

Department of Ecology - Environmental Report Tracking System

ERTS # 540666

SEEN ON THE GROUND IN FRONT OF THE BREAK ROOM. CALLER STATES ONE OF THE FORKLIFTS IS LEAKING AN GALLON OF HYDRAULIC FLUID AND EVEN MORE OIL A DAY.

CONDENSATE TANKS FOR THE AIR COMPRESSORS. THEY ARE HOOK TO THE BLOW DOWN POINTS THAT HAVE TO BE DUMPED IN THE SUMP POINT TO BE TREATED. CALLER STATES THAT THEY ARE NOT DOING THE WORK. CALLER STATES THAT THE SAMPLE NUMBERS ARE BEING FUDGED. THEY ARE REPORTING FALSE NUMBERS TO THE 'EPA'. CALLER STATES THAT THE NUMBERS ARE MUCH 'HOTTER'.

THE DIESEL TANK IS NOT MAINTAIN PROPERLY. CALLER STATES THAT THEY HAVE JUST PUT IN SECONDARY CONTAINMENT. THE ONLY REASON THAT THEY PUT IT IN WAS TO COVER UP THE CONTAMINATION UNDER PAD.

THE ASH THAT IS BEING COLLECTED AND TAKEN TO A LANDFILL. CALLER STATES THAT IT IS PROBABLY GOING TO ONE OF THEIR PARKING LOT.

CALLER STATES THAT THEY PULLED THE PLUG ON THE BUCKET CONVEYOR AND DUMPED TEN YEAR OLD HEAVY DUTY OIL TO THE GROUND. CALLER STATES THAT THIS HAPPENED IN MARCH DURING THE HIGH WIND STORM. THE OIL WENT EVERYWHERE. HE REPORTED IT TO CORPORATE BUT IT HASN'T BEEN CLEANED UP.

CALLER STATES THAT HIS MAJOR CONCERNED IS WATER QUALITY.

Entry Person BERUBE, JERI

Entry Date 5/10/2004

Department of Ecology - Environmental Report Tracking System

ERTS # 540666

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Entry Person BERUBE, JERI

Entry Date 5/10/2004

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Referral

<p>Referral Method</p> <p><input type="radio"/> E-mail ERTS number</p> <p><input checked="" type="radio"/> E-mail attachment</p> <p><input type="radio"/> Print</p> <p><input type="radio"/> Telephone</p>	<p>Person Referred to PIESCH, CURT</p> <p>Phone 360-750-6976 Fax 360-690-7166</p> <p>E-mail cupi461@ecy.wa.gov</p> <p>Program/Organization SPILLS, PREVENTION, PREPAREDNESS AND RESPONSE</p> <p>Address</p> <p>City</p> <p>Region/Location VFO</p> <p>Referral Date 5/10/2004</p>	<p>Referral # 69410</p> <p>Primary <input type="checkbox"/></p>
<p>Referral Method</p> <p><input type="radio"/> E-mail ERTS number</p> <p><input checked="" type="radio"/> E-mail attachment</p> <p><input type="radio"/> Print</p> <p><input type="radio"/> Telephone</p>	<p>Person Referred to BICKETT, GARY</p> <p>Phone Fax (360) 397-8084</p> <p>E-mail Gary.Bickett@clark.wa.gov</p> <p>Program/Organization TOXICS CLEANUP</p> <p>Address PO BOX 9825</p> <p>City VANCOUVER WA 98666-8825</p> <p>Region/Location swro</p> <p>Referral Date 5/10/2004</p>	<p>Referral # 69411</p> <p>Primary <input type="checkbox"/></p>
<p>Referral Method</p> <p><input type="radio"/> E-mail ERTS number</p> <p><input checked="" type="radio"/> E-mail attachment</p> <p><input type="radio"/> Print</p> <p><input type="radio"/> Telephone</p>	<p>Person Referred to POST, RUSTY</p> <p>Phone 360-690-4787 Fax 360-690-7166</p> <p>E-mail rpos461@ecy.wa.gov</p> <p>Program/Organization WATER QUALITY</p> <p>Address</p> <p>City</p> <p>Region/Location VFO</p> <p>Referral Date 5/10/2004</p>	<p>Referral # 69412</p> <p>Primary <input type="checkbox"/></p>
<p>Referral Method</p> <p><input type="radio"/> E-mail ERTS number</p> <p><input type="radio"/> E-mail attachment</p> <p><input type="radio"/> Print</p> <p><input checked="" type="radio"/> Telephone</p>	<p>Person Referred to PIVIROTTO, MARILOU</p> <p>Phone 407-6273 Fax</p> <p>E-mail mpiv461@ecy.wa.gov</p> <p>Program/Organization WATER QUALITY</p> <p>Address</p> <p>City</p> <p>Region/Location SWRO</p> <p>Referral Date 5/10/2004</p>	<p>Referral # 69430</p> <p>Primary <input type="checkbox"/></p>

Department of Ecology - Environmental Report Tracking System

ERTS # 540666

Followup

<u>Inspector Information</u>		<u>Where did it happen</u>	
Referral # 69410		Berth	Anchorage
Lead Inspector PIESCH, CURT		Location Name	WASHINGTON FOREST PRODUCTS
Program/Organization SPILLS, PREVENTION, PREPAREDNESS AND RESPONSE		Street Address	520 SOUTH 28TH STREET
* Region/Location VFO		Other Address	
# of Ecology Staff 1	Overtime <input type="checkbox"/>	City/Place	WASHOUGAL (CL State WA Zip
<u>Action</u>	Start Date	End Date	County CLARK Region SWRO FS ID
FIELD RESPONSE - INVESTIGATION	5/10/2004	5/10/2004	Waterway Type
TELEPHONE	5/10/2004	5/10/2004	WRIA #
<u>What happened</u>	Spills Program Oil Spill? N	Latitude	Longitude
Incident Date 5/10/2004		Topo Quad 1:24,000	WASHOUGAL
<u>Medium</u>		Direction/Landmark (mile post, cross roads, township/range)	
SURFACE WATER-FRESH			
<u>Material</u>			
CHEMICAL			
Quantity Unit	Est.		
0 SHEEN	<input type="checkbox"/>		
<u>Source</u>		<u>Potentially Responsible Party Information</u>	
COMMERCIAL		Check if the primary PRP provided notice to Ecology <input type="checkbox"/>	
<u>Cause</u>		Primary <input checked="" type="checkbox"/>	First Last
IMPROPER PROCEDURE		Name	
<u>Incident Type</u>		Business Name	WASHINGTON FOREST PRODUCT
		Street Address	520 SOUTH 28TH STREET
<u>Activity</u>		Other Address	
ROUTINE/NORMAL OPERATIONS		City	WASHOUGAL State WA Zip
<u>Impact</u>		Phone	Ext Type
WATER POLLUTION		E-mail	
<u>Vessel</u>			
<u>Narrative</u>			
05/10/2004.			
@ 1030 hours, I (Curt Piesch) called the Calling Party, Loren Evy at (360) 835-9734, no one was at home.			
Field Response, Curt Piesch and Jon Kuykendall responded.			
I called Loren while Jon and I were driving to the site. He explained in detail different problems associated with this business. We should be looking for boiler condensate and steam on the water at the slough. He was also going to notify the media.			
Upon arrival, we looked in the area of the slough off of S 32nd Street and were not able to see any discharge in the slough. If the discharge was occurring during our visit, we should have been able to see steam coming off of the water. This was at 1100 hours.			
GPS Readings at the slough: 45 degrees 34.422N 122 degrees 20.131N			
@ 1110 hours, I contacted Dee Williams and discussed this case. Dee and Rusty had just talked about this case. I explained that we could not see any discharge. I explained that I thought that this was another facility and actually this facility is very large. She said that we had done all that we should and that the Water Quality Program was going to take the lead (Rusty Post or Mary P.).			
@ 1126 hours, we left the area and I called and briefed PIO, Sandy Howard.			
We had to respond to another case in Cowlitz County (ERTS # 540674).			
No further action will be taken on this case by Ecology Spills.			

Department of Ecology - Environmental Report Tracking System

ERTS # 540666

Followup

Inspector Information		Where did it happen	
Referral # 69410		Berth	Anchorage
Lead Inspector PIESCH, CURT		Location Name WASHINGTON FOREST PRODUCTS	
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Incident Date 5/10/2004		Topo Quad 1:24,000 WASHOUGAL	
Medium		Direction/Landmark (mile post, cross roads, township/range)	
SURFACE WATER-FRESH			
Material			
CHEMICAL			
Quantity Unit Est.			
0 SHEEN			
Source		Potentially Responsible Party Information	
COMMERCIAL		Check if the primary PRP provided notice to Ecology <input type="checkbox"/>	
		Primary <input checked="" type="checkbox"/>	First Last
		Name	
Cause		Business Name WASHINGTON FOREST PRODUCT	
IMPROPER PROCEDURE		Street Address 520 SOUTH 28TH STREET	
Incident Type		Other Address	
		City WASHOUGAL State WA Zip	
Activity		Phone	Ext Type
ROUTINE/NORMAL OPERATIONS		E-mail	
Impact			
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Vessel			
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Department of Ecology - Environmental Report Tracking System

ERTS # 540666

Sent to Central Files on 05/10/2004.

Entry Person: PIESCH, CURT

Entry Date 5/10/2004

Inspector Information

Referral # 69411
 Lead Inspector DEDONCKER, BRYAN
 Program/Organization TOXICS CLEANUP - SHA GRANT

* Region/Location SWRO

of Ecology Staff 1 Overtime

Action

NO ACTION NEEDED

Start Date 9/22/2005 End Date 9/22/2005

Where did it happen

Berth Anchorage
 Location Name WASHINGTON FOREST PRODUCTS
 Street Address 520 SOUTH 28TH STREET
 Other Address

City/Place WASHOUGAL (CL State WA Zip
 County CLARK Region SWRO FS ID

Waterway Type
 WRIA #

What happened

Incident Date 5/10/2004

Spills Program Oil Spill? N

Latitude Longitude

Topo Quad 1:24,000 WASHOUGAL

Medium

Direction/Landmark (mile post, cross roads, township/range)

SURFACE WATER-FRESH

Material

CHEMICAL

Quantity Unit Est.

Potentially Responsible Party Information

Check if the primary PRP provided notice to Ecology

Source

COMMERCIAL

Primary Name First Last

Cause

IMPROPER PROCEDURE

Business Name WASHINGTON FOREST PRODUCT

Incident Type

Street Address 520 SOUTH 28TH STREET

Activity

ROUTINE/NORMAL OPERATIONS

Other Address

City WASHOUGAL State WA Zip

Impact

WATER POLLUTION

Phone Ext Type

Vessel

E-mail

Narrative

IT WAS DETERMINED BY MYSELF (NANNETTE BROOKS, ERTS COORDINATOR) AND CRIS MATTHEWS, TOXICS CLEANUP PROGRAM THAT THIS CASE DOES NOT NEED ACTION BY THE TOXICS CLEANUP PROGRAM.

Entry Person: BROOKS, NANNETTE

Entry Date 9/22/2005

Inspector Information

Referral # 69412
 Lead Inspector POST, RUSTY
 Program/Organization WATER QUALITY

* Region/Location VFO

of Ecology Staff Overtime

Action

REFERRAL

Start Date 5/10/2004 End Date 5/10/2004

Where did it happen

Berth Anchorage
 Location Name WASHINGTON FOREST PRODUCTS
 Street Address 520 SOUTH 28TH STREET
 Other Address

City/Place WASHOUGAL (CL State WA Zip
 County CLARK Region SWRO FS ID

Waterway Type
 WRIA #

Department of Ecology - Environmental Report Tracking System

ERTS # 540666

What happened	Spills Program Oil Spill? N	Latitude	Longitude
Incident Date 5/10/2004		Topo Quad 1:24,000 WASHOUGAL	
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SURFACE WATER-FRESH			
<u>Material</u>			
CHEMICAL			
Quantity	Unit	Est.	
		<input type="checkbox"/>	
<u>Source</u>		Potentially Responsible Party Information	
COMMERCIAL		Check if the primary PRP provided notice to Ecology <input type="checkbox"/>	
<u>Cause</u>		Primary <input checked="" type="checkbox"/>	First Last
IMPROPER PROCEDURE		Name	
<u>Incident Type</u>		Business Name WASHINGTON FOREST PRODUCT	
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<u>Activity</u>		Other Address	
ROUTINE/NORMAL OPERATIONS		City WASHOUGAL	State WA Zip
<u>Impact</u>		Phone	Ext Type
WATER POLLUTION		E-mail	
<u>Vessel</u>			

Narrative
 I traded messages with Carey Cholski (WQ) today about this site, Washington Forest Products. According to Carey, they DO have an industrial stormwater permit. Please forward this complaint to Marilou for follow up

Entry Person: BERUBE, JERI Entry Date 5/10/2004

Inspector Information

Where did it happen

Referral # 69430
 Lead Inspector PIVIROTTO, MARILOU
 Program/Organization WATER QUALITY
 * Region/Location SWRO
 # of Ecology Staff 1 Overtime

Berth Anchorage
 Location Name WASHINGTON FOREST PRODUCTS
 Street Address 520 SOUTH 28TH STREET
 Other Address
 City/Place WASHOUGAL (CL State WA Zip
 County CLARK Region SWRO FS ID

Action

E-MAIL	Start Date	End Date	Waterway	Type
	5/10/2004	5/10/2004	WRIA #	

Department of Ecology - Environmental Report Tracking System

ERTS # 540666

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<u>Material</u>			
CHEMICAL			
Quantity Unit	Est.		
	<input type="checkbox"/>		
<u>Source</u>		Potentially Responsible Party Information	
COMMERCIAL		Check if the primary PRP provided notice to Ecology <input type="checkbox"/>	
<u>Cause</u>		Primary <input checked="" type="checkbox"/>	First Last
IMPROPER PROCEDURE		Name	
<u>Incident Type</u>		Business Name WASHINGTON FOREST PRODUCT	
Activity		Street Address 520 SOUTH 28TH STREET	
ROUTINE/NORMAL OPERATIONS		Other Address	
<u>Impact</u>		City WASHOUGAL	State WA Zip
WATER POLLUTION		Phone	Ext Type
<u>Vessel</u>		E-mail	

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Entry Person: BERUBE, JERI

Entry Date 5/10/2004

Inspector Information

Where did it happen

Referral # 69430
 Lead Inspector PIVIROTTO, MARILOU
 Program/Organization WATER QUALITY
 * Region/Location SWRO
 # of Ecology Staff 1 Overtime

Berth Anchorage
 Location Name WASHINGTON FOREST PRODUCTS
 Street Address 520 SOUTH 28TH STREET
 Other Address
 City/Place WASHOUGAL (CL State WA Zip
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Action

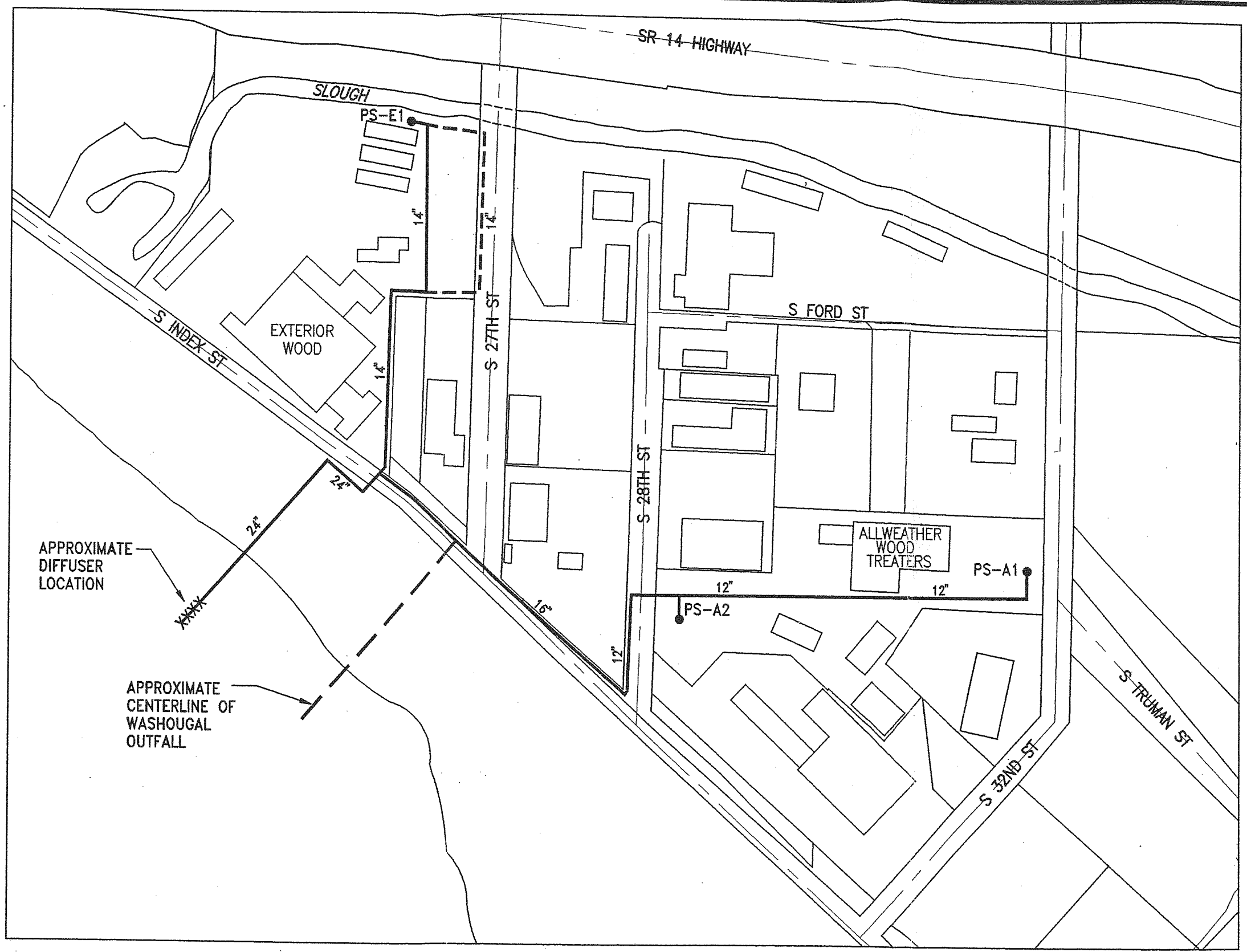
E-MAIL Start Date 5/10/2004 End Date 5/10/2004

Waterway Type
 WRIA #

Department of Ecology - Environmental Report Tracking System

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What happened		Spills Program Oil Spill? N	Latitude	Longitude
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COMMERCIAL	Check if the primary PRP provided notice to Ecology <input type="checkbox"/>			
	Primary <input checked="" type="checkbox"/>	First	Last	
	Name			
<u>Cause</u>	Business Name WASHINGTON FOREST PRODUCT			
IMPROPER PROCEDURE	Street Address 520 SOUTH 28TH STREET			
<u>Incident Type</u>	Other Address			
	City WASHOUGAL	State WA	Zip	
<u>Activity</u>	Phone	Ext	Type	
ROUTINE/NORMAL OPERATIONS	E-mail			
<u>Impact</u>				
WATER POLLUTION				
<u>Vessel</u>				
Narrative				
WILL RESPOND AS SCHEDULE PERMITS.				
Entry Person: BERUBE, JERI			Entry Date 5/10/2004	



EXPLANATION

- APPROXIMATE PUMP STATION LOCATION
- APPROXIMATE PIPE LOCATION WITH PIPE SIZE
- - - APPROXIMATE LOCATION OF ALTERNATIVE PIPE ROUTE FOR EXTERIOR WOOD
- XXXX APPROXIMATE DIFFUSER LOCATION
- APPROXIMATE CENTERLINE OF WASHOUGAL OUTFALL

Maul Foster & Alongi, Inc.

DATE 12/96
 DWN. JLG
 APPR. _____
 REVS. _____
 PROJECT NO. 9009-001.002

Figure 5.1
 ALLWEATHER WOOD TREATERS
 AND EXTERIOR WOOD
 WASHOUGAL, WASHINGTON
PIPING AND PUMP STATION LOCATIONS

ENGINEERING REPORT
STORMWATER FACILITIES EVALUATION
AND
MIXING ZONE STUDY

Prepared for

Allweather Wood Treaters and Exterior Wood, Inc.

June 26, 1997

Prepared by

Maul Foster & Alongi, Inc.
7223 NE Hazel Dell Avenue, Suite B
Vancouver, Washington 98665

Project 9009-001.002 and 9019-001.001

5 STORMWATER FACILITIES DESCRIPTION

5.1 Allweather Stormwater Collection System - Existing

The Allweather site consists of approximately 8.3 acres of paved and roofed area which is divided roughly into two equal drainage basins, east and west. The east outfall (001) currently is connected to a City of Washougal storm sewer which discharges to the Gibbons Creek remnant to the north along 32nd Street. The west outfall (002) discharges to a City storm sewer along 28th Street which also discharges to the Gibbons Creek remnant. Both outfalls are monitored under the site's NPDES permit.

5.2 Exterior Stormwater Collection System - Existing

The Exterior site consists of approximately 12.7 acres of paved area with the majority of the roofed areas separated from the paved areas by a discrete storm sewer connection. The paved area drainage is collected by a single run of storm drain pipe and catch basins which then discharge to the Gibbons Creek remnant to the north of the site.

5.3 Proposed Stormwater Collection and Discharge System

The existing drainage system for each site will be left in place up to the point where the pipes leave the last catch basin at each outfall. At that point, a wet well and pump station will be installed to collect the runoff, pump it through a piping system, and then discharge it to the Columbia River through a submerged outfall (see Figure 5.1).

Each pump station will have a high water over flow provision which will discharge stormwater to the existing outfalls in the event pumping capacity is exceeded or there is a power failure. The over flow locations will be able to be monitored.

Piping along Index Street and to the diffuser has been oversized to allow for the possibility of other industries using the system at a future date. There are no additional industries to include at this time.

Allweather and Exterior will independently own, operate and maintain the piping and pump stations on their own property and will jointly own, operate and maintain the off-site facilities including the Columbia River outfall.

5.4 Outfall and Diffuser

The outfall line must traverse a flood control dike in order to reach the Columbia River (see Figure 5.2). The preliminary outfall design is based primarily on hydraulics and does not try to optimize the diffusers for purposes of mixing. At this time the assumed diffuser layout consists of twelve 4-inch diameter Red Valve™ Tideflex Diffusers at 12 foot intervals and located at a depth of 17 feet below the surface during a 7Q10 (7 day, 10-year low flow recurrence interval) flow event. Information regarding the manufacturer's diffuser properties at the respective design flows is included in Appendix D. The configuration of the diffusers may be modified based on a more economical design that still meets mixing zone requirements.

5.5 Project Schedule

The permit requires the facilities to meet the final effluent limitations by July 1, 1998, which is the date set for issuing a new permit. The proposed project requires a number of approvals, permits, and easements in order for construction to begin. In addition, the work in the Columbia River is currently limited to two narrow windows of construction in the fall and spring. The issues impacting the schedule include

- SEPA Checklist and Determination of Non-significance
- Approval of engineering report by Ecology
- Development of preliminary system design
- Application for permits from the Corps of Engineers, Department of Natural Resources, and Department of Fish and Wildlife
- Obtain easements or approvals from the City of Washougal
- Obtain easement from the Port of Cams-Washougal
- Perform wetlands determination for pipeline route to Columbia and apply for permit if required
- Complete final plans and specifications

MAUL FOSTER ALONGI

3121 SW Moody Avenue, Suite 200 | Portland, OR 97239 | www.maulfooster.com

November 3, 2009
Project No. 9009.01.12

RECEIVED

'09 NOV 12 110:02

Tom Middleton, LHG
Washington State Department of Ecology
SWRO Toxics Cleanup Program
PO Box 47775
Olympia, Washington 98504-7775

WA STATE
DEPARTMENT OF ECOLOGY
SW REGIONAL OFFICE

Re: TrueGuard, LLC—Washougal Facility SW0916, Pilot Scale Testing Protocol

Dear Mr. Middleton:

On behalf of TrueGuard, LLC (TrueGuard), Maul Foster & Alongi, Inc. (MFA) is providing the attached memorandum describing pilot scale study alternatives and the planned approach for the preferred test method.

A voluntary cleanup program status report was submitted to you on October 2, 2009. In the report, TrueGuard requested that Ecology confirm the applicable background concentration for arsenic in the site vicinity as 25.48 micrograms per liter (µg/L) for the shallow aquifer. Using this background arsenic concentration, our prior bench test demonstrated adequate arsenic reductions. Should the pilot test also prove successful, TrueGuard anticipates a full-scale remedial action. Approval from Ecology of the pilot test results and planned full-scale approach will be requested before proceeding.

Please contact us at your convenience to discuss the arsenic background concentration issue and the pilot study work plan.

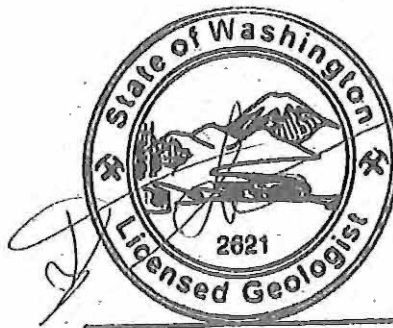
Sincerely,

Maul Foster & Alongi, Inc.

Ted Wall, PE
Director of Engineering

Attachments: Pilot Scale Test Protocol

cc: Steve Krommenacker, TrueGuard, LLC
Cheryl Moore, TrueGuard, LLC



Anthony Gomez Silva

Tony Silva, RG
Project Geologist

PILOT-SCALE TEST PROTOCOL



BASIS FOR PILOT-SCALE TEST PROTOCOL

There are two equally important aspects to the successful *in-situ* remediation of groundwater contamination;

1. Selection of the appropriate remediation reagents, considering the site-specific geochemical conditions; and,
2. Selection and design of the appropriate reagent delivery system, considering the site-specific geochemical and geohydrological conditions.

The laboratory-scale tests have identified a feasible reagent combination to achieve arsenic oxidation and subsequent geochemical fixation. Reagent delivery systems are dependent on site-specific conditions, and at least two reagent delivery systems appeared to hold promise for delivery of the remediation reagents to the subsurface at the Site. The delivery systems include reagent slurry introduction by (1) Geoprobe™ hydrofracturing (or equivalent) or (2) infiltration trench.

The Geoprobe™ hydrofracture injection method (or equivalent) pilot test could be accomplished through a single temporary injection borehole. A slurry of remedial reagents and water should be injected at sufficient pressure (estimated at 125 to 150 psi) to hydrofracture the subsurface material and cause the reagent to move radially out from the injection point. This method allows for the use of a higher slurry concentration than the trench infiltration method due to a higher injection pressure. The radius of migration is determined by monitoring a series of temporary monitoring points installed radially around the injection point.

The infiltration trench method pilot test would involve groundwater extraction down-gradient of the infiltration trench, introduction of remedial reagents to the extracted groundwater, and injection of the remedial reagent/extracted groundwater slurry into the infiltration trench. The treated water would migrate down-gradient, treating the arsenic in the groundwater by creating a reactive zone in the aquifer. Due to anticipated low injection pressures, concentrations of reagents should be low to avoid "plugging" the aquifer. The infiltration trench method would allow for repeated reagent application if needed to maintain an oxidized condition and the removal of arsenic from solution. This method is best suited for sites where contaminants are primarily at the water table, as there is not a driving force to mix the reagent with contaminants located at deeper depths.

Either method of reagent introduction can be used to create reactive barriers at select locations across the Site. Historical concentrations of dissolved arsenic and boron in groundwater measured from investigations conducted in July and December 2007 and May 2009 are presented on **Figure 3**. A

comparison of the dissolved arsenic and boron concentrations indicates that the transport of arsenic is somewhat naturally attenuated relative to boron. Boron, conservative in nature and highly soluble, is widely used as a tracer in groundwater studies¹. Knowledge of groundwater flow and observed boron movement in groundwater over time across the Site were used to select locations to best intercept arsenic contaminated groundwater down-gradient of the source area. Based on this information and accessibility at the Site, the proposed pilot-scale study is focused on down-gradient control of arsenic impacted groundwater. The proposed pilot-scale test locations, as delineated by observed historical boron concentrations, could potentially serve as the beginning of a reactive barrier across the plume. Recent groundwater sampling conducted by MFA indicates the arsenic concentrations and oxidation reduction potential (ORP) values are relatively uniform with depth; thus, suggesting that the hydrofracture approach is the method best suited for the Site.

The two recommended reagent delivery methods are discussed in further detail in the following sections. It is anticipated the pilot test will first involve the hydrofracture injection method, and the infiltration trench method would only be implemented if the hydrofracture injection method proved infeasible and TrueGuard deems the additional pilot test is warranted.

GEOPROBE™ HYDROFRACTURING TEST PROTOCOL – ALTERNATIVE A

Conceptual Layout

The Geoprobe™ hydrofracture test will require preparation of a radial grid of six temporary monitoring wells (TW-3 through TW-8) around a central injection point (IW-1) that should be located as illustrated on **Figure 4A**. It should be noted that the pilot-scale well identifications in this protocol are conceptual only and should be modified as necessary during actual field implementation. The temporary monitoring wells should be located on a radial pattern on 60 degree angles and at distances of 7.5 to 20 feet from the injection point. The temporary monitoring wells should be installed using direct-push methods and consist of minimum 1.5-inch diameter PVC with 10 feet of pre packed screens. The temporary wells should be completed in accordance with State of Washington regulations. Following completion, the temporary monitoring wells should be surveyed. The injection point will not involve the placement of well casing and will occur in a single event. The injection borehole will be abandoned per State of Washington regulations following the injections.

Reagent Slurry and Delivery

¹ Vengosh, A., Heumann, K. G., Juraske, S., and Kasher, R. (1994) "Boron isotope application for tracing sources of contamination in groundwater", *Environ. Sci., Technol.*, 28, 1968-1974.

Reagent slurry injection should be conducted through a slotted Geoprobe™ pressure activated injection probe, advanced in a top-down fashion, with equal amounts of reagent slurry injected at three intervals (approximately 5 to 8, 8 to 11, and 11 to 14 feet below ground surface [bgs]). The actual depths will be adjusted in the field based on the depth to groundwater and the underlying aquitard, as determined by the temporary monitoring wells. A total of 2,400 gallons of slurry, divided between the three injection intervals (approximately 800 gallons each), should be injected at a rate the subsurface can accept based on observed groundwater elevations in the nearby temporary monitoring wells. The reagent slurry should consist of 10 grams per liter (g/L) Klozur™ and 0.25 g/L ARM. Sufficient ferrous chloride solution should be added to the reagent slurry to lower the pH of the slurry to the range of 5.5 to 6.5. Care shall be taken to assure that the pH is not lowered below 5.5 in the reagent slurry, as lower pH could potentially adversely impact the mobilization of manganese. Water for preparation of the slurry shall be extracted from an existing monitor well, pumped into a 2500-gallon tank located near the injection point, and mixed with the remedial reagents by recirculation prior to injection. A sample of the resultant slurry shall be collected prior to injection.

Performance Monitoring

Prior to injection, the six temporary monitoring wells should be sampled and groundwater elevations recorded. Groundwater elevations should be monitored and recorded in the temporary monitoring wells during injection at regular intervals to observe the volume of reagent slurry and distance traveled from the injection point. After the injection, the six temporary monitoring wells should be sampled after 1, 8, and 15 days, using low-flow sampling techniques. Geochemical field parameters including pH, temperature, conductivity, turbidity, dissolved oxygen, and ORP should be recorded during purging. Groundwater samples as well as a sample of the reagent slurry should be analyzed for the following analytical parameters:

- Dissolved metals including copper, iron, and manganese by US Environmental Protection Agency (USEPA) method 6010, and dissolved arsenic by USEPA method 6020;
- Dissolved chromium and dissolved hexavalent chromium by USEPA methods 6010 and 7196, respectively;
- Dissolved boron by USEPA method 6010; and,
- Sulfate by USEPA method 9056.

Dissolved groundwater samples should be field filtered through a 0.45-micron filter prior to submission to the analytical laboratory.

Assumptions

For calculation of the reagent slurry injection volumes listed above, the following assumptions were considered:

1. The subsurface was considered saturated from 5 to 15 feet bgs;
2. Porosity = 30%;
3. A goal of achieving 10% reagent slurry by volume of groundwater for injection was determined by filling a cylinder with a 10-foot radius around the Geoprobe™ hydrofracturing injection point.

INFILTRATION TRENCH TEST PROTOCOL – ALTERNATIVE B

Conceptual Layout

As noted above, the infiltration trench method will not be implemented unless the results of the Geoprobe™ hydrofracture test prove unsuccessful and TrueGuard determines the infiltration method feasibility should be tested. Contaminant concentrations at the Site have demonstrated to be relatively uniform throughout the entire depth of the saturated zone, and the trench infiltration tends to primarily treat the upper portion of the saturated zone. The trench infiltration method is presented in this memorandum in the event that the hydrofracture method proves infeasible or ineffective, in which case the trench infiltration method may be implemented at the discretion of TrueGuard.

The conceptual layout for the infiltration trench test consists of a trench approximately 30 feet long and 2 feet wide located approximately 60 feet down-gradient of monitoring well MW-12 (**Figure 4B**). The trench should be oriented perpendicular to the direction of groundwater flow. Cross sections of the recommended infiltration trench conceptual design are presented on **Figure 5**. The trench should be excavated to the top of the water table (estimated to be approximately 3 to 5 feet bgs based on historical groundwater elevation measurements collected from nearby monitoring well MW-12). The trench should be lined with an appropriate filter fabric to prevent fines from entering the trench with time, but still allow the reagent solution to infiltrate into the subsurface. A 4-inch diameter perforated drain pipe should be placed along the length of the bottom of the trench. A 4-inch diameter PVC riser pipe should be connected to the middle of the drain pipe and extended to the ground surface. This riser pipe should be used for the introduction of the remedial reagent solution into the trench. One piezometer (1.5" diameter PVC) with four feet of 20-slot screen should be placed at each end of the trench to monitor the solution depth in the trench. The riser pipe and piezometers should be cut to just below the finished ground surface and protected with flush mount protective well monuments. The trench should be backfilled with clean washed drain rock (1 to 2-inch diameter, <5% fines) and the upper portion of the trench finished and paved to match existing conditions. Backfill material should be

compacted by a hand-held power tamper or vibrating plate compactor in no greater than 8-inch loose lifts. The surface should be restored to match the surrounding surface area.

Water used for preparation of the reagent slurry should be groundwater from a new temporary extraction well (EW-1). A 4-inch diameter extraction well should be drilled 15 feet down-gradient from the center of the infiltration trench using appropriate drilling methods. The terminal depth of the extraction well should be defined by the observed aquitard (historically silts at approximately 14-16 feet bgs). The well should be constructed of 4-inch PVC with 20-slot well screen over the entire saturated thickness of the shallow aquifer at this location. The well should be constructed in accordance with State of Washington regulations. An appropriate filter pack should be placed and extended at least 1 foot above the screened interval. Hydrated bentonite should then be placed and the upper portion of the borehole should be completed with bentonite-cement grout within 1 foot of the land surface. The well should be protected with a traffic-rated flush mount protective monument encased in concrete. A centrifugal pump (or equivalent) should be used to withdraw water from the well and be capable of pumping at a sufficient rate to supply a mix tank. The pump discharge should be conveyed via PVC pipe (or equivalent) to a temporary mixing tank located in close proximity to the well and infiltration trench. The pump should be equipped with the necessary controls to monitor groundwater levels in the well and mixing tank volumes in order to protect the pump and prevent overfilling of the tank. A sample port should be installed on the extraction well discharge piping for sampling of the extracted groundwater.

Two temporary monitoring wells (TW-17 and TW-18) should be installed approximately 15 feet down-gradient of the trench, spaced 25 feet apart as shown on **Figure 4B**. The wells should be installed using direct-push methods (or other appropriate method) and consist of minimum 1.5-inch PVC wells with 10 feet of pre packed filter screen and completed as described for extraction well EW-1. The temporary monitoring wells and the extraction well will provide monitoring points to observe the performance of the remedial reagent slurry infiltration.

Reagent Solution and Delivery

The injection water should be treated with 0.75 g/L Klozur™ and 0.2 g/L ARM. Sufficient ferrous chloride should be added to the reagent slurry to lower the pH of the slurry to 6 to 6.5 units. The desired total reagent slurry infiltration volume is approximately 7,000 gallons. The reagent slurry should be prepared in 700 gallon batches on a daily basis in a tank located in close proximity to the trench. Sufficient agitation should be employed to keep the ARM particles entrained prior to injection. The agitation can likely be accomplished by means of a centrifugal pump within the tank. The daily

injections should consist of discharging the 700 gallons of prepared reagent slurry via gravity flow into the infiltration trench for 10 days.

Performance Monitoring

Infiltration trench injection system monitoring should be performed on a daily basis during the reagent injections. Tank volumes, reagent dosing volumes, reagent slurry levels in the injection trench, and other pertinent system monitoring information should be recorded on field forms on a daily basis during the testing. Prior to the start of the infiltration test, background water-quality samples and groundwater elevations should be collected one time from extraction well EW-1 and temporary monitoring wells TW-1 and TW-2. It is anticipated that the test should run for approximately six weeks or until the data show that there has been a significant drop of arsenic concentrations in a shorter period of time. Sampling of the discharge from extraction well EW-1 and monitoring wells TW-1 and TW-2 should be performed on a daily basis the first week of the test, followed by weekly monitoring for the next five weeks. Groundwater samples from wells EW-1, TW-1 and TW-2 should be collected using the USEPA-approved low-flow sampling techniques after the injections are performed each day during the first two weeks and when groundwater is not being extracted from EW-1 for reagent preparation. Geochemical field parameters including pH, temperature, conductivity, turbidity, dissolved oxygen, and ORP should be monitored and recorded during purging. Groundwater samples should be analyzed for the following analytical parameters:

- Dissolved metals including copper, iron, and manganese by US Environmental Protection Agency (USEPA) method 6010, and dissolved arsenic by USEPA method 6020;
- Dissolved chromium and dissolved hexavalent chromium by USEPA methods 6010 and 7196, respectively;
- Dissolved boron by USEPA method 6010; and,
- Sulfate by USEPA method 9056.

Dissolved samples for metals analysis should be field filtered through a 0.45-micron filter prior to submission to the analytical laboratory.

Upon completion of the pilot-scale testing and receipt of the laboratory results, a report will be prepared and will generally include a summary of the site location and description, purpose and objectives, summary of field work, analytical results (tabulated and figures), and a discussion of findings. Appendices to the report are expected to include:

- Well construction logs;
- Groundwater sampling data sheets

- Field forms;
- Analytical data; and,
- Photographs.

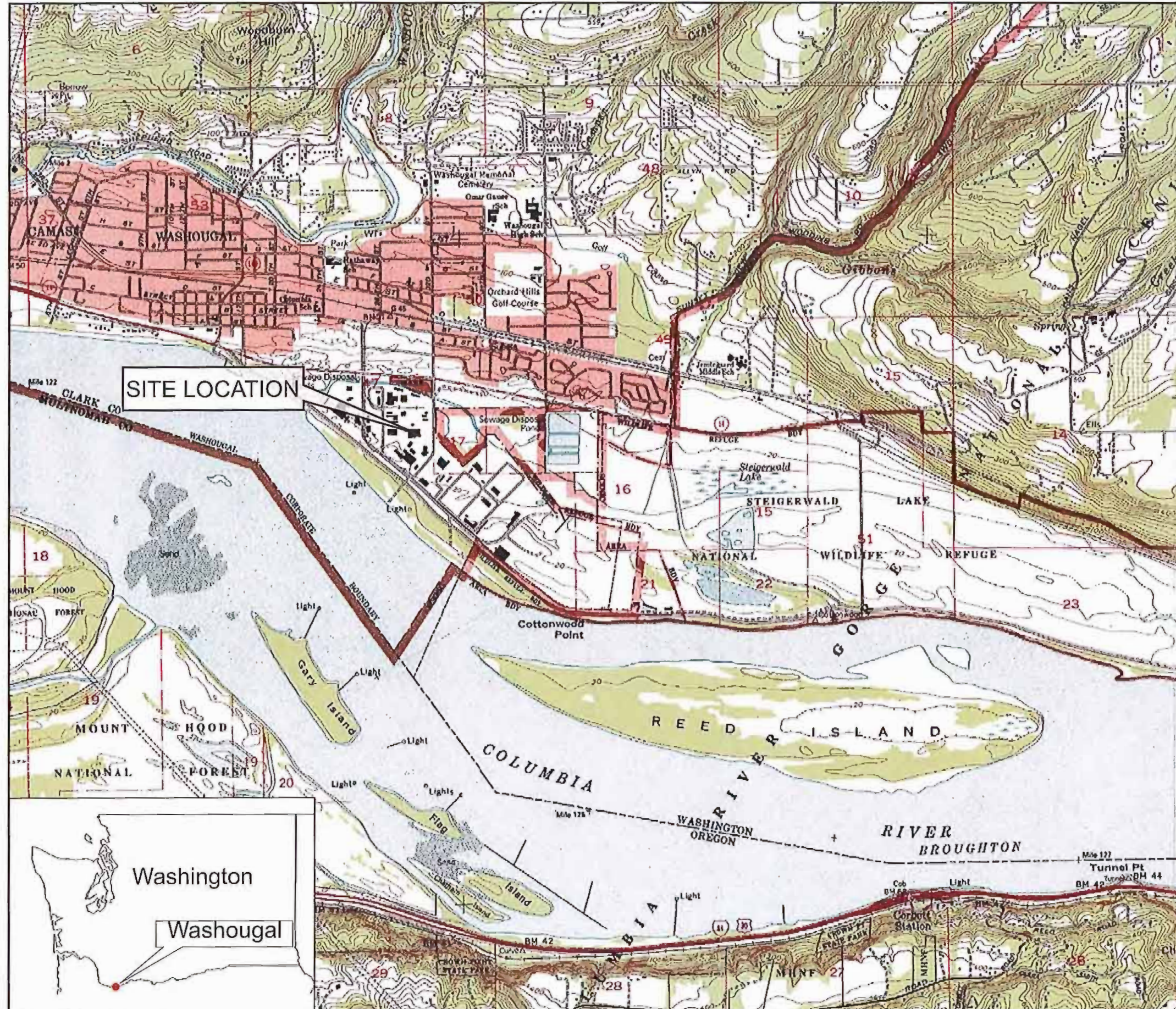
Additionally, based on the results of the pilot-scale testing, the report will provide general recommendations regarding next steps for remedial design.

The report will be drafted by MWH and reviewed by MFA and TrueGuard personnel. Revisions will be made as appropriate and the report will be issued in final form within one week of receiving any comments from TrueGuard.

cc: Ted Wall – Maul Foster & Alongi, Inc.

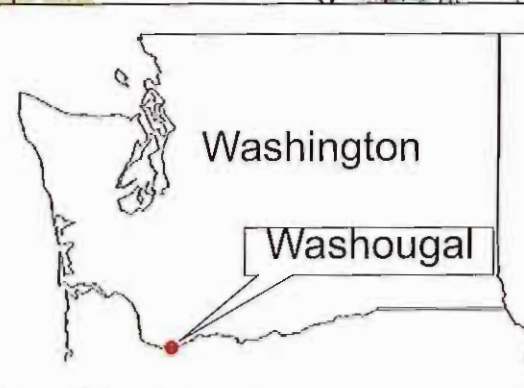
Attachments:

- Figure 1: Site Location Map
- Figure 2: Site Layout Map
- Figure 3: Arsenic and Boron Groundwater Concentrations (July/December 2007 and May 2009)
- Figure 4A: Conceptual Pilot Scale Layout Alternative A
- Figure 4B: Conceptual Pilot Scale Layout Alternative B
- Figure 5: Conceptual Pilot Scale Layout Trench Cross Sections



Source

Topographic Map:
 Washougal Quadrangle
 7.5 Minute Series
 U.S. Geological Survey
 1996

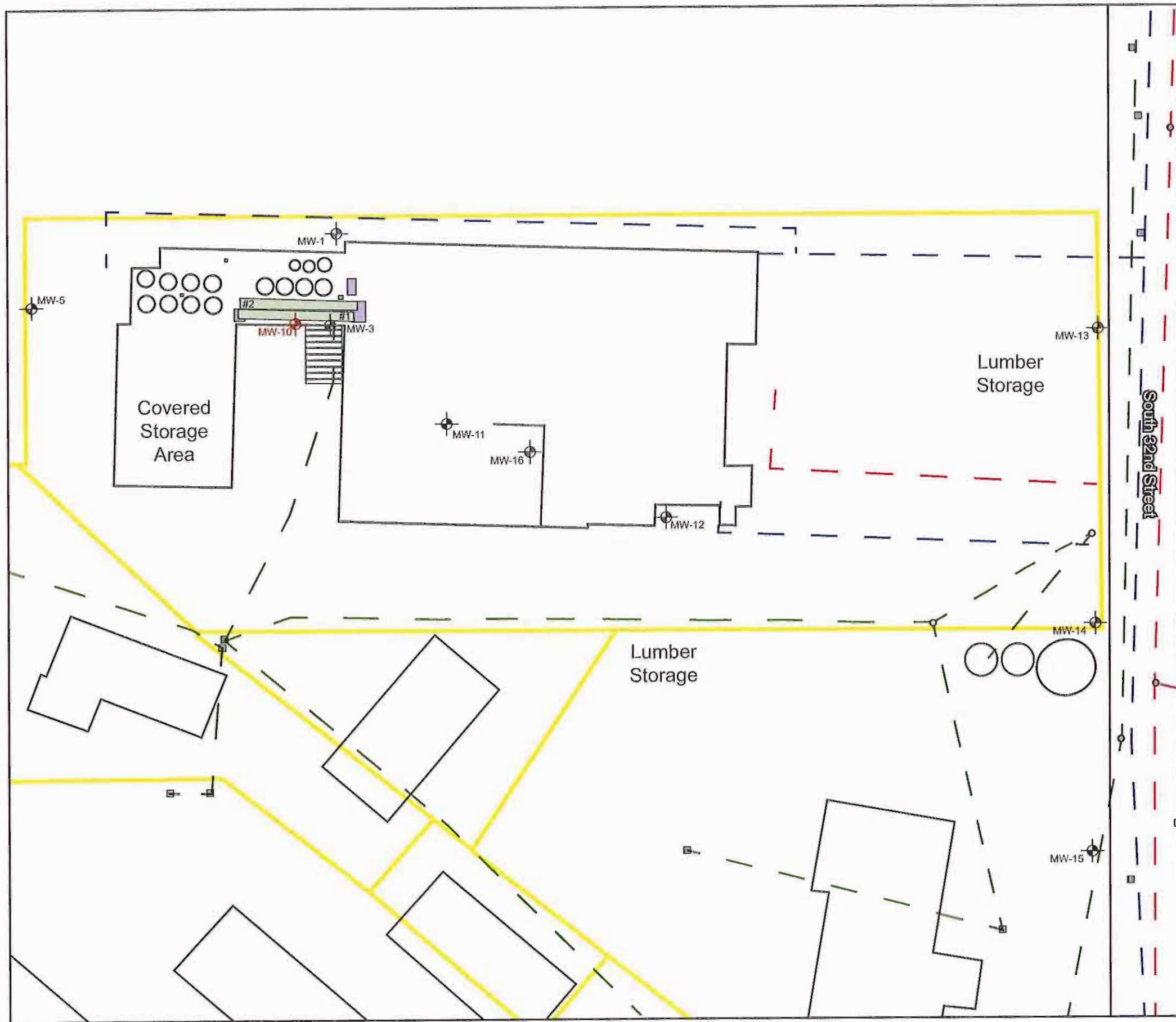


MWH November 3, 2009

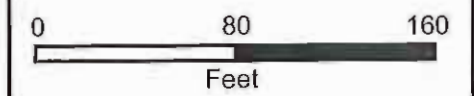
TrueGuard, LLC

**Site Location Map
 Figure 1**

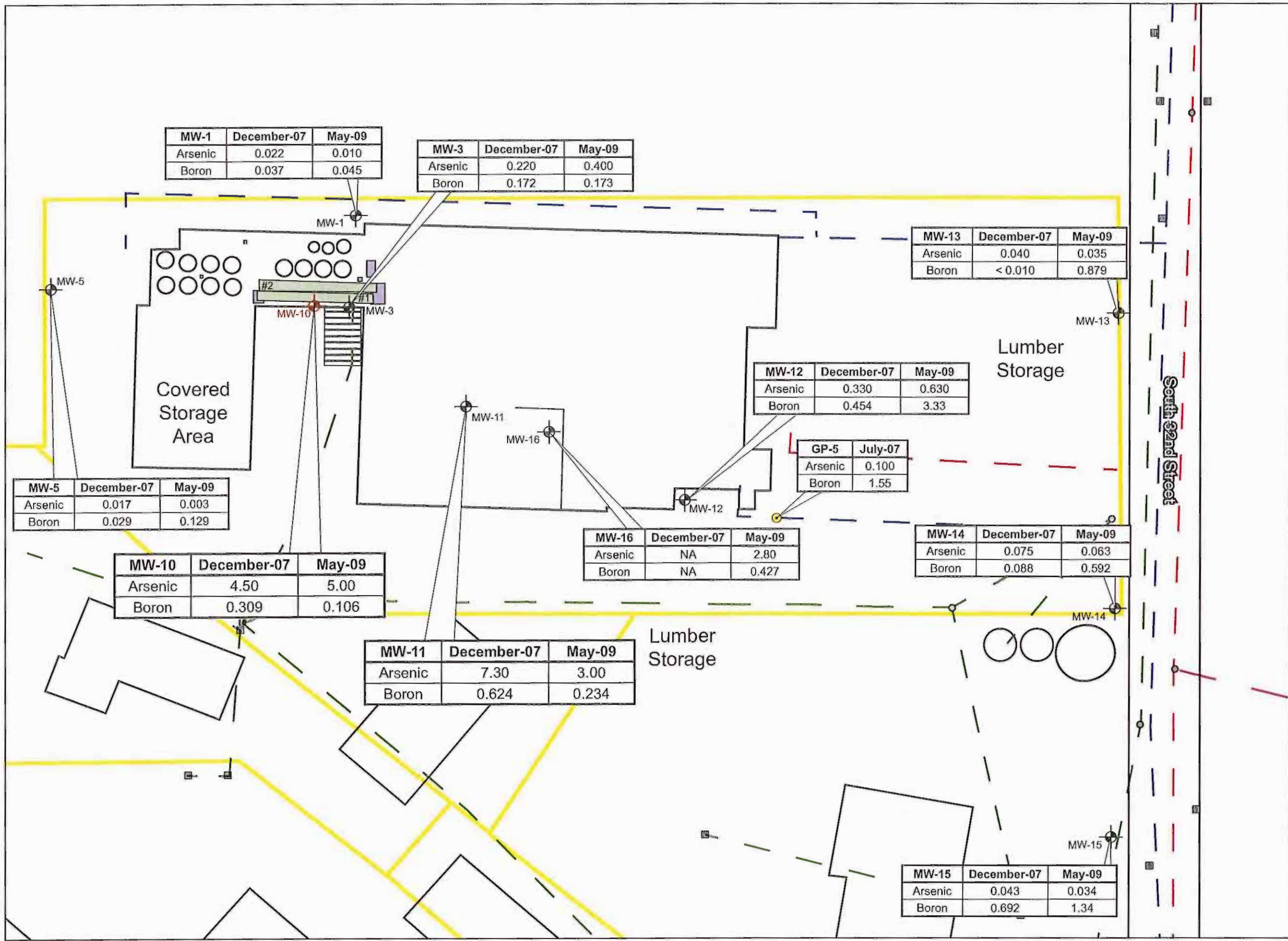
Washougal, Washington



- ### Legend
- TrueGuard Site Boundaries
 - Building
 - Monitoring Well
 - Extraction Well
 - Aboveground Storage Tank
 - Sump
 - Retort
 - Conveyor Belt
 - Water Supply
 - Storm Sewer
 - Sanitary Sewer
 - Catch Basin
 - Manhole



MWH November 3, 2009
 TrueGuard, LLC
**Site Layout Map
 Figure 2**
 Washougal, Washington



MW-1	December-07	May-09
Arsenic	0.022	0.010
Boron	0.037	0.045

MW-3	December-07	May-09
Arsenic	0.220	0.400
Boron	0.172	0.173

MW-13	December-07	May-09
Arsenic	0.040	0.035
Boron	< 0.010	0.879

MW-12	December-07	May-09
Arsenic	0.330	0.630
Boron	0.454	3.33

GP-5	July-07
Arsenic	0.100
Boron	1.55

MW-16	December-07	May-09
Arsenic	NA	2.80
Boron	NA	0.427

MW-14	December-07	May-09
Arsenic	0.075	0.063
Boron	0.088	0.592

MW-10	December-07	May-09
Arsenic	4.50	5.00
Boron	0.309	0.106

MW-11	December-07	May-09
Arsenic	7.30	3.00
Boron	0.624	0.234

MW-5	December-07	May-09
Arsenic	0.017	0.003
Boron	0.029	0.129

MW-15	December-07	May-09
Arsenic	0.043	0.034
Boron	0.692	1.34

- ### Legend
- TrueGuard Site Boundaries
 - Building
 - Monitoring Well
 - Extraction Well
 - Boring Location
 - Aboveground Storage Tank
 - Sump
 - Retort
 - Conveyor Belt
 - Water Supply
 - Storm Sewer
 - Sanitary Sewer
 - Catch Basin
 - Manhole

Notes

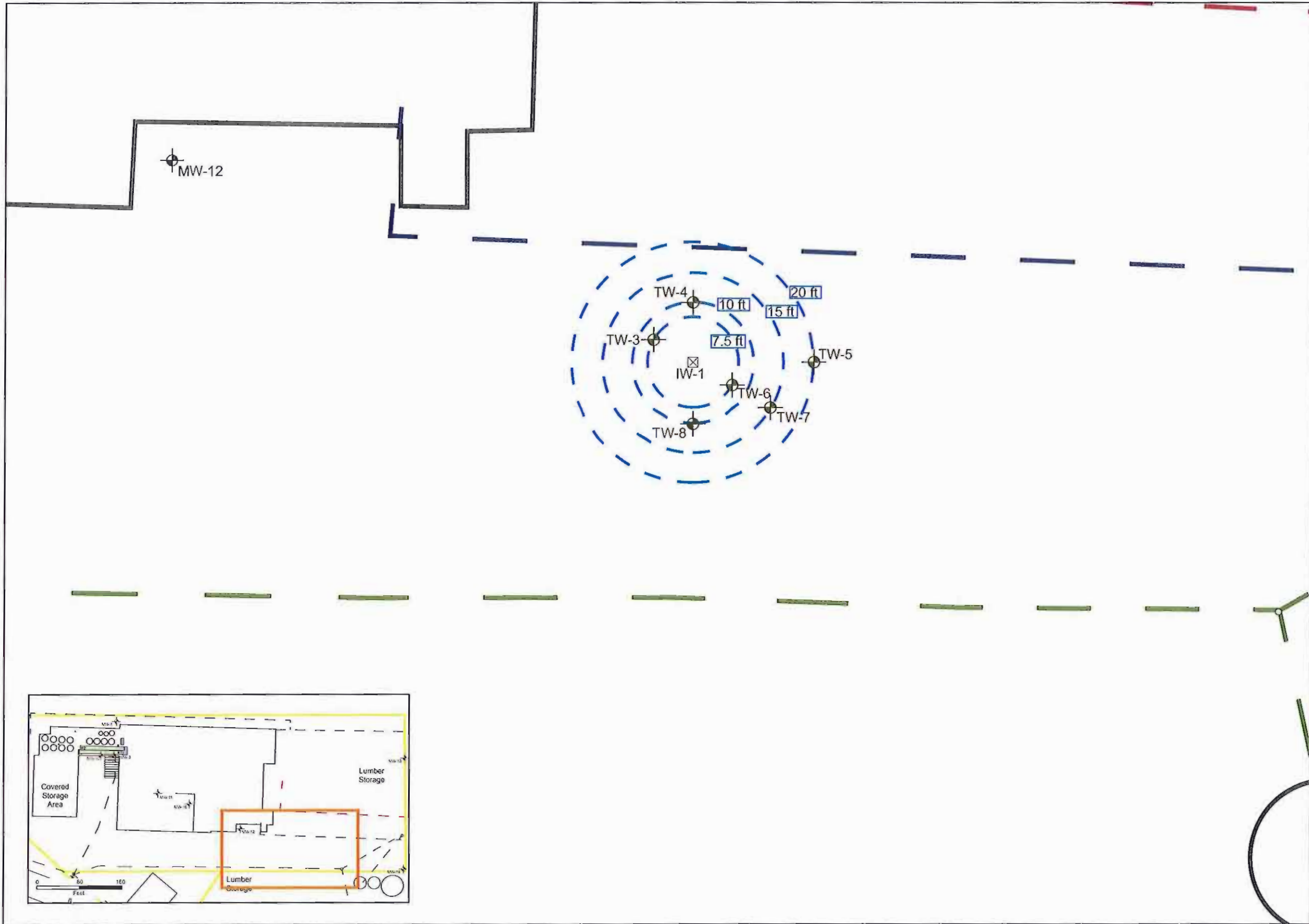
Concentrations are dissolved concentrations in milligrams per liter (mg/L).
 NA Not Applicable
 < Analyte non detected at reported concentration

Well ID	Month-Year
Analyte	Concentration



MWH November 3, 2009

TrueGuard, LLC
**Arsenic and Boron
 Groundwater
 Concentrations
 Figure 3
 Washougal, Washington**



Legend

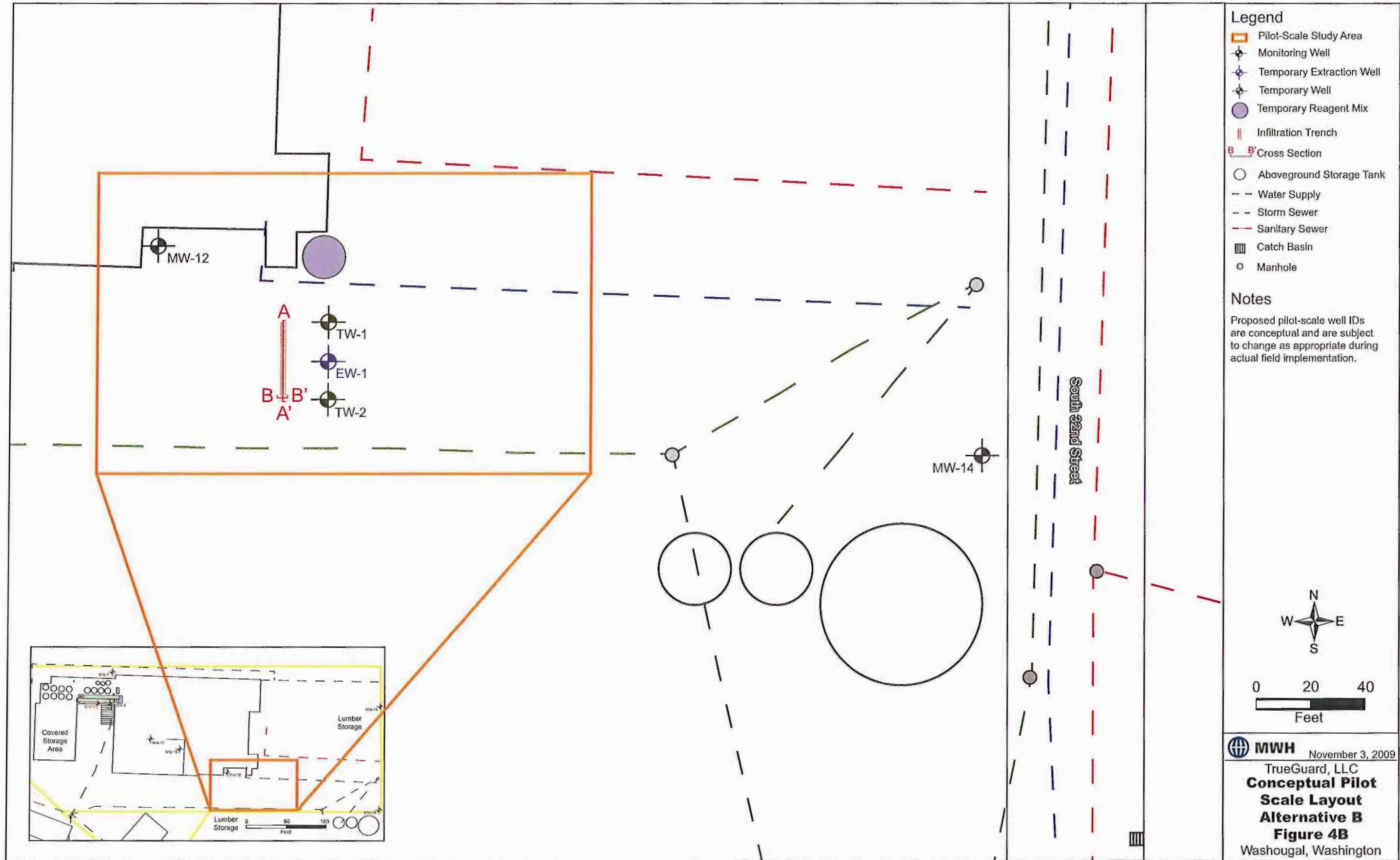
- Pilot-Scale Study Area
- Monitoring Well
- Temporary Well
- Injection Well
- Aboveground Storage Tank
- Water Supply
- Storm Sewer
- Sanitary Sewer
- Manhole

Notes

Proposed pilot-scale well IDs are conceptual and are subject to change as appropriate during actual field implementation.

ft Feet

MWH November 3, 2009
 TrueGuard, LLC
Conceptual Pilot Scale Layout Alternative A
Figure 4A
 Washougal, Washington

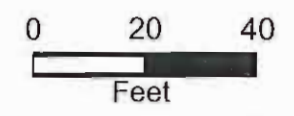


Legend

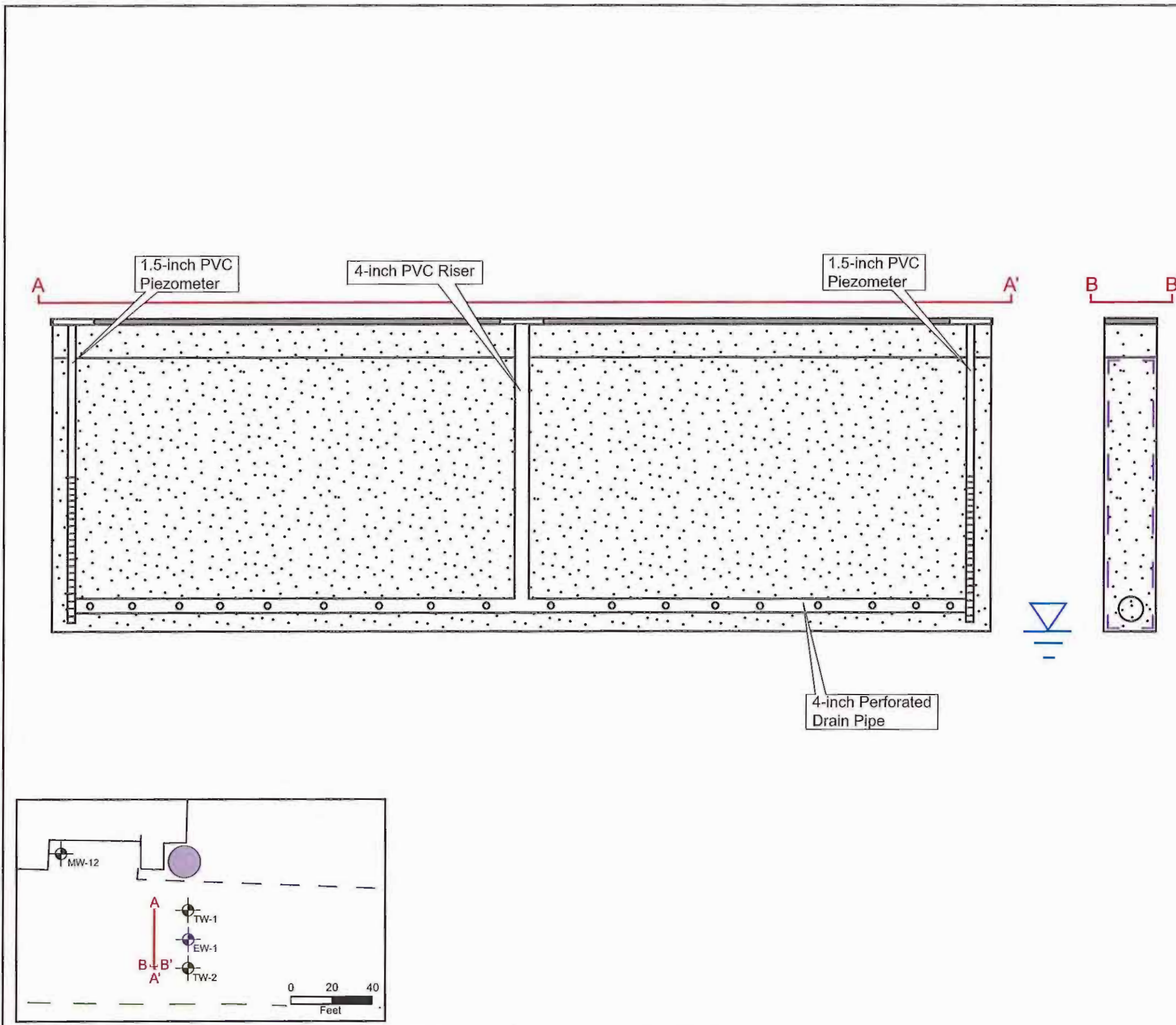
- Pilot-Scale Study Area
- Monitoring Well
- Temporary Extraction Well
- Temporary Well
- Temporary Reagent Mix
- Infiltration Trench
- B-B' Cross Section
- Aboveground Storage Tank
- Water Supply
- Storm Sewer
- Sanitary Sewer
- Catch Basin
- Manhole

Notes

Proposed pilot-scale well IDs are conceptual and are subject to change as appropriate during actual field implementation.



MWH November 3, 2009
 TrueGuard, LLC
Conceptual Pilot Scale Layout Alternative B
Figure 4B
 Washougal, Washington



Legend

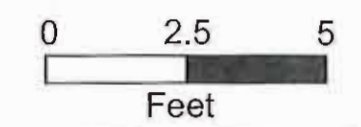
- Top of Water Table
- Flush Mount Monument
- Asphaltic Cement Concrete
- Drain Pipe
- Filter Fabric
- 1 - 2-inch Drain Rock (< 5% fines)
- B-B' Cross Section

Notes

Proposed pilot-scale well IDs are conceptual and are subject to change as appropriate during actual field implementation.



Vertical Exaggeration: 2



MWH November 3, 2009

TrueGuard, LLC
Conceptual Pilot Scale Layout Trench Cross Sections
Figure 5
 Washougal, Washington



RECEIVED

FEB 22 2010

WA State Department
of Ecology (SWRO)

February 19, 2010
Project No. 9009.01.12

Tom Middleton, LHG
Washington State Department of Ecology
SWRO Toxics Cleanup Program
PO Box 47775
Olympia, Washington 98504-7775

Re: TrueGuard, LLC—Washougal Facility SW0916, Voluntary Cleanup Program Status
Report and Air Sparging Pilot-Scale Test Protocol

Dear Mr. Middleton:

On behalf of TrueGuard, LLC (TrueGuard), Maul Foster & Alongi, Inc. (MFA) is submitting this status update for site characterization and pilot-test work for the TrueGuard facility at 725 South 32nd Street, Washougal, Washington. This status update covers the period from October 2, 2009 (i.e., from the time of the previous status report¹) to the present.

A laboratory-scale testing program conducted in the summer of 2009 demonstrated the process of geochemical fixation of arsenic using selected concentrations of proprietary remedial reagents. The reagents consisted of a slurry composed of a chemical oxidant (calcium persulfate [KlozurTM]) manufactured by FMC Environmental Solutions; ferrous chloride solution; and Activated Red Mud manufactured by GEOCHEM Remediation, LLC and marketed under the trade name GeobindTM. Results of the laboratory-scale testing program demonstrated that a mixture of the reagents was capable of immobilizing arsenic without mobilizing hexavalent chromium.

A pilot-scale test involving the hydrofracture injection of the reagents was then designed and conducted downgradient of the source area. Temporary monitoring wells MW-17 through MW-22 were installed in November 2009. The pilot-scale test was conducted in December 2009. The results demonstrated that a one-time hydrofracture injection of reagent slurry was capable of fixing arsenic in groundwater extracted from monitoring well MW-19 (approximately 7.5 feet downgradient of the injection location) within one day of the injection without resulting in the mobilization of hexavalent chromium. However, the effect was localized and persisted for less than one week following the injection.

¹ MFA, Letter (re: TrueGuard, LLC—Washougal facility SW0916, Voluntary Cleanup Program status report) to T. Middleton, Washington State Department of Ecology, Olympia, Washington, from T. Silva and T. Wall, Maul Foster & Alongi, Inc., Portland, Oregon. October 2, 2009.

In addition to the abovementioned pilot study, TrueGuard sampled selected groundwater monitoring wells in October 2009 to determine if dissolved arsenic was stratified within the water column. Arsenic was not found to be stratified. Also, quarterly groundwater monitoring from the existing monitoring wells was performed in December 2009.

The results of two previously conducted pilot-scale tests demonstrate that the subsurface oxidation/reduction and potential hydrogen conditions are highly stable, and quickly revert to ambient conditions after the injection of either reductants or oxidants. Thus, the concept of a one-time injection of a reagent mixture to achieve fixation of arsenic by changing geochemical conditions to either highly reduced or highly oxidized conditions will not provide the long term results needed. This approach has been tabled until more viable, cost effective approaches are explored. However, based in part on known site conditions and the prior test results, it was concluded that air sparging to create oxidizing conditions through injection of atmospheric air into the subsurface warranted assessment.

This status report includes data from the pilot study, arsenic stratification sampling, and quarterly groundwater monitoring event. Attached are summary tables, site figures, field sampling data sheets, laboratory analytical reports, data validation memoranda, well logs, and an air sparging pilot-scale test protocol.

PLANNED NEXT STEPS

The following actions are planned:

1. **Air Sparging Pilot Test:** This status letter serves as TrueGuard's notice to Ecology of its intention to implement an air sparging pilot-scale injection program as described in the attached protocol. Should the test prove successful in reducing dissolved arsenic levels to near or below background concentrations, TrueGuard anticipates a full-scale remedial action using the air sparging approach. Approval from Ecology of the pilot test results and planned full-scale approach will be requested before proceeding with full-scale efforts.
2. **Groundwater Monitoring:** At this point, TrueGuard plans to continue conducting groundwater monitoring generally on a quarterly basis. However, the monitoring schedule and analyte lists may be adjusted without notification to Ecology to meet the data collection objectives of the pilot test.

Tom Middleton, LHG
February 19, 2010
Page 3

Project No. 9009.01.12

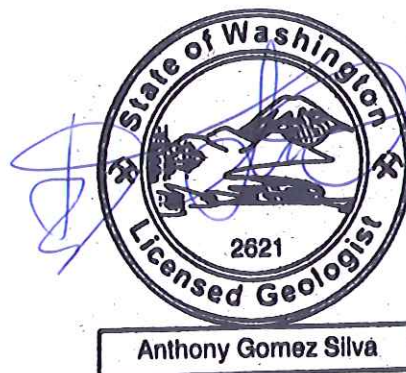
Please contact us at your convenience to discuss the air sparging pilot-scale program.

Sincerely,

Maul Foster & Alongi, Inc.



Ted Wall, PE
Director of Engineering



Tony Silva, LG
Project Geologist

Attachments: Limitations
Tables
Figures
Field Sampling Data Sheets
Laboratory Analytical Reports
Data Validation Memoranda
Well Logs
Air Sparging Pilot-Scale Test Protocol

cc: Alan Wade, TrueGuard, LLC
Steve Krommenacker, TrueGuard, LLC
Cheryl Moore, TrueGuard, LLC

LIMITATIONS

The services undertaken in completing this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with our client. This report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, or the use of segregated portions of this report.

TABLES



Table Notes
TrueGuard, LLC
Washougal, Washington

Ground and TOC elevations surveyed by Minister-Glaeser Surveying, Inc.

Surveys were conducted in December 2007, April 2008, May 2009, and December 2009.
Washington State Plane Coordinate System, South Zone in North American Datum 1983 (NAD83).
North American Vertical Datum of 1988 (NAVD 88).

-- = not analyzed or not sampled.

< = not detected at or above the method reporting limit.

DUP = duplicate sample.

J = estimated concentration.

mg/L = milligrams per liter.

NM = not measured.

$\mu\text{S}/\text{cm}$ = microsiemens per centimeter.

NTU = nephelometric turbidity unit.

R = qualified as rejected, based on equipment calibration.

TOC = top of casing.

^aMeasurement taken from top of steel security casing.

^bWell was dry and a blockage was encountered.

