

October 30, 2013

Ms. Sandra Caldwell Washington State Department of Ecology PO Box 47775 Olympia, Washington 98504-7775

### **BY E-MAIL ONLY**

### RE: CLOSURE REPORT MJB NORTH DOCK AREA ANACORTES, WASHINGTON FARALLON PN: 299-001

Dear Ms. Caldwell:

Farallon Consulting, L.L.C. (Farallon) has prepared this Closure Report on behalf of MJB Properties, L.L.C. (MJB) to summarize the cleanup action completed in July 2013 at the North Dock Area property owned by MJB adjacent to Fidalgo Bay in Anacortes, Washington (herein referred to as the Property) (Figure 1). The cleanup action was performed in accordance with the recommendations contained in the *Property Investigation Summary Report, MJB North Dock Area, Anacortes, Washington* dated October 15, 2012, prepared by Farallon (Property Investigation report) and approved in an e-mail dated December 24, 2012 from Ms. Sandra Caldwell.

The subsurface Property Investigation conducted by Farallon identified polycyclic aromatic hydrocarbons (PAHs), quantified and evaluated as the total carcinogenic PAHs toxic equivalency factor (total cPAHs TEF), and cadmium and mercury in soil at concentrations exceeding Washington State Model Toxics Control Act Cleanup Regulation (MTCA) Method A cleanup levels for unrestricted land uses. The identified contaminants likely were related to the presence of fill material placed on the Property during historical dredging activities in Fidalgo Bay and/or historical operations on the Property.

Groundwater samples from a monitoring well near one of the two areas with elevated PAHs in soil also contained m,p-cresol (a PAH) at a concentration that exceeded the MTCA Method B cleanup level for groundwater.

Based on the reported concentrations of PAHs, including m,p-cresol, cadmium, and mercury, exceeding MTCA Method A and Method B cleanup levels for soil and/or groundwater, those constituents were identified as constituents of concern (COCs) for the Property.

This Closure Report presents the analytical results for confirmation samples collected during cleanup activities to remediate the two localized areas with COCs in soil at concentrations exceeding MTCA Method A cleanup levels in accordance with the provisions of Section 430 of Chapter 173-340 of the Washington Administrative Code (WAC 173-340-430). The cleanup activities were conducted during redevelopment of the Property and in compliance with threshold requirements of WAC 173-340-360 to protect human health and the environment, cleanup standards, and applicable state and federal laws. The cleanup activities were conducted in accordance with MTCA as an independent



action under the direction of Ecology, and were conducted in a manner substantially equivalent to a remedial action conducted by Ecology.

## BACKGROUND

The Property is bounded by Fidalgo Bay to the east, R Avenue to the West, 22<sup>nd</sup> Street to the South, and minimally developed upland property to the north (Figure 2). The Property is south of the historical Scott Paper Mill facility. Historical Sanborn insurance maps showed a shingle mill on the northeastern portion of the Property in the early 1900s, and single-family residences on the remainder of the Property. The Property currently is unpaved and includes several pole structure buildings used for general storage.

Based on Farallon's observations during the Property Investigation, the general subsurface stratigraphy at the Property comprises varying amounts of fill material approximately 2 to 15 feet thick, underlain by native clay. Groundwater was not present within the fill horizon on the majority of the Property with the exception of a discontinuous perched groundwater-bearing zone encountered on the northeastern portion of the Property at depths ranging from 5 to 9 feet below ground surface (bgs) within the fill horizon. The inferred groundwater flow direction within the perched discontinuous groundwater-bearing zone is east, toward Fidalgo Bay.

## PREVIOUS INVESTIGATION SUMMARY

A Property Investigation was conducted by Farallon in October and November 2011. Soil sampling activities included excavation and sampling of backhoe test pits TP-1 through TP-10 to assess potential sources of constituents of potential concern (COPCs). Groundwater monitoring wells MW-1 through MW-3 were installed on the northeastern portion of the Property to assess groundwater quality within the discontinuous perched groundwater-bearing zone encountered within the fill horizon. The test pit and monitoring well locations are shown on Figure 2. Laboratory analytical results for soil and groundwater sampling conducted during the Property Investigation by Farallon are summarized in Tables 1 through 10 and on Figures 3 through 8.

### SOIL

COPCs were detected at concentrations exceeding MTCA cleanup levels only in the soil samples collected from test pits TP-5 and TP-6, in the northeast corner of the Property. Cadmium and mercury were detected at concentrations slightly above their respective MTCA Method A cleanup levels in soil samples collected from the fill horizon in test pits TP-5 and TP-6 (Table 4). The total cPAHs TEF calculated for soil samples collected from test pits TP-5 and TP-6 also exceeded the MTCA Method A cleanup levels for unrestricted land uses (Table 3).

Total petroleum hydrocarbons, including diesel- and oil-range organics, were detected at concentrations below MTCA Method A cleanup levels in soil samples collected from test pits TP-5, TP-6, and TP-7 (Table 1). Dioxins and furans were detected at concentrations below the total 2,3,7,8-TCDD toxicity equivalent (TEQ) value for human health in soil samples collected from test pits TP-1, TP-4, TP-5, TP-6, and TP-10 (Table 6). Several volatile organic compounds (VOCs) were detected at concentrations below MTCA cleanup levels in soil samples collected throughout the Property (Table 3). The other analytes tested for were reported non-detect at the laboratory practical quantitation limits.



### GROUNDWATER

The PAH m,p-cresol was reported at a concentration of 9.3 micrograms per liter ( $\mu$ g/l) in the groundwater sample collected from monitoring well MW-2, and was the only detected analyte that exceeded MTCA cleanup levels (Table 9). The m,p-cresol MTCA Method B cleanup level for groundwater is 8  $\mu$ g/l. This finding was consistent with the cPAHs calculated for soil at test pit TP-6, excavated near monitoring well MW-2. The remaining analytes tested for in the groundwater sample collected from monitoring well MW-2 were reported non-detect at the laboratory practical quantitation limit. Groundwater samples collected from monitoring wells MW-1 and MW-3 were reported non-detect at the laboratory practical quantitation limit for the analytes tested for.

Based on the results of the Property Investigation, the COCs were identified and found to be present in two limited areas, likely related to the presence of fill material placed during historical dredging activities in Fidalgo Bay and/or historical operations on the Property. Soil near test pits TP-5 and TP-6 was therefore recommended for a cleanup action in the Property Investigation report.

### **CLEANUP ACTION JULY 2013**

A cleanup action was completed at the Property on July 9, 2013 and consisted of excavation and offsite disposal of fill horizon soil proximate to monitoring well/test pit locations MW-1/TP-5 (EX1) and MW-2/TP-6 (EX2) (Figure 2).

### EXCAVATION AREAS AND CONFIRMATION SOIL SAMPLING

The analytical results from the Property Investigation soil sampling were used to identify soil that required disposal off the Property. Excavation areas EX1 and EX2 were completed using a trackhoe excavator provided by MJB (Figure 2). Each excavation comprised an area of approximately 6 by 6 feet, and was completed to a depth of 12.5 feet bgs, which coincided with the top of native soil encountered beneath the fill.

Based on previous analytical results and field observations, clean soil excavated from the upper intervals at each location was segregated into temporary stockpiles and reused as backfill in the completed excavations. Additional clean gravel material was used to backfill the remainder of each excavation as needed.

One confirmation soil sample was collected at the final limits of each excavation and analyzed for the specific COCs previously identified in the Property Investigation to demonstrate that the cleanup level has been attained. Confirmation soil samples were collected directly from the excavator bucket and placed into laboratory-prepared containers. The samples were placed on ice in a cooler and submitted under standard chain-of-custody protocols to the laboratory for analysis.

#### **Excavation Area EX1**

The EX1 excavation area at the test pit TP-5/monitoring well MW-1 location measured approximately 6 by 6 feet, and was completed to a total depth of 12.5 feet bgs (Figure 2). Based on previous soil sample analytical results, soil from the upper soil interval (from the ground surface to a depth of 7.5 feet bgs) was segregated as clean material and reused to backfill the excavation upon completion.



Groundwater was encountered during digging at this location, and was observed as a small seep at approximately 8 feet bgs. Groundwater did not interfere with completing the excavation or collecting a confirmation soil sample at the final limits of the excavation.

Confirmation soil sample EX1-12.5 was collected from native soil at a depth of 12.5 feet bgs in excavation area EX1.

Soil removed from excavation area EX1 that was intended for off-site disposal was placed in a temporary stockpile on visqueen plastic sheeting. Based on a field estimate, the soil removed from the EX1 excavation and segregated for off-site disposal totaled approximately 17.5 cubic yards.

### Excavation Area EX2

The EX2 excavation area at the test pit TP-6/monitoring well MW-2 location measured approximately 6 by 6 feet, and was completed to a total depth of 12.5 feet bgs (Figure 2). Based on previous soil sample analytical results, soil from the upper interval (from the ground surface to a depth of 1.5 feet bgs) was segregated as clean material and reused to backfill the excavation upon completion.

Groundwater was encountered during digging at this location, and was observed as a small seep at approximately 8.5 feet bgs. Groundwater did not interfere with completing the excavation or collecting a confirmation soil sample at the final limits of the excavation.

Confirmation soil sample EX2-12.5 was collected from native soil at a depth of 12.5 feet bgs in excavation area EX2.

Soil removed from excavation area EX2 that was intended for off-site disposal was placed in a temporary stockpile on visqueen plastic sheeting. Based on a field estimate, the soil removed from the EX2 excavation and segregated for off-site disposal totaled approximately 35 cubic yards.

### WASTE SAMPLING AND DISPOSAL

Following completion of the EX1 and EX2 excavations, a grab sample was collected from each stockpile for compositing into sample SP1-070913 for waste characterization purposes. The stockpiles were then covered with visqueen plastic sheeting and secured.

On August 19 through 21, 2013, MJB loaded and transported the stockpiled soil by truck off the Property to the Republic Services 3<sup>rd</sup> and Lander waste transfer facility in Seattle, Washington for containerization, rail transport, and disposal at the Subtitle D Landfill in Roosevelt, Washington. Landfill weight tickets show receipt of 68.31 tons of contaminated soil from the Property. Waste disposal manifests are included in Attachment A.

### ANALYTICAL RESULTS

Analytical results for the confirmation soil samples collected in excavation areas EX1 and EX2 are presented on Figures 4 and 5, and in Tables 12 and 13. Both confirmation soil samples were reported non-detect at the laboratory practical quantitation limits for the COCs tested.



The composite soil sample collected from the stockpiles was submitted for laboratory analysis for total Resource Conservation and Recovery Act (RCRA) 8 metals and Toxicity Characteristic Leaching Procedure (TCLP) RCRA 8 metals for waste characterization purposes. The total and TCLP metals analytical results are presented in Tables 13 and 14, and were within the acceptable range for the selected waste disposal facility.

The analytical results for this sampling event are provided in Attachment B.

## CONCLUSIONS AND REQUEST FOR NO FURTHER ACTION DETERMINATION

Excavation remediation activities and confirmation soil sampling were completed at prior test pit locations TP-5 and TP-6 in accordance with the recommendations provided in the Property Investigation report, and as approved by Ecology. Approximately 53 cubic yards of soil was excavated and transported off the Property to a Subtitle D landfill for disposal as contaminated soil. The analytical results for confirmation soil samples collected at the limit of each excavation confirm that the cleanup levels were attained at the standard point of compliance for soil. The excavation remediation activities were successful in removing the identified source areas for COCs on the Property.

Based on the results of the cleanup action, MJB requests that Ecology issue a property-specific No Further Action determination for the upland portion of the North Dock Area.

Farallon trusts this Closure Report provides sufficient information for Ecology to evaluate the request for a property-specific No Further Action determination. Please contact Riley Conkin at (425) 295-0800 if you have questions or require additional information.

Sincerely,

Farallon Consulting, L.L.C.

