123995-MS1)													QC Source: BRL0200-45		Extracted: 12/27/08 06:50	
Acenaphthene	SW846 8270CSIM	0.0492	---	0.00435	mg/kg dry	1x	0.0167	0.0435	75%	(16-137)	--	--	01/05/09 01:19			
Acenaphthylene	"	0.108	---	0.00435	"	"	0.166	"	-134%	(11-145)	--	--	"	M2		
Anthracene	"	0.139	---	0.00435	"	"	0.127	"	29%	(18-156)	--	--	"			
Benzo (a) anthracene	"	0.361	---	0.00435	"	"	0.386	"	-56%	(16-154)	--	--	"	M2		
Benzo (a) pyrene	"	0.374	---	0.00435	"	"	0.379	"	-12%	(17-141)	--	--	"	M2		
Benzo (b) fluoranthene	"	0.296	---	0.00435	"	"	0.272	"	54%	(13-156)	--	--	"			
Benzo (g,h,i) perylene	"	0.308	---	0.00435	"	"	0.290	"	43%	(10-153)	--	--	"			
Benzo (k) fluoranthene	"	0.302	---	0.00435	"	"	0.317	"	-33%	(19-150)	--	--	"	M2		
Chrysene	"	0.406	---	0.00435	"	"	0.446	"	-90%	(13-152)	--	--	"	M2		
Dibenz (a,h) anthracene	"	0.111	---	0.00435	"	"	0.0686	"	97%	(10-148)	--	--	"			
Fluoranthene	"	0.608	---	0.00435	"	"	0.680	"	-167%	(10-171)	--	--	"	M2		
Fluorene	"	0.0688	---	0.00435	"	"	0.0227	"	106%	(10-151)	--	--	"			
Indeno (1,2,3-cd) pyrene	"	0.275	---	0.00435	"	"	0.242	"	77%	(10-144)	--	--	"			
1-Methylnaphthalene	"	0.0466	---	0.00435	"	"	0.0184	"	65%	(18-127)	--	--	"			
2-Methylnaphthalene	"	0.0474	---	0.00435	"	"	0.0236	"	55%	(21-131)	--	--	"			
Naphthalene	"	0.0653	---	0.00435	"	"	0.0759	"	-25%	(16-125)	--	--	"	M2		
Phenanthrene	"	0.260	---	0.00435	"	"	0.265	"	-11%	(10-156)	--	--	"	M2		
Pyrene	"	1.08	---	0.00435	"	"	1.41	"	-752%	(10-163)	--	--	"	M2		
<i>Surrogate(s): Nitrobenzene-d5</i>		<i>Recovery: 72%</i>		<i>Limits: 22-104%</i>		<i>"</i>						<i>01/05/09 01:19</i>				
<i>2-Fluorobiphenyl</i>		<i>63%</i>		<i>19-109%</i>		<i>"</i>						<i>"</i>				
<i>Terphenyl-d14</i>		<i>113%</i>		<i>26-128%</i>		<i>"</i>						<i>"</i>				

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/26/09 09:59

Polyaromatic Hydrocarbons by EPA 8270C SIM - Laboratory Quality Control Results

TestAmerica Nashville

QC Batch: 8123995

Soil Preparation Method: EPA 3550B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Matrix Spike Dup (8123995-MSD1)			QC Source: BRL0200-45				Extracted: 12/27/08 06:50							
Acenaphthene	SW846 8270CSIM	0.0528	---	0.00426	mg/kg dry	1x	0.0167	0.0426	85%	(16-137)	7%	(48)	01/05/09 12:34	
Acenaphthylene	"	0.109	---	0.00426	"	"	0.166	"	-135%	(11-145)	0.6%	(45)	"	M2
Anthracene	"	0.139	---	0.00426	"	"	0.127	"	30%	(18-156)	0.03%	(50)	"	
Benzo (a) anthracene	"	0.383	---	0.00426	"	"	0.386	"	-6%	(16-154)	6%	(45)	"	M2
Benzo (a) pyrene	"	0.400	---	0.00426	"	"	0.379	"	51%	(17-141)	7%	(50)	"	
Benzo (b) fluoranthene	"	0.313	---	0.00426	"	"	0.272	"	94%	(13-156)	6%	(49)	"	
Benzo (g,h,i) perylene	"	0.348	---	0.00426	"	"	0.290	"	136%	(10-153)	12%	"	"	
Benzo (k) fluoranthene	"	0.320	---	0.00426	"	"	0.317	"	8%	(19-150)	6%	(45)	"	M2
Chrysene	"	0.443	---	0.00426	"	"	0.446	"	-6%	(13-152)	9%	(46)	"	M2
Dibenz (a,h) anthracene	"	0.120	---	0.00426	"	"	0.0686	"	121%	(10-148)	8%	(43)	"	
Fluoranthene	"	0.623	---	0.00426	"	"	0.680	"	-134%	(10-171)	2%	(50)	"	M2
Fluorene	"	0.0720	---	0.00426	"	"	0.0227	"	116%	(10-151)	5%	(49)	"	
Indeno (1,2,3-cd) pyrene	"	0.309	---	0.00426	"	"	0.242	"	158%	(10-144)	12%	(46)	"	M1
1-Methylnaphthalene	"	0.0490	---	0.00426	"	"	0.0184	"	72%	(18-127)	5%	(47)	"	
2-Methylnaphthalene	"	0.0494	---	0.00426	"	"	0.0236	"	61%	(21-131)	4%	(49)	"	
Naphthalene	"	0.0724	---	0.00426	"	"	0.0759	"	-8%	(16-125)	10%	(50)	"	M2
Phenanthrene	"	0.241	---	0.00426	"	"	0.265	"	-57%	(10-156)	8%	(49)	"	M2
Pyrene	"	1.21	---	0.00426	"	"	1.41	"	-466%	(10-163)	11%	(46)	"	M2
Surrogate(s):	Nitrobenzene-d5	Recovery:	70%	Limits:	22-104%	"							01/05/09 12:34	
	2-Fluorobiphenyl		65%		19-109%	"							"	
	Terphenyl-d14		126%		26-128%	"							"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.



Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
Project Number: 180171.AR.X7.02
Project Manager: Brian Tracy

Report Created:
01/26/09 09:59

Notes and Definitions

Report Specific Notes:

- B - Analyte was detected in the associated Method Blank.
- B1 - Analyte was detected in the associated method blank. Analyte concentration in the sample is greater than 10x the concentration found in the method blank.
- C - Calibration Verification recovery was above the method control limit for this analyte. Analyte not detected, data not impacted.
- C4 - Calibration Verification recovery was below the method control limit for this analyte.
- C5 - Calibration Verification recovery was below the method control limit for this analyte. An additional check standard was analyzed at the reporting limit to ensure instrument sensitivity at the reporting limit. Samples ND.
- C8 - Calibration Verification recovery was above the method control limit for this analyte. A high bias may be indicated.
- I2 - Internal Standard recovery was outside of method limits.
- M1 - The MS and/or MSD were above the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
- M2 - The MS and/or MSD were below the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
- M7 - The MS and/or MSD were above the acceptance limits. See Blank Spike (LCS).
- M8 - The MS and/or MSD were below the acceptance limits. See Blank Spike (LCS).
- MHA - Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery information. See Blank Spike (LCS).
- MNR1 - There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate.
- Q1 - Does not match typical pattern
- Q3 - The chromatographic pattern is not consistent with diesel fuel.
- Q4 - The hydrocarbons present are a complex mixture of diesel range and heavy oil range organics.
- Q6 - Results in the diesel organics range are primarily due to overlap from a heavy oil range product.
- Q8 - Detected hydrocarbons in the gasoline range appear to be due to overlap of diesel range hydrocarbons.
- QP - Hydrocarbon result partly due to individual peak(s) in quantitation range.
- R3 - The RPD exceeded the acceptance limit due to sample matrix effects.
- R4 - Due to the low levels of analyte in the sample, the duplicate RPD calculation does not provide useful information.
- RL1 - Reporting limit raised due to sample matrix effects.
- S3 - Post digestion spike is out of acceptance limits for this analyte
- SPS - Percent solids result provided to the TestAmerica Nashville laboratory.
- Z6 - Surrogate recovery was below acceptance limits.
- ZX - Due to sample matrix effects, the surrogate recovery was outside the acceptance limits.

Laboratory Reporting Conventions:

- DET - Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.
- ND - Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).
- NR/NA - Not Reported / Not Available
- dry - Sample results reported on a Dry Weight Basis. Results and Reporting Limits have been corrected for Percent Dry Weight.

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue 1100 112th Avenue NE, Suite 400 Bellevue, WA/USA 98004-4504	Project Name: WSDOT SR 520 - Pontoon Sites Project Number: 180171.AR.X7.02 Project Manager: Brian Tracy	Report Created: 01/26/09 09:59
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- wet - Sample results and reporting limits reported on a Wet Weight Basis (as received). Results with neither 'wet' nor 'dry' are reported on a Wet Weight Basis.
- RPD - RELATIVE PERCENT DIFFERENCE (RPDs calculated using Results, not Percent Recoveries).
- MRL - METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.
- MDL* - METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. *MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated Results.
- Dil - Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.
- Reporting Limits - Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.
- Electronic Signature - Electronic Signature added in accordance with TestAmerica's *Electronic Reporting and Electronic Signatures Policy*. Application of electronic signature indicates that the report has been reviewed and approved for release by the laboratory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

11730 North Creek Pkwy N Suite 400, Bothell, WA 98011-8244
 425-420-9200 FAX 420-9210
 11922 E. First Ave, Spokane, WA 99206-5302
 509-924-9200 FAX 924-9290
 9405 SW Nimbus Ave Beaverton, OR 97008-7145
 503-906-9200 FAX 906-9210
 2000 W International Airport Rd Ste A10, Anchorage, AK 99502 1119
 907-563-9200 FAX 563-9210

CHAIN OF CUSTODY REPORT

Work Order #: **BR10100**

CLIENT: CHRM Hill		INVOICE TO:	
REPORT TO: 1100 112th Ave. NE Bellevue, WA 98004		PRESERVATIVE:	
PHONE: 425-453-5000 FAX:		P.O. NUMBER:	
PROJECT NAME: WS DOT SR 520 - Random S14		REQUESTED ANALYSES:	
PROJECT NUMBER: 180171.AR.X7 0Z		<input checked="" type="checkbox"/> VOC (8160) <input checked="" type="checkbox"/> PCBs (8180) <input checked="" type="checkbox"/> PAHs (8170-8175) <input checked="" type="checkbox"/> PCBs (8190)	
SAMPLED BY: Brian Tracy / Nichole Baden		OTHER: <input type="checkbox"/> Specify:	
CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	* Turnaround Requested (at least standard two, in our Rush Charge).	
1. AM-SB-1-1.0-2.0	12-15-09 / 1240	Matrix (W, S, O)	# OF COUNT
2. AM-SB-1-4.0-6.0	1300	S	4
3. AM-W-1	1330	S	4
4. AM-SB-2-1.0-2.0	1423	W	9
5. AM-SB-2-4.0-6.0	1440	S	4
6. AM-SB-3-0.0-1.0	1515	S	4
7. AM-SB-3-4.0-5.0	1520	S	4
8. AM-SB-7-1.5-3.0	1540	S	4
9. AM-SB-7-6.0-7.0	1555	S	4
10. AM-SB-10-0.0-3.0	1620	S	4
RELEASED BY: Brian Tracy	DATE: 12/18/09	RECEIVED BY: Roger Hays	DATE: 12-19-09
PRINT NAME: Brian Tracy	TIME: 0845	PRINT NAME: Dwayne Hays	TIME: 0845
RELEASED BY:	DATE:	RECEIVED BY:	DATE:
PRINT NAME:	TIME:	PRINT NAME:	TIME:
ADDITIONAL REMARKS:	FIRM: Test America		
Run silica gel cleanup for MWH-Dx analysis (apply to entire COC)	FIRM:		
	TEMP: 5.1	PAGE 1 OF 7	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

11720 North Creek Pkwy N Suite 400, Bothell, WA 98011-8244
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 11922 E. First Ave. Spokane, WA 99206-5302
 509-924-9200 FAX: 924-9290
 9405 SW Nimbus Ave. Beaverton, OR 97008-7145
 503-966-9200 FAX: 966-9210
 2000 W International Airport Rd Ste. A10, Anchorage, AK 99502-1119
 907-563-9200 FAX: 563-9210

CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT: CH2M Hill	INVOICE TO:	TURNAROUND REQUEST in Business Days *				
REPORT TO: ADDRESS		<input type="checkbox"/> 10 <input type="checkbox"/> 7 <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1				
PHONE: 425-453-5660 FAX:		<input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1				
PROJECT NAME: WSDOT SR 520 Ponton Project		Ozone & Inorganic Analyses Pesticide Hydrocarbon Analyses				
PROJECT NUMBER: 180171.AR.X7.02		OTHER Specify: * Turnaround Request less than standard may show Rush Charges.				
SAMPLED BY: Brian Tracy / Nichole Baden						
CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	REQUESTED ANALYSES	MATRIX (W, S, O)	# OF CONT.	LOCATION/ COMMENTS	TA WORD
1. AM-SB-10-10.0-11.0	12-15-08 / 1632	PCBS (8082) PCRA (8270) PHH (8260) VOC (8260) METH-S METH-D	X	4		S
2. AM-SB-11-1.0-2.0	12-16-08 / 0810		X	4		S
3. AM-SB-11-4.0-6.0	/ 0822		X	4		S
4. AM-W-11	/ 0845		X	8		W
5. AM-SB-8-1.0-2.0	/ 0947		X	4		S
6. AM-SB-8-8.0-10.0	/ 1000		X	4		S
7. AM-SB-6-1.0-2.0	/ 1029		X	4		S
8. AM-SB-6-6.0-8.0	/ 1035		X	4		S
9. AM-W-6	/ 1100		X	8		W
10. AM-SB-5-1.0-2.0	/ 1135		X	4		S
RELEASED BY: <i>[Signature]</i>	DATE: 12/19/08	RECEIVED BY: <i>[Signature]</i>	DATE: 12/19/08	FIRM: Test America	DATE: 12/19/08	
PRINT NAME: Brian Tracy	TIME: 0845	PRINT NAME: Duane Mays	TIME: 0845	FIRM: Test America	TIME: 0845	
RELEASED BY:	DATE:	RECEIVED BY:	DATE:	FIRM:	DATE:	
PRINT NAME:	TIME:	PRINT NAME:	TIME:	FIRM:	TIME:	
ADDITIONAL REMARKS:						

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

11720 North Creek Pkwy N Suite 400, Bothell, WA 98011-8244
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425-420-9200 FAX 420-9210
 509-924-9200 FAX 924-9290
 503-906-9300 FAX 906-9210
 907-563-9300 FAX 563-9210

CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT: CH2M Hill		INVOICE TO:		TURNAROUND REQUEST In Business Days*	
REPORT TO: ADDRESS:		PRESERVATIVE:		<input checked="" type="checkbox"/> 7 <input checked="" type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 Organic & Inorganic Analyses Petroleum Hydrocarbon Analysis <input checked="" type="checkbox"/> 4 <input checked="" type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 OTHER: _____ * Turnaround Requests less than standard may incur Rush Charges.	
PHONE: 425-453-5080 FAX:		RO NUMBER:		MATRIX (W, S, O)	
PROJECT NAME: WSDOT SR520: Eastern Project		REQUESTED ANALYSES:		LOCATION/ COMMENTS	
PROJECT NUMBER: 180171.M.X7.02		METALS (8270) PCBs (8082) VOCs (8260) METALS (8270)		TA WO ID	
SAMPLED BY: Brian Tracy / Nichole Baden		SAMPLING DATE/TIME		S 4 S 4 W 8 W 10 S 4 S 4 W 8 S 4 S 4	
1. ALY-SB-11-10-2.0		12-16-08 / 1615			
2. ALY-SB-11-30-4.0		/ 1623			
3. ALY-W-11		/ 1650			
4. AM-11-12		12-16-08 / 1455			
5. ALY-SB-3-10-7.0		12-17-08 / 0802			
6. ALY-SB-3-30-4.0		/ 0810			
7. ALY-W-3		/ 0840			
8. ALY-SB-9-10-2.0		/ 0925			
9. ALY-SB-9-7-0-8.0		/ 0935			
10. ALY-SB-12-10-2.0		/ 0955			
RELEASED BY: Brian Tracy		DATE: 12/18/08		RECEIVED BY: Brian Tracy	
FIRM: CH2M Hill		TIME: 0845		FIRM: TestAmerica	
RELEASED BY:		DATE:		DATE:	
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TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

11720 North Creek Pkwy N Suite 400, Bimbell, WA 98011-8244
 425-420-9280 FAX 420-9210
 11922 E. First Ave. Spokane, WA 99216-5302
 509-924-9200 FAX 924-9290
 9405 SW Nimbus Ave. Beaverton, OR 97008-7145
 503-906-9200 FAX 906-9210
 2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119
 907-463-9200 FAX 563-9210

CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT: <u>CR2M Hill</u>		INVOICE TO:		TURNAROUND REQUEST		
REPORT TO:		PRESERVATIVE:		in Business Days *		
ADDRESS:		REQUESTED ANALYSES:		Organic & Inorganic Analyses		
PHONE: <u>425-453-5100</u> FAX:		MATRIX (W, S, O):		<input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input checked="" type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/> 11 <input type="checkbox"/> 12		
PROJECT NAME: <u>WSDOT: SR 580 Pontoon SAS</u>		I.O. NUMBER:		<input type="checkbox"/> OTHER Specify:		
PROJECT NUMBER: <u>180171.AK.X7.02</u>		DATE: <u>12/18/08</u>		* Turnaround Request less than standard may incur Rush Charges.		
SAMPLED BY: <u>Brian Tracy / Michele Bidon</u>		TIME: <u>0845</u>		Location/Comments:		
CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	MMTHX	MMTHX	# OF CONT.	LOCATION/COMMENTS	TA W/O ID
ALY-SB-12-65-7.5	12-17-08 / 1000	X	X	4		
ALY-W-12	/ 1030	X	X	10		
ALY-SB-8-10-2.0	/ 1102	X	X	4		
ALY-SB-8-3.0-4.0	/ 1110	X	X	4		
ALY-SB-7-10-2.0	/ 1135	X	X	4		
ALY-SB-7-10.0-11.0	/ 1152	X	X	4		
ALY-SB-7-10-10.0 <u>Asph</u>	/ 1152	X	X	4		
ALY-W-7	/ 1220	X	X	8		
ALY-SB-6-10-2.0	/ 1245	X	X	4		
ALY-SB-6-30-1.0	/ 1255	X	X	4		

RECEIVED BY: Dwight Hays
 PRINT NAME: Dwight Hays
 RECEIVED BY: Dwight Hays
 PRINT NAME: Dwight Hays

DATE: 12/18/08
 FIRM: Test America
 TIME: 0845
 DATE: 12/18/08
 FIRM: Test America
 TIME: 0845

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

11720 North Creek Pkwy N Suite 400, Bothell, WA 98011-8244
 11922 E. First Ave., Spokane, WA 99206-5302
 9405 SW Nimbus Ave., Beaverton, OR 97008-7145
 2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119

425-420-9200 FAX 420-4210
 509-934-9200 FAX 924-9290
 503-906-9200 FAX 906-9210
 907-563-9200 FAX 563-9210

CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT: CH2M Hill		INVOICE TO:		TURNAROUND REQUEST	
REPRINT TO:		ADDRESS:		In Business Days: *	
PHONE: 425-453-5000 FAX:		PROJECT NAME: WSDOT SR 520 - Pontoon Project		<input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/> 11 <input type="checkbox"/> 12 <input type="checkbox"/> 13 <input type="checkbox"/> 14 <input type="checkbox"/> 15 <input type="checkbox"/> 16 <input type="checkbox"/> 17 <input type="checkbox"/> 18 <input type="checkbox"/> 19 <input type="checkbox"/> 20 <input type="checkbox"/> 21 <input type="checkbox"/> 22 <input type="checkbox"/> 23 <input type="checkbox"/> 24 <input type="checkbox"/> 25 <input type="checkbox"/> 26 <input type="checkbox"/> 27 <input type="checkbox"/> 28 <input type="checkbox"/> 29 <input type="checkbox"/> 30 <input type="checkbox"/> 31 <input type="checkbox"/> 32 <input type="checkbox"/> 33 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TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

11720 North Creek Pkwy N Suite 400, Bobbell, WA 98011-8244
 11922 E. First Ave, Spokane, WA 99206-5302
 9405 SW Nimbus Ave, Beaverton, OR 97008-7145
 2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119

425-420-9200 FAX 420-9210
 509-924-9200 FAX 924-9200
 503-906-9200 FAX 906-9210
 907-563-9200 FAX 563-9210

CHAIN OF CUSTODY REPORT

Work Order #: _____

CLIENT: CH2M Hill		INVOICE TO:		TURNAROUND REQUEST	
REPORT TO ADDRESS:		PRESERVATIVE:		In Business Days *	
PHONE: 425-457-5000 FAX:		REQUESTED ANALYSES:		<input checked="" type="checkbox"/> 7 <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <1 <input checked="" type="checkbox"/> 8 <input type="checkbox"/> 6 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <1 <input checked="" type="checkbox"/> 9 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <1	
PROJECT NAME: WSDOT 2520 Penton Project		PO NUMBER:		Organic & Inorganic Analyses Petroleum Hydrocarbon Analyses	
PROJECT NUMBER: 180171 AR.X7.02		DATE:		OTHER: _____ * Turnaround Request Less than standard may incur rush charges.	
SAMPLER BY: Brian Tracy / Nichole Bolton		SAMPLING DATE/TIME:		MATRIX (W, S, O) LOCATION/ COMMENTS TA WO ID	
1. AX-5B-5-30-40		12-17-08 / 1610		S 4	
2. Trip Blanks				W 4	
3. Trip Blanks				S 4	
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
RELEASED BY: Brian Tracy		DATE: 12/18/08		DATE: 12/18/08	
PRINT NAME: Brian Tracy		FIRM: CH2M Hill		FIRM: TestAmerica	
RECEIVED BY: _____		DATE: _____		DATE: _____	
PRINT NAME: _____		FIRM: _____		FIRM: _____	
RECEIVED BY: _____		DATE: _____		DATE: _____	
PRINT NAME: _____		FIRM: _____		FIRM: _____	
ADDITIONAL REMARKS:		TEMP:		TIME	
				PAGE 7 of 7	

TAT: _____

Paperwork to PM - Date: _____ Time: _____

Non-Conformances?

Page Time & Initials: _____

Circle Y or N

(If Y, see other side)

TEST AMERICA SAMPLE RECEIPT CHECKLIST

Received By:
(applies to temp at receipt)

Logged-in By:

Unpacked/Labeled By:

Cooler ID: 324, 392, 364, 357, 301, 293, 355

Date: 12-18-08

Date: 12/18

Date: 12-18-08

Work Order No. BR10200

Time: 0845

Time: 10:09

Time: 1200

Client: _____

Initials: DSH

Initials: HK
with the by C6

Initials: DSH

Project: _____

Container Type:

COC Seals:

Packing Material:

Cooler _____ Ship Container _____ Sign By _____
 Box _____ On Bottles _____ Date _____
 None/Other _____ None

Bubble Bags _____ Styrofoam _____
 Foam Packs _____
 None/Other _____

Refrigerant:

Received Via: Bill#

Gel Ice Pack _____
 Loose Ice _____
 None/Other _____

Fed Ex Client _____
 UPS _____ TA Courier _____
 DHL _____ Mid Valley _____
 Senvoy _____ TDP _____
 GS _____ Other _____

Cooler Temperature (IR): _____ °C Plastic Glass (Frozen filters, Tedlars and aqueous Metals exempt)

Temperature Blank? 1.7 °C or NA ^{43, 1.9, 4.9} (circle one) 5.7, 3.7, 5.5

Trip Blank? Y or N or NA

BP, OPLC, ARCO-Temperature monitoring every 15 minutes:

(initial/date/time): _____

Comments: _____

Sample Containers:

ID

ID

Intact? Y or N _____
Provided by TA? Y or N _____
Correct Type? Y or N _____
#Containers match COC? Y or N _____
IDs/time/date match COC? Y or N _____
Hold Times in hold? Y or N _____

Metals Preserved? Y or N or NA _____
Client QAPP Preserved? Y or N or NA _____
Adequate Volume? Y or N _____
(for tests requested)
Water VOAs: Headspace? Y or N or NA _____
Comments: _____

PROJECT MANAGEMENT

Is the Chain of Custody complete?

Y or N if N, circle the items that were incomplete

Comments/Problems _____

Total access set up?
Has client been contacted regarding non-conformances?

Y or N
Y or N .if Y, _____ / _____
Date Time

PM Initials: _____ Date: _____ Time: _____

January 20, 2009

Brian Tracy
CH2M Hill - Bellevue
1100 112th Avenue NE, Suite 400
Bellevue, WA/USA 98004-4504

RE: WSDOT SR 520 - Pontoon Sites

Enclosed are the results of analyses for samples received by the laboratory on 12/18/08 08:45.
The following list is a summary of the Work Orders contained in this report, generated on 01/20/09
17:02.

If you have any questions concerning this report, please feel free to contact me.

<u>Work Order</u>	<u>Project</u>	<u>ProjectNumber</u>
BRL0201	WSDOT SR 520 - Pontoon Sit	180171.AR.X7.02

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.



CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/20/09 17:02

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AM-SB-7-1.5-3.0	BRL0201-01	Soil	12/15/08 15:40	12/18/08 08:45
AM-SB-10-0.0-3.0	BRL0201-02	Soil	12/15/08 16:20	12/18/08 08:45
AM-SB-11-1.0-2.0	BRL0201-03	Soil	12/16/08 08:10	12/18/08 08:45
ALY-SB-9-1.0-2.0	BRL0201-04	Soil	12/17/08 09:25	12/18/08 08:45
ALY-SB-12-1.0-2.0	BRL0201-05	Soil	12/17/08 09:55	12/18/08 08:45
ALY-SB-8-1.0-2.0	BRL0201-06	Soil	12/17/08 11:02	12/18/08 08:45

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

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CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
Bellevue, WA/USA 98004-4504

Project Name:

WSDOT SR 520 - Pontoon Sites

Project Number:

180171.AR.X7.02

Project Manager:

Brian Tracy

Report Created:

01/20/09 17:02

Analytical Case Narrative

TestAmerica - Seattle, WA

BRL0201

1613B, Dioxins/Furans with Totals

Samples: BRL0201-04 and BRL0201-06

Due to matrix interferences, the detection limits of some isomers have been elevated and are reported with a "G" flag.

Sample BRL0201-04:

This sample has matrix interference masking some of the early eluting peaks that are typically included in the Total TCDF and Total TCDD results. The analytical results are reported from a 20x dilution that was analyzed on January 11, 2009, at 20:34. The results for these Totals should be considered a minimum value.

Sample: BRL0201-06

All of the internal standard recoveries are below the method recommended criteria. Data quality is not considered affected if the internal standard signal-to-noise ratio is greater than 10:1, which is achieved for all of the internal standards in this sample and there is no adverse impact on data quality.

The results for 2,3,7,8-TCDD and 2,3,7,8-TCDF are reported from the confirmation data that was analyzed on January 12, 2009 at 8:14.

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

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CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/20/09 17:02

ASTM D 2216-90

TestAmerica West Sacramento

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0201-01 (AM-SB-7-1.5-3.0)										
		Soil								Sampled: 12/15/08 15:40
Percent Moisture	ASTM D 2216-90	25.4	----	0.10	%	1x	8364224	12/29/08 00:00	12/30/08 09:03	
BRL0201-02 (AM-SB-10-0.0-3.0)										
		Soil								Sampled: 12/15/08 16:20
Percent Moisture	ASTM D 2216-90	12.8	----	0.10	%	1x	8364224	12/29/08 00:00	12/30/08 09:03	
BRL0201-03 (AM-SB-11-1.0-2.0)										
		Soil								Sampled: 12/16/08 08:10
Percent Moisture	ASTM D 2216-90	14.4	----	0.10	%	1x	8364224	12/29/08 00:00	12/30/08 09:03	
BRL0201-04 (ALY-SB-9-1.0-2.0)										
		Soil								Sampled: 12/17/08 09:25
Percent Moisture	ASTM D 2216-90	26.2	----	0.10	%	1x	8364224	12/29/08 00:00	12/30/08 09:03	
BRL0201-05 (ALY-SB-12-1.0-2.0)										
		Soil								Sampled: 12/17/08 09:55
Percent Moisture	ASTM D 2216-90	9.2	----	0.10	%	1x	8364224	12/29/08 00:00	12/30/08 09:04	
BRL0201-06 (ALY-SB-8-1.0-2.0)										
		Soil								Sampled: 12/17/08 11:02
Percent Moisture	ASTM D 2216-90	12.4	----	0.10	%	1x	8364224	12/29/08 00:00	12/30/08 09:04	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

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CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/20/09 17:02

EPA-5 1613B
 TestAmerica West Sacramento

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
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BRL0201-01 (AM-SB-7-1.5-3.0)

Soil **Sampled: 12/15/08 15:40**

1,2,3,4,6,7,8-HpCDD	EPA-5 1613B	ND	----	0.15	pg/g dry	1x	9002205	01/08/09 17:45	01/10/09 02:55	
Total TCDF	"	ND	----	0.82	"	"	"	"	"	
Total HpCDF	"	ND	----	0.10	"	"	"	"	"	
1,2,3,7,8,9-HxCDD	"	ND	----	0.17	"	"	"	"	"	
Total HpCDD	"	ND	----	0.23	"	"	"	"	"	
1,2,3,4,6,7,8-HpCDF	"	ND	----	0.10	"	"	"	"	"	
1,2,3,4,7,8-HxCDD	"	ND	----	0.20	"	"	"	"	"	
1,2,3,4,7,8,9-HpCDF	"	ND	----	0.087	"	"	"	"	"	
1,2,3,6,7,8-HxCDD	"	ND	----	0.17	"	"	"	"	"	
1,2,3,4,7,8-HxCDF	"	ND	----	0.19	"	"	"	"	"	
1,2,3,6,7,8-HxCDF	"	ND	----	0.17	"	"	"	"	"	
Total HxCDD	"	ND	----	0.20	"	"	"	"	"	
1,2,3,7,8,9-HxCDF	"	ND	----	0.16	"	"	"	"	"	
Total HxCDF	"	ND	----	0.19	"	"	"	"	"	
OCDD	"	ND	----	1.0	"	"	"	"	"	
OCDF	"	ND	----	0.35	"	"	"	"	"	
1,2,3,7,8-PeCDD	"	ND	----	0.32	"	"	"	"	"	
2,3,4,6,7,8-HxCDF	"	ND	----	0.16	"	"	"	"	"	
Total PeCDD	"	ND	----	0.32	"	"	"	"	"	
1,2,3,7,8-PeCDF	"	ND	----	0.19	"	"	"	"	"	
2,3,4,7,8-PeCDF	"	ND	----	0.20	"	"	"	"	"	
2,3,7,8-TCDF	"	ND	----	0.82	"	"	"	"	"	
Total PeCDF	"	ND	----	0.70	"	"	"	"	"	
2,3,7,8-TCDD	"	ND	----	0.38	"	"	"	"	"	
Total TCDD	"	ND	----	0.38	"	"	"	"	"	

<i>Surrogate(s):</i>	<i>13C-1,2,3,4,6,7,8-HpCDF</i>	<i>82%</i>	<i>28 - 143 %</i>	<i>"</i>	<i>"</i>
	<i>13C-1,2,3,4,6,7,8-HpCDD</i>	<i>82%</i>	<i>23 - 140 %</i>	<i>"</i>	<i>"</i>
	<i>13C-1,2,3,4,7,8,9-HpCDF</i>	<i>91%</i>	<i>26 - 138 %</i>	<i>"</i>	<i>"</i>
	<i>13C-1,2,3,4,7,8-HxCDD</i>	<i>80%</i>	<i>32 - 141 %</i>	<i>"</i>	<i>"</i>
	<i>13C-1,2,3,6,7,8-HxCDD</i>	<i>84%</i>	<i>28 - 130 %</i>	<i>"</i>	<i>"</i>
	<i>13C-1,2,3,4,7,8-HxCDF</i>	<i>81%</i>	<i>26 - 152 %</i>	<i>"</i>	<i>"</i>
	<i>13C-1,2,3,6,7,8-HxCDF</i>	<i>85%</i>	<i>26 - 123 %</i>	<i>"</i>	<i>"</i>
	<i>13C-OCDD</i>	<i>88%</i>	<i>17 - 157 %</i>	<i>"</i>	<i>"</i>
	<i>13C-1,2,3,7,8,9-HxCDF</i>	<i>90%</i>	<i>29 - 147 %</i>	<i>"</i>	<i>"</i>
	<i>13C-2,3,4,6,7,8-HxCDF</i>	<i>84%</i>	<i>28 - 136 %</i>	<i>"</i>	<i>"</i>
	<i>13C-1,2,3,7,8-PeCDD</i>	<i>83%</i>	<i>25 - 181 %</i>	<i>"</i>	<i>"</i>
	<i>13C-1,2,3,7,8-PeCDF</i>	<i>86%</i>	<i>24 - 185 %</i>	<i>"</i>	<i>"</i>
	<i>13C-2,3,4,7,8-PeCDF</i>	<i>86%</i>	<i>21 - 178 %</i>	<i>"</i>	<i>"</i>
	<i>13C-2,3,7,8-TCDF</i>	<i>81%</i>	<i>24 - 169 %</i>	<i>"</i>	<i>"</i>
	<i>13C-2,3,7,8-TCDD</i>	<i>84%</i>	<i>25 - 164 %</i>	<i>"</i>	<i>"</i>
	<i>37Cl4-2,3,7,8-TCDD</i>	<i>85%</i>	<i>35 - 197 %</i>	<i>"</i>	<i>"</i>

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

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CH2M Hill - Bellevue	Project Name: WSDOT SR 520 - Pontoon Sites	
1100 112th Avenue NE, Suite 400	Project Number: 180171.AR.X7.02	Report Created:
Bellevue, WA/USA 98004-4504	Project Manager: Brian Tracy	01/20/09 17:02

EPA-5 1613B
 TestAmerica West Sacramento

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
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BRL0201-02 (AM-SB-10-0-0-3.0)		Soil		Sampled: 12/15/08 16:20						
1,2,3,4,6,7,8-HpCDD	EPA-5 1613B	ND	----	0.63	pg/g dry	1x	9002205	01/08/09 17:45	01/10/09 03:39	
Total TCDF	"	ND	----	0.55	"	"	"	"	"	
Total HpCDF	"	ND	----	0.64	"	"	"	"	"	
1,2,3,7,8,9-HxCDD	"	ND	----	0.14	"	"	"	"	"	
Total HpCDD	"	ND	----	0.65	"	"	"	"	"	
1,2,3,4,6,7,8-HpCDF	"	ND	----	0.40	"	"	"	"	"	
1,2,3,4,7,8-HxCDD	"	ND	----	0.16	"	"	"	"	"	
1,2,3,4,7,8,9-HpCDF	"	ND	----	0.11	"	"	"	"	"	
1,2,3,6,7,8-HxCDD	"	ND	----	0.15	"	"	"	"	"	
1,2,3,4,7,8-HxCDF	"	ND	----	0.14	"	"	"	"	"	
1,2,3,6,7,8-HxCDF	"	ND	----	0.14	"	"	"	"	"	
Total HxCDD	"	ND	----	0.16	"	"	"	"	"	
1,2,3,7,8,9-HxCDF	"	ND	----	0.14	"	"	"	"	"	
Total HxCDF	"	ND	----	0.14	"	"	"	"	"	
OCDD	"	7.6	----	0.30	"	"	"	"	"	1J
OCDF	"	ND	----	0.84	"	"	"	"	"	
1,2,3,7,8-PeCDD	"	ND	----	0.31	"	"	"	"	"	
2,3,4,6,7,8-HxCDF	"	ND	----	0.11	"	"	"	"	"	
Total PeCDD	"	ND	----	0.31	"	"	"	"	"	
1,2,3,7,8-PeCDF	"	ND	----	0.15	"	"	"	"	"	
2,3,4,7,8-PeCDF	"	ND	----	0.16	"	"	"	"	"	
2,3,7,8-TCDF	"	ND	----	0.55	"	"	"	"	"	
Total PeCDF	"	ND	----	0.54	"	"	"	"	"	
2,3,7,8-TCDD	"	ND	----	0.36	"	"	"	"	"	
Total TCDD	"	ND	----	0.36	"	"	"	"	"	

Surrogate(s)	13C-1,2,3,4,6,7,8-HpCDF	89%	28 - 143 %	"	"
	13C-1,2,3,4,6,7,8-HpCDD	88%	23 - 140 %	"	"
	13C-1,2,3,4,7,8,9-HpCDF	93%	26 - 138 %	"	"
	13C-1,2,3,4,7,8-HxCDD	80%	32 - 141 %	"	"
	13C-1,2,3,6,7,8-HxCDD	87%	28 - 130 %	"	"
	13C-1,2,3,4,7,8-HxCDF	82%	26 - 152 %	"	"
	13C-1,2,3,6,7,8-HxCDF	86%	26 - 123 %	"	"
	13C-OCDD	82%	17 - 157 %	"	"
	13C-1,2,3,7,8,9-HxCDF	91%	29 - 147 %	"	"
	13C-2,3,4,6,7,8-HxCDF	88%	28 - 136 %	"	"
	13C-1,2,3,7,8-PeCDD	87%	25 - 181 %	"	"
	13C-1,2,3,7,8-PeCDF	89%	24 - 185 %	"	"
	13C-2,3,4,7,8-PeCDF	92%	21 - 178 %	"	"
	13C-2,3,7,8-TCDF	84%	24 - 169 %	"	"
	13C-2,3,7,8-TCDD	83%	25 - 164 %	"	"
	37Cl4-2,3,7,8-TCDD	85%	35 - 197 %	"	"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

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CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/20/09 17:02

EPA-5 1613B

TestAmerica West Sacramento

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0201-03 (AM-SB-11-1.0-2.0)										
		Soil					Sampled: 12/16/08 08:10			
1,2,3,4,6,7,8-HpCDD	EPA-5 1613B	3.9	----	0.23	pg/g dry	1x	9002205	01/08/09 17:45	01/10/09 04:23	1J
Total TCDF	"	ND	----	0.47	"	"	"	"	"	
Total HpCDF	"	ND	----	0.39	"	"	"	"	"	
1,2,3,7,8,9-HxCDD	"	ND	----	1.7	"	"	"	"	"	
Total HpCDD	"	12	----	0.23	"	"	"	"	"	
1,2,3,4,6,7,8-HpCDF	"	ND	----	0.39	"	"	"	"	"	
1,2,3,4,7,8-HxCDD	"	ND	----	0.69	"	"	"	"	"	
1,2,3,4,7,8,9-HpCDF	"	ND	----	0.088	"	"	"	"	"	
1,2,3,6,7,8-HxCDD	"	ND	----	0.54	"	"	"	"	"	
1,2,3,4,7,8-HxCDF	"	ND	----	0.15	"	"	"	"	"	
1,2,3,6,7,8-HxCDF	"	ND	----	0.15	"	"	"	"	"	
Total HxCDD	"	14	----	0.18	"	"	"	"	"	
1,2,3,7,8,9-HxCDF	"	ND	----	0.15	"	"	"	"	"	
Total HxCDF	"	ND	----	0.15	"	"	"	"	"	
OCDD	"	22	----	0.43	"	"	"	"	"	
OCDF	"	ND	----	0.44	"	"	"	"	"	
1,2,3,7,8-PeCDD	"	ND	----	0.95	"	"	"	"	"	
2,3,4,6,7,8-HxCDF	"	ND	----	0.14	"	"	"	"	"	
Total PeCDD	"	8.0	----	1.7	"	"	"	"	"	
1,2,3,7,8-PeCDF	"	ND	----	0.18	"	"	"	"	"	
2,3,4,7,8-PeCDF	"	ND	----	0.19	"	"	"	"	"	
2,3,7,8-TCDF	"	ND	----	0.47	"	"	"	"	"	
Total PeCDF	"	ND	----	0.47	"	"	"	"	"	
2,3,7,8-TCDD	"	6.5	----	0.36	"	"	"	"	"	
Total TCDD	"	13	----	0.36	"	"	"	"	"	

Surrogate(s):	13C-1,2,3,4,6,7,8-HpCDF	91%	28 - 143 %	"	"
	13C-1,2,3,4,6,7,8-HpCDD	89%	23 - 140 %	"	"
	13C-1,2,3,4,7,8,9-HpCDF	96%	26 - 138 %	"	"
	13C-1,2,3,4,7,8-HxCDD	82%	32 - 141 %	"	"
	13C-1,2,3,6,7,8-HxCDD	88%	28 - 130 %	"	"
	13C-1,2,3,4,7,8-HxCDF	85%	26 - 152 %	"	"
	13C-1,2,3,6,7,8-HxCDF	92%	26 - 123 %	"	"
	13C-OCDD	78%	17 - 157 %	"	"
	13C-1,2,3,7,8,9-HxCDF	92%	29 - 147 %	"	"
	13C-2,3,4,6,7,8-HxCDF	87%	28 - 136 %	"	"
	13C-1,2,3,7,8-PeCDD	87%	25 - 181 %	"	"
	13C-1,2,3,7,8-PeCDF	89%	24 - 185 %	"	"
	13C-2,3,4,7,8-PeCDF	92%	21 - 178 %	"	"
	13C-2,3,7,8-TCDF	85%	24 - 169 %	"	"
	13C-2,3,7,8-TCDD	89%	25 - 164 %	"	"
	37Cl4-2,3,7,8-TCDD	92%	35 - 197 %	"	"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

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CH2M Hill - Bellevue	Project Name: WSDOT SR 520 - Pontoon Sites	Report Created:
1100 112th Avenue NE, Suite 400	Project Number: 180171.AR.X7.02	01/20/09 17:02
Bellevue, WA/USA 98004-4504	Project Manager: Brian Tracy	

EPA-5 1613B
 TestAmerica West Sacramento

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
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BRL0201-04 (ALY-SB-9-1.0-2.0)		Soil		Sampled: 12/17/08 09:25						
1,2,3,4,6,7,8-HpCDD	EPA-5 1613B	3.5	----	0.24	pg/g dry	1x	9002205	01/08/09 17:45	01/10/09 05:07	1J
Total TCDF	"	ND	----	17	"	"	"	"	"	1G, 1H, 1D
Total HpCDF	"	ND	----	1.3	"	"	"	"	"	
1,2,3,7,8,9-HxCDD	"	ND	----	0.37	"	"	"	"	"	
Total HpCDD	"	7.8	----	0.24	"	"	"	"	"	
1,2,3,4,6,7,8-HpCDF	"	ND	----	0.80	"	"	"	"	"	
1,2,3,4,7,8-HxCDD	"	ND	----	0.16	"	"	"	"	"	
1,2,3,4,7,8,9-HpCDF	"	ND	----	0.13	"	"	"	"	"	
1,2,3,6,7,8-HxCDD	"	ND	----	0.15	"	"	"	"	"	
1,2,3,4,7,8-HxCDF	"	ND	----	0.13	"	"	"	"	"	
1,2,3,6,7,8-HxCDF	"	ND	----	0.13	"	"	"	"	"	
Total HxCDD	"	ND	----	0.83	"	"	"	"	"	
1,2,3,7,8,9-HxCDF	"	ND	----	0.14	"	"	"	"	"	
Total HxCDF	"	ND	----	0.32	"	"	"	"	"	
OCDD	"	27	----	0.27	"	"	"	"	"	
OCDF	"	ND	----	1.2	"	"	"	"	"	
1,2,3,7,8-PeCDD	"	ND	----	0.27	"	"	"	"	"	
2,3,4,6,7,8-HxCDF	"	ND	----	0.13	"	"	"	"	"	
Total PeCDD	"	ND	----	0.28	"	"	"	"	"	
1,2,3,7,8-PeCDF	"	ND	----	0.18	"	"	"	"	"	
2,3,4,7,8-PeCDF	"	ND	----	0.20	"	"	"	"	"	
2,3,7,8-TCDF	"	ND	----	4.5	"	"	"	"	"	1G
Total PeCDF	"	ND	----	2.4	"	"	"	"	"	
2,3,7,8-TCDD	"	ND	----	0.79	"	"	"	"	"	1G
Total TCDD	"	ND	----	7.4	"	"	"	"	"	1G, 1H, 1D

Surrogate(s):	13C-1,2,3,4,6,7,8-HpCDF	66%	28 - 143 %	"	"
	13C-1,2,3,4,6,7,8-HpCDD	91%	23 - 140 %	"	"
	13C-1,2,3,4,7,8,9-HpCDF	97%	26 - 138 %	"	"
	13C-1,2,3,4,7,8-HxCDD	92%	32 - 141 %	"	"
	13C-1,2,3,6,7,8-HxCDD	89%	28 - 130 %	"	"
	13C-1,2,3,4,7,8-HxCDF	93%	26 - 152 %	"	"
	13C-1,2,3,6,7,8-HxCDF	89%	26 - 123 %	"	"
	13C-OCDD	91%	17 - 157 %	"	"
	13C-1,2,3,7,8,9-HxCDF	97%	29 - 147 %	"	"
	13C-2,3,4,6,7,8-HxCDF	91%	28 - 136 %	"	"
	13C-1,2,3,7,8-PeCDD	103%	25 - 181 %	"	"
	13C-1,2,3,7,8-PeCDF	102%	24 - 185 %	"	"
	13C-2,3,4,7,8-PeCDF	103%	21 - 178 %	"	"
	13C-2,3,7,8-TCDF	96%	24 - 169 %	"	"
	13C-2,3,7,8-TCDD	101%	25 - 164 %	"	"
	37Cl4-2,3,7,8-TCDD	98%	35 - 197 %	"	"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

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CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 01/20/09 17:02

EPA-5 1613B
 TestAmerica West Sacramento

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
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BRL0201-05 (ALY-SB-12-1.0-2.0)

Soil **Sampled: 12/17/08 09:55**

1,2,3,4,6,7,8-HpCDD	EPA-5 1613B	ND	----	0.40	pg/g dry	1x	9002205	01/08/09 17:45	01/10/09 05:51	
Total TCDF	"	ND	----	0.42	"	"	"	"	"	
Total HpCDF	"	ND	----	0.31	"	"	"	"	"	
1,2,3,7,8,9-HxCDD	"	ND	----	0.12	"	"	"	"	"	
Total HpCDD	"	ND	----	0.46	"	"	"	"	"	
1,2,3,4,6,7,8-HpCDF	"	ND	----	0.20	"	"	"	"	"	
1,2,3,4,7,8-HxCDD	"	ND	----	0.13	"	"	"	"	"	
1,2,3,4,7,8,9-HpCDF	"	ND	----	0.072	"	"	"	"	"	
1,2,3,6,7,8-HxCDD	"	ND	----	0.12	"	"	"	"	"	
1,2,3,4,7,8-HxCDF	"	ND	----	0.11	"	"	"	"	"	
1,2,3,6,7,8-HxCDF	"	ND	----	0.11	"	"	"	"	"	
Total HxCDD	"	ND	----	0.20	"	"	"	"	"	
1,2,3,7,8,9-HxCDF	"	ND	----	0.10	"	"	"	"	"	
Total HxCDF	"	ND	----	0.11	"	"	"	"	"	
OCDD	"	ND	----	2.4	"	"	"	"	"	
OCDF	"	ND	----	0.36	"	"	"	"	"	
1,2,3,7,8-PeCDD	"	ND	----	0.26	"	"	"	"	"	
2,3,4,6,7,8-HxCDF	"	ND	----	0.10	"	"	"	"	"	
Total PeCDD	"	ND	----	0.26	"	"	"	"	"	
1,2,3,7,8-PeCDF	"	ND	----	0.13	"	"	"	"	"	
2,3,4,7,8-PeCDF	"	ND	----	0.15	"	"	"	"	"	
2,3,7,8-TCDF	"	ND	----	0.42	"	"	"	"	"	
Total PeCDF	"	ND	----	0.36	"	"	"	"	"	
2,3,7,8-TCDD	"	ND	----	0.24	"	"	"	"	"	
Total TCDD	"	ND	----	0.24	"	"	"	"	"	

Surrogate(s):	13C-1,2,3,4,6,7,8-HpCDF	82%		28 - 143 %	"					
	13C-1,2,3,4,6,7,8-HpCDD	83%		23 - 140 %	"					
	13C-1,2,3,4,7,8,9-HpCDF	87%		26 - 138 %	"					
	13C-1,2,3,4,7,8-HxCDD	78%		32 - 141 %	"					
	13C-1,2,3,6,7,8-HxCDD	85%		28 - 130 %	"					
	13C-1,2,3,4,7,8-HxCDF	83%		26 - 152 %	"					
	13C-1,2,3,6,7,8-HxCDF	80%		26 - 123 %	"					
	13C-OCDD	79%		17 - 157 %	"					
	13C-1,2,3,7,8,9-HxCDF	91%		29 - 147 %	"					
	13C-2,3,4,6,7,8-HxCDF	82%		28 - 136 %	"					
	13C-1,2,3,7,8-PeCDD	96%		25 - 181 %	"					
	13C-1,2,3,7,8-PeCDF	96%		24 - 185 %	"					
	13C-2,3,4,7,8-PeCDF	97%		21 - 178 %	"					
	13C-2,3,7,8-TCDF	84%		24 - 169 %	"					
	13C-2,3,7,8-TCDD	84%		25 - 164 %	"					
	37Cl4-2,3,7,8-TCDD	85%		35 - 197 %	"					

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

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CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

01/20/09 17:02

EPA-5 1613B
 TestAmerica West Sacramento

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRL0201-06 (ALY-SB-8-1.0-2.0)										
		Soil					Sampled: 12/17/08 11:02			
1,2,3,4,6,7,8-HpCDD	EPA-5 1613B	5.6	----	1.4	pg/g dry	1x	9002205	01/08/09 17:45	01/10/09 06:35	1J
Total TCDF	"	ND	----	10	"	"	"	"	"	1G
Total HpCDF	"	9.8	----	0.82	"	"	"	"	"	
1,2,3,7,8,9-HxCDD	"	3.3	----	1.1	"	"	"	"	"	1J
Total HpCDD	"	5.6	----	1.4	"	"	"	"	"	
1,2,3,4,6,7,8-HpCDF	"	6.4	----	0.69	"	"	"	"	"	
1,2,3,4,7,8-HxCDD	"	ND	----	2.2	"	"	"	"	"	
1,2,3,4,7,8,9-HpCDF	"	3.4	----	0.88	"	"	"	"	"	1J, 1JA
1,2,3,6,7,8-HxCDD	"	ND	----	2.6	"	"	"	"	"	
1,2,3,4,7,8-HxCDF	"	ND	----	2.6	"	"	"	"	"	
1,2,3,6,7,8-HxCDF	"	ND	----	2.6	"	"	"	"	"	
Total HxCDD	"	3.3	----	1.2	"	"	"	"	"	
1,2,3,7,8,9-HxCDF	"	ND	----	2.4	"	"	"	"	"	
Total HxCDF	"	3.0	----	2.6	"	"	"	"	"	
OCDD	"	28	----	3.0	"	"	"	"	"	
OCDF	"	13	----	2.3	"	"	"	"	"	1J
1,2,3,7,8-PeCDD	"	ND	----	2.2	"	"	"	"	"	
2,3,4,6,7,8-HxCDF	"	3.0	----	0.98	"	"	"	"	"	1J, 1JA
Total PeCDD	"	ND	----	2.2	"	"	"	"	"	
1,2,3,7,8-PeCDF	"	ND	----	1.5	"	"	"	"	"	
2,3,4,7,8-PeCDF	"	ND	----	2.0	"	"	"	"	"	
2,3,7,8-TCDF	"	ND	----	0.88	"	"	"	"	"	1H
Total PeCDF	"	ND	----	7.2	"	"	"	"	"	1G
2,3,7,8-TCDD	"	ND	----	0.70	"	"	"	"	"	1H
Total TCDD	"	ND	----	3.5	"	"	"	"	"	1G
<i>Surrogate(s):</i>										
	<i>13C-1,2,3,4,6,7,8-HpCDF</i>		<i>10%</i>		<i>28 - 143 %</i>	<i>"</i>			<i>"</i>	<i>1*</i>
	<i>13C-1,2,3,4,6,7,8-HpCDD</i>		<i>10%</i>		<i>23 - 140 %</i>	<i>"</i>			<i>"</i>	<i>1*</i>
	<i>13C-1,2,3,4,7,8,9-HpCDF</i>		<i>10%</i>		<i>26 - 138 %</i>	<i>"</i>			<i>"</i>	<i>1*</i>
	<i>13C-1,2,3,4,7,8-HxCDD</i>		<i>9.9%</i>		<i>32 - 141 %</i>	<i>"</i>			<i>"</i>	<i>1*</i>
	<i>13C-1,2,3,6,7,8-HxCDD</i>		<i>9.8%</i>		<i>28 - 130 %</i>	<i>"</i>			<i>"</i>	<i>1*</i>
	<i>13C-1,2,3,4,7,8-HxCDF</i>		<i>11%</i>		<i>26 - 152 %</i>	<i>"</i>			<i>"</i>	<i>1*</i>
	<i>13C-1,2,3,6,7,8-HxCDF</i>		<i>11%</i>		<i>26 - 123 %</i>	<i>"</i>			<i>"</i>	<i>1*</i>
	<i>13C-OCDD</i>		<i>9.5%</i>		<i>17 - 157 %</i>	<i>"</i>			<i>"</i>	<i>1*</i>
	<i>13C-1,2,3,7,8,9-HxCDF</i>		<i>12%</i>		<i>29 - 147 %</i>	<i>"</i>			<i>"</i>	<i>1*</i>
	<i>13C-2,3,4,6,7,8-HxCDF</i>		<i>11%</i>		<i>28 - 136 %</i>	<i>"</i>			<i>"</i>	<i>1*</i>
	<i>13C-1,2,3,7,8-PeCDD</i>		<i>11%</i>		<i>25 - 181 %</i>	<i>"</i>			<i>"</i>	<i>1*</i>
	<i>13C-1,2,3,7,8-PeCDF</i>		<i>12%</i>		<i>24 - 185 %</i>	<i>"</i>			<i>"</i>	<i>1*</i>
	<i>13C-2,3,4,7,8-PeCDF</i>		<i>12%</i>		<i>21 - 178 %</i>	<i>"</i>			<i>"</i>	<i>1*</i>
	<i>13C-2,3,7,8-TCDF</i>		<i>13%</i>		<i>24 - 169 %</i>	<i>"</i>			<i>"</i>	<i>1*</i>
	<i>13C-2,3,7,8-TCDD</i>		<i>14%</i>		<i>25 - 164 %</i>	<i>"</i>			<i>"</i>	<i>1*</i>
	<i>37Cl4-2,3,7,8-TCDD</i>		<i>90%</i>		<i>35 - 197 %</i>	<i>"</i>			<i>"</i>	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

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CH2M Hill - Bellevue 1100 112th Avenue NE, Suite 400 Bellevue, WA/USA 98004-4504	Project Name: WSDOT SR 520 - Pontoon Sites Project Number: 180171.AR.X7.02 Project Manager: Brian Tracy	Report Created: 01/20/09 17:02
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ASTM D 2216-90 - Laboratory Quality Control Results
 TestAmerica West Sacramento

QC Batch: 8364224 Soil Preparation Method: D2216-90

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Duplicate (G8L240275001X)			QC Source: G8L240275001			Extracted: 12/29/08 00:00								
Percent Moisture	ASTM D 2216-90	15.2	---	0.10	%	1x	15.7	--	--	--	3.5%	(20)	12/30/08 09:02	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

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CH2M Hill - Bellevue	Project Name: WSDOT SR 520 - Pontoon Sites	
1100 112th Avenue NE, Suite 400	Project Number: 180171.AR.X7.02	Report Created:
Bellevue, WA/USA 98004-4504	Project Manager: Brian Tracy	01/20/09 17:02

EPA-5 1613B - Laboratory Quality Control Results
 TestAmerica West Sacramento

QC Batch: 9002205 Soil Preparation Method: 1613B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	---------------	-----------	-------	----------	-------	----------	----------	-------

Blank (G9A020000205B)			QC Source:				Extracted: 01/08/09 17:45							
1,2,3,4,6,7,8-HpCDD	EPA-5 1613B	ND	---	0.20	pg/g dry	1x	--	--	--	--	--	--	01/10/09 02:11	
Total TCDF	"	ND	---	0.61	"	"	--	--	--	--	--	--	"	
Total HpCDF	"	ND	---	0.059	"	"	--	--	--	--	--	--	"	
Total HpCDD	"	ND	---	0.20	"	"	--	--	--	--	--	--	"	
1,2,3,7,8,9-HxCDD	"	ND	---	0.15	"	"	--	--	--	--	--	--	"	
1,2,3,4,6,7,8-HpCDF	"	ND	---	0.054	"	"	--	--	--	--	--	--	"	
1,2,3,4,7,8-HxCDD	"	ND	---	0.17	"	"	--	--	--	--	--	--	"	
1,2,3,4,7,8,9-HpCDF	"	ND	---	0.059	"	"	--	--	--	--	--	--	"	
1,2,3,6,7,8-HxCDD	"	ND	---	0.15	"	"	--	--	--	--	--	--	"	
1,2,3,4,7,8-HxCDF	"	ND	---	0.15	"	"	--	--	--	--	--	--	"	
Total HxCDD	"	ND	---	0.17	"	"	--	--	--	--	--	--	"	
1,2,3,6,7,8-HxCDF	"	ND	---	0.14	"	"	--	--	--	--	--	--	"	
1,2,3,7,8,9-HxCDF	"	ND	---	0.14	"	"	--	--	--	--	--	--	"	
Total HxCDF	"	ND	---	0.15	"	"	--	--	--	--	--	--	"	
OCDD	"	ND	---	1.1	"	"	--	--	--	--	--	--	"	
OCDF	"	ND	---	0.22	"	"	--	--	--	--	--	--	"	
1,2,3,7,8-PeCDD	"	ND	---	0.32	"	"	--	--	--	--	--	--	"	
2,3,4,6,7,8-HxCDF	"	ND	---	0.13	"	"	--	--	--	--	--	--	"	
Total PeCDD	"	ND	---	0.32	"	"	--	--	--	--	--	--	"	
1,2,3,7,8-PeCDF	"	ND	---	0.18	"	"	--	--	--	--	--	--	"	
2,3,4,7,8-PeCDF	"	ND	---	0.19	"	"	--	--	--	--	--	--	"	
Total PeCDF	"	ND	---	0.59	"	"	--	--	--	--	--	--	"	
2,3,7,8-TCDF	"	ND	---	0.61	"	"	--	--	--	--	--	--	"	
2,3,7,8-TCDD	"	ND	---	0.40	"	"	--	--	--	--	--	--	"	
Total TCDD	"	ND	---	0.40	"	"	--	--	--	--	--	--	"	

Surrogate(s):	Recovery:	Limits:		
13C-1,2,3,4,6,7,8-HpCDF	80%	28-143%	"	01/10/09 02:11
13C-1,2,3,4,6,7,8-HpCDD	78%	23-140%	"	"
13C-1,2,3,4,7,8-HxCDD	73%	32-141%	"	"
13C-1,2,3,4,7,8,9-HpCDF	91%	26-138%	"	"
13C-1,2,3,6,7,8-HxCDD	80%	28-130%	"	"
13C-1,2,3,4,7,8-HxCDF	77%	26-152%	"	"
13C-1,2,3,6,7,8-HxCDF	80%	26-123%	"	"
13C-OCDD	81%	17-157%	"	"
13C-1,2,3,7,8,9-HxCDF	84%	29-147%	"	"
13C-2,3,4,6,7,8-HxCDF	81%	28-136%	"	"
13C-1,2,3,7,8-PeCDD	79%	25-181%	"	"
13C-1,2,3,7,8-PeCDF	79%	24-185%	"	"
13C-2,3,4,7,8-PeCDF	84%	21-178%	"	"
13C-2,3,7,8-TCDF	73%	24-169%	"	"
13C-2,3,7,8-TCDD	76%	25-164%	"	"

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

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CH2M Hill - Bellevue	Project Name: WSDOT SR 520 - Pontoon Sites	
1100 112th Avenue NE, Suite 400	Project Number: 180171.AR.X7.02	Report Created:
Bellevue, WA/USA 98004-4504	Project Manager: Brian Tracy	01/20/09 17:02

EPA-5 1613B - Laboratory Quality Control Results
 TestAmerica West Sacramento

QC Batch: 9002205 **Soil Preparation Method: 1613B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	---------------	-----------	-------	----------	-------	----------	----------	-------

Blank (G9A020000205B) **QC Source:** **Extracted: 01/08/09 17:45**

Surrogate(s): 37Cl4-2,3,7,8-TCDD Recovery: 91% Limits: 35-197% 1x 01/10/09 02:11

LCS (G9A020000205C) **QC Source:** **Extracted: 01/08/09 17:45**

1,2,3,4,6,7,8-HpCDD	EPA-5 1613B	106	---	0.38	pg/g dry	1x	--	100	106%	(70-140)	--	--	01/10/09 01:27	
1,2,3,7,8,9-HxCDD	"	113	---	0.16	"	"	--	"	113%	(64-162)	--	--	"	
1,2,3,4,6,7,8-HpCDF	"	103	---	0.48	"	"	--	"	103%	(82-122)	--	--	"	
1,2,3,4,7,8-HxCDD	"	96.6	---	0.17	"	"	--	"	97%	(70-164)	--	--	"	
1,2,3,6,7,8-HxCDD	"	116	---	0.16	"	"	--	"	116%	(76-134)	--	--	"	
1,2,3,4,7,8,9-HpCDF	"	101	---	0.55	"	"	--	"	101%	(78-138)	--	--	"	
1,2,3,4,7,8-HxCDF	"	96.9	---	0.21	"	"	--	"	97%	(72-134)	--	--	"	
1,2,3,6,7,8-HxCDF	"	101	---	0.19	"	"	--	"	101%	(84-130)	--	--	"	
1,2,3,7,8,9-HxCDF	"	104	---	0.19	"	"	--	"	104%	(78-130)	--	--	"	
OCDD	"	217	---	0.41	"	"	--	200	108%	(78-144)	--	--	"	
OCDF	"	218	---	0.60	"	"	--	"	109%	(63-170)	--	--	"	
1,2,3,7,8-PeCDD	"	104	---	0.34	"	"	--	100	104%	(70-142)	--	--	"	
2,3,4,6,7,8-HxCDF	"	106	---	0.18	"	"	--	"	106%	(70-156)	--	--	"	
1,2,3,7,8-PeCDF	"	104	---	0.33	"	"	--	"	104%	(80-134)	--	--	"	
2,3,4,7,8-PeCDF	"	103	---	0.36	"	"	--	"	103%	(68-160)	--	--	"	
2,3,7,8-TCDF	"	21.1	---	0.52	"	"	--	20.0	106%	(75-158)	--	--	"	
2,3,7,8-TCDD	"	21.1	---	0.34	"	"	--	"	106%	(67-158)	--	--	"	

Surrogate(s): 13C-1,2,3,4,6,7,8-HpCDF Recovery: 92% Limits: 28-143% "

13C-1,2,3,4,6,7,8-HpCDD 96% 23-140% "

13C-1,2,3,4,7,8,9-HpCDF 103% 26-138% "

13C-1,2,3,4,7,8-HxCDD 85% 32-141% "

13C-1,2,3,6,7,8-HxCDD 86% 28-130% "

13C-1,2,3,4,7,8-HxCDF 85% 26-152% "

13C-OCDD 94% 17-157% "

13C-1,2,3,6,7,8-HxCDF 90% 26-123% "

13C-1,2,3,7,8,9-HxCDF 93% 29-147% "

13C-2,3,4,6,7,8-HxCDF 87% 28-136% "

13C-1,2,3,7,8-PeCDD 95% 25-181% "

13C-1,2,3,7,8-PeCDF 94% 24-185% "

13C-2,3,4,7,8-PeCDF 96% 21-178% "

13C-2,3,7,8-TCDF 90% 24-169% "

13C-2,3,7,8-TCDD 87% 25-164% "

37Cl4-2,3,7,8-TCDD 85% 35-197% "

01/10/09 01:27

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

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CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
Bellevue, WA/USA 98004-4504

Project Name:

WSDOT SR 520 - Pontoon Sites

Project Number:

180171.AR.X7.02

Project Manager:

Brian Tracy

Report Created:

01/20/09 17:02

CERTIFICATION SUMMARY

Subcontracted Laboratories

STL - Sacramento, CA

880 Riverside Parkway - West Sacramento, CA 95605

Method Performed: ASTM D 2216-90

Samples: BRL0201-01, BRL0201-02, BRL0201-03, BRL0201-04, BRL0201-05, BRL0201-06

Method Performed: EPA-5 1613B

Samples: BRL0201-01, BRL0201-02, BRL0201-03, BRL0201-04, BRL0201-05, BRL0201-06

Any abnormalities or departures from sample acceptance policy shall be documented on the 'Sample Receipt and Temperature Log Form' and 'Sample Non-conformance Form' (if applicable) included with this report.

For information concerning certifications of this facility or another TestAmerica facility, please visit our website at www.TestAmericaInc.com

Samples collected by TestAmerica Field Services personnel are noted on the Chain of Custody (COC) .

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

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CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name:

WSDOT SR 520 - Pontoon Sites

Project Number:

180171.AR.X7.02

Project Manager:

Brian Tracy

Report Created:

01/20/09 17:02

Notes and Definitions

Report Specific Notes:

- 1* - Surrogate recovery is outside stated control limits.
- ID - Result was obtained from the analysis of a dilution.
- IG - Elevated reporting limit. The reporting limit is elevated due to matrix interference.
- IH - Due to interference in a portion of the Tetra function, some Tetra totals peaks may have been masked and therefore not reported.
- IJ - Estimated result. Result is less than the reporting limit.
- IJA - The analyte was positively identified, but the quantitation is an estimate.

Laboratory Reporting Conventions:

- DET - Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.
- ND - Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).
- NR/NA - Not Reported / Not Available
- dry - Sample results reported on a Dry Weight Basis. Results and Reporting Limits have been corrected for Percent Dry Weight.
- wet - Sample results and reporting limits reported on a Wet Weight Basis (as received). Results with neither 'wet' nor 'dry' are reported on a Wet Weight Basis.
- RPD - RELATIVE PERCENT DIFFERENCE (RPDs calculated using Results, not Percent Recoveries).
- MRL - METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.
- MDL* - METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. *MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated Results.
- Dil - Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.
- Reporting Limits - Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.
- Electronic Signature - Electronic Signature added in accordance with TestAmerica's *Electronic Reporting and Electronic Signatures Policy*. Application of electronic signature indicates that the report has been reviewed and approved for release by the laboratory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

11720 North Creek Pkwy N Suite 400, Bothell, WA 98011-8244
 11922 E. First Ave. Spokane, WA 99206-3102
 9405 SW Nimbus Ave. Beaverton, OR 97008-7145
 2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119

425-420-9280 FAX 420-9210
 509-424-9200 FAX 924-9296
 503 906-9200 FAX 906-9210
 907-563-9200 FAX 563-9210

CHAIN OF CUSTODY REPORT

Work Order #: *221001*

CLIENT: <i>CH2M Hill</i>		INVOICE TO:	
REPORT TO: ADDRESS:		TURNAROUND REQUEST in Business Days *	
PHONE: <i>425-453-5800</i>	FAX:	<input checked="" type="checkbox"/> 1	<input type="checkbox"/> 2
PROJECT NAME: <i>WSDOT SR 520 - Pontoon Project</i>		<input type="checkbox"/> 3	<input type="checkbox"/> 4
PROJECT NUMBER: <i>180171 AR.X7.02</i>		<input type="checkbox"/> 5	<input type="checkbox"/> 6
SAMPLED BY: <i>Brian Tracy / Nichole Budon</i>		<input type="checkbox"/> 7	<input type="checkbox"/> 8
CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	OTHER Specify	
<i>1 AM-SB-7-65-3.0</i>	<i>12-15-08 / 1540</i>	* Turnaround Requested (see item standard req. for each charge).	
<i>2 AM-SB-10-00-3.0</i>	<i>12-15-08 / 1620</i>	MATRIX (W, S, O)	# OF CONT.
<i>3 AM-SB-11-6.0-2.0</i>	<i>12-16-08 / 0810</i>	<i>S</i>	<i>1</i>
<i>4 ALX-SB-9-6.0-2.0</i>	<i>12-17-08 / 0925</i>	<i>S</i>	<i>1</i>
<i>5 ALX-SB-12-6.0-2.0</i>	<i>12-17-08 / 0955</i>	<i>S</i>	<i>1</i>
<i>6 ALX-SB-8-6.0-2.0</i>	<i>12-17-08 / 1102</i>	<i>S</i>	<i>1</i>
7			
8			
9			
10			
RELEASED BY: <i>Brian Tracy</i>	DATE: <i>12/18/08</i>	RECEIVED BY: <i>Dwayne King</i>	DATE: <i>12/18/08</i>
PRINT NAME: <i>Brian Tracy</i>	TIME: <i>0845</i>	PRINT NAME: <i>Dwayne King</i>	TIME: <i>0845</i>
RELEASED BY:	DATE:	RECEIVED BY:	DATE:
PRINT NAME:	TIME:	PRINT NAME:	TIME:
ADDITIONAL REMARKS:			

TAT: _____

Paperwork to PM - Date: _____ Time: _____

Non-Conformances? Circle Y or N

Page Time & Initials: _____

(If Y, see other side)

TEST AMERICA SAMPLE RECEIPT CHECKLIST

Received By: _____
(applies to temp at receipt)

Logged-in By: _____

Unpacked/Labeled By: _____

Cooler ID: 324, 392, 364, 357, 301
343, 355

Date: 12-18-08

Date: 12/18

Date: 12-18-08

Work Order No. BA10201

Time: 0845

Time: 11:12

Time: 1400

Client: _____

Initials: DSH

Initials: HH

Initials: DSA

Project: _____

Container Type:

(written by COC)
COC Seals: _____

Packing Material: _____

Cooler _____ Ship Container _____ Sign By _____
 Box _____ On Bottles _____ Date _____
 None/Other _____ None

Bubble Bags _____ Styrofoam _____
 Foam Packs _____
 None/Other _____

Refrigerant:

Gel Ice Pack _____
 Loose Ice _____
 None/Other _____

Received Via: Bill# _____

Fed Ex Client _____
 UPS _____ TA Courier _____
 DHL _____ Mid Valley _____
 Senvoy _____ TDP _____
 GS _____ Other _____

Cooler Temperature (IR): _____ °C Plastic Glass (Frozen filters, Tedlars and aqueous Metals exempt)

Temperature Blank? 17 °C or NA ^{4, 3, 1, 9, 4, 9, 5, 7 (circle one)} 3, 7, 5, 5

Trip Blank? Y or N or NA

BP, OPLC, ARCO-Temperature monitoring every 15 minutes:

(initial/date/time): _____

Comments: _____

Sample Containers:

Intact? or N _____ ID _____
Provided by TA? or N _____
Correct Type? or N _____
#Containers match COC? or N _____
IDs/time/date match COC? or N _____
Hold Times in hold? or N _____

Metals Preserved? Y or or NA Soil
Client QAPP Preserved? Y or N or _____
Adequate Volume? or N _____
(for tests requested)
Water VOAs: Headspace? Y or N or _____
Comments: _____

PROJECT MANAGEMENT

Is the Chain of Custody complete? Y or N If N, circle the items that were incomplete

Comments, Problems _____

Total access set up? _____
Has client been contacted regarding non-conformances? _____

Y or N _____
Y or N If Y, _____ / _____
Date Time

PM Initials: _____ Date: _____ Time: _____

Amended Report

February 04, 2009

Brian Tracy
CH2M Hill - Bellevue
1100 112th Avenue NE, Suite 400
Bellevue, WA/USA 98004-4504

RE: WSDOT SR 520 - Pontoon Sites

Enclosed are the results of analyses for samples received by the laboratory on 01/23/09 07:00.
The following list is a summary of the Work Orders contained in this report, generated on 02/04/09
10:39.