Table 1
Water Level Elevations
TrueGuard, LLC
Washougal, Washington

Location	Date	Measuring Point Elevation (feet NAVD)	Depth to Water (feet below TOC)	Water Level Elevation (feet NAVD)
MW-1	02/08/2007	23.65	4.21	19.44
	02/27/2007	23.65	2.92	20.73
	03/07/2007	23.65	NM	NM
	06/25/2007	23.65	5.67	17.98
	09/25/2007	23.65	7.08	16.57
	12/06/2007	23.65	4.94	18.71
	02/26/2008	23.65	4.10	19.55
	02/28/2008	23.65	4.29	19.36
	07/14/2008	24.00 ^a	5.68	18.32
	10/14/2008	23.65	6.75	16.90
	01/13/2009	23.65	3.28	20.37
	05/04/2009	23.65	3.71	19.94
12/01/2009	23.65	5.20	18.45	
MW-2	02/08/2007	22.80	2.88	19.92
	02/27/2007	22.80	1.38	21.42
	03/07/2007	22.80	NM	NM
	06/25/2007	22.80	4.45	18.35
	09/25/2007	22.80	5.16	Dry ^b
Decommissioned in November 2007				
MW-3	02/08/2007	23.46	4.02	19.44
	02/27/2007	23.46	2.82	20.64
	03/07/2007	23.46	2.85	20.61
	06/25/2007	23.46	5.91	17.55
	08/01/2007	23.46	6.23	17.23
	09/25/2007	23.46	6.95	16.51
	12/06/2007	23.46	5.42	18.04
	02/26/2008	23.92 ^a	4.39	19.53
	02/28/2008	23.92 ^a	4.60	19.32
	07/14/2008	23.92 ^a	5.53	18.39
	10/14/2008	23.46	8.55	14.91
	01/13/2009	23.46	3.35	20.11
	05/04/2009	23.46	3.51	19.95
12/01/2009	23.46	5.05	18.41	
MW-5	02/08/2007	23.17	3.13	20.04
	02/27/2007	23.17	1.92	21.25
	03/07/2007	23.17	NM	NM
	06/25/2007	23.17	4.36	18.81
	09/25/2007	23.17	5.76	17.41
	12/06/2007	23.17	3.43	19.74
	02/26/2008	23.17	2.93	20.24
	02/28/2008	23.17	3.03	20.14
	07/14/2008	23.34 ^a	4.40	18.94
	10/14/2008	23.17	7.66	15.51
	01/13/2009	23.17	2.26	20.91
	05/04/2009	23.17	2.55	20.62
	12/01/2009	23.17	3.86	19.31

Table 1
Water Level Elevations
TrueGuard, LLC
Washougal, Washington

Location	Date	Measuring Point Elevation (feet NAVD)	Depth to Water (feet below TOC)	Water Level Elevation (feet NAVD)
MW-6	02/08/2007	22.78	3.70	19.08
	02/27/2007	22.78	2.68	20.10
	03/07/2007	22.78	NM	NM
	06/25/2007	22.78	NM	NM
	09/25/2007	22.78	4.73	18.05
	12/06/2007	22.78	1.73	21.05
	02/26/2008	22.78	3.41	19.37
	02/28/2008	22.78	3.45	19.33
	07/14/2008	23.24 ^a	4.72	18.52
	10/14/2008	22.78	3.89	18.89
	01/13/2009	22.78	2.35	20.43
	05/04/2009	22.78	2.75	20.03
12/01/2009	22.78	3.29	19.49	
MW-8	03/07/2007	21.55	0.92	20.63
	06/25/2007	21.55	4.29	17.26
	08/01/2007	21.55	3.88	17.67
	09/25/2007	21.55	7.42	14.13
	12/06/2007	21.55	3.42	18.13
	02/26/2008	21.55	2.01	19.54
Decommissioned in April 2008				
MW-9	08/01/2007	23.82	6.18	17.64
	09/25/2007	23.82	5.00	18.82
	12/06/2007	23.82	NM	NM
	02/26/2008	23.82	4.31	19.51
Decommissioned in April 2008				
MW-10	08/01/2007	23.78	6.09	17.69
	09/25/2007	23.78	7.31	16.47
	12/06/2007	23.78	NM	NM
	02/26/2008	23.78	4.20	19.58
	02/28/2008	23.78	4.43	19.35
	07/14/2008	23.78	5.41	18.37
	10/14/2008	23.78	8.79	14.99
	01/13/2009	23.78	3.55	20.23
	05/04/2009	23.78	3.77	20.01
	12/01/2009	23.78	5.31	18.47
MW-11	12/06/2007	23.82	6.44	17.38
	02/26/2008	23.82	4.70	19.12
	02/28/2008	23.82	4.84	18.98
	07/14/2008	24.16 ^a	6.00	18.16
	10/14/2008	23.82	7.06	16.76
	01/13/2009	23.82	4.59	19.23
	05/04/2009	23.82	4.38	19.44
	12/01/2009	23.82	6.04	17.78
MW-12	12/06/2007	21.19	4.50	16.69
	02/26/2008	21.19	2.89	18.30
	02/28/2008	21.19	2.95	18.24
	07/14/2008	21.19	3.50	17.69
	10/14/2008	21.19	4.93	16.26
	01/13/2009	21.19	3.46	17.73
	05/04/2009	21.19	2.63	18.56
12/01/2009	21.19	4.50	16.69	

**Table 1
Water Level Elevations
TrueGuard, LLC
Washougal, Washington**

Location	Date	Measuring Point Elevation (feet NAVD)	Depth to Water (feet below TOC)	Water Level Elevation (feet NAVD)
MW-13	12/06/2007	19.91	4.86	15.05
	02/26/2008	19.91	4.52	15.39
	02/28/2008	19.91	4.55	15.36
	07/14/2008	19.91	5.14	14.77
	10/14/2008	19.91	5.76	14.15
	01/13/2009	19.91	4.45	15.46
	05/04/2009	19.91	4.65	15.26
	12/01/2009	19.91	5.69	14.22
MW-14	12/06/2007	20.10	5.25	14.85
	02/26/2008	20.10	4.21	15.89
	02/28/2008	20.10	4.25	15.85
	07/14/2008	20.10	4.85	15.25
	10/14/2008	20.10	6.20	13.90
	01/13/2009	20.10	4.23	15.87
	05/04/2009	20.10	3.65	16.45
	12/01/2009	20.10	5.67	14.43
MW-15	12/06/2007	21.73	5.95	15.78
	02/26/2008	21.73	4.63	17.10
	02/28/2008	21.73	4.64	17.09
	07/14/2008	21.73	4.98	16.75
	10/14/2008	21.73	7.34	14.39
	01/13/2009	21.73	5.05	16.68
	05/04/2009	21.73	4.20	17.53
	12/01/2009	21.73	6.52	15.21
MW-16	05/07/2009	21.33	2.08	19.25
	12/01/2009	21.33	3.92	17.41
MW-17	12/01/2009	20.32	4.42	15.90
	12/08/2009	20.32	4.31	16.01
	12/15/2009	20.32	4.34	15.98
	12/22/2009	20.32	4.22	16.10
MW-18	12/01/2009	20.42	4.45	15.97
	12/08/2009	20.42	4.37	16.05
	12/15/2009	20.42	4.36	16.06
	12/22/2009	20.42	4.25	16.17
MW-19	12/01/2009	20.31	4.35	15.96
	12/08/2009	20.31	4.28	16.03
	12/15/2009	20.31	4.30	16.01
	12/22/2009	20.31	4.11	16.20
MW-20	12/01/2009	20.48	4.42	16.06
	12/08/2009	20.48	4.38	16.10
	12/15/2009	20.48	4.35	16.13
	12/22/2009	20.48	4.22	16.26
MW-21	12/01/2009	20.15	4.07	16.08
	12/08/2009	20.15	4.02	16.13
	12/15/2009	20.15	3.98	16.17
	12/22/2009	20.15	3.84	16.31
MW-22	12/01/2009	19.94	3.92	16.02
	12/08/2009	19.94	3.88	16.06
	12/15/2009	19.94	3.83	16.11
	12/22/2009	19.94	3.69	16.25
PZ-1	09/25/2007	21.40	7.02	14.38
	Decommissioned in November 2007			

Table 2
Quarterly Monitoring Water Quality Field Parameters
TrueGuard, LLC
Washougal, Washington

Location	Sample	Date	Sample Depth	pH (standard units)	Temperature (degrees Celsius)	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (millivolts)	Turbidity (NTUs)	
MW-5	GW-35	02/08/2007	5.0	6.50	8.50	97.9	--	--	9.8	
	GW-41	06/25/2007	5.5	6.89	16.00	454	--	--	7.21	
	MW5-120607	12/06/2007	7.0	7.06	11.14	115	10.20 R	155.2	5.1	
	MW-5	02/26/2008	--	6.83	8.59	64	6.83 R	7.58	--	
	MW5-W	07/14/2008	7.0	6.85	16.94	443	0.39	-77	488	
	MW5	10/14/2008	7.0	--	--	--	--	--	--	
	MW-5	01/13/2009	3.5	5.92	7.83	38	2.81	-114.4	27.9	
	MW5	05/04/2009	3.5	6.70	11.49	42	3.14	3.6	27.45	
	MW5	12/02/2009	6.0	6.75	11.98	2.19	0.91	-80.8	3.18	
	MW-6	GW-36	02/08/2007	8.0	6.55	7.50	389	--	--	6.76
MW-6	MW-6	11/06/2007	5.0	6.61	13.29	302	0.19	-76.4	4.1	
	MW6-120607	12/06/2007	6.0	6.80	10.10	284	6.80 R	151.4	3.52	
	MW-6	02/26/2008	--	6.59	7.68	392	0.13 R	30.8	--	
	MW6-W	07/14/2008	6.0	5.82	14.10	414	0.18	-30.8	0.8	
	MW6	10/14/2008	6.0	6.45	15.20	331	0.40	19.6	3.19	
	MW-6	01/13/2009	4.0	6.48	8.21	364	0.07	-62.2	14.3	
	MW6	05/05/2009	4.0	7.09	9.80	282	0.34	-80.3	1.53	
	MW6	12/02/2009	7.5	6.73	10.97	212	0.36	-99.1	1.05	
	MW-8	GW-38	03/07/2007	3.5	6.99	15.00	185.3	--	--	0.59
	MW-8	GW-43	06/25/2007	5.5	6.70	19.60	180.7	--	--	1.74
MW8-W		08/01/2007	--	6.40	19.53	337	0.41	-82.7	1.22	
MW-8		11/06/2007	--	6.85	18.30	149	0.10	-127.6	0.4	
GW-45		06/25/2007	--	6.78	17.20	285	--	--	5.24	
MW-9	MW9-W	08/01/2007	--	6.50	19.67	279	0.58	-85	3.98	

Table 2
Quarterly Monitoring Water Quality Field Parameters
TrueGuard, LLC
Washougal, Washington

Location	Sample	Date	Sample Depth	pH (standard units)	Temperature (degrees Celsius)	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	Oxidation Potential (millivolts)	Turbidity (NTUs)
MW-1	GW-32	02/08/2007	6.0	6.95	7.60	131.9	--	--	3.66
	GW-37	02/27/2007	6.0	6.61	7.30	113.5	--	--	5.47
	GW-39	06/25/2007	6.5	6.94	15.90	113.1	--	--	1.3
	MW1-120607	12/06/2007	8.0	6.99	12.86	52	4.66 R	226.5	4.19
	MW-1	02/26/2008	--	6.74	9.32	59	1.75 R	62	--
	MW1-W	07/14/2008	8.0	6.47	16.18	207	0.36	-45.7	1.2
	MW1	10/14/2008	8.0	6.58	16.52	198	0.36	-32.2	0.61
	MW-1	01/13/2009	8.0	6.42	10.68	95	2.43	-16.8	5.5
	MW1	05/04/2009	8.0	6.89	12.50	74	5.52	-19.6	2.89
	MW1	12/02/2009	7.0	6.63	13.18	247	0.66	-91.4	3.08
MW-2	GW-33	02/08/2007	5.0	6.54	6.90	151	--	--	2.15
	GW-38	02/27/2007	5.0	6.39	6.70	164	--	--	0.98
	GW-40	06/25/2007	5.5	6.64	14.00	346	--	--	0.29
MW-3	GW-34	02/08/2007	6.0	6.78	14.70	185.5	--	--	3.27
	GW-37	03/07/2007	6.0	7.15	14.70	175.1	--	--	1.01
	GW-42	06/25/2007	7.5	6.76	17.80	289	--	--	0.79
	MW3-W	08/01/2007	--	6.82	18.61	183	1.15	-115.7	2.38
	MW3-120607	12/06/2007	8.0	7.14	16.65	140	6.86 R	112.6	1.49
	MW-3	02/26/2008	--	7.08	15.10	167	0.01 R	-7.2	--
	MW3	07/15/2008	8.0	6.63	18.52	487	0.26	-58.8	4.2
	MW3	10/14/2008	10.0	6.52	19.69	1,031	0.29	-168.6	1.22
	MW-3	01/14/2009	10.0	6.88	16.64	142	0.04	-96.9	2.66
	MW3-030209	03/02/2009	7.0	6.74	16.59	129	0.46	-99.9	2.99
MW3	MW3	05/05/2009	10.0	8.28	16.67	132	0.38	-146.5	1.35
	MW3	12/01/2009	7.5	6.83	18.80	267	0.26	-140.2	1.21

Table 2
Quarterly Monitoring Water Quality Field Parameters
TrueGuard, LLC
Washougal, Washington

Location	Sample	Date	Sample Depth	pH (standard units)	Temperature (degrees Celsius)	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (millivolts)	Turbidity (NTUs)
MW-10	GW-44	06/25/2007	--	6.75	18.10	315	--	--	4.12
	MW10-W	08/01/2007	--	6.52	20.39	208	0.48	-87.9	3.24
	MW10-120607	12/06/2007	--	6.96	17.26	179	6.65 R	114.6	3.47
	MW-10	02/26/2008	--	6.71	15.60	143	0.01 R	14.6	--
	MW10	07/15/2008	--	6.47	19.61	359	0.19	-191.8	8.0
	MW10	10/14/2008	10.0	6.45	21.13	641	0.13	-188.4	2.45
	MW-10	01/14/2009	6.0	6.31	17.41	175	0.04	-65.2	1.37
	MW10-030209	03/02/2009	7.0	6.57	16.34	174	0.28	-76.2	1.9
	MW10	05/05/2009	6.0	7.27	17.10	210	0.42	-124	2.87
	MW10	12/01/2009	6.0	6.76	18.58	221	0.49	-118.6	1.12
MW-11	MW11-120607	12/06/2007	10.0	6.79	14.98	470	7.67 R	108.4	4.24
	MW-11	02/26/2008	--	6.66	14.03	363	0.04 R	0	--
	MW11	07/15/2008	10.0	6.34	15.96	762	0.44	-62.6	18
	MW11	07/15/2008	10.0	6.34	15.96	762	0.44	-62.6	18
	MW11	10/14/2008	10.0	6.26	17.02	1,235	0.12	-198.4	1.5
	MW-11	01/14/2009	7.0	6.42	13.54	396	0.33	-72.5	1.02
	MW11-030209	03/02/2009	7.0	6.27	13.17	517	0.92	-85.2	3.67
	MW11	05/05/2009	7.0	7.45	13.97	817	0.64	-123.4	2.04
	MW11	12/01/2009	8.0	6.58	15.42	628	0.41	-121.9	1.34
	MW12-120607	12/06/2007	8.0	6.83	16.08	423	6.83 R	101.2	5.92
MW-12	MW-12	02/28/2008	--	6.60	15.42	510	0.02 R	-134.6	--
	MW12-W	07/15/2008	8.0	6.68	17.30	562	0.11	-85.5	6.2
	MW12	10/14/2008	8.0	6.69	18.85	632	0.22	-172.5	1.65
	MW-12	01/13/2009	6.0	6.53	14.93	616	0.09	-90.6	2.74
	MW12	05/04/2009	6.0	7.14	14.72	608	0.65	-132	5.09
	MW12	12/02/2009	5.5	6.80	16.63	629	0.51	-161.8	0.26

Table 2
Quarterly Monitoring Water Quality Field Parameters
TrueGuard, LLC
Washougal, Washington

Location	Sample	Date	Sample Depth	pH (standard units)	Temperature (degrees Celsius)	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (millivolts)	Turbidity (NTUs)
MW-13	MW13-120707	12/07/2007	8.0	6.78	14.46	149	7.41 R	169.3	1.76
	MW-13	02/28/2008	--	6.59	11.52	171	0.04 R	-102.5	--
	MW13-W	07/14/2008	8.0	6.48	17.64	247	0.07	-49.3	4.5
	MW13	10/14/2008	8.0	6.40	18.31	283	0.31	-15.6	0.85
	MW-13	01/13/2009	6.0	6.48	11.92	235	0.06	-55.8	9.57
	MW13	05/04/2009	6.0	7.15	12.36	181	0.39	-95.2	0.68
	MW13	12/02/2009	7.0	6.67	14.66	258	0.28	-108.6	1.64
MW-14	MW14-120707	12/07/2007	8.0	6.83	13.37	399	8.21 R	113.6	0.53
	MW-14	02/28/2008	--	6.62	11.32	363	0.09 R	-113.8	--
	MW14	07/15/2008	8.0	6.68	15.37	322	0.16	-80.4	9.4
	MW14	10/14/2008	8.0	6.49	15.82	397	0.40	-30	2.77
	MW-14	01/13/2009	6.0	6.52	11.25	323	0.06	-91.1	9.27
	MW14	05/04/2009	6.0	7.02	11.66	384	0.82	-88.3	4.74
	MW14	12/03/2009	6.0	6.66	13.18	585	0.61	-107.3	5.19
MW-15	MW15-120707	12/07/2007	8.0	6.71	15.34	459	6.70 R	106.8	0.59
	MW-15	02/28/2008	--	6.67	12.77	370	0.08 R	-124.0	--
	MW15	07/15/2008	8.0	6.71	14.96	412	0.08	-79.7	30.08
	MW15	10/14/2008	9.0	6.55	18.37	538	0.48	-43.1	0.81
	MW-15	01/13/2009	7.0	6.56	13.33	436	0.04	-90.2	3.13
	MW15	05/04/2009	7.0	6.75	12.29	416	0.59	-87.3	1.24
	MW15	12/03/2009	7.0	6.67	16.00	889	0.65	-124.7	5.83
MW-16	MW16	05/07/2009	5.0	7.66	13.30	589	1.03	-90.2	2.46
	MW16	12/02/2009	5.0	6.55	16.00	738	0.37	-123.1	3.9

**Table 3
Pilot Study Water Quality Field Parameters
TrueGuard, LLC
Washougal, Washington**

Location	Sample	Sample Date	Sample Depth	Temperature (degrees Celsius)	pH (standard units)	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (millivolts)	Turbidity (NTUs)	TOC (feet)	Depth to Water (feet)	Elevation (feet)	Depth to Bottom (feet)	Water Column (feet)
MW-17	MW17	12/02/2009	7	16.20	6.80	1,017	0.40	-143.0	2.20	20.32	4.42	15.90	14.86	10.44
	MW17	12/08/2009	6	15.00	7.13	562	0.71	-136.6	7.20	20.32	4.31	16.01	15.13	10.82
	MW17	12/15/2009	6	13.69	6.86	626	4.42	-157.2	9.53	20.32	4.34	15.98	15.13	10.79
	MW17	12/22/2009	6	14.69	6.92	654	3.08	-155.1	--	20.32	4.22	16.10	15.13	10.91
MW-18	MW18	12/02/2009	6	16.32	6.71	642	0.30	-142.1	0.49	20.42	4.45	15.97	14.41	9.96
	MW18	12/08/2009	6	14.73	6.48	1,224	2.25	-134.0	5.98	20.42	4.37	16.05	14.63	10.26
	MW18	12/15/2009	6	14.54	6.55	2,358	1.40	-133.1	2.88	20.42	4.36	16.06	14.63	10.27
	MW18	12/22/2009	6	14.58	6.59	2,732	1.02	-137.3	--	20.42	4.25	16.17	14.63	10.38
MW-19	MW19	12/02/2009	7	16.21	6.53	1,172	0.58	-129.7	5.65	20.31	4.35	15.96	14.40	10.05
	MW19	12/08/2009	6	15.98	3.53	3,191	1.74	432.7	33.40	20.31	4.28	16.03	14.65	10.37
	MW19	12/15/2009	6	12.92	6.01	4,497	1.67	-41.7	8.68	20.31	4.30	16.01	14.65	10.35
	MW19	12/22/2009	6	13.51	6.47	2,431	3.25	-87.4	--	20.31	4.11	16.20	14.65	10.54
MW-20	MW20	12/02/2009	7	15.72	6.67	977	0.67	-133.7	2.62	20.48	4.42	16.06	14.44	10.02
	MW20	12/08/2009	6	15.15	6.50	1,308	2.49	-136.3	4.51	20.48	4.38	16.10	14.69	10.31
	MW20	12/15/2009	6	14.38	6.70	657	1.13	-122.0	6.62	20.48	4.35	16.13	14.69	10.34
	MW20	12/22/2009	6	14.98	6.67	691	0.38	-116.9	--	20.48	4.22	16.26	14.69	10.47
MW-21	MW21	12/02/2009	7	16.52	6.53	1,158	0.40	-126.0	2.00	20.15	4.07	16.08	14.37	10.30
	MW21	12/08/2009	6	14.41	6.46	1,481	8.76	-127.9	2.92	20.15	4.02	16.13	14.63	10.61
	MW21	12/15/2009	6	13.88	6.56	716	1.70	-143.6	2.41	20.15	3.98	16.17	14.63	10.65
	MW21	12/22/2009	6	14.32	6.63	705	2.04	-143.1	--	20.15	3.84	16.31	14.63	10.79
MW-22	MW22	12/02/2009	7	16.19	6.86	1,002	0.73	-60.4	1.58	19.94	3.92	16.02	14.37	10.45
	MW22	12/08/2009	6	15.25	6.96	598	0.97	-130.5	4.00	19.94	3.88	16.06	14.64	10.76
	MW22	12/15/2009	6	14.00	6.92	600	2.00	-137.2	2.87	19.94	3.83	16.11	14.64	10.81
	MW22	12/22/2009	6	14.53	6.87	628	0.31	-137.4	--	19.94	3.69	16.25	14.64	10.95

Table 4
Quarterly Monitoring Summary of Dissolved Metals in Groundwater (mg/L)
TrueGuard, LLC
Washougal, Washington

Well	Date	Sample	Dissolved Arsenic	Dissolved Boron	Dissolved Chromium	Dissolved Hexavalent Chromium	Dissolved Copper	Dissolved Iron	Dissolved Manganese
MW-1	02/08/2007	GW-32	0.019	--	<0.0050	--	<0.010	--	--
	06/25/2007	GW-39	0.045	0.0234	<0.005	--	<0.01	--	--
	12/06/2007	MW1-120607	0.022	0.0366	<0.005	--	<0.01	6.34	--
	02/26/2008	MW-1	0.021	--	<0.005	--	<0.01	--	--
	07/14/2008	MW1-W	0.037	0.01	<0.005	--	<0.01	--	--
	10/14/2008	MW1	0.05	<0.01	<0.005	--	<0.01	22.3	--
	01/13/2009	MW-1	0.015	0.0328	<0.005	--	<0.01	7.24	--
	05/04/2009	MW1	0.0097	0.0449	<0.005	--	<0.01	5.05	0.494
	12/02/2009	MW1	0.025	0.0246	0.0056	--	<0.01	17	--
	02/08/2007	GW-33	0.017	--	<0.0050	--	<0.010	--	--
MW-2	06/25/2007	GW-40	0.033	0.0206	<0.005	--	<0.01	--	--
	02/08/2007	GW-34	0.64	--	<0.0050	--	<0.010	--	--
	03/07/2007	GW-37	0.76	--	<0.005	--	<0.01	--	--
	06/25/2007	GW-42	0.6	0.746	<0.005	--	<0.01	--	--
	08/01/2007	MW3-W	0.69	0.507	<0.005	--	<0.01	--	--
	12/06/2007	MW3-120607	0.22	0.172	<0.005	--	<0.01	5.94	--
	02/26/2008	MW-3	0.082	--	<0.005	--	<0.01	--	--
	07/15/2008	MW3-W	0.27	0.447	0.0053	<0.005	<0.01	26.2	4.89
	10/14/2008	MW3	0.64	0.288	<0.005	<0.005J	<0.01	40.3	6.74
	01/14/2009	MW-3	0.24	0.254	<0.005	<0.005	<0.01	5.41	0.934
MW-3	03/02/2009	MW3-030209	0.31	--	--	--	--	--	--
	05/05/2009	MW3	0.4	0.173	<0.005	<0.005	<0.01	5.4	0.872
	12/01/2009	MW3	1	0.202	0.0079	--	<0.01	12.5	--
	02/08/2007	GW-35	0.0074	--	<0.0050	--	<0.010	--	--
	06/25/2007	GW-41	0.061	<0.01	<0.005	--	<0.01	--	--
	12/06/2007	MW5-120607	0.017	0.0287	<0.005	--	0.0214	5.78	--
	02/26/2008	MW-5	0.01	--	<0.005	--	0.016	--	--
	07/14/2008	MW5-W	0.062	<0.01	<0.005	--	<0.01	--	--
	01/13/2009	MW-5	0.0023	0.0684	<0.005	--	<0.01	0.277	--
	05/04/2009	MW5	0.0031	0.129	0.0071	--	<0.01	0.62	0.197
12/02/2009	MW5	0.012	<0.01	0.0082	--	<0.01	5.63	--	
MW-5	02/08/2007	GW-35	0.0074	--	<0.0050	--	<0.010	--	--
	06/25/2007	GW-41	0.061	<0.01	<0.005	--	<0.01	--	--
	12/06/2007	MW5-120607	0.017	0.0287	<0.005	--	0.0214	5.78	--
	02/26/2008	MW-5	0.01	--	<0.005	--	0.016	--	--
	07/14/2008	MW5-W	0.062	<0.01	<0.005	--	<0.01	--	--
	01/13/2009	MW-5	0.0023	0.0684	<0.005	--	<0.01	0.277	--
	05/04/2009	MW5	0.0031	0.129	0.0071	--	<0.01	0.62	0.197
	12/02/2009	MW5	0.012	<0.01	0.0082	--	<0.01	5.63	--

Table 4
Quarterly Monitoring Summary of Dissolved Metals in Groundwater (mg/L)
TrueGuard, LLC
Washougal, Washington

Well	Date	Sample	Dissolved Arsenic	Dissolved Boron	Dissolved Chromium	Dissolved Hexavalent Chromium	Dissolved Copper	Dissolved Iron	Dissolved Manganese
MW-6	02/08/2007	GW-36	0.0053	--	<0.0050	--	<0.010	--	--
	11/06/2007	MW-6	0.0015	0.494	--	<0.005J	<0.01	17.8	--
	12/06/2007	MW6-120607	0.0047	0.17	<0.005	--	<0.01	23.5	--
	02/26/2008	MW-6	0.008	--	<0.005	--	<0.01	--	--
	07/14/2008	MW6-W	0.0084	0.0659	<0.005	--	<0.01	--	--
	10/14/2008	MW6	0.0035	0.585	0.0054	--	<0.01	16.8	--
	01/13/2009	MW-6	0.0061	0.0334	<0.005	--	<0.01	22.4	--
	05/05/2009	MW6	0.0042	0.128	0.0051	<0.005	<0.01	16.4	2.35
	12/02/2009	MW6	<0.0010	0.1	0.0069	--	<0.01	15.8	--
	03/07/2007	GW-38	2.9	--	<0.005	--	<0.01	--	--
MW-8	06/25/2007	GW-43	1.4	0.567	<0.005	--	<0.01	--	--
	08/01/2007	MW8-W	3.3	0.627	<0.005	--	<0.01	--	--
	11/06/2007	MW-8	0.72	0.106	--	<0.005J	<0.01	9.05	--
	06/25/2007	GW-45	2.9	1.13	<0.005	--	<0.01	--	--
MW-9	08/01/2007	MW9-W	2.6	0.893	<0.005	--	<0.01	--	--
	06/25/2007	GW-44	4.8	0.529	0.0057	--	<0.01	--	--
MW-10	08/01/2007	MW10-W	6.4	0.914	<0.005	--	<0.01	--	--
	12/06/2007	MW10-120607	4.5	0.309	0.0062	--	<0.01	9.63	--
	02/26/2008	MW-10	2.8	--	<0.005	--	<0.01	--	--
	07/15/2008	MW10-W	3.8	0.159	0.0096	<0.005	<0.01	16.7	2.55
	10/14/2008	MW10	3.8	0.438	0.006	<0.005J	<0.01	26	3.52
	01/14/2009	MW-10	2.8	0.127	<0.005	<0.005	<0.01	11.9	0.83
	03/02/2009	MW10-030209	4.5	--	--	--	--	--	--
	05/05/2009	MW10	5	0.106	0.0067	<0.005	<0.01	14.4	1.18
	12/01/2009	MW10	3.7	0.271	0.0089	--	<0.01	14.3	--
	12/06/2007	MW11-120607	7.3	0.624	<0.005	--	<0.01	34	--
MW-11	02/26/2008	MW-11	7.1	--	<0.005	--	<0.01	--	--
	07/15/2008	MW11-W	3.7	4.52	<0.005	<0.005	<0.01	44.6	6.3
	07/15/2008	MW11-WD	3.8	4.59	<0.005	<0.005	<0.01	45.2	6.29
	10/14/2008	MW11	3.4	1.9	<0.005	<0.005J	<0.01	55.8	5.48
	10/14/2008	MW11-D	3.5	1.85	<0.005	<0.005J	<0.01	55.5	5.1

Table 4
Quarterly Monitoring Summary of Dissolved Metals in Groundwater (mg/L)
TrueGuard, LLC
Washougal, Washington

Well	Date	Sample	Dissolved Arsenic	Dissolved Boron	Dissolved Chromium	Dissolved Hexavalent Chromium	Dissolved Copper	Dissolved Iron	Dissolved Manganese
MW-12	01/14/2009	MW-11	4.1	0.367	<0.005	<0.005	<0.01	25.4	2.45
	01/14/2009	MW-11D	4.1	0.37	<0.005	<0.005	<0.01	25.2	2.43
	03/02/2009	MW11-030209	3.9	--	--	--	--	--	--
	05/05/2009	MW11	3	0.234	0.0052	<0.005	<0.01	52.1	6.25
	10/02/2009	MW11-17.2	1.3	--	--	--	--	--	--
	10/02/2009	MW11-14.0	3.7	--	--	--	--	--	--
	10/02/2009	MW11-10.7	4.7	--	--	--	--	--	--
	10/02/2009	MW11-7.4	3.2	--	--	--	--	--	--
	12/01/2009	MW11	3.1	0.194	0.0102	--	<0.01	37.3	--
	12/06/2007	MW12-120607	0.33	0.454	<0.005	--	<0.01	29.3	--
	02/28/2008	MW-12	0.37	--	<0.005	--	<0.01	--	--
	07/15/2008	MW12-W	0.5	1.58	<0.005	--	<0.01	--	--
	10/14/2008	MW12	1.5	1.45	<0.005	--	<0.01	29.9	--
	01/14/2009	MW-12	0.44	0.339	<0.005	--	<0.01	44.6	--
05/04/2009	MW12	0.63	3.33	<0.005	--	<0.01	40.2	2.12	
10/02/2009	MW12-14.0	2.3	--	--	--	--	--	--	
10/02/2009	MW12-11.0	2.2	--	--	--	--	--	--	
10/02/2009	MW12-8.0	1.1	--	--	--	--	--	--	
10/02/2009	MW12-5.0	2	--	--	--	--	--	--	
12/02/2009	MW12	1.2	0.807	0.006	--	<0.01	51.4	--	
MW-13	12/07/2007	MW13-120707	0.04	<0.01	<0.005	--	<0.01	27.2	--
	02/28/2008	MW-13	0.037	--	<0.005	--	<0.01	--	--
	07/14/2008	MW13-W	0.043	0.0197	<0.005	--	<0.01	--	--
	10/14/2008	MW13	0.053	0.0612	<0.005	--	<0.01	25.2	--
	01/13/2009	MW-13	0.035	0.0619	<0.005	--	<0.01	18.8	--
	05/04/2009	MW13	0.035	0.879	<0.005	--	<0.01	17.1	1.39
	05/04/2009	MW13D	0.033	0.803	<0.005	--	<0.01	15.6	1.3
	12/02/2009	MW13	0.042	0.597	0.0076	--	<0.01	27.4	--
	12/02/2009	MW13 DUP	0.041	0.615	0.0063	--	<0.01	28.1	--

Table 4
Quarterly Monitoring Summary of Dissolved Metals in Groundwater (mg/L)
TrueGuard, LLC
Washougal, Washington

Well	Date	Sample	Dissolved Arsenic	Dissolved Boron	Dissolved Chromium	Dissolved Hexavalent Chromium	Dissolved Copper	Dissolved Iron	Dissolved Manganese
MW-14	12/07/2007	MW14-120707	0.075	0.0879	<0.005	--	<0.01	31.1	--
	02/28/2008	MW-14	0.072	--	<0.005	--	<0.01	--	--
	07/15/2008	MW14-W	0.075	1.32	<0.005	--	<0.01	--	--
	10/14/2008	MW14	0.084	0.743	<0.005	--	<0.01	35.6	--
	01/13/2009	MW-14	0.069	1.7	<0.005	--	<0.01	26.7	--
	05/04/2009	MW14	0.063	0.592	<0.005	--	<0.01	32.5	3.66
	12/03/2009	MW14	0.056	0.977	0.0077	--	<0.01	36.7	--
MW-15	12/07/2007	MW15-120707	0.043	0.692	<0.005	--	<0.01	38	--
	02/28/2008	MW-15	0.0048	--	<0.005	--	<0.01	--	--
	07/15/2008	MW15-W	0.044	3.12	<0.005	--	<0.01	--	--
	10/14/2008	MW15	0.05	1.72	<0.005	--	<0.01	37.4	--
	01/13/2009	MW-15	0.036	1.72	<0.005	--	<0.01	28.3	--
	05/04/2009	MW15	0.034	1.34	<0.005	--	<0.01	25.2	3.58
	12/03/2009	MW15	0.041	1.2	0.0073	--	<0.01	37.7	--
MW-16	05/07/2009	MW16	2.8	0.427	<0.005	<0.005	<0.01	60.8	5.08
	10/02/2009	MW16-13.7	1.6	--	--	--	--	--	--
	10/02/2009	MW16-11.0	1.6	--	--	--	--	--	--
	10/02/2009	MW16-8.3	1.5	--	--	--	--	--	--
	10/02/2009	MW16-5.5	1.3	--	--	--	--	--	--
	12/02/2009	MW16	1.6	0.44	0.007	--	<0.01	47.4	--

Table 5
Summary of Pilot Study Data (mg/L)
TrueGuard, LLC
Washougal, Washington

Well	Date	Sample	Dissolved Arsenic	Dissolved Manganese	Dissolved Boron	Dissolved Chromium	Dissolved Hexavalent Chromium	Dissolved Copper	Dissolved Iron	Sulfate
MW-17	12/02/2009	MW17	0.25	2.96	0.597	0.0082	<0.005	<0.01	18.9	46.8
	12/08/2009	MW17	0.3	3.31	0.558	0.0058	<0.005	<0.01	21.8	18.6
	12/15/2009	MW17	0.35	3.19	0.529J	0.0072	<0.005	<0.01	23.6	16.5
	12/22/2009	MW17	0.43	3.32	0.471	0.0081	<0.005	<0.01	26.7	8.22
MW-18	12/02/2009	MW18	0.098	6.06	0.116	0.0051	<0.005	<0.01	68.7	<0.5
	12/08/2009	MW18	0.087	6.45	0.0885	0.005	<0.005	<0.01	71.8	131
	12/15/2009	MW18	0.12	24	<0.01J	<0.005	<0.005	<0.01	294	1,710
	12/22/2009	MW18	0.095	19.5	0.078	<0.005	<0.005	<0.01	249	1,680
MW-19	12/02/2009	MW19	0.093	6.29	0.166	<0.005	<0.005	<0.01	60.2	1.27
	12/08/2009	MW19	<0.010	23.5	0.0275	0.0071	<0.1	0.0297	216	3,350
	12/15/2009	MW19	0.045	33.8	0.424J	<0.005	<0.005	<0.01	350	3,650
	12/22/2009	MW19	0.058	11.3	0.196	0.005	<0.005	<0.01	109	2,190
MW-20	12/02/2009	MW20	0.062	5.24	0.113	0.0078	<0.005	<0.01	50.1	<0.5
	12/08/2009	MW20	0.082	5.69	0.083	0.006	<0.005	<0.01	63.2	70.8
	12/15/2009	MW20	0.12	5.46	0.101J	0.007	<0.005	<0.01	58.6	3.28
	12/22/2009	MW20	0.098	5.64	0.082	0.006	<0.005	<0.01	57.4	3.38
MW-21	12/02/2009	MW21	0.3	5.93	0.2	<0.005	<0.005	<0.01	55.3	32.6
	12/08/2009	MW21	0.38	5.74	0.16	<0.005	<0.005	<0.01	67.4	35.3
	12/15/2009	MW21	0.33	6.14	0.213J	0.0067	<0.005	<0.01	62.3	28.8
	12/22/2009	MW21	0.46	6.05	0.185	0.0068	<0.005	<0.01	64.6	14.5
MW-22	12/02/2009	MW22	0.44	3.57	0.516	0.0058	<0.005	<0.01	26.6	13.2
	12/08/2009	MW22	0.45	3.92	0.475	0.0054	<0.005	<0.01	34.8	6.62
	12/15/2009	MW22	0.47	3.39	0.577J	0.0062	<0.005	<0.01	29.6	5
	12/22/2009	MW22	0.5	3.13	0.619	0.0062	<0.005	<0.01	28.5	1.49

Table 6
Summary of Arsenic Stratification (mg/L)
TrueGuard, LLC
Washougal, Washington

Well	Date	Depth	Sample	Dissolved Arsenic
MW-11	10/02/2009	7.4	MW11-7.4	3.2
	10/02/2009	10.7	MW11-10.7	4.7
	10/02/2009	14.0	MW11-14.0	3.7
	10/02/2009	17.2	MW11-17.2	1.3
MW-12	10/02/2009	5.0	MW12-5.0	2
	10/02/2009	8.0	MW12-8.0	1.1
	10/02/2009	11.0	MW12-11.0	2.2
	10/02/2009	14.0	MW12-14.0	2.3
MW-16	10/02/2009	5.5	MW16-5.5	1.3
	10/02/2009	8.3	MW16-8.3	1.5
	10/02/2009	11.0	MW16-11.0	1.6
	10/02/2009	13.7	MW16-13.7	1.6

FIGURES



Project: 8008.01.1204 Produced By: W. Coffey Approved By: T. Silva Print Date: 02-16-2010 File: X:\8008.01\Projects\1204\Fig. Water Level Contours Dec 1, 2009



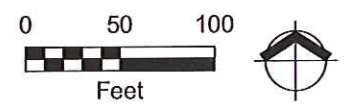
Figure 1
Water Level Contours
from December 1, 2009

TrueGuard, LLC
 Washougal, Washington

Legend

- MW-6 19.49 Extraction Well Location
- MW-10 14.22 Monitoring Well Location (with Water Level Value in Feet NAVD88)
- 14.5 Contour (0.5-Foot Interval)
- TrueGuard, LLC Site Boundaries
- Taxlots
- Pilot Study Area
- Approximate Groundwater Flow Direction

Notes:
 1. NAVD88 = North American Vertical Datum of 1988.
 2. Water level contours were generated using the tension spline method within ArcGIS 9.3 Spatial Analyst extension.



Source: Aerial photograph obtained from ESRI, Inc. ArcGIS Online/Bing Maps.

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Source: Aerial photograph obtained from Clark County GIS Department.

Legend

-  Injection Point (December 7, 2009)
-  Proposed Air Sparge Well Location
-  Monitoring Well
-  Tax Lot Boundary

Figure 2
Pilot Study Area
 TrueGuard, LLC
 Washougal, Washington



FIELD SAMPLING
DATA SHEETS



Maul Foster & Alongi, Inc.

7223 NE Hazel Dell Avenue, Suite B, Vancouver, WA 98665 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW11
Project #	9009.01.12	Sampler	JJP
Project Name	Washougal	Sampling Date	10/2/2009
Sampling Event	October 2009	Sample Name	MW11-7.4
Sub Area		Sample Depth	7.4
FSDS QA:	TJS 10/06/09	Easting	
		Northing	
		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
10/02/09	10:20	17.40	--	6.95	--	10.45	1.70

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	11:40	0.25	0.1	6.85	16.82	435	0.20	-65.3	7.04
Final Field Parameters	11:50	0.30	0.1	6.84	16.75	421	0.17	-70.3	7.01

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	12:00:00 PM	VOA-Glass		
			Amber Glass		
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
			Total Bottles	1	

General Sampling Comments

Depth to water at time of sampling = 7.02 feet below top of casing.

Signature

Maul Foster & Alongi, Inc.

7223 NE Hazel Dell Avenue, Suite B, Vancouver, WA 98665 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW11
Project #	9009.01.12	Sampler	JJP
Project Name	Washougal	Sampling Date	10/2/2009
Sampling Event	October 2009	Sample Name	MW11-10.7
Sub Area		Sample Depth	10.7
FSDS QA:	TJS 10/06/09	Easting	
		Northing	
		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
10/02/09	10:20	17.40	--	6.95	--	10.45	1.70

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	11:20	0.25	0.1	7.05	16.84	483	0.21	-62.1	8.39
Final Field Parameters	11:25	0.30	0.1	7.04	16.80	462	0.18	-70.1	8.24

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	11:45:00 AM	VOA-Glass		
			Amber Glass		
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
			Total Bottles	1	

General Sampling Comments

Depth to water at time of sampling = 7.00 feet below top of casing.

Signature _____

Maul Foster & Alongi, Inc.

7223 NE Hazel Dell Avenue, Suite B, Vancouver, WA 98665 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW11
Project #	9009.01.12	Sampler	JJP
Project Name	Washougal	Sampling Date	10/2/2009
Sampling Event	October 2009	Sample Name	MW11-14.0
Sub Area		Sample Depth	14
FSDS QA:	TJS 10/06/09	Easting	
		Northing	
		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
10/02/09	10:20	17.40	--	6.95	--	10.45	1.70

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	11:00	0.25	0.1	7.12	16.96	795	0.33	-68.3	8.24
Final Field Parameters	11:10	0.30	0.1	7.10	16.90	750	0.20	-75.3	6.32

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	11:15:00 AM	VOA-Glass		
			Amber Glass		
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
			Total Bottles	1	

General Sampling Comments

Depth to water at time of sampling = 7.00 feet below top of casing.

Signature _____



Maul Foster & Alongi, Inc.

7223 NE Hazel Dell Avenue, Suite B, Vancouver, WA 98665 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW11		
Project #	9009.01.12	Sampler	JJP		
Project Name	Washougal	Sampling Date	10/2/2009		
Sampling Event	October 2009	Sample Name	MW11-17.2		
Sub Area		Sample Depth	17.2		
FSDS QA:	TJS 10/06/09	Easting		Northing	
				TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
10/02/09	10:20	17.40	--	6.95	--	10.45	1.70

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	10:30	0.5	0.1	7.53	16.69	798	0.27	-98.3	11.02
Final Field Parameters	10:40	0.6	0.1	7.45	16.20	750	0.15	-109.3	8.32

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear and colorless.

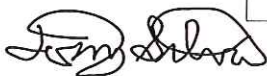
Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	10:47:00 AM	VOA-Glass		
			Amber Glass		
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
			Total Bottles	1	

General Sampling Comments

Depth to water at time of sampling = 6.99 feet below top of casing.

Signature _____



Maul Foster & Alongi, Inc.

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Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW12
Project #	9009.01.12	Sampler	JJP
Project Name	Washougal	Sampling Date	10/2/2009
Sampling Event	October 2009	Sample Name	MW12-5.0
Sub Area		Sample Depth	5
FSDS QA:	TJS 10/06/09	Easting	
		Northing	
		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
10/02/09	13:00	14.03	--	4.81	--	9.22	1.50

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	13:50	0.1	0.1	7.34	19.24	234	1.34	-34.3	5.34
Final Field Parameters	13:55	0.15	0.1	7.30	19.20	184	0.32	-50.4	4.01

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	2:00:00 PM	VOA-Glass		
			Amber Glass		
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
Total Bottles	1				

General Sampling Comments

Depth to water at time of sampling = 4.48 feet below top of casing.

Signature _____

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Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW12
Project #	9009.01.12	Sampler	JJP
Project Name	Washougal	Sampling Date	10/2/2009
Sampling Event	October 2009	Sample Name	MW12-8.0
Sub Area		Sample Depth	8
FSDS QA:	TJS 10/06/09	Easting	
		Northing	
		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
10/02/09	13:00	14.03	--	4.81	--	9.22	1.50

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	13:40	0.1	0.1	7.34	19.10	201.3	0.62	-32.3	4.85
Final Field Parameters	13:45	0.15	0.1	7.30	19.02	197.4	0.17	-45.6	4.01

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear and colorless.

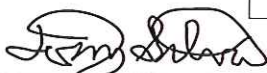
Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	1:50:00 PM	VOA-Glass		
			Amber Glass		
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
			Total Bottles	1	

General Sampling Comments

Depth to water at time of sampling = 4.83 feet below top of casing.

Signature



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Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW12
Project #	9009.01.12	Sampler	JJP
Project Name	Washougal	Sampling Date	10/2/2009
Sampling Event	October 2009	Sample Name	MW12-11.0
Sub Area		Sample Depth	11
FSDS QA:	TJS 10/06/09	Easting	
		Northing	
		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
10/02/09	13:00	14.03	--	4.81	--	9.22	1.50

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	13:25	0.1	0.1	7.45	19.32	194.5	0.34	-28.3	7.67
Final Field Parameters	13:30	0.2	0.1	7.40	19.40	190.3	0.15	-50.4	7.01

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	1:35:00 PM	VOA-Glass		
			Amber Glass		
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
			Total Bottles	1	

General Sampling Comments

Depth to water at time of sampling = 4.83 feet below top of casing.

Signature _____

Maul Foster & Alongi, Inc.

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Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW12
Project #	9009.01.12	Sampler	JJP
Project Name	Washougal	Sampling Date	10/2/2009
Sampling Event	October 2009	Sample Name	MW12-14.0
Sub Area		Sample Depth	14
FSDS QA:	TJS 10/06/09	Easting	
		Northing	
		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
10/02/09	13:00	14.03	--	4.81	--	9.22	1.50

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	13:10	0.1	0.1	7.32	19.01	210.3	0.25	-32.3	7.67
Final Field Parameters	13:20	0.2	0.1	7.30	19.05	193.7	0.17	-43.5	7.52

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear and colorless.

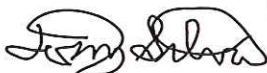
Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	1:20:00 PM	VOA-Glass		
			Amber Glass		
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
			Total Bottles	1	

General Sampling Comments

Depth to water at time of sampling = 4.82 feet below top of casing.

Signature _____



Maul Foster & Alongi, Inc.

7223 NE Hazel Dell Avenue, Suite B, Vancouver, WA 98665 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW16
Project #	9009.01.12	Sampler	JJP
Project Name	Washougal	Sampling Date	10/2/2009
Sampling Event	October 2009	Sample Name	MW16-5.5
Sub Area		Sample Depth	5.5
FSDS QA:	TJS 10/06/09	Easting	
		Northing	
		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
10/02/09	12:00	13.83	--	4.55	--	9.28	1.51

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	13:00	0.1	0.1	6.85	19.40	152.3	0.10	-32.3	4.86
Final Field Parameters	13:05	0.15	0.1	6.82	19.52	150.3	0.10	-31.4	4.20

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	1:10:00 PM	VOA-Glass		
			Amber Glass		
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
			Total Bottles	1	

General Sampling Comments

Depth to water at time of sampling = 4.55 feet below top of casing.

Signature _____



Maul Foster & Alongi, Inc.

7223 NE Hazel Dell Avenue, Suite B, Vancouver, WA 98665 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW16		
Project #	9009.01.12	Sampler	JJP		
Project Name	Washougal	Sampling Date	10/2/2009		
Sampling Event	October 2009	Sample Name	MW16-8.3		
Sub Area		Sample Depth	8.3		
FSDS QA:	TJS 10/06/09	Easting		Northing	
				TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
10/02/09	12:00	13.83	--	4.55	--	9.28	1.51

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	12:40	0.1	0.1	6.85	19.25	168.4	0.10	-20.3	4.35
Final Field Parameters	12:50	0.2	0.1	6.80	19.20	170.3	0.09	-35.3	4.25

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	12:55:00 PM	VOA-Glass		
			Amber Glass		
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
			Total Bottles	1	

General Sampling Comments

Depth to water at time of sampling = 4.55 feet below top of casing.

Signature _____

Maul Foster & Alongi, Inc.

7223 NE Hazel Dell Avenue, Suite B, Vancouver, WA 98665 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW16		
Project #	9009.01.12	Sampler	JJP		
Project Name	Washougal	Sampling Date	10/2/2009		
Sampling Event	October 2009	Sample Name	MW16-11.0		
Sub Area		Sample Depth	11		
FSDS QA:	TJS 10/06/09	Easting		Northing	
				TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
10/02/09	12:00	13.83	--	4.55	--	9.28	1.51

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	12:25	0.1	0.1	6.93	19.00	192	0.56	-30.8	6.02
Final Field Parameters	12:30	0.25	0.1	6.90	19.00	162	0.40	-45.3	6.01

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	12:35:00 PM	VOA-Glass		
			Amber Glass		
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
			Total Bottles	1	

General Sampling Comments

Depth to water at time of sampling = 4.56 feet below top of casing.

Signature _____



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Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW16
Project #	9009.01.12	Sampler	JJP
Project Name	Washougal	Sampling Date	10/2/2009
Sampling Event	October 2009	Sample Name	MW16-13.7
Sub Area		Sample Depth	13.7
FSDS QA:	TJS 10/06/09	Easting	
		Northing	
		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
10/02/09	12:00	13.83	--	4.55	--	9.28	1.51

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	12:10	0.1	0.1	7.22	18.83	490	0.58	-51.9	6.47
Final Field Parameters	12:20	0.25	0.1	7.30	18.70	485	0.20	-64.5	6.32

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	12:20:00 PM	VOA-Glass		
			Amber Glass		
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
			Total Bottles	1	

General Sampling Comments

Depth to water at time of sampling = 4.55 feet below top of casing.

Signature _____



Maul Foster & Alongi, Inc.

7223 NE Hazel Dell Avenue, Suite B, Vancouver, WA 98665 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-17
Project #	9009.01.12	Sampler	RGA
Project Name	Washougal	Sampling Date	12/2/2009
Sampling Event	December 2009 Pilot Study	Sample Name	MW17
Sub Area	Baseline	Sample Depth	7
FSDS QA:	SM 12/09/09	Easting	
		Northing	
		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
12/01/09	10:20	14.86	--	4.42	--	10.44	1.70

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	08:53	1.75	0.5	6.90	16.24	994	0.57	-139.7	9.51
	09:04	3.50	0.5	6.84	16.14	1,005	0.44	-142.7	2.79
Final Field Parameters	09:17	5.25	0.5	6.80	16.20	1,017	0.40	-143.0	2.20

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	9:20:00 AM	VOA-Glass		
			Amber Glass		
			White Poly	2	Yes/No
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
			Total Bottles	3	

General Sampling Comments

Start pump at 08:39.
 DTW after 1st pore volume = 4.38 feet from TOC.
 DTW after 2nd pore volume = 4.48 feet from TOC.
 DTW after 3rd pore volume = 4.52 feet from TOC.
 Water quality data collected using a YSI 556 and flow-through cell.

Signature _____

Maul Foster & Alongi, Inc.

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Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-17
Project #	9009.01.12	Sampler	RGA
Project Name	Washougal	Sampling Date	12/8/2009
Sampling Event	December 2009 Pilot Study	Sample Name	MW17
Sub Area	1st Round Post Injection	Sample Depth	6
FSDS QA:	SM 12/09/09	Easting	<input type="text"/>
		Northing	<input type="text"/>
		TOC	<input type="text"/>

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
12/08/09	08:21	15.13	--	4.31	--	10.82	1.76

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	08:54	1.80	0.5	7.12	14.98	549	0.80	-120.7	33.40
	09:06	3.60	0.5	7.17	14.73	549	0.67	-123.4	17.73
Final Field Parameters	09:23	5.40	0.5	7.13	15.00	562	0.71	-136.6	7.20

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	9:25:00 AM	VOA-Glass		
			Amber Glass		
			White Poly	2	Yes/No
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
			Total Bottles	3	

General Sampling Comments

Signature _____

Maul Foster & Alongi, Inc.

7223 NE Hazel Dell Avenue, Suite B, Vancouver, WA 98665 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-17
Project #	9009.01.12	Sampler	RGA
Project Name	Washougal	Sampling Date	12/15/2009
Sampling Event	December 2009 Pilot Study	Sample Name	MW17
Sub Area	2nd Round Post Injection	Sample Depth	6
FSDS QA:	TJS 12/15/09	Easting	
		Northing	
		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
12/15/09	08:17	15.13	--	4.34	--	10.79	1.76

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	08:55	1.80	0.5	6.96	13.79	615	5.07	-157.4	29.17
	09:12	3.60	0.5	6.88	14.00	628	4.62	-157.6	14.83
Final Field Parameters									
	09:21	5.40	0.5	6.86	13.69	626	4.42	-157.2	9.53

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

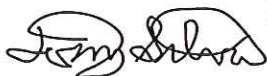
Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	9:21:00 AM	VOA-Glass		
			Amber Glass		
			White Poly	2	Yes/No
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
Total Bottles	3				

General Sampling Comments

Signature



Maul Foster & Alongi, Inc.

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Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-17
Project #	9009.01.12	Sampler	RGA
Project Name	Washougal	Sampling Date	12/22/2009
Sampling Event	December 2009 Pilot Study	Sample Name	MW17
Sub Area	3rd Round Post Injection	Sample Depth	6
FSDS QA:	TJS 12/22/09	Easting	
		Northing	
		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
12/22/09	08:24	15.13	--	4.22	--	10.91	1.78

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	09:10	1.80	0.5	7.00	14.59	643	4.37	-157.6	--
	09:19	3.60	0.5	6.98	14.60	645	4.19	-157.4	--
Final Field Parameters	09:35	5.40	0.5	6.92	14.69	654	3.08	-155.1	--

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

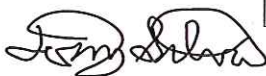
Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	9:35:00 AM	VOA-Glass		
			Amber Glass		
			White Poly	2	Yes/No
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
			Total Bottles	3	

General Sampling Comments

Signature _____



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Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-18
Project #	9009.01.12	Sampler	SM
Project Name	Washougal	Sampling Date	12/2/2009
Sampling Event	December 2009 Pilot Study	Sample Name	MW18
Sub Area	Baseline	Sample Depth	6
FSDS QA:	SM 12/09/09	Easting	<input style="width: 50px;" type="text"/>
		Northing	<input style="width: 50px;" type="text"/>
		TOC	<input style="width: 50px;" type="text"/>

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
12/01/09	10:23	14.41	--	4.45	--	9.96	1.62

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	10:45	1.6	0.5	6.72	16.21	627	0.58	-131.0	3.60
	10:57	3.2	0.5	6.70	16.27	640	0.32	-140.7	1.22
Final Field Parameters	11:09	4.8	0.5	6.71	16.32	642	0.30	-142.1	0.49

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	11:10:00 AM	VOA-Glass		
			Amber Glass		
			White Poly	2	Yes/No
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
			Total Bottles	3	

General Sampling Comments

Initial water level on 12/2/09 = 4.50 feet from TOC.
Water level holding steady at 4.52 feet from TOC.
Water quality data collected using a YSI 556 and flow-through cell.

Signature _____

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Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-18
Project #	9009.01.12	Sampler	RG
Project Name	Washougal	Sampling Date	12/8/2009
Sampling Event	December 2009 Pilot Study	Sample Name	MW18
Sub Area	1st Round Post Injection	Sample Depth	6
FSDS QA:	SM 12/09/09	Easting	<input style="width: 50px;" type="text"/>
		Northing	<input style="width: 50px;" type="text"/>
		TOC	<input style="width: 50px;" type="text"/>

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
12/08/09	08:11	14.63	--	4.37	--	10.26	1.67

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	09:01	1.70	0.5	6.50	14.49	1,248	3.51	-124.8	26.39
	09:17	3.40	0.5	6.48	14.72	1,234	2.56	-131.6	7.92
Final Field Parameters	09:30	5.10	0.5	6.48	14.73	1,224	2.25	-134.0	5.98

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	9:35:00 AM	VOA-Glass		
			Amber Glass		
			White Poly	2	Yes/No
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
			Total Bottles	3	

General Sampling Comments

Signature _____

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Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-18
Project #	9009.01.12	Sampler	RGA
Project Name	Washougal	Sampling Date	12/15/2009
Sampling Event	December 2009 Pilot Study	Sample Name	MW18
Sub Area	2nd Round Post Injection	Sample Depth	6
FSDS QA:	TJS 12/15/09	Easting	
		Northing	
		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
12/15/09	08:15	14.63	--	4.36	--	10.27	1.67

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	09:10	1.70	0.5	6.55	14.29	2,262	1.72	-121.6	8.35
	09:18	3.40	0.5	6.55	14.32	2,324	1.59	-129.4	4.58
Final Field Parameters	09:33	5.10	0.5	6.55	14.54	2,358	1.40	-133.1	2.88

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	9:33:00 AM	VOA-Glass		
			Amber Glass		
			White Poly	2	Yes/No
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
Total Bottles			3		

General Sampling Comments

Signature _____

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Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-18
Project #	9009.01.12	Sampler	RGA
Project Name	Washougal	Sampling Date	12/22/2009
Sampling Event	December 2009 Pilot Study	Sample Name	MW18
Sub Area	3rd Round Post Injection	Sample Depth	6
FSDS QA:	TJS 12/22/09	Easting	
		Northing	
		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
12/22/09	08:25	14.63	--	4.25	--	10.38	1.69

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	09:14	1.70	0.5	6.66	14.04	1,548	3.35	-128.5	--
	09:27	3.40	0.5	6.60	14.36	2,506	1.65	-133.5	--
Final Field Parameters	09:46	5.10	0.5	6.59	14.58	2,732	1.02	-137.3	--

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	9:46:00 AM	VOA-Glass		
			Amber Glass		
			White Poly	2	Yes/No
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
			Total Bottles	3	

General Sampling Comments

Signature _____

Maul Foster & Alongi, Inc.

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Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-19
Project #	9009.01.12	Sampler	RGA
Project Name	Washougal	Sampling Date	12/2/2009
Sampling Event	December 2009 Pilot Study	Sample Name	MW19
Sub Area	Baseline	Sample Depth	7
FSDS QA:	SM 12/09/09	Easting	
		Northing	
		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
12/01/09	10:27	14.40	--	4.35	--	10.05	1.64

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	11:28	1.75	0.5	6.55	16.77	1,220	0.59	-117.8	14.57
	11:42	3.50	0.5	6.53	16.50	1,189	0.53	-126.0	8.75
Final Field Parameters	11:57	5.25	0.5	6.53	16.21	1,172	0.58	-129.7	5.65

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations: Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	12:00:00 PM	VOA-Glass		
			Amber Glass		
			White Poly	2	Yes/No
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
Total Bottles			3		

General Sampling Comments

Start pump at 11:18. DTW = 4.35 ft from TOC.
 DTW after 1st pore volume = 4.42 ft from TOC.
 DTW after 2nd pore volume = 4.42 ft from TOC.
 DTW after 3rd pore volume = 4.42 ft from TOC.
 Water quality data collected using a YSI 556 and flow-through cell.

Signature



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Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-19
Project #	9009.01.12	Sampler	RGA
Project Name	Washougal	Sampling Date	12/8/2009
Sampling Event	December 2009 Pilot Study	Sample Name	MW19
Sub Area	1st Round Post Injection	Sample Depth	6
FSDS QA:	SM 12/09/09	Easting	<input type="text"/>
		Northing	<input type="text"/>
		TOC	<input type="text"/>

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
12/08/09	08:13	14.65	--	4.28	--	10.37	1.69

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	09:58	1.70	0.5	1.99	15.89	4,633	3.36	514.2	49.34
	10:12	3.40	0.5	3.40	15.99	3,693	1.85	459.3	33.04
Final Field Parameters	10:23	5.10	0.5	3.53	15.98	3,191	1.74	432.7	33.40

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	10:30:00 AM	VOA-Glass		
			Amber Glass		
			White Poly	2	Yes/No
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
Total Bottles	3				

General Sampling Comments

Signature _____

Maul Foster & Alongi, Inc.

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Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-19
Project #	9009.01.12	Sampler	RGA
Project Name	Washougal	Sampling Date	12/15/2009
Sampling Event	December 2009 Pilot Study	Sample Name	MW19
Sub Area	2nd Round Post Injection	Sample Depth	6
FSDS QA:	TJS 12/15/09	Easting	<input type="text"/>
		Northing	<input type="text"/>
		TOC	<input type="text"/>

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
12/15/09	08:14	14.65	--	4.3	--	10.35	1.69

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	09:48	1.70	0.5	5.90	12.84	4,116	4.27	-13.4	46.79
	10:04	3.40	0.5	5.95	12.81	4,398	1.82	-29.5	23.51
Final Field Parameters	10:18	5.10	0.5	6.01	12.92	4,497	1.67	-41.7	8.68

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

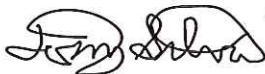
Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	10:18:00 AM	VOA-Glass		
			Amber Glass		
			White Poly	2	Yes/No
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
Total Bottles				3	

General Sampling Comments

Signature _____



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Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-19
Project #	9009.01.12	Sampler	RGA
Project Name	Washougal	Sampling Date	12/22/2009
Sampling Event	December 2009 Pilot Study	Sample Name	MW19
Sub Area	3rd Round Post Injection	Sample Depth	6
FSDS QA:	TJS 12/22/09	Easting	
		Northing	
		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
12/22/09	08:26	14.65	--	4.11	--	10.54	1.72

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	10:04	1.75	0.5	6.57	13.58	1,922	7.45	-63.0	--
	10:17	3.50	0.5	6.48	13.65	2,408	3.82	-81.4	--
Final Field Parameters	10:35	5.25	0.5	6.47	13.51	2,431	3.25	-87.4	--

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

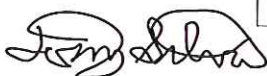
Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	10:35:00 AM	VOA-Glass		
			Amber Glass		
			White Poly	2	Yes/No
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
			Total Bottles	3	

General Sampling Comments

Signature



Maul Foster & Alongi, Inc.

7223 NE Hazel Dell Avenue, Suite B, Vancouver, WA 98665 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-20
Project #	9009.01.12	Sampler	SM
Project Name	Washougal	Sampling Date	12/2/2009
Sampling Event	December 2009 Pilot Study	Sample Name	MW20
Sub Area	Baseline	Sample Depth	7
FSDS QA:	SM 12/09/09	Easting	
		Northing	
		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
12/01/09	10:30	14.44	--	4.42	--	10.02	1.63

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	10:28	1.75	0.5	6.59	15.44	965	0.65	-113.6	3.89
	10:43	3.50	0.5	6.62	15.44	937	0.51	-132.0	3.51
Final Field Parameters	10:58	5.25	0.5	6.67	15.72	977	0.67	-133.7	2.62

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	11:00:00 AM	VOA-Glass		
			Amber Glass		
			White Poly	2	Yes/No
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
Total Bottles	3				

General Sampling Comments

Initial DTW on 12/2/09 = 4.42 ft from TOC.
 DTW after 1st pore volume = 4.44 ft from TOC.
 DTW after 2nd pore volume = 4.49 ft from TOC.
 DTW after 3rd pore volume = 4.50 ft from TOC.
 Water quality data collected using a YSI 556 and flow-through cell.

Signature

Maul Foster & Alongi, Inc.

7223 NE Hazel Dell Avenue, Suite B, Vancouver, WA 98665 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-20
Project #	9009.01.12	Sampler	RGA
Project Name	Washougal	Sampling Date	12/8/2009
Sampling Event	December 2009 Pilot Study	Sample Name	MW20
Sub Area	1st Round Post Injection	Sample Depth	6
FSDS QA:	SM 12/09/09	Easting	
		Northing	
		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
12/08/09	08:15	14.69	--	4.38	--	10.31	1.68

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	10:02	1.70	0.5	6.49	14.97	1,531	3.74	-124.5	30.40
	10:15	3.40	0.5	6.51	15.25	1,387	2.84	-133.0	9.24
Final Field Parameters	10:25	5.10	0.5	6.50	15.15	1,308	2.49	-136.3	4.51

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Rusty tint.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	10:35:00 AM	VOA-Glass		
			Amber Glass		
			White Poly	2	Yes/No
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
			Total Bottles	3	

General Sampling Comments

Signature _____

Maul Foster & Alongi, Inc.

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Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-20
Project #	9009.01.12	Sampler	RGA
Project Name	Washougal	Sampling Date	12/15/2009
Sampling Event	December 2009 Pilot Study	Sample Name	MW20
Sub Area	2nd Round Post Injection	Sample Depth	6
FSDS QA:	TJS 12/15/09	Easting	
		Northing	
		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
12/15/09	08:13	14.69	--	4.35	--	10.34	1.69

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	09:54	1.70	0.5	6.66	14.03	554	2.52	-53.4	46.01
	10:15	3.40	0.5	6.70	14.42	645	1.08	-110.4	18.37
Final Field Parameters	10:31	5.10	0.5	6.70	14.38	657	1.13	-122.0	6.62

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	10:31:00 AM	VOA-Glass		
			Amber Glass		
			White Poly	2	Yes/No
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
Total Bottles				3	

General Sampling Comments

Signature _____

Maul Foster & Alongi, Inc.

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Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-20
Project #	9009.01.12	Sampler	RGA
Project Name	Washougal	Sampling Date	12/22/2009
Sampling Event	December 2009 Pilot Study	Sample Name	MW20
Sub Area	3rd Round Post Injection	Sample Depth	6
FSDS QA:	TJS 12/22/09	Easting	
		Northing	
		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
12/22/09	08:27	14.69	--	4.22	--	10.47	1.71

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	10:09	1.75	0.5	6.67	15.05	678	0.80	-95.8	--
	10:23	3.50	0.5	6.68	14.96	681	0.55	-107.9	--
Final Field Parameters	10:44	5.25	0.5	6.67	14.98	691	0.38	-116.9	--

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

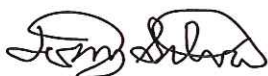
Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	10:44:00 AM	VOA-Glass		
			Amber Glass		
			White Poly	2	Yes/No
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
			Total Bottles	3	

General Sampling Comments

Signature _____



Maul Foster & Alongi, Inc.

7223 NE Hazel Dell Avenue, Suite B, Vancouver, WA 98665 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-21
Project #	9009.01.12	Sampler	RGA
Project Name	Washougal	Sampling Date	12/2/2009
Sampling Event	December 2009 Pilot Study	Sample Name	MW21
Sub Area	Baseline	Sample Depth	7
FSDS QA:	SM 12/09/09	Easting	
		Northing	
		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
12/01/09	10:35	14.37	--	4.07	--	10.30	1.68

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	09:49	1.75	0.5	6.58	16.20	1,097	1.17	-113.8	8.43
	10:02	3.50	0.5	6.54	16.40	1,134	0.46	-122.4	3.13
Final Field Parameters	10:15	5.25	0.5	6.53	16.52	1,158	0.40	-126.0	2.00

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	10:20:00 AM	VOA-Glass		
			Amber Glass		
			White Poly	2	Yes/No
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
Total Bottles	3				

General Sampling Comments

Start pump at 09:35.
 DTW after 1st pore volume = 4.13 ft from TOC.
 DTW after 2nd pore volume = 4.08 ft from TOC.
 DTW after 3rd pore volume = 4.12 ft from TOC.
 Water quality data collected using a YSI 556 and flow-through cell.

Signature

Maul Foster & Alongi, Inc.

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Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-21
Project #	9009.01.12	Sampler	RGA
Project Name	Washougal	Sampling Date	12/8/2009
Sampling Event	December 2009 Pilot Study	Sample Name	MW21
Sub Area	1st Round Post Injection	Sample Depth	6
FSDS QA:	SM 12/09/09	Easting	
		Northing	
		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
12/08/09	08:17	14.63	--	4.02	--	10.61	1.73

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	11:01	1.80	0.5	6.44	14.83	1,566	6.48	-114.2	17.20
	11:13	3.60	0.5	6.42	14.36	1,421	9.48	-124.6	5.70
Final Field Parameters	11:27	5.40	0.5	6.46	14.41	1,481	8.76	-127.9	2.92

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	11:35:00 AM	VOA-Glass		
			Amber Glass		
			White Poly	2	Yes/No
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
			Total Bottles	3	

General Sampling Comments

Signature _____

Maul Foster & Alongi, Inc.

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Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-21
Project #	9009.01.12	Sampler	RGA
Project Name	Washougal	Sampling Date	12/15/2009
Sampling Event	December 2009 Pilot Study	Sample Name	MW21
Sub Area	2nd Round Post Injection	Sample Depth	6
FSDS QA:	TJS 12/15/09	Easting	
		Northing	
		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
12/15/09	08:11	14.63	--	3.98	--	10.65	1.74

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	10:49	1.75	0.5	6.56	14.13	719	1.88	-135.9	21.97
	11:00	3.50	0.5	6.59	14.18	721	1.77	-139.0	6.18
Final Field Parameters	11:13	5.25	0.5	6.56	13.88	716	1.70	-143.6	2.41

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

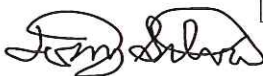
Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	11:13:00 AM	VOA-Glass		
			Amber Glass		
			White Poly	2	Yes/No
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
Total Bottles	3				

General Sampling Comments

Signature



Maul Foster & Alongi, Inc.

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Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-21
Project #	9009.01.12	Sampler	RGA
Project Name	Washougal	Sampling Date	12/22/2009
Sampling Event	December 2009 Pilot Study	Sample Name	MW21
Sub Area	3rd Round Post Injection	Sample Depth	6
FSDS QA:	TJS 12/22/09	Easting	
		Northing	
		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
12/22/09	08:29	14.63	--	3.84	--	10.79	1.76

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	11:03	1.80	0.5	6.66	14.68	721	2.86	-138.7	--
	11:16	3.60	0.5	6.62	14.86	724	2.23	-136.9	--
Final Field Parameters	11:35	5.40	0.5	6.63	14.32	705	2.04	-143.1	--

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

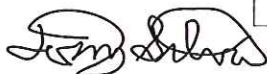
Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	11:35:00 AM	VOA-Glass		
			Amber Glass		
			White Poly	2	Yes/No
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
Total Bottles	3				

General Sampling Comments

Signature



Maul Foster & Alongi, Inc.

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Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-22
Project #	9009.01.12	Sampler	SM
Project Name	Washougal	Sampling Date	12/2/2009
Sampling Event	December 2009 Pilot Study	Sample Name	MW22
Sub Area	Baseline	Sample Depth	7
FSDS QA:	SM 12/09/09	Easting	<input type="text"/>
		Northing	<input type="text"/>
		TOC	<input type="text"/>

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
12/01/09	10:39	14.37	--	3.92	--	10.45	1.70

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	09:00	1.7	0.5	6.69	16.10	970	1.53	-33.8	7.14
	09:13	3.4	0.5	6.87	16.12	996	1.06	-50.6	3.10
Final Field Parameters	09:26	5.1	0.5	6.86	16.19	1,002	0.73	-60.4	1.58

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	9:30:00 AM	VOA-Glass	2	Yes/No
			Amber Glass		
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly		
Total Bottles			3		

General Sampling Comments

Initial water level on 12/2/09 = 3.92 feet from TOC.
Water level holding steady at 4.00 feet from TOC.
Water quality data collected using a YSI 556 and flow-through cell.

Signature _____

Maul Foster & Alongi, Inc.

7223 NE Hazel Dell Avenue, Suite B, Vancouver, WA 98665 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-22
Project #	9009.01.12	Sampler	RGA
Project Name	Washougal	Sampling Date	12/8/2009
Sampling Event	December 2009 Pilot Study	Sample Name	MW22
Sub Area	1st Round Post Injection	Sample Depth	6
FSDS QA:	SM 12/09/09	Easting	
		Northing	
		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
12/08/09	08:19	14.64	--	3.88	--	10.76	1.75

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	10:59	1.80	0.5	6.82	15.62	610	0.54	-101.5	14.73
	11:11	3.60	0.5	6.43	15.48	596	0.63	-119.3	7.95
Final Field Parameters	11:25	5.40	0.5	6.96	15.25	598	0.97	-130.5	4.00

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	11:30:00 AM	VOA-Glass		
			Amber Glass		
			White Poly	2	Yes/No
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
Total Bottles	3				

General Sampling Comments

Signature



Maul Foster & Alongi, Inc.

7223 NE Hazel Dell Avenue, Suite B, Vancouver, WA 98665 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-22
Project #	9009.01.12	Sampler	RGA
Project Name	Washougal	Sampling Date	12/15/2009
Sampling Event	December 2009 Pilot Study	Sample Name	MW22
Sub Area	2nd Round Post Injection	Sample Depth	6
FSDS QA:	TJS 12/15/09	Easting	<input type="text"/>
		Northing	<input type="text"/>
		TOC	<input type="text"/>

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
12/15/09	08:09	14.64	--	3.83	--	10.81	1.76

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	11:02	1.80	0.5	6.96	14.21	600	1.99	-120.5	15.77
	11:16	3.60	0.5	6.87	14.29	614	1.97	-127.8	5.64
Final Field Parameters	11:28	5.40	0.5	6.92	14.00	600	2.00	-137.2	2.87

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	11:28:00 AM	VOA-Glass		
			Amber Glass		
			White Poly	2	Yes/No
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
Total Bottles	3				

General Sampling Comments

Signature _____

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Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-22
Project #	9009.01.12	Sampler	RGA
Project Name	Washougal	Sampling Date	12/22/2009
Sampling Event	December 2009 Pilot Study	Sample Name	MW22
Sub Area	3rd Round Post Injection	Sample Depth	6
FSDS QA:	TJS 12/22/09	Easting	
		Northing	
		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
12/22/09	08:30	14.64	--	3.69	--	10.95	1.78

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	11:08	1.80	0.5	6.94	14.47	615	0.54	-134.5	--
	11:23	3.60	0.5	6.91	14.54	622	0.37	-138.6	--
Final Field Parameters	11:45	5.40	0.5	6.87	14.53	628	0.31	-137.4	--

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

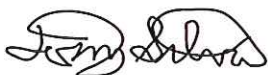
Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	11:45:00 AM	VOA-Glass		
			Amber Glass		
			White Poly	2	Yes/No
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
Total Bottles			3		

General Sampling Comments

Signature



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Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-1
Project #	9009.01.12	Sampler	RGA
Project Name	Washougal	Sampling Date	12/2/2009
Sampling Event	December 2009	Sample Name	MW1
Sub Area	Quarterly	Sample Depth	7
FSDS QA:	SM 12/09/09	Easting	
		Northing	
		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
12/01/09	09:44	13.38	--	5.2	--	8.18	1.33

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	14:23	1.4	0.5	6.60	13.13	243	1.22	-55.2	7.11
	14:34	2.8	0.5	6.61	13.14	247	0.75	-82.5	3.41
Final Field Parameters	14:46	4.2	0.5	6.63	13.18	247	0.66	-91.4	3.08

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	2:50:00 PM	VOA-Glass		
			Amber Glass		
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
			Total Bottles	1	

General Sampling Comments

Start pump at 14:10. DTW = 5.50 ft from TOC.
 DTW after 1st pore volume = 5.51 ft from TOC.
 DTW after 2nd pore volume = 5.51 ft from TOC.
 DTW after 3rd pore volume = 5.51 ft from TOC.
 Water quality data collected using a YSI 556 and flow-through cell.

Signature _____



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Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-3		
Project #	9009.01.12	Sampler	SM		
Project Name	Washougal	Sampling Date	12/1/2009		
Sampling Event	December 2009	Sample Name	MW3		
Sub Area	Quarterly	Sample Depth	7.5		
FSDS QA:	SM 12/09/09	Easting		Northing	
				TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
12/01/09	09:48	13.95	--	5.05	--	8.90	1.45

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	13:08	1.5	0.5	6.89	18.66	240	0.40	-131.7	6.82
	13:19	3.0	0.5	6.83	18.73	264	0.35	-138.7	2.85
Final Field Parameters	13:31	4.5	0.5	6.83	18.80	267	0.26	-140.2	1.21

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	1:35:00 PM	VOA-Glass		
			Amber Glass		
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
			Total Bottles	1	

General Sampling Comments

Water level holding steady at 5.10 ft from TOC.
Water quality data collected using a YSI 556 and flow-through cell.

Signature _____



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Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-5
Project #	9009.01.12	Sampler	RGA
Project Name	Washougal	Sampling Date	12/2/2009
Sampling Event	December 2009	Sample Name	MW5
Sub Area	Quarterly	Sample Depth	6
FSDS QA:	SM 12/09/09	Easting	
		Northing	
		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
12/01/09	09:46	7.85	--	3.86	--	3.99	0.65

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	13:17	0.75	0.25	6.72	12.37	431	0.76	-70.1	16.42
	13:35	1.50	0.25	6.75	12.17	256	0.99	-81.1	6.07
Final Field Parameters	13:49	2.25	0.25	6.75	11.98	219	0.91	-80.8	3.18

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear and colorless.

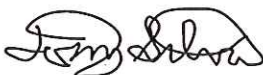
Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	2:00:00 PM	VOA-Glass		
			Amber Glass		
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
			Total Bottles	1	

General Sampling Comments

Start pump at 12:57. DTW = 3.88 ft from TOC.
 DTW after 1st pore volume = 5.51 ft from TOC.
 DTW after 2nd pore volume = 5.53 ft from TOC.
 DTW after 3rd pore volume = 5.43 ft from TOC.
 Water quality data collected using a YSI 556 and flow-through cell.

Signature



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Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-6
Project #	9009.01.12	Sampler	SM
Project Name	Washougal	Sampling Date	12/2/2009
Sampling Event	December 2009	Sample Name	MW6
Sub Area	Quarterly	Sample Depth	7.5
FSDS QA:	SM 12/09/09	Easting	<input style="width: 50px;" type="text"/>
		Northing	<input style="width: 50px;" type="text"/>
		TOC	<input style="width: 50px;" type="text"/>

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
12/01/09	11:15	9.75	--	3.29	--	6.46	1.05

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	13:09	1.05	0.5	6.77	10.93	161	1.20	-55.5	2.66
	13:17	2.10	0.5	6.73	10.97	206	0.42	-93.4	1.21
Final Field Parameters	13:25	3.15	0.5	6.73	10.97	212	0.36	-99.1	1.05

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	1:30:00 PM	VOA-Glass		
			Amber Glass		
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
			Total Bottles	1	

General Sampling Comments

Initial DTW on 12/2/09 = 6.46 ft from TOC.
 Water level holding steady at 6.50 ft from TOC.
 Water quality data collected using a YSI 556 and flow-through cell.

Signature _____

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Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-10
Project #	9009.01.12	Sampler	SM
Project Name	Washougal	Sampling Date	12/1/2009
Sampling Event	December 2009	Sample Name	MW10
Sub Area	Quarterly	Sample Depth	6.5
FSDS QA:	SM 12/09/09	Easting	<input type="text"/>
		Northing	<input type="text"/>
		TOC	<input type="text"/>

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
12/01/09	09:50	16.62	--	5.31	--	11.31	7.39

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	14:10	7.4	1.0	6.80	16.54	216	1.03	-111.1	6.21
	14:38	14.8	1.0	6.77	18.55	218	0.62	-117.6	2.01
Final Field Parameters	15:06	22.2	1.0	6.76	18.58	221	0.49	-118.6	1.12

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	3:10:00 PM	VOA-Glass		
			Amber Glass		
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
			Total Bottles	1	

General Sampling Comments

Water level holding steady at 5.40 ft from TOC.
Water quality data collected using a YSI 556 and flow-through cell.

Signature _____

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Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-11
Project #	9009.01.12	Sampler	SM
Project Name	Washougal	Sampling Date	12/1/2009
Sampling Event	December 2009	Sample Name	MW11
Sub Area	Quarterly	Sample Depth	8
FSDS QA:	SM 12/09/09	Easting	
		Northing	
		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
12/01/09	09:58	17.40	--	6.04	--	11.36	1.85

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	15:36	1.85	0.5	6.60	15.47	680	0.66	-116.6	10.08
	15:50	3.70	0.5	6.60	15.45	631	0.47	-120.2	4.24
Final Field Parameters	16:04	5.55	0.5	6.58	15.42	628	0.41	-121.9	1.34

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	4:05:00 PM	VOA-Glass		
			Amber Glass		
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
			Total Bottles	1	

General Sampling Comments

Water level holding steady at 6.69 ft from TOC.
Water quality data collected using a YSI 556 and flow-through cell.

Signature

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Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-12
Project #	9009.01.12	Sampler	SM
Project Name	Washougal	Sampling Date	12/2/2009
Sampling Event	December 2009	Sample Name	MW12
Sub Area	Quarterly	Sample Depth	5.5
FSDS QA:	SM 12/09/09	Easting	
		Northing	
		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
12/01/09	10:13	14.03	--	4.5	--	9.53	1.55

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	14:10	1.6	0.5	6.79	16.50	663	0.57	-152.7	0.76
	14:25	3.2	0.5	6.80	16.59	633	0.56	-158.8	0.39
Final Field Parameters	14:40	4.8	0.5	6.80	16.63	629	0.51	-161.8	0.26

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	2:45:00 PM	VOA-Glass		
			Amber Glass		
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
			Total Bottles	1	

General Sampling Comments

Initial water level on 12/2/09 = 4.50 ft from TOC.
Water level holding steady at 4.67 ft from TOC.
Water quality data collected using a YSI 556 and flow-through cell.

Signature

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Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-13
Project #	9009.01.12	Sampler	SM
Project Name	Washougal	Sampling Date	12/2/2009
Sampling Event	December 2009	Sample Name	MW13
Sub Area	Quarterly	Sample Depth	7
FSDS QA:	SM 12/09/09	Easting	<input style="width: 50px;" type="text"/>
		Northing	<input style="width: 50px;" type="text"/>
		TOC	<input style="width: 50px;" type="text"/>

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
12/01/09	10:45	14.05	--	5.69	--	8.36	1.36

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	15:17	1.4	0.5	6.67	14.72	271	0.42	-98.1	3.33
	15:30	2.8	0.5	6.67	14.62	260	0.30	-107.5	1.65
Final Field Parameters	15:45	4.2	0.5	6.67	14.66	258	0.28	-108.6	1.64

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	3:50:00 PM	VOA-Glass		
			Amber Glass		
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
			Total Bottles	1	

General Sampling Comments

Duplicate sample MW13-DUP collected.
 Initial DTW = 5.69 ft from TOC.
 Water level holding steady at 6.12 ft from TOC.
 Water quality data collected using a YSI 556 and flow-through cell.

Signature _____

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Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-13
Project #	9009.01.12	Sampler	SM
Project Name	Washougal	Sampling Date	12/2/2009
Sampling Event	December 2009	Sample Name	MW13-DUP
Sub Area	Quarterly	Sample Depth	7
FSDS QA:	SM 12/09/09	Easting	
		Northing	
		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
12/01/09	10:45	14.05	--	5.69	--	8.36	1.36

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	15:17	1.4	0.5	6.67	14.72	271	0.42	-98.1	3.33
	15:30	2.8	0.5	6.67	14.62	260	0.30	-107.5	1.65
Final Field Parameters	15:45	4.2	0.5	6.67	14.66	258	0.28	-108.6	1.64

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	3:50:00 PM	VOA-Glass		
			Amber Glass		
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
			Total Bottles	1	

General Sampling Comments

Duplicate sample of MW13.
Initial DTW = 5.69 ft from TOC.
Water level holding steady at 6.12 ft from TOC.
Water quality data collected using a YSI 556 and flow-through cell.

Signature _____

Maul Foster & Alongi, Inc.

7223 NE Hazel Dell Avenue, Suite B, Vancouver, WA 98665 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-14
Project #	9009.01.12	Sampler	RGA
Project Name	Washougal	Sampling Date	12/3/2009
Sampling Event	December 2009	Sample Name	MW14
Sub Area	Quarterly	Sample Depth	6
FSDS QA:	SM 12/09/09	Easting	<input style="width: 50px;" type="text"/>
		Northing	<input style="width: 50px;" type="text"/>
		TOC	<input style="width: 50px;" type="text"/>

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
12/01/09	10:52	13.82	--	5.67	--	8.15	1.33

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	09:45	1.4	0.5	6.63	13.04	599	1.05	-75.3	11.58
	09:56	2.8	0.5	6.71	13.10	582	0.70	-100.7	5.53
Final Field Parameters	10:06	4.2	0.5	6.66	13.18	585	0.61	-107.3	5.19

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear and colorless.

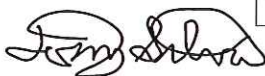
Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	10:10:00 AM	VOA-Glass		
			Amber Glass		
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
			Total Bottles	1	

General Sampling Comments

Start pump at 09:34. DTW = 5.82 ft from TOC.
 DTW after 1st pore volume = 5.82 ft from TOC.
 DTW after 2nd pore volume = 5.82 ft from TOC.
 DTW after 3rd pore volume = 5.82 ft from TOC.
 Water quality data collected using a YSI 556 and flow-through cell.

Signature _____



Maul Foster & Alongi, Inc.