Andrew E. Seutter Senior Engineering Geologist

J. Riley Conkin, L.G., L.H.G. Principal Geologist



Attachments: Figure 1, Site Vicinity Map Figure 2, Site Plan and Soil Excavation Areas
Figure 3, Site Plan Showing Soil Analytical Results for Total Petroleum Hydrocarbons
Figure 4, Site Plan Showing Soil Analytical Results for VOCs, SVOCs, cPAHs, PCBs, and D/F TEQ
Figure 5, Site Plan Showing Soil Analytical Results for Metals
Figure 6, Site Plan Showing Groundwater Analytical Results for Total Petroleum Hydrocarbons
Figure 7, Site Plan Showing Groundwater Analytical Results for VOCs and SVOCs
Figure 8, Site Plan Showing Groundwater Analytical Results for Metals

G:\Projects\299 MJB Properties\299001 MJB North Dock Area\Reports\Closure Report 2013\MJB North Dock Closure Report.docx



- Table 1, Summary of Soil Analytical Results Total Petroleum Hydrocarbons
- Table 2, Summary of Soil Analytical Result Volatile Organic Compounds
- Table 3, Summary of Soil Analytical Results Semivolatile Organic Compounds
- Table 4, Summary of Soil Analytical Results Metals
- Table 5, Summary of Soil Analytical Results Polychlorinated Biphenyls
- Table 6, Summary of Soil Analytical Results Dioxins and Furans
- Table 7, Summary of Groundwater Analytical Results Total Petroleum

   Hydrocarbons
- Table 8, Summary of Groundwater Analytical Results Volatile Organic Compounds
- Table 9, Summary of Groundwater Analytical Results Semivolatile Organic

   Compounds
- Table 10, Summary of Groundwater Analytical Results Metals
- Table 11, Excavation Confirmation Soil Sample Analytical Results Semivolatile
   Organic Compounds
- Table 12, Excavation Confirmation Soil Sample Analytical Results Total Metals
- Table 13, Summary of Soil Stockpile Analytical Results Total RCRA 8 Metals
- Table 14, Summary of Soil Stockpile Analytical Results TCLP RCRA 8 Metals

Attachment A, Waste Disposal Documentation Attachment B, Analytical Report

cc: Mr. Jimmy Blais, MJB (by e-mail)

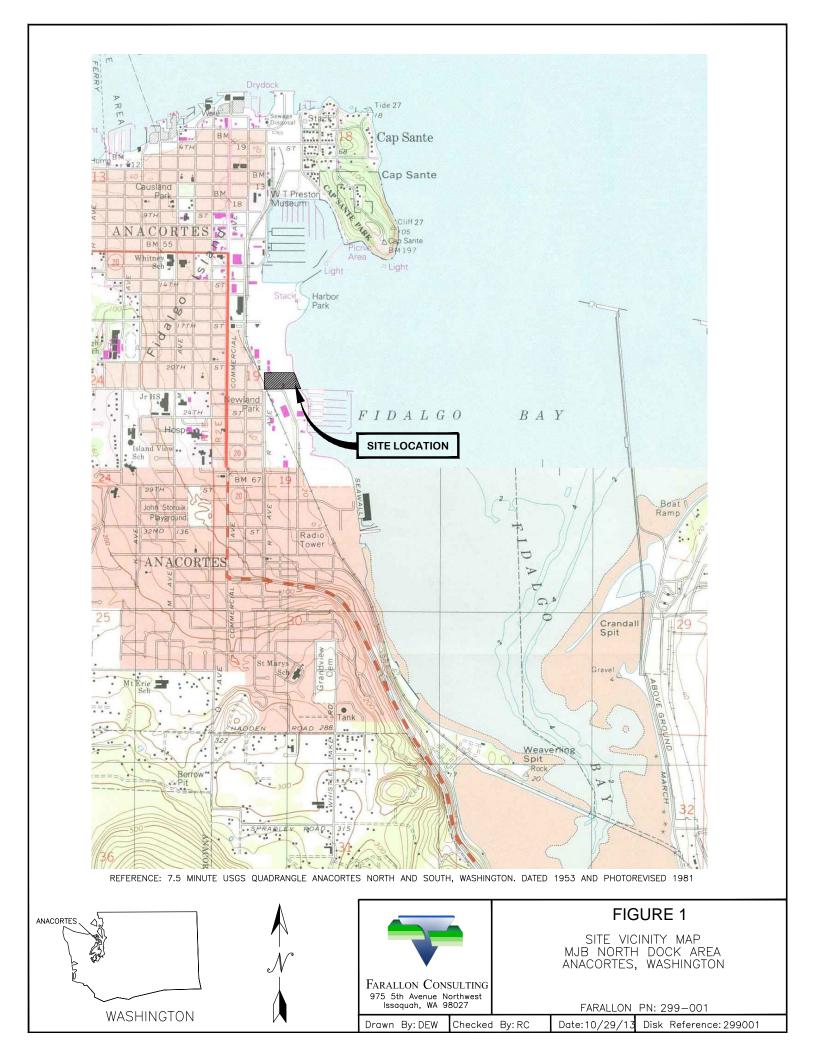
Mr. William Joyce, Joyce Ziker Parkinson, PLLC (by e-mail)

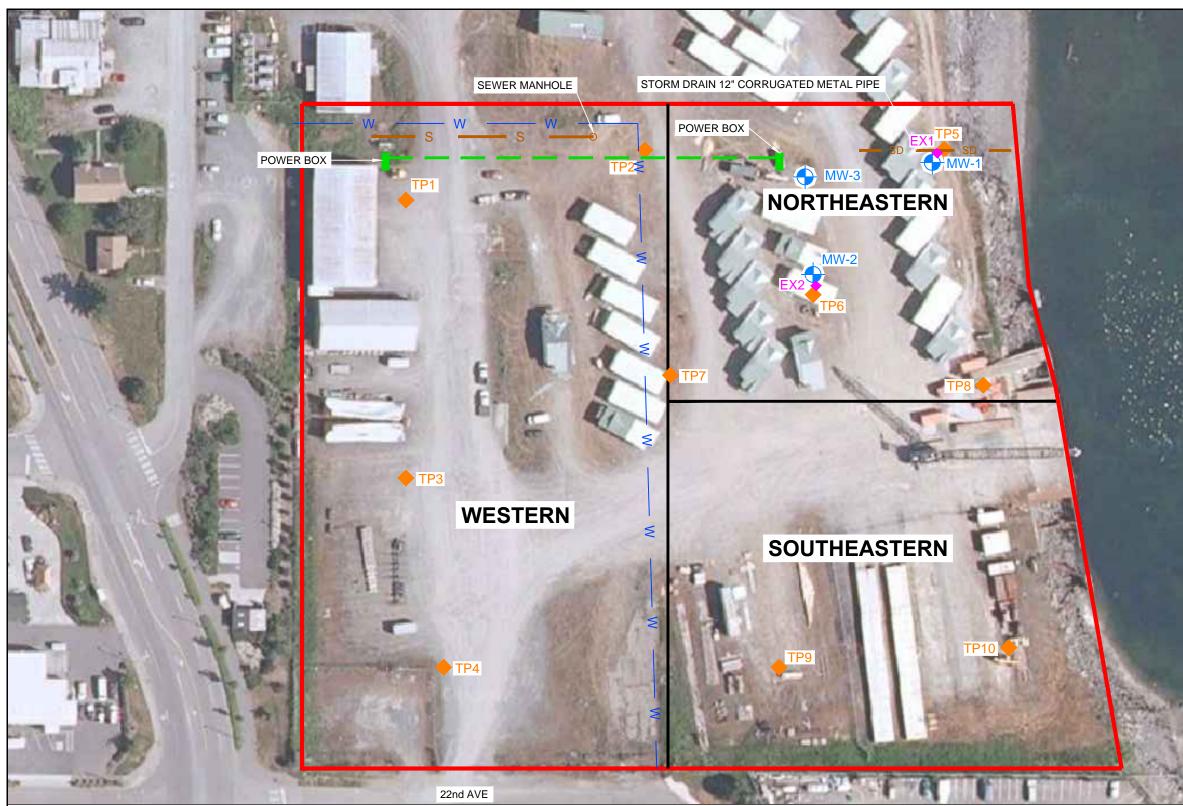
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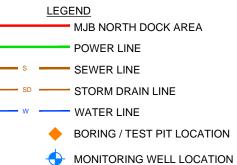
## FIGURES

CLOSURE REPORT MJB North Dock Area Anacortes, Washington

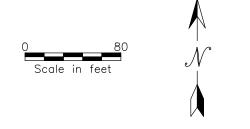
Farallon PN: 299-001







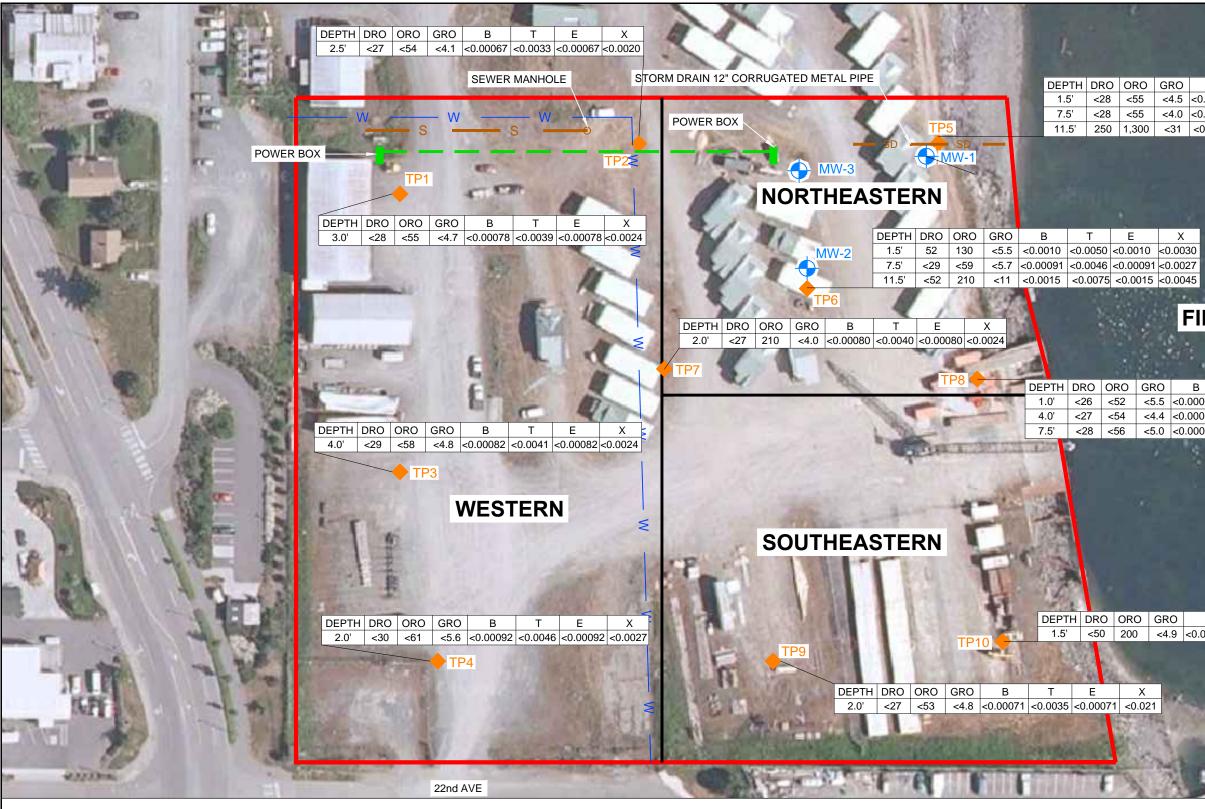
NOTE: SOIL EXCAVATION AREAS EX1 AND EX2 MEASURED APPROXIMATELY 6 FEET BY 6 FEET BY 12.5 FEET DEEP, AND WERE COMPLETED ON JULY 9, 2013.