If you have any questions concerning this report, please feel free to contact me.

<u>Work Order</u>	<u>Project</u>	<u>ProjectNumber</u>
BSA0192	WSDOT SR 520 - Pontoon Sit	180171.AR.X7.02

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 02/04/09 10:39

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FD-1	BSA0192-01	Water	01/22/09 09:00	01/23/09 07:00
H-8P-08	BSA0192-02	Water	01/22/09 09:20	01/23/09 07:00
H-5P-08	BSA0192-03	Water	01/22/09 10:30	01/23/09 07:00
MW-1	BSA0192-04	Water	01/22/09 12:00	01/23/09 07:00
MW-5	BSA0192-05	Water	01/22/09 13:00	01/23/09 07:00
H-3P-08	BSA0192-06	Water	01/22/09 14:45	01/23/09 07:00
H-2P-08	BSA0192-07	Water	01/22/09 15:50	01/23/09 07:00
FD-2	BSA0192-08	Water	01/22/09 16:00	01/23/09 07:00

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

02/04/09 10:39

Analytical Case Narrative

TestAmerica - Seattle, WA

BSA0192

SAMPLE RECEIPT

The samples were received 01/23/09 by TestAmerica - Seattle. The temperature of the samples at the time of receipt was 4.9 degrees Celsius.

PREPARATIONS AND ANALYSIS

Dissolved Metals by EPA 6000/7000 Series Methods

Samples BSA0192-02 (H-8P-08) and BSA0192-03 (H-5P-08) were re-analyzed and the re-analysis yielded no detections in either sample. The detections that were originally reported are suspected to be laboratory contamination. The re-analysis has been included in this amended report.

No additional anomalies, discrepancies, or issues were associated with sample preparation, analysis and quality control other than those already qualified in the data and described in the Notes and Definitions page at the end of the report.

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 02/04/09 10:39

Dissolved Metals by EPA 200 Series Methods
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BSA0192-01RE1 (FD-1)		Water		Sampled: 01/22/09 09:00						
Strontium	EPA 6020 - Diss	3.15	----	0.0200	mg/l	20x	9A26002	01/26/09 06:34	01/26/09 19:43	
BSA0192-02RE1 (H-8P-08)		Water		Sampled: 01/22/09 09:20						
Strontium	EPA 6020 - Diss	3.12	----	0.0200	mg/l	20x	9A26002	01/26/09 06:34	01/26/09 19:49	
BSA0192-03RE1 (H-5P-08)		Water		Sampled: 01/22/09 10:30						
Strontium	EPA 6020 - Diss	1.44	----	0.0100	mg/l	10x	9A26002	01/26/09 06:34	01/26/09 20:56	
BSA0192-04RE1 (MW-1)		Water		Sampled: 01/22/09 12:00						
Strontium	EPA 6020 - Diss	2.52	----	0.0100	mg/l	10x	9A26002	01/26/09 06:34	01/26/09 21:02	
BSA0192-05RE1 (MW-5)		Water		Sampled: 01/22/09 13:00						
Strontium	EPA 6020 - Diss	1.46	----	0.0100	mg/l	10x	9A26002	01/26/09 06:34	01/26/09 21:08	
BSA0192-06RE1 (H-3P-08)		Water		Sampled: 01/22/09 14:45						
Strontium	EPA 6020 - Diss	1.28	----	0.0100	mg/l	10x	9A26002	01/26/09 06:34	01/26/09 22:20	
BSA0192-07RE1 (H-2P-08)		Water		Sampled: 01/22/09 15:50						
Strontium	EPA 6020 - Diss	1.75	----	0.0100	mg/l	10x	9A26002	01/26/09 06:34	01/26/09 22:26	
BSA0192-08RE1 (FD-2)		Water		Sampled: 01/22/09 16:00						
Strontium	EPA 6020 - Diss	1.30	----	0.0100	mg/l	10x	9A26002	01/26/09 06:34	01/26/09 22:50	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue	Project Name: WSDOT SR 520 - Pontoon Sites	Report Created:
1100 112th Avenue NE, Suite 400	Project Number: 180171.AR.X7.02	02/04/09 10:39
Bellevue, WA/USA 98004-4504	Project Manager: Brian Tracy	

Total Metals by EPA 6000/7000 Series Methods
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BSA0192-01 (FD-1) Water Sampled: 01/22/09 09:00										
Antimony	EPA 6020	ND	----	0.00300	mg/l	1x	9A26003	01/26/09 06:49	01/26/09 13:08	
Arsenic	"	0.00286	----	0.00100	"	"	"	"	"	
Barium	"	0.0832	----	0.0100	"	"	"	"	"	
Beryllium	"	ND	----	0.00100	"	"	"	"	"	
Cadmium	"	ND	----	0.00100	"	"	"	"	"	
Chromium	"	0.00476	----	0.00100	"	"	"	"	"	
Cobalt	"	0.00314	----	0.00100	"	"	"	"	"	
Copper	"	0.00755	----	0.00100	"	"	"	"	"	
Lead	"	ND	----	0.00100	"	"	"	"	"	
Manganese	"	0.335	----	0.0100	"	"	"	"	"	
Mercury	EPA 7470A	ND	----	0.000200	"	"	9A26018	01/26/09 10:42	01/26/09 13:30	
Molybdenum	EPA 6020	ND	----	0.00500	"	"	9A26003	01/26/09 06:49	01/26/09 13:08	
Nickel	"	0.00396	----	0.00100	"	"	"	"	"	
Selenium	"	0.0134	----	0.00100	"	"	"	"	"	
Silver	"	ND	----	0.00100	"	"	"	"	"	
Thallium	"	ND	----	0.00100	"	"	"	"	"	
Titanium	"	0.224	----	0.00100	"	"	"	"	01/26/09 23:26	
Vanadium	"	0.00872	----	0.00100	"	"	"	"	01/26/09 13:08	
BSA0192-01RE1 (FD-1) Water Sampled: 01/22/09 09:00										
Strontium	EPA 6020	3.05	----	0.0200	mg/l	20x	9A26003	01/26/09 06:49	01/27/09 00:43	
Zinc	"	0.0178	----	0.0100	"	1x	9A27003	01/27/09 10:09	01/27/09 12:59	
BSA0192-02 (H-8P-08) Water Sampled: 01/22/09 09:20										
Antimony	EPA 6020	ND	----	0.00300	mg/l	1x	9A26003	01/26/09 06:49	01/26/09 13:14	
Arsenic	"	0.00302	----	0.00100	"	"	"	"	"	
Barium	"	0.0779	----	0.0100	"	"	"	"	"	
Beryllium	"	ND	----	0.00100	"	"	"	"	"	
Cadmium	"	ND	----	0.00100	"	"	"	"	"	
Chromium	"	0.00459	----	0.00100	"	"	"	"	"	
Cobalt	"	0.00301	----	0.00100	"	"	"	"	"	
Copper	"	0.00684	----	0.00100	"	"	"	"	"	
Lead	"	ND	----	0.00100	"	"	"	"	"	
Manganese	"	0.322	----	0.0100	"	"	"	"	"	
Mercury	EPA 7470A	ND	----	0.000200	"	"	9A26018	01/26/09 10:42	01/26/09 13:32	
Molybdenum	EPA 6020	ND	----	0.00500	"	"	9A26003	01/26/09 06:49	01/26/09 13:14	
Nickel	"	0.00396	----	0.00100	"	"	"	"	"	
Selenium	"	0.0136	----	0.00100	"	"	"	"	"	
Silver	"	ND	----	0.00100	"	"	"	"	"	
Thallium	"	ND	----	0.00100	"	"	"	"	"	
Titanium	"	0.221	----	0.00100	"	"	"	"	01/26/09 23:32	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 02/04/09 10:39

Total Metals by EPA 6000/7000 Series Methods
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes	
BSA0192-02 (H-8P-08)		Water			Sampled: 01/22/09 09:20						
Vanadium	"	0.00810	----	0.00100	"	"	"	"	01/26/09 13:14		
BSA0192-02RE1 (H-8P-08)		Water			Sampled: 01/22/09 09:20						
Strontium	EPA 6020	3.12	----	0.0200	mg/l	20x	9A26003	01/26/09 06:49	01/27/09 00:49		
Zinc	"	0.0215	----	0.0200	"	2x	9A27003	01/27/09 10:09	01/27/09 14:10		
BSA0192-03 (H-5P-08)		Water			Sampled: 01/22/09 10:30						
Antimony	EPA 6020	ND	----	0.00300	mg/l	1x	9A26003	01/26/09 06:49	01/26/09 13:20		
Arsenic	"	0.00203	----	0.00100	"	"	"	"	"		
Barium	"	0.0501	----	0.0100	"	"	"	"	"		
Beryllium	"	ND	----	0.00100	"	"	"	"	"		
Cadmium	"	ND	----	0.00100	"	"	"	"	"		
Chromium	"	0.00254	----	0.00100	"	"	"	"	"		
Cobalt	"	0.00326	----	0.00100	"	"	"	"	"		
Copper	"	0.00214	----	0.00100	"	"	"	"	"		
Lead	"	ND	----	0.00100	"	"	"	"	"		
Manganese	"	0.115	----	0.0100	"	"	"	"	"		
Mercury	EPA 7470A	ND	----	0.000200	"	"	9A26018	01/26/09 10:42	01/26/09 13:35		
Molybdenum	EPA 6020	ND	----	0.00500	"	"	9A26003	01/26/09 06:49	01/26/09 13:20		
Nickel	"	0.00118	----	0.00100	"	"	"	"	"		
Selenium	"	0.00970	----	0.00100	"	"	"	"	"		
Silver	"	ND	----	0.00100	"	"	"	"	"		
Thallium	"	ND	----	0.00100	"	"	"	"	"		
Titanium	"	0.0277	----	0.00100	"	"	"	"	01/26/09 23:38		
Vanadium	"	0.00469	----	0.00100	"	"	"	"	01/26/09 13:20		
BSA0192-03RE1 (H-5P-08)		Water			Sampled: 01/22/09 10:30						
Strontium	EPA 6020	1.56	----	0.0100	mg/l	10x	9A26003	01/26/09 06:49	01/27/09 00:56		
Zinc	"	ND	----	0.0200	"	2x	9A27003	01/27/09 10:09	01/27/09 13:17	RL1	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 02/04/09 10:39

Total Metals by EPA 6000/7000 Series Methods
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BSA0192-04 (MW-1)		Water			Sampled: 01/22/09 12:00					
Antimony	EPA 6020	ND	----	0.00300	mg/l	1x	9A26003	01/26/09 06:49	01/26/09 13:50	
Arsenic	"	0.00231	----	0.00100	"	"	"	"	"	
Barium	"	0.0434	----	0.0100	"	"	"	"	"	
Beryllium	"	ND	----	0.00100	"	"	"	"	"	
Cadmium	"	ND	----	0.00100	"	"	"	"	"	
Chromium	"	0.00134	----	0.00100	"	"	"	"	"	
Cobalt	"	0.00177	----	0.00100	"	"	"	"	"	
Copper	"	0.00350	----	0.00100	"	"	"	"	"	
Lead	"	ND	----	0.00100	"	"	"	"	"	
Mercury	EPA 7470A	ND	----	0.000200	"	"	9A26018	01/26/09 10:42	01/26/09 13:37	
Molybdenum	EPA 6020	ND	----	0.00500	"	"	9A26003	01/26/09 06:49	01/26/09 13:50	
Nickel	"	0.00214	----	0.00100	"	"	"	"	"	
Selenium	"	0.0125	----	0.00100	"	"	"	"	"	
Silver	"	ND	----	0.00100	"	"	"	"	"	
Thallium	"	ND	----	0.00100	"	"	"	"	01/26/09 23:44	
Titanium	"	0.0102	----	0.00100	"	"	"	"	"	
Vanadium	"	0.00152	----	0.00100	"	"	"	"	01/26/09 13:50	
BSA0192-04RE1 (MW-1)		Water			Sampled: 01/22/09 12:00					
Manganese	EPA 6020	1.04	----	0.100	mg/l	10x	9A26003	01/26/09 06:49	01/27/09 01:02	
Strontium	"	2.63	----	0.0100	"	"	"	"	"	
Zinc	"	0.0215	----	0.0200	"	2x	9A27003	01/27/09 10:09	01/27/09 13:23	
BSA0192-05 (MW-5)		Water			Sampled: 01/22/09 13:00					
Antimony	EPA 6020	ND	----	0.00300	mg/l	1x	9A26003	01/26/09 06:49	01/26/09 13:55	
Arsenic	"	0.00178	----	0.00100	"	"	"	"	"	
Barium	"	0.0541	----	0.0100	"	"	"	"	"	
Beryllium	"	ND	----	0.00100	"	"	"	"	"	
Cadmium	"	ND	----	0.00100	"	"	"	"	"	
Chromium	"	0.00199	----	0.00100	"	"	"	"	"	
Cobalt	"	0.00146	----	0.00100	"	"	"	"	"	
Copper	"	0.00173	----	0.00100	"	"	"	"	"	
Lead	"	ND	----	0.00100	"	"	"	"	"	
Manganese	"	0.331	----	0.0100	"	"	"	"	"	
Mercury	EPA 7470A	ND	----	0.000200	"	"	9A26018	01/26/09 10:42	01/26/09 13:40	
Molybdenum	EPA 6020	ND	----	0.00500	"	"	9A26003	01/26/09 06:49	01/26/09 13:55	
Nickel	"	0.00136	----	0.00100	"	"	"	"	"	
Selenium	"	0.0104	----	0.00100	"	"	"	"	"	
Silver	"	ND	----	0.00100	"	"	"	"	"	
Thallium	"	ND	----	0.00100	"	"	"	"	01/27/09 00:08	
Titanium	"	0.0109	----	0.00100	"	"	"	"	01/27/09 11:41	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 02/04/09 10:39

Total Metals by EPA 6000/7000 Series Methods
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BSA0192-05 (MW-5)		Water			Sampled: 01/22/09 13:00					
Vanadium	"	0.00278	----	0.00100	"	"	"	"	01/26/09 13:55	
BSA0192-05RE1 (MW-5)		Water			Sampled: 01/22/09 13:00					
Strontium	EPA 6020	1.48	----	0.0100	mg/l	10x	9A26003	01/26/09 06:49	01/27/09 01:26	
Zinc	"	ND	----	0.0200	"	2x	9A27003	01/27/09 10:09	01/27/09 13:28	RL1
BSA0192-06 (H-3P-08)		Water			Sampled: 01/22/09 14:45					
Antimony	EPA 6020	ND	----	0.00300	mg/l	1x	9A26003	01/26/09 06:49	01/26/09 14:01	
Arsenic	"	0.00237	----	0.00100	"	"	"	"	"	
Barium	"	0.0822	----	0.0100	"	"	"	"	"	
Beryllium	"	ND	----	0.00100	"	"	"	"	"	
Cadmium	"	ND	----	0.00100	"	"	"	"	"	
Chromium	"	0.00276	----	0.00100	"	"	"	"	"	
Cobalt	"	0.00263	----	0.00100	"	"	"	"	"	
Copper	"	0.00276	----	0.00100	"	"	"	"	"	
Lead	"	ND	----	0.00100	"	"	"	"	"	
Mercury	EPA 7470A	ND	----	0.000200	"	"	9A26018	01/26/09 10:42	01/26/09 13:48	
Molybdenum	EPA 6020	0.00507	----	0.00500	"	"	9A26003	01/26/09 06:49	01/26/09 14:01	
Nickel	"	0.00216	----	0.00100	"	"	"	"	"	
Selenium	"	0.00887	----	0.00100	"	"	"	"	"	
Silver	"	ND	----	0.00100	"	"	"	"	"	
Thallium	"	ND	----	0.00100	"	"	"	"	01/27/09 00:14	
Titanium	"	0.0292	----	0.00100	"	"	"	"	01/27/09 11:47	
Vanadium	"	0.00406	----	0.00100	"	"	"	"	01/26/09 14:01	
BSA0192-06RE1 (H-3P-08)		Water			Sampled: 01/22/09 14:45					
Manganese	EPA 6020	0.867	----	0.100	mg/l	10x	9A26003	01/26/09 06:49	01/27/09 01:32	
Strontium	"	1.30	----	0.0100	"	"	"	"	"	
Zinc	"	ND	----	0.0200	"	2x	9A27003	01/27/09 10:09	01/27/09 13:34	RL1

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 02/04/09 10:39

Total Metals by EPA 6000/7000 Series Methods
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BSA0192-07 (H-2P-08)		Water			Sampled: 01/22/09 15:50					
Antimony	EPA 6020	ND	----	0.00300	mg/l	1x	9A26003	01/26/09 06:49	01/26/09 14:07	
Arsenic	"	0.00298	----	0.00100	"	"	"	"	"	
Barium	"	0.124	----	0.0100	"	"	"	"	"	
Beryllium	"	ND	----	0.00100	"	"	"	"	"	
Cadmium	"	ND	----	0.00100	"	"	"	"	"	
Chromium	"	0.00213	----	0.00100	"	"	"	"	"	
Cobalt	"	0.00156	----	0.00100	"	"	"	"	"	
Copper	"	0.00251	----	0.00100	"	"	"	"	"	
Lead	"	ND	----	0.00100	"	"	"	"	"	
Mercury	EPA 7470A	ND	----	0.000200	"	"	9A26018	01/26/09 10:42	01/26/09 13:50	
Molybdenum	EPA 6020	0.00761	----	0.00500	"	"	9A26003	01/26/09 06:49	01/26/09 14:07	
Nickel	"	0.00198	----	0.00100	"	"	"	"	"	
Selenium	"	0.00796	----	0.00100	"	"	"	"	"	
Silver	"	ND	----	0.00100	"	"	"	"	"	
Thallium	"	ND	----	0.00100	"	"	"	"	01/27/09 11:53	
Titanium	"	0.0198	----	0.00100	"	"	"	"	"	
Vanadium	"	0.00242	----	0.00100	"	"	"	"	01/26/09 14:07	
BSA0192-07RE1 (H-2P-08)		Water			Sampled: 01/22/09 15:50					
Manganese	EPA 6020	1.03	----	0.100	mg/l	10x	9A26003	01/26/09 06:49	01/27/09 01:38	
Strontium	"	1.75	----	0.0100	"	"	"	"	"	
Zinc	"	0.0287	----	0.0200	"	2x	9A27003	01/27/09 10:09	01/27/09 13:40	
BSA0192-08 (FD-2)		Water			Sampled: 01/22/09 16:00					
Antimony	EPA 6020	ND	----	0.00300	mg/l	1x	9A26003	01/26/09 06:49	01/26/09 14:13	
Arsenic	"	0.00276	----	0.00100	"	"	"	"	"	
Barium	"	0.0850	----	0.0100	"	"	"	"	"	
Beryllium	"	ND	----	0.00100	"	"	"	"	"	
Cadmium	"	ND	----	0.00100	"	"	"	"	"	
Chromium	"	0.00272	----	0.00100	"	"	"	"	"	
Cobalt	"	0.00278	----	0.00100	"	"	"	"	"	
Copper	"	0.00261	----	0.00100	"	"	"	"	"	
Lead	"	ND	----	0.00100	"	"	"	"	"	
Mercury	EPA 7470A	ND	----	0.000200	"	"	9A26018	01/26/09 10:42	01/26/09 13:53	
Molybdenum	EPA 6020	0.00550	----	0.00500	"	"	9A26003	01/26/09 06:49	01/26/09 14:13	
Nickel	"	0.00218	----	0.00100	"	"	"	"	"	
Selenium	"	0.0101	----	0.00100	"	"	"	"	"	
Silver	"	ND	----	0.00100	"	"	"	"	"	
Thallium	"	ND	----	0.00100	"	"	"	"	01/27/09 11:59	
Titanium	"	0.0290	----	0.00100	"	"	"	"	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 02/04/09 10:39

Total Metals by EPA 6000/7000 Series Methods

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BSA0192-08 (FD-2)		Water			Sampled: 01/22/09 16:00					
Vanadium	EPA 6020	0.00414	----	0.00100	mg/l	1x	9A26003	01/26/09 06:49	01/26/09 14:13	
BSA0192-08RE1 (FD-2)		Water			Sampled: 01/22/09 16:00					
Manganese	EPA 6020	0.925	----	0.0500	mg/l	5x	9A26003	01/26/09 06:49	01/26/09 14:19	
Strontium	"	1.39	----	0.00500	"	"	"	"	"	
Zinc	"	0.0287	----	0.0200	"	2x	9A27003	01/27/09 10:09	01/27/09 13:46	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 02/04/09 10:39

Dissolved Metals by EPA 6000/7000 Series Methods
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes	
BSA0192-01 (FD-1)		Water				Sampled: 01/22/09 09:00					
Antimony	EPA 6020 - Diss	ND	----	0.00300	mg/l	1x	9A26002	01/26/09 06:34	01/26/09 09:50		
Arsenic	"	ND	----	0.0100	"	10x	"	"	01/27/09 09:24	RL1	
Barium	"	0.0760	----	0.0100	"	1x	"	"	01/26/09 09:50		
Beryllium	"	ND	----	0.00100	"	"	"	"	"		
Cadmium	"	ND	----	0.00100	"	"	"	"	"		
Chromium	"	0.0126	----	0.0100	"	10x	"	"	01/27/09 09:24		
Cobalt	"	0.00189	----	0.00100	"	1x	"	"	01/26/09 09:50		
Copper	"	0.00363	----	0.00100	"	"	"	"	"		
Lead	"	ND	----	0.00100	"	"	"	"	"		
Manganese	"	0.333	----	0.0100	"	"	"	"	"		
Mercury	EPA 7470A - Diss	ND	----	0.000200	"	"	9A26018	01/26/09 10:42	01/26/09 13:55		
Molybdenum	EPA 6020 - Diss	ND	----	0.00500	"	"	9A26002	01/26/09 06:34	01/26/09 09:50		
Nickel	"	0.00208	----	0.00100	"	"	"	"	"		
Selenium	"	0.0417	----	0.0100	"	10x	"	"	01/27/09 09:24		
Silver	"	ND	----	0.0100	"	"	"	"	"	RL1	
Thallium	"	ND	----	0.00100	"	1x	"	"	01/26/09 09:50		
Titanium	"	0.0124	----	0.00100	"	"	"	"	"		
Vanadium	"	0.0154	----	0.00100	"	"	"	"	"		
Zinc	"	ND	----	0.0100	"	"	"	"	"		

BSA0192-01RE1 (FD-1)

BSA0192-01RE1 (FD-1)		Water				Sampled: 01/22/09 09:00					
Vanadium	EPA 6020 - Diss	ND	----	0.0100	mg/l	10x	9A26002	01/26/09 06:34	01/27/09 09:24	RL1	

BSA0192-02 (H-8P-08)

BSA0192-02 (H-8P-08)		Water				Sampled: 01/22/09 09:20					
Antimony	EPA 6020 - Diss	ND	----	0.00300	mg/l	1x	9A26002	01/26/09 06:34	01/26/09 09:56		
Arsenic	"	ND	----	0.0100	"	10x	"	"	01/27/09 09:30	RL1	
Barium	"	0.0740	----	0.0100	"	1x	"	"	01/26/09 09:56		
Beryllium	"	ND	----	0.00100	"	"	"	"	"		
Cadmium	"	ND	----	0.00100	"	"	"	"	"		
Chromium	"	0.0132	----	0.0100	"	10x	"	"	01/27/09 09:30	RL1	
Cobalt	"	0.00196	----	0.00100	"	1x	"	"	01/26/09 09:56		
Copper	"	0.00373	----	0.00100	"	"	"	"	"		
Lead	"	ND	----	0.00100	"	"	"	"	"		
Manganese	"	0.328	----	0.0100	"	"	"	"	"		
Molybdenum	"	ND	----	0.00500	"	"	"	"	"		
Nickel	"	0.00221	----	0.00100	"	"	"	"	"		
Selenium	"	0.0416	----	0.0100	"	10x	"	"	01/27/09 09:30		
Silver	"	ND	----	0.0100	"	"	"	"	"	RL1	
Thallium	"	ND	----	0.00100	"	1x	"	"	01/26/09 09:56		
Titanium	"	0.0114	----	0.00100	"	"	"	"	"		

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 02/04/09 10:39

Dissolved Metals by EPA 6000/7000 Series Methods
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BSA0192-02 (H-8P-08)		Water			Sampled: 01/22/09 09:20					
Vanadium	EPA 6020 - Diss	0.0168	----	0.00100	mg/l	1x	9A26002	01/26/09 06:34	01/26/09 09:56	
Zinc	"	ND	----	0.0100	"	"	"	"	"	
BSA0192-02RE1 (H-8P-08)		Water			Sampled: 01/22/09 09:20					
Mercury	EPA 7470A - Diss	ND	----	0.000200	mg/l	1x	9A30012	01/30/09 10:22	01/30/09 14:40	
Vanadium	EPA 6020 - Diss	ND	----	0.0100	"	10x	9A26002	01/26/09 06:34	01/27/09 09:30	RL1
BSA0192-03 (H-5P-08)		Water			Sampled: 01/22/09 10:30					
Antimony	EPA 6020 - Diss	ND	----	0.00300	mg/l	1x	9A26002	01/26/09 06:34	01/26/09 10:02	
Arsenic	"	ND	----	0.0100	"	10x	"	"	01/27/09 10:24	RL1
Barium	"	0.0327	----	0.0100	"	1x	"	"	01/26/09 10:02	
Beryllium	"	ND	----	0.00100	"	"	"	"	"	
Cadmium	"	ND	----	0.00100	"	"	"	"	"	
Chromium	"	0.0132	----	0.0100	"	10x	"	"	01/27/09 10:24	
Cobalt	"	0.00308	----	0.00100	"	1x	"	"	01/26/09 10:02	
Copper	"	0.00173	----	0.00100	"	"	"	"	"	
Lead	"	ND	----	0.00100	"	"	"	"	"	
Manganese	"	0.115	----	0.0100	"	"	"	"	"	
Molybdenum	"	ND	----	0.00500	"	"	"	"	"	
Nickel	"	ND	----	0.00100	"	"	"	"	"	
Selenium	"	0.0178	----	0.0100	"	10x	"	"	01/27/09 10:24	
Silver	"	ND	----	0.0100	"	"	"	"	"	RL1
Thallium	"	ND	----	0.00100	"	1x	"	"	01/26/09 10:02	
Titanium	"	0.0144	----	0.00100	"	"	"	"	"	
Vanadium	"	0.0187	----	0.00100	"	"	"	"	"	
Zinc	"	ND	----	0.0100	"	"	"	"	"	
BSA0192-03RE1 (H-5P-08)		Water			Sampled: 01/22/09 10:30					
Mercury	EPA 7470A - Diss	ND	----	0.000200	mg/l	1x	9A30012	01/30/09 10:22	01/30/09 14:43	
Vanadium	EPA 6020 - Diss	ND	----	0.0100	"	10x	9A26002	01/26/09 06:34	01/27/09 10:24	RL1

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 02/04/09 10:39

Dissolved Metals by EPA 6000/7000 Series Methods
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BSA0192-04 (MW-1)		Water			Sampled: 01/22/09 12:00					
Antimony	EPA 6020 - Diss	ND	----	0.00300	mg/l	1x	9A26002	01/26/09 06:34	01/26/09 10:08	
Arsenic	"	ND	----	0.0100	"	10x	"	"	01/27/09 10:30	RL1
Barium	"	0.0279	----	0.0100	"	1x	"	"	01/26/09 10:08	
Beryllium	"	ND	----	0.00100	"	"	"	"	"	
Cadmium	"	ND	----	0.00100	"	"	"	"	"	
Chromium	"	0.0139	----	0.0100	"	10x	"	"	01/27/09 10:30	
Cobalt	"	0.00159	----	0.00100	"	1x	"	"	01/26/09 10:08	
Copper	"	0.00328	----	0.00100	"	"	"	"	"	
Lead	"	ND	----	0.00100	"	"	"	"	"	
Mercury	EPA 7470A - Diss	ND	----	0.000200	"	"	9A26018	01/26/09 10:42	01/26/09 14:03	
Molybdenum	EPA 6020 - Diss	ND	----	0.00500	"	"	9A26002	01/26/09 06:34	01/26/09 10:08	
Nickel	"	0.00194	----	0.00100	"	"	"	"	"	
Selenium	"	0.0279	----	0.0100	"	10x	"	"	01/27/09 10:30	
Silver	"	ND	----	0.0100	"	"	"	"	"	RL1
Thallium	"	ND	----	0.00100	"	1x	"	"	01/26/09 10:08	
Titanium	"	0.00518	----	0.00100	"	"	"	"	"	
Vanadium	"	0.0135	----	0.00100	"	"	"	"	"	
Zinc	"	0.0122	----	0.0100	"	"	"	"	"	

BSA0192-04RE1 (MW-1)

BSA0192-04RE1 (MW-1)		Water	Sampled: 01/22/09 12:00							
Manganese	EPA 6020 - Diss	0.930	----	0.100	mg/l	10x	9A26002	01/26/09 06:34	01/27/09 10:30	
Vanadium	"	ND	----	0.0100	"	"	"	"	"	RL1

BSA0192-05 (MW-5)

BSA0192-05 (MW-5)		Water	Sampled: 01/22/09 13:00							
Antimony	EPA 6020 - Diss	ND	----	0.00300	mg/l	1x	9A26002	01/26/09 06:34	01/26/09 10:14	
Arsenic	"	ND	----	0.0100	"	10x	"	"	01/27/09 10:36	RL1
Barium	"	0.0514	----	0.0100	"	1x	"	"	01/26/09 10:14	
Beryllium	"	ND	----	0.00100	"	"	"	"	"	
Cadmium	"	ND	----	0.00100	"	"	"	"	"	
Chromium	"	0.0118	----	0.0100	"	10x	"	"	01/27/09 10:36	
Cobalt	"	0.00140	----	0.00100	"	1x	"	"	01/26/09 10:14	
Copper	"	0.00159	----	0.00100	"	"	"	"	"	
Lead	"	ND	----	0.00100	"	"	"	"	"	
Mercury	EPA 7470A - Diss	ND	----	0.000200	"	"	9A26018	01/26/09 10:42	01/26/09 14:05	
Molybdenum	EPA 6020 - Diss	ND	----	0.00500	"	"	9A26002	01/26/09 06:34	01/26/09 10:14	
Nickel	"	0.00127	----	0.00100	"	"	"	"	"	
Selenium	"	0.0218	----	0.0100	"	10x	"	"	01/27/09 10:36	
Silver	"	ND	----	0.0100	"	"	"	"	"	RL1
Thallium	"	ND	----	0.00100	"	1x	"	"	01/26/09 10:14	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 02/04/09 10:39

Dissolved Metals by EPA 6000/7000 Series Methods
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes	
BSA0192-05 (MW-5)		Water			Sampled: 01/22/09 13:00						
Titanium	EPA 6020 - Diss	0.0101	----	0.00100	mg/l	1x	9A26002	01/26/09 06:34	01/26/09 10:14		
Vanadium	"	0.0150	----	0.00100	"	"	"	"	"		
Zinc	"	ND	----	0.0100	"	"	"	"	"		
BSA0192-05RE1 (MW-5)		Water			Sampled: 01/22/09 13:00						
Manganese	EPA 6020 - Diss	0.345	----	0.100	mg/l	10x	9A26002	01/26/09 06:34	01/27/09 10:36		
Vanadium	"	ND	----	0.0100	"	"	"	"	"	RL1	
BSA0192-06 (H-3P-08)		Water			Sampled: 01/22/09 14:45						
Antimony	EPA 6020 - Diss	ND	----	0.00300	mg/l	1x	9A26002	01/26/09 06:34	01/26/09 10:20		
Arsenic	"	ND	----	0.0100	"	10x	"	"	01/27/09 10:42	RL1	
Barium	"	0.0756	----	0.0100	"	1x	"	"	01/26/09 10:20		
Beryllium	"	ND	----	0.00100	"	"	"	"	"		
Cadmium	"	ND	----	0.00100	"	"	"	"	"		
Chromium	"	ND	----	0.0100	"	10x	"	"	01/27/09 10:42	RL1	
Cobalt	"	0.00234	----	0.00100	"	1x	"	"	01/26/09 10:20		
Copper	"	0.00135	----	0.00100	"	"	"	"	"		
Lead	"	ND	----	0.00100	"	"	"	"	"		
Mercury	EPA 7470A - Diss	ND	----	0.000200	"	"	9A26018	01/26/09 10:42	01/26/09 14:08		
Molybdenum	EPA 6020 - Diss	ND	----	0.00500	"	"	9A26002	01/26/09 06:34	01/26/09 10:20		
Nickel	"	0.00165	----	0.00100	"	"	"	"	"		
Selenium	"	0.0180	----	0.0100	"	10x	"	"	01/27/09 10:42		
Silver	"	ND	----	0.0100	"	"	"	"	"	RL1	
Thallium	"	ND	----	0.00100	"	1x	"	"	01/26/09 10:20		
Titanium	"	0.00723	----	0.00100	"	"	"	"	"		
Vanadium	"	0.0136	----	0.00100	"	"	"	"	"		
Zinc	"	ND	----	0.0100	"	"	"	"	"		
BSA0192-06RE1 (H-3P-08)		Water			Sampled: 01/22/09 14:45						
Manganese	EPA 6020 - Diss	0.814	----	0.100	mg/l	10x	9A26002	01/26/09 06:34	01/27/09 10:42		
Vanadium	"	ND	----	0.0100	"	"	"	"	"	RL1	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 02/04/09 10:39

Dissolved Metals by EPA 6000/7000 Series Methods
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes	
BSA0192-07 (H-2P-08)		Water			Sampled: 01/22/09 15:50						
Antimony	EPA 6020 - Diss	ND	----	0.00300	mg/l	1x	9A26002	01/26/09 06:34	01/26/09 10:26		
Arsenic	"	ND	----	0.0100	"	10x	"	"	01/27/09 10:48	RL1	
Barium	"	0.122	----	0.0100	"	1x	"	"	01/26/09 10:26		
Beryllium	"	ND	----	0.00100	"	"	"	"	"		
Cadmium	"	ND	----	0.00100	"	"	"	"	"		
Chromium	"	ND	----	0.0100	"	10x	"	"	01/27/09 10:48	RL1	
Cobalt	"	0.00138	----	0.00100	"	1x	"	"	01/26/09 10:26		
Copper	"	0.00188	----	0.00100	"	"	"	"	"		
Lead	"	ND	----	0.00100	"	"	"	"	"		
Mercury	EPA 7470A - Diss	ND	----	0.000200	"	"	9A26018	01/26/09 10:42	01/26/09 14:10		
Molybdenum	EPA 6020 - Diss	0.00664	----	0.00500	"	"	9A26002	01/26/09 06:34	01/26/09 10:26		
Nickel	"	0.00173	----	0.00100	"	"	"	"	"		
Selenium	"	0.0194	----	0.0100	"	10x	"	"	01/27/09 10:48		
Silver	"	ND	----	0.0100	"	"	"	"	"	RL1	
Thallium	"	ND	----	0.00100	"	1x	"	"	01/26/09 10:26		
Titanium	"	0.00699	----	0.00100	"	"	"	"	"		
Vanadium	"	0.0124	----	0.00100	"	"	"	"	"		
Zinc	"	ND	----	0.0100	"	"	"	"	"		
BSA0192-07RE1 (H-2P-08)		Water			Sampled: 01/22/09 15:50						
Manganese	EPA 6020 - Diss	0.946	----	0.100	mg/l	10x	9A26002	01/26/09 06:34	01/27/09 10:48		
Vanadium	"	ND	----	0.0100	"	"	"	"	"	RL1	
BSA0192-08 (FD-2)		Water			Sampled: 01/22/09 16:00						
Antimony	EPA 6020 - Diss	ND	----	0.00300	mg/l	1x	9A26002	01/26/09 06:34	01/26/09 10:32		
Arsenic	"	ND	----	0.0100	"	10x	"	"	01/27/09 11:35	RL1	
Barium	"	0.0763	----	0.0100	"	1x	"	"	01/26/09 10:32		
Beryllium	"	ND	----	0.00100	"	"	"	"	"		
Cadmium	"	ND	----	0.00100	"	"	"	"	"		
Chromium	"	ND	----	0.0100	"	10x	"	"	01/27/09 11:35	RL1	
Cobalt	"	0.00239	----	0.00100	"	1x	"	"	01/26/09 10:32		
Copper	"	0.00140	----	0.00100	"	"	"	"	"		
Lead	"	ND	----	0.00100	"	"	"	"	"		
Mercury	EPA 7470A - Diss	ND	----	0.000200	"	"	9A26018	01/26/09 10:42	01/26/09 14:18		
Molybdenum	EPA 6020 - Diss	ND	----	0.00500	"	"	9A26002	01/26/09 06:34	01/26/09 10:32		
Nickel	"	0.00163	----	0.00100	"	"	"	"	"		
Selenium	"	0.0160	----	0.0100	"	10x	"	"	01/27/09 11:35		
Silver	"	ND	----	0.0100	"	"	"	"	"	RL1	
Thallium	"	ND	----	0.00100	"	1x	"	"	01/26/09 10:32		

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

02/04/09 10:39

Dissolved Metals by EPA 6000/7000 Series Methods

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BSA0192-08 (FD-2)		Water			Sampled: 01/22/09 16:00					
Titanium	EPA 6020 - Diss	0.00844	----	0.00100	mg/l	1x	9A26002	01/26/09 06:34	01/26/09 10:32	
Vanadium	"	0.0131	----	0.00100	"	"	"	"	"	
Zinc	"	ND	----	0.0100	"	"	"	"	"	
BSA0192-08RE1 (FD-2)		Water			Sampled: 01/22/09 16:00					
Manganese	EPA 6020 - Diss	0.814	----	0.100	mg/l	10x	9A26002	01/26/09 06:34	01/27/09 11:35	
Vanadium	"	ND	----	0.0100	"	"	"	"	"	RL1

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 02/04/09 10:39

Conventional Chemistry Parameters by APHA/EPA Methods
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BSA0192-01 (FD-1)		Water			Sampled: 01/22/09 09:00					
Hexavalent Chromium	EPA 7196A	0.00800	----	0.00500	mg/l	1x	9A23015	01/23/09 08:00	01/23/09 08:20	
BSA0192-02 (H-8P-08)		Water			Sampled: 01/22/09 09:20					
Hexavalent Chromium	EPA 7196A	0.0220	----	0.00500	mg/l	1x	9A23015	01/23/09 08:00	01/23/09 08:20	
Total Dissolved Solids	EPA 160.1	13000	----	10	"	"	9A23019	01/23/09 11:48	01/26/09 14:07	
Total Suspended Solids	EPA 160.2	120	----	4.0	"	"	9A23018	01/23/09 11:46	01/23/09 17:15	
BSA0192-03 (H-5P-08)		Water			Sampled: 01/22/09 10:30					
Hexavalent Chromium	EPA 7196A	0.00500	----	0.00500	mg/l	1x	9A23015	01/23/09 08:00	01/23/09 08:20	
Total Dissolved Solids	EPA 160.1	7000	----	10	"	"	9A23019	01/23/09 11:48	01/26/09 14:07	
Total Suspended Solids	EPA 160.2	14	----	4.0	"	"	9A23018	01/23/09 11:46	01/23/09 17:15	
BSA0192-04 (MW-1)		Water			Sampled: 01/22/09 12:00					
Hexavalent Chromium	EPA 7196A	0.00600	----	0.00500	mg/l	1x	9A23015	01/23/09 08:00	01/23/09 08:20	
Total Dissolved Solids	EPA 160.1	8300	----	10	"	"	9A23019	01/23/09 11:48	01/26/09 14:07	
Total Suspended Solids	EPA 160.2	40	----	4.0	"	"	9A23018	01/23/09 11:46	01/23/09 17:15	
BSA0192-05 (MW-5)		Water			Sampled: 01/22/09 13:00					
Hexavalent Chromium	EPA 7196A	ND	----	0.00500	mg/l	1x	9A23015	01/23/09 08:00	01/23/09 08:20	
Total Dissolved Solids	EPA 160.1	5700	----	10	"	"	9A23019	01/23/09 11:48	01/26/09 14:07	
Total Suspended Solids	EPA 160.2	16	----	4.0	"	"	9A23018	01/23/09 11:46	01/23/09 17:15	
BSA0192-06 (H-3P-08)		Water			Sampled: 01/22/09 14:45					
Hexavalent Chromium	EPA 7196A	ND	----	0.00500	mg/l	1x	9A23015	01/23/09 08:00	01/23/09 08:20	
Total Dissolved Solids	EPA 160.1	4200	----	10	"	"	9A23019	01/23/09 11:48	01/26/09 14:07	
Total Suspended Solids	EPA 160.2	62	----	4.0	"	"	9A23018	01/23/09 11:46	01/23/09 17:15	
BSA0192-07 (H-2P-08)		Water			Sampled: 01/22/09 15:50					
Hexavalent Chromium	EPA 7196A	0.0190	----	0.00500	mg/l	1x	9A23015	01/23/09 08:00	01/23/09 08:20	
Total Dissolved Solids	EPA 160.1	5100	----	10	"	"	9A23019	01/23/09 11:48	01/26/09 14:07	
Total Suspended Solids	EPA 160.2	72	----	4.0	"	"	9A23018	01/23/09 11:46	01/23/09 17:15	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 02/04/09 10:39

TOC
 TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BSA0192-02 (H-8P-08)		Water		Sampled: 01/22/09 09:20						
Total Organic Carbon	415.1	21	----	5.0	mg/L	5x	40157	01/24/09 10:10	01/24/09 10:10	
BSA0192-03 (H-5P-08)		Water		Sampled: 01/22/09 10:30						
Total Organic Carbon	415.1	29	----	5.0	mg/L	5x	40157	01/24/09 10:10	01/24/09 10:10	
BSA0192-04 (MW-1)		Water		Sampled: 01/22/09 12:00						
Total Organic Carbon	415.1	39	----	5.0	mg/L	5x	40157	01/24/09 10:10	01/24/09 10:10	
BSA0192-05 (MW-5)		Water		Sampled: 01/22/09 13:00						
Total Organic Carbon	415.1	24	----	5.0	mg/L	5x	40157	01/24/09 10:10	01/24/09 10:10	
BSA0192-06 (H-3P-08)		Water		Sampled: 01/22/09 14:45						
Total Organic Carbon	415.1	28	----	5.0	mg/L	5x	40157	01/24/09 10:10	01/24/09 10:10	
BSA0192-07 (H-2P-08)		Water		Sampled: 01/22/09 15:50						
Total Organic Carbon	415.1	29	----	5.0	mg/L	5x	40157	01/24/09 10:10	01/24/09 10:10	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 02/04/09 10:39

Dissolved Metals by EPA 200 Series Methods - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 9A26002 Water Preparation Method: EPA 3005A

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (9A26002-BLK1)										Extracted: 01/26/09 06:34				
Strontium	EPA 6020 - Diss	ND	---	0.00100	mg/l	1x	--	--	--	--	--	--	01/26/09 09:08	
LCS (9A26002-BS1)										Extracted: 01/26/09 06:34				
Strontium	EPA 6020 - Diss	0.215	---	0.00100	mg/l	1x	--	0.200	108%	(80-120)	--	--	01/26/09 09:14	
Duplicate (9A26002-DUP2)										QC Source: BSA0192-01RE1		Extracted: 01/26/09 06:34		
Strontium	EPA 6020 - Diss	3.00	---	0.0200	mg/l	20x	3.15	--	--	--	4.81% (20)		01/26/09 20:50	
Matrix Spike (9A26002-MS2)										QC Source: BSA0192-01RE1		Extracted: 01/26/09 06:34		
Strontium	EPA 6020 - Diss	3.59	---	0.0200	mg/l	20x	3.15	0.201	219%	(75-125)	--	--	01/26/09 20:43	MHA

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 02/04/09 10:39

Total Metals by EPA 6000/7000 Series Methods - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 9A26003 Water Preparation Method: EPA 3020A

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (9A26003-BLK1)													Extracted: 01/26/09 06:49	
Beryllium	EPA 6020	ND	---	0.00100	mg/l	1x	--	--	--	--	--	--	01/26/09 12:38	
Vanadium	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Thallium	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Selenium	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Lead	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Manganese	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Chromium	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Antimony	"	ND	---	0.00300	"	"	--	--	--	--	--	--	"	
Nickel	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Strontium	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Copper	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Cadmium	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Silver	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Cobalt	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Barium	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Arsenic	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Molybdenum	"	ND	---	0.00500	"	"	--	--	--	--	--	--	"	
Titanium	"	ND	---	0.00100	"	"	--	--	--	--	--	--	01/26/09 22:56	

LCS (9A26003-BS1)

Extracted: 01/26/09 06:49

Copper	EPA 6020	0.0787	---	0.00100	mg/l	1x	--	0.0800	98.3%	(80-120)	--	--	01/26/09 12:44	
Barium	"	0.0780	---	0.0100	"	"	--	"	97.4%	"	--	--	"	
Silver	"	0.0756	---	0.00100	"	"	--	"	94.5%	"	--	--	"	
Arsenic	"	0.0771	---	0.00100	"	"	--	"	96.4%	"	--	--	"	
Beryllium	"	0.0815	---	0.00100	"	"	--	"	102%	"	--	--	"	
Strontium	"	0.0785	---	0.00100	"	"	--	"	98.1%	"	--	--	"	
Cobalt	"	0.0746	---	0.00100	"	"	--	"	93.3%	"	--	--	"	
Cadmium	"	0.0764	---	0.00100	"	"	--	"	95.5%	"	--	--	"	
Nickel	"	0.0769	---	0.00100	"	"	--	"	96.1%	"	--	--	"	
Antimony	"	0.0563	---	0.00300	"	"	--	0.0600	93.8%	"	--	--	"	
Selenium	"	0.0784	---	0.00100	"	"	--	0.0800	98.0%	"	--	--	"	
Vanadium	"	0.0738	---	0.00100	"	"	--	"	92.3%	"	--	--	"	
Titanium	"	0.0844	---	0.00100	"	"	--	"	105%	"	--	--	01/26/09 23:02	
Chromium	"	0.0769	---	0.00100	"	"	--	"	96.1%	"	--	--	01/26/09 12:44	
Thallium	"	0.0756	---	0.00100	"	"	--	"	94.6%	"	--	--	"	
Lead	"	0.0777	---	0.00100	"	"	--	"	97.2%	"	--	--	"	
Molybdenum	"	0.0574	---	0.00500	"	"	--	0.0600	95.7%	"	--	--	"	
Manganese	"	0.0786	---	0.0100	"	"	--	0.0800	98.2%	"	--	--	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 02/04/09 10:39

Total Metals by EPA 6000/7000 Series Methods - Laboratory Quality Control Results

TestAmerica Seattle

QC Batch: 9A26003

Water Preparation Method: EPA 3020A

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Duplicate (9A26003-DUP1)			QC Source: BSA0192-01				Extracted: 01/26/09 06:49							
Nickel	EPA 6020	0.00403	---	0.00100	mg/l	1x	0.00396	--	--	--	1.75%	(20)	01/26/09 13:02	
Titanium	"	0.234	---	0.00100	"	"	0.224	--	--	--	4.63%	"	01/26/09 23:20	
Vanadium	"	0.00872	---	0.00100	"	"	0.00872	--	--	--	0.00%	"	01/26/09 13:02	
Copper	"	0.00722	---	0.00100	"	"	0.00755	--	--	--	4.47%	"	"	
Manganese	"	0.328	---	0.0100	"	"	0.335	--	--	--	2.20%	"	"	
Antimony	"	ND	---	0.00300	"	"	ND	--	--	--	NR	"	"	
Lead	"	ND	---	0.00100	"	"	ND	--	--	--	1.34%	"	"	
Silver	"	0.00143	---	0.00100	"	"	ND	--	--	--	87.4%	"	"	R4
Chromium	"	0.00477	---	0.00100	"	"	0.00476	--	--	--	0.210%	"	"	
Molybdenum	"	ND	---	0.00500	"	"	ND	--	--	--	67.4%	"	"	R4
Selenium	"	0.0143	---	0.00100	"	"	0.0134	--	--	--	6.58%	"	"	
Arsenic	"	0.00323	---	0.00100	"	"	0.00286	--	--	--	12.2%	"	"	
Beryllium	"	ND	---	0.00100	"	"	ND	--	--	--	NR	"	"	
Cadmium	"	ND	---	0.00100	"	"	ND	--	--	--	NR	"	"	
Cobalt	"	0.00321	---	0.00100	"	"	0.00314	--	--	--	2.20%	"	"	
Barium	"	0.0794	---	0.0100	"	"	0.0832	--	--	--	4.60%	"	"	
Thallium	"	ND	---	0.00100	"	"	ND	--	--	--	"	"	"	

Duplicate (9A26003-DUP2)

QC Source: BSA0192-01RE1

Extracted: 01/26/09 06:49

Strontium	EPA 6020	3.10	---	0.0200	mg/l	20x	3.05	--	--	--	1.69%	(20)	01/27/09 00:37	
-----------	----------	------	-----	--------	------	-----	------	----	----	----	-------	------	----------------	--

Matrix Spike (9A26003-MS1)

QC Source: BSA0192-01

Extracted: 01/26/09 06:49

Lead	EPA 6020	0.0657	---	0.00100	mg/l	1x	0.000750	0.0800	81.2%	(75-125)	--	--	01/26/09 12:56	
Chromium	"	0.0774	---	0.00100	"	"	0.00476	"	90.8%	"	--	--	"	
Thallium	"	0.0640	---	0.00100	"	"	ND	"	80.0%	"	--	--	"	
Selenium	"	0.0892	---	0.00100	"	"	0.0134	"	94.8%	"	--	--	"	
Nickel	"	0.0788	---	0.00100	"	"	0.00396	"	93.6%	"	--	--	"	
Copper	"	0.0795	---	0.00100	"	"	0.00755	"	90.0%	"	--	--	"	
Cadmium	"	0.0741	---	0.00100	"	"	ND	"	92.6%	"	--	--	"	
Barium	"	0.159	---	0.0100	"	"	0.0832	"	94.9%	"	--	--	"	
Cobalt	"	0.0801	---	0.00100	"	"	0.00314	"	96.2%	"	--	--	"	
Arsenic	"	0.0804	---	0.00100	"	"	0.00286	"	97.0%	"	--	--	"	
Vanadium	"	0.0928	---	0.00100	"	"	0.00872	"	105%	"	--	--	"	
Molybdenum	"	0.0675	---	0.00500	"	"	0.000590	0.0600	111%	"	--	--	"	
Antimony	"	0.0600	---	0.00300	"	"	ND	"	100%	"	--	--	"	
Silver	"	0.0736	---	0.00100	"	"	0.000560	0.0800	91.2%	"	--	--	"	
Titanium	"	0.297	---	0.00100	"	"	0.224	"	91.6%	"	--	--	01/26/09 23:14	
Beryllium	"	0.0886	---	0.00100	"	"	ND	"	111%	"	--	--	01/26/09 12:56	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue	Project Name: WSDOT SR 520 - Pontoon Sites	Report Created:
1100 112th Avenue NE, Suite 400	Project Number: 180171.AR.X7.02	02/04/09 10:39
Bellevue, WA/USA 98004-4504	Project Manager: Brian Tracy	

Total Metals by EPA 6000/7000 Series Methods - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 9A26003 Water Preparation Method: EPA 3020A

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes	
Matrix Spike (9A26003-MS2)			QC Source: BSA0192-01RE1					Extracted: 01/26/09 06:49							
Strontium	EPA 6020	3.42	---	0.0200	mg/l	20x	3.05	0.0800	465%	(75-125)	--	--	01/26/09 14:37	MHA	
Manganese	"	0.408	---	0.0200	"	2x	0.335	"	91.4%	"	--	--	01/27/09 00:31		
Post Spike (9A26003-PS1)			QC Source: BSA0192-01					Extracted: 01/26/09 06:49							
Thallium	EPA 6020	0.0812	---		ug/ml	1x	0.0000900	0.100	80.7%	(80-120)	--	--	01/26/09 12:50		
Cobalt	"	0.0958	---		"	"	0.00314	"	92.7%	"	--	--	"		
Beryllium	"	0.113	---		"	"	0.0000900	0.0995	114%	"	--	--	"		
Vanadium	"	0.111	---		"	"	0.00872	0.100	102%	"	--	--	"		
Cadmium	"	0.0967	---		"	"	-0.000510	"	97.2%	"	--	--	"		
Antimony	"	0.0580	---		"	"	0.000140	0.0510	114%	"	--	--	"		
Molybdenum	"	0.0561	---		"	"	0.000590	0.0495	112%	(75-125)	--	--	"		
Arsenic	"	0.107	---		"	"	0.00286	0.0995	105%	(80-120)	--	--	"		
Barium	"	0.182	---		"	"	0.0832	0.100	98.6%	"	--	--	"		
Nickel	"	0.0946	---		"	"	0.00396	0.0995	91.1%	"	--	--	"		
Titanium	"	0.351	---		"	"	0.224	0.100	127%	(75-125)	--	--	01/26/09 23:08	S3	
Copper	"	0.0981	---		"	"	0.00755	"	90.1%	(80-120)	--	--	01/26/09 12:50		
Silver	"	0.0893	---		"	"	0.000560	"	88.8%	"	--	--	"		
Lead	"	0.0901	---		"	"	0.000750	"	88.9%	"	--	--	"		
Chromium	"	0.0990	---		"	"	0.00476	"	93.7%	"	--	--	"		
Selenium	"	0.110	---		"	"	0.0134	"	97.1%	"	--	--	"		
Post Spike (9A26003-PS2)			QC Source: BSA0192-01RE1					Extracted: 01/26/09 06:49							
Strontium	EPA 6020	3.37	---		ug/ml	20x	3.05	0.100	316%	(75-125)	--	--	01/26/09 14:31	S3	
Manganese	"	0.428	---		"	2x	0.335	"	92.2%	(80-120)	--	--	01/26/09 14:25		

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue	Project Name: WSDOT SR 520 - Pontoon Sites	Report Created:
1100 112th Avenue NE, Suite 400	Project Number: 180171.AR.X7.02	02/04/09 10:39
Bellevue, WA/USA 98004-4504	Project Manager: Brian Tracy	

Total Metals by EPA 6000/7000 Series Methods - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 9A26018 Water Preparation Method: EPA 7470A

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (9A26018-BLK1)								Extracted: 01/26/09 10:42						
Mercury	EPA 7470A	ND	---	0.000200	mg/l	1x	--	--	--	--	--	--	01/26/09 13:17	
LCS (9A26018-BS1)								Extracted: 01/26/09 10:42						
Mercury	EPA 7470A	0.00411	---	0.000200	mg/l	1x	--	0.00500	82.2%	(80-120)	--	--	01/26/09 13:20	
LCS Dup (9A26018-BSD1)								Extracted: 01/26/09 10:42						
Mercury	EPA 7470A	0.00404	---	0.000200	mg/l	1x	--	0.00500	80.8%	(80-120)	1.73% (20)	--	01/26/09 13:22	
Matrix Spike (9A26018-MS1)				QC Source: BSA0192-01				Extracted: 01/26/09 10:42						
Mercury	EPA 7470A	0.00347	---	0.000200	mg/l	1x	0.000143	0.00500	66.6%	(75-125)	--	--	01/26/09 13:25	M2
Matrix Spike Dup (9A26018-MSD1)				QC Source: BSA0192-01				Extracted: 01/26/09 10:42						
Mercury	EPA 7470A	0.00355	---	0.000200	mg/l	1x	0.000143	0.00500	68.2%	(75-125)	2.32% (20)	--	01/26/09 13:27	M2

QC Batch: 9A27003 Water Preparation Method: EPA 3020A

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (9A27003-BLK1)								Extracted: 01/27/09 10:09						
Zinc	EPA 6020	ND	---	0.0100	mg/l	1x	--	--	--	--	--	--	01/27/09 10:18	
LCS (9A27003-BS1)								Extracted: 01/27/09 10:09						
Zinc	EPA 6020	0.0788	---	0.0100	mg/l	1x	--	0.0800	98.6%	(80-120)	--	--	01/27/09 12:05	
Duplicate (9A27003-DUP1)				QC Source: BSA0192-01RE1				Extracted: 01/27/09 10:09						
Zinc	EPA 6020	ND	---	0.0200	mg/l	2x	ND	--	--	--	8.60% (20)	--	01/27/09 13:11	
Matrix Spike (9A27003-MS1)				QC Source: BSA0192-01RE1				Extracted: 01/27/09 10:09						
Zinc	EPA 6020	0.0818	---	0.0100	mg/l	1x	0.0178	0.0800	80.0%	(75-125)	--	--	01/27/09 12:17	
Post Spike (9A27003-PS1)				QC Source: BSA0192-01RE1				Extracted: 01/27/09 10:09						
Zinc	EPA 6020	0.104	---		ug/ml	1x	0.0178	0.100	85.7%	(80-120)	--	--	01/27/09 12:11	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 02/04/09 10:39

Dissolved Metals by EPA 6000/7000 Series Methods - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 9A26002 Water Preparation Method: EPA 3005A

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (9A26002-BLK1)													Extracted: 01/26/09 06:34	
Chromium	EPA 6020 - Diss	ND	---	0.00100	mg/l	1x	--	--	--	--	--	--	01/26/09 09:08	
Copper	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Manganese	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Antimony	"	ND	---	0.00300	"	"	--	--	--	--	--	--	"	
Cadmium	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Thallium	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Barium	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Molybdenum	"	ND	---	0.00500	"	"	--	--	--	--	--	--	"	
Lead	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Selenium	"	ND	---	0.00100	"	"	--	--	--	--	--	--	01/27/09 07:59	
Nickel	"	ND	---	0.00100	"	"	--	--	--	--	--	--	01/26/09 09:08	
Arsenic	"	ND	---	0.00100	"	"	--	--	--	--	--	--	01/27/09 07:59	
Cobalt	"	ND	---	0.00100	"	"	--	--	--	--	--	--	01/26/09 09:08	
Zinc	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Beryllium	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Vanadium	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Titanium	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Silver	"	ND	---	0.00100	"	"	--	--	--	--	--	--	01/27/09 07:59	

LCS (9A26002-BS1)

Extracted: 01/26/09 06:34

Cadmium	EPA 6020 - Diss	0.214	---	0.00100	mg/l	1x	--	0.200	107%	(80-120)	--	--	01/26/09 09:14	
Zinc	"	0.214	---	0.0100	"	"	--	"	107%	"	--	--	"	
Antimony	"	0.0543	---	0.00300	"	"	--	0.0500	109%	"	--	--	"	
Lead	"	0.211	---	0.00100	"	"	--	0.200	106%	"	--	--	"	
Thallium	"	0.210	---	0.00100	"	"	--	"	105%	"	--	--	"	
Nickel	"	0.213	---	0.00100	"	"	--	"	106%	"	--	--	"	
Titanium	"	0.210	---	0.00100	"	"	--	"	105%	"	--	--	"	
Selenium	"	0.211	---	0.00100	"	"	--	"	105%	"	--	--	01/27/09 08:05	
Vanadium	"	0.209	---	0.00100	"	"	--	"	105%	"	--	--	01/26/09 09:14	
Barium	"	0.216	---	0.0100	"	"	--	"	108%	"	--	--	"	
Beryllium	"	0.215	---	0.00100	"	"	--	"	108%	"	--	--	"	
Arsenic	"	0.212	---	0.00100	"	"	--	"	106%	"	--	--	01/27/09 08:05	
Silver	"	0.212	---	0.00100	"	"	--	"	106%	"	--	--	"	
Cobalt	"	0.210	---	0.00100	"	"	--	"	105%	"	--	--	01/26/09 09:14	
Molybdenum	"	0.0539	---	0.00500	"	"	--	0.0500	108%	"	--	--	"	
Chromium	"	0.212	---	0.00100	"	"	--	0.200	106%	"	--	--	"	
Manganese	"	0.209	---	0.0100	"	"	--	"	104%	"	--	--	"	
Copper	"	0.213	---	0.00100	"	"	--	"	106%	"	--	--	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**

Project Number: 180171.AR.X7.02

Project Manager: Brian Tracy

Report Created:

02/04/09 10:39

Dissolved Metals by EPA 6000/7000 Series Methods - Laboratory Quality Control Results

TestAmerica Seattle

QC Batch: 9A26002

Water Preparation Method: EPA 3005A

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Duplicate (9A26002-DUP1)			QC Source: BSA0192-01				Extracted: 01/26/09 06:34							
Lead	EPA 6020 - Diss	ND	---	0.00100	mg/l	1x	ND	--	--	--	NR	(20)	01/26/09 09:26	
Zinc	"	0.0101	---	0.0100	"	"	ND	--	--	--	5.16%	"	"	
Silver	"	ND	---	0.0100	"	10x	ND	--	--	--	NR	"	01/27/09 09:18	
Barium	"	0.0753	---	0.0100	"	1x	0.0760	--	--	--	0.820%	"	01/26/09 09:26	
Manganese	"	0.334	---	0.0100	"	"	0.333	--	--	--	0.150%	"	"	
Cadmium	"	ND	---	0.00100	"	"	ND	--	--	--	NR	"	"	
Arsenic	"	ND	---	0.0100	"	10x	ND	--	--	--	2.63%	"	01/27/09 09:18	
Selenium	"	0.0418	---	0.0100	"	"	0.0417	--	--	--	0.240%	"	"	
Antimony	"	ND	---	0.00300	"	1x	ND	--	--	--	"	"	01/26/09 09:26	
Thallium	"	ND	---	0.00100	"	"	ND	--	--	--	NR	"	"	
Cobalt	"	0.00198	---	0.00100	"	"	0.00189	--	--	--	4.65%	"	"	
Beryllium	"	ND	---	0.00100	"	"	ND	--	--	--	NR	"	"	
Vanadium	"	0.0152	---	0.00100	"	"	0.0154	--	--	--	1.17%	"	"	
Molybdenum	"	ND	---	0.00500	"	"	ND	--	--	--	134%	"	"	R4
Nickel	"	0.00219	---	0.00100	"	"	0.00208	--	--	--	5.15%	"	"	
Copper	"	0.00376	---	0.00100	"	"	0.00363	--	--	--	3.52%	"	"	
Titanium	"	0.0121	---	0.00100	"	"	0.0124	--	--	--	2.69%	"	"	
Chromium	"	0.0129	---	0.0100	"	10x	0.0126	--	--	--	2.35%	"	01/27/09 09:18	
Duplicate (9A26002-DUP2)			QC Source: BSA0192-01RE1				Extracted: 01/26/09 06:34							
Vanadium	EPA 6020 - Diss	ND	---	0.0100	mg/l	10x	ND	--	--	--	29.0%	(20)	01/27/09 09:18	R4, RL1
Matrix Spike (9A26002-MS1)			QC Source: BSA0192-01				Extracted: 01/26/09 06:34							
Barium	EPA 6020 - Diss	0.280	---	0.0100	mg/l	1x	0.0760	0.200	102%	(80-120)	--	--	01/26/09 09:20	
Beryllium	"	0.238	---	0.00100	"	"	ND	0.199	119%	"	--	--	"	
Arsenic	"	0.222	---	0.0100	"	10x	0.00750	"	108%	(80-125)	--	--	01/27/09 09:12	
Manganese	"	0.508	---	0.0100	"	1x	0.333	0.201	87.0%	(75-120)	--	--	01/26/09 09:20	
Silver	"	0.158	---	0.0100	"	10x	ND	0.200	79.1%	(75-125)	--	--	01/27/09 09:12	
Cobalt	"	0.194	---	0.00100	"	1x	0.00189	"	96.3%	"	--	--	01/26/09 09:20	
Cadmium	"	0.202	---	0.00100	"	"	ND	"	101%	"	--	--	"	
Vanadium	"	0.224	---	0.00100	"	"	0.0154	"	104%	"	--	--	"	
Chromium	"	0.222	---	0.0100	"	10x	0.0126	0.201	104%	"	--	--	01/27/09 09:12	
Zinc	"	0.209	---	0.0100	"	1x	0.00962	"	99.3%	"	--	--	01/26/09 09:20	
Selenium	"	0.254	---	0.0100	"	10x	0.0417	0.200	106%	"	--	--	01/27/09 09:12	
Lead	"	0.213	---	0.00100	"	1x	ND	0.201	106%	"	--	--	01/26/09 09:20	
Thallium	"	0.213	---	0.00100	"	"	ND	"	106%	"	--	--	"	
Nickel	"	0.191	---	0.00100	"	"	0.00208	0.199	94.8%	"	--	--	"	
Copper	"	0.192	---	0.00100	"	"	0.00363	0.201	93.8%	"	--	--	"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 02/04/09 10:39

Dissolved Metals by EPA 6000/7000 Series Methods - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 9A26002 Water Preparation Method: EPA 3005A

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes	
Matrix Spike (9A26002-MS1)			QC Source: BSA0192-01					Extracted: 01/26/09 06:34							
Titanium	EPA 6020 - Diss	0.224	---	0.00100	mg/l	1x	0.0124	0.200	106%	(75-125)	--	--	01/26/09 09:20		

Matrix Spike (9A26002-MS2)			QC Source: BSA0192-01RE1					Extracted: 01/26/09 06:34							
Vanadium	EPA 6020 - Diss	0.218	---	0.0100	mg/l	10x	0.00620	0.200	106%	(75-125)	--	--	01/27/09 09:12		
Antimony	"	0.104	---	0.00600	"	2x	ND	0.102	102%	"	--	--	01/26/09 20:25		
Molybdenum	"	0.119	---	0.0100	"	"	0.000510	0.0990	120%	(75-128)	--	--	"		

QC Batch: 9A26018 Water Preparation Method: EPA 7470A

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes	
Blank (9A26018-BLK1)								Extracted: 01/26/09 10:42							
Mercury	EPA 7470A - Diss	ND	---	0.000200	mg/l	1x	--	--	--	--	--	--	01/26/09 13:17		

LCS (9A26018-BS1)								Extracted: 01/26/09 10:42							
Mercury	EPA 7470A - Diss	0.00411	---	0.000200	mg/l	1x	--	0.00500	82.2%	(80-120)	--	--	01/26/09 13:20		

LCS Dup (9A26018-BSD1)								Extracted: 01/26/09 10:42							
Mercury	EPA 7470A - Diss	0.00404	---	0.000200	mg/l	1x	--	0.00500	80.8%	(80-120)	1.73%	(20)	01/26/09 13:22		

Matrix Spike (9A26018-MS1)			QC Source: BSA0192-01					Extracted: 01/26/09 10:42							
Mercury	EPA 7470A - Diss	0.00347	---	0.000200	mg/l	1x	ND	0.00500	69.5%	(75-125)	--	--	01/26/09 13:25	M2	

Matrix Spike Dup (9A26018-MSD1)			QC Source: BSA0192-01					Extracted: 01/26/09 10:42							
Mercury	EPA 7470A - Diss	0.00355	---	0.000200	mg/l	1x	ND	0.00500	71.1%	(75-125)	2.32%	(20)	01/26/09 13:27	M2	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 02/04/09 10:39

Dissolved Metals by EPA 6000/7000 Series Methods - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 9A30012 Water Preparation Method: EPA 7470A

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes		
Blank (9A30012-BLK1)													Extracted: 01/30/09 10:22			
Mercury	EPA 7470A - Diss	ND	---	0.000200	mg/l	1x	--	--	--	--	--	--	01/30/09 14:05			
LCS (9A30012-BS1)													Extracted: 01/30/09 10:22			
Mercury	EPA 7470A - Diss	0.00567	---	0.000200	mg/l	1x	--	0.00500	113%	(80-120)	--	--	01/30/09 14:08			
LCS Dup (9A30012-BSD1)													Extracted: 01/30/09 10:22			
Mercury	EPA 7470A - Diss	0.00565	---	0.000200	mg/l	1x	--	0.00500	113%	(80-120)	0.322% (20)	--	01/30/09 14:10			
Matrix Spike (9A30012-MS1)													QC Source: BSA0238-01		Extracted: 01/30/09 10:22	
Mercury	EPA 7470A - Diss	0.00549	---	0.000200	mg/l	1x	ND	0.00500	110%	(75-125)	--	--	01/30/09 14:13			
Matrix Spike Dup (9A30012-MSD1)													QC Source: BSA0238-01		Extracted: 01/30/09 10:22	
Mercury	EPA 7470A - Diss	0.00556	---	0.000200	mg/l	1x	ND	0.00500	111%	(75-125)	1.22% (20)	--	01/30/09 14:15			

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue 1100 112th Avenue NE, Suite 400 Bellevue, WA/USA 98004-4504	Project Name: WSDOT SR 520 - Pontoon Sites Project Number: 180171.AR.X7.02 Project Manager: Brian Tracy	Report Created: 02/04/09 10:39
---	--	-----------------------------------

Conventional Chemistry Parameters by APHA/EPA Methods - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 9A23015 Water Preparation Method: General Preparation

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (9A23015-BLK1)										Extracted: 01/23/09 08:00				
Hexavalent Chromium	EPA 7196A	ND	---	0.00500	mg/l	1x	--	--	--	--	--	--	01/23/09 08:20	
LCS (9A23015-BS1)										Extracted: 01/23/09 08:00				
Hexavalent Chromium	EPA 7196A	0.0530	---	0.00500	mg/l	1x	--	0.0512	104%	(90-110)	--	--	01/23/09 08:20	
Duplicate (9A23015-DUP1)										QC Source: BSA0192-01 Extracted: 01/23/09 08:00				
Hexavalent Chromium	EPA 7196A	0.00900	---	0.00500	mg/l	1x	0.00800	--	--	--	11.8% (25)	--	01/23/09 08:20	
Matrix Spike (9A23015-MS1)										QC Source: BSA0192-01 Extracted: 01/23/09 08:00				
Hexavalent Chromium	EPA 7196A	0.00500	---	0.00500	mg/l	1x	0.00800	0.0512	-5.86%	(85-115)	--	--	01/23/09 08:20	M2

QC Batch: 9A23018 Water Preparation Method: General Preparation

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (9A23018-BLK1)										Extracted: 01/23/09 11:46				
Total Suspended Solids	EPA 160.2	ND	---	4.0	mg/l	1x	--	--	--	--	--	--	01/23/09 17:15	
LCS (9A23018-BS1)										Extracted: 01/23/09 11:46				
Total Suspended Solids	EPA 160.2	54	---	4.0	mg/l	1x	--	50.0	109%	(70-130)	--	--	01/23/09 17:15	
Duplicate (9A23018-DUP1)										QC Source: BSA0192-07 Extracted: 01/23/09 11:46				
Total Suspended Solids	EPA 160.2	71	---	4.0	mg/l	1x	72	--	--	--	0.702% (20)	--	01/23/09 17:15	

QC Batch: 9A23019 Water Preparation Method: General Preparation

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (9A23019-BLK1)										Extracted: 01/23/09 11:48				
Total Dissolved Solids	EPA 160.1	ND	---	10	mg/l	1x	--	--	--	--	--	--	01/26/09 14:07	
LCS (9A23019-BS1)										Extracted: 01/23/09 11:48				
Total Dissolved Solids	EPA 160.1	540	---	10	mg/l	1x	--	667	81.0%	(70-130)	--	--	01/26/09 14:07	
Duplicate (9A23019-DUP1)										QC Source: BSA0192-07 Extracted: 01/23/09 11:48				
Total Dissolved Solids	EPA 160.1	5100	---	10	mg/l	1x	5100	--	--	--	0.196% (20)	--	01/26/09 14:07	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
 Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
 Project Number: 180171.AR.X7.02
 Project Manager: Brian Tracy

Report Created:
 02/04/09 10:39

TOC - Laboratory Quality Control Results

TestAmerica Tacoma

QC Batch: 40157

Water Preparation Method: NA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes	
Matrix Spike (125821S)			QC Source: BSA0192-02					Extracted: 01/24/09 10:10							
Total Organic Carbon	415.1	31.0	---	5.0	mg/L	5x	21	10.0	96%	(49-142)	--	--	01/24/09 10:10		
Duplicate (125821X)			QC Source: BSA0192-02					Extracted: 01/24/09 10:10							
Total Organic Carbon	415.1	20.2	---	5.0	mg/L	5x	21	--	--	--	6%	(20)	01/24/09 10:10		
Blank (580-40157-1)			QC Source:					Extracted: 01/24/09 10:10							
Total Organic Carbon	415.1	ND	---	1.0	mg/L	1x	--	--	--	--	--	--	01/24/09 10:10		
LCS (580-40157-2)			QC Source:					Extracted: 01/24/09 10:10							
Total Organic Carbon	415.1	15.3	---	1.0	mg/L	1x	--	15.0	102%	(85-115)	--	--	01/24/09 10:10		

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
Project Number: 180171.AR.X7.02
Project Manager: Brian Tracy

Report Created:
02/04/09 10:39

CERTIFICATION SUMMARY

TestAmerica Seattle

Method	Matrix	Nelac	Washington
EPA 160.1	Water	N/A	N/A
EPA 160.2	Water	N/A	N/A
EPA 6020 - Diss	Water	X	X
EPA 6020	Water	X	X
EPA 7196A	Water		
EPA 7470A - Diss	Water		
EPA 7470A	Water	X	X

Subcontracted Laboratories

TestAmerica Tacoma NELAC Cert #WA100007, Alaska Cert #UST-022, Washington Cert #C1226
5755 8th St E - Fife, WA/USA 98424

Method Performed: 415.1

Samples: BSA0192-02, BSA0192-03, BSA0192-04, BSA0192-05, BSA0192-06, BSA0192-07

Any abnormalities or departures from sample acceptance policy shall be documented on the 'Sample Receipt and Temperature Log Form' and 'Sample Non-conformance Form' (if applicable) included with this report.