7223 NE Hazel Dell Avenue, Suite B, Vancouver, WA 98665 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-15
Project #	9009.01.12	Sampler	RGA
Project Name	Washougal	Sampling Date	12/3/2009
Sampling Event	December 2009	Sample Name	MW15
Sub Area	Quarterly	Sample Depth	7
FSDS QA:	SM 12/09/09	Easting	
		Northing	
		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness) DTP-DTW	(Water Column) DTB-DTW	(Gallons/ft x Water Column) Pore Volume
12/01/09	11:00	14.47	--	6.52	--	7.95	1.30

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	10:40	1.4	0.5	6.68	16.22	941	1.07	-117.3	20.36
	10:50	2.8	0.5	6.67	15.86	883	0.70	-120.5	8.92
Final Field Parameters	11:06	4.2	0.5	6.67	16.00	889	0.65	-124.7	5.83

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	11:10:00 AM	VOA-Glass		
			Amber Glass		
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
			Total Bottles	1	

General Sampling Comments

Start pump at 10:28. DTW = 6.58 ft from TOC.
 DTW after 1st pore volume = 6.69 ft from TOC.
 DTW after 2nd pore volume = 6.69 ft from TOC.
 DTW after 3rd pore volume = 6.69 ft from TOC.
 Water quality data collected using a YSI 556 and flow-through cell.

Signature

Maul Foster & Alongi, Inc.

7223 NE Hazel Dell Avenue, Suite B, Vancouver, WA 98665 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-16
Project #	9009.01.12	Sampler	RGA
Project Name	Washougal	Sampling Date	12/2/2009
Sampling Event	December 2009	Sample Name	MW16
Sub Area	Quarterly	Sample Depth	5
FSDS QA:	SM 12/09/09	Easting	<input type="text"/>
		Northing	<input type="text"/>
		TOC	<input type="text"/>

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
12/01/09	11:39	13.83	--	3.92	--	9.91	1.62

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	15:22	1.75	0.5	6.53	15.97	669	0.82	-113.7	7.56
	15:36	3.50	0.5	6.53	15.98	717	0.45	-120.5	4.53
Final Field Parameters	15:48	5.25	0.5	6.55	16.00	738	0.37	-123.1	3.90

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	3:50:00 PM	VOA-Glass		
			Amber Glass		
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
			Total Bottles	1	

General Sampling Comments

Initial DTW = 3.95 ft from TOC.
 DTW after 1st pore volume = 4.07 ft from TOC.
 DTW after 2nd pore volume = 4.02 ft from TOC.
 DTW after 3rd pore volume = 4.02 ft from TOC.
 Water quality data collected using a YSI 556 and flow-through cell.

Signature _____



LABORATORY
ANALYTICAL
REPORTS





Specialty Analytical

11711 SE Capps Road
Clackamas, OR 97015
(503) 607-1331
Fax (503) 607-1336

October 05, 2009

Tony Silva
Maul, Foster & Alongi
7223 NE Hazel Dell Avenue
Suite B
Vancouver, WA 98665

TEL: (360) 694-2691

FAX: (360) 906-1958

RE: Trueguard / 9009.01.12

Dear Tony Silva:


Order No.: 0910023

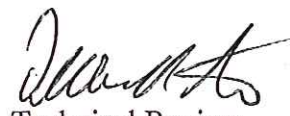
Specialty Analytical received 12 samples on 10/2/2009 for the analyses presented in the following report.

There were no problems with the analysis and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative, or as qualified with flags. Results apply only to the samples analyzed. Without approval of the laboratory, the reproduction of this report is only permitted in its entirety.

If you have any questions regarding these tests, please feel free to call.

Sincerely,


Cindy Hillyard
Project Manager


Technical Review

Specialty Analytical

Date: 05-Oct-09

CLIENT: Maul, Foster & Alongi
Project: Trueguard / 9009.01.12

Lab Order: 0910023

Lab ID: 0910023-01 **Collection Date:** 10/2/2009 10:47:00 AM
Client Sample ID: MW11-17.2 **Matrix:** GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP/MS						
Arsenic	1300	100		ug/L	100	10/5/2009 12:45:00 PM
		SW6020	Analyst: zau			

Lab ID: 0910023-02 **Collection Date:** 10/2/2009 11:15:00 AM
Client Sample ID: MW11-14.0 **Matrix:** GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP/MS						
Arsenic	3700	100		ug/L	100	10/5/2009 12:52:00 PM
		SW6020	Analyst: zau			

Lab ID: 0910023-03 **Collection Date:** 10/2/2009 11:45:00 AM
Client Sample ID: MW11-10.7 **Matrix:** GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP/MS						
Arsenic	4700	100		ug/L	100	10/5/2009 11:31:00 AM
		SW6020	Analyst: zau			

Lab ID: 0910023-04 **Collection Date:** 10/2/2009 12:00:00 PM
Client Sample ID: MW11-7.4 **Matrix:** GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP/MS						
Arsenic	3200	100		ug/L	100	10/5/2009 11:51:00 AM
		SW6020	Analyst: zau			

Lab ID: 0910023-05 **Collection Date:** 10/2/2009 12:20:00 PM
Client Sample ID: MW16-13.7 **Matrix:** GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP/MS						
Arsenic	1600	100		ug/L	100	10/5/2009 11:58:00 AM
		SW6020	Analyst: zau			

Specialty Analytical

Date: 05-Oct-09

CLIENT: Maul, Foster & Alongi
Project: Trueguard / 9009.01.12

Lab Order: 0910023

Lab ID: 0910023-06 **Collection Date:** 10/2/2009 12:35:00 PM
Client Sample ID: MW16-11.0 **Matrix:** GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP/MS						
Arsenic	1600	100		ug/L	100	10/5/2009 10:50:00 AM
		SW6020		Analyst: zau		

Lab ID: 0910023-07 **Collection Date:** 10/2/2009 12:55:00 PM
Client Sample ID: MW16-8.3 **Matrix:** GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP/MS						
Arsenic	1500	100		ug/L	100	10/5/2009 12:04:00 PM
		SW6020		Analyst: zau		

Lab ID: 0910023-08 **Collection Date:** 10/2/2009 1:10:00 PM
Client Sample ID: MW16-5.5 **Matrix:** GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP/MS						
Arsenic	1300	100		ug/L	100	10/5/2009 12:11:00 PM
		SW6020		Analyst: zau		

Lab ID: 0910023-09 **Collection Date:** 10/2/2009 1:20:00 PM
Client Sample ID: MW12-14.0 **Matrix:** GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP/MS						
Arsenic	2300	100		ug/L	100	10/5/2009 3:55:00 PM
		SW6020		Analyst: zau		

Lab ID: 0910023-10 **Collection Date:** 10/2/2009 1:35:00 PM
Client Sample ID: MW12-11.0 **Matrix:** GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP/MS						
Arsenic	2200	100		ug/L	100	10/5/2009 12:25:00 PM
		SW6020		Analyst: zau		

Specialty Analytical

Date: 05-Oct-09

CLIENT: Maul, Foster & Alongi
Project: Trueguard / 9009.01.12

Lab Order: 0910023

Lab ID: 0910023-11

Collection Date: 10/2/2009 1:50:00 PM

Client Sample ID: MW12-8.0

Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP/MS

SW6020

Analyst: zau

Arsenic

1100

100

ug/L

100

10/5/2009 4:02:00 PM

Lab ID: 0910023-12

Collection Date: 10/2/2009 2:00:00 PM

Client Sample ID: MW12-5.0

Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP/MS

SW6020

Analyst: zau

Arsenic

2000

100

ug/L

100

10/5/2009 4:09:00 PM

CLIENT: Maul, Foster & Alongi
 Work Order: 0910023
 Project: Trueguard / 9009.01.12

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_WDISS

Sample ID: 0910023-06AMS	SampType: MS	TestCode: 6020_WDISS	Units: ug/L	Prep Date: 10/2/2009	Run ID: ICPMS_091005A						
Client ID: MW16-11.0	Batch ID: 24134	TestNo: SW6020		Analysis Date: 10/5/2009	SeqNo: 631645						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	6488	100	5000	1579	98.2	70	130	0	0	0	0

Sample ID: 0910023-06AMSD	SampType: MSD	TestCode: 6020_WDISS	Units: ug/L	Prep Date: 10/2/2009	Run ID: ICPMS_091005A						
Client ID: MW16-11.0	Batch ID: 24134	TestNo: SW6020		Analysis Date: 10/5/2009	SeqNo: 631646						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	6489	100	5000	1579	98.2	70	130	6488	0.0154	20	20

Sample ID: 0910023-06ADUP	SampType: DUP	TestCode: 6020_WDISS	Units: ug/L	Prep Date: 10/2/2009	Run ID: ICPMS_091005A						
Client ID: MW16-11.0	Batch ID: 24134	TestNo: SW6020		Analysis Date: 10/5/2009	SeqNo: 631644						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	1586	100	0	0	0	0	0	1579	0.442	20	20

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_091005A						
Client ID: ZZZZZ	Batch ID: 24134	TestNo: SW6020		Analysis Date: 10/5/2009	SeqNo: 631650						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	54.01	1.0	50	0	108	90	110	0	0	0	0

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_091005A						
Client ID: ZZZZZ	Batch ID: 24134	TestNo: SW6020		Analysis Date: 10/5/2009	SeqNo: 631661						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	54.31	1.0	50	0	109	90	110	0	0	0	0

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

ANALYTICAL QC SUMMARY REPORT

CLIENT: Maul, Foster & Alongi
Work Order: 0910023
Project: Trueguard / 9009.01.12

TestCode: 6020_WDISS

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_091005A						
Client ID: ZZZZZ	Batch ID: 24134	TestNo: SW6020		Analysis Date: 10/5/2009	SeqNo: 631702						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	53.31	1.0	50	0	107	90	110	0	0	0	0

Sample ID: ICB-24134	SampType: ICB	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_091005A						
Client ID: ZZZZZ	Batch ID: 24134	TestNo: SW6020		Analysis Date: 10/5/2009	SeqNo: 631642						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	1.0	0	0	0	0	0	0	0	0	0

Sample ID: ICV	SampType: ICV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_091005A						
Client ID: ZZZZZ	Batch ID: 24134	TestNo: SW6020		Analysis Date: 10/5/2009	SeqNo: 631641						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	53.8	1.0	50	0	108	90	110	0	0	0	0

Sample ID: ICV	SampType: ICV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_091005A						
Client ID: ZZZZZ	Batch ID: 24134	TestNo: SW6020		Analysis Date: 10/5/2009	SeqNo: 631698						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	53.55	1.0	50	0	107	90	110	0	0	0	0

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

KEY TO FLAGS

- A This sample contains a Gasoline Range Organic not identified as a specific hydrocarbon product. The result was quantified against gasoline calibration standards.
- A1 This sample contains a Diesel Range Organic not identified as a specific hydrocarbon product. The result was quantified against diesel calibration standards.
- A2 This sample contains a Lube Oil Range Organic not identified as a specific hydrocarbon product. The result was quantified against a lube oil calibration standard.
- A3 The result was determined to be Non-Detect based on hydrocarbon pattern recognition. The product was carry-over from another hydrocarbon type.
- B The blank exhibited a positive result greater than the reporting limit for this compound.
- CN See Case Narrative.
- D Result is based from a dilution.
- E Result exceeds the calibration range for this compound. The result should be considered as estimate.
- F The positive result for this hydrocarbon is due to single component contamination. The product does not match any hydrocarbon in the fuels library.
- H Sample was analyzed outside recommended hold time.
- HT At clients request, sample was analyzed outside recommended hold time.
- J The result for this analyte is between the MDL and the PQL and should be considered as estimated concentration.
- K Diesel result is biased high due to amount of Oil contained in the sample.
- L Diesel result is biased high due to amount of Gasoline contained in the sample.
- M Oil result is biased high due to amount of Diesel contained in the sample.
- N Gasoline result is biased high due to amount of Diesel contained in the sample.
- MC Sample concentration is greater than 4x the spiked value, the spiked value is considered insignificant.
- MI Result is outside control limits due to matrix interference.
- MSA Value determined by Method of Standard Addition.
- O Laboratory Control Standard (LCS) exceeded laboratory control limits, but meets CCV criteria. Data meets EPA requirements.
- P Detection levels of Methylene Chloride may be laboratory contamination, due to previous analysis or background levels.
- Q Detection levels elevated due to sample matrix.
- R RPD control limits were exceeded.
- RF Duplicate failed due to result being at or near the method-reporting limit.
- RP Matrix spike values exceed established QC limits, post digestion spike is in control.
- S Recovery is outside control limits.
- SC Closing CCV or LCS exceeded high recovery control limits, but associated samples are non-detect. Data meets EPA requirements.
- * The result for this parameter was greater than the maximum contaminant level of the TCLP regulatory limit.

CHAIN OF CUSTODY RECORD

Page 1 of 1

Specialty Analytical
 11711 SE Capps Road
 Clackamas, OR 97015
 Phone: 503-607-1331
 Fax: 503-607-1336

Contact Person/Project Manager Terry Silva
 Company Mowl Foster & Albani
 Address 3121 SW Meador Ave, Ste 200
Portland, OR
 Phone _____ Fax _____
 Project No. 9007.01.12 Project Name Investment
 Project Site Location OR WA Other _____
 Invoice To MFA P.O. No. _____

Collected By: [Signature]
 Signature Justin Pennicks
 Printed _____

Signature _____
 Printed _____

Turn Around Time _____
 Normal 5-7 Business Days
 Rush _____ Specify _____

Rush Analyses Must Be Scheduled With The Lab In Advance

Date	Time	Sample I.D.	Matrix	No. of Containers	Analyses	For Laboratory Use	Relinquished By:	Date	Time
10/2/07	10:47	MW11-17.2	W	1		Lab Job No. <u>0910023</u> Shipped Via <u>Specialty</u> Air Bill No. _____ Temperature On Receipt <u>6</u> °C Specialty Analytical Containers? Y/N Specialty Analytical Trip Blanks? Y/N	Company: <u>Specialty</u>	10-2-07	1453
	11:15	MW11-14.0		X					
	11:45	MW11-10.7		X					
	12:00	MW11-7.4		X					
	12:20	MW16-13.7		X					
	12:35	MW16-11.0		X					
	12:55	MW16-8.3		X					
	13:10	MW16-5.5		X					
	13:20	MW12-14.0		X					
	13:35	MW12-11.0		X					
	13:50	MW12-8.0		X					
	14:00	MW12-5.0		X					
Relinquished By:	<u>[Signature]</u>		Received By:	<u>[Signature]</u>		Relinquished By:	<u>[Signature]</u>		
Company:	<u>MFA</u>		Company:	<u>Specialty</u>		Company:	<u>Specialty</u>		

Unless Reclaimed, Samples Will Be Disposed of 60 Days After Receipt.
 Samples held beyond 60 days subject to storage fee(s)



Specialty Analytical

11711 SE Capps Road
Clackamas, OR 97015
(503) 607-1331
Fax (503) 607-1336

December 09, 2009

Tony Silva
Maul, Foster & Alongi
7223 NE Hazel Dell Avenue
Suite B
Vancouver, WA 98665

TEL: (360) 694-2691

FAX: (360) 906-1958

RE: Trueguard Pilot Study Base Line / 9009.01.1

Dear Tony Silva:

Order No.: 0912006

Specialty Analytical received 6 samples on 12/2/2009 for the analyses presented in the following report.

There were no problems with the analysis and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative, or as qualified with flags. Results apply only to the samples analyzed. Without approval of the laboratory, the reproduction of this report is only permitted in its entirety.

If you have any questions regarding these tests, please feel free to call.

Sincerely,


for Cindy Hillyard
Project Manager


Technical Review

**Specialty Analytical**Date: 09-Dec-09

CLIENT: Maul, Foster & Alongi
Project: Trueguard Pilot Study Base Line / 9009.01.12/0
Lab Order: 0912006

CASE NARRATIVE

The recoveries of Hexavalent Chromium for Dissolved Hexavalent Chromium by EPA 7196A for the Matrix Spike/Matrix Spike Duplicate were outside laboratory control limits (low). Following method procedures, the sample was made basic and spiked with Hexavalent Chromium and then analyzed using the standard method instructions and the recovery of Hexavalent Chromium was within laboratory control limits.

Specialty Analytical

Date: 09-Dec-09

CLIENT: Maul, Foster & Alongi
Project: Trueguard Pilot Study Base Line / 9009.01.12/0

Lab Order: 0912006

Lab ID: 0912006-01
Client Sample ID: MW17

Collection Date: 12/2/2009 9:20:00 AM
Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A				Analyst: zau
Boron	0.597	0.0100		mg/L	1	12/3/2009 2:23:10 PM
Chromium	0.00820	0.00500		mg/L	1	12/3/2009 2:23:10 PM
Copper	ND	0.0100		mg/L	1	12/3/2009 2:23:10 PM
Iron	18.9	0.0100		mg/L	1	12/3/2009 2:23:10 PM
Manganese	2.96	0.0100		mg/L	10	12/7/2009 12:07:50 PM
DISSOLVED METALS BY ICP/MS		SW6020				Analyst: zau
Arsenic	250	10		ug/L	10	12/2/2009 5:29:00 PM
DISSOLVED HEXAVALENT CHROMIUM		M3500-CR D				Analyst: zau
Chromium, Hexavalent Dissolved	ND	0.0050		mg/L	1	12/2/2009 3:07:00 PM
ANIONS BY ION CHROMATOGRAPHY		SW9056				Analyst: en
Sulfate	46.8	2.50		mg/L	5	12/9/2009

Lab ID: 0912006-02
Client Sample ID: MW22

Collection Date: 12/2/2009 9:30:00 AM
Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A				Analyst: zau
Boron	0.516	0.0100		mg/L	1	12/3/2009 2:28:12 PM
Chromium	0.00580	0.00500		mg/L	1	12/3/2009 2:28:12 PM
Copper	ND	0.0100		mg/L	1	12/3/2009 2:28:12 PM
Iron	26.6	0.0100		mg/L	1	12/3/2009 2:28:12 PM
Manganese	3.57	0.0100		mg/L	10	12/7/2009 12:12:53 PM
DISSOLVED METALS BY ICP/MS		SW6020				Analyst: zau
Arsenic	440	10		ug/L	10	12/2/2009 5:36:00 PM
DISSOLVED HEXAVALENT CHROMIUM		M3500-CR D				Analyst: zau
Chromium, Hexavalent Dissolved	ND	0.0050		mg/L	1	12/2/2009 3:03:00 PM
ANIONS BY ION CHROMATOGRAPHY		SW9056				Analyst: en
Sulfate	13.2	0.500		mg/L	1	12/3/2009

Specialty Analytical

Date: 09-Dec-09

CLIENT: Maul, Foster & Alongi
Project: Trueguard Pilot Study Base Line / 9009.01.12/0

Lab Order: 0912006

Lab ID: 0912006-03

Collection Date: 12/2/2009 11:10:00 AM

Client Sample ID: MW18

Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A		Analyst: zau		
Boron	0.116	0.0100		mg/L	1	12/3/2009 2:33:14 PM
Chromium	0.00510	0.00500		mg/L	1	12/3/2009 2:33:14 PM
Copper	ND	0.0100		mg/L	1	12/3/2009 2:33:14 PM
Iron	68.7	0.0100		mg/L	1	12/3/2009 2:33:14 PM
Manganese	6.06	0.0100		mg/L	10	12/7/2009 12:17:56 PM
DISSOLVED METALS BY ICP/MS		SW6020		Analyst: zau		
Arsenic	98	10		ug/L	10	12/2/2009 5:42:00 PM
DISSOLVED HEXAVALENT CHROMIUM		M3500-CR D		Analyst: zau		
Chromium, Hexavalent Dissolved	ND	0.0050		mg/L	1	12/2/2009 3:08:00 PM
ANIONS BY ION CHROMATOGRAPHY		SW9056		Analyst: en		
Sulfate	ND	0.500		mg/L	1	12/3/2009

Lab ID: 0912006-04

Collection Date: 12/2/2009 12:00:00 PM

Client Sample ID: MW19

Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A		Analyst: zau		
Boron	0.166	0.0100		mg/L	1	12/3/2009 2:38:15 PM
Chromium	ND	0.00500		mg/L	1	12/3/2009 2:38:15 PM
Copper	ND	0.0100		mg/L	1	12/3/2009 2:38:15 PM
Iron	60.2	0.0100		mg/L	1	12/3/2009 2:38:15 PM
Manganese	6.29	0.0100		mg/L	10	12/7/2009 12:23:00 PM
DISSOLVED METALS BY ICP/MS		SW6020		Analyst: zau		
Arsenic	93	10		ug/L	10	12/2/2009 5:49:00 PM
DISSOLVED HEXAVALENT CHROMIUM		M3500-CR D		Analyst: zau		
Chromium, Hexavalent Dissolved	ND	0.0050		mg/L	1	12/2/2009 3:09:00 PM
ANIONS BY ION CHROMATOGRAPHY		SW9056		Analyst: en		
Sulfate	1.27	0.500		mg/L	1	12/3/2009



Specialty Analytical

Date: 09-Dec-09

CLIENT: Maul, Foster & Alongi
Project: Trueguard Pilot Study Base Line / 9009.01.12/0

Lab Order: 0912006

Lab ID: 0912006-05

Collection Date: 12/2/2009 11:00:00 AM

Client Sample ID: MW20

Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A				Analyst: zau
Boron	0.113	0.0100		mg/L	1	12/3/2009 2:03:18 PM
Chromium	0.00780	0.00500		mg/L	1	12/3/2009 2:03:18 PM
Copper	ND	0.0100		mg/L	1	12/3/2009 2:03:18 PM
Iron	50.1	0.0100		mg/L	1	12/3/2009 2:03:18 PM
Manganese	5.24	0.0100		mg/L	10	12/7/2009 11:47:55 AM
DISSOLVED METALS BY ICP/MS		SW6020				Analyst: zau
Arsenic	62	10		ug/L	10	12/2/2009 5:56:00 PM
DISSOLVED HEXAVALENT CHROMIUM		M3500-CR D				Analyst: zau
Chromium, Hexavalent Dissolved	ND	0.0050		mg/L	1	12/2/2009 3:10:00 PM
ANIONS BY ION CHROMATOGRAPHY		SW9056				Analyst: en
Sulfate	ND	0.500		mg/L	1	12/3/2009

Lab ID: 0912006-06

Collection Date: 12/2/2009 10:20:00 AM

Client Sample ID: MW21

Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A				Analyst: zau
Boron	0.200	0.0100		mg/L	1	12/3/2009 2:43:18 PM
Chromium	ND	0.00500		mg/L	1	12/3/2009 2:43:18 PM
Copper	ND	0.0100		mg/L	1	12/3/2009 2:43:18 PM
Iron	55.3	0.0100		mg/L	1	12/3/2009 2:43:18 PM
Manganese	5.93	0.0100		mg/L	10	12/7/2009 12:28:03 PM
DISSOLVED METALS BY ICP/MS		SW6020				Analyst: zau
Arsenic	300	10		ug/L	10	12/2/2009 6:16:00 PM
DISSOLVED HEXAVALENT CHROMIUM		M3500-CR D				Analyst: zau
Chromium, Hexavalent Dissolved	ND	0.0050		mg/L	1	12/2/2009 3:11:00 PM
ANIONS BY ION CHROMATOGRAPHY		SW9056				Analyst: en
Sulfate	32.6	1.00		mg/L	2	12/9/2009

CLIENT: Maul, Foster & Alongi
 Work Order: 0912006

ANALYTICAL QC SUMMARY REPORT

Project: Trueguard Pilot Study Base Line / 9009.01.12/0

TestCode: 6010_WDIS

Sample ID: 0912006-05AMSD	SampType: MS	TestCode: 6010_WDIS	Units: mg/L	Prep Date: 12/3/2009	Run ID: TJA IRIS_091203B						
Client ID: MW20	Batch ID: 24496	TestNo: 6010A		Analysis Date: 12/3/2009	SeqNo: 643436						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.6479	0.0100	0.5	0.1134	107	88.2	118	0	0	0	
Chromium	0.2606	0.00500	0.25	0.0078	101	93.4	112	0	0	0	
Copper	0.5038	0.0100	0.5	0	101	92.7	114	0	0	0	
Iron	48.48	0.0100	0.5	50.07	-318	75	125	0	0	0	S,MC

Sample ID: 0912006-05AMSD	SampType: MS	TestCode: 6010_WDIS	Units: mg/L	Prep Date: 12/3/2009	Run ID: TJA IRIS_091203B						
Client ID: MW20	Batch ID: 24496	TestNo: 6010A		Analysis Date: 12/7/2009	SeqNo: 643795						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	5.491	0.0100	0.5	5.24	50.2	83.9	118	0	0	0	S,MC

Sample ID: 0912006-05AMSD	SampType: MSD	TestCode: 6010_WDIS	Units: mg/L	Prep Date: 12/3/2009	Run ID: TJA IRIS_091203B						
Client ID: MW20	Batch ID: 24496	TestNo: 6010A		Analysis Date: 12/3/2009	SeqNo: 643437						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.6398	0.0100	0.5	0.1134	105	88.2	118	0.6479	1.26	20	
Chromium	0.2615	0.00500	0.25	0.0078	101	93.4	112	0.2606	0.345	20	
Copper	0.4984	0.0100	0.5	0	99.7	92.7	114	0.5038	1.08	20	
Iron	48.11	0.0100	0.5	50.07	-392	75	125	48.48	0.766	20	S,MC

Sample ID: 0912006-05AMSD	SampType: MSD	TestCode: 6010_WDIS	Units: mg/L	Prep Date: 12/3/2009	Run ID: TJA IRIS_091203B						
Client ID: MW20	Batch ID: 24496	TestNo: 6010A		Analysis Date: 12/7/2009	SeqNo: 643796						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	5.485	0.0100	0.5	5.24	49	83.9	118	5.491	0.109	20	S,MC

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

ANALYTICAL QC SUMMARY REPORT

CLIENT: Maul, Foster & Alongi
Work Order: 0912006

Project: Trueguard Pilot Study Base Line / 9009.01.12/0

TestCode: 6010_WDIS

Sample ID: 0912006-05ADUP	SampType: DUP	TestCode: 6010_WDIS	Units: mg/L	Prep Date: 12/3/2009	Run ID: TJA IRIS_091203B						
Client ID: MW20	Batch ID: 24496	TestNo: 6010A		Analysis Date: 12/3/2009	SeqNo: 643435						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Boron	0.1119	0.0100	0	0	0	0	0	0.1134	1.33	20	
Chromium	0.0048	0.00500	0	0	0	0	0	0.0078	0	20	J
Copper	ND	0.0100	0	0	0	0	0	0	0	20	
Iron	49.55	0.0100	0	0	0	0	0	50.07	1.04	20	

Sample ID: 0912006-05ADUP	SampType: DUP	TestCode: 6010_WDIS	Units: mg/L	Prep Date: 12/3/2009	Run ID: TJA IRIS_091203B						
Client ID: MW20	Batch ID: 24496	TestNo: 6010A		Analysis Date: 12/7/2009	SeqNo: 643794						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Manganese	5.299	0.0100	0	0	0	0	0	5.24	1.12	20	
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Sample ID: CCV	SampType: CCV	TestCode: 6010_WDIS	Units: mg/L	Prep Date: 12/3/2009	Run ID: TJA IRIS_091203B						
Client ID: ZZZZZ	Batch ID: 24496	TestNo: 6010A		Analysis Date: 12/3/2009	SeqNo: 643432						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Boron	0.4951	0.0100	0.5	0	99	90	110	0	0	0	
Chromium	0.2538	0.00500	0.25	0	102	90	110	0	0	0	
Copper	0.4916	0.0100	0.5	0	98.3	90	110	0	0	0	
Iron	0.509	0.0100	0.5	0	102	90	110	0	0	0	

Sample ID: CCV	SampType: CCV	TestCode: 6010_WDIS	Units: mg/L	Prep Date: 12/3/2009	Run ID: TJA IRIS_091203B						
Client ID: ZZZZZ	Batch ID: 24496	TestNo: 6010A		Analysis Date: 12/3/2009	SeqNo: 643443						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Boron	0.4905	0.0100	0.5	0	98.1	90	110	0	0	0	
Chromium	0.2534	0.00500	0.25	0	101	90	110	0	0	0	
Copper	0.4841	0.0100	0.5	0	96.8	90	110	0	0	0	
Iron	0.5473	0.0100	0.5	0	109	90	110	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

ANALYTICAL QC SUMMARY REPORT

CLIENT: Maul, Foster & Alongi
 Work Order: 0912006

Project: Trueguard Pilot Study Base Line / 9009.01.12/0

TestCode: 6010_WDIS

Sample ID: CCV	SampType: CCV	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_091203B						
Client ID: ZZZZZ	Batch ID: 24496	TestNo: 6010A		Analysis Date: 12/7/2009	SeqNo: 643802						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	0.0471	0.00100	0.05	0	94.2	90	110	0	0	0	0

Sample ID: ICB-24496	SampType: ICB	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_091203B						
Client ID: ZZZZZ	Batch ID: 24496	TestNo: 6010A		Analysis Date: 12/3/2009	SeqNo: 643433						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	ND	0.0100	0	0	0	0	0	0	0	0	0
Chromium	ND	0.00500	0	0	0	0	0	0	0	0	0
Copper	ND	0.0100	0	0	0	0	0	0	0	0	0
Iron	ND	0.0100	0	0	0	0	0	0	0	0	0

Sample ID: ICB-24496	SampType: ICB	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_091203B						
Client ID: ZZZZZ	Batch ID: 24496	TestNo: 6010A		Analysis Date: 12/7/2009	SeqNo: 643792						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.00100	0	0	0	0	0	0	0	0	0

Sample ID: ICV	SampType: ICV	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_091203B						
Client ID: ZZZZZ	Batch ID: 24496	TestNo: 6010A		Analysis Date: 12/3/2009	SeqNo: 643431						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.4953	0.0100	0.5	0	99.1	90	110	0	0	0	0
Chromium	0.2536	0.00500	0.25	0	101	90	110	0	0	0	0
Copper	0.4938	0.0100	0.5	0	98.8	90	110	0	0	0	0
Iron	0.5118	0.0100	0.5	0	102	90	110	0	0	0	0

Sample ID: ICV	SampType: ICV	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_091203B						
Client ID: ZZZZZ	Batch ID: 24496	TestNo: 6010A		Analysis Date: 12/7/2009	SeqNo: 643791						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank
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CLIENT: Maul, Foster & Alongi
Work Order: 0912006

Project: Trueguard Pilot Study Base Line / 9009.01.12/0

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDIS

Sample ID: ICV	SampType: ICV	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_091203B						
Client ID: ZZZZZ	Batch ID: 24496	TestNo: 6010A		Analysis Date: 12/7/2009	SeqNo: 643791						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	0.0486	0.00100	0.05	0	97.2	90	110	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_WDISS

CLIENT: Maul, Foster & Alongi
 Work Order: 0912006
 Project: Trueguard Pilot Study Base Line / 9009.01.12/0

Sample ID: 0912001-01BMS	SampType: MS	TestCode: 6020_WDISS	Units: ug/L	Prep Date: 12/2/2009	Run ID: ICPMS_091202A						
Client ID: ZZZZZ	Batch ID: 24495	TestNo: SW6020		Analysis Date: 12/2/2009	SeqNo: 643067						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	58.15	1.0	50	6.097	104	70	130	0	0	0	0

Sample ID: 0912001-01BMSD	SampType: MSD	TestCode: 6020_WDISS	Units: ug/L	Prep Date: 12/2/2009	Run ID: ICPMS_091202A						
Client ID: ZZZZZ	Batch ID: 24495	TestNo: SW6020		Analysis Date: 12/2/2009	SeqNo: 643068						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	57.69	1.0	50	6.097	103	70	130	58.15	0.794	20	

Sample ID: 0912001-01BDUP	SampType: DUP	TestCode: 6020_WDISS	Units: ug/L	Prep Date: 12/2/2009	Run ID: ICPMS_091202A						
Client ID: ZZZZZ	Batch ID: 24495	TestNo: SW6020		Analysis Date: 12/2/2009	SeqNo: 643066						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	6.34	1.0	0	0	0	0	0	6.097	3.91	20	

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_091202A						
Client ID: ZZZZZ	Batch ID: 24495	TestNo: SW6020		Analysis Date: 12/2/2009	SeqNo: 643072						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	51.18	1.0	50	0	102	90	110	0	0	0	

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_091202A						
Client ID: ZZZZZ	Batch ID: 24495	TestNo: SW6020		Analysis Date: 12/2/2009	SeqNo: 643145						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	48.27	1.0	50	0	96.5	90	110	0	0	0	

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_091202A						
Client ID: ZZZZZ	Batch ID: 24495	TestNo: SW6020		Analysis Date: 12/2/2009	SeqNo: 643147						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank
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CLIENT: Maul, Foster & Alongi
Work Order: 0912006

Project: Trueguard Pilot Study Base Line / 9009.01.12/0

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_WDISS

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_091202A						
Client ID: ZZZZZ	Batch ID: 24495	TestNo: SW6020		Analysis Date: 12/2/2009	SeqNo: 643147						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	48.34	1.0	50	0	96.7	90	110	0	0	0	0

Sample ID: ICB-24495	SampType: ICB	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_091202A						
Client ID: ZZZZZ	Batch ID: 24495	TestNo: SW6020		Analysis Date: 12/2/2009	SeqNo: 643064						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	1.0	0	0	0	0	0	0	0	0	0

Sample ID: ICV	SampType: ICV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_091202A						
Client ID: ZZZZZ	Batch ID: 24495	TestNo: SW6020		Analysis Date: 12/2/2009	SeqNo: 643063						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	49.04	1.0	50	0	98.1	90	110	0	0	0	0

Sample ID: ICV	SampType: ICV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_091202A						
Client ID: ZZZZZ	Batch ID: 24495	TestNo: SW6020		Analysis Date: 12/2/2009	SeqNo: 643136						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	48.07	1.0	50	0	96.1	90	110	0	0	0	0

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

ANALYTICAL QC SUMMARY REPORT

CLIENT: Maul, Foster & Alongi
 Work Order: 0912006
 Project: Trueguard Pilot Study Base Line / 9009.01.12/0
 TestCode: CR6_CWA DISS

Sample ID: MBLK	SampType: MBLK	TestCode: CR6_CWA_DI	Units: mg/L	Prep Date:	Run ID: GENESIS-1_091202A						
Client ID: ZZZZZ	Batch ID: R58609	TestNo: M3500-Cr D		Analysis Date: 12/2/2009	SeqNo: 643051						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent Dissolved	ND	0.0050									

Sample ID: LCS	SampType: LCS	TestCode: CR6_CWA_DI	Units: mg/L	Prep Date:	Run ID: GENESIS-1_091202A						
Client ID: ZZZZZ	Batch ID: R58609	TestNo: M3500-Cr D		Analysis Date: 12/2/2009	SeqNo: 643052						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent Dissolved	0.04635	0.0050	0.05	0	92.7	80	120	0	0	0	

Sample ID: 0912006-02BMS	SampType: MS	TestCode: CR6_CWA_DI	Units: mg/L	Prep Date:	Run ID: GENESIS-1_091202A						
Client ID: MW22	Batch ID: R58609	TestNo: M3500-Cr D		Analysis Date: 12/2/2009	SeqNo: 643062						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent Dissolved	0.05374	0.0050	0.05	0.00198	104	75	125	0	0	0	CN

Sample ID: 0912006-02BDUP	SampType: DUP	TestCode: CR6_CWA_DI	Units: mg/L	Prep Date:	Run ID: GENESIS-1_091202A						
Client ID: MW22	Batch ID: R58609	TestNo: M3500-Cr D		Analysis Date: 12/2/2009	SeqNo: 643054						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent Dissolved	ND	0.0050	0	0	0	0	0	0.00198	0	0	20

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analytic detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

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CLIENT: Maul, Foster & Alongi
Work Order: 0912006

Project: Trueguard Pilot Study Base Line / 9009.01.12/0

ANALYTICAL QC SUMMARY REPORT

TestCode: IC_GW

Sample ID: MB-R58699	SampType: MBLK	TestCode: IC_GW	Units: mg/L	Prep Date:	Run ID: IC_091203A
Client ID: ZZZZZ	Batch ID: R58699	TestNo: SW9056		Analysis Date: 12/3/2009	SeqNo: 644266
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Sulfate	0.06	0.500	10	0.06	104
				HighLimit	RPD Ref Val
				89.6	0
				LowLimit	%RPD
				112	0
				RPDLimit	Qual
					J

Sample ID: LCS-R58699	SampType: LCS	TestCode: IC_GW	Units: mg/L	Prep Date:	Run ID: IC_091203A
Client ID: ZZZZZ	Batch ID: R58699	TestNo: SW9056		Analysis Date: 12/3/2009	SeqNo: 644266
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Sulfate	10.44	0.500	10	0.06	104
				HighLimit	RPD Ref Val
				89.6	0
				LowLimit	%RPD
				112	0
				RPDLimit	Qual

Sample ID: 0912006-01CMS	SampType: MS	TestCode: IC_GW	Units: mg/L	Prep Date:	Run ID: IC_091203A
Client ID: MW17	Batch ID: R58699	TestNo: SW9056		Analysis Date: 12/9/2009	SeqNo: 644257
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Sulfate	72.5	2.50	25	46.8	103
				HighLimit	RPD Ref Val
				69.1	122
				LowLimit	%RPD
				122	0
				RPDLimit	Qual

Sample ID: 0912006-01CMS	SampType: MSD	TestCode: IC_GW	Units: mg/L	Prep Date:	Run ID: IC_091203A
Client ID: MW17	Batch ID: R58699	TestNo: SW9056		Analysis Date: 12/9/2009	SeqNo: 644258
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Sulfate	72.25	2.50	25	46.8	102
				HighLimit	RPD Ref Val
				69.1	122
				LowLimit	%RPD
				122	72.5
				RPDLimit	Qual
					20

Sample ID: CCV	SampType: CCV	TestCode: IC_GW	Units: mg/L	Prep Date:	Run ID: IC_091203A
Client ID: ZZZZZ	Batch ID: R58699	TestNo: SW9056		Analysis Date: 12/3/2009	SeqNo: 644264
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Sulfate	16	0.500	15	0	107
				HighLimit	RPD Ref Val
				90	110
				LowLimit	%RPD
				110	0
				RPDLimit	Qual

Sample ID: CCV	SampType: CCV	TestCode: IC_GW	Units: mg/L	Prep Date:	Run ID: IC_091203A
Client ID: ZZZZZ	Batch ID: R58699	TestNo: SW9056		Analysis Date: 12/9/2009	SeqNo: 644294
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
				HighLimit	RPD Ref Val
				90	110
				LowLimit	%RPD
				110	0
				RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

CLIENT: Maul, Foster & Alongi
Work Order: 0912006
Project: Trueguard Pilot Study Base Line / 9009.01.12/0
TestCode: IC_GW

ANALYTICAL QC SUMMARY REPORT

Sample ID: CCV	SampType: CCV	TestCode: IC_GW	Units: mg/L	Prep Date:	Run ID: IC_091203A						
Client ID: ZZZZZ	Batch ID: R58699	TestNo: SW9056		Analysis Date: 12/9/2009	SeqNo: 644294						
Analyte	Result	PQL	SPK value	SPK RefVal	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	10.56	0.500	10	0	106	90	110	0	0	0	

Sample ID: CCV	SampType: CCV	TestCode: IC_GW	Units: mg/L	Prep Date:	Run ID: IC_091203A						
Client ID: ZZZZZ	Batch ID: R58699	TestNo: SW9056		Analysis Date: 12/9/2009	SeqNo: 644295						
Analyte	Result	PQL	SPK value	SPK RefVal	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	5.28	0.500	5	0	106	90	110	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank
 Page 9 of 9

KEY TO FLAGS

- A This sample contains a Gasoline Range Organic not identified as a specific hydrocarbon product. The result was quantified against gasoline calibration standards.
- A1 This sample contains a Diesel Range Organic not identified as a specific hydrocarbon product. The result was quantified against diesel calibration standards.
- A2 This sample contains a Lube Oil Range Organic not identified as a specific hydrocarbon product. The result was quantified against a lube oil calibration standard.
- A3 The result was determined to be Non-Detect based on hydrocarbon pattern recognition. The product was carry-over from another hydrocarbon type.
- B The blank exhibited a positive result greater than the reporting limit for this compound.
- CN See Case Narrative.
- D Result is based from a dilution.
- E Result exceeds the calibration range for this compound. The result should be considered as estimate.
- F The positive result for this hydrocarbon is due to single component contamination. The product does not match any hydrocarbon in the fuels library.
- H Sample was analyzed outside recommended hold time.
- HT At clients request, sample was analyzed outside recommended hold time.
- J The result for this analyte is between the MDL and the PQL and should be considered as estimated concentration.
- K Diesel result is biased high due to amount of Oil contained in the sample.
- L Diesel result is biased high due to amount of Gasoline contained in the sample.
- M Oil result is biased high due to amount of Diesel contained in the sample.
- N Gasoline result is biased high due to amount of Diesel contained in the sample.
- MC Sample concentration is greater than 4x the spiked value, the spiked value is considered insignificant.
- MI Result is outside control limits due to matrix interference.
- MSA Value determined by Method of Standard Addition.
- O Laboratory Control Standard (LCS) exceeded laboratory control limits, but meets CCV criteria. Data meets EPA requirements.
- P Detection levels of Methylene Chloride may be laboratory contamination, due to previous analysis or background levels.
- Q Detection levels elevated due to sample matrix.
- R RPD control limits were exceeded.
- RF Duplicate failed due to result being at or near the method-reporting limit.
- RP Matrix spike values exceed established QC limits, post digestion spike is in control.
- S Recovery is outside control limits.
- SC Closing CCV or LCS exceeded high recovery control limits, but associated samples are non-detect. Data meets EPA requirements.
- * The result for this parameter was greater than the maximum contaminant level of the TCLP regulatory limit.

CHAIN OF **STUDY RECORD**

Specialty Analytical

11711 SE Capps Road
Clackamas, OR 97015
Phone: 503-607-1331
Fax: 503-607-1336

Collected By: S. Mauldin
Signature _____
Printed SCOTT MAULDIN

Signature _____
Printed _____

Turn Around Time _____
 Normal 5-7 Business Days
 Rush _____ Specify _____

Rush Analyses Must Be Scheduled With The Lab In Advance

Date	Time	Sample I.D.	Matrix
12/2/09	09:20	MW17	GW
12/2/09	9:30	MW22	GW
12/2/09	11:10	MW18	GW
12/2/09	12:00	MW19	GW
12/2/09	11:00	MW20	GW
12/2/09	10:20	MW21	GW

Relinquished By: S. Mauldin
Company: MFA
Date: 12/2/09
Time: 12:05

Unless Reclaimed, Samples Will Be Disposed of 60 Days After Receipt.
Samples held beyond 60 days subject to storage fee(s)

Contact Person/Project Manager: Tony Silva

Company: MFA

Address: 3121 SW Moody Ave

PORTLAND, OR 97239

Phone: 971-544-2139 Fax: 971-544-2140

Project No. 9009.01.12/05 Project Name: Trueguard Pilot Study Box

Project Site Location: OR WA Other X

Invoice To: Trueguard P.O. No. _____

No. of Containers	Analyses						For Laboratory Use		
	DISSOLVED ARSENIC EPA 6010	DISSOLVED COPPER, BARIUM, IRON, CHROMIUM, COBALT	DISSOLVED MANGANESE EPA 6010	DISSOLVED HEXAVALENT CHROMIUM 7190A	SULFATE 9056	Lab Job No.	Comments	Lab I.D.	
3	X	X	X	X	X	0112000			
3	X	X	X	X	X	Specialty			
3	X	X	X	X	X				
3	X	X	X	X	X				
3	X	X	X	X	X				
3	X	X	X	X	X				

Temperature On Receipt: 4 °C
Specialty Analytical Containers? Y/N
Specialty Analytical Trip Blanks? Y/N

Shipped Via: Specialty
Air Bill No. _____
Comments: METALS WERE FIELD FILTERED

Relinquished By: _____
Company: _____
Date: _____
Time: _____
Received For Lab By: Nikki Juton
Received For Lab By: _____
Date: 12/19/09
Time: 1:30



Specialty Analytical

11711 SE Capps Road
Clackamas, OR 97015
(503) 607-1331
Fax (503) 607-1336

December 10, 2009

Tony Silva
Maul, Foster & Alongi
7223 NE Hazel Dell Avenue
Suite B
Vancouver, WA 98665

TEL: (360) 694-2691

FAX: (360) 906-1958

RE: Trueguard Quarterly / 9009.01.12

Dear Tony Silva:

Order No.: 0912036

Specialty Analytical received 12 samples on 12/4/2009 for the analyses presented in the following report.

There were no problems with the analysis and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative, or as qualified with flags. Results apply only to the samples analyzed. Without approval of the laboratory, the reproduction of this report is only permitted in its entirety.

If you have any questions regarding these tests, please feel free to call.

Sincerely,

for 
Cindy Hillyard
Project Manager


Technical Review

Specialty Analytical

Date: 10-Dec-09

CLIENT: Maul, Foster & Alongi
Project: Trueguard Quarterly / 9009.01.12

Lab Order: 0912036

Lab ID: 0912036-01 **Collection Date:** 12/1/2009 1:35:00 PM
Client Sample ID: MW3 **Matrix:** GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A				Analyst: zau
Boron	0.202	0.0100		mg/L	1	12/7/2009 2:18:52 PM
Chromium	0.00790	0.00500		mg/L	1	12/7/2009 2:18:52 PM
Copper	ND	0.0100		mg/L	1	12/7/2009 2:18:52 PM
Iron	12.5	0.0100		mg/L	1	12/7/2009 2:18:52 PM
DISSOLVED METALS BY ICP/MS		SW6020				Analyst: zau
Arsenic	1000	100		ug/L	100	12/7/2009 7:13:00 PM

Lab ID: 0912036-02 **Collection Date:** 12/1/2009 3:10:00 PM
Client Sample ID: MW10 **Matrix:** GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A				Analyst: zau
Boron	0.271	0.0100		mg/L	1	12/7/2009 2:23:54 PM
Chromium	0.00890	0.00500		mg/L	1	12/7/2009 2:23:54 PM
Copper	ND	0.0100		mg/L	1	12/7/2009 2:23:54 PM
Iron	14.3	0.0100		mg/L	1	12/7/2009 2:23:54 PM
DISSOLVED METALS BY ICP/MS		SW6020				Analyst: zau
Arsenic	3700	100		ug/L	100	12/7/2009 7:20:00 PM

Lab ID: 0912036-03 **Collection Date:** 12/1/2009 4:05:00 PM
Client Sample ID: MW11 **Matrix:** GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A				Analyst: zau
Boron	0.194	0.0100		mg/L	1	12/7/2009 1:59:00 PM
Chromium	0.0102	0.00500		mg/L	1	12/7/2009 1:59:00 PM
Copper	ND	0.0100		mg/L	1	12/7/2009 1:59:00 PM
Iron	37.3	0.0100		mg/L	1	12/7/2009 1:59:00 PM
DISSOLVED METALS BY ICP/MS		SW6020				Analyst: zau
Arsenic	3100	100		ug/L	100	12/7/2009 7:26:00 PM

Specialty Analytical

Date: 10-Dec-09

CLIENT: Maul, Foster & Alongi
Project: Trueguard Quarterly / 9009.01.12

Lab Order: 0912036

Lab ID: 0912036-04

Collection Date: 12/2/2009 1:30:00 PM

Client Sample ID: MW6

Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A		Analyst: zau		
Boron	0.100	0.0100		mg/L	1	12/7/2009 2:28:57 PM
Chromium	0.00690	0.00500		mg/L	1	12/7/2009 2:28:57 PM
Copper	ND	0.0100		mg/L	1	12/7/2009 2:28:57 PM
Iron	15.8	0.0100		mg/L	1	12/7/2009 2:28:57 PM
DISSOLVED METALS BY ICP/MS		SW6020		Analyst: zau		
Arsenic	ND	1.0		ug/L	1	12/7/2009 7:33:00 PM

Lab ID: 0912036-05

Collection Date: 12/2/2009 2:45:00 PM

Client Sample ID: MW12

Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A		Analyst: zau		
Boron	0.807	0.0100		mg/L	1	12/7/2009 2:34:01 PM
Chromium	0.00600	0.00500		mg/L	1	12/7/2009 2:34:01 PM
Copper	ND	0.0100		mg/L	1	12/7/2009 2:34:01 PM
Iron	51.4	0.0100		mg/L	1	12/7/2009 2:34:01 PM
DISSOLVED METALS BY ICP/MS		SW6020		Analyst: zau		
Arsenic	1200	100		ug/L	100	12/7/2009 6:33:00 PM

Lab ID: 0912036-06

Collection Date: 12/2/2009 2:00:00 PM

Client Sample ID: MW5

Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A		Analyst: zau		
Boron	ND	0.0100		mg/L	1	12/7/2009 2:39:03 PM
Chromium	0.00820	0.00500		mg/L	1	12/7/2009 2:39:03 PM
Copper	ND	0.0100		mg/L	1	12/7/2009 2:39:03 PM
Iron	5.63	0.0100		mg/L	1	12/7/2009 2:39:03 PM
DISSOLVED METALS BY ICP/MS		SW6020		Analyst: zau		
Arsenic	12	1.0		ug/L	1	12/7/2009 1:44:00 PM



Specialty Analytical

Date: 10-Dec-09

CLIENT: Maul, Foster & Alongi
Project: Trueguard Quarterly / 9009.01.12

Lab Order: 0912036

Lab ID: 0912036-07

Collection Date: 12/2/2009 2:50:00 PM

Client Sample ID: MW1

Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A				Analyst: zau
Boron	0.0246	0.0100		mg/L	1	12/7/2009 2:59:24 PM
Chromium	0.00560	0.00500		mg/L	1	12/7/2009 2:59:24 PM
Copper	ND	0.0100		mg/L	1	12/7/2009 2:59:24 PM
Iron	17.0	0.0100		mg/L	1	12/7/2009 2:59:24 PM
DISSOLVED METALS BY ICP/MS		SW6020				Analyst: zau
Arsenic	25	1.0		ug/L	1	12/7/2009 2:04:00 PM

Lab ID: 0912036-08

Collection Date: 12/2/2009 3:50:00 PM

Client Sample ID: MW13

Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A				Analyst: zau
Boron	0.597	0.0100		mg/L	1	12/7/2009 3:04:28 PM
Chromium	0.00760	0.00500		mg/L	1	12/7/2009 3:04:28 PM
Copper	ND	0.0100		mg/L	1	12/7/2009 3:04:28 PM
Iron	27.4	0.0100		mg/L	1	12/7/2009 3:04:28 PM
DISSOLVED METALS BY ICP/MS		SW6020				Analyst: zau
Arsenic	42	1.0		ug/L	1	12/7/2009 2:11:00 PM

Lab ID: 0912036-09

Collection Date: 12/2/2009 3:50:00 PM

Client Sample ID: MW13 DUP

Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A				Analyst: zau
Boron	0.615	0.0100		mg/L	1	12/7/2009 3:09:31 PM
Chromium	0.00630	0.00500		mg/L	1	12/7/2009 3:09:31 PM
Copper	ND	0.0100		mg/L	1	12/7/2009 3:09:31 PM
Iron	28.1	0.0100		mg/L	1	12/7/2009 3:09:31 PM
DISSOLVED METALS BY ICP/MS		SW6020				Analyst: zau
Arsenic	41	1.0		ug/L	1	12/7/2009 2:18:00 PM

Specialty Analytical

Date: 10-Dec-09

CLIENT: Maul, Foster & Alongi
Project: Trueguard Quarterly / 9009.01.12

Lab Order: 0912036

Lab ID: 0912036-10

Collection Date: 12/2/2009 3:50:00 PM

Client Sample ID: MW16

Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A		Analyst: zau		
Boron	0.440	0.0100		mg/L	1	12/7/2009 3:14:35 PM
Chromium	0.00700	0.00500		mg/L	1	12/7/2009 3:14:35 PM
Copper	ND	0.0100		mg/L	1	12/7/2009 3:14:35 PM
Iron	47.4	0.0100		mg/L	1	12/7/2009 3:14:35 PM
DISSOLVED METALS BY ICP/MS		SW6020		Analyst: zau		
Arsenic	1600	100		ug/L	100	12/7/2009 7:40:00 PM

Lab ID: 0912036-11

Collection Date: 12/3/2009 10:10:00 AM

Client Sample ID: MW14

Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A		Analyst: zau		
Boron	0.977	0.0100		mg/L	1	12/7/2009 3:19:37 PM
Chromium	0.00770	0.00500		mg/L	1	12/7/2009 3:19:37 PM
Copper	ND	0.0100		mg/L	1	12/7/2009 3:19:37 PM
Iron	36.7	0.0100		mg/L	1	12/7/2009 3:19:37 PM
DISSOLVED METALS BY ICP/MS		SW6020		Analyst: zau		
Arsenic	56	1.0		ug/L	1	12/7/2009 7:46:00 PM

Lab ID: 0912036-12

Collection Date: 12/3/2009 11:10:00 AM

Client Sample ID: MW15

Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A		Analyst: zau		
Boron	1.20	0.0100		mg/L	1	12/7/2009 3:24:41 PM
Chromium	0.00730	0.00500		mg/L	1	12/7/2009 3:24:41 PM
Copper	ND	0.0100		mg/L	1	12/7/2009 3:24:41 PM
Iron	37.7	0.0100		mg/L	1	12/7/2009 3:24:41 PM
DISSOLVED METALS BY ICP/MS		SW6020		Analyst: zau		
Arsenic	41	1.0		ug/L	1	12/7/2009 2:38:00 PM

CLIENT: Maul, Foster & Alongi
 Work Order: 0912036

ANALYTICAL QC SUMMARY REPORT

Project: Trueguard Quarterly / 9009.01.12

TestCode: 6010_WDIS

Sample ID: 0912036-03AMS	SampType: MS	TestCode: 6010_WDIS	Units: mg/L	Prep Date: 12/7/2009	Run ID: TJA IRIS_091207A						
Client ID: MW11	Batch ID: 24512	TestNo: 6010A		Analysis Date: 12/7/2009	SeqNo: 643919						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Boron	0.7405	0.0100	0.5	0.1935	109	88.2	118	0	0		
Chromium	0.2839	0.00500	0.25	0.0102	109	93.4	112	0	0		
Copper	0.5461	0.0100	0.5	0	109	92.7	114	0	0		
Iron	36.31	0.0100	0.5	37.28	-194	75	125	0	0		S,MC

Sample ID: 0912036-03AMS	SampType: MSD	TestCode: 6010_WDIS	Units: mg/L	Prep Date: 12/7/2009	Run ID: TJA IRIS_091207A						
Client ID: MW11	Batch ID: 24512	TestNo: 6010A		Analysis Date: 12/7/2009	SeqNo: 643920						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Boron	0.7442	0.0100	0.5	0.1935	110	88.2	118	0.7405	0.498	20	
Chromium	0.2812	0.00500	0.25	0.0102	108	93.4	112	0.2839	0.956	20	
Copper	0.5433	0.0100	0.5	0	109	92.7	114	0.5461	0.514	20	
Iron	35.41	0.0100	0.5	37.28	-374	75	125	36.31	2.51	20	S,MC

Sample ID: 0912036-03ADUP	SampType: DUP	TestCode: 6010_WDIS	Units: mg/L	Prep Date: 12/7/2009	Run ID: TJA IRIS_091207A						
Client ID: MW11	Batch ID: 24512	TestNo: 6010A		Analysis Date: 12/7/2009	SeqNo: 643918						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Boron	0.193	0.0100	0	0	0	0	0	0.1935	0.259	20	
Chromium	0.0078	0.00500	0	0	0	0	0	0.0102	26.7	20	RF
Copper	ND	0.0100	0	0	0	0	0	0	0	20	
Iron	37.15	0.0100	0	0	0	0	0	37.28	0.349	20	

Sample ID: CCV	SampType: CCV	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_091207A						
Client ID: ZZZZZ	Batch ID: 24512	TestNo: 6010A		Analysis Date: 12/7/2009	SeqNo: 643915						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Boron	0.4936	0.0100	0.5	0	98.7	90	110	0	0		
Chromium	0.2545	0.00500	0.25	0	102	90	110	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

ANALYTICAL QC SUMMARY REPORT

CLIENT: Maul, Foster & Alongi
 Work Order: 0912036
 Project: Trueguard Quarterly / 9009.01.12

TestCode: 6010_WDIS

Sample ID: CCV	SampType: CCV	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_091207A						
Client ID: ZZZZZ	Batch ID: 24512	TestNo: 6010A		Analysis Date: 12/7/2009	SeqNo: 643915						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	0.4961	0.0100	0.5	0	99.2	90	110	0	0	0	0
Iron	0.4799	0.0100	0.5	0	96	90	110	0	0	0	0

Sample ID: CCV	SampType: CCV	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_091207A						
Client ID: ZZZZZ	Batch ID: 24512	TestNo: 6010A		Analysis Date: 12/7/2009	SeqNo: 643926						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.4963	0.0100	0.5	0	99.3	90	110	0	0	0	0
Chromium	0.258	0.00500	0.25	0	103	90	110	0	0	0	0
Copper	0.4957	0.0100	0.5	0	99.1	90	110	0	0	0	0
Iron	0.5006	0.0100	0.5	0	100	90	110	0	0	0	0

Sample ID: CCV	SampType: CCV	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_091207A						
Client ID: ZZZZZ	Batch ID: 24512	TestNo: 6010A		Analysis Date: 12/7/2009	SeqNo: 643933						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.5005	0.0100	0.5	0	100	90	110	0	0	0	0
Chromium	0.2573	0.00500	0.25	0	103	90	110	0	0	0	0
Copper	0.499	0.0100	0.5	0	99.8	90	110	0	0	0	0
Iron	0.4923	0.0100	0.5	0	98.5	90	110	0	0	0	0

Sample ID: ICB-24512	SampType: ICB	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_091207A						
Client ID: ZZZZZ	Batch ID: 24512	TestNo: 6010A		Analysis Date: 12/7/2009	SeqNo: 643916						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	ND	0.0100	0	0	0	0	0	0	0	0	0
Chromium	ND	0.00500	0	0	0	0	0	0	0	0	0
Copper	ND	0.0100	0	0	0	0	0	0	0	0	0
Iron	ND	0.0100	0	0	0	0	0	0	0	0	0

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

CLIENT: Maul, Foster & Alongi
Work Order: 0912036
Project: Trueguard Quarterly / 9009.01.12

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDIS

Sample ID: ICV SampType: ICV TestCode: 6010_WDIS Units: mg/L Prep Date: Run ID: TJA IRIS_091207A
 Client ID: ZZZZZ Batch ID: 24512 TestNo: 6010A Analysis Date: 12/7/2009 SeqNo: 643914

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.5102	0.0100	0.5	0	102	90	110	0	0	0	
Chromium	0.2599	0.00500	0.25	0	104	90	110	0	0	0	
Copper	0.5098	0.0100	0.5	0	102	90	110	0	0	0	
Iron	0.5262	0.0100	0.5	0	105	90	110	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

ANALYTICAL QC SUMMARY REPORT

CLIENT: Maul, Foster & Alongi
Work Order: 0912036
Project: Trueguard Quarterly / 9009.01.12

TestCode: 6020_WDISS

Sample ID: 0912036-05AMS	SampType: MS	TestCode: 6020_WDISS	Units: ug/L	Prep Date: 12/7/2009	Run ID: ICPMS_091207A						
Client ID: MW12	Batch ID: 24513	TestNo: SW6020		Analysis Date: 12/7/2009	SeqNo: 643941						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	5496	100	5000	1213	85.7	70	130	0	0	0	

Sample ID: 0912036-05AMSD	SampType: MSD	TestCode: 6020_WDISS	Units: ug/L	Prep Date: 12/7/2009	Run ID: ICPMS_091207A						
Client ID: MW12	Batch ID: 24513	TestNo: SW6020		Analysis Date: 12/7/2009	SeqNo: 643942						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	5554	100	5000	1213	86.8	70	130	5496	1.05	20	

Sample ID: 0912036-05ADUP	SampType: DUP	TestCode: 6020_WDISS	Units: ug/L	Prep Date: 12/7/2009	Run ID: ICPMS_091207A						
Client ID: MW12	Batch ID: 24513	TestNo: SW6020		Analysis Date: 12/7/2009	SeqNo: 643939						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	1204	100	0	0	0	0	0	1213	0.745	20	

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_091207A						
Client ID: ZZZZZ	Batch ID: 24513	TestNo: SW6020		Analysis Date: 12/7/2009	SeqNo: 643852						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	49.03	1.0	50	0	98.1	90	110	0	0	0	

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_091207A						
Client ID: ZZZZZ	Batch ID: 24513	TestNo: SW6020		Analysis Date: 12/7/2009	SeqNo: 643863						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	50.94	1.0	50	0	102	90	110	0	0	0	

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_091207A						
Client ID: ZZZZZ	Batch ID: 24513	TestNo: SW6020		Analysis Date: 12/7/2009	SeqNo: 643870						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic											

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

ANALYTICAL QC SUMMARY REPORT

CLIENT: Maul, Foster & Alongi
Work Order: 0912036
Project: Trueguard Quarterly / 9009.01.12

TestCode: 6020_WDISS

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_091207A				
Client ID: ZZZZZ	Batch ID: 24513	TestNo: SW6020		Analysis Date: 12/7/2009	SeqNo: 643870				
Analyte	Result	PQL	SPK value	SPK Ref Val	%RPD	RPDLimit	Qual		
Arsenic	51.14	1.0	50	0	102	90	110	0	0

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_091207A						
Client ID: ZZZZZ	Batch ID: 24513	TestNo: SW6020		Analysis Date: 12/7/2009	SeqNo: 643936						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	51.07	1.0	50	0	102	90	110	0	0	0	

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_091207A						
Client ID: ZZZZZ	Batch ID: 24513	TestNo: SW6020		Analysis Date: 12/7/2009	SeqNo: 643940						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	50.08	1.0	50	0	100	90	110	0	0	0	

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_091207A						
Client ID: ZZZZZ	Batch ID: 24513	TestNo: SW6020		Analysis Date: 12/7/2009	SeqNo: 643949						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	48.01	1.0	50	0	96	90	110	0	0	0	

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_091207A						
Client ID: ZZZZZ	Batch ID: 24513	TestNo: SW6020		Analysis Date: 12/9/2009	SeqNo: 644330						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	50.48	1.0	50	0	101	90	110	0	0	0	

Sample ID: ICB-24513	SampType: ICB	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_091207A						
Client ID: ZZZZZ	Batch ID: 24513	TestNo: SW6020		Analysis Date: 12/9/2009	SeqNo: 644329						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

CLIENT: Maul, Foster & Alongi

Work Order: 0912036

Project: Trueguard Quarterly / 9009.01.12

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_WDISS

Sample ID: ICB-24513	SampType: ICB	TestCode: 6020_WDISS	Units: ug/L	Prep Date: 12/7/2009	Run ID: ICPMS_091207A						
Client ID: ZZZZZ	Batch ID: 24513	TestNo: SW6020		Analysis Date: 12/9/2009	SeqNo: 644329						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	1.0	0	0	0	0	0	0	0	0	0

Sample ID: ICV	SampType: ICV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_091207A						
Client ID: ZZZZZ	Batch ID: 24513	TestNo: SW6020		Analysis Date: 12/7/2009	SeqNo: 643851						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	47.88	1.0	50	0	95.8	90	110	0	0	0	0

Sample ID: ICV	SampType: ICV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_091207A						
Client ID: ZZZZZ	Batch ID: 24513	TestNo: SW6020		Analysis Date: 12/7/2009	SeqNo: 643935						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	47.8	1.0	50	0	95.6	90	110	0	0	0	0

Sample ID: ICV	SampType: ICV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_091207A						
Client ID: ZZZZZ	Batch ID: 24513	TestNo: SW6020		Analysis Date: 12/9/2009	SeqNo: 644328						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	47.2	1.0	50	0	94.4	90	110	0	0	0	0

Qualifiers: ND - Not Detected at the Reporting Limit
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B - Analyte detected in the associated Method Blank

CHAIN OF CUSTODY RECORD

Page 1 of 1

Specialty Analytical

11711 SE Capps Road
Clackamas, OR 97015
Phone: 503-607-1331
Fax: 503-607-1336

Contact Person/Project Manager: Tony Silva
Company: MAUL FOSTER ALONGE
Address: 3121 SW MOODY AVE
PORTLAND, OR 97239
Phone: 971-544-2139 Fax: 971-544-2146
Project No. 9009.01.12/ Project Name: TRUJARD QUARTERS
Project Site Location OR WA K Other
Invoice To _____ P.O. No. _____

Collected By: Scout Mardian
Signature: [Signature]
Printed: SCOUT MARDIAN
Signature: [Signature]
Printed: KASS ADAMS

Turn Around Time
 Normal 5-7 Business Days
 Rush _____ Specify _____

Rush Analyses Must Be Scheduled With The Lab In Advance

Date	Time	Sample I.D.	Matrix	No. of Containers			Relinquished By:	Date	Time
				Dissolved Arsenic EPA 6020	Dissolved Copper, Boron Iron, Chromium, BOD	Analyses			
12/1/09	13:35	MW3	GW	1	X				
12/1/09	15:10	MW10	GW	1	X				
12/1/09	16:05	MW11	GW	1	X				
12/2/09	13:30	MW6	GW	1	X				
12/2/09	14:45	MW12	GW	1	X				
12/2/09	14:00	MW5	GW	1	X				
12/2/09	14:50	MW1	GW	1	X				
12/2/09	15:50	MW13	GW	1	X				
12/2/09	15:50	MW13 DUF	GW	1	X				
12/2/09	15:50	MW16	GW	1	X				
12/3/09	10:10	MW14	GW	1	X				
12/3/09	11:10	MW15	GW	1	X				
Relinquished By: <u>[Signature]</u>			Received By:	Company:		Relinquished By:	Date	Time	
Company: <u>MFA</u>							12/14/09	13:59	
Unless Reclaimed, Samples Will Be Disposed of 60 Days After Receipt. Samples held beyond 60 days subject to storage fee(s)			Received For Lab By: <u>[Signature]</u>			Date	Time		
						12/14/09	13:59		



Specialty Analytical

11711 SE Capps Road
Clackamas, OR 97015
(503) 607-1331
Fax (503) 607-1336

December 17, 2009

Tony Silva
Maul, Foster & Alongi
7223 NE Hazel Dell Avenue
Suite B
Vancouver, WA 98665

TEL: (360) 694-2691
FAX: (360) 906-1958

RE: Trueguard Pilot Study / 9009.01.12/05

Dear Tony Silva:

Order No.: 0912045

Specialty Analytical received 6 samples on 12/8/2009 for the analyses presented in the following report.

There were no problems with the analysis and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative, or as qualified with flags. Results apply only to the samples analyzed. Without approval of the laboratory, the reproduction of this report is only permitted in its entirety.

If you have any questions regarding these tests, please feel free to call.

Sincerely,


Cindy Hilliard
Project Manager


Technical Review

Specialty Analytical

Date: 17-Dec-09

CLIENT: Maul, Foster & Alongi
 Project: Trueguard Pilot Study / 9009.01.12/05

Lab Order: 0912045

Lab ID: 0912045-01
 Client Sample ID: MW17

Collection Date: 12/8/2009 9:25:00 AM
 Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP						
		6010A				Analyst: zau
Boron	0.558	0.0100		mg/L	1	12/9/2009 2:40:01 PM
Chromium	0.00580	0.00500		mg/L	1	12/9/2009 2:40:01 PM
Copper	ND	0.0100		mg/L	1	12/9/2009 2:40:01 PM
Iron	21.8	0.0100		mg/L	1	12/9/2009 2:40:01 PM
Manganese	3.31	0.0100		mg/L	10	12/10/2009 3:15:41 PM
DISSOLVED METALS BY ICP/MS						
		SW6020				Analyst: zau
Arsenic	300	10		ug/L	10	12/11/2009 12:23:00 PM
DISSOLVED HEXAVALENT CHROMIUM						
		M3500-CR D				Analyst: zau
Chromium, Hexavalent Dissolved	ND	0.0050		mg/L	1	12/9/2009 8:02:00 AM
ANIONS BY ION CHROMATOGRAPHY						
		SW9056				Analyst: en
Sulfate	18.6	0.500		mg/L	1	12/14/2009

Lab ID: 0912045-02
 Client Sample ID: MW18

Collection Date: 12/8/2009 9:35:00 AM
 Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP						
		6010A				Analyst: zau
Boron	0.0885	0.0100		mg/L	1	12/9/2009 2:45:05 PM
Chromium	0.00500	0.00500		mg/L	1	12/9/2009 2:45:05 PM
Copper	ND	0.0100		mg/L	1	12/9/2009 2:45:05 PM
Iron	71.8	0.100		mg/L	10	12/11/2009 12:17:18 PM
Manganese	6.45	0.0100		mg/L	10	12/10/2009 3:20:45 PM
DISSOLVED METALS BY ICP/MS						
		SW6020				Analyst: zau
Arsenic	87	5.0		ug/L	5	12/10/2009 1:22:00 PM
DISSOLVED HEXAVALENT CHROMIUM						
		M3500-CR D				Analyst: zau
Chromium, Hexavalent Dissolved	ND	0.0050		mg/L	1	12/9/2009 8:07:00 AM
ANIONS BY ION CHROMATOGRAPHY						
		SW9056				Analyst: en
Sulfate	131	5.00		mg/L	10	12/14/2009

Specialty Analytical

Date: 17-Dec-09

CLIENT: Maul, Foster & Alongi
Project: Trueguard Pilot Study / 9009.01.12/05

Lab Order: 0912045

Lab ID: 0912045-03

Collection Date: 12/8/2009 10:30:00 AM

Client Sample ID: MW19

Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A				Analyst: zau
Boron	0.0275	0.0100		mg/L	1	12/9/2009 2:50:09 PM
Chromium	0.00710	0.00500		mg/L	1	12/9/2009 2:50:09 PM
Copper	0.0297	0.0100		mg/L	1	12/9/2009 2:50:09 PM
Iron	216	0.100		mg/L	10	12/10/2009 3:41:04 PM
Manganese	23.5	0.0200		mg/L	20	12/11/2009 12:22:21 PM
DISSOLVED METALS BY ICP/MS		SW6020				Analyst: zau
Arsenic	ND	10	Q	ug/L	10	12/14/2009 1:44:00 PM
DISSOLVED HEXAVALENT CHROMIUM		M3500-CR D				Analyst: zau
Chromium, Hexavalent Dissolved	ND	0.10	Q	mg/L	20	12/9/2009 8:08:00 AM
ANIONS BY ION CHROMATOGRAPHY		SW9056				Analyst: en
Sulfate	3350	100		mg/L	200	12/14/2009

Lab ID: 0912045-04

Collection Date: 12/8/2009 10:35:00 AM

Client Sample ID: MW20

Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A				Analyst: zau
Boron	0.0830	0.0100		mg/L	1	12/9/2009 2:55:22 PM
Chromium	0.00600	0.00500		mg/L	1	12/9/2009 2:55:22 PM
Copper	ND	0.0100		mg/L	1	12/9/2009 2:55:22 PM
Iron	63.2	0.0100		mg/L	1	12/9/2009 2:55:22 PM
Manganese	5.69	0.0100		mg/L	10	12/10/2009 1:38:29 PM
DISSOLVED METALS BY ICP/MS		SW6020				Analyst: zau
Arsenic	82	5.0		ug/L	5	12/10/2009 1:36:00 PM
DISSOLVED HEXAVALENT CHROMIUM		M3500-CR D				Analyst: zau
Chromium, Hexavalent Dissolved	ND	0.0050		mg/L	1	12/9/2009 8:09:00 AM
ANIONS BY ION CHROMATOGRAPHY		SW9056				Analyst: en
Sulfate	70.8	10.0		mg/L	20	12/14/2009

Specialty Analytical

Date: 17-Dec-09

CLIENT: Maul, Foster & Alongi
Project: Trueguard Pilot Study / 9009.01.12/05

Lab Order: 0912045

Lab ID: 0912045-05
Client Sample ID: MW21

Collection Date: 12/8/2009 11:35:00 AM
Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP						Analyst: zau
		6010A				
Boron	0.160	0.0100		mg/L	1	12/9/2009 3:00:25 PM
Chromium	ND	0.00500		mg/L	1	12/9/2009 3:00:25 PM
Copper	ND	0.0100		mg/L	1	12/9/2009 3:00:25 PM
Iron	67.4	0.100		mg/L	10	12/10/2009 3:46:05 PM
Manganese	5.74	0.0100		mg/L	10	12/10/2009 3:46:05 PM
DISSOLVED METALS BY ICP/MS						Analyst: zau
		SW6020				
Arsenic	380	10		ug/L	10	12/10/2009 1:43:00 PM
DISSOLVED HEXAVALENT CHROMIUM						Analyst: zau
		M3500-CR D				
Chromium, Hexavalent Dissolved	ND	0.0050		mg/L	1	12/9/2009 8:10:00 AM
ANIONS BY ION CHROMATOGRAPHY						Analyst: en
		SW9056				
Sulfate	35.3	5.00		mg/L	10	12/14/2009

Lab ID: 0912045-06
Client Sample ID: MW22

Collection Date: 12/8/2009 11:30:00 AM
Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP						Analyst: zau
		6010A				
Boron	0.475	0.0100		mg/L	1	12/9/2009 3:05:28 PM
Chromium	0.00540	0.00500		mg/L	1	12/9/2009 3:05:28 PM
Copper	ND	0.0100		mg/L	1	12/9/2009 3:05:28 PM
Iron	34.8	0.0100		mg/L	1	12/9/2009 3:05:28 PM
Manganese	3.92	0.0100		mg/L	10	12/10/2009 3:51:09 PM
DISSOLVED METALS BY ICP/MS						Analyst: zau
		SW6020				
Arsenic	450	10		ug/L	10	12/10/2009 1:49:00 PM
DISSOLVED HEXAVALENT CHROMIUM						Analyst: zau
		M3500-CR D				
Chromium, Hexavalent Dissolved	ND	0.0050		mg/L	1	12/9/2009 8:11:00 AM
ANIONS BY ION CHROMATOGRAPHY						Analyst: en
		SW9056				
Sulfate	6.62	1.00		mg/L	2	12/14/2009



Date: 17-Dec-09

Specialty Analytical

CLIENT: Maul, Foster & Alongi

Work Order: 0912045

Project: Trueguard Pilot Study / 9009.01.12/05

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDIS

Sample ID: 0912045-04AMS	SampType: MS	TestCode: 6010_WDIS	Units: mg/L	Prep Date: 12/9/2009	Run ID: TJA IRIS_091209F						
Client ID: MW20	Batch ID: 24537	TestNo: 6010A		Analysis Date: 12/9/2009	SeqNo: 644541						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Boron	0.602	0.0100	0.5	0.083	104	88.2	118	0	0		
Chromium	0.2696	0.00500	0.25	0.006	105	93.4	112	0	0		
Copper	0.4843	0.0100	0.5	0	96.9	92.7	114	0	0		
Iron	61.19	0.0100	0.5	63.19	-400	75	125	0	0		S,MC

Sample ID: 0912045-04AMS	SampType: MS	TestCode: 6010_WDIS	Units: mg/L	Prep Date: 12/9/2009	Run ID: TJA IRIS_091209F						
Client ID: MW20	Batch ID: 24537	TestNo: 6010A		Analysis Date: 12/10/2009	SeqNo: 644715						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Manganese	5.866	0.0100	0.5	5.69	35.2	83.9	118	0	0		S,MC
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Sample ID: 0912045-04AMS	SampType: MSD	TestCode: 6010_WDIS	Units: mg/L	Prep Date: 12/9/2009	Run ID: TJA IRIS_091209F						
Client ID: MW20	Batch ID: 24537	TestNo: 6010A		Analysis Date: 12/9/2009	SeqNo: 644542						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Boron	0.5913	0.0100	0.5	0.083	102	88.2	118	0.602	1.79	20	
Chromium	0.2647	0.00500	0.25	0.006	103	93.4	112	0.2696	1.83	20	
Copper	0.4761	0.0100	0.5	0	95.2	92.7	114	0.4843	1.71	20	
Iron	61.26	0.0100	0.5	63.19	-386	75	125	61.19	0.114	20	S,MC

Sample ID: 0912045-04AMS	SampType: MSD	TestCode: 6010_WDIS	Units: mg/L	Prep Date: 12/9/2009	Run ID: TJA IRIS_091209F						
Client ID: MW20	Batch ID: 24537	TestNo: 6010A		Analysis Date: 12/10/2009	SeqNo: 644716						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Manganese	5.92	0.0100	0.5	5.69	46	83.9	118	5.866	0.916	20	S,MC
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Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

CLIENT: Maul, Foster & Alongi
 Work Order: 0912045
 Project: Trueguard Pilot Study / 9009.01.12/05

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDIS

Sample ID: 0912045-04ADUP	SampType: DUP	TestCode: 6010_WDIS	Units: mg/L	Prep Date: 12/9/2009	Run ID: TJA IRIS_091209F						
Client ID: MW20	Batch ID: 24537	TestNo: 6010A		Analysis Date: 12/9/2009	SeqNo: 644540						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.0826	0.0100	0	0	0	0	0	0.083	0.483	20	
Chromium	0.0062	0.00500	0	0	0	0	0	0.006	3.28	20	
Copper	ND	0.0100	0	0	0	0	0	0	0	20	
Iron	63.82	0.0100	0	0	0	0	0	63.19	0.992	20	

Sample ID: 0912045-04ADUP	SampType: DUP	TestCode: 6010_WDIS	Units: mg/L	Prep Date: 12/9/2009	Run ID: TJA IRIS_091209F						
Client ID: MW20	Batch ID: 24537	TestNo: 6010A		Analysis Date: 12/10/2009	SeqNo: 644712						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	0.5343	0.00100	0	0	0	0	0	5.69	166	20	R

Sample ID: CCV	SampType: CCV	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_091209F						
Client ID: ZZZZZ	Batch ID: 24537	TestNo: 6010A		Analysis Date: 12/9/2009	SeqNo: 644530						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.4963	0.0100	0.5	0	99.3	90	110	0	0		
Chromium	0.2595	0.00500	0.25	0	104	90	110	0	0		
Copper	0.483	0.0100	0.5	0	96.6	90	110	0	0		
Iron	0.5232	0.0100	0.5	0	105	90	110	0	0		
Manganese	0.0502	0.00100	0.05	0	100	90	110	0	0		

Sample ID: CCV	SampType: CCV	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_091209F						
Client ID: ZZZZZ	Batch ID: 24537	TestNo: 6010A		Analysis Date: 12/9/2009	SeqNo: 644533						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.4952	0.0100	0.5	0	99	90	110	0	0		
Chromium	0.2574	0.00500	0.25	0	103	90	110	0	0		
Copper	0.4766	0.0100	0.5	0	95.3	90	110	0	0		
Iron	0.5266	0.0100	0.5	0	105	90	110	0	0		
Manganese	0.0506	0.00100	0.05	0	101	90	110	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

ANALYTICAL QC SUMMARY REPORT

CLIENT: Maul, Foster & Alongi

Work Order: 0912045

Project: Trueguard Pilot Study / 9009.01.12/05

TestCode: 6010_WDIS

Sample ID: CCV	SampType: CCV	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_091209F						
Client ID: ZZZZZ	Batch ID: 24537	TestNo: 6010A		Analysis Date: 12/9/2009	SeqNo: 644544						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Boron	0.5015	0.0100	0.5	0	100	90	110	0	0	0	
Chromium	0.2679	0.00500	0.25	0	107	90	110	0	0	0	
Copper	0.4758	0.0100	0.5	0	95.2	90	110	0	0	0	
Iron	0.5424	0.0100	0.5	0	108	90	110	0	0	0	
Manganese	0.0522	0.00100	0.05	0	104	90	110	0	0	0	