EX2 REMEDIAL EXCAVATION LOCATION

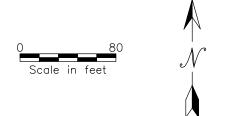


	FIGURE 2			
FARALLON CONSULTING 975 5th Avenue Northwest	SITE PLAN AND SOIL EXCAVATION AREAS MJB NORTH DOCK AREA ANACORTES, WASHINGTON			
Issaquah, WA 98027	FARALLON PN: 299-001			
Drawn By:DEW Checked	By:RC Date:10/29/13 Disk Reference:299-001			
Issaquah, WA 98027				



- MJB NORTH DOCK AREA
- POWER LINE
- SEWER LINE
- STORM DRAIN LINE
  - WATER LINE
    - BORING / TEST PIT LOCATION
    - MONITORING WELL LOCATION

- SOIL ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM
- GRO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS
- GASOLINE-RANGE ORGANICS DRO = TPH AS DIESEL-RANGE ORGANICS
- ORO = TPH AS OIL-RANGE ORGANICS
- B = BENZENE
- T = TOLUENE E = ETHYLBENZENE
- X = TOTAL XYLENES
- < = INDICATES CONCENTRATIONS NOT DETECTED AT OR ABOVE THE STATED LABORATORY PRACTICAL QUANTITATION LIMIT



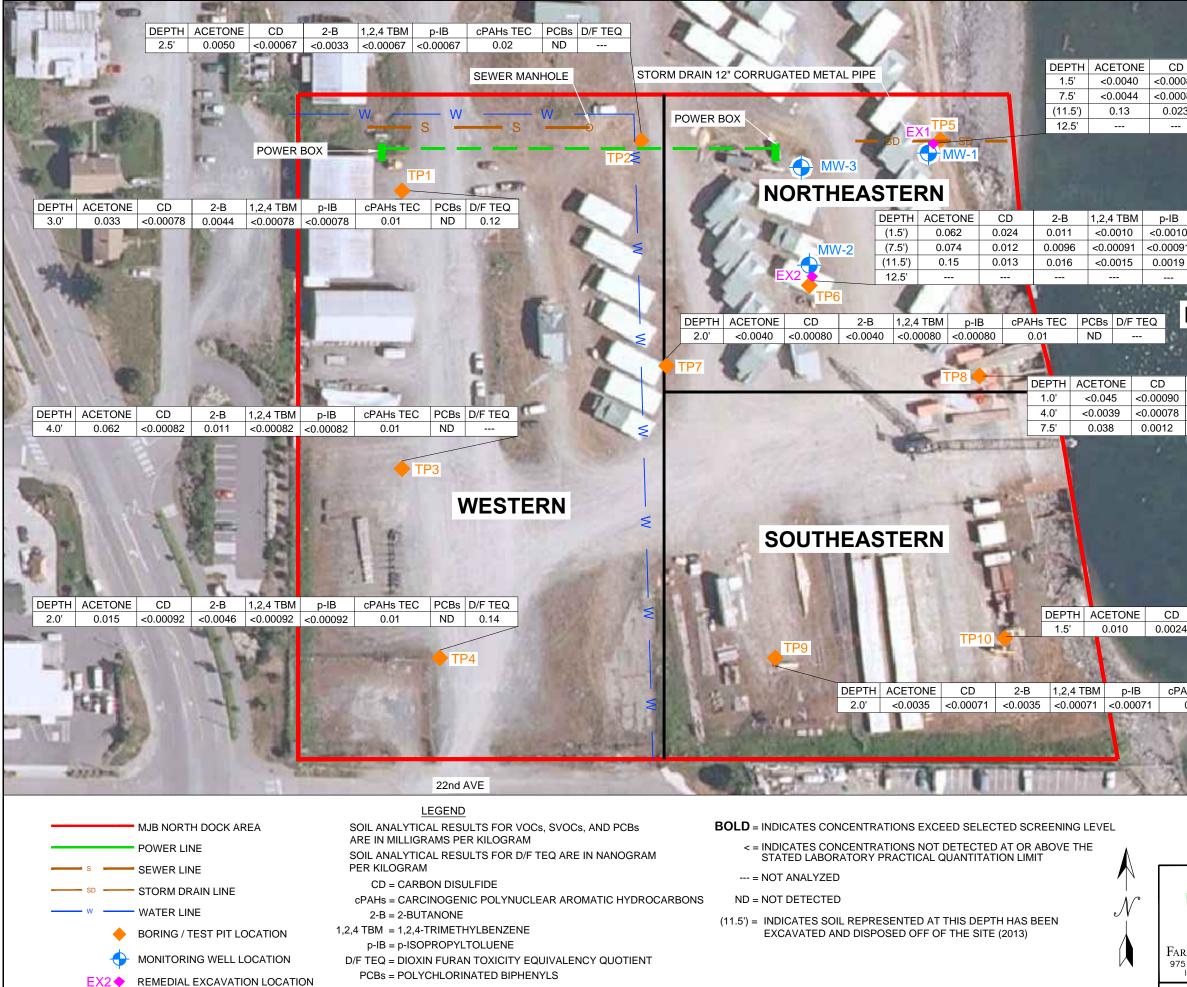
2	В	Т	Е	Х
5	<0.00080	<0.0040	<0.00080	<0.0024
0	<0.00088	<0.0044	<0.00088	<0.0027
1	<0.0041	<0.020	<0.0041	<0.012

## FIDALGO BAY

B T E X 0.00090 <0.0045 <0.00090 <0.002	
	7
0.00078 <0.0039 <0.00078 <0.002	4
0.00080 <0.0040 <0.00080 <0.002	4

В	Т	E	Х
<0.0072	<0.0036	<0.0072	<0.0021

			FIG	URE 3
FARALLON CONSULTING 975 5th Avenue Northwest Issaquah, WA 98027		0.0	DIL ANALYTICA AL PETROLEU MJB NORTH ANACORTES,	N SHOWING L RESULTS FOR M HYDROCARBONS H DOCK AREA , WASHINGTON PN: 299–001
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VOCs = VOLATILE ORGANIC COMPOUNDS

)	2-B	1,2,4 TBM	p-IB	cPAHs TEC	PCBs	D/F TEQ
080	<0.0040	<0.00080	<0.00080	0.01	ND	0.24
088	<0.0044	<0.00088	<0.00088	0.01	ND	0.075
23	<0.020	<0.0041	<0.0041	1.29	ND	
				0.013		

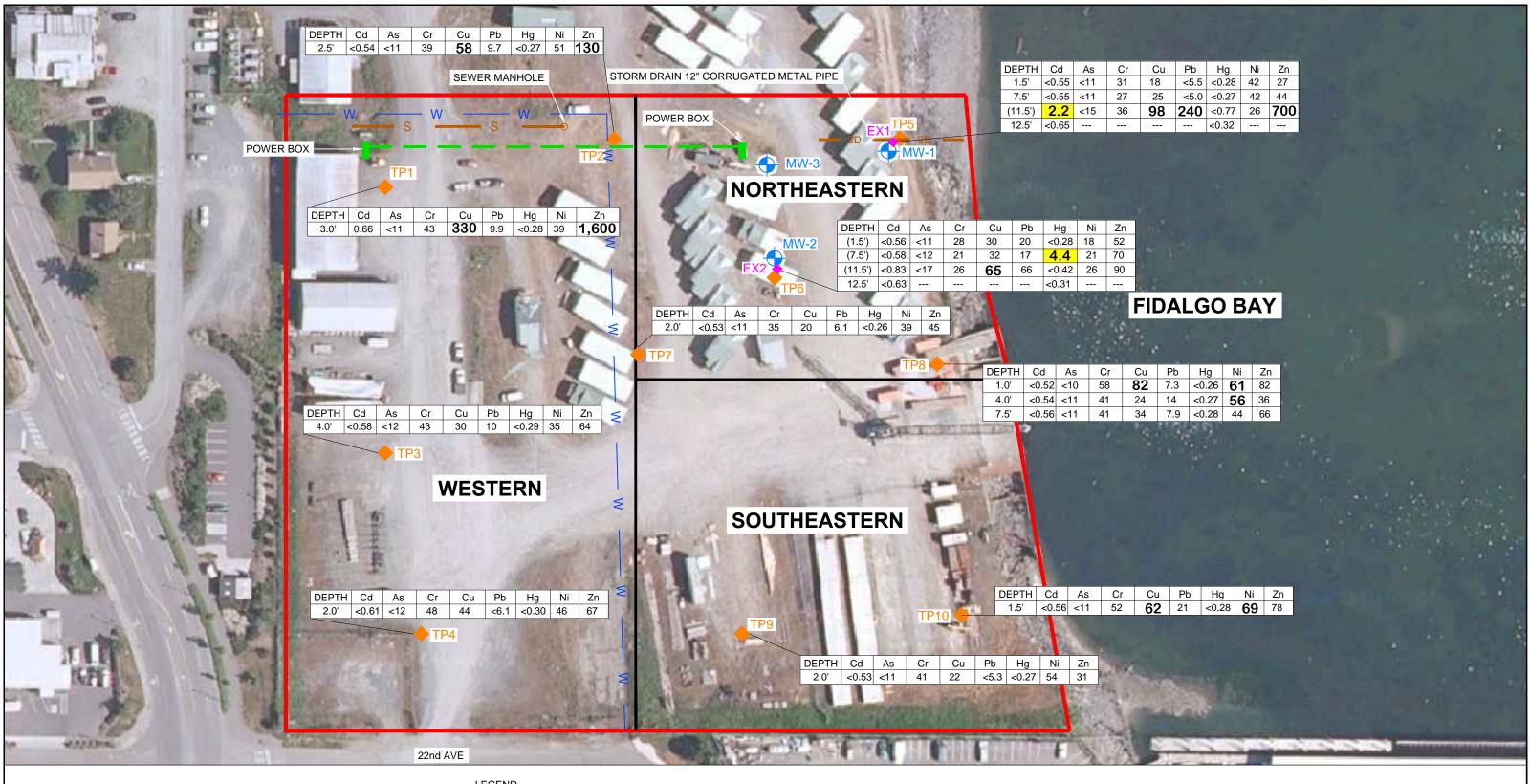
	cPAHs TEC	PCBs	D/F TEQ
0	0.96	ND	1.1
91	0.27	ND	0.76
)	0.17	ND	
	0.013		

## FIDALGO BAY

- X - 2	130				
2-B	1,2,4 TBM	p-IB	cPAHs TEC	PCBs	D/F TEQ
<0.0045	<0.00090	<0.00090	0.01	ND	
<0.0039	<0.00078	<0.00078	0.01	ND	
0.0057	<0.00080	<0.00080	0.02	ND	

)	2-B		1,2,4 TBM	p-IB	cPAHs TEC	PCBs	D/F TEQ		
24	<0.00	36	< 0.00083	<0.00072	0.05	ND	0.34		
PAHs	TEC	PCE	Bs D/F TE	Q				10	
0.0	1	NE	)						
	210	2		-	1991	- 62			

0 80 Scale in feet					
			FIG	URE 4	
			ANALYTICAL F Cs, cPAHs, P	N SHOWING RESUTLS FOR VOCs, CBs, AND D/F TEQ	
FARALLON CONSULTING 975 5th Avenue Northwest		MJB NORTH DOCK AREA ANACORTES, WASHINGTON			
Issaquah, WA 98			FARALLON	PN: 299-001	
Drawn By:DEW	Checked	By: RC	Date:10/29/13	Disk Reference:299001	