For information concerning certifications of this facility or another TestAmerica facility, please visit our website at www.TestAmericaInc.com

Samples collected by TestAmerica Field Services personnel are noted on the Chain of Custody (COC) .

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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Amended Report

CH2M Hill - Bellevue

1100 112th Avenue NE, Suite 400
Bellevue, WA/USA 98004-4504

Project Name: **WSDOT SR 520 - Pontoon Sites**
Project Number: 180171.AR.X7.02
Project Manager: Brian Tracy

Report Created:
02/04/09 10:39

Notes and Definitions

Report Specific Notes:

- M2 - The MS and/or MSD were below the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
- MHA - Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery information. See Blank Spike (LCS).
- R4 - Due to the low levels of analyte in the sample, the duplicate RPD calculation does not provide useful information.
- RL1 - Reporting limit raised due to sample matrix effects.
- S3 - Post digestion spike is out of acceptance limits for this analyte

Laboratory Reporting Conventions:

- DET - Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.
- ND - Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).
- NR/NA - Not Reported / Not Available
- dry - Sample results reported on a Dry Weight Basis. Results and Reporting Limits have been corrected for Percent Dry Weight.
- wet - Sample results and reporting limits reported on a Wet Weight Basis (as received). Results with neither 'wet' nor 'dry' are reported on a Wet Weight Basis.
- RPD - RELATIVE PERCENT DIFFERENCE (RPDs calculated using Results, not Percent Recoveries).
- MRL - METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.
- MDL* - METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. *MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated Results.
- Dil - Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.
- Reporting Limits - Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.
- Electronic Signature - Electronic Signature added in accordance with TestAmerica's *Electronic Reporting and Electronic Signatures Policy*. Application of electronic signature indicates that the report has been reviewed and approved for release by the laboratory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

Amended Report

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TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

11720 North Creek Pkwy N Suite 400, Bothell, WA 98011-8244 425-420-9200 FAX 420-9210
 11922 E. East Ave, Spokane, WA 99206-5302 509-924-9200 FAX 924-9290
 9405 SW Nimbus Ave, Beaverton, OR 97008-7145 503-906-9200 FAX 906-9210
 2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119 907-563-9200 FAX 563-9210

CHAIN OF CUSTODY REPORT

Work Order #: **BSA0192**

CLIENT CH2M Hill		INVOICE TO: Rachel Chang		TURNAROUND REQUEST in Business Days * Organics & Inorganics Analyses 10 1 5 4 3 2 <input checked="" type="checkbox"/> <1 <small>STD</small> Petroleum Hydrocarbon Analyses 5 4 3 2 <input checked="" type="checkbox"/> <1 <small>STD</small> <input type="checkbox"/> OTHER Specify: _____ <small>* Turnaround Request Lead Time Standards may vary from Book Charges</small>																																																																																																																																							
REPORT TO: 1100 112th Ave NE, Suite 400 ADDRESS: Bellevue, WA 98004		P.O. NUMBER: 180171.AR.X7.02																																																																																																																																									
PHONE 425-453-5800 FAX:		PROJECT NAME: SR 520 - Intake Project		PRESERVATIVE																																																																																																																																							
PROJECT NUMBER 180171.AR.X7.02		HNO3/HNO2 - H2SO4 - -		REQUESTED ANALYSES																																																																																																																																							
SAMPLED BY: Brian Tracy / Candice Schwartz				<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>CLIENT SAMPLE IDENTIFICATION</th> <th>SAMPLING DATE/TIME</th> <th>Total Metals (ug/L)</th> <th>Dissolved Metals (ug/L)</th> <th>Cr VI</th> <th>TOC</th> <th>TSS</th> <th>TDS</th> <th>MATRIX (W, S, O)</th> <th># OF CONT.</th> <th>LOCATION COMMENTS</th> <th>TA WO ID</th> </tr> </thead> <tbody> <tr> <td>1 FD-1</td> <td>1-22-09 / 0900</td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td>W</td> <td>3</td> <td></td> <td>-01</td> </tr> <tr> <td>2 H-8P-08</td> <td>/ 0920</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td>5</td> <td></td> <td>-02</td> </tr> <tr> <td>3 H-5P-08</td> <td>/ 1030</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td>5</td> <td></td> <td>-03</td> </tr> <tr> <td>4 MW-1</td> <td>/ 1200</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td>5</td> <td></td> <td>-04</td> </tr> <tr> <td>5 MW-5</td> <td>/ 1300</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td>5</td> <td></td> <td>-05</td> </tr> <tr> <td>6 H-3P-08</td> <td>/ 1445</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td>5</td> <td></td> <td>-06</td> </tr> <tr> <td>7 H-2P-08</td> <td>/ 1550</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td>5</td> <td></td> <td>-07</td> </tr> <tr> <td>8 FD-2</td> <td>/ 1600</td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>2</td> <td></td> <td>-08</td> </tr> <tr> <td>9</td> <td></td> </tr> <tr> <td>10</td> <td></td> </tr> </tbody> </table>				CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	Total Metals (ug/L)	Dissolved Metals (ug/L)	Cr VI	TOC	TSS	TDS	MATRIX (W, S, O)	# OF CONT.	LOCATION COMMENTS	TA WO ID	1 FD-1	1-22-09 / 0900	X	X	X				W	3		-01	2 H-8P-08	/ 0920	X	X	X	X	X	X		5		-02	3 H-5P-08	/ 1030	X	X	X	X	X	X		5		-03	4 MW-1	/ 1200	X	X	X	X	X	X		5		-04	5 MW-5	/ 1300	X	X	X	X	X	X		5		-05	6 H-3P-08	/ 1445	X	X	X	X	X	X		5		-06	7 H-2P-08	/ 1550	X	X	X	X	X	X		5		-07	8 FD-2	/ 1600	X	X						2		-08	9												10											
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TA#: _____

Paperwork to PM - Date: _____ Time: _____

Non-Conformances? Circle **Y** or N

Page Name & Initials: _____

(If Y, see other side)

TEST AMERICA SAMPLE RECEIPT CHECKLIST

Received By: _____

(applies to time of receipt)

Logged-in By: _____

Unpacked/Labeled By: _____

Cooler ID: _____

Date: 01-23-09

Date: 01-23

Date: 01-23

Work Order No. BSA0192

Time: 0700

Time: 0803

Time: 0725

Client: _____

Initials: CW

Initials: CW

Initials: CW

Project: _____

Container Type:

COC Seals:

Packing Material _____

Cooler

____ Ship Container

____ Sign By

Bubble Bags

____ Styrofoam

____ Box

____ On Bottles

____ Date

____ Foam Packs

____ None/Other _____

None

____ None/Other _____

Refrigerant:

____ Gel Ice Pack _____

Loose Ice _____

____ None/Other _____

Received Via: Bill# _____

____ Fed Ex Client

____ UPS _____ TA Courer

____ DHL _____ Mid Valley

____ Senvoy _____ TDP

____ GS _____ Other _____

Cooler Temperature (IR): _____ °C Plastic Glass (Frozen filters, Tedlars and aqueous Metals exempt)
(circle one)

Temperature Blank? 4.9 °C or NA 4.0c

Trip Blank? Y or N or **NA**

BP, OPLC, ARCO-Temperature monitoring every 15 minutes:

(initial/date/time): _____

Comments: _____

Sample Containers:

ID

ID

Intact? or N _____

Metals Preserved? or **N** or NA _____

Provided by TA? or N _____

Client QAPP Preserved? Y or N or **NA** _____

Correct Type? or N _____

Adequate Volume? or N _____

#Containers match COC? or N _____

Water VOAs: Headspace? Y or N or **NA** _____

IDs/time/date match COC? or N _____

Comments: _____

Hold Times in hold? or N _____

PROJECT MANAGEMENT

Is the Chain of Custody complete?

Y or N If N, circle the items that were incomplete

Comments/Problems _____

Total access set up?

Y or N

Was client been contacted regarding non-conformances?

Y or N

If Y, _____
Date Time

PM Initials: _____ Date: _____ Time: _____

APPENDIX C

Quality Assurance/Quality Control Review of Laboratory Data

Quality Assurance/Quality Control Review of Laboratory Data

Introduction

The objective of this data quality evaluation (DQE) report is to assess the data quality of analytical results for soil and groundwater samples collected for the WSDOT SR 520 Pontoon Sites investigation. The basis for this assessment includes: individual method requirements, guidelines from the U.S. Environmental Protection Agency (EPA) *Contract Laboratory National Functional Guidelines for Organic Data Review* (EPA, 1999), and the EPA *Contract Laboratory National Functional Guidelines for Inorganic Data Review* (EPA, 2002).

This DQE report is intended as a general data quality assessment designed to summarize data issues.

Analytical Data

This DQE covers 54 soil samples, 17 water samples, and 2 water field duplicates (FD). Samples were collected December 15, 2008 through January 22, 2009. These sample results were reported as three sample delivery groups, BRL0200, BRL0201, and BSA0192. The analyses were performed by TestAmerica Laboratories located in Seattle, Washington.

Thirteen methods were used to analyze the environmental samples. Samples were collected and shipped by overnight carrier to the laboratory for analysis. Selected samples were analyzed for one or more of the following parameters/methods:

TABLE C-1
Analytical Parameters

Parameter	Method
Volatile Organic Compounds	SW8260B
Semi-Volatile Organic Compounds	SW8270C
Polynuclear Aromatic Hydrocarbons	SW8270C-SIM
Polychlorinated Biphenyls	SW8082
Dioxins/Furans	E1613B
Gasoline Range Hydrocarbons	NWTPH-Gx
Diesel and Oil Range Hydrocarbons	NWTPH-Dx
Hexavalent Chromium	SW7196A
Resource Conservation and Recovery Act Metals	SW6020
Mercury	SW7470A/SW7471A

TABLE C-1
 Analytical Parameters

Parameter	Method
Total Dissolved Solids	E160.1
Total Suspended Solids	E160.2
Total Organic Carbon	E415.1

The assessment of data includes a review of: (1) the chain of custody documentation; (2) holding time compliance; (3) the required field and laboratory quality control samples; (4) flagging for method and field blanks; (5) laboratory control sample/laboratory control sample duplicate (LCS/LCSD) recoveries and precision; (6) surrogate spike recoveries; and, (7) matrix spike/matrix spike duplicate (MS/MSD) recoveries and precision. Calibration and internal standard information were not supplied with the reports.

Data flags are assigned according to the National Functional Guidelines. Multiple flags are routinely applied to specific sample method/matrix/analyte combinations, but there will be only one final flag. A final flag is applied to the data and is the most conservative of the applied validation flags. The final flag also includes matrix and blank sample impacts.

The data flags are defined below:

- J = The analyte was present, but reported value may not be accurate or precise.
- R = The result was rejected.
- U = Analyte was analyzed for but not detected at the specified detection limit.
- UJ = Analyte was not detected above the detection limit objective. However, the reported detection limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

Findings

The overall summaries of the data validation findings are contained in the following sections below and summarized in Table 2.

Holding Times

All holding time criteria were met.

Calibration

Calibration information was not supplied and could not be directly verified to have met control criteria. However, the laboratory case narratives and/or footnotes in the laboratory data packages were reviewed by the data validator and there were exceptions noted.

The recoveries of three analytes were below criteria in the continuing calibration verification (CCV) standards for method SW8260B, indicating associated sample results are possibly

biased low. Thirteen associated non-detected water results, and 43 associated non-detected soil results, were qualified as estimated and flagged "UJ".

Method Blanks

Method blanks were analyzed at the required frequency and were free of contamination that would require data to be qualified.

Field Blanks

Trip blanks were collected and were free of contamination that would require data to be qualified.

Field Duplicates

Two water FDs were collected with this event. Precision was acceptable with the following exceptions:

- The relative percent difference (RPD) of hexavalent chromium was above the laboratory control limit in one water sample for method SW7196A.
- The associated detected results in the normal and duplicate were qualified as estimated and flagged "J".

Laboratory Duplicates

The laboratory duplicate RPDs of six analytes were above the laboratory control limit in one or more of two soil samples for method SW6020. This is likely due to the non-homogeneity of the soil. Seven associated detected results were qualified as estimated and flagged "J".

Surrogates

Surrogates were recovered within laboratory established quality control (QC) limits with the following exceptions:

- Surrogate recovery was below criteria in one water sample for method SW8270C-SIM, indicating associated sample results are possibly biased low. Eighteen associated non-detected results were qualified as estimated and flagged "UJ".
- Surrogate recovery was above criteria in one soil sample for method SW8270C, indicating associated sample results are possibly biased high. One associated detected result was qualified as estimated and flagged "J".
- Surrogate recovery was above criteria in one soil sample for method NWTPH-Gx, indicating associated sample results are possibly biased high. One associated detected result was qualified as estimated and flagged "J".
- Surrogate recovery was above criteria in one soil sample for method NWTPH-Dx, indicating associated sample results are possibly biased high. One associated detected result was qualified as estimated and flagged "J".

Data were not qualified in instances where surrogates were not recovered due to sample dilution.

Laboratory Control Samples

LCS/LCSDs were analyzed as required and all accuracy and precision criteria were met.

Matrix Spikes

The results of MS/MSD analyses provide information about the possible influence of the matrix on either accuracy or precision of the measurements. MS/MSD recoveries and the associated RPD met criteria with the following exceptions:

- The recovery of hexavalent chromium was below the laboratory control limit in one water sample for method SW7196A, indicating the associated parent sample result is possibly biased low. The associated detected result was qualified as estimated and flagged "J".
- The recovery of mercury was below the laboratory control limit in one water sample for method SW7470A, indicating the associated parent sample result is possibly biased low. The associated non-detected result was qualified as estimated and flagged "UJ".
- The recoveries of nine analytes were below the laboratory control limits in one or more of two soil samples for method SW6020, indicating associated parent sample results are possibly biased low. Six associated detected results were qualified as estimated and flagged "J"; six associated non-detected results were qualified as estimated and flagged "UJ".
- The recovery of silver was below the laboratory control limit in one water sample for method SW6020, indicating the associated parent sample result is possibly biased low. The associated non-detected result was qualified as estimated and flagged "UJ".
- The recovery of Lube Oil Range Organics was below the laboratory control limit in one soil sample for method NWTPH-Dx, indicating the associated parent sample result is possibly biased low. One associated detected result was qualified as estimated and flagged "J".
- The recoveries of six analytes were below the laboratory control limits in one soil sample for method SW8270C, indicating associated parent sample results are possibly biased low. Six associated detected results were qualified as estimated and flagged "J".
- The recovery of indeno(1,2,3-cd)pyrene was above laboratory control limits in one soil sample for method SW8270C, indicating associated parent sample results are possibly biased high. One associated detected result was qualified as estimated and flagged "J".
- The recoveries of three analytes were above laboratory control limits in one soil sample for method SW6020, indicating associated parent sample results are possibly biased high. Three associated detected results were qualified as estimated and flagged "J".

Post-Digestion Spikes

The recovery of titanium was above the laboratory control limit in one water sample for method SW6020, indicating the associated sample result is possibly biased high. The associated detected result was qualified as estimated and flagged "J".

The recovery of silver was below the laboratory control limit in one water sample for method SW6020, indicating the associated parent sample result is possibly biased low. The associated non-detected result was qualified as estimated and flagged "UJ".

Total and Dissolved Metals

The dissolved results of chromium, selenium and vanadium were greater than the total results in one or more of eight water samples for method SW6020. Forty-two associated detected results were qualified as estimated and flagged "J".

This discrepancy in total and dissolved concentrations is attributed to matrix interference in the dissolved samples. The dissolved samples were not acid digested as the total samples were. The acid digestion step helps to eliminate matrix interference. Chromium, selenium, and vanadium are analytes that can be susceptible to matrix interference. It is an acceptable practice to skip the acid digestion step for dissolved metals as long as the filtrate is acid-preserved to the same pH as the analytical standards. However, since the groundwater at this site appears to have a matrix issue, the laboratory will be instructed to perform the acid digestion step for all future dissolved metals samples.

Internal Standards

Internal standard data were not supplied and could not be directly verified to have met control criteria. The laboratory case narratives and/or footnotes in the laboratory data package were reviewed by the data validator and exceptions were noted.

The internal standards were recovered below criteria in one soil sample for method E1613B. Eleven associated detected results were qualified as estimated and flagged "J"; 14 associated non-detected results were qualified as estimated and flagged "UJ".

The internal standards were recovered outside of criteria in several soil samples for method SW8260B. This is likely due matrix interference of the soil. Associated non-detected results were qualified as estimated; 557 results were flagged "UJ".

Sample Quantitation

The laboratory noted interference in two soil samples for method E1613B, indicating the associated sample results are possibly biased high. Two associated detected results were qualified as estimated and flagged "J"; two associated non-detected results were qualified as estimated and flagged "UJ".

Chain of Custody

Each sample was documented in a completed chain of custody and received at the laboratory in good condition.

Overall Assessment

The goal of this assessment is to demonstrate that a sufficient number of representative samples were collected and the resulting analytical data can be used to support the decision-making process. The following summary highlights the precision, accuracy, representativeness, completeness, and comparability findings for the above-defined event:

1. No data were rejected and completeness was 100 percent.

2. No data were qualified due to low-level blank contamination.
3. CCV recovery exceedances were observed for method SW8260B.
4. A FD RPD exceedance was observed for method SW7196A.
5. Laboratory duplicate RPD exceedances were observed for method SW6020.
6. Surrogate recovery exceedances were observed for methods SW8270C, SW8270C-SIM, NWTPH-Gx, and NWTPH-Dx.
7. Post-digestion spike recovery exceedances were observed for method SW6020.
8. MS/MSD recovery exceedances were observed for methods SW7196A, SW7470A, SW6020, SW8270C, and NWTPH-Dx.
9. Dissolved results were greater than total results for methods SW7470A and SW6020.
10. Internal standard recovery exceedances were observed for methods E1613B and SW8260B.
11. Interference was noted by the laboratory during the E1613B analysis.
12. Although data were qualified as estimated due to QC exceedances as noted, overall precision and accuracy of the data, as measured by field and laboratory QC indicators suggest that data are usable for project objectives.

References

- U.S. Environmental Protection Agency. 1999. *Contract Laboratory Program National Functional Guidelines for Organic Data Review, Final*. EPA-540/R-99-008. October 1999.
- U.S. Environmental Protection Agency. 2002. *Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, Final*. EPA-540/R-01-008. July 2002.

TABLE C-2
Validation Findings

Sample ID	Method	Analyte	Final Result	Units ¹	Final Flag ²	Validation Reason ³
ALY-SB-8-1.0-2.0	E1613B	1,2,3,4,6,7,8-HpCDD	5.6	pg/g	J	IS<LCL
ALY-SB-8-1.0-2.0	E1613B	1,2,3,4,6,7,8-HpCDF	6.4	pg/g	J	IS<LCL
ALY-SB-8-1.0-2.0	E1613B	1,2,3,4,7,8,9-HpCDF	3.4	pg/g	J	IS<LCL
ALY-SB-8-1.0-2.0	E1613B	1,2,3,4,7,8-HxCDD	2.2	pg/g	UJ	IS<LCL
ALY-SB-8-1.0-2.0	E1613B	1,2,3,4,7,8-HxCDF	2.6	pg/g	UJ	IS<LCL
ALY-SB-8-1.0-2.0	E1613B	1,2,3,6,7,8-HxCDD	2.6	pg/g	UJ	IS<LCL
ALY-SB-8-1.0-2.0	E1613B	1,2,3,6,7,8-HxCDF	2.6	pg/g	UJ	IS<LCL
ALY-SB-8-1.0-2.0	E1613B	1,2,3,7,8,9-HxCDD	3.3	pg/g	J	IS<LCL
ALY-SB-8-1.0-2.0	E1613B	1,2,3,7,8,9-HxCDF	2.4	pg/g	UJ	IS<LCL
ALY-SB-8-1.0-2.0	E1613B	1,2,3,7,8-PeCDD	2.2	pg/g	UJ	IS<LCL
ALY-SB-8-1.0-2.0	E1613B	1,2,3,7,8-PeCDF	1.5	pg/g	UJ	IS<LCL
ALY-SB-8-1.0-2.0	E1613B	2,3,4,6,7,8-HxCDF	3	pg/g	J	IS<LCL
ALY-SB-8-1.0-2.0	E1613B	2,3,4,7,8-PeCDF	2	pg/g	UJ	IS<LCL
ALY-SB-8-1.0-2.0	E1613B	2,3,7,8-TCDD	0.7	pg/g	UJ	IS<LCL, Interference
ALY-SB-8-1.0-2.0	E1613B	2,3,7,8-TCDF	0.88	pg/g	UJ	IS<LCL, Interference
ALY-SB-8-1.0-2.0	E1613B	OCDD	28	pg/g	J	IS<LCL
ALY-SB-8-1.0-2.0	E1613B	OCDF	13	pg/g	J	IS<LCL
ALY-SB-8-1.0-2.0	E1613B	Total HpCDD	5.6	pg/g	J	IS<LCL
ALY-SB-8-1.0-2.0	E1613B	Total HpCDF	9.8	pg/g	J	IS<LCL
ALY-SB-8-1.0-2.0	E1613B	Total HxCDD	3.3	pg/g	J	IS<LCL
ALY-SB-8-1.0-2.0	E1613B	Total HxCDF	3	pg/g	J	IS<LCL
ALY-SB-8-1.0-2.0	E1613B	Total PeCDD	2.2	pg/g	UJ	IS<LCL
ALY-SB-8-1.0-2.0	E1613B	Total PeCDF	7.2	pg/g	UJ	IS<LCL
ALY-SB-8-1.0-2.0	E1613B	Total TCDD	3.5	pg/g	UJ	IS<LCL
ALY-SB-8-1.0-2.0	E1613B	Total TCDF	10	pg/g	UJ	IS<LCL
ALY-SB-9-1.0-2.0	E1613B	Total TCDD	7.4	pg/g	J	Interference
ALY-SB-9-1.0-2.0	E1613B	Total TCDF	17	pg/g	J	Interference
FD-1	SW6020	Chromium	0.0126	mg/L	J	Diss>Total
FD-1	SW7196A	Hexavalent Chromium	0.008	mg/L	J	MS<LCL, FD>RPD
FD-1	SW7470A	Mercury	0.0002	mg/L	UJ	MS<LCL, MSD<LCL
FD-1	SW6020	Selenium	0.0417	mg/L	J	Diss>Total
FD-1	SW6020	Selenium	0.0134	mg/L	J	Diss>Total
FD-1	SW6020	Titanium	0.224	mg/L	J	PDS>UCL
FD-1	SW6020	Vanadium	0.0154	mg/L	J	Diss>Total
FD-1	SW6020	Vanadium	0.00872	mg/L	J	Diss>Total
FD-1	SW6020	Chromium	0.00476	mg/L	J	Diss>Total
FD-1	SW7470A	Mercury	0.0002	mg/L	UJ	MS<LCL, MSD<LCL
FD-2	SW6020	Selenium	0.0101	mg/L	J	Diss>Total
FD-2	SW6020	Selenium	0.016	mg/L	J	Diss>Total

TABLE C-2
 Validation Findings

Sample ID	Method	Analyte	Final Result	Units ¹	Final Flag ²	Validation Reason ³
FD-2	SW6020	Vanadium	0.00414	mg/L	J	Diss>Total
FD-2	SW6020	Vanadium	0.0131	mg/L	J	Diss>Total
H-2P-08	SW6020	Selenium	0.00796	mg/L	J	Diss>Total
H-2P-08	SW6020	Selenium	0.0194	mg/L	J	Diss>Total
H-2P-08	SW6020	Vanadium	0.00242	mg/L	J	Diss>Total
H-2P-08	SW6020	Vanadium	0.0124	mg/L	J	Diss>Total
H-3P-08	SW6020	Selenium	0.018	mg/L	J	Diss>Total
H-3P-08	SW6020	Selenium	0.00887	mg/L	J	Diss>Total
H-3P-08	SW6020	Vanadium	0.0136	mg/L	J	Diss>Total
H-3P-08	SW6020	Vanadium	0.00406	mg/L	J	Diss>Total
H-5P-08	SW6020	Chromium	0.0132	mg/L	J	Diss>Total
H-5P-08	SW6020	Selenium	0.0097	mg/L	J	Diss>Total
H-5P-08	SW6020	Selenium	0.0178	mg/L	J	Diss>Total
H-5P-08	SW6020	Vanadium	0.0187	mg/L	J	Diss>Total
H-5P-08	SW6020	Vanadium	0.00469	mg/L	J	Diss>Total
H-5P-08	SW6020	Chromium	0.00254	mg/L	J	Diss>Total
H-8P-08	SW6020	Chromium	0.0132	mg/L	J	Diss>Total
H-8P-08	SW7196A	Hexavalent Chromium	0.022	mg/L	J	FD>RPD
H-8P-08	SW6020	Selenium	0.0136	mg/L	J	Diss>Total
H-8P-08	SW6020	Selenium	0.0416	mg/L	J	Diss>Total
H-8P-08	SW6020	Vanadium	0.0081	mg/L	J	Diss>Total
H-8P-08	SW6020	Vanadium	0.0168	mg/L	J	Diss>Total
H-8P-08	SW6020	Chromium	0.00459	mg/L	J	Diss>Total
MW-1	SW6020	Chromium	0.0139	mg/L	J	Diss>Total
MW-1	SW6020	Selenium	0.0125	mg/L	J	Diss>Total
MW-1	SW6020	Selenium	0.0279	mg/L	J	Diss>Total
MW-1	SW6020	Vanadium	0.0135	mg/L	J	Diss>Total
MW-1	SW6020	Vanadium	0.00152	mg/L	J	Diss>Total
MW-1	SW6020	Chromium	0.00134	mg/L	J	Diss>Total
MW-5	SW6020	Chromium	0.0118	mg/L	J	Diss>Total
MW-5	SW6020	Selenium	0.0104	mg/L	J	Diss>Total
MW-5	SW6020	Selenium	0.0218	mg/L	J	Diss>Total
MW-5	SW6020	Vanadium	0.015	mg/L	J	Diss>Total
MW-5	SW6020	Vanadium	0.00278	mg/L	J	Diss>Total
MW-5	SW6020	Chromium	0.00199	mg/L	J	Diss>Total
ALY-SB-10-1.0-2.0	SW8260B	1,1,1,2-Tetrachloroethane	4.43	µg/kg	UJ	IS OUT
ALY-SB-10-1.0-2.0	SW8260B	1,1,1-Trichloroethane	2.21	µg/kg	UJ	IS OUT
ALY-SB-10-1.0-2.0	SW8260B	1,1,2,2-Tetrachloroethane	4.43	µg/kg	UJ	IS OUT

TABLE C-2
Validation Findings

Sample ID	Method	Analyte	Final Result	Units ¹	Final Flag ²	Validation Reason ³
ALY-SB-10-1.0-2.0	SW8260B	1,1,2-Trichloroethane	1.77	µg/kg	UJ	IS OUT
ALY-SB-10-1.0-2.0	SW8260B	1,1-Dichloroethane	1.77	µg/kg	UJ	IS OUT
ALY-SB-10-1.0-2.0	SW8260B	1,1-Dichloropropene	4.43	µg/kg	UJ	IS OUT
ALY-SB-10-1.0-2.0	SW8260B	1,2,3-Trichlorobenzene	8.85	µg/kg	UJ	IS OUT
ALY-SB-10-1.0-2.0	SW8260B	1,2,3-Trichloropropane	4.43	µg/kg	UJ	IS OUT
ALY-SB-10-1.0-2.0	SW8260B	1,2,4-Trichlorobenzene	8.85	µg/kg	UJ	IS OUT
ALY-SB-10-1.0-2.0	SW8260B	1,2,4-Trimethylbenzene	4.43	µg/kg	UJ	IS OUT
ALY-SB-10-1.0-2.0	SW8260B	1,2-Dibromo-3-chloropropane	8.85	µg/kg	UJ	IS OUT
ALY-SB-10-1.0-2.0	SW8260B	1,2-Dibromoethane	4.43	µg/kg	UJ	IS OUT
ALY-SB-10-1.0-2.0	SW8260B	1,2-Dichlorobenzene	4.43	µg/kg	UJ	IS OUT
ALY-SB-10-1.0-2.0	SW8260B	1,3,5-Trimethylbenzene	4.43	µg/kg	UJ	IS OUT
ALY-SB-10-1.0-2.0	SW8260B	1,3-Dichlorobenzene	4.43	µg/kg	UJ	IS OUT
ALY-SB-10-1.0-2.0	SW8260B	1,3-Dichloropropane	4.43	µg/kg	UJ	IS OUT
ALY-SB-10-1.0-2.0	SW8260B	1,4-Dichlorobenzene	4.43	µg/kg	UJ	IS OUT
ALY-SB-10-1.0-2.0	SW8260B	2,2-Dichloropropane	8.85	µg/kg	UJ	IS OUT
ALY-SB-10-1.0-2.0	SW8260B	2-Chlorotoluene	4.43	µg/kg	UJ	IS OUT
ALY-SB-10-1.0-2.0	SW8260B	2-Hexanone	26.6	µg/kg	UJ	IS OUT
ALY-SB-10-1.0-2.0	SW8260B	4-Chlorotoluene	4.43	µg/kg	UJ	IS OUT
ALY-SB-10-1.0-2.0	SW8260B	Bromobenzene	4.43	µg/kg	UJ	IS OUT
ALY-SB-10-1.0-2.0	SW8260B	Bromochloromethane	4.43	µg/kg	UJ	IS OUT
ALY-SB-10-1.0-2.0	SW8260B	Bromoform	4.43	µg/kg	UJ	IS OUT
ALY-SB-10-1.0-2.0	SW8260B	Bromomethane	8.85	µg/kg	UJ	IS OUT
ALY-SB-10-1.0-2.0	SW8260B	Chlorobenzene	1.77	µg/kg	UJ	IS OUT
ALY-SB-10-1.0-2.0	SW8260B	Chloroethane	4.43	µg/kg	UJ	IS OUT
ALY-SB-10-1.0-2.0	SW8260B	Chloroform	2.21	µg/kg	UJ	IS OUT
ALY-SB-10-1.0-2.0	SW8260B	Chloromethane	8.85	µg/kg	UJ	CCV<LCL, IS OUT
ALY-SB-10-1.0-2.0	SW8260B	cis-1,2-Dichloroethene	2.66	µg/kg	UJ	IS OUT
ALY-SB-10-1.0-2.0	SW8260B	Dibromochloromethane	4.43	µg/kg	UJ	IS OUT
ALY-SB-10-1.0-2.0	SW8260B	Dichlorodifluoromethane	4.43	µg/kg	UJ	CCV<LCL, IS OUT
ALY-SB-10-1.0-2.0	SW8260B	Ethylbenzene	3.54	µg/kg	UJ	IS OUT
ALY-SB-10-1.0-2.0	SW8260B	Hexachlorobutadiene	8.85	µg/kg	UJ	IS OUT
ALY-SB-10-1.0-2.0	SW8260B	Isopropylbenzene	4.43	µg/kg	UJ	IS OUT
ALY-SB-10-1.0-2.0	SW8260B	m,p-Xylene	4.43	µg/kg	UJ	IS OUT
ALY-SB-10-1.0-2.0	SW8260B	Methyl tert-butyl ether	0.885	µg/kg	UJ	IS OUT
ALY-SB-10-1.0-2.0	SW8260B	Methylene chloride	10.6	µg/kg	UJ	IS OUT
ALY-SB-10-1.0-2.0	SW8260B	Naphthalene	8.85	µg/kg	UJ	IS OUT
ALY-SB-10-1.0-2.0	SW8260B	n-Butylbenzene	4.43	µg/kg	UJ	IS OUT
ALY-SB-10-1.0-2.0	SW8260B	n-Hexane	4.43	µg/kg	UJ	IS OUT
ALY-SB-10-1.0-2.0	SW8260B	n-Propylbenzene	4.43	µg/kg	UJ	IS OUT

TABLE C-2
 Validation Findings

Sample ID	Method	Analyte	Final Result	Units ¹	Final Flag ²	Validation Reason ³
ALY-SB-10-1.0-2.0	SW8260B	o-Xylene	4.43	µg/kg	UJ	IS OUT
ALY-SB-10-1.0-2.0	SW8260B	p-Isopropyltoluene	4.43	µg/kg	UJ	IS OUT
ALY-SB-10-1.0-2.0	SW8260B	sec-Butylbenzene	4.43	µg/kg	UJ	IS OUT
ALY-SB-10-1.0-2.0	SW8260B	Styrene	2.21	µg/kg	UJ	IS OUT
ALY-SB-10-1.0-2.0	SW8260B	tert-Butylbenzene	4.43	µg/kg	UJ	IS OUT
ALY-SB-10-1.0-2.0	SW8260B	Tetrachloroethene	1.77	µg/kg	UJ	IS OUT
ALY-SB-10-1.0-2.0	SW8260B	Toluene	1.33	µg/kg	UJ	IS OUT
ALY-SB-10-1.0-2.0	SW8260B	Total Xylenes	8.85	µg/kg	UJ	IS OUT
ALY-SB-10-1.0-2.0	SW8260B	trans-1,2-Dichloroethene	2.21	µg/kg	UJ	IS OUT
ALY-SB-10-1.0-2.0	SW8260B	trans-1,3-Dichloropropene	1.11	µg/kg	UJ	IS OUT
ALY-SB-10-1.0-2.0	SW8260B	Trichlorofluoromethane	4.43	µg/kg	UJ	IS OUT
ALY-SB-10-1.0-2.0	SW8260B	Vinyl chloride	2.21	µg/kg	UJ	IS OUT
ALY-SB-10-6.0-8.0	SW8260B	Chloromethane	9.21	µg/kg	UJ	CCV<LCL
ALY-SB-10-6.0-8.0	SW8260B	Dichlorodifluoromethane	4.61	µg/kg	UJ	CCV<LCL
ALY-SB-1-1.0-2.0	SW6020	Antimony	1.8	mg/kg	UJ	MS<LCL
ALY-SB-1-1.0-2.0	SW6020	Barium	135	mg/kg	J	MS<LCL
ALY-SB-1-1.0-2.0	SW6020	Molybdenum	3	mg/kg	UJ	MS<LCL
ALY-SB-1-1.0-2.0	SW6020	Strontium	60.8	mg/kg	J	MS<LCL
ALY-SB-1-1.0-2.0	SW6020	Zinc	60.8	mg/kg	J	MS<LCL, LabDupe>UCL
ALY-SB-11-1.0-2.0	SW8260B	1,1,2,2-Tetrachloroethane	3.42	µg/kg	UJ	IS OUT
ALY-SB-11-1.0-2.0	SW8260B	1,2,3-Trichlorobenzene	6.84	µg/kg	UJ	IS OUT
ALY-SB-11-1.0-2.0	SW8260B	1,2,3-Trichloropropane	3.42	µg/kg	UJ	IS OUT
ALY-SB-11-1.0-2.0	SW8260B	1,2,4-Trichlorobenzene	6.84	µg/kg	UJ	IS OUT
ALY-SB-11-1.0-2.0	SW8260B	1,2,4-Trimethylbenzene	3.42	µg/kg	UJ	IS OUT
ALY-SB-11-1.0-2.0	SW8260B	1,2-Dibromo-3-chloropropane	6.84	µg/kg	UJ	IS OUT
ALY-SB-11-1.0-2.0	SW8260B	1,2-Dichlorobenzene	3.42	µg/kg	UJ	IS OUT
ALY-SB-11-1.0-2.0	SW8260B	1,3,5-Trimethylbenzene	3.42	µg/kg	UJ	IS OUT
ALY-SB-11-1.0-2.0	SW8260B	1,3-Dichlorobenzene	3.42	µg/kg	UJ	IS OUT
ALY-SB-11-1.0-2.0	SW8260B	1,4-Dichlorobenzene	3.42	µg/kg	UJ	IS OUT
ALY-SB-11-1.0-2.0	SW8260B	2-Chlorotoluene	3.42	µg/kg	UJ	IS OUT
ALY-SB-11-1.0-2.0	SW8260B	4-Chlorotoluene	3.42	µg/kg	UJ	IS OUT
ALY-SB-11-1.0-2.0	SW8260B	Bromobenzene	3.42	µg/kg	UJ	IS OUT
ALY-SB-11-1.0-2.0	SW8260B	Dichlorodifluoromethane	3.42	µg/kg	UJ	CCV<LCL
ALY-SB-11-1.0-2.0	SW8260B	Hexachlorobutadiene	6.84	µg/kg	UJ	IS OUT
ALY-SB-11-1.0-2.0	SW8260B	Naphthalene	6.84	µg/kg	UJ	IS OUT
ALY-SB-11-1.0-2.0	SW8260B	n-Butylbenzene	3.42	µg/kg	UJ	IS OUT
ALY-SB-11-1.0-2.0	SW8260B	n-Propylbenzene	3.42	µg/kg	UJ	IS OUT
ALY-SB-11-1.0-2.0	SW8260B	p-Isopropyltoluene	3.42	µg/kg	UJ	IS OUT

TABLE C-2
Validation Findings

Sample ID	Method	Analyte	Final Result	Units ¹	Final Flag ²	Validation Reason ³
ALY-SB-11-1.0-2.0	SW8260B	sec-Butylbenzene	3.42	µg/kg	UJ	IS OUT
ALY-SB-11-1.0-2.0	SW8260B	tert-Butylbenzene	3.42	µg/kg	UJ	IS OUT
ALY-SB-11-1.0-2.0	SW8270C	Pyrene	0.314	mg/kg	J	Sur>UCL
ALY-SB-11-3.0-4.0	SW8260B	Dichlorodifluoromethane	2.73	µg/kg	UJ	CCV<LCL
ALY-SB-12-1.0-2.0	SW8260B	1,1,2,2-Tetrachloroethane	4.83	µg/kg	UJ	IS OUT
ALY-SB-12-1.0-2.0	SW8260B	1,2,3-Trichlorobenzene	9.65	µg/kg	UJ	IS OUT
ALY-SB-12-1.0-2.0	SW8260B	1,2,3-Trichloropropane	4.83	µg/kg	UJ	IS OUT
ALY-SB-12-1.0-2.0	SW8260B	1,2,4-Trichlorobenzene	9.65	µg/kg	UJ	IS OUT
ALY-SB-12-1.0-2.0	SW8260B	1,2,4-Trimethylbenzene	4.83	µg/kg	UJ	IS OUT
ALY-SB-12-1.0-2.0	SW8260B	1,2-Dibromo-3-chloropropane	9.65	µg/kg	UJ	IS OUT
ALY-SB-12-1.0-2.0	SW8260B	1,2-Dichlorobenzene	4.83	µg/kg	UJ	IS OUT
ALY-SB-12-1.0-2.0	SW8260B	1,3,5-Trimethylbenzene	4.83	µg/kg	UJ	IS OUT
ALY-SB-12-1.0-2.0	SW8260B	1,3-Dichlorobenzene	4.83	µg/kg	UJ	IS OUT
ALY-SB-12-1.0-2.0	SW8260B	1,4-Dichlorobenzene	4.83	µg/kg	UJ	IS OUT
ALY-SB-12-1.0-2.0	SW8260B	2-Chlorotoluene	4.83	µg/kg	UJ	IS OUT
ALY-SB-12-1.0-2.0	SW8260B	4-Chlorotoluene	4.83	µg/kg	UJ	IS OUT
ALY-SB-12-1.0-2.0	SW8260B	Bromobenzene	4.83	µg/kg	UJ	IS OUT
ALY-SB-12-1.0-2.0	SW8260B	Chloromethane	9.65	µg/kg	UJ	CCV<LCL
ALY-SB-12-1.0-2.0	SW8260B	Dichlorodifluoromethane	4.83	µg/kg	UJ	CCV<LCL
ALY-SB-12-1.0-2.0	SW8260B	Hexachlorobutadiene	9.65	µg/kg	UJ	IS OUT
ALY-SB-12-1.0-2.0	SW8260B	Naphthalene	9.65	µg/kg	UJ	IS OUT
ALY-SB-12-1.0-2.0	SW8260B	n-Butylbenzene	4.83	µg/kg	UJ	IS OUT
ALY-SB-12-1.0-2.0	SW8260B	n-Propylbenzene	4.83	µg/kg	UJ	IS OUT
ALY-SB-12-1.0-2.0	SW8260B	sec-Butylbenzene	4.83	µg/kg	UJ	IS OUT
ALY-SB-12-1.0-2.0	SW8260B	tert-Butylbenzene	4.83	µg/kg	UJ	IS OUT
ALY-SB-1-3.0-4.0	SW8260B	Chloromethane	10.6	µg/kg	UJ	CCV<LCL
ALY-SB-1-3.0-4.0	SW8260B	Dichlorodifluoromethane	5.31	µg/kg	UJ	CCV<LCL
ALY-SB-2-4.0-5.0	SW8260B	Chloromethane	11.8	µg/kg	UJ	CCV<LCL
ALY-SB-2-4.0-5.0	SW8260B	Dichlorodifluoromethane	5.89	µg/kg	UJ	CCV<LCL
ALY-SB-3-1.0-3.0	SW8260B	Dichlorodifluoromethane	2.73	µg/kg	UJ	CCV<LCL
ALY-SB-3-3.0-4.0	SW8260B	Dichlorodifluoromethane	4.53	µg/kg	UJ	CCV<LCL
ALY-SB-4-1.0-2.0	SW8260B	Chloromethane	6.88	µg/kg	UJ	CCV<LCL
ALY-SB-4-1.0-2.0	SW8260B	Dichlorodifluoromethane	3.44	µg/kg	UJ	CCV<LCL
ALY-SB-5-1.0-2.0	SW8260B	1,1,1,2-Tetrachloroethane	4.18	µg/kg	UJ	IS OUT
ALY-SB-5-1.0-2.0	SW8260B	1,1,1-Trichloroethane	2.09	µg/kg	UJ	IS OUT
ALY-SB-5-1.0-2.0	SW8260B	1,1,2,2-Tetrachloroethane	4.18	µg/kg	UJ	IS OUT
ALY-SB-5-1.0-2.0	SW8260B	1,1,2-Trichloroethane	1.67	µg/kg	UJ	IS OUT
ALY-SB-5-1.0-2.0	SW8260B	1,1-Dichloroethane	1.67	µg/kg	UJ	IS OUT

TABLE C-2
 Validation Findings

Sample ID	Method	Analyte	Final Result	Units ¹	Final Flag ²	Validation Reason ³
ALY-SB-5-1.0-2.0	SW8260B	1,1-Dichloroethene	2.51	µg/kg	UJ	IS OUT
ALY-SB-5-1.0-2.0	SW8260B	1,1-Dichloropropene	4.18	µg/kg	UJ	IS OUT
ALY-SB-5-1.0-2.0	SW8260B	1,2,3-Trichlorobenzene	8.36	µg/kg	UJ	IS OUT
ALY-SB-5-1.0-2.0	SW8260B	1,2,3-Trichloropropane	4.18	µg/kg	UJ	IS OUT
ALY-SB-5-1.0-2.0	SW8260B	1,2,4-Trichlorobenzene	8.36	µg/kg	UJ	IS OUT
ALY-SB-5-1.0-2.0	SW8260B	1,2,4-Trimethylbenzene	4.18	µg/kg	UJ	IS OUT
ALY-SB-5-1.0-2.0	SW8260B	1,2-Dibromo-3-chloropropane	8.36	µg/kg	UJ	IS OUT
ALY-SB-5-1.0-2.0	SW8260B	1,2-Dibromoethane	4.18	µg/kg	UJ	IS OUT
ALY-SB-5-1.0-2.0	SW8260B	1,2-Dichlorobenzene	4.18	µg/kg	UJ	IS OUT
ALY-SB-5-1.0-2.0	SW8260B	1,3,5-Trimethylbenzene	4.18	µg/kg	UJ	IS OUT
ALY-SB-5-1.0-2.0	SW8260B	1,3-Dichlorobenzene	4.18	µg/kg	UJ	IS OUT
ALY-SB-5-1.0-2.0	SW8260B	1,3-Dichloropropane	4.18	µg/kg	UJ	IS OUT
ALY-SB-5-1.0-2.0	SW8260B	1,4-Dichlorobenzene	4.18	µg/kg	UJ	IS OUT
ALY-SB-5-1.0-2.0	SW8260B	2,2-Dichloropropane	8.36	µg/kg	UJ	IS OUT
ALY-SB-5-1.0-2.0	SW8260B	2-Chlorotoluene	4.18	µg/kg	UJ	IS OUT
ALY-SB-5-1.0-2.0	SW8260B	2-Hexanone	25.1	µg/kg	UJ	IS OUT
ALY-SB-5-1.0-2.0	SW8260B	4-Chlorotoluene	4.18	µg/kg	UJ	IS OUT
ALY-SB-5-1.0-2.0	SW8260B	Bromobenzene	4.18	µg/kg	UJ	IS OUT
ALY-SB-5-1.0-2.0	SW8260B	Bromochloromethane	4.18	µg/kg	UJ	IS OUT
ALY-SB-5-1.0-2.0	SW8260B	Bromoform	4.18	µg/kg	UJ	IS OUT
ALY-SB-5-1.0-2.0	SW8260B	Bromomethane	8.36	µg/kg	UJ	IS OUT
ALY-SB-5-1.0-2.0	SW8260B	Chlorobenzene	1.67	µg/kg	UJ	IS OUT
ALY-SB-5-1.0-2.0	SW8260B	Chloroethane	4.18	µg/kg	UJ	IS OUT
ALY-SB-5-1.0-2.0	SW8260B	Chloroform	2.09	µg/kg	UJ	IS OUT
ALY-SB-5-1.0-2.0	SW8260B	Chloromethane	8.36	µg/kg	UJ	CCV<LCL, IS OUT
ALY-SB-5-1.0-2.0	SW8260B	cis-1,2-Dichloroethene	2.51	µg/kg	UJ	IS OUT
ALY-SB-5-1.0-2.0	SW8260B	Dibromochloromethane	4.18	µg/kg	UJ	IS OUT
ALY-SB-5-1.0-2.0	SW8260B	Dichlorodifluoromethane	4.18	µg/kg	UJ	CCV<LCL, IS OUT
ALY-SB-5-1.0-2.0	SW8260B	Hexachlorobutadiene	8.36	µg/kg	UJ	IS OUT
ALY-SB-5-1.0-2.0	SW8260B	Isopropylbenzene	4.18	µg/kg	UJ	IS OUT
ALY-SB-5-1.0-2.0	SW8260B	m,p-Xylene	4.18	µg/kg	UJ	IS OUT
ALY-SB-5-1.0-2.0	SW8260B	Methyl tert-butyl ether	0.836	µg/kg	UJ	IS OUT
ALY-SB-5-1.0-2.0	SW8260B	Methylene chloride	10	µg/kg	UJ	IS OUT
ALY-SB-5-1.0-2.0	SW8260B	Naphthalene	8.36	µg/kg	UJ	IS OUT
ALY-SB-5-1.0-2.0	SW8260B	n-Butylbenzene	4.18	µg/kg	UJ	IS OUT
ALY-SB-5-1.0-2.0	SW8260B	n-Hexane	4.18	µg/kg	UJ	IS OUT
ALY-SB-5-1.0-2.0	SW8260B	n-Propylbenzene	4.18	µg/kg	UJ	IS OUT
ALY-SB-5-1.0-2.0	SW8260B	o-Xylene	4.18	µg/kg	UJ	IS OUT
ALY-SB-5-1.0-2.0	SW8260B	sec-Butylbenzene	4.18	µg/kg	UJ	IS OUT

TABLE C-2
Validation Findings

Sample ID	Method	Analyte	Final Result	Units ¹	Final Flag ²	Validation Reason ³
ALY-SB-5-1.0-2.0	SW8260B	Styrene	2.09	µg/kg	UJ	IS OUT
ALY-SB-5-1.0-2.0	SW8260B	tert-Butylbenzene	4.18	µg/kg	UJ	IS OUT
ALY-SB-5-1.0-2.0	SW8260B	Tetrachloroethene	1.67	µg/kg	UJ	IS OUT
ALY-SB-5-1.0-2.0	SW8260B	Total Xylenes	8.36	µg/kg	UJ	IS OUT
ALY-SB-5-1.0-2.0	SW8260B	trans-1,2-Dichloroethene	2.09	µg/kg	UJ	IS OUT
ALY-SB-5-1.0-2.0	SW8260B	trans-1,3-Dichloropropene	1.04	µg/kg	UJ	IS OUT
ALY-SB-5-1.0-2.0	SW8260B	Trichlorofluoromethane	4.18	µg/kg	UJ	IS OUT
ALY-SB-5-1.0-2.0	SW8260B	Vinyl chloride	2.09	µg/kg	UJ	IS OUT
ALY-SB-5-3.0-4.0	SW8260B	1,1,1,2-Tetrachloroethane	5.67	µg/kg	UJ	IS OUT
ALY-SB-5-3.0-4.0	SW8260B	1,1,2,2-Tetrachloroethane	5.67	µg/kg	UJ	IS OUT
ALY-SB-5-3.0-4.0	SW8260B	1,1,2-Trichloroethane	2.27	µg/kg	UJ	IS OUT
ALY-SB-5-3.0-4.0	SW8260B	1,2,3-Trichlorobenzene	11.3	µg/kg	UJ	IS OUT
ALY-SB-5-3.0-4.0	SW8260B	1,2,3-Trichloropropane	5.67	µg/kg	UJ	IS OUT
ALY-SB-5-3.0-4.0	SW8260B	1,2,4-Trichlorobenzene	11.3	µg/kg	UJ	IS OUT
ALY-SB-5-3.0-4.0	SW8260B	1,2,4-Trimethylbenzene	5.67	µg/kg	UJ	IS OUT
ALY-SB-5-3.0-4.0	SW8260B	1,2-Dibromo-3-chloropropane	11.3	µg/kg	UJ	IS OUT
ALY-SB-5-3.0-4.0	SW8260B	1,2-Dibromoethane	5.67	µg/kg	UJ	IS OUT
ALY-SB-5-3.0-4.0	SW8260B	1,2-Dichlorobenzene	5.67	µg/kg	UJ	IS OUT
ALY-SB-5-3.0-4.0	SW8260B	1,3,5-Trimethylbenzene	5.67	µg/kg	UJ	IS OUT
ALY-SB-5-3.0-4.0	SW8260B	1,3-Dichlorobenzene	5.67	µg/kg	UJ	IS OUT
ALY-SB-5-3.0-4.0	SW8260B	1,3-Dichloropropane	5.67	µg/kg	UJ	IS OUT
ALY-SB-5-3.0-4.0	SW8260B	1,4-Dichlorobenzene	5.67	µg/kg	UJ	IS OUT
ALY-SB-5-3.0-4.0	SW8260B	2-Chlorotoluene	5.67	µg/kg	UJ	IS OUT
ALY-SB-5-3.0-4.0	SW8260B	2-Hexanone	34	µg/kg	UJ	IS OUT
ALY-SB-5-3.0-4.0	SW8260B	4-Chlorotoluene	5.67	µg/kg	UJ	IS OUT
ALY-SB-5-3.0-4.0	SW8260B	Bromobenzene	5.67	µg/kg	UJ	IS OUT
ALY-SB-5-3.0-4.0	SW8260B	Bromoform	5.67	µg/kg	UJ	IS OUT
ALY-SB-5-3.0-4.0	SW8260B	Chlorobenzene	2.27	µg/kg	UJ	IS OUT
ALY-SB-5-3.0-4.0	SW8260B	Chloromethane	11.3	µg/kg	UJ	CCV<LCL
ALY-SB-5-3.0-4.0	SW8260B	Dibromochloromethane	5.67	µg/kg	UJ	IS OUT
ALY-SB-5-3.0-4.0	SW8260B	Dichlorodifluoromethane	5.67	µg/kg	UJ	CCV<LCL
ALY-SB-5-3.0-4.0	SW8260B	Ethylbenzene	4.53	µg/kg	UJ	IS OUT
ALY-SB-5-3.0-4.0	SW8260B	Hexachlorobutadiene	11.3	µg/kg	UJ	IS OUT
ALY-SB-5-3.0-4.0	SW8260B	m,p-Xylene	5.67	µg/kg	UJ	IS OUT
ALY-SB-5-3.0-4.0	SW8260B	Naphthalene	11.3	µg/kg	UJ	IS OUT
ALY-SB-5-3.0-4.0	SW8260B	n-Butylbenzene	5.67	µg/kg	UJ	IS OUT
ALY-SB-5-3.0-4.0	SW8260B	n-Propylbenzene	5.67	µg/kg	UJ	IS OUT
ALY-SB-5-3.0-4.0	SW8260B	o-Xylene	5.67	µg/kg	UJ	IS OUT

TABLE C-2
 Validation Findings

Sample ID	Method	Analyte	Final Result	Units ¹	Final Flag ²	Validation Reason ³
ALY-SB-5-3.0-4.0	SW8260B	sec-Butylbenzene	5.67	µg/kg	UJ	IS OUT
ALY-SB-5-3.0-4.0	SW8260B	Styrene	2.83	µg/kg	UJ	IS OUT
ALY-SB-5-3.0-4.0	SW8260B	tert-Butylbenzene	5.67	µg/kg	UJ	IS OUT
ALY-SB-5-3.0-4.0	SW8260B	Tetrachloroethene	2.27	µg/kg	UJ	IS OUT
ALY-SB-5-3.0-4.0	SW8260B	Toluene	1.7	µg/kg	UJ	IS OUT
ALY-SB-5-3.0-4.0	SW8260B	Total Xylenes	11.3	µg/kg	UJ	IS OUT
ALY-SB-5-3.0-4.0	SW8260B	trans-1,3-Dichloropropene	1.42	µg/kg	UJ	IS OUT
ALY-SB-6-3.0-4.0	SW8260B	1,1,2,2-Tetrachloroethane	3.36	µg/kg	UJ	IS OUT
ALY-SB-6-3.0-4.0	SW8260B	1,2,3-Trichlorobenzene	6.71	µg/kg	UJ	IS OUT
ALY-SB-6-3.0-4.0	SW8260B	1,2,3-Trichloropropane	3.36	µg/kg	UJ	IS OUT
ALY-SB-6-3.0-4.0	SW8260B	1,2,4-Trichlorobenzene	6.71	µg/kg	UJ	IS OUT
ALY-SB-6-3.0-4.0	SW8260B	1,2,4-Trimethylbenzene	3.36	µg/kg	UJ	IS OUT
ALY-SB-6-3.0-4.0	SW8260B	1,2-Dibromo-3-chloropropane	6.71	µg/kg	UJ	IS OUT
ALY-SB-6-3.0-4.0	SW8260B	1,2-Dichlorobenzene	3.36	µg/kg	UJ	IS OUT
ALY-SB-6-3.0-4.0	SW8260B	1,3,5-Trimethylbenzene	3.36	µg/kg	UJ	IS OUT
ALY-SB-6-3.0-4.0	SW8260B	1,3-Dichlorobenzene	3.36	µg/kg	UJ	IS OUT
ALY-SB-6-3.0-4.0	SW8260B	1,4-Dichlorobenzene	3.36	µg/kg	UJ	IS OUT
ALY-SB-6-3.0-4.0	SW8260B	2-Chlorotoluene	3.36	µg/kg	UJ	IS OUT
ALY-SB-6-3.0-4.0	SW8260B	4-Chlorotoluene	3.36	µg/kg	UJ	IS OUT
ALY-SB-6-3.0-4.0	SW8260B	Bromobenzene	3.36	µg/kg	UJ	IS OUT
ALY-SB-6-3.0-4.0	SW8260B	Chloromethane	6.71	µg/kg	UJ	CCV<LCL
ALY-SB-6-3.0-4.0	SW8260B	Dichlorodifluoromethane	3.36	µg/kg	UJ	CCV<LCL
ALY-SB-6-3.0-4.0	SW8260B	Hexachlorobutadiene	6.71	µg/kg	UJ	IS OUT
ALY-SB-6-3.0-4.0	SW8260B	Naphthalene	6.71	µg/kg	UJ	IS OUT
ALY-SB-6-3.0-4.0	SW8260B	n-Butylbenzene	3.36	µg/kg	UJ	IS OUT
ALY-SB-6-3.0-4.0	SW8260B	n-Propylbenzene	3.36	µg/kg	UJ	IS OUT
ALY-SB-6-3.0-4.0	SW8260B	p-Isopropyltoluene	3.36	µg/kg	UJ	IS OUT
ALY-SB-6-3.0-4.0	SW8260B	sec-Butylbenzene	3.36	µg/kg	UJ	IS OUT
ALY-SB-6-3.0-4.0	SW8260B	tert-Butylbenzene	3.36	µg/kg	UJ	IS OUT
ALY-SB-7-1.0-2.0	SW8260B	Chloromethane	8.64	µg/kg	UJ	CCV<LCL
ALY-SB-7-1.0-2.0	SW8260B	Dichlorodifluoromethane	4.32	µg/kg	UJ	CCV<LCL
ALY-SB-7-10.0-11.0	NWTPHDX-G	Lube Oil Range Hydrocarbons	70.4	mg/kg	J	MS<LCL
ALY-SB-7-10.0-11.0	SW8260B	Chloromethane	7.71	µg/kg	UJ	CCV<LCL
ALY-SB-7-10.0-11.0	SW8260B	Dichlorodifluoromethane	3.86	µg/kg	UJ	CCV<LCL
ALY-SB-7-10.0-11.0	SW8270C	Acenaphthylene	0.166	mg/kg	J	MS<LCL
ALY-SB-7-10.0-11.0	SW8270C	Benzo (a) anthracene	0.386	mg/kg	J	MS<LCL
ALY-SB-7-10.0-11.0	SW8270C	Benzo (a) pyrene	0.379	mg/kg	J	MS<LCL
ALY-SB-7-10.0-11.0	SW8270C	Benzo (k) fluoranthene	0.317	mg/kg	J	MS<LCL

TABLE C-2
Validation Findings

Sample ID	Method	Analyte	Final Result	Units ¹	Final Flag ²	Validation Reason ³
ALY-SB-7-10.0-11.0	SW8270C	Indeno (1,2,3-cd) pyrene	0.242	mg/kg	J	MS>UCL
ALY-SB-7-10.0-11.0	SW8270C	Naphthalene	0.0759	mg/kg	J	MS<LCL
ALY-SB-7-10.0-11.0	SW8270C	Phenanthrene	0.265	mg/kg	J	MS<LCL
ALY-SB-8-1.0-2.0	SW8260B	Chloromethane	6.81	µg/kg	UJ	CCV<LCL
ALY-SB-8-1.0-2.0	SW8260B	Dichlorodifluoromethane	3.4	µg/kg	UJ	CCV<LCL
ALY-SB-8-3.0-4.0	SW8260B	1,1,2,2-Tetrachloroethane	9.07	µg/kg	UJ	IS OUT
ALY-SB-8-3.0-4.0	SW8260B	1,2,3-Trichlorobenzene	18.1	µg/kg	UJ	IS OUT
ALY-SB-8-3.0-4.0	SW8260B	1,2,3-Trichloropropane	9.07	µg/kg	UJ	IS OUT
ALY-SB-8-3.0-4.0	SW8260B	1,2,4-Trichlorobenzene	18.1	µg/kg	UJ	IS OUT
ALY-SB-8-3.0-4.0	SW8260B	1,2,4-Trimethylbenzene	9.07	µg/kg	UJ	IS OUT
ALY-SB-8-3.0-4.0	SW8260B	1,2-Dibromo-3-chloropropane	18.1	µg/kg	UJ	IS OUT
ALY-SB-8-3.0-4.0	SW8260B	1,2-Dichlorobenzene	9.07	µg/kg	UJ	IS OUT
ALY-SB-8-3.0-4.0	SW8260B	1,3,5-Trimethylbenzene	9.07	µg/kg	UJ	IS OUT
ALY-SB-8-3.0-4.0	SW8260B	1,3-Dichlorobenzene	9.07	µg/kg	UJ	IS OUT
ALY-SB-8-3.0-4.0	SW8260B	1,4-Dichlorobenzene	9.07	µg/kg	UJ	IS OUT
ALY-SB-8-3.0-4.0	SW8260B	2-Chlorotoluene	9.07	µg/kg	UJ	IS OUT
ALY-SB-8-3.0-4.0	SW8260B	4-Chlorotoluene	9.07	µg/kg	UJ	IS OUT
ALY-SB-8-3.0-4.0	SW8260B	Bromobenzene	9.07	µg/kg	UJ	IS OUT
ALY-SB-8-3.0-4.0	SW8260B	Chloromethane	18.1	µg/kg	UJ	CCV<LCL
ALY-SB-8-3.0-4.0	SW8260B	Dichlorodifluoromethane	9.07	µg/kg	UJ	CCV<LCL
ALY-SB-8-3.0-4.0	SW8260B	Hexachlorobutadiene	18.1	µg/kg	UJ	IS OUT
ALY-SB-8-3.0-4.0	SW8260B	Naphthalene	18.1	µg/kg	UJ	IS OUT
ALY-SB-8-3.0-4.0	SW8260B	n-Butylbenzene	9.07	µg/kg	UJ	IS OUT
ALY-SB-8-3.0-4.0	SW8260B	n-Propylbenzene	9.07	µg/kg	UJ	IS OUT
ALY-SB-8-3.0-4.0	SW8260B	sec-Butylbenzene	9.07	µg/kg	UJ	IS OUT
ALY-SB-8-3.0-4.0	SW8260B	tert-Butylbenzene	9.07	µg/kg	UJ	IS OUT
ALY-SB-9-1.0-2.0	NWTPHGX	Gasoline Range Hydrocarbons	43	mg/kg	J	Sur>UCL
ALY-SB-9-1.0-2.0	SW8260B	1,1,1,2-Tetrachloroethane	3.28	µg/kg	UJ	IS OUT
ALY-SB-9-1.0-2.0	SW8260B	1,1,1-Trichloroethane	1.64	µg/kg	UJ	IS OUT
ALY-SB-9-1.0-2.0	SW8260B	1,1,2,2-Tetrachloroethane	3.28	µg/kg	UJ	IS OUT
ALY-SB-9-1.0-2.0	SW8260B	1,1,2-Trichloroethane	1.31	µg/kg	UJ	IS OUT
ALY-SB-9-1.0-2.0	SW8260B	1,1-Dichloroethane	1.31	µg/kg	UJ	IS OUT
ALY-SB-9-1.0-2.0	SW8260B	1,1-Dichloropropene	3.28	µg/kg	UJ	IS OUT
ALY-SB-9-1.0-2.0	SW8260B	1,2,3-Trichlorobenzene	6.57	µg/kg	UJ	IS OUT
ALY-SB-9-1.0-2.0	SW8260B	1,2,3-Trichloropropane	3.28	µg/kg	UJ	IS OUT
ALY-SB-9-1.0-2.0	SW8260B	1,2,4-Trichlorobenzene	6.57	µg/kg	UJ	IS OUT
ALY-SB-9-1.0-2.0	SW8260B	1,2,4-Trimethylbenzene	3.28	µg/kg	UJ	IS OUT
ALY-SB-9-1.0-2.0	SW8260B	1,2-Dibromo-3-chloropropane	6.57	µg/kg	UJ	IS OUT
ALY-SB-9-1.0-2.0	SW8260B	1,2-Dibromoethane	3.28	µg/kg	UJ	IS OUT

TABLE C-2
 Validation Findings

Sample ID	Method	Analyte	Final Result	Units ¹	Final Flag ²	Validation Reason ³
ALY-SB-9-1.0-2.0	SW8260B	1,2-Dichlorobenzene	3.28	µg/kg	UJ	IS OUT
ALY-SB-9-1.0-2.0	SW8260B	1,3,5-Trimethylbenzene	3.28	µg/kg	UJ	IS OUT
ALY-SB-9-1.0-2.0	SW8260B	1,3-Dichlorobenzene	3.28	µg/kg	UJ	IS OUT
ALY-SB-9-1.0-2.0	SW8260B	1,3-Dichloropropane	3.28	µg/kg	UJ	IS OUT
ALY-SB-9-1.0-2.0	SW8260B	1,4-Dichlorobenzene	3.28	µg/kg	UJ	IS OUT
ALY-SB-9-1.0-2.0	SW8260B	2,2-Dichloropropane	6.57	µg/kg	UJ	IS OUT
ALY-SB-9-1.0-2.0	SW8260B	2-Chlorotoluene	3.28	µg/kg	UJ	IS OUT
ALY-SB-9-1.0-2.0	SW8260B	2-Hexanone	19.7	µg/kg	UJ	IS OUT
ALY-SB-9-1.0-2.0	SW8260B	4-Chlorotoluene	3.28	µg/kg	UJ	IS OUT
ALY-SB-9-1.0-2.0	SW8260B	Bromobenzene	3.28	µg/kg	UJ	IS OUT
ALY-SB-9-1.0-2.0	SW8260B	Bromochloromethane	3.28	µg/kg	UJ	IS OUT
ALY-SB-9-1.0-2.0	SW8260B	Bromoform	3.28	µg/kg	UJ	IS OUT
ALY-SB-9-1.0-2.0	SW8260B	Bromomethane	6.57	µg/kg	UJ	IS OUT
ALY-SB-9-1.0-2.0	SW8260B	Chlorobenzene	1.31	µg/kg	UJ	IS OUT
ALY-SB-9-1.0-2.0	SW8260B	Chloroethane	3.28	µg/kg	UJ	IS OUT
ALY-SB-9-1.0-2.0	SW8260B	Chloroform	1.64	µg/kg	UJ	IS OUT
ALY-SB-9-1.0-2.0	SW8260B	Chloromethane	6.57	µg/kg	UJ	CCV<LCL
ALY-SB-9-1.0-2.0	SW8260B	cis-1,2-Dichloroethene	1.97	µg/kg	UJ	IS OUT
ALY-SB-9-1.0-2.0	SW8260B	Dibromochloromethane	3.28	µg/kg	UJ	IS OUT
ALY-SB-9-1.0-2.0	SW8260B	Dichlorodifluoromethane	3.28	µg/kg	UJ	CCV<LCL
ALY-SB-9-1.0-2.0	SW8260B	Ethylbenzene	2.63	µg/kg	UJ	IS OUT
ALY-SB-9-1.0-2.0	SW8260B	Hexachlorobutadiene	6.57	µg/kg	UJ	IS OUT
ALY-SB-9-1.0-2.0	SW8260B	Isopropylbenzene	3.28	µg/kg	UJ	IS OUT
ALY-SB-9-1.0-2.0	SW8260B	m,p-Xylene	3.28	µg/kg	UJ	IS OUT
ALY-SB-9-1.0-2.0	SW8260B	Methyl tert-butyl ether	0.657	µg/kg	UJ	IS OUT
ALY-SB-9-1.0-2.0	SW8260B	Methylene chloride	7.88	µg/kg	UJ	IS OUT
ALY-SB-9-1.0-2.0	SW8260B	Naphthalene	6.57	µg/kg	UJ	IS OUT
ALY-SB-9-1.0-2.0	SW8260B	n-Butylbenzene	3.28	µg/kg	UJ	IS OUT
ALY-SB-9-1.0-2.0	SW8260B	n-Hexane	3.28	µg/kg	UJ	IS OUT
ALY-SB-9-1.0-2.0	SW8260B	n-Propylbenzene	3.28	µg/kg	UJ	IS OUT
ALY-SB-9-1.0-2.0	SW8260B	o-Xylene	3.28	µg/kg	UJ	IS OUT
ALY-SB-9-1.0-2.0	SW8260B	sec-Butylbenzene	3.28	µg/kg	UJ	IS OUT
ALY-SB-9-1.0-2.0	SW8260B	Styrene	1.64	µg/kg	UJ	IS OUT
ALY-SB-9-1.0-2.0	SW8260B	tert-Butylbenzene	3.28	µg/kg	UJ	IS OUT
ALY-SB-9-1.0-2.0	SW8260B	Tetrachloroethene	1.31	µg/kg	UJ	IS OUT
ALY-SB-9-1.0-2.0	SW8260B	Toluene	0.985	µg/kg	UJ	IS OUT
ALY-SB-9-1.0-2.0	SW8260B	Total Xylenes	6.57	µg/kg	UJ	IS OUT
ALY-SB-9-1.0-2.0	SW8260B	trans-1,2-Dichloroethene	1.64	µg/kg	UJ	IS OUT
ALY-SB-9-1.0-2.0	SW8260B	trans-1,3-Dichloropropene	0.821	µg/kg	UJ	IS OUT