Sample ID: CCV	SampType: CCV	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_091209F						
Client ID: ZZZZZ	Batch ID: 24537	TestNo: 6010A		Analysis Date: 12/9/2009	SeqNo: 644552						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Boron	0.4945	0.0100	0.5	0	98.9	90	110	0	0	0	
Chromium	0.2612	0.00500	0.25	0	104	90	110	0	0	0	
Copper	0.4825	0.0100	0.5	0	96.5	90	110	0	0	0	
Iron	0.519	0.0100	0.5	0	104	90	110	0	0	0	
Manganese	0.0508	0.00100	0.05	0	102	90	110	0	0	0	

Sample ID: CCV	SampType: CCV	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_091209F						
Client ID: ZZZZZ	Batch ID: 24537	TestNo: 6010A		Analysis Date: 12/10/2009	SeqNo: 644713						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Manganese	0.0537	0.00100	0.05	0	107	90	110	0	0	0	
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Sample ID: CCV	SampType: CCV	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_091209F						
Client ID: ZZZZZ	Batch ID: 24537	TestNo: 6010A		Analysis Date: 12/10/2009	SeqNo: 644714						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Manganese	0.0516	0.00100	0.05	0	103	90	110	0	0	0	
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Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

ANALYTICAL QC SUMMARY REPORT

CLIENT: Maul, Foster & Alongi
 Work Order: 0912045
 Project: Trueguard Pilot Study / 9009.01.12/05

TestCode: 6010_WDIS

Sample ID: CCV	SampType: CCV	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_091209F						
Client ID: ZZZZZ	Batch ID: 24537	TestNo: 6010A		Analysis Date: 12/10/2009	SeqNo: 644719						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	0.5185	0.0100	0.5	0	104	90	110	0	0	0	0
Manganese	0.0508	0.00100	0.05	0	102	90	110	0	0	0	0

Sample ID: CCV	SampType: CCV	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_091209F						
Client ID: ZZZZZ	Batch ID: 24537	TestNo: 6010A		Analysis Date: 12/10/2009	SeqNo: 644726						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	0.5278	0.0100	0.5	0	106	90	110	0	0	0	0
Manganese	0.051	0.00100	0.05	0	102	90	110	0	0	0	0

Sample ID: CCV	SampType: CCV	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_091209F						
Client ID: ZZZZZ	Batch ID: 24537	TestNo: 6010A		Analysis Date: 12/11/2009	SeqNo: 644815						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	0.4914	0.0100	0.5	0	98.3	90	110	0	0	0	0
Manganese	0.0484	0.00100	0.05	0	96.8	90	110	0	0	0	0

Sample ID: CCV	SampType: CCV	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_091209F						
Client ID: ZZZZZ	Batch ID: 24537	TestNo: 6010A		Analysis Date: 12/11/2009	SeqNo: 644817						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	0.4864	0.0100	0.5	0	97.3	90	110	0	0	0	0

Sample ID: ICB-24537	SampType: ICB	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_091209F						
Client ID: ZZZZZ	Batch ID: 24537	TestNo: 6010A		Analysis Date: 12/19/2009	SeqNo: 644531						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.007	0.0100	0	0	0	0	0	0	0	0	0
Chromium	ND	0.00500	0	0	0	0	0	0	0	0	0
Copper	ND	0.0100	0	0	0	0	0	0	0	0	0

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

ANALYTICAL QC SUMMARY REPORT

CLIENT: Maul, Foster & Alongi

Work Order: 0912045

Project: Trueguard Pilot Study / 9009.01.12/05

TestCode: 6010_WDIS

Sample ID: ICB-24537	SampType: ICB	TestCode: 6010_WDIS	Units: mg/L	Prep Date: 12/9/2009	Run ID: TJA IRIS_091209F						
Client ID: ZZZZZ	Batch ID: 24537	TestNo: 6010A		Analysis Date: 12/9/2009	SeqNo: 644531						
Analyte	Result	PQL	SPK value	SPK RefVal	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	ND	0.0100	0	0	0	0	0	0	0	0	0
Manganese	ND	0.00100	0	0	0	0	0	0	0	0	0

Sample ID: ICV	SampType: ICV	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_091209F						
Client ID: ZZZZZ	Batch ID: 24537	TestNo: 6010A		Analysis Date: 12/9/2009	SeqNo: 644529						
Analyte	Result	PQL	SPK value	SPK RefVal	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.4969	0.0100	0.5	0	99.4	90	110	0	0	0	0
Chromium	0.2528	0.00500	0.25	0	101	90	110	0	0	0	0
Copper	0.4903	0.0100	0.5	0	98.1	90	110	0	0	0	0
Iron	0.5114	0.0100	0.5	0	102	90	110	0	0	0	0
Manganese	0.0496	0.00100	0.05	0	99.2	90	110	0	0	0	0

Sample ID: ICV	SampType: ICV	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_091209F						
Client ID: ZZZZZ	Batch ID: 24537	TestNo: 6010A		Analysis Date: 12/10/2009	SeqNo: 644710						
Analyte	Result	PQL	SPK value	SPK RefVal	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	0.5303	0.0100	0.5	0	106	90	110	0	0	0	0
Manganese	0.0515	0.00100	0.05	0	103	90	110	0	0	0	0

Sample ID: ICV	SampType: ICV	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_091209F						
Client ID: ZZZZZ	Batch ID: 24537	TestNo: 6010A		Analysis Date: 12/11/2009	SeqNo: 644809						
Analyte	Result	PQL	SPK value	SPK RefVal	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	0.4874	0.0100	0.5	0	97.5	90	110	0	0	0	0
Manganese	0.0481	0.00100	0.05	0	96.2	90	110	0	0	0	0

Qualifiers: ND - Not Detected at the Reporting Limit
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits

CLIENT: Maul, Foster & Alongi
Work Order: 0912045
Project: Trueguard Pilot Study / 9009.01.12/05

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_WDISS

Sample ID: 0912040-03AMS	SampType: MS	TestCode: 6020_WDISS	Units: ug/L	Prep Date: 12/8/2009	Run ID: ICPMS_091210A						
Client ID: ZZZZZ	Batch ID: 24528	TestNo: SW6020		Analysis Date: 12/10/2009	SeqNo: 644628						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	726.5	10	500	282.4	88.8	70	130	0	0	0	0

Sample ID: 0912040-03AMSD	SampType: MSD	TestCode: 6020_WDISS	Units: ug/L	Prep Date: 12/8/2009	Run ID: ICPMS_091210A						
Client ID: ZZZZZ	Batch ID: 24528	TestNo: SW6020		Analysis Date: 12/10/2009	SeqNo: 644629						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	721.4	10	500	282.4	87.8	70	130	726.5	0.704	20	

Sample ID: 0912040-03ADUP	SampType: DUP	TestCode: 6020_WDISS	Units: ug/L	Prep Date: 12/8/2009	Run ID: ICPMS_091210A						
Client ID: ZZZZZ	Batch ID: 24528	TestNo: SW6020		Analysis Date: 12/10/2009	SeqNo: 644627						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	283.1	10	0	0	0	0	0	282.4	0.248	20	

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_091210A						
Client ID: ZZZZZ	Batch ID: 24528	TestNo: SW6020		Analysis Date: 12/10/2009	SeqNo: 644633						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	48.22	1.0	50	0	96.4	90	110	0	0	0	

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_091210A						
Client ID: ZZZZZ	Batch ID: 24528	TestNo: SW6020		Analysis Date: 12/10/2009	SeqNo: 644639						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	47.81	1.0	50	0	95.6	90	110	0	0	0	

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_091210A						
Client ID: ZZZZZ	Batch ID: 24528	TestNo: SW6020		Analysis Date: 12/11/2009	SeqNo: 644848						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

ANALYTICAL QC SUMMARY REPORT

CLIENT: Maul, Foster & Alongi

Work Order: 0912045

Project: Trueguard Pilot Study / 9009.01.12/05

TestCode: 6020_WDISS

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_091210A						
Client ID: ZZZZZ	Batch ID: 24528	TestNo: SW6020		Analysis Date: 12/11/2009	SeqNo: 644848						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	51.15	1.0	50	0	102	90	110	0	0	0	

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_091210A						
Client ID: ZZZZZ	Batch ID: 24528	TestNo: SW6020		Analysis Date: 12/11/2009	SeqNo: 644850						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	52.29	1.0	50	0	105	90	110	0	0	0	

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_091210A						
Client ID: ZZZZZ	Batch ID: 24528	TestNo: SW6020		Analysis Date: 12/14/2009	SeqNo: 645130						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	53.41	1.0	50	0	107	90	110	0	0	0	

Sample ID: ICB-24528	SampType: ICB	TestCode: 6020_WDISS	Units: ug/L	Prep Date: 12/8/2009	Run ID: ICPMS_091210A						
Client ID: ZZZZZ	Batch ID: 24528	TestNo: SW6020		Analysis Date: 12/10/2009	SeqNo: 644625						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	1.0	0	0	0	0	0	0	0	0	

Sample ID: ICV	SampType: ICV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_091210A						
Client ID: ZZZZZ	Batch ID: 24528	TestNo: SW6020		Analysis Date: 12/10/2009	SeqNo: 644624						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	48.5	1.0	50	0	97	90	110	0	0	0	

Sample ID: ICV	SampType: ICV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_091210A						
Client ID: ZZZZZ	Batch ID: 24528	TestNo: SW6020		Analysis Date: 12/11/2009	SeqNo: 644847						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	48.5	1.0	50	0	97	90	110	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

CLIENT: Maul, Foster & Alongi
 Work Order: 0912045
 Project: Trueguard Pilot Study / 9009.01.12/05

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_WDISS

Sample ID: ICV	SampType: ICV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_091210A						
Client ID: ZZZZZ	Batch ID: 24528	TestNo: SW6020		Analysis Date: 12/11/2009	SeqNo: 644847						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	51.88	1.0	50	0	104	90	110	0	0	0	

Sample ID: ICV	SampType: ICV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_091210A						
Client ID: ZZZZZ	Batch ID: 24528	TestNo: SW6020		Analysis Date: 12/14/2009	SeqNo: 645128						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	52.22	1.0	50	0	104	90	110	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

ANALYTICAL QC SUMMARY REPORT

CLIENT: Maul, Foster & Alongi

Work Order: 0912045

Project: Trueguard Pilot Study / 9009.01.12/05

TestCode: CR6_CWA_DISS

Sample ID: MBLK	SampType: MBLK	TestCode: CR6_CWA_DI	Units: mg/L	Prep Date:	Run ID: GENESIS-1_091209F		
Client ID: ZZZZ	Batch ID: R58686	TestNo: M3500-Cr D		Analysis Date: 12/9/2009	SeqNo: 644126		
Analyte	Result	PQL	SPK value	SPK Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent Dissolved	ND	0.0050					

Sample ID: LCS	SampType: LCS	TestCode: CR6_CWA_DI	Units: mg/L	Prep Date:	Run ID: GENESIS-1_091209F					
Client ID: ZZZZ	Batch ID: R58686	TestNo: M3500-Cr D		Analysis Date: 12/9/2009	SeqNo: 644127					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent Dissolved	0.04799	0.0050	0.05	0	96	80	120	0	0	

Sample ID: 0912045-01BMS B-A	SampType: MS	TestCode: CR6_CWA_DI	Units: mg/L	Prep Date:	Run ID: GENESIS-1_091209F						
Client ID: MW17	Batch ID: R58686	TestNo: M3500-Cr D		Analysis Date: 12/9/2009	SeqNo: 644132						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent Dissolved	0.05292	0.0050	0.05	0.0028	100	75	125	0	0	0	

Sample ID: 0912045-01BDUP	SampType: DUP	TestCode: CR6_CWA_DI	Units: mg/L	Prep Date:	Run ID: GENESIS-1_091209F						
Client ID: MW17	Batch ID: R58686	TestNo: M3500-Cr D		Analysis Date: 12/9/2009	SeqNo: 644129						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent Dissolved	ND	0.0050	0	0	0	0	0	0.0028	0	0	20

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

CLIENT: Maul, Foster & Alongi
 Work Order: 0912045
 Project: Trueguard Pilot Study / 9009.01.12/05

ANALYTICAL QC SUMMARY REPORT

TestCode: IC_GW

Sample ID: MB-R58770	SampType: MBLK	TestCode: IC_GW	Units: mg/L	Prep Date: 12/14/2009	Run ID: IC_091214A
Client ID: ZZZZZ	Batch ID: R58770	TestNo: SW9056		Analysis Date: 12/14/2009	SeqNo: 645152
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Sulfate	ND	0.500			
			LowLimit	HighLimit	RPD Ref Val
					%RPD
					RPDLimit
					Qual

Sample ID: LCS-R58770	SampType: LCS	TestCode: IC_GW	Units: mg/L	Prep Date: 12/14/2009	Run ID: IC_091214A
Client ID: ZZZZZ	Batch ID: R58770	TestNo: SW9056		Analysis Date: 12/14/2009	SeqNo: 645151
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Sulfate	10.01	0.500	10	0	100
			LowLimit	HighLimit	RPD Ref Val
					%RPD
					RPDLimit
					Qual

Sample ID: 0912045-01CMS	SampType: MS	TestCode: IC_GW	Units: mg/L	Prep Date: 12/14/2009	Run ID: IC_091214A
Client ID: MW17	Batch ID: R58770	TestNo: SW9056		Analysis Date: 12/14/2009	SeqNo: 645143
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Sulfate	22.54	0.500	5	18.57	79.4
			LowLimit	HighLimit	RPD Ref Val
					%RPD
					RPDLimit
					Qual

Sample ID: 0912045-01CMSD	SampType: MSD	TestCode: IC_GW	Units: mg/L	Prep Date: 12/14/2009	Run ID: IC_091214A
Client ID: MW17	Batch ID: R58770	TestNo: SW9056		Analysis Date: 12/14/2009	SeqNo: 645144
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Sulfate	22.76	0.500	5	18.57	83.8
			LowLimit	HighLimit	RPD Ref Val
					%RPD
					RPDLimit
					Qual

Sample ID: CCV	SampType: CCV	TestCode: IC_GW	Units: mg/L	Prep Date: 12/14/2009	Run ID: IC_091214A
Client ID: ZZZZZ	Batch ID: R58770	TestNo: SW9056		Analysis Date: 12/14/2009	SeqNo: 645150
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Sulfate	10.29	0.500	10	0	103
			LowLimit	HighLimit	RPD Ref Val
					%RPD
					RPDLimit
					Qual

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

KEY TO FLAGS

- A This sample contains a Gasoline Range Organic not identified as a specific hydrocarbon product. The result was quantified against gasoline calibration standards.
- A1 This sample contains a Diesel Range Organic not identified as a specific hydrocarbon product. The result was quantified against diesel calibration standards.
- A2 This sample contains a Lube Oil Range Organic not identified as a specific hydrocarbon product. The result was quantified against a lube oil calibration standard.
- A3 The result was determined to be Non-Detect based on hydrocarbon pattern recognition. The product was carry-over from another hydrocarbon type.
- B The blank exhibited a positive result greater than the reporting limit for this compound.
- CN See Case Narrative.
- D Result is based from a dilution.
- E Result exceeds the calibration range for this compound. The result should be considered as estimate.
- F The positive result for this hydrocarbon is due to single component contamination. The product does not match any hydrocarbon in the fuels library.
- H Sample was analyzed outside recommended hold time.
- HT At clients request, sample was analyzed outside recommended hold time.
- J The result for this analyte is between the MDL and the PQL and should be considered as estimated concentration.
- K Diesel result is biased high due to amount of Oil contained in the sample.
- L Diesel result is biased high due to amount of Gasoline contained in the sample.
- M Oil result is biased high due to amount of Diesel contained in the sample.
- N Gasoline result is biased high due to amount of Diesel contained in the sample.
- MC Sample concentration is greater than 4x the spiked value, the spiked value is considered insignificant.
- MI Result is outside control limits due to matrix interference.
- MSA Value determined by Method of Standard Addition.
- O Laboratory Control Standard (LCS) exceeded laboratory control limits, but meets CCV criteria. Data meets EPA requirements.
- P Detection levels of Methylene Chloride may be laboratory contamination, due to previous analysis or background levels.
- Q Detection levels elevated due to sample matrix.
- R RPD control limits were exceeded.
- RF Duplicate failed due to result being at or near the method-reporting limit.
- RP Matrix spike values exceed established QC limits, post digestion spike is in control.
- S Recovery is outside control limits.
- SC Closing CCV or LCS exceeded high recovery control limits, but associated samples are non-detect. Data meets EPA requirements.
- * The result for this parameter was greater than the maximum contaminant level of the TCLP regulatory limit.



Specialty Analytical

11711 SE Capps Road
Clackamas, OR 97015
(503) 607-1331
Fax (503) 607-1336

December 21, 2009

Tony Silva
Maul, Foster & Alongi
7223 NE Hazel Dell Avenue
Suite B
Vancouver, WA 98665
TEL: (360) 694-2691
FAX: (360) 906-1958

RE: TrueGuard Pilot / 9009.01.12/05

Order No.: 0912075

Dear Tony Silva:

Specialty Analytical received 6 samples on 12/15/2009 for the analyses presented in the following report.

There were no problems with the analysis and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative, or as qualified with flags. Results apply only to the samples analyzed. Without approval of the laboratory, the reproduction of this report is only permitted in its entirety.

If you have any questions regarding these tests, please feel free to call.

Sincerely,


Cindy Hillyard
Project Manager


Technical Review



Specialty Analytical

Date: 21-Dec-09

CLIENT: Maul, Foster & Alongi
Project: TrueGuard Pilot / 9009.01.12/05

Lab Order: 0912075

Lab ID: 0912075-01
Client Sample ID: MW17

Collection Date: 12/15/2009 9:21:00 AM
Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A				Analyst: zau
Boron	0.529	0.0100		mg/L	1	12/16/2009 1:52:59 PM
Chromium	0.00720	0.00500		mg/L	1	12/16/2009 1:52:59 PM
Copper	ND	0.0100		mg/L	1	12/16/2009 1:52:59 PM
Iron	23.6	0.100		mg/L	10	12/17/2009 2:29:22 PM
Manganese	3.19	0.0100		mg/L	10	12/17/2009 2:29:22 PM
DISSOLVED METALS BY ICP/MS		SW6020				Analyst: zau
Arsenic	350	10		ug/L	10	12/17/2009 1:05:00 PM
DISSOLVED HEXAVALENT CHROMIUM		M3500-CR D				Analyst: cz
Chromium, Hexavalent Dissolved	ND	0.0050		mg/L	1	12/15/2009
ANIONS BY ION CHROMATOGRAPHY		SW9056				Analyst: en
Sulfate	16.5	1.00		mg/L	2	12/18/2009

Lab ID: 0912075-02
Client Sample ID: MW18

Collection Date: 12/15/2009 9:33:00 AM
Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A				Analyst: zau
Boron	ND	0.0100		mg/L	1	12/16/2009 2:00:38 PM
Chromium	ND	0.00500		mg/L	1	12/16/2009 2:00:38 PM
Copper	ND	0.0100		mg/L	1	12/16/2009 2:00:38 PM
Iron	294	0.500		mg/L	50	12/17/2009 2:34:26 PM
Manganese	24.0	0.0500		mg/L	50	12/17/2009 2:34:26 PM
DISSOLVED METALS BY ICP/MS		SW6020				Analyst: zau
Arsenic	120	10		ug/L	10	12/17/2009 6:14:00 PM
DISSOLVED HEXAVALENT CHROMIUM		M3500-CR D				Analyst: cz
Chromium, Hexavalent Dissolved	ND	0.0050		mg/L	1	12/15/2009
ANIONS BY ION CHROMATOGRAPHY		SW9056				Analyst: en
Sulfate	1710	50.0		mg/L	100	12/18/2009

Specialty Analytical

Date: 21-Dec-09

CLIENT: Maul, Foster & Alongi
Project: TrueGuard Pilot / 9009.01.12/05

Lab Order: 0912075

Lab ID: 0912075-03

Collection Date: 12/15/2009 10:18:00 AM

Client Sample ID: MW19

Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A				Analyst: zau
Boron	0.424	0.0100		mg/L	1	12/16/2009 2:05:38 PM
Chromium	ND	0.00500		mg/L	1	12/16/2009 2:05:38 PM
Copper	ND	0.0100		mg/L	1	12/16/2009 2:05:38 PM
Iron	350	1.00		mg/L	100	12/17/2009 2:39:31 PM
Manganese	33.8	0.100		mg/L	100	12/17/2009 2:39:31 PM
DISSOLVED METALS BY ICP/MS		SW6020				Analyst: zau
Arsenic	45	5.0		ug/L	5	12/17/2009 6:20:00 PM
DISSOLVED HEXAVALENT CHROMIUM		M3500-CR D				Analyst: cz
Chromium, Hexavalent Dissolved	ND	0.0050		mg/L	1	12/15/2009
ANIONS BY ION CHROMATOGRAPHY		SW9056				Analyst: en
Sulfate	3650	100		mg/L	200	12/18/2009

Lab ID: 0912075-04

Collection Date: 12/15/2009 10:31:00 AM

Client Sample ID: MW20

Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A				Analyst: zau
Boron	0.101	0.0100		mg/L	1	12/16/2009 2:34:48 PM
Chromium	0.00700	0.00500		mg/L	1	12/16/2009 2:34:48 PM
Copper	ND	0.0100		mg/L	1	12/16/2009 2:34:48 PM
Iron	58.6	0.100		mg/L	10	12/17/2009 2:44:35 PM
Manganese	5.46	0.0100		mg/L	10	12/17/2009 2:44:35 PM
DISSOLVED METALS BY ICP/MS		SW6020				Analyst: zau
Arsenic	120	10		ug/L	10	12/17/2009 1:25:00 PM
DISSOLVED HEXAVALENT CHROMIUM		M3500-CR D				Analyst: cz
Chromium, Hexavalent Dissolved	ND	0.0050		mg/L	1	12/15/2009
ANIONS BY ION CHROMATOGRAPHY		SW9056				Analyst: en
Sulfate	3.28	0.500		mg/L	1	12/18/2009

Specialty Analytical

Date: 21-Dec-09

CLIENT: Maul, Foster & Alongi
Project: TrueGuard Pilot / 9009.01.12/05

Lab Order: 0912075

Lab ID: 0912075-05
Client Sample ID: MW21

Collection Date: 12/15/2009 11:13:00 AM
Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP						Analyst: zau
		6010A				
Boron	0.213	0.0100		mg/L	1	12/16/2009 2:39:50 PM
Chromium	0.00670	0.00500		mg/L	1	12/16/2009 2:39:50 PM
Copper	ND	0.0100		mg/L	1	12/16/2009 2:39:50 PM
Iron	62.3	0.100		mg/L	10	12/17/2009 2:49:39 PM
Manganese	6.14	0.0100		mg/L	10	12/17/2009 2:49:39 PM
DISSOLVED METALS BY ICP/MS						Analyst: zau
		SW6020				
Arsenic	330	10		ug/L	10	12/17/2009 1:32:00 PM
DISSOLVED HEXAVALENT CHROMIUM						Analyst: cz
		M3500-CR D				
Chromium, Hexavalent Dissolved	ND	0.0050		mg/L	1	12/15/2009
ANIONS BY ION CHROMATOGRAPHY						Analyst: en
		SW9056				
Sulfate	28.8	2.50		mg/L	5	12/18/2009

Lab ID: 0912075-06
Client Sample ID: MW22

Collection Date: 12/15/2009 11:28:00 AM
Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP						Analyst: zau
		6010A				
Boron	0.577	0.0100		mg/L	1	12/16/2009 2:44:51 PM
Chromium	0.00620	0.00500		mg/L	1	12/16/2009 2:44:51 PM
Copper	ND	0.0100		mg/L	1	12/16/2009 2:44:51 PM
Iron	29.6	0.100		mg/L	10	12/17/2009 2:54:43 PM
Manganese	3.39	0.0100		mg/L	10	12/17/2009 2:54:43 PM
DISSOLVED METALS BY ICP/MS						Analyst: zau
		SW6020				
Arsenic	470	10		ug/L	10	12/17/2009 1:39:00 PM
DISSOLVED HEXAVALENT CHROMIUM						Analyst: cz
		M3500-CR D				
Chromium, Hexavalent Dissolved	ND	0.0050		mg/L	1	12/15/2009
ANIONS BY ION CHROMATOGRAPHY						Analyst: en
		SW9056				
Sulfate	5.00	1.00		mg/L	2	12/18/2009



Date: 21-Dec-09

Specialty Analytical

CLIENT: Maul, Foster & Alongi
Work Order: 0912075
Project: TrueGuard Pilot / 9009.01.12/05

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDIS

Sample ID: 0912082-01GMS	SampType: MS	TestCode: 6010_WDIS	Units: mg/L	Prep Date: 12/16/2009	Run ID: TJA IRIS_091216D						
Client ID: ZZZZZ	Batch ID: 24591	TestNo: 6010A		Analysis Date: 12/16/2009	SeqNo: 646093						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.3354	0.0100	0.5	0	67.1	88.2	118	0	0	0	S
Chromium	0.2588	0.00500	0.25	0	104	93.4	112	0	0	0	
Copper	0.496	0.0100	0.5	0	99.2	92.7	114	0	0	0	

Sample ID: 0912082-01GMS	SampType: MS	TestCode: 6010_WDIS	Units: mg/L	Prep Date: 12/16/2009	Run ID: TJA IRIS_091216D						
Client ID: ZZZZZ	Batch ID: 24591	TestNo: 6010A		Analysis Date: 12/17/2009	SeqNo: 646188						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	207.6	0.100	5	216.3	-174	75	125	0	0	0	S,MC
Manganese	13.8	0.0100	0.5	14.25	-90	83.9	118	0	0	0	S,MC

Sample ID: 0912082-01GMSD	SampType: MSD	TestCode: 6010_WDIS	Units: mg/L	Prep Date: 12/16/2009	Run ID: TJA IRIS_091216D						
Client ID: ZZZZZ	Batch ID: 24591	TestNo: 6010A		Analysis Date: 12/16/2009	SeqNo: 646094						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.3489	0.0100	0.5	0	69.8	88.2	118	0.3354	3.95	20	S
Chromium	0.2665	0.00500	0.25	0	107	93.4	112	0.2588	2.93	20	
Copper	0.5196	0.0100	0.5	0	104	92.7	114	0.496	4.65	20	

Sample ID: 0912082-01GMSD	SampType: MSD	TestCode: 6010_WDIS	Units: mg/L	Prep Date: 12/16/2009	Run ID: TJA IRIS_091216D						
Client ID: ZZZZZ	Batch ID: 24591	TestNo: 6010A		Analysis Date: 12/17/2009	SeqNo: 646189						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	205.7	0.100	5	216.3	-212	75	125	207.6	0.919	20	S,MC
Manganese	13.69	0.0100	0.5	14.25	-112	83.9	118	13.8	0.800	20	S,MC

Qualifiers:
 ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

CLIENT: Maul, Foster & Alongi

Work Order: 0912075

Project: TrueGuard Pilot / 9009.01.12/05

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDIS

Sample ID: 0912082-01GDUP SampType: DUP Prep Date: 12/16/2009 Run ID: TJA IRIS_091216D
 Client ID: ZZZZZ Batch ID: 24591 Analysis Date: 12/16/2009 SeqNo: 646091

Analyte	Result	PQL	SPK value	SPK Ref Val	Units: mg/L	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	ND	0.0100	0	0	0	0	0	0	0	0	0	20
Chromium	ND	0.00500	0	0	0	0	0	0	0	0	0	20
Copper	ND	0.0100	0	0	0	0	0	0	0	0	0	20

Sample ID: 0912082-01GDUP SampType: DUP Prep Date: 12/16/2009 Run ID: TJA IRIS_091216D
 Client ID: ZZZZZ Batch ID: 24591 Analysis Date: 12/17/2009 SeqNo: 646187

Analyte	Result	PQL	SPK value	SPK Ref Val	Units: mg/L	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	209.9	0.100	0	0	0	0	0	0	216.3	3.00	20	
Manganese	13.76	0.0100	0	0	0	0	0	0	14.25	3.50	20	

Sample ID: CCV SampType: CCV Prep Date: Run ID: TJA IRIS_091216D
 Client ID: ZZZZZ Batch ID: 24591 Analysis Date: 12/16/2009 SeqNo: 646092

Analyte	Result	PQL	SPK value	SPK Ref Val	Units: mg/L	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.4853	0.0100	0.5	0	0	97.1	90	110	0	0	0	
Chromium	0.249	0.00500	0.25	0	0	99.6	90	110	0	0	0	
Copper	0.4779	0.0100	0.5	0	0	95.6	90	110	0	0	0	

Sample ID: CCV SampType: CCV Prep Date: Run ID: TJA IRIS_091216D
 Client ID: ZZZZZ Batch ID: 24591 Analysis Date: 12/16/2009 SeqNo: 646103

Analyte	Result	PQL	SPK value	SPK Ref Val	Units: mg/L	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.5135	0.0100	0.5	0	0	103	90	110	0	0	0	
Chromium	0.2599	0.00500	0.25	0	0	104	90	110	0	0	0	
Copper	0.5156	0.0100	0.5	0	0	103	90	110	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

ANALYTICAL QC SUMMARY REPORT

CLIENT: Maul, Foster & Alongi
Work Order: 0912075
Project: TrueGuard Pilot / 9009.01.12/05

TestCode: 6010_WDIS

Sample ID: CCV	SampType: CCV	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_091216D						
Client ID: ZZZZZ	Batch ID: 24591	TestNo: 6010A		Analysis Date: 12/16/2009	SeqNo: 646112						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.4994	0.0100	0.5	0	99.9	90	110	0	0	0	
Chromium	0.2516	0.00500	0.25	0	101	90	110	0	0	0	
Copper	0.5001	0.0100	0.5	0	100	90	110	0	0	0	

Sample ID: CCV	SampType: CCV	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_091216D						
Client ID: ZZZZZ	Batch ID: 24591	TestNo: 6010A		Analysis Date: 12/17/2009	SeqNo: 646184						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.502	0.0100	0.5	0	100	90	110	0	0	0	
Iron	0.5447	0.0100	0.5	0	109	90	110	0	0	0	
Manganese	0.0528	0.00100	0.05	0	106	90	110	0	0	0	

Sample ID: CCV	SampType: CCV	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_091216D						
Client ID: ZZZZZ	Batch ID: 24591	TestNo: 6010A		Analysis Date: 12/17/2009	SeqNo: 646194						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.4964	0.0100	0.5	0	99.3	90	110	0	0	0	
Iron	0.5358	0.0100	0.5	0	107	90	110	0	0	0	
Manganese	0.052	0.00100	0.05	0	104	90	110	0	0	0	

Sample ID: CCV	SampType: CCV	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_091216D						
Client ID: ZZZZZ	Batch ID: 24591	TestNo: 6010A		Analysis Date: 12/17/2009	SeqNo: 646205						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	0.5117	0.0100	0.5	0	102	90	110	0	0	0	
Manganese	0.0505	0.00100	0.05	0	101	90	110	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDIS

CLIENT: Maul, Foster & Alongi
 Work Order: 0912075
 Project: TrueGuard Pilot / 9009.01.12/05

Sample ID:	CCV	SampType:	CCV	TestCode:	6010_WDIS	Units:	mg/L	Prep Date:	Run ID:	TJA IRIS_091216D	
Client ID:	ZZZZZ	Batch ID:	24591	TestNo:	6010A			Analysis Date:	SeqNo:	646208	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	0.5022	0.0100	0.5	0	100	90	110	0	0	0	0
Manganese	0.0503	0.00100	0.05	0	101	90	110	0	0	0	0

Sample ID:	ICB-24591	SampType:	ICB	TestCode:	6010_WDIS	Units:	mg/L	Prep Date:	Run ID:	TJA IRIS_091216D	
Client ID:	ZZZZZ	Batch ID:	24591	TestNo:	6010A			Analysis Date:	SeqNo:	646089	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	0.00500	0	0	0	0	0	0	0	0	0
Copper	ND	0.0100	0	0	0	0	0	0	0	0	0

Sample ID:	ICB-24591	SampType:	ICB	TestCode:	6010_WDIS	Units:	mg/L	Prep Date:	Run ID:	TJA IRIS_091216D	
Client ID:	ZZZZZ	Batch ID:	24591	TestNo:	6010A			Analysis Date:	SeqNo:	646185	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	ND	0.0100	0	0	0	0	0	0	0	0	0
Iron	ND	0.0100	0	0	0	0	0	0	0	0	0
Manganese	ND	0.00100	0	0	0	0	0	0	0	0	0

Sample ID:	ICV	SampType:	ICV	TestCode:	6010_WDIS	Units:	mg/L	Prep Date:	Run ID:	TJA IRIS_091216D	
Client ID:	ZZZZZ	Batch ID:	24591	TestNo:	6010A			Analysis Date:	SeqNo:	646088	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.4941	0.0100	0.5	0	98.8	90	110	0	0	0	0
Chromium	0.2503	0.00500	0.25	0	100	90	110	0	0	0	0
Copper	0.491	0.0100	0.5	0	98.2	90	110	0	0	0	0

Sample ID:	ICV	SampType:	ICV	TestCode:	6010_WDIS	Units:	mg/L	Prep Date:	Run ID:	TJA IRIS_091216D	
Client ID:	ZZZZZ	Batch ID:	24591	TestNo:	6010A			Analysis Date:	SeqNo:	646183	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDIS

CLIENT: Maul, Foster & Alongi
Work Order: 0912075
Project: TrueGuard Pilot / 9009.01.12/05

Sample ID: ICV	SampType: ICV	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_091216D						
Client ID: ZZZZZ	Batch ID: 24591	TestNo: 6010A		Analysis Date: 12/17/2009	SeqNo: 646183						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.5046	0.0100	0.5	0	101	90	110	0	0	0	
Iron	0.5456	0.0100	0.5	0	109	90	110	0	0	0	
Manganese	0.0527	0.00100	0.05	0	105	90	110	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

CLIENT: Maul, Foster & Alongi

Work Order: 0912075

Project: TrueGuard Pilot / 9009.01.12/05

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_WDISS

Sample ID: 0912082-01GMS	SampType: MS	TestCode: 6020_WDISS	Units: ug/L	Prep Date: 12/16/2009	Run ID: ICPMS_091217B						
Client ID: ZZZZZ	Batch ID: 24590	TestNo: SW6020		Analysis Date: 12/17/2009	SeqNo: 646144						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	476.8	10	500	10.95	93.2	70	130	0	0	0	0

Sample ID: 0912082-01GMSD	SampType: MSD	TestCode: 6020_WDISS	Units: ug/L	Prep Date: 12/16/2009	Run ID: ICPMS_091217B						
Client ID: ZZZZZ	Batch ID: 24590	TestNo: SW6020		Analysis Date: 12/17/2009	SeqNo: 646145						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	464.1	10	500	10.95	90.6	70	130	476.8	2.70	20	20

Sample ID: 0912082-01GDUP	SampType: DUP	TestCode: 6020_WDISS	Units: ug/L	Prep Date: 12/16/2009	Run ID: ICPMS_091217B						
Client ID: ZZZZZ	Batch ID: 24590	TestNo: SW6020		Analysis Date: 12/17/2009	SeqNo: 646143						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	13.24	10	0	0	0	0	0	10.95	18.9	20	20

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_091217B						
Client ID: ZZZZZ	Batch ID: 24590	TestNo: SW6020		Analysis Date: 12/17/2009	SeqNo: 646140						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	50.73	1.0	50	0	101	90	110	0	0	0	0

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_091217B						
Client ID: ZZZZZ	Batch ID: 24590	TestNo: SW6020		Analysis Date: 12/17/2009	SeqNo: 646150						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	50.89	1.0	50	0	102	90	110	0	0	0	0

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_091217B						
Client ID: ZZZZZ	Batch ID: 24590	TestNo: SW6020		Analysis Date: 12/17/2009	SeqNo: 646158						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	50.89	1.0	50	0	102	90	110	0	0	0	0

Qualifiers: ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

ANALYTICAL QC SUMMARY REPORT

CLIENT: Maul, Foster & Alongi

Work Order: 0912075

Project: TrueGuard Pilot / 9009.01.12/05

TestCode: 6020_WDISS

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_091217B					
Client ID: ZZZZZ	Batch ID: 24590	TestNo: SW6020		Analysis Date: 12/17/2009	SeqNo: 646158					
Analyte	Result	PQL	SPK value	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	51.31	1.0	50	103	90	110	0	0	0	

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_091217B					
Client ID: ZZZZZ	Batch ID: 24590	TestNo: SW6020		Analysis Date: 12/17/2009	SeqNo: 646318					
Analyte	Result	PQL	SPK value	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	51.05	1.0	50	102	90	110	0	0	0	

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_091217B					
Client ID: ZZZZZ	Batch ID: 24590	TestNo: SW6020		Analysis Date: 12/17/2009	SeqNo: 646322					
Analyte	Result	PQL	SPK value	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	50.91	1.0	50	102	90	110	0	0	0	

Sample ID: ICB-24590	SampType: ICB	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_091217B					
Client ID: ZZZZZ	Batch ID: 24590	TestNo: SW6020		Analysis Date: 12/17/2009	SeqNo: 646141					
Analyte	Result	PQL	SPK value	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	1.0	0	0	0	0	0	0	0	

Sample ID: ICV	SampType: ICV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_091217B					
Client ID: ZZZZZ	Batch ID: 24590	TestNo: SW6020		Analysis Date: 12/17/2009	SeqNo: 646139					
Analyte	Result	PQL	SPK value	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	51.22	1.0	50	102	90	110	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

CLIENT: Maul, Foster & Alongi
Work Order: 0912075
Project: TrueGuard Pilot / 9009.01.12/05

ANALYTICAL QC SUMMARY REPORT

TestCode: CR6_CWA_DISS

Sample ID: MBLK	SampType: MBLK	TestCode: CR6_CWA_DI	Units: mg/L	Prep Date:	Run ID: GENESIS-1_091215B
Client ID: ZZZZZ	Batch ID: R58775	TestNo: M3500-Cr D		Analysis Date: 12/15/2009	SeqNo: 645191
Analyte	Result	PQL	SPK value	SPK Ref Val	%RCD
Chromium, Hexavalent Dissolved	ND	0.0050			

Sample ID: LCS	SampType: LCS	TestCode: CR6_CWA_DI	Units: mg/L	Prep Date:	Run ID: GENESIS-1_091215B	
Client ID: ZZZZZ	Batch ID: R58775	TestNo: M3500-Cr D		Analysis Date: 12/15/2009	SeqNo: 645192	
Analyte	Result	PQL	SPK value	SPK Ref Val	%RCD	
Chromium, Hexavalent Dissolved	0.047	0.0050	0.05	0	94	
				LowLimit	HighLimit	RPD Ref Val
				80	120	0

Sample ID: A0912076-01CMS	SampType: MS	TestCode: CR6_CWA_DI	Units: mg/L	Prep Date:	Run ID: GENESIS-1_091215B	
Client ID: ZZZZZ	Batch ID: R58775	TestNo: M3500-Cr D		Analysis Date: 12/15/2009	SeqNo: 645195	
Analyte	Result	PQL	SPK value	SPK Ref Val	%RCD	
Chromium, Hexavalent Dissolved	0.12	0.0050	0.05	0.073	94	
				LowLimit	HighLimit	RPD Ref Val
				75	125	0

Sample ID: A0912076-01CMSD	SampType: MSD	TestCode: CR6_CWA_DI	Units: mg/L	Prep Date:	Run ID: GENESIS-1_091215B	
Client ID: ZZZZZ	Batch ID: R58775	TestNo: M3500-Cr D		Analysis Date: 12/15/2009	SeqNo: 645196	
Analyte	Result	PQL	SPK value	SPK Ref Val	%RCD	
Chromium, Hexavalent Dissolved	0.122	0.0050	0.05	0.073	98	
				LowLimit	HighLimit	RPD Ref Val
				75	125	0.12

Sample ID: A0912076-01CDUP	SampType: DUP	TestCode: CR6_CWA_DI	Units: mg/L	Prep Date:	Run ID: GENESIS-1_091215B	
Client ID: ZZZZZ	Batch ID: R58775	TestNo: M3500-Cr D		Analysis Date: 12/15/2009	SeqNo: 645194	
Analyte	Result	PQL	SPK value	SPK Ref Val	%RCD	
Chromium, Hexavalent Dissolved	0.074	0.0050	0	0	0	
				LowLimit	HighLimit	RPD Ref Val
				0	0	0.073

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

ANALYTICAL QC SUMMARY REPORT

CLIENT: Maul, Foster & Alongi

Work Order: 0912075

Project: TrueGuard Pilot / 9009.01.12/05

TestCode: IC_GW

Sample ID: MB-R58869	SampType: MBLK	TestCode: IC_GW	Units: mg/L	Prep Date: 12/17/2009	Run ID: IC_091218B
Client ID: ZZZZZ	Batch ID: R58869	TestNo: SW9056		Analysis Date: 12/18/2009	SeqNo: 646889
Analyte	Result	PQL	SPK value	LowLimit	HighLimit
	0.12	0.500	SPK Ref Val	%REC	RPD Ref Val
Sulfate					%RPD
					RPDLimit
					Qual
					J

Sample ID: LCS-R58869	SampType: LCS	TestCode: IC_GW	Units: mg/L	Prep Date: 12/17/2009	Run ID: IC_091218B
Client ID: ZZZZZ	Batch ID: R58869	TestNo: SW9056		Analysis Date: 12/18/2009	SeqNo: 646888
Analyte	Result	PQL	SPK value	LowLimit	HighLimit
	12.58	0.500	SPK Ref Val	%REC	RPD Ref Val
Sulfate					%RPD
					RPDLimit
					Qual

Sample ID: 0912081-01BMS	SampType: MS	TestCode: IC_GW	Units: mg/L	Prep Date: 12/17/2009	Run ID: IC_091218B
Client ID: ZZZZZ	Batch ID: R58869	TestNo: SW9056		Analysis Date: 12/18/2009	SeqNo: 646875
Analyte	Result	PQL	SPK value	LowLimit	HighLimit
	50.7	5.00	SPK Ref Val	%REC	RPD Ref Val
Sulfate					%RPD
					RPDLimit
					Qual

Sample ID: 0912082-01BMS	SampType: MS	TestCode: IC_GW	Units: mg/L	Prep Date: 12/17/2009	Run ID: IC_091218B
Client ID: ZZZZZ	Batch ID: R58869	TestNo: SW9056		Analysis Date: 12/18/2009	SeqNo: 646880
Analyte	Result	PQL	SPK value	LowLimit	HighLimit
	53.7	5.00	SPK Ref Val	%REC	RPD Ref Val
Sulfate					%RPD
					RPDLimit
					Qual

Sample ID: 0912081-01BMSD	SampType: MSD	TestCode: IC_GW	Units: mg/L	Prep Date: 12/17/2009	Run ID: IC_091218B
Client ID: ZZZZZ	Batch ID: R58869	TestNo: SW9056		Analysis Date: 12/18/2009	SeqNo: 646876
Analyte	Result	PQL	SPK value	LowLimit	HighLimit
	51.6	5.00	SPK Ref Val	%REC	RPD Ref Val
Sulfate					%RPD
					RPDLimit
					Qual

Sample ID: 0912082-01BMSD	SampType: MSD	TestCode: IC_GW	Units: mg/L	Prep Date: 12/17/2009	Run ID: IC_091218B
Client ID: ZZZZZ	Batch ID: R58869	TestNo: SW9056		Analysis Date: 12/18/2009	SeqNo: 646881
Analyte	Result	PQL	SPK value	LowLimit	HighLimit
			SPK Ref Val	%REC	RPD Ref Val
					%RPD
					RPDLimit
					Qual

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

CLIENT: Maul, Foster & Alongi
Work Order: 0912075
Project: TrueGuard Pilot / 9009.01.12/05

ANALYTICAL QC SUMMARY REPORT

TestCode: IC_GW

Sample ID: 0912082-01BMSD	Batch ID: R58869	SampType: MSD	TestCode: IC_GW	Units: mg/L	Prep Date: 12/17/2009	Run ID: IC_091218B					
Client ID: ZZZZZ			TestNo: SW9056		Analysis Date: 12/18/2009	SeqNo: 646881					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	53.7	5.00	50	3.9	99.6	69.1	122	53.7	0	20	

Sample ID: CCV	Batch ID: R58869	SampType: CCV	TestCode: IC_GW	Units: mg/L	Prep Date: 12/17/2009	Run ID: IC_091218B					
Client ID: ZZZZZ			TestNo: SW9056		Analysis Date: 12/18/2009	SeqNo: 646895					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	10.13	0.500	10	0	101	90	110	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

KEY TO FLAGS

- A This sample contains a Gasoline Range Organic not identified as a specific hydrocarbon product. The result was quantified against gasoline calibration standards.
- A1 This sample contains a Diesel Range Organic not identified as a specific hydrocarbon product. The result was quantified against diesel calibration standards.
- A2 This sample contains a Lube Oil Range Organic not identified as a specific hydrocarbon product. The result was quantified against a lube oil calibration standard.
- A3 The result was determined to be Non-Detect based on hydrocarbon pattern recognition. The product was carry-over from another hydrocarbon type.
- B The blank exhibited a positive result greater than the reporting limit for this compound.
- CN See Case Narrative.
- D Result is based from a dilution.
- E Result exceeds the calibration range for this compound. The result should be considered as estimate.
- F The positive result for this hydrocarbon is due to single component contamination. The product does not match any hydrocarbon in the fuels library.
- H Sample was analyzed outside recommended hold time.
- HT At clients request, sample was analyzed outside recommended hold time.
- J The result for this analyte is between the MDL and the PQL and should be considered as estimated concentration.
- K Diesel result is biased high due to amount of Oil contained in the sample.
- L Diesel result is biased high due to amount of Gasoline contained in the sample.
- M Oil result is biased high due to amount of Diesel contained in the sample.
- N Gasoline result is biased high due to amount of Diesel contained in the sample.
- MC Sample concentration is greater than 4x the spiked value, the spiked value is considered insignificant.
- MI Result is outside control limits due to matrix interference.
- MSA Value determined by Method of Standard Addition.
- O Laboratory Control Standard (LCS) exceeded laboratory control limits, but meets CCV criteria. Data meets EPA requirements.
- P Detection levels of Methylene Chloride may be laboratory contamination, due to previous analysis or background levels.
- Q Detection levels elevated due to sample matrix.
- R RPD control limits were exceeded.
- RF Duplicate failed due to result being at or near the method-reporting limit.
- RP Matrix spike values exceed established QC limits, post digestion spike is in control.
- S Recovery is outside control limits.
- SC Closing CCV or LCS exceeded high recovery control limits, but associated samples are non-detect. Data meets EPA requirements.
- * The result for this parameter was greater than the maximum contaminant level of the TCLP regulatory limit.

CHAIN OF CUSTODY RECORD

Pa _____ of _____

Specialty Analytical
 11711 SE Capps Road
 Clackamas, OR 97015
 Phone: 503-607-1331
 Fax: 503-607-1336

Contact Person/Project Manager Tony SILVA
 Company MACLESTER + ALORAY
 Address 3121 SW MADRID AVE
PORTLAND OR 97239
 Phone 971-544-2139 Fax 971-544-2140

Project No. 9009.01.12/05 Project Name TRUWARD P1407
 Project Site Location OR WA Other _____
 Invoice To TRUWARD P.O. No. _____

Collected By: Russell G Adams
 Signature _____
 Printed RUSSELL G ADAMS

Signature _____
 Printed _____

Turn Around Time _____
 Normal 5-7 Business Days
 Rush _____ Specify _____
Rush Analyses Must Be Scheduled With The Lab In Advance

Date	Time	Sample I.D.	Matrix	No. of Containers	Analyses							For Laboratory Use Lab Job No. <u>0912075</u> Shipped Via _____ Air Bill No. _____ Temperature On Receipt _____ °C Specialty Analytical Containers? Y/N Specialty Analytical Trip Blanks? Y/N	Comments	Lab I.D.
					DISSOLVED METALS (6010)	DISSOLVED METALS (6010)	DISSOLVED METALS (6010)	DISSOLVED METALS (6010)	DISSOLVED METALS (6010)	DISSOLVED METALS (6010)	DISSOLVED METALS (6010)			
12/15/09	0931	MW017	W	5	X	X	X	X	X	X	X	X	X	
	0933	MW018	↓	↓	X	X	X	X	X	X	X	X	X	
	1018	MW019	↓	↓	X	X	X	X	X	X	X	X	X	
	1031	MW020	↓	↓	X	X	X	X	X	X	X	X	X	
	1113	MW021	↓	↓	X	X	X	X	X	X	X	X	X	
	1128	MW022	↓	↓	X	X	X	X	X	X	X	X	X	

Relinquished By: [Signature] Date 12/15/09 Time 1320
 Company: MCA
 Received By: _____ Company: _____
 Relinquished By: _____ Company: _____
 Received For Lab By: [Signature] Date 12/15/09 Time 1320

Unless Reclaimed, Samples Will Be Disposed of 60 Days After Receipt.
 Samples held beyond 60 days subject to storage fee(s)



Specialty Analytical

11711 SE Capps Road
Clackamas, OR 97015
(503) 607-1331
Fax (503) 607-1336

January 07, 2010

Tony Silva
Maul, Foster & Alongi
7223 NE Hazel Dell Avenue
Suite B
Vancouver, WA 98665

TEL: (360) 694-2691

FAX: (360) 906-1958

RE: TrueGuard Pilot / 9009.01.12/05

Dear Tony Silva:

Order No.: 0912165

Specialty Analytical received 6 samples on 12/22/2009 for the analyses presented in the following report.

There were no problems with the analysis and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative, or as qualified with flags. Results apply only to the samples analyzed. Without approval of the laboratory, the reproduction of this report is only permitted in its entirety.

If you have any questions regarding these tests, please feel free to call.

Sincerely,


Cindy Hillyard
Project Manager


Technical Review



Specialty Analytical

Date: 07-Jan-10

CLIENT: Maul, Foster & Alongi
Project: TrueGuard Pilot / 9009.01.12/05

Lab Order: 0912165

Lab ID: 0912165-01
Client Sample ID: MW17

Collection Date: 12/22/2009 9:35:00 AM
Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A				Analyst: zau
Boron	0.471	0.0100		mg/L	1	12/23/2009 2:34:31 PM
Chromium	0.00810	0.00500		mg/L	1	12/23/2009 2:34:31 PM
Copper	ND	0.0100		mg/L	1	12/23/2009 2:34:31 PM
Iron	26.7	0.100		mg/L	10	12/24/2009 11:48:35 AM
Manganese	3.32	0.0100		mg/L	10	12/24/2009 11:48:35 AM
DISSOLVED METALS BY ICP/MS		SW6020				Analyst: das
Arsenic	430	10		ug/L	10	1/4/2010 5:08:00 PM
DISSOLVED HEXAVALENT CHROMIUM		M3500-CR D				Analyst: zau
Chromium, Hexavalent Dissolved	ND	0.0050		mg/L	1	12/22/2009 5:03:00 PM
ANIONS BY ION CHROMATOGRAPHY		SW9056				Analyst: en
Sulfate	8.22	0.500		mg/L	1	12/29/2009

Lab ID: 0912165-02
Client Sample ID: MW18

Collection Date: 12/22/2009 9:46:00 AM
Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A				Analyst: zau
Boron	0.0780	0.0100		mg/L	1	12/23/2009 2:39:35 PM
Chromium	ND	0.00500		mg/L	1	12/23/2009 2:39:35 PM
Copper	ND	0.0100		mg/L	1	12/23/2009 2:39:35 PM
Iron	249	0.200		mg/L	20	12/24/2009 11:53:38 AM
Manganese	19.5	0.0200		mg/L	20	12/24/2009 11:53:38 AM
DISSOLVED METALS BY ICP/MS		SW6020				Analyst: das
Arsenic	95	1.0		ug/L	1	12/29/2009 5:59:00 PM
DISSOLVED HEXAVALENT CHROMIUM		M3500-CR D				Analyst: zau
Chromium, Hexavalent Dissolved	ND	0.0050		mg/L	1	12/22/2009 5:07:00 PM
ANIONS BY ION CHROMATOGRAPHY		SW9056				Analyst: en
Sulfate	1680	50.0		mg/L	100	12/23/2009

Specialty Analytical

Date: 07-Jan-10

CLIENT: Maul, Foster & Alongi
Project: TrueGuard Pilot / 9009.01.12/05

Lab Order: 0912165

Lab ID: 0912165-03

Collection Date: 12/22/2009 10:35:00 AM

Client Sample ID: MW19

Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A				Analyst: zau
Boron	0.196	0.0100		mg/L	1	12/23/2009 2:44:37 PM
Chromium	0.00500	0.00500		mg/L	1	12/23/2009 2:44:37 PM
Copper	ND	0.0100		mg/L	1	12/23/2009 2:44:37 PM
Iron	109	0.200		mg/L	20	12/24/2009 11:58:41 AM
Manganese	11.3	0.0200		mg/L	20	12/24/2009 11:58:41 AM
DISSOLVED METALS BY ICP/MS		SW6020				Analyst: das
Arsenic	58	1.0		ug/L	1	12/29/2009 6:06:00 PM
DISSOLVED HEXAVALENT CHROMIUM		M3500-CR D				Analyst: zau
Chromium, Hexavalent Dissolved	ND	0.0050		mg/L	1	12/22/2009 5:08:00 PM
ANIONS BY ION CHROMATOGRAPHY		SW9056				Analyst: en
Sulfate	2190	50.0		mg/L	100	12/23/2009

Lab ID: 0912165-04

Collection Date: 12/22/2009 10:44:00 AM

Client Sample ID: MW20

Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A				Analyst: zau
Boron	0.0820	0.0100		mg/L	1	12/23/2009 2:49:52 PM
Chromium	0.00600	0.00500		mg/L	1	12/23/2009 2:49:52 PM
Copper	ND	0.0100		mg/L	1	12/23/2009 2:49:52 PM
Iron	57.4	0.100		mg/L	10	12/24/2009 12:03:46 PM
Manganese	5.64	0.0100		mg/L	10	12/24/2009 12:03:46 PM
DISSOLVED METALS BY ICP/MS		SW6020				Analyst: das
Arsenic	98	1.0		ug/L	1	12/29/2009 6:13:00 PM
DISSOLVED HEXAVALENT CHROMIUM		M3500-CR D				Analyst: zau
Chromium, Hexavalent Dissolved	ND	0.0050		mg/L	1	12/22/2009 5:09:00 PM
ANIONS BY ION CHROMATOGRAPHY		SW9056				Analyst: en
Sulfate	3.38	0.500		mg/L	1	12/29/2009



Specialty Analytical

Date: 07-Jan-10

CLIENT: Maul, Foster & Alongi
Project: TrueGuard Pilot / 9009.01.12/05

Lab Order: 0912165

Lab ID: 0912165-05

Collection Date: 12/22/2009 11:35:00 AM

Client Sample ID: MW21

Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A				Analyst: zau
Boron	0.185	0.0100		mg/L	1	12/23/2009 3:10:08 PM
Chromium	0.00680	0.00500		mg/L	1	12/23/2009 3:10:08 PM
Copper	ND	0.0100		mg/L	1	12/23/2009 3:10:08 PM
Iron	64.6	0.100		mg/L	10	12/24/2009 12:08:50 PM
Manganese	6.05	0.0100		mg/L	10	12/24/2009 12:08:50 PM
DISSOLVED METALS BY ICP/MS		SW6020				Analyst: das
Arsenic	460	10		ug/L	10	1/4/2010 5:14:00 PM
DISSOLVED HEXAVALENT CHROMIUM		M3500-CR D				Analyst: zau
Chromium, Hexavalent Dissolved	ND	0.0050		mg/L	1	12/22/2009 5:10:00 PM
ANIONS BY ION CHROMATOGRAPHY		SW9056				Analyst: en
Sulfate	14.5	0.500		mg/L	1	12/29/2009

Lab ID: 0912165-06

Collection Date: 12/22/2009 11:45:00 AM

Client Sample ID: MW22

Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A				Analyst: zau
Boron	0.619	0.0100		mg/L	1	12/23/2009 3:15:11 PM
Chromium	0.00620	0.00500		mg/L	1	12/23/2009 3:15:11 PM
Copper	ND	0.0100		mg/L	1	12/23/2009 3:15:11 PM
Iron	28.5	0.100		mg/L	10	12/24/2009 12:29:06 PM
Manganese	3.13	0.0100		mg/L	10	12/24/2009 12:29:06 PM
DISSOLVED METALS BY ICP/MS		SW6020				Analyst: das
Arsenic	500	10		ug/L	10	1/4/2010 5:21:00 PM
DISSOLVED HEXAVALENT CHROMIUM		M3500-CR D				Analyst: zau
Chromium, Hexavalent Dissolved	ND	0.0050		mg/L	1	12/22/2009 5:11:00 PM
ANIONS BY ION CHROMATOGRAPHY		SW9056				Analyst: en
Sulfate	1.49	0.500		mg/L	1	12/29/2009

CLIENT: Maul, Foster & Alongi

Work Order: 0912165

Project: TrueGuard Pilot / 9009.01.12/05

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDIS

Sample ID: 0912162-01GMS	SampType: MS	TestCode: 6010_WDIS	Units: mg/L	Prep Date: 12/23/2009	Run ID: TJA IRIS_091223E
Client ID: ZZZZZ	Batch ID: 24660	TestNo: 6010A		Analysis Date: 12/23/2009	SeqNo: 648519

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.4746	0.0100	0.5	0	94.9	88.2	118	0	0	0	
Chromium	0.2629	0.00500	0.25	0.0063	103	93.4	112	0	0	0	
Copper	0.4814	0.0100	0.5	0	96.3	92.7	114	0	0	0	
Manganese	1.329	0.00100	0.05	1.329	0	83.9	118	0	0	0	S,MC

Sample ID: 0912162-01GMS	SampType: MS	TestCode: 6010_WDIS	Units: mg/L	Prep Date: 12/23/2009	Run ID: TJA IRIS_091223E
Client ID: ZZZZZ	Batch ID: 24660	TestNo: 6010A		Analysis Date: 12/24/2009	SeqNo: 649491

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	32.58	0.0100	0.5	33.78	-240	75	125	0	0	0	S,MC

Sample ID: 0912162-01GMSD	SampType: MSD	TestCode: 6010_WDIS	Units: mg/L	Prep Date: 12/23/2009	Run ID: TJA IRIS_091223E
Client ID: ZZZZZ	Batch ID: 24660	TestNo: 6010A		Analysis Date: 12/23/2009	SeqNo: 648520

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.481	0.0100	0.5	0	96.2	88.2	118	0.4746	1.34	20	
Chromium	0.2632	0.00500	0.25	0.0063	103	93.4	112	0.2629	0.114	20	
Copper	0.4786	0.0100	0.5	0	95.7	92.7	114	0.4814	0.583	20	
Manganese	1.328	0.00100	0.05	1.329	-2	83.9	118	1.329	0.0753	20	S,MC

Sample ID: 0912162-01GMSD	SampType: MSD	TestCode: 6010_WDIS	Units: mg/L	Prep Date: 12/23/2009	Run ID: TJA IRIS_091223E
Client ID: ZZZZZ	Batch ID: 24660	TestNo: 6010A		Analysis Date: 12/24/2009	SeqNo: 649492

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	32.44	0.0100	0.5	33.78	-268	75	125	32.58	0.431	20	S,MC

Qualifiers: ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

ANALYTICAL QC SUMMARY REPORT

CLIENT: Maul, Foster & Alongi
 Work Order: 0912165
 Project: TrueGuard Pilot / 9009.01.12/05

TestCode: 6010_WDIS

Sample ID: 0912162-01GDUP	SampType: DUP	TestCode: 6010_WDIS	Units: mg/L	Prep Date: 12/23/2009	Run ID: TJA IRIS_091223E						
Client ID: ZZZZZ	Batch ID: 24660	TestNo: 6010A		Analysis Date: 12/23/2009	SeqNo: 648518						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Boron	ND	0.0100	0	0	0	0	0	0	0	0	20
Chromium	0.0053	0.00500	0	0	0	0	0	0.0063	17.2	0	20
Copper	ND	0.0100	0	0	0	0	0	0	0	0	20
Manganese	1.331	0.00100	0	0	0	0	0	1.329	0.150	0	20

Sample ID: 0912162-01GDUP	SampType: DUP	TestCode: 6010_WDIS	Units: mg/L	Prep Date: 12/23/2009	Run ID: TJA IRIS_091223E						
Client ID: ZZZZZ	Batch ID: 24660	TestNo: 6010A		Analysis Date: 12/24/2009	SeqNo: 649490						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron	34.02	0.0100	0	0	0	0	0	33.78	0.708	0	20
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Sample ID: CCV	SampType: CCV	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_091223E						
Client ID: ZZZZZ	Batch ID: 24660	TestNo: 6010A		Analysis Date: 12/23/2009	SeqNo: 648486						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Boron	0.4885	0.0100	0.5	0	97.7	90	110	0	0	0	0
Chromium	0.2573	0.00500	0.25	0	103	90	110	0	0	0	0
Copper	0.4912	0.0100	0.5	0	98.2	90	110	0	0	0	0
Iron	0.52	0.0100	0.5	0	104	90	110	0	0	0	0
Manganese	0.0506	0.00100	0.05	0	101	90	110	0	0	0	0

Sample ID: CCV	SampType: CCV	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_091223E						
Client ID: ZZZZZ	Batch ID: 24660	TestNo: 6010A		Analysis Date: 12/23/2009	SeqNo: 648492						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium	0.257	0.00500	0.25	0	103	90	110	0	0	0	0
Copper	0.4848	0.0100	0.5	0	97	90	110	0	0	0	0
Iron	0.5236	0.0100	0.5	0	105	90	110	0	0	0	0
Manganese	0.0505	0.00100	0.05	0	101	90	110	0	0	0	0

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

CLIENT: Maul, Foster & Alongi
Work Order: 0912165
Project: TrueGuard Pilot / 9009.01.12/05

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDIS

Sample ID: CCV SampType: CCV TestCode: 6010_WDIS Units: mg/L Prep Date: Run ID: TJA IRIS_091223E
 Client ID: ZZZZZ Batch ID: 24660 TestNo: 6010A Analysis Date: 12/23/2009 SeqNo: 648503

Analyte	Result	PQL	SPK value	SPK RefVal	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.4892	0.0100	0.5	0	97.8	90	110	0	0	0	
Chromium	0.2534	0.00500	0.25	0	101	90	110	0	0	0	
Copper	0.4891	0.0100	0.5	0	97.8	90	110	0	0	0	
Iron	0.5224	0.0100	0.5	0	104	90	110	0	0	0	
Manganese	0.0501	0.00100	0.05	0	100	90	110	0	0	0	

Sample ID: CCV SampType: CCV TestCode: 6010_WDIS Units: mg/L Prep Date: Run ID: TJA IRIS_091223E
 Client ID: ZZZZZ Batch ID: 24660 TestNo: 6010A Analysis Date: 12/23/2009 SeqNo: 648514

Analyte	Result	PQL	SPK value	SPK RefVal	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.4996	0.0100	0.5	0	99.9	90	110	0	0	0	
Chromium	0.2619	0.00500	0.25	0	105	90	110	0	0	0	
Copper	0.4984	0.0100	0.5	0	99.7	90	110	0	0	0	
Manganese	0.0537	0.00100	0.05	0	107	90	110	0	0	0	

Sample ID: CCV SampType: CCV TestCode: 6010_WDIS Units: mg/L Prep Date: Run ID: TJA IRIS_091223E
 Client ID: ZZZZZ Batch ID: 24660 TestNo: 6010A Analysis Date: 12/23/2009 SeqNo: 648525

Analyte	Result	PQL	SPK value	SPK RefVal	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.5044	0.0100	0.5	0	101	90	110	0	0	0	
Chromium	0.2689	0.00500	0.25	0	108	90	110	0	0	0	
Copper	0.4992	0.0100	0.5	0	99.8	90	110	0	0	0	
Manganese	0.0548	0.00100	0.05	0	110	90	110	0	0	0	

Sample ID: CCV SampType: CCV TestCode: 6010_WDIS Units: mg/L Prep Date: Run ID: TJA IRIS_091223E
 Client ID: ZZZZZ Batch ID: 24660 TestNo: 6010A Analysis Date: 12/23/2009 SeqNo: 648536

Analyte	Result	PQL	SPK value	SPK RefVal	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.4961	0.0100	0.5	0	99.2	90	110	0	0	0	
Chromium	0.2683	0.00500	0.25	0	107	90	110	0	0	0	
Copper	0.4931	0.0100	0.5	0	98.6	90	110	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

ANALYTICAL QC SUMMARY REPORT

CLIENT: Maul, Foster & Alongi
Work Order: 0912165
Project: TrueGuard Pilot / 9009.01.12/05

TestCode: 6010_WDIS

Sample ID: CCV	SampType: CCV	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_091223E						
Client ID: ZZZZZ	Batch ID: 24660	TestNo: 6010A		Analysis Date: 12/24/2009	SeqNo: 649493						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron	0.4867	0.0100	0.5	0	97.3	90	110	0	0		
Manganese	0.0473	0.00100	0.05	0	94.6	90	110	0	0		

Sample ID: CCV	SampType: CCV	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_091223E						
Client ID: ZZZZZ	Batch ID: 24660	TestNo: 6010A		Analysis Date: 12/24/2009	SeqNo: 649503						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron	0.5016	0.0100	0.5	0	100	90	110	0	0		
Manganese	0.0481	0.00100	0.05	0	96.2	90	110	0	0		

Sample ID: CCV	SampType: CCV	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_091223E						
Client ID: ZZZZZ	Batch ID: 24660	TestNo: 6010A		Analysis Date: 12/24/2009	SeqNo: 649505						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron	0.5085	0.0100	0.5	0	102	90	110	0	0		
Manganese	0.0492	0.00100	0.05	0	98.4	90	110	0	0		

Sample ID: ICB-24660	SampType: ICB	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_091223E						
Client ID: ZZZZZ	Batch ID: 24660	TestNo: 6010A		Analysis Date: 12/23/2009	SeqNo: 648487						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium	ND	0.00500	0	0	0	0	0	0	0		
Copper	ND	0.0100	0	0	0	0	0	0	0		
Iron	ND	0.0100	0	0	0	0	0	0	0		
Manganese	ND	0.00100	0	0	0	0	0	0	0		

Sample ID: ICV	SampType: ICV	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_091223E						
Client ID: ZZZZZ	Batch ID: 24660	TestNo: 6010A		Analysis Date: 12/23/2009	SeqNo: 648485						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

ANALYTICAL QC SUMMARY REPORT

CLIENT: Maul, Foster & Alongi
 Work Order: 0912165

Project: TrueGuard Pilot / 9009.01.12/05

TestCode: 6010_WDIS

Sample ID: ICV	SampType: ICV	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_091223E
Client ID: ZZZZZ	Batch ID: 24660	TestNo: 6010A		Analysis Date: 12/23/2009	SeqNo: 648485

Analyte	Result	PQL	SPK value	SPK RefVal	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.4904	0.0100	0.5	0	98.1	90	110	0	0	0	
Chromium	0.2565	0.00500	0.25	0	103	90	110	0	0	0	
Copper	0.4915	0.0100	0.5	0	98.3	90	110	0	0	0	
Iron	0.538	0.0100	0.5	0	108	90	110	0	0	0	
Manganese	0.0496	0.00100	0.05	0	99.2	90	110	0	0	0	

Sample ID: ICV	SampType: ICV	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_091223E
Client ID: ZZZZZ	Batch ID: 24660	TestNo: 6010A		Analysis Date: 12/24/2009	SeqNo: 649487

Analyte	Result	PQL	SPK value	SPK RefVal	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	0.4848	0.0100	0.5	0	97	90	110	0	0	0	
Manganese	0.0478	0.00100	0.05	0	95.6	90	110	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

ANALYTICAL QC SUMMARY REPORT

CLIENT: Maul, Foster & Alongi
Work Order: 0912165

Project: TrueGuard Pilot / 9009.01.12/05

TestCode: 6020_WDISS

Sample ID: 0912162-01GMS	SampType: MS	TestCode: 6020_WDISS	Units: ug/L	Prep Date: 12/23/2009	Run ID: ICPMS_091229B						
Client ID: ZZZZZ	Batch ID: 24661	TestNo: SW6020		Analysis Date: 12/29/2009	SeqNo: 649460						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	51.04	1.0	50	1.078	99.9	70	130	0	0	0	0

Sample ID: 0912162-01GMSD	SampType: MSD	TestCode: 6020_WDISS	Units: ug/L	Prep Date: 12/23/2009	Run ID: ICPMS_091229B						
Client ID: ZZZZZ	Batch ID: 24661	TestNo: SW6020		Analysis Date: 12/29/2009	SeqNo: 649461						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	51.95	1.0	50	1.078	102	70	130	51.04	1.77	20	20

Sample ID: 0912162-01GDUP	SampType: DUP	TestCode: 6020_WDISS	Units: ug/L	Prep Date: 12/23/2009	Run ID: ICPMS_091229B						
Client ID: ZZZZZ	Batch ID: 24661	TestNo: SW6020		Analysis Date: 12/29/2009	SeqNo: 649459						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	1.099	1.0	0	0	0	0	0	1.078	1.93	20	20

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_091229B						
Client ID: ZZZZZ	Batch ID: 24661	TestNo: SW6020		Analysis Date: 12/29/2009	SeqNo: 649455						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	53.05	1.0	50	0	106	90	110	0	0	0	0

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_091229B						
Client ID: ZZZZZ	Batch ID: 24661	TestNo: SW6020		Analysis Date: 12/29/2009	SeqNo: 649458						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	51.58	1.0	50	0	103	90	110	0	0	0	0

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_091229B						
Client ID: ZZZZZ	Batch ID: 24661	TestNo: SW6020		Analysis Date: 12/29/2009	SeqNo: 649469						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	51.58	1.0	50	0	103	90	110	0	0	0	0

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank
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CLIENT: Maul, Foster & Alongi
 Work Order: 0912165
 Project: TrueGuard Pilot / 9009.01.12/05

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_WDISS

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_091229B						
Client ID: ZZZZZ	Batch ID: 24661	TestNo: SW6020		Analysis Date: 12/29/2009	SeqNo: 649469						
Analyte	Result	PQL	SPK value	SPK RefVal	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	51.73	1.0	50	0	103	90	110	0	0	0	0

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_091229B						
Client ID: ZZZZZ	Batch ID: 24661	TestNo: SW6020		Analysis Date: 12/29/2009	SeqNo: 649478						
Analyte	Result	PQL	SPK value	SPK RefVal	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	50.91	1.0	50	0	102	90	110	0	0	0	0

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_091229B						
Client ID: ZZZZZ	Batch ID: 24661	TestNo: SW6020		Analysis Date: 1/4/2010	SeqNo: 650557						
Analyte	Result	PQL	SPK value	SPK RefVal	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	47.39	1.0	50	0	94.8	90	110	0	0	0	0

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_091229B						
Client ID: ZZZZZ	Batch ID: 24661	TestNo: SW6020		Analysis Date: 1/4/2010	SeqNo: 650568						
Analyte	Result	PQL	SPK value	SPK RefVal	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	48.77	1.0	50	0	97.5	90	110	0	0	0	0

Sample ID: ICB-24661	SampType: ICB	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_091229B						
Client ID: ZZZZZ	Batch ID: 24661	TestNo: SW6020		Analysis Date: 12/29/2009	SeqNo: 649456						
Analyte	Result	PQL	SPK value	SPK RefVal	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.1382	1.0	0	0	0	0	0	0	0	0	0

Sample ID: ICB	SampType: ICB	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_091229B						
Client ID: ZZZZZ	Batch ID: 24661	TestNo: SW6020		Analysis Date: 12/29/2009	SeqNo: 649454						
Analyte	Result	PQL	SPK value	SPK RefVal	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.1382	1.0	0	0	0	0	0	0	0	0	0

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank
 Page 7 of 11

CLIENT: Maul, Foster & Alongi
Work Order: 0912165

Project: TrueGuard Pilot / 9009.01.12/05

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_WDISS

Sample ID: ICV	SampType: ICV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_091229B						
Client ID: ZZZZZ	Batch ID: 24661	TestNo: SW6020		Analysis Date: 12/29/2009	SeqNo: 649454						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	51.81	1.0	50	0	104	90	110	0	0	0	

Sample ID: ICV	SampType: ICV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_091229B						
Client ID: ZZZZZ	Batch ID: 24661	TestNo: SW6020		Analysis Date: 1/4/2010	SeqNo: 650549						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	49.3	1.0	50	0	98.6	90	110	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: Maul, Foster & Alongi
Work Order: 0912165

Project: TrueGuard Pilot / 9009.01.12/05

ANALYTICAL QC SUMMARY REPORT

TestCode: CR6_CWA_DISS

Sample ID: MBLK	SampType: MBLK	TestCode: CR6_CWA_DI	Units: mg/L	Prep Date:	Run ID: GENESIS-1_091222C						
Client ID: ZZZZ	Batch ID: R58941	TestNo: M3500-Cr D		Analysis Date: 12/22/2009	SeqNo: 647971						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent Dissolved	ND	0.0050									

Sample ID: LCS	SampType: LCS	TestCode: CR6_CWA_DI	Units: mg/L	Prep Date:	Run ID: GENESIS-1_091222C						
Client ID: ZZZZ	Batch ID: R58941	TestNo: M3500-Cr D		Analysis Date: 12/22/2009	SeqNo: 647972						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent Dissolved	0.04717	0.0050	0.05	0	94.3	80	120	0	0	0	

Sample ID: 0912165-01BMS	SampType: MS	TestCode: CR6_CWA_DI	Units: mg/L	Prep Date:	Run ID: GENESIS-1_091222C						
Client ID: MW17	Batch ID: R58941	TestNo: M3500-Cr D		Analysis Date: 12/22/2009	SeqNo: 647977						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent Dissolved	0.057	0.0050	0.05	0	114	75	125	0	0	0	

Sample ID: 0912165-01BDUP	SampType: DUP	TestCode: CR6_CWA_DI	Units: mg/L	Prep Date:	Run ID: GENESIS-1_091222C						
Client ID: MW17	Batch ID: R58941	TestNo: M3500-Cr D		Analysis Date: 12/22/2009	SeqNo: 647974						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent Dissolved	ND	0.0050	0	0	0	0	0	0	0	0	20

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

ANALYTICAL QC SUMMARY REPORT

CLIENT: Maul, Foster & Alongi
Work Order: 0912165

Project: TrueGuard Pilot / 9009.01.12/05

TestCode: IC_GW

Sample ID: MB-R59021	SampType: MBLK	TestCode: IC_GW	Units: mg/L	Prep Date: 12/23/2009	Run ID: IC_091223A
Client ID: ZZZZZ	Batch ID: R59021	TestNo: SW9056		Analysis Date: 12/23/2009	SeqNo: 649164
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Sulfate	0.41	0.500			
				LowLimit	HighLimit
				RPD Ref Val	RPDLimit
					Qual

J

Sample ID: MB-R59022	SampType: MBLK	TestCode: IC_GW	Units: mg/L	Prep Date: 12/29/2009	Run ID: IC_091229A
Client ID: ZZZZZ	Batch ID: R59022	TestNo: SW9056		Analysis Date: 12/29/2009	SeqNo: 649173
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Sulfate	0.1	0.500			
				LowLimit	HighLimit
				RPD Ref Val	RPDLimit
					Qual

J

Sample ID: LCS-R59021	SampType: LCS	TestCode: IC_GW	Units: mg/L	Prep Date: 12/23/2009	Run ID: IC_091223A
Client ID: ZZZZZ	Batch ID: R59021	TestNo: SW9056		Analysis Date: 12/23/2009	SeqNo: 649163
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Sulfate	9.81	0.500	10	0.41	94
				89.6	112
					0

0

Sample ID: LCS-R59022	SampType: LCS	TestCode: IC_GW	Units: mg/L	Prep Date: 12/29/2009	Run ID: IC_091229A
Client ID: ZZZZZ	Batch ID: R59022	TestNo: SW9056		Analysis Date: 12/29/2009	SeqNo: 649172
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Sulfate	9.51	0.500	10	0.1	94.1
				89.6	112
					0

0

Sample ID: 0912165-01CMS	SampType: MS	TestCode: IC_GW	Units: mg/L	Prep Date: 12/23/2009	Run ID: IC_091223A
Client ID: MW17	Batch ID: R59021	TestNo: SW9056		Analysis Date: 12/23/2009	SeqNo: 649158
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Sulfate	506	50.0	500	19	97.4
				69.1	122
					0

0

Sample ID: 0912165-01CMS	SampType: MS	TestCode: IC_GW	Units: mg/L	Prep Date: 12/29/2009	Run ID: IC_091229A
Client ID: MW17	Batch ID: R59022	TestNo: SW9056		Analysis Date: 12/29/2009	SeqNo: 649166
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
				LowLimit	HighLimit
				RPD Ref Val	RPDLimit
					Qual

Qualifiers: ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

ANALYTICAL QC SUMMARY REPORT

TestCode: IC_GW

CLIENT: Maul, Foster & Alongi
 Work Order: 0912165
 Project: TrueGuard Pilot / 9009.01.12/05

Sample ID: 0912165-01CMS	SampType: MS	TestCode: IC_GW	Units: mg/L	Prep Date: 12/29/2009	Run ID: IC_091229A						
Client ID: MW17	Batch ID: R59022	TestNo: SW9056		Analysis Date: 12/29/2009	SeqNo: 649166						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	12.6	0.500	5	8.22	87.6	69.1	122	0	0	0	0

Sample ID: 0912165-01CMSD	SampType: MSD	TestCode: IC_GW	Units: mg/L	Prep Date: 12/23/2009	Run ID: IC_091223A						
Client ID: MW17	Batch ID: R59021	TestNo: SW9056		Analysis Date: 12/23/2009	SeqNo: 649159						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	520	50.0	500	19	100	69.1	122	506	2.73	20	20

Sample ID: 0912165-01CMSD	SampType: MSD	TestCode: IC_GW	Units: mg/L	Prep Date: 12/29/2009	Run ID: IC_091229A						
Client ID: MW17	Batch ID: R59022	TestNo: SW9056		Analysis Date: 12/29/2009	SeqNo: 649167						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	12.81	0.500	5	8.22	91.8	69.1	122	12.6	1.65	20	20

Sample ID: CCV	SampType: CCV	TestCode: IC_GW	Units: mg/L	Prep Date: 12/23/2009	Run ID: IC_091223A						
Client ID: ZZZZZ	Batch ID: R59021	TestNo: SW9056		Analysis Date: 12/23/2009	SeqNo: 649162						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	12.45	0.500	12.5	0	99.6	90	110	0	0	0	0

Sample ID: CCV	SampType: CCV	TestCode: IC_GW	Units: mg/L	Prep Date: 12/29/2009	Run ID: IC_091229A						
Client ID: ZZZZZ	Batch ID: R59022	TestNo: SW9056		Analysis Date: 12/29/2009	SeqNo: 649171						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	11.77	0.500	12.5	0	94.2	90	110	0	0	0	0

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

KEY TO FLAGS

- A This sample contains a Gasoline Range Organic not identified as a specific hydrocarbon product. The result was quantified against gasoline calibration standards.
- A1 This sample contains a Diesel Range Organic not identified as a specific hydrocarbon product. The result was quantified against diesel calibration standards.
- A2 This sample contains a Lube Oil Range Organic not identified as a specific hydrocarbon product. The result was quantified against a lube oil calibration standard.
- A3 The result was determined to be Non-Detect based on hydrocarbon pattern recognition. The product was carry-over from another hydrocarbon type.
- B The blank exhibited a positive result greater than the reporting limit for this compound.
- CN See Case Narrative.
- D Result is based from a dilution.
- E Result exceeds the calibration range for this compound. The result should be considered as estimate.
- F The positive result for this hydrocarbon is due to single component contamination. The product does not match any hydrocarbon in the fuels library.
- H Sample was analyzed outside recommended hold time.
- HT At clients request, sample was analyzed outside recommended hold time.
- J The result for this analyte is between the MDL and the PQL and should be considered as estimated concentration.
- K Diesel result is biased high due to amount of Oil contained in the sample.
- L Diesel result is biased high due to amount of Gasoline contained in the sample.
- M Oil result is biased high due to amount of Diesel contained in the sample.
- N Gasoline result is biased high due to amount of Diesel contained in the sample.
- MC Sample concentration is greater than 4x the spiked value, the spiked value is considered insignificant.
- MI Result is outside control limits due to matrix interference.
- MSA Value determined by Method of Standard Addition.
- O Laboratory Control Standard (LCS) exceeded laboratory control limits, but meets CCV criteria. Data meets EPA requirements.
- P Detection levels of Methylene Chloride may be laboratory contamination, due to previous analysis or background levels.
- Q Detection levels elevated due to sample matrix.
- R RPD control limits were exceeded.
- RF Duplicate failed due to result being at or near the method-reporting limit.
- RP Matrix spike values exceed established QC limits, post digestion spike is in control.
- S Recovery is outside control limits.
- SC Closing CCV or LCS exceeded high recovery control limits, but associated samples are non-detect. Data meets EPA requirements.
- * The result for this parameter was greater than the maximum contaminant level of the TCLP regulatory limit.