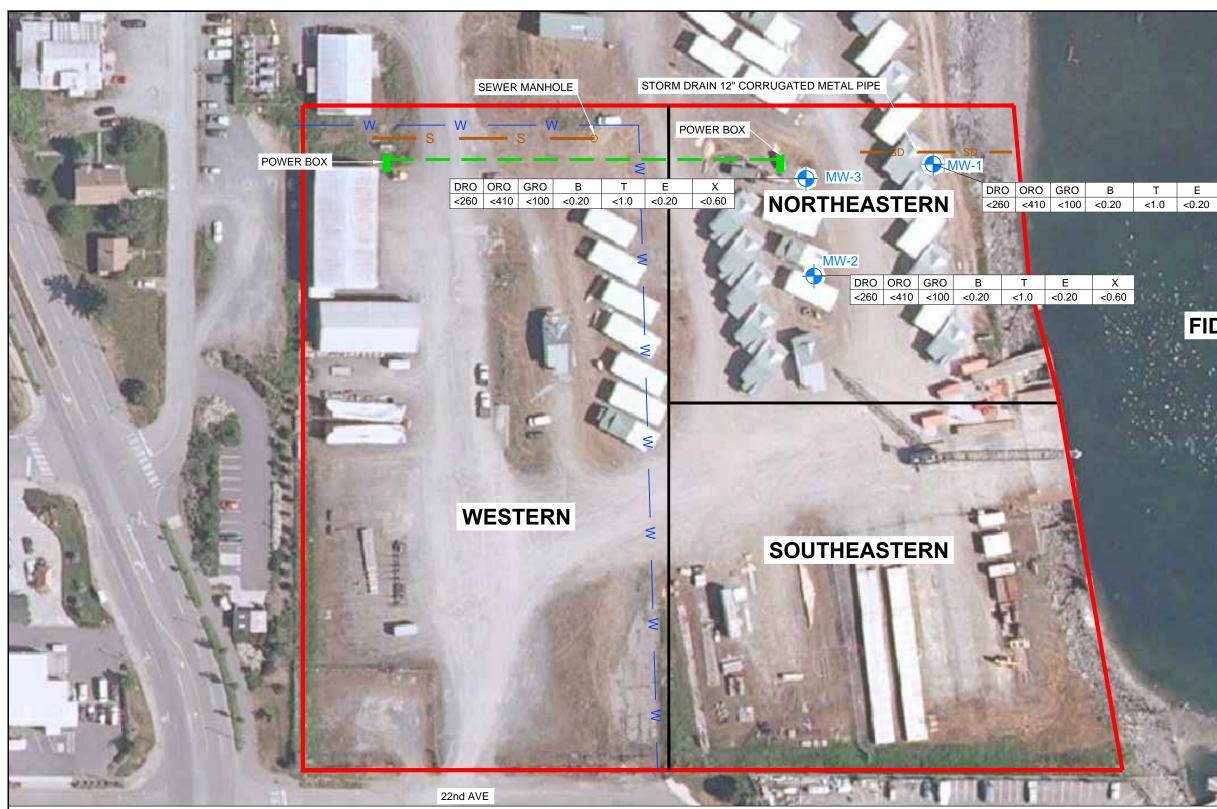
	MJB NORTH DOCK AREA	SOIL ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM	<b>BOLD</b> = INDICATES CONCENTRATIONS EXCEED SELECTED SCREENING LEVEL	
	POWER LINE	Cd = CADMIUM As = ARSENIC	<b>BOLD</b> = INDICATES CONCENTRATION EXCEEDS APPLICABLE WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION (MTCA)	٨
S	SEWER LINE	Cr = CHROMIUM	METHOD A CLEANUP LEVELS	
SD	STORM DRAIN LINE	Cu = COPPER Pb = LEAD	< = INDICATES CONCENTRATIONS NOT DETECTED AT OR ABOVE THE STATED LABORATORY PRACTICAL QUANTITATION LIMIT	1
w	WATER LINE	Hg = MERCURY	= NOT ANALYZED	JV
•	BORING / TEST PIT LOCATION	Ni = NICKEL Zn = ZINC	ND = NOT DETECTED	
	MONITORING WELL LOCATION		(11.5') = INDICATES SOIL REPRESENTED AT THIS DEPTH HAS BEEN	
EX2	REMEDIAL EXCAVATION LOCATION		EXCAVATED AND DISPOSED OFF OF THE SITE (2013)	

Cu	Pb	Hg	Ni	Zn
18	<5.5	<0.28	42	27
25	<5.0	<0.27	42	44
98	240	<0.77	26	700
		<0.32		

Cu	Pb	Hg	Ni	Zn
82	7.3	<0.26	61	82
24	14	<0.27	56	36
34	7.9	<0.28	44	66
	1.0.0	100.000		

Cu	Pb	Hg	Ni	Zn
62	21	<0.28	69	78

0 80 Scale in feet											
				FIC	GURE 5						
		SITE PLAN SHOWING SOIL ANALYTICAL RESULTS FOR METALS									
FARALLON CONSUL 975 5th Avenue North					H DOCK AREA , WASHINGTON						
Issaquah, WA 9802			FAF	ALLON	PN: 299-001						
Drawn By:DEW Cl	hecked	By: RC	Date:10,	/29/13	Disk Reference:299001						

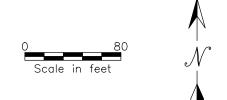


### MJB NORTH DOCK AREA

- POWER LINE
- SEWER LINE
- STORM DRAIN LINE
  - WATER LINE
    - BORING / TEST PIT LOCATION
  - HONITORING WELL LOCATION

- GROUNDWATER ANALYTICAL RESULTS IN MICROGRAMS PER LITER
- GRO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS GASOLINE-RANGE ORGANICS DRO = TPH AS DIESEL-RANGE ORGANICS ORO = TPH AS OIL-RANGE ORGANICS

- B = BENZENE T = TOLUENE E = ETHYLBENZENE
- X = TOTAL XYLENES
- < = INDICATES CONCENTRATIONS NOT DETECTED AT OR ABOVE THE STATED LABORATORY PRACTICAL QUANTITATION LIMIT



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	•		FIGUI	RE 6
RALLON CONS 5 5th Avenue No Issaquah, WA 98	orthwest	011001	IDWATER ANAL AL PETROLEUI MJB NORTH ANACORTES,	N SHOWING YTICAL RESULTS FOR M HYDROCARBONS DOCK AREA WASHINGTON PN: 299–001
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- MJB NORTH DOCK AREA
  POWER LINE
  S SEWER LINE
  SD STORM DRAIN LINE
- - WATER LINE
    - BORING / TEST PIT LOCATION
    - HONITORING WELL LOCATION

GROUNDWATER ANALYTICAL RESULTS IN MICROGRAMS PER LITER O-CRESOL= 2-METHYLPHENOL (O-CRESOL) m,p-CRESOL= (3+4)-METHYLPHENOL (M,P-CRESOL) 2,4-Dim = n-PROPYLBENZENE NAP = NAPHTHALENE 2-MPH = 2-METHYLNAPHTHALENE 1-Mph = 1-METHYLNAPHTHALENE BENZO (a) = BENZO(a)ANTHRACENE BENZO (b) = BENZO(b)FLUORANTHENE CD = CARBON DISULFIDE

p-IB = p-ISOPROPYLTOLUENE

**BOLD** = INDICATES CONCENTRATIONS EXCEED SELECTED SCREENING LEVEL

- **BOLD** = INDICATES CONCENTRATION EXCEEDS APPLICABLE WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION (MTCA) METHOD B CLEANUP LEVELS
- PCBs = POLYCHLORINATED BIPHENYL
- VOCs = VOLATILE ORGANIC COMPOUNDS
  - < = INDICATES CONCENTRATIONS NOT DETECTED AT OR ABOVE THE STATED LABORATORY PRACTICAL QUANTITATION LIMIT
- --- = NOT ANALYZED

		-	_		and the second second			
								I In
						0.5		
-Dim N/	AP 2-1 .094 <0	Mph 1- ).094 <(	Mph BEN 0.094 0.0	ZO (a) B	ENZO (b) <0.00094	CD <0.20	p-IB <0.20	
			100		-	-		N
n 1-Mpł 0.097	n BENZ	O (a) BE 0096	NZO (b)	CD 0.31	p-IB 0.47			
0.097	<0.0	096	0.011	0.31	0.47			
Sec.		a 1	10					
FID	ALG	ΟВ	AY					1.1
and a	1.7		24					
		1.						1
	an len	1.00						
2. 20	12.2	2						
		11 an						
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Contrast.								
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1 2	200	-	-	-	Contraction of			
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#### <u>LEGEND</u>

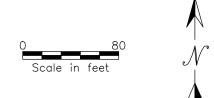
#### MJB NORTH DOCK AREA

- POWER LINE
- SEWER LINE
- STORM DRAIN LINE
  - WATER LINE
    - BORING / TEST PIT LOCATION
    - HONITORING WELL LOCATION

GROUNDWATER ANALYTICAL RESULTS IN MICROGRAMS PER LITER

- Cd = CADMIUM As = ARSENIC Cr = CHROMIUM Cu = COPPER Pb = LEAD Hg = MERCURY Ni = NICKEL
- Zn = ZINC

<= INDICATES CONCENTRATIONS NOT DETECTED AT OR ABOVE THE STATED LABORATORY PRACTICAL QUANTITATION LIMIT



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## FIDALGO BAY

	,		FIGURE 8						
		SITE PLAN SHOWING GROUNDWATER ANALYTICAL RESULTS FOR METALS							
RALLON CONS 5 5th Avenue No			MJB NORTH DOCK AREA ANACORTES, WASHINGTON						
Issaquah, WA 98			FARALLON PN: 299-001						
awn By:DEW	Checked	I By: EE	Date:10/29/13 Disk Reference:299001						

## TABLES

CLOSURE REPORT MJB North Dock Area Anacortes, Washington

Farallon PN: 299-001

## Table 1Summary of Soil Analytical Results - Total Petroleum HydrocarbonsMJB North Dock AreaAnacortes, WashingtonFarallon PN: 299-001

					Analytical Results (milligrams per kilogram)						
Sample Location	Sample Identification	Sampled By	Sample Date	Sample Depth (feet) <sup>1</sup>	<b>DRO</b> <sup>2</sup>	ORO <sup>2</sup>	GRO <sup>3</sup>	Benzene <sup>4</sup>	Toluene <sup>4</sup>	Ethyl- benzene <sup>4</sup>	Xylenes <sup>4</sup>
TP1	TP1-103111-3.0	Farallon	10/31/2011	3.0	<28	<55	<4.7	< 0.00078	< 0.0039	< 0.00078	< 0.0024
TP2	TP2-103111-2.5	Farallon	10/31/2011	2.5	<27	<54	<4.1	< 0.00067	< 0.0033	< 0.00067	< 0.0020
TP3	TP3-103111-4.0	Farallon	10/31/2011	4.0	<29	<58	<4.8	< 0.00082	< 0.0041	< 0.00082	< 0.0024
TP4	TP4-103111-2.0	Farallon	10/31/2011	2.0	<30	<61	<5.6	< 0.00092	< 0.0046	< 0.00092	< 0.0027
TP5	TP5-103111-1.5	Farallon	10/31/2011	1.5	<28	<55	<4.5	< 0.00080	< 0.0040	< 0.00080	< 0.0024
TP5	TP5-103111-7.5	Farallon	10/31/2011	7.5	<28	<55	<4.0	< 0.00088	< 0.0044	< 0.00088	< 0.0027
TP5	TP5-103111-11.5	Farallon	10/31/2011	11.5	250	1,300	<31	< 0.0041	< 0.020	< 0.0041	< 0.012
TP6	TP6-103111-1.5	Farallon	10/31/2011	1.5	52	130	<5.5	< 0.0010	< 0.0050	< 0.0010	< 0.0030
TP6	TP6-103111-7.5	Farallon	10/31/2011	7.5	<29	<59	<5.7	< 0.00091	< 0.0046	< 0.00091	< 0.0027
TP6	TP6-103111-11.5	Farallon	10/31/2011	11.5	<52	210	<11	< 0.0015	< 0.0075	< 0.0015	< 0.0045
TP7	TP7-103111-2.0	Farallon	10/31/2011	2.0	<27	210	<4.0	< 0.00080	< 0.0040	< 0.00080	< 0.0024
TP8	TP8-103111-1.0	Farallon	10/31/2011	1.0	<26	<52	<5.5	< 0.00090	< 0.0045	< 0.00090	< 0.0027
TP8	TP8-103111-4.0	Farallon	10/31/2011	4.0	<27	<54	<4.4	< 0.00078	< 0.0039	< 0.00078	< 0.0024
TP8	TP8-103111-7.5	Farallon	10/31/2011	7.5	<28	<56	<5.0	< 0.00080	< 0.0040	< 0.00080	< 0.0024
TP9	TP9-103111-2.0	Farallon	10/31/2011	2.0	<27	<53	<4.8	< 0.00071	< 0.0035	< 0.00071	< 0.021
TP10	TP10-103111-1.5	Farallon	10/31/2011	1.5	<50	200	<4.9	< 0.0072	< 0.0036	< 0.0072	< 0.0021
MTCA Method	A Cleanup Levels for	r Soil <sup>5</sup>			2,000	2,000	100/30 <sup>6</sup>	0.03	7	6	9

NOTES:

Results in **bold** denote concentrations above applicable cleanup levels.