TABLE C-2
Validation Findings

Sample ID	Method	Analyte	Final Result	Units ¹	Final Flag ²	Validation Reason ³
ALY-SB-9-1.0-2.0	SW8260B	Vinyl chloride	1.64	µg/kg	UJ	IS OUT
ALY-SB-9-7.0-8.0	SW8260B	Chloromethane	6.96	µg/kg	UJ	CCV<LCL
ALY-SB-9-7.0-8.0	SW8260B	Dichlorodifluoromethane	3.48	µg/kg	UJ	CCV<LCL
ALY-W-11	SW8260B	Dichlorodifluoromethane	0.5	µG/L	UJ	CCV<LCL
ALY-W-12	SW8260B	Dichlorodifluoromethane	0.5	µG/L	UJ	CCV<LCL
ALY-W-12	SW8260B	Hexachlorobutadiene	2.5	µG/L	UJ	CCV<LCL
ALY-W-2	SW8260B	Dichlorodifluoromethane	0.5	µG/L	UJ	CCV<LCL
ALY-W-3	SW8260B	Dichlorodifluoromethane	0.5	µG/L	UJ	CCV<LCL
ALY-W-7	SW8260B	Dichlorodifluoromethane	0.5	µG/L	UJ	CCV<LCL
AM-SB-1-1.0-2.0	SW6020	Antimony	1.58	mg/kg	UJ	MS<LCL
AM-SB-1-1.0-2.0	SW6020	Barium	36.9	mg/kg	J	MS>UCL
AM-SB-1-1.0-2.0	SW6020	Copper	143	mg/kg	J	MS>UCL
AM-SB-1-1.0-2.0	SW6020	Strontium	105	mg/kg	J	MS>UCL
AM-SB-1-1.0-2.0	SW6020	Arsenic	0.599	mg/kg	J	LabDupe>UCL
AM-SB-1-1.0-2.0	SW6020	Lead	0.793	mg/kg	J	LabDupe>UCL
AM-SB-1-1.0-2.0	SW8260B	1,1,1,2-Tetrachloroethane	4.76	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	1,1,1-Trichloroethane	2.38	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	1,1,2,2-Tetrachloroethane	4.76	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	1,1,2-Trichloroethane	1.9	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	1,1-Dichloroethane	1.9	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	1,1-Dichloroethene	2.86	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	1,1-Dichloropropene	4.76	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	1,2,3-Trichlorobenzene	9.52	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	1,2,3-Trichloropropane	4.76	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	1,2,4-Trichlorobenzene	9.52	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	1,2,4-Trimethylbenzene	4.76	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	1,2-Dibromo-3-chloropropane	9.52	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	1,2-Dibromoethane	4.76	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	1,2-Dichlorobenzene	4.76	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	1,2-Dichloroethane	1.19	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	1,2-Dichloropropane	4.76	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	1,3,5-Trimethylbenzene	4.76	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	1,3-Dichlorobenzene	4.76	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	1,3-Dichloropropane	4.76	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	1,4-Dichlorobenzene	4.76	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	2,2-Dichloropropane	9.52	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	2-Butanone	28.6	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	2-Chlorotoluene	4.76	µg/kg	UJ	IS OUT

TABLE C-2
 Validation Findings

Sample ID	Method	Analyte	Final Result	Units ¹	Final Flag ²	Validation Reason ³
AM-SB-1-1.0-2.0	SW8260B	2-Hexanone	28.6	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	4-Chlorotoluene	4.76	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	4-Methyl-2-pentanone	28.6	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	Acetone	38.1	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	Benzene	1.43	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	Bromobenzene	4.76	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	Bromochloromethane	4.76	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	Bromodichloromethane	4.76	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	Bromoform	4.76	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	Bromomethane	9.52	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	Carbon disulfide	2.86	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	Carbon tetrachloride	4.76	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	Chlorobenzene	1.9	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	Chloroethane	4.76	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	Chloroform	2.38	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	Chloromethane	9.52	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	cis-1,2-Dichloroethene	2.86	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	cis-1,3-Dichloropropene	4.76	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	Dibromochloromethane	4.76	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	Dibromomethane	4.76	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	Dichlorodifluoromethane	4.76	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	Ethylbenzene	3.81	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	Hexachlorobutadiene	9.52	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	Isopropylbenzene	4.76	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	m,p-Xylene	4.76	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	Methyl tert-butyl ether	0.952	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	Methylene chloride	11.4	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	Naphthalene	9.52	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	n-Butylbenzene	4.76	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	n-Hexane	4.76	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	n-Propylbenzene	4.76	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	o-Xylene	4.76	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	p-Isopropyltoluene	4.76	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	sec-Butylbenzene	4.76	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	Styrene	2.38	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	tert-Butylbenzene	4.76	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	Tetrachloroethene	1.9	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	Toluene	1.43	µg/kg	UJ	IS OUT

TABLE C-2
Validation Findings

Sample ID	Method	Analyte	Final Result	Units ¹	Final Flag ²	Validation Reason ³
AM-SB-1-1.0-2.0	SW8260B	Total Xylenes	9.52	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	trans-1,2-Dichloroethene	2.38	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	trans-1,3-Dichloropropene	1.19	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	Trichloroethene	2.38	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	Trichlorofluoromethane	4.76	µg/kg	UJ	IS OUT
AM-SB-1-1.0-2.0	SW8260B	Vinyl chloride	2.38	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	1,1,1,2-Tetrachloroethane	4.03	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	1,1,1-Trichloroethane	2.02	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	1,1,2,2-Tetrachloroethane	4.03	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	1,1,2-Trichloroethane	1.61	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	1,1-Dichloroethane	1.61	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	1,1-Dichloroethene	2.42	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	1,1-Dichloropropene	4.03	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	1,2,3-Trichlorobenzene	8.07	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	1,2,3-Trichloropropane	4.03	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	1,2,4-Trichlorobenzene	8.07	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	1,2,4-Trimethylbenzene	4.03	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	1,2-Dibromo-3-chloropropane	8.07	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	1,2-Dibromoethane	4.03	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	1,2-Dichlorobenzene	4.03	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	1,2-Dichloroethane	1.01	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	1,2-Dichloropropane	4.03	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	1,3,5-Trimethylbenzene	4.03	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	1,3-Dichlorobenzene	4.03	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	1,3-Dichloropropane	4.03	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	1,4-Dichlorobenzene	4.03	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	2,2-Dichloropropane	8.07	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	2-Butanone	24.2	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	2-Chlorotoluene	4.03	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	2-Hexanone	24.2	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	4-Chlorotoluene	4.03	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	4-Methyl-2-pentanone	24.2	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	Benzene	1.21	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	Bromobenzene	4.03	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	Bromochloromethane	4.03	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	Bromodichloromethane	4.03	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	Bromoform	4.03	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	Bromomethane	8.07	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	Carbon disulfide	2.42	µg/kg	UJ	IS OUT

TABLE C-2
 Validation Findings

Sample ID	Method	Analyte	Final Result	Units ¹	Final Flag ²	Validation Reason ³
AM-SB-11-1.0-2.0	SW8260B	Carbon tetrachloride	4.03	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	Chlorobenzene	1.61	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	Chloroethane	4.03	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	Chloroform	2.02	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	Chloromethane	8.07	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	cis-1,2-Dichloroethene	2.42	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	cis-1,3-Dichloropropene	4.03	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	Dibromochloromethane	4.03	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	Dibromomethane	4.03	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	Dichlorodifluoromethane	4.03	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	Ethylbenzene	3.23	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	Hexachlorobutadiene	8.07	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	Isopropylbenzene	4.03	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	m,p-Xylene	4.03	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	Methyl tert-butyl ether	0.807	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	Methylene chloride	9.68	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	Naphthalene	8.07	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	n-Butylbenzene	4.03	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	n-Hexane	4.03	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	n-Propylbenzene	4.03	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	o-Xylene	4.03	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	p-Isopropyltoluene	4.03	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	sec-Butylbenzene	4.03	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	Styrene	2.02	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	tert-Butylbenzene	4.03	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	Tetrachloroethene	1.61	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	Total Xylenes	8.07	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	trans-1,2-Dichloroethene	2.02	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	trans-1,3-Dichloropropene	1.01	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	Trichloroethene	2.02	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	Trichlorofluoromethane	4.03	µg/kg	UJ	IS OUT
AM-SB-11-1.0-2.0	SW8260B	Vinyl chloride	2.02	µg/kg	UJ	IS OUT
AM-SB-12-1.0-2.0	SW8260B	Dichlorodifluoromethane	4.17	µg/kg	UJ	CCV<LCL
AM-SB-2-4.0-6.0	SW8260B	Dichlorodifluoromethane	4.02	µg/kg	UJ	CCV<LCL
AM-SB-3-0.0-1.0	NWTPHDX-G	Lube Oil Range Hydrocarbons	1580	mg/kg	J	Sur>UCL
AM-SB-3-4.0-5.0	SW8260B	1,1,2,2-Tetrachloroethane	4.12	µg/kg	UJ	IS OUT
AM-SB-3-4.0-5.0	SW8260B	1,2,3-Trichlorobenzene	8.24	µg/kg	UJ	IS OUT
AM-SB-3-4.0-5.0	SW8260B	1,2,3-Trichloropropane	4.12	µg/kg	UJ	IS OUT

TABLE C-2
Validation Findings

Sample ID	Method	Analyte	Final Result	Units ¹	Final Flag ²	Validation Reason ³
AM-SB-3-4.0-5.0	SW8260B	1,2,4-Trichlorobenzene	8.24	µg/kg	UJ	IS OUT
AM-SB-3-4.0-5.0	SW8260B	1,2,4-Trimethylbenzene	4.12	µg/kg	UJ	IS OUT
AM-SB-3-4.0-5.0	SW8260B	1,2-Dibromo-3-chloropropane	8.24	µg/kg	UJ	IS OUT
AM-SB-3-4.0-5.0	SW8260B	1,2-Dichlorobenzene	4.12	µg/kg	UJ	IS OUT
AM-SB-3-4.0-5.0	SW8260B	1,3,5-Trimethylbenzene	4.12	µg/kg	UJ	IS OUT
AM-SB-3-4.0-5.0	SW8260B	1,3-Dichlorobenzene	4.12	µg/kg	UJ	IS OUT
AM-SB-3-4.0-5.0	SW8260B	1,4-Dichlorobenzene	4.12	µg/kg	UJ	IS OUT
AM-SB-3-4.0-5.0	SW8260B	2-Chlorotoluene	4.12	µg/kg	UJ	IS OUT
AM-SB-3-4.0-5.0	SW8260B	4-Chlorotoluene	4.12	µg/kg	UJ	IS OUT
AM-SB-3-4.0-5.0	SW8260B	Bromobenzene	4.12	µg/kg	UJ	IS OUT
AM-SB-3-4.0-5.0	SW8260B	Dichlorodifluoromethane	4.12	µg/kg	UJ	CCV<LCL
AM-SB-3-4.0-5.0	SW8260B	Hexachlorobutadiene	8.24	µg/kg	UJ	IS OUT
AM-SB-3-4.0-5.0	SW8260B	Naphthalene	8.24	µg/kg	UJ	IS OUT
AM-SB-3-4.0-5.0	SW8260B	n-Butylbenzene	4.12	µg/kg	UJ	IS OUT
AM-SB-3-4.0-5.0	SW8260B	n-Propylbenzene	4.12	µg/kg	UJ	IS OUT
AM-SB-3-4.0-5.0	SW8260B	p-Isopropyltoluene	4.12	µg/kg	UJ	IS OUT
AM-SB-3-4.0-5.0	SW8260B	sec-Butylbenzene	4.12	µg/kg	UJ	IS OUT
AM-SB-3-4.0-5.0	SW8260B	tert-Butylbenzene	4.12	µg/kg	UJ	IS OUT
AM-SB-4-1.0-2.0	SW8260B	Dichlorodifluoromethane	3.91	µg/kg	UJ	CCV<LCL
AM-SB-4-7.0-8.0	SW8260B	1,1,2,2-Tetrachloroethane	5.46	µg/kg	UJ	IS OUT
AM-SB-4-7.0-8.0	SW8260B	1,2,3-Trichlorobenzene	10.9	µg/kg	UJ	IS OUT
AM-SB-4-7.0-8.0	SW8260B	1,2,3-Trichloropropane	5.46	µg/kg	UJ	IS OUT
AM-SB-4-7.0-8.0	SW8260B	1,2,4-Trichlorobenzene	10.9	µg/kg	UJ	IS OUT
AM-SB-4-7.0-8.0	SW8260B	1,2,4-Trimethylbenzene	5.46	µg/kg	UJ	IS OUT
AM-SB-4-7.0-8.0	SW8260B	1,2-Dibromo-3-chloropropane	10.9	µg/kg	UJ	IS OUT
AM-SB-4-7.0-8.0	SW8260B	1,2-Dichlorobenzene	5.46	µg/kg	UJ	IS OUT
AM-SB-4-7.0-8.0	SW8260B	1,3,5-Trimethylbenzene	5.46	µg/kg	UJ	IS OUT
AM-SB-4-7.0-8.0	SW8260B	1,3-Dichlorobenzene	5.46	µg/kg	UJ	IS OUT
AM-SB-4-7.0-8.0	SW8260B	1,4-Dichlorobenzene	5.46	µg/kg	UJ	IS OUT
AM-SB-4-7.0-8.0	SW8260B	2-Chlorotoluene	5.46	µg/kg	UJ	IS OUT
AM-SB-4-7.0-8.0	SW8260B	4-Chlorotoluene	5.46	µg/kg	UJ	IS OUT
AM-SB-4-7.0-8.0	SW8260B	Bromobenzene	5.46	µg/kg	UJ	IS OUT
AM-SB-4-7.0-8.0	SW8260B	Dichlorodifluoromethane	5.46	µg/kg	UJ	CCV<LCL
AM-SB-4-7.0-8.0	SW8260B	Hexachlorobutadiene	10.9	µg/kg	UJ	IS OUT
AM-SB-4-7.0-8.0	SW8260B	Naphthalene	10.9	µg/kg	UJ	IS OUT
AM-SB-4-7.0-8.0	SW8260B	n-Butylbenzene	5.46	µg/kg	UJ	IS OUT
AM-SB-4-7.0-8.0	SW8260B	n-Propylbenzene	5.46	µg/kg	UJ	IS OUT
AM-SB-4-7.0-8.0	SW8260B	p-Isopropyltoluene	5.46	µg/kg	UJ	IS OUT

TABLE C-2
 Validation Findings

Sample ID	Method	Analyte	Final Result	Units ¹	Final Flag ²	Validation Reason ³
AM-SB-4-7.0-8.0	SW8260B	sec-Butylbenzene	5.46	µg/kg	UJ	IS OUT
AM-SB-4-7.0-8.0	SW8260B	tert-Butylbenzene	5.46	µg/kg	UJ	IS OUT
AM-SB-5-3.0-4.0	SW8260B	Dichlorodifluoromethane	4.13	µg/kg	UJ	CCV<LCL
AM-SB-6-1.0-2.0	SW8260B	Dichlorodifluoromethane	2.93	µg/kg	UJ	CCV<LCL
AM-SB-6-6.0-8.0	SW8260B	1,1,1-Trichloroethane	2.19	µg/kg	UJ	IS OUT
AM-SB-6-6.0-8.0	SW8260B	1,1,2,2-Tetrachloroethane	4.38	µg/kg	UJ	IS OUT
AM-SB-6-6.0-8.0	SW8260B	1,1-Dichloroethane	1.75	µg/kg	UJ	IS OUT
AM-SB-6-6.0-8.0	SW8260B	1,1-Dichloroethene	2.63	µg/kg	UJ	IS OUT
AM-SB-6-6.0-8.0	SW8260B	1,1-Dichloropropene	4.38	µg/kg	UJ	IS OUT
AM-SB-6-6.0-8.0	SW8260B	1,2,3-Trichlorobenzene	8.75	µg/kg	UJ	IS OUT
AM-SB-6-6.0-8.0	SW8260B	1,2,3-Trichloropropane	4.38	µg/kg	UJ	IS OUT
AM-SB-6-6.0-8.0	SW8260B	1,2,4-Trichlorobenzene	8.75	µg/kg	UJ	IS OUT
AM-SB-6-6.0-8.0	SW8260B	1,2,4-Trimethylbenzene	4.38	µg/kg	UJ	IS OUT
AM-SB-6-6.0-8.0	SW8260B	1,2-Dibromo-3-chloropropane	8.75	µg/kg	UJ	IS OUT
AM-SB-6-6.0-8.0	SW8260B	1,2-Dichlorobenzene	4.38	µg/kg	UJ	IS OUT
AM-SB-6-6.0-8.0	SW8260B	1,3,5-Trimethylbenzene	4.38	µg/kg	UJ	IS OUT
AM-SB-6-6.0-8.0	SW8260B	1,3-Dichlorobenzene	4.38	µg/kg	UJ	IS OUT
AM-SB-6-6.0-8.0	SW8260B	1,4-Dichlorobenzene	4.38	µg/kg	UJ	IS OUT
AM-SB-6-6.0-8.0	SW8260B	2,2-Dichloropropane	8.75	µg/kg	UJ	IS OUT
AM-SB-6-6.0-8.0	SW8260B	2-Chlorotoluene	4.38	µg/kg	UJ	IS OUT
AM-SB-6-6.0-8.0	SW8260B	4-Chlorotoluene	4.38	µg/kg	UJ	IS OUT
AM-SB-6-6.0-8.0	SW8260B	Bromobenzene	4.38	µg/kg	UJ	IS OUT
AM-SB-6-6.0-8.0	SW8260B	Bromochloromethane	4.38	µg/kg	UJ	IS OUT
AM-SB-6-6.0-8.0	SW8260B	Bromomethane	8.75	µg/kg	UJ	IS OUT
AM-SB-6-6.0-8.0	SW8260B	Carbon disulfide	2.63	µg/kg	UJ	IS OUT
AM-SB-6-6.0-8.0	SW8260B	Chloroethane	4.38	µg/kg	UJ	IS OUT
AM-SB-6-6.0-8.0	SW8260B	Chloroform	2.19	µg/kg	UJ	IS OUT
AM-SB-6-6.0-8.0	SW8260B	Chloromethane	8.75	µg/kg	UJ	IS OUT
AM-SB-6-6.0-8.0	SW8260B	cis-1,3-Dichloropropene	4.38	µg/kg	UJ	IS OUT
AM-SB-6-6.0-8.0	SW8260B	Dichlorodifluoromethane	4.38	µg/kg	UJ	CCV<LCL, IS OUT
AM-SB-6-6.0-8.0	SW8260B	Hexachlorobutadiene	8.75	µg/kg	UJ	IS OUT
AM-SB-6-6.0-8.0	SW8260B	Methyl tert-butyl ether	0.875	µg/kg	UJ	IS OUT
AM-SB-6-6.0-8.0	SW8260B	Methylene chloride	10.5	µg/kg	UJ	IS OUT
AM-SB-6-6.0-8.0	SW8260B	Naphthalene	8.75	µg/kg	UJ	IS OUT
AM-SB-6-6.0-8.0	SW8260B	n-Butylbenzene	4.38	µg/kg	UJ	IS OUT
AM-SB-6-6.0-8.0	SW8260B	n-Hexane	4.38	µg/kg	UJ	IS OUT
AM-SB-6-6.0-8.0	SW8260B	n-Propylbenzene	4.38	µg/kg	UJ	IS OUT
AM-SB-6-6.0-8.0	SW8260B	p-Isopropyltoluene	4.38	µg/kg	UJ	IS OUT
AM-SB-6-6.0-8.0	SW8260B	sec-Butylbenzene	4.38	µg/kg	UJ	IS OUT

TABLE C-2
Validation Findings

Sample ID	Method	Analyte	Final Result	Units ¹	Final Flag ²	Validation Reason ³
AM-SB-6-6.0-8.0	SW8260B	tert-Butylbenzene	4.38	µg/kg	UJ	IS OUT
AM-SB-6-6.0-8.0	SW8260B	trans-1,3-Dichloropropene	1.09	µg/kg	UJ	IS OUT
AM-SB-6-6.0-8.0	SW8260B	Trichlorofluoromethane	4.38	µg/kg	UJ	IS OUT
AM-SB-6-6.0-8.0	SW8260B	Vinyl chloride	2.19	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	1,1,1,2-Tetrachloroethane	4.9	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	1,1,1-Trichloroethane	2.45	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	1,1,2,2-Tetrachloroethane	4.9	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	1,1,2-Trichloroethane	1.96	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	1,1-Dichloroethane	1.96	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	1,1-Dichloroethene	2.94	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	1,1-Dichloropropene	4.9	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	1,2,3-Trichlorobenzene	9.8	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	1,2,3-Trichloropropane	4.9	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	1,2,4-Trichlorobenzene	9.8	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	1,2,4-Trimethylbenzene	4.9	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	1,2-Dibromo-3-chloropropane	9.8	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	1,2-Dibromoethane	4.9	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	1,2-Dichlorobenzene	4.9	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	1,3,5-Trimethylbenzene	4.9	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	1,3-Dichlorobenzene	4.9	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	1,3-Dichloropropane	4.9	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	1,4-Dichlorobenzene	4.9	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	2,2-Dichloropropane	9.8	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	2-Butanone	29.4	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	2-Chlorotoluene	4.9	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	2-Hexanone	29.4	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	4-Chlorotoluene	4.9	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	Bromobenzene	4.9	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	Bromochloromethane	4.9	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	Bromoform	4.9	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	Bromomethane	9.8	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	Carbon disulfide	2.94	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	Chlorobenzene	1.96	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	Chloroethane	4.9	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	Chloroform	2.45	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	Chloromethane	9.8	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	cis-1,2-Dichloroethene	2.94	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	Dibromochloromethane	4.9	µg/kg	UJ	IS OUT

TABLE C-2
 Validation Findings

Sample ID	Method	Analyte	Final Result	Units ¹	Final Flag ²	Validation Reason ³
AM-SB-7-6.0-7.0	SW8260B	Dichlorodifluoromethane	4.9	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	Ethylbenzene	3.92	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	Hexachlorobutadiene	9.8	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	Isopropylbenzene	4.9	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	m,p-Xylene	4.9	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	Methyl tert-butyl ether	0.98	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	Methylene chloride	11.8	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	Naphthalene	9.8	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	n-Butylbenzene	4.9	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	n-Hexane	4.9	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	n-Propylbenzene	4.9	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	o-Xylene	4.9	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	p-Isopropyltoluene	4.9	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	sec-Butylbenzene	4.9	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	Styrene	2.45	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	tert-Butylbenzene	4.9	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	Tetrachloroethene	1.96	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	Toluene	1.47	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	Total Xylenes	9.8	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	trans-1,2-Dichloroethene	2.45	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	trans-1,3-Dichloropropene	1.23	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	Trichlorofluoromethane	4.9	µg/kg	UJ	IS OUT
AM-SB-7-6.0-7.0	SW8260B	Vinyl chloride	2.45	µg/kg	UJ	IS OUT
AM-SB-8-8.0-10.0	SW8260B	1,1,2,2-Tetrachloroethane	3.58	µg/kg	UJ	IS OUT
AM-SB-8-8.0-10.0	SW8260B	1,2,3-Trichlorobenzene	7.15	µg/kg	UJ	IS OUT
AM-SB-8-8.0-10.0	SW8260B	1,2,3-Trichloropropane	3.58	µg/kg	UJ	IS OUT
AM-SB-8-8.0-10.0	SW8260B	1,2,4-Trichlorobenzene	7.15	µg/kg	UJ	IS OUT
AM-SB-8-8.0-10.0	SW8260B	1,2,4-Trimethylbenzene	3.58	µg/kg	UJ	IS OUT
AM-SB-8-8.0-10.0	SW8260B	1,2-Dibromo-3-chloropropane	7.15	µg/kg	UJ	IS OUT
AM-SB-8-8.0-10.0	SW8260B	1,2-Dichlorobenzene	3.58	µg/kg	UJ	IS OUT
AM-SB-8-8.0-10.0	SW8260B	1,3,5-Trimethylbenzene	3.58	µg/kg	UJ	IS OUT
AM-SB-8-8.0-10.0	SW8260B	1,3-Dichlorobenzene	3.58	µg/kg	UJ	IS OUT
AM-SB-8-8.0-10.0	SW8260B	1,4-Dichlorobenzene	3.58	µg/kg	UJ	IS OUT
AM-SB-8-8.0-10.0	SW8260B	2-Chlorotoluene	3.58	µg/kg	UJ	IS OUT
AM-SB-8-8.0-10.0	SW8260B	4-Chlorotoluene	3.58	µg/kg	UJ	IS OUT
AM-SB-8-8.0-10.0	SW8260B	Bromoform	3.58	µg/kg	UJ	IS OUT
AM-SB-8-8.0-10.0	SW8260B	Hexachlorobutadiene	7.15	µg/kg	UJ	IS OUT
AM-SB-8-8.0-10.0	SW8260B	Naphthalene	7.15	µg/kg	UJ	IS OUT

TABLE C-2
Validation Findings

Sample ID	Method	Analyte	Final Result	Units ¹	Final Flag ²	Validation Reason ³
AM-SB-8-8.0-10.0	SW8260B	n-Butylbenzene	3.58	µg/kg	UJ	IS OUT
AM-SB-8-8.0-10.0	SW8260B	n-Propylbenzene	3.58	µg/kg	UJ	IS OUT
AM-SB-8-8.0-10.0	SW8260B	p-Isopropyltoluene	3.58	µg/kg	UJ	IS OUT
AM-SB-8-8.0-10.0	SW8260B	sec-Butylbenzene	3.58	µg/kg	UJ	IS OUT
AM-SB-8-8.0-10.0	SW8260B	tert-Butylbenzene	3.58	µg/kg	UJ	IS OUT
AM-SB-9-1.0-3.0	SW6020	Antimony	1.75	mg/kg	UJ	MS<LCL
AM-SB-9-1.0-3.0	SW6020	Barium	192	mg/kg	J	MS<LCL, LabDupe>UCL
AM-SB-9-1.0-3.0	SW6020	Molybdenum	2.91	mg/kg	UJ	MS<LCL
AM-SB-9-1.0-3.0	SW6020	Selenium	1.16	mg/kg	UJ	MS<LCL
AM-SB-9-1.0-3.0	SW6020	Strontium	139	mg/kg	J	MS<LCL, LabDupe>UCL
AM-SB-9-1.0-3.0	SW6020	Vanadium	161	mg/kg	J	MS<LCL
AM-SB-9-1.0-3.0	SW6020	Zinc	112	mg/kg	J	MS<LCL
AM-SB-9-1.0-3.0	SW6020	Arsenic	0.996	mg/kg	J	MS<LCL
AM-SB-9-1.0-3.0	SW6020	Chromium	88.2	mg/kg	J	MS<LCL, LabDupe>UCL
AM-SB-9-1.0-3.0	SW6020	Lead	6.82	mg/kg	J	LabDupe>UCL
AM-SB-9-1.0-3.0	SW8260B	Dichlorodifluoromethane	4.34	µg/kg	UJ	CCV<LCL
AM-W-1	SW6020	Silver	0.001	mg/L	UJ	MS<LCL, PDS<LCL
AM-W-1	SW8260B	Dichlorodifluoromethane	0.5	µG/L	UJ	CCV<LCL
AM-W-1	SW8270C	1-Methylnaphthalene	0.098	µG/L	UJ	Sur<LCL
AM-W-1	SW8270C	2-Methylnaphthalene	0.098	µG/L	UJ	Sur<LCL
AM-W-1	SW8270C	Acenaphthene	0.098	µG/L	UJ	Sur<LCL
AM-W-1	SW8270C	Acenaphthylene	0.098	µG/L	UJ	Sur<LCL
AM-W-1	SW8270C	Anthracene	0.098	µG/L	UJ	Sur<LCL
AM-W-1	SW8270C	Benzo (a) anthracene	0.0098	µG/L	UJ	Sur<LCL
AM-W-1	SW8270C	Benzo (a) pyrene	0.0098	µG/L	UJ	Sur<LCL
AM-W-1	SW8270C	Benzo (b) fluoranthene	0.0098	µG/L	UJ	Sur<LCL
AM-W-1	SW8270C	Benzo (ghi) perylene	0.098	µG/L	UJ	Sur<LCL
AM-W-1	SW8270C	Benzo (k) fluoranthene	0.0098	µG/L	UJ	Sur<LCL
AM-W-1	SW8270C	Chrysene	0.0098	µG/L	UJ	Sur<LCL
AM-W-1	SW8270C	Dibenz (a,h) anthracene	0.0098	µG/L	UJ	Sur<LCL
AM-W-1	SW8270C	Fluoranthene	0.098	µG/L	UJ	Sur<LCL
AM-W-1	SW8270C	Fluorene	0.098	µG/L	UJ	Sur<LCL
AM-W-1	SW8270C	Indeno (1,2,3-cd) pyrene	0.0098	µG/L	UJ	Sur<LCL
AM-W-1	SW8270C	Naphthalene	0.098	µG/L	UJ	Sur<LCL
AM-W-1	SW8270C	Phenanthrene	0.098	µG/L	UJ	Sur<LCL
AM-W-1	SW8270C	Pyrene	0.098	µG/L	UJ	Sur<LCL
AM-W-11	SW8260B	Dichlorodifluoromethane	0.5	µG/L	UJ	CCV<LCL
AM-W-12	SW8260B	Dichlorodifluoromethane	0.5	µG/L	UJ	CCV<LCL

TABLE C-2
 Validation Findings

Sample ID	Method	Analyte	Final Result	Units ¹	Final Flag ²	Validation Reason ³
AM-W-12	SW8260B	Hexachlorobutadiene	2.5	µG/L	UJ	CCV<LCL
AM-W-5	SW8260B	Dichlorodifluoromethane	0.5	µG/L	UJ	CCV<LCL
AM-W-6	SW8260B	Dichlorodifluoromethane	0.5	µG/L	UJ	CCV<LCL
AM-W-9	SW8260B	Dichlorodifluoromethane	0.5	µG/L	UJ	CCV<LCL

¹ pg/g = picograms per gram
 mg/L = milligrams per Liter
 mg/kg = milligrams per kilogram
 µg/kg micrograms per kilogram
 µG/L = micrograms per liter

² J = Analyte was present, but reported value may not be accurate or precise
 R = The result was rejected
 U = Analyte was analyzed for but not detected at the specified detection limit
 UJ = Analyte was not detected above the detection limit objective. However, the reported detection limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

³ CCV<LCL = Continuing calibration verification recovery less than the lower control limit
 Diss>Total = Dissolved result greater than total result
 FD>RPD = Field duplicate relative percent difference greater than control limit
 Interference = Spectral interference during analysis
 IS<LCL = Internal standard recovery less than the lower control limit
 ISOUT = Internal standard recovery outside of control limits
 LabDupe>RPD = Laboratory duplicate relative percent difference exceeded criteria
 MS<LCL = Matrix spike recovery less than lower control limit
 MSD<LCL = Matrix spike duplicate recovery less than lower control limit
 PDS<LCL = Post-digestion spike recovery less than the lower control limit
 PDS>UCL = Post-digestion spike recovery greater than the upper control limit
 Sur<LCL = Surrogate recovery less than the lower control limit
 Sur>UCL = Surrogate recovery greater than upper control limit

ATTACHMENT B

**Sediment Characterization Report: Anderson &
Middleton and Aberdeen Log Yard Properties**

Pontoon Construction Project Draft Environmental Impact Statement

Reconnaissance-Level Sediment Characterization Report Technical Memorandum

Prepared for
Washington State Department of Transportation

Lead Author
CH2M HILL

Consultant Team
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September 2009



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Appendices

- A Mud Mole™ Boring Logs
- B Sediment Collection Data Logs, Field Notes, and Sample Photographs
- C Data Quality Evaluation Report
- D Chain-of-Custody Records

Acronyms and Abbreviations

BTEX	benzene, toluene, ethylbenzene, and xylene
CAS	Columbia Analytical Services
COC	chain of custody
DDT	dichlorodiphenyltrichloroethane
DMMP	Dredge Material Management Program
DQE	data quality evaluation
Ecology	Washington State Department of Ecology
EIM	Environmental Information Management
EPA	U.S. Environmental Protection Agency
ESA	Environmental Site Assessment
IDD#1	Industrial Development District parcel #1
IDW	investigation-derived waste
µg/L	microgram per liter
µg/kg	microgram per kilogram
mg/kg	milligram per kilogram
MLLW	mean lower low water
MPSI	modified preliminary site investigation
MS/MSD	matrix spike/matrix spike duplicate
NAD83	North American Datum
ng/kg	nanogram per kilogram
NPDES	National Pollutant Discharge Elimination System
PAH	polycyclic aromatic hydrocarbons
PCB	polychlorinated biphenyl
QA/QC	quality assurance/quality control
RPD	relative percent difference
SAP	Sampling and Analysis Plan
TEQ	toxicity equivalent
2,3,6,8-TCDD	2,3,7,8-tetrachlorodibenzo-p-dioxin
TOC	total organic carbon
TVS	total volatile solids
WSDOT	Washington Department of Transportation
WTTP	wastewater treatment plant

1. Introduction

Purpose and Organization

On behalf of the Washington State Department of Transportation (WSDOT), CH2M HILL has prepared this Reconnaissance-Level Sediment Characterization Report for the Anderson & Middleton property located at 815 8th Street in Hoquiam, Washington, and the Aberdeen Log Yard property located at 400 East Terminal Way in Aberdeen, Washington. The objective of this report is to provide reconnaissance-level sediment characterization to support the alternative site selection for the SR 520 Pontoon Construction Project. The sediment characterization was not conducted at the same level of detail or sampling intensity as would have been done for a full dredge material evaluation sampling effort, which is required for Dredge Material Management Program (DMMP) approval. The sediment analysts used professional judgment to characterize aquatic areas to be occupied by the launch channel in each alternative site, based on a minimum threshold needed, to establish a relative ranking of the two alternative sites.

Section 1 includes site background information and a brief summary of existing sediment information. Section 2 describes the sampling procedures used in the reconnaissance-level sediment characterization of the two alternative sites performed in February 2009. It also describes deviations from the sampling and analysis plan. Section 3 includes a discussion on sample handling and custody, chemical analyses, quality assurance/quality control (QA/QC) requirements, laboratory corrective actions, and effects of QA/QC issues on the testing results. Section 4 presents the sediment analysis results and conclusions of the dredge material characterization. Section 5 shows the references included in this report. Appendix A includes the Mud MoleTM Boring Logs; Appendix B includes field data logs, field notes, and sample photographs; Appendix C contains the data quality evaluation report; and Appendix D contains the chain-of-custody (COC) records.

Site Description and Background

WSDOT plans to construct a number of pontoons for the proposed SR 520 floating bridge that crosses Lake Washington from Seattle to Bellevue. WSDOT is evaluating industrial sites within Grays Harbor where these pontoons can be constructed.

To assist in identifying potential pontoon construction sites, physical and chemical settings of the sediment at the alternative sites (Anderson & Middleton and Aberdeen Log Yard) must be characterized. The information obtained as part of this sediment characterization effort will be used to support the National Environmental Policy Act/State Environmental Policy Act Draft Environmental Impact Statement for the SR 520 Pontoon Construction Project.

Both alternatives would involve excavating the launch channel where dredging of sediment in the offshore areas would be required. The launch channel would have a depth of -21 feet mean lower low water (MLLW). Dredging would remove approximately 20,000 cubic yards

and 76,500 cubic yards of sediment from the Anderson & Middleton and the Aberdeen Log Yard sites, respectively. The pontoon design is still under way and these dredge volume estimates are preliminary and subject to change.

This section provides a summary of findings from a brief literature search for each site. This summary includes site land use history, potential sources of contamination to sediment in the proposed launch channel, and existing sediment data from within and around both sites.

Land Use History

Anderson & Middleton Property. The Anderson & Middleton property lies directly west of the Port of Grays Harbor Industrial Development District #1 (IDD#1) site on the north shore of Grays Harbor in Hoquiam (Figure 1). The property, located at 815 Eighth Street in Hoquiam, is owned by the Anderson & Middleton Company. Along most of its eastern boundary, the Anderson & Middleton site is separated from the IDD#1 site by a former mill pond tidal inlet. Industrial Way runs along the northern boundary of the site, and the western boundary of the site is wooded property owned by the Port of Grays Harbor and paved property owned by the Anderson & Middleton Company. A rock berm borders the shoreline of this site. The offshore footprint of the proposed launch channel excavation measured at the bottom of the channel is approximately 28,800 square feet.

The Anderson & Middleton property was first developed in 1901 for the Grays Harbor Lumber Company. The site was used as a lumber mill for approximately 60 years, except for a period of 4 years between 1930 and 1934 when it was shut down. The Anderson & Middleton Company acquired the site in November 1962, and in the mid-1960s hydraulic filling took place under what is now the asphalt pad in the center of the site. Over the hydraulic fill, crushed rock was placed throughout the site to raise the final grade and provide a sufficient surface for paved and gravel roadways throughout the site. After the Anderson & Middleton Company acquired the site, the sawmill was shut down and the site has been used primarily to process and sort logs.

The site is currently vacant except for an existing office building on the northern edge of the property, dirt roads that run around and through the site, and a paved area in the middle of the site where the parking area for lumber operations was located.

Additional information about the historical uses of this site can be found in the Modified Phase I Environmental Site Assessment, Anderson & Middleton Property (WSDOT 2006).

Aberdeen Log Yard Property. The Aberdeen Log Yard property lies on the north shore of the Chehalis River in Aberdeen less than a 1/2 mile upstream from its confluence with Grays Harbor (Figure 1). The property address is 400 East Terminal Way, Aberdeen, Washington. The offshore footprint of the proposed launch channel excavation measured at the bottom of the channel is approximately 76,500 square feet. Immediately west of the site is the paved Port of Grays Harbor property, while the City of Aberdeen wastewater treatment plant (WWTP) borders the eastern side of the site.

Historically, the site has been used for sawmills since the 1900s. The historic sawmill that was located south of West Heron Street between the early 1900s and the mid-1900s contained features such as a refuse burner, a boiler, and fuel storage areas. Since 1971, the site has been used mostly for log storage, and it is currently used for that activity by the Weyerhaeuser Corporation. All former sawmill-related structures have been demolished.

Historic U.S. Geological Survey maps indicate that before the first sawmill was built on the site in the early 1900s, the Chehalis River shoreline was north of the present-day shoreline. Between 1973 and 1983, the shoreline was extended southward by backfilling with sediments dredged from the Chehalis River and accumulated wood waste and other fill material.

Additional information about the historical uses of this site can be found in the Hazardous Material Alternative Site Screening Technical Memorandum, Aberdeen Log Yard (CH2M HILL 2009).

Potential Sources of Sediment Contamination

Potential sources of contamination are related to the National Pollutant Discharge Elimination System (NPDES) discharges and urban stormwater runoff. The sediment analysts identified historical and active individual waste dischargers permitted under the NPDES program through a search of Ecology's NPDES program database (listed in Table 1 and shown on Figure 2).

Four NPDES permit holders were identified near the Aberdeen Log Yard site. The following information comes from their respective NPDES permit fact sheets:

- Aberdeen Log Yard could be a historical source of wood waste from the sawmills and log yard areas and petroleum contamination from maintenance activities.
- The City of Aberdeen WWTP could be a source of various pollutants. As documented in the NPDES permit fact sheet, this facility had multiple violations of biochemical oxygen demand, total suspended solids, residual chlorine, and bacteria limits. Acute whole effluent toxicity testing standards were exceeded possibly because of elevated ammonia levels. In addition, thousands of gallons of solids with minimal treatment were washed out of the system and discharged to Grays Harbor in December 2005. These solids might have contained elevated levels of pollutants such as metals and nutrient.
- The Aberdeen Sanitary Landfill could be a historical source of leachate potentially containing various toxic substances subsequently discharged into Grays Harbor. Improvements have been made over the years, and leachate from the landfill currently discharges to the City of Aberdeen WWTP.

The Weyerhaeuser Cosmopolis facility is a part of a larger sorting yard. Some of the industrial processes may include repairs, servicing, and washing of heavy equipment and trucks used in the log yard. The historical discharge data indicated elevated dioxin concentrations. In addition, this facility had multiple recent violations of oil and grease and

total suspended solids permit limits, and therefore, may be a potential source of contamination.

The only NPDES permit holder located near the Anderson & Middleton site was the Anderson & Middleton site owner. This site had two discharge outfalls that are currently inactive. Historical sources of contamination could include wood waste from the log storage areas and petroleum products from the tank full storage area, maintenance building, and equipment building.

As a result of tidal influence in the Grays Harbor area, contamination from downstream sources in the vicinity could also affect site sediment quality. Potential point sources from the immediate downstream area include wood waste from log sort yards and storage areas. Discharge data from ITT Rayonier showed detected dioxin concentrations in excess of the water quality standard; therefore, this could be a source of dioxin contamination. Limited contamination is expected to be associated with the City of Hoquiam WWTP, because no violations of the permit discharge requirements have been reported for this facility.

Two active NPDES dischargers are located between the Anderson & Middleton and Aberdeen Log Yard sites and could affect sediment quality in both sites. The Port of Grays Harbor Equipment Maintenance Facility maintains log loaders and other equipment for the port and its tenants. Limited discharge monitoring reports were submitted for this facility, and the available discharge concentrations were below the associated permit limitations. Therefore, limited contamination is expected from this facility. The Port of Grays Harbor Biodiesel Production Facility discharges its wastewater to the City of Aberdeen WWTP. Therefore, no additional contamination from point source discharge is expected from this facility other than those included in the City of Aberdeen WWTP discharge.

In addition to individual NPDES permit holders, several urban storm drains and stormwater outfalls are located near the two potential sites. Typical storm runoff in the area could include potential pollutants such as metals in vehicle exhaust, paint, rust, metal plating, and tires; spilled or leaked oil and petroleum products; lawn pesticides and fertilizers; animal waste and organic matter; and cleaners.

Two stormwater outfalls were located in or are near the Aberdeen Log Yard site; one of these was located near the mouth of the Hoquiam River. In 1988, Ecology inventoried potential urban storm drains in the inner Grays Harbor area (shown on Figure 2). Although that study indicated that the water quality observed in these stormwater outfalls was within the expected range for typical urban storm drains, the study further concluded that some of the wastewater connections might have been improper.

The 1988 inventory indicated that there were no stormwater outfalls in or near the Anderson & Middleton site; however, because of the proximity of the dredge area for the Anderson & Middleton site to the Hoquiam River, these areas could be affected by the outfalls located upstream along the Hoquiam River. Specifically, the 1988 inventory indicated that there could be residential grey water discharge to the Hoquiam River. Grey water could include

various contaminants such as pathogens, cleaning products, oil and grease, and nutrients. The northern boundary of the Anderson & Middleton site is bordered by a railroad, which could be a potential source for petroleum contamination and wood preservatives.

Boat yards and shipping in the vicinity of these two sites could be a potential source of tributyltins and petroleum products from boat coating and accidental spills, respectively. Available bathymetric surveys suggest that the Anderson & Middleton site might be in a scouring environment, while the Aberdeen Log Yard site might be in a depositional zone (David Michalsen, coastal engineer, USACE personal communication, January 9, 2009, personal communication). Additional studies, such as hydrodynamic modeling, would be required to verify this. The potential for redeposition of contaminated sediment from upstream sources, if present, would increase in a depositional environment.

Existing Sediment Data

Sediment data have been collected for various sites in Grays Harbor. The DMMP Users' Manual (Dredged Material Management Office 2008) assigned a low dredged material ranking for the Hoquiam and Aberdeen reaches of Grays Harbor. Low rank is defined as few or no sources of chemicals of concern, where data were available to verify low chemical concentrations (below DMMP screening levels) and no significant response in biological tests was observed. This was based on results from the chemical and biological literature inventory for Grays Harbor and Willapa Bay (U.S. Army Corps of Engineers 1991). The sediment analysts collected recent sediment data back to 1991 and used the available sediment data from Ecology's Environmental Information Management (EIM) database to evaluate the potential sediment quality for the proposed sites.

The analysts identified no biological data in the brief literature search, and limited sediment data were available for the area near the proposed sites. Four recent (within the past 15 years) sediment sample locations were identified for the Anderson & Middleton site, and three were identified for the Aberdeen Log Yard site (see Figures 3 and 4). Table 2 summarizes the sediment data available from the EIM database (Ecology 2008), and the modified preliminary site investigation (MPSI) for the Anderson & Middleton Site (Landau Associates 2007) is summarized in the following paragraphs.

Sample depth information was not available for a few sample locations identified in the EIM database. For all other EIM sample locations with sample depth information, the sediment data were collected from the top 1 foot. For the two sample locations included in the MPSI, one surface (mudline) and one subsurface (within the top 6.5 feet) sample were collected at each sample location.

Sediment from the MPSI sample locations (B-18 and B-19) was analyzed for metals; benzene, toluene, ethylbenzene, and xylene (BTEX); polychlorinated biphenyls (PCBs); pesticides; semivolatile organic compounds; and dioxins and furans. Of these, metals, polycyclic aromatic hydrocarbons (PAHs), diesel- and lube oil-range petroleum hydrocarbons, and dioxin and furans were detected in three of the four sediment samples. The

detected levels were below the DMMP Users' Manual (DMMO 2008) screening levels, where available. The DMMP Users' Manual has no sediment screening levels for dioxins and furans, but individual congeners were detected in one or more sediment samples. The toxicity equivalent (TEQ) values were below the DMMP trigger level for the requirement to perform bioaccumulation testing for the dispersive sites in Grays Harbor (5 nanograms per kilogram [ng/kg] 2,3,7,8-tetrachlorodibenzo-p-dioxin [2,3,7,8-TCDD] concentration or 15 ng/kg TEQ).

Sediment samples identified in the EIM database show that PAHs were detected at both sites. Various trace metals and retene were also detected in both sites. Tetrabutyltin was detected at the Aberdeen Log Yard site and aldrin was detected at the Anderson & Middleton site. Sediment data from the Anderson & Middleton site indicated that none of the individual analytes exceeded the screening levels, where available. Concentrations of a number of analytes in one of the samples collected from the Aberdeen Log Yard site exceeded the screening levels: various heavy PAHs exceeded by approximately twofold, chromium exceeded by approximately fivefold, and nickel exceeded by approximately threefold.

Regarding physical characteristics and particle size, the analysts identified no information on the native contact area in the brief literature search. Existing particle size data indicated that the sediment from both areas appears to consist of silty-sand to sandy-silt material. The Anderson & Middleton site appears to be relatively more silty (more than 50 percent silt).

2. Methods

As discussed in Section 1, existing sediment data were not available for the proposed launch channels. The sediment analysts prepared a sampling and analysis plan (SAP) to support the reconnaissance sediment sampling (CH2M HILL 2009) and to provide physical and chemical data to evaluate the proposed dredging project. Seven sediment cores were collected on February 24 and 25, 2009, from the Anderson & Middleton and Aberdeen Log Yard sites with the use of proprietary Mud Mole™ pneumatic coring technology. The analysts collected samples from the surface, subsurface, leave, and below-leave layers at various sample core locations as specified by the SAP. They processed the samples in a nearby onshore processing area. The SAP included COC procedures, with consistent use of Columbia Analytical Services (CAS) COC forms throughout the project. Collected samples were stored in iced coolers or kept in a secured refrigerated unit at 4°C. Field staff delivered the samples with their associated COC documents to CAS labs in Kelso, Washington.

The analysts used the SAP methods and materials to locate, collect, handle, and deliver sediment samples collected at the Anderson & Middleton and Aberdeen Log Yard sites. This section summarizes any deviations from the SAP.

Sample Locations and Depths

Limited bathymetry data were available for the proposed sites, and actual sampling locations were slightly different from the proposed locations because of site conditions such as differences in the actual versus proposed bathymetry encountered at the location in the field, tidal limitation, obstacles, and windy sample conditions. Actual sample location coordinates were recorded in the North American Datum of 1983 (NAD83) and shown in the Mud Mole™ Boring Logs (Appendix A). These boring logs also include details of corrective actions and deviations such as removal of rock layer by the divers, and distance of actual sample location from the proposed sample location. The Mud Mole™ boring logs also show the estimated percent recovery matched to the associated penetration intervals. Figures 5 and 6 show the actual core locations for the Anderson & Middleton and Aberdeen Log Yard sites, respectively.

Sampling depths and composite intervals were changed for three samples because of tidal limitation. Details of the sampling depths and composite intervals are included in the field data logs and notes (Appendix B). Specifically, sampling depths and composite intervals were changed for three samples in comparison to the SAP. These samples are AM-1-S (changed from +3 to -1 ft MLLW to 0 to -4 ft MLLW); AM-1B-4-8 (changed from -1 to -5 MLLW to -4 to -8 MLLW); and ALY-1-S (changed from +7 to +3 MLLW to +6 to +2 MLLW).

Sediment samples collected from the actual sampled locations and depths are considered representative of site conditions, and these deviations from the SAP are not expected to affect the overall objective of the sampling scheme.

Sample Refusal

There were no sample refusals, with the exception of one core located at ALY-1. The core tube was bent during the first attempt because of quarry rocks. The field crew sent the divers down in advance of the second attempt to remove the rock layer. The crew then reloaded the Mud Mole™ and successfully collected a sediment core during the second attempt.

Investigation-Derived Waste

Investigation-derived waste (IDW) generated during the fieldwork was placed in labeled 30-gallon drums instead of the 55-gallon drums specified in the SAP because they were determined to be easier to transport. Onshore areas at each site were not available for drum storage as specified in the SAP; therefore, IDW-filled drums were transported offsite to the City of Hoquiam maintenance yard for temporary secured storage.

3. Quality Assurance/Quality Control

QA/QC requirements are specified in the SAP, with specific procedures provided in the analytical protocols for each group of chemicals. QA/QC procedures for chemical analyses followed those specified in the SAP. The analyst producing the analytical data and an experienced data reviewer verified and reviewed the data at the CAS laboratory before the data were released to CH2M HILL. The data packages submitted by CAS were determined to be sufficient for the QA review. This section summarizes findings from the data quality evaluation (DQE) conducted by CH2M HILL and any QA/QC deviations from the SAP.

Data Review

In addition to the laboratory QC procedures conducted by CAS, CH2M HILL reviewed and validated the collected data based on the following guidelines: individual method requirements, guidelines from the United States Environmental Protection Agency (EPA) Contract Laboratory National Functional Guidelines for Organic Data Review (U.S. EPA 1999), the EPA Contract Laboratory National Functional Guidelines for Inorganic Data Review (U.S. EPA 2002), and the Dredged Material Evaluation and Disposal Procedures (User's Manual) (DMMO 2008). Details of the data quality are included in the DQE (Appendix C). The following is a brief summary of the data issues and the potential effects to the overall project objective.

Data Validation and Corrective Actions

A total of 25 normal samples, two field duplicates, and one matrix spike/matrix spike duplicate (MS/MSD) sample were included in the DQE. Three below-leave layer samples were collected and archived as specified in the SAP. These archived samples were not analyzed because the leave layer samples had no exceedances. Because of insufficient sample volume, only two field duplicate samples were analyzed instead of three as specified in the SAP. Similarly, because of the limited sample available, MS/MSD samples were only analyzed for the following analytes: volatile organic compounds, dioxin/furans, and conventionals.

Each sample was documented in a completed COC form and received at the laboratory in good condition. Appendix D includes the COC forms for this sampling event. All holding-time and initial and continuing calibration criteria were met.

No significant laboratory deviations from specified protocols were observed. In the cases where deviations were observed, the data were considered sufficient and acceptable for decision-making and no effects on the conclusions presented in this report are expected. The following is a summary of the deviations noted, including discussion of the implications for data usability:

- Total heptachlorodibenzofuran, octachlorodibenzofuran, and total xylenes were detected below the reporting limit in the method blanks. The associated results were detected less than five times the blank concentration and therefore were qualified as not detected and flagged “U.” No samples exceeded the limits for total xylenes, and the TEQs were calculated based on half of the detection limits. Therefore, the detected concentrations in the method blanks are not expected to affect the conclusions presented in this report.
- The relative percent difference (RPD) of sulfide in one field duplicate set, 8 analytes for Method SW8270C, and 15 analytes for Method E1613B were above criteria in the field duplicate sample(s), indicating the normal and duplicate samples may not be homogenous. No screening levels were available for sulfide and none of the Method SW8270C samples exceeded the screening levels for these analytes. In the case of A&M, concentrations of the 15 analytes for Method E1613B in both the normal and field duplicate samples were below the screening level; therefore, they are not expected to affect the conclusions presented in this report. In the case of ALY, concentration of the 15 analytes for Method E1613B was generally higher in the normal sample than the paired duplicate sample, and the normal sample concentration was used to derive the conclusion in this report.
- The laboratory duplicate RPDs of two analytes were above criteria in two samples for the geophysical analysis. No screening levels were available for these analytes, and therefore they are not expected to affect the conclusions presented in this report.
- Surrogate recovery was below the criterion in one sample, ALY-3-B-4-8 for Method E1613B. TEQ calculated using five times the estimated concentration for each congener with a surrogate recovery below the criterion was less than the bioaccumulation testing trigger of 15 ng/Kg; therefore, the potential low biased is not expected to affect the conclusions presented in this report.
- The recovery of guaiacol (2-methoxyphenol) was zero percent on the laboratory control sample/laboratory control sample duplicate for Method SW8270C. Because no screening levels currently exist for this analyte and other guiacols and chlorinated guiacols were not detected in any samples, there is no reason to believe that guaiacol (2-methoxyphenol) may be a potential contaminant of concern at the alternative sites. Therefore, this is not expected to affect the conclusions presented in this report.
- The recovery of antimony was below the criterion in the matrix spikes of two samples for method SW6010B. Antimony was not detected in any samples and the method detection limits were below the associated screening level; therefore, the low recovery of antimony is not expected to affect the conclusions presented in this report.
- The recovery of sulfide was below criteria in the matrix spike; therefore, the associated parent sample result could be biased low.

- The internal standards were recovered below criteria in 19 samples for Method E1653M; therefore, the reported concentrations could be biased low.
- The confirmation RPD of 2,3,7,8-TCDF was above the criterion; therefore, the reported concentrations could be biased high.
- The confirmation RPDs of six analytes were above criteria in one or more of eight samples for Method SW8081. These analytes did not exceed the associated screening levels and, therefore, are not expected to affect the conclusions presented in this report.
- The confirmation RPD of Aroclor-1260 was above criteria in four samples for Method SW8082. Total PCB concentrations did not exceed the limits; therefore, this is not expected to affect the conclusions presented in this report.
- A total of 13 analytes in 16 samples were recorded as the estimated maximum potential concentration (EMPC) in which the analytes were detected but did not meet the identification ratio criteria for Method E1613B. The sample with 2,3,7,8-TCDD exceedance, ALY-4-S, was not recorded as an EMPC. EMPC values for other samples for this congener ranged from 0.5 to 2.2 ng/Kg. The combined relative contribution of congeners with EMPC values to the estimated TEQ (calculated using EMPC values and one half of the detection limits for non-detects) for ALY-4-S was 1.5%. Similarly, the combined relative contribution of congeners with EMPC values to the estimated TEQ for ALY-5-S was 1.4%. With the exception of ALY-5-Z, all TEQ estimates (calculated using five times the estimated concentration for each congener with a surrogate recovery below the criterion, five times the EMPC values, and one half of the detection limits for non-detects) were less than the bioaccumulation testing trigger of 15 ng/Kg. For ALY-5-Z, TEQ value calculated using 2.5 times the EMPC values was also less than the bioaccumulation testing trigger. Therefore, uncertainties associated with EMPC are not expected to affect the conclusions presented in this report.
- 2,4-dimethylphenol was mostly not detected, and the method detection limits were above the screening level. Other phenols were either not detected, or the concentrations were below the associated screening levels. In addition, the detected 2,4-dimethylphenol sample did not exceed the screening level; therefore, it is not expected to affect the conclusions presented in this report.
- A few method detection limits for hexachlorobenzene exceeded the associated screening level. However, this analyte was not detected in any of the other sediment samples; therefore, it is not expected to affect the conclusions presented in this report.

4. Results and Conclusions

Laboratory analysis of the sediment samples included physical and chemical testing as specified in the SAP (CH2M HILL 2009). The data evaluation yielded a number of key findings and conclusions, which are presented in this section.

Sediment Data Results

The sections below summarize the results of the particle size analysis and physical characterization, and the results of the chemical characterization.

Concentrational Parameters, Particle Size Analysis, and Physical Properties

Anderson & Middleton. Field observations of sample cores indicated that the sediment was generally homogeneous, consisting of dark brown to black silt with trace fine sand and occasional wood debris. As shown in Table 4, silt ranged from 40% to 62% for the Anderson & Middleton samples. The analysts observed no apparent difference in the physical properties for surface, subsurface, and leave layer samples. Ammonia, sulfide, total organic carbon (TOC), total solids, and total volatile solids (TVS) concentrations ranged from 129 to 377 milligrams per kilogram (mg/kg), 568 to 1370 mg/kg, 2.5% to 3.7%, 49.4% to 56.9%, and 8.8% to 10%, respectively.

Aberdeen Log Yard. Field observations of sample cores indicated that the sediment was generally homogeneous, consisting of dark brown to black silt with trace fine sand and occasional wood debris. ALY-1-S consisted of less silt (23.1%) and greater percent gravel (37.3%) than the other samples from the Aberdeen Log Yard site. As shown in Table 5, silt ranged from 40% to 62% for the other Anderson & Middleton samples. No apparent difference in the physical properties for surface, subsurface, and leave layer samples was observed. Ammonia and sulfide concentrations were generally lower (6.8 mg/kg and 23.7 mg/kg, respectively) than concentrations detected in the other Aberdeen Log Yard samples (ranging from 185 to 471 mg/kg and 133 to 4,060 mg/kg, respectively). TOC, total solids, and TVS ranged from 2.2% to 4.7%, 47.7% to 57.6%, and 7.8% to 11.2%, respectively.

Chemical Characterization Data

With the exception of the archived below-leave layer samples, all samples were analyzed for the suite of analytes detailed in the SAP (CH2M HILL 2009). Tables 3 and 4 summarize all chemical data, except dioxin and furan, for Anderson & Middleton and Aberdeen Log Yard sites, Tables 5 and 6 summarize dioxin/furan data for Anderson & Middleton and Aberdeen Log Yard sites. Sediment concentrations were compared to both DMMP screening level and sediment management standards. For comparison with the sediment management standards, concentrations were carbon-normalized using the matched percent total organic carbon, as appropriate.

Anderson & Middleton. The routine suite of DMMP analytes were either not detected or detected at concentrations below the associated screening levels and sediment management standards. Dioxin and furans, guiacols, and chlorinated guiacols were considered special analytes for this characterization. These additional chemicals were added because of potential sources of contamination in the area. Dioxin and furans were detected in the Anderson & Middleton samples, but the detected concentrations were below the bioaccumulation triggers for Grays Harbor. Guiacols and chlorinated guiacols were not detected in any sample.

Aberdeen Log Yard. With the exception for total dichlorodiphenyltrichloroethane (DDT), no exceedance was observed for the routine suite of DMMP analytes evaluated. Total DDT was detected in all surface samples and 3 of the 12 subsurface samples analyzed (collected from ALY-2, ALY-4, and ALY-5). The detected concentration (9.5 micrograms per kilogram [$\mu\text{g}/\text{kg}$]) at the subsurface sample collected from 4 to 8 feet below the existing sediment surface from ALY-2 exceeded the screening level (6.9 $\mu\text{g}/\text{kg}$) by approximately 38 percent. The dioxin/furan result for 2,3,7,8-TCDD in the surface samples collected from ALY-4 (5.5 ng/kg) also slightly exceeded the bioaccumulation trigger for Grays Harbor (5 ng/kg). In addition, the TEQ values (assuming half the detection limit for non-detects, 18.5 ng/kg and 16.4 ng/kg) for two surface samples collected from ALY-4 and SLY-5, respectively, also slightly exceeded the bioaccumulation trigger of 15 ng/kg . Guiacols and chlorinated guiacols were not detected in any sample. Figure 7 is a schematic representation of the concentrations for DDT, 2,3,7,8-TCDD, and TCDD TEQ at the Aberdeen Log Yard site.

Conclusions

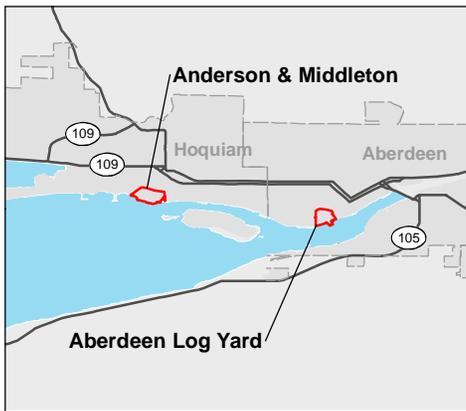
The proposed dredged material had no exceedances of the screening levels for the Anderson & Middleton site. Based on the reconnaissance sampling results, the dredged material from the Anderson & Middleton site appears to be suitable for unconfined open-water disposal at either the South Jetty or Point Chehalis dispersive site. Additional sampling may be required to meet the minimum number of samples required by the DMMO to fully characterize the proposed dredge area.

Both surface and subsurface sediment at the Aberdeen Log Yard site could be contaminated with DDT and dioxin/furan. Additional sampling would be necessary to confirm the magnitude and extent of contamination. Some material from dredge material management unit identified as uncontaminated would be suitable for open-water disposal, while contaminated materials may need to be removed and disposed of in upland confined disposal facilities. Based on the detected concentrations identified in this reconnaissance sampling, the level of contamination may be suitable for disposal in nonhazardous waste landfills.

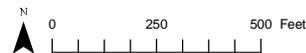
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Figures



- Crane Rail
- Proposed Rail Line
- Rock Berm
- Access Road
- Batch Plant
- Berm
- Casting Basin
- Dry Storage
- Gate
- Laydown Area
- Office/Parking
- Pontoon
- Rock Side Slope
- Water Treatment Area



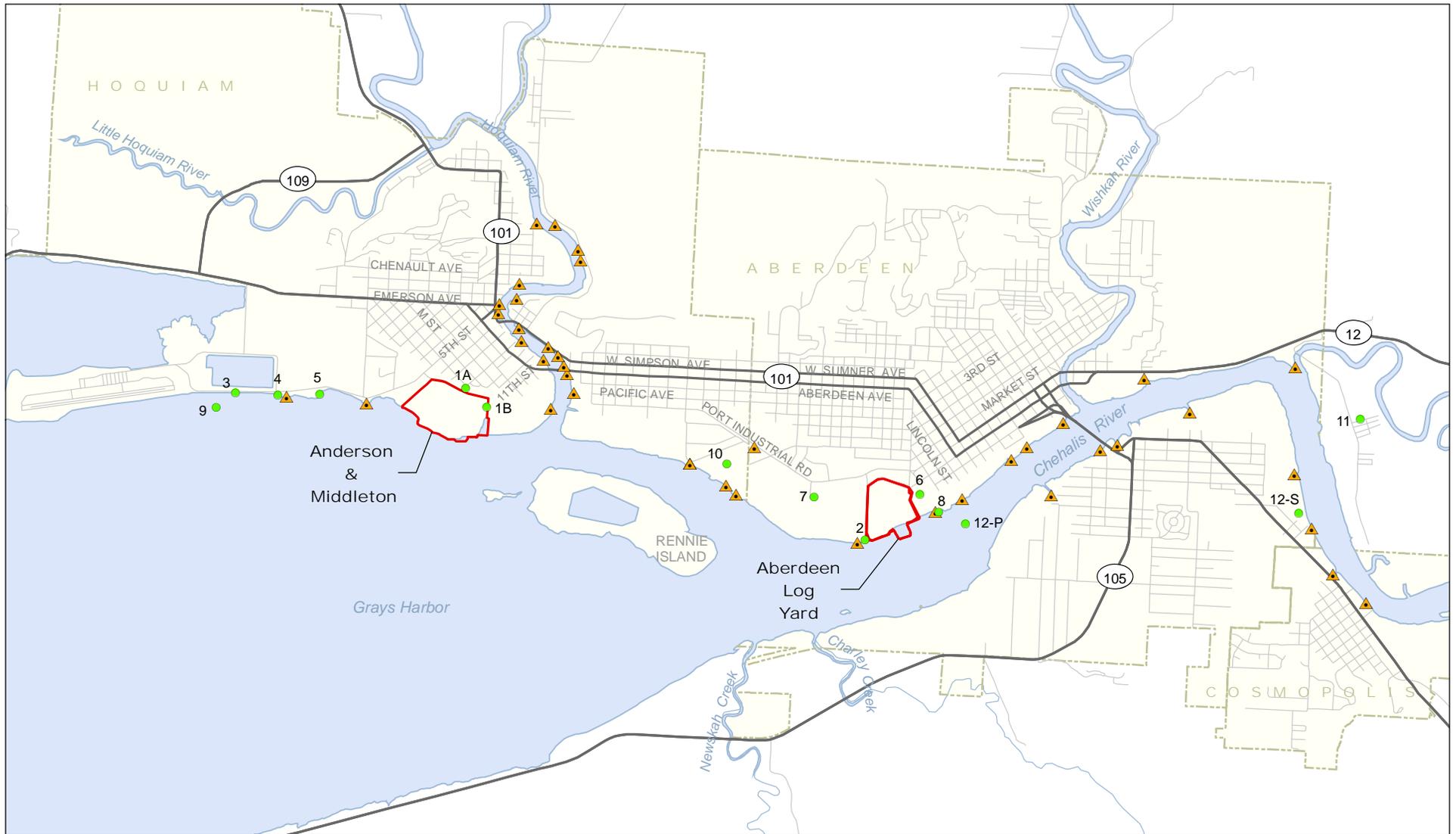
Source: WSDOT (2002, 2005) Aerial Photo, Grays Harbor County (2007) GIS Data (Water Bodies and Streets), WSDOT (2008) Design Data. Horizontal datum for all layers is State Plane Washington South NAD 83; vertical datum for layers is NAVD88.

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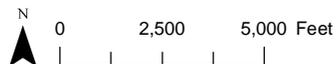
Figure 1. Proposed Alternative Sites

Pontoon Construction Project





- ▲ Stormwater Outfall Location
- NPDES Discharge Location
- Project Alternative Site
- City Limits

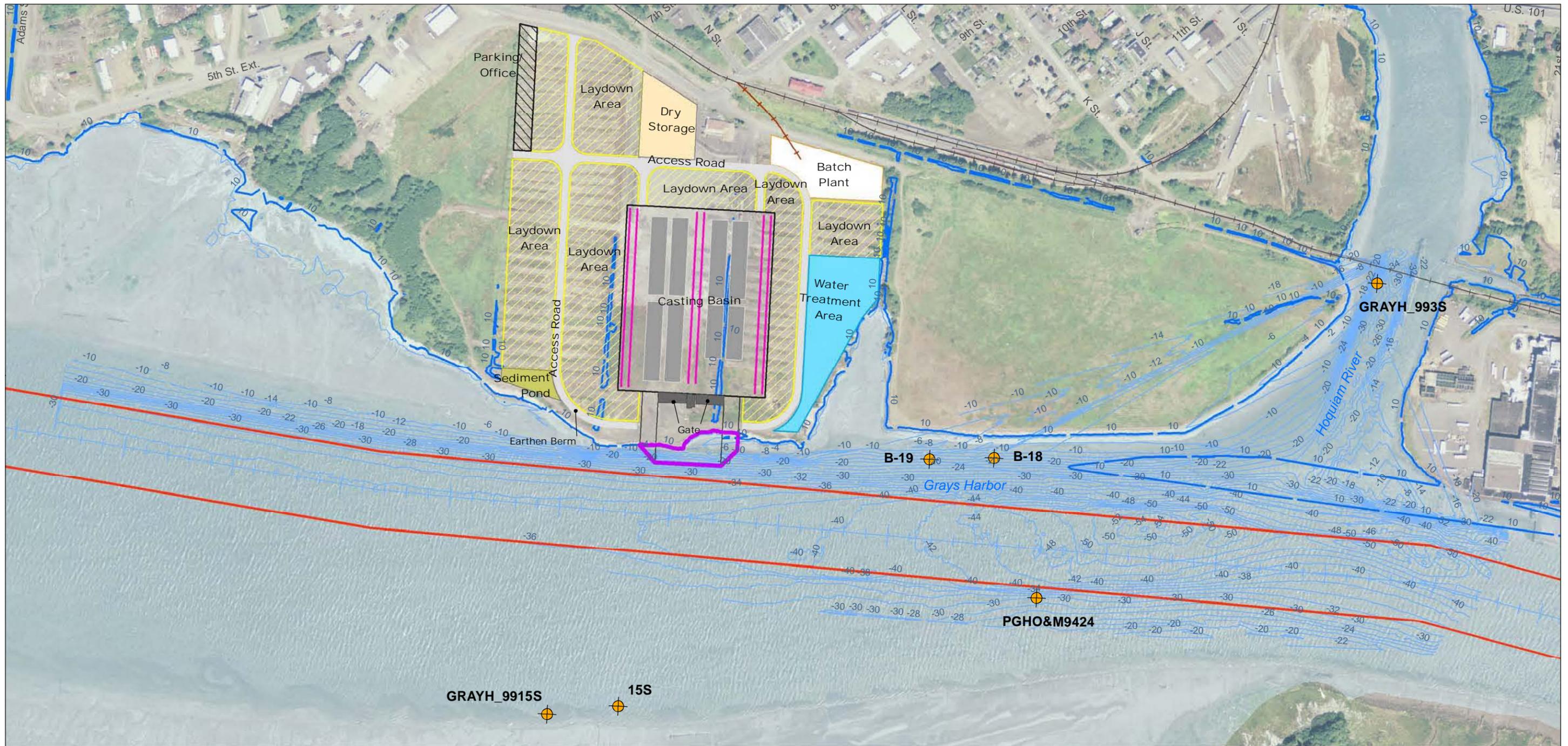


Source: Grays Harbor County (2007) GIS Data (Water Bodies and Streets). Horizontal datum for all layers is State Plane Washington South NAD 83, vertical datum for layers is NAVD88.