CHAIN OF CUSTODY RECORD

Specialty Analytical
 11711 SE Capps Road
 Clackamas, OR 97015
 Phone: 503-607-1331
 Fax: 503-607-1336

Contact Person/Project Manager: TONY SILVA
 Company: MAULFOSTER & ALONGI
 Address: 3121 S.D. MOODY AVE
PORTLAND OR 97239
 Phone: 971-544-2139 Fax: 971-544-2140
 Project No: 09.009.0117.05 Project Name: TRUGGARD AIGT
 Project Site Location: OR WA Other
 Invoice To: TRUGGARD P.O. No. _____

Collected By: Russell Adams
 Signature: _____
 Printed: RUSSELL ADAMS

Signature: _____
 Printed: _____
 Turn Around Time
 Normal 5-7 Business Days
 Rush _____
 Specify _____
 Rush Analyses Must Be Scheduled With The Lab In Advance

Date	Time	Sample I.D.	Matrix	No. of Containers	Analyses							For Laboratory Use			Date	Time
					DISCONTAMINATED (402.6)	DISCONTAMINATED METALS	CHLORIDE, MERCURY, BISMUTH (7130)	SULFATE (9050)	Comments	Lab Job No.	Shipped Via	Air Bill No.	Temperature On Receipt	Specialty Analytical Containers?		
12/22/09	0935	MW17	W	3	X	X	X	X								
12/22/09	0946	MW18	W	3	X	X	X	X								
12/22/09	0935	MW19	W	3	X	X	X	X								
12/22/09	1044	MW20	W	3	X	X	X	X								
12/22/09	1135	MW21	W	3	X	X	X	X								
12/22/09	1145	MW22	W	3	X	X	X	X								
Relinquished By: <u>MAF</u> Date: <u>12/22/09</u> Time: <u>1500</u>																
Company: <u>MAF</u> Received By: _____ Company: _____																
Relinquished By: _____ Company: _____																
Received For Lab By: <u>Mark Wilson</u> Date: <u>12/22/09</u> Time: <u>1500</u>																

Unless Reclaimed, Samples Will Be Disposed of 60 Days After Receipt.
 Samples held beyond 60 days subject to storage fee(s)

DATA VALIDATION
MEMORANDA



DATA QUALITY ASSURANCE/QUALITY CONTROL REVIEW

PROJECT NO. 9009.01.12 | JANUARY 11, 2010 | TRUEGUARD, LLC
REPORT NUMBERS 0910023, 0912006, 0912045, 0912075, 0912165

This report reviews the analytical results for groundwater samples collected by the Maul Foster & Alongi, Inc. project team on the TrueGuard, LLC, facility at 725 South 32nd Street in Washougal, Washington. The samples were collected in October and December 2009.

Specialty Analytical (SA), in Clackamas, Oregon, performed the analyses. SA report numbers 0910023, 0912006, 0912045, 0912075, and 0912165 were reviewed. The analyses performed are listed below.

Analysis	Reference
Dissolved metals	USEPA 6010A/6020
Dissolved hexavalent chromium	SM 3500
Total sulfate	USEPA 9056

SM = Standard Methods for the Examination of Water and Wastewater.
USEPA = U.S. Environmental Protection Agency.

DATA QUALIFICATIONS

Analytical results were evaluated according to applicable sections of USEPA procedures (USEPA, 1994); appropriate laboratory and method-specific guidelines (SA, 2009; USEPA, 1986); and APHA, AWWA, and WEF standard methods (APHA et al., 1992).

The data are considered acceptable for their intended use, with the appropriate data qualifiers assigned.

HOLDING TIMES, PRESERVATION, AND SAMPLE STORAGE

Holding Times

Extractions and analyses were performed within the recommended holding time criteria.

Preservation and Sample Storage

The samples were preserved and stored appropriately.

BLANKS

Method Blanks

Laboratory method blank analyses were performed at the required frequencies. No target analytes were detected above the SA reporting limits.

Trip Blanks

Trip blanks were not submitted for this sampling event.

Equipment Rinse Blanks

Equipment rinse blanks were not required for this sampling event, as all samples were collected using dedicated, single-use equipment.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE RESULTS

MS/MSD results are used to evaluate laboratory precision and accuracy. All MS/MSD samples were extracted and analyzed at the required frequency. Except for the dissolved hexavalent chromium MS/MSD for report number 0912040 and the dissolved boron MS/MSD for report 0912075, all recoveries were within acceptance limits for percent recovery and relative percent differences (RPDs). Because of low percent recoveries, all dissolved hexavalent chromium results for report 0912040 and dissolved boron results for report 0912075 were qualified as estimated (J or UJ).

LABORATORY DUPLICATE RESULTS

Duplicate results are used to evaluate laboratory precision. All duplicate samples were extracted and analyzed at the required frequency. All RPDs were within acceptance limits.

REPORTING LIMITS

SA used routine method reporting limits for non-detect results.

DATA PACKAGE

The data package was reviewed for transcription errors, omissions, and anomalies. None were found.

REFERENCES

- APHA, AWWA, and WEF. 1992. American Public Health Association, American Water Works Association, and Water Environment Federation. Standard methods for the examination of water and wastewater. 18th ed.
- SA. 2009. Quality assurance manual. Specialty Analytical, Clackamas, Oregon.
- USEPA. 1986. Test methods for evaluating solid waste: physical/chemical methods. EPA-530/SW-846. U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response. September (update 1, July 1992; update 2a, August 1993; update 2, September 1994; update 2b, January 1995).
- USEPA. 1994. USEPA contract laboratory program, national functional guidelines for inorganics data review. EPA 540/R-94/013. U.S. Environmental Protection Agency, Office of Emergency and Remedial Response. February.

DATA QUALITY ASSURANCE/QUALITY CONTROL REVIEW

PROJECT NO. 9009.01.12 | DECEMBER 15, 2009 | TRUEGUARD, LLC
REPORT NUMBER 0912036

This report reviews the analytical results for groundwater samples collected by the Maul Foster & Alongi, Inc. (MFA) project team on the TrueGuard, LLC, facility at 725 South 32nd Street in Washougal, Washington. The samples were collected in December 2009.

Specialty Analytical (SA), in Clackamas, Oregon, performed the analyses. SA report number 0912036 was reviewed. The analyses performed are listed below.

Analysis	Reference
Dissolved metals	USEPA 6010A/6020

USEPA = U.S. Environmental Protection Agency.

DATA QUALIFICATIONS

Analytical results were evaluated according to applicable sections of USEPA procedures (USEPA, 1994), and appropriate laboratory and method-specific guidelines (SA, 2009; USEPA, 1986).

The data are considered acceptable for their intended use, with the appropriate data qualifiers assigned.

HOLDING TIMES, PRESERVATION, AND SAMPLE STORAGE

Holding Times

Extractions and analyses were performed within the recommended holding time criteria.

Preservation and Sample Storage

The samples were preserved and stored appropriately.

BLANKS

Method Blanks

Laboratory method blank analyses were performed at the required frequencies. No target analytes were detected above the SA reporting limits (RLs).

Trip Blanks

Trip blanks were not submitted for this sampling event.

Equipment Rinsate Blanks

Equipment rinsate blanks were not required for this sampling event, as all samples were collected using dedicated, single-use equipment.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE RESULTS

MS/MSD results are used to evaluate laboratory precision and accuracy. All MS/MSD samples were extracted and analyzed at the required frequency. All recoveries were within acceptance limits for percent recovery and relative percent differences (RPDs).

LABORATORY DUPLICATE RESULTS

Duplicate results are used to evaluate laboratory precision. All duplicate samples were extracted and analyzed at the required frequency. All RPDs were within acceptance limits.

FIELD DUPLICATE RESULTS

Field duplicate samples measure both field and laboratory precision. One field duplicate pair was submitted for analysis (MW13/MW13DUP). MFA uses acceptance criteria of 100 percent RPD for results that are less than five times the RL, or 50 percent RPD for results that are greater than five times the RL. Non-detect data are not used in the evaluation of field duplicate results. All analytes were within the acceptance criteria.

REPORTING LIMITS

SA used routine method RLs for non-detect results.

DATA PACKAGE

The data package was reviewed for transcription errors, omissions, and anomalies. None were found.

REFERENCES

- SA. 2009. Quality assurance manual. Specialty Analytical, Clackamas, Oregon.
- USEPA. 1986. Test methods for evaluating solid waste: physical/chemical methods. EPA-530/SW-846. U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response. September (update 1, July 1992; update 2a, August 1993; update 2, September 1994; update 2b, January 1995).
- USEPA. 1994. USEPA contract laboratory program, national functional guidelines for inorganics data review. EPA 540/R-94/013. U.S. Environmental Protection Agency, Office of Emergency and Remedial Response. February.

WELL LOGS



Geologic Borehole Log/Well Construction

Maul Foster & Alongi, Inc.

Project Number
9009.01.12

Well Number
MW-17

Sheet
1 of 1

Project Name	TrueGuard, LLC	TOC Elevation (feet)	20.321
Project Location	725 South 32nd Street, Washougal, Washington 98671-2519	Surface Elevation (feet)	20.5
Start/End Date	11/23/09 to 11/23/09	Northing	92023.0
Driller/Equipment	Tyler Day, Cascade Drilling Inc./Geoprobe	Easting	1169754.8
Geologist/Engineer	Justin Pounds	Hole Depth	15.0-feet
Sample Method	Geoprobe	Outer Hole Diam	4-inch

Depth (feet, BGS)	Well Details	Interval	Percent Recovery	Sample Data			Blows/6"	Lithologic Column	Soil Description
				Collection Method	Number	Name (Type)			
0.0			100%	GP	1			0.0 to 0.5 feet: CONCRETE.	
0.5								0.5 to 1.5 feet: SILTY GRAVEL (GM); brownish gray; 15% fines; 5% sand; 80% gravel; hand dug by driller. (FILL)	
1.5								1.5 to 4.9 feet: SAND (SP); brown; 100% sand; fine to medium; micaceous; damp.	
4.9			100%	GP	2			4.9 to 15.0 feet: SAND (SP); gray; 100% sand; fine to medium; micaceous; wet.	
10.0			100%	GP	3				
15.0									

Total Depth = 15.0 feet below ground surface.

Boring Completion Details

- 0.0 to 15.0 feet: 4-inch boring.
- 0.0 to 1.0 feet: concrete.
- 1.0 to 4.0 feet: bentonite chips hydrated with potable water.
- 4.0 to 15.0 feet: 10X20 silica sand.

Monitoring Well Completion Details

- Flush mount completion.
- 0.5 to 4.8 feet: 2-inch, schedule 40, polyvinyl chloride, riser pipe.
- 4.8 to 14.8 feet: 2-inch, schedule 40, polyvinyl chloride, 0.010-inch machine slot, prepacked well screen.
- 14.8 to 15.0 feet: 2-inch, schedule 40, polyvinyl chloride pipe end cap.

- NOTES:** 1) GP = Geoprobe.
2) Ecology Well # BBA861.

Water level observed while drilling.

GBLWC W:\GINT\GINT\PROJECTS\9009-00\112\MW17-MW22.GPJ 2/12/10

Geologic Borehole Log/Well Construction

Maul Foster & Alongi, Inc.

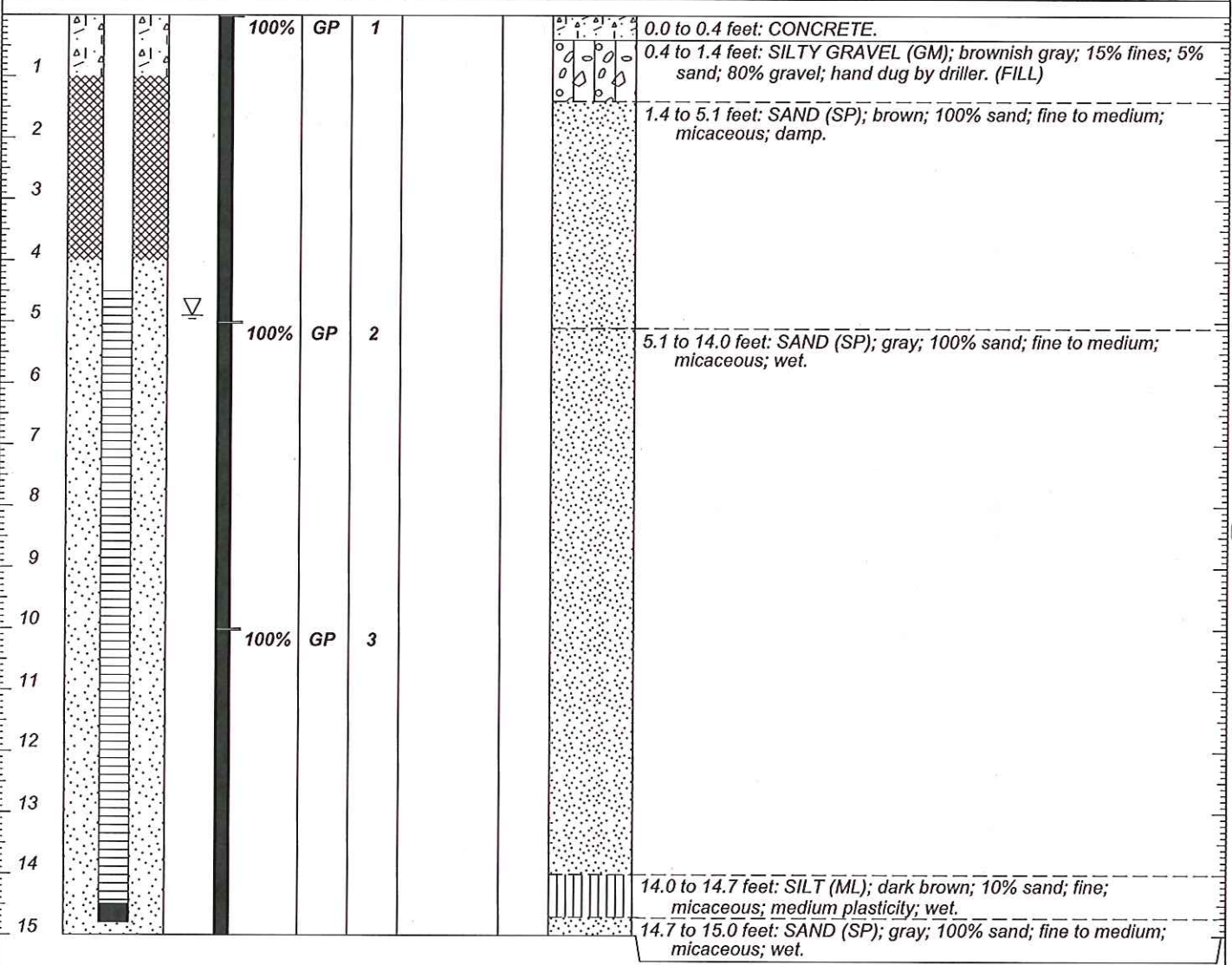
Project Number
9009.01.12

Well Number
MW-18

Sheet
1 of 1

Project Name	TrueGuard, LLC	TOC Elevation (feet)	20.415
Project Location	725 South 32nd Street, Washougal, Washington 98671-2519	Surface Elevation (feet)	20.7
Start/End Date	11/23/09 to 11/23/09	Northing	92008.6
Driller/Equipment	Tyler Day, Cascade Drilling Inc./Geoprobe	Easting	1169749.4
Geologist/Engineer	Justin Pounds	Hole Depth	15.0-feet
Sample Method	Geoprobe	Outer Hole Diam	4-inch

Depth (feet, BGS)	Well Details	Interval	Percent Recovery	Sample Data			Blows/6"	Lithologic Column	Soil Description
				Collection Method	Number	Name (Type)			



Total Depth = 15.0 feet below ground surface.

Boring Completion Details
 0.0 to 15.0 feet: 4-inch boring.
 0.0 to 1.0 feet: concrete.
 1.0 to 4.0 feet: bentonite chips hydrated with potable water.
 4.0 to 15.0 feet: 10X20 silica sand.

Monitoring Well Completion Details
 Flush mount completion.
 0.5 to 4.5 feet: 2-inch, schedule 40, polyvinyl chloride, riser pipe.
 4.5 to 14.5 feet: 2-inch, schedule 40, polyvinyl chloride, 0.010-inch, machine slot, prepacked well screen.
 14.5 to 14.7 feet: 2-inch, schedule 40, polyvinyl chloride pipe end cap.

NOTES: 1) GP = Geoprobe.
 2) Ecology Well # BBA862.

▽ Water level observed while drilling.

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Geologic Borehole Log/Well Construction

Maul Foster & Alongi, Inc.		Project Number 9009.01.12	Well Number MW-19	Sheet 1 of 1
		Project Name TrueGuard, LLC Project Location 725 South 32nd Street, Washougal, Washington 98671-2519 Start/End Date 11/23/09 to 11/23/09 Driller/Equipment Tyler Day, Cascade Drilling Inc./Geoprobe Geologist/Engineer Justin Pounds Sample Method Geoprobe		TOC Elevation (feet) 20.311 Surface Elevation (feet) 20.6 Northing 92012.4 Easting 1169742.9 Hole Depth 15.0-feet Outer Hole Diam 4-inch

Depth (feet, BGS)	Well Details	Interval	Percent Recovery	Sample Data			Blows/6"	Lithologic Column	Soil Description
				Collection Method	Number	Name (Type)			
1		100%		GP	1			0.0 to 0.5 feet: CONCRETE.	
2								0.5 to 1.4 feet: SILTY GRAVEL (GM); brownish gray; 15% fines; 5% sand; 80% gravel; hand dug by driller. (FILL)	
3								1.4 to 4.9 feet: SAND (SP); brown; 100% sand; fine to medium; micaceous; damp.	
4									
5		100%		GP	2			4.9 to 14.2 feet: SAND (SP); gray; 100% sand; fine to medium; micaceous; wet.	
6									
7									
8									
9									
10		100%		GP	3				
11									
12									
13									
14									
15								14.2 to 15.0 feet: SILT (ML); dark brown; 10% sand; fine; micaceous; medium plasticity; wet.	

Total Depth = 15.0 feet below ground surface.

Boring Completion Details
 0.0 to 15.0 feet: 4-inch boring.
 0.0 to 1.0 feet: concrete.
 1.0 to 4.0 feet: bentonite chips hydrated with potable water.
 4.0 to 15.0 feet: 10X20 silica sand.

Monitoring Well Completion Details
 Flush mount completion.
 0.5 to 4.5 feet: 2-inch, schedule 40, polyvinyl chloride, riser pipe.
 4.5 to 14.5 feet: 2-inch, schedule 40, polyvinyl chloride, 0.010-inch, machine slot, prepacked well screen.
 14.5 to 14.7 feet: 2-inch, schedule 40, polyvinyl chloride pipe end cap.

NOTES: 1) GP = Geoprobe.
 2) Ecology Well # BBA863.

Water level observed while drilling.

GBLWC WAGNTGNTWPROJECTS\9009-00-112\MW17-MW22.GPJ 2/12/10

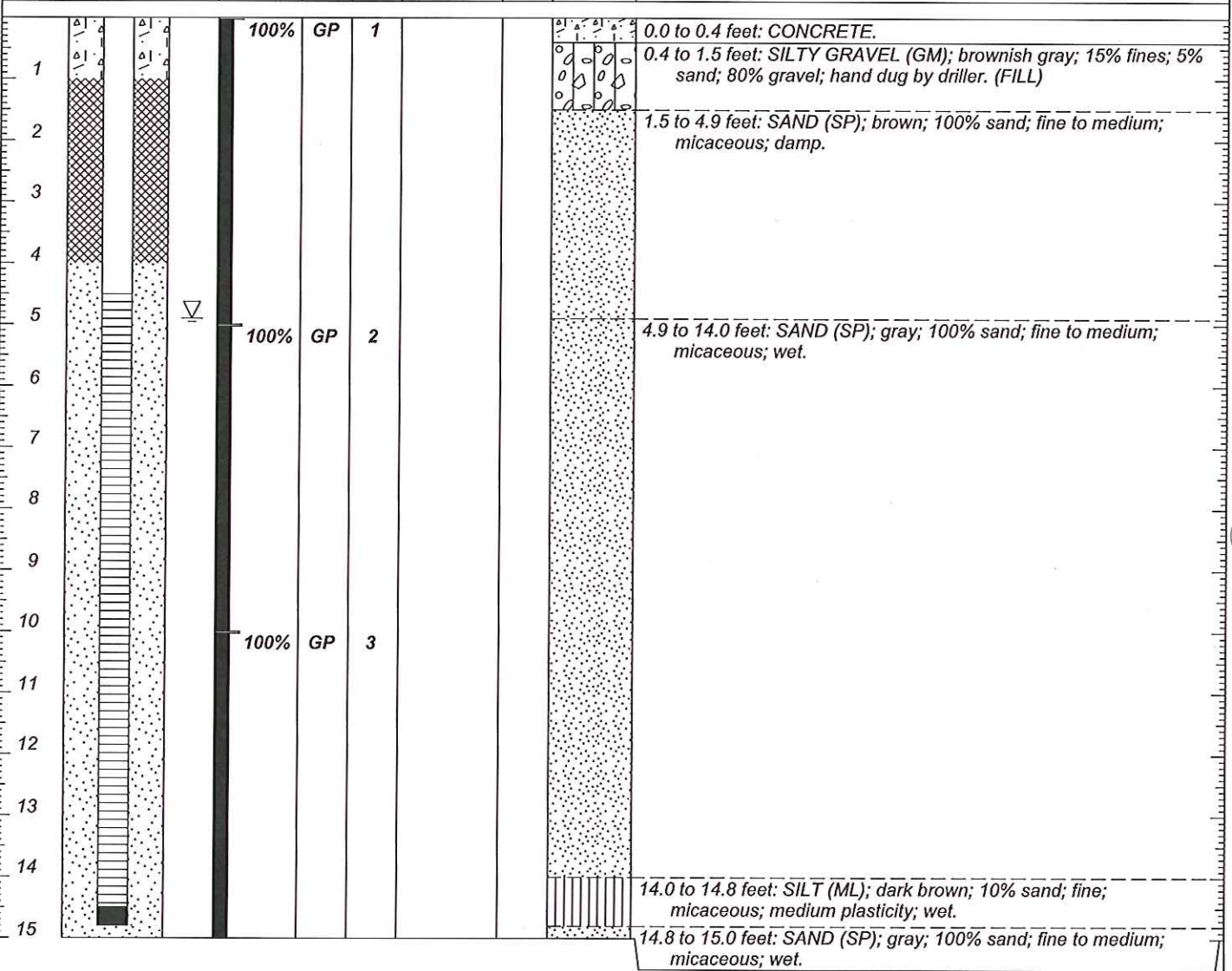
Geologic Borehole Log/Well Construction

Maul Foster & Alongi, Inc.

Project Number 9009.01.12	Well Number MW-20	Sheet 1 of 1
-------------------------------------	-----------------------------	------------------------

Project Name TrueGuard, LLC	TOC Elevation (feet) 20.481
Project Location 725 South 32nd Street, Washougal, Washington 98671-2519	Surface Elevation (feet) 20.7
Start/End Date 11/23/09 to 11/23/09	Northing 92006.3
Driller/Equipment Tyler Day, Cascade Drilling Inc./Geoprobe	Easting 1169736.5
Geologist/Engineer Justin Pounds	Hole Depth 15.0-foot
Sample Method Geoprobe	Outer Hole Diam 4-inch

Depth (feet, BGS)	Well Details	Interval	Percent Recovery	Sample Data		Blows/6"	Lithologic Column	Soil Description
				Collection Method	Number			



Total Depth = 15.0 feet below ground surface.

Boring Completion Details
 0.0 to 15.0 feet: 4-inch boring.
 0.0 to 1.0 feet: concrete.
 1.0 to 4.0 feet: bentonite chips hydrated with potable water.
 4.0 to 15.0 feet: 10X20 silica sand.

Monitoring Well Completion Details
 Flush mount completion.
 0.5 to 4.5 feet: 2-inch, schedule 40, polyvinyl chloride, riser pipe.
 4.5 to 14.5 feet: 2-inch, schedule 40, polyvinyl chloride, 0.010-inch, machine slot, prepacked well screen.
 14.5 to 14.7 feet: 2-inch, schedule 40, polyvinyl chloride pipe end.

NOTES: 1) GP = Geoprobe.
 2) Ecology Well # BBA864.

▽ Water level observed while drilling.

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Maul Foster & Alongi, Inc. **Geologic Borehole Log/Well Construction**

Project Name TrueGuard, LLC		TOC Elevation (feet) 20.154	
Project Location 725 South 32nd Street, Washougal, Washington 98671-2519		Surface Elevation (feet) 20.6	
Start/End Date 11/24/09 to 11/24/09		Northing 92020.2	
Driller/Equipment Tyler Day, Cascade Drilling Inc./Geoprobe		Easting 1169729.6	
Geologist/Engineer Justin Pounds		Hole Depth 15.0-feet	
Sample Method Geoprobe		Outer Hole Diam 4-inch	

Depth (feet, BGS)	Well Details	Interval	Percent Recovery	Sample Data			Blows/6"	Lithologic Column	Soil Description
				Collection Method	Number	Name (Type)			
0.0 to 0.5			100%	GP	1			0.0 to 0.5 feet: CONCRETE.	
0.5 to 1.3								0.5 to 1.3 feet: SILTY GRAVEL (GM); brownish gray; 15% fines; 5% sand; 80% gravel; hand dug by driller. (FILL)	
1.3 to 4.8								1.3 to 4.8 feet: SAND (SP); brown; 100% sand; fine to medium; micaceous; damp.	
4.8 to 13.5			100%	GP	2			4.8 to 13.5 feet: SAND (SP); gray; 100% sand; fine to medium; micaceous; wet.	
13.5 to 15.0			100%	GP	3			13.5 to 15.0 feet: SILT (ML); dark brown; with organics and woody debris; 10% sand; fine; micaceous; medium plasticity; wet.	

Total Depth = 15.0 feet below ground surface.

Boring Completion Details
 0.0 to 15.0 feet: 4-inch boring.
 0.0 to 1.0 feet: concrete.
 1.0 to 4.0 feet: bentonite chips hydrated with potable water.
 4.0 to 15.0 feet: 10X20 silica sand.

Monitoring Well Completion Details
 Flush mount completion.
 0.5 to 4.5 feet: 2-inch, schedule 40, polyvinyl chloride, riser pipe.
 4.5 to 14.5 feet: 2-inch, schedule 40, polyvinyl chloride, 0.010-inch, machine slot, prepacked well screen.
 14.5 to 14.7 feet: 2-inch, schedule 40, polyvinyl chloride pipe end cap.

- NOTES:** 1) GP = Geoprobe.
 2) Ecology Well # BBA865.

▽ Water level observed while drilling.

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MauFoster &Alongi, Inc. **GeologicBorehole Log/WellConstruction**

Project Number
9009.01.12

Well Number
MW-22

Sheet
1 of 1

Project Name	TrueGuard, LLC	TOC Elevation (feet)	19.936
Project Location	725 South 32nd Street, Washougal, Washington 98671-2519	Surface Elevation (feet)	20.6
Start/End Date	11/24/09 to 11/24/09	Northing	92026.3
Driller/Equipment	Tyler Day, Cascade Drilling Inc./Geoprobe	Easting	1169735.6
Geologist/Engineer	Justin Pounds	Hole Depth	15.0-feet
Sample Method	Geoprobe	Outer Hole Diam	4-inch

Depth (feet, BGS)	Well Details	Interval	Percent Recovery	Sample Data			Blows/6"	Lithologic Column	Soil Description
				Collection Method	Number	Name (Type)			
1		100%	GP	1				0.0 to 0.5 feet: CONCRETE.	
2								0.5 to 1.3 feet: SILTY GRAVEL (GM); brownish gray; 15% fines; 5% sand; 80% gravel; hand dug by driller. (FILL)	
3								1.3 to 4.9 feet: SAND (SP); brown; 100% sand; fine to medium; micaceous; damp.	
4									
5		100%	GP	2				4.9 to 15.0 feet: SAND (SP); gray; 100% sand; fine to medium; micaceous; wet.	
6									
7									
8									
9									
10		100%	GP	3					
11									
12									
13									
14									
15									

Total Depth = 15.0 feet below ground surface.

Boring Completion Details

0.0 to 15.0 feet: 4-inch boring.
 0.0 to 1.0 feet: concrete.
 1.0 to 4.0 feet: bentonite chips hydrated with potable water.
 4.0 to 15.0 feet: 10X20 silica sand.

Monitoring Well Completion Details

Flush mount completion.
 0.5 to 4.5 feet: 2-inch, schedule 40, polyvinyl chloride, riser pipe.
 4.5 to 14.5 feet: 2-inch, schedule 40, polyvinyl chloride, 0.010-inch, machine slot, prepacked well screen.
 14.5 to 14.7 feet: 2-inch, schedule 40, polyvinyl chloride pipe end cap.

NOTES: 1) GP = Geoprobe.
 2) Ecology Well # BBA866.

▽ Water level observed while drilling.

AIR SPARGING
PILOT-SCALE TEST
PROTOCOL





February 19, 2010
Project No. 9009.01.12

Cheryl Moore and Steve Krommenacker
TrueGuard, LLC
725 South 32nd Street
Washougal, Washington 98671-2519

Re: Air Sparging Pilot-Scale Test Protocol
TrueGuard, LLC—Washougal Facility SW0916, Washougal, Washington

Dear Ms. Moore and Mr. Krommenacker:

Maul Foster & Alongi, Inc (MFA) has prepared this letter to present a recommended pilot-scale testing protocol to evaluate the feasibility of air sparging for the in situ remediation of arsenic-impacted groundwater present at the TrueGuard, LLC (TrueGuard) facility in Washougal, Washington (site).

BACKGROUND

Groundwater beneath the site has been impacted with arsenic as a result of the unintentional release of wood preservatives, including chromated copper arsenate, into the subsurface. Arsenic is relatively insoluble as the oxidized arsenate (+5) anion and the reduced arsenic sulfide; however, arsenic is relatively soluble as the reduced arsenite (+3) anion. The groundwater conditions beneath the site are generally reducing, which allows the arsenic to remain in solution as the arsenite anion and migrate in the subsurface with groundwater flow.

Upon discovery of the arsenic groundwater plume, TrueGuard installed and began operation of a groundwater extraction system as an independent remedial action. Extracted groundwater from this system was used within the plant as make-up water. In April 2008 groundwater extraction was discontinued and a pilot-scale test was conducted in the source area. The test involved the injection of a remediation reagent, EHC-M™, manufactured by Adventus Americas, Inc. The purpose of this pilot-scale test was to determine if arsenic could be “fixed” in place by enhancing the reduced conditions in the groundwater and precipitating the arsenic as arsenic sulfide minerals such as realgar and orpiment. Results of the test indicated that the application of the reagent was not a viable method of remediating the arsenic groundwater plume.

A laboratory-scale testing program conducted in the summer of 2009 demonstrated the process of geochemical fixation of arsenic using selected concentrations of proprietary remedial reagents. The reagents consisted of a slurry composed of a chemical oxidant (calcium persulfate [Klozur™]) manufactured by FMC Environmental Solutions; ferrous

chloride solution; and Activated Red Mud manufactured by GEOCHEM Remediation, LLC and marketed under the trade name Geobind™. Results of the laboratory-scale testing program demonstrated that a mixture of the reagents was capable of immobilizing arsenic without mobilizing hexavalent chromium. A pilot-scale test involving the hydrofracture injection of the reagents was then designed and conducted downgradient of the source area. Temporary monitoring wells MW-17 through MW-22 were installed in November 2009 (Figures 1 and 2). The pilot-scale test was conducted in December 2009. The results demonstrated that a one-time hydrofracture injection of reagent slurry was capable of fixing arsenic in groundwater extracted from monitoring well MW-19 (approximately 7.5 feet downgradient of the injection location) within one day of the injection without resulting in the mobilization of hexavalent chromium. However, the effect was localized and persisted for less than one week following the injection.

The results of the two previously conducted pilot-scale tests demonstrate that the subsurface oxidation/reduction and potential hydrogen (pH) conditions are highly stable, and quickly revert to ambient conditions after the injection of either reductants or oxidants. Thus, the concept of a one-time injection of a reagent mixture to achieve fixation of arsenic by changing geochemical conditions to either highly reduced or highly oxidized conditions will not provide the long term results needed. This approach has been tabled until more viable, cost effective approaches are explored. However, based in part on known site conditions and the prior test results, it was concluded that air sparging to create oxidizing conditions through injection of atmospheric air into the subsurface warranted assessment. If air sparging can generate persistent oxidizing conditions in the subsurface, this should result in the conversion of iron and arsenic into a relatively insoluble ferric hydroxide-ferric arsenate co-precipitate.

This method may immobilize the arsenic. It could also reduce the permeability of the subsurface. Depending on location, permeability reduction could have positive or negative impacts to overall management and treatment of impacted groundwater. Decreased permeability could be beneficial by reducing groundwater flow. Decreased permeability could also negatively affect the performance of the air sparge system by reducing the zone of influence from the sparge well. Permeability changes should be addressed in the design of an air sparging system.

In the event that atmospheric air is unable to sustain the needed level of oxygen necessary to create oxidative conditions in the subsurface, the use of ozone to supplement oxidation may be considered.

BASIS FOR PILOT-SCALE TEST PROTOCOL

The laboratory-scale tests indicate that arsenic fixation can be achieved by the generation of highly oxidized conditions through the addition of an oxidant. The results of prior tests also suggest that the reducing conditions in the groundwater are highly stable and will require

continued input of an oxidant in order to sustain an oxidizing environment. Atmospheric air, while of relatively low oxidizing ability, is suited for continuous application. The previous pilot-scale testing has demonstrated that the subsurface conditions allow the input of fluids (gas or liquid) into the saturated zone that extends from the water table at a depth of approximately 3 feet below ground surface (bgs) to the base of the surficial aquifer at a depth of approximately 15 feet bgs.

AIR SPARGING TEST PROTOCOL

Conceptual Layout

The Geoprobe™ hydrofracture injection pilot-scale test conducted at the site on December 7, 2009, involved a radial grid of six temporary monitoring wells (MW-17 through MW-22) installed around a central injection point. The proposed air sparging pilot test will also be conducted at this location, the primary advantages being: 1) the groundwater monitoring wells are already installed; and 2) the geochemical conditions of the groundwater in this area are known. A potential disadvantage is that the previous pilot-scale testing may have altered the subsurface conditions through the injection of the reagents and by the subsequently induced chemical reactions. However, the likelihood that this short-duration test would have a substantive negative impact on the air sparge test results is considered low. Therefore, the use of the existing apparatus is warranted.

A 2-inch diameter air sparge well will be installed at a point midway between the December 2009 hydrofracture injection point and downgradient monitoring well MW-19 (Figure 2). The injection well will consist of a 2-foot-long factory prepacked well screen set at the lower 2 feet of the aquifer (e.g., 13 to 15 feet bgs), with a blank riser pipe extending to the existing ground surface. The air sparge well will be grouted to ensure an effective seal with the ground surface and will be completed in accordance with State of Washington regulations. The air sparge well will be enclosed at the surface in a traffic-rated vault. At the time the injection well is installed, a representative soil sample will be collected from the screened interval and archived for possible grain size¹ analysis.

A compressor capable of generating up to 25 standard cubic feet per minute at a pressure greater than 20 pounds per square inch will be used for the duration of the pilot test. If air is obtained from a compressor that is not oil-less, an appropriate air filter will be installed between the compressor and the air sparge well. To the extent practical, the compressor will be located in an area out of the way of site traffic. Because site traffic is a concern, the air supply line will be routed from the compressor to the well vault via a capped trench. An appropriate high-temperature flow meter, a bleed valve, and an isolation valve will be

¹ For a full-scale injection system design, the air sparge injection well screen and sand filter should be sized based on the results of grain-size analyses.

installed in the air supply line for purposes of monitoring and controlling the injection air flow rate.

Pilot Test Operation

At system startup, the isolation valve will be opened to slowly increase the air pressure in the injection well. Air flow through the soil will initiate only when the air pressure overcomes the resistance created by the hydraulic pressure and the soil formation. The test startup will include a careful assessment of the breakthrough pressure when air begins to flow. Once air flow is established, the injection pressure will be incrementally increased by opening the isolation valve more to increase air flow into the sparge well. The air flow rate will be stepped up gradually by allowing system pressures to equilibrate before increasing air flow.

Air sparging operating pressures are also site-specific and are dependent on the static water pressure (depth of the air sparging well screen below the water table) and the head necessary to overcome capillary forces of the water in the soil pores near the injection point (permeability of the aquifer). Excessive pressure will be avoided, as it could potentially cause fracturing and the formation of preferential air channels, which will reduce the effectiveness of the air sparging. Flow rates and pressures will be monitored and recorded on field data sheets during system startup.

The air sparging pilot test will be operated continuously for up to four weeks. After two weeks of continuous operation, MFA will assess the system performance and provide a summary to TrueGuard. The system assessment will be based on field observations of groundwater parameters and laboratory data for dissolved arsenic. If no measurable changes in dissolved arsenic concentrations or other groundwater parameters are observed after two weeks of operation, the test may be discontinued at TrueGuard's discretion.

Measuring Area of Influence

Measuring the area of influence of the sparge well is important for determining the spacing between injection locations for a full-scale treatment system. Shortly after the sparge test is initiated, a conservative tracer gas (e.g., helium) will be metered into the compressed air stream as a means of assessing area of influence. A field instrument will be used to analyze air samples extracted under low vacuum levels from the air space in the groundwater monitoring well casings. A backflow-prevention valve will be installed between the tracer gas cylinder and the compressed air supply line.

One set of air samples will be collected from monitoring wells MW-17 through MW-22 after the injection air flow rate and injection pressure have reached an optimal level. The air samples will be collected in Tedlar® bags and sent to Air Toxics laboratory in Folsom, California, for analysis.

The optimum level will be determined based on the air flow versus injection pressure assessment conducted at the start of the pilot test. An air flow rate versus injection pressure curve will be developed during startup; this curve will be used to determine the operating point for the pilot test. For example, the operating point on a curve that is asymptotic would be near the hinge point of the curve.

To supplement the tracer gas data, periodic groundwater surface elevation measurements will be recorded².

Performance Monitoring

Performance monitoring during implementation of the air sparge pilot test will include measurements of injection pressures and air flow rates; field and laboratory screening of air samples for tracer gas; general groundwater chemistry parameters; and sampling and laboratory analysis of groundwater for arsenic.

Air sampling and analysis will be conducted after the air flow rate and injection pressure have been established and stabilized. Air samples will be collected from the well casing head space, using a low-flow vacuum pump and monitored with a field meter.

Performance monitoring will be conducted more frequently (i.e., twice during the first week) following test startup to document induced changes in the subsurface (e.g., increases in dissolved oxygen levels, changes in arsenic concentrations). Monitoring will be conducted weekly thereafter for the remaining three weeks. Air flow and injection pressure in the sparge well will be monitored and recorded on a weekly basis during the pilot test.

Water quality samples will also be collected from the six temporary monitoring wells, using U.S. Environmental Protection Agency (USEPA) low-flow sampling techniques. Geochemical field parameters, including pH, temperature, conductivity, turbidity, dissolved oxygen, and oxidation-reduction potential, will be monitored and recorded during purging activities. Groundwater samples will be collected consistent with USEPA low-flow/parameter stabilization sampling protocols. Groundwater samples will be analyzed for dissolved arsenic, by USEPA Method 6020.

Groundwater samples collected for dissolved constituents will be field filtered through a 0.45-micron filter. Groundwater samples will be submitted to Specialty Analytical in Clackamas, Oregon, for analysis.

² The efficacy of periodic water level measurement data are expected to be somewhat limited, due to diurnal variations in groundwater elevations. However, since these data are readily obtainable, it remains a worthwhile effort.

The following table outlines the groundwater sampling and analysis schedule described above:

Before System Startup	Sample MW-19 one time for dissolved arsenic and field parameters.
Week 1	Sample MW-19 through MW-22 one time for dissolved arsenic and field parameters.
Week 2	Sample MW-19 through MW-22 one time for dissolved arsenic and field parameters.
Week 3	Sample MW-19 through MW-22 one time for dissolved arsenic and field parameters.
After System Shutdown	Sample MW-19 through MW-22 one time for dissolved arsenic and field parameters.

REPORT PREPARATION

Upon completion of the pilot-scale testing and receipt of the laboratory results, a report will be prepared that will include a summary of the purpose and objectives of the test, a summary of fieldwork, analytical results, and a discussion of results. Appendices to the report will include items such as:

- Well construction logs
- Groundwater sampling data sheets
- Field forms
- Analytical data
- Photographs

Additionally, based on the results of the pilot-scale testing, the report will provide general recommendations regarding next steps for remedial design.

Air Sparging with Ozone Injection – Deferred Option

Based on the results of the air sparge pilot test using atmospheric air as the oxidant, additional pilot testing may be conducted to evaluate the effectiveness of ozone as an addition to atmospheric air.

Soil and Hydraulic Characteristics – Deferred Option

TrueGuard may elect to defer soil physical analysis and pneumatic slug testing until the time a full scale system is designed. For information needed as part of the full scale design, it is anticipated that soil samples would be collected from areas of the site where injections may

Cheryl Moore and Steve Krommenacker
February 19, 2010
Page 7

Project No. 9009.01.12

occur (e.g., the source area and or along the property boundary). Soil samples would be collected for grain size and for chemical oxygen demand analysis. The aquifer hydraulic conductivity would be estimated by pneumatic slug testing. Soil sampling and pneumatic slug testing may help inform the design process (e.g. spacing requirements needed in a full scale system). A decision on the need for this testing can be made following the air sparging pilot test results analysis.

Please call us to discuss the pilot-scale testing protocol for air sparging and to talk about the next steps.

Sincerely,

Maul Foster & Alongi, Inc.



Ted Wall, PE
Director of Engineering



Tony Silva, LG
Project Geologist

Attachments: Limitations
Figures

cc: Alan Wade, TrueGuard, LLC

LIMITATIONS

The services undertaken in completing this work plan were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with our client. This work plan is solely for the use and information of our client unless otherwise noted. Any reliance on this work plan by a third party is at such party's sole risk.

Opinions and recommendations contained in this work plan apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, or the use of segregated portions of this work plan.

FIGURES





Source: Aerial photograph and Tax Lots obtained from Clark County GIS Department.

Legend




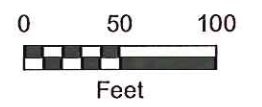
-  Monitoring Well
-  Tax Lot Boundary
-  Pilot Study Area

Figure 1
Monitoring Wells
 TrueGuard, LLC
 Washougal, Washington





Source: Aerial photograph obtained from Clark County GIS Department.

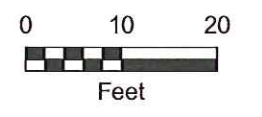
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Legend

-  Injection Point (December 7, 2009)
-  Proposed Air Sparge Well Location
-  Monitoring Well
-  Tax Lot Boundary

Figure 2
Pilot Study Area
 TrueGuard, LLC
 Washougal, Washington





RECEIVED

AUG 20 2010

WA State Department
of Ecology (SWRO)

August 18, 2010

Project No. 9009.01.12

Mr. Tom Middleton, LHG
SRO Toxics Cleanup Program
Washington State Department of Ecology
PO Box 47775
Olympia, Washington 98504-7775

Re: TrueGuard, LLC—Washougal Facility SW0916
Horizontal Air Sparging Work Plan

Dear Mr. Middleton:

Maul Foster & Alongi, Inc. (MFA) has prepared the following work plan describing the approach for remediating arsenic in shallow groundwater at the TrueGuard, LLC (TrueGuard) facility, 725 South 32nd Street in Washougal, Washington (the site). Based on the results of multiple field studies, MFA recommends implementation of horizontal well air sparging (AS) for in situ precipitation and removal of arsenic from groundwater. This work plan includes the following sections:

- Section 1 Introduction—Provides summary information related to existing site conditions, including site hydrogeology, nature and extent of impacts, and work completed to date.
- Section 2 Regulatory Framework—Describes the remedial action objectives (RAOs) for the proposed AS system.
- Section 3 Implementation Approach—Describes the methods and equipment for the AS system installation.
- Section 4 Performance Monitoring and Reporting—Describes the periodic monitoring and reporting schedule to document the performance of the AS system.

1 INTRODUCTION

The site is located approximately 1,000 feet north of the Columbia River (Figure 1). Adjoining properties include the former Philip Services Corporation hazardous waste treatment, storage, and disposal facility to the north; Familian Plastics to the west; Saint-Gobain Crystals to the southeast; and undeveloped property to the east. The site is a wood-treatment facility that uses CCA (copper-chrome-arsenate) solution in its operations.

Facility investigations identified arsenic in shallow groundwater, which was later sourced to a cracked foundation (repaired in 2007) under the main retort. The shallow groundwater at the site extends from approximately 3 feet below ground surface (bgs) to 20 feet bgs and is underlain by a relatively thick silt aquitard. The silt unit varies in thickness ranging from three to eleven feet. The shallow groundwater flows generally from the northwest to east-southeast. Arsenic impacts in groundwater extend to the eastern or downgradient property boundary.¹

Starting in 2008 and continuing through present, TrueGuard conducted a series of field pilot studies to identify appropriate in situ technologies to address the elevated arsenic concentrations. The tests included:

- April 2008—in situ field pilot of EHC-M, a zero-valent-iron-based reducing compound. The data from this test did not support full-scale implementation.
- June 2009—bench test and in situ field pilot (December 2009) of activated red mud and persulfate (KlozurTM). The data from this test did not support full-scale implementation.
- Spring 2010—in situ AS field pilot. The data from this test, included as Attachment A, confirmed that AS successfully reduced concentrations of arsenic, in some wells to below the U.S. Environmental Protection Agency Maximum Contaminant Level (10.0 micrograms per liter [$\mu\text{g}/\text{L}$]). These data support full-scale implementation of AS.

Based on the success of the most recent pilot study, MFA recommends full-scale implementation of horizontal AS at the downgradient portion of the arsenic plume (i.e., near the eastern property boundary) as shown in Figure 2. The intended effect of the AS system is to create a continuous zone of oxidizing groundwater that will precipitate arsenic onto the surface of oxidized iron minerals in the formation. This oxidation zone (or barrier) will significantly reduce the amount of arsenic in groundwater traveling downgradient and off site.

2 REGULATORY FRAMEWORK

The site characterization and pilot tests conducted to date have been completed as independent actions under the Voluntary Cleanup Program (VCP). The design, installation, operation/maintenance, and monitoring of the proposed AS system will be completed as an independent cleanup action, also under the VCP.

¹ The nature and extent of arsenic contamination and site hydrogeology are only briefly summarized here; additional detail was previously reported to Ecology by MFA in status reports dated November 25, 2008; May 13, 2009; October 2, 2009; and February 19, 2010.

Arsenic is a naturally occurring mineral characteristic of alluvial soil in the Pacific Northwest. Reducing conditions created by natural and anthropogenic processes can mobilize arsenic and create plumes with elevated concentrations. Therefore, RAOs for arsenic need to consider off-site sources of arsenic to establish background concentrations. Based on groundwater quality data in the immediate vicinity of the site, and communications with the Washington State Department of Ecology² (Ecology), the site-specific background levels for arsenic are expected to be up to 26 µg/L. The RAO for this project therefore is to reduce arsenic in groundwater to concentrations equal to or below the background level.

3 IMPLEMENTATION APPROACH

The full-scale AS system will include the following components:

- A horizontal AS well extending approximately 450 to 500 feet near the downgradient property boundary (see Figure 2). Note that the location and length of the horizontal well will be adjusted based on site constraints and access. The AS well will be installed with standard horizontal drilling methods and equipment by Directed Technologies, Inc., as described in Attachment B. The AS well will be installed near the base of the shallow aquifer, along the upper horizon of the underlying silt aquitard (i.e., approximately 15 feet bgs). Specifications are included as Attachment C.
- A blower system consisting of the equipment described in Attachment C.
- Five performance monitoring wells (PMWs) located upgradient and downgradient will be used to document influent and effluent groundwater data for arsenic, among other parameters described below. Five existing monitoring wells (MW-12 through MW-15, and MW-17) will be used as the PMW network.

Following installation, system startup will be staged in order to evaluate blower performance relative to the anticipated load.

4 PERFORMANCE MONITORING AND REPORTING

The performance of the system will be evaluated based on the concentrations of arsenic in groundwater downgradient of the AS barrier. The downgradient concentrations will be compared to the RAO; the difference between the influent (upgradient) concentrations and effluent (downgradient) concentrations will be used to estimate mass removal rates.

² Letter to T. Middleton, Ecology, from T. Wall and T. Silva, MFA, on November 3, 2009.

The performance monitoring will utilize the five PMWs identified in Section 3. The wells will be sampled on a quarterly basis for years one and two or until the RAO has been met. Monitoring could continue on a semiannual basis for years three through five if determined necessary based on the performance monitoring and mass removal estimates. Performance monitoring will be completed consistent with methods and equipment previously approved for and in use at the site.

Water quality field parameters will include:

- Temperature
- Hydrogen ion potential (pH)
- Conductivity
- Dissolved oxygen
- Oxidation reduction potential
- Turbidity

Laboratory analysis of groundwater samples will include (consistent with previous methods):

- Total and dissolved arsenic
- Dissolved manganese, iron, and boron
- Sulfate

MFA will prepare data submittals summarizing the PMW results and include a brief discussion regarding progress toward the RAO and mass removal. Any problems encountered will be noted, as will proposed modifications to the system, if needed. Data submittals will be issued to Ecology in electronic format within 60 days of receipt of analytical data from a monitoring event.

SCHEDULE

Implementation of this work plan will begin as soon as practical following input from Ecology. Some design work can be initiated concurrent with Ecology review. An approximate schedule is as follows:

Mr. Tom Middleton, LHG
August 18, 2010
Page 5

Project No. 9009.01.12

<u>Task</u>	<u>Date</u>
Ecology Review	Aug 20–Sept 20, 2010
Design	Aug 20–Oct 15, 2010
Ecology Design Review	Oct 15–Nov 15, 2010
Contracting	Nov 1–Nov 30, 2010
Construction	Dec 1–Dec 31, 2010
Start-Up/Begin Operations	Jan 2011

We will contact you shortly after submittal of this plan regarding scope and schedule of Ecology's review.

Sincerely,

Maul Foster & Alongi, Inc.



James Peale, LG
Senior Hydrogeologist



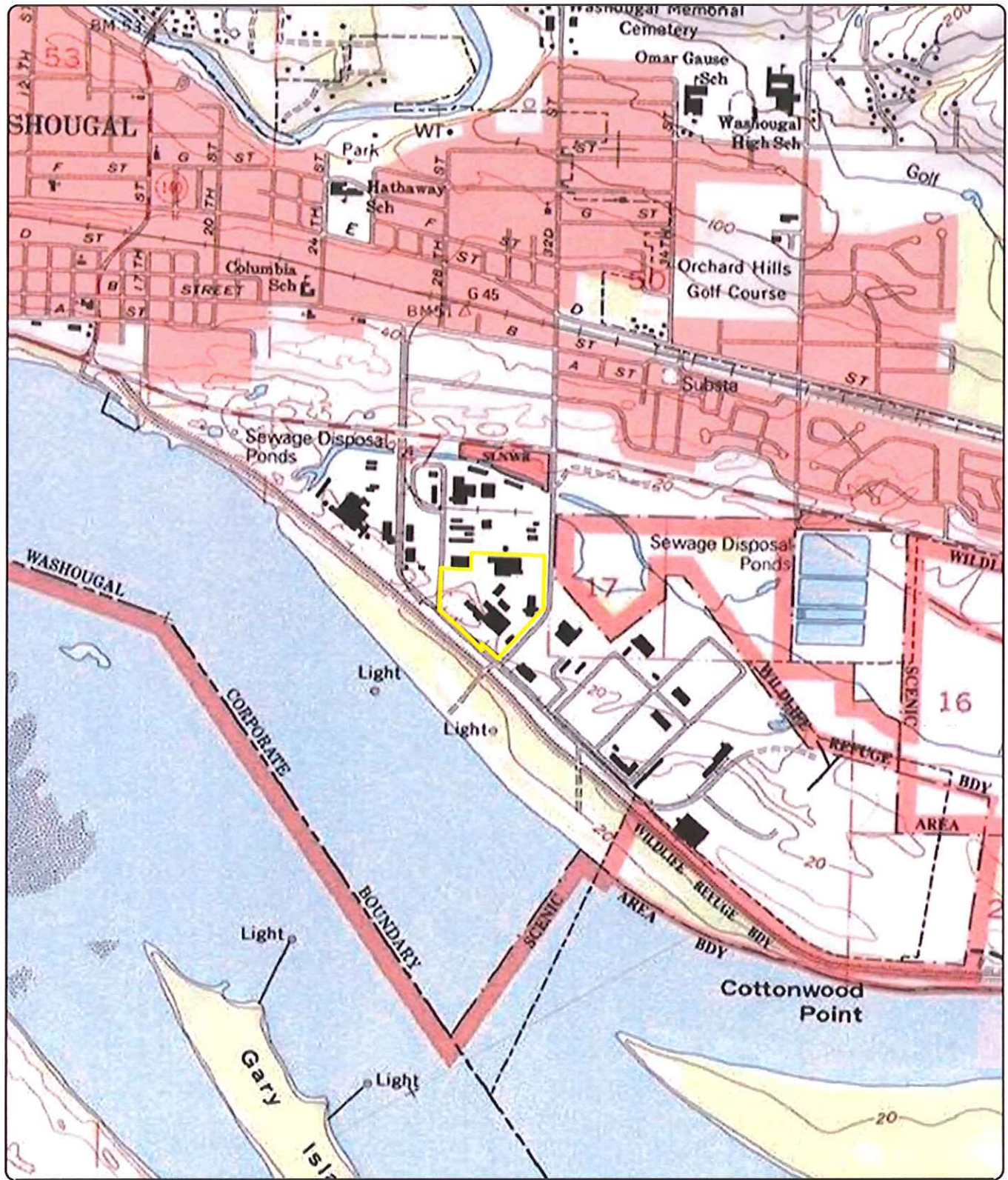
Ted J. Wall, PE
Oregon Operations Director

Attachments: Figures
A: Status Report and Pilot Study Data Submittal
B: Horizontal Drilling Method
C: Preliminary Construction Specifications

cc: Alan Wade, TrueGuard, LLC
Steve Krommenacker, TrueGuard, LLC
Cheryl Moore, TrueGuard, LLC

FIGURES





Site Address: 725 S 32nd Street, Washougal, Washington
 Source: USGS (1990) 7.5 Minute Topo Quad Washougal:
 Section 17, Township 1 North, Range 4 East

Legend
 Site Boundary

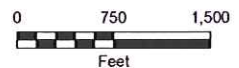
Figure 1
Site Location

TrueGuard, LLC
 Washougal, Washington



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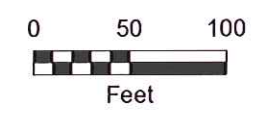


Source: Aerial photograph and Tax Lots obtained from Clark County GIS Department.

Legend

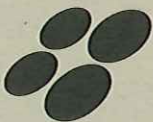
- Monitoring Well
- Pilot Test Air Sparge Well Location (Approximate)
- Site Boundary
- Tax Lot Boundary
- Pilot Study Area
- Proposed Horizontal Well Location (Approximate)
- Groundwater Flow Direction (Approximate)
- Source Area

Figure 2
Proposed Horizontal Well Air Sparge System Layout
 TrueGuard, LLC
 Washougal, Washington



ATTACHMENT A

STATUS REPORT AND PILOT STUDY DATA
SUBMITTAL



APPENDIX A AIR SPARGING PILOT TEST RESULTS

This appendix summarizes the results of pilot-test work for the TrueGuard facility at 725 South 32nd Street, Washougal, Washington, which was completed in March and April 2010. This data submittal also serves as a status update for the period from February 19, 2010 (i.e., from the time of the previous status report¹) to the present.

A laboratory-scale testing program conducted in the summer of 2009 demonstrated the process of geochemical fixation of arsenic using selected concentrations of proprietary remedial reagents. The reagents consisted of a slurry composed of a chemical oxidant (calcium persulfate [KlozurTM]) manufactured by FMC Environmental Solutions; ferrous chloride solution; and Activated Red Mud manufactured by GEOCHEM Remediation, LLC and marketed under the trade name GeobindTM. Results of the laboratory-scale testing program demonstrated that a mixture of the reagents was capable of immobilizing arsenic without mobilizing hexavalent chromium.

A pilot-scale test involving the hydrofracture injection of the reagents was then designed and conducted downgradient of the source area. Temporary monitoring wells MW-17 through MW-22 were installed in November 2009; the well logs were provided in the previous status report. The pilot-scale test was conducted in December 2009. The results demonstrated that a one-time hydrofracture injection of reagent slurry was capable of fixing arsenic in groundwater extracted from monitoring well MW-19 (approximately 7.5 feet downgradient of the injection location) within one day of the injection without resulting in the mobilization of hexavalent chromium. However, the effect was localized and persisted for less than one week following the injection.

In addition to the abovementioned pilot study, TrueGuard sampled selected groundwater monitoring wells in October 2009 to determine if dissolved arsenic was stratified within the water column. Arsenic was not found to be stratified. Also, quarterly groundwater monitoring from the existing monitoring wells was performed in December 2009. The data for the abovementioned events were provided in the previous status report.

The results of two previously conducted pilot-scale tests demonstrate that the subsurface oxidation/reduction and potential hydrogen conditions are highly stable, and quickly revert to ambient conditions after the injection of either reductants or oxidants. Thus, the concept of a one-time injection of a reagent mixture to achieve fixation of arsenic by changing geochemical conditions to either highly reduced or highly oxidized conditions will not provide the long-term results needed. This approach has been tabled until more viable, cost-effective approaches are explored. However, based in part on known site conditions and the

¹ MFA. Letter (re: TrueGuard, LLC—Washougal facility SW0916, Voluntary Cleanup Program status report and air sparging pilot-scale test protocol) to T. Middleton, Washington State Department of Ecology, Olympia, Washington, from T. Silva and T. Wall, Maul Foster & Alongi, Inc., Portland, Oregon. February 19, 2010.

prior test results, it was concluded that air sparging to create oxidizing conditions through injection of atmospheric air into the subsurface warranted assessment.

AIR SPARGE PILOT TEST

An air sparge pilot-scale test was performed at the site in the spring of 2010. This submittal includes data from the spring 2010 air sparge pilot study. Attached are summary tables, a figure, field sampling data sheets, laboratory analytical reports, a data validation memorandum, and a well log for the air sparge well. Details and background information for the pilot study were provided in a February 16, 2010 pilot-test protocol included in the previous status report.

The Geoprobe™ hydrofracture injection pilot-scale test conducted at the site on December 7, 2009, involved a radial grid of six temporary monitoring wells (MW-17 through MW-22) installed around a central injection point. The air sparging pilot test was also conducted at this location, the primary advantages being: 1) the groundwater monitoring wells are already installed; and 2) the geochemical conditions of the groundwater in this area are known. A potential disadvantage was that the previous pilot-scale testing may have altered the subsurface conditions through the injection of the reagents and by the subsequently induced chemical reactions. However, the likelihood that this short-duration test would have a substantive negative impact on the air sparge test results was considered low. Therefore, the use of the existing apparatus was warranted.

A 2-inch-diameter air sparge well was installed at a point generally between the December 2009 hydrofracture injection point and monitoring well MW-22 (see the attached figure). The injection well consists of a 2-foot-long, factory prepacked well screen set at the lower 2 feet of the aquifer (i.e., 13 to 15 feet below ground surface), with a blank riser pipe extending to the existing ground surface. The air sparge well was grouted to ensure an effective seal and was enclosed at the surface in a traffic-rated vault. The well log for the air sparge well (MW-23) is attached. The well was installed by a license driller in accordance with State of Washington regulations.

An oil-less compressor capable of generating up to 25 standard cubic feet per minute at a pressure greater than 20 pounds per square inch was used for the duration of the pilot test. The compressor was located in an area out of the way of site traffic. Because site traffic was a concern, the air supply line was routed from the compressor to the well vault via a capped trench. A high-temperature flow meter, a bleed valve, and an isolation valve were installed in the air supply line for purposes of monitoring and controlling the injection air flow rate. Flow rates and pressures were monitored during system startup.

The air sparge compressor operated continuously from March 26, 2010, to April 22, 2010. The area of influence was noted as being at least 20 feet, as air bubbles were observed in all six of the nearby groundwater monitoring wells. Therefore, an assessment with a tracer gas was not needed.

Performance monitoring during implementation of the air sparge pilot test included measurements of injection pressures and air flow rates; general groundwater chemistry parameters; and sampling and laboratory analysis of groundwater for metals and sulfate.

Water quality samples were collected from the six temporary monitoring wells (MW-17 through MW-22). Groundwater monitoring was performed on March 22 (before system startup), April 1, April 9, April 16, April 22, and May 7, 2010 (after system shutdown). The field parameters and analytical data are summarized in the attached tables. The attached laboratory reports and data validation memorandum provide information regarding the analytical methods used.

Prior work and the pilot-study test indicates that arsenic fixation can be achieved by the generation of highly oxidized conditions through the addition of an oxidant. The results of prior tests also suggest that the reducing conditions in the groundwater are highly stable and will require continued input of an oxidant in order to sustain an oxidizing environment. Atmospheric air, while of relatively low oxidizing ability, is suited for continuous application. The pilot-scale testing has demonstrated that the subsurface conditions allow the input of fluids (gas or liquid) into the saturated zone that extends from the water table (at approximately 3 feet below ground surface) to the base of the surficial aquifer (at approximately 15 feet below ground surface). Together, this information indicates that a full-scale system can be designed, installed, and operated to reduce dissolved arsenic levels in the groundwater at this site.

LIMITATIONS

The services undertaken in completing this data submittal were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with our client. This data submittal is solely for the use and information of our client unless otherwise noted. Any reliance on this data submittal by a third party is at such party's sole risk.

Opinions and recommendations contained in this data submittal apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, or the use of segregated portions of this data submittal.

TABLES



Table Notes
TrueGuard, LLC
Washougal, Washington

Ground and TOC elevations surveyed by Minister-Glaeser Surveying, Inc.

Surveys were conducted in December 2007, April 2008, May 2009, and December 2009.

Washington State Plane Coordinate System, South Zone in North American Datum 1983 (NAD83).
North American Vertical Datum of 1988 (NAVD 88).

-- = not analyzed or not sampled.

< = not detected at or above method reporting limit.

J = estimated concentration.

mg/L = milligrams per liter.

µS/cm = microsiemens per centimeter.

NTUs = nephelometric turbidity units.

TOC = top of casing.

**Table 1
Pilot Study Water Quality Field Parameters
TrueGuard, LLC
Washougal, Washington**

Well	Date	Sample	Distance to Sparge Well (feet)	Sample Depth	Temperature (degrees Celsius)	pH (standard units)	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (millivolts)	Turbidity (NTUs)	TOC (feet)	Depth to Water (feet)	Elevation (feet)	Depth to Bottom (feet)	Water Column (feet)
MW-17	12/02/2009	MW17	20.1	7	16.20	6.80	1,017	0.40	-143.0	2.20	20.32	4.42	15.90	14.86	10.44
	12/08/2009	MW17	20.1	6	15.00	7.13	562	0.71	-136.6	7.20	20.32	4.31	16.01	15.13	10.82
	12/15/2009	MW17	20.1	6	13.69	6.86	626	4.42	-157.2	9.53	20.32	4.34	15.98	15.13	10.79
	12/22/2009	MW17	20.1	6	14.69	6.92	654	3.08	-155.1	--	20.32	4.22	16.10	15.13	10.91
	04/01/2010	MW17	20.1	6	14.02	7.07	403	12.03	-71.7	36.41	20.32	2.70	17.62	15.13	12.43
	04/09/2010	MW17	20.1	5	13.88	7.22	374	9.69	-53.1	8.92	20.32	2.58	17.74	15.13	12.55
	04/16/2010	MW17	20.1	5	15.28	6.67	450	8.35	-8.1	11.26	20.32	2.75	17.57	15.13	12.38
	04/22/2010	MW17	20.1	5	14.44	6.77	486	12.88	-12.4	3.93	20.32	2.72	17.60	15.13	12.41
	05/07/2010	MW17	20.1	5	15.63	6.73	461	0.48	-61.4	2.95	20.32	2.80	17.52	15.13	12.33
	12/02/2009	MW18	18.9	6	16.32	6.71	642	0.30	-142.1	0.49	20.42	4.45	15.97	14.41	9.96
MW-18	12/08/2009	MW18	18.9	6	14.73	6.48	1,224	2.25	-134.0	5.98	20.42	4.37	16.05	14.63	10.26
	12/15/2009	MW18	18.9	6	14.54	6.55	2,358	1.40	-133.1	2.88	20.42	4.36	16.06	14.63	10.27
	12/22/2009	MW18	18.9	6	14.58	6.59	2,732	1.02	-137.3	--	20.42	4.25	16.17	14.63	10.38
	04/01/2010	MW18	18.9	6	14.15	6.30	290	4.92	-28.1	18.80	20.42	2.75	17.67	14.63	11.88
	04/09/2010	MW18	18.9	6	14.11	6.40	161	4.94	-23.5	7.66	20.42	2.60	17.82	14.63	12.03
	04/16/2010	MW18	18.9	6	14.42	6.03	184	2.70	11.0	7.00	20.42	2.75	17.67	14.63	11.88
	04/22/2010	MW18	18.9	5	14.41	6.24	160	1.16	34.1	6.73	20.42	2.71	17.71	14.63	11.92
	05/07/2010	MW18	18.9	5	15.22	6.40	380	0.52	-57.2	1.24	20.42	2.81	17.61	14.63	11.82
	12/02/2009	MW19	11.6	7	16.21	6.53	1,172	0.58	-129.7	5.65	20.31	4.35	15.96	14.40	10.05
	12/08/2009	MW19	11.6	6	15.98	3.53	3,191	1.74	432.7	33.40	20.31	4.28	16.03	14.65	10.37
MW-19	12/15/2009	MW19	11.6	6	12.92	6.01	4,497	1.67	-41.7	8.68	20.31	4.30	16.01	14.65	10.35
	12/22/2009	MW19	11.6	6	13.51	6.47	2,431	3.25	-87.4	--	20.31	4.11	16.20	14.65	10.54
	03/22/2010	MW19	11.6	5.5	13.40	5.94	475	0.65	-41.6	3.16	20.31	2.82	17.49	14.65	11.83
	04/01/2010	MW19	11.6	6	14.50	5.96	300	8.41	52.9	16.01	20.31	2.61	17.70	14.65	12.04
	04/09/2010	MW19	11.6	4.5	13.98	4.02	355	8.44	270.7	5.44	20.31	2.51	17.80	14.65	12.14
	04/16/2010	MW19	11.6	4.5	14.80	4.19	235	7.99	328.5	2.47	20.31	2.60	17.71	14.65	12.05
	04/22/2010	MW19	11.6	4.5	14.77	3.90	283	10.72	272.6	4.40	20.31	2.62	17.69	14.65	12.03
	05/07/2010	MW19	11.6	4.5	15.52	6.04	178	0.46	29.8	1.68	20.31	2.69	17.62	14.65	11.96

**Table 1
Pilot Study Water Quality Field Parameters
TrueGuard, LLC
Washougal, Washington**

Well	Date	Sample	Distance to Sparge Well (feet)	Sample Depth	Temperature (degrees Celsius)	pH (standard units)	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (millivolts)	Turbidity (NTUs)	TOC (feet)	Depth to Water (feet)	Elevation (feet)	Depth to Bottom (feet)	Water Column (feet)
MW-20	12/02/2009	MW20	14.7	7	15.72	6.67	977	0.67	-133.7	2.62	20.48	4.42	16.06	14.44	10.02
	12/08/2009	MW20	14.7	6	15.15	6.50	1,308	2.49	-136.3	4.51	20.48	4.38	16.10	14.69	10.31
	12/15/2009	MW20	14.7	6	14.38	6.70	657	1.13	-122.0	6.62	20.48	4.35	16.13	14.69	10.34
	12/22/2009	MW20	14.7	6	14.98	6.67	691	0.38	-116.9	--	20.48	4.22	16.26	14.69	10.47
	04/01/2010	MW20	14.7	6	14.14	6.62	345	6.87	-31.5	46.03	20.48	2.75	17.73	14.69	11.94
	04/09/2010	MW20	14.7	6	13.90	6.55	307	7.74	14.4	16.08	20.48	2.60	17.88	14.69	12.09
	04/16/2010	MW20	14.7	6	14.63	6.29	401	4.14	19.9	10.07	20.48	2.67	17.81	14.69	12.02
	04/22/2010	MW20	14.7	5	14.70	6.45	416	5.06	-10.8	9.42	20.48	2.70	17.78	14.69	11.99
	05/07/2010	MW20	14.7	5	15.63	6.49	379	0.46	-53.8	1.96	20.48	2.78	17.70	14.69	11.91
	12/02/2009	MW21	5.2	7	16.52	6.53	1,158	0.40	-126.0	2.00	20.15	4.07	16.08	14.37	10.30
MW-21	12/08/2009	MW21	5.2	6	14.41	6.46	1,481	8.76	-127.9	2.92	20.15	4.02	16.13	14.63	10.61
	12/15/2009	MW21	5.2	6	13.88	6.56	716	1.70	-143.6	2.41	20.15	3.98	16.17	14.63	10.65
	12/22/2009	MW21	5.2	6	14.32	6.63	705	2.04	-143.1	--	20.15	3.84	16.31	14.63	10.79
	04/01/2010	MW21	5.2	6	15.18	6.68	694	8.53	101.4	8.30	20.15	3.90	16.25	14.63	10.73
	04/09/2010	MW21	5.2	6	14.31	6.49	423	4.08	146.6	1.90	20.15	3.60	16.55	14.63	11.03
	04/16/2010	MW21	5.2	5	14.64	6.57	399	4.11	147.7	1.03	20.15	3.24	16.91	14.63	11.39
	04/22/2010	MW21	5.2	5	14.49	6.63	502	5.39	126.9	1.25	20.15	3.50	16.65	14.63	11.13
	05/07/2010	MW21	5.2	5	15.71	6.30	491	0.33	59.1	5.35	20.15	2.43	17.72	14.63	12.20
	12/02/2009	MW22	5.7	7	16.19	6.86	1,002	0.73	-60.4	1.58	19.94	3.92	16.02	14.37	10.45
	12/08/2009	MW22	5.7	6	15.25	6.96	598	0.97	-130.5	4.00	19.94	3.88	16.06	14.64	10.76
MW-22	12/15/2009	MW22	5.7	6	14.00	6.92	600	2.00	-137.2	2.87	19.94	3.83	16.11	14.64	10.81
	12/22/2009	MW22	5.7	6	14.53	6.87	628	0.31	-137.4	--	19.94	3.69	16.25	14.64	10.95
	04/01/2010	MW22	5.7	6	14.49	6.39	510	6.91	108.2	2.82	19.94	3.10	16.84	14.64	11.54
	04/09/2010	MW22	5.7	6	14.29	6.67	496	6.44	192.6	3.05	19.94	2.80	17.14	14.64	11.84
	04/16/2010	MW22	5.7	6	14.91	6.83	509	6.93	22.2	7.67	19.94	2.65	17.29	14.64	11.99
	04/22/2010	MW22	5.7	6	14.49	6.95	547	9.65	28.2	3.28	19.94	3.11	16.83	14.64	11.53
	05/07/2010	MW22	5.7	6	15.89	6.84	556	0.37	-29.7	6.26	19.94	2.30	17.64	14.64	12.34

Table 2
Summary of Pilot Study Data (mg/L)
TrueGuard, LLC
Washougal, Washington

Well	Date	Sample	Distance to Sparge Well (feet)	Total Arsenic	Dissolved Arsenic	Dissolved Manganese	Dissolved Iron	Sulfate	Dissolved Boron	Dissolved Chromium	Dissolved Hexavalent Chromium	Dissolved Copper
MW-17	12/02/2009	MW17	20.1	--	0.250	2.96	18.9	46.8	0.597	0.0082	<0.005	<0.01
	12/08/2009	MW17	20.1	--	0.300	3.31	21.8	18.6	0.558	0.0058	<0.005	<0.01
	12/15/2009	MW17	20.1	--	0.350	3.19	23.6	16.5	0.529J	0.0072	<0.005	<0.01
	12/22/2009	MW17	20.1	--	0.430	3.32	26.7	8.22	0.471	0.0081	<0.005	<0.01
	04/01/2010	MW17	20.1	--	0.045	2.54	6.59	--	--	--	--	--
	04/09/2010	MW17	20.1	--	0.022	1.94	3.15	--	--	--	--	--
	04/16/2010	MW17	20.1	--	0.013	2.13	3.75	--	--	--	--	--
	04/22/2010	MW17	20.1	--	0.016	2.36	3.16	48.5	--	--	--	--
	05/07/2010	MW17	20.1	--	0.024	2.09	9.23	46.9	--	--	--	--
	12/02/2009	MW18	18.9	--	0.098	6.06	68.7	<0.5	0.116	0.0051	<0.005	<0.01
12/08/2009	MW18	18.9	--	0.087	6.45	71.8	131	0.0885	0.005	<0.005	<0.01	
12/15/2009	MW18	18.9	--	0.120	24.0	294	1,710	<0.01J	<0.005	<0.005	<0.01	
12/22/2009	MW18	18.9	--	0.095	19.5	249	1,680	0.078	<0.005	<0.005	<0.01	
04/01/2010	MW18	18.9	--	0.054	2.07	22.9	--	--	--	--	--	
04/09/2010	MW18	18.9	--	0.022	1.04	7.68	--	--	--	--	--	
04/16/2010	MW18	18.9	--	0.017	1.2	8.36	--	--	--	--	--	
04/22/2010	MW18	18.9	--	0.016	1.05	7.36	28.1	--	--	--	--	
05/07/2010	MW18	18.9	--	0.014	2.86	26.2	22.1	--	--	--	--	
12/02/2009	MW19	11.6	--	0.093	6.29	60.2	1.27	0.166	<0.005	<0.005	<0.01	
12/08/2009	MW19	11.6	--	<0.010	23.5	216	3,350	0.0275	0.0071	<0.1	0.0297	
12/15/2009	MW19	11.6	--	0.045	33.8	350	3,650	0.424J	<0.005	<0.005	<0.01	
12/22/2009	MW19	11.6	--	0.058	11.3	109	2,190	0.196	0.005	<0.005	<0.01	
03/22/2010	MW19	11.6	0.033	0.030	3.42	55.4	--	--	--	--	--	
04/01/2010	MW19	11.6	0.0095	0.0097	2.05	17.9	--	--	--	--	--	
04/09/2010	MW19	11.6	0.0064	0.0062	2.59	13.4	--	--	--	--	--	
04/16/2010	MW19	11.6	0.0054	0.0058	1.69	7.1	--	--	--	--	--	
04/22/2010	MW19	11.6	0.0043	0.0043	2.17	4.82	41.8	--	--	--	--	
05/07/2010	MW19	11.6	0.0043	0.0043	1.00	8.17	44.9	--	--	--	--	

Table 2
Summary of Pilot Study Data (mg/L)
TrueGuard, LLC
Washougal, Washington

Well	Date	Sample	Distance to Sparge Well (feet)	Total Arsenic	Dissolved Arsenic	Dissolved Manganese	Dissolved Iron	Sulfate	Dissolved Boron	Dissolved Chromium	Dissolved Hexavalent Chromium	Dissolved Copper
MW-20	12/02/2009	MW20	14.7	--	0.062	5.24	50.1	<0.5	0.113	0.0078	<0.005	<0.01
	12/08/2009	MW20	14.7	--	0.082	5.69	63.2	70.8	0.083	0.006	<0.005	<0.01
	12/15/2009	MW20	14.7	--	0.120	5.46	58.6	3.28	0.101J	0.007	<0.005	<0.01
	12/22/2009	MW20	14.7	--	0.098	5.64	57.4	3.38	0.082	0.006	<0.005	<0.01
	04/01/2010	MW20	14.7	--	0.031	2.43	19.2	--	--	--	--	--
	04/09/2010	MW20	14.7	--	0.014	2.06	11.7	--	--	--	--	--
	04/16/2010	MW20	14.7	--	0.011	2.61	16.2	--	--	--	--	--
	04/22/2010	MW20	14.7	--	0.0093	2.56	15.3	17.0	--	--	--	--
	05/07/2010	MW20	14.7	--	0.015	2.64	20.5	24.2	--	--	--	--
	12/02/2009	MW21	5.2	--	0.300	5.93	55.3	32.6	0.2	<0.005	<0.005	<0.01
12/08/2009	MW21	5.2	--	0.380	5.74	67.4	35.3	0.16	<0.005	<0.005	<0.01	
12/15/2009	MW21	5.2	--	0.330	6.14	62.3	28.8	0.213J	0.0067	<0.005	<0.01	
12/22/2009	MW21	5.2	--	0.460	6.05	64.6	14.5	0.185	0.0068	<0.005	<0.01	
04/01/2010	MW21	5.2	--	0.0022	2.74	<0.01	<0.01	--	--	--	--	
04/09/2010	MW21	5.2	--	0.0014	2.30	<0.01	<0.01	--	--	--	--	
04/16/2010	MW21	5.2	--	0.0016	1.89	<0.01	<0.01	--	--	--	--	
04/22/2010	MW21	5.2	--	0.0011	2.51	<0.01	<0.01	17.4	--	--	--	
05/07/2010	MW21	5.2	--	0.0039	1.97	0.414	7.81	--	--	--	--	
12/02/2009	MW22	5.7	--	0.440	3.57	26.6	13.2	0.516	0.0058	0.0058	<0.005	<0.01
12/08/2009	MW22	5.7	--	0.450	3.92	34.8	6.62	0.475	0.0054	0.0054	<0.005	<0.01
12/15/2009	MW22	5.7	--	0.470	3.39	29.6	5.0	0.577J	0.0062	0.0062	<0.005	<0.01
12/22/2009	MW22	5.7	--	0.500	3.13	28.5	1.49	0.619	0.0062	0.0062	<0.005	<0.01
04/01/2010	MW22	5.7	--	0.0038	3.13	<0.01	<0.01	--	--	--	--	--
04/09/2010	MW22	5.7	--	0.0094	2.53	<0.01	<0.01	--	--	--	--	--
04/16/2010	MW22	5.7	--	0.028	2.12	0.448	--	--	--	--	--	--
04/22/2010	MW22	5.7	--	0.015	2.22	0.0513	28.6	--	--	--	--	--
05/07/2010	MW22	5.7	--	0.081	2.95	1.32	15.3	--	--	--	--	--

FIGURE





Source: Aerial photograph obtained from Clark County GIS Department.