< denotes analyte not detected at or above the laboratory reporting limit listed.

— denotes sample was not analyzed.

<sup>1</sup>Depth in feet below ground surface.

<sup>2</sup>Analyzed by Northwest Method NWTPH-Dx.

<sup>3</sup>Analyzed by Northwest Method NWTPH-Gx.

<sup>4</sup>Analyzed by U.S. Environmental Protection Agency Method 8260B.

<sup>5</sup>Washington State Model Toxics Control Act Cleanup Regulation (MTCA) Method A Soil Cleanup Levels for Unrestricted Land Uses, Table 740-1

of Section 900 of Chapter 173-340 of the Washington Administrative Code, as amended November 2007.

<sup>6</sup>Cleanup level when benzene is present.

DRO = total petroleum hydrocarbons (TPH) as diesel-range organics

Farallon = Farallon Consulting, L.L.C.

GRO = TPH as gasoline-range organics

ORO = TPH as oil-range organics

1 of 1

# Table 2Summary of Soil Analytical Results - Volatile Organic CompoundsMJB North Dock AreaAnacortes, WashingtonFarallon PN: 299-001

					Analytical Results (milligrams per kilogram) <sup>2</sup>					
Boring Location	Sample Identification	Sampled By	Sample Date	Depth (feet) <sup>1</sup>	Acetone	Carbon Disulfide	2-Butanone	1,2,4- Trimethylbenzene	p-Isopropyltoluene	
TP1	TP1-103111-3.0	Farallon	10/31/2011	3.0	0.033	< 0.00078	0.0044	< 0.00078	< 0.00078	
TP2	TP2-103111-2.5	Farallon	10/31/2011	2.5	0.0050	< 0.00067	< 0.0033	< 0.00067	< 0.00067	
TP3	TP3-103111-4.0	Farallon	10/31/2011	4.0	0.062	<0.00082	0.011	< 0.00082	< 0.00082	
TP4	TP4-103111-2.0	Farallon	10/31/2011	2.0	0.015	< 0.00092	< 0.0046	< 0.00092	< 0.00092	
TP5	TP5-103111-1.5	Farallon	10/31/2011	1.5	< 0.0040	<0.00080	< 0.0040	<0.00080	< 0.00080	
TP5	TP5-103111-7.5	Farallon	10/31/2011	7.5	< 0.0044	< 0.00088	< 0.0044	<0.00088	< 0.00088	
TP5	TP5-1031111-11.5	Farallon	10/31/2011	11.5	0.13	0.023	< 0.020	< 0.0041	< 0.0041	
TP6	TP6-103111-1.5	Farallon	10/31/2011	1.5	0.062	0.024	0.011	< 0.0010	< 0.0010	
TP6	TP6-103111-7.5	Farallon	10/31/2011	7.5	0.074	0.012	0.0096	< 0.00091	< 0.00091	
TP6	TP6-103111-11.5	Farallon	10/31/2011	11.5	0.15	0.013	0.016	< 0.0015	0.0019	
TP7	TP7-103111-2.0	Farallon	10/31/2011	2.0	< 0.0040	< 0.00080	< 0.0040	<0.00080	< 0.00080	
TP8	TP8-103111-1.0	Farallon	10/31/2011	1.0	< 0.0045	< 0.00090	< 0.0045	< 0.00090	< 0.00090	
TP8	TP8-103111-4.0	Farallon	10/31/2011	4.0	< 0.0039	< 0.00078	< 0.0039	< 0.00078	< 0.00078	
TP8	TP8-103111-7.5	Farallon	10/31/2011	7.5	0.038	0.0012	0.0057	<0.00080	< 0.00080	
TP9	TP9-103111-2.0	Farallon	10/31/2011	2.0	< 0.0035	< 0.00071	< 0.0035	< 0.00071	< 0.00071	
TP10	TP10-103111-1.5	Farallon	10/31/2011	1.5	0.010	0.0024	< 0.0036	0.00083	< 0.00072	
MTCA Cleanu	up Levels for Soil				NE	NE	NE	NE	NE	

NOTES:

< denotes analyte not detected at or above the reporting limit listed.

<sup>1</sup>Depth in feet below ground surface.

<sup>2</sup>Analyzed by U.S. Environmental Protection Agency Method 8260B.

Farallon = Farallon Consulting, L.L.C. MTCA = Washington State Model Toxics Control Act NE = not established

#### Table 3

## Summary of Soil Analytical Results - Semivolatile Organic Compounds

## **MJB North Dock Area** Anacortes, Washington

Farallon PN: 299-001

					Analytical Results (milligrams per kilogram) <sup>2,3</sup>																				
Sample Location	Sample Identification	Sample Date	Sample Depth (feet) <sup>1</sup>	Naphthalene	2-Methylhaphthalene	1-Methylnaphthalene	Acenaphthylene	Acenaphthene	Dibenzofuran	Fluorene	Phenanthrene	Anthracene	Carbazole	Fluoranthene	Pyrene	Benzo(a)anthracene	Chrysene	bis(2-Ethylhexyl) phthalate	Benzo(b)fluoranthene	Benzo(j,k)fluoranthene	Benzo(a)pyrene	Indeno(1,2,3-c,d)pyrene	Dibenz(a,h)anthracene	Benzo(g,h,i)perylene	Total cPAHs TEC <sup>4</sup>
TP1	TP1-103111-3.0	10/31/2011	3.0	< 0.0073	< 0.0073	< 0.0073	< 0.0073	< 0.0073	< 0.037	< 0.0073	< 0.0073	< 0.0073	< 0.037	< 0.0073	< 0.0073	< 0.0073	< 0.0073	1.5	< 0.0073	< 0.0073	< 0.0073	< 0.0073	< 0.0073	< 0.0073	0.01
TP2	TP2-103111-2.5	10/31/2011	2.5	< 0.0071	< 0.0071	< 0.0071	< 0.0071	< 0.0071	< 0.036	< 0.0071	0.012	< 0.0071	< 0.036	0.036	0.024	0.016	0.015	< 0.18	0.010	0.010	0.015	0.0086	< 0.0071	0.0085	0.02
TP3	TP3-103111-4.0	10/31/2011	4.0	< 0.0077	< 0.0077	< 0.0077	< 0.0077	< 0.0077	< 0.038	< 0.0077	0.0095	< 0.0077	< 0.038	0.013	0.013	0.0091	0.0080	< 0.19	< 0.0077	< 0.0077	0.0081	< 0.0077	< 0.0077	< 0.0077	0.01
TP4	TP4-103111-2.0	10/31/2011	2.0	< 0.0081	< 0.0081	< 0.0081	< 0.0081	< 0.0081	< 0.040	< 0.0081	< 0.0081	< 0.0081	< 0.040	< 0.0081	< 0.0081	< 0.0081	< 0.0081	< 0.20	< 0.0081	< 0.0081	< 0.0081	< 0.0081	< 0.0081	< 0.0081	0.01
TP5	TP5-103111-1.5	10/31/2011	1.5	< 0.0074	< 0.0074	< 0.0074	< 0.0074	< 0.0074	< 0.037	< 0.0074	< 0.0074	< 0.0074	< 0.037	< 0.0074	< 0.0074	< 0.0074	< 0.0074	<0.18	< 0.0074	< 0.0074	< 0.0074	< 0.0074	< 0.0074	< 0.0074	0.01
TP5	TP5-103111-7.5	10/31/2011	7.5	< 0.0073	< 0.0073	< 0.0073	< 0.0073	< 0.0073	< 0.037	< 0.0073	< 0.0073	< 0.0073	< 0.037	< 0.0073	< 0.0073	< 0.0073	< 0.0073	< 0.18	< 0.0073	< 0.0073	< 0.0073	< 0.0073	< 0.0073	< 0.0073	0.01
TP5	TP5-103111-11.5	10/31/2011	11.5	0.25	0.10	0.11	0.25	0.088	< 0.10	0.18	1.5	0.32	0.12	2.0	2.1	0.84	1.2	< 0.52	0.82	0.74	0.97	0.55	0.14	0.62	1.29
TP6	TP6-103111-1.5	10/31/2011	1.5	0.066	0.020	0.028	0.13	0.071	0.043	0.14	0.95	0.26	0.045	1.6	1.7	0.65	0.70	< 0.19	0.53	0.54	0.73	0.38	0.11	0.41	0.96
TP6	TP6-103111-7.5	10/31/2011	7.5	0.015	< 0.0078	0.0085	0.043	0.028	< 0.039	0.032	0.30	0.072	< 0.039	0.54	0.47	0.17	0.24	< 0.19	0.14	0.20	0.20	0.13	0.031	0.14	0.27
TP6	TP6-103111-11.5	10/31/2011	11.5	< 0.011	< 0.011	< 0.011	0.033	< 0.011	< 0.056	< 0.011	0.11	0.036	< 0.056	0.25	0.22	0.11	0.12	< 0.28	0.072	0.085	0.13	0.075	0.018	0.082	0.17
TP7	TP7-103111-2.0	10/31/2011	2.0	< 0.0071	< 0.0071	< 0.0071	< 0.0071	< 0.0071	< 0.035	< 0.0071	0.012	< 0.0071	< 0.035	0.017	0.019	0.011	0.011	< 0.18	0.0076	0.0075	0.011	< 0.0071	< 0.0071	< 0.0071	0.01
TP8	TP8-103111-1.0	10/31/2011	1.0	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.035	< 0.0069	< 0.0069	< 0.0069	< 0.035	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.17	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	0.01
TP8	TP8-103111-4.0	10/31/2011	4.0	< 0.0072	< 0.0072	< 0.0072	< 0.0072	< 0.0072	< 0.036	< 0.0072	0.0097	< 0.0072	< 0.036	0.0096	0.010	< 0.0072	< 0.0072	< 0.18	< 0.0072	< 0.0072	< 0.0072	< 0.0072	< 0.0072	< 0.0072	0.01
TP8	TP8-103111-7.5	10/31/2011	7.5	0.0091	< 0.0075	< 0.0075	< 0.0075	< 0.0075	< 0.037	< 0.0075	0.017	< 0.0075	< 0.037	0.040	0.023	0.011	0.018	< 0.19	0.012	0.010	0.012	0.0077	< 0.0075	0.0091	0.02
TP9	TP9-103111-2.0	10/31/2011	2.0	< 0.0071	< 0.0071	< 0.0071	< 0.0071	< 0.0071	< 0.035	< 0.0071	0.013	< 0.0071	< 0.035	0.016	0.012	< 0.0071	0.0079	0.19	< 0.0071	< 0.0071	< 0.0071	< 0.0071	< 0.0071	< 0.0071	0.01
TP10	TP10-103111-1.5	10/31/2011	1.5	< 0.0074	< 0.0074	< 0.0074	< 0.0074	< 0.0074	< 0.037	< 0.0074	0.051	0.012	< 0.037	0.057	0.070	0.028	0.032	< 0.19	0.024	0.022	0.042	0.019	< 0.0074	0.023	0.05
EX1	EX1-12.5	7/9/2013	12.5	< 0.0087	< 0.0087	< 0.0087	< 0.0087	< 0.0087	< 0.043	< 0.0087	< 0.0087	< 0.0087	< 0.043	< 0.0087	< 0.0087	< 0.0087	< 0.0087	< 0.043	< 0.0087	< 0.0087	< 0.0087	< 0.0087	< 0.0087	< 0.0087	0.013
EX2	EX2-12.5	7/9/2013	12.5	< 0.0084	< 0.0084	< 0.0084	< 0.0084	< 0.0084	< 0.042	< 0.0084	< 0.0084	< 0.0084	< 0.042	< 0.0084	< 0.0084	< 0.0084	< 0.0084	< 0.042	< 0.0084	< 0.0084	< 0.0084	< 0.0084	< 0.0084	< 0.0084	0.013
Selected Screening Level																									
MTCA Method A, Industrial Land Use Cleanup Level for Soil <sup>5</sup>											2														
MTCA Method A, Unrest	tricted Land Use Cleanup Le	evel for Soil <sup>5</sup>																							0.1
MTCA Method B, Unrest	tricted Land Use Cleanup Le	evel for Soil 6																							0.14
MTCA Method C, Unrest	tricted Land Use Cleanup Le	evel for Soil 7																							0.18

NOTES:

Results in **bold** denote concentrations above preliminary screening level.