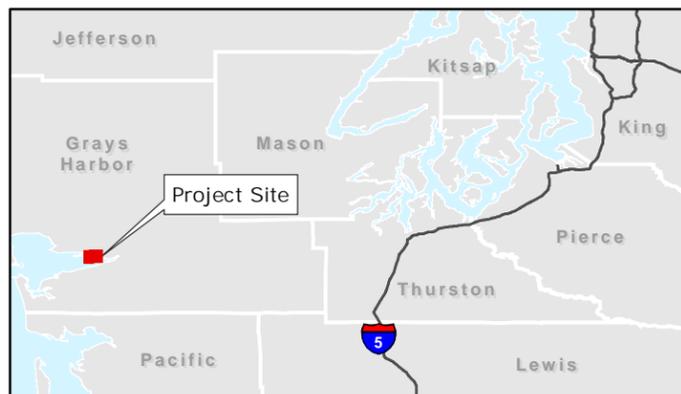
Figure 2. NPDES Discharge and Stormwater Outfall Locations at proposed Project Alternative Sites

SR 520 Pontoon Construction Project





Source: Grays Harbor County (2007) GIS Data (Water Bodies and Streets) and WSDOT (2006) GIS Data (Color Aerial). Horizontal datum for all layers is State Plane Washington South NAD 27; vertical datum for layers is NAVD88.



LEGEND

- | | | | |
|---------------|----------------------|--------------------------------------|--------------------------|
| Access Road | Laydown Area | Dredge Prism | Existing Sample Location |
| Batch Plant | Parking/Office | Crane Rail | |
| Berm | Pontoon | Proposed Railroad Spur | |
| Casting Basin | Rock Side Slope | Federal Navigation Channel | |
| Dry Storage | Sediment Pond | 2-ft Bathymetry | |
| Gate | Water Treatment Area | Mean Lower Low Water (10-ft contour) | |
| | Water Bodies | | |

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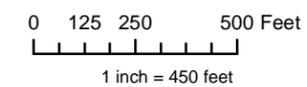
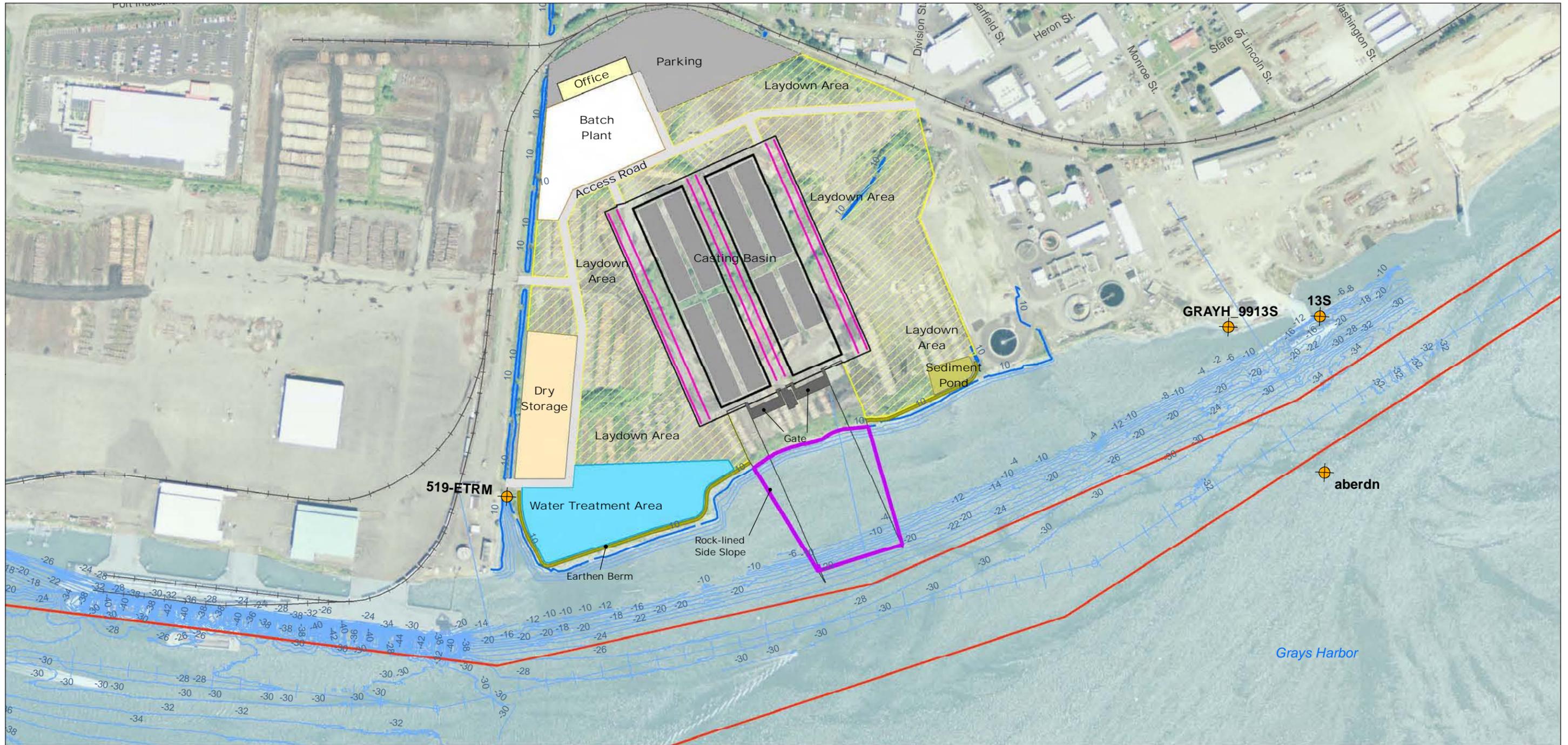


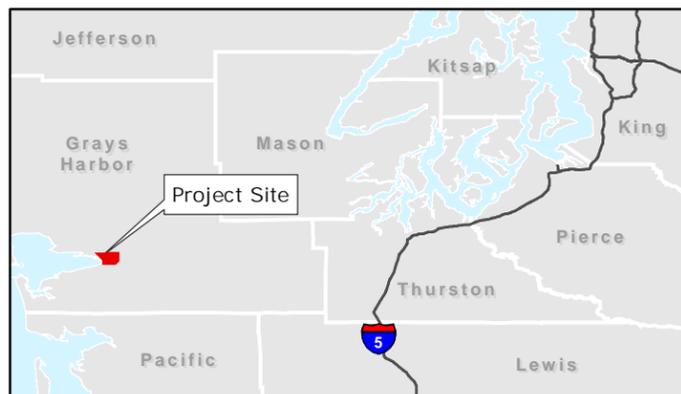
Figure 3. Existing Sediment Sample Locations for the Anderson & Middleton Site

Pontoon Construction Project





Source: Grays Harbor County (2007) GIS Data (Water Bodies and Streets) and WSDOT (2006) GIS Data (Color Aerial). Horizontal datum for all layers is State Plane Washington South NAD 27; vertical datum for layers is NAVD88.



LEGEND

- | | | |
|---------------|----------------------|--------------------------------------|
| Access Road | Office | Dredge Prism |
| Batch Plant | Parking | Crane Rail |
| Berm | Pontoon | Mean Lower Low Water (10-ft contour) |
| Casting Basin | Rock Side Slope | 2-ft Bathymetry |
| Dry Storage | Sediment Pond | Federal Navigation Channel |
| Gate | Water Treatment Area | Existing Sample Location |
| Laydown Area | Water Bodies | |

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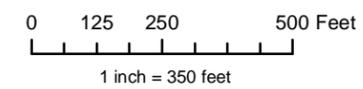
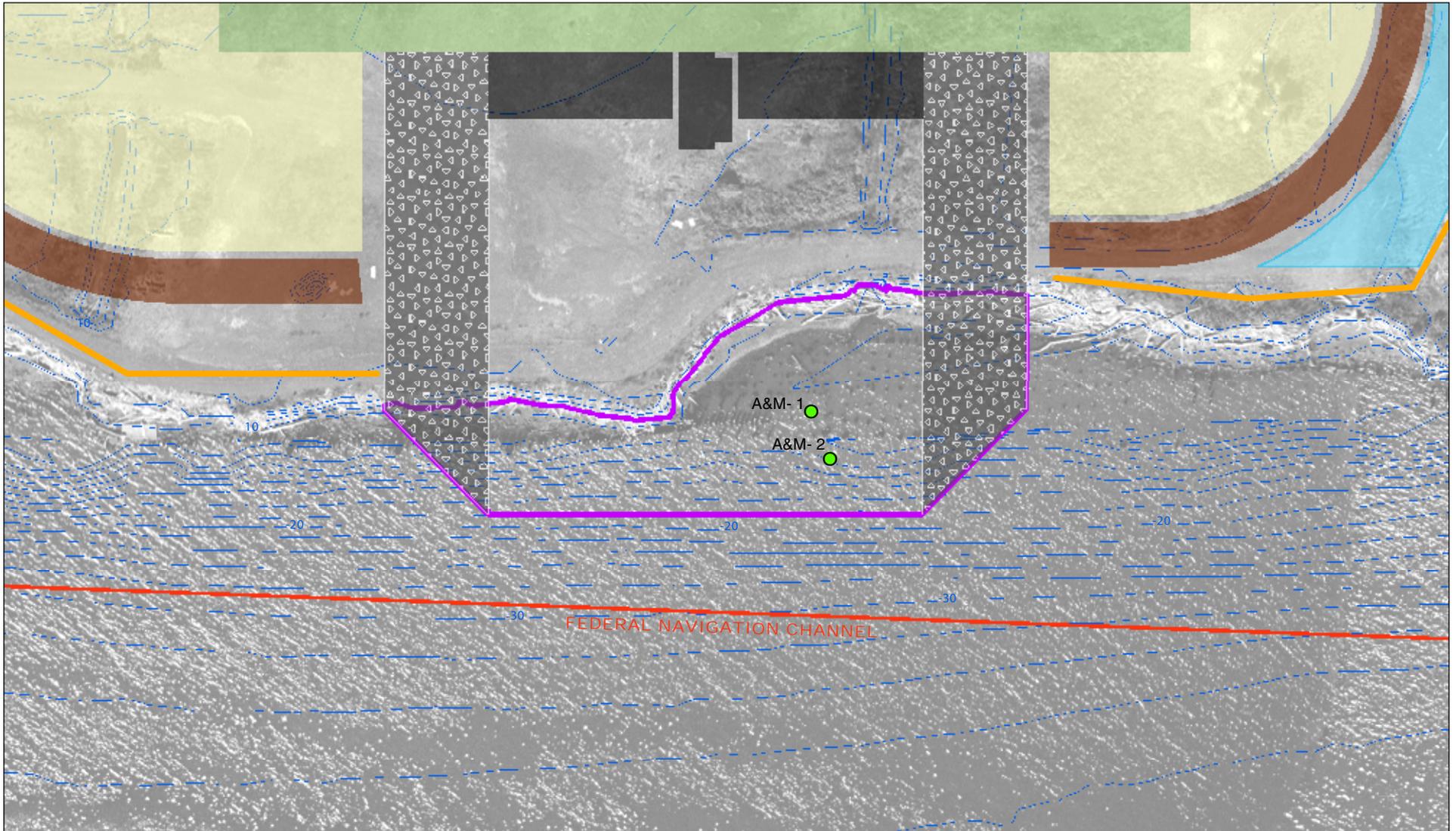


Figure 4. Existing Sediment Sample Locations for the Aberdeen Log Yard Site

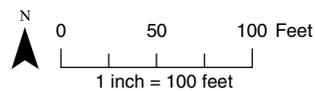
Pontoon Construction Project





- Sediment Boring Location
- Federal Navigation Channel
- - - Mean Lower Low Water (2-ft Contour)
- Rock Berm
- Proposed Dredge Prism
- Gate
- Access Road
- Casting Basin
- Laydown Area
- Rock Side Slope
- Water Treatment Area

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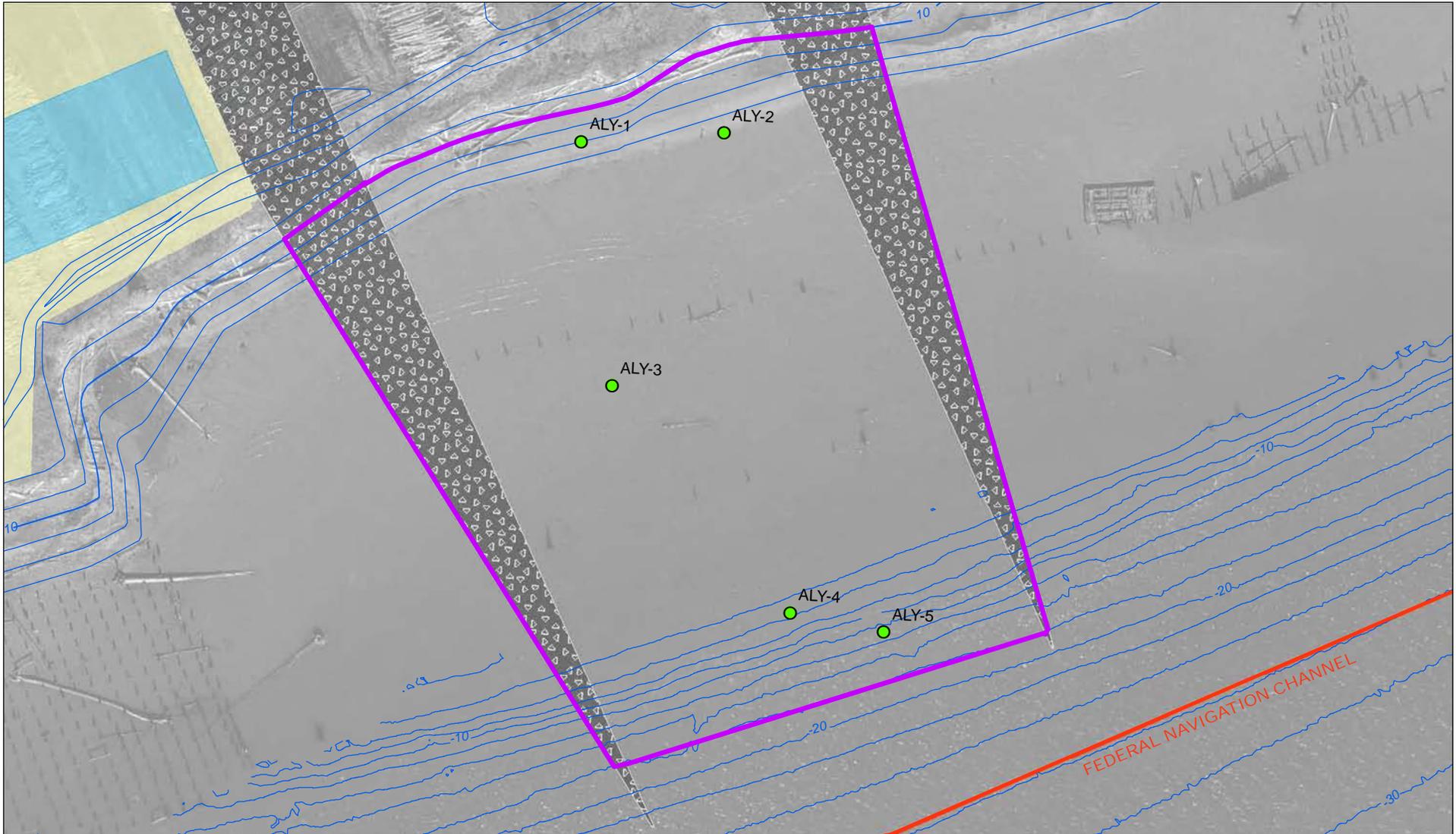


Source: Grays Harbor County (2007) GIS Data (Water Bodies and Streets). Horizontal datum for all layers is State Plane Washington South NAD 83; vertical datum for layers is NAVD88.

Figure 5. Sediment Reconnaissance Sampling Locations Anderson & Middleton Site

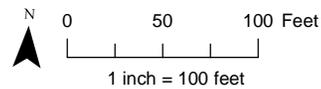
Pontoon Construction Project





- Sediment Boring Location
- Mean Lower Low Water (2-ft Contour)
- Federal Navigation Channel
- Proposed Dredge Prism
- Laydown Area
- Rock Side Slope
- Water Treatment Area

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Source: Grays Harbor County (2007) GIS Data (Water Bodies and Streets). Horizontal datum for all layers is State Plane Washington South NAD 83; vertical datum for layers is NAVD88.

Figure 6. Sediment Reconnaissance Sampling Locations Aberdeen Log Yard

Pontoon Construction Project



DMMP Screening Values

Total DDT = 6.9 ug/kg
 2,3,7,8-TCDD = 5 ng/kg
 TCDD TEQ = 15 ng/kg

MLLW	ALY-1	ALY-2	ALY-3	ALY-4	ALY-5
+10					
+9					
+8					
+7					
+6					
+5					
+4	Surface DDT=1.195				
+3		Surface DDT=2.01 2,3,7,8-TCDD=1.08J TCDD TEQ=5.6			
+2			Surface DDT=2.46		
+1					
0					
-1		Subsurface DDT=9.5	Subsurface DDT=1.35U		
-2					
-3			Subsurface DDT=1.35U		
-4					
-5		Subsurface DDT=1.38U 2,3,7,8-TCDD=0.813J TCDD TEQ=5.3	2,3,7,8-TCDD=1.02J TCDD TEQ=6.1	Surface DDT=2.26 2,3,7,8-TCDD=5.5J TCDD TEQ=18.5	
-6			Subsurface DDT=1.455U		
-7					
-8		Subsurface DDT=1.365U	Subsurface DDT=1.38U 2,3,7,8-TCDD=1.18J TCDD TEQ=3.9	Subsurface DDT=1.7U	
-9					
-10					
-11					
-12					
-13				Subsurface DDT=1.67 2,3,7,8-TCDD=0.71U TCDD TEQ=6.3	Surface DDT=2.19 2,3,7,8-TCDD=2.15 TCDD TEQ=16.4
-14					
-15					
-16			Subsurface DDT=1.41U	Subsurface DDT=1.41U	Subsurface DDT=1.57 2,3,7,8-TCDD=1.39J TCDD TEQ=12.4
-17					
-18					
-19					
-20					
-21	← Proposed Dredge Depth			Leave Layer DDT=1.38U 2,3,7,8-TCDD=0.501J TCDD TEQ=10.8	Leave Layer DDT=1.335U 2,3,7,8-TCDD=2.15J TCDD TEQ=12.0
-22					
-23				Archived	Archived
-24					

Notes: U = not detected **BOLD** = detected
 J = estimated **Red** = exceeded screening value

Figure 7. Schematic Representation of DDT, 2,3,7,8-TCDD, and TCDD TEQ Concentrations at the ALY Site

Pontoon Construction Project

Tables

Table 1. List of Historical and Active NPDES Discharges in and near the A&M and ALY Properties

Map Reference ID	NPDES No.	Facility	City	Active?
1	SO300039ID	Anderson and Middleton	Hoquiam	No
2	NA	Aberdeen Log Yard	Aberdeen	No
3	SO300131D	Port of Grays Harbor Sort Yard	Hoquiam	No
4	NA	ITT Rayonier - East Ditch Outfall	Hoquiam	No
5	NA	ITT Rayonier - West Ditch Outfall	Hoquiam	No
6	WA0037192	City of Aberdeen WWTP	Aberdeen	Yes
7	ST6170	Port of Grays Harbor Harold LeMay Enterprises, Inc. Aberdeen	Aberdeen	Yes
8	ST6158	Sanitary Landfill, Post Closure	Aberdeen	Yes
9	WA0020915	City of Hoquiam WWTP Imperium Grays Harbor Biodiesel	Hoquiam	Yes
10	ST6214	Production Facility	Hoquiam	Yes
11	ST6191	Sierra Pacific Industries	Aberdeen	Yes
12	ST6128	Weyerhaeuser Company	Cosmopolis	Yes

Note:

ID = identification

NA = not available

NPDES = National Pollutant Discharge Elimination System

WWTP indicates Wastewater Treatment Plant

Table 2. Summary of Existing Sediment Data from Sample Locations in and near the A&M and ALY Properties

Analyte	Sample Date: Sample depth (m): Units SL	Anderson and Middleton Property				Aberdeen Log Yard			Detection Ratio		Max Detected Conc		Detected Conc Exceed SL?					
		GRAYH_993S	PGHO&M9424	15S	GRAYH_9915S	13S	519-ETRM	GRAYH_9913S	Anderson and Middleton Property	Aberdeen Log Yard	Anderson and Middleton Property	Aberdeen Log Yard	Anderson and Middleton Property	Aberdeen Log Yard				
		3/30/98	1/5/94	3/31/98	3/31/98	3/31/98	4/7/98	3/31/98										
		0-0.1	--	--	0-0.1	--	--	0-0.1										
1,2,4-Trichlorobenzene	ug/Kg 31	NA	9.3	U	52	U	NA	222	U	NA	NA	0/2	0/1	ND	ND	N	N	
1,2-Dichlorobenzene	ug/Kg 35	NA	4	U	52	U	NA	222	U	NA	NA	0/2	0/1	ND	ND	N	N	
1,2-Diphenylhydrazine	ug/Kg --	NA	NA		26	U	NA	111	U	NA	NA	0/1	0/1	ND	ND	NA	NA	
1,3-Dichlorobenzene	ug/Kg 170	NA	4	U	52	U	NA	222	U	NA	NA	0/2	0/1	ND	ND	N	N	
1,4-Dichlorobenzene	ug/Kg 110	66	U	4	U	52	U	222	U	NA	45	U	0/4	0/2	ND	ND	N	N
1-Methylnaphthalene	ug/Kg --	36	NA		5.3	J	5.3	87	NA	NA	87		3/3	2/2	36	87	NA	NA
2,4,5-Trichlorophenol	ug/Kg --	23	J	NA	26	U	26	111	U	NA	22	U	1/3	0/2	23	ND	NA	NA
2,4,6-Trichlorophenol	ug/Kg --	NA	NA		26	U	NA	111	U	NA	NA		0/1	0/1	ND	ND	NA	NA
2,4-Dichlorophenol	ug/Kg --	NA	NA		52	U	NA	222	U	NA	NA		0/1	0/1	ND	ND	NA	NA
2,4-Dimethylphenol	ug/Kg 29	33	U	16	U	26	U	111	U	NA	22	U	0/4	0/2	ND	ND	N	N
2,4-Dinitrophenol	ug/Kg --	NA	NA		515	UJ	NA	2220	UJ	NA	NA		0/1	0/1	ND	ND	NA	NA
2,4-Dinitrotoluene	ug/Kg --	NA	NA		52	U	NA	222	U	NA	NA		0/1	0/1	ND	ND	NA	NA
2,6-Dinitrotoluene	ug/Kg --	NA	NA		129	U	NA	556	U	NA	NA		0/1	0/1	ND	ND	NA	NA
2-Chloronaphthalene	ug/Kg --	NA	NA		52	U	NA	222	U	NA	NA		0/1	0/1	ND	ND	NA	NA
2-Chlorophenol	ug/Kg --	NA	NA		52	U	NA	222	U	NA	NA		0/1	0/1	ND	ND	NA	NA
2-Methylnaphthalene	ug/Kg 670	46	J	31	U	7.6	J	117	J	NA	110		3/4	2/2	46	117	NA	NA
2-Nitroaniline	ug/Kg --	NA	NA		26	U	NA	111	U	NA	NA		0/1	0/1	ND	ND	NA	NA
2-Nitrophenol	ug/Kg --	NA	NA		129	U	NA	556	U	NA	NA		0/1	0/1	ND	ND	NA	NA
3,3'-Dichlorobenzidine	ug/Kg --	NA	NA		52	U	NA	222	U	NA	NA		0/1	0/1	ND	ND	NA	NA
4,6-Dinitro-2-Methylphenol	ug/Kg --	NA	NA		515	UJ	NA	2220	UJ	NA	NA		0/1	0/1	ND	ND	NA	NA
4-Bromophenyl phenyl ether	ug/Kg --	NA	NA		52	U	NA	222	U	NA	NA		0/1	0/1	ND	ND	NA	NA
4-Chloro-3-Methylphenol	ug/Kg --	NA	NA		26	U	NA	111	U	NA	NA		0/1	0/1	ND	ND	NA	NA
4-Chloroaniline	ug/Kg --	NA	NA		26	U	NA	111	U	NA	NA		0/1	0/1	ND	ND	NA	NA
4-Chlorophenyl-Phenylether	ug/Kg --	NA	NA		52	U	NA	222	U	NA	NA		0/1	0/1	ND	ND	NA	NA
4-Nitroaniline	ug/Kg --	NA	NA		52	U	NA	222	U	NA	NA		0/1	0/1	ND	ND	NA	NA
4-Nitrophenol	ug/Kg --	NA	NA		129	U	NA	556	U	NA	NA		0/1	0/1	ND	ND	NA	NA
Acenaphthene	ug/Kg 500	76	31	U	52	U	52	280	NA	NA	280		1/4	2/2	76	280	NA	NA
Acenaphthylene	ug/Kg 560	89	31	U	8.6	J	8.6	27	NA	NA	27		3/4	2/2	89	27	NA	NA
Aluminum	mg/Kg --	NA	NA		21400		NA	13200		NA	NA		1/1	1/1	21400	13,200	NA	NA
Aniline	ug/Kg --	NA	NA		56	U	NA	111	U	NA	NA		0/1	0/1	ND	ND	NA	NA
Anthracene	ug/Kg 960	51	J	31	U	8.2	J	394	NA	NA	400		3/4	2/2	51	400	NA	NA
Antimony	mg/Kg 150	NA	0.64		3	U	NA	6.1	NA	NA	NA		1/2	1/1	0.64	6.1	NA	NA
Arsenic	mg/Kg 57	NA	5.3		17		NA	5	U	NA	NA		2/2	0/1	17	ND	NA	N
Barium	mg/Kg --	NA	NA		26		NA	36		NA	NA		1/1	1/1	26	36	NA	NA
Benz[a]anthracene	ug/Kg 1300	43	J	31	U	52	U	2160		NA	2200		1/4	2/2	43	2,200	NA	Y
Benzidine	ug/Kg --	NA	NA		26	UJ	NA	111	UJ	NA	NA		0/1	0/1	ND	ND	NA	NA
Benzo(a)pyrene	ug/Kg 1600	47	J	31	U	12	J	2490		NA	2500		3/4	2/2	47	2,500	NA	Y
Benzo(b)fluoranthene	ug/Kg --	NA	NA		23	J	NA	3190	E	NA	NA		1/1	1/1	23	3,190	NA	NA
Benzo(ghi)perylene	ug/Kg 670	66	UJ	31	U	28	UJ	1320		NA	1300		0/4	2/2	ND	1,320	N	Y
Benzo(k)fluoranthene	ug/Kg --	NA	NA		52	U	NA	1180		NA	NA		0/1	1/1	ND	1,180	NA	NA
Benzoic Acid	ug/Kg 650	NA	160	U	616	UJ	NA	580	UJ	NA	NA		0/2	0/1	ND	ND	N	N
Benzyl Alcohol	ug/Kg 57	13	J	19	U	15	J	13		NA	13	J	3/4	2/2	15	13	NA	NA
Beryllium	mg/Kg --	NA	NA		0.6		NA	0.33		NA	NA		1/1	1/1	0.6	0.33	NA	NA
Bis(2-Chloroethoxy)Methane	ug/Kg --	NA	NA		26	U	NA	111	U	NA	NA		0/1	0/1	ND	ND	NA	NA
Bis(2-Chloroethyl)Ether	ug/Kg --	NA	NA		52	UJ	NA	222	UJ	NA	NA		0/1	0/1	ND	ND	NA	NA
Bis(2-Ethylhexyl) Phthalate	ug/Kg 1300	66	UJ	31	U	52	U	222	UJ	NA	190	UJ	0/4	0/2	ND	ND	N	N
Boron	mg/Kg --	NA	NA		11		NA	2	U	NA	NA		1/1	0/1	11	ND	NA	NA
Butyl benzyl phthalate	ug/Kg 63	33	U	31	U	26	U	111	U	NA	22	U	0/4	0/2	ND	ND	N	N
Cadmium	mg/Kg 5.1	NA	0.15		0.5	U	NA	0.56		NA	NA		1/2	1/1	0.15	0.56	NA	NA
Caffeine	ug/Kg --	10	J	NA	26	U	26	222	U	NA	22	U	1/3	0/2	10	ND	NA	NA
Calcium	mg/Kg --	NA	NA		6220		NA	8060		NA	NA		1/1	1/1	6220	8,060	NA	NA
Carbazole	ug/Kg --	13	J	NA	52	U	52	285		NA	280		1/3	2/2	13	285	NA	NA
Carcinogenic Polycyclic Aromatic Hydrocarbons as TEQs (CPAH-TEQ)	ug/Kg --	88	NA		NA		44	NA		NA	3200		2/2	1/1	88	3,200	NA	NA
Chromium	mg/Kg 267	NA	NA		34.1		NA	1300		NA	NA		1/1	1/1	34.1	1,300	NA	Y
Chrysene	ug/Kg 1400	80	31	U	52	U	52	2770		NA	2800		1/4	2/2	80	2,800	NA	Y
Cobalt	mg/Kg --	NA	NA		14.6		NA	26.8		NA	NA		1/1	1/1	14.6	26.8	NA	NA
Copper	mg/Kg 390	82		58	43.8		44	232		NA	230		4/4	2/2	82	232	NA	NA
Dibenzo(a,h)anthracene	ug/Kg 230	33	U	31	U	26	U	450		NA	400		0/4	2/2	ND	450	N	Y
Dibenzofuran	ug/Kg 540	65		31	U	5.2	J	194		NA	190		3/4	2/2	65	194	NA	NA
Dibutyl phthalate	ug/Kg --	NA	31	U	700	UJ	NA	556	UJ	NA	NA		0/2	0/1	ND	ND	NA	NA
Dibutyltin Dichloride	ug/Kg --	NA	NA		3.5	UJ	3.5	157	J	NA	160	J	0/2	2/2	ND	160	NA	NA
Diethyl phthalate	ug/Kg 200	66	U	31	U	13	J	111	U	NA	22	U	2/4	0/2	13	ND	NA	N
Dimethyl phthalate	ug/Kg 71	66	U	31	U	52	U	222	U	NA	45	U	0/4	0/2	ND	ND	N	N
Di-N-Octyl Phthalate	ug/Kg 6200	NA	31	U	129	U	NA	556	U	NA	NA		0/2	0/1	ND	ND	N	N

Table 2. Summary of Existing Sediment Data from Sample Locations in and near the A&M and ALY Properties

Analyte	Sample Date: Sample depth (m): Units SL	Anderson and Middleton Property				Aberdeen Log Yard			Detection Ratio		Max Detected Conc		Detected Conc Exceed SL?							
		GRAYH_993S	PGHO&M9424	15S	GRAYH_9915S	13S	519-ETRM	GRAYH_9913S	Anderson and Middleton Property	Aberdeen Log Yard	Anderson and Middleton Property	Aberdeen Log Yard	Anderson and Middleton Property	Aberdeen Log Yard						
		3/30/98	1/5/94	3/31/98	3/31/98	3/31/98	4/7/98	3/31/98												
Fluoranthene	ug/Kg 1700	230	31	U	35	35	4310	NA	4300	3/4	2/2	230	4310	NA	Y					
Fluorene	ug/Kg 540	62	J	31	U	7.7	J	7.7	J	307	3/4	2/2	62	310	NA	NA				
Hexachlorobenzene	ug/Kg 22	NA	19	U	52	U	222	U	NA	0/2	0/1	ND	ND	N	N					
Hexachlorobutadiene	ug/Kg 29	NA	29	U	52	U	222	U	NA	0/2	0/1	ND	ND	N	N					
Hexachlorocyclopentadiene	ug/Kg --	NA	NA		129	U	556	U	NA	0/1	0/1	ND	ND	NA	NA					
Hexachloroethane	ug/Kg 1400	NA	31	U	52	U	222	U	NA	0/2	0/1	ND	ND	N	N					
Indeno(1,2,3-cd)pyrene	ug/Kg 600	45	31	U	13	J	1490	NA	1400	3/4	2/2	45	1490	NA	Y					
Iron	mg/Kg --	NA	NA		31900		74500		NA	1/1	1/1	31900	74,500	NA	NA					
Isophorone	ug/Kg --	NA	NA		52	U	222	U	NA	0/1	0/1	ND	ND	NA	NA					
Lead	mg/Kg 450	48	12		3.5		57.1		57	4/4	2/2	48	57.1	NA	NA					
Magnesium	mg/Kg --	NA	NA		8480		40400		NA	1/1	1/1	8480	40,400	NA	NA					
Manganese	mg/Kg --	NA	NA		314		770		NA	1/1	1/1	314	770	NA	NA					
Mercury	mg/Kg 0.41	0.082	0.06		0.049		0.035		0.035	4/4	2/2	0.082	0.035	NA	NA					
m-Nitroaniline	ug/Kg --	NA	NA		52	U	222	U	NA	0/1	0/1	ND	ND	NA	NA					
Molybdenum	mg/Kg --	NA	NA		1.6		18.7		NA	1/1	1/1	1.6	18.7	NA	NA					
Monobutyltin Trichloride	ug/Kg --	NA	NA		12	J	12	J	506	E	NA	500	J	2/2	2/2	12	506	NA	NA	
Naphthalene	ug/Kg 2100	280	31	U	29		296		NA	3/4	2/2	280	296	NA	NA					
Nickel	mg/Kg 140	NA	42		26.6		425		NA	2/2	1/1	42	425	NA	Y					
Nitrobenzene	ug/Kg --	NA	NA		52	U	222	U	NA	0/1	0/1	ND	ND	NA	NA					
N-Nitrosodimethylamine	ug/Kg --	NA	NA		26	U	111	U	NA	0/1	0/1	ND	ND	NA	NA					
N-Nitrosodi-n-propylamine	ug/Kg --	NA	NA		52	U	222	U	NA	0/1	0/1	ND	ND	NA	NA					
N-Nitrosodiphenylamine	ug/Kg 28	66	U	19	U	52	U	52	U	222	U	NA	45	U	0/4	0/2	ND	ND	N	N
o-Cresol	ug/Kg --	66	U	16	U	52	U	52	U	222	U	NA	45	U	0/4	0/2	ND	ND	NA	NA
Particle/Grain Size, Clay	% --	16.1		NA	NA		9.2		7.5	2/2	1/1	16.1	7.5	NA	NA					
Particle/Grain Size, Gravel	% --	6.7		NA	NA		13.5		16.7	2/2	1/1	13.5	16.7	NA	NA					
Particle/Grain Size, Sand	% --	24		NA	NA		51.9		56.8	2/2	1/1	51.9	56.8	NA	NA					
Particle/Grain Size, Silt	% --	53.3		NA	NA		25.4		19.1	2/2	1/1	53.3	19.1	NA	NA					
p-Cresol	ug/Kg --	240		31	U	116		120		222	U	26	J	3/4	1/2	240	26	NA	NA	
Pentachlorophenol	ug/Kg 400	110	J	93	U	129	U	130	U	218		220		1/4	2/2	110	220	NA	NA	
Phenanthrene	ug/Kg 1500	200		31	U	27	J	27	J	2520		2500		3/4	2/2	200	2,520	NA	Y	
Phenol	ug/Kg 420	94	UU	31	U	109	UU	110	UU	111	UU	38	UU	0/4	0/2	ND	ND	N	N	
Potassium	mg/Kg --	NA	NA		1820		951		NA	1/1	1/1	1820	951	NA	NA					
Propane, 2,2'-oxybis[1-chloro-	ug/Kg --	NA	NA		52	U	222	U	NA	0/1	0/1	ND	ND	NA	NA					
Pyrene	ug/Kg 2600	230	31	U	51	J	51	J	5070		NA	5100		3/4	2/2	230	5,100	NA	Y	
Pyridine	ug/Kg --	NA	NA		26	U	111	U	NA	0/1	0/1	ND	ND	NA	NA					
Retene	ug/Kg --	150		NA	41	J	41	J	49		NA	49		3/3	2/2	150	49	NA	NA	
Salinity	ppt --	NA	NA		NA		NA		0.32		NA	1/1	0.32	NA	NA					
Selenium	mg/Kg 3	NA	NA		5	U	5	U	NA	0/1	0/1	ND	ND	N	N					
Silicon	mg/Kg --	NA	NA		102		155		NA	1/1	1/1	102	155	NA	NA					
Silver	mg/Kg 6.1	NA	0.16		1.2		2.3		NA	2/2	1/1	1.2	2.3	NA	NA					
Sodium	mg/Kg --	NA	NA		5270		1940		NA	1/1	1/1	5270	1,940	NA	NA					
Solids	% --	NA	NA		60.9		67.9		NA	1/1	1/1	60.9	67.9	NA	NA					
Strontium	mg/Kg --	NA	NA		40.3		52.1		NA	1/1	1/1	40.3	52.1	NA	NA					
Tetrabutyltin	ug/Kg --	NA	NA		NA		2.1	J	NA	NA	1/1	NA	2.1	NA	NA					
Thallium	mg/Kg --	NA	NA		5	U	6		NA	0/1	1/1	ND	6	NA	NA					
Titanium	mg/Kg --	NA	NA		2250		1060		NA	1/1	1/1	2250	1,060	NA	NA					
Total Organic Carbon	% --	2.6	1.3		1.44		1.4		1.26	4/4	2/2	2.6	1.26	NA	NA					
Total Solids	% --	50.9	42		NA		60.9		67.9	3/3	1/1	60.9	67.9	NA	NA					
Tributyltin Chloride	ug/Kg --	NA	NA		2.2	J	2.2	J	212	E	NA	270	J	2/2	2/2	2.2	270	NA	NA	
Vanadium	mg/Kg --	NA	NA		79.2		55.2		NA	1/1	1/1	79.2	55.2	NA	NA					
Zinc	mg/Kg 410	110	90		68.5		69		133	4/4	2/2	110	133	NA	NA					
4,4'-DDD	ug/Kg --	NA	1.5	U	NA		NA		NA	0/1	NA	ND	NA	NA	NA					
4,4'-DDE	ug/Kg --	NA	1.2	U	NA		NA		NA	0/1	NA	ND	NA	NA	NA					
4,4'-DDT	ug/Kg --	NA	3.1	U	NA		NA		NA	0/1	NA	ND	NA	NA	NA					
Aldrin	ug/Kg 10	NA	1.2		NA		NA		NA	1/1	NA	1.2	NA	NA	NA					
Ammonia	mg/Kg --	NA	8.4		NA		NA		NA	1/1	NA	8.4	NA	NA	NA					
Chlordane	ug/Kg 10	NA	0.92	U	NA		NA		NA	0/1	NA	ND	NA	N	NA					
DDT/DDD/DDE, o,p' and p,p' isomers	ug/Kg --	NA	3.1	U	NA		NA		NA	0/1	NA	ND	NA	NA	NA					
Dieldrin	ug/Kg 10	NA	1.2	U	NA		NA		NA	0/1	NA	ND	NA	N	NA					
Ethylbenzene	ug/Kg 10	NA	4	U	NA		NA		NA	0/1	NA	ND	NA	N	NA					
Heptachlor	ug/Kg 10	NA	0.92	U	NA		NA		NA	0/1	NA	ND	NA	N	NA					
Lindane	ug/Kg --	NA	1.1		NA		NA		NA	1/1	NA	1.1	NA	NA	NA					
PCB-aroclor 1016	ug/Kg --	NA	15	U	NA		NA		NA	0/1	NA	ND	NA	NA	NA					
PCB-aroclor 1221	ug/Kg --	NA	62	U	NA		NA		NA	0/1	NA	ND	NA	NA	NA					

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		GRAYH_993S	PGHO&M9424	15S	GRAYH_9915S	13S	519-ETRM	GRAYH_9913S	Anderson and Middleton Property	Aberdeen Log Yard	Anderson and Middleton Property	Aberdeen Log Yard	Anderson and Middleton Property	Aberdeen Log Yard
		3/30/98	1/5/94	3/31/98	3/31/98	3/31/98	4/7/98	3/31/98						
PCB-aroclor 1232	ug/Kg --	NA	15 U	NA	NA	NA	NA	0/1	NA	ND	NA	NA	NA	
PCB-aroclor 1242	ug/Kg --	NA	15 U	NA	NA	NA	NA	0/1	NA	ND	NA	NA	NA	
PCB-aroclor 1248	ug/Kg --	NA	15 U	NA	NA	NA	NA	0/1	NA	ND	NA	NA	NA	
PCB-aroclor 1254	ug/Kg --	NA	15 U	NA	NA	NA	NA	0/1	NA	ND	NA	NA	NA	
PCB-aroclor 1260	ug/Kg --	NA	15 U	NA	NA	NA	NA	0/1	NA	ND	NA	NA	NA	
Sulfide	mg/Kg --	NA	20	NA	NA	NA	NA	1/1	NA	20	NA	NA	NA	
Tetrachloroethane	ug/Kg --	NA	4 U	NA	NA	NA	NA	0/1	NA	ND	NA	NA	NA	
Total Volatile Solids	% --	NA	4.4	NA	NA	NA	NA	1/1	NA	4.4	NA	NA	NA	
Total Xylenes	ug/Kg 40	NA	4 U	NA	NA	NA	NA	0/1	NA	ND	NA	N	NA	
Trichloroethene	ug/Kg 160	NA	4 U	NA	NA	NA	NA	0/1	NA	ND	NA	N	NA	
Total PCBs	ug/Kg 130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Total LPAH	ug/Kg 5,200	645	ND	80.5	80.5	3,824	NA	3/4	2/2	645	3,824	NA	NA	
Total HPAH	ug/Kg 12,000	632	ND	134	111	24,430	NA	3/4	2/2	632	24,430	NA	Y	
Total DDT	ug/Kg 6.9	NA	ND	NA	NA	NA	NA	0/1	NA	NA	NA	NA	NA	
Formaldehyde	ug/Kg --	NA	NA	27.7	28,000	NA	NA	2/2	NA	28000	NA	NA	NA	

Note:
 CPAH-TEQ = Carcinogenic Polycyclic Aromatic Hydrocarbons as TEQs
 SL = Screening Level
 -- = Not available
 U = Analyte was not detected at or above the reported result
 J = Analyte was positively identified. The reported result is an estimate
 UJ = Analyte was not detected at or above the reported estimate
 E = Reported result is an estimate because it exceeds the calibration range
 NA = Not applicable
 ND = Not detected

TABLE 3
Sediment Results at Anderson and Middleton Property
Pontoon Site, WSDOT SR 520

Chemical Group	Analyte	Sample ID:				Sample Type:	Sample Depth (ft MLLW):	Normal/Duplicate Sample:	Sample Date:	AM-1-S	AM-1B-4-8	AM-2-S	AM-2-Y	AM-2B-4-8	AM-2B-8-12	AM-2-Z
		Surface	Subsurface	Surface	Surface					Subsurface	Subsurface	Leave Layer				
		SMS														
		DMMP		SQS												
		Units	SL	BT	Units	SQS	Dry Weight	OC-normalized	Dry Weight	OC-normalized	Dry Weight	OC-normalized	Dry Weight	OC-normalized	Dry Weight	OC-normalized
CONV	AMMONIA-N	mg/kg	--	--	mg/kg	--	129	NA	278	NA	245	NA	182	NA	374	NA
CONV	Sulfide	mg/kg	--	--	mg/kg	--	893	NA	1,340	NA	568	NA J	915	NA J	1,060	NA
CONV	Total Solids	percent	--	--	percent	--	49.4	NA	53.0	NA	51.2	NA	52.4	NA	53.3	NA
CONV	TOTAL ORGANIC CARBON	percent	--	--	percent	--	3.04	NA	2.79	NA	2.91	NA	3.65	NA	3.16	NA
CONV	Total Volatile Solids	percent	--	--	percent	--	9.46	NA	9.47	NA	9.65	NA	10	NA	9.77	NA
GRAIN	Clay	percent	--	--	percent	--	16.7	NA	23.6	NA	19.3	NA	19.3	NA	19.1	NA
GRAIN	Gravel	percent	--	--	percent	--	3.81	NA	0.92	NA	4.13	NA	4.51	NA J	3.14	NA
GRAIN	Sand, Coarse	percent	--	--	percent	--	2.38	NA	1.14	NA	2.32	NA	2.17	NA	4.95	NA
GRAIN	Sand, Fine	percent	--	--	percent	--	4.26	NA	2.6	NA	4.87	NA	4.35	NA	3.8	NA
GRAIN	Sand, Medium	percent	--	--	percent	--	2.29	NA	1.27	NA	2.96	NA	2.56	NA	3	NA
GRAIN	Sand, Very Coarse	percent	--	--	percent	--	3.97	NA	1.7	NA	2.7	NA	3.28	NA	9.94	NA
GRAIN	Sand, Very Fine	percent	--	--	percent	--	10.1	NA	8.71	NA	10.9	NA	9.98	NA	8.2	NA
GRAIN	Silt	percent	--	--	percent	--	58.2	NA	61.8	NA	53.9	NA	54.2	NA	40.2	NA
METAL	ANTIMONY	mg/kg	150	--	mg/kg	--	2.9	NA U	2.7	NA U	2.8	NA U	2.7	NA U	3.1	NA U
METAL	ARSENIC	mg/kg	57	507.1	mg/kg	57	8	NA U	7.7	NA U	7.4	NA	8	NA	8.4	NA
METAL	CADMIUM	mg/kg	5.1	11.3	mg/kg	5.1	0.29	NA U	0.27	NA U	0.06	NA B	0.27	NA U	0.31	NA U
METAL	CHROMIUM	mg/kg	267	267	mg/kg	260	41.7	NA	39.6	NA	43.8	NA	45	NA	44.1	NA
METAL	COPPER	mg/kg	390	1,027	mg/kg	390	54.4	NA	56.6	NA	58.4	NA	57.8	NA	54.6	NA
METAL	LEAD	mg/kg	450	975	mg/kg	450	11.1	NA	10.6	NA	11.2	NA	10.6	NA	10.3	NA
METAL	MERCURY	mg/kg	0.41	1.5	mg/kg	0.41	0.086	NA	0.083	NA	0.082	NA	0.081	NA	0.104	NA
METAL	NICKEL	mg/kg	140	370	mg/kg	--	24.8	NA	24.7	NA	26.1	NA	25.6	NA	27	NA
METAL	SELENIUM	mg/kg	3	3	mg/kg	--	1.5	NA U	1.3	NA U	1.4	NA U	1.3	NA U	1.6	NA U
METAL	SILVER	mg/kg	6.1	6.1	mg/kg	6.1	1.3	NA U	1.2	NA U	1.3	NA U	1.2	NA U	1.4	NA U
METAL	ZINC	mg/kg	410	2,783	mg/kg	410	83.2	NA	79.6	NA	85.1	NA	84	NA	86.2	NA
ORMET	Tri-n-butyltin	ug/kg	--	--	ug/kg	--	2.1	NA U	1.9	NA U	2	NA U	1.9	NA U	1.9	NA U
LPAH	Total LPAH	ug/kg	5,200	--	ug/kg-OC	370,000	46	1513.2	129.1	4627.2	67.5	2319.6	57.8	1583.6	36.6	1158.2
LPAH	NAPHTHALENE	ug/kg	2,100	--	ug/kg-OC	99,000	8.4	276.3 J	48	1720.4	13	446.7	12	328.8	7.6	240.5 J
LPAH	ACENAPHTHYLENE	ug/kg	560	--	ug/kg-OC	66,000	3.2	105.3 J	14	501.8	4.8	164.9 J	4.3	117.8 J	2.8	88.6 J
LPAH	ACENAPHTHENE	ug/kg	500	--	ug/kg-OC	16,000	2.4	78.9 J	3.8	136.2 J	3.4	116.8 J	3.2	87.7 J	1.4	44.3 J
LPAH	FLUORENE	ug/kg	540	4,600	ug/kg-OC	23,000	4.2	138.2 J	6.3	225.8 J	6.3	216.5 J	5.1	139.7 J	3.5	110.8 J
LPAH	PHENANTHRENE	ug/kg	1,500	--	ug/kg-OC	100,000	17	559.2	41	1469.5	28	962.2	22	602.7	14	443.0
LPAH	ANTHRACENE	ug/kg	960	--	ug/kg-OC	220,000	3.7	121.7 J	7	250.9 J	4.5	154.6 J	4.2	115.1 J	2.9	91.8 J
LPAH	2-METHYLNAPHTHALENE	ug/kg	670	--	ug/kg-OC	220,000	7.1	233.6 J	9	322.6 J	7.5	257.7 J	7	191.8 J	4.4	139.2 J
HPAH	Total HPAH	ug/kg	12,000	--	ug/kg-OC	960,000	116.8	3842.1	173.6	6222.2	136.1	4677.0	112.4	3079.5	80.6	2550.6
HPAH	FLUORANTHENE	ug/kg	1,700	--	ug/kg-OC	160,000	26	855.3	44	1577.1	33	1134.0	26	712.3	17	538.0
HPAH	PYRENE	ug/kg	2,600	11,980	ug/kg-OC	1,00E+06	24	789.5	46	1648.7	30	1030.9	26	712.3	17	538.0
HPAH	BENZO (A) ANTHRACENE	ug/kg	1,300	--	ug/kg-OC	110,000	8.4	276.3 J	10	358.4	11	378.0	8.5	232.9 J	7.1	224.7 J
HPAH	CHRYSENE	ug/kg	1,400	--	ug/kg-OC	110,000	14	460.5	14	501.8	14	481.1	11	301.4	8.5	269.0 J
HPAH	BENZO (B) FLUORANTHENE	ug/kg	3,200	--	ug/kg	--	14	460.5	15	537.6	14	481.1	11	301.4	9.3	294.3 J
HPAH	BENZO(K)FLUORANTHENE	ug/kg	3,200	--	ug/kg	--	4.7	154.6 J	5	179.2 J	4.2	144.3 J	3.8	104.1 J	2.7	85.4 J
HPAH	Total Benzo(b+h)fluoranthenes	ug/kg	3,200	--	ug/kg-OC	230,000	18.7	615.1	20	716.8	18.2	625.4	14.8	405.5	12	379.7
HPAH	BENZO (A) PYRENE	ug/kg	1,600	--	ug/kg-OC	99,000	9.3	305.9 J	14	501.8	10	343.6	10	274.0	7.1	224.7 J
HPAH	INDENO (1,2,3-C,D) PYRENE	ug/kg	630	--	ug/kg-OC	34,000	6.9	227.0 J	11	384.3	6.8	233.7 J	6.5	178.1 J	5	155.2 J
HPAH	DIBENZO (A,H) ANTHRACENE	ug/kg	230	--	ug/kg-OC	12,000	2.1	69.1 J	2.6	93.2 J	9.8	336.8 U	2.2	60.3 J	1.6	50.6 J
HPAH	BENZO (G,H,I) PERYLENE	ug/kg	670	--	ug/kg-OC	31,000	7.4	243.4 J	12	430.1	8.2	281.8 U	7.4	202.7 J	5.3	167.7 J
CHYDRO	1,3-DICHLOROBENZENE	ug/kg	170	--	--	--	11	NA U	9.5	NA U	9.8	NA U	9.6	NA U	9.4	NA U
CHYDRO	1,4-DICHLOROBENZENE	ug/kg	110	--	ug/kg-OC	3,100	11	361.8 U	9.5	340.5 U	9.8	336.8 U	9.6	263.0 U	9.4	319.7 U
CHYDRO	1,2-DICHLOROBENZENE	ug/kg	35	--	ug/kg-OC	2,300	11	361.8 U	9.5	340.5 U	9.8	336.8 U	9.6	263.0 U	9.4	319.7 U
CHYDRO	1,2,4-TRICHLOROBENZENE	ug/kg	31	--	ug/kg-OC	810	11	361.8 U	9.5	340.5 U	9.8	336.8 U	9.6	263.0 U	9.4	319.7 U
CHYDRO	HEXACHLOROBENZENE	ug/kg	22	168	ug/kg-OC	380	11	361.8 U	9.5	340.5 U	9.8	336.8 U	9.6	263.0 U	9.4	319.7 U
PHTH	DIMETHYL PHTHALATE	ug/kg	71	--	ug/kg-OC	53,000	11	361.8 U	9.5	340.5 U	9.8	336.8 U	9.6	263.0 U	9.4	319.7 U
PHTH	DIETHYL PHTHALATE	ug/kg	200	--	ug/kg-OC	61,000	11	361.8 U	9.5	340.5 U	9.8	336.8 U	9.6	263.0 U	9.4	319.7 U
PHTH	DI-N-BUTYL PHTHALATE	ug/kg	1,400	--	ug/kg-OC	220,000	21	690.8 U	19	681.0 U	20	687.3 U	20	547.9 U	19	601.3 U
PHTH	BUTYL BENZYL PHTHALATE	ug/kg	63	--	ug/kg-OC	4,900	11	361.8 U	9.5	340.5 U	9.8	336.8 U	9.6	263.0 U	9.4	319.7 U
PHTH	BIS (2-ETHYLHEXYL) PHTHALATE	ug/kg	1,300	--	ug/kg-OC	47,000	18	592.1 J	95	3405.0 U	13	446.7 J	12	328.8 U	9.4	297.4 U
PHTH	DI-N-OCTYL PHTHALATE	ug/kg	6,200	--	ug/kg-OC	58,000	11	361.8 U	9.5	340.5 U	9.8	336.8 U	9.6	263.0 U	9.4	319.7 U
PHENOLS	PHENOL	ug/kg	420	--	ug/kg	420	7.3	NA J	12	NA J	7.1	NA J	12	NA J	6.1	NA J
PHENOLS	2-METHYLPHENOL	ug/kg	63	--	ug/kg	63	11	NA U	9.5	NA U	9.8	NA U	9.6	NA U	9.4	NA U
PHENOLS	4-METHYLPHENOL	ug/kg	670	--	ug/kg	670	9.4	NA J	98	NA J	17	NA U	24	NA	32	NA
PHENOLS	2,4-DIMETHYLPHENOL	ug/kg	29	--	ug/kg	29	51	NA U	48	NA U	49	NA U	48	NA U	47	NA U
PHENOLS	PENTACHLOROPHENOL	ug/kg	400	504	ug/kg	360	110	NA U	95	NA U	98	NA U	96	NA U	94	NA U
MEXTRACT	BENZYL ALCOHOL	ug/kg	57	--	ug/kg	57	3.4	NA J	19	NA U	20	NA U	20	NA U	3	NA J
MEXTRACT	BENZOIC ACID	ug/kg	650	--	ug/kg	650	2.0	NA U	190	NA U	200	NA U	200	NA U	190	NA U
MEXTRACT	DIBENZOFURAN	ug/kg	540	--	ug/kg-OC	15000	2.4	78.9 J	5.9	211.5 J	4	137.5 J	3.3	90.4 J	1.8	57.0 J
MEXTRACT	HEXACHLOROETHANE	ug/kg	1,400	--	--	--	11	NA U	9.5	NA U	9.8	NA U	9.6	NA U	9.4	NA U
MEXTRACT	HEXACHLOROBUTADIENE	ug/kg	29	--	ug/kg-OC	3,900	11	361.8 U	9.5	340.5 U	9.8	336.8 U	9.6	263.0 U	9.4	319.7 U

TABLE 3
Sediment Results at Anderson and Middleton Property
Pontoon Site, WSDOT SR 520

Chemical Group	Analyze	DMMP			SMS		Sample ID:	AM-1-S	AM-1B-4-8	AM-2-S	AM-2-Y	AM-2B-4-8	AM-2B-8-12	AM-2-Z						
		Units	SL	BT	Units	SQS	Sample Type:	Surface	Subsurface	Surface	Surface	Subsurface	Subsurface	Leave Layer						
						Sample Depth (ft MLLW):	0 to -4	-4 to -8	-9 to -13	-9 to -13	-13 to 17	-13 to 17	-17 to 21	-21 to -23						
						Normal/Duplicate Sample:	N	N	N	FD	N	N	N	N						
						Sample Date:	25-Feb-09	25-Feb-09	25-Feb-09	25-Feb-09	25-Feb-09	25-Feb-09	25-Feb-09	25-Feb-09						
						Dry Weight	OC-normalized	Dry Weight	OC-normalized	Dry Weight	OC-normalized	Dry Weight	OC-normalized	Dry Weight	OC-normalized					
MEXTRACT	N-NITROSODIPHENYLAMINE	ug/kg	28	--	ug/kg-OC	11,000	11	361.8 U	9.5	340.5 U	9.8	336.8 U	9.6	263.0 U	9.4	297.5 U	9.4	319.7 U	8.8	349.2 U
VOC	TCE	ug/kg	160	--	--	--	6.6	NA U	7.9	NA U	5.3	NA U	6.1	NA U	6.5	NA U	6.6	NA U	5.4	NA U
VOC	TETRACHLOROETHENE	ug/kg	57	--	--	--	6.6	NA U	7.9	NA U	5.3	NA U	6.1	NA U	6.5	NA U	6.6	NA U	5.4	NA U
VOC	ETHYLBENZENE	ug/kg	10	--	--	--	6.6	NA U	7.9	NA U	5.3	NA U	6.1	NA U	6.5	NA U	6.6	NA U	5.4	NA U
VOC	XYLENES, TOTAL	ug/kg	40	--	--	--	0.37	NA J	16	NA U	11	NA U	12	NA U	13	NA U	13	NA U	11	NA U
PEST	4,4'-DDD	ug/kg	--	--	--	--	1.1	NA U	0.94	NA U	0.98	NA U	0.95	NA U	0.94	NA J	0.94	NA U	0.88	NA U
PEST	4,4'-DDE	ug/kg	--	--	--	--	1.1	NA U	0.94	NA U	0.98	NA U	0.95	NA U	0.94	NA U	0.94	NA U	0.88	NA U
PEST	4,4'-DDT	ug/kg	--	--	--	--	1.1	NA U	0.83	NA J	0.98	NA U	1.4	NA U	1.6	NA U	1.1	NA U	1.5	NA U
PEST	Total DDT	ug/kg	6.9	50	--	--	1.65	NA U	1.77	NA	1.47	NA U	1.65	NA U	1.81	NA	1.49	NA U	1.63	NA U
PEST	ALDRIN	ug/kg	10	--	--	--	1.1	NA U	0.94	NA U	0.98	NA U	0.95	NA U	0.94	NA U	0.94	NA U	0.88	NA U
PEST	ALPHA-CHLORDANE	ug/kg	--	--	--	--	1.1	NA U	0.94	NA U	0.98	NA U	0.95	NA U	0.94	NA U	0.94	NA U	0.88	NA U
PEST	cis-Nonachlor	ug/kg	10	--	--	--	1.1	NA U	0.94	NA U	0.98	NA U	0.95	NA U	0.94	NA U	0.94	NA U	0.88	NA U
PEST	GAMMA-CHLORDANE	ug/kg	--	--	--	--	1.1	NA U	0.25	NA J	0.8	NA J	0.95	NA	1.3	NA U	0.94	NA U	0.65	NA J
PEST	Oxychlorane	ug/kg	10	--	--	--	1.1	NA U	0.94	NA U	0.98	NA U	0.95	NA U	0.94	NA U	0.94	NA U	0.88	NA U
PEST	TRANS-NONACHLOR	ug/kg	10	--	--	--	1.1	NA U	0.94	NA U	0.98	NA U	1.3	NA U	0.94	NA U	0.94	NA U	0.88	NA U
PEST	Total Chlordane	ug/kg	10	37	--	--	3	NA U	2	NA	3	NA	3	NA	3	NA	2	NA U	2	NA
PEST	DIELDRIN	ug/kg	10	--	--	--	1.1	NA U	0.94	NA U	0.98	NA U	0.95	NA U	1.1	NA U	0.94	NA U	0.88	NA U
PEST	HEPTACHLOR	ug/kg	10	--	--	--	1.1	NA U	0.94	NA U	0.98	NA U	0.95	NA U	0.94	NA U	0.94	NA U	0.88	NA U
PEST	GAMMA-BHC (LINDANE)	ug/kg	10	--	--	--	1.1	NA U	0.94	NA U	0.98	NA U	0.95	NA U	0.94	NA U	0.94	NA U	0.88	NA U
PCB	AROCLOR-1016	ug/kg	130	--	--	--	11	NA U	9.4	NA U	9.8	NA U	9.5	NA U	9.4	NA U	9.4	NA U	8.8	NA U
PCB	AROCLOR-1221	ug/kg	130	--	--	--	21	NA U	19	NA U	20	NA U	19	NA U	19	NA U	19	NA U	18	NA U
PCB	AROCLOR-1232	ug/kg	130	--	--	--	11	NA U	9.4	NA U	9.8	NA U	9.5	NA U	9.4	NA U	9.4	NA U	8.8	NA U
PCB	AROCLOR-1242	ug/kg	130	--	--	--	11	NA U	9.4	NA U	9.8	NA U	9.5	NA U	9.4	NA U	9.4	NA U	8.8	NA U
PCB	AROCLOR-1248	ug/kg	130	--	--	--	11	NA U	9.4	NA U	9.8	NA U	9.5	NA U	9.4	NA U	9.4	NA U	8.8	NA U
PCB	AROCLOR-1254	ug/kg	130	--	--	--	11	NA U	15	NA U	9.8	NA U	9.9	NA U	21	NA U	13	NA U	16	NA U
PCB	AROCLOR-1260	ug/kg	130	--	--	--	12	NA U	9.4	NA U	12	NA U	11	NA U	21	NA	18	NA	23	NA
PCB	Total PCBs	ug/kg	130	38000	ug/kg-OC	12,000	21	690.8 U	19	681.0 U	20	687.3 U	19	520.5 U	21	664.6	18	612.2	23	912.7
GUAI	3,4,5-Trichloroguaiacol	mg/kg	--	--	--	--	2.5	NA UJ	2.5	NA UJ	0.25	NA UJ	0.25	NA UJ	0.25	NA UJ	2.5	NA UJ	2.5	NA UJ
GUAI	3,4,6-Trichloroguaiacol	mg/kg	--	--	--	--	2.5	NA UJ	2.5	NA UJ	0.25	NA UJ	0.25	NA UJ	0.25	NA UJ	2.5	NA UJ	2.5	NA UJ
GUAI	3,4-Dichloroguaiacol	mg/kg	--	--	--	--	2.5	NA UJ	2.5	NA UJ	0.25	NA UJ	0.25	NA UJ	0.25	NA UJ	2.5	NA UJ	2.5	NA UJ
GUAI	4,5,6-Trichloroguaiacol	mg/kg	--	--	--	--	2.5	NA UJ	2.5	NA UJ	0.25	NA UJ	0.25	NA UJ	0.25	NA UJ	2.5	NA UJ	2.5	NA UJ
GUAI	4,5-Dichloroguaiacol	mg/kg	--	--	--	--	2.5	NA UJ	2.5	NA UJ	0.25	NA UJ	0.25	NA UJ	0.25	NA UJ	2.5	NA UJ	2.5	NA UJ
GUAI	4,6-Dichloroguaiacol	mg/kg	--	--	--	--	2.5	NA UJ	2.5	NA UJ	0.25	NA UJ	0.25	NA UJ	0.25	NA UJ	2.5	NA UJ	2.5	NA UJ
GUAI	4-Chloroguaiacol	mg/kg	--	--	--	--	1.3	NA UJ	1.3	NA UJ	0.13	NA UJ	0.13	NA UJ	0.13	NA UJ	1.3	NA UJ	1.3	NA UJ
GUAI	Tetrachloroguaiacol	mg/kg	--	--	--	--	5	NA UJ	5	NA UJ	0.5	NA UJ	0.5	NA UJ	0.5	NA UJ	5	NA UJ	5	NA UJ

Notes:
 CONV = conventional data
 ORMET = organometallic compounds
 SVOC = semivolatile organic compounds
 VOC = volatile organic compounds
 CHYDRO = chlorinated hydrocarbons
 PHTH = phthalates
 MEXTRACT = miscellaneous extractables
 GUAI = guaiacol and chlorinated guaiacols

ug/kg = milligrams per kilogram
 ug/kg = micrograms per kilogram

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the sample-specific method detection limit (MDL).
 J = The analyte was positively identified; the quantitation is an estimation.