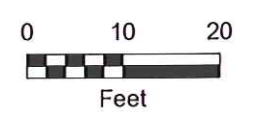


This product is for informational purposes and may not have been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information.

Legend

- Air Sparge Well Location (Approximate)
- Injection Point (December 7, 2009)
- Monitoring Well
- Tax Lot Boundary

**Figure
Pilot Study Area**
TrueGuard, LLC
Washougal, Washington



FIELD SAMPLING DATA SHEETS



Maul Foster & Alongi, Inc.

7223 NE Hazel Dell Avenue, Suite B, Vancouver, WA 98665 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-19
Project #	9009.01.12	Sampler	SM
Project Name	Washougal	Sampling Date	3/22/2010
Sampling Event	Spring 2010 Pilot Study	Sample Name	MW19
Sub Area	Baseline	Sample Depth	5.5
FSDS QA:	TJS 03/23/10	Easting	<input style="width: 50px;" type="text"/>
		Northing	<input style="width: 50px;" type="text"/>
		TOC	<input style="width: 50px;" type="text"/>

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
03/22/10	11:50	14.61	--	2.82	--	11.79	1.92

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	12:00	1.98	0.5	5.93	13.93	485	1.21	-37.6	10.94
	12:15	3.96	0.5	5.92	13.42	474	0.67	-40.9	6.02
Final Field Parameters	12:30	5.94	0.5	5.94	13.40	475	0.65	-41.6	3.16

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	12:30:00 PM	VOA-Glass		
			Amber Glass		
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly	1	No
			Red Dissolved Poly	1	Yes
			Total Bottles	2	

General Sampling Comments

Water level holding steady at 2.97 feet below top of casing while purging.

Signature _____

Maul Foster & Alongi, Inc.

7223 NE Hazel Dell Avenue, Suite B, Vancouver, WA 98665 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-17
Project #	9009.01.12	Sampler	SM/SF
Project Name	Washougal	Sampling Date	4/1/2010
Sampling Event	Spring 2010 Pilot Study	Sample Name	MW17
Sub Area	1st Round Post Injection	Sample Depth	6
FSDS QA:	TJS 04/06/10	Easting	<input style="width: 50px;" type="text"/>
		Northing	<input style="width: 50px;" type="text"/>
		TOC	<input style="width: 50px;" type="text"/>

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
04/01/10	10:39	15.13	--	2.7	--	12.43	2.03

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	11:03	2.0	0.5	7.18	14.05	400	12.57	-44.1	284.4
	11:19	4.0	0.5	7.10	14.04	404	12.25	-66.2	96.4
	11:33	6.0	0.5	7.07	14.02	403	12.03	-71.7	54.5
	11:40	6.75	0.4	--	--	--	--	--	35.45
	11:45	7.0	0.25	--	--	--	--	--	34.32
Final Field Parameters	11:50	7.25	0.2	7.07	14.02	403	12.03	-71.7	36.41

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations: Bubbles observed in well. Turbid at first, then cleared somewhat. Small particles (<1 millimeter in diameter) floating on water.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	11:53:00 AM	VOA-Glass		
			Amber Glass		
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly	1	No
			Red Dissolved Poly	1	Yes
			Total Bottles	2	

General Sampling Comments Removed flow-through cell and took turbidity measurements.

Signature _____

Maul Foster & Alongi, Inc.

7223 NE Hazel Dell Avenue, Suite B, Vancouver, WA 98665 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-18
Project #	9009.01.12	Sampler	SM/SF
Project Name	Washougal	Sampling Date	4/1/2010
Sampling Event	Spring 2010 Pilot Study	Sample Name	MW18
Sub Area	1st Round Post Injection	Sample Depth	6
FSDS QA:	TJS 04/06/10	Easting	<input style="width: 50px;" type="text"/>
		Northing	<input style="width: 50px;" type="text"/>
		TOC	<input style="width: 50px;" type="text"/>

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
04/01/10	10:42	14.63	--	2.75	--	11.88	1.93

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	11:00	2.0	0.5	6.39	14.00	231	6.40	-26.0	141
	11:16	4.0	0.5	6.27	14.44	288	4.97	-27.6	57.3
	11:31	6.0	0.5	6.30	14.15	290	4.92	-28.1	27.4
	11:40	7.0	0.3	--	--	--	--	--	25.5
	11:45	7.8	0.2	--	--	--	--	--	20.2
Final Field Parameters	11:50	8.0	0.2	6.30	14.15	290	4.92	-28.1	18.8

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Bubbles observed in well. Turbid at first, then cleared somewhat. Small particles (<1 millimeter in diameter) in water.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	11:50:00 AM	VOA-Glass		
			Amber Glass		
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly	1	No
			Red Dissolved Poly	1	Yes
			Total Bottles	2	

General Sampling Comments

Removed flow-through cell and took turbidity measurements.

Signature _____

Maul Foster & Alongi, Inc.

7223 NE Hazel Dell Avenue, Suite B, Vancouver, WA 98665 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-19
Project #	9009.01.12	Sampler	SM/SF
Project Name	Washougal	Sampling Date	4/1/2010
Sampling Event	Spring 2010 Pilot Study	Sample Name	MW19
Sub Area	1st Round Post Injection	Sample Depth	6
FSDS QA:	TJS 04/06/10	Easting	
		Northing	
		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
04/01/10	12:00	14.65	--	2.61	--	12.04	1.96

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	12:30	2.0	0.4	5.95	14.00	252	8.57	60.9	48.7
	12:46	4.0	0.4	5.90	14.14	294	8.34	54.3	30.5
	13:07	6.0	0.4	5.96	14.50	300	8.41	52.9	18.33
	13:12	6.5	0.2	--	--	--	--	--	17.60
Final Field Parameters	13:17	7.0	0.2	5.96	14.50	300	8.41	52.9	16.01

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Bubbles observed in well. Turbid at first, then cleared.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	1:17:00 PM	VOA-Glass		
			Amber Glass		
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly	1	No
			Red Dissolved Poly	1	Yes
Total Bottles	2				

General Sampling Comments

Removed flow-through cell and took turbidity measurements.

Signature _____

Maul Foster & Alongi, Inc.

7223 NE Hazel Dell Avenue, Suite B, Vancouver, WA 98665 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-20
Project #	9009.01.12	Sampler	SM/SF
Project Name	Washougal	Sampling Date	4/1/2010
Sampling Event	Spring 2010 Pilot Study	Sample Name	MW20
Sub Area	1st Round Post Injection	Sample Depth	6
FSDS QA:	TJS 04/06/10	Easting	
		Northing	
		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
04/01/10	12:11	14.69	--	2.75	--	11.94	1.95

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	12:29	2.0	0.4	6.56	13.90	286	7.53	-38.7	128.9
	12:48	4.0	0.4	6.54	13.85	321	7.14	-32.1	76.43
	13:02	6.0	0.4	6.62	14.14	345	6.87	-31.5	46.53
	13:15	6.85	0.25	--	--	--	--	--	65.00
	13:20	7.15	0.25	--	--	--	--	--	47.36
	13:25	7.5	0.25	--	--	--	--	--	40.54
Final Field Parameters	13:30	7.85	0.25	6.62	14.14	345	6.87	-31.5	46.03

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Bubbles observed in well. Turbid at first, then cleared somewhat. Small particles (<1 millimeter in diameter) in water.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	1:30:00 PM	VOA-Glass		
			Amber Glass		
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly	1	No
			Red Dissolved Poly	1	Yes
			Total Bottles	2	

General Sampling Comments

Removed flow-through cell and took turbidity measurements.

Signature _____

Maul Foster & Alongi, Inc.

7223 NE Hazel Dell Avenue, Suite B, Vancouver, WA 98665 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-21		
Project #	9009.01.12	Sampler	SM/SF		
Project Name	Washougal	Sampling Date	4/1/2010		
Sampling Event	Spring 2010 Pilot Study	Sample Name	MW21		
Sub Area	Ist Round Post Injection	Sample Depth	6		
FSDS QA:	TJS 04/06/10	Easting		Northing	
				TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
04/01/10	13:46	14.63	--	3.9	--	10.73	1.75

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	14:02	1.75	0.45	6.58	15.36	790	9.16	81.2	70.31
	14:14	3.5	0.45	6.59	15.13	692	9.07	106.6	32.67
Final Field Parameters	14:27	5.25	0.45	6.68	15.18	694	8.53	101.4	8.30

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Bubbles observed in well. Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	2:30:00 PM	VOA-Glass		
			Amber Glass		
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly	1	No
			Red Dissolved Poly	1	Yes
			Total Bottles	2	

General Sampling Comments

Turned off air compressor, took depth to water reading. Bubbles in sample tubing.

Signature _____

Maul Foster & Alongi, Inc.

7223 NE Hazel Dell Avenue, Suite B, Vancouver, WA 98665 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-22		
Project #	9009.01.12	Sampler	SM/SF		
Project Name	Washougal	Sampling Date	4/1/2010		
Sampling Event	Spring 2010 Pilot Study	Sample Name	MW22		
Sub Area	1st Round Post Injection	Sample Depth	6		
FSDS QA:	TJS 04/06/10	Easting		Northing	
				TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
04/01/10	13:45	14.64	--	3.1	--	11.54	1.88

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	14:10	2.0	0.4	6.39	14.73	535	8.28	97.9	11.85
	14:30	4.0	0.4	6.41	14.60	516	6.98	107.9	3.11
Final Field Parameters									
	14:50	6.0	0.4	6.39	14.49	510	6.91	108.2	2.82

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Bubbles observed in well. Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	2:50:00 PM	VOA-Glass		
			Amber Glass		
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly	1	No
			Red Dissolved Poly	1	Yes
Total Bottles				2	

General Sampling Comments

Turned off air compressor, took depth to water reading. Bubbles in sample tubing.

Signature _____

Maul Foster & Alongi, Inc.

7223 NE Hazel Dell Avenue, Suite B, Vancouver, WA 98665 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-22
Project #	9009.01.12	Sampler	SM/SF
Project Name	Washougal	Sampling Date	4/1/2010
Sampling Event	Spring 2010 Pilot Study	Sample Name	MW22DUP
Sub Area	1st Round Post Injection	Sample Depth	6
FSDS QA:	TJS 04/06/10	Easting	
		Northing	
		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
04/01/10	13:45	14.64	--	3.1	--	11.54	1.88

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	14:10	2.0	0.4	6.39	14.73	535	8.28	97.9	11.85
	14:30	4.0	0.4	6.41	14.60	516	6.98	107.9	3.11
Final Field Parameters	14:50	6.0	0.4	6.39	14.49	510	6.91	108.2	2.82

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Bubbles observed in well. Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	2:50:00 PM	VOA-Glass		
			Amber Glass		
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly	1	No
			Red Dissolved Poly	1	Yes
Total Bottles	2				

General Sampling Comments

Turned off air compressor, took depth to water reading. Bubbles in sample tubing.

Signature _____

Maul Foster & Alongi, Inc.

7223 NE Hazel Dell Avenue, Suite B, Vancouver, WA 98665 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-17
Project #	9009.01.12	Sampler	SM/SF
Project Name	Washougal	Sampling Date	4/9/2010
Sampling Event	Spring 2010 Pilot Study	Sample Name	MW17
Sub Area	2nd Round Post Injection	Sample Depth	5
FSDS QA:	TJS 04/14/10	Easting	<input style="width: 50px;" type="text"/>
		Northing	<input style="width: 50px;" type="text"/>
		TOC	<input style="width: 50px;" type="text"/>

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
04/09/10	09:06	15.13	--	2.58	--	12.55	2.05

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	09:30	2.1	0.4	7.65	13.70	409	10.13	-60.7	129.1
	09:50	4.2	0.4	7.27	13.86	376	9.74	-52.9	40.8
Final Field Parameters	10:10	6.3	0.4	7.22	13.88	374	9.69	-53.1	8.92

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Bubbles observed in well. Turbid at first, then cleared.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	10:10:00 AM	VOA-Glass		
			Amber Glass		
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly	1	No
			Red Dissolved Poly	1	Yes
			Total Bottles	2	

General Sampling Comments

Removed flow-through cell for final turbidity measurements. Bubbles in sample tubing.

Signature _____

Maul Foster & Alongi, Inc.

7223 NE Hazel Dell Avenue, Suite B, Vancouver, WA 98665 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-18
Project #	9009.01.12	Sampler	SM/SF
Project Name	Washougal	Sampling Date	4/9/2010
Sampling Event	Spring 2010 Pilot Study	Sample Name	MW18
Sub Area	2nd Round Post Injection	Sample Depth	6
FSDS QA:	TJS 04/14/10	Easting	
		Northing	
		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
04/09/10	09:04	14.63	--	2.6	--	12.03	1.96

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	09:30	2.0	0.5	7.66	13.32	144	6.62	-98.2	38.45
	09:48	4.0	0.5	6.57	13.92	140	4.99	-42.9	11.63
Final Field Parameters	10:06	6.0	0.5	6.40	14.11	161	4.94	-23.5	7.66

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Bubbles observed in well. Turbid at first, then cleared. Small particles (<1 millimeter in diameter) in water.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	10:06:00 AM	VOA-Glass		
			Amber Glass		
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly	1	No
			Red Dissolved Poly	1	Yes
Total Bottles			2		

General Sampling Comments

Removed flow-through cell for final turbidity measurements.

Signature _____

Maul Foster & Alongi, Inc.

7223 NE Hazel Dell Avenue, Suite B, Vancouver, WA 98665 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-19
Project #	9009.01.12	Sampler	SM/SF
Project Name	Washougal	Sampling Date	4/9/2010
Sampling Event	Spring 2010 Pilot Study	Sample Name	MW19
Sub Area	2nd Round Post Injection	Sample Depth	4.5
FSDS QA:	TJS 04/14/10	Easting	<input style="width: 50px;" type="text"/>
		Northing	<input style="width: 50px;" type="text"/>
		TOC	<input style="width: 50px;" type="text"/>

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
04/09/10	10:20	14.65	--	2.51	--	12.14	1.98

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	10:45	2.0	0.4	3.99	13.83	319	8.81	237.0	13.69
	11:05	4.0	0.4	3.94	13.88	349	8.51	265.4	8.58
Final Field Parameters									
	11:25	6.0	0.4	4.02	13.98	355	8.44	270.7	5.44

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Bubbles observed in well. Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	11:25:00 AM	VOA-Glass		
			Amber Glass		
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly	1	No
			Red Dissolved Poly	1	Yes
			Total Bottles	2	

General Sampling Comments

Removed flow-through cell for final turbidity measurements. Checked calibration for pH; calibration confirmed.

Signature _____

Maul Foster & Alongi, Inc.

7223 NE Hazel Dell Avenue, Suite B, Vancouver, WA 98665 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-20
Project #	9009.01.12	Sampler	SM/SF
Project Name	Washougal	Sampling Date	4/9/2010
Sampling Event	Spring 2010 Pilot Study	Sample Name	MW20
Sub Area	2nd Round Post Injection	Sample Depth	6
FSDS QA:	TJS 04/14/10	Easting	
		Northing	
		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
04/09/10	10:27	14.69	--	2.6	--	12.09	1.97

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	10:50	2.0	0.5	6.44	13.64	274	8.55	12.3	57.06
	11:04	4.0	0.5	6.34	13.78	298	7.87	5.1	21.42
Final Field Parameters									
	11:18	6.0	0.6	6.55	13.90	307	7.74	14.4	16.08

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Bubbles observed in well. Turbid at first, then cleared.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	11:18:00 AM	VOA-Glass		
			Amber Glass		
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly	1	No
			Red Dissolved Poly	1	Yes
			Total Bottles	2	

General Sampling Comments

Removed flow-through cell for final turbidity measurements.

Signature _____

Maul Foster & Alongi, Inc.

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Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-21
Project #	9009.01.12	Sampler	SM/SF
Project Name	Washougal	Sampling Date	4/9/2010
Sampling Event	Spring 2010 Pilot Study	Sample Name	MW21
Sub Area	2nd Round Post Injection	Sample Depth	6
FSDS QA:	TJS 04/14/10	Easting	
		Northing	
		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
04/09/10	11:40	14.63	--	3.6	--	11.03	1.80

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	11:59	2.0	0.5	6.56	14.22	536	5.92	124.0	11.82
	12:10	3.6	0.5	6.51	14.27	455	4.83	139.0	4.68
Final Field Parameters									
	12:24	5.4	0.5	6.49	14.31	423	4.08	146.6	1.90

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Bubbles observed in well. Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	12:24:00 PM	VOA-Glass		
			Amber Glass		
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly	1	No
			Red Dissolved Poly	1	Yes
			Total Bottles	2	

General Sampling Comments

Turned off air compressor, took depth to water reading.

Signature _____

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Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-22
Project #	9009.01.12	Sampler	SM/SF
Project Name	Washougal	Sampling Date	4/9/2010
Sampling Event	Spring 2010 Pilot Study	Sample Name	MW22
Sub Area	2nd Round Post Injection	Sample Depth	6
FSDS QA:	TJS 04/14/10	Easting	
		Northing	
		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
04/09/10	11:40	14.64	--	2.8	--	11.84	1.93

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	12:07	2.0	0.4	6.76	14.09	503	8.16	195.7	8.51
	12:27	4.0	0.4	6.64	14.24	507	6.43	194.7	5.73
Final Field Parameters	12:47	6.0	0.4	6.67	14.29	496	6.44	192.6	3.05

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Bubbles observed in well. Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	12:47:00 PM	VOA-Glass		
			Amber Glass		
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly	1	No
			Red Dissolved Poly	1	Yes
			Total Bottles	2	

General Sampling Comments

Turned off air compressor, took depth to water reading. Bubbles in sample tubing. Collected Duplicate sample MW22-DUP at this location.

Signature _____

Maul Foster & Alongi, Inc.

7223 NE Hazel Dell Avenue, Suite B, Vancouver, WA 98665 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-22
Project #	9009.01.12	Sampler	SM/SF
Project Name	Washougal	Sampling Date	4/9/2010
Sampling Event	Spring 2010 Pilot Study	Sample Name	MW22-DUP
Sub Area	2nd Round Post Injection	Sample Depth	6
FSDS QA:	TJS 04/14/10	Easting	
		Northing	
		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
04/09/10	11:40	14.64	--	2.8	--	11.84	1.93

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	12:07	2.0	0.4	6.76	14.09	503	8.16	195.7	8.51
	12:27	4.0	0.4	6.64	14.24	507	6.43	194.7	5.73
Final Field Parameters	12:47	6.0	0.4	6.67	14.29	496	6.44	192.6	3.05

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Bubbles observed in well. Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	12:47:00 PM	VOA-Glass		
			Amber Glass		
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly	1	No
			Red Dissolved Poly	1	Yes
			Total Bottles	2	

General Sampling Comments

Turned off air compressor, took depth to water reading. Bubbles in sample tubing. Duplicate sample of MW-22.

Signature _____

Maul Foster & Alongi, Inc.

7223 NE Hazel Dell Avenue, Suite B, Vancouver, WA 98665 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-17
Project #	9009.01.12	Sampler	SM/SF
Project Name	Washougal	Sampling Date	4/16/2010
Sampling Event	Spring 2010 Pilot Study	Sample Name	MW17
Sub Area	3rd Round Post Injection	Sample Depth	5
FSDS QA:	JJP 04/20/10	Easting	<input style="width: 50px;" type="text"/>
		Northing	<input style="width: 50px;" type="text"/>
		TOC	<input style="width: 50px;" type="text"/>

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
04/16/10	10:12	15.13	--	2.75	--	12.38	2.02

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	10:37	2.0	0.5	6.19	14.88	453	8.61	54.0	39.44
	10:55	4.0	0.5	6.42	15.20	456	8.77	-1.2	22.95
Final Field Parameters	11:13	6.0	0.5	6.67	15.28	450	8.35	-8.1	11.26

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Bubbles observed in well. Turbid at first, then cleared. Small particles (<1 millimeter in diameter) in water.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	11:15:00 AM	VOA-Glass		
			Amber Glass		
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly	1	No
			Red Dissolved Poly	1	Yes
			Total Bottles	2	

General Sampling Comments

Removed flow-through cell for final turbidity measurements. Bubbles in sample tubing.

Signature _____

Maul Foster & Alongi, Inc.

7223 NE Hazel Dell Avenue, Suite B, Vancouver, WA 98665 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-18
Project #	9009.01.12	Sampler	SM/SF
Project Name	Washougal	Sampling Date	4/16/2010
Sampling Event	Spring 2010 Pilot Study	Sample Name	MW18
Sub Area	3rd Round Post Injection	Sample Depth	6
FSDS QA:	JJP 04/20/10	Easting	<input style="width: 50px;" type="text"/>
		Northing	<input style="width: 50px;" type="text"/>
		TOC	<input style="width: 50px;" type="text"/>

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
04/16/10	09:06	14.63	--	2.75	--	11.88	1.94

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	09:28	2.5	0.5	6.11	14.34	159	3.18	15.1	35.68
	09:39	4.0	0.5	6.08	14.37	170	2.66	10.0	25.14
	09:55	6.0	0.5	6.03	14.42	184	2.70	11.0	12.45
	09:59	6.5	0.5	--	--	--	--	--	7.00
Final Field Parameters	09:59	6.5	0.5	6.03	14.42	184	2.70	11.0	7.00

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Bubbles observed in well. Turbid at first, then cleared. Small particles (<1 millimeter in diameter) in water.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	9:59:00 AM	VOA-Glass		
			Amber Glass		
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly	1	No
			Red Dissolved Poly	1	Yes
			Total Bottles	2	

General Sampling Comments

Removed flow-through cell for final turbidity measurements.

Signature _____

Maul Foster & Alongi, Inc.

7223 NE Hazel Dell Avenue, Suite B, Vancouver, WA 98665 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-19		
Project #	9009.01.12	Sampler	SM/SF		
Project Name	Washougal	Sampling Date	4/16/2010		
Sampling Event	Spring 2010 Pilot Study	Sample Name	MW19		
Sub Area	3rd Round Post Injection	Sample Depth	4.5		
FSDS QA:	JJP 04/20/10	Easting		Northing	
				TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
04/16/10	09:00	14.65	--	2.6	--	12.05	1.96

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	09:20	2.0	0.5	3.98	14.59	245	8.42	349.9	10.03
	09:35	4.0	0.5	4.11	14.72	238	8.18	333.0	4.01
Final Field Parameters	09:50	6.0	0.5	4.19	14.80	235	7.99	328.5	2.47

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations: Bubbles observed in well. Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	9:50:00 AM	VOA-Glass		
			Amber Glass		
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly	1	No
			Red Dissolved Poly	1	Yes
			Total Bottles	2	

General Sampling Comments Bubbles in sample tubing.

Signature _____

Maul Foster & Alongi, Inc.

7223 NE Hazel Dell Avenue, Suite B, Vancouver, WA 98665 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-20
Project #	9009.01.12	Sampler	SM/SF
Project Name	Washougal	Sampling Date	4/16/2010
Sampling Event	Spring 2010 Pilot Study	Sample Name	MW20
Sub Area	3rd Round Post Injection	Sample Depth	6
FSDS QA:	JJP 04/20/10	Easting	
		Northing	
		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
04/16/10	10:00	14.69	--	2.67	--	12.02	1.96

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	10:20	2.0	0.5	6.08	14.44	383	5.60	59.0	56.7
	10:35	4.0	0.5	6.23	14.50	398	4.20	21.4	16.20
Final Field Parameters									
	10:50	6.0	0.5	6.29	14.63	401	4.14	19.9	10.07

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Bubbles observed in well. Turbid at first, then cleared.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	10:50:00 AM	VOA-Glass		
			Amber Glass		
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly	1	No
			Red Dissolved Poly	1	Yes
			Total Bottles	2	

General Sampling Comments

Signature _____

Maul Foster & Alongi, Inc.

7223 NE Hazel Dell Avenue, Suite B, Vancouver, WA 98665 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-21
Project #	9009.01.12	Sampler	SM/SF
Project Name	Washougal	Sampling Date	4/16/2010
Sampling Event	Spring 2010 Pilot Study	Sample Name	MW21
Sub Area	3rd Round Post Injection	Sample Depth	5
FSDS QA:	JJP 04/20/10	Easting	
		Northing	
		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
04/16/10	11:32	14.63	--	3.24	--	11.39	1.86

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	11:52	2.0	0.5	6.57	14.65	422	4.82	150.4	7.32
	12:07	4.0	0.5	6.58	14.59	398	4.16	148.5	2.97
Final Field Parameters									
	12:22	6.0	0.5	6.57	14.64	399	4.11	147.7	1.03

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Bubbles observed in well. Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	12:22:00 PM	VOA-Glass		
			Amber Glass		
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly	1	No
			Red Dissolved Poly	1	Yes
			Total Bottles	2	

General Sampling Comments

Turned down air compressor, took depth to water reading. Bubbles in sample tubing. Water level about 1 foot below top of casing.

Signature _____

Maul Foster & Alongi, Inc.

7223 NE Hazel Dell Avenue, Suite B, Vancouver, WA 98665 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-22
Project #	9009.01.12	Sampler	SM/SF
Project Name	Washougal	Sampling Date	4/16/2010
Sampling Event	Spring 2010 Pilot Study	Sample Name	MW22
Sub Area	3rd Round Post Injection	Sample Depth	6
FSDS QA:	JJP 04/20/10	Easting	
		Northing	
		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
04/16/10	11:29	14.64	--	2.65	--	11.99	1.95

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	11:48	2.0	0.5	7.16	14.98	517	8.39	68.4	20.06
	12:01	4.0	0.5	7.03	14.79	518	8.92	49.1	14.58
Final Field Parameters									
	12:18	6.0	0.5	6.83	14.91	509	6.93	22.2	7.67

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Bubbles observed in well. Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	12:18:00 PM	VOA-Glass		
			Amber Glass		
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly	1	No
			Red Dissolved Poly	1	Yes
			Total Bottles	2	

General Sampling Comments

Turned down air compressor, took depth to water reading. Bubbles in sample tubing. Collected duplicate sample MW22-DUP at this location.

Signature _____

Maul Foster & Alongi, Inc.

7223 NE Hazel Dell Avenue, Suite B, Vancouver, WA 98665 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-22		
Project #	9009.01.12	Sampler	SM/SF		
Project Name	Washougal	Sampling Date	4/16/2010		
Sampling Event	Spring 2010 Pilot Study	Sample Name	MW22-DUP		
Sub Area	3rd Round Post Injection	Sample Depth	6		
FSDS QA:	JJP 04/20/10	Easting		Northing	
				TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
04/16/10	11:29	14.64	--	2.65	--	11.99	1.95

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	11:48	2.0	0.5	7.16	14.98	517	8.39	68.4	20.06
	12:01	4.0	0.5	7.03	14.79	518	8.92	49.1	14.58
Final Field Parameters									
	12:18	6.0	0.5	6.83	14.91	509	6.93	22.2	7.67

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations: Bubbles observed in well. Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	12:18:00 PM	VOA-Glass		
			Amber Glass		
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly	1	No
			Red Dissolved Poly	1	Yes
			Total Bottles	2	

General Sampling Comments Turned down air compressor, took depth to water reading. Bubbles in sample tubing. This is a duplicate of MW22.

Signature _____

Maul Foster & Alongi, Inc.

7223 NE Hazel Dell Avenue, Suite B, Vancouver, WA 98665 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-17
Project #	9009.01.12	Sampler	SM/SF
Project Name	Washougal	Sampling Date	4/22/2010
Sampling Event	Spring 2010 Pilot Study	Sample Name	MW17
Sub Area	4th Round Post Injection	Sample Depth	5
FSDS QA:	TJS 04/23/10	Easting	<input type="text"/>
		Northing	<input type="text"/>
		TOC	<input type="text"/>

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
04/22/10	09:14	15.13	--	2.72	--	12.41	2.02

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	09:31	2.0	0.5	7.01	14.41	456	12.77	-8.3	26.56
	09:45	4.0	0.5	6.76	14.39	480	12.55	-10.4	8.35
Final Field Parameters	10:05	6.9	0.5	6.77	14.44	486	12.88	-12.4	3.93

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Bubbles observed in well. Turbid at first, then cleared. Small particles (<1 millimeter in diameter) in water.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	10:05:00 AM	VOA-Glass		
			Amber Glass		
			White Poly	1	No
			Yellow Poly		
			Green Poly		
			Red Total Poly	1	No
			Red Dissolved Poly	1	Yes
			Total Bottles	3	

General Sampling Comments

Removed flow-through cell for final turbidity measurements. Bubbles in sample tubing.

Signature _____

Maul Foster & Alongi, Inc.

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Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-18
Project #	9009.01.12	Sampler	SM/SF
Project Name	Washougal	Sampling Date	4/22/2010
Sampling Event	Spring 2010 Pilot Study	Sample Name	MW18
Sub Area	4th Round Post Injection	Sample Depth	5
FSDS QA:	TJS 04/23/10	Easting	<input type="text"/>
		Northing	<input type="text"/>
		TOC	<input type="text"/>

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
04/22/10	09:11	14.63	--	2.71	--	11.92	1.94

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	09:32	2.0	0.45	6.39	14.47	141	1.26	-16.0	34.30
	09:50	4.0	0.5	6.34	14.48	153	1.24	-4.9	20.01
	10:05	6.0	0.5	6.26	14.43	159	1.18	32.0	12.56
Final Field Parameters	10:20	8.0	0.5	6.24	14.41	160	1.16	34.1	6.73

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Bubbles observed in well. Turbid at first, then cleared. Small particles (<1 millimeter in diameter) in water.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	10:20:00 AM	VOA-Glass		
			Amber Glass		
			White Poly	1	No
			Yellow Poly		
			Green Poly		
			Red Total Poly	1	No
			Red Dissolved Poly	1	Yes
			Total Bottles	3	

General Sampling Comments

Removed flow-through cell for final turbidity measurements.

Signature _____

Maul Foster & Alongi, Inc.

7223 NE Hazel Dell Avenue, Suite B, Vancouver, WA 98665 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-19
Project #	9009.01.12	Sampler	SM/SF
Project Name	Washougal	Sampling Date	4/22/2010
Sampling Event	Spring 2010 Pilot Study	Sample Name	MW19
Sub Area	4th Round Post Injection	Sample Depth	4.5
FSDS QA:	TJS 04/23/10	Easting	<input style="width: 50px;" type="text"/>
		Northing	<input style="width: 50px;" type="text"/>
		TOC	<input style="width: 50px;" type="text"/>

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons'/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
04/22/10	10:24	14.65	--	2.62	--	12.03	1.96

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	10:46	2.0	0.5	3.76	15.04	242	11.03	309.1	7.00
	11:04	4.3	0.5	3.88	14.79	265	11.13	289.9	4.56
Final Field Parameters	11:17	6.0	0.5	3.90	14.77	283	10.72	272.6	4.40

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Bubbles observed in well. Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	11:17:00 AM	VOA-Glass		
			Amber Glass		
			White Poly	1	No
			Yellow Poly		
			Green Poly		
			Red Total Poly	1	No
			Red Dissolved Poly	1	Yes
Total Bottles			3		

General Sampling Comments

Bubbles in sample tubing.

Signature _____

Maul Foster & Alongi, Inc.

7223 NE Hazel Dell Avenue, Suite B, Vancouver, WA 98665 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-20
Project #	9009.01.12	Sampler	SM/SF
Project Name	Washougal	Sampling Date	4/22/2010
Sampling Event	Spring 2010 Pilot Study	Sample Name	MW20
Sub Area	4th Round Post Injection	Sample Depth	5
FSDS QA:	TJS 04/23/10	Easting	<input style="width: 50px;" type="text"/>
		Northing	<input style="width: 50px;" type="text"/>
		TOC	<input style="width: 50px;" type="text"/>

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
04/22/10	10:30	14.69	--	2.7	--	11.99	1.95

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	10:50	2.0	0.5	6.51	14.80	395	5.83	-8.7	54.7
	11:05	4.0	0.5	6.47	14.73	411	5.09	-10.4	14.99
Final Field Parameters	11:20	6.0	0.5	6.45	14.70	416	5.06	-10.8	9.42

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Bubbles observed in well. Turbid at first, then cleared.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	12:20:00 PM	VOA-Glass		
			Amber Glass		
			White Poly	1	No
			Yellow Poly		
			Green Poly		
			Red Total Poly	1	No
			Red Dissolved Poly	1	Yes
			Total Bottles	3	

General Sampling Comments

Removed flow-through cell for final turbidity measurements.

Signature _____

Maul Foster & Alongi, Inc.

7223 NE Hazel Dell Avenue, Suite B, Vancouver, WA 98665 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-21
Project #	9009.01.12	Sampler	SM/SF
Project Name	Washougal	Sampling Date	4/22/2010
Sampling Event	Spring 2010 Pilot Study	Sample Name	MW21
Sub Area	4th Round Post Injection	Sample Depth	5
FSDS QA:	TJS 04/23/10	Easting	<input type="text"/>
		Northing	<input type="text"/>
		TOC	<input type="text"/>

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
04/22/10	11:41	14.63	--	3.5	--	11.13	1.81

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	11:57	2.0	0.5	6.60	14.75	549	6.40	116.4	7.66
	12:12	4.0	0.5	6.63	14.51	504	5.57	117.9	4.00
Final Field Parameters	12:27	6.0	0.5	6.63	14.49	502	5.39	126.9	1.25

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations: Bubbles observed in well. Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	12:27:00 PM	VOA-Glass		
			Amber Glass		
			White Poly	1	No
			Yellow Poly		
			Green Poly		
			Red Total Poly	1	No
			Red Dissolved Poly	1	Yes
Total Bottles				3	

General Sampling Comments

Turned down air compressor, took depth to water reading. Bubbles in sample tubing. Water level about 1 foot below top of casing.

Signature _____

Maul Foster & Alongi, Inc.

7223 NE Hazel Dell Avenue, Suite B, Vancouver, WA 98665 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-22		
Project #	9009.01.12	Sampler	SM/SF		
Project Name	Washougal	Sampling Date	4/22/2010		
Sampling Event	Spring 2010 Pilot Study	Sample Name	MW22		
Sub Area	4th Round Post Injection	Sample Depth	6		
FSDS QA:	TJS 04/23/10	Easting		Northing	
				TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
04/22/10	11:36	14.64	--	3.11	--	11.53	1.88

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	11:54	1.9	0.5	6.76	14.74	571	11.42	88.3	16.70
	12:08	3.8	0.5	6.95	14.47	560	10.89	22.0	4.55
Final Field Parameters									
	12:20	5.7	0.5	6.95	14.49	547	9.65	28.2	3.28

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Bubbles observed in well. Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	12:20:00 PM	VOA-Glass		
			Amber Glass		
			White Poly	1	No
			Yellow Poly		
			Green Poly		
			Red Total Poly	1	No
			Red Dissolved Poly	1	Yes
			Total Bottles	3	

General Sampling Comments

Turned down air compressor, took depth to water reading. Bubbles in sample tubing. Collected Duplicate sample MW22-DUP at this location.

Signature _____

Maul Foster & Alongi, Inc.

7223 NE Hazel Dell Avenue, Suite B, Vancouver, WA 98665 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-22
Project #	9009.01.12	Sampler	SM/SF
Project Name	Washougal	Sampling Date	4/22/2010
Sampling Event	Spring 2010 Pilot Study	Sample Name	MW22-DUP
Sub Area	4th Round Post Injection	Sample Depth	6
FSDS QA:	TJS 04/23/10	Easting	
		Northing	
		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
04/22/10	11:36	14.64	--	3.11	--	11.53	1.88

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	11:54	1.9	0.5	6.76	14.74	571	11.42	88.3	16.7
	12:08	3.8	0.5	6.95	14.47	560	10.89	22.0	4.55
Final Field Parameters	12:20	5.7	0.5	6.95	14.49	547	9.65	28.2	3.28

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Bubbles observed in well. Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	12:20:00 PM	VOA-Glass		
			Amber Glass		
			White Poly	1	No
			Yellow Poly		
			Green Poly		
			Red Total Poly	1	No
			Red Dissolved Poly	1	Yes
Total Bottles			3		

General Sampling Comments

Turned down air compressor, took depth to water reading. Bubbles in sample tubing. Duplicate of MW22.

Signature _____

Maul Foster & Alongi, Inc.

7223 NE Hazel Dell Avenue, Suite B, Vancouver, WA 98665 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-17
Project #	9009.01.12	Sampler	SM/SF
Project Name	Washougal	Sampling Date	5/7/2010
Sampling Event	Spring 2010 Pilot Study	Sample Name	MW17
Sub Area	1st Round Post Compressor Shutdow	Sample Depth	5
FSDS QA:	SM 05/11/10	Easting	<input style="width: 50px;" type="text"/>
		Northing	<input style="width: 50px;" type="text"/>
		TOC	<input style="width: 50px;" type="text"/>

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
05/07/10	09:26	15.13	--	2.8	--	12.33	2.01

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	09:58	2.0	0.5	6.74	15.78	476	0.68	-66.4	4.47
	10:21	4.5	0.5	6.67	15.72	462	0.68	-58.6	3.47
Final Field Parameters	10:33	6.0	0.5	6.73	15.63	461	0.48	-61.4	2.95

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	10:33:00 AM	VOA-Glass		
			Amber Glass		
			White Poly	1	No
			Yellow Poly		
			Green Poly		
			Red Total Poly	1	No
			Red Dissolved Poly	1	Yes
			Total Bottles	3	

General Sampling Comments

Signature _____

Maul Foster & Alongi, Inc.

7223 NE Hazel Dell Avenue, Suite B, Vancouver, WA 98665 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-18
Project #	9009.01.12	Sampler	SM/SF
Project Name	Washougal	Sampling Date	5/7/2010
Sampling Event	Spring 2010 Pilot Study	Sample Name	MW18
Sub Area	1st Round Post Compressor Shutdown	Sample Depth	5
FSDS QA:	SM 05/11/10	Easting	<input style="width: 50px;" type="text"/>
		Northing	<input style="width: 50px;" type="text"/>
		TOC	<input style="width: 50px;" type="text"/>

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
05/07/10	09:26	14.63	--	2.81	--	11.82	1.93

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	10:02	2.0	0.5	6.42	15.19	365	0.44	-59.0	1.34
	10:18	4.0	0.5	6.42	15.26	378	0.51	-58.4	1.22
Final Field Parameters									
	10:34	6.0	0.5	6.40	15.22	380	0.52	-57.2	1.24

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	10:34:00 AM	VOA-Glass		
			Amber Glass		
			White Poly	1	No
			Yellow Poly		
			Green Poly		
			Red Total Poly	1	No
			Red Dissolved Poly	1	Yes
			Total Bottles	3	

General Sampling Comments

Signature _____

Maul Foster & Alongi, Inc.

7223 NE Hazel Dell Avenue, Suite B, Vancouver, WA 98665 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-19
Project #	9009.01.12	Sampler	SM/SF
Project Name	Washougal	Sampling Date	5/7/2010
Sampling Event	Spring 2010 Pilot Study	Sample Name	MW19
Sub Area	1st Round Post Compressor Shutdow	Sample Depth	4.5
FSDS QA:	SM 05/11/10	Easting	
		Northing	
		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
05/07/10	09:28	14.65	--	2.69	--	11.96	1.95

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	11:05	2.0	0.5	6.01	15.41	177	0.68	28.8	4.06
	11:21	4.0	0.5	6.03	15.49	175	0.53	31.8	1.78
Final Field Parameters	11:37	6.0	0.5	6.04	15.52	178	0.46	29.8	1.68

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	11:37:00 AM	VOA-Glass		
			Amber Glass		
			White Poly	1	No
			Yellow Poly		
			Green Poly		
			Red Total Poly	1	No
			Red Dissolved Poly	1	Yes
			Total Bottles	3	

General Sampling Comments

Signature _____

Maul Foster & Alongi, Inc.

7223 NE Hazel Dell Avenue, Suite B, Vancouver, WA 98665 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-20
Project #	9009.01.12	Sampler	SM/SF
Project Name	Washougal	Sampling Date	5/7/2010
Sampling Event	Spring 2010 Pilot Study	Sample Name	MW20
Sub Area	1st Round Post Compressor Shutdown	Sample Depth	5
FSDS QA:	SM 05/11/10	Easting	<input style="width: 50px;" type="text"/>
		Northing	<input style="width: 50px;" type="text"/>
		TOC	<input style="width: 50px;" type="text"/>

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
05/07/10	09:29	14.69	--	2.78	--	11.91	1.94

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	12:09	2.0	0.5	6.52	15.56	330	0.75	-50.4	5.28
	12:25	4.0	0.5	6.48	15.61	376	0.52	-53.6	2.14
Final Field Parameters	12:41	6.0	0.5	6.49	15.63	379	0.46	-53.8	1.96

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	12:41:00 PM	VOA-Glass		
			Amber Glass		
			White Poly	1	No
			Yellow Poly		
			Green Poly		
			Red Total Poly	1	No
			Red Dissolved Poly	1	Yes
			Total Bottles	3	

General Sampling Comments

Signature _____

Maul Foster & Alongi, Inc.

7223 NE Hazel Dell Avenue, Suite B, Vancouver, WA 98665 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-21
Project #	9009.01.12	Sampler	SM/SF
Project Name	Washougal	Sampling Date	5/7/2010
Sampling Event	Spring 2010 Pilot Study	Sample Name	MW21
Sub Area	1st Round Post Compressor Shutdow	Sample Depth	5
FSDS QA:	SM 05/11/10	Easting	<input style="width: 50px;" type="text"/>
		Northing	<input style="width: 50px;" type="text"/>
		TOC	<input style="width: 50px;" type="text"/>

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
05/07/10	09:31	14.63	--	2.43	--	12.20	1.99

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	12:16	2.0	0.5	6.22	15.57	456	0.53	51.9	7.34
	12:32	4.0	0.5	6.97	15.65	474	0.38	30.0	6.54
Final Field Parameters	12:48	6.0	0.5	6.30	15.71	491	0.33	59.1	5.35

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	12:48:00 PM	VOA-Glass		
			Amber Glass		
			White Poly	1	No
			Yellow Poly		
			Green Poly		
			Red Total Poly	1	No
			Red Dissolved Poly	1	Yes
			Total Bottles	3	

General Sampling Comments

Signature _____

Maul Foster & Alongi, Inc.

7223 NE Hazel Dell Avenue, Suite B, Vancouver, WA 98665 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-22
Project #	9009.01.12	Sampler	SM/SF
Project Name	Washougal	Sampling Date	5/7/2010
Sampling Event	Spring 2010 Pilot Study	Sample Name	MW22
Sub Area	1st Round Post Compressor Shutdow	Sample Depth	6
FSDS QA:	SM 05/11/10	Easting	
		Northing	
		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
05/07/10	09:32	14.64	--	2.3	--	12.34	2.01

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	11:08	2.0	0.5	6.84	15.47	550	0.57	-32.0	6.09
	11:29	4.0	0.5	6.84	15.50	551	0.45	-29.5	5.98
Final Field Parameters	11:40	6.0	0.5	6.84	15.89	556	0.37	-29.7	6.26

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	11:40:00 AM	VOA-Glass		
			Amber Glass		
			White Poly	1	No
			Yellow Poly		
			Green Poly		
			Red Total Poly	1	No
			Red Dissolved Poly	1	Yes
			Total Bottles	3	

General Sampling Comments

Collected duplicate sample MW22-DUP at this location.

Signature _____

Maul Foster & Alongi, Inc.

7223 NE Hazel Dell Avenue, Suite B, Vancouver, WA 98665 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	TrueGuard, LLC	Sample Location	MW-22		
Project #	9009.01.12	Sampler	SM/SF		
Project Name	Washougal	Sampling Date	5/7/2010		
Sampling Event	Spring 2010 Pilot Study	Sample Name	MW22-DUP		
Sub Area	1st Round Post Compressor Shutdow	Sample Depth	6		
FSDS QA:	SM 05/11/10	Easting		Northing	
				TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
05/07/10	09:32	14.64	--	2.3	--	12.34	2.01

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	11:08	2.0	0.5	6.84	15.47	550	0.57	-32.0	6.09
	11:29	4.0	0.5	6.84	15.50	551	0.45	-29.5	5.98
Final Field Parameters	11:40	6.0	0.5	6.84	15.89	556	0.37	-29.7	6.26

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	11:40:00 AM	VOA-Glass		
			Amber Glass		
			White Poly	1	No
			Yellow Poly		
			Green Poly		
			Red Total Poly	1	No
			Red Dissolved Poly	1	Yes
Total Bottles				3	

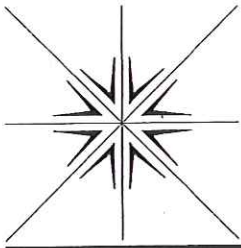
General Sampling Comments

Duplicate sample of MW22.

Signature _____

LABORATORY ANALYTICAL REPORTS





Specialty Analytical

11711 SE Capps Road
Clackamas, OR 97015
(503) 607-1331
Fax (503) 607-1336

April 02, 2010

Tony Silva
Maul, Foster & Alongi
7223 NE Hazel Dell Avenue
Suite B
Vancouver, WA 98665

TEL: (360) 694-2691

FAX: (360) 906-1958

RE: Trueguard Air Sparge Baseline / 9009.01.12

Dear Tony Silva:


Order No.: 1003143

Specialty Analytical received 1 sample on 3/23/2010 for the analyses presented in the following report.

There were no problems with the analysis and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative, or as qualified with flags. Results apply only to the samples analyzed. Without approval of the laboratory, the reproduction of this report is only permitted in its entirety.

If you have any questions regarding these tests, please feel free to call.

Sincerely,


Cindy Hillyard
Project Manager


Technical Review

Specialty Analytical

Date: 02-Apr-10

CLIENT: Maul, Foster & Alongi
Project: Trueguard Air Sparge Baseline / 9009.01.12/05

Lab Order: 1003143

Lab ID: 1003143-01

Collection Date: 3/22/2010 12:30:00 PM

Client Sample ID: MW19

Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
TOTAL METALS BY ICP/MS						Analyst: zau
Arsenic	33	5.0		µg/L	5	3/31/2010 1:09:00 PM
DISSOLVED METALS BY ICP/MS						Analyst: zau
Arsenic	30	5.0		ug/L	5	3/29/2010 5:15:00 PM

Specialty Analytical

Date: 02-Apr-10

CLIENT: Maul, Foster & Alongi
 Work Order: 1003143

ANALYTICAL QC SUMMARY REPORT

Project: Trueguard Air Sparge Baseline / 9009.01.12/05

TestCode: 6020_W

Sample ID: MBLK-25241	SampType: MBLK	TestCode: 6020_W	Units: µg/L	Prep Date: 3/25/2010	Run ID: ICPMS_100331A						
Client ID: ZZZZ	Batch ID: 25241	TestNo: SW6020		Analysis Date: 3/31/2010	SeqNo: 665646						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	1.0									

Sample ID: LCS-25241	SampType: LCS	TestCode: 6020_W	Units: µg/L	Prep Date: 3/25/2010	Run ID: ICPMS_100331A						
Client ID: ZZZZ	Batch ID: 25241	TestNo: SW6020		Analysis Date: 3/31/2010	SeqNo: 665647						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	54.09	1.0	50		108	80	120	0	0	0	

Sample ID: 1003143-01AMS	SampType: MS	TestCode: 6020_W	Units: µg/L	Prep Date: 3/25/2010	Run ID: ICPMS_100331A						
Client ID: MW19	Batch ID: 25241	TestNo: SW6020		Analysis Date: 3/31/2010	SeqNo: 665656						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	86.6	5.0	50	33.22	107	70	130	0	0	0	

Sample ID: 1003143-01AMSD	SampType: MSD	TestCode: 6020_W	Units: µg/L	Prep Date: 3/25/2010	Run ID: ICPMS_100331A						
Client ID: MW19	Batch ID: 25241	TestNo: SW6020		Analysis Date: 3/31/2010	SeqNo: 665657						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	86.3	5.0	50	33.22	106	70	130	86.6	0.347	20	

Sample ID: 1003143-01ADUP	SampType: DUP	TestCode: 6020_W	Units: µg/L	Prep Date: 3/25/2010	Run ID: ICPMS_100331A						
Client ID: MW19	Batch ID: 25241	TestNo: SW6020		Analysis Date: 3/31/2010	SeqNo: 665655						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	33.41	5.0	0		0	0	0	33.22	0.585	20	

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

ANALYTICAL QC SUMMARY REPORT

CLIENT: Maul, Foster & Alongi
Work Order: 1003143
Project: Trueguard Air Sparge Baseline / 9009.01.12/05

TestCode: 6020_W

Sample ID: CCV	SampType: CCV	TestCode: 6020_W	Units: µg/L	Prep Date:	Run ID: ICPMS_100331A						
Client ID: ZZZZZ	Batch ID: 25241	TestNo: SW6020		Analysis Date: 3/31/2010	SeqNo: 665653						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	52.17	1.0	50	0	104	90	110	0	0	0	

Sample ID: CCV	SampType: CCV	TestCode: 6020_W	Units: µg/L	Prep Date:	Run ID: ICPMS_100331A						
Client ID: ZZZZZ	Batch ID: 25241	TestNo: SW6020		Analysis Date: 3/31/2010	SeqNo: 665658						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	52.42	1.0	50	0	105	90	110	0	0	0	

Sample ID: ICV	SampType: ICV	TestCode: 6020_W	Units: µg/L	Prep Date:	Run ID: ICPMS_100331A						
Client ID: ZZZZZ	Batch ID: 25241	TestNo: SW6020		Analysis Date: 3/31/2010	SeqNo: 665645						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	52.77	1.0	50	0	106	90	110	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

ANALYTICAL QC SUMMARY REPORT

CLIENT: Maul, Foster & Alongi
 Work Order: 1003143

Project: Trueguard Air Sparge Baseline / 9009.01.12/05

TestCode: 6020_WDISS

Sample ID:	1003165-02CMS	SampType:	MS	TestCode:	6020_WDISS	Units:	ug/L	Prep Date:	3/26/2010	Run ID:	ICPMS_100326A
Client ID:	ZZZZZ	Batch ID:	25244	TestNo:	SW6020			Analysis Date:	3/26/2010	SeqNo:	664572
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	54.21	1.0	50	0.4319	108	70	130	0	0	0	

Sample ID:	1003165-02CMSD	SampType:	MSD	TestCode:	6020_WDISS	Units:	ug/L	Prep Date:	3/26/2010	Run ID:	ICPMS_100326A
Client ID:	ZZZZZ	Batch ID:	25244	TestNo:	SW6020			Analysis Date:	3/26/2010	SeqNo:	664573
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	55.31	1.0	50	0.4319	110	70	130	54.21	2.01	20	

Sample ID:	1003165-02CDUP	SampType:	DUP	TestCode:	6020_WDISS	Units:	ug/L	Prep Date:	3/26/2010	Run ID:	ICPMS_100326A
Client ID:	ZZZZZ	Batch ID:	25244	TestNo:	SW6020			Analysis Date:	3/26/2010	SeqNo:	664569
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4302	1.0	0	0	0	0	0	0.4319	0	20	J

Sample ID:	CCV	SampType:	CCV	TestCode:	6020_WDISS	Units:	ug/L	Prep Date:		Run ID:	ICPMS_100326A
Client ID:	ZZZZZ	Batch ID:	25244	TestNo:	SW6020			Analysis Date:	3/26/2010	SeqNo:	664568
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	53.46	1.0	50	0	107	90	110	0	0	0	

Sample ID:	CCV	SampType:	CCV	TestCode:	6020_WDISS	Units:	ug/L	Prep Date:		Run ID:	ICPMS_100326A
Client ID:	ZZZZZ	Batch ID:	25244	TestNo:	SW6020			Analysis Date:	3/26/2010	SeqNo:	664577
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	52.63	1.0	50	0	105	90	110	0	0	0	

Sample ID:	CCV	SampType:	CCV	TestCode:	6020_WDISS	Units:	ug/L	Prep Date:		Run ID:	ICPMS_100326A
Client ID:	ZZZZZ	Batch ID:	25244	TestNo:	SW6020			Analysis Date:	3/29/2010	SeqNo:	664884
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

ANALYTICAL QC SUMMARY REPORT

CLIENT: Maul, Foster & Alongi
 Work Order: 1003143

Project: Trueguard Air Sparge Baseline / 9009.01.12/05

TestCode: 6020_WDISS

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_100326A						
Client ID: ZZZZZ	Batch ID: 25244	TestNo: SW6020		Analysis Date: 3/29/2010	SeqNo: 664884						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	49.84	1.0	50	0	99.7	90	110	0	0	0	

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_100326A						
Client ID: ZZZZZ	Batch ID: 25244	TestNo: SW6020		Analysis Date: 3/29/2010	SeqNo: 664886						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	49.67	1.0	50	0	99.3	90	110	0	0		

Sample ID: ICB-25244	SampType: ICB	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_100326A						
Client ID: ZZZZZ	Batch ID: 25244	TestNo: SW6020		Analysis Date: 3/26/2010	SeqNo: 664570						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	1.0	0	0	0	0	0	0	0	0	

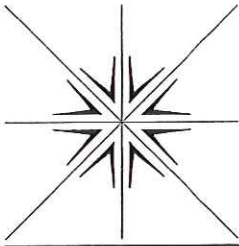
Sample ID: ICV	SampType: ICV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_100326A						
Client ID: ZZZZZ	Batch ID: 25244	TestNo: SW6020		Analysis Date: 3/26/2010	SeqNo: 664567						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	54.12	1.0	50	0	108	90	110	0	0	0	

Sample ID: ICV	SampType: ICV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_100326A						
Client ID: ZZZZZ	Batch ID: 25244	TestNo: SW6020		Analysis Date: 3/29/2010	SeqNo: 664883						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	48.94	1.0	50	0	97.9	90	110	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

KEY TO FLAGS

- A This sample contains a Gasoline Range Organic not identified as a specific hydrocarbon product. The result was quantified against gasoline calibration standards.
- A1 This sample contains a Diesel Range Organic not identified as a specific hydrocarbon product. The result was quantified against diesel calibration standards.
- A2 This sample contains a Lube Oil Range Organic not identified as a specific hydrocarbon product. The result was quantified against a lube oil calibration standard.
- A3 The result was determined to be Non-Detect based on hydrocarbon pattern recognition. The product was carry-over from another hydrocarbon type.
- B The blank exhibited a positive result greater than the reporting limit for this compound.
- CN See Case Narrative.
- D Result is based from a dilution.
- E Result exceeds the calibration range for this compound. The result should be considered as estimate.
- F The positive result for this hydrocarbon is due to single component contamination. The product does not match any hydrocarbon in the fuels library.
- H Sample was analyzed outside recommended hold time.
- HT At clients request, sample was analyzed outside recommended hold time.
- J The result for this analyte is between the MDL and the PQL and should be considered as estimated concentration.
- K Diesel result is biased high due to amount of Oil contained in the sample.
- L Diesel result is biased high due to amount of Gasoline contained in the sample.
- M Oil result is biased high due to amount of Diesel contained in the sample.
- N Gasoline result is biased high due to amount of Diesel contained in the sample.
- MC Sample concentration is greater than 4x the spiked value, the spiked value is considered insignificant.
- MI Result is outside control limits due to matrix interference.
- MSA Value determined by Method of Standard Addition.
- O Laboratory Control Standard (LCS) exceeded laboratory control limits, but meets CCV criteria. Data meets EPA requirements.
- P Detection levels of Methylene Chloride may be laboratory contamination, due to previous analysis or background levels.
- Q Detection levels elevated due to sample matrix.
- R RPD control limits were exceeded.
- RF Duplicate failed due to result being at or near the method-reporting limit.
- RP Matrix spike values exceed established QC limits, post digestion spike is in control.
- S Recovery is outside control limits.
- SC Closing CCV or LCS exceeded high recovery control limits, but associated samples are non-detect. Data meets EPA requirements.
- * The result for this parameter was greater than the maximum contaminant level of the TCLP regulatory limit.



Specialty Analytical

11711 SE Capps Road
Clackamas, OR 97015
(503) 607-1331
Fax (503) 607-1336

April 12, 2010

Tony Silva
Maul, Foster & Alongi
7223 NE Hazel Dell Avenue
Suite B
Vancouver, WA 98665
TEL: (360) 694-2691
FAX: (360) 906-1958

RE: Trueguard 1st Round Post Injection / 9009.0

Dear Tony Silva:


Order No.: 1004022

Specialty Analytical received 7 samples on 4/2/2010 for the analyses presented in the following report.

There were no problems with the analysis and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative, or as qualified with flags. Results apply only to the samples analyzed. Without approval of the laboratory, the reproduction of this report is only permitted in its entirety.

If you have any questions regarding these tests, please feel free to call.

Sincerely,


Cindy Hillyard
Project Manager


Technical Review

Specialty Analytical

Date: 12-Apr-10

CLIENT: Maul, Foster & Alongi
Project: Trueguard 1st Round Post Injection / 9009.01.12

Lab Order: 1004022

Lab ID: 1004022-01 **Collection Date:** 4/1/2010 11:53:00 AM
Client Sample ID: MW17 **Matrix:** GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP/MS		SW6020				Analyst: zau
Arsenic	45	1.0		ug/L	1	4/5/2010 5:05:00 PM

Lab ID: 1004022-02 **Collection Date:** 4/1/2010 11:50:00 AM
Client Sample ID: MW18 **Matrix:** GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP/MS		SW6020				Analyst: zau
Arsenic	54	5.0		ug/L	5	4/6/2010 1:59:00 PM

Lab ID: 1004022-03 **Collection Date:** 4/1/2010 1:17:00 PM
Client Sample ID: MW19 **Matrix:** GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
TOTAL METALS BY ICP/MS		SW6020				Analyst: zau
Arsenic	9.5	1.0		µg/L	1	4/8/2010 1:57:00 PM
DISSOLVED METALS BY ICP/MS		SW6020				Analyst: zau
Arsenic	9.7	1.0		ug/L	1	4/5/2010 4:39:00 PM

Lab ID: 1004022-04 **Collection Date:** 4/1/2010 1:30:00 PM
Client Sample ID: MW20 **Matrix:** GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP/MS		SW6020				Analyst: zau
Arsenic	31	5.0		ug/L	5	4/6/2010 2:06:00 PM

Lab ID: 1004022-05 **Collection Date:** 4/1/2010 2:30:00 PM
Client Sample ID: MW21 **Matrix:** GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP/MS		SW6020				Analyst: zau
Arsenic	2.2	1.0		ug/L	1	4/5/2010 5:39:00 PM

Specialty Analytical

Date: 12-Apr-10

CLIENT: Maul, Foster & Alongi
Project: Trueguard 1st Round Post Injection / 9009.01.12

Lab Order: 1004022

Lab ID: 1004022-06 **Collection Date:** 4/1/2010 2:50:00 PM
Client Sample ID: MW22 **Matrix:** GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP/MS		SW6020				Analyst: zau
Arsenic	3.8	1.0		ug/L	1	4/5/2010 5:46:00 PM

Lab ID: 1004022-07 **Collection Date:** 4/1/2010 2:50:00 PM
Client Sample ID: MW22 DUP **Matrix:** GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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HOLD PER CLIENT REQUEST		PER CLIENT				Analyst: knt
Hold	Hold				1	4/12/2010

Specialty Analytical

Date: 12-Apr-10

CLIENT: Maul, Foster & Alongi
 Work Order: 1004022

ANALYTICAL QC SUMMARY REPORT

Project: Trueguard 1st Round Post Injection / 9009.01.1

TestCode: 6020_W

Sample ID: MBLK-25327	SampType: MBLK	TestCode: 6020_W	Units: µg/L	Prep Date: 4/7/2010	Run ID: ICPMS_100408A						
Client ID: ZZZZ	Batch ID: 25327	TestNo: SW6020		Analysis Date: 4/8/2010	SeqNo: 667210						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	1.0									

Sample ID: LCS-25327	SampType: LCS	TestCode: 6020_W	Units: µg/L	Prep Date: 4/7/2010	Run ID: ICPMS_100408A						
Client ID: ZZZZ	Batch ID: 25327	TestNo: SW6020		Analysis Date: 4/8/2010	SeqNo: 667211						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	47.34	1.0	50	0	94.7	80	120	0	0	0	

Sample ID: 1004022-03BMS	SampType: MS	TestCode: 6020_W	Units: µg/L	Prep Date: 4/7/2010	Run ID: ICPMS_100408A						
Client ID: MW19	Batch ID: 25327	TestNo: SW6020		Analysis Date: 4/8/2010	SeqNo: 667214						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	54.45	1.0	50	9.52	89.9	70	130	0	0	0	

Sample ID: 1004022-03BMSD	SampType: MSD	TestCode: 6020_W	Units: µg/L	Prep Date: 4/7/2010	Run ID: ICPMS_100408A						
Client ID: MW19	Batch ID: 25327	TestNo: SW6020		Analysis Date: 4/8/2010	SeqNo: 667215						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	54.97	1.0	50	9.52	90.9	70	130	54.45	0.950	20	

Sample ID: 1004022-03BDUP	SampType: DUP	TestCode: 6020_W	Units: µg/L	Prep Date: 4/7/2010	Run ID: ICPMS_100408A						
Client ID: MW19	Batch ID: 25327	TestNo: SW6020		Analysis Date: 4/8/2010	SeqNo: 667213						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	9.636	1.0	0	0	0	0	0	9.52	1.21	20	

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank
 Page 1 of 4

CLIENT: Maul, Foster & Alongi
Work Order: 1004022

Project: Trueguard 1st Round Post Injection / 9009.01.1

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_W

Sample ID: CCV	SampType: CCV	TestCode: 6020_W	Units: µg/L	Prep Date:	Run ID: ICPMS_100408A						
Client ID: ZZZZZ	Batch ID: 25327	TestNo: SW6020		Analysis Date: 4/8/2010	SeqNo: 667216						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	50.44	1.0	50	0	101	90	110	0	0	0	

Sample ID: ICV	SampType: ICV	TestCode: 6020_W	Units: µg/L	Prep Date:	Run ID: ICPMS_100408A						
Client ID: ZZZZZ	Batch ID: 25327	TestNo: SW6020		Analysis Date: 4/8/2010	SeqNo: 667209						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	50.24	1.0	50	0	100	90	110	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

ANALYTICAL QC SUMMARY REPORT

CLIENT: Maul, Foster & Alongi
 Work Order: 1004022

Project: Trueguard 1st Round Post Injection / 9009.01.1

TestCode: 6020_WDISS

Sample ID: 1004022-03AMS	SampType: MS	TestCode: 6020_WDISS	Units: ug/L	Prep Date: 4/5/2010	Run ID: ICPMS_100405C						
Client ID: MW19	Batch ID: 25307	TestNo: SW6020		Analysis Date: 4/6/2010	SeqNo: 666948						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	59.1	1.0	50	9.651	98.9	70	130	0	0	0	

Sample ID: 1004022-03AMS	SampType: MSD	TestCode: 6020_WDISS	Units: ug/L	Prep Date: 4/5/2010	Run ID: ICPMS_100405C						
Client ID: MW19	Batch ID: 25307	TestNo: SW6020		Analysis Date: 4/5/2010	SeqNo: 666824						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	57.82	1.0	50	9.651	96.3	70	130	55.82	3.52	20	

Sample ID: 1004022-03ADUP	SampType: DUP	TestCode: 6020_WDISS	Units: ug/L	Prep Date: 4/5/2010	Run ID: ICPMS_100405C						
Client ID: MW19	Batch ID: 25307	TestNo: SW6020		Analysis Date: 4/6/2010	SeqNo: 666947						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	9.89	1.0	0	0	0	0	0	9.651	2.45	20	

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_100405C						
Client ID: ZZZZZ	Batch ID: 25307	TestNo: SW6020		Analysis Date: 4/5/2010	SeqNo: 666819						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	48.05	1.0	50	0	96.1	90	110	0	0	0	

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_100405C						
Client ID: ZZZZZ	Batch ID: 25307	TestNo: SW6020		Analysis Date: 4/5/2010	SeqNo: 666826						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	47.88	1.0	50	0	95.8	90	110	0	0	0	

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_100405C						
Client ID: ZZZZZ	Batch ID: 25307	TestNo: SW6020		Analysis Date: 4/5/2010	SeqNo: 666833						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	47.88	1.0	50	0	95.8	90	110	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit
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 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

CLIENT: Maul, Foster & Alongi
Work Order: 1004022
Project: Trueguard 1st Round Post Injection / 9009.01.1

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_WDISS

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_100405C						
Client ID: ZZZZZ	Batch ID: 25307	TestNo: SW6020		Analysis Date: 4/5/2010	SeqNo: 666833						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	48.17	1.0	50	0	96.3	90	110	0	0	0	

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_100405C						
Client ID: ZZZZZ	Batch ID: 25307	TestNo: SW6020		Analysis Date: 4/6/2010	SeqNo: 666951						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	50.42	1.0	50	0	101	90	110	0	0	0	

Sample ID: ICB-25307	SampType: ICB	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_100405C						
Client ID: ZZZZZ	Batch ID: 25307	TestNo: SW6020		Analysis Date: 4/5/2010	SeqNo: 666820						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	1.0	0	0	0	0	0	0	0	0	

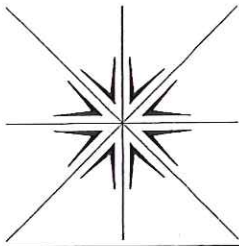
Sample ID: ICV	SampType: ICV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_100405C						
Client ID: ZZZZZ	Batch ID: 25307	TestNo: SW6020		Analysis Date: 4/5/2010	SeqNo: 666818						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	49.03	1.0	50	0	98.1	90	110	0	0	0	

Sample ID: ICV	SampType: ICV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_100405C						
Client ID: ZZZZZ	Batch ID: 25307	TestNo: SW6020		Analysis Date: 4/6/2010	SeqNo: 666946						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	50.19	1.0	50	0	100	90	110	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

KEY TO FLAGS

- A This sample contains a Gasoline Range Organic not identified as a specific hydrocarbon product. The result was quantified against gasoline calibration standards.
- A1 This sample contains a Diesel Range Organic not identified as a specific hydrocarbon product. The result was quantified against diesel calibration standards.
- A2 This sample contains a Lube Oil Range Organic not identified as a specific hydrocarbon product. The result was quantified against a lube oil calibration standard.
- A3 The result was determined to be Non-Detect based on hydrocarbon pattern recognition. The product was carry-over from another hydrocarbon type.
- B The blank exhibited a positive result greater than the reporting limit for this compound.
- CN See Case Narrative.
- D Result is based from a dilution.
- E Result exceeds the calibration range for this compound. The result should be considered as estimate.
- F The positive result for this hydrocarbon is due to single component contamination. The product does not match any hydrocarbon in the fuels library.
- H Sample was analyzed outside recommended hold time.
- HT At clients request, sample was analyzed outside recommended hold time.
- J The result for this analyte is between the MDL and the PQL and should be considered as estimated concentration.
- K Diesel result is biased high due to amount of Oil contained in the sample.
- L Diesel result is biased high due to amount of Gasoline contained in the sample.
- M Oil result is biased high due to amount of Diesel contained in the sample.
- N Gasoline result is biased high due to amount of Diesel contained in the sample.
- MC Sample concentration is greater than 4x the spiked value, the spiked value is considered insignificant.
- MI Result is outside control limits due to matrix interference.
- MSA Value determined by Method of Standard Addition.
- O Laboratory Control Standard (LCS) exceeded laboratory control limits, but meets CCV criteria. Data meets EPA requirements.
- P Detection levels of Methylene Chloride may be laboratory contamination, due to previous analysis or background levels.
- Q Detection levels elevated due to sample matrix.
- R RPD control limits were exceeded.
- RF Duplicate failed due to result being at or near the method-reporting limit.
- RP Matrix spike values exceed established QC limits, post digestion spike is in control.
- S Recovery is outside control limits.
- SC Closing CCV or LCS exceeded high recovery control limits, but associated samples are non-detect. Data meets EPA requirements.
- * The result for this parameter was greater than the maximum contaminant level of the TCLP regulatory limit.



Specialty Analytical

11711 SE Capps Road
Clackamas, OR 97015
(503) 607-1331
Fax (503) 607-1336

April 15, 2010

Tony Silva
Maul, Foster & Alongi
7223 NE Hazel Dell Avenue
Suite B
Vancouver, WA 98665
TEL: (360) 694-2691
FAX: (360) 906-1958

RE: Trueguard 2010 Pilot Study / 9009.01.12/05

Dear Tony Silva:

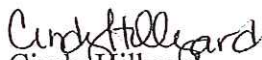
Order No.: 1004071

Specialty Analytical received 7 samples on 4/12/2010 for the analyses presented in the following report.

There were no problems with the analysis and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative, or as qualified with flags. Results apply only to the samples analyzed. Without approval of the laboratory, the reproduction of this report is only permitted in its entirety.

If you have any questions regarding these tests, please feel free to call.

Sincerely,


Cindy Hillyard
Project Manager


Technical Review

Specialty Analytical

Date: 15-Apr-10

CLIENT: Maul, Foster & Alongi
Project: Trueguard 2010 Pilot Study / 9009.01.12/05

Lab Order: 1004071

Lab ID: 1004071-01 **Collection Date:** 4/9/2010 10:10:00 AM
Client Sample ID: MW17 **Matrix:** GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP/MS						
		SW6020				Analyst: zau
Arsenic	22	1.0		ug/L	1	4/13/2010 3:07:00 PM

Lab ID: 1004071-02 **Collection Date:** 4/9/2010 10:06:00 AM
Client Sample ID: MW18 **Matrix:** GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP/MS						
		SW6020				Analyst: zau
Arsenic	22	1.0		ug/L	1	4/13/2010 2:41:00 PM

Lab ID: 1004071-03 **Collection Date:** 4/9/2010 11:25:00 AM
Client Sample ID: MW19 **Matrix:** GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
TOTAL METALS BY ICP/MS						
		SW6020				Analyst: zau
Arsenic	6.4	1.0		µg/L	1	4/14/2010 5:38:00 PM
DISSOLVED METALS BY ICP/MS						
		SW6020				Analyst: zau
Arsenic	6.2	1.0		ug/L	1	4/13/2010 3:14:00 PM

Lab ID: 1004071-04 **Collection Date:** 4/9/2010 11:18:00 AM
Client Sample ID: MW20 **Matrix:** GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP/MS						
		SW6020				Analyst: zau
Arsenic	14	1.0		ug/L	1	4/13/2010 3:21:00 PM

Lab ID: 1004071-05 **Collection Date:** 4/9/1940 12:24:00 PM
Client Sample ID: MW21 **Matrix:** GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP/MS						
		SW6020				Analyst: zau
Arsenic	1.4	1.0		ug/L	1	4/13/2010 3:41:00 PM

Specialty Analytical

Date: 15-Apr-10

CLIENT: Maul, Foster & Alongi
Project: Trueguard 2010 Pilot Study / 9009.01.12/05

Lab Order: 1004071

Lab ID: 1004071-06 **Collection Date:** 4/9/2010 12:47:00 PM
Client Sample ID: MW22 **Matrix:** GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP/MS		SW6020				Analyst: zau
Arsenic	9.4	1.0		ug/L	1	4/13/2010 3:48:00 PM

Lab ID: 1004071-07 **Collection Date:** 4/9/2010 12:47:00 PM
Client Sample ID: MW22 DUP **Matrix:** GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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HOLD PER CLIENT REQUEST		PER CLIENT				Analyst: knt
Hold	Hold				1	4/15/2010

Specialty Analytical

Date: 15-Apr-10

CLIENT: Maul, Foster & Alongi
 Work Order: 1004071

ANALYTICAL QC SUMMARY REPORT

Project: Trueguard 2010 Pilot Study / 9009.01.12/05

TestCode: 6020_W

Sample ID: MBLK-25377	SampType: MBLK	TestCode: 6020_W	Units: µg/L	Prep Date: 4/14/2010	Run ID: ICPMS_100414B						
Client ID: ZZZZZ	Batch ID: 25377	TestNo: SW6020		Analysis Date: 4/14/2010	SeqNo: 668233						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	1.0									

Sample ID: LCS-25377	SampType: LCS	TestCode: 6020_W	Units: µg/L	Prep Date: 4/14/2010	Run ID: ICPMS_100414B						
Client ID: ZZZZZ	Batch ID: 25377	TestNo: SW6020		Analysis Date: 4/14/2010	SeqNo: 668234						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	44.63	1.0	50		89.3	80	120	0	0	0	

Sample ID: A1004074-01AMS	SampType: MS	TestCode: 6020_W	Units: µg/L	Prep Date: 4/14/2010	Run ID: ICPMS_100414B						
Client ID: ZZZZZ	Batch ID: 25377	TestNo: SW6020		Analysis Date: 4/14/2010	SeqNo: 668238						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	50.34	1.0	50	1.636	97.4	70	130	0	0	0	

Sample ID: A1004074-01AMSD	SampType: MSD	TestCode: 6020_W	Units: µg/L	Prep Date: 4/14/2010	Run ID: ICPMS_100414B						
Client ID: ZZZZZ	Batch ID: 25377	TestNo: SW6020		Analysis Date: 4/14/2010	SeqNo: 668239						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	49.81	1.0	50	1.636	96.3	70	130	50.34	1.06	20	

Sample ID: A1004074-01ADUP	SampType: DUP	TestCode: 6020_W	Units: µg/L	Prep Date: 4/14/2010	Run ID: ICPMS_100414B						
Client ID: ZZZZZ	Batch ID: 25377	TestNo: SW6020		Analysis Date: 4/14/2010	SeqNo: 668237						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	1.546	1.0	0	0	0	0	0	1.636	5.66	20	

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank
 Page 1 of 4

ANALYTICAL QC SUMMARY REPORT

CLIENT: Maul, Foster & Alongi
Work Order: 1004071
Project: Trueguard 2010 Pilot Study / 9009.01.12/05

TestCode: 6020_W

Sample ID: CCV	SampType: CCV	TestCode: 6020_W	Units: µg/L	Prep Date:	Run ID: ICPMS_100414B						
Client ID: ZZZZZ	Batch ID: 25377	TestNo: SW6020		Analysis Date: 4/14/2010	SeqNo: 668232						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	48.6	1.0	50	0	97.2	90	110	0	0	0	

Sample ID: CCV	SampType: CCV	TestCode: 6020_W	Units: µg/L	Prep Date:	Run ID: ICPMS_100414B						
Client ID: ZZZZZ	Batch ID: 25377	TestNo: SW6020		Analysis Date: 4/14/2010	SeqNo: 668235						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	48.05	1.0	50	0	96.1	90	110	0	0	0	

Sample ID: CCV	SampType: CCV	TestCode: 6020_W	Units: µg/L	Prep Date:	Run ID: ICPMS_100414B						
Client ID: ZZZZZ	Batch ID: 25377	TestNo: SW6020		Analysis Date: 4/14/2010	SeqNo: 668241						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	47.96	1.0	50	0	95.9	90	110	0	0	0	

Sample ID: ICV	SampType: ICV	TestCode: 6020_W	Units: µg/L	Prep Date:	Run ID: ICPMS_100414B						
Client ID: ZZZZZ	Batch ID: 25377	TestNo: SW6020		Analysis Date: 4/14/2010	SeqNo: 668231						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	47.88	1.0	50	0	95.8	90	110	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

ANALYTICAL QC SUMMARY REPORT

CLIENT: Maul, Foster & Alongi
 Work Order: 1004071

Project: Trueguard 2010 Pilot Study / 9009.01.12/05

TestCode: 6020_WDISS

Sample ID: 1004071-02AMS	SampType: MS	TestCode: 6020_WDISS	Units: ug/L	Prep Date: 4/13/2010	Run ID: ICPMS_100413C						
Client ID: MW18	Batch ID: 25373	TestNo: SW6020		Analysis Date: 4/13/2010	SeqNo: 667979						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	71.11	1.0	50	22.18	97.9	70	130	0	0	0	

Sample ID: 1004071-02AMSD	SampType: MSD	TestCode: 6020_WDISS	Units: ug/L	Prep Date: 4/13/2010	Run ID: ICPMS_100413C						
Client ID: MW18	Batch ID: 25373	TestNo: SW6020		Analysis Date: 4/13/2010	SeqNo: 667980						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	73.33	1.0	50	22.18	102	70	130	71.11	3.07	20	

Sample ID: 1004071-02ADUP	SampType: DUP	TestCode: 6020_WDISS	Units: ug/L	Prep Date: 4/13/2010	Run ID: ICPMS_100413C						
Client ID: MW18	Batch ID: 25373	TestNo: SW6020		Analysis Date: 4/13/2010	SeqNo: 667978						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	22.19	1.0	0	0	0	0	0	22.18	0.0451	20	

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_100413C						
Client ID: ZZZZZ	Batch ID: 25373	TestNo: SW6020		Analysis Date: 4/13/2010	SeqNo: 667975						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	46.99	1.0	50	0	94	90	110	0	0	0	

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_100413C						
Client ID: ZZZZZ	Batch ID: 25373	TestNo: SW6020		Analysis Date: 4/13/2010	SeqNo: 667984						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	47.49	1.0	50	0	95	90	110	0	0	0	

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_100413C						
Client ID: ZZZZZ	Batch ID: 25373	TestNo: SW6020		Analysis Date: 4/13/2010	SeqNo: 667987						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: Maul, Foster & Alongi
 Work Order: 1004071
 Project: Trueguard 2010 Pilot Study / 9009.01.12/05

TestCode: 6020_WDISS

ANALYTICAL QC SUMMARY REPORT

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_100413C						
Client ID: ZZZZ	Batch ID: 25373	TestNo: SW6020		Analysis Date: 4/13/2010	SeqNo: 667987						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	47.38	1.0	50	0	94.8	90	110	0	0	0	

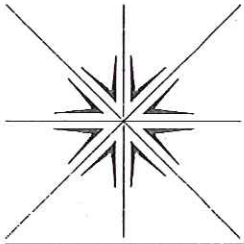
Sample ID: ICB-25373	SampType: ICB	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_100413C						
Client ID: ZZZZ	Batch ID: 25373	TestNo: SW6020		Analysis Date: 4/13/2010	SeqNo: 667976						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	1.0	0	0	0	0	0	0	0	0	

Sample ID: ICV	SampType: ICV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_100413C						
Client ID: ZZZZ	Batch ID: 25373	TestNo: SW6020		Analysis Date: 4/13/2010	SeqNo: 667974						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	47.7	1.0	50	0	95.4	90	110	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit
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 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

KEY TO FLAGS

- A This sample contains a Gasoline Range Organic not identified as a specific hydrocarbon product. The result was quantified against gasoline calibration standards.
- A1 This sample contains a Diesel Range Organic not identified as a specific hydrocarbon product. The result was quantified against diesel calibration standards.
- A2 This sample contains a Lube Oil Range Organic not identified as a specific hydrocarbon product. The result was quantified against a lube oil calibration standard.
- A3 The result was determined to be Non-Detect based on hydrocarbon pattern recognition. The product was carry-over from another hydrocarbon type.
- B The blank exhibited a positive result greater than the reporting limit for this compound.
- CN See Case Narrative.
- D Result is based from a dilution.
- E Result exceeds the calibration range for this compound. The result should be considered as estimate.
- F The positive result for this hydrocarbon is due to single component contamination. The product does not match any hydrocarbon in the fuels library.
- H Sample was analyzed outside recommended hold time.
- HT At clients request, sample was analyzed outside recommended hold time.
- J The result for this analyte is between the MDL and the PQL and should be considered as estimated concentration.
- K Diesel result is biased high due to amount of Oil contained in the sample.
- L Diesel result is biased high due to amount of Gasoline contained in the sample.
- M Oil result is biased high due to amount of Diesel contained in the sample.
- N Gasoline result is biased high due to amount of Diesel contained in the sample.
- MC Sample concentration is greater than 4x the spiked value, the spiked value is considered insignificant.
- MI Result is outside control limits due to matrix interference.
- MSA Value determined by Method of Standard Addition.
- O Laboratory Control Standard (LCS) exceeded laboratory control limits, but meets CCV criteria. Data meets EPA requirements.
- P Detection levels of Methylene Chloride may be laboratory contamination, due to previous analysis or background levels.
- Q Detection levels elevated due to sample matrix.
- R RPD control limits were exceeded.
- RF Duplicate failed due to result being at or near the method-reporting limit.
- RP Matrix spike values exceed established QC limits, post digestion spike is in control.
- S Recovery is outside control limits.
- SC Closing CCV or LCS exceeded high recovery control limits, but associated samples are non-detect. Data meets EPA requirements.
- * The result for this parameter was greater than the maximum contaminant level of the TCLP regulatory limit.