< denotes analyte not detected at or above the reporting limit listed.

<sup>1</sup>Depth in feet below ground surface.

<sup>2</sup>Analyzed by U.S. Environmental Protection Agency Method 8270D/SIM

<sup>3</sup>Analytical results shown are limited to analytes with concentrations detected above the associated laboratory practical quantitation limits.

<sup>4</sup>Total carcinogenic polycyclic aromatic hydrocarbons derived using the total toxicity equivalency method in Section 708(8) of Chapter 173-340 of the Washington Administrative Code.

<sup>5</sup>Washington State Model Toxics Control Act Cleanup Regulation (MTCA) Method A Soil Cleanup Levels for Unrestricted Land Uses, Table 740-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, as revised November 2007.

<sup>6</sup>Washington State Department of Ecology Cleanup Levels and Risk Calculations under MTCA Standard Method B Formula Values for Soil (Unrestricted Land Use) - Direct Contact (Ingestion Only) and Leaching Pathway, https://fortress.wa.gov/ecy/clarc/Reporting/ChemicalQuery.aspx

<sup>7</sup>Washington State Department of Ecology Cleanup Levels and Risk Calculations under MTCA Standard Method C Formula Values for Soil (Industrial Land Use) - Direct Contact (Ingestion Only) and Leaching Pathway, https://fortress.wa.gov/ecy/clarc/Reporting/ChemicalQuery.aspx

cPAHs = carcinogenic polycyclic aromatic hydrocarbons TEC = toxic equivalent concentration

### Table 4 Summary of Soil Analytical Results - Metals MJB North Dock Area Anacortes, Washington Farallon PN: 299-002

	Sample			Sample Depth			A	Analytical Resu	ılts (milligrams	per kilogram)	2	
Sample Location	Identification	Sampled By	Sample Date	·	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc
TP1	TP1-103111-3.0	Farallon	10/31/2011	3.0	<11	0.66	43	330	9.9	<0.28	39	1,600
TP2	TP2-103111-2.5	Farallon	10/31/2011	2.5	<11	< 0.54	39	58	9.7	< 0.27	51	130
TP3	TP3-103111-4.0	Farallon	10/31/2011	4.0	<12	< 0.58	43	30	10	<0.29	35	64
TP4	TP4-103111-2.0	Farallon	10/31/2011	2.0	<12	< 0.61	48	44	<6.1	< 0.30	46	67
TP5	TP5-103111-1.5	Farallon	10/31/2011	1.5	<11	< 0.55	31	18	<5.5	< 0.28	42	27
TP5	TP5-103111-7.5	Farallon	10/31/2011	7.5	<11	< 0.55	27	25	<5.5	< 0.27	42	44
TP5	TP5-103111-11.5	Farallon	10/31/2011	11.5	<15	2.2	36	98	240	< 0.77	26	700
TP6	TP6-103111-1.5	Farallon	10/31/2011	1.5	<11	< 0.56	28	30	20	<0.28	18	52
TP6	TP6-103111-7.5	Farallon	10/31/2011	7.5	<12	< 0.58	21	32	17	4.4	21	70
TP6	TP6-103111-11.5	Farallon	10/31/2011	11.5	<17	< 0.83	26	65	66	< 0.42	26	90
TP7	TP7-103111-2.0	Farallon	10/31/2011	2.0	<11	< 0.53	35	20	6.1	< 0.26	39	45
TP8	TP8-103111-1.0	Farallon	10/31/2011	1.0	<10	< 0.52	58	82	7.3	< 0.26	61	82
TP8	TP8-103111-4.0	Farallon	10/31/2011	4.0	<11	< 0.54	41	24	14	< 0.27	56	36
TP8	TP8-103111-7.5	Farallon	10/31/2011	7.5	<11	< 0.56	41	34	7.9	<0.28	44	66
TP9	TP9-103111-2.0	Farallon	10/31/2011	2.0	<11	< 0.53	41	22	<5.3	< 0.27	54	31
TP10	TP10-103111-1.5	Farallon	10/31/2011	1.5	<11	< 0.56	52	62	21	<0.28	69	78
EX1	EX1-12.5	Farallon	7/9/2013	12.5		<0.65				< 0.32		
EX2	EX2-12.5	Farallon	7/9/2013	12.5		< 0.63				< 0.31		
Selected Screening L	evel				13	1.21	117 <sup>7</sup>	52.9 <sup>7</sup>	220	0.13 <sup>7</sup>	54.2 <sup>7</sup>	101
MTCA Method A Cl	leanup Levels for Soi	1 <sup>3</sup>			20	2	2,000	3,000	250	2	1,600	24,000
MTCA Method B Cleanup Levels for Soil <sup>4</sup>					24	80	NE	3,000	NE	24	1,600	24,000
MTCA Method B Protective of Groundwater as Marine Surface Water <sup>5</sup>					0.08	1.21	NE	1.07	1.620	0.03	10.7	101
MTCA Method B Pr	otective of Terrestria	al Ecological Recep	tors <sup>6</sup>		20	25	42	100	220	9	100	270
Area Background					8.47	1.2	117	NE	NE	0.13	54.2	85.6

NOTES:

Results in **bold** denote concentrations above preliminary screening level.

Results highlighted in yellow denote that sample results exceed applicable Washington State Model Toxics Control Act Cleanup Regulation Method A cleanup levels for Soil.

< denotes analyte not detected at or above the laboratory reporting limit listed.

<sup>1</sup>Depth in feet below ground surface.

<sup>2</sup>Analyzed by U.S. Environmental Protection Agency Method 6010B/7471A.

<sup>3</sup>Washington State Model Toxics Control Act Cleanup Regulation (MTCA) Method A Soil Cleanup Levels for Unrestricted Land Uses, Table 740-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, as amended November 2007.

<sup>4</sup>Washington State Department of Ecology Cleanup levels and Risk Calculations under MTCA, Standard Method B Formula Values for Soil (Unrestricted Land Use) - Direct Contact (Ingestion Only). Carcinogen values used where established.

<sup>5</sup>Calculated using fixed parameter three-phase partitioning model Washington Administrative Code (WAC) 173-340-747(4).

<sup>6</sup>Concentrations based on simplified ecological terrestrial evaluation in WAC 173-340-7492; concentrations listed in Table 749-2 (unrestricted land use values).

<sup>7</sup>The screening level of some metals is adjusted for regional background concentrations within Skagit/Whatcom Counties or western Washington as reported by the Washington State Department of Ecology.

Farallon = Farallon Consulting, L.L.C. NE = not established

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## Table 5Summary of Soil Analytical Results - Polychlorinated BiphenylsMJB North Dock AreaAnacortes, WashingtonFarallon PN: 299-001

				Sample		Analy	tical Result	s (milligrar	ns per kilog	gram) <sup>2</sup>	
Sample				Depth	Aroclor	Aroclor	Aroclor	Aroclor	Aroclor	Aroclor	Aroclor
Location	Sample Identification	Sampled By	Sample Date	(feet) <sup>1</sup>	1016	1221	1232	1242	1248	1254	1260
TP1	TP1-103111-3.0	Farallon	10/31/2011	3.0	< 0.055	< 0.055	< 0.055	< 0.055	< 0.055	< 0.055	< 0.055
TP2	TP2-103111-2.5	Farallon	10/31/2011	2.5	< 0.0054	< 0.0054	< 0.0054	< 0.0054	< 0.0054	< 0.0054	< 0.0054
TP3	TP3-103111-4.0	Farallon	10/31/2011	4.0	< 0.058	< 0.058	< 0.058	< 0.058	< 0.058	< 0.058	< 0.058
TP4	TP4-103111-2.0	Farallon	10/31/2011	2.0	< 0.061	< 0.061	< 0.061	< 0.061	< 0.061	< 0.061	< 0.061
TP5	TP5-103111-1.5	Farallon	10/31/2011	1.5	< 0.055	< 0.055	< 0.055	< 0.055	< 0.055	< 0.055	< 0.055
TP5	TP5-103111-7.5	Farallon	10/31/2011	7.5	< 0.055	< 0.055	< 0.055	< 0.055	< 0.055	< 0.055	< 0.055
TP5	TP5-103111-11.5	Farallon	10/31/2011	11.5	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15
TP6	TP6-103111-1.5	Farallon	10/31/2011	1.5	< 0.056	< 0.056	< 0.056	< 0.056	< 0.056	< 0.056	< 0.056
TP6	TP6-103111-7.5	Farallon	10/31/2011	7.5	< 0.058	< 0.058	< 0.058	< 0.058	< 0.058	< 0.058	< 0.058
TP6	TP6-103111-11.5	Farallon	10/31/2011	11.5	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083
TP7	TP7-103111-2.0	Farallon	10/31/2011	2.0	< 0.053	< 0.053	< 0.053	< 0.053	< 0.053	< 0.053	< 0.053
TP8	TP8-103111-1.0	Farallon	10/31/2011	1.0	< 0.052	< 0.052	< 0.052	< 0.052	< 0.052	< 0.052	< 0.052
TP8	TP8-1031111-4.0	Farallon	10/31/2011	4.0	< 0.054	< 0.054	< 0.054	< 0.054	< 0.054	< 0.054	< 0.054
TP8	TP8-103111-7.5	Farallon	10/31/2011	7.5	< 0.056	< 0.056	< 0.056	< 0.056	< 0.056	< 0.056	< 0.056
TP9	TP9-103111-2.0	Farallon	10/31/2011	2.0	< 0.053	< 0.053	< 0.053	< 0.053	< 0.053	< 0.053	< 0.053
TP10	TP10-103111-1.5	Farallon	10/31/2011	1.5	< 0.056	< 0.056	< 0.056	< 0.056	< 0.056	< 0.056	< 0.056
Selected Screen	ning Level				5.6	NE	NE	NE	NE	0.5	0.5
MTCA Methoo	A Cleanup Levels for So	oil <sup>3</sup>			NE	NE	NE	NE	NE	NE	NE
MTCA Methoo	B Cleanup Levels for So	oil <sup>4</sup>			5.6	NE	NE	NE	NE	0.5	0.5

NOTES:

< denotes analyte not detected at or above the reporting limit listed. <sup>1</sup>Depth in feet below ground surface.

Farallon = Farallon Consulting, L.L.C. NE = not established.

<sup>2</sup>Analyzed by U.S. Environmental Protection Agency Method 8082.

<sup>3</sup>Washington State Model Toxics Control Act Cleanup Regulation (MTCA) Method A Soil Cleanup Levels for Unrestricted Land Uses, Table 740-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, as amended November 2007.