N = normal sample
 FD = field duplicate sample
 FT = feet (MLLW)

Shaded cell indicates analyte not detected, but MDL exceed the associated SL or SQS
 -- indicates not available
 NA indicates not applicable

TABLE 4
Sediment Results at Aberdeen Log Yard Property
Pontoon Site, WSDOT SR 520

		Sample ID: ALY-1-S		Sample ID: ALY-2-S		Sample ID: ALY-2-B-4-8		Sample ID: ALY-2-B-8-12		Sample ID: ALY-2-B-12-16						
		Sample Type: Surface		Sample Type: Surface		Sample Type: Subsurface		Sample Type: Subsurface		Sample Type: Subsurface						
		Sample Depth (ft MLLW): +6 to +2		Sample Depth (ft MLLW): +3 to -1		Sample Depth (ft MLLW): -1 to -5		Sample Depth (ft MLLW): -5 to -9		Sample Depth (ft MLLW): -5 to -9						
		Normal/Duplicate Sample: N		Normal/Duplicate Sample: N		Normal/Duplicate Sample: N		Normal/Duplicate Sample: N		Normal/Duplicate Sample: N						
		Sample Date: 25-Feb-09		Sample Date: 24-Feb-09		Sample Date: 24-Feb-09		Sample Date: 24-Feb-09		Sample Date: 24-Feb-09						
Chemical Group	Analyte	DMMP			SMS		OC-		OC-		OC-		OC-			
		Units	SL	BT	Units	SQS	Dry Weight	normalized	Dry Weight	normalized	Dry Weight	normalized	Dry Weight	normalized		
CONV	Ammonia-N	mg/kg	--	--	mg/kg	--	6.8		323		471		410		395	
CONV	Sulfide	mg/kg	--	--	mg/kg	--	23.7		2,910		2,960		838		176	
CONV	Total Solids	percent	--	--	percent	--	57.6		47.7		50.8		54.1		55.1	
CONV	Total Organic Carbon	percent	--	--	percent	--	3.86		2.83		4.66		2.9		3.06	
CONV	Total Volatile Solids	percent	--	--	percent	--	7.16		8.8		11.2		9.53		9.66	
GRAIN	Clay	percent	--	--	percent	--	5.92		17.9		22.7		23.1		25.1	
GRAIN	Gravel	percent	--	--	percent	--	37.3		9.82		2.71		9.09		2.31	
GRAIN	Sand, Coarse	percent	--	--	percent	--	6.2		2.17		2.34		1.84		1.61	
GRAIN	Sand, Fine	percent	--	--	percent	--	4.61		1.6		1.71		0.84		1.85	
GRAIN	Sand, Medium	percent	--	--	percent	--	6.11		1.52		1.84		0.94		1.37	
GRAIN	Sand, Very Coarse	percent	--	--	percent	--	7.33		3.93		2.69		4.1		2.73	
GRAIN	Sand, Very Fine	percent	--	--	percent	--	2.45		2.06		2.06		1.24		3.5	
GRAIN	Silt	percent	--	--	percent	--	23.1	J	63.1		58.3		57.3		55.5	
METAL	ANTIMONY	mg/kg	150	--	mg/kg	--	1.9	U	2.3	U	2.8	U	2.6	U	2.5	U
METAL	ARSENIC	mg/kg	57	507.1	mg/kg	57	2.1		5.7		7		6.8		7.6	
METAL	CADMIUM	mg/kg	5.1	11.3	mg/kg	5.1	0.19	U	0.07	B	0.31		0.05	B	0.08	B
METAL	CHROMIUM	mg/kg	267	267	mg/kg	260	18.2		46.9		42		42.2		34.5	
METAL	COPPER	mg/kg	390	1,027	mg/kg	390	25		68.5		70.8		65.3		56.1	
METAL	LEAD	mg/kg	450	975	mg/kg	450	7.9		16.3		28.8		13.9		13.6	
METAL	MERCURY	mg/kg	0.41	1.5	mg/kg	0.41	0.027		0.139		0.164		0.14		0.142	
METAL	NICKEL	mg/kg	140	370	mg/kg	--	12.8		26.3		26.6		26.2		23	
METAL	SELENIUM	mg/kg	3	3	mg/kg	--	1	U	1.1	U	1.4	U	1.3	U	1.2	U
METAL	SILVER	mg/kg	6.1	6.1	mg/kg	6.1	0.9	U	1	U	1.3	U	1.2	U	1.1	U
METAL	ZINC	mg/kg	410	2,783	mg/kg	410	49.1		91.5		139		93.5		83.4	
ORMET	Tri-n-butyltin	ug/kg	--	--	ug/kg	--	1.8	U	2.1	U	2	U	1.9	U	1.8	U
LPAH	Total LPAH	ug/kg	5,200	--	ug/kg-OC	370,000	317	8212.4	64.4	2275.6	373	8004.3	141.4	4875.9	290	9477.1
LPAH	NAPHTHALENE	ug/kg	2,100	--	ug/kg-OC	99,000	4.8	124.4 J	17	600.7	130	2789.7	47	1620.7	81	2647.1
LPAH	ACENAPHTHYLENE	ug/kg	560	--	ug/kg-OC	66,000	22	569.9	6.2	219.1 J	39	836.9	19	655.2	31	1013.1
LPAH	ACENAPHTHENE	ug/kg	500	--	ug/kg-OC	16,000	6.9	178.8 J	2.9	102.5 J	10	214.6	4.6	158.6 J	11	359.5
LPAH	FLUORENE	ug/kg	540	4,600	ug/kg-OC	23,000	30	777.2	4.9	173.1 J	23	493.6	8.6	296.6 J	20	653.6
LPAH	PHENANTHRENE	ug/kg	1,500	--	ug/kg-OC	100,000	210	5440.4	20	706.7	110	2360.5	41	1413.8	100	3268.0
LPAH	ANTHRACENE	ug/kg	960	--	ug/kg-OC	220,000	38	984.5	4.4	155.5 J	25	536.5	9.2	317.2 J	24	784.3
LPAH	2-METHYLNAPHTHALENE	ug/kg	670	--	--	--	5.3	137.3 J	9	318.0 J	36	772.5	12	413.8	23	751.6
HPAH	Total HPAH	ug/kg	12,000	--	ug/kg-OC	960,000	636.4	16487.0	127.8	4515.9	485.2	10412.0	170	5862.1	383.5	12532.7
HPAH	FLUORANTHENE	ug/kg	1,700	--	ug/kg-OC	160,000	150	3886.0	29	1024.7	110	2360.5	38	1310.3	87	2843.1
HPAH	PYRENE	ug/kg	2,600	11,980	ug/kg-OC	1.00E+06	170	4404.1	30	1060.1	110	2360.5	44	1517.2	98	3202.6
HPAH	BENZO (A) ANTHRACENE	ug/kg	1,300	--	ug/kg-OC	110,000	65	1683.9	8.3	293.3 J	40	858.4	12	413.8	28	915.0
HPAH	CHRYSENE	ug/kg	1,400	--	ug/kg-OC	110,000	63	1632.1	11	388.7	45	965.7	16	551.7	35	1143.8
HPAH	BENZO (B) FLUORANTHENE	ug/kg	3,200	--	ug/kg	--	52	1347.2	12	424.0	50	1073.0	15	517.2	33	1078.4
HPAH	BENZO(K)FLUORANTHENE	ug/kg	3,200	--	ug/kg	--	20	518.1	4.2	148.4 J	16	343.3	4.5	155.2 J	12	392.2
HPAH	Total Benzo(b+k)fluoranthenes	ug/kg	3,200	--	ug/kg-OC	230,000	72	1865.3	16.2	572.4	66	1416.3	19.5	672.4	45	1470.6
HPAH	BENZO (A) PYRENE	ug/kg	1,600	--	ug/kg-OC	99,000	56	1450.8	10	353.4 J	43	922.7	16	551.7	36	1176.5
HPAH	INDENO (1,2,3-C,D) PYRENE	ug/kg	600	--	ug/kg-OC	34,000	31	803.1	7.9	279.2 J	30	643.8	10	344.8	22	719.0
HPAH	DIBENZO (A,H) ANTHRACENE	ug/kg	230	--	ug/kg-OC	12,000	7.4	191.7 J	11	388.7 U	7.2	154.5 J	2.5	86.2 J	6.5	212.4 J
HPAH	BENZO (G,H,I) PERYLENE	ug/kg	670	--	ug/kg-OC	31,000	22	569.9	9.9	349.8 J	34	729.6	12	413.8	26	849.7
CHYDRO	1,3-DICHLOROBENZENE	ug/kg	170	--	--	--	8.7	U	11	U	9.8	U	9.3	U	9	U

TABLE 4
Sediment Results at Aberdeen Log Yard Property
Pontoon Site, WSDOT SR 520

		Sample ID: ALY-1-S		Sample ID: ALY-2-S		Sample ID: ALY-2-B-4-8		Sample ID: ALY-2-B-8-12		Sample ID: ALY-2-B-12-16											
		Sample Type: Surface		Sample Type: Surface		Sample Type: Subsurface		Sample Type: Subsurface		Sample Type: Subsurface											
		Sample Depth (ft MLLW): +6 to +2		Sample Depth (ft MLLW): +3 to -1		Sample Depth (ft MLLW): -1 to -5		Sample Depth (ft MLLW): -5 to -9		Sample Depth (ft MLLW): -5 to -9											
		Normal/Duplicate Sample: N		Normal/Duplicate Sample: N		Normal/Duplicate Sample: N		Normal/Duplicate Sample: N		Normal/Duplicate Sample: N											
		Sample Date: 25-Feb-09		Sample Date: 24-Feb-09		Sample Date: 24-Feb-09		Sample Date: 24-Feb-09		Sample Date: 24-Feb-09											
Chemical Group	Analyte	DMMP		SMS		OC-		OC-		OC-		OC-		OC-							
		Units	SL	BT	Units	SQS	Dry Weight	normalized	Dry Weight	normalized	Dry Weight	normalized	Dry Weight	normalized	Dry Weight	normalized					
CHYDRO	1,4-DICHLOROBENZENE	ug/kg	110	--	ug/kg-OC	3,100	8.7	225.4	U	11	388.7	U	6.7	143.8	J	9.3	320.7	U	9	294.1	U
CHYDRO	1,2-DICHLOROBENZENE	ug/kg	35	--	ug/kg-OC	2,300	8.7	225.4	U	11	388.7	U	9.8	210.3	U	9.3	320.7	U	9	294.1	U
CHYDRO	1,2,4-TRICHLOROBENZENE	ug/kg	31	--	ug/kg-OC	810	8.7	225.4	U	11	388.7	U	9.8	210.3	U	9.3	320.7	U	9	294.1	U
CHYDRO	HEXACHLOROBENZENE	ug/kg	22	168	ug/kg-OC	380	8.7	225.4	U	11	388.7	U	9.8	210.3	U	9.3	320.7	U	9	294.1	U
PHTH	DIMETHYL PHTHALATE	ug/kg	71	--	ug/kg-OC	53,000	8.7	225.4	U	11	388.7	U	9.8	210.3	U	9.3	320.7	U	9	294.1	U
PHTH	DIETHYL PHTHALATE	ug/kg	200	--	ug/kg-OC	61,000	8.7	225.4	U	11	388.7	U	9.8	210.3	U	9.3	320.7	U	9	294.1	U
PHTH	DI-N-BUTYLPHTHALATE	ug/kg	1,400	--	ug/kg-OC	220,000	18	466.3	U	21	742.0	U	20	429.2	U	19	655.2	U	18	588.2	U
PHTH	BUTYL BENZYLPHTHALATE	ug/kg	63	--	ug/kg-OC	4,900	8.7	225.4	U	11	388.7	U	9.8	210.3	U	9.3	320.7	U	14	457.5	U
PHTH	BIS (2-ETHYLHEXYL) PHTHALATE	ug/kg	1,300	--	ug/kg-OC	47,000	13	336.8	J	15	530.0	J	42	901.3	J	93	3206.9	U	9.8	320.3	J
PHTH	DI-N-OCTYLPHTHALATE	ug/kg	6,200	--	ug/kg-OC	58,000	8.7	225.4	U	11	388.7	U	9.8	210.3	U	9.3	320.7	U	9	294.1	U
PHENOLS	PHENOL	ug/kg	420	--	ug/kg	420	64			6		J	51			7.3		J	10		J
PHENOLS	2-METHYLPHENOL	ug/kg	63	--	ug/kg	63	8.7		U	11		U	28			9.3		U	9		U
PHENOLS	4-METHYLPHENOL	ug/kg	670	--	ug/kg	670	12			29			550			50			190		
PHENOLS	2,4-DIMETHYLPHENOL	ug/kg	29	--	ug/kg	29	44		U	53		U	15	J		47		U	45		U
PHENOLS	PENTACHLOROPHENOL	ug/kg	400	504	ug/kg	360	87		U	110		U	98		U	93		U	90		U
MEXTRACT	BENZYL ALCOHOL	ug/kg	57	--	ug/kg	57	18		U	4		J	20		U	19		U	18		U
MEXTRACT	BENZOIC ACID	ug/kg	650	--	ug/kg	650	180		U	210		U	200		U	190		U	180		U
MEXTRACT	DIBENZOFURAN	ug/kg	540	--	ug/kg-OC	15000	5.4	139.9	J	3.8	134.3	J	18	386.3		5.4	186.2	J	11	359.5	
MEXTRACT	HEXACHLOROETHANE	ug/kg	1,400	--	--	--	8.7		U	11		U	9.8		U	9.3		U	9		U
MEXTRACT	HEXACHLOROBUTADIENE	ug/kg	29	--	ug/kg-OC	3,900	8.7	225.4	U	11	388.7	U	9.8	210.3	U	9.3	320.7	U	9	294.1	U
MEXTRACT	N-NITROSODIPHENYLAMINE	ug/kg	28	--	ug/kg-OC	11,000	8.7	225.4	U	11	388.7	U	9.8	210.3	U	9.3	320.7	U	9	294.1	U
VOC	TCE	ug/kg	160	--	--	--	5.5		U	6.9		U	6.8		U	5.5		U	5.9		U
VOC	TETRACHLOROETHENE	ug/kg	57	--	--	--	5.5		U	6.9		U	6.8		U	5.5		U	5.9		U
VOC	ETHYLBENZENE	ug/kg	10	--	--	--	5.5		U	6.9		U	6.8		U	5.5		U	5.9		U
VOC	XYLENES, TOTAL	ug/kg	40	--	--	--	11		U	14		U	14		U	11		U	12		U
PEST	4,4'-DDD	ug/kg	--	--	--	--	0.15		J	0.92		J	6			0.92		U	0.91		U
PEST	4,4'-DDE	ug/kg	--	--	--	--	0.87		U	0.29		J	2.1			0.92		U	0.91		U
PEST	4,4'-DDT	ug/kg	--	--	--	--	0.61		J	1.6		U	1.4			0.92		U	0.91		U
PEST	Total DDT	ug/kg	6.9	50	--	--	1.195			2.01			9.5			1.38		U	1.365		U
PEST	ALDRIN	ug/kg	10	--	--	--	0.87		U	1.1		U	0.99		U	0.92		U	0.91		U
PEST	ALPHA-CHLORDANE	ug/kg	--	--	--	--	0.87		U	1.1		U	0.99		U	0.92		U	0.91		U
PEST	cis-Nonachlor	ug/kg	10	--	--	--	0.24		J	1.1		U	0.99		U	0.92		U	0.91		U
PEST	GAMMA-CHLORDANE	ug/kg	--	--	--	--	0.87		U	1.5			1.2		U	0.92		U	0.91		U
PEST	Oxychlordane	ug/kg	10	--	--	--	0.87		U	1.1		U	0.99		U	0.92		U	0.91		U
PEST	TRANS-NONACHLOR	ug/kg	10	--	--	--	0.87		U	1.1		U	0.99		U	0.92		U	0.91		U
PEST	Total Chlordane	ug/kg	10	37	--	--	2			4			3		U	2		U	2		U
PEST	DIELDRIN	ug/kg	10	--	--	--	0.87		U	1.1		U	0.99		U	0.92		U	0.91		U
PEST	HEPTACHLOR	ug/kg	10	--	--	--	0.87		U	1.1		U	0.99		U	0.92		U	0.91		U
PEST	GAMMA-BHC (LINDANE)	ug/kg	10	--	--	--	0.87		U	1.1		U	0.99		U	0.92		U	0.91		U
PCB	AROCLOR-1016	ug/kg	130	--	--	--	8.7		U	11		U	9.9		U	9.2		U	9.1		U
PCB	AROCLOR-1221	ug/kg	130	--	--	--	18		U	21		U	20		U	19		U	19		U
PCB	AROCLOR-1232	ug/kg	130	--	--	--	8.7		U	11		U	9.9		U	9.2		U	9.1		U
PCB	AROCLOR-1242	ug/kg	130	--	--	--	8.7		U	11		U	9.9		U	9.2		U	9.1		U
PCB	AROCLOR-1248	ug/kg	130	--	--	--	8.7		U	11		U	9.9		U	9.2		U	9.1		U
PCB	AROCLOR-1254	ug/kg	130	--	--	--	8.7		U	19		U	51			9.2		U	9.1		U
PCB	AROCLOR-1260	ug/kg	130	--	--	--	8.7		U	23		J	9.9		U	9.2		U	9.1		U

TABLE 4
Sediment Results at Aberdeen Log Yard Property
Pontoon Site, WSDOT SR 520

		Sample ID: ALY-1-S		Sample ID: ALY-2-S		Sample ID: ALY-2-B-4-8		Sample ID: ALY-2-B-8-12		Sample ID: ALY-2-B-12-16						
		Sample Type: Surface		Sample Type: Surface		Sample Type: Subsurface		Sample Type: Subsurface		Sample Type: Subsurface						
		Sample Depth (ft MLLW): +6 to +2		Sample Depth (ft MLLW): +3 to -1		Sample Depth (ft MLLW): -1 to -5		Sample Depth (ft MLLW): -5 to -9		Sample Depth (ft MLLW): -5 to -9						
		Normal/Duplicate Sample: N		Normal/Duplicate Sample: N		Normal/Duplicate Sample: N		Normal/Duplicate Sample: N		Normal/Duplicate Sample: N						
		Sample Date: 25-Feb-09		Sample Date: 24-Feb-09		Sample Date: 24-Feb-09		Sample Date: 24-Feb-09		Sample Date: 24-Feb-09						
Chemical Group	Analyte	DMMP			SMS		OC-		OC-		OC-		OC-			
		Units	SL	BT	Units	SQS	Dry Weight	normalized	Dry Weight	normalized	Dry Weight	normalized	Dry Weight	normalized		
PCB	Total PCBs	ug/kg	130	38000	ug/kg-OC	12,000	18	466.3 U	23	812.7	51	1094.4	19	655.2 U	19	620.9 U
GUAI	3,4,5-Trichloroguaiacol	mg/kg	--	--	--	--	2.5	UJ	0.26	UJ	0.25	UJ	0.25	UJ	0.25	UJ
GUAI	3,4,6-Trichloroguaiacol	mg/kg	--	--	--	--	2.5	UJ	0.26	UJ	0.25	UJ	0.25	UJ	0.25	UJ
GUAI	3,4-Dichloroguaiacol	mg/kg	--	--	--	--	2.5	UJ	0.26	UJ	0.25	UJ	0.25	UJ	0.25	UJ
GUAI	4,5,6-Trichloroguaiacol	mg/kg	--	--	--	--	2.5	UJ	0.26	UJ	0.25	UJ	0.25	UJ	0.25	UJ
GUAI	4,5-Dichloroguaiacol	mg/kg	--	--	--	--	2.5	UJ	0.26	UJ	0.25	UJ	0.25	UJ	0.25	UJ
GUAI	4,6-Dichloroguaiacol	mg/kg	--	--	--	--	2.5	UJ	0.26	UJ	0.25	UJ	0.25	UJ	0.25	UJ
GUAI	4-Chloroguaiacol	mg/kg	--	--	--	--	1.3	UJ	0.13	UJ	0.13	UJ	0.13	UJ	0.13	UJ
GUAI	Tetrachloroguaiacol	mg/kg	--	--	--	--	5	UJ	0.52	UJ	0.5	UJ	0.5	UJ	0.5	UJ

Notes:

CONV = conventional data
ORMET = organometallic compounds
SVOC = semivolatile organic compounds
VOC = volatile organic compounds

umg/kg = milligrams per kilogram
ug/kg = micrograms per kilogram

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the sample-specific method detection limit (MDL).

J = The analyte was positively identified; the quantitation is an estimation.

R = The result is rejected.

N = normal sample

FD = field duplicate sample

FT = feet (MLLW)

FT = feet (MLLW)

Shaded cell indicates analyte not detected, but MDL exceed the associated SL or SQS

Bolded = exceeded associated SL

TABLE 4
Sediment Results at Aberdeen Log Yard Property
Pontoon Site, WSDOT SR 520

		Sample ID: ALY-2-B-16-20		Sample ID: ALY-3-S		Sample ID: ALY-3-B-4-8		Sample ID: ALY-3-B-8-12		Sample ID: ALY-3-B-12-16						
		Sample Type: Subsurface		Sample Type: Surface		Sample Type: Subsurface		Sample Type: Subsurface		Sample Type: Subsurface						
		Sample Depth (ft MLLW): -15 to -19		Sample Depth (ft MLLW): +1 to -3		Sample Depth (ft MLLW): -3 to -7		Sample Depth (ft MLLW): -7 to -11		Sample Depth (ft MLLW): -11 to -15						
		Normal/Duplicate Sample: N		Normal/Duplicate Sample: N		Normal/Duplicate Sample: N		Normal/Duplicate Sample: N		Normal/Duplicate Sample: N						
		Sample Date: 24-Feb-09		Sample Date: 24-Feb-09		Sample Date: 24-Feb-09		Sample Date: 24-Feb-09		Sample Date: 24-Feb-09						
Chemical Group	Analyte	DMMP			SMS		OC-		OC-		OC-		OC-			
		Units	SL	BT	Units	SQS	Dry Weight	normalized	Dry Weight	normalized	Dry Weight	normalized	Dry Weight	normalized		
CONV	Ammonia-N	mg/kg	--	--	mg/kg	--	346		239		365		449		372	
CONV	Sulfide	mg/kg	--	--	mg/kg	--	157		4,060	J	1,170		592		133	
CONV	Total Solids	percent	--	--	percent	--	54.5		50.3		55.6		51.7		54.5	
CONV	Total Organic Carbon	percent	--	--	percent	--	3.52		2.91		2.88		3.46		3.14	
CONV	Total Volatile Solids	percent	--	--	percent	--	9.56		9.56		9.25		10.3		9.25	
GRAIN	Clay	percent	--	--	percent	--	23.8		23.8		23.9		14.4		25.7	
GRAIN	Gravel	percent	--	--	percent	--	3.84		6.81		3.29		27.9		1.9	
GRAIN	Sand, Coarse	percent	--	--	percent	--	1.96		1.06		1.57		4.63		1.58	
GRAIN	Sand, Fine	percent	--	--	percent	--	2.69		0.77		1.34		1.92		1.57	
GRAIN	Sand, Medium	percent	--	--	percent	--	1.94		0.76		1.1		2.66		1.34	
GRAIN	Sand, Very Coarse	percent	--	--	percent	--	3.83		2.51		2.49		8.22		2	
GRAIN	Sand, Very Fine	percent	--	--	percent	--	4.28		1.31		2.73		2.86		3.53	
GRAIN	Silt	percent	--	--	percent	--	57.3		59.4		58.7		34.8		60.5	
METAL	ANTIMONY	mg/kg	150	--	mg/kg	--	2.5	U	2.8	UJ	2.5	U	2.7	U	2.5	U
METAL	ARSENIC	mg/kg	57	507.1	mg/kg	57	8		6.4		7.5		7.1		7.6	
METAL	CADMIUM	mg/kg	5.1	11.3	mg/kg	5.1	0.08	B	0.14	B	0.07	B	0.27	U	0.25	U
METAL	CHROMIUM	mg/kg	267	267	mg/kg	260	39.1		44.6		40.9		41.3		37.6	
METAL	COPPER	mg/kg	390	1,027	mg/kg	390	57.9		69.4		63		59.4		55.6	
METAL	LEAD	mg/kg	450	975	mg/kg	450	14.4		18.4		16.7		13.3		12.2	
METAL	MERCURY	mg/kg	0.41	1.5	mg/kg	0.41	0.138		0.115		0.132		0.133		0.12	
METAL	NICKEL	mg/kg	140	370	mg/kg	--	24.4		26.7		25.1		25.3		23.7	
METAL	SELENIUM	mg/kg	3	3	mg/kg	--	1.3	U	1.4	U	1.2	U	1.4	U	1.3	U
METAL	SILVER	mg/kg	6.1	6.1	mg/kg	6.1	1.1	U	1.3	U	1.1	U	1.2	U	1.1	U
METAL	ZINC	mg/kg	410	2,783	mg/kg	410	86.1		97.1		89.1		86.9		83.4	
ORMET	Tri-n-butyltin	ug/kg	--	--	ug/kg	--	1.9	U	2	U	1.8	U	2	U	1.9	U
LPAH	Total LPAH	ug/kg	5,200	--	ug/kg-OC	370,000	230	6534.1	54.8	1883.2	132.7	4607.6	226.8	6554.9	413	13152.9
LPAH	NAPHTHALENE	ug/kg	2,100	--	ug/kg-OC	99,000	97	2755.7	14	481.1	49	1701.4	66	1907.5	160	5095.5
LPAH	ACENAPHTHYLENE	ug/kg	560	--	ug/kg-OC	66,000	31	880.7	4.7	161.5 J	19	659.7	25	722.5	42	1337.6
LPAH	ACENAPHTHENE	ug/kg	500	--	ug/kg-OC	16,000	7	198.9 J	2.5	85.9 J	4.2	145.8 J	7.8	225.4 J	14	445.9
LPAH	FLUORENE	ug/kg	540	4,600	ug/kg-OC	23,000	11	312.5	4.4	151.2 J	7.7	267.4 J	14	404.6	23	732.5
LPAH	PHENANTHRENE	ug/kg	1,500	--	ug/kg-OC	100,000	60	1704.5	19	652.9	36	1250.0	78	2254.3	120	3821.7
LPAH	ANTHRACENE	ug/kg	960	--	ug/kg-OC	220,000	12	340.9	4.1	140.9 J	7.8	270.8 J	18	520.2	25	796.2
LPAH	2-METHYLNAPHTHALENE	ug/kg	670	--	--	--	12	340.9	6.1	209.6 J	9	312.5	18	520.2	29	923.6
HPAH	Total HPAH	ug/kg	12,000	--	ug/kg-OC	960,000	244.8	6954.5	115.1	3955.3	146.35	5081.6	317.6	9179.2	404.3	12875.8
HPAH	FLUORANTHENE	ug/kg	1,700	--	ug/kg-OC	160,000	62	1761.4	26	893.5	34	1180.6	73	2109.8	110	3503.2
HPAH	PYRENE	ug/kg	2,600	11,980	ug/kg-OC	1.00E+06	68	1931.8	26	893.5	36	1250.0	85	2456.6	120	3821.7
HPAH	BENZO (A) ANTHRACENE	ug/kg	1,300	--	ug/kg-OC	110,000	16	454.5	8.1	278.4 J	10	347.2	24	693.6	25	796.2
HPAH	CHRYSENE	ug/kg	1,400	--	ug/kg-OC	110,000	19	539.8	11	378.0	13	451.4	28	809.2	30	955.4
HPAH	BENZO (B) FLUORANTHENE	ug/kg	3,200	--	ug/kg	--	21	596.6	11	378.0	13	451.4	28	809.2	30	955.4
HPAH	BENZO(K)FLUORANTHENE	ug/kg	3,200	--	ug/kg	--	5.9	167.6 J	4.1	140.9 J	4.2	145.8 J	7.7	222.5 J	9.7	308.9
HPAH	Total Benzo(b+k)fluoranthenes	ug/kg	3,200	--	ug/kg-OC	230,000	26.9	764.2	15.1	518.9	17.2	597.2	35.7	1031.8	39.7	1264.3
HPAH	BENZO (A) PYRENE	ug/kg	1,600	--	ug/kg-OC	99,000	20	568.2	10	343.6	13	451.4	29	838.2	29	923.6
HPAH	INDENO (1,2,3-C,D) PYRENE	ug/kg	600	--	ug/kg-OC	34,000	13	369.3	7.8	268.0 J	8.9	309.0	17	491.3	20	636.9
HPAH	DIBENZO (A,H) ANTHRACENE	ug/kg	230	--	ug/kg-OC	12,000	2.9	82.4 J	2.1	72.2 J	8.9	309.0 U	3.9	112.7 J	9.2	293.0 U
HPAH	BENZO (G,H,I) PERYLENE	ug/kg	670	--	ug/kg-OC	31,000	17	483.0	9	309.3 J	9.8	340.3	22	635.8	26	828.0
CHYDRO	1,3-DICHLOROBENZENE	ug/kg	170	--	--	--	9.2	U	10	U	8.9	U	9.7	U	9.2	U

TABLE 4
Sediment Results at Aberdeen Log Yard Property
Pontoon Site, WSDOT SR 520

		Sample ID: ALY-2-B-16-20			Sample ID: ALY-3-S		Sample ID: ALY-3-B-4-8		Sample ID: ALY-3-B-8-12		Sample ID: ALY-3-B-12-16					
		Sample Type: Subsurface			Sample Type: Surface		Sample Type: Subsurface		Sample Type: Subsurface		Sample Type: Subsurface					
		Sample Depth (ft MLLW): -15 to -19			Sample Depth (ft MLLW): +1 to -3		Sample Depth (ft MLLW): -3 to -7		Sample Depth (ft MLLW): -7 to -11		Sample Depth (ft MLLW): -11 to -15					
		Normal/Duplicate Sample: N			Normal/Duplicate Sample: N		Normal/Duplicate Sample: N		Normal/Duplicate Sample: N		Normal/Duplicate Sample: N					
		Sample Date: 24-Feb-09			Sample Date: 24-Feb-09		Sample Date: 24-Feb-09		Sample Date: 24-Feb-09		Sample Date: 24-Feb-09					
Chemical Group	Analyte	DMMP		SMS		OC-		OC-		OC-		OC-				
		Units	SL	BT	Units	SQS	Dry Weight	normalized	Dry Weight	normalized	Dry Weight	normalized	Dry Weight	normalized		
CHYDRO	1,4-DICHLOROBENZENE	ug/kg	110	--	ug/kg-OC	3,100	9.2	261.4 U	10	343.6 U	8.9	309.0 U	9.7	280.3 U	9.2	293.0 U
CHYDRO	1,2-DICHLOROBENZENE	ug/kg	35	--	ug/kg-OC	2,300	9.2	261.4 U	10	343.6 U	8.9	309.0 U	9.7	280.3 U	9.2	293.0 U
CHYDRO	1,2,4-TRICHLOROBENZENE	ug/kg	31	--	ug/kg-OC	810	9.2	261.4 U	10	343.6 U	8.9	309.0 U	9.7	280.3 U	9.2	293.0 U
CHYDRO	HEXACHLOROBENZENE	ug/kg	22	168	ug/kg-OC	380	9.2	261.4 U	10	343.6 U	8.9	309.0 U	9.7	280.3 U	9.2	293.0 U
PHTH	DIMETHYL PHTHALATE	ug/kg	71	--	ug/kg-OC	53,000	9.2	261.4 U	10	343.6 U	8.9	309.0 U	9.7	280.3 U	9.2	293.0 U
PHTH	DIETHYL PHTHALATE	ug/kg	200	--	ug/kg-OC	61,000	9.2	261.4 U	10	343.6 U	8.9	309.0 U	9.7	280.3 U	9.2	293.0 U
PHTH	DI-N-BUTYLPHTHALATE	ug/kg	1,400	--	ug/kg-OC	220,000	19	539.8 U	20	687.3 U	18	625.0 U	20	578.0 U	19	605.1 U
PHTH	BUTYL BENZYLPHTHALATE	ug/kg	63	--	ug/kg-OC	4,900	9.2	261.4 U	10	343.6 U	8.9	309.0 U	9.7	280.3 U	9.2	293.0 U
PHTH	BIS (2-ETHYLHEXYL) PHTHALATE	ug/kg	1,300	--	ug/kg-OC	47,000	20	568.2 J	21	721.6 J	89	3090.3 U	97	2803.5 U	92	2929.9 U
PHTH	DI-N-OCTYLPHTHALATE	ug/kg	6,200	--	ug/kg-OC	58,000	9.2	261.4 U	10	343.6 U	8.9	309.0 U	9.7	280.3 U	9.2	293.0 U
PHENOLS	PHENOL	ug/kg	420	--	ug/kg	420	6.1	J	5.1	J	7.1	J	6.8	J	9.1	J
PHENOLS	2-METHYLPHENOL	ug/kg	63	--	ug/kg	63	9.2	U	10	U	8.9	U	9.7	U	9.2	U
PHENOLS	4-METHYLPHENOL	ug/kg	670	--	ug/kg	670	16	U	20	U	70	U	62	U	140	U
PHENOLS	2,4-DIMETHYLPHENOL	ug/kg	29	--	ug/kg	29	46	U	50	U	45	U	49	U	46	U
PHENOLS	PENTACHLOROPHENOL	ug/kg	400	504	ug/kg	360	92	U	100	U	89	U	97	U	92	U
MEXTRACT	BENZYL ALCOHOL	ug/kg	57	--	ug/kg	57	19	U	20	U	18	U	20	U	19	U
MEXTRACT	BENZOIC ACID	ug/kg	650	--	ug/kg	650	190	U	200	U	180	U	200	U	190	U
MEXTRACT	DIBENZOFURAN	ug/kg	540	--	ug/kg-OC	15000	8.4	238.6 J	3	103.1 J	5.6	194.4 J	8.5	245.7 J	15	477.7
MEXTRACT	HEXACHLOROETHANE	ug/kg	1,400	--	--	--	9.2	U	10	U	8.9	U	9.7	U	9.2	U
MEXTRACT	HEXACHLOROBUTADIENE	ug/kg	29	--	ug/kg-OC	3,900	9.2	261.4 U	10	343.6 U	8.9	309.0 U	9.7	280.3 U	9.2	293.0 U
MEXTRACT	N-NITROSODIPHENYLAMINE	ug/kg	28	--	ug/kg-OC	11,000	9.2	261.4 U	10	343.6 U	8.9	309.0 U	9.7	280.3 U	9.2	293.0 U
VOC	TCE	ug/kg	160	--	--	--	6.8	U	6.4	U	6	U	5.9	U	5.3	U
VOC	TETRACHLOROETHENE	ug/kg	57	--	--	--	6.8	U	6.4	U	6	U	5.9	U	5.3	U
VOC	ETHYLBENZENE	ug/kg	10	--	--	--	6.8	U	6.4	U	6	U	5.9	U	5.3	U
VOC	XYLENES, TOTAL	ug/kg	40	--	--	--	14	U	13	U	12	U	12	U	11	U
PEST	4,4'-DDD	ug/kg	--	--	--	--	0.92	U	0.69	J	0.9	U	0.97	U	0.92	U
PEST	4,4'-DDE	ug/kg	--	--	--	--	0.92	U	0.47	J	0.9	U	0.97	U	0.92	U
PEST	4,4'-DDT	ug/kg	--	--	--	--	0.92	U	1.3	U	0.9	U	0.97	U	0.92	U
PEST	Total DDT	ug/kg	6.9	50	--	--	1.38	U	2.46	U	1.35	U	1.455	U	1.38	U
PEST	ALDRIN	ug/kg	10	--	--	--	0.92	U	1	U	0.9	U	0.97	U	0.92	U
PEST	ALPHA-CHLORDANE	ug/kg	--	--	--	--	0.92	U	1	U	0.9	U	0.97	U	0.92	U
PEST	cis-Nonachlor	ug/kg	10	--	--	--	0.92	U	1.6	U	0.9	U	0.97	U	0.92	U
PEST	GAMMA-CHLORDANE	ug/kg	--	--	--	--	0.92	U	1.7	J	0.9	U	0.97	U	0.92	U
PEST	Oxychlordane	ug/kg	10	--	--	--	0.92	U	1	U	0.9	U	0.97	U	0.92	U
PEST	TRANS-NONACHLOR	ug/kg	10	--	--	--	0.92	U	0.1	J	0.9	U	0.97	U	0.92	U
PEST	Total Chlordane	ug/kg	10	37	--	--	2	U	4	U	2	U	2	U	2	U
PEST	DIELDRIN	ug/kg	10	--	--	--	0.92	U	1	U	0.9	U	0.57	J	0.92	U
PEST	HEPTACHLOR	ug/kg	10	--	--	--	0.92	U	1	U	0.9	U	0.97	U	0.92	U
PEST	GAMMA-BHC (LINDANE)	ug/kg	10	--	--	--	0.92	U	1	U	0.9	U	0.97	U	0.92	U
PCB	AROCLOR-1016	ug/kg	130	--	--	--	9.2	U	10	U	9	U	9.7	U	9.2	U
PCB	AROCLOR-1221	ug/kg	130	--	--	--	19	U	20	U	18	U	20	U	19	U
PCB	AROCLOR-1232	ug/kg	130	--	--	--	9.2	U	10	U	9	U	9.7	U	9.2	U
PCB	AROCLOR-1242	ug/kg	130	--	--	--	9.2	U	10	U	9	U	9.7	U	9.2	U
PCB	AROCLOR-1248	ug/kg	130	--	--	--	9.2	U	10	U	9	U	9.7	U	9.2	U
PCB	AROCLOR-1254	ug/kg	130	--	--	--	9.2	U	21	U	9	U	9.7	U	9.2	U
PCB	AROCLOR-1260	ug/kg	130	--	--	--	9.2	U	20	J	9	U	9.7	U	9.2	U

TABLE 4
Sediment Results at Aberdeen Log Yard Property
Pontoon Site, WSDOT SR 520

		Sample ID: ALY-2-B-16-20			Sample ID: ALY-3-S		Sample ID: ALY-3-B-4-8		Sample ID: ALY-3-B-8-12		Sample ID: ALY-3-B-12-16					
		Sample Type: Subsurface			Sample Type: Surface		Sample Type: Subsurface		Sample Type: Subsurface		Sample Type: Subsurface					
		Sample Depth (ft MLLW): -15 to -19			Sample Depth (ft MLLW): +1 to -3		Sample Depth (ft MLLW): -3 to -7		Sample Depth (ft MLLW): -7 to -11		Sample Depth (ft MLLW): -11 to -15					
		Normal/Duplicate Sample: N			Normal/Duplicate Sample: N		Normal/Duplicate Sample: N		Normal/Duplicate Sample: N		Normal/Duplicate Sample: N					
		Sample Date: 24-Feb-09			Sample Date: 24-Feb-09		Sample Date: 24-Feb-09		Sample Date: 24-Feb-09		Sample Date: 24-Feb-09					
Chemical Group	Analyte	DMMP		SMS		OC-		OC-		OC-		OC-				
		Units	SL	BT	Units	SQS	Dry Weight	normalized	Dry Weight	normalized	Dry Weight	normalized	Dry Weight	normalized		
PCB	Total PCBs	ug/kg	130	38000	ug/kg-OC	12,000	19	539.8 U	20	687.3	18	625.0 U	20	578.0 U	19	605.1 U
GUAI	3,4,5-Trichloroguaiacol	mg/kg	--	--	--	--	0.25	UJ	0.25	UJ	0.25	UJ	0.25	UJ	0.25	UJ
GUAI	3,4,6-Trichloroguaiacol	mg/kg	--	--	--	--	0.25	UJ	0.25	UJ	0.25	UJ	0.25	UJ	0.25	UJ
GUAI	3,4-Dichloroguaiacol	mg/kg	--	--	--	--	0.25	UJ	0.25	UJ	0.25	UJ	0.25	UJ	0.25	UJ
GUAI	4,5,6-Trichloroguaiacol	mg/kg	--	--	--	--	0.25	UJ	0.25	UJ	0.25	UJ	0.25	UJ	0.25	UJ
GUAI	4,5-Dichloroguaiacol	mg/kg	--	--	--	--	0.25	UJ	0.25	UJ	0.25	UJ	0.25	UJ	0.25	UJ
GUAI	4,6-Dichloroguaiacol	mg/kg	--	--	--	--	0.25	UJ	0.25	UJ	0.25	UJ	0.25	UJ	0.25	UJ
GUAI	4-Chloroguaiacol	mg/kg	--	--	--	--	0.13	UJ	0.13	UJ	0.13	UJ	0.13	UJ	0.13	UJ
GUAI	Tetrachloroguaiacol	mg/kg	--	--	--	--	0.5	UJ	0.5	UJ	0.5	UJ	0.5	UJ	0.5	UJ

Notes:

CONV = conventional data
ORMET = organometallic compounds
SVOC = semivolatile organic compounds
VOC = volatile organic compounds

umg/kg = milligrams per kilogram
ug/kg = micrograms per kilogram

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the sample-specific method detection limit (MDL).

J = The analyte was positively identified; the quantitation is an estimation.

R = The result is rejected.

N = normal sample
FD = field duplicate sample
FT = feet (MLLW)
FT = feet (MLLW)

Shaded cell indicates analyte not detected, but MDL exceed the associated SL or SQS

Bolded = exceeded associated SL

TABLE 4
Sediment Results at Aberdeen Log Yard Property
Pontoon Site, WSDOT SR 520

		Sample ID: ALY-3-B-16-20		Sample ID: ALY-4-S		Sample ID: ALY-4-X		Sample ID: ALY-4B-4-8		Sample ID: ALY-4B-8-12						
		Sample Type: Subsurface		Sample Type: Surface		Sample Type: Surface		Sample Type: Subsurface		Sample Type: Subsurface						
		Sample Depth (ft MLLW): -15 to -19		Sample Depth (ft MLLW): -5 to -9		Sample Depth (ft MLLW): -5 to -9		Sample Depth (ft MLLW): -9 to -13		Sample Depth (ft MLLW): -13 to -17						
		Normal/Duplicate Sample: N		Normal/Duplicate Sample: N		Normal/Duplicate Sample: FD		Normal/Duplicate Sample: N		Normal/Duplicate Sample: N						
		Sample Date: 24-Feb-09		Sample Date: 25-Feb-09		Sample Date: 25-Feb-09		Sample Date: 25-Feb-09		Sample Date: 25-Feb-09						
Chemical Group	Analyte	DMMP			SMS		OC-		OC-		OC-		OC-			
		Units	SL	BT	Units	SQS	Dry Weight	normalized	Dry Weight	normalized	Dry Weight	normalized	Dry Weight	normalized		
CONV	Ammonia-N	mg/kg	--	--	mg/kg	--	308		208		203		306	310		
CONV	Sulfide	mg/kg	--	--	mg/kg	--	179		1,510		1,790		1,960	1,250		
CONV	Total Solids	percent	--	--	percent	--	53.4		54.4		54.9		55.7	56.1		
CONV	Total Organic Carbon	percent	--	--	percent	--	3.01		3.15		2.95		2.37	2.17		
CONV	Total Volatile Solids	percent	--	--	percent	--	9.03		9.56		9.65		7.89	7.84		
GRAIN	Clay	percent	--	--	percent	--	26.1		20.4		16.2		15.7	16.5		
GRAIN	Gravel	percent	--	--	percent	--	2.91		3.2		3.04		6.28	6.34		
GRAIN	Sand, Coarse	percent	--	--	percent	--	2.05		2.6		6.1		2.91	2.89		
GRAIN	Sand, Fine	percent	--	--	percent	--	1.66		4.76		5.38		3.58	3.82		
GRAIN	Sand, Medium	percent	--	--	percent	--	1.78		2.68		4.28		1.99	2.54		
GRAIN	Sand, Very Coarse	percent	--	--	percent	--	2.72		3.84		7.55		5.08	5.5		
GRAIN	Sand, Very Fine	percent	--	--	percent	--	2.89		8.33		8.38		12.5	11.9		
GRAIN	Silt	percent	--	--	percent	--	58		52.4		50.1		51.7	49.5		
METAL	ANTIMONY	mg/kg	150	--	mg/kg	--	2.6	U	2.5	U	2.5	U	2.5	U		
METAL	ARSENIC	mg/kg	57	507.1	mg/kg	57	7.1		7.4		6.1		6.3	6.8		
METAL	CADMIUM	mg/kg	5.1	11.3	mg/kg	5.1	0.26	U	0.05	B	0.25	U	0.1	B		
METAL	CHROMIUM	mg/kg	267	267	mg/kg	260	35.4		46.6		45		34.5	35.3		
METAL	COPPER	mg/kg	390	1,027	mg/kg	390	56.7		61.3		60.7		57.1	54		
METAL	LEAD	mg/kg	450	975	mg/kg	450	13.6		13.4		14.7		13.1	11.7		
METAL	MERCURY	mg/kg	0.41	1.5	mg/kg	0.41	0.17		0.141		0.121		0.094	0.081		
METAL	NICKEL	mg/kg	140	370	mg/kg	--	23.2		25		24.7		23.6	23.5		
METAL	SELENIUM	mg/kg	3	3	mg/kg	--	1.3	U	1.3	U	1.3	U	1.3	U		
METAL	SILVER	mg/kg	6.1	6.1	mg/kg	6.1	1.2	U	1.1	U	1.1	U	1.1	U		
METAL	ZINC	mg/kg	410	2,783	mg/kg	410	82.1		82.9		82.6		83.3	77.8		
ORMET	Tri-n-butyltin	ug/kg	--	--	ug/kg	--	1.9	U	1.9	U	1.9	U	1.8	U		
LPAH	Total LPAH	ug/kg	5,200	--	ug/kg-OC	370,000	179.6	5966.8	134.5	4269.8	136.3	4620.3	101.1	4265.8	120.6	5557.6
LPAH	NAPHTHALENE	ug/kg	2,100	--	ug/kg-OC	99,000	56	1860.5	38	1206.3	39	1322.0	30	1265.8	36	1659.0
LPAH	ACENAPHTHYLENE	ug/kg	560	--	ug/kg-OC	66,000	21	697.7	14	444.4	11	372.9	9.5	400.8	12	553.0
LPAH	ACENAPHTHENE	ug/kg	500	--	ug/kg-OC	16,000	6.6	219.3 J	6.3	200.0 J	6.3	213.6 J	4.3	181.4 J	4.2	193.5 J
LPAH	FLUORENE	ug/kg	540	4,600	ug/kg-OC	23,000	12	398.7	8.7	276.2 J	10	339.0	7.1	299.6 J	7.2	331.8 J
LPAH	PHENANTHRENE	ug/kg	1,500	--	ug/kg-OC	100,000	59	1960.1	45	1428.6	44	1491.5	33	1392.4	42	1935.5
LPAH	ANTHRACENE	ug/kg	960	--	ug/kg-OC	220,000	13	431.9	9.5	301.6	9	305.1 J	6.2	261.6 J	9.5	437.8
LPAH	2-METHYLNAPHTHALENE	ug/kg	670	--	--	--	12	398.7	13	412.7	17	576.3	11	464.1	9.7	447.0
HPAH	Total HPAH	ug/kg	12,000	--	ug/kg-OC	960,000	276.9	9199.3	235.7	7482.5	173.45	5879.7	146.5	6181.4	215.2	9917.1
HPAH	FLUORANTHENE	ug/kg	1,700	--	ug/kg-OC	160,000	66	2192.7	53	1682.5	46	1559.3	34	1434.6	49	2258.1
HPAH	PYRENE	ug/kg	2,600	11,980	ug/kg-OC	1.00E+06	71	2358.8	52	1650.8	43	1457.6	36	1519.0	53	2442.4
HPAH	BENZO (A) ANTHRACENE	ug/kg	1,300	--	ug/kg-OC	110,000	18	598.0	15	476.2 J	10	339.0 J	11	464.1	15	691.2
HPAH	CHRYSENE	ug/kg	1,400	--	ug/kg-OC	110,000	23	764.1	23	730.2 J	15	508.5 J	13	548.5	18	829.5
HPAH	BENZO (B) FLUORANTHENE	ug/kg	3,200	--	ug/kg	--	23	764.1	25	793.7 J	16	542.4 J	13	548.5	21	967.7
HPAH	BENZO (K) FLUORANTHENE	ug/kg	3,200	--	ug/kg	--	8.2	272.4 J	8.9	282.5 J	4	135.6 J	4.1	173.0 J	5.7	262.7 J
HPAH	Total Benzo(b+k)fluoranthenes	ug/kg	3,200	--	ug/kg-OC	230,000	31.2	1036.5	33.9	1076.2	20	678.0	17.1	721.5	26.7	1230.4
HPAH	BENZO (A) PYRENE	ug/kg	1,600	--	ug/kg-OC	99,000	24	797.3	21	666.7 J	13	440.7 J	14	590.7	19	875.6
HPAH	INDENO (1,2,3-C,D) PYRENE	ug/kg	600	--	ug/kg-OC	34,000	17	564.8	15	476.2 J	9.9	335.6 J	8.7	367.1 J	14	645.2
HPAH	DIBENZO (A,H) ANTHRACENE	ug/kg	230	--	ug/kg-OC	12,000	9.4	312.3 U	4.8	152.4 J	9.1	308.5 U	2.7	113.9 J	3.5	161.3 J
HPAH	BENZO (G,H,I) PERYLENE	ug/kg	670	--	ug/kg-OC	31,000	22	730.9	18	571.4 J	12	406.8 J	10	421.9	17	783.4
CHYDRO	1,3-DICHLOROBENZENE	ug/kg	170	--	--	--	9.4	U	9.2	U	9.1	U	9	U	9	U

TABLE 4
Sediment Results at Aberdeen Log Yard Property
Pontoon Site, WSDOT SR 520

		Sample ID: ALY-3-B-16-20		Sample ID: ALY-4-S		Sample ID: ALY-4-X		Sample ID: ALY-4B-4-8		Sample ID: ALY-4B-8-12						
		Sample Type: Subsurface		Sample Type: Surface		Sample Type: Surface		Sample Type: Subsurface		Sample Type: Subsurface						
		Sample Depth (ft MLLW): -15 to -19		Sample Depth (ft MLLW): -5 to -9		Sample Depth (ft MLLW): -5 to -9		Sample Depth (ft MLLW): -9 to -13		Sample Depth (ft MLLW): -13 to -17						
		Normal/Duplicate Sample: N		Normal/Duplicate Sample: N		Normal/Duplicate Sample: FD		Normal/Duplicate Sample: N		Normal/Duplicate Sample: N						
		Sample Date: 24-Feb-09		Sample Date: 25-Feb-09		Sample Date: 25-Feb-09		Sample Date: 25-Feb-09		Sample Date: 25-Feb-09						
Chemical Group	Analyte	DMMP		SMS		OC-		OC-		OC-		OC-		OC-		
		Units	SL	BT	Units	SQS	Dry Weight	normalized	Dry Weight	normalized	Dry Weight	normalized	Dry Weight	normalized	Dry Weight	normalized
CHYDRO	1,4-DICHLOROBENZENE	ug/kg	110	--	ug/kg-OC	3,100	9.4	312.3 U	9.2	292.1 U	9.1	308.5 U	9	379.7 U	9	414.7 U
CHYDRO	1,2-DICHLOROBENZENE	ug/kg	35	--	ug/kg-OC	2,300	9.4	312.3 U	9.2	292.1 U	9.1	308.5 U	9	379.7 U	9	414.7 U
CHYDRO	1,2,4-TRICHLOROBENZENE	ug/kg	31	--	ug/kg-OC	810	9.4	312.3 U	9.2	292.1 U	9.1	308.5 U	9	379.7 U	9	414.7 U
CHYDRO	HEXACHLOROBENZENE	ug/kg	22	168	ug/kg-OC	380	9.4	312.3 U	9.2	292.1 U	9.1	308.5 U	9	379.7 U	9	414.7 U
PHTH	DIMETHYL PHTHALATE	ug/kg	71	--	ug/kg-OC	53,000	9.4	312.3 U	9.2	292.1 U	9.1	308.5 U	9	379.7 U	9	414.7 U
PHTH	DIETHYL PHTHALATE	ug/kg	200	--	ug/kg-OC	61,000	9.4	312.3 U	9.2	292.1 U	9.1	308.5 U	9	379.7 U	9	414.7 U
PHTH	DI-N-BUTYLPHTHALATE	ug/kg	1,400	--	ug/kg-OC	220,000	19	631.2 U	19	603.2 U	19	644.1 U	18	759.5 U	18	829.5 U
PHTH	BUTYL BENZYLPHTHALATE	ug/kg	63	--	ug/kg-OC	4,900	9.4	312.3 U	35	1111.1 J	9.1	308.5 UJ	9	379.7 U	9	414.7 U
PHTH	BIS (2-ETHYLHEXYL) PHTHALATE	ug/kg	1,300	--	ug/kg-OC	47,000	94	3122.9 U	27	857.1 J	25	847.5 J	15	632.9 J	90	4147.5 U
PHTH	DI-N-OCTYLPHTHALATE	ug/kg	6,200	--	ug/kg-OC	58,000	9.4	312.3 U	9.2	292.1 U	9.1	308.5 U	9	379.7 U	9	414.7 U
PHENOLS	PHENOL	ug/kg	420	--	ug/kg	420	7.8	J	14	J	10	J	7.4	J	7.9	J
PHENOLS	2-METHYLPHENOL	ug/kg	63	--	ug/kg	63	9.4	U	9.2	U	9.1	U	9	U	9	U
PHENOLS	4-METHYLPHENOL	ug/kg	670	--	ug/kg	670	34	U	64	J	100	J	94	U	68	U
PHENOLS	2,4-DIMETHYLPHENOL	ug/kg	29	--	ug/kg	29	47	U	46	U	46	U	45	U	45	U
PHENOLS	PENTACHLOROPHENOL	ug/kg	400	504	ug/kg	360	94	U	92	U	91	U	90	U	90	U
MEXTRACT	BENZYL ALCOHOL	ug/kg	57	--	ug/kg	57	19	U	19	U	4.9	J	18	U	18	U
MEXTRACT	BENZOIC ACID	ug/kg	650	--	ug/kg	650	190	U	190	U	190	U	180	U	180	U
MEXTRACT	DIBENZOFURAN	ug/kg	540	--	ug/kg-OC	15000	7.9	262.5 J	6.2	196.8 J	7	237.3 J	4.7	198.3 J	5.4	248.8 J
MEXTRACT	HEXACHLOROETHANE	ug/kg	1,400	--	--	--	9.4	U	9.2	U	9.1	U	9	U	9	U
MEXTRACT	HEXACHLOROBUTADIENE	ug/kg	29	--	ug/kg-OC	3,900	9.4	312.3 U	9.2	292.1 U	9.1	308.5 U	9	379.7 U	9	414.7 U
MEXTRACT	N-NITROSODIPHENYLAMINE	ug/kg	28	--	ug/kg-OC	11,000	9.4	312.3 U	9.2	292.1 U	9.1	308.5 U	9	379.7 U	9	414.7 U
VOC	TCE	ug/kg	160	--	--	--	4.6	U	5.4	U	5.3	U	5.7	U	5.2	U
VOC	TETRACHLOROETHENE	ug/kg	57	--	--	--	4.6	U	5.4	U	5.3	U	5.7	U	5.2	U
VOC	ETHYLBENZENE	ug/kg	10	--	--	--	4.6	U	5.4	U	5.3	U	5.7	U	5.2	U
VOC	XYLENES, TOTAL	ug/kg	40	--	--	--	9.2	U	11	U	11	U	11	U	10	U
PEST	4,4'-DDD	ug/kg	--	--	--	--	0.94	U	1	U	0.91	U	1.1	U	0.89	U
PEST	4,4'-DDE	ug/kg	--	--	--	--	0.94	U	0.92	U	0.91	U	1.4	U	0.89	U
PEST	4,4'-DDT	ug/kg	--	--	--	--	0.94	U	1.6	U	2.1	U	0.9	U	0.78	J
PEST	Total DDT	ug/kg	6.9	50	--	--	1.41	U	2.26	U	1.96	U	1.7	U	1.67	U
PEST	ALDRIN	ug/kg	10	--	--	--	0.94	U	0.92	U	0.91	U	0.9	U	0.89	U
PEST	ALPHA-CHLORDANE	ug/kg	--	--	--	--	0.94	U	0.92	U	0.91	U	0.9	U	0.89	U
PEST	cis-Nonachlor	ug/kg	10	--	--	--	0.94	U	0.92	U	0.91	U	0.55	J	0.29	J
PEST	GAMMA-CHLORDANE	ug/kg	--	--	--	--	0.94	U	2	U	2.1	U	0.38	J	0.3	J
PEST	Oxychlordane	ug/kg	10	--	--	--	0.94	U	0.92	U	0.91	U	0.9	U	0.89	U
PEST	TRANS-NONACHLOR	ug/kg	10	--	--	--	0.94	U	2	U	0.91	U	0.9	U	0.89	U
PEST	Total Chlordane	ug/kg	10	37	--	--	2	U	3	U	3	U	2	U	2	U
PEST	DIELDRIN	ug/kg	10	--	--	--	0.94	U	1.6	U	1.4	U	0.9	U	0.89	U
PEST	HEPTACHLOR	ug/kg	10	--	--	--	0.94	U	0.92	U	0.91	U	0.9	U	0.89	U
PEST	GAMMA-BHC (LINDANE)	ug/kg	10	--	--	--	0.94	U	0.92	U	0.91	U	0.9	U	0.89	U
PCB	AROCLOR-1016	ug/kg	130	--	--	--	9.4	U	9.2	U	9.1	U	9	U	8.9	U
PCB	AROCLOR-1221	ug/kg	130	--	--	--	19	U	19	U	19	U	18	U	18	U
PCB	AROCLOR-1232	ug/kg	130	--	--	--	9.4	U	9.2	U	9.1	U	9	U	8.9	U
PCB	AROCLOR-1242	ug/kg	130	--	--	--	9.4	U	9.2	U	9.1	U	9	U	8.9	U
PCB	AROCLOR-1248	ug/kg	130	--	--	--	9.4	U	9.2	U	9.1	U	9	U	8.9	U
PCB	AROCLOR-1254	ug/kg	130	--	--	--	9.4	U	29	U	27	U	9	U	8.9	U
PCB	AROCLOR-1260	ug/kg	130	--	--	--	9.4	U	77	U	66	J	9	U	8.9	U

TABLE 4
Sediment Results at Aberdeen Log Yard Property
Pontoon Site, WSDOT SR 520

		Sample ID: ALY-3-B-16-20			Sample ID: ALY-4-S		Sample ID: ALY-4-X		Sample ID: ALY-4B-4-8		Sample ID: ALY-4B-8-12					
		Sample Type: Subsurface			Sample Type: Surface		Sample Type: Surface		Sample Type: Subsurface		Sample Type: Subsurface					
		Sample Depth (ft MLLW): -15 to -19			Sample Depth (ft MLLW): -5 to -9		Sample Depth (ft MLLW): -5 to -9		Sample Depth (ft MLLW): -9 to -13		Sample Depth (ft MLLW): -13 to -17					
		Normal/Duplicate Sample: N			Normal/Duplicate Sample: N		Normal/Duplicate Sample: FD		Normal/Duplicate Sample: N		Normal/Duplicate Sample: N					
		Sample Date: 24-Feb-09			Sample Date: 25-Feb-09		Sample Date: 25-Feb-09		Sample Date: 25-Feb-09		Sample Date: 25-Feb-09					
Chemical Group	Analyte	DMMP			SMS		OC-		OC-		OC-		OC-			
		Units	SL	BT	Units	SQS	Dry Weight	normalized	Dry Weight	normalized	Dry Weight	normalized	Dry Weight	normalized		
PCB	Total PCBs	ug/kg	130	38000	ug/kg-OC	12,000	19	631.2 U	77	2444.4	66	2237.3	18	759.5 U	18	829.5 U
GUAI	3,4,5-Trichloroguaiacol	mg/kg	--	--	--	--	0.25	UJ	0.25	UJ	0.25	UJ	0.25	UJ	0.25	UJ
GUAI	3,4,6-Trichloroguaiacol	mg/kg	--	--	--	--	0.25	UJ	0.25	UJ	0.25	UJ	0.25	UJ	0.25	UJ
GUAI	3,4-Dichloroguaiacol	mg/kg	--	--	--	--	0.25	UJ	0.25	UJ	0.25	UJ	0.25	UJ	0.25	UJ
GUAI	4,5,6-Trichloroguaiacol	mg/kg	--	--	--	--	0.25	UJ	0.25	UJ	0.25	UJ	0.25	UJ	0.25	UJ
GUAI	4,5-Dichloroguaiacol	mg/kg	--	--	--	--	0.25	UJ	0.25	UJ	0.25	UJ	0.25	UJ	0.25	UJ
GUAI	4,6-Dichloroguaiacol	mg/kg	--	--	--	--	0.25	UJ	0.25	UJ	0.25	UJ	0.25	UJ	0.25	UJ
GUAI	4-Chloroguaiacol	mg/kg	--	--	--	--	0.13	UJ	0.13	UJ	0.13	UJ	0.13	UJ	0.13	UJ
GUAI	Tetrachloroguaiacol	mg/kg	--	--	--	--	0.5	UJ	0.5	UJ	0.5	UJ	0.5	UJ	0.5	UJ

Notes:

CONV = conventional data
ORMET = organometallic compounds
SVOC = semivolatile organic compounds
VOC = volatile organic compounds

umg/kg = milligrams per kilogram
ug/kg = micrograms per kilogram

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the sample-specific method detection limit (MDL).

J = The analyte was positively identified; the quantitation is an estimation.

R = The result is rejected.

N = normal sample
FD = field duplicate sample
FT = feet (MLLW)
FT = feet (MLLW)

Shaded cell indicates analyte not detected, but MDL exceed the associated SL or SQS

Bolded = exceeded associated SL

TABLE 4
Sediment Results at Aberdeen Log Yard Property
Pontoon Site, WSDOT SR 520

		Sample ID: ALY-4B-12-16					ALY-4-Z		ALY-5-S		ALY-5-B-4-8		ALY-5-Z			
		Sample Type: Subsurface					Leave Layer		Surface		Subsurface		Leave Layer			
		Sample Depth (ft MLLW): -17 to -21					-21 to -23		13 to -17		-17 to -21		-21 to -23			
		Normal/Duplicate Sample: N					N		N		N		N			
		Sample Date: 25-Feb-09					25-Feb-09		24-Feb-09		24-Feb-09		24-Feb-09			
Chemical Group	Analyte	DMMP			SMS		OC-		OC-		OC-		OC-			
		Units	SL	BT	Units	SQS	Dry Weight	OC-normalized	Dry Weight	normalized	Dry Weight	normalized	Dry Weight	normalized		
CONV	Ammonia-N	mg/kg	--	--	mg/kg	--	414		405		185		313		289	
CONV	Sulfide	mg/kg	--	--	mg/kg	--	631		766		1,810		1,770		2,350	
CONV	Total Solids	percent	--	--	percent	--	53.4		54.4		51.7		57.1		56.1	
CONV	Total Organic Carbon	percent	--	--	percent	--	2.75		3.49		3.3		2.67		2.17	
CONV	Total Volatile Solids	percent	--	--	percent	--	8.98		10.2		9.09		7.81		8.15	
GRAIN	Clay	percent	--	--	percent	--	19.8		17.7		20.7		17.3		17.3	
GRAIN	Gravel	percent	--	--	percent	--	5.84		11.9		9.79		1.74		2.69	
GRAIN	Sand, Coarse	percent	--	--	percent	--	3.2		4.82		2.14		2.04		2.53	
GRAIN	Sand, Fine	percent	--	--	percent	--	3.82		3.91		3.02		4.09		3.88	
GRAIN	Sand, Medium	percent	--	--	percent	--	2.74		4.22		2		1.86		2.19	
GRAIN	Sand, Very Coarse	percent	--	--	percent	--	5.81		7.03		4.01		2.94		3.92	
GRAIN	Sand, Very Fine	percent	--	--	percent	--	8.11		6.56		7.88		16.2		12	
GRAIN	Silt	percent	--	--	percent	--	48.7		40.9		51.4		51		55.6	
METAL	ANTIMONY	mg/kg	150	--	mg/kg	--	2.6	U	2.6	U	2.1	U	2.4	U	2.6	U
METAL	ARSENIC	mg/kg	57	507.1	mg/kg	57	7.4		8.2		7.4		6.4		6	
METAL	CADMIUM	mg/kg	5.1	11.3	mg/kg	5.1	0.26	U	0.26	U	0.15	B	0.24	U	0.05	B
METAL	CHROMIUM	mg/kg	267	267	mg/kg	260	37.7		37.6		45.4		34.7		32.2	
METAL	COPPER	mg/kg	390	1,027	mg/kg	390	56.5		59.7		59.5		52.6		49.7	
METAL	LEAD	mg/kg	450	975	mg/kg	450	11.8		12.8		13.7		11		11.4	
METAL	MERCURY	mg/kg	0.41	1.5	mg/kg	0.41	0.094		0.09		0.143		0.085		0.077	
METAL	NICKEL	mg/kg	140	370	mg/kg	--	23.8		24.1		24.2		22.9		22.3	
METAL	SELENIUM	mg/kg	3	3	mg/kg	--	1.3	U	1.3	U	1.1	U	1.2	U	1.2	U
METAL	SILVER	mg/kg	6.1	6.1	mg/kg	6.1	1.2	U	1.2	U	0.9	U	1.1	U	1.2	U
METAL	ZINC	mg/kg	410	2,783	mg/kg	410	81.7		84		77.8		74.7		72.7	
ORMET	Tri-n-butyltin	ug/kg	--	--	ug/kg	--	1.9	U	1.9	U	2	U	1.8	U	1.8	U
LPAH	Total LPAH	ug/kg	5,200	--	ug/kg-OC	370,000	187.5	6818.2	323	9255.0	82.8	2509.1	114.7	4295.9	137.8	6350.2
LPAH	NAPHTHALENE	ug/kg	2,100	--	ug/kg-OC	99,000	56	2036.4	110	3151.9	27	818.2	30	1123.6	45	2073.7
LPAH	ACENAPHTHYLENE	ug/kg	560	--	ug/kg-OC	66,000	20	727.3	33	945.6	7.9	239.4 J	12	449.4	15	691.2
LPAH	ACENAPHTHENE	ug/kg	500	--	ug/kg-OC	16,000	7.5	272.7 J	13	372.5	6.3	190.9 J	4.5	168.5 J	5	230.4 J
LPAH	FLUORENE	ug/kg	540	4,600	ug/kg-OC	23,000	12	436.4	18	515.8	6.4	193.9 J	6.8	254.7 J	8.8	405.5 J
LPAH	PHENANTHRENE	ug/kg	1,500	--	ug/kg-OC	100,000	63	2290.9	89	2550.1	23	697.0	41	1535.6	42	1935.5
LPAH	ANTHRACENE	ug/kg	960	--	ug/kg-OC	220,000	13	472.7	19	544.4	3.9	118.2 J	9.4	352.1	9	414.7
LPAH	2-METHYLNAPHTHALENE	ug/kg	670	--	--	--	16	581.8	41	1174.8	8.3	251.5 J	11	412.0	13	599.1
HPAH	Total HPAH	ug/kg	12,000	--	ug/kg-OC	960,000	262	9527.3	360	10315.2	105.25	3189.4	315.3	11809.0	212.7	9801.8
HPAH	FLUORANTHENE	ug/kg	1,700	--	ug/kg-OC	160,000	58	2109.1	82	2349.6	23	697.0	91	3408.2	43	1981.6
HPAH	PYRENE	ug/kg	2,600	11,980	ug/kg-OC	1.00E+06	67	2436.4	100	2865.3	24	727.3	85	3183.5	50	2304.1
HPAH	BENZO (A) ANTHRACENE	ug/kg	1,300	--	ug/kg-OC	110,000	17	618.2	25	716.3	6.6	200.0 J	21	786.5	15	691.2
HPAH	CHRYSENE	ug/kg	1,400	--	ug/kg-OC	110,000	20	727.3	30	859.6	8.9	269.7 J	36	1348.3	19	875.6
HPAH	BENZO (B) FLUORANTHENE	ug/kg	3,200	--	ug/kg	--	24	872.7	31	888.3	9.8	297.0	26	973.8	21	967.7
HPAH	BENZO (K) FLUORANTHENE	ug/kg	3,200	--	ug/kg	--	7.1	258.2 J	7.6	217.8 J	2.7	81.8 J	7.3	273.4 J	6.6	304.1 J
HPAH	Total Benzo(b+k)fluoranthenes	ug/kg	3,200	--	ug/kg-OC	230,000	31.1	1130.9	38.6	1106.0	12.5	378.8	33.3	1247.2	27.6	1271.9
HPAH	BENZO (A) PYRENE	ug/kg	1,600	--	ug/kg-OC	99,000	26	945.5	33	945.6	9.7	293.9	20	749.1	22	1013.8
HPAH	INDENO (1,2,3-C,D) PYRENE	ug/kg	600	--	ug/kg-OC	34,000	17	618.2	20	573.1	7	212.1 J	12	449.4	15	691.2
HPAH	DIBENZO (A,H) ANTHRACENE	ug/kg	230	--	ug/kg-OC	12,000	3.9	141.8 J	4.4	126.1 J	9.7	293.9 U	3	112.4 J	3.1	142.9 J
HPAH	BENZO (G,H,I) PERYLENE	ug/kg	670	--	ug/kg-OC	31,000	22	800.0	27	773.6	8.7	263.6 J	14	524.3	18	829.5
CHYDRO	1,3-DICHLOROBENZENE	ug/kg	170	--	--	--	9.4	U	9.1	U	9.7	U	8.8	U	9	U

TABLE 4
Sediment Results at Aberdeen Log Yard Property
Pontoon Site, WSDOT SR 520

		Sample ID: ALY-4B-12-16			Sample ID: ALY-4-Z		Sample ID: ALY-5-S		Sample ID: ALY-5-B-4-8		Sample ID: ALY-5-Z					
		Sample Type: Subsurface			Sample Type: Leave Layer		Sample Type: Surface		Sample Type: Subsurface		Sample Type: Leave Layer					
		Sample Depth (ft MLLW): -17 to -21			Sample Depth (ft MLLW): -21 to -23		Sample Depth (ft MLLW): 13 to -17		Sample Depth (ft MLLW): -17 to -21		Sample Depth (ft MLLW): -21 to -23					
		Normal/Duplicate Sample: N			Normal/Duplicate Sample: N		Normal/Duplicate Sample: N		Normal/Duplicate Sample: N		Normal/Duplicate Sample: N					
		Sample Date: 25-Feb-09			Sample Date: 25-Feb-09		Sample Date: 24-Feb-09		Sample Date: 24-Feb-09		Sample Date: 24-Feb-09					
Chemical Group	Analyte	DMMP		SMS		OC-		OC-		OC-		OC-				
		Units	SL	BT	Units	SQS	Dry Weight	OC-normalized	Dry Weight	OC-normalized	Dry Weight	OC-normalized	Dry Weight	OC-normalized		
CHYDRO	1,4-DICHLOROBENZENE	ug/kg	110	--	ug/kg-OC	3,100	9.4	341.8 U	3.5	100.3 J	9.7	293.9 U	8.8	329.6 U	9	414.7 U
CHYDRO	1,2-DICHLOROBENZENE	ug/kg	35	--	ug/kg-OC	2,300	9.4	341.8 U	9.1	260.7 U	9.7	293.9 U	8.8	329.6 U	9	414.7 U
CHYDRO	1,2,4-TRICHLOROBENZENE	ug/kg	31	--	ug/kg-OC	810	9.4	341.8 U	9.1	260.7 U	9.7	293.9 U	8.8	329.6 U	9	414.7 U
CHYDRO	HEXACHLOROBENZENE	ug/kg	22	168	ug/kg-OC	380	9.4	341.8 U	9.1	260.7 U	9.7	293.9 U	8.8	329.6 U	9	414.7 U
PHTH	DIMETHYL PHTHALATE	ug/kg	71	--	ug/kg-OC	53,000	9.4	341.8 U	9.1	260.7 U	9.7	293.9 U	8.8	329.6 U	9	414.7 U
PHTH	DIETHYL PHTHALATE	ug/kg	200	--	ug/kg-OC	61,000	9.4	341.8 U	9.1	260.7 U	9.7	293.9 U	8.8	329.6 U	9	414.7 U
PHTH	DI-N-BUTYLPHTHALATE	ug/kg	1,400	--	ug/kg-OC	220,000	19	690.9 U	19	544.4 U	20	606.1 U	18	674.2 U	18	829.5 U
PHTH	BUTYL BENZYLPHTHALATE	ug/kg	63	--	ug/kg-OC	4,900	9.4	341.8 U	9.1	260.7 U	9.7	293.9 U	8.8	329.6 U	9	414.7 U
PHTH	BIS (2-ETHYLHEXYL) PHTHALATE	ug/kg	1,300	--	ug/kg-OC	47,000	7.7	280.0 J	12	343.8 J	7.7	233.3 J	9.2	344.6 J	10	460.8 J
PHTH	DI-N-OCTYLPHTHALATE	ug/kg	6,200	--	ug/kg-OC	58,000	9.4	341.8 U	9.1	260.7 U	9.7	293.9 U	8.8	329.6 U	9	414.7 U
PHENOLS	PHENOL	ug/kg	420	--	ug/kg	420	7.2	J	13	J	11	J	7.3	J	5.9	J
PHENOLS	2-METHYLPHENOL	ug/kg	63	--	ug/kg	63	9.4	U	9.1	U	9.7	U	8.8	U	9	U
PHENOLS	4-METHYLPHENOL	ug/kg	670	--	ug/kg	670	44	81	120	81	32	U	32	U	32	U
PHENOLS	2,4-DIMETHYLPHENOL	ug/kg	29	--	ug/kg	29	47	U	46	U	49	U	44	U	45	U
PHENOLS	PENTACHLOROPHENOL	ug/kg	400	504	ug/kg	360	94	U	91	U	97	U	88	U	90	U
MEXTRACT	BENZYL ALCOHOL	ug/kg	57	--	ug/kg	57	19	U	19	U	20	U	18	U	3.7	J
MEXTRACT	BENZOIC ACID	ug/kg	650	--	ug/kg	650	190	U	190	U	200	U	180	U	180	U
MEXTRACT	DIBENZOFURAN	ug/kg	540	--	ug/kg-OC	15000	7	254.5 J	11	315.2	3.9	118.2 J	4.6	172.3 J	5.2	239.6 J
MEXTRACT	HEXACHLOROETHANE	ug/kg	1,400	--	--	--	9.4	U	9.1	U	9.7	U	8.8	U	9	U
MEXTRACT	HEXACHLOROETHANE	ug/kg	29	--	ug/kg-OC	3,900	9.4	341.8 U	9.1	260.7 U	9.7	293.9 U	8.8	329.6 U	9	414.7 U
MEXTRACT	N-NITROSODIPHENYLAMINE	ug/kg	28	--	ug/kg-OC	11,000	9.4	341.8 U	9.1	260.7 U	9.7	293.9 U	8.8	329.6 U	9	414.7 U
VOC	TCE	ug/kg	160	--	--	--	5.3	U	6	U	5.3	U	5.1	U	5.6	U
VOC	TETRACHLOROETHENE	ug/kg	57	--	--	--	5.3	U	6	U	5.3	U	5.1	U	5.6	U
VOC	ETHYLBENZENE	ug/kg	10	--	--	--	5.3	U	6	U	5.3	U	5.1	U	5.6	U
VOC	XYLENES, TOTAL	ug/kg	40	--	--	--	11	U	12	U	11	U	10	U	11	U
PEST	4,4'-DDD	ug/kg	--	--	--	--	0.94	U	0.92	U	0.96	U	0.77	J	0.89	U
PEST	4,4'-DDE	ug/kg	--	--	--	--	0.94	U	0.92	U	0.41	J	0.36	J	0.89	U
PEST	4,4'-DDT	ug/kg	--	--	--	--	0.94	U	0.92	U	2.6	U	0.88	U	0.89	U
PEST	Total DDT	ug/kg	6.9	50	--	--	1.41	U	1.38	U	2.19	U	1.57	U	1.335	U
PEST	ALDRIN	ug/kg	10	--	--	--	0.94	U	0.92	U	0.96	U	0.88	U	0.89	U
PEST	ALPHA-CHLORDANE	ug/kg	--	--	--	--	0.94	U	0.92	U	0.97	U	0.88	U	0.89	U
PEST	cis-Nonachlor	ug/kg	10	--	--	--	0.94	U	0.92	U	0.96	U	0.41	J	0.89	U
PEST	GAMMA-CHLORDANE	ug/kg	--	--	--	--	0.94	U	0.92	U	2.9	U	0.88	U	0.23	J
PEST	Oxychlordane	ug/kg	10	--	--	--	0.94	U	0.92	U	0.96	U	0.88	U	0.89	U
PEST	TRANS-NONACHLOR	ug/kg	10	--	--	--	0.94	U	0.92	U	0.96	U	0.88	U	0.89	U
PEST	Total Chlordane	ug/kg	10	37	--	--	2	U	2	U	5	U	2	U	2	U
PEST	DIELDRIN	ug/kg	10	--	--	--	0.94	U	0.92	U	0.96	U	0.88	U	0.89	U
PEST	HEPTACHLOR	ug/kg	10	--	--	--	0.94	U	0.92	U	0.96	U	0.88	U	0.89	U
PEST	GAMMA-BHC (LINDANE)	ug/kg	10	--	--	--	0.94	U	0.92	U	0.96	U	0.88	U	0.89	U
PCB	AROCLOR-1016	ug/kg	130	--	--	--	9.4	U	9.2	U	9.6	U	8.8	U	8.9	U
PCB	AROCLOR-1221	ug/kg	130	--	--	--	19	U	19	U	20	U	18	U	18	U
PCB	AROCLOR-1232	ug/kg	130	--	--	--	9.4	U	9.2	U	9.6	U	8.8	U	8.9	U
PCB	AROCLOR-1242	ug/kg	130	--	--	--	9.4	U	9.2	U	9.6	U	8.8	U	8.9	U
PCB	AROCLOR-1248	ug/kg	130	--	--	--	9.4	U	9.2	U	9.6	U	8.8	U	8.9	U
PCB	AROCLOR-1254	ug/kg	130	--	--	--	9.4	U	9.2	U	9.6	U	20	U	12	U
PCB	AROCLOR-1260	ug/kg	130	--	--	--	9.4	U	9.2	U	97	J	8.8	U	8.9	U

TABLE 4
Sediment Results at Aberdeen Log Yard Property
Pontoon Site, WSDOT SR 520

		Sample ID: ALY-4B-12-16			Sample ID: ALY-4-Z		Sample ID: ALY-5-S		Sample ID: ALY-5-B-4-8		Sample ID: ALY-5-Z					
		Sample Type: Subsurface			Sample Type: Leave Layer		Sample Type: Surface		Sample Type: Subsurface		Sample Type: Leave Layer					
		Sample Depth (ft MLLW): -17 to -21			Sample Depth (ft MLLW): -21 to -23		Sample Depth (ft MLLW): 13 to -17		Sample Depth (ft MLLW): -17 to -21		Sample Depth (ft MLLW): -21 to -23					
		Normal/Duplicate Sample: N			Normal/Duplicate Sample: N		Normal/Duplicate Sample: N		Normal/Duplicate Sample: N		Normal/Duplicate Sample: N					
		Sample Date: 25-Feb-09			Sample Date: 25-Feb-09		Sample Date: 24-Feb-09		Sample Date: 24-Feb-09		Sample Date: 24-Feb-09					
Chemical Group	Analyte	DMMP			SMS		OC-		OC-		OC-		OC-			
		Units	SL	BT	Units	SQS	Dry Weight	OC-normalized	Dry Weight	OC-normalized	Dry Weight	OC-normalized	Dry Weight	OC-normalized		
PCB	Total PCBs	ug/kg	130	38000	ug/kg-OC	12,000	19	690.9 U	19	544.4 U	97	2939.4	20	749.1	12	553.0
	GUAI 3,4,5-Trichloroguaiacol	mg/kg	--	--	--	--	0.25	UJ	0.25	UJ	0.25	UJ	0.25	UJ	0.25	UJ
	GUAI 3,4,6-Trichloroguaiacol	mg/kg	--	--	--	--	0.25	UJ	0.25	UJ	0.25	UJ	0.25	UJ	0.25	UJ
	GUAI 3,4-Dichloroguaiacol	mg/kg	--	--	--	--	0.25	UJ	0.25	UJ	0.25	UJ	0.25	UJ	0.25	UJ
	GUAI 4,5,6-Trichloroguaiacol	mg/kg	--	--	--	--	0.25	UJ	0.25	UJ	0.25	UJ	0.25	UJ	0.25	UJ
	GUAI 4,5-Dichloroguaiacol	mg/kg	--	--	--	--	0.25	UJ	0.25	UJ	0.25	UJ	0.25	UJ	0.25	UJ
	GUAI 4,6-Dichloroguaiacol	mg/kg	--	--	--	--	0.25	UJ	0.25	UJ	0.25	UJ	0.25	UJ	0.25	UJ
	GUAI 4-Chloroguaiacol	mg/kg	--	--	--	--	0.13	UJ	0.13	UJ	0.13	UJ	0.13	UJ	0.13	UJ
	GUAI Tetrachloroguaiacol	mg/kg	--	--	--	--	0.5	UJ	0.5	UJ	0.5	UJ	0.5	UJ	0.5	UJ

Notes:

CONV = conventional data
ORMET = organometallic compounds
SVOC = semivolatile organic compounds
VOC = volatile organic compounds

umg/kg = milligrams per kilogram
ug/kg = micrograms per kilogram

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the sample-specific method detection limit (MDL).