Specialty Analytical

11711 SE Capps Road
Clackamas, OR 97015
(503) 607-1331
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April 23, 2010

Tony Silva
Maul, Foster & Alongi
7223 NE Hazel Dell Avenue
Suite B
Vancouver, WA 98665

TEL: (360) 694-2691

FAX: (360) 906-1958

RE: Trueguard 2010 Pilot Study / 9009.01.12

Dear Tony Silva:

Order No.: 1004115

Specialty Analytical received 7 samples on 4/19/2010 for the analyses presented in the following report.

There were no problems with the analysis and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative, or as qualified with flags. Results apply only to the samples analyzed. Without approval of the laboratory, the reproduction of this report is only permitted in its entirety.

If you have any questions regarding these tests, please feel free to call.

Sincerely,


Cindy Hillyard

Project Manager


Technical Review

Specialty Analytical

Date: 23-Apr-10

CLIENT: Maul, Foster & Alongi
Project: Trueguard 2010 Pilot Study / 9009.01.12

Lab Order: 1004115

Lab ID: 1004115-01 **Collection Date:** 4/16/2010 11:15:00 AM
Client Sample ID: MW17 **Matrix:** GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A				Analyst: cz
Iron	3.75	0.0100		mg/L	1	4/22/2010 10:50:17 AM
Manganese	2.13	0.00200		mg/L	2	4/22/2010 1:11:33 PM
DISSOLVED METALS BY ICP/MS		SW6020				Analyst: zau
Arsenic	13	1.0		ug/L	1	4/19/2010 5:51:00 PM

Lab ID: 1004115-02 **Collection Date:** 4/16/2010 9:59:00 AM
Client Sample ID: MW18 **Matrix:** GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A				Analyst: cz
Iron	8.36	0.0100		mg/L	1	4/22/2010 10:55:18 AM
Manganese	1.20	0.00100		mg/L	1	4/22/2010 10:55:18 AM
DISSOLVED METALS BY ICP/MS		SW6020				Analyst: zau
Arsenic	17	1.0		ug/L	1	4/19/2010 5:57:00 PM

Lab ID: 1004115-03 **Collection Date:** 4/16/2010 9:50:00 AM
Client Sample ID: MW19 **Matrix:** GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A				Analyst: cz
Iron	7.10	0.0100		mg/L	1	4/22/2010 11:00:20 AM
Manganese	1.69	0.00100		mg/L	1	4/22/2010 11:00:20 AM
TOTAL METALS BY ICP/MS		SW6020				Analyst: zau
Arsenic	5.4	1.0		µg/L	1	4/21/2010 4:11:00 PM
DISSOLVED METALS BY ICP/MS		SW6020				Analyst: zau
Arsenic	5.8	1.0		ug/L	1	4/19/2010 6:04:00 PM

Specialty Analytical

Date: 23-Apr-10

CLIENT: Maul, Foster & Alongi
Project: Trueguard 2010 Pilot Study / 9009.01.12

Lab Order: 1004115

Lab ID: 1004115-04 **Collection Date:** 4/16/2010 10:50:00 AM
Client Sample ID: MW20 **Matrix:** GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A		Analyst: cz		
Iron	16.2	0.0100		mg/L	1	4/22/2010 11:05:22 AM
Manganese	2.61	0.00200		mg/L	2	4/22/2010 1:16:39 PM
DISSOLVED METALS BY ICP/MS		SW6020		Analyst: zau		
Arsenic	11	1.0		ug/L	1	4/19/2010 6:11:00 PM

Lab ID: 1004115-05 **Collection Date:** 4/16/2010 12:22:00 PM
Client Sample ID: MW21 **Matrix:** GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A		Analyst: cz		
Iron	ND	0.0100		mg/L	1	4/22/2010 10:30:25 AM
Manganese	1.89	0.00200		mg/L	2	4/22/2010 12:51:29 PM
DISSOLVED METALS BY ICP/MS		SW6020		Analyst: zau		
Arsenic	1.6	1.0		ug/L	1	4/19/2010 5:10:00 PM

Lab ID: 1004115-06 **Collection Date:** 4/16/2010 12:18:00 PM
Client Sample ID: MW22 **Matrix:** GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A		Analyst: cz		
Iron	0.448	0.0100		mg/L	1	4/22/2010 11:10:24 AM
Manganese	2.12	0.00200		mg/L	2	4/22/2010 1:21:45 PM
DISSOLVED METALS BY ICP/MS		SW6020		Analyst: zau		
Arsenic	28	1.0		ug/L	1	4/19/2010 6:17:00 PM

Lab ID: 1004115-07 **Collection Date:** 4/16/2010 12:18:00 PM
Client Sample ID: MW22 DUP **Matrix:** GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
HOLD PER CLIENT REQUEST		PER CLIENT		Analyst: knt		
Hold	Hold				1	4/23/2010

Specialty Analytical

Date: 23-Apr-10

CLIENT: Maul, Foster & Alongi
 Work Order: 1004115

ANALYTICAL QC SUMMARY REPORT

Project: Trueguard 2010 Pilot Study / 9009.01.12

TestCode: 6010_WDIS

Sample ID: 1004115-05AMS	SampType: MS	TestCode: 6010_WDIS	Units: mg/L	Prep Date: 4/22/2010	Run ID: TJA IRIS_100422A						
Client ID: MW21	Batch ID: 25437	TestNo: 6010A		Analysis Date: 4/22/2010	SeqNo: 669892						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	0.4022	0.0100	0.5	0	80.4	75	125	0	0	0	0

Sample ID: 1004115-05AMS	SampType: MS	TestCode: 6010_WDIS	Units: mg/L	Prep Date: 4/22/2010	Run ID: TJA IRIS_100422A						
Client ID: MW21	Batch ID: 25437	TestNo: 6010A		Analysis Date: 4/22/2010	SeqNo: 669916						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	2.022	0.00200	0.1	1.893	129	83.9	118	0	0	0	S,MC

Sample ID: 1004115-05AMSD	SampType: MSD	TestCode: 6010_WDIS	Units: mg/L	Prep Date: 4/22/2010	Run ID: TJA IRIS_100422A						
Client ID: MW21	Batch ID: 25437	TestNo: 6010A		Analysis Date: 4/22/2010	SeqNo: 669893						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	0.4	0.0100	0.5	0	80	75	125	0.4022	0.548	20	

Sample ID: 1004115-05AMSD	SampType: MSD	TestCode: 6010_WDIS	Units: mg/L	Prep Date: 4/22/2010	Run ID: TJA IRIS_100422A						
Client ID: MW21	Batch ID: 25437	TestNo: 6010A		Analysis Date: 4/22/2010	SeqNo: 669917						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	2.01	0.00200	0.1	1.893	117	83.9	118	2.022	0.595	20	

Sample ID: 1004115-05ADUP	SampType: DUP	TestCode: 6010_WDIS	Units: mg/L	Prep Date: 4/22/2010	Run ID: TJA IRIS_100422A						
Client ID: MW21	Batch ID: 25437	TestNo: 6010A		Analysis Date: 4/22/2010	SeqNo: 669891						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	ND	0.0100	0	0	0	0	0	0	0	0	20

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

ANALYTICAL QC SUMMARY REPORT

CLIENT: Maul, Foster & Alongi
Work Order: 1004115

Project: Truanguard 2010 Pilot Study / 9009.01.12

TestCode: 6010_WDIS

Sample ID: 1004115-05ADUP	SampType: DUP	TestCode: 6010_WDIS	Units: mg/L	Prep Date: 4/22/2010	Run ID: TJA IRIS_100422A						
Client ID: MW21	Batch ID: 25437	TestNo: 6010A		Analysis Date: 4/22/2010	SeqNo: 669915						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	1.889	0.00200	0	0	0	0	0	1.893	0.212	20	

Sample ID: CCV	SampType: CCV	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_100422A						
Client ID: ZZZZZ	Batch ID: 25437	TestNo: 6010A		Analysis Date: 4/22/2010	SeqNo: 669899						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	0.5118	0.0100	0.5	0	102	90	110	0	0		
Manganese	0.0513	0.00100	0.05	0	103	90	110	0	0		

Sample ID: CCV	SampType: CCV	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_100422A						
Client ID: ZZZZZ	Batch ID: 25437	TestNo: 6010A		Analysis Date: 4/22/2010	SeqNo: 669910						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	0.5081	0.0100	0.5	0	102	90	110	0	0		
Manganese	0.0512	0.00100	0.05	0	102	90	110	0	0		

Sample ID: CCV	SampType: CCV	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_100422A						
Client ID: ZZZZZ	Batch ID: 25437	TestNo: 6010A		Analysis Date: 4/22/2010	SeqNo: 669921						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	0.5115	0.0100	0.5	0	102	90	110	0	0		
Manganese	0.0521	0.00100	0.05	0	104	90	110	0	0		

Sample ID: CCV	SampType: CCV	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_100422A						
Client ID: ZZZZZ	Batch ID: 25437	TestNo: 6010A		Analysis Date: 4/22/2010	SeqNo: 669932						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	0.4995	0.0100	0.5	0	99.9	90	110	0	0		
Manganese	0.0514	0.00100	0.05	0	103	90	110	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

ANALYTICAL QC SUMMARY REPORT

CLIENT: Maul, Foster & Alongi
Work Order: 1004115
Project: Trueguard 2010 Pilot Study / 9009.01.12

TestCode: 6010_WDIS

Sample ID: CCV	SampType: CCV	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_100422A						
Client ID: ZZZZZ	Batch ID: 25437	TestNo: 6010A		Analysis Date: 4/22/2010	SeqNo: 669934						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	0.0503	0.00100	0.05	0	101	90	110	0	0	0	0

Sample ID: ICB-25437	SampType: ICB	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_100422A						
Client ID: ZZZZZ	Batch ID: 25437	TestNo: 6010A		Analysis Date: 4/22/2010	SeqNo: 669889						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	ND	0.0100	0	0	0	0	0	0	0	0	0
Manganese	-0.0004	0.00100	0	0	0	0	0	0	0	0	0

Sample ID: ICV	SampType: ICV	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_100422A						
Client ID: ZZZZZ	Batch ID: 25437	TestNo: 6010A		Analysis Date: 4/22/2010	SeqNo: 669888						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	0.5367	0.0100	0.5	0	107	90	110	0	0	0	0
Manganese	0.052	0.00100	0.05	0	104	90	110	0	0	0	0

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

ANALYTICAL QC SUMMARY REPORT

CLIENT: Maul, Foster & Alongi
Work Order: 1004115
Project: Trueguard 2010 Pilot Study / 9009.01.12

TestCode: 6020_W

Sample ID: MBLK-25426	Samp Type: MBLK	TestCode: 6020_W	Units: µg/L	Prep Date: 4/21/2010	Run ID: ICPMS_100421A
Client ID: ZZZZ	Batch ID: 25426	TestNo: SW6020		Analysis Date: 4/21/2010	SeqNo: 669677
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Arsenic	ND	1.0			
				LowLimit	HighLimit
				RPD Ref Val	RPDLimit
					Qual

Sample ID: LCS-25426	Samp Type: LCS	TestCode: 6020_W	Units: µg/L	Prep Date: 4/21/2010	Run ID: ICPMS_100421A
Client ID: ZZZZ	Batch ID: 25426	TestNo: SW6020		Analysis Date: 4/21/2010	SeqNo: 669681
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Arsenic	47.79	1.0	50	80	95.6
				120	0
					0

Sample ID: 1004115-03BMS	Samp Type: MS	TestCode: 6020_W	Units: µg/L	Prep Date: 4/21/2010	Run ID: ICPMS_100421A
Client ID: MW19	Batch ID: 25426	TestNo: SW6020		Analysis Date: 4/21/2010	SeqNo: 669681
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Arsenic	53.22	1.0	50	70	95.7
				130	0
					0

Sample ID: 1004115-03BMSD	Samp Type: MSD	TestCode: 6020_W	Units: µg/L	Prep Date: 4/21/2010	Run ID: ICPMS_100421A
Client ID: MW19	Batch ID: 25426	TestNo: SW6020		Analysis Date: 4/21/2010	SeqNo: 669682
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Arsenic	61.06	1.0	50	70	111
				130	53.22
					13.7
					20

Sample ID: 1004115-03BDUP	Samp Type: DUP	TestCode: 6020_W	Units: µg/L	Prep Date: 4/21/2010	Run ID: ICPMS_100421A
Client ID: MW19	Batch ID: 25426	TestNo: SW6020		Analysis Date: 4/21/2010	SeqNo: 669680
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Arsenic	5.573	1.0	0	0	0
				0	5.388
					3.38
					20

Sample ID: CCV	Samp Type: CCV	TestCode: 6020_W	Units: µg/L	Prep Date:	Run ID: ICPMS_100421A
Client ID: ZZZZ	Batch ID: 25426	TestNo: SW6020		Analysis Date: 4/21/2010	SeqNo: 669683
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC

Qualifiers: ND - Not Detected at the Reporting Limit
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

CLIENT: Maul, Foster & Alongi
Work Order: 1004115

Project: Trueguard 2010 Pilot Study / 9009.01.12

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_W

Sample ID: CCV	SampType: CCV	TestCode: 6020_W	Units: µg/L	Prep Date:	Run ID: ICPMS_100421A						
Client ID: ZZZZZ	Batch ID: 25426	TestNo: SW6020		Analysis Date: 4/21/2010	SeqNo: 669683						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	52.69	1.0	50	0	105	90	110	0	0	0	

Sample ID: ICV	SampType: ICV	TestCode: 6020_W	Units: µg/L	Prep Date:	Run ID: ICPMS_100421A						
Client ID: ZZZZZ	Batch ID: 25426	TestNo: SW6020		Analysis Date: 4/21/2010	SeqNo: 669676						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	51.96	1.0	50	0	104	90	110	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

ANALYTICAL QC SUMMARY REPORT

CLIENT: Maul, Foster & Alongi
 Work Order: 1004115

Project: Trueguard 2010 Pilot Study / 9009.01.12

TestCode: 6020_WDISS

Sample ID:	1004115-05AMS	SampType:	MS	TestCode:	6020_WDISS	Units:	ug/L	Prep Date:	4/19/2010	Run ID:	ICPMS_100419A
Client ID:	MW21	Batch ID:	25410	TestNo:	SW6020			Analysis Date:	4/19/2010	SeqNo:	669098
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	59.6	1.0	50	1.648	116	70	130	0	0	0	

Sample ID:	1004115-05AMS	SampType:	MSD	TestCode:	6020_WDISS	Units:	ug/L	Prep Date:	4/19/2010	Run ID:	ICPMS_100419A
Client ID:	MW21	Batch ID:	25410	TestNo:	SW6020			Analysis Date:	4/19/2010	SeqNo:	669099
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	60.23	1.0	50	1.648	117	70	130	59.6	1.05	20	

Sample ID:	1004115-05ADUP	SampType:	DUP	TestCode:	6020_WDISS	Units:	ug/L	Prep Date:	4/19/2010	Run ID:	ICPMS_100419A
Client ID:	MW21	Batch ID:	25410	TestNo:	SW6020			Analysis Date:	4/19/2010	SeqNo:	669096
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	1.748	1.0	0	0	0	0	0	1.648	5.89	20	

Sample ID:	CCV	SampType:	CCV	TestCode:	6020_WDISS	Units:	ug/L	Prep Date:		Run ID:	ICPMS_100419A
Client ID:	ZZZZZ	Batch ID:	25410	TestNo:	SW6020			Analysis Date:	4/19/2010	SeqNo:	669093
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	50.7	1.0	50	0	101	90	110	0	0	0	

Sample ID:	CCV	SampType:	CCV	TestCode:	6020_WDISS	Units:	ug/L	Prep Date:		Run ID:	ICPMS_100419A
Client ID:	ZZZZZ	Batch ID:	25410	TestNo:	SW6020			Analysis Date:	4/19/2010	SeqNo:	669097
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	52.36	1.0	50	0	105	90	110	0	0	0	

Sample ID:	CCV	SampType:	CCV	TestCode:	6020_WDISS	Units:	ug/L	Prep Date:		Run ID:	ICPMS_100419A
Client ID:	ZZZZZ	Batch ID:	25410	TestNo:	SW6020			Analysis Date:	4/19/2010	SeqNo:	669105
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic											

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

ANALYTICAL QC SUMMARY REPORT

CLIENT: Maul, Foster & Alongi
Work Order: 1004115
Project: Trueguard 2010 Pilot Study / 9009.01.12

TestCode: 6020_WDISS

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_100419A						
Client ID: ZZZZZ	Batch ID: 25410	TestNo: SW6020		Analysis Date: 4/19/2010	SeqNo: 669105						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	51.57	1.0	50	0	103	90	110	0	0	0	

Sample ID: ICB-25410	SampType: ICB	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_100419A						
Client ID: ZZZZZ	Batch ID: 25410	TestNo: SW6020		Analysis Date: 4/19/2010	SeqNo: 669094						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	1.0	0	0	0	0	0	0	0	0	

Sample ID: ICV	SampType: ICV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_100419A						
Client ID: ZZZZZ	Batch ID: 25410	TestNo: SW6020		Analysis Date: 4/19/2010	SeqNo: 669092						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	50.6	1.0	50	0	101	90	110	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

KEY TO FLAGS

- A This sample contains a Gasoline Range Organic not identified as a specific hydrocarbon product. The result was quantified against gasoline calibration standards.
- A1 This sample contains a Diesel Range Organic not identified as a specific hydrocarbon product. The result was quantified against diesel calibration standards.
- A2 This sample contains a Lube Oil Range Organic not identified as a specific hydrocarbon product. The result was quantified against a lube oil calibration standard.
- A3 The result was determined to be Non-Detect based on hydrocarbon pattern recognition. The product was carry-over from another hydrocarbon type.
- B The blank exhibited a positive result greater than the reporting limit for this compound.
- CN See Case Narrative.
- D Result is based from a dilution.
- E Result exceeds the calibration range for this compound. The result should be considered as estimate.
- F The positive result for this hydrocarbon is due to single component contamination. The product does not match any hydrocarbon in the fuels library.
- H Sample was analyzed outside recommended hold time.
- HT At clients request, sample was analyzed outside recommended hold time.
- J The result for this analyte is between the MDL and the PQL and should be considered as estimated concentration.
- K Diesel result is biased high due to amount of Oil contained in the sample.
- L Diesel result is biased high due to amount of Gasoline contained in the sample.
- M Oil result is biased high due to amount of Diesel contained in the sample.
- N Gasoline result is biased high due to amount of Diesel contained in the sample.
- MC Sample concentration is greater than 4x the spiked value, the spiked value is considered insignificant.
- MI Result is outside control limits due to matrix interference.
- MSA Value determined by Method of Standard Addition.
- O Laboratory Control Standard (LCS) exceeded laboratory control limits, but meets CCV criteria. Data meets EPA requirements.
- P Detection levels of Methylene Chloride may be laboratory contamination, due to previous analysis or background levels.
- Q Detection levels elevated due to sample matrix.
- R RPD control limits were exceeded.
- RF Duplicate failed due to result being at or near the method-reporting limit.
- RP Matrix spike values exceed established QC limits, post digestion spike is in control.
- S Recovery is outside control limits.
- SC Closing CCV or LCS exceeded high recovery control limits, but associated samples are non-detect. Data meets EPA requirements.
- * The result for this parameter was greater than the maximum contaminant level of the TCLP regulatory limit.

CHAIN OF CUSTODY RECORD

Specialty Analytical
 11711 SE Capps Road
 Clackamas, OR 97015
 Phone: 503-607-1331
 Fax: 503-607-1336

Contact Person/Project Manager: Tony Silva

Company: MEFA

Address: 2001 NW 19th Avenue, Suite 200

Phone: 503 971 5442 Fax: 503 971 5442

Project No.: 9004.01.12 Project Name: 2010 Pilot Study

Project Site Location: OR WA Other

Invoice To: Time yard P.O. No.: 2010 Pilot St.

Collected By: [Signature]
 Signature: [Signature]
 Printed: Sid Ferguson

Signature: _____
 Printed: _____

Turn Around Time
 Normal 5-7 Business Days
 Rush _____ Specify _____

Rush Analyses Must Be Scheduled With The Lab In Advance

Date	Time	Sample I.D.	Matrix	No. of Containers	Received By:	Company:	Date	Time
4/16/20	11:15	MW17	W	2	[Signature]	MEFA	4/19/10	11:15
4/16/20	9:59	MW18	W	2	[Signature]	MEFA	4/19/10	11:15
4/16/20	9:50	MW19	W	2	[Signature]	MEFA	4/19/10	11:15
4/16/20	10:50	MW20	V	2	[Signature]	MEFA	4/19/10	11:15
4/16/20	12:22	MW21	W	2	[Signature]	MEFA	4/19/10	11:15
4/16/20	12:18	MW22	W	2	[Signature]	MEFA	4/19/10	11:15
4/16/20	12:18	MW22-DUP	V	2	[Signature]	MEFA	4/19/10	11:15

Analyses		For Laboratory Use	
Total Arsenic	60.20	Lab Job No.	1004115
Discovered Arsenic	60.20	Shipped Via	Specialty
Discovered Arsenic	60.20	Air Bill No.	
		Temperature On Receipt	4 °C
		Specialty Analytical Containers?	Y/N
		Specialty Analytical Trip Blanks?	Y/N
		Comments	
		Lab I.D.	

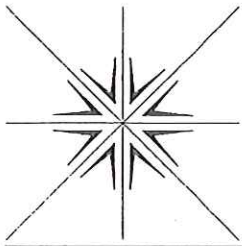
Relinquished By: [Signature]
 Company: MEFA

Relinquished By: [Signature]
 Company: MEFA

Date: 4/19/10
 Time: 11:15

Date: 4/19/10
 Time: 12:11

Unless Reclaimed, Samples Will Be Disposed of 60 Days After Receipt.
 Samples held beyond 60 days subject to storage fee(s)



Specialty Analytical

11711 SE Capps Road
Clackamas, OR 97015
(503) 607-1331
Fax (503) 607-1336

April 23, 2010

Tony Silva
Maul, Foster & Alongi
7223 NE Hazel Dell Avenue
Suite B
Vancouver, WA 98665

TEL: (360) 694-2691
FAX: (360) 906-1958

RE: TrueGuard 2010 / 9009.01.12/05

Dear Tony Silva:


Order No.: 1004128

Specialty Analytical received 13 samples on 4/21/2010 for the analyses presented in the following report.

There were no problems with the analysis and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative, or as qualified with flags. Results apply only to the samples analyzed. Without approval of the laboratory, the reproduction of this report is only permitted in its entirety.

If you have any questions regarding these tests, please feel free to call.

Sincerely,


Cindy Hillyard
Project Manager


Technical Review

Specialty Analytical

Date: 23-Apr-10

CLIENT: Maul, Foster & Alongi
Project: TrueGuard 2010 / 9009.01.12/05

Lab Order: 1004128

Lab ID: 1004128-01 **Collection Date:** 3/22/2010 12:30:00 PM
Client Sample ID: MW19 (3/22/10) **Matrix:** GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A				Analyst: cz
Iron	55.4	0.0100		mg/L	1	4/22/2010 11:30:41 AM
Manganese	3.42	0.00200		mg/L	2	4/22/2010 1:42:06 PM

Lab ID: 1004128-02 **Collection Date:** 4/1/2010 11:53:00 AM
Client Sample ID: MW17 (4/1/10) **Matrix:** GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A				Analyst: cz
Iron	6.59	0.0100		mg/L	1	4/22/2010 11:35:42 AM
Manganese	2.54	0.00200		mg/L	2	4/22/2010 1:47:10 PM

Lab ID: 1004128-03 **Collection Date:** 4/1/2010 11:50:00 AM
Client Sample ID: MW18 (4/1/10) **Matrix:** GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A				Analyst: cz
Iron	22.9	0.0100		mg/L	1	4/22/2010 11:40:43 AM
Manganese	2.07	0.00200		mg/L	2	4/22/2010 1:52:14 PM

Lab ID: 1004128-04 **Collection Date:** 4/1/2010 1:17:00 PM
Client Sample ID: MW19 (4/1/10) **Matrix:** GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A				Analyst: cz
Iron	17.9	0.0100		mg/L	1	4/22/2010 11:45:45 AM
Manganese	2.05	0.00200		mg/L	2	4/22/2010 1:57:21 PM

Specialty Analytical

Date: 23-Apr-10

CLIENT: Maul, Foster & Alongi
Project: TrueGuard 2010 / 9009.01.12/05

Lab Order: 1004128

Lab ID: 1004128-05
Client Sample ID: MW20 (4/1/10)

Collection Date: 4/1/2010 1:30:00 PM
Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A				Analyst: cz
Iron	19.2	0.0100		mg/L	1	4/22/2010 11:50:48 AM
Manganese	2.43	0.00200		mg/L	2	4/22/2010 2:02:26 PM

Lab ID: 1004128-06
Client Sample ID: MW21 (4/1/10)

Collection Date: 4/1/2010 2:30:00 PM
Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A				Analyst: cz
Iron	ND	0.0100		mg/L	1	4/22/2010 11:55:50 AM
Manganese	2.74	0.00200		mg/L	2	4/22/2010 2:07:32 PM

Lab ID: 1004128-07
Client Sample ID: MW22 (4/1/10)

Collection Date: 4/1/2010 2:50:00 PM
Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A				Analyst: cz
Iron	ND	0.0100		mg/L	1	4/22/2010 12:00:55 PM
Manganese	3.13	0.00200		mg/L	2	4/22/2010 2:12:37 PM

Lab ID: 1004128-08
Client Sample ID: MW17 (4/9/10)

Collection Date: 4/9/2010 10:10:00 AM
Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A				Analyst: cz
Iron	3.15	0.0100		mg/L	1	4/22/2010 12:05:57 PM
Manganese	1.94	0.00100		mg/L	1	4/22/2010 12:05:57 PM

Specialty Analytical

Date: 23-Apr-10

CLIENT: Maul, Foster & Alongi
Project: TrueGuard 2010 / 9009.01.12/05

Lab Order: 1004128

Lab ID: 1004128-13
Client Sample ID: MW22 (4/9/10)

Collection Date: 4/9/2010 12:47:00 PM
Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP						
		6010A				Analyst: cz
Iron	ND	0.0100		mg/L	1	4/22/2010 12:46:26 PM
Manganese	2.53	0.00200		mg/L	2	4/22/2010 2:48:12 PM

Specialty Analytical

Date: 23-Apr-10

CLIENT: Maul, Foster & Alongi
 Work Order: 1004128

Project: TrueGuard 2010 / 9009.01.12/05

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDIS

Sample ID: 1004115-05AMS	SampType: MS	TestCode: 6010_WDIS	Units: mg/L	Prep Date: 4/22/2010	Run ID: TJA IRIS_100422A						
Client ID: ZZZZZ	Batch ID: 25437	TestNo: 6010A		Analysis Date: 4/22/2010	SeqNo: 669892						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	0.4022	0.0100	0.5	0	80.4	75	125	0	0	0	0

Sample ID: 1004115-05AMS	SampType: MS	TestCode: 6010_WDIS	Units: mg/L	Prep Date: 4/22/2010	Run ID: TJA IRIS_100422A						
Client ID: ZZZZZ	Batch ID: 25437	TestNo: 6010A		Analysis Date: 4/22/2010	SeqNo: 669916						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	2.022	0.00200	0.1	1.893	129	83.9	118	0	0	0	S,MC

Sample ID: 1004115-05AMSD	SampType: MSD	TestCode: 6010_WDIS	Units: mg/L	Prep Date: 4/22/2010	Run ID: TJA IRIS_100422A						
Client ID: ZZZZZ	Batch ID: 25437	TestNo: 6010A		Analysis Date: 4/22/2010	SeqNo: 669893						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	0.4	0.0100	0.5	0	80	75	125	0.4022	0.548	20	

Sample ID: 1004115-05AMSD	SampType: MSD	TestCode: 6010_WDIS	Units: mg/L	Prep Date: 4/22/2010	Run ID: TJA IRIS_100422A						
Client ID: ZZZZZ	Batch ID: 25437	TestNo: 6010A		Analysis Date: 4/22/2010	SeqNo: 669917						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	2.01	0.00200	0.1	1.893	117	83.9	118	2.022	0.595	20	

Sample ID: 1004115-05ADUP	SampType: DUP	TestCode: 6010_WDIS	Units: mg/L	Prep Date: 4/22/2010	Run ID: TJA IRIS_100422A						
Client ID: ZZZZZ	Batch ID: 25437	TestNo: 6010A		Analysis Date: 4/22/2010	SeqNo: 669891						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	ND	0.0100	0	0	0	0	0	0	0	0	20

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank
 Page 1 of 3

ANALYTICAL QC SUMMARY REPORT

CLIENT: Maul, Foster & Alongi
 Work Order: 1004128
 Project: TrueGuard 2010 / 9009.01.12/05
 TestCode: 6010_WDIS

Sample ID: 1004115-05ADUP	SampType: DUP	TestCode: 6010_WDIS	Units: mg/L	Prep Date: 4/22/2010	Run ID: TJA IRIS_100422A						
Client ID: ZZZZZ	Batch ID: 25437	TestNo: 6010A		Analysis Date: 4/22/2010	SeqNo: 669915						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	1.889	0.00200	0	0	0	0	0	1.893	0.212	20	

Sample ID: CCV	SampType: CCV	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_100422A						
Client ID: ZZZZZ	Batch ID: 25437	TestNo: 6010A		Analysis Date: 4/22/2010	SeqNo: 669899						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	0.5118	0.0100	0.5	0	102	90	110	0	0		
Manganese	0.0513	0.00100	0.05	0	103	90	110	0	0		

Sample ID: CCV	SampType: CCV	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_100422A						
Client ID: ZZZZZ	Batch ID: 25437	TestNo: 6010A		Analysis Date: 4/22/2010	SeqNo: 669910						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	0.5081	0.0100	0.5	0	102	90	110	0	0		
Manganese	0.0512	0.00100	0.05	0	102	90	110	0	0		

Sample ID: CCV	SampType: CCV	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_100422A						
Client ID: ZZZZZ	Batch ID: 25437	TestNo: 6010A		Analysis Date: 4/22/2010	SeqNo: 669921						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	0.5115	0.0100	0.5	0	102	90	110	0	0		
Manganese	0.0521	0.00100	0.05	0	104	90	110	0	0		

Sample ID: CCV	SampType: CCV	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_100422A						
Client ID: ZZZZZ	Batch ID: 25437	TestNo: 6010A		Analysis Date: 4/22/2010	SeqNo: 669932						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	0.4995	0.0100	0.5	0	99.9	90	110	0	0		
Manganese	0.0514	0.00100	0.05	0	103	90	110	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

ANALYTICAL QC SUMMARY REPORT

CLIENT: Maul, Foster & Alongi
 Work Order: 1004128

Project: TrueGuard 2010 / 9009.01.12/05

TestCode: 6010_WDIS

Sample ID: CCV	SampType: CCV	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_100422A						
Client ID: ZZZZZ	Batch ID: 25437	TestNo: 6010A		Analysis Date: 4/22/2010	SeqNo: 669934						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	0.0503	0.00100	0.05	0	101	90	110	0	0	0	0

Sample ID: ICB-25437	SampType: ICB	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_100422A						
Client ID: ZZZZZ	Batch ID: 25437	TestNo: 6010A		Analysis Date: 4/22/2010	SeqNo: 669889						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	ND	0.0100	0	0	0	0	0	0	0	0	0
Manganese	-0.0004	0.00100	0	0	0	0	0	0	0	0	0

Sample ID: ICV	SampType: ICV	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_100422A						
Client ID: ZZZZZ	Batch ID: 25437	TestNo: 6010A		Analysis Date: 4/22/2010	SeqNo: 669888						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	0.5367	0.0100	0.5	0	107	90	110	0	0	0	0
Manganese	0.052	0.00100	0.05	0	104	90	110	0	0	0	0

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

KEY TO FLAGS

- A This sample contains a Gasoline Range Organic not identified as a specific hydrocarbon product. The result was quantified against gasoline calibration standards.
- A1 This sample contains a Diesel Range Organic not identified as a specific hydrocarbon product. The result was quantified against diesel calibration standards.
- A2 This sample contains a Lube Oil Range Organic not identified as a specific hydrocarbon product. The result was quantified against a lube oil calibration standard.
- A3 The result was determined to be Non-Detect based on hydrocarbon pattern recognition. The product was carry-over from another hydrocarbon type.
- B The blank exhibited a positive result greater than the reporting limit for this compound.
- CN See Case Narrative.
- D Result is based from a dilution.
- E Result exceeds the calibration range for this compound. The result should be considered as estimate.
- F The positive result for this hydrocarbon is due to single component contamination. The product does not match any hydrocarbon in the fuels library.
- H Sample was analyzed outside recommended hold time.
- HT At clients request, sample was analyzed outside recommended hold time.
- J The result for this analyte is between the MDL and the PQL and should be considered as estimated concentration.
- K Diesel result is biased high due to amount of Oil contained in the sample.
- L Diesel result is biased high due to amount of Gasoline contained in the sample.
- M Oil result is biased high due to amount of Diesel contained in the sample.
- N Gasoline result is biased high due to amount of Diesel contained in the sample.
- MC Sample concentration is greater than 4x the spiked value, the spiked value is considered insignificant.
- MI Result is outside control limits due to matrix interference.
- MSA Value determined by Method of Standard Addition.
- O Laboratory Control Standard (LCS) exceeded laboratory control limits, but meets CCV criteria. Data meets EPA requirements.
- P Detection levels of Methylene Chloride may be laboratory contamination, due to previous analysis or background levels.
- Q Detection levels elevated due to sample matrix.
- R RPD control limits were exceeded.
- RF Duplicate failed due to result being at or near the method-reporting limit.
- RP Matrix spike values exceed established QC limits, post digestion spike is in control.
- S Recovery is outside control limits.
- SC Closing CCV or LCS exceeded high recovery control limits, but associated samples are non-detect. Data meets EPA requirements.
- * The result for this parameter was greater than the maximum contaminant level of the TCLP regulatory limit.

CHAIN OF CUSTODY RECORD

Specialty Analytical
 11711 SE Capps Road
 Clackamas, OR 97015
 Phone: 503-607-1331
 Fax: 503-607-1336

Contact Person/Project Manager: TONY SILVA
 Company: MAUL FOSTER ALONG F
 Address: 2001 NW 19th AVE, SUITE 200
PORTLAND, OR 97209
 Phone: 971-544-289 Fax: 971-544-2140
 Project No.: 9009, 81.12 / 05 Project Name: TRAVEGUARD AIR STRAY
TRAVEGUARD A BASELINE
 Project Site Location OR: WA Other
 Invoice To: AFFA TRAVEGUARD P.O. No. Air Sparg

Collected By: Scout Mard
 Signature: Scout Mard
 Printed: Scout Mard

Signature: _____
 Printed: _____
 Turn Around Time: _____
 Normal 5-7 Business Days
 Rush _____ Specify _____
 Rush Analyses Must Be Scheduled With The Lab In Advance

Date	Time	Sample I.D.	Matrix	No. of Containers	Analyses	For Laboratory Use		Relinquished By:	Date
						Lab Job No.	Shipped Via		
3/22/10	12:30	MW19	GW	2	TOTAL ARSENIC (0020) DISSED ARSENIC DISSED REM W/IO	100218 Specialty	Temperature On Receipt: <u>5</u> °C Specialty Analytical Containers? Y/N Specialty Analytical Trip Blanks? Y/N	Company: <u>Scout Mard</u>	3/23/10
								Company: <u>Scout Mard</u>	Time: 1330
								Received For Lab By: <u>Mulla Papers</u>	Time: 1330

Relinquished By: Scout Mard
 Company: MFA
 Date: 3/23/10
 Time: 0830
 Unless Reclaimed, Samples Will Be Disposed of 60 Days After Receipt.
 Samples held beyond 60 days subject to storage fee(s)

CHAIN OF CUSTODY RECORD

Page 1 of 1

Specialty Analytical
 11711 SE Capps Road
 Clackamas, OR 97015
 Phone: 503-607-1331
 Fax: 503-607-1336

Contact Person/Project Manager Tony Silva
 Company Marc Foster Aronj
 Address 2001 NW 19th Ave Suite 200
PORTLAND, OR 97209
 Phone 971-544-2139 Fax 971-544-2140

Collected By: S. Mauld
 Signature SCOTT MAULDIN
 Printed SCOTT MAULDIN
 Signature _____
 Printed _____

Turn Around Time _____
 Normal 5-7 Business Days
 Rush _____ Specify _____

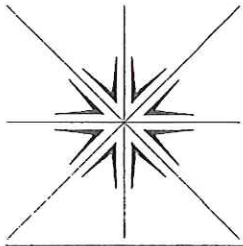
Rush Analyses Must Be Scheduled With The Lab In Advance

Project No. 1009.01.12.1-5 Project Name Trueguard 2010 Point Spring
 Project Site Location OR WA K Other _____
 Invoice To Trueguard P.O. No. Trueguard Spring 2010

Date	Time	Sample I.D.	Matrix	No. of Containers	Analyses	For Laboratory Use	Relinquished By:	Date	Time	
4/8/10	10:10	MW17	GW	2	Dissolved Arsenic Dissolved Fe, Mn Total Arsenic (GD)	Lab Job No. <u>1009011</u> Shipped Via <u>1004128</u> Air Bill No. _____ Temperature On Receipt _____ °C Specialty Analytical Containers? Y/N Specialty Analytical Trip Blanks? Y/N	<u>S. Mauld</u>	4/11/10	14:00	
	10:04	MW18	GW	2				Company: <u>Smith</u>	4/12/10	12:25
	11:25	MW19	GW	2				Received For Lab By: <u>Nikki Harper</u>		
	11:18	MW20	GW	2						
	12:04	MW21	GW	2						
	12:47	MW22	GW	2						
	12:47	MW22-Dup	GW	2						

Copies: White-Original Yellow-Project File Pink-Customer Copy

Unless Reclaimed, Samples Will Be Disposed of 60 Days After Receipt.
 Samples held beyond 60 days subject to storage fee(s)



Specialty Analytical

11711 SE Capps Road
Clackamas, OR 97015
(503) 607-1331
Fax (503) 607-1336

April 29, 2010

Tony Silva
Maul, Foster & Alongi
7223 NE Hazel Dell Avenue
Suite B
Vancouver, WA 98665

TEL: (360) 694-2691

FAX: (360) 906-1958

RE: Trueguard 2010 Pilot Study / 9009.01.12

Dear Tony Silva:


Order No.: 1004144

Specialty Analytical received 7 samples on 4/23/2010 for the analyses presented in the following report.

There were no problems with the analysis and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative, or as qualified with flags. Results apply only to the samples analyzed. Without approval of the laboratory, the reproduction of this report is only permitted in its entirety.

If you have any questions regarding these tests, please feel free to call.

Sincerely,


Cindy Hillyard
Project Manager


Technical Review

Specialty Analytical

Date: 29-Apr-10

CLIENT: Maul, Foster & Alongi
Project: Trueguard 2010 Pilot Study / 9009.01.12

Lab Order: 1004144

Lab ID: 1004144-01 **Collection Date:** 4/22/2010 10:05:00 AM
Client Sample ID: MW17 **Matrix:** GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A				Analyst: zau
Iron	3.16	0.0100		mg/L	1	4/27/2010 2:24:18 PM
Manganese	2.36	0.0100		mg/L	10	4/27/2010 1:23:32 PM
DISSOLVED METALS BY ICP/MS		SW6020				Analyst: zau
Arsenic	16	1.0		ug/L	1	4/26/2010 2:11:00 PM
ANIONS BY ION CHROMATOGRAPHY		SW9056				Analyst: en
Sulfate	48.5	2.50		mg/L	5	4/27/2010

Lab ID: 1004144-02 **Collection Date:** 4/22/2010 10:20:00 AM
Client Sample ID: MW18 **Matrix:** GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A				Analyst: zau
Iron	7.36	0.0100		mg/L	1	4/27/2010 1:28:37 PM
Manganese	1.05	0.00100		mg/L	1	4/27/2010 1:28:37 PM
DISSOLVED METALS BY ICP/MS		SW6020				Analyst: zau
Arsenic	16	1.0		ug/L	1	4/26/2010 2:18:00 PM
ANIONS BY ION CHROMATOGRAPHY		SW9056				Analyst: en
Sulfate	28.1	1.00		mg/L	2	4/27/2010

Lab ID: 1004144-03 **Collection Date:** 4/22/2010 11:17:00 AM
Client Sample ID: MW19 **Matrix:** GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A				Analyst: zau
Iron	4.82	0.0100		mg/L	1	4/27/2010 2:29:22 PM
Manganese	2.17	0.0100		mg/L	10	4/27/2010 1:33:41 PM
TOTAL METALS BY ICP/MS		SW6020				Analyst: zau
Arsenic	4.3	1.0		µg/L	1	4/27/2010 12:26:00 PM
DISSOLVED METALS BY ICP/MS		SW6020				Analyst: zau
Arsenic	4.3	1.0		ug/L	1	4/26/2010 2:38:00 PM
ANIONS BY ION CHROMATOGRAPHY		SW9056				Analyst: en
Sulfate	41.8	2.50		mg/L	5	4/27/2010

Specialty Analytical

Date: 29-Apr-10

CLIENT: Maul, Foster & Alongi
Project: Trueguard 2010 Pilot Study / 9009.01.12

Lab Order: 1004144

Lab ID: 1004144-04

Collection Date: 4/22/2010 11:20:00 AM

Client Sample ID: MW20

Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A				Analyst: zau
Iron	15.3	0.0100		mg/L	1	4/27/2010 2:34:25 PM
Manganese	2.56	0.0100		mg/L	10	4/27/2010 1:38:47 PM
DISSOLVED METALS BY ICP/MS		SW6020				Analyst: zau
Arsenic	9.3	1.0		ug/L	1	4/26/2010 1:44:00 PM
ANIONS BY ION CHROMATOGRAPHY		SW9056				Analyst: en
Sulfate	17.0	0.500		mg/L	1	4/26/2010

Lab ID: 1004144-05

Collection Date: 4/22/2010 12:27:00 PM

Client Sample ID: MW21

Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A				Analyst: zau
Iron	ND	0.0100		mg/L	1	4/27/2010 2:04:14 PM
Manganese	2.51	0.0100		mg/L	10	4/27/2010 1:03:26 PM
DISSOLVED METALS BY ICP/MS		SW6020				Analyst: zau
Arsenic	1.1	1.0		ug/L	1	4/26/2010 2:45:00 PM
ANIONS BY ION CHROMATOGRAPHY		SW9056				Analyst: en
Sulfate	17.4	0.500		mg/L	1	4/26/2010

Lab ID: 1004144-06

Collection Date: 4/22/2010 12:20:00 PM

Client Sample ID: MW22

Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A				Analyst: zau
Iron	0.0513	0.0100		mg/L	1	4/27/2010 2:39:30 PM
Manganese	2.22	0.0100		mg/L	10	4/27/2010 1:43:53 PM
DISSOLVED METALS BY ICP/MS		SW6020				Analyst: zau
Arsenic	15	1.0		ug/L	1	4/26/2010 2:51:00 PM
ANIONS BY ION CHROMATOGRAPHY		SW9056				Analyst: en
Sulfate	28.6	2.50		mg/L	5	4/27/2010

Specialty Analytical

Date: 29-Apr-10

CLIENT: Maul, Foster & Alongi
Project: Trueguard 2010 Pilot Study / 9009.01.12

Lab Order: 1004144

Lab ID: 1004144-07
Client Sample ID: MW22 DUP

Collection Date: 4/22/2010 12:20:00 PM
Matrix: GROUNDWATER

Analyses	Result	Limit Qual Units	DF	Date Analyzed
HOLD PER CLIENT REQUEST		PER CLIENT		Analyst: knt
Hold	Hold		1	4/28/2010

Specialty Analytical

Date: 29-Apr-10

CLIENT: Maul, Foster & Alongi
 Work Order: 1004144

Project: Trueguard 2010 Pilot Study / 9009.01.12

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDIS

Sample ID: 1004144-05AMS	SampType: MS	TestCode: 6010_WDIS	Units: mg/L	Prep Date: 4/26/2010	Run ID: TJA IRIS_100427F						
Client ID: MW21	Batch ID: 25452	TestNo: 6010A		Analysis Date: 4/27/2010	SeqNo: 670676						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	2.858	0.0100	0.5	2.512	69.2	83.9	118	0	0	0	S,MC

Sample ID: 1004144-05AMS	SampType: MS	TestCode: 6010_WDIS	Units: mg/L	Prep Date: 4/26/2010	Run ID: TJA IRIS_100427F						
Client ID: MW21	Batch ID: 25452	TestNo: 6010A		Analysis Date: 4/27/2010	SeqNo: 670686						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	0.4917	0.0100	0.5	0	98.3	75	125	0	0	0	

Sample ID: 1004144-05AMSD	SampType: MSD	TestCode: 6010_WDIS	Units: mg/L	Prep Date: 4/26/2010	Run ID: TJA IRIS_100427F						
Client ID: MW21	Batch ID: 25452	TestNo: 6010A		Analysis Date: 4/27/2010	SeqNo: 670677						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	2.892	0.0100	0.5	2.512	76	83.9	118	2.858	1.18	20	S,MC

Sample ID: 1004144-05AMSD	SampType: MSD	TestCode: 6010_WDIS	Units: mg/L	Prep Date: 4/26/2010	Run ID: TJA IRIS_100427F						
Client ID: MW21	Batch ID: 25452	TestNo: 6010A		Analysis Date: 4/27/2010	SeqNo: 670687						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	0.4835	0.0100	0.5	0	96.7	75	125	0.4917	1.68	20	

Sample ID: 1004144-05ADUP	SampType: DUP	TestCode: 6010_WDIS	Units: mg/L	Prep Date: 4/26/2010	Run ID: TJA IRIS_100427F						
Client ID: MW21	Batch ID: 25452	TestNo: 6010A		Analysis Date: 4/27/2010	SeqNo: 670675						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	2.45	0.0100	0	0	0	0	0	2.512	2.50	20	

Qualifiers: ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

ANALYTICAL QC SUMMARY REPORT

CLIENT: Maul, Foster & Alongi
Work Order: 1004144
Project: Trueguard 2010 Pilot Study / 9009.01.12

TestCode: 6010_WDIS

Sample ID: 1004144-05ADUP	SampType: DUP	TestCode: 6010_WDIS	Units: mg/L	Prep Date: 4/26/2010	Run ID: TJA IRIS_100427F						
Client ID: MW21	Batch ID: 25452	TestNo: 6010A		Analysis Date: 4/27/2010	SeqNo: 670685						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	ND	0.0100	0	0	0	0	0	0	0	0	20

Sample ID: CCV	SampType: CCV	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_100427F						
Client ID: ZZZZZ	Batch ID: 25452	TestNo: 6010A		Analysis Date: 4/27/2010	SeqNo: 670672						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	0.5082	0.0100	0.5	0	102	90	110	0	0	0	
Manganese	0.0511	0.00100	0.05	0	102	90	110	0	0	0	

Sample ID: CCV	SampType: CCV	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_100427F						
Client ID: ZZZZZ	Batch ID: 25452	TestNo: 6010A		Analysis Date: 4/27/2010	SeqNo: 670683						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	0.4956	0.0100	0.5	0	99.1	90	110	0	0	0	
Manganese	0.0508	0.00100	0.05	0	102	90	110	0	0	0	

Sample ID: CCV	SampType: CCV	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_100427F						
Client ID: ZZZZZ	Batch ID: 25452	TestNo: 6010A		Analysis Date: 4/27/2010	SeqNo: 670695						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	0.4889	0.0100	0.5	0	97.8	90	110	0	0	0	
Manganese	0.0499	0.00100	0.05	0	99.8	90	110	0	0	0	

Sample ID: ICB-25452	SampType: ICB	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_100427F						
Client ID: ZZZZZ	Batch ID: 25452	TestNo: 6010A		Analysis Date: 4/27/2010	SeqNo: 670694						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	ND	0.0100	0	0	0	0	0	0	0	0	
Manganese	ND	0.00100	0	0	0	0	0	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

CLIENT: Maul, Foster & Alongi
Work Order: 1004144

Project: Trueguard 2010 Pilot Study / 9009.01.12

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDIS

Sample ID: ICV	SampType: ICV	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_100427F						
Client ID: ZZZZZ	Batch ID: 25452	TestNo: 6010A		Analysis Date: 4/27/2010	SeqNo: 670671						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron	0.5168	0.0100	0.5	0	103	90	110	0	0	0	0
Manganese	0.0513	0.00100	0.05	0	103	90	110	0	0	0	0

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

ANALYTICAL QC SUMMARY REPORT

CLIENT: Maul, Foster & Alongi
Work Order: 1004144

Project: Trueguard 2010 Pilot Study / 9009.01.12

TestCode: 6020_W

Sample ID: MBLK-25457	SampType: MBLK	TestCode: 6020_W	Units: µg/L	Prep Date: 4/26/2010	Run ID: ICPMS_100427B		
Client ID: ZZZZZ	Batch ID: 25457	TestNo: SW6020		Analysis Date: 4/27/2010	SeqNo: 670604		
Analyte	Result	PQL	SPK value	SPK Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	1.0					

Sample ID: LCS-25457	SampType: LCS	TestCode: 6020_W	Units: µg/L	Prep Date: 4/26/2010	Run ID: ICPMS_100427B						
Client ID: ZZZZZ	Batch ID: 25457	TestNo: SW6020		Analysis Date: 4/27/2010	SeqNo: 670605						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	49.4	1.0	50	0	98.8	80	120	0		0	

Sample ID: 1004144-03BMS	SampType: MS	TestCode: 6020_W	Units: µg/L	Prep Date: 4/26/2010	Run ID: ICPMS_100427B						
Client ID: MW19	Batch ID: 25457	TestNo: SW6020		Analysis Date: 4/27/2010	SeqNo: 670608						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	53.94	1.0	50	4.308	99.3	70	130	0		0	

Sample ID: 1004144-03BMSD	SampType: MSD	TestCode: 6020_W	Units: µg/L	Prep Date: 4/26/2010	Run ID: ICPMS_100427B						
Client ID: MW19	Batch ID: 25457	TestNo: SW6020		Analysis Date: 4/27/2010	SeqNo: 670609						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	53.8	1.0	50	4.308	99	70	130	53.94	0.260	20	

Sample ID: 1004144-03BDUP	SampType: DUP	TestCode: 6020_W	Units: µg/L	Prep Date: 4/26/2010	Run ID: ICPMS_100427B						
Client ID: MW19	Batch ID: 25457	TestNo: SW6020		Analysis Date: 4/27/2010	SeqNo: 670607						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	4.482	1.0	0	0	0	0	0	4.308	3.96	20	

Sample ID: CCV	SampType: CCV	TestCode: 6020_W	Units: µg/L	Prep Date:	Run ID: ICPMS_100427B						
Client ID: ZZZZZ	Batch ID: 25457	TestNo: SW6020		Analysis Date: 4/27/2010	SeqNo: 670610						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

CLIENT: Maul, Foster & Alongi
Work Order: 1004144

Project: Trueguard 2010 Pilot Study / 9009.01.12

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_W

Sample ID: CCV	SampType: CCV	TestCode: 6020_W	Units: µg/L	Prep Date:	Run ID: ICPMS_100427B						
Client ID: ZZZZZ	Batch ID: 25457	TestNo: SW6020		Analysis Date: 4/27/2010	SeqNo: 670610						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	52.74	1.0	50	0	105	90	110	0	0	0	

Sample ID: ICV	SampType: ICV	TestCode: 6020_W	Units: µg/L	Prep Date:	Run ID: ICPMS_100427B						
Client ID: ZZZZZ	Batch ID: 25457	TestNo: SW6020		Analysis Date: 4/27/2010	SeqNo: 670603						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	52.22	1.0	50	0	104	90	110	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank
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ANALYTICAL QC SUMMARY REPORT

CLIENT: Maul, Foster & Alongi
Work Order: 1004144
Project: Trueguard 2010 Pilot Study / 9009.01.12

TestCode: 6020_WDISS

Sample ID: 1004144-04AMS	SampType: MS	TestCode: 6020_WDISS	Units: ug/L	Prep Date: 4/26/2010	Run ID: ICPMS_100426C						
Client ID: MW20	Batch ID: 25451	TestNo: SW6020		Analysis Date: 4/26/2010	SeqNo: 670385						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	61.24	1.0	50	9.337	104	70	130	0	0	0	

Sample ID: 1004144-04AMSD	SampType: MSD	TestCode: 6020_WDISS	Units: ug/L	Prep Date: 4/26/2010	Run ID: ICPMS_100426C						
Client ID: MW20	Batch ID: 25451	TestNo: SW6020		Analysis Date: 4/26/2010	SeqNo: 670386						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	62.18	1.0	50	9.337	106	70	130	61.24	1.52	20	

Sample ID: 1004144-04ADUP	SampType: DUP	TestCode: 6020_WDISS	Units: ug/L	Prep Date: 4/26/2010	Run ID: ICPMS_100426C						
Client ID: MW20	Batch ID: 25451	TestNo: SW6020		Analysis Date: 4/26/2010	SeqNo: 670384						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	9.634	1.0	0	0	0	0	0	9.337	3.13	20	

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_100426C						
Client ID: ZZZZZ	Batch ID: 25451	TestNo: SW6020		Analysis Date: 4/26/2010	SeqNo: 670389						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	54.51	1.0	50	0	109	90	110	0	0	0	

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_100426C						
Client ID: ZZZZZ	Batch ID: 25451	TestNo: SW6020		Analysis Date: 4/26/2010	SeqNo: 670393						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	52.04	1.0	50	0	104	90	110	0	0	0	

Sample ID: ICB-25451	SampType: ICB	TestCode: 6020_WDISS	Units: ug/L	Prep Date: 4/26/2010	Run ID: ICPMS_100426C						
Client ID: ZZZZZ	Batch ID: 25451	TestNo: SW6020		Analysis Date: 4/26/2010	SeqNo: 670382						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: Maul, Foster & Alongi
Work Order: 1004144

Project: Trueguard 2010 Pilot Study / 9009.01.12

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_WDISS

Sample ID: ICB-25451	SampType: ICB	TestCode: 6020_WDISS	Units: ug/L	Prep Date: 4/26/2010	Run ID: ICPMS_100426C						
Client ID: ZZZZZ	Batch ID: 25451	TestNo: SW6020		Analysis Date: 4/26/2010	SeqNo: 670382						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	1.0	0	0	0	0	0	0	0	0	0

Sample ID: ICV	SampType: ICV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_100426C						
Client ID: ZZZZZ	Batch ID: 25451	TestNo: SW6020		Analysis Date: 4/26/2010	SeqNo: 670381						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	50.75	1.0	50	0	102	90	110	0	0	0	0

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

ANALYTICAL QC SUMMARY REPORT

CLIENT: Maul, Foster & Alongi
Work Order: 1004144
Project: Trueguard 2010 Pilot Study / 9009.01.12

TestCode: IC_GW

Sample ID: MB-R60698	SampType: MBLK	TestCode: IC_GW	Units: mg/L	Prep Date: 4/26/2010	Run ID: IC_100426B
Client ID: ZZZZZ	Batch ID: R60698	TestNo: SW9056		Analysis Date: 4/26/2010	SeqNo: 670869
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Sulfate	ND	0.500			
				LowLimit	HighLimit
				RPD Ref Val	RPDLimit
				%RPD	Qual

Sample ID: MB-R60699	SampType: MBLK	TestCode: IC_GW	Units: mg/L	Prep Date: 4/27/2010	Run ID: IC_100427A
Client ID: ZZZZZ	Batch ID: R60699	TestNo: SW9056		Analysis Date: 4/27/2010	SeqNo: 670886
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Sulfate	ND	0.500			
				LowLimit	HighLimit
				RPD Ref Val	RPDLimit
				%RPD	Qual

Sample ID: LCS-R60698	SampType: LCS	TestCode: IC_GW	Units: mg/L	Prep Date: 4/26/2010	Run ID: IC_100426B
Client ID: ZZZZZ	Batch ID: R60698	TestNo: SW9056		Analysis Date: 4/26/2010	SeqNo: 670868
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Sulfate	9.73	0.500	10	0	97.3
				LowLimit	HighLimit
				RPD Ref Val	RPDLimit
				%RPD	Qual

Sample ID: LCS-R60699	SampType: LCS	TestCode: IC_GW	Units: mg/L	Prep Date: 4/27/2010	Run ID: IC_100427A
Client ID: ZZZZZ	Batch ID: R60699	TestNo: SW9056		Analysis Date: 4/27/2010	SeqNo: 670885
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Sulfate	9.82	0.500	10	0	98.2
				LowLimit	HighLimit
				RPD Ref Val	RPDLimit
				%RPD	Qual

Sample ID: 1004141-03BMS	SampType: MS	TestCode: IC_GW	Units: mg/L	Prep Date: 4/26/2010	Run ID: IC_100426B
Client ID: ZZZZZ	Batch ID: R60698	TestNo: SW9056		Analysis Date: 4/26/2010	SeqNo: 670861
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Sulfate	9.23	0.500	5	4.48	95
				LowLimit	HighLimit
				RPD Ref Val	RPDLimit
				%RPD	Qual

Sample ID: 1004144-04CMS	SampType: MS	TestCode: IC_GW	Units: mg/L	Prep Date: 4/27/2010	Run ID: IC_100427A
Client ID: MW20	Batch ID: R60699	TestNo: SW9056		Analysis Date: 4/27/2010	SeqNo: 670880
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
				LowLimit	HighLimit
				RPD Ref Val	RPDLimit
				%RPD	Qual

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

ANALYTICAL QC SUMMARY REPORT

CLIENT: Maul, Foster & Alongi
Work Order: 1004144

Project: Trueguard 2010 Pilot Study / 9009.01.12

TestCode: IC_GW

Sample ID: 1004144-04CMS	SampType: MS	TestCode: IC_GW	Units: mg/L	Prep Date: 4/27/2010	Run ID: IC_100427A						
Client ID: MW20	Batch ID: R60699	TestNo: SW9056		Analysis Date: 4/27/2010	SeqNo: 670880						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	64.7	5.00	50	18.1	93.2	69.1	122	0	0	0	

Sample ID: 1004141-03BMSD	SampType: MSD	TestCode: IC_GW	Units: mg/L	Prep Date: 4/26/2010	Run ID: IC_100426B						
Client ID: ZZZZZ	Batch ID: R60698	TestNo: SW9056		Analysis Date: 4/26/2010	SeqNo: 670862						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	9.07	0.500	5	4.48	91.8	69.1	122	9.23	1.75	20	

Sample ID: 1004144-04CMS	SampType: MSD	TestCode: IC_GW	Units: mg/L	Prep Date: 4/27/2010	Run ID: IC_100427A						
Client ID: MW20	Batch ID: R60699	TestNo: SW9056		Analysis Date: 4/27/2010	SeqNo: 670881						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	64.5	5.00	50	18.1	92.8	69.1	122	64.7	0.310	20	

Sample ID: CCV	SampType: CCV	TestCode: IC_GW	Units: mg/L	Prep Date: 4/26/2010	Run ID: IC_100426B						
Client ID: ZZZZZ	Batch ID: R60698	TestNo: SW9056		Analysis Date: 4/26/2010	SeqNo: 670867						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	12.3	0.500	12.5	0	98.4	90	110	0	0	0	

Sample ID: CCV	SampType: CCV	TestCode: IC_GW	Units: mg/L	Prep Date: 4/27/2010	Run ID: IC_100427A						
Client ID: ZZZZZ	Batch ID: R60699	TestNo: SW9056		Analysis Date: 4/27/2010	SeqNo: 670884						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	12.31	0.500	12.5	0	98.5	90	110	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit
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 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank
 Page 9 of 9

KEY TO FLAGS

- A This sample contains a Gasoline Range Organic not identified as a specific hydrocarbon product. The result was quantified against gasoline calibration standards.
- A1 This sample contains a Diesel Range Organic not identified as a specific hydrocarbon product. The result was quantified against diesel calibration standards.
- A2 This sample contains a Lube Oil Range Organic not identified as a specific hydrocarbon product. The result was quantified against a lube oil calibration standard.
- A3 The result was determined to be Non-Detect based on hydrocarbon pattern recognition. The product was carry-over from another hydrocarbon type.
- B The blank exhibited a positive result greater than the reporting limit for this compound.
- CN See Case Narrative.
- D Result is based from a dilution.
- E Result exceeds the calibration range for this compound. The result should be considered as estimate.
- F The positive result for this hydrocarbon is due to single component contamination. The product does not match any hydrocarbon in the fuels library.
- H Sample was analyzed outside recommended hold time.
- HT At clients request, sample was analyzed outside recommended hold time.
- J The result for this analyte is between the MDL and the PQL and should be considered as estimated concentration.
- K Diesel result is biased high due to amount of Oil contained in the sample.
- L Diesel result is biased high due to amount of Gasoline contained in the sample.
- M Oil result is biased high due to amount of Diesel contained in the sample.
- N Gasoline result is biased high due to amount of Diesel contained in the sample.
- MC Sample concentration is greater than 4x the spiked value, the spiked value is considered insignificant.
- MI Result is outside control limits due to matrix interference.
- MSA Value determined by Method of Standard Addition.
- O Laboratory Control Standard (LCS) exceeded laboratory control limits, but meets CCV criteria. Data meets EPA requirements.
- P Detection levels of Methylene Chloride may be laboratory contamination, due to previous analysis or background levels.
- Q Detection levels elevated due to sample matrix.
- R RPD control limits were exceeded.
- RF Duplicate failed due to result being at or near the method-reporting limit.
- RP Matrix spike values exceed established QC limits, post digestion spike is in control.
- S Recovery is outside control limits.
- SC Closing CCV or LCS exceeded high recovery control limits, but associated samples are non-detect. Data meets EPA requirements.
- * The result for this parameter was greater than the maximum contaminant level of the TCLP regulatory limit.

CHAIN OF CUSTODY RECORD

Specialty Analytical

11711 SE Capps Road
Clackamas, OR 97015
Phone: 503-607-1331
Fax: 503-607-1336

Contact Person/Project Manager Tony SILVA

Company MFA

Address 32 2001 NW 19th, Suite 200

PORTLAND, OR 97209

Phone 971-544-2137 Fax 971-544-2140

Project No. 9009, 01.20/05 Project Name Inverness Air Space Prow

Project Site Location OR WA X Other

Invoice To Inverness P.O. No. Inverness 4-SP

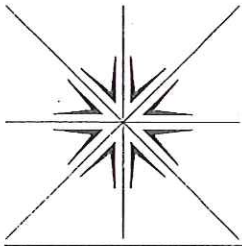
Collected By: S Mauld
Signature SCOTT MAULD
Printed MAULD

Signature
Printed

Turn Around Time
Normal 5-7 Business Days
Rush Specify

Rush Analyses Must Be Scheduled With The Lab In Advance

Table with columns: Date, Time, Sample I.D., Matrix, No. of Containers, Analyses (Total Arsenic, Dissolved Arsenic, etc.), Relinquished By, Received By, Date, Time.



Specialty Analytical

11711 SE Capps Road
Clackamas, OR 97015
(503) 607-1331
Fax (503) 607-1336

May 18, 2010

Tony Silva
Maul, Foster & Alongi
7223 NE Hazel Dell Avenue
Suite B
Vancouver, WA 98665

TEL: (360) 694-2691

FAX: (360) 906-1958

RE: Trueguard Pilot Post Compressor/9009.01.1

Dear Tony Silva:

Order No.: 1005045

Specialty Analytical received 7 samples on 5/10/2010 for the analyses presented in the following report.

There were no problems with the analysis and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative, or as qualified with flags. Results apply only to the samples analyzed. Without approval of the laboratory, the reproduction of this report is only permitted in its entirety.

If you have any questions regarding these tests, please feel free to call.

Sincerely,


Cindy Hillyard

Project Manager


Technical Review

Specialty Analytical

Date: 18-May-10

CLIENT: Maul, Foster & Alongi
Project: Trueguard Pilot Post Compressor / 9009.01.12/0

Lab Order: 1005045

Lab ID: 1005045-01 **Collection Date:** 5/7/2010 10:33:00 AM
Client Sample ID: MW17 **Matrix:** GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A				Analyst: zau
Iron	9.23	0.0100		mg/L	1	5/11/2010 12:40:08 PM
Manganese	2.09	0.0100		mg/L	10	5/11/2010 1:44:39 PM
DISSOLVED METALS BY ICP/MS		SW6020				Analyst: zau
Arsenic	24	1.0		ug/L	1	5/11/2010 4:16:00 PM
ANIONS BY ION CHROMATOGRAPHY		SW9056				Analyst: en
Sulfate	46.9	5.00		mg/L	10	5/11/2010

Lab ID: 1005045-02 **Collection Date:** 5/7/2010 10:34:00 AM
Client Sample ID: MW18 **Matrix:** GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A				Analyst: zau
Iron	26.2	0.0100		mg/L	1	5/11/2010 12:45:10 PM
Manganese	2.86	0.0100		mg/L	10	5/11/2010 1:49:43 PM
DISSOLVED METALS BY ICP/MS		SW6020				Analyst: zau
Arsenic	14	1.0		ug/L	1	5/12/2010 2:27:00 PM
ANIONS BY ION CHROMATOGRAPHY		SW9056				Analyst: en
Sulfate	22.1	0.500		mg/L	1	5/11/2010

Lab ID: 1005045-03 **Collection Date:** 5/7/2010 11:37:00 AM
Client Sample ID: MW19 **Matrix:** GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A				Analyst: zau
Iron	8.17	0.0100		mg/L	1	5/11/2010 12:50:11 PM
Manganese	1.00	0.00100		mg/L	1	5/11/2010 12:50:11 PM
TOTAL METALS BY ICP/MS		SW6020				Analyst: zau
Arsenic	4.3	1.0		ug/L	1	5/13/2010 2:17:00 PM
DISSOLVED METALS BY ICP/MS		SW6020				Analyst: zau
Arsenic	4.3	1.0		ug/L	1	5/11/2010 4:30:00 PM
ANIONS BY ION CHROMATOGRAPHY		SW9056				Analyst: en
Sulfate	44.9	5.00		mg/L	10	5/11/2010

Specialty Analytical

Date: 18-May-10

CLIENT: Maul, Foster & Alongi
Project: Trueguard Pilot Post Compressor / 9009.01.12/0

Lab Order: 1005045

Lab ID: 1005045-04

Collection Date: 5/7/2010 12:41:00 PM

Client Sample ID: MW20

Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A				Analyst: zau
Iron	20.5	0.0100		mg/L	1	5/11/2010 12:20:16 PM
Manganese	2.64	0.0100		mg/L	10	5/11/2010 1:24:39 PM
DISSOLVED METALS BY ICP/MS		SW6020				Analyst: zau
Arsenic	15	1.0		ug/L	1	5/11/2010 4:36:00 PM
ANIONS BY ION CHROMATOGRAPHY		SW9056				Analyst: en
Sulfate	24.2	0.500		mg/L	1	5/11/2010

Lab ID: 1005045-05

Collection Date: 5/7/2010 12:48:00 PM

Client Sample ID: MW21

Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A				Analyst: zau
Iron	0.414	0.0100		mg/L	1	5/11/2010 12:55:14 PM
Manganese	1.97	0.00100		mg/L	1	5/11/2010 12:55:14 PM
DISSOLVED METALS BY ICP/MS		SW6020				Analyst: zau
Arsenic	3.9	1.0		ug/L	1	5/11/2010 3:49:00 PM
ANIONS BY ION CHROMATOGRAPHY		SW9056				Analyst: en
Sulfate	7.81	0.500		mg/L	1	5/11/2010

Lab ID: 1005045-06

Collection Date: 5/7/2010 11:40:00 AM

Client Sample ID: MW22

Matrix: GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP		6010A				Analyst: zau
Iron	1.32	0.0100		mg/L	1	5/11/2010 1:15:33 PM
Manganese	2.95	0.0100		mg/L	10	5/11/2010 1:54:47 PM
DISSOLVED METALS BY ICP/MS		SW6020				Analyst: zau
Arsenic	81	1.0		ug/L	1	5/11/2010 4:43:00 PM
ANIONS BY ION CHROMATOGRAPHY		SW9056				Analyst: en
Sulfate	15.3	0.500		mg/L	1	5/11/2010

Specialty Analytical

Date: 18-May-10

CLIENT: Maul, Foster & Alongi
Project: Trueguard Pilot Post Compressor / 9009.01.12/0

Lab Order: 1005045

Lab ID: 1005045-07
Client Sample ID: MW22 DUP

Collection Date: 5/7/2010 11:40:00 AM
Matrix: GROUNDWATER

Analyses	Result	Limit Qual	Units	DF	Date Analyzed
HOLD PER CLIENT REQUEST Hold		PER CLIENT		1	Analyst: ADM 5/18/2010

Specialty Analytical

Date: 18-May-10

CLIENT: Maul, Foster & Alongi
 Work Order: 1005045

ANALYTICAL QC SUMMARY REPORT

Project: Trueguard Pilot Post Compressor / 9009.01.12/0

TestCode: 6010_WDIS

Sample ID: 1005045-04AMS	SampType: MS	TestCode: 6010_WDIS	Units: mg/L	Prep Date: 5/11/2010	Run ID: TJA IRIS_100511A						
Client ID: MW20	Batch ID: 25560	TestNo: 6010A		Analysis Date: 5/11/2010	SeqNo: 673113						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	19.82	0.0100	0.5	20.47	-130	75	125	0	0	0	S,MC

Sample ID: 1005045-04AMS	SampType: MS	TestCode: 6010_WDIS	Units: mg/L	Prep Date: 5/11/2010	Run ID: TJA IRIS_100511A						
Client ID: MW20	Batch ID: 25560	TestNo: 6010A		Analysis Date: 5/11/2010	SeqNo: 673123						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	3.003	0.0100	0.5	2.638	73	83.9	118	0	0	0	S,MC

Sample ID: 1005045-04AMSD	SampType: MSD	TestCode: 6010_WDIS	Units: mg/L	Prep Date: 5/11/2010	Run ID: TJA IRIS_100511A						
Client ID: MW20	Batch ID: 25560	TestNo: 6010A		Analysis Date: 5/11/2010	SeqNo: 673114						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	19.92	0.0100	0.5	20.47	-110	75	125	19.82	0.503	20	S,MC

Sample ID: 1005045-04AMSD	SampType: MSD	TestCode: 6010_WDIS	Units: mg/L	Prep Date: 5/11/2010	Run ID: TJA IRIS_100511A						
Client ID: MW20	Batch ID: 25560	TestNo: 6010A		Analysis Date: 5/11/2010	SeqNo: 673124						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	3.036	0.0100	0.5	2.638	79.6	83.9	118	3.003	1.09	20	S,MC

Sample ID: 1005045-04ADUP	SampType: DUP	TestCode: 6010_WDIS	Units: mg/L	Prep Date: 5/11/2010	Run ID: TJA IRIS_100511A						
Client ID: MW20	Batch ID: 25560	TestNo: 6010A		Analysis Date: 5/11/2010	SeqNo: 673112						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	20.07	0.0100	0	0	0	0	0	20.47	1.97	20	

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

ANALYTICAL QC SUMMARY REPORT

CLIENT: Maul, Foster & Alongi
Work Order: 1005045

Project: Trueguard Pilot Post Compressor / 9009.01.12/0

TestCode: 6010_WDIS

Sample ID: 1005045-04ADUP	SampType: DUP	TestCode: 6010_WDIS	Units: mg/L	Prep Date: 5/11/2010	Run ID: TJA IRIS_100511A						
Client ID: MW20	Batch ID: 25560	TestNo: 6010A		Analysis Date: 5/11/2010	SeqNo: 673122						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	2.611	0.0100	0	0	0	0	0	2.638	1.03		20

Sample ID: CCV	SampType: CCV	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_100511A						
Client ID: ZZZZ	Batch ID: 25560	TestNo: 6010A		Analysis Date: 5/11/2010	SeqNo: 673119						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	0.5153	0.0100	0.5	0	103	90	110	0	0		
Manganese	0.0507	0.00100	0.05	0	101	90	110	0	0		

Sample ID: CCV	SampType: CCV	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_100511A						
Client ID: ZZZZ	Batch ID: 25560	TestNo: 6010A		Analysis Date: 5/11/2010	SeqNo: 673128						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	0.5126	0.0100	0.5	0	103	90	110	0	0		
Manganese	0.0513	0.00100	0.05	0	103	90	110	0	0		

Sample ID: ICB-25560	SampType: ICB	TestCode: 6010_WDIS	Units: mg/L	Prep Date: 5/11/2010	Run ID: TJA IRIS_100511A						
Client ID: ZZZZ	Batch ID: 25560	TestNo: 6010A		Analysis Date: 5/11/2010	SeqNo: 673110						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	ND	0.0100	0	0	0	0	0	0	0		
Manganese	ND	0.00100	0	0	0	0	0	0	0		

Sample ID: ICV	SampType: ICV	TestCode: 6010_WDIS	Units: mg/L	Prep Date:	Run ID: TJA IRIS_100511A						
Client ID: ZZZZ	Batch ID: 25560	TestNo: 6010A		Analysis Date: 5/11/2010	SeqNo: 673109						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	0.5223	0.0100	0.5	0	104	90	110	0	0		
Manganese	0.0514	0.00100	0.05	0	103	90	110	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

CLIENT: Maul, Foster & Alongi
Work Order: 1005045

Project: Trueguard Pilot Post Compressor / 9009.01.12/0

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_W

Sample ID: MBLK-25575	SampType: MBLK	TestCode: 6020_W	Units: µg/L	Prep Date: 5/12/2010	Run ID: ICPMS_100513B						
Client ID: ZZZZZ	Batch ID: 25575	TestNo: SW6020		Analysis Date: 5/13/2010	SeqNo: 673667						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	1.0									

Sample ID: LCS-25575	SampType: LCS	TestCode: 6020_W	Units: µg/L	Prep Date: 5/12/2010	Run ID: ICPMS_100513B						
Client ID: ZZZZZ	Batch ID: 25575	TestNo: SW6020		Analysis Date: 5/13/2010	SeqNo: 673668						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	49.44	1.0	50	0	98.9	80	120	0	0	0	

Sample ID: 1005052-03CMS	SampType: MS	TestCode: 6020_W	Units: µg/L	Prep Date: 5/12/2010	Run ID: ICPMS_100513B						
Client ID: ZZZZZ	Batch ID: 25575	TestNo: SW6020		Analysis Date: 5/13/2010	SeqNo: 673671						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	65.49	1.0	50	16.47	98	70	130	0	0	0	

Sample ID: 1005052-03CMSD	SampType: MSD	TestCode: 6020_W	Units: µg/L	Prep Date: 5/12/2010	Run ID: ICPMS_100513B						
Client ID: ZZZZZ	Batch ID: 25575	TestNo: SW6020		Analysis Date: 5/13/2010	SeqNo: 673672						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	64.68	1.0	50	16.47	96.4	70	130	65.49	1.24	20	

Sample ID: 1005052-03CDUP	SampType: DUP	TestCode: 6020_W	Units: µg/L	Prep Date: 5/12/2010	Run ID: ICPMS_100513B						
Client ID: ZZZZZ	Batch ID: 25575	TestNo: SW6020		Analysis Date: 5/13/2010	SeqNo: 673670						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	16.14	1.0	0	0	0	0	0	16.47	2.02	20	

Sample ID: CCV	SampType: CCV	TestCode: 6020_W	Units: µg/L	Prep Date:	Run ID: ICPMS_100513B						
Client ID: ZZZZZ	Batch ID: 25575	TestNo: SW6020		Analysis Date: 5/13/2010	SeqNo: 673673						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

ANALYTICAL QC SUMMARY REPORT

CLIENT: Maul, Foster & Alongi
Work Order: 1005045

Project: Trueguard Pilot Post Compressor / 9009.01.12/0

TestCode: 6020_W

Sample ID: CCV	SampType: CCV	TestCode: 6020_W	Units: µg/L	Prep Date:	Run ID: ICPMS_100513B						
Client ID: ZZZZZ	Batch ID: 25575	TestNo: SW6020		Analysis Date: 5/13/2010	SeqNo: 673673						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	51.76	1.0	50	0	104	90	110	0	0	0	

Sample ID: CCV	SampType: CCV	TestCode: 6020_W	Units: µg/L	Prep Date:	Run ID: ICPMS_100513B						
Client ID: ZZZZZ	Batch ID: 25575	TestNo: SW6020		Analysis Date: 5/13/2010	SeqNo: 673680						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	51.7	1.0	50	0	103	90	110	0	0	0	

Sample ID: ICV	SampType: ICV	TestCode: 6020_W	Units: µg/L	Prep Date:	Run ID: ICPMS_100513B						
Client ID: ZZZZZ	Batch ID: 25575	TestNo: SW6020		Analysis Date: 5/13/2010	SeqNo: 673666						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	51.98	1.0	50	0	104	90	110	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank
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ANALYTICAL QC SUMMARY REPORT

CLIENT: Maul, Foster & Alongi
 Work Order: 1005045

Project: Trueguard Pilot Post Compressor / 9009.01.12/0

TestCode: 6020_WDISS

Sample ID: 1005045-05AMS	SampType: MS	TestCode: 6020_WDISS	Units: ug/L	Prep Date: 5/11/2010	Run ID: ICPMS_100511A						
Client ID: MW21	Batch ID: 25561	TestNo: SW6020		Analysis Date: 5/11/2010	SeqNo: 673189						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	59.57	1.0	50	3.887	111	70	130	0	0	0	0

Sample ID: 1005045-05AMSD	SampType: MSD	TestCode: 6020_WDISS	Units: ug/L	Prep Date: 5/11/2010	Run ID: ICPMS_100511A						
Client ID: MW21	Batch ID: 25561	TestNo: SW6020		Analysis Date: 5/11/2010	SeqNo: 673190						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	57.54	1.0	50	3.887	107	70	130	59.57	3.47	3.47	20

Sample ID: 1005045-05ADUP	SampType: DUP	TestCode: 6020_WDISS	Units: ug/L	Prep Date: 5/11/2010	Run ID: ICPMS_100511A						
Client ID: MW21	Batch ID: 25561	TestNo: SW6020		Analysis Date: 5/11/2010	SeqNo: 673188						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	4.087	1.0	0	0	0	0	0	3.887	5.02	5.02	20

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_100511A						
Client ID: ZZZZZ	Batch ID: 25561	TestNo: SW6020		Analysis Date: 5/11/2010	SeqNo: 673185						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	53.83	1.0	50	0	108	90	110	0	0	0	0

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_100511A						
Client ID: ZZZZZ	Batch ID: 25561	TestNo: SW6020		Analysis Date: 5/11/2010	SeqNo: 673196						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	52.15	1.0	50	0	104	90	110	0	0	0	0

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_100511A						
Client ID: ZZZZZ	Batch ID: 25561	TestNo: SW6020		Analysis Date: 5/12/2010	SeqNo: 673499						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

CLIENT: Maul, Foster & Alongi
Work Order: 1005045

Project: Trueguard Pilot Post Compressor / 9009.01.12/0

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_WDISS

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_100511A						
Client ID: ZZZZZ	Batch ID: 25561	TestNo: SW6020		Analysis Date: 5/12/2010	SeqNo: 673499						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	51.59	1.0	50	0	103	90	110	0	0	0	0

Sample ID: ICB-25561	SampType: ICB	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_100511A						
Client ID: ZZZZZ	Batch ID: 25561	TestNo: SW6020		Analysis Date: 5/11/2010	SeqNo: 673186						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	1.0	0	0	0	0	0	0	0	0	0

Sample ID: ICV	SampType: ICV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_100511A						
Client ID: ZZZZZ	Batch ID: 25561	TestNo: SW6020		Analysis Date: 5/11/2010	SeqNo: 673184						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	53.29	1.0	50	0	107	90	110	0	0	0	0

Sample ID: ICV	SampType: ICV	TestCode: 6020_WDISS	Units: ug/L	Prep Date:	Run ID: ICPMS_100511A						
Client ID: ZZZZZ	Batch ID: 25561	TestNo: SW6020		Analysis Date: 5/12/2010	SeqNo: 673497						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	50.8	1.0	50	0	102	90	110	0	0	0	0

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank
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ANALYTICAL QC SUMMARY REPORT

CLIENT: Maul, Foster & Alongi
Work Order: 1005045

Project: Trueguard Pilot Post Compressor / 9009.01.12/0

TestCode: IC_GW

Sample ID: MB-R60933	SampType: MBLK	TestCode: IC_GW	Units: mg/L	Prep Date: 5/11/2010	Run ID: IC_100511A						
Client ID: ZZZZZ	Batch ID: R60933	TestNo: SW9056		Analysis Date: 5/11/2010	SeqNo: 673633						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.500									

Sample ID: LCS-R60933	SampType: LCS	TestCode: IC_GW	Units: mg/L	Prep Date: 5/11/2010	Run ID: IC_100511A						
Client ID: ZZZZZ	Batch ID: R60933	TestNo: SW9056		Analysis Date: 5/11/2010	SeqNo: 673632						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	9.62	0.500	10	0	96.2	89.6	112	0	0	0	

Sample ID: 1005045-01CMS	SampType: MS	TestCode: IC_GW	Units: mg/L	Prep Date: 5/11/2010	Run ID: IC_100511A						
Client ID: MW17	Batch ID: R60933	TestNo: SW9056		Analysis Date: 5/11/2010	SeqNo: 673624						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	97.3	5.00	50	46.9	101	69.1	122	0	0	0	

Sample ID: 1005045-01CMSD	SampType: MSD	TestCode: IC_GW	Units: mg/L	Prep Date: 5/11/2010	Run ID: IC_100511A						
Client ID: MW17	Batch ID: R60933	TestNo: SW9056		Analysis Date: 5/11/2010	SeqNo: 673625						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	95.1	5.00	50	46.9	96.4	69.1	122	97.3	2.29	20	

Sample ID: CCV	SampType: CCV	TestCode: IC_GW	Units: mg/L	Prep Date: 5/11/2010	Run ID: IC_100511A						
Client ID: ZZZZZ	Batch ID: R60933	TestNo: SW9056		Analysis Date: 5/11/2010	SeqNo: 673631						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	12.43	0.500	12.5	0	99.4	90	110	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

KEY TO FLAGS

- A This sample contains a Gasoline Range Organic not identified as a specific hydrocarbon product. The result was quantified against gasoline calibration standards.
- A1 This sample contains a Diesel Range Organic not identified as a specific hydrocarbon product. The result was quantified against diesel calibration standards.
- A2 This sample contains a Lube Oil Range Organic not identified as a specific hydrocarbon product. The result was quantified against a lube oil calibration standard.
- A3 The result was determined to be Non-Detect based on hydrocarbon pattern recognition. The product was carry-over from another hydrocarbon type.
- B The blank exhibited a positive result greater than the reporting limit for this compound.
- CN See Case Narrative.
- D Result is based from a dilution.
- E Result exceeds the calibration range for this compound. The result should be considered as estimate.
- F The positive result for this hydrocarbon is due to single component contamination. The product does not match any hydrocarbon in the fuels library.
- H Sample was analyzed outside recommended hold time.
- HT At clients request, sample was analyzed outside recommended hold time.
- J The result for this analyte is between the MDL and the PQL and should be considered as estimated concentration.
- K Diesel result is biased high due to amount of Oil contained in the sample.
- L Diesel result is biased high due to amount of Gasoline contained in the sample.
- M Oil result is biased high due to amount of Diesel contained in the sample.
- N Gasoline result is biased high due to amount of Diesel contained in the sample.
- MC Sample concentration is greater than 4x the spiked value, the spiked value is considered insignificant.
- MI Result is outside control limits due to matrix interference.
- MSA Value determined by Method of Standard Addition.
- O Laboratory Control Standard (LCS) exceeded laboratory control limits, but meets CCV criteria. Data meets EPA requirements.
- P Detection levels of Methylene Chloride may be laboratory contamination, due to previous analysis or background levels.
- Q Detection levels elevated due to sample matrix.
- R RPD control limits were exceeded.
- RF Duplicate failed due to result being at or near the method-reporting limit.
- RP Matrix spike values exceed established QC limits, post digestion spike is in control.
- S Recovery is outside control limits.
- SC Closing CCV or LCS exceeded high recovery control limits, but associated samples are non-detect. Data meets EPA requirements.
- * The result for this parameter was greater than the maximum contaminant level of the TCLP regulatory limit.