<sup>4</sup>Washington State Department of Ecology Cleanup Levels and Risk Calculations under MTCA Standard Method B Formula Values for Soil (Unrestricted Land Use) - Direct Contact (Ingestion Only) and Leaching Pathway, https://fortress.wa.gov/ecy/clarc/Reporting/ChemicalQuery.aspx

## Table 6Summary of Soil Analytical Results - Dioxins and FuransMJB North Dock AreaAnacortes, WashingtonFarallon PN: 299-001

				Sample Depth	Analytical Results (ng/kg) <sup>2</sup>						
Sample Location	Sample Identification	Sampled By	Sample Date	(feet) <sup>1</sup>	TEQ <sup>3</sup>						
TP1	TP1-103111-3.0	Farallon	10/31/2011	3.0	0.12						
TP4	TP4-103111-2.0	Farallon	10/31/2011	2.0	0.14						
TP5	TP5-103111-1.5	Farallon	10/31/2011	1.5	0.24						
TP5	TP5-103111-7.5	Farallon	10/31/2011	7.5	0.075						
TP6	TP6-103111-1.5	Farallon	10/31/2011	1.5	1.1						
TP6	TP6-103111-7.5	Farallon	10/31/2011	7.5	0.76						
TP10	TP10-103111-1.5	Farallon	10/31/2011	1.5	0.34						
Screening Level for	r Total Dioxins/Furans-Huma	n Health			11						
Screening Level for	Screening Level for Total Dioxins-Ecological <sup>4</sup>										
Screening Level for	r Total Furans- Ecological <sup>4</sup>	3.0									
Screening Level for	r Total Dioxins/Furans-Indus		1,460								

NOTES:

<sup>1</sup>Depth in feet below ground surface.

<sup>2</sup>Analyzed by U.S. Environmental Protection Agency Method 8290.

<sup>3</sup>Per MTCA (WAC 173-340-708[8][D]), 7 chlorinated dibenzo-p-dioxins (CDDs) and 10 chlorinated dibenzofuran cogeners (CDFs) were tested to enable calculation of a toxicity equivalency quotient (TEQ) concentration of 2,3,7,8-tetrachlorodibenzo-p-dioxin. The reference chemical was 2,3,7,8-tetrachlorodibenzo-p-dioxin because it is the most toxic and best studied of the 210 CDDs and CDFs. Toxicity Equivalent Quotient based on Vanden Berg et al. 2006. *The 2005 World Health Organization Re-evaluation of Human and Mammalian Toxic Equivalency Factors For Dioxins/ and Dioxin-like compounds.* 

<sup>4</sup>Concentration based on simplified terrestrial ecological evaluation in WAC 173-340-7492 concentrations listed in Table 749-2 (unrestricted land use values).

Farallon = Farallon Consulting, L.L.C. ng/kg = nanograms per kilogram TEQ = Toxicity Equivalency Quotient

# Table 7 Summary of Groundwater Analytical Results - Total Petroleum Hydrocarbons MJB North Dock Area Anacortes, Washington Farallon PN: 299-001

					Α	nalytical Re	sults (microg	rams per lite	r)	
Monitoring Well	Sample Identification	Sampled By	Sample Date	<b>DRO</b> <sup>1</sup>	<b>ORO</b> <sup>1</sup>	<b>GRO</b> <sup>2</sup>	Benzene <sup>3</sup>	Toluene <sup>3</sup>	Ethyl- benzene <sup>3</sup>	Xylenes <sup>3</sup>
MW-1	MW-1-112811	Farallon	11/28/2011	<260	<410	<100	< 0.20	<1.0	< 0.20	< 0.60
MW-2	MW-2-112811	Farallon	11/28/2011	<260	<410	<100	< 0.20	<1.0	< 0.20	< 0.60
MW-3	MW-3-112811	Farallon	11/28/2011	<260	<410	<100	< 0.20	<1.0	< 0.20	<0.60
MTCA Metho	d A Cleanup Levels fo	or Groundwater <sup>4</sup>		500	500	1,000	5	1,000	700	1,000

NOTES:

< denotes analyte not detected at or above the reporting limit listed.

<sup>1</sup>Analyzed by Northwest Method NWTPH-Dx.

<sup>2</sup>Analyzed by Northwest Method NWTPH-Gx.

<sup>3</sup>Analyzed by U.S. Environmental Protection Agency Method 8260B.

<sup>4</sup>Washington State Model Toxics Control Act Cleanup Regulation Method A Cleanup Levels for Groundwater, Table 720-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, as revised November 2007.

DRO = total petroleum hydrocarbons (TPH) as diesel-range organics Farallon = Farallon Consulting, L.L.C.

GRO = TPH as gasoline-range organics

ORO = TPH as oil-range organics

## Table 8 Summary of Groundwater Analytical Results - Volatile Organic Compounds MJB North Dock Area Anacortes, Washington Farallon PN: 299-001

			Analytical Results (n	nicrograms per liter) <sup>1</sup>
Monitoring Well	Sample Identification	Sample Date	Carbon Disulfide	p-Isopropyltoluene
MW-1	MW-1-112811	11/28/2011	< 0.20	<0.20
MW-2	MW-2-112811	11/28/2011	0.31	0.47
MW-3	MW-3-112811	11/28/2011	<0.20	<0.20
MTCA Method A Cleanup I	Levels for Groundwater <sup>2</sup>		NE	NE
MTCA Method B (carcinoge	en) Cleanup Levels for Ground	dwater <sup>3</sup>	NE	NE
MTCA Method B (non-carci	inogen) Cleanup Levels for Gi	oundwater <sup>3</sup>	800	-

NOTES:

< denotes analyte not detected at or above the reporting limit listed.

<sup>1</sup>Analyzed by U.S. Environmental Protection Agency Method 8260B.

MTCA = Washington State Model Toxics Control Act Cleanup Regulation NE = not established

<sup>2</sup>Washington State Model Toxics Control Act Cleanup Regulation Method A Cleanup Levels for Groundwater, Table 720-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, as revised November 2007.

<sup>3</sup>Washington State Model Toxics Control Act Cleanup Regulation Cleanup Levels and Risk Calculations, Standard Method B Values for Groundwater,

https://fortress.wa.gov/ecy/clarc/Reporting/ChemicalQuery.aspx

# Table 9 Summary of Groundwater Analytical Results - Semivolatile Organic Compounds MJB North Dock Area Anacortes, Washington Farallon PN: 299-001

			Analytical Results (micrograms per liter) <sup>1</sup>							-	
Monitoring Well	Sample Identification	Sample Date	Phenol	2-Methylphenol (O-Cresol)	(3+4)-Methylphenol (m,p-Cresol)	2,4-Dimethylphenol	Naphthalene	2-Methylnaphthalene	1-Methylnaphthalene	Benzo(a)anthracene	Benzo(b)fluoranthene
MW-1	MW-1-112811	11/28/2011	< 0.94	< 0.94	< 0.94	< 0.94	< 0.094	< 0.094	< 0.094	0.012	< 0.0094
MW-2	MW-2-112811	11/28/2011	3.9	1.8	9.3	2.2	0.43	0.12	0.097	< 0.0096	0.011
MW-3	MW-3-112811	11/28/2011	< 0.96	< 0.96	< 0.96	< 0.96	< 0.096	< 0.096	< 0.096	< 0.0096	< 0.0096
MTCA Method A Cle	eanup Levels for Ground	water <sup>2</sup>	NE	NE	NE	NE	160	NE	NE	NE	NE
MTCA Method B (ca	rcinogen) Cleanup Level	s for Groundwater <sup>3</sup>	NE	NE	NE	NE	NE	NE	1.5	0.12	0.12
MTCA Method B (no	on-carcinogen) Cleanup l	Levels for Groundwater <sup>3</sup>	2,400	NE	8	160	160	32	NE	NE	NE

NOTES:

< denotes analyte not detected at or above the reporting limit listed.

Results highlighted in yellow denote that sample results exceed applicable Washington State Model Toxics Control Act Cleanup Regulation Method A cleanup levels for groundwater.

EX1 = MW-1 excavation EX2 = MW-2 excavation NE = not established.

<sup>1</sup>Analyzed by U.S. Environmental Protection Agency Method 8260B.

<sup>2</sup>Washington State Model Toxics Control Act Cleanup Regulation (MTCA) Method A Cleanup Levels for Groundwater, Table 720-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, as revised November 2007.

<sup>3</sup>Washington State Model Toxics Control Act Cleanup Regulation Cleanup Levels and Risk Calculations,

Standard Method B Values for Groundwater, https://fortress.wa.gov/ecy/clarc/Reporting/ChemicalQuery.aspx

# Table 10Summary of Groundwater Analytical Results - MetalsMJB North Dock AreaAnacortes, WashingtonFarallon PN: 299-001

	Sample			Analytical Results (micrograms per liter) <sup>1</sup>							
Monitoring Well	Identification	Sampled By	Sample Date	Cadmium	Arsenic	Chromium	Copper	Lead	Mercury	Nickel	Zinc
MW-1	MW-1-112811	Farallon	11/28/11	<4.0	<3.0	<10	<10	<1.0	< 0.50	40	26
MW-2	MW-2-112811	Farallon	11/28/11	<4.0	<3.0	<10	<10	9.5	< 0.50	<20	<25
MW-3	MW-3-112811	Farallon	11/28/11	<4.0	<3.0	<10	<10	<1.0	< 0.50	<20	<25
MTCA Method A Cl	eanup Levels for Gr	roundwater <sup>2</sup>		5	5	50	NE	15	2	NE	NE

NOTES:

Results in **bold** denote concentrations above applicable cleanup levels.

< denotes analyte not detected at or above the laboratory reporting limit listed.

<sup>1</sup>Analyzed by U.S. Environmental Protection Agency Method 200.8/7470A

<sup>2</sup>Washington State Model Toxics Control Act Cleanup Regulation (MTCA) Method A Cleanup Levels for Groundwater, Table 720-1 of Section 900 of Chapter 173-

340 of the Washington Administrative Code, as amended November 2007.

Farallon = Farallon Consulting, L.L.C. NE = not established.

## Table 11 Excavation Confirmation Soil Sample Analytical Results - Semivolatile Organic Compounds MJB North Dock Area Anacortes, Washington PN: 299-001

													Ana	lytical Resu	ults (milligra	ams per kilog	gram) <sup>2</sup>								
Sample Location	Sample Identification	Sample Date	Sample Depth (feet) <sup>1</sup>	Naphthalene	2-Methylhaphthalene	1-Methylnaphthalene	Acenaphthylene	Acenaphthene	Dibenzofuran	Fluorene	Phenanthrene	Anthracene	Carbazole	Fluoranthene	Pyrene	Benzo(a)anthracene	Chrysene	bis(2-Ethylhexyl) phthalate	Benzo(b)fluoranthene	Benzo(j,k)fluoranthene	Benzo(a)pyrene	Indeno(1,2,3-c,d)pyrene	Dibenz(a,h)anthracene	Benzo(g,h,i)perylene	Total cPAHs TEC <sup>3</sup>
EX1	EX1-12.5	7/9/2013	12.5	< 0.0087	< 0.0087	< 0.0087	< 0.0087	< 0.0087	< 0.043	< 0.0087	< 0.0087	< 0.0087	< 0.043	< 0.0087	< 0.0087	< 0.0087	< 0.0087	< 0.043	< 0.0087	< 0.0087	< 0.0087	< 0.0087	< 0.0087	< 0.0087	0.013
EX2	EX2-12.5	7/9/2013	12.5	< 0.0084	< 0.0084	< 0.0084	< 0.0084	< 0.0084	< 0.042	< 0.0084	< 0.0084	< 0.0084	< 0.042	< 0.0084	< 0.0084	< 0.0084	< 0.0084	< 0.042	< 0.0084	< 0.0084	< 0.0084	< 0.0084	< 0.0084	< 0.0084	0.013
Selected Screeni	ing Level																								0.14
MTCA Method	A, Industrial Lan	d Use Clean	up Level for	Soil <sup>4</sup>																					2
MTCA Method	A, Unrestricted L	and Use Cle	anup Level f	or Soil <sup>4</sup>																					0.1
	B, Unrestricted L		-	_																					0.14
	C, Unrestricted L																								0.18
NOTES:	e concentrations above		<b>^</b>												cPAHs = carci	nogenic polycycl	ic aromatic hyd	lrocarbons							
	detected at or above th	e reporting limit	listed.													quivalent concent									
<sup>1</sup> Depth in feet below	ground surface.																								