J = The analyte was positively identified; the quantitation is an estimation.

R = The result is rejected.

N = normal sample
FD = field duplicate sample
FT = feet (MLLW)
FT = feet (MLLW)

Shaded cell indicates analyte not detected, but MDL exceed the associated SL or SQS

Bolded = exceeded associated SL

TABLE 5

Dioxin/Furan Results at Anderson and Middleton Property
Pontoon Site, WSDOT SR 520

	Sample ID:	AM-1B-4-8	AM-2-S	AM-2-Y	AM-2B-8-12	AM-2-Z	
	Sample Type:	Subsurface	Surface	Surface	Subsurface	Leave Layer	
	Sample Depth (ft MLLW):	-4 to -8	-9 to -13	-9 to -13	-17 to 21	-21 to -23	
	Normal/Duplicate Sample:	N	N	FD	N	N	
	Sample Date:	25-Feb-09	25-Feb-09	25-Feb-09	25-Feb-09	25-Feb-09	
Analyte	Unit	BT ¹					
Dioxins							
1,2,3,4,6,7,8,9-OCDD	ng/Kg	--	62.1 B	321 B	504 B	769 B	498 B
1,2,3,4,6,7,8-HPCDD	ng/Kg	--	7.78 BJ	42.5 B	69.4 B	93.5 B	56.2 B
1,2,3,4,7,8-HXCDD	ng/Kg	--	0.0667 J	0.459 J	0.788 J	0.864 J	0.502 J
1,2,3,6,7,8-HXCDD	ng/Kg	--	0.559 J	2.61 J	5 J	6.47 J	4.33 J
1,2,3,7,8,9-HXCDD	ng/Kg	--	0.507 J	2.9 J	6 J	6.02 J	3.79 J
1,2,3,7,8-PECDD	ng/Kg	--	10.4 U	0.72 J	1.38 J	1.66 J	1.03 J
2,3,7,8-TCDD	ng/Kg	5	2.08 U	0.797 J	1.07 J	1.31 J	1.01 J
HEPTACHLORODIBENZO-P-DIOXINS (HPCDD), TOTAL	ng/Kg	--	18.7	94.5	150	187	112
HEXACHLORODIBENZO-P-DIOXINS (HXCDD), TOTAL	ng/Kg	--	4.84 J	25 J	47.7 J	57.2	37
PENTACHLORODIBENZO-P-DIOXIN (PECDD), TOTAL	ng/Kg	--	0.566 J	7.29 J	13.2 J	13.5	11.1
TETRACHLORODIBENZO-P-DIOXINS (TCDD), TOTAL	ng/Kg	--	2.08 U	1.8 J	5.75 J	4.3	5.5
Furans							
1,2,3,4,6,7,8-HPCDF	ng/Kg	--	4.39 J	12.8 J	21.6 J	25.8	14.3
1,2,3,4,7,8,9-HPCDF	ng/Kg	--	0.146 J	0.395 J	0.59 J	0.995 J	0.449 J
1,2,3,4,7,8-HXCDF	ng/Kg	--	0.646 J	0.74 J	1.36 J	1.63 J	0.978 J
1,2,3,6,7,8-HXCDF	ng/Kg	--	0.148 J	0.337 J	0.862 J	0.648 J	0.449 J
1,2,3,7,8,9-HXCDF	ng/Kg	--	10.4 U	13 U	12.2 U	12.2 U	6.17 U
1,2,3,7,8-PECDF	ng/Kg	--	10.4 U	0.218 J	0.294 J	0.332 J	0.194 J
2,3,4,6,7,8-HXCDF	ng/Kg	--	0.296 J	0.677 J	1.22 J	1.44 J	0.871 J
2,3,4,7,8-PECDF	ng/Kg	--	0.075 J	0.378 J	0.622 J	0.925 J	0.736 J
2,3,7,8-TCDF	ng/Kg	--	2.08 U	2.3 J	3.22	2.98	3.32
Octachlorodibenzofuran-C13	ng/Kg	--	7.38 BJ	26.1 B	35.9 B	247 B	26.2 B

TABLE 5

Dioxin/Furan Results at Anderson and Middleton Property
Pontoon Site, WSDOT SR 520

	Sample ID:	AM-1B-4-8	AM-2-S	AM-2-Y	AM-2B-8-12	AM-2-Z	
	Sample Type:	Subsurface	Surface	Surface	Subsurface	Leave Layer	
	Sample Depth (ft MLLW):	-4 to -8	-9 to -13	-9 to -13	-17 to 21	-21 to -23	
	Normal/Duplicate Sample:	N	N	FD	N	N	
	Sample Date:	25-Feb-09	25-Feb-09	25-Feb-09	25-Feb-09	25-Feb-09	
Analyte	Unit	BT¹					
HEPTACHLORODIBENZOFURANS (HPCDF), TOTAL	ng/Kg	--	11.2	31.9	49.7	67.1	36.5
HEXACHLORODIBENZOFURANS (HXCDF), TOTAL	ng/Kg	--	5.77 J	7.74 J	13.6 J	26.8	16.9
PENTACHLORODIBENZOFURANS (PECDF), TOTAL	ng/Kg	--	1.78 J	8.39 J	13.7	15.7	10.9
TETRACHLORODIBENZOFURANS (TCDF), TOTAL	ng/Kg	--	0.505 J	9.04 J	18.4 J	23.9	17.5
TEQ (Total Toxic Equivalency)	ng/Kg	15	7.4	4.0	6.2	7.4	4.9

Notes:

ng/kg = nanograms per kilograms

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the sample-specific method detection limit (MDL).

B = Reported value is less than the CRDL but greater than the reporting limit.

J = The analyte was positively identified; the quantitation is an estimation.

N = normal sample

FD = field duplicate sample

¹ BT is based on the bioaccumulation testing trigger for dispersive sites in Grays Harbor (DMMO, 2008).

TABLE 6
Dioxin/Furan Results at Aberdeen Log Yard Property
Pontoon Site, WSDOT SR 520

			Sample ID: ALY-2-S	ALY-2-B-8-12	ALY-3-B-4-8	ALY-3-B-12-16	ALY-4-S	ALY-4-X	ALY-4B-8-12	ALY-4-Z	ALY-5-S	ALY-5-B-4-8	ALY-5-Z
			Sample Type: Surface	Subsurface	Subsurface	Subsurface	Surface	Surface	Subsurface	Leave Layer	Surface	Subsurface	Leave Layer
			Sample Depth (ft MLLW): +3 to -1	-5 to -9	-3 to -7	-11 to -15	-5 to -9	-5 to -9	-13 to -17	-21 to -23	13 to -17	-17 to -21	-21 to -23
			Normal/Duplicate Sample: N	N	N	N	N	FD	N	N	N	N	N
			Sample Date: 24-Feb-09	24-Feb-09	24-Feb-09	24-Feb-09	25-Feb-09	25-Feb-09	25-Feb-09	25-Feb-09	24-Feb-09	24-Feb-09	24-Feb-09
Analyte	Unit	BT ¹											
Dioxins													
1,2,3,4,6,7,8,9-OCDD	ng/Kg	--	604 B	32.3 B	30.3 J	20 BJ	3,220 J	57.1 J	25.1 B	339 B	4,140 B	2,410 B	1,150 B
1,2,3,4,6,7,8-HPCDD	ng/Kg	--	52.3 B	8.02 BJ	7.67 J	6.66 BJ	343 J	7.34 J	2.82 BJ	53.1 B	403 B	260 B	156 B
1,2,3,4,7,8-HXCDD	ng/Kg	--	0.298 J	0.267 J	0.27 J	0.346 J	2.16 J	8.18 U	7.1 U	0.519 J	2.27 J	1.54 J	0.969 J
1,2,3,6,7,8-HXCDD	ng/Kg	--	2.2 J	1.15 J	1.36 J	0.962 J	14.5 J	0.399 J	0.179 J	5.42 J	17.6	10.8	9.36 J
1,2,3,7,8,9-HXCDD	ng/Kg	--	1.74 J	4.19 J	3.4 J	3.56 J	11.7 J	0.306 J	0.129 J	3.05 J	12.6	9.26 J	7.43 J
1,2,3,7,8-PECDD	ng/Kg	--	0.396 J	1.29 J	1.41 J	1.3 J	2.53 J	8.18 U	7.1 U	1.17 J	2.73 J	2.07 J	1.94 J
2,3,7,8-TCDD	ng/Kg	5	1.08 J	0.813 J	1.02 J	1.18 J	5.5 J	1.64 UJ	1.42 U	0.501 J	2.15	1.39 J	2.15 J
HEPTACHLORODIBENZO-P-DIOXINS (HPCDD), TOTAL	ng/Kg	--	114	16.3	16.8	13.6	673 J	14.1 J	7.27	104	846	541	343
HEXACHLORODIBENZO-P-DIOXINS (HXCDD), TOTAL	ng/Kg	--	18.4	22.4	25.4	22.2	132 J	2.8 J	1.37 J	41	155	117	86.9
PENTACHLORODIBENZO-P-DIOXIN (PECDD), TOTAL	ng/Kg	--	3.46 J	11.9	10.5 J	17.7	30.5 J	0.348 J	7.1 U	13.6	32.4	34.1	22.2
TETRACHLORODIBENZO-P-DIOXINS (TCDD), TOTAL	ng/Kg	--	1.87	5.62	5.17	20	20.3 J	1.64 UJ	1.42 U	2.95	15.8	26.1	7.95
Furans													
1,2,3,4,6,7,8-HPCDF	ng/Kg	--	21.9	1.31 J	0.317 J	0.241 J	77.4 J	1.89 J	1.24 J	392	88	106	119
1,2,3,4,7,8,9-HPCDF	ng/Kg	--	3 J	11.3 U	11.4 U	11 U	3.48 J	8.18 U	0.044 J	1.92 J	4.33 J	3.79 J	2.47 J
1,2,3,4,7,8-HXCDF	ng/Kg	--	10.4	0.21 J	0.313 J	0.198 J	3.81 J	0.159 J	0.177 J	7.92 J	3.97 J	6.87 J	6.82 J
1,2,3,6,7,8-HXCDF	ng/Kg	--	3.26 J	0.14 J	11.4 U	0.115 J	2.14 J	8.18 U	0.0426 J	5.75 J	2.01 J	2.09 J	2.55 J
1,2,3,7,8,9-HXCDF	ng/Kg	--	6.66 U	11.3 U	0.273 J	11 U	11.4 U	8.18 U	7.1 U	0.155 J	6.02 U	10.3 U	10.4 U
1,2,3,7,8-PECDF	ng/Kg	--	0.261 J	0.204 J	0.115 J	0.152 J	0.465 J	8.18 U	7.1 U	0.854 J	0.351 J	0.497 J	0.525 J
2,3,4,6,7,8-HXCDF	ng/Kg	--	3.82 J	0.153 J	11.4 U	0.0747 J	4.23 J	0.121 J	0.084 J	7.48 J	4.44 J	4.41 J	4.56 J
2,3,4,7,8-PECDF	ng/Kg	--	1.89 J	11.3 U	11.4 U	0.249 J	1.58 J	8.18 U	7.1 U	4.48 J	1.59 J	0.814 J	1.14 J
2,3,7,8-TCDF	ng/Kg	--	0.538 J	2.25 U	2.27 U	2.19 U	2.73 J	1.64 UJ	1.42 U	1.82 UJ	1.81	1.08 J	2.17
Octachlorodibenzofuran-C13	ng/Kg	--	44.1 B	1.31 J	1.64 BJ	21.9 U	256 J	4.93 J	2.39 BJ	179 B	331 B	315 B	185 B
HEPTACHLORODIBENZOFURANS (HPCDF), TOTAL	ng/Kg	--	68.2	2.45 J	1.67 J	11 U	252 J	5.56 J	3.25 J	624	325	321	290
HEXACHLORODIBENZOFURANS (HXCDF), TOTAL	ng/Kg	--	54.1	0.645 J	11.4 U	0.357 J	42.5 J	2.18 J	1.15 J	224	111	51.1	113
PENTACHLORODIBENZOFURANS (PECDF), TOTAL	ng/Kg	--	19.8	1.32 J	4.43 J	0.412 J	40.6 J	0.963 J	0.681 J	92.3	41.4	35.1	44.2
TETRACHLORODIBENZOFURANS (TCDF), TOTAL	ng/Kg	--	4.05	2.7	3.31	6.82	40.2 J	0.577 J	0.121 J	42.9	40.1	15.9	26.4
TEQ (Total Toxic Equivalency)*	ng/Kg	15	5.6	5.3	6.1	3.9	18.5	7.8	6.3	10.8	16.4	12.4	12.0

Notes:

ng/kg = nanograms per kilograms

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the sample-specific method detection limit (MDL).

B = Reported value is less than the CRDL but greater than the reporting limit.

J = The analyte was positively identified; the quantitation is an estimation.

N = normal sample

FD = field duplicate sample

¹BT is based on the bioaccumulation testing trigger for dispersive sites in Grays Harbor (DMMO, 2008).

Bold = detected result exceeds bioaccumulation testing trigger

* TEQ calculated using 1/2 detection limit when analyte not detected

APPENDIX A

Mud Mole™ Boring Logs

Mudmole™ Bore Log

Project: Aberdeen Coring
Project No: CH2M Hill
Collected by: GSM
Date: 2/25/2009
Water depth: 3.7 ft

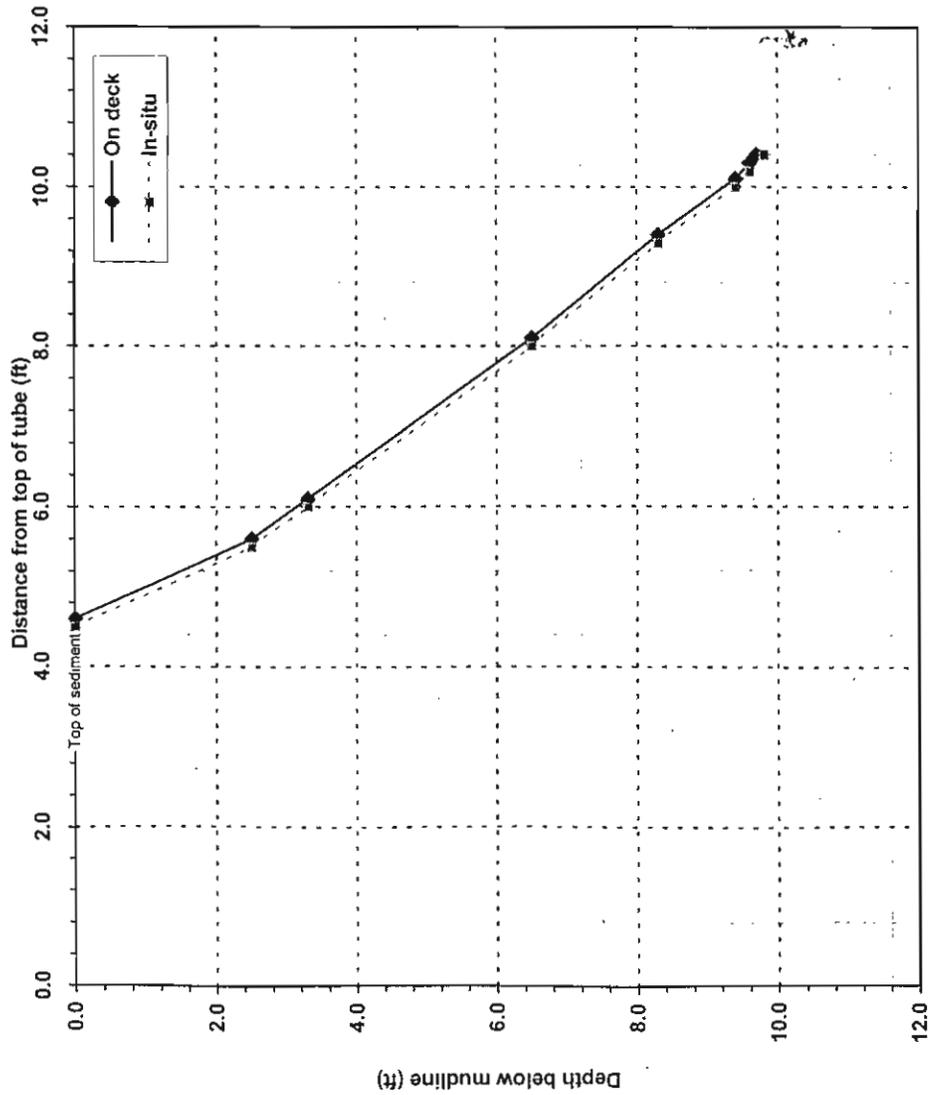
Station: ALY-1
Position: NAD83
 611828
 808674

Time: 14:48
Mudline: 5.9 ft MLLW (estimated using electronic tide gauge)

Place Field ID Label Here

Weather/Comments: N/A

Penetration interval (ft)	Interval recovery (ft)	Percent recovery	Depth below mudline (ft)	Distance from top of tube (ft)
0-2.5	1	40%	Mudline 6	4.6
2.5-3.3	0.5	62%	1 5	5.00
3.3-6.5	2	63%	2 4	5.40
6.5-8.3	1.3	72%	3 3	5.91
8.3-9.4	0.7	64%	4 2	6.54
9.4-9.6	0.2	100%	5 1	7.16
9.6-9.8	0.2	100%	6 0	7.79
			7 1	8.46
			8 -2	9.18
			9 -3	9.85
			10	No sample
			11	No sample
			12	No sample
			13	No sample
			14	No sample
			15	No sample
			16	No sample
			17	No sample
			18	No sample
			19	No sample
			20	No sample



Penetration 9.8 ft/ On deck recovery 5.8 ft = 59% Recovery

Mudmole™ Bore Log

Project: Aberdeen Coring
Project No: CH2M Hill
Collected by: GSM
Date: 2/25/2009
Water depth: 10.2 ft

Station: A&M-1
Position: NAD83
 614644
 794561

Time: 12:24
Mudline: 0.0 ft MLLW (estimated using electronic tide gauge)

Place Field ID Label Here

Weather/Comments: N/A

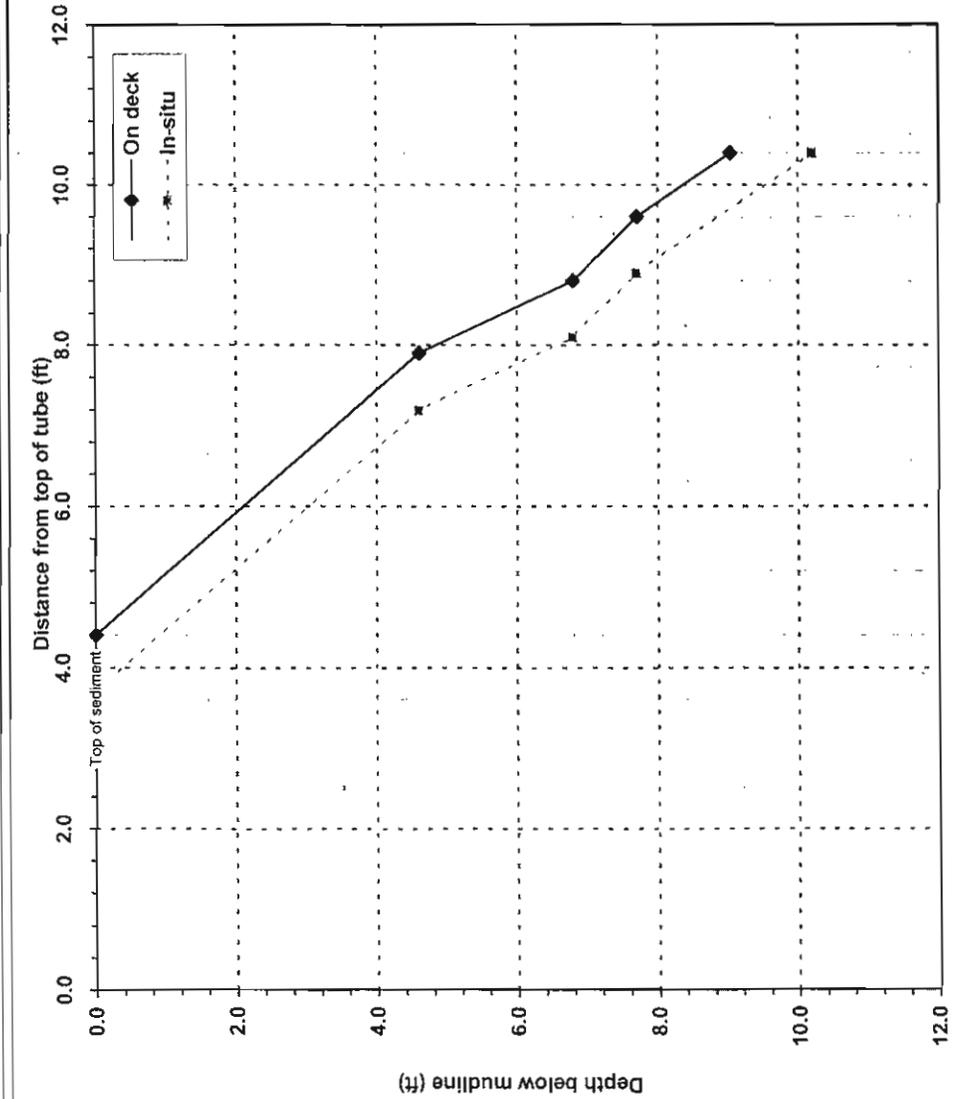
Penetration interval (ft)

Interval recovery (ft)

Percent recovery

Depth below mudline (ft)

Distance from top of tube (ft)



Penetration 10.2 ft/ On deck recovery 6 ft = 59% Recovery

Mudline	Depth below mudline (ft)	Distance from top of tube (ft)
1	1	4.4
2	2	5.16
3	3	5.92
4	4	6.68
5	5	7.44
6	6	8.06
7	7	8.47
8	8	8.98
9	9	9.78
10	10	10.38
11	11	No sample
12	12	No sample
13	13	No sample
14	14	No sample
15	15	No sample
16	16	No sample
17	17	No sample
18	18	No sample
19	19	No sample
20	20	No sample

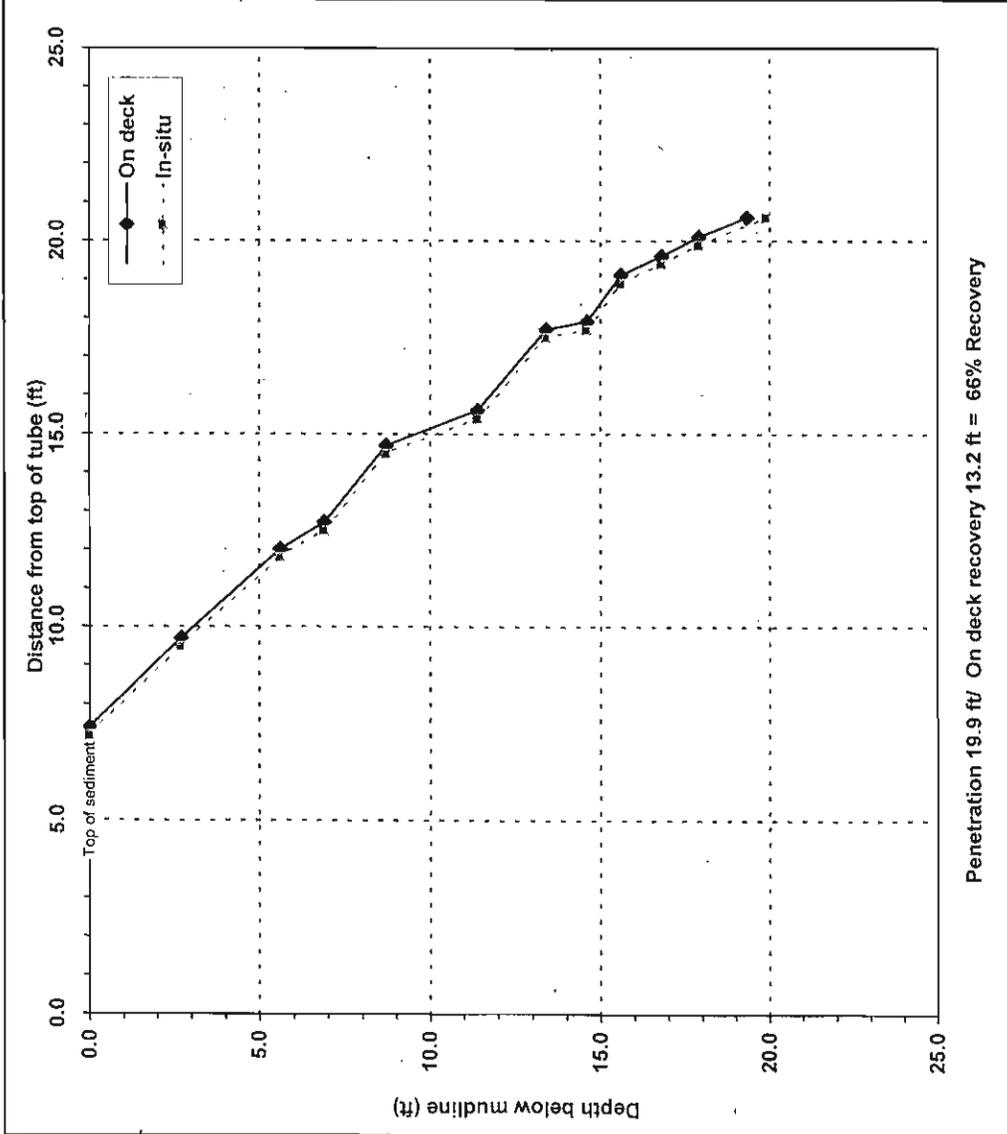
Mudmole™ Bore Log

Place Field ID Label Here

Project: Aberdeen Coring **Station:** A&M-2
Project No: CH2M Hill **Position:** NAD83
Collected by: GSM **614611**
Date: 2/25/2009 **Time:** 10:35
Water depth: 16.3 ft **Mudline:** -8.8 ft MLLW (estimated using electronic tide gauge)
794574

Weather/Comments: N/A

Penetration interval (ft)	Interval recovery (ft)	Percent recovery	Depth below mudline (ft)	Distance from top of tube (ft)
0-2.7	2.3	85%	Mudline -9	7.4
2.7-5.6	2.3	79%	1 - 10	8.25
5.6-6.9	0.7	54%	2 - 11	9.10
6.9-8.7	2	111%	3 - 12	9.94
8.7-11.4	0.9	33%	4 - 13	10.73
11.4-13.4	2.1	105%	5 - 14	11.52
13.4-14.6	0.2	17%	6 - 15	12.22
14.6-15.6	1.2	120%	7 - 16	12.81
15.6-16.8	0.5	42%	8 - 17	13.92
16.8-17.9	0.5	45%	9 - 18	14.80
17.9-19.9	0.7	35%	10 - 19	15.13
			11 - 20	15.47
			12 - 21	16.23
			13 - 22	17.28
			14 - 23	17.80
			15 - 24	18.38
			16 - 25	19.27
			17 - 26	19.69
			18 - 27	20.14
			19 - 28	20.49
			20	No sample



AMEC/Geomatrix MudMole Bore Log

Collection Information

Date: 2-25-09

Project: Aberdeen Recorder: GSM

Station Name: AM 2



Position Information

Tube Length (ft): 20.6

Coordinate Datum: _____

Water Depth (ft): 16.3

Time: 1035

Northing 614611

Est. Tide Height (ft) 7.5 (MLLW)

Easting 794574

Est. Mudline: _____ (MLLW)

On Deck Top of Sediment 7.4

Comments: _____

Penetration Tape Reading	Recovery Tape Reading	Comments
<u>17.9</u>	<u>18.3</u>	
<u>15.0</u>	<u>16.0</u>	
<u>13.7</u>	<u>15.3</u>	
<u>11.9</u>	<u>13.3</u>	
<u>9.2</u>	<u>12.4</u>	
<u>7.2</u>	<u>10.3</u>	
<u>6.0</u>	<u>10.1</u>	
<u>5.0</u>	<u>8.9</u>	
<u>3.8</u>	<u>8.4</u>	
<u>2.7</u>	<u>7.9</u>	
<u>0.7</u>	<u>7.2</u>	

Mudmole™ Bore Log

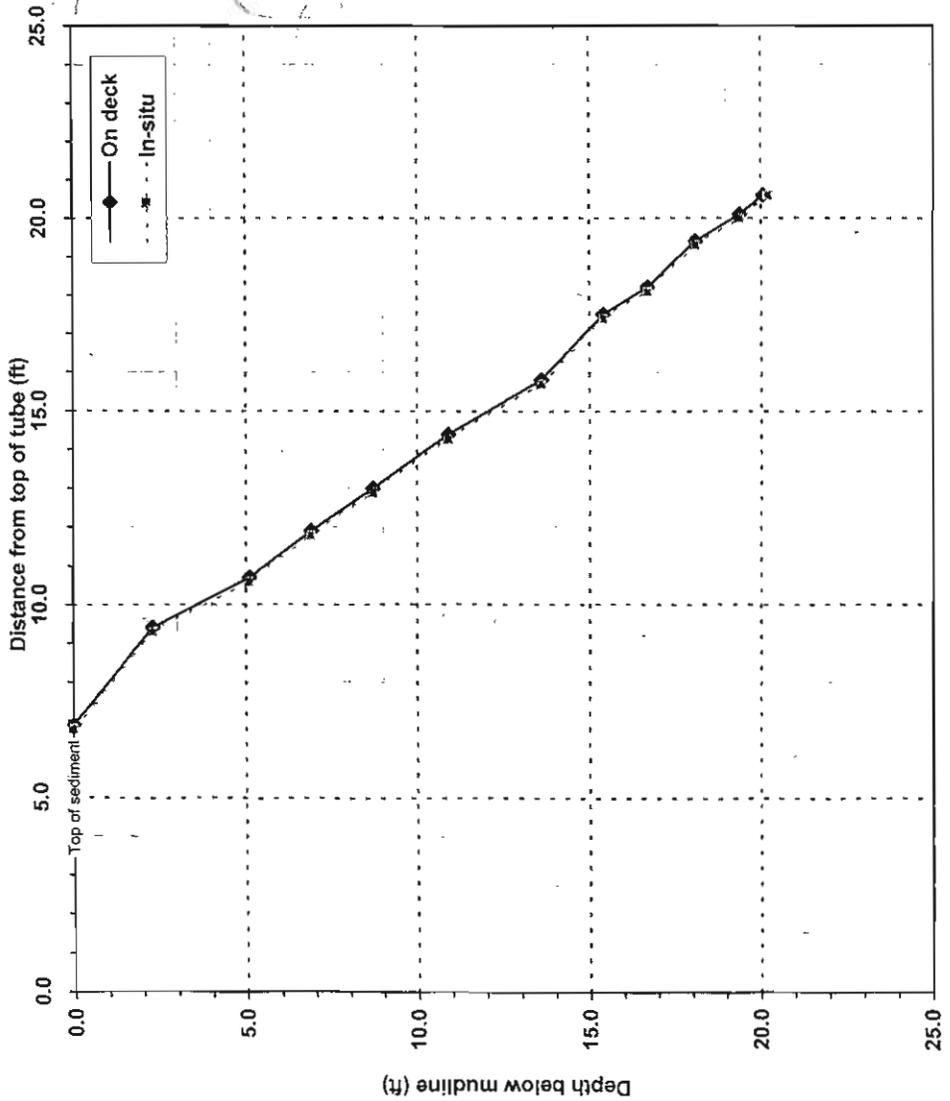
Project: Aberdeen Coring
 Project No: CH2M Hill
 Collected by: GSM
 Date: 2/25/2009
 Water depth: 8.2 ft

Station: ALY-4
 Position: NAD83
 611511
 808835
 Time: 8:23
 Mudline: -4.9 ft MLLW (estimated using electronic tide gauge)

Weather/Comments: N/A

Place Field ID Label Here

Penetration interval (ft)	Interval recovery (ft)	Percent recovery	Depth below mudline (ft)	Distance from top of tube (ft)
0-2.3	2.5	109%	Mudline 5	6.9
2.3-5.1	1.3	46%	1-6	7.99
5.1-6.9	1.2	67%	2-7	9.07
6.9-8.7	1.1	61%	3-8	9.73
8.7-10.9	1.4	64%	4-9	10.19
10.9-13.6	1.4	52%	5-10	10.65
13.6-15.4	1.7	94%	6-11	11.30
15.4-16.7	0.7	54%	7-12	11.96
16.7-18.1	1.2	86%	8-13	12.57
18.1-19.4	0.7	54%	9-14	13.19
19.4-20.2	0.6	75%	10-15	13.83
			11-16	14.45
			12-17	14.97
			13-18	15.49
			14-19	16.18
			15-20	17.12
			16-21	17.82
			17-22	18.46
			18-23	19.31
			19-24	19.88
			20-25	20.55



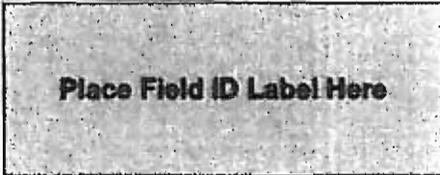
AMEC/Geomatrix MudMole Bore Log

Collection Information

Date: 2-25-08

Project: Aberdeen Recorder: GSM

Station Name: ALY 4



Position Information

Tube Length (ft): 20.6

Coordinate Datum: _____

Water

Depth (ft): 8.2

Time: 0823

Northing 611511

Est. Tide Height

(ft) 3.3

(MLLW)

Easting 808836

Est. Mudline: _____

(MLLW)

On Deck Top of Sediment 7.0

Comments: ~ 3 ft off station - very windy 15-20 mph

Penetration Tape
Reading

Recovery Tape Reading

Comments

<u>18.3</u>	<u>18.1</u>	
<u>15.5</u>	<u>16.8</u>	
<u>13.7</u>	<u>15.6</u>	
<u>11.9</u>	<u>14.5</u>	
<u>9.7</u>	<u>13.1</u>	
<u>7.0</u>	<u>11.7</u>	
<u>5.2</u>	<u>10.0</u>	
<u>3.9</u>	<u>9.3</u>	
<u>2.5</u>	<u>8.1</u>	
<u>1.2</u>	<u>7.4</u>	
<u>0.4</u>	<u>6.8</u>	X
		X

target 808837 off station X
611516 X

Mudmole™ Bore Log

Project: Aberdeen Coring

Station: ALY-5

Project No: CH2M Hill

Position: NAD83

Collected by: GSM

611501

Date: 2/24/2009

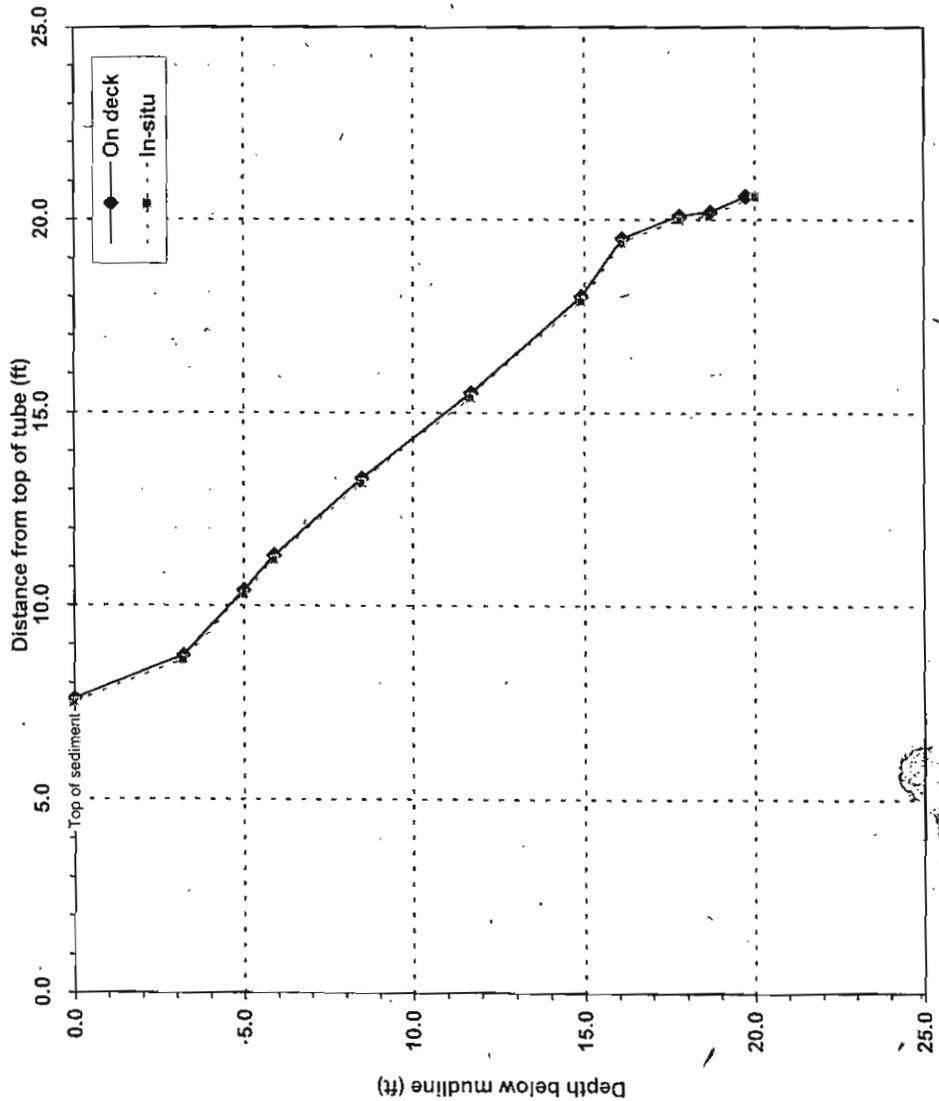
808900

Water depth: 21.0 ft

Mudline: -12.9 ft MLLW (estimated using electronic tide gauge)

Weather/Comments: N/A

Place Field ID Label Here



Penetration interval (ft)	Interval recovery (ft)	Percent recovery	Depth below mudline (ft)	Distance from top of tube (ft)
0-3.2	1.1	34%	Mudline -13	7.6
3.2-5	1.7	94%	1 -14	7.94
5-5.9	0.9	100%	2 -15	8.29
5.9-8.5	2	77%	3 -16	8.63
8.5-11.7	2.2	69%	4 -17	9.46
11.7-14.9	2.5	78%	5 -18	10.40
14.9-16.1	1.5	125%	6 -19	11.38
16.1-17.8	0.6	35%	7 -20	12.15
17.8-18.7	0.1	11%	8 -21	12.92
18.7-20	0.5	38%	9 -22	13.64
			10 -23	14.33
			11 -24	15.02
			12 -25	15.73
			13 -26	16.52
			14 -27	17.30
			15 -28	18.13
			16 -29	19.38
			17 -30	19.82
			18 -31	20.12
			19 -32	20.32
			20 -33	No sample

AMEC/Geomatrix MudMole Bore Log

Collection Information

Date: 2-24-09

Project: Aberdeen Recorder: GSW

Station Name: ALY-5



Position Information

Tube Length (ft): 20.6

Coordinate Datum: _____

Water Depth (ft): 21.0

Time: 1502

Northing 61150

Est. Tide Height (ft) 8.1 (MLLW)

Easting 808900

Est. Mudline: _____ (MLLW)

On Deck Top of Sediment 7.6

Comments: _____

Penetration Tape Reading	Recovery Tape Reading	Comments
<u>17.4</u>	10.8 <u>19.5</u>	
<u>15.6</u>	<u>17.8</u>	
<u>14.7</u>	<u>16.9</u>	
<u>12.1</u>	<u>14.9</u>	
<u>8.9</u>	<u>12.7</u>	
<u>5.7</u>	<u>10.2</u>	
<u>4.5</u>	<u>8.7</u>	
<u>2.8</u>	<u>8.1</u>	
<u>1.9</u>	<u>8.0</u>	
<u>0.6</u>	<u>7.5</u>	
	<u>9ft off station on E</u>	<u>target 611503</u>
	<u>2ft off station in W</u>	<u>808909</u>

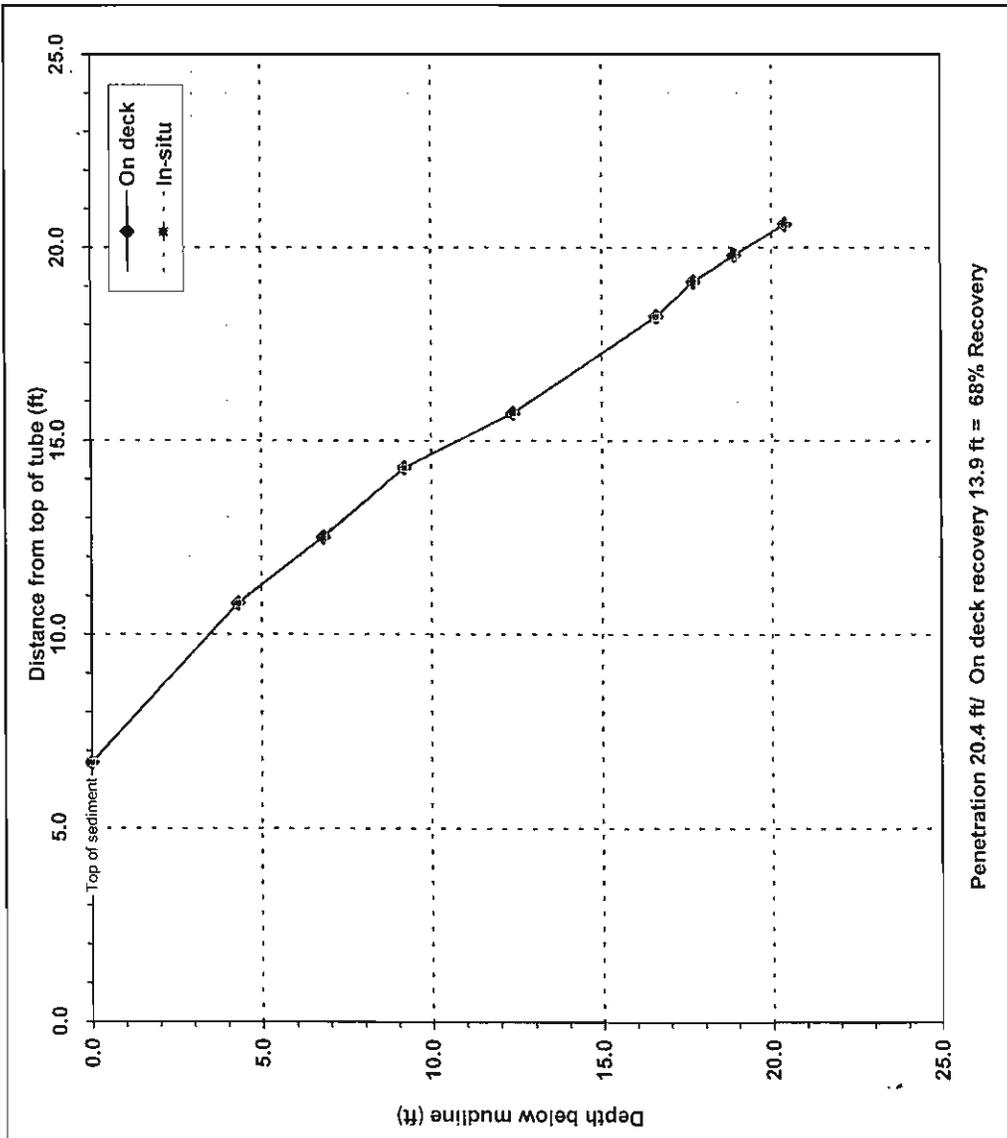
Mudmole™ Bore Log

Project: Aberdeen Coring **Station:** ALY-2
Project No: CH2M Hill **Position:** NAD83
Collected by: GSM **611839**
Date: 2/24/2009 **Time:** 13:06 **808772**
Water depth: 7.8 ft **Mudline:** 3.0 ft MLLW (estimated using electronic tide gauge)

Place Field ID Label Here

Weather/Comments: N/A

Penetration interval (ft)	Interval recovery (ft)	Percent recovery	Depth below mudline (ft)	Distance from top of tube (ft)
0-4.3	4.1	95%	Mudline +3	6.7
4.3-6.8	1.7	68%	1 - 2	7.65
6.8-9.2	1.8	75%	2 - 1	8.61
9.2-12.4	1.4	44%	3 0	9.56
12.4-16.6	2.5	60%	4 - 1	10.51
16.6-17.7	0.9	82%	5 - 2	11.28
17.7-18.9	0.7	58%	6 - 3	11.96
18.9-20.4	0.8	53%	7 - 4	12.65
			8 - 5	13.40
			9 - 6	14.15
			10 - 7	14.65
			11 - 8	15.09
			12 - 9	15.53
			13 - 10	16.06
			14 - 11	16.65
			15 - 12	17.25
			16 - 13	17.84
			17 - 14	18.53
			18 - 15	19.28
			19 - 16	19.85
			20 - 17	20.39



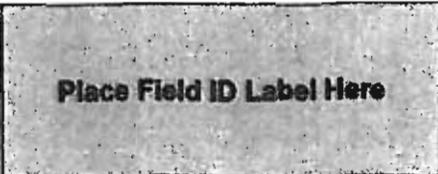
AMEC/Geomatrix MudMole Bore Log

Collection Information

Date: 2-24-09

Project: Aberdeen Recorder: SM

Station Name: ALY-2



Position Information

Tube Length (ft): 20.6

Coordinate Datum: _____

Water Depth (ft): 7.8

Time: 1306

Northing 511839

Est. Tide Height (ft) _____ (MLLW)

Easting 808772

Est. Mudline: _____ (MLLW)

On Deck Top of Sediment 6.7

Comments: _____

Penetration Tape Reading	Recovery Tape Reading	Comments
<u>16.3</u>	<u>16.5</u>	
<u>13.8</u>	<u>14.8</u>	
<u>11.4</u>	<u>13.0</u>	
<u>8.2</u>	<u>11.6</u>	
<u>4.0</u>	<u>9.1</u>	
<u>2.9</u>	<u>8.2</u>	
<u>1.7</u>	7.5 <u>7.5</u>	
<u>0.2</u>	<u>6.7</u>	

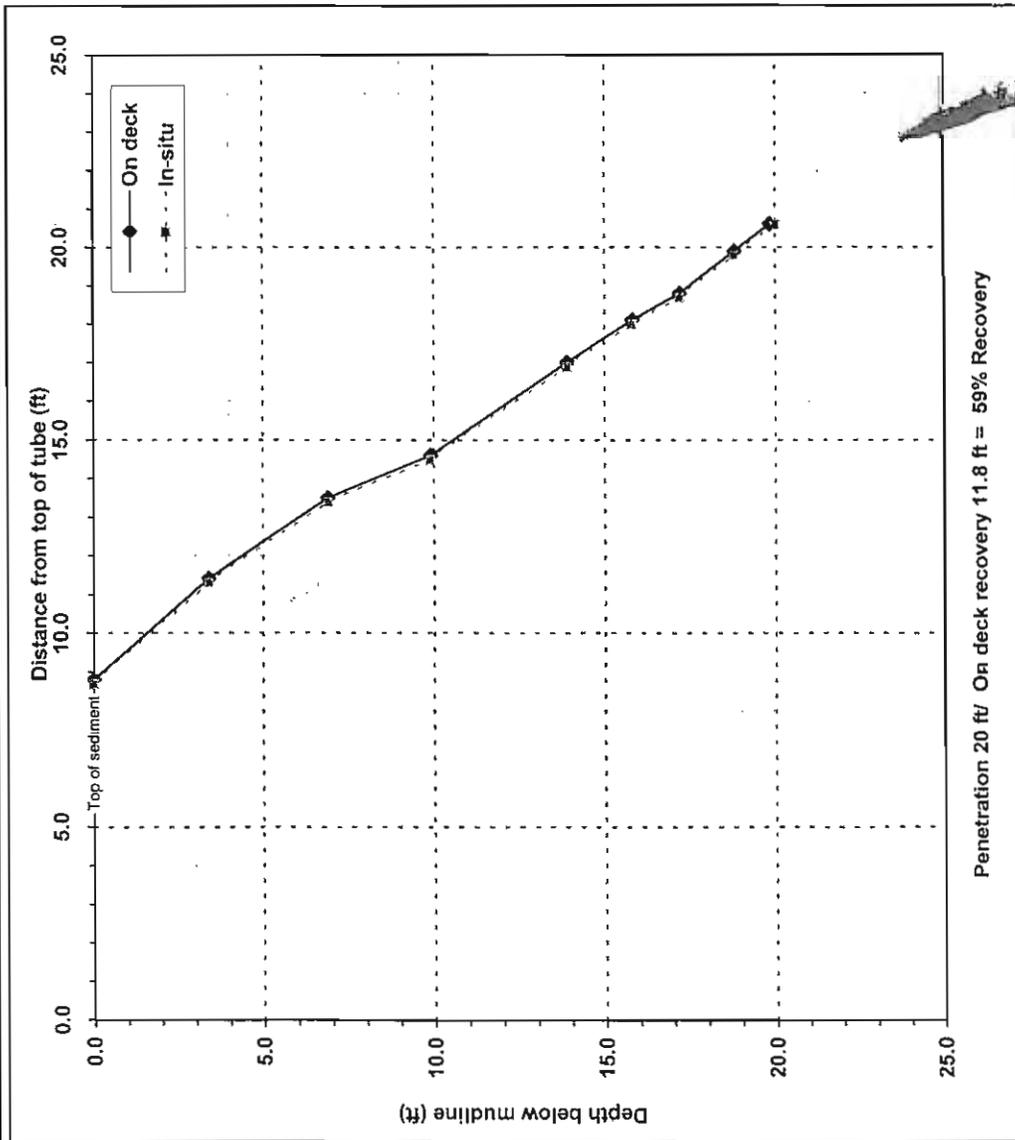
Mudmole™ Bore Log

Project: Aberdeen Coring **Station:** ALY-3
Project No: CH2M Hill **Position:** NAD83
Collected by: GSM **611661**
Date: 2/24/2009 **Time:** 11:23 **808704**
Water depth: 7.7 ft **Mudline:** 2.1 ft MLLW (estimated using electronic tide gauge)

Place Field ID Label Here

Weather/Comments: N/A

Penetration interval (ft)	Interval recovery (ft)	Percent recovery	Depth below mudline (ft)	Distance from top of tube (ft)
0-3.4	2.6	76%	Mudline	8.8
3.4-6.9	2.1	60%	1 - 11	9.56
6.9-9.9	1.1	37%	2 0	10.33
9.9-13.9	2.4	60%	3 - 1	11.09
13.9-15.8	1.1	58%	4 - 2	11.76
15.8-17.2	0.7	50%	5 - 3	12.36
17.2-18.8	1.1	69%	6 - 4	12.96
18.8-20	0.8	67%	7 - 5	13.54
			8 - 6	13.90
			9 - 7	14.27
			10 - 8	14.66
			11 - 9	15.26
			12 - 10	15.86
			13 - 11	16.46
			14 - 12	17.06
			15 - 13	17.64
			16 - 14	18.20
			17 - 15	18.70
			18 - 16	19.35
			19 - 17	20.03
			20 - 16	No sample



AMEC/Geomatrix MudMole Bore Log

Collection Information

Date: 2-24-09

Project: Aberdeen Recorder: SSM

Station Name: ALY-3

Tube Length (ft): 20.6

Water Depth (ft): 7.7

Est. Tide Height (ft) _____ (MLLW)

Est. Mudline: _____ (MLLW)

Comments: _____



Position Information

Coordinate Datum: WAS Survey Ft NAD 83

Northing 611661

Easting 808704

On Deck Top of Sediment 8.8

Penetration Tape Reading

Recovery Tape Reading

Comments

Penetration Tape Reading	Recovery Tape Reading	Comments
<u>(1.8) actual</u>	<u>18.9</u>	
<u>17.2 tape</u>	<u>18.0</u>	
<u>13.7 15.9</u>	<u>15.9</u>	
<u>10.7</u>	<u>14.8</u>	
<u>6.7</u>	<u>12.4</u>	
<u>4.8</u>	<u>11.3</u>	
<u>3.4</u>	<u>10.6</u>	
<u>1.8</u>	<u>9.5</u>	
<u>0.6</u>	<u>8.7</u>	

APPENDIX B

Field Data Logs, Field Notes, and Sample Photographs



Washington State
Department of Transportation

SR 520 Bridge Replacement and HOV Project



Reconnaissance Sediment Sampling SR 520 Pontoon Construction Project

Sediment Coring Field Notebook

Notebook No.: ①

Dates: Feb 24, 2009
Feb 25, 2009



PROJECT NUMBER 180171.AR.12.01

BORING NUMBER ALY-3

SHEET 1 OF 1

SEDIMENT CORING LOG

ACAD 83 611661; 808704

PROJECT: WSDOT Pontoon Construction Recon. Sediment Sampling

LOCATION: ABERDEEN LOG YARD, ABERDEEN

DRILLING CONTRACTOR: AMEC

DRILLING METHOD AND EQUIPMENT USED: MUD MOLE, 4" SQUARE ALUM. CORE TUBE

DEPTH OF WATER: 7.7 ft START: 11:23 AM END: 2/24/09

LOGGER: M. RUPICH

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (%)	#/TYPE	USCS	SPT RESULTS 9/5-8 (N)	SIZE DISTRIBUTION			SOIL DESCRIPTION SOIL NAME (USCS SYMBOL); COLOR, GRAIN SIZE (COARSE-GRAINED SOIL ONLY); GRADING (COARSE-GRAINED SOIL ONLY); ANGULARITY (COARSE-GRAINED SOIL ONLY); DENSITY (COARSE-GRAINED SOIL ONLY); PLASTICITY (FINE-GRAINED SOIL ONLY); DILATANCY	Hg (ppm):		SAMPLES COMMENTS (e.g.: DRILLING FLUID LOSS, TESTS, OR DRILLER COMMENTS, ETC.)
						%G	%S	%F		BREATHING ZONE	HEAD SPACE	
1			①	ML				99	DK BROWN - BLACK SILT w/ TRACE FINE SAND. TRACE WOOD FRAGS (<1 INCH) AND TRACE FI (V).	0.0		① ALY-3-S (+1 - 3) below mudline
2			②									② ALY-3B-4-8 (-3 to -7 below mudline)
3												
4			②	ML				95	BROWN-OLIVE SI w/ OCCAS FI SA.			③ ALY-3B-8-12 (-7 to -11)
5												
6.5			③						WOOD DEBRIS (<1") FROM 6.5 to 7.5 ft			④ ALY-3B-12-16 (-11 to -15)
7.5				ML					OLIVE-BROWN SI w/ TRACE SA AND TRACE WOOD			⑤ ALY-3B-16-20 (-15 to -17.5)
8			④									
10												
11			⑤									
12									END OF BORING = 11.9 ft.			
									PENETRATED TO 20 ft.			
15												

SEE MUD MOLE BORE LOG FOR RECOVERY %, INTERVAL RECOVERY, PENETRATION INTERVAL, ETC.



PROJECT NUMBER 180171.AR.12.01

BORING NUMBER ALY-2

SHEET 1 OF 1

SEDIMENT CORING LOG

772

NAD 83 611839 ; 808835

PROJECT: WSDOT Pontoon Construction Recon. Sediment Sampling

LOCATION: ABERDEEN LOG YARD

DRILLING CONTRACTOR: AMEC

DRILLING METHOD AND EQUIPMENT USED: MUD MOLE

DEPTH OF WATER: 7.8 ft START: 13:06 END: 2/24/09

LOGGER: M. RIPICH

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (%)	#/TYPE	USCS	SPT RESULTS (7.5'-8'-6") (N)	SIZE DISTRIBUTION			SOIL DESCRIPTION	Hg (ppm):		SAMPLES *	COMMENTS (e.g.: DRILLING FLUID LOSS, TESTS, OR DRILLER COMMENTS, ETC.)
						%G	%S	%F		BREATHING ZONE	HEAD SPACE		
1				ML				100	DK BROWN - BLACK SILT	0.0			BELOW MUDLINE
2			①						(LG. GRAVEL FROM 0"-2")			① ALY-2-S (-1 to -1)	
3													
4													
5			②									② ALY-2B-4-8 (-1 to 5)	
6									SOME WOOD DEBRIS FROM 6'-7' BGS				
7				ML				95	(1"-2")				
8			③						DK BROWN - OLIVE SI W/ TRACE SA.			③ ALY-2B-8-12 (-5 to -9)	
9									METALLIC FLECKS IN SEDIMENT				
10			④						FROM 7' - 14' (NOT FROM CORE BARREL). VACUUM HOSE ATTACHED TO DRILL WHEN CUTTING ALUMINUM CORE.			④ ALY-2B-12-16 (-9 to -13)	
11													
12			⑤									⑤ ALY-2B-16-20 (-13 to -17)	
13													
14									END OF BORING:				
15									13.9 ft.				

PENETRATED TO 20.4 ft.

SEE MUD MOLE BORING LOG FOR RECOVERY %,



PROJECT NUMBER 180171.AR.12.01

BORING NUMBER ALY-5

SHEET 1 OF 1

SEDIMENT CORING LOG

NAD 83: 611501; 808900

PROJECT: WSDOT Pontoon Construction Recon. Sediment Sampling

LOCATION: ABERDEEN LOG YARD

DRILLING CONTRACTOR: AMEC

DRILLING METHOD AND EQUIPMENT USED: MUD MOLE

DEPTH OF WATER: 21.0ft START: 15:02 END: 2/24/09 LOGGER: M. R. PICA

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (%)	#TYPE	USCS	SPT RESULTS 6" S - 6" S (N)	SIZE DISTRIBUTION			SOIL DESCRIPTION SOIL NAME (USCS SYMBOL); COLOR; GRAIN SIZE (COARSE-GRAINED SOIL ONLY); GRADING (COARSE-GRAINED SOIL ONLY); ANGULARITY (COARSE-GRAINED SOIL ONLY); DENSITY (COARSE-GRAINED/CONSISTENCY (FINE-GRAINED); MOISTURE; PLASTICITY (FINE-GRAINED SOIL ONLY); DILATANCY	Hg (ppm):		COMMENTS (e.g.: DRILLING FLUID LOSS, TESTS, OR DRILLER COMMENTS, ETC.)
						%G	%S	%F		BREATHING ZONE	HEAD SPACE	
1			①	ML		-	1	99	DK BROWN - BLACK SILT W/ TRACE WOOD FRAGS	0.0		SAMPLES * BELOW MUDLINE ① ALY-5-S (-13.4-17)
2			②	ML		-	5	95	DK BROWN - OLIVE SILT W/ OCCAS. FI SA.			② ALY-5B-4-8 (-17.6-21)
5			③						METALLIC FLECKS THROUGHOUT CORE FROM 2' to 13.5'			③ ALY-5-Z (-21 to -23)
			④									④ ALY-5-A (-23 to -25)
12									WOOD DEBRIS (2"-3") FROM 12'-13'			
13									END OF BORING @ 13ft. PENETRATED TO 20ft.			

⊗ SEE MUD MOLE BORING LOG FOR RECOVERY %, INTERVAL RECOVERY AND PENETRATION INTERVAL.



PROJECT NUMBER 180171.AR.12.01

BORING NUMBER ALY-4

SHEET 1 OF 1

SEDIMENT CORING LOG

NAD 83: 611511; 808835

PROJECT: WSDOT Pontoon Construction Recon. Sediment Sampling

LOCATION: ABERDEEN LOG YARD

DRILLING CONTRACTOR: AMEC

DRILLING METHOD AND EQUIPMENT USED: MUD MOLE

DEPTH OF WATER: 8.2 ft START: 8:23

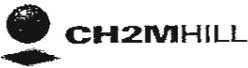
END:

2/25/09

LOGGER: M. R. PICH

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (%)	#TYPE	USCS	SPT RESULTS 6'-5'-4' (N)	SIZE DISTRIBUTION			SOIL DESCRIPTION	Hg (ppm):		COMMENTS (e.g.: DRILLING FLUID LOSS, TESTS, OR DRILLER COMMENTS, ETC.)
						%G	%S	%F		BREATHING ZONE	HEAD SPACE	
1			①	ML				99	OLIVE-BLACK SILT w/ TRACE F.S.A., WOOD FRAGS, and ANGULAR F.I.G.V. -(COLOR CHANGES TO DARK BROWN FROM 1'-2') (OLIVE-BLACK FROM 2'-13.7')	0.0		SAMPLES * ① ALY-4-S (-5 to -9) MUDLINE FIELD DUP: ALY-4-X (-5 to -9)
2												
3												
4			②									② ALY-4B-4-8 (-9 to -13)
5									METALLIC FLECKS THROUGHOUT CORE (NOT FROM ALUM CORE BARREL)			
6												
7			③									③ ALY-4B-8-12 (-13 to -17)
8												
9			④									④ ALY-4B-17-16 (-17 to -22)
10												
11												
12			⑤									⑤ ALY-4-E (-21 to -23)
13			⑥						LARGER WOOD PIECES (2"-3") FROM 13'-13.7'			⑥ ALY-4-A (-23 to -25)
14									END OF BORING @ 13.7 ft. PENETRATED TO 20.2 ft.			
15												

* SEE MUD MOLE BORING LOG FOR RECOVERY %, INTERVAL RECOVERY AND PENETRATION INTERVAL.



PROJECT NUMBER 180171.AR.12.01

BORING NUMBER AM-2

SHEET 1 OF 1

SEDIMENT CORING LOG

PROJECT: WSDOT Pontoon Construction Recon. Sediment Sampling

LOCATION: ANDERSON & MIDDLETON

DRILLING CONTRACTOR: AMEC

DRILLING METHOD AND EQUIPMENT USED: MUD MOLE

DEPTH OF WATER: 10.3 ft START: 10:35

END:

2/25/09

LOGGER: M. RIPIEN

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (%)	#/TYPE	USCS	SPT RESULTS (N)	SIZE DISTRIBUTION			SOIL DESCRIPTION	Hg (ppm):		COMMENTS (e.g.: DRILLING FLUID LOSS, TESTS, OR DRILLER COMMENTS, ETC.)
						%G	%S	%F		BREATHING ZONE	HEAD SPACE	
1				ML					DARK BROWN - BLACK SILT W/ TRACE FI	0.0		① AM-2-S (-9 to -13) FIELD DUP: AM-2-Y (-9 to -13)
2									GRAVEL, METALLICK FLECKS THROUGHOUT CORE, LITTLE TO NO WOOD DEBRIS.			
3				ML					BECOMES OLIVE GRAY (@ 3") SILT W/ TRACE ORGANIC MATERIAL.			
5												② AM-2B-4-8 (-13 to -17)
				ML					BECOMES SANDIER (~5% FI SA)			③ AM-2B-8-12 (-17 to -21)
10				ML					BECOMES SILTIER			④ AM-2-Z (-21 to -23)
												⑤ AM-2-A (-23 to -25)
13									END OF BORING @ 13.2 ft. PENETRATED TO 19.9 ft.			



SEE MUD MOLE BORING LOG.



PROJECT NUMBER 180171.AR.12.01

BORING NUMBER AM-1

SHEET 1 OF 1

SEDIMENT CORING LOG

NAD 83: 1614644; 794561

PROJECT: WSDOT Pontoon Construction Recon. Sediment Sampling

LOCATION: ANDERSON & MIDDLETON

DRILLING CONTRACTOR: AMEC

DRILLING METHOD AND EQUIPMENT USED: MUD MOLD

DEPTH OF WATER: 10.2 ft START: 12:24

END:

2/25/09

LOGGER: M. R. RICH

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (%)	#/TYPE	USCS	SPT RESULTS (N)	SIZE DISTRIBUTION			SOIL DESCRIPTION	Hg (ppm)		COMMENTS (e.g.: DRILLING FLUID LOSS, TESTS, OR DRILLER COMMENTS, ETC.)	
						%G	%S	%F		BREATHING ZONE	HEAD SPACE		
				ML				5	95	DARK BROWN - BLACK SILT w/ TRACE F1 SA (4" WOOD PIECES from 1.5' to 2.0')	0.0		SAMPLES * BELOW MUDLINE ① AM-1-S (0 to -4) SAP = -3 to -1
										METALLIC FLECKS THROUGHOUT CORE.			
5													② AM-1B-4-8 (-4 to -8) SAP = -1 to -5
										END OF BORING @ 5.9 ft. PENETRATED TO 10.2 ft.			
										SEE MUD MOLD BORING LOG.			
10													
15													

M. R. RICH
3/2/09



PROJECT NUMBER 180171.AR.12.01

BORING NUMBER ALY-1

SHEET 1 OF 1

SEDIMENT CORING LOG

NAD 83: 611828, 808674

PROJECT: WSDOT Pontoon Construction Recon. Sediment Sampling

LOCATION:

DRILLING CONTRACTOR: AMEC

DRILLING METHOD AND EQUIPMENT USED: MUD MOLE

DEPTH OF WATER: 3.7 ft START: 14:48 END: 2/25/09 LOGGER: M. R. P. I. C. M.