DATA VALIDATION MEMORANDUM



DATA QUALITY ASSURANCE/QUALITY CONTROL REVIEW

PROJECT NO. 9009.01.12 | AUGUST 12, 2010 | TRUEGUARD, LLC
REPORTS 1003143, 1004022, 1004071, 1004115, 1004128, 1004144, 1005045

This report reviews the analytical results for groundwater samples collected by the Maul Foster & Alongi, Inc. project team on the TrueGuard, LLC, facility at 725 South 32nd Street in Washougal, Washington. The samples were collected in March, April, and May 2010.

Specialty Analytical (SA), in Clackamas, Oregon, performed the analyses. SA report numbers 1003143, 1004022, 1004071, 1004115, 1004128, 1004144, and 1005045 were reviewed. The analyses performed are listed below.

Analysis	Reference
Total and dissolved metals	USEPA 6010A/6020
Total sulfate	USEPA 9056

USEPA = U.S. Environmental Protection Agency.

DATA QUALIFICATIONS

Analytical results were evaluated according to applicable sections of USEPA procedures (USEPA, 1994) and appropriate laboratory and method-specific guidelines (SA, 2009; USEPA, 1986).

The data are considered acceptable for their intended use, with the appropriate data qualifiers assigned.

HOLDING TIMES, PRESERVATION, AND SAMPLE STORAGE

Holding Times

Extractions and analyses were performed within the recommended holding time criteria.

Preservation and Sample Storage

The samples were preserved and stored appropriately.

BLANKS

Method Blanks

Laboratory method blank analyses were performed at the required frequencies. No target analytes were detected above the SA reporting limits.

Trip Blanks

Trip blanks were not submitted for this sampling event.

Equipment Rinse Blanks

Equipment rinse blanks were not required for this sampling event, as all samples were collected using dedicated, single-use equipment.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE RESULTS

MS/MSD results are used to evaluate laboratory precision and accuracy. All MS/MSD samples were extracted and analyzed at the required frequency. All recoveries were within acceptance limits for percent recovery and relative percent differences (RPDs).

LABORATORY DUPLICATE RESULTS

Duplicate results are used to evaluate laboratory precision. All duplicate samples were extracted and analyzed at the required frequency. All RPDs were within acceptance limits.

REPORTING LIMITS

SA used routine method reporting limits for non-detect results.

DATA PACKAGE

The data packages were reviewed for transcription errors, omissions, and anomalies. None were found.

REFERENCES

- SA. 2009. Quality assurance manual. Specialty Analytical, Clackamas, Oregon.
- USEPA. 1986. Test methods for evaluating solid waste: physical/chemical methods. EPA-530/SW-846. U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response. September (update 1, July 1992; update 2a, August 1993; update 2, September 1994; update 2b, January 1995).
- USEPA. 1994. USEPA contract laboratory program, national functional guidelines for inorganics data review. EPA 540/R-94/013. U.S. Environmental Protection Agency, Office of Emergency and Remedial Response. February.

WELL LOG



Maul Foster & Alongi, Inc.

Geologic Borehole Log/Well Construction

Project Number
9009.01.12

Well Number
MW23

Sheet
1 of 1

Project Name **TrueGuard, LLC**
 Project Location **725 South 32nd Street, Washougal, Washington 98671-2519**
 Start/End Date **3/22/2010 to 3/22/2010**
 Driller/Equipment **Cascade Drilling, L.P./Geoprobe 7720 DT**
 Geologist/Engineer **S. Mauldin**
 Sample Method **Geoprobe**

TOC Elevation (feet)
 Surface Elevation (feet)
 Northing
 Easting
 Hole Depth **15.0-feet**
 Outer Hole Diam **4-inch**

Depth (feet, BGS)	Well Details	Interval	Percent Recovery	Collection Method	Sample Data		Blows/6"	Lithologic Column	Soil Description
					Number	Name (Type)			
0.0			100%	GP					0.0 to 0.5 feet: ASPHALT; black.
0.5									0.5 to 1.5 feet: SILTY GRAVEL (GM); brownish gray; 80% gravel; 15% fines; 5% sand. (FILL)
1.5									1.5 to 2.0 feet: SAND (SP); brown; 100% SAND, fine to medium; micaceous; red lithics; damp. (FILL)
2.0									1.5 to 2.0 feet: SAND (SP); brown; 100% SAND, fine to medium; micaceous; red lithics. (FILL)
3.0									@ 3.0 feet bgs = wet.
4.7									@ 4.7 feet = color change to gray.
5.0			100%	GP					5.0 to 10.0 feet: SAND (SP); gray; 100% SAND, fine to medium; micaceous; red lithics; wet.
9.6									@ 9.6 feet = 0.3 inch woody debris.
10.0			70%	GP					10.0 to 11.5 feet: NO RECOVERY.
11.5									11.5 to 15.0 feet: SAND (SP); gray; 100% SAND, fine to medium; micaceous; red lithics; wet.
15.0									Total Depth = 15.0 feet bgs.

MW23 Completion Details

Boring:

0.0 to 2.0 feet bgs: flush mount steel vault and cement seal. Vault measures 2 feet by 2 feet by 2 feet.
 2.0 to 12.0 feet bgs: granular bentonite.
 12.0 to 15.0 feet bgs: 10x20 sand filter pack.
 13.0 to 15.0 feet bgs: prepack 0.020-inch (20 slot) screen.

Well:

0.0 to 13.0 feet bgs: 2-inch diameter, schedule 40 PVC blank riser pipe.
 13.0 to 15.0 feet bgs: 2-inch diameter, schedule 40 PVC screen prepack, 0.020-inch (20 slot), machine-perforated.

- NOTES:** 1) bgs = below ground surface.
 2) Ecology Well Identification = BAL 369.
 3) Washington Start Card Number = RE04452.

∇ **Approximate water level observed during drilling.**

ATTACHMENT B

HORIZONTAL DRILLING METHOD



ATTACHMENT B HORIZONTAL DRILLING METHODOLOGY

The description below is based on a proposal submitted to Maul Foster and Alongi, Inc. (MFA) by Directed Technologies Drilling, Inc. (DTD), dated June 9, 2010.

1 Horizontal Drilling Operations and Casing Installation

This section describes the technical approach for installing the horizontal well. Pilot hole drilling, well bore reaming, and casing installation are all described in this section. Drill fluid management and well development is discussed in subsequent sections.

1.1 Mobilization

Prior to drilling, MFA will mark the proposed borepaths on the ground surface. On site and offsite utilities will be located prior to subsurface work.

The drill and ancillary equipment will be transported in a 48 foot cargo van. A work space will be provided with enough room to allow the loading ramps to be attached and the equipment walked off the trailer.

1.2 Materials

3-inch schedule 80 polyvinyl chloride (PVC) pipe will be used. Transverse slotted pipe with a 0.5% or less open area is assumed.

CETCO CleanDrill (or equivalent) will be used as the drilling mud. This drilling mud is a polymer-based fluid that has been developed primarily for use in horizontal remediation wells. It is designed to give good performance in removing cuttings from the borehole, stabilizing the borehole walls, and lubricating and cooling the drilling tools, while facilitating development of the formation for optimum well performance after the installation is completed.

1.3 Drilling Equipment and Crew

Drilling operations will begin after the final visual identification of utility lines. The drilling crew will set up the drilling equipment, consisting of three primary units: 1) the directional drill, 2) a mud mixing system, and 3) a spoils collection system. The drilling crew will consist of three people including a driller, a locating technician and a mud mixing person.

Drill Rig

A Vermeer D-24 x 40a (or equivalent) drill rig will be used. Drilling fluid is supplied to the rig via hoses from the mud-mixing unit. A single pass system will be used so there will be no need to decontaminate the mud system once the well is installed.



Support Equipment

Drilling fluid (CleanDrill in aqueous solution, or equivalent) is mixed and supplied from a separate mud handling module, a self-contained unit comprising a mud tank, mixing jet, pump, and associated fluid conveyance lines. This unit is skid mounted and is located in the vicinity of the drill unit. Drilling fluid is supplied to the drill rig from the module and is recovered from the entrance pit for disposal in a container. Additional fluid is mixed as required to make up for fluid losses within the borehole.

Additional support equipment will include the following:

- Backhoe, for excavation needs;
- Extended reach forklift, to unload and handle equipment and supplies;
- Concrete saw to saw cut hard surfacing (asphalt or concrete) at the mud pit locations;
- Centrifugal trash pumps and/or diaphragm pumps for fluid handling;
- Pressure washer, for equipment decontamination;
- Generator set, for temporary power supply to pumps, power tools, etc.

1.4 Drilling Operations

Drilling operations include preparing the entry pits (both ends), advancing the pilot hole, reaming the pilot hole (if necessary), and pushing the well material. Although each of these steps is critical to the success of the installation, completing the pilot hole is the single most important step for accurate placement of the well. Once the pilot hole is established, the forward reaming and casing installation will follow the path of the initial pilot hole.

Entrance pits

Entry pits are primarily used to temporarily contain drilling fluids as they flow from the borehole during the drilling process. These pits will be approximately 3 feet wide, 3 feet long, and 3-4 feet deep. The pits are typically unlined as the drilling mud will seal the walls preventing infiltration of contaminated drilling mud.

Pilot hole advancement and casing installation

The horizontal well is expected to be 450 to 500 feet in length. Installation will occur using a double-ended well methodology. For a 500-foot double-ended well, the total length drilled will be approximately 620 feet.

The trajectory of the well screens and casings will be established by an initial pilot hole drilled from the surface to the target depth using a five-inch diameter drill bit. The bore will be advanced for the design borehole length at which time the hole will be swabbed and conditioned.

Depending on the borehole stability, the driller may elect to pre-ream the bore to a larger diameter. This may help to stabilize the bore and provides more annular space in which to insert the casing. Once the reaming tools have been pulled from the borehole, the well materials will be pushed into the borehole. This is a continuous process, with work continuing until the well is in place.

Tracking and Steering the Drill Head

Guidance and navigation of the pilot bore will be accomplished with a DCI Eclipse (or equivalent) walkover guidance system. A walkover system will require fairly continuous surface access (minor gaps are acceptable) for tracking.

Prior to drilling, buried utilities must be identified and positively located. This involves using a backhoe or other tools to excavate and confirm the depth of utilities that have been identified at the surface by a locating company. Depth confirmation is critical to avoid striking buried power, water, or other lines, particularly near the street.



Under normal conditions, the Eclipse system is sufficient to give accurate positioning data to depths of up to 60 feet. However, local magnetic anomalies, whether natural or induced by man-made structures, can cause interference in obtaining an accurate location. These anomalies can be the result of electrical fields, large masses of ferrous metals, or other perturbations. Minor interference may result in lateral (X-Y) inaccuracies of a few feet. Since the drillhead pitch is transmitted to the locator as a data stream, the elevation of the bore path is seldom affected by more than a few tenths of a percent in pitch.

2 Drilling Fluids Management

Drilling fluid will be used for cutting the borehole and stabilizing the borehole wall until the well materials are installed. While bentonite-based drilling fluids have been used for the water well industry for years, they are not appropriate for horizontal environmental wells. This is primarily due to the low entrance velocities experienced in horizontal wells as contrasted to water supply wells. These, combined with the low open area of horizontal wells makes it very difficult to assure that the bentonite is removed during development.

To address this issue CETCO CleanDrill (or equivalent) will be used to install the well. The driller reports that they have used CleanDrill on many projects with 100% success. Depending on the soil conditions encountered in the field, the driller may use fluid additives to stabilize the hole. These materials will also be biodegradable. These additives will be approved by MFA before use.

2.1 Fluid Recovery

Drilling fluids will be passed from the cutting tool into the borehole and will emerge at the surface of the entrance pit during pilot hole drilling. The fluids will be pumped from these collection points into waste fluid containers for treatment and disposal. The waste fluid will be treated with a breaking solution and the solid material will be allowed to settle out of the fluid. The liquid fraction will then be pumped off, treated and disposed. The solid fraction will be disposed of at a permitted facility as solid waste.

2.2 Managing Well Development Fluids

Well development water will be pumped into containers. The waste materials derived from development (dewatered solids and fluids) will be characterized for disposal purposes.

3 Well Completion & Development

3.1 Well Sealing

After the well screen and casing have been installed in the borehole, the space between the outside of the pipe and the tunnel wall must be sealed to prevent infiltration of surface water into the well. A block will be installed in the borehole approximately 10 feet from the surface with a suitable device or with bentonite chips, and will fill the annular space to the surface with grout using a standard pressure-grouting system.

3.2 Well Development

Well development will begin after the well has been completed and sealed, and will consist of three or four steps: 1) check the pH of the well water and adjust it to close to 7.0; 2) flush the wells to remove residual drilling mud, 3) inject the breaking solution, and 4) jet the well.



pH Adjustment

CleanDrill when mixed with water typically has a pH of between 7.0 and 7.5. The optimum pH for breaking CleanDrill using Liquid Enzyme Breaker is approximately 5. The driller typically treats the well fluid with an acid wash to lower the pH before injecting the breaker solution.

Well Flushing

The wells will be flushed with fresh water to clean out the drilling fluid and sediment that entered when the screen was installed. This is accomplished by connecting a high-volume water source to the well and flushing as much fluid as practicable through the well.

Breaking the Drilling Mud

The well will be filled with an approved thinning agent to break the chemical bonds of the drilling fluid. This will cause the drilling fluids to lose viscosity and make the wells much easier to develop. Use of an enzyme breaker specifically designed to break the chemical bonds of the drilling mud is planned.

Jetting the Well

This step involves forcing water through the well screen openings using a jetting process, to ensure that the slots are open after the installation process. The driller has found this process works well with relatively short screens where the well diameter is less than eight inches. This is accomplished by attaching a pressure washer hose to the drill rig which can produce up to 20 gallons per minute (gpm) at very high pressures. The driller will attach a jet to the other end of the hose and flush clean water into the well. The well may be pumped to remove water, depending on the tightness of the formation and return fluid from the jetting operation. Fluid generated from the flushing process, if any, will be pumped to the appropriate containers for treatment and disposal.



4 Schedule

It will take approximately four days to drill, install, and develop the well.

ATTACHMENT C

PRELIMINARY CONSTRUCTION
SPECIFICATIONS



Table
Horizontal Well Construction Components—Preliminary
TrueGuard, LLC Facility
Washougal, Washington

Air flow per foot of horizontal well 0.544 scfm
 Total air flow 272 scfm
 Well depth 15 feet
 Injection pressure 13 pounds psi

ITEM	Quantity	Units	Comments
3 in. horizontal well, slotted screen	450 - 500	LF	
Rotary PD blower package (25 Horsepower; 460 Volts, 60 Hertz, 3 Phase; 275 scfm, 13 psi)	1	EA	Gardner Denver Sutorbilt Legend blower, Model 5HP
Ventilated sound enclosure	1	EA	From H2Oil recovery, galvanized
Electrical control panel	1	LS	Assumed based on experience
Electrical power hookup	1	LS	Placeholder—dependent on final location of equipment compound
Access pit excavation	1	LS	Two access pits, one at each end of bore
4-in. schedule 40 polyvinyl chloride air pipe to horizontal well	100	LF	Dependent on final locations of compound and manifold
Precast concrete vaults for well heads	2	EA	Set vault on horizontal well line at each end of bore
Equipment compound concrete slab	44	SY	
Fencing and gate enclosures	80	LF	
Venturi air flow meter	1	EA	
4-in. brass gate valves, air control	1	EA	
4-in. galvanized steel pipe	80	LF	Heat dissipation
4-in. galvanized 90° elbows	8	EA	
4-in. pressure hosing and fittings	1	LS	
Unistrut (1-5/8 in. x 1-5/8 in.)	70	LF	Support for heat dissipation
Unistrut fittings	1	LS	

NOTES:
 EA = each.
 LS = lump sum.
 LF = linear foot.
 PSI = per square inch.
 scfm = standard cubic feet per minute.
 SY = square yard.

Maul Foster & Alongi, Inc.

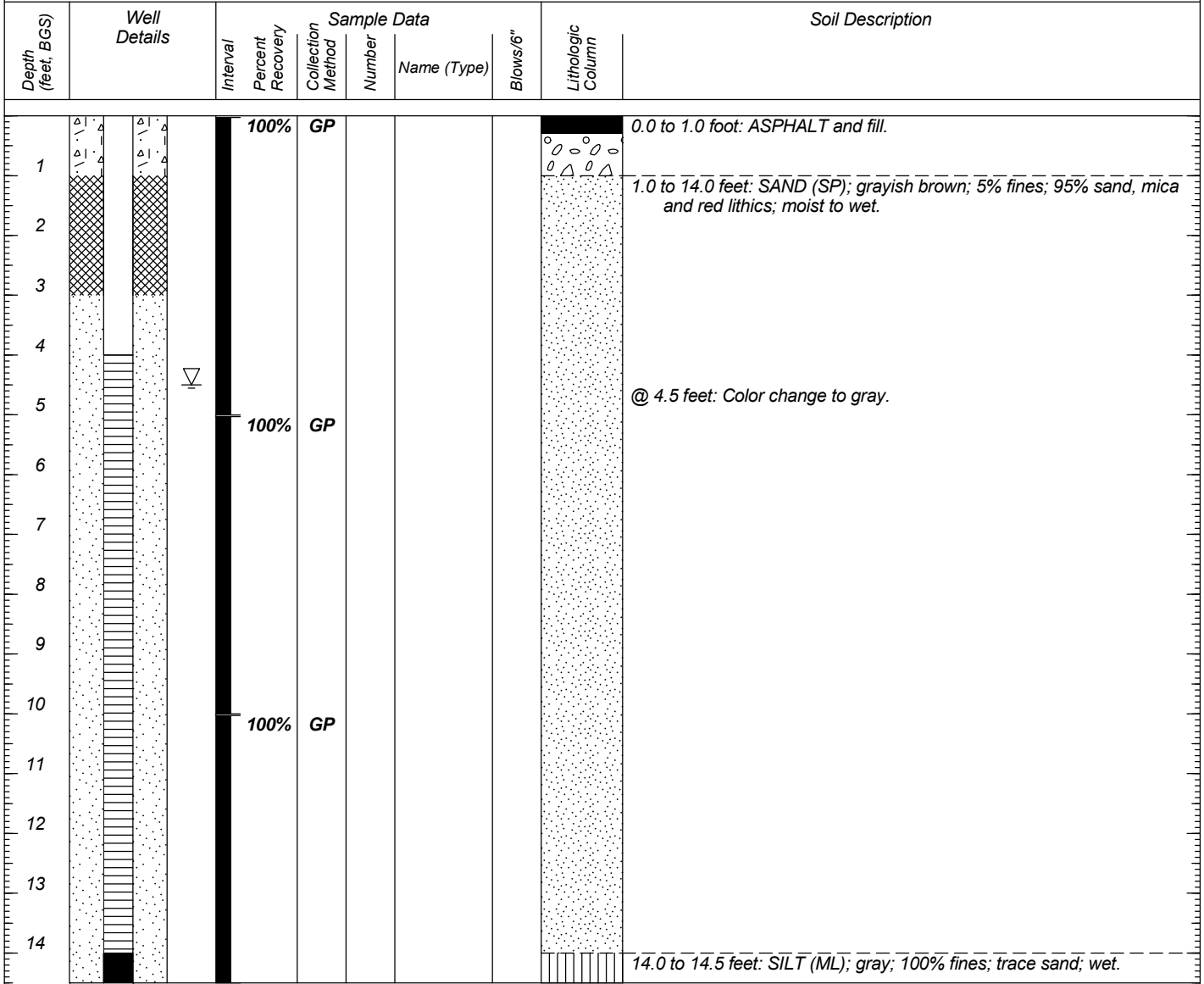
Geologic Borehole Log/Well Construction

Project Number
9009.01.11

Well Number
MW-8

Sheet
1 of 1

Project Name	AllWeather Wood, LLC	TOC Elevation (feet)	21.546
Project Location	725 South 32nd Street, Washougal, Washington 98671-2519	Surface Elevation (feet)	21.7
Start/End Date	03/05/07 to 03/05/07	Northing	92208.3
Driller/Equipment	Boart Longyear/Geoprobe 6600	Easting	1169397.9
Geologist/Engineer	S. Mauldin	Hole Depth	14.5-feet
Sample Method	Geoprobe	Outer Hole Diam	4-inch



Total Depth = 14.5 feet below ground surface.

Boring Completion Details:

- 0.0 to 14.5 feet: 4-inch boring.
- 0.0 to 1.0 feet: concrete.
- 1.0 to 3.0 feet: bentonite chips hydrated with potable water.
- 3.0 to 14.5 feet: 10X20 silica sand.

Monitoring Well Completion Details:

- Flush-mount completion.
- 0.2 to 4.0 feet: 2-inch, schedule 40, polyvinyl chloride, riser pipe.
- 4.0 to 14.0 feet: 2-inch, schedule 40, polyvinyl chloride, 0.010-inch, machine slot, prepacked well screen.
- 14.0 to 14.5 feet: 2-inch, schedule 40, polyvinyl chloride pipe end cap.

NOTES: 1) GP = Geoprobe.

Water level observed while drilling.

Maul Foster & Alongi, Inc.

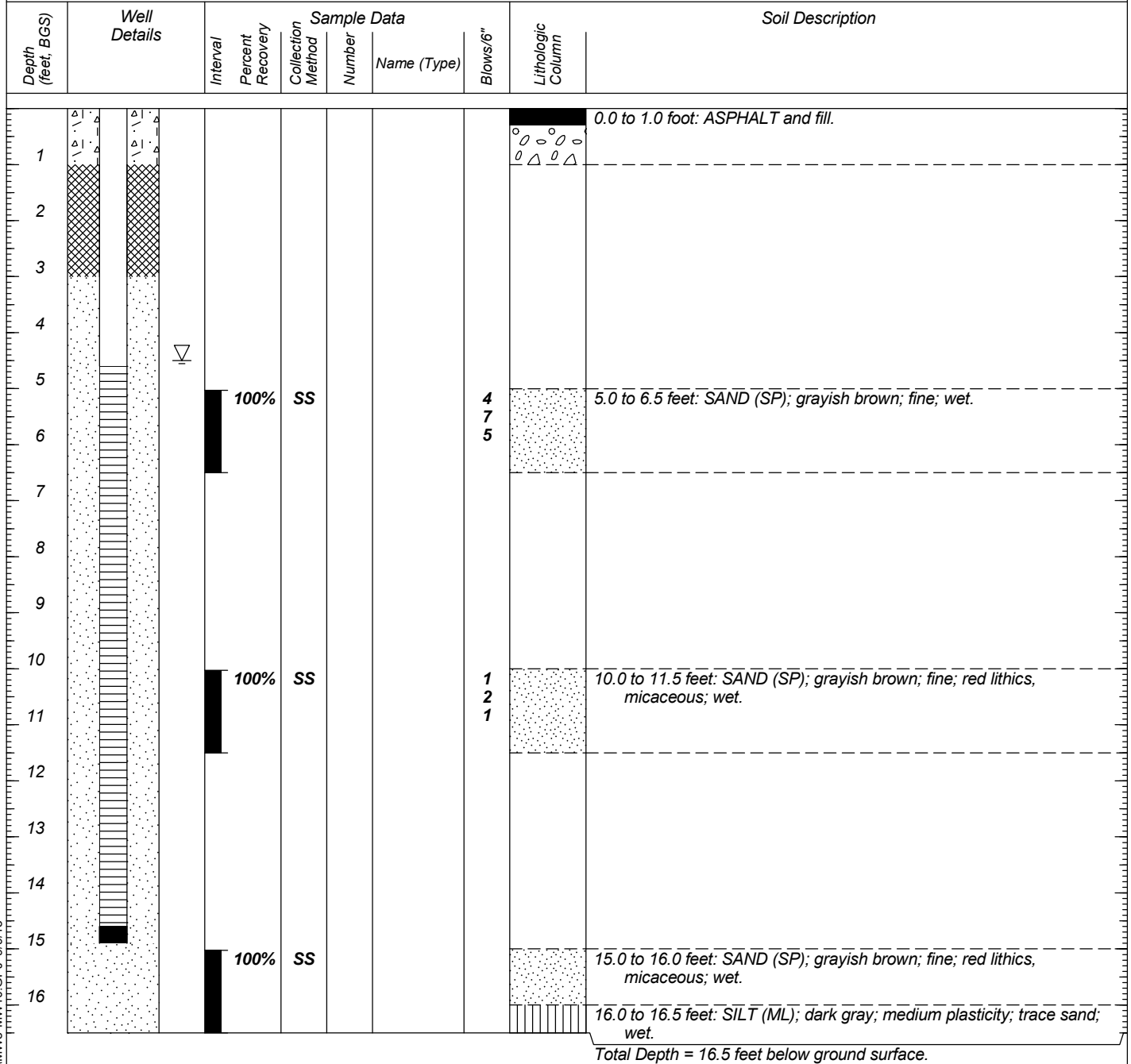
Geologic Borehole Log/Well Construction

Project Number
9009.01.11

Well Number
MW-9

Sheet
1 of 2

Project Name	AllWeather Wood, LLC	TOC Elevation (feet)	23.818
Project Location	725 South 32nd Street, Washougal, Washington 98671-2519	Surface Elevation (feet)	21.7
Start/End Date	04/27/07 to 04/27/07	Northing	92208.3
Driller/Equipment	Boart Longyear/Mobile B-59 Auger Rig	Easting	1169403.3
Geologist/Engineer	S. Mauldin	Hole Depth	16.5-feet
Sample Method	Hollow Stem Auger - Split Spoon	Outer Hole Diam	6.25-inch



GBLWC WA\GINTGINT\PROJECTS\9009-001\MW8-MW10.GPJ 9/9/13

NOTES: 1) SS = split spoon.

Water level observed while drilling.

Geologic Borehole Log/Well Construction

Project Number
9009.01.11

Well Number
MW-9

Sheet
2 of 2

Depth (feet, BGS)	Well Details	Interval	Percent Recovery	Sample Data			Blows/6"	Lithologic Column	Soil Description
				Collection Method	Number	Name (Type)			

Boring Completion Details:

0.0 to 16.5 feet: 6.25-inch boring.

0.0 to 1.0 feet: concrete.

1.0 to 3.0 feet: bentonite chips hydrated with potable water.

3.0 to 16.5 feet: 10X20 silica sand.

Monitoring Well Completion Details:

Stick-up completion.

+2.0 to 4.6 feet: 4-inch, schedule 40, polyvinyl chloride, riser pipe.

4.6 to 14.6 feet: 4-inch, schedule 40, polyvinyl chloride, 0.010-inch, machine slot, well screen.

14.6 to 14.9 feet: 4-inch, schedule 40, polyvinyl chloride pipe end cap.

NOTES: 1) SS = split spoon.



Water level observed while drilling.

Maul Foster & Alongi, Inc.

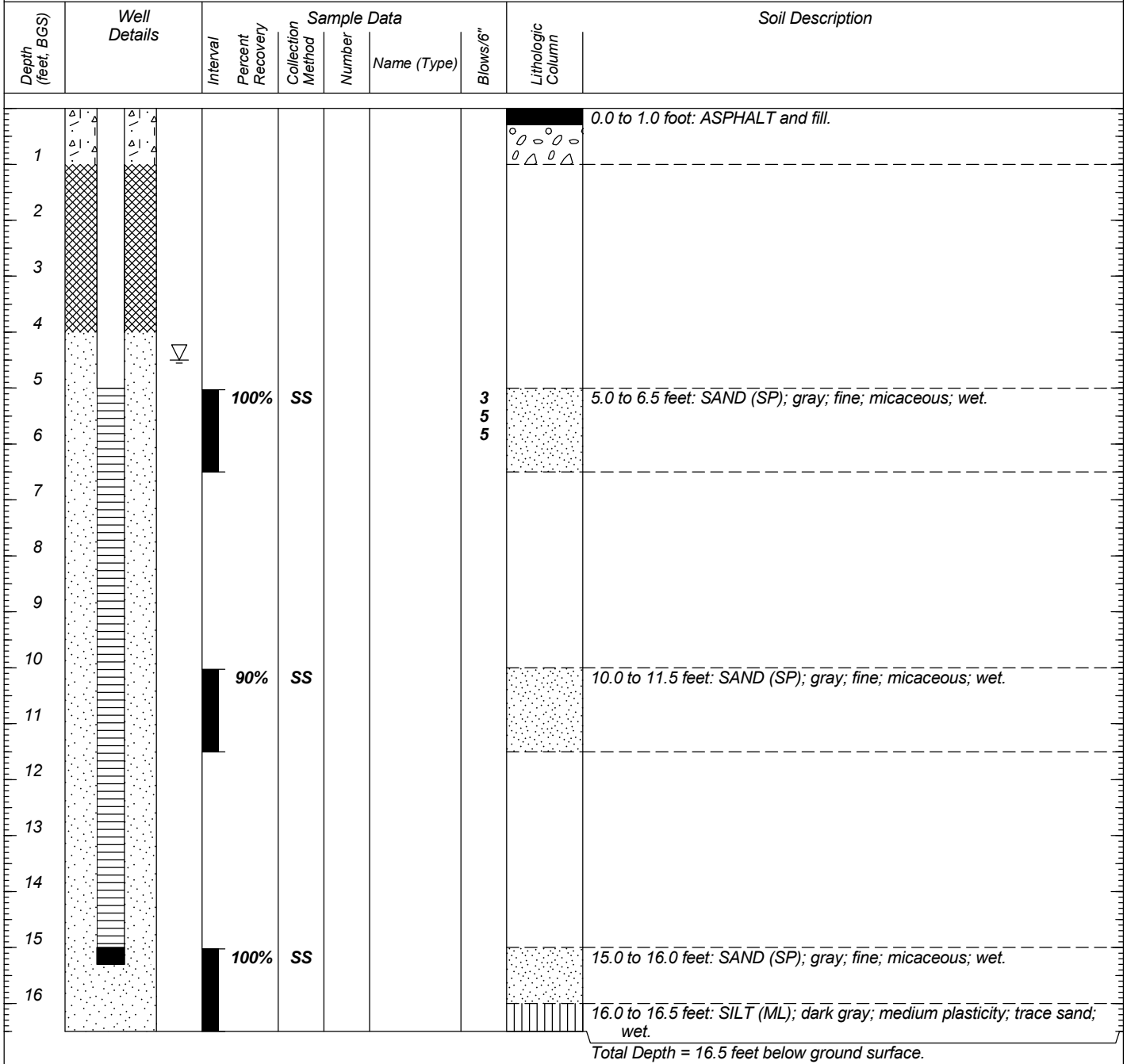
Geologic Borehole Log/Well Construction

Project Number
9009.01.11

Well Number
MW-10

Sheet
1 of 2

Project Name	AllWeather Wood, LLC	TOC Elevation (feet)	23.782
Project Location	725 South 32nd Street, Washougal, Washington 98671-2519	Surface Elevation (feet)	21.8
Start/End Date	04/27/07 to 04/27/07	Northing	92208.4
Driller/Equipment	Boart Longyear/Mobile B-59 Auger Rig	Easting	1169389.2
Geologist/Engineer	S. Mauldin	Hole Depth	16.5-feet
Sample Method	Hollow Stem Auger - Split Spoon	Outer Hole Diam	6.25-inch



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NOTES: 1) SS = split spoon.

Water level observed while drilling.

Geologic Borehole Log/Well Construction

Project Number
9009.01.11

Well Number
MW-10

Sheet
2 of 2

Depth (feet, BGS)	Well Details	Interval	Percent Recovery	Collection Method	Sample Data			Blows/6"	Lithologic Column	Soil Description
					Number	Name (Type)				

Boring Completion Details:

0.0 to 16.5 feet: 6.25-inch boring.

0.0 to 1.0 feet: concrete.

1.0 to 4.0 feet: bentonite chips hydrated with potable water.

4.0 to 16.5 feet: 10X20 silica sand.

Monitoring Well Completion Details:

Stick-up completion.

+2.0 to 5.0 feet: 4-inch, schedule 40, polyvinyl chloride, riser pipe.

5.0 to 15.0 feet: 4-inch, schedule 40, polyvinyl chloride, 0.010-inch, machine slot, well screen.

15.0 to 15.3 feet: 4-inch, schedule 40, polyvinyl chloride pipe end cap.

NOTES: 1) SS = split spoon.



Water level observed while drilling.

TABLE A-1

CONSTRUCTION DETAILS FOR ALLWEATHER WOOD, LLC GROUNDWATER MONITORING WELLS

PSC Washougal Facility
Washougal, Washington

Well ID	Drilling Method	Installation Date	Abandonment Date	Total Borehole Depth (feet bgs)	Total Well Depth (feet bgs)	Diameter (inches)	Material	Screen Slot Size	Screen Interval (feet bgs)	Filter Pack Sand Type	Filter Pack Interval (feet bgs)	Seal Interval (feet bgs)	Surface Seal
MW-3	HSA	4/3/1986	NA	12.5	12.5	1.5	Sch. 80 PVC	0.01	2.5-12.5	natural sand and Monterey Sand	2-12.5	0.5-2	Flush Mount
MW-5 ¹	unknown	circa 1998	NA	7.85	7.85	2	Sch. 80 PVC	unknown	unknown	unknown	unknown	unknown	unknown
MW-8	GP	3/5/2007	4/1/2008 ²	14.5	14.5	2	Sch. 40 PVC	0.01	4 - 14	10/20 Silica	3-14.5	1-3	Flush Mount
MW-9	HSA	4/27/2007	4/1/2008 ²	16.5	15	4	Sch. 40 PVC	0.01	4.6-14.6	10/20 Silica	3-16.5	1 - 3	Stand Pipe
MW-10	HSA	4/27/2007	NA	16.5	15	4	Sch. 40 PVC	0.01	5 - 15	10/20 Silica	4-16.5	1 - 4	Stand Pipe

Notes

1. Boring log not available, construction details provided from Maul, Foster & Alongi, Inc., in 2013.
2. Date provided by Maul, Foster & Alongi, Inc., in 2013.

Abbreviations

bgs = below ground surface
GP = geoprobe
HSA = hollow-stem auger
NA = not applicable
PVC = polyvinyl chloride
SS = stainless steel

ERTS # 540666

Department of Ecology - Environmental Report Tracking System

Initial Report

External Reference #

Caller Information

First Name LOREN
 Last Name EVY
 Business Name
 Street Address 21 HUDSON ROAD
 Other Address
 City WASHOUGAL State WA Zip
 E-mail
 Phone (360) 835-9734 Ext Home
 (360) 909-3213 Ext Mobile

Where did it happen

Berth Anchorage
 Location Name WASHINGTON FOREST PRODUCTS
 Street Address 520 SOUTH 28TH STREET
 Other Address
 City/Place WASHOUGAL (CLA State WA Zip
 County - Region CLARK SWRO FS ID
 WIRA #
 Waterway Type
 Latitude Longitude
 Topo Quad 1:24:000 WASHOUGAL
 Direction/Landmark (mile post, cross roads, township/range)

What happened

Spills Program Oil Spill? N

Incident Date 5/10/2004 Received Date 5/10/2004 0:00
 Medium SURFACE WATER-FRESH
 Material CHEMICAL

Primary Potentially Responsible Party Information

Quantity Unit
 Source COMMERCIAL
 Cause IMPROPER PROCEDURE
 Incident Type
 Activity ROUTINE/NORMAL OPERATIONS
 Impact WATER POLLUTION
 Vessel Name
 Hull Number

First Last
 Name
 Business Name WASHINGTON FOREST PRODUCT
 Street Address 520 SOUTH 28TH STREET
 Other Address
 City WASHOUGAL State WA Zip
 Phone Ext Type
 E-mail

Additional Contact Information

Name Phone Ext Type

More Information

COMPANY IS WILLING AND KNOWINGLY POLLUTING THE ENVIRONMENT. THEY ARE POLLUTING AIR, WATER AND SOIL. FOREMAN IS NOT ENVIRONMENTALLY SAVVY.

THE BAG HOUSE DOES NOT HAVE MONOCULAR VACUUM READING. THERE IS HOLES IN THE BOTTOM SIDE OF THE BAG HOUSE. THE HORIZONTAL SECTION IS THE ONLY PART OF THE TOWER IS THE ONLY THING THAT DOESN'T HAVE HOLES. THEY DO NOT PLAN TO FIX IT UNTIL IT FALLS DOWN. PAUL ANDERSON CAME DOWN AND LOOKED AT IT BUT SAID THAT IT WASN'T GOING TO. FIX.

PURE CONDENSATE IS LEAKING OUT OF THE PIPE. THE PIPE HAS LOTS OF HOLES IN IT. THE CONDENSATE TANKS ARE LOCATED BETWEEN KILN 1 AND KILN2. THE TANK OVERFILLS INTO THE RAVINE TO A HOLE AND INTO A STORM WATER SYSTEM THAT OUTFALLS TO THE SLOUGH. THE BOILER IS OVERFLOWING THE TRI KILN FLUMES THAT CAUSING THE TANK TO OVERFLOW. CALLER STATES THAT HE WAS A BOILER OPERATOR. HE WAS ASKED TO LEAVE BECAUSE HE COMPLAINED ABOUT THE ENVIRONMENTAL ISSUES TO THE COMPANY. THE GROUNDWATER FROM THE TANK IS PUMPING 3 GALLONS A SECOND. THE WATER IS CONTAMINATED AND HEATED TO 240 GALLONS. THE MANHOLE THAT THE RUN OFF IS GOING TO IS ON THE GREEN SIDE BETWEEN KILN 3 AND 4. IT HEATS THE CREEK TO THE POINT OF STEAMING. CALLER STATES THAT HE HAS NOT WORKED THERE FOR ABOUT 2 MONTHS BUT A BUDDY TOLD HIM THAT THE TANK WAS OVERFLOWING ON FRIDAY. THEY REMOVED A PUMP TO TRY TO STOP IT BUT IT DIDN'T WORK. CALLER STATES THAT THE WATER IS PROBABLY LEAKING STILL TODAY.

CALLER STATES THAT THE FORKLIFTS ARE LEAKING ALL OVER THE PLACE. OIL AND HYDRAULIC FLUID STAINING CAN BE

ERTS # 540666

SEEN ON THE GROUND IN FRONT OF THE BREAK ROOM. CALLER STATES ONE OF THE FORKLIFTS IS LEAKING AN GALLON OF HYDRAULIC FLUID AND EVEN MORE OIL A DAY.

CONDENSATE TANKS FOR THE AIR COMPRESSORS. THEY ARE HOOK TO THE BLOW DOWN POINTS THAT HAVE TO BE DUMPED IN THE SUMP POINT TO BE TREATED. CALLER STATES THAT THEY ARE NOT DOING THE WORK. CALLER STATES THAT THE SAMPLE NUMBERS ARE BEING FUDGED. THEY ARE REPORTING FALSE NUMBERS TO THE 'EPA'. CALLER STATES THAT THE NUMBERS ARE MUCH 'HOTTER'.

THE DIESEL TANK IS NOT MAINTAIN PROPERLY. CALLER STATES THAT THEY HAVE JUST PUT IN SECONDARY CONTAINMENT. THE ONLY REASON THAT THEY PUT IT IN WAS TO COVER UP THE CONTAMINATION UNDER PAD.

THE ASH THAT IS BEING COLLECTED AND TAKEN TO A LANDFILL. CALLER STATES THAT IT IS PROBABLY GOING TO ONE OF THEIR PARKING LOT.

CALLER STATES THAT THEY PULLED THE PLUG ON THE BUCKET CONVEYOR AND DUMPED TEN YEAR OLD HEAVY DUTY OIL TO THE GROUND. CALLER STATES THAT THIS HAPPENED IN MARCH DURING THE HIGH WIND STORM. THE OIL WENT EVERYWHERE. HE REPORTED IT TO CORPORATE BUT IT HASN'T BEEN CLEANED UP.

CALLER STATES THAT HIS MAJOR CONCERNED IS WATER QUALITY.

Entry Person BERUBE, JERI

Entry Date 5/10/2004

ERTS # 540666

Referral

Referral # 69410

Referral Method

- E-mail ERTS number
- E-mail attachment
- Print
- Telephone

Person Referred to PIESCH, CURT

Primary

Phone 360-750-6976

Fax 360-690-7166

E-mail cupi461@ecy.wa.gov

Program/Organization SPILLS, PREVENTION, PREPAREDNESS AND RESPONSE

Address

City

Region/Location VFO

Referral Date 5/10/2004

Referral # 69411

Referral Method

- E-mail ERTS number
- E-mail attachment
- Print
- Telephone

Person Referred to BICKETT, GARY

Primary

Phone

Fax (360) 397-8084

E-mail Gary.Bickett@clark.wa.gov

Program/Organization TOXICS CLEANUP

Address PO BOX 9825

City VANCOUVER

WA 98666-8825

Region/Location swro

Referral Date 5/10/2004

Referral # 69412

Referral Method

- E-mail ERTS number
- E-mail attachment
- Print
- Telephone

Person Referred to POST, RUSTY

Primary

Phone 360-690-4787

Fax 360-690-7166

E-mail rpos461@ecy.wa.gov

Program/Organization WATER QUALITY

Address

City

Region/Location VFO

Referral Date 5/10/2004

Referral # 69430

Referral Method

- E-mail ERTS number
- E-mail attachment
- Print
- Telephone

Person Referred to PIVIROTTI, MARILOU

Primary

Phone 407-6273

Fax

E-mail mpiv461@ecy.wa.gov

Program/Organization WATER QUALITY

Address

City

Region/Location SWRO

Referral Date 5/10/2004

ERTS # 540666

Followup

<u>Inspector Information</u>		<u>Where did it happen</u>	
Referral # 69410		Berth	Anchorage
Lead Inspector PIESCH, CURT		Location Name WASHINGTON FOREST PRODUCTS	
Program/Organization SPILLS, PREVENTION, PREPAREDNESS AND RESPONSE		Street Address 520 SOUTH 28TH STREET	
* Region/Location VFO		Other Address	
# of Ecology Staff 1	Overtime <input type="checkbox"/>	City/Place WASHOUGAL (CL State WA Zip	
		County CLARK Region SWRO FS ID	
<u>Action</u>	Start Date	End Date	Waterway Type
FIELD RESPONSE - INVESTIGATION	5/10/2004	5/10/2004	
TELEPHONE	5/10/2004	5/10/2004	WRIA #
<u>What happened</u>	Spills Program Oil Spill? N	Latitude	Longitude
Incident Date 5/10/2004		Topo Quad 1:24,000 WASHOUGAL	
<u>Medium</u>		Direction/Landmark (mile post, cross roads, township/range)	
SURFACE WATER-FRESH			
<u>Material</u>			
CHEMICAL			
Quantity	Unit	Est.	
0	SHEEN	<input type="checkbox"/>	
<u>Source</u>		<u>Potentially Responsible Party Information</u>	
COMMERCIAL		Check if the primary PRP provided notice to Ecology <input type="checkbox"/>	
		Primary <input checked="" type="checkbox"/>	First Last
<u>Cause</u>		Name	
IMPROPER PROCEDURE		Business Name WASHINGTON FOREST PRODUCT	
<u>Incident Type</u>		Street Address 520 SOUTH 28TH STREET	
		Other Address	
<u>Activity</u>		City WASHOUGAL	State WA Zip
ROUTINE/NORMAL OPERATIONS		Phone	Ext Type
<u>Impact</u>		E-mail	
WATER POLLUTION			
<u>Vessel</u>			
<u>Narrative</u>			
05/10/2004.			
@ 1030 hours, I (Curt Piesch) called the Calling Party, Loren Evy at (360) 835-9734, no one was at home.			
Field Response, Curt Piesch and Jon Kuykendall responded.			
I called Loren while Jon and I were driving to the site. He explained in detail different problems associated with this business. We should be looking for boiler condensate and steam on the water at the slough. He was also going to notify the media.			
Upon arrival, we looked in the area of the slough off of S 32nd Street and were not able to see any discharge in the slough. If the discharge was occurring during our visit, we should have been able to see steam coming off of the water. This was at 1100 hours.			
GPS Readings at the slough: 45 degrees 34.422N 122 degrees 20.131N			
@ 1110 hours, I contacted Dee Williams and discussed this case. Dee and Rusty had just talked about this case. I explained that we could not see any discharge. I explained that I thought that this was another facility and actually this facility is very large. She said that we had done all that we should and that the Water Quality Program was going to take the lead (Rusty Post or Mary P.).			
@ 1126 hours, we left the area and I called and briefed PIO, Sandy Howard.			
We had to respond to another case in Cowlitz County (ERTS # 540674).			
No further action will be taken on this case by Ecology Spills.			

ERTS # 540666

Sent to Central Files on 05/10/2004.

Entry Person: PIESCH, CURT

Entry Date 5/10/2004

Inspector Information

Referral # 69411
 Lead Inspector DEDONCKER, BRYAN
 Program/Organization TOXICS CLEANUP - SHA GRANT

* Region/Location SWRO

of Ecology Staff 1 Overtime

Action

NO ACTION NEEDED

Start Date 9/22/2005 End Date 9/22/2005

What happened

Incident Date 5/10/2004

Spills Program Oil Spill? N

Medium

SURFACE WATER-FRESH

Material

CHEMICAL

Quantity	Unit	Est.
		<input type="checkbox"/>

Source

COMMERCIAL

Cause

IMPROPER PROCEDURE

Incident Type

Activity

ROUTINE/NORMAL OPERATIONS

Impact

WATER POLLUTION

Vessel

Where did it happen

Berth Anchorage
 Location Name WASHINGTON FOREST PRODUCTS
 Street Address 520 SOUTH 28TH STREET
 Other Address
 City/Place WASHOUGAL (CL State WA Zip
 County CLARK Region SWRO FS ID
 Waterway Type
 WRIA #
 Latitude Longitude
 Topo Quad 1:24,000 WASHOUGAL
 Direction/Landmark (mile post, cross roads, township/range)

Potentially Responsible Party Information

Check if the primary PRP provided notice to Ecology

Primary First Last
 Name

Business Name WASHINGTON FOREST PRODUCT

Street Address 520 SOUTH 28TH STREET

Other Address

City WASHOUGAL State WA Zip
 Phone Ext Type
 E-mail

Narrative

IT WAS DETERMINED BY MYSELF (NANNETTE BROOKS, ERTS COORDINATOR) AND CRIS MATTHEWS, TOXICS CLEANUP PROGRAM THAT THIS CASE DOES NOT NEED ACTION BY THE TOXICS CLEANUP PROGRAM.

Entry Person: BROOKS, NANNETTE

Entry Date 9/22/2005

Inspector Information

Referral # 69412
 Lead Inspector POST, RUSTY
 Program/Organization WATER QUALITY

* Region/Location VFO

of Ecology Staff Overtime

Action

REFERRAL

Start Date 5/10/2004 End Date 5/10/2004

Where did it happen

Berth Anchorage
 Location Name WASHINGTON FOREST PRODUCTS
 Street Address 520 SOUTH 28TH STREET
 Other Address
 City/Place WASHOUGAL (CL State WA Zip
 County CLARK Region SWRO FS ID
 Waterway Type
 WRIA #

ERTS # 540666

What happened		Spills Program Oil Spill? N	Latitude	Longitude
Incident Date	5/10/2004		Topo Quad 1:24,000 WASHOUGAL	
Medium	Direction/Landmark (mile post, cross roads, township/range)			
SURFACE WATER-FRESH				
Material				
CHEMICAL				
Quantity	Unit	Est.		
		<input type="checkbox"/>		
Source		Potentially Responsible Party Information		
COMMERCIAL		Check if the primary PRP provided notice to Ecology <input type="checkbox"/>		
		Primary <input checked="" type="checkbox"/>	First	Last
		Name		
Cause		Business Name WASHINGTON FOREST PRODUCT		
IMPROPER PROCEDURE		Street Address 520 SOUTH 28TH STREET		
Incident Type		Other Address		
		City WASHOUGAL	State WA	Zip
Activity		Phone	Ext	Type
ROUTINE/NORMAL OPERATIONS		E-mail		
Impact				
WATER POLLUTION				
Vessel				
Narrative				
I traded messages with Carey Cholski (WQ) today about this site, Washington Forest Products. According to Carey, they DO have an industrial stormwater permit. Please forward this complaint to Marilou for follow up				
			Entry Person: BERUBE, JERI	Entry Date 5/10/2004
Inspector Information		Where did it happen		
Referral # 69430		Berth	Anchorage	
Lead Inspector PIVIROTTO, MARILOU		Location Name WASHINGTON FOREST PRODUCTS		
Program/Organization WATER QUALITY		Street Address 520 SOUTH 28TH STREET		
		Other Address		
* Region/Location SWRO		City/Place WASHOUGAL (CL	State WA	Zip
# of Ecology Staff	1	County CLARK	Region SWRO	FS ID
	Overtime <input type="checkbox"/>			
Action		Start Date	End Date	Waterway
E-MAIL		5/10/2004	5/10/2004	Type
		WRIA #		

ERTS # 540666

What happened	Spills Program Oil Spill? N	Latitude	Longitude
Incident Date 5/10/2004		Topo Quad 1:24,000 WASHOUGAL	
Medium		Direction/Landmark (mile post, cross roads, township/range)	
SURFACE WATER-FRESH			
Material			
CHEMICAL			
Quantity Unit	Est.		
Source		Potentially Responsible Party Information	
COMMERCIAL		Check if the primary PRP provided notice to Ecology <input type="checkbox"/>	
Cause		Primary <input checked="" type="checkbox"/>	First Last
IMPROPER PROCEDURE		Name	
Incident Type		Business Name WASHINGTON FOREST PRODUCT	
		Street Address 520 SOUTH 28TH STREET	
		Other Address	
		City WASHOUGAL	State WA Zip
Activity		Phone	Ext Type
ROUTINE/NORMAL OPERATIONS		E-mail	
Impact			
WATER POLLUTION			
Vessel			
Narrative			
WILL RESPOND AS SCHEDULE PERMITS.			
		Entry Person: BERUBE, JERI	Entry Date 5/10/2004

<http://www.ecy.wa.gov/news/2008news/2008-246.html>

Clark	Washougal	6/9/2008	Hambleton Lumber Sales	Failed to submit stormwater discharge monitoring reports for all quarters of 2004, 2005, 2006 and 2007 as required by its permit.	\$3,000	Kim Schmanke, 360-407- 6239
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PROGRAM/ORGANIZATION: WATER QUALITY
PIVIROTTA, MARILOU
CONTACT: MCKAY, KELI
REFERRAL DATE: 05/01/2000

PRIMARY?: Y

ADDITIONAL INFO:

INVESTIGATOR: PIVIROTTA, MARILOU
DATE STARTED: 06/14/2000 DATE COMPLETED: 06/14/2000
ACTION: INVESTIGATE DATE: 06/14/2000

NARRATIVE TEXT: CORROSION CONTROLLERS INC

This facility was inspected earlier this year on February 8, 2000; today's inspection came as a result of a citizen's complaint received at the Department of Ecology on May 1, 2000. The complainant alleged that Corrosion Controllers was spraying ornamental iron outside at the loading dock area; the runoff would flow to a sump and then to a storm drain. The complainant stated that the drain was now plugged up and acid-contaminated water was flooding out the yard.

- I explained the reason for my visit to Mr. Chris Kellogg, general manager of the company. Kellogg me informed that on occasion, ornamental iron was washed out by the loading dock and sometimes sprayed with 'citric acid'; however, this was not a regular practice.
- A SWPPP was available for review. Wet and dry season inspections had not been done and the source control; good housekeeping; operational; and treatment BMPs were not listed or described.
- Outside at the loading dock, where the spraying had occurred, the ground slopes down at a sharp angle creating an area where rainwater accumulates. This was described in the February 8, 2000 inspection report. Today, due to the dry weather, there was minimal ponding. I looked under the dock but could not actually enter the area due to the ponding and slime build-up; however, from what I could observe, the entire area under the dock was paved. I was unable to determine whether or not a drain was located in this area. Kellogg informed me that the ponding does not come from rain and runoff, but rather from rising groundwater in the winter.
- At the time of inspection, treated ornamental iron was placed adjacent to the dock. Also adjacent to the dock was a makeshift spray booth. Tarps were placed over wooden beams and iron was being spray painted in this area. Three sides of the structure were covered with tarps, as was the floor.
- Adjacent to the spray booth was 2 other makeshift structures where fiberglass materials were being made.
- At the loading dock area, 55-gallon drums containing acetone and resin were stored without cover and secondary containment.

6/22/00
3:27 PM
INCIDENT ID: S510671

DEPARTMENT OF ECOLOGY
ENVIRONMENTAL REPORT TRACKING SYSTEM
INCIDENT HISTORY

PAGE 3
ACTUAL DATA

NARRATIVE TEXT: At the rear of the facility acetone and resin drums were stored under an overhang, but no secondary containment.

- Both metal cutting and grinding are being conducted outdoors without cover or containment.
- The outside work area is extremely dirty; metal shavings and fiberglass dust cover several areas.
- The facility has a large open dumpster filled with manufacturing debris.
- The stormwater runoff from the entire facility flows into a single catch basin located approximately 15 yards away.

TECHNICAL ASSISTANCE/RECOMMENDATIONS

- Complete SWPPP within 30 days.
- Train all technical employees on SWPPP no later than October 1, 2000.
- Cease washing and acid spraying of iron.
- Manager was notified that Ecology might issue an enforcement action.

COUNTY: CLARK CITY: WASHOUGAL
WATERWAY: GIBBONS CREEK TYPE: CREEK
COLUMBIA RIVER TYPE: RIVER

LOCATION INFO:

MEDIUM: UNKNOWN
MATERIAL: OTHER QTY: 0 UNIT: HAZARDOUS: N
OTHER: ACID

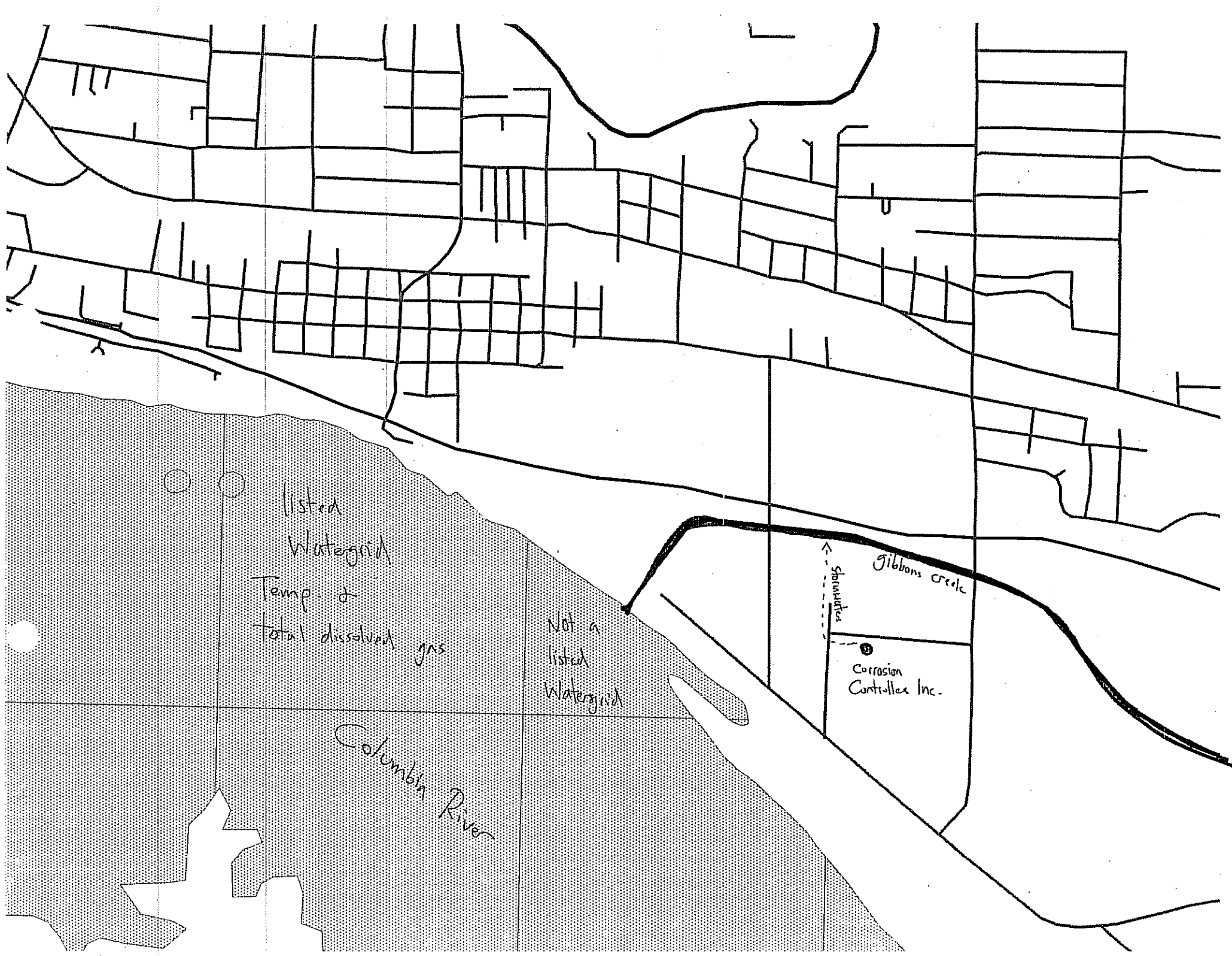
CAUSE: HUMAN FACTOR HUMAN FACTOR: INTENTIONAL
IMPACT: GROUND WATER CONTAMINATION
SOURCE: COMMERCIAL ACTIVITY: ROUTINE/NORMAL OPERATIONS

NONPOINT: POINT: LUST:

CONTRACTOR INFO:

ACTUAL VIOLATOR 1: CORROSION CONTROLLERS ENFORCEMENT
MERKLIN, EVER SENSITIVE:
ADDRESS: 2930 FORD ST
WASHOUGAL WA 98671

CONTACT 1: MERKLIN, EVE
PHONE: 360-835-2171 EXT: TYPE:



listed
Watergrid
Temp. &
total dissolved gas

Not a
listed
Watergrid

Columbia River

Shuntmeter

Corrosion
Controller Inc.

Gibbons creek

**Washington Department of Ecology
Hazardous Waste & Toxics Reduction Program
Compliance Report**

Site:	Composite Materials Technology	EPA ID # WAD009036153
Inspection Date:	06/05/06	
Site Contacts:	Mark Cooper	
Phone:	(360) 835-9750. X108	
Site Location:	2930 Ford Street Washougal, WA 98671	
Generator/Site Status:	LQG	

Ecology

Lead Contact: Dee Williams Phone: (360) 407-6348
Other Representatives: Lisa Perle, NWRO-HWTR

Report By: Dee Williams

Dee Williams by G. M. Edmon 7-25-06
(Signed) (Date)

Summary

This was a routine, unannounced inspection focused on determining the site's level of compliance with the Dangerous Waste Regulations. The site has been inspected several times in the past, and compliance violations have been determined.

Lisa Perle and I arrived on-site at 10:00a. We introduced ourselves to the operations manager, Mark Cooper. Mr. Cooper explained that the site was formerly operated by Corrosion Controllers. In November, 2005, the site ownership was transferred to Composite Materials Technology (CMT). The company manufactures composite fiberglass poles. They generate about 4-drums of spent acetone each month.

Mr. Cooper said that the company has not notified Ecology about the operational change. He said the company's corporate office (in Atlanta) was handling the change of ownership. All paperwork is managed through the Atlanta office. Mr. Cooper had a copy of the manifest associated with the last shipment of dangerous waste (attached). It showed that 9 55-gallon drums of dangerous waste (D001 and F003) were shipped off-site on May 26, 2006. Corrosion Controllers was referenced as the generator.

CMT has 12 workers and runs one shift. They make about 600 poles per month. Mr. Cooper is responsible for employee training and environmental compliance.

We toured the facility and observed the following:

- CMT runs several sprayed lay-up lines. Resin and catalyst are applied via chop-guns. Lines are not flushed. Gun nozzles and hand tools are cleaned in acetone, which is held in cans and buckets. They generate about one gallon of waste acetone every 10-days. The waste is transferred to a 55-gallon drum "outside" in the final accumulation area. We noted that

accumulation buckets/cans were not well marked as flammable or as waste. All containers had lids and were in good condition.

- CMT uses bucket liners that are reused 3 or 4 times. At the end of their use, any residue is allowed to dry and the liner is disposed as solid waste. We observed several discharged liners with solid, dried residue.
- Excess resin/gelcoat is poured into molds which are integrated into the structure of the pole. This action has minimized the amount of waste allowed to 'kick off' outside and managed as solid waste. CMT still manages some waste outside and off-site. We observed a bucket liner holding a gelatinous, grey/brown substance, and a small plastic container with white-grey putty. Both were sitting outside near the dumpster (see Photos #1 and #2). Mr. Cooper said that the waste was being allowed to cure, and would be managed as solid waste. He also said that (normally) the waste sets up fairly fast, and catalyst is sometimes added to accelerate the curing process.
- Fire extinguishers are located throughout the process area. We checked several of the units, and noted that some were marked as being serviced in July 2005; several others were not marked to define the service date. Mr. Cooper said the extinguishers are regularly checked and that the fire department had completed a recent inspection. He also said that within the past several months, the company had a fire in the outside dumpster (located adjacent to the building, along the northwest wall). Mr. Cooper speculated that the fire was started when uncured resin 'kicked off' in the dumpster (this creating heat which combusted paper and other debris).
- CMT uses aerosol cans on occasion. We observed several cans in use. Mr. Cooper said they just started using the cans, and haven't yet set up a disposal system. He said he understood that the cans could not be disposed in the trash.
- CMT mixes materials in a mix room, located south of the lay-up building. We observed product residue covering the floor inside the mix room, and on the ground outside the mix room. There were animal tracks inside the room, running through the spilled material. We also observed empty bags and one-gallon cans (labeled as toxic) scattered on the ground outside the mix room (see Photo #3). Mr. Cooper explained that the cans used to hold catalyst, and the bags contained non-toxic silica.
- CMT has a paint booth located south of the lay-up building. We observed open containers of product and waste in the booth. See Photo #4.
- CMT's final dangerous waste accumulation area is located adjacent to the spray booth, south of the lay-up building. We observed several 55-gallon drums in this area; some product and some waste. There were ten 55-gallon drums of dangerous waste noted as follows:
 - One drum was open with a funnel in the bung;

- The drums were marked as hazardous waste, with accumulation start-dates ranging from November 24, 2005 to April 15, 2006. The drums were not marked to identify the risk (flammable).
- The oldest drum (dated November 24, 2005) was bulging at the chime.
- The floor of the room is sloped to the south. We observed spills around the drums and residue on the floor. There was a strong odor of styrene and acetone.

We discussed the condition of drums, labeling requirements, and proper disposal of dangerous waste. I explained that there were numerous violations in this area including failure to dispose of waste within 90-days of accumulation, unmitigated spills, open containers, and improper labeling. I also highlighted the need to ground the product drum (which was fitted with a drum pump). There was a grounding bar and cable located near the drum.

We concluded our inspection. I offered to forward an inspection report and compliance notification within the next month, and we thanked Mr. Cooper for his time. Off-site at 11:15a.

Recommendations and Requests

Certain concerns were brought up through the course of the inspection. Beyond the required actions defined in the subsequent list of "Compliance Problems", Ecology has the following recommendations and requests geared toward addressing these concerns:

- 1.) **Waste Treatment** – During the inspection, Ecology observed that waste was being "cured" (solidified) outside the building. This may be an acceptable practice, however the following standards must be met:
 - The Treatment by Generator standards (WAC 173-303-170(3)(b) apply if catalyst is added to discarded products or wastes to accelerate the curing process. These standards apply if the product or waste designates as a dangerous waste (most resin mixtures are toxic). In this case, CMT must keep a log to record the volume of dangerous waste that is treated on-site. This volume must be recorded in the Annual Generator Dangerous Waste Report.
 - The curing process needs to be controlled to minimize risks to human health and the environment. Ecology recommends that CMT establish a dedicated area that is protected from rainwater contact, and is routinely inspected and cleaned/maintained. Employees should be trained to safely handle wastes (to avoid another dumpster fire, or other risks to human health and the environment). If the waste designates as dangerous, then it must be treated (kicked off) in a controlled manner; i.e., in a manner that does not present a risk to human health or the environment. At the least, waste should be treated in appropriate containers, in an area that is protected from rain water contact.
- 2.) **Product Grounding Clamps** – During the inspection, Ecology observed a product drum fitted with a drum pump. The drum was not grounded to prevent accidental ignition of acetone. It appears that CMT normally would ground the drum, as grounding clamps were located near the drum. Ecology recommends that all product/waste drums be grounded when adding or removing product/waste.
- 3.) **Notification** – During the inspection, you indicated that CMT had not yet submitted information to Ecology to transfer the site's EPA identification number (WAD 009 036 153) from Corrosion Controllers to Composite Materials Technology. You indicated that this would happen in the near future. This notification

must be complete in a timely manner. Since CMT is currently generating dangerous waste, the identification number should be transferred immediately to properly dispose of dangerous waste off-site. Notification forms and information are available on-line at <http://www.ecy.wa.gov/programs/hwtr/waste-report/notification.html>.

COMPLIANCE PROBLEMS

The following conditions were not in compliance with Dangerous Waste Regulations (WAC 173-303). Each problem is covered in three parts: (1) the citation from the regulations; (2) observations; and (3) the actions that must be taken to achieve compliance. On the last page(s) of this report is a 'Compliance Certificate' which again lists these compliance citations and directives in a table. That certificate also lists the deadlines for the corrective measures to be completed. The certificate explains how to complete the form and return it to the Department of Ecology.

1. WAC 173-303-200(1)(a) as referenced by 170(3): Dangerous waste was accumulated on-site for more than 90 days.

Observations: Several drums of spent acetone were accumulated longer than 90-days. These drums were marked with accumulation start-dates of November 24, 2005, December 16, 2005, December 28, 2005, January 18, 2006, and February 7, 2006.

Required Actions: Within 14 days of the receipt of this letter, dispose of dangerous waste that has been on-site longer than 90-days, and submit copies of disposal records (manifests) to Ecology.

2. WAC 173-303-200(1)(b) and 630(2): Failure to manage dangerous waste in containers that are in good condition.

Observations: One drum, marked with an accumulation start date of November 24, 2005, was bulging at the chime.

Required Actions: Immediately upon receipt of this letter, transfer the contents of the bulging drum into a container that is in good condition. This waste must be managed off-site in a timely manner, as it has already exceeded the 90-day accumulation period (see #1, above).

3. WAC 173-303-200(1)(b) and (d), and 630(3): Failure to mark each container with the accumulation start date, and failure to provide a label that identifies the major risk(s) associated with the waste.

Observations: The accumulation start-date was marked, but unreadable on one drum. Risk labels were not affixed to dangerous waste containers.

Required Actions: Within two days of receipt of this letter, ensure that the accumulation start date is clearly written on all containers holding dangerous wastes. Ensure that all dangerous waste containers are marked to identify the risk.

4. WAC 173-303-200(1)(b) and 630(5): Failure to keep containers closed except when adding or removing waste.

Observations: One drum was open with a funnel sitting in the open bung.

Required Actions: Immediately upon receipt of this letter, close all containers of dangerous waste and keep them closed except when adding or removing waste.

5. WAC 173-303-200(1)(b) and 630(6): Failure to conduct weekly inspections of dangerous waste accumulation areas and containers.

Observations: Weekly inspections in the dangerous waste accumulation area were not being completed.

Required Actions: Within seven days of receipt of this letter, institute an inspection schedule for areas where containers of dangerous waste are stored. These areas must be inspected at least on a weekly basis. Maintain an inspection log that includes: the date and time of inspection; the name and signature of the inspector; a notation of the observations made; and the date and nature of any corrective measures taken.

6. WAC 173-303-200(1)(b) and 630(8)(b), and 395(1)(d): Failure to meet the requirements for ignitable dangerous waste.

Observations: Ecology observed ungrounded drums with highly flammable material, and had concerns about the maintenance of fire extinguishers throughout the facility.

Required Actions: Within 30-days of receipt of this letter, comply with the requirements of this section by having the facility inspected by a professional person who is familiar with the International Fire Code, or in the presence of the local fire marshal. The results of the inspection must include a written record defining the date and time of the inspection; the name and credential of the inspector; a notation of all observations made; and any remedial action taken as a result of the inspection. A copy of the report must be submitted to Ecology within the 30-day timeline.

7. WAC 173-303-145: Failure to mitigate spills or releases.

Observations: Ecology observed liquid dangerous waste spilled in the accumulation area. The ground around drums was also stained with residue from past spills.

Required Actions: Immediately upon receipt of this letter, clean up any liquid spills in the dangerous waste accumulation area. Within 30-days of receipt of this letter, submit information to Ecology describing CMT's actions in this matter, and any controls implemented to prevent future spills and releases.

6/22/00

3:27 PM

INCIDENT ID: S510671

DEPARTMENT OF ECOLOGY
ENVIRONMENTAL REPORT TRACKING SYSTEM
INCIDENT HISTORY

PAGE 1

ALLEGED DATA

=====

COORDINATOR: PIVIROTTO, MARILOU

REPORT 1 OF 1

DATE/TIME REC'D: 05/01/2000 12:10 PM
ACTUAL DATE:

REPORT TYPE: INITIAL

CALLER NAME: ANONYMOUS

CONTACT 1:

COUNTY: CLARK CITY: WASHOUGAL
WATERWAY: COLUMBIA RIVER TYPE: RIVER
GIBBONS CREEK TYPE: CREEK

LOCATION INFO:

MEDIUM: UNKNOWN

MATERIAL: OTHER

QTY: 0 UNIT:
OTHER: ACID

HAZARDOUS:

CAUSE: HUMAN FACTOR
IMPACT: GROUND WATER CONTAMINATION
SOURCE: COMMERCIAL

HUMAN FACTOR: INTENTIONAL
ACTIVITY: ROUTINE/NORMAL OPERATIONS

ALLEGED VIOLATOR 1: CORROSION CONTROLLERS

MERKLIN, EVER

ADDRESS: 2930 FORD ST

WASHOUGAL WA 98671

CONTACT 1: MERKLIN, EVE

PHONE: 360-835-2171 EXT: TYPE:

ADDITIONAL INFO:

ADDITIONAL INFORMATION ON INCIDENT:

ALLEGED VIOLATOR SPRAYS ORNAMENTAL IRON WITH ACID, THEN WASHES IT OFF. THIS OCCURS OUTSIDE. DRAINAGE GOES TO SUMP AND THEN TO A DRAIN (SANITARY/STORM SEWER?) DRAIN IS NOW ALL PLUGGED UP. ACID AND WASTEWATER NOW ARE FLOODING THE UNPAVED PARKING LOT.

REFER TO MARILOU PIVIROTTO

6/22/00
3:27 PM

DEPARTMENT OF ECOLOGY
ENVIRONMENTAL REPORT TRACKING SYSTEM
INCIDENT HISTORY

PAGE 2

INCIDENT ID: S510671

ACTUAL DATA

PROGRAM/ORGANIZATION: WATER QUALITY
PIVIROTTO, MARILOU

CONTACT: MCKAY, KELI
REFERRAL DATE: 05/01/2000

PRIMARY?: Y

ADDITIONAL INFO:

INVESTIGATOR: PIVIROTTO, MARILOU
DATE STARTED: 06/14/2000 DATE COMPLETED: 06/14/2000
ACTION: INVESTIGATE DATE: 06/14/2000

NARRATIVE TEXT: CORROSION CONTROLLERS INC

This facility was inspected earlier this year on February 8, 2000; today's inspection came as a result of a citizen's complaint received at the Department of Ecology on May 1, 2000. The complainant alleged that Corrosion Controllers was spraying ornamental iron outside at the loading dock area; the runoff would flow to a sump and then to a storm drain. The complainant stated that the drain was now plugged up and acid-contaminated water was flooding out the yard.

- I explained the reason for my visit to Mr. Chris Kellogg, general manager of the company. Kellogg me informed that on occasion, ornamental iron was washed out by the loading dock and sometimes sprayed with 'citric acid'; however, this was not a regular practice.
- A SWPPP was available for review. Wet and dry season inspections had not been done and the source control; good housekeeping; operational; and treatment BMPs were not listed or described.
- Outside at the loading dock, where the spraying had occurred, the ground slopes down at a sharp angle creating an area where rainwater accumulates. This was described in the February 8, 2000 inspection report. Today, due to the dry weather, there was minimal ponding. I looked under the dock but could not actually enter the area due to the ponding and slime build-up; however, from what I could observe, the entire area under the dock was paved. I was unable to determine whether or not a drain was located in this area. Kellogg informed me that the ponding does not come from rain and runoff, but rather from rising groundwater in the winter.
- At the time of inspection, treated ornamental iron was placed adjacent to the dock. Also adjacent to the dock was a makeshift spray booth. Tarps were placed over wooden beams and iron was being spray painted in this area. Three sides of the structure were covered with tarps, as was the floor.
- Adjacent to the spray booth was 2 other makeshift structures where fiberglass materials were being made.
- At the loading dock area, 55-gallon drums containing acetone and resin were stored without cover and secondary containment.