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (%)	#/TYPE	USCS	SPT RESULTS 5'-5'-5'-5' (N)	SIZE DISTRIBUTION			SOIL DESCRIPTION	Hg (ppm):		COMMENTS (e.g.: DRILLING FLUID LOSS, TESTS, OR DRILLER COMMENTS, ETC.)
						%G	%S	%F		BREATHING ZONE	HEAD SPACE	
1				GW		40	5	5	DARK BROWN, COARSE, ANGULAR GRAVE w/ SI AND COARSE SA (0-1ft)	0.0		BELOW MUD LINE ① ALY-1-S (16 to 17)
2				ML				99	DARK BROWN SI w/ OCCAS WOOD DEBRIS (4") from 1-1.5ft.			
3				GW								
4				SM		2.5	2.5	95	LIQUIFIED SI w/ OCCAS GRAVEL from 1.5 to 2.5ft			POUNTING ON RIP-RAP, CAUSED SILT TO LIQUIFY AND MOVE UP FROM BELOW.
5									COARSE GRAVEL from 2.5 to 2.75ft (RIP-RAP)			PIECES OF RIP-RAP BROKEN UP.
6									DK BROWN SILTY FI SAND w/ OCCAS FI GW AND WOOD DEBRIS			
7									BLACK SILT from 4-5.8ft.			
8									END OF BORING @ 5.8ft.			
9									PENETRATED TO 9.8ft.			
10												
15												

① SEE MUD MOLE LOG.

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CITY OF HOQUIAM (WATER DEPT.)

ALBERT WATERS

360.581.0160

→ CITY OF HOQUIAM WATER DEPT. MAINTENANCE YARD @ 8th & L STREETS

(NEAR ASM SITE) - USE FOR BOAT STORAGE AREA.

MONDAY, FEBRUARY 23, 2009

0830 - BP + MR. MET W/ JC (SEA OFFICE) TO GO OVER SAMPLING SCHEDULE & CONTINGENCY FOR SAMPLE STATION RELOCATION

ITEMS DISCUSSED:

- @ A.M. SITE - STN. 1 CAN BE MOVED CLOSER TO SHORE; LOCATIONS OF STN. 2 IS PRETTY MUCH FIXED.
- @ A.M. SITE, TRY TO KEEP SAMPLING STATIONS NEAR DATE CENTER OF THE DEEPER PASS

→ PLAN / PROCEED FOR SAMPLING @ A.M. STATIONS-

- 1ST ATTEMPT: TRY ORIGINAL LOCATION (e.g. AS SHOWN ON FIGURES)
- 2ND ATTEMPT: MOVE STATIONS (LATERALLY) ALONG SAME DEPTH COURSE (PREFERABLE TO SHORE)
- 3RD (A FINAL) ATTEMPT: MOVE STATIONS OFFSHORE TO ACHIEVE SAME AMT. OF PENETRATION

0900-1100: LOAD VEHICLES @ SEA, PICK UP GENERALIST & LOAD GEAR @

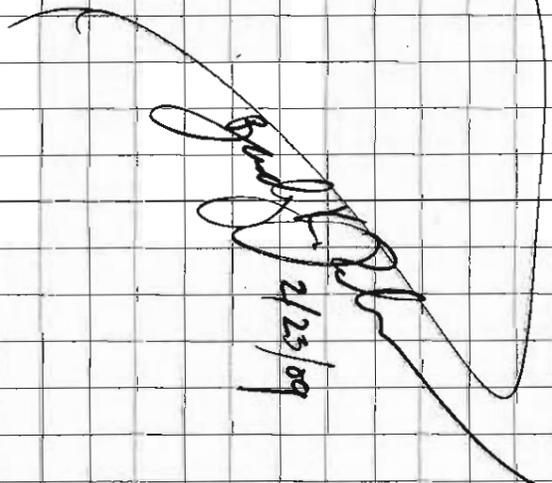
WAREHOUSE; BP + MR. DUPART FOR SEA. 1130-1200: PICK UP TWD CONTRACTORS (6-306M GARDENS) IN SORTIE.

1200-1430: BP + MR. TRANT TO GEM'S HARBOR 1430-1600: SECURITY LOCATIONS FOR PROCESSING STATIONS @ A.M. SITE; CLEAN BUSH, etc; OFF SITE

1630: MET UP W/ AMEC STAFF @ HOTEL; TALKED TO PRIMARY + BACKUP BOAT LAWYERS TO CHECK OUT RAMP CONVERSION.

1645: MET ARGENT WATERS @ CITY OF HOQUANAY (GARDEN CITY HALL); GOT KEY TO MAINTENANCE YARD FOR BOAT STORAGE

1730: EOD


2/23/09

6
TUESDAY, FEBRUARY 24th, 2009

- 0615 - MEET PROJECT TEAM FOR BREAKFAST @
HOTEL; DISCUSS PROJECT OBJECTIVES,
SAMPLING PLAN FOR TODAY, & SATURDAY
TOPICS (PELLETS, DIVING, & ON-
SHORE PROCESSING STATIONS).
0700 - DEPART HOTEL TO LAUREL POINT
+ SET UP SHORE PROCESSING STATIONS &
AGENCY LABOR YARD.
0730 - BP + MR ARRIVE AT SITE, START
SETTING UP PROCESSING STATIONS.
REST OF TEAM TO LAND + LAUNCH BOATS,
TRAILER TO MY SITE.
0930 - BOATS ARRIVE SITE; RECON FOR
SAMPLING STATIONS ATY-5, SETTING
3-POINT ANCHORS
1030 - SAMPLING VESSEL CALLED; HOURS
SET ANCHORS TWICE AND AGE SNU
OPERATIONS W/ 300+ FT OF ANCHOR LINE
{WIND IS CONSTANT 20 kt, CURRENT TO
25 kt}. NEED TO COME INSHORE
1040 - RECON. SAMPLING STATION ATY-3.
(PILINGS IN VICINITY CAN BE USED
TO ANCHOR TO).

7

- 1120 - SAMPLING VESSEL TIED OFF TO
PILING, SETTING ANCHORS.
GM REPORTS WATER DEPTH ON ATY-3
STATION IS 75-80 FT @ 1100 (TIDE
COMING UP) WITHIN 2 FT OF
TARGET DEPTH OF +1.0' MUDLINE.
1245 - SPOKE W/ NICK B. (AMETZ). MUDLINE
ELEVATION IS +2.1' (1.1 ft OFF OF
TARGET +1.0'). ADJUST SAMPLING
MUDLINES ACCORDINGLY WITHIN TOLERANCE
PENDING TOP 1.0 FT.
1305 - ON STATION @ ATY-2; WATER
DEPTH IS 7.8 FT. (TIDE TAG)
1330 - DROPPED OFF CORE & PROCESSING
STATION
1500 - ON STATION @ ATY-5 OFFSHORE
W/ 20' CORE TUBE TAGGED; DIVER
(DP) PREPARING TO GET IN.
1503 - BEGIN ATY-5 SAMPLE COLLECTION
1600 - CORE ASSEMBLED; PILING IN
ANCHORS, TIDE CORE OVER TO
PROCESSING STATION.
1615-1745: PROCESS CORE FROM ATY-5
{VESSELS DEPART FOR SMT LAUREL; BP, MR, &
NICK BRECHER PLASTER CORE + CEANU-UP}

1745-1815: CLEANUP CORE PROCESSING AREA,
 PNEC + SMOKE COOLERS W/ CARGO
 VAN, PNEC IDW DRUMS W/ VAN
 1820: OFFSITE; EOD.

[Signature]
 6/24/09

Wednesday, February 25, 2009

0545 - meet project team, go to
 breakfast, discuss plan +
 schedule for Tony's Samples:
 remaining sampling spots are
 Aly-4, Aly-1, A1M-1 & A1M-2
 (-5' mud) (+7') (+4') (-9')

ORDER OF SAMPLING BASED ON TIDES, FOR-
 CASTED WHENEVER + TRANSIT TIME BETWEEN SITES.

1. Aly-4 (DUE TO CURRENT + TIDE)
2. A1M-2
3. A1M-1 (DUE TO TIDE)
4. Aly-1 (DUE TO TIDE)

A1M SITE will potentially BE A MORE
 EXPOSED location: today's forecast is
 winds w/swl 20-25 kt, e/nw @ times.

0630 - Tony Departs for Brent Lauretta.
 BP TAKES CARGO VAN TO ALY SITE

0730 - BP Arrives Processing Sonar @
 Aly Site, PNEC SITE - waiting for
 sampling vessel to arrive at
 site.

OBIS-0845 - GULF CORE @ SNL.
(APPROX) Aug-4

0915-0930: DELIVERED CORE TO PROC-
ESSING STATION @ AUY SITE

0945: BOATS DEPART FOR AEM SITE;
MR + NB. PURSUING CORE

1010: ARRIVE AEM-2; WIND SLOWING
20 kt SMOGGY, 25 ft GUSTS, WIND
WAVES 2' & BUILDING. WILL USE
PERCUIT FLUIDS ABOVE US TO
ANCHOR (ONE POINT) + 1 PORT &
1 STERN ANCHOR.

1030-1230: CONVERT CORES @ AEM-2,
THIRD AEM-1.

1245: DEPART FOR AUY SITE TO DENVER
CORES TO PROCESSING STATION

1310: ARRIVE AUY SITE, DENVER CORES,
PREP FOR FLUID CORE @ APOKASAKI
SNL. (AUY-1) TO HIT 1323 HRS.
FLIGHT TIME

1325: ON STATION @ AUY-1, READY
TO CORE

1330: 1ST CORE (NGE BENT (CORE
CRACKING DAMAGED)); RELOAD
AND MORE

~ 1350: BEGIN 2ND ATTEMPT @ AUY-1;
SERVING DIVER DOWN IN ADVANCE
TO RECON THE DENVER SITE
BEFORE MUDHOUSE SPURS IN

1415: DIVER REPORTS SAMPLE ALONG
CORNER IS ~~6'~~ 6" + QUINCY
SPUR LOCK - WILL ATTEMPT TO
CUT AWAY FOR MUDHOUSE

~ 1445: CONVERT CORE @ AUY-1. CORE
OKS SEND DUE TO ROTA ENLARGED.
SIS: VERY DIFFICULT EXPOSURE/APPX
AUY DRYWYND. ENTIRE 10' LENGTH
(TYPE "MUSHROOMED" w/ SHUT GEAR
WAS BOTTOM?).

~ 1500 - CORE EXHAUSTED; PREP FOR DENVER
TO SHUTE SNL.

~ 1530 - CORE DENVER: BOATS BACK TO
LAUNCH, BEGIN PROCESSING REMAINS
CORES.

1945-1815: COMPLETE SAMPLE PROCESSING,
TRANSFER TO PRESERVATION, DENVER
CORE PURT SNL.

1815-1915: DENVER IWD DRUMS TO
CITY OF HOQUAM MOUNT. ROAD

1930: EOPD See RFB & other

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SEDIMENT *CHARACT.*
ABERDEEN, WA
FEBRUARY 2009

2/23/09

1500 ARRIVE ALY SITE,

M. RYDIN, B. ANDERSON,

- INSPECTED SITE,

CHECKED ON-SHORE

WICK AREA.

- BOUGHT ICE & DI

WATER.

1700 ARRIVE HOTEL

ABERDEEN, WA.

[Handwritten signature]
2/24/09

2/24/09

0645 MET W DRILLERS

DIVERS M. RIPPICH

B. PHUDSON

- DISCUSSED HIS
AND TODAY'S WORK.

0730 ON SITE AT ALY.

- DRILLERS TO DICK

TO LAUNCH BRIDGE.

- SET UP PROCESSING

STATION ON-SHORE

0900 - MILK ARRIVES AT

ALY PROCESSING STATION

0905 CALIBRATE PID

SEND: CH2M C102001

CH GAS: 150BUTYLENE 100ppm

FRESH AIR: 0.0 ppm

CH GAS: 101 ppm

CH GAS: OHA INSTR.

LOT # 921009

PMT # 103172000

Exp Date: 10/6/2011

0930 - 1045 ATTEMPTED TO

MOVE ALY-5.

VERY WINDY, ANCHOR

NOT STAYING. MOVED

TO ALY-3.

11:23 CALVERTED 20' CORE ALY-3.

1230 - ALY-3 CORE ON

SHORE AT PROCESSING.

STATION.

ALY-3

M. RIPPICH - LOCATED

OVERCAST, WINDY, ~45°F

DTW 7.7 ft

1245 - 1430 SAMPLED ALY3.

- LOCATED CORE, TOOK PHOTOS,
SAMPLED

6 STND. SUITE = SULFIDES, VOCs, CONVENTIONALs
PCDD/F = DIOXINS/FURANS

COLLECTED: ALY-3-S (STND SUITE)

ALY-3-B-4-8 (STND SUITE + ROD/F)

ALY-3-B-8-12 (STN SUITE)

ALY-3-B-12-16 (STN SUITE + ROD/F)

ALY-3-B-16-20 (STND SUITE)

1440 CUT OPEN ALY-2

1500 - SAMPLED ALY-2

1600

= LOCATED CORE, NO PHOTOS
(LOOKS VERY SIMILAR TO

COLLECTED: ALY-2-S (SS + ROD/F) (ALY-3)

ALY-2-B-4-8 (STN SUITE)

ALY-2-B-8-12 (SS + ROD/F)

ALY-2-B-12-16 (STN SUITE)

ALY-2-B-16-20 (STN SUITE)

1625: CUT OPEN ALY-5

1630 SAMPLED ALY-5

ARCHIVE = SULFIDE, CONVENTIONALs,
DIOXINS/FURANS

COLLECTED: ALY-5-S (SS + ROD/F)

ALY-5-B-4-8 (SS + ROD/F)

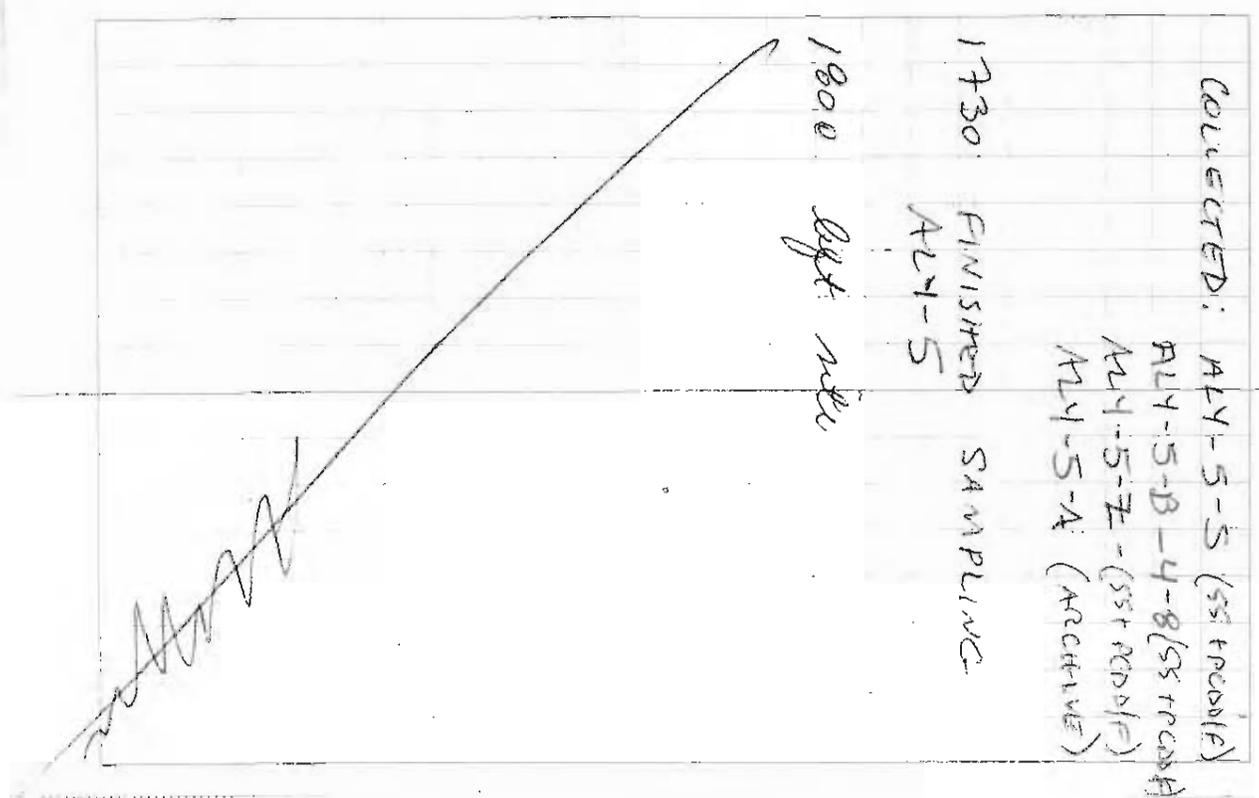
ALY-5-B-8-12 (SS + ROD/F)

ALY-5-B-16-20 (ARCHIVE)

1730 FINISHED SAMPLING

ALY-5

1800 left note



2/25/09

M. RICH

0800 On site RAINING HMD 40°F

Bought 10-cell bags
ground for mud
in processing area.
H's plan.

0830 prep'g samples
for delivery later
today on tomorrow

Drillers on lounge at
0700.

Calibrated PID: FRESH AIR: 0.0
CUT GAS: 99ppm

0945 ATY-4 RECEIVED
ON-SHORE

1005 CUT OPEN ATY-4.

1030 COLLECTED ATY-4 SAMPLES

1200 FINISHED SAMPLING
ATY-4.

FIELD DUPLICATE (ATY-4-X)
collected at ATY-4-S @
1030.

COLLECTED:

- ATY-4-S (95+RECORD)
- ATY-4-X FD (55+RECORD)
- ATY-4-B-4-B (55)
- ATY-4-B-8-12 (55+RECORD)
- ATY-4-B-12-16 (55)
- ATY-4-Z (55+RECORD)
- ATY-4-A (ARCHIVE)

1315 194M 1 and 194M 2
BROW-CUT ASHORE.

1330 CUT OPEN AM 2

FIELD DUPLICATE (ATY-2-Y)
TAKEN @ ~~1330~~ 1330
AM-2 (55)

MS/MSD AT ~~1330~~ 1330-4-B
FAIR: VOCs, DIOXINS, FURANS,
CONVENTIONALS
(NO SULFIDES).
DIOXINS/FURANS and CONVENTIONALS
IN 4 gal ZINCOLIC BARS.
(PART OUT OF BARS.)

COLLECTED: AM-2-5 (SS+RODIF)
~~1500~~ AM-2-1 (FD) (SS+RODIF)
 AM-2B-4-8 (MS/MSD)
 for VCs, Diox/FURANS,
 CEVENTHWANAS (STN SUITE)
 AM-2B-8-12 (SS+RODIF)
 AM-2-2-Z (STN SUITE+RODIF)
 AM-2-A (ARCHIVE)

1500 FINISHED AM-2.
 1520 CUT ~~OPEN~~ ^{MS} OPEN AM-1
 1600 SAMPLED AM-1

COLLECTED AM-1-5 (STN SUITE)
 AM-1B-4-6 (STN SUITE+RODIF)

1615 CUT OPEN ALY-1
 1630 SAMPLED ALY-1
 1700 FINISHED SAMPLING
 ALY-1

SNOW SHOWERS, COLD, WINDY

COLLECTED: ALY-1-5 (STN SUITE)

~1100 BETHANY PRENTICE/SEN
 ON SITE TO DELIVE
 SAMPLES TO COLUMBIA
 PARTNUTICAL LABS IN
 KERSO, WA.

~1800 BETHANY LEFT SITE
 w/ 7 COOLERS (ALL
 SAMPLES) FOR CAR
 LABS.

1700-1800
 PACKED ICE FOR THE
 COOLERS. FILLED OUT
 COGS FOR THE SAMPLES,
 TAPED COOLERS.

1800-1830 FINISHED HOLDING
 BARR AND CLEAN UP SITE
 AND PACK UP.

DRUMS / DIVING LEFT
SITE @ ~ 1700.

1830 - 1930 DROPPED OFF

DRUMS AT CAMP OF

HOQUITM MAINTENANCE

YARD FOR TEMP. STORAGE.

FOUR (30 gal) DRUMS -

SELL ONLY, ALL LABELED

AS "SEDIMENT - PENDING

ANALYSIS"

CONTACT: WINTER

DRUMS FILLED TO MAX
OF 25 gal each.

1930 M. RUPICHT, B. PULSON

ARRIVE HOTEL (QUESTHOUSE

INN) ABERDEEN, WA.

~~2/25/09~~

2/26/09

0800 WORKING AT HOTEL. (Snow
in garden)

CALLS W/ LMB, PM,

TOY CHEN.

1030 LEFT HOTEL.

1330 ARRIVE WAREHOUSE,

BELLEVUE. UNPACK,

RETURN CAR.

~~2/26/09~~

APPENDIX C

Data Quality Evaluation Report

Quality Assurance/Quality Control Review of Laboratory Data Sediment Sampling – February 2009

Introduction

The objective of this data quality evaluation (DQE) report is to assess the data quality of analytical results for sediment samples collected for the WSDOT SR 520 Pontoon Sites investigation. The basis for this assessment includes: individual method requirements, guidelines from the United States Environmental Protection Agency (USEPA) *Contract Laboratory National Functional Guidelines for Organic Data Review* (USEPA, 1999), the USEPA *Contract Laboratory National Functional Guidelines for Inorganic Data Review* (USEPA, 2002), and the *Dredged Material Evaluation and Disposal Procedures (User's Manual)* (USACE Seattle District 2008).

This DQE report is intended as a general data quality assessment designed to summarize data issues.

Analytical Data

This DQE covers 25 normal samples and two field duplicates (FD). Three samples were collected and archived. Samples were collected February 24 and 25, 2009. These sample results were reported as one sample delivery group, K0901613. The analyses were performed by Columbia Analytical Services located in Kelso, Washington.

Fifteen methods were used to analyze the environmental samples. Samples were collected and shipped by overnight carrier to the laboratory for analysis. Selected samples were analyzed for one or more of the following parameters/methods:

Parameter	Method
Total Volatile Solids	E160.3M
Dioxins and Furans	E1613B
Guaiacols	E1653M
Tri-n-butyltin and Tri-n-propyltin	Krone
Ammonia	Plumb
Geophysical Parameters	PSEP
Sulfide	PSEP Sulfide
Total Organic Carbon	PSEP Total Organic Carbon
Metals (Sb, As, Cd, Cr, Cu, Pb, Ni, Ag, Zn)	SW6010B

Table 1 – Analytical Parameters	
Parameter	Method
Selenium	SW6020
Mercury	SW7471A
Volatile Organic Compounds	SW8260B
Semi-Volatile Organic Compounds	SW8270C
Polychlorinated Biphenyls	SW8082
Pesticides	SW8081

The assessment of data includes a review of: (1) the chain-of-custody documentation; (2) holding-time compliance; (3) the required field and laboratory quality control (QC) samples; (4) flagging for method and field blanks; (5) laboratory control sample/laboratory control sample duplicate (LCS/LCSD) recoveries and precision; (6) surrogate spike recoveries; (7) matrix spike/matrix spike duplicate (MS/MSD) recoveries and precision; (8) initial and continuing calibration information; and, (9) internal standard recoveries.

Data flags are assigned according to the National Functional Guidelines. Multiple flags are routinely applied to specific sample method/matrix/analyte combinations, but there will be only one final flag. A final flag is applied to the data and is the most conservative of the applied validation flags. The final flag also includes matrix and blank sample impacts.

The data flags are defined below:

- J = Analyte was present but reported value may not be accurate or precise.
- R = The result was rejected.
- U = Analyte was analyzed for but not detected at the specified detection limit.
- UJ = Analyte was not detected above the detection limit objective. However, the reported detection limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample

Findings

The overall summaries of the data validation findings are contained in the following sections below and summarized in Table 2.

Holding Times

All holding-time criteria were met.

Calibration

Initial and continuing calibration criteria were met.

Method Blanks

Method blanks were analyzed at the required frequency and were free of contamination with the following exceptions:

Total HPCDF and octachlorodibenzofuran were detected below the reporting limit (RL) in the methods blanks for method E1613B. Two associated results were detected less than five times the blank concentrations. The results were qualified as not detected and flagged "U".

Total xylenes was detected below the RL in a methods blank for method SW8260B. Four associated results were detected less than five times the blank concentration. The results were qualified as not detected and flagged "U".

Field Blanks

Field blanks were not collected with this event.

Field Duplicates

Two FDs were collected with this event. Precision was acceptable with the following exceptions:

The relative percent difference (RPD) of sulfide was above criteria in one FD set for method PSEP sulfide. Two associated detected results in the normal and duplicate were qualified as estimated and flagged "J".

The RPDs of eight analytes were above criteria in one FD set for method SW8270C. Fifteen associated detected results in the normal and duplicate were qualified as estimated and flagged "J"; one associated non-detected result in the duplicate was qualified as estimated and flagged "UJ".

The RPDs of 15 analytes were above criteria in two FD sets for method E1613B. The laboratory noted the sediment of the normal and duplicate were not homogeneous. Forty-one associated detected results in the normals and duplicates were qualified as estimated and flagged "J"; three associated non-detected results in a duplicate were qualified as estimated and flagged "UJ".

Laboratory Duplicates

The laboratory duplicate RPDs of two analytes were above criteria in two samples for the PSEP geophysical analysis. Two associated detected results were qualified as estimated and flagged "J".

Surrogates

Surrogates were recovered within criteria with the following exceptions:

Surrogate recovery was below criteria in one sample for method E1613B, indicating associated sample results are possibly biased low. Four associated detected results were qualified as estimated and flagged "J".

Laboratory Control Samples

LCS/LCSDs were analyzed as required. All accuracy and precision criteria were met with the following exceptions:

The recovery of guaiacol (2-methoxyphenol) was zero percent on the LCS and LCSD for method SW8270C, indicating associated results are possibly biased significantly low. Twenty-seven associated non-detected results were rejected for project use and flagged "R".

Matrix Spikes

The results of MS/MSD analyses provide information about the possible influence of the matrix on either accuracy or precision of the measurements. MS/MSD recoveries and the associated RPD met criteria with the following exceptions:

The recovery of antimony was below criteria in the MSs of two samples for method SW6010B, indicating the associated parent sample results are possibly biased low. Two associated non-detected results were qualified as estimated and flagged "UJ".

The recovery of sulfide was below criteria in the MS of one sample for method PSEP sulfide, indicating the associated parent sample result is possibly biased low. Additionally, the MS/MSD RPD was above criteria. The associated detected result was qualified as estimated and flagged "J".

Internal Standards

The internal standards were recovered below criteria in 19 samples for method E1653M, indicating associated results are possibly biased. One hundred fifty-two associated non-detected results were qualified as estimated and flagged "UJ".

Confirmation

The confirmation RPD of 2,3,7,8-TCDF was above criteria in one sample for method E1613B. The analyte was detected in the confirmation sample. The non-detected result was reported. The result is qualified as estimated and flagged "UJ".

The confirmation RPDs of six analytes were above criteria in one or more of eight samples for method SW8081. Twelve associated detected results were qualified as estimated and flagged "J".

The confirmation RPD of Aroclor-1260 was above criteria in four samples for method SW8082. Four associated detected results were qualified as estimated and flagged "J".

Sample Quantitation

Thirteen analytes in 16 samples did not meet the identification ratio criteria for method E1613B, indicating the associated sample results are possibly biased. Thirty-eight associated detected results were qualified as estimated and flagged "J".

Chain of Custody

Each sample was documented in a completed chain-of-custody and received at the laboratory in good condition.

Overall Assessment

The goal of this assessment is to demonstrate that a sufficient number of representative samples were collected and the resulting analytical data can be used to support the decision-making process. The following summary highlights the precision, accuracy, representativeness, completeness, and comparability findings for the above-defined event:

1. Twenty-seven guaiacol results were rejected for method SW8270C due to LCS/LCSD recoveries. Completeness for this analyte by SW8270C is zero percent. Overall completeness for method SW8270C is 97.5 percent. Completeness is 100 percent for all other method/analyte combinations.
2. Less than two percent of the data were qualified due to low-level blank contamination. The degree to which blank contamination was observed is within reasonable method expectations.
3. FD RPD exceedances were observed for methods PSEP sulfide, SW8270C and E1613B.
4. A laboratory duplicate RPD exceedance was observed for the PSEP geophysical analysis.
5. Surrogate recovery exceedances were observed for E1613B.
6. Internal standard recovery exceedances were observed for method E1653M.
7. MS/MSD recovery exceedances were observed for methods SW6010B and PSEP sulfide.
8. Confirmation RPD exceedances were observed for methods SW8081 and SW8082.
9. Several analytes did not meet the identification ratio criteria for method E1613B.
10. Although data were qualified as estimated due to QC exceedances as noted, overall precision and accuracy of the data, as measured by field and laboratory QC indicators suggest that data are usable for project objectives.

References

U.S. Environmental Protection Agency (U.S. EPA). 1999. *Contract Laboratory Program National Functional Guidelines for Organic Data Review, Final*. EPA-540/R-99-008. October.

U.S. Environmental Protection Agency (U.S. EPA). 2002. *Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, Final*. EPA-540/R-01-008. July.

USACE Seattle District 2008. 2008. *Dredged Material Evaluation and Disposal Procedures (User's Manual)*.

Table 2 – Validation Findings

SampleID	Method	Analyte	Final Result	Units	Final Flag	Reason
ALY-1-S	SW8081	4,4'-DDD	0.15	ug/Kg	J	CF>RPD
ALY-1-S	SW8081	4,4'-DDT	0.61	ug/Kg	J	CF>RPD
ALY-1-S	SW8270C	Guaiacol(2-Methoxyphenol)	30	ug/Kg	R	LCS<LCL, LCSD<LCL
ALY-1-S	PSEP	Silt	23.1	Percent	J	LabDupe>RPD
ALY-2-B-12-16	SW8270C	Guaiacol(2-Methoxyphenol)	30	ug/Kg	R	LCS<LCL, LCSD<LCL
ALY-2-B-16-20	1653M	3,4,5-Trichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-2-B-16-20	1653M	3,4,6-Trichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-2-B-16-20	1653M	3,4-Dichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-2-B-16-20	1653M	4,5,6-Trichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-2-B-16-20	1653M	4,5-Dichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-2-B-16-20	1653M	4,6-Dichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-2-B-16-20	1653M	4-Chloroguaiacol	0.13	mg/Kg	UJ	IS<LCL
ALY-2-B-16-20	1653M	Tetrachloroguaiacol	0.5	mg/Kg	UJ	IS<LCL
ALY-2-B-16-20	SW8270C	Guaiacol(2-Methoxyphenol)	30	ug/Kg	R	LCS<LCL, LCSD<LCL
ALY-2-B-4-8	SW8270C	Guaiacol(2-Methoxyphenol)	100	ug/Kg	R	LCS<LCL, LCSD<LCL
ALY-2-B-8-12	1613B	1,2,3,4,7,8-HXCDF	0.21	ng/Kg	J	EMPC
ALY-2-B-8-12	1613B	1,2,3,6,7,8-HXCDF	0.14	ng/Kg	J	EMPC
ALY-2-B-8-12	1613B	2,3,4,6,7,8-HXCDF	0.153	ng/Kg	J	EMPC
ALY-2-B-8-12	1613B	2,3,7,8-TCDD	0.813	ng/Kg	J	EMPC
ALY-2-B-8-12	1613B	Octachlorodibenzofuran-C13	1.31	ng/Kg	J	EMPC
ALY-2-B-8-12	SW8270C	Guaiacol(2-Methoxyphenol)	30	ug/Kg	R	LCS<LCL, LCSD<LCL
ALY-2-S	1613B	1,2,3,4,7,8-HXCDD	0.298	ng/Kg	J	EMPC
ALY-2-S	SW8082	Aroclor-1260	23	ug/Kg	J	CF>RPD
ALY-2-S	SW8270C	Guaiacol(2-Methoxyphenol)	32	ug/Kg	R	LCS<LCL, LCSD<LCL
ALY-3-B-12-16	1613B	1,2,3,4,7,8-HXCDD	0.346	ng/Kg	J	EMPC
ALY-3-B-12-16	1613B	1,2,3,4,7,8-HXCDF	0.198	ng/Kg	J	EMPC
ALY-3-B-12-16	1613B	1,2,3,7,8-PECDF	0.152	ng/Kg	J	EMPC
ALY-3-B-12-16	1613B	2,3,4,6,7,8-HXCDF	0.0747	ng/Kg	J	EMPC
ALY-3-B-12-16	1613B	HPCDF, Total	0.241	ng/Kg	U	MB<RL
ALY-3-B-12-16	1613B	Octachlorodibenzofuran-C13	0.299	ng/Kg	U	MB<RL
ALY-3-B-12-16	1653M	3,4,5-Trichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-3-B-12-16	1653M	3,4,6-Trichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-3-B-12-16	1653M	3,4-Dichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-3-B-12-16	1653M	4,5,6-Trichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-3-B-12-16	1653M	4,5-Dichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-3-B-12-16	1653M	4,6-Dichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-3-B-12-16	1653M	4-Chloroguaiacol	0.13	mg/Kg	UJ	IS<LCL
ALY-3-B-12-16	1653M	Tetrachloroguaiacol	0.5	mg/Kg	UJ	IS<LCL
ALY-3-B-12-16	SW8270C	Guaiacol(2-Methoxyphenol)	30	ug/Kg	R	LCS<LCL, LCSD<LCL

SampleID	Method	Analyte	Final Result	Units	Final Flag	Reason
ALY-3-B-16-20	1653M	3,4,5-Trichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-3-B-16-20	1653M	3,4,6-Trichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-3-B-16-20	1653M	3,4-Dichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-3-B-16-20	1653M	4,5,6-Trichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-3-B-16-20	1653M	4,5-Dichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-3-B-16-20	1653M	4,6-Dichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-3-B-16-20	1653M	4-Chloroguaiacol	0.13	mg/Kg	UJ	IS<LCL
ALY-3-B-16-20	1653M	Tetrachloroguaiacol	0.5	mg/Kg	UJ	IS<LCL
ALY-3-B-16-20	SW8270C	Guaiacol(2-Methoxyphenol)	30	ug/Kg	R	LCS<LCL, LCSD<LCL
ALY-3-B-4-8	1613B	1,2,3,4,6,7,8,9-OCDD	30.3	ng/Kg	J	Sur<LCL
ALY-3-B-4-8	1613B	1,2,3,4,6,7,8-HPCDD	7.67	ng/Kg	J	Sur<LCL
ALY-3-B-4-8	1613B	1,2,3,4,6,7,8-HPCDF	0.317	ng/Kg	J	Sur<LCL
ALY-3-B-4-8	1613B	1,2,3,4,7,8-HXCDD	0.27	ng/Kg	J	EMPC
ALY-3-B-4-8	1613B	1,2,3,4,7,8-HXCDF	0.313	ng/Kg	J	EMPC
ALY-3-B-4-8	1613B	1,2,3,7,8,9-HXCDF	0.273	ng/Kg	J	Sur<LCL
ALY-3-B-4-8	1613B	1,2,3,7,8-PECDF	0.115	ng/Kg	J	EMPC
ALY-3-B-4-8	1613B	2,3,7,8-TCDD	1.02	ng/Kg	J	EMPC
ALY-3-B-4-8	1653M	3,4,5-Trichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-3-B-4-8	1653M	3,4,6-Trichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-3-B-4-8	1653M	3,4-Dichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-3-B-4-8	1653M	4,5,6-Trichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-3-B-4-8	1653M	4,5-Dichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-3-B-4-8	1653M	4,6-Dichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-3-B-4-8	1653M	4-Chloroguaiacol	0.13	mg/Kg	UJ	IS<LCL
ALY-3-B-4-8	1653M	Tetrachloroguaiacol	0.5	mg/Kg	UJ	IS<LCL
ALY-3-B-4-8	SW8260B	Xylenes, total	0.38	ug/Kg	U	MB<RL
ALY-3-B-4-8	SW8270C	Guaiacol(2-Methoxyphenol)	30	ug/Kg	R	LCS<LCL, LCSD<LCL
ALY-3-B-8-12	1653M	3,4,5-Trichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-3-B-8-12	1653M	3,4,6-Trichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-3-B-8-12	1653M	3,4-Dichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-3-B-8-12	1653M	4,5,6-Trichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-3-B-8-12	1653M	4,5-Dichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-3-B-8-12	1653M	4,6-Dichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-3-B-8-12	1653M	4-Chloroguaiacol	0.13	mg/Kg	UJ	IS<LCL
ALY-3-B-8-12	1653M	Tetrachloroguaiacol	0.5	mg/Kg	UJ	IS<LCL
ALY-3-B-8-12	SW8081	Dieldrin	0.57	ug/Kg	J	CF>RPD
ALY-3-B-8-12	SW8270C	Guaiacol(2-Methoxyphenol)	30	ug/Kg	R	LCS<LCL, LCSD<LCL
ALY-3-S	1653M	3,4,5-Trichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-3-S	1653M	3,4,6-Trichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-3-S	1653M	3,4-Dichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-3-S	1653M	4,5,6-Trichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-3-S	1653M	4,5-Dichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-3-S	1653M	4,6-Dichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-3-S	1653M	4-Chloroguaiacol	0.13	mg/Kg	UJ	IS<LCL

SampleID	Method	Analyte	Final Result	Units	Final Flag	Reason
ALY-3-S	1653M	Tetrachloroguaiacol	0.5	mg/Kg	UJ	IS<LCL
ALY-3-S	PSEP Sulfide	Sulfide	4060	mg/Kg	J	MS<LCL, MSRPD
ALY-3-S	SW6010B	Antimony	0.6	mg/Kg	UJ	MS<LCL
ALY-3-S	SW8081	4,4'-DDE	0.47	ug/Kg	J	CF>RPD
ALY-3-S	SW8081	gamma-Chlordane	1.7	ug/Kg	J	CF>RPD
ALY-3-S	SW8082	Aroclor-1260	20	ug/Kg	J	CF>RPD
ALY-3-S	SW8260B	Xylenes, total	0.51	ug/Kg	U	MB<RL
ALY-3-S	SW8270C	Guaiacol(2-Methoxyphenol)	30	ug/Kg	R	LCS<LCL, LCSD<LCL
ALY-4B-12-16	1653M	3,4,5-Trichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-4B-12-16	1653M	3,4,6-Trichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-4B-12-16	1653M	3,4-Dichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-4B-12-16	1653M	4,5,6-Trichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-4B-12-16	1653M	4,5-Dichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-4B-12-16	1653M	4,6-Dichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-4B-12-16	1653M	4-Chloroguaiacol	0.13	mg/Kg	UJ	IS<LCL
ALY-4B-12-16	1653M	Tetrachloroguaiacol	0.5	mg/Kg	UJ	IS<LCL
ALY-4B-12-16	SW8270C	Guaiacol(2-Methoxyphenol)	30	ug/Kg	R	LCS<LCL, LCSD<LCL
ALY-4B-4-8	1653M	3,4,5-Trichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-4B-4-8	1653M	3,4,6-Trichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-4B-4-8	1653M	3,4-Dichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-4B-4-8	1653M	4,5,6-Trichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-4B-4-8	1653M	4,5-Dichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-4B-4-8	1653M	4,6-Dichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-4B-4-8	1653M	4-Chloroguaiacol	0.13	mg/Kg	UJ	IS<LCL
ALY-4B-4-8	1653M	Tetrachloroguaiacol	0.5	mg/Kg	UJ	IS<LCL
ALY-4B-4-8	SW8081	cis-Nonachlor	0.55	ug/Kg	J	CF>RPD
ALY-4B-4-8	SW8270C	Guaiacol(2-Methoxyphenol)	30	ug/Kg	R	LCS<LCL, LCSD<LCL
ALY-4B-8-12	1613B	1,2,3,4,7,8,9-HPCDF	0.044	ng/Kg	J	EMPC
ALY-4B-8-12	1613B	1,2,3,6,7,8-HXCDF	0.0426	ng/Kg	J	EMPC
ALY-4B-8-12	SW8081	4,4'-DDT	0.78	ug/Kg	J	CF>RPD
ALY-4B-8-12	SW8081	cis-Nonachlor	0.29	ug/Kg	J	CF>RPD
ALY-4B-8-12	SW8270C	Guaiacol(2-Methoxyphenol)	30	ug/Kg	R	LCS<LCL, LCSD<LCL
ALY-4-S	1613B	1,2,3,4,6,7,8,9-OCDD	3220	ng/Kg	J	FD>RPD
ALY-4-S	1613B	1,2,3,4,6,7,8-HPCDD	343	ng/Kg	J	FD>RPD
ALY-4-S	1613B	1,2,3,4,6,7,8-HPCDF	77.4	ng/Kg	J	FD>RPD
ALY-4-S	1613B	1,2,3,6,7,8-HXCDD	14.5	ng/Kg	J	FD>RPD
ALY-4-S	1613B	1,2,3,7,8,9-HXCDD	11.7	ng/Kg	J	FD>RPD
ALY-4-S	1613B	2,3,7,8-TCDD	5.5	ng/Kg	J	FD>RPD
ALY-4-S	1613B	2,3,7,8-TCDF	2.73	ng/Kg	J	FD>RPD, EMPC
ALY-4-S	1613B	HPCDF, Total	252	ng/Kg	J	FD>RPD
ALY-4-S	1613B	HPCDD, Total	673	ng/Kg	J	FD>RPD
ALY-4-S	1613B	HXCDF, Total	42.5	ng/Kg	J	FD>RPD
ALY-4-S	1613B	HXCDD, Total	132	ng/Kg	J	FD>RPD

SampleID	Method	Analyte	Final Result	Units	Final Flag	Reason
ALY-4-S	1613B	Octachlorodibenzofuran-C13	256	ng/Kg	J	FD>RPD
ALY-4-S	1613B	PECDF, Total	40.6	ng/Kg	J	FD>RPD
ALY-4-S	1613B	PECDD, Total	30.5	ng/Kg	J	FD>RPD
ALY-4-S	1613B	TCDF, Total	40.2	ng/Kg	J	FD>RPD
ALY-4-S	1613B	TCDD, Total	20.3	ng/Kg	J	FD>RPD
ALY-4-S	1653M	3,4,5-Trichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-4-S	1653M	3,4,6-Trichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-4-S	1653M	3,4-Dichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-4-S	1653M	4,5,6-Trichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-4-S	1653M	4,5-Dichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-4-S	1653M	4,6-Dichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-4-S	1653M	4-Chloroguaiacol	0.13	mg/Kg	UJ	IS<LCL
ALY-4-S	1653M	Tetrachloroguaiacol	0.5	mg/Kg	UJ	IS<LCL
ALY-4-S	SW8270C	4-Methylphenol	64	ug/Kg	J	FD>RPD
ALY-4-S	SW8270C	Benzo (a) anthracene	15	ug/Kg	J	FD>RPD
ALY-4-S	SW8270C	Benzo (a) pyrene	21	ug/Kg	J	FD>RPD
ALY-4-S	SW8270C	Benzo (b) fluoranthene	25	ug/Kg	J	FD>RPD
ALY-4-S	SW8270C	Benzo (g,h,i) perylene	18	ug/Kg	J	FD>RPD
ALY-4-S	SW8270C	Butyl Benzylphthalate	35	ug/Kg	J	FD>RPD
ALY-4-S	SW8270C	Chrysene	23	ug/Kg	J	FD>RPD
ALY-4-S	SW8270C	Guaiacol(2-Methoxyphenol)	30	ug/Kg	R	LCS<LCL, LCSD<LCL
ALY-4-S	SW8270C	Indeno (1,2,3-c,d) pyrene	15	ug/Kg	J	FD>RPD
ALY-4-X	1613B	1,2,3,4,6,7,8,9-OCDD	57.1	ng/Kg	J	FD>RPD
ALY-4-X	1613B	1,2,3,4,6,7,8-HPCDD	7.34	ng/Kg	J	FD>RPD
ALY-4-X	1613B	1,2,3,4,6,7,8-HPCDF	1.89	ng/Kg	J	FD>RPD
ALY-4-X	1613B	1,2,3,6,7,8-HXCDD	0.399	ng/Kg	J	FD>RPD, EMPC
ALY-4-X	1613B	1,2,3,7,8,9-HXCDD	0.306	ng/Kg	J	FD>RPD, EMPC
ALY-4-X	1613B	2,3,7,8-TCDD	0.0283	ng/Kg	UJ	FD>RPD
ALY-4-X	1613B	2,3,7,8-TCDF	0.0581	ng/Kg	UJ	FD>RPD
ALY-4-X	1613B	HPCDF, Total	5.56	ng/Kg	J	FD>RPD
ALY-4-X	1613B	HPCDD, Total	14.1	ng/Kg	J	FD>RPD
ALY-4-X	1613B	HXCDF, Total	2.18	ng/Kg	J	FD>RPD
ALY-4-X	1613B	HXCDD, Total	2.8	ng/Kg	J	FD>RPD
ALY-4-X	1613B	Octachlorodibenzofuran-C13	4.93	ng/Kg	J	FD>RPD
ALY-4-X	1613B	PECDF, Total	0.963	ng/Kg	J	FD>RPD
ALY-4-X	1613B	PECDD, Total	0.348	ng/Kg	J	FD>RPD
ALY-4-X	1613B	TCDF, Total	0.577	ng/Kg	J	FD>RPD
ALY-4-X	1613B	TCDD, Total	0.0283	ng/Kg	UJ	FD>RPD
ALY-4-X	1653M	3,4,5-Trichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-4-X	1653M	3,4,6-Trichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-4-X	1653M	3,4-Dichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-4-X	1653M	4,5,6-Trichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-4-X	1653M	4,5-Dichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-4-X	1653M	4,6-Dichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-4-X	1653M	4-Chloroguaiacol	0.13	mg/Kg	UJ	IS<LCL

SampleID	Method	Analyte	Final Result	Units	Final Flag	Reason
ALY-4-X	1653M	Tetrachloroguaiacol	0.5	mg/Kg	UJ	IS<LCL
ALY-4-X	SW8082	Aroclor-1260	66	ug/Kg	J	CF>RPD
ALY-4-X	SW8270C	4-Methylphenol	100	ug/Kg	J	FD>RPD
ALY-4-X	SW8270C	Benzo (a) anthracene	10	ug/Kg	J	FD>RPD
ALY-4-X	SW8270C	Benzo (a) pyrene	13	ug/Kg	J	FD>RPD
ALY-4-X	SW8270C	Benzo (b) fluoranthene	16	ug/Kg	J	FD>RPD
ALY-4-X	SW8270C	Benzo (g,h,i) perylene	12	ug/Kg	J	FD>RPD
ALY-4-X	SW8270C	Butyl Benzylphthalate	3.2	ug/Kg	UJ	FD>RPD
ALY-4-X	SW8270C	Chrysene	15	ug/Kg	J	FD>RPD
ALY-4-X	SW8270C	Guaiacol(2-Methoxyphenol)	30	ug/Kg	R	LCS<LCL, LCSD<LCL
ALY-4-X	SW8270C	Indeno (1,2,3-c,d) pyrene	9.9	ug/Kg	J	FD>RPD
ALY-4-Z	1613B	1,2,3,7,8,9-HXCDF	0.155	ng/Kg	J	EMPC
ALY-4-Z	1613B	2,3,7,8-TCDD	0.501	ng/Kg	J	EMPC
ALY-4-Z	1613B	2,3,7,8-TCDF	0.345	ng/Kg	UJ	CF>RPD
ALY-4-Z	1653M	3,4,5-Trichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-4-Z	1653M	3,4,6-Trichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-4-Z	1653M	3,4-Dichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-4-Z	1653M	4,5,6-Trichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-4-Z	1653M	4,5-Dichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-4-Z	1653M	4,6-Dichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-4-Z	1653M	4-Chloroguaiacol	0.13	mg/Kg	UJ	IS<LCL
ALY-4-Z	1653M	Tetrachloroguaiacol	0.5	mg/Kg	UJ	IS<LCL
ALY-4-Z	SW8270C	Guaiacol(2-Methoxyphenol)	30	ug/Kg	R	LCS<LCL, LCSD<LCL
ALY-5-B-4-8	1613B	2,3,7,8-TCDF	1.08	ng/Kg	J	EMPC
ALY-5-B-4-8	1653M	3,4,5-Trichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-5-B-4-8	1653M	3,4,6-Trichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-5-B-4-8	1653M	3,4-Dichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-5-B-4-8	1653M	4,5,6-Trichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-5-B-4-8	1653M	4,5-Dichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-5-B-4-8	1653M	4,6-Dichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-5-B-4-8	1653M	4-Chloroguaiacol	0.13	mg/Kg	UJ	IS<LCL
ALY-5-B-4-8	1653M	Tetrachloroguaiacol	0.5	mg/Kg	UJ	IS<LCL
ALY-5-B-4-8	SW8081	4,4'-DDE	0.36	ug/Kg	J	CF>RPD
ALY-5-B-4-8	SW8081	cis-Nonachlor	0.41	ug/Kg	J	CF>RPD
ALY-5-B-4-8	SW8270C	Guaiacol(2-Methoxyphenol)	30	ug/Kg	R	LCS<LCL, LCSD<LCL
ALY-5-S	1613B	1,2,3,4,7,8-HXCDD	2.27	ng/Kg	J	EMPC
ALY-5-S	1613B	1,2,3,7,8-PECDF	0.351	ng/Kg	J	EMPC
ALY-5-S	1653M	3,4,5-Trichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-5-S	1653M	3,4,6-Trichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-5-S	1653M	3,4-Dichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-5-S	1653M	4,5,6-Trichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-5-S	1653M	4,5-Dichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-5-S	1653M	4,6-Dichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-5-S	1653M	4-Chloroguaiacol	0.13	mg/Kg	UJ	IS<LCL

SampleID	Method	Analyte	Final Result	Units	Final Flag	Reason
ALY-5-S	1653M	Tetrachloroguaiacol	0.5	mg/Kg	UJ	IS<LCL
ALY-5-S	SW8081	4,4'-DDE	0.41	ug/Kg	J	CF>RPD
ALY-5-S	SW8082	Aroclor-1260	97	ug/Kg	J	CF>RPD
ALY-5-S	SW8270C	Guaiacol(2-Methoxyphenol)	30	ug/Kg	R	LCS<LCL, LCSD<LCL
ALY-5-Z	1613B	1,2,3,7,8-PECDF	0.525	ng/Kg	J	EMPC
ALY-5-Z	1613B	2,3,7,8-TCDD	2.15	ng/Kg	J	EMPC
ALY-5-Z	1653M	3,4,5-Trichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-5-Z	1653M	3,4,6-Trichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-5-Z	1653M	3,4-Dichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-5-Z	1653M	4,5,6-Trichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-5-Z	1653M	4,5-Dichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-5-Z	1653M	4,6-Dichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
ALY-5-Z	1653M	4-Chloroguaiacol	0.13	mg/Kg	UJ	IS<LCL
ALY-5-Z	1653M	Tetrachloroguaiacol	0.5	mg/Kg	UJ	IS<LCL
ALY-5-Z	SW8270C	Guaiacol(2-Methoxyphenol)	30	ug/Kg	R	LCS<LCL, LCSD<LCL
AM-1B-4-8	1613B	1,2,3,4,7,8,9-HPCDF	0.146	ng/Kg	J	EMPC
AM-1B-4-8	1613B	1,2,3,4,7,8-HXCDD	0.0667	ng/Kg	J	EMPC
AM-1B-4-8	1613B	1,2,3,6,7,8-HXCDF	0.148	ng/Kg	J	EMPC
AM-1B-4-8	1613B	1,2,3,7,8,9-HXCDD	0.507	ng/Kg	J	EMPC
AM-1B-4-8	1613B	2,3,4,7,8-PECDF	0.075	ng/Kg	J	EMPC
AM-1B-4-8	SW8081	4,4'-DDT	0.83	ug/Kg	J	CF>RPD
AM-1B-4-8	SW8270C	Guaiacol(2-Methoxyphenol)	30	ug/Kg	R	LCS<LCL, LCSD<LCL
AM-1-S	SW8270C	Guaiacol(2-Methoxyphenol)	31	ug/Kg	R	LCS<LCL, LCSD<LCL
AM-2B-4-8	1653M	3,4,5-Trichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
AM-2B-4-8	1653M	3,4,6-Trichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
AM-2B-4-8	1653M	3,4-Dichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
AM-2B-4-8	1653M	4,5,6-Trichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
AM-2B-4-8	1653M	4,5-Dichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
AM-2B-4-8	1653M	4,6-Dichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
AM-2B-4-8	1653M	4-Chloroguaiacol	0.13	mg/Kg	UJ	IS<LCL
AM-2B-4-8	1653M	Tetrachloroguaiacol	0.5	mg/Kg	UJ	IS<LCL
AM-2B-4-8	SW6010B	Antimony	0.6	mg/Kg	UJ	MS<LCL
AM-2B-4-8	SW8260B	Xylenes, total	0.43	ug/Kg	U	MB<RL
AM-2B-4-8	SW8270C	Guaiacol(2-Methoxyphenol)	30	ug/Kg	R	LCS<LCL, LCSD<LCL
AM-2B-4-8	PSEP	Gravel	18.3	Percent	J	LabDupe>RPD
AM-2B-8-12	1613B	1,2,3,6,7,8-HXCDF	0.648	ng/Kg	J	EMPC
AM-2B-8-12	1613B	1,2,3,7,8-PECDF	0.332	ng/Kg	J	EMPC
AM-2B-8-12	1613B	2,3,7,8-TCDD	1.31	ng/Kg	J	EMPC
AM-2B-8-12	1653M	3,4,5-Trichloroguaiacol	2.5	mg/Kg	UJ	IS<LCL
AM-2B-8-12	1653M	3,4,6-Trichloroguaiacol	2.5	mg/Kg	UJ	IS<LCL
AM-2B-8-12	1653M	3,4-Dichloroguaiacol	2.5	mg/Kg	UJ	IS<LCL
AM-2B-8-12	1653M	4,5,6-Trichloroguaiacol	2.5	mg/Kg	UJ	IS<LCL

SampleID	Method	Analyte	Final Result	Units	Final Flag	Reason
AM-2B-8-12	1653M	4,5-Dichloroguaiacol	2.5	mg/Kg	UJ	IS<LCL
AM-2B-8-12	1653M	4,6-Dichloroguaiacol	2.5	mg/Kg	UJ	IS<LCL
AM-2B-8-12	1653M	4-Chloroguaiacol	1.3	mg/Kg	UJ	IS<LCL
AM-2B-8-12	1653M	Tetrachloroguaiacol	5	mg/Kg	UJ	IS<LCL
AM-2B-8-12	SW8270C	Guaiacol(2-Methoxyphenol)	30	ug/Kg	R	LCS<LCL, LCSD<LCL
AM-2-S	1613B	1,2,3,4,6,7,8-HPCDF	12.8	ng/Kg	J	FD>RPD
AM-2-S	1613B	2,3,7,8-TCDD	0.797	ng/Kg	J	EMPC
AM-2-S	1613B	HXCDF, Total	7.74	ng/Kg	J	FD>RPD
AM-2-S	1613B	HXCDD, Total	25	ng/Kg	J	FD>RPD
AM-2-S	1613B	PECDD, Total	7.29	ng/Kg	J	FD>RPD
AM-2-S	1613B	TCDF, Total	9.04	ng/Kg	J	FD>RPD
AM-2-S	1613B	TCDD, Total	1.8	ng/Kg	J	FD>RPD
AM-2-S	1653M	3,4,5-Trichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
AM-2-S	1653M	3,4,6-Trichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
AM-2-S	1653M	3,4-Dichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
AM-2-S	1653M	4,5,6-Trichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
AM-2-S	1653M	4,5-Dichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
AM-2-S	1653M	4,6-Dichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
AM-2-S	1653M	4-Chloroguaiacol	0.13	mg/Kg	UJ	IS<LCL
AM-2-S	1653M	Tetrachloroguaiacol	0.5	mg/Kg	UJ	IS<LCL
AM-2-S	PSEP Sulfide	Sulfide	568	mg/Kg	J	FD>RPD
AM-2-S	SW8270C	Guaiacol(2-Methoxyphenol)	30	ug/Kg	R	LCS<LCL, LCSD<LCL
AM-2-Y	1613B	1,2,3,4,6,7,8-HPCDF	21.6	ng/Kg	J	FD>RPD
AM-2-Y	1613B	1,2,3,7,8-PECDF	0.294	ng/Kg	J	EMPC
AM-2-Y	1613B	2,3,7,8-TCDD	1.07	ng/Kg	J	EMPC
AM-2-Y	1613B	HXCDF, Total	13.6	ng/Kg	J	FD>RPD
AM-2-Y	1613B	HXCDD, Total	47.7	ng/Kg	J	FD>RPD
AM-2-Y	1613B	PECDD, Total	13.2	ng/Kg	J	FD>RPD
AM-2-Y	1613B	TCDF, Total	18.4	ng/Kg	J	FD>RPD
AM-2-Y	1613B	TCDD, Total	5.75	ng/Kg	J	FD>RPD
AM-2-Y	1653M	3,4,5-Trichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
AM-2-Y	1653M	3,4,6-Trichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
AM-2-Y	1653M	3,4-Dichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
AM-2-Y	1653M	4,5,6-Trichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
AM-2-Y	1653M	4,5-Dichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
AM-2-Y	1653M	4,6-Dichloroguaiacol	0.25	mg/Kg	UJ	IS<LCL
AM-2-Y	1653M	4-Chloroguaiacol	0.13	mg/Kg	UJ	IS<LCL
AM-2-Y	1653M	Tetrachloroguaiacol	0.5	mg/Kg	UJ	IS<LCL
AM-2-Y	PSEP Sulfide	Sulfide	915	mg/Kg	J	FD>RPD
AM-2-Y	SW8260B	Xylenes, total	0.38	ug/Kg	U	MB<RL
AM-2-Y	SW8270C	Guaiacol(2-Methoxyphenol)	30	ug/Kg	R	LCS<LCL, LCSD<LCL
AM-2-Z	1613B	1,2,3,7,8-PECDF	0.194	ng/Kg	J	EMPC
AM-2-Z	1653M	3,4,5-Trichloroguaiacol	2.5	mg/Kg	UJ	IS<LCL
AM-2-Z	1653M	3,4,6-Trichloroguaiacol	2.5	mg/Kg	UJ	IS<LCL

SampleID	Method	Analyte	Final Result	Units	Final Flag	Reason
AM-2-Z	1653M	3,4-Dichloroguaiacol	2.5	mg/Kg	UJ	IS<LCL
AM-2-Z	1653M	4,5,6-Trichloroguaiacol	2.5	mg/Kg	UJ	IS<LCL
AM-2-Z	1653M	4,5-Dichloroguaiacol	2.5	mg/Kg	UJ	IS<LCL
AM-2-Z	1653M	4,6-Dichloroguaiacol	2.5	mg/Kg	UJ	IS<LCL
AM-2-Z	1653M	4-Chloroguaiacol	1.3	mg/Kg	UJ	IS<LCL
AM-2-Z	1653M	Tetrachloroguaiacol	5	mg/Kg	UJ	IS<LCL
AM-2-Z	SW8270C	Guaiacol(2-Methoxyphenol)	30	ug/Kg	R	LCS<LCL, LCSD<LCL

Notes:

CF>RPD = Confirmation relative percent difference above criteria

EMPC = Estimated maximum possible concentration

FD>RPD = Field duplicate relative percent difference greater than control limit

IS<LCL = Internal standard recovery less than the lower control limit

LabDupe>RPD = Laboratory duplicate relative percent difference above criteria

LCS<LCL = Laboratory control sample recovery less than the lower control limit

LCSD<LCL = Laboratory control sample duplicate recovery less than the lower control limit

MB<RL = Method blank concentration less than the reporting limit

MS<LCL = Matrix spike recovery less than lower control limit

MSRPD = Matrix spike duplicate relative percent difference above criteria

Sur<LCL = Surrogate recovery less than the lower control limit

APPENDIX D

Chain-of-Custody Records

CHAIN OF CUSTODY

PROJECT NAME: SA 320 PONTON CONST. SEDIMENT

PROJECT NUMBER: 180171.AK.12-01

PROJECT MANAGER: R. CHANG

COMPANY ADDRESS: CHAM HILL BELLEVUE

CITY/STATE/ZIP: _____

E-MAIL ADDRESS: RACHEL.CHANG@CHAM.COM

PHONE # 360-453-500 FAX # _____

SAMPLER'S SIGNATURE: _____

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX
ALY-3-5	2/24/04	1300	S	6
ALY-3-B-4-8				7
ALY-3-B-8-12				6
ALY-3-B-12-16				7
ALY-3-B-16-20				6
ALY-2-5				7
ALY-2-B-4-8				6
ALY-2-B-8-12				7
ALY-2-B-12-16				6
ALY-2-B-16-20				6

NUMBER OF CONTAINERS	
Semivolatile Organics by GC/MS 625 <input type="checkbox"/> 8270 <input type="checkbox"/> 8270LL <input type="checkbox"/>	BTEX <input type="checkbox"/>
Volatile Organics 624 <input type="checkbox"/> 8260 <input type="checkbox"/> 8021 <input type="checkbox"/>	Diesel <input type="checkbox"/> Oil <input type="checkbox"/>
Hydrocarbons (*see below) Gas <input type="checkbox"/>	Fuel Fingerprint (FIQ) <input type="checkbox"/>
NW-HCID Screen	Oil & Grease/TRPH <input type="checkbox"/>
1664 HEM <input type="checkbox"/>	1664 SGT <input type="checkbox"/>
PCB's Aroclors <input type="checkbox"/>	Congeners <input type="checkbox"/>
Pesticides/Herbicides 608 <input type="checkbox"/> 8081A <input type="checkbox"/>	8141A <input type="checkbox"/> 8151A <input type="checkbox"/>
Chlorophenolics - 8151M Tri <input type="checkbox"/> Tetra <input type="checkbox"/>	PCP <input type="checkbox"/>
PAHS 8310 <input type="checkbox"/>	SIM <input type="checkbox"/>
Metals, Total or Dissolved (See list below)	8270C <input type="checkbox"/>
Cyanide <input type="checkbox"/>	Hex-Chrom <input type="checkbox"/>
pH, Cond., Cl, SO ₄ , PO ₄ , F, NO ₂ , NO ₃ , BOD, TSS, TDS (circle)	
NH ₃ -N, COD, Total-P, TKN, TOC DOC (circle) NO ₂ +NO ₃	
TOX 9020 <input type="checkbox"/>	AOX 1650 <input type="checkbox"/> 506 <input type="checkbox"/>
PER SULFIDE	
DIOXIN/LAURIC 16138	
REMARKS	<u>ANALYSIS PER CONTRACT</u>

REPORT REQUIREMENTS	INVOICE INFORMATION	TURNAROUND REQUIREMENTS	SPECIAL INSTRUCTIONS/COMMENTS:
I. Routine Report: Method Blank, Surrogate, as required	P.O. # <u>180171.AK.12</u> Bill To: _____	24 hr. _____ 48 hr. _____ 5 Day <input checked="" type="checkbox"/> Standard (10-15 working days)	*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: _____ (CIRCLE ONE) ANALYSIS PER CONTRACT
II. Report Dup., MS, MSD as required			
III. Data Validation Report (includes all raw data)			
IV. CLP Deliverable Report			
V. EDD			

RELINQUISHED BY: [Signature] Date/Time: 2/25/04 Firm: CH2M

RECEIVED BY: [Signature] Date/Time: 2/25/04 Firm: CH2M

RELINQUISHED BY: [Signature] Date/Time: 2/25/04 Firm: CH2M

RECEIVED BY: [Signature] Date/Time: 2/25/04 Firm: CH2M

RELINQUISHED BY: [Signature] Date/Time: 2/25/04 Firm: CH2M

RECEIVED BY: [Signature] Date/Time: 2/25/04 Firm: CH2M

PROJECT NAME: SR520 PINTON CANT - SEDIMENT
 PROJECT NUMBER: 180131.ME.12.01
 PROJECT MANAGER: 2 CHANE / S. REDMAN
 COMPANY/ADDRESS: CH2M HILL
 CITY/STATE/ZIP: BRIDGEVIEW, WA
 E-MAIL ADDRESS: 2.CHANE@CH2M.COM
 PHONE # 360 453-5003 FAX # _____
 SAMPLER'S SIGNATURE: [Signature]

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625 <input type="checkbox"/> 8270 <input type="checkbox"/> 8270LL <input type="checkbox"/>	Volatile Organics 624 <input type="checkbox"/> 8260 <input type="checkbox"/> 8021 <input type="checkbox"/> BTEX <input type="checkbox"/>	Hydrocarbons (*see below) Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Oil <input type="checkbox"/>	Fuel Fingerprint (FIQ) <input type="checkbox"/> NW-HCID Screen	Oil & Grease/TRPH 1664 HEM <input type="checkbox"/> 1664 SGT <input type="checkbox"/>	PCB's Aroclors <input type="checkbox"/> Congeners <input type="checkbox"/>	Pesticides/Herbicides 608 <input type="checkbox"/> 8081A <input type="checkbox"/> 8141A <input type="checkbox"/> 8151A <input type="checkbox"/>	Chlorophenolics - 8151M Tri <input type="checkbox"/> Tetra <input type="checkbox"/> PCP <input type="checkbox"/>	PAHS 8310 <input type="checkbox"/> SIM <input type="checkbox"/>	Metals, Total or Dissolved (See list below)	Cyanide <input type="checkbox"/> Hex-Chrom <input type="checkbox"/>	pH, Cond., Cl, SO4, PO4, F, NO2, NO3, BOD, TSS, TDS (circle)	NH3-N, COD, Total-P, TKN, (TOC, DOC (circle) NO2+NO3	TOX 9020 <input type="checkbox"/> AOX 1650 <input type="checkbox"/> 506 <input type="checkbox"/>	REMARKS	
ALY-5-5	2/24/11	1030	S	7																	
ALY-5-8-4-8				7																	
ALY-5-2				7																	
ALY-5-A				4																	
ALY-4-5	2/25/09	1030		7																	
ALY-4-X				7																	
ALY-4B-4-8				6																	
ALY-4B-8-12				7																	
ALY-4-12-10				6																	
ALY-4-2				7																	

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

INVOICE INFORMATION
 P.O. # 180131.AA.12.01
 Bill To: _____

TURNAROUND REQUIREMENTS
 24 hr. _____ 48 hr. _____
 5 Day _____
 Standard (10-15 working days)
 Provide FAX Results _____
 Requested Report Date _____

SPECIAL INSTRUCTIONS/COMMENTS:
 * ANALYSIS PER CONTRACT X

RELINQUISHED BY:
 Signature: [Signature] Date/Time: 2/25/09 1350
 Printed Name: [Name] Firm: _____

RECEIVED BY:
 Signature: [Signature] Date/Time: 2/25/09 1350
 Printed Name: [Name] Firm: _____

RELINQUISHED BY:
 Signature: [Signature] Date/Time: 2/25/09 1350
 Printed Name: [Name] Firm: _____

RECEIVED BY:
 Signature: [Signature] Date/Time: 2/25/09 2000
 Printed Name: [Name] Firm: _____

PROJECT NAME: SR 520 PONDON - SED CHANGES
 PROJECT NUMBER: 190171, AC. 12.01
 PROJECT MANAGER: CHYN
 COMPANY/ADDRESS: CHYN HILL BELLEVUE
 CITY/STATE/ZIP: _____
 EMAIL ADDRESS: R. CHYN @ CHYN.COM
 PHONE # 425 453 5000 FAX # _____
 SAMPLER'S SIGNATURE: _____

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625 <input type="checkbox"/> 8270 <input type="checkbox"/> 8270LL <input type="checkbox"/>	Volatile Organics 624 <input type="checkbox"/> 8260 <input type="checkbox"/> 8021 <input type="checkbox"/> BTEX <input type="checkbox"/>	Hydrocarbons (*see below) Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Oil <input type="checkbox"/>	Fuel Fingerprint (FIQ) <input type="checkbox"/> NW-HCID Screen	Oil & Grease/TRPH 1664 HEM <input type="checkbox"/> 1664 SGT <input type="checkbox"/>	PCB's Aroclors <input checked="" type="checkbox"/> 8082 <input type="checkbox"/> Congeners <input type="checkbox"/>	Pesticides/Herbicides 608 <input type="checkbox"/> 8081A <input checked="" type="checkbox"/> 8141A <input type="checkbox"/> 8151A <input type="checkbox"/>	Chlorophenolics - 8151M Tri <input type="checkbox"/> Tetra <input type="checkbox"/> PCP <input type="checkbox"/>	PAHS 8310 <input type="checkbox"/> SIM <input type="checkbox"/> 8220C <input type="checkbox"/>	Metals, Total or Dissolved (See list below)	Cyanide <input type="checkbox"/> Hex-Chrom <input type="checkbox"/>	pH, Cond., Cl, SO4, PO4, F, NO2, NO3, BOD, TSS, TDS (circle)	NH3-N, COD, Total-P, TKN, TOC DOC (circle) NO2+NO3 <input type="checkbox"/>	TOX 9020 <input type="checkbox"/> AOX 1650 <input type="checkbox"/> 506 <input type="checkbox"/>	REMARKS	
AM-4-A	2/25/04	1030	5																		
AM-2-S		1330																			
AM-2-Y																					
AM-2B-4-8																					
AM-2B-8-12																					
AM-2A																					
AM-1-S																					
AM-1B-4-8																					
AM-1-S																					

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

INVOICE INFORMATION
 P.O. # 180171, AC. 12.01
 Bill To: _____

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

SPECIAL INSTRUCTIONS/COMMENTS:
 * ANALYSIS PER CONTRACT *

RELINQUISHED BY: [Signature] Date/Time 2/25/04 Firm CHYN
 RECEIVED BY: [Signature] Date/Time 2/25/04 Firm CHYN

RELINQUISHED BY: [Signature] Date/Time 2/25/04 Firm CHYN
 RECEIVED BY: [Signature] Date/Time 2/25/04 Firm CHYN

RELINQUISHED BY: [Signature] Date/Time 2/25/04 Firm CHYN
 RECEIVED BY: [Signature] Date/Time 2/25/04 Firm CHYN

FOR VOLATILES, DIOXINS/FURANS AND CONVENTIONALS (ZIPLOCK BAGS)



Courier/After-Hours Sample Receipt Record

Company: CH2MHill

Date/Time: 2-25-09 2000 A.M. P.M.

Number of Containers: 8 Cooler Box Other

Custody Seal(s) Present: Yes No Custody Seal(s) Added: Yes No

Containers Received From: Butter

Containers Received By: Willy Wood

Client Not Available Samples Stored: _____

Relinquished to CAS SMO by: _____ Date/Time: _____ A.M. P.M.

CAS's Sample Receiving Office hours are 8:00 am to 5:00 pm Monday through Friday, and 8:00 am to 12:00 pm on Saturdays. Samples received, other than during office hours will be placed under refrigeration and officially received and processed on the following workday. Samples received via Courier will be officially received and processed according to the actual time of arrival at CAS's Sample Receiving office.

1317 13th Avenue • Kelso Washington 98626 • Telephone 360/577-7222 • Fax 360/636-1068

WHITE - retained by originator YELLOW - Courier/Lab