<sup>2</sup>Analyzed by U.S. Environmental Protection Agency Method 8270D/SIM

<sup>3</sup>Total carcinogenic polycyclic aromatic hydrocarbons derived using the total toxicity equivalency method in Section 708(8) of Chapter 173-340 of the Washington Administrative Code.

<sup>4</sup>Washington State Model Toxics Control Act Cleanup Regulation (MTCA) Method A Soil Cleanup Levels for Unrestricted Land Uses, Table 740-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, as revised November 2007.

<sup>5</sup>Washington State Department of Ecology Cleanup Levels and Risk Calculations under MTCA Standard Method B Formula Values for Soil (Unrestricted Land Use) - Direct Contact (Ingestion Only) and Leaching Pathway, https://fortress.wa.gov/ecy/clarc/Reporting/ChemicalQuery.aspx

<sup>6</sup>Washington State Department of Ecology Cleanup Levels and Risk Calculations under MTCA Standard Method C Formula Values for Soil (Industrial Land Use) - Direct Contact (Ingestion Only) and Leaching Pathway, https://fortress.wa.gov/ecy/clarc/Reporting/ChemicalQuery.aspx

## Table 12 Excavation Confirmation Soil Sample Analytical Results - Total Metals MJB North Dock Area Anacortes, Washington PN: 299-001

	Sample			Sample Depth	Analytical Results (mil	lligrams per kilogram) <sup>2</sup>
Sample Location	Identification	Sampled By	Sample Date	(feet) <sup>1</sup>	Cadmium	Mercury
EX1	EX1-12.5	Farallon	7/9/2013	12.5	<0.65	< 0.32
EX2	EX2-12.5	Farallon	7/9/2013	12.5	< 0.63	< 0.31
Selected Screening L	evel				1.21	<b>0.13</b> <sup>7</sup>
MTCA Method A Cl	eanup Levels for So	il <sup>3</sup>			2	2
MTCA Method B Cl	eanup Levels for So	il <sup>4</sup>			80	24
MTCA Method B Pr	otective of Terrestri	al Ecological Rece	otors <sup>6</sup>		25	9
Area Background			1.2	0.13		

NOTES:

Results in **bold** denote concentrations above preliminary screening level.

Results highlighted in yellow denote that sample results exceed applicable Washington State Model Toxics Control Act Cleanup Regulation Method A cleanup levels for Soil Farallon = Farallon Consulting, L.L.C. NE = not established

Model Toxics Control Act Cleanup Regulation Method A cleanup levels for Soil.

< denotes analyte not detected at or above the laboratory reporting limit listed.

<sup>1</sup>Depth in feet below ground surface.

<sup>2</sup>Analyzed by U.S. Environmental Protection Agency Method 6010C/7471B (RCRA 8).

<sup>3</sup>Washington State Model Toxics Control Act Cleanup Regulation (MTCA) Method A Soil Cleanup Levels for Unrestricted Land Uses, Table 740-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, as amended November 2007.

<sup>4</sup>Washington State Department of Ecology Cleanup levels and Risk Calculations under MTCA, Standard Method B Formula Values for Soil (Unrestricted

Land Use) - Direct Contact (Ingestion Only). Carcinogen values used where established.

<sup>5</sup>Calculated using fixed parameter three-phase partitioning model Washington Administrative Code (WAC) 173-340-747(4).

<sup>6</sup>Concentrations based on simplified ecological terrestrial evaluation in WAC 173-340-7492; concentrations listed in Table 749-2 (unrestricted land use values).

<sup>7</sup>The screening level of some metals is adjusted for regional background concentrations within Skagit/Whatcom Counties or western Washington as reported by the Washington State Department of Ecology.

## Table 13 Summary of Soil Stockpile Analytical Results - Total RCRA 8 Metals MJB North Dock Area Anacortes, Washington Farallon PN: 299-001

	Sample			Sample Depth	Analytical Results (milligrams per kilogram) <sup>2</sup>							
Sample Location	Identification	Sampled By	Sample Date	(feet) <sup>1</sup>	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
Stockpile SP1	SP1-070913	Farallon	7/9/2013	0.5	< 0.13	87	<0.65	46	12	< 0.33	<13	<1.3
Selected Screening I	level				13		1.21	117 <sup>7</sup>	220	0.13 <sup>7</sup>	< 0.40	< 0.040
MTCA Method A C	leanup Levels for So	oil <sup>3</sup>			20	NE	2	2,000	250	2	NE	NE
MTCA Method B C	leanup Levels for So	oil <sup>4</sup>			24	16,000	80	NE	NE	24	400	400
MTCA Method B Pi	MTCA Method B Protective of Terrestrial Ecological Receptors <sup>6</sup>				20	1,250	25	42	220	9	0.8	NE
Area Background					8.47	NE	1.2	117	NE	0.13	NE	NE

NOTES:

Results in **bold** denote concentrations above preliminary screening level.

Results highlighted in yellow denote that sample results exceed applicable Washington State Model Toxics Control Act Cleanup Regulation Method A cleanup levels for soil.

Farallon = Farallon Consulting, L.L.C. NE = not established RCRA = Resource Conservation and Recovery Act

< denotes analyte not detected at or above the laboratory reporting limit listed.

<sup>1</sup>Depth in feet below ground surface.

<sup>2</sup>Analyzed by U.S. Environmental Protection Agency Method 6010B/7471A (RCRA 8).

<sup>3</sup>Washington State Model Toxics Control Act Cleanup Regulation (MTCA) Method A Soil Cleanup Levels for Unrestricted Land Uses, Table 740-1 of Section 900 of Chapter 173-340 of

the Washington Administrative Code, as amended November 2007.

<sup>4</sup>Washington State Department of Ecology Cleanup levels and Risk Calculations under MTCA, Standard Method B Formula Values for Soil (Unrestricted Land Use) - Direct Contact

(Ingestion Only). Carcinogen values used where established.

<sup>5</sup>Calculated using fixed parameter three-phase partitioning model Washington Administrative Code (WAC) 173-340-747(4).

<sup>6</sup>Concentrations based on simplified ecological terrestrial evaluation in WAC 173-340-7492; concentrations listed in Table 749-2 (unrestricted land use values).

<sup>7</sup>The screening level of some metals is adjusted for regional background concentrations within Skagit/Whatcom Counties or western

Washington as reported by the Washington State Department of Ecology.

## Table 14 Summary of Soil Stockpile Analytical Results - TCLP RCRA 8 Metals MJB North Dock Area Anacortes, Washington PN: 299-001

	Sample			Sample Depth	Sample Depth Analytical Results (milligrams per liter) <sup>2</sup>							
Sample Location	Identification	Sampled By	Sample Date	(feet) <sup>1</sup>	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
Stockpile SP1	SP1-070913	Farallon	07/09/13	0.5	< 0.40	0.24	< 0.020	< 0.020	< 0.20	< 0.0050	< 0.40	< 0.040
Maximum Concentra	ation of Contaminar	nts for the Toxicity (	Characteristic	3	5.0	100	1.0	5.0	5.0	0.2	1.0	5.0

NOTES:

Results in **bold** denote concentrations above screening level.

< denotes analyte not detected at or above the laboratory reporting limit listed.

<sup>1</sup>Depth in feet below ground surface.

<sup>2</sup>Analyzed by U.S. Environmental Protection Agency Method 1311/6010C (RCRA 8).

<sup>3</sup>40 CFR §261.24 - Maximum Concentration of Contaminants for the Toxicity Characteristic

Farallon = Farallon Consulting, L.L.C. RCRA = Resource Conservation and Recovery Act TCLP = Toxicity Characteristic Leaching Procedure

## ATTACHMENT A WASTE DISPOSAL DOCUMENTATION

CLOSURE REPORT MJB North Dock Area Anacortes, Washington

Farallon PN: 299-001

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## **SAFETY MEMOS:**

- Hard hats MUST be worn.
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  Passengers MUST remain in vehicle at all times. SIGNATURE

## ATTACHMENT B ANALYTICAL REPORT

CLOSURE REPORT MJB North Dock Area Anacortes, Washington

Farallon PN: 299-001



14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 • (425) 883-3881

July 15, 2013

Riley Conkin Farallon Consulting, LLC Queen Anne Square East Bldg. 200 West Mercer Street, Suite 302 Seattle, WA 98119

Re: Analytical Data for Project 299-001 Laboratory Reference No. 1307-054

Dear Riley:

Enclosed are the analytical results and associated quality control data for samples submitted on July 9, 2013.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister Project Manager

Enclosures

#### **Case Narrative**

Samples were collected on July 9, 2013 and received by the laboratory on July 9, 2013. They were maintained at the laboratory at a temperature of  $2^{\circ}$ C to  $6^{\circ}$ C.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

#### Total Metals EPA 6010C/7471B Analysis

The duplicate RPD for Chromium is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

### SEMIVOLATILES EPA 8270D/SIM page 1 of 2

Matrix: Soil Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flace
Client ID:	EX1-12.5	FQL	Wethod	Flepareu	Analyzeu	Flags
	07-054-01					
Laboratory ID: n-Nitrosodimethylamine	ND	0.043	EPA 8270D	7-10-13	7-11-13	
Pyridine	ND	0.043	EPA 8270D EPA 8270D	7-10-13	7-11-13	
Phenol	ND	0.43	EPA 8270D EPA 8270D	7-10-13	7-11-13	
Aniline	ND	0.043	EPA 8270D	7-10-13	7-11-13	
bis(2-Chloroethyl)ether	ND	0.22	EPA 8270D	7-10-13	7-11-13	
	ND	0.043	EPA 8270D EPA 8270D	7-10-13	7-11-13	
2-Chlorophenol 1,3-Dichlorobenzene	ND	0.043	EPA 8270D	7-10-13	7-11-13	
1,4-Dichlorobenzene	ND	0.043	EPA 8270D	7-10-13	7-11-13	
	ND	0.043	EPA 8270D	7-10-13	7-11-13	
Benzyl alcohol	ND	0.22	EPA 8270D EPA 8270D	7-10-13	7-11-13	
1,2-Dichlorobenzene 2-Methylphenol (o-Cresol)	ND	0.043	EPA 8270D EPA 8270D	7-10-13	7-11-13	
bis(2-Chloroisopropyl)ether	ND	0.043				
	ND		EPA 8270D EPA 8270D	7-10-13	7-11-13	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.043		7-10-13 7-10-13	7-11-13 7-11-13	
n-Nitroso-di-n-propylamine Hexachloroethane	ND	0.043	EPA 8270D	7-10-13	7-11-13	
		0.043	EPA 8270D		-	
Nitrobenzene	ND	0.043	EPA 8270D	7-10-13	7-11-13	
sophorone	ND	0.043	EPA 8270D	7-10-13	7-11-13	
2-Nitrophenol	ND ND	0.043	EPA 8270D	7-10-13	7-11-13	
2,4-Dimethylphenol		0.043	EPA 8270D	7-10-13	7-11-13	
bis(2-Chloroethoxy)methane	ND ND	0.043	EPA 8270D	7-10-13 7-10-13	7-11-13 7-11-13	
2,4-Dichlorophenol		0.043	EPA 8270D		-	
1,2,4-Trichlorobenzene	ND	0.043	EPA 8270D	7-10-13	7-11-13	
Naphthalene	ND	0.0087	EPA 8270D/SIM	7-10-13	7-10-13	
4-Chloroaniline	ND	0.22	EPA 8270D	7-10-13	7-11-13	
Hexachlorobutadiene	ND	0.043	EPA 8270D	7-10-13	7-11-13	
4-Chloro-3-methylphenol	ND	0.043	EPA 8270D	7-10-13	7-11-13	
2-Methylnaphthalene	ND	0.0087	EPA 8270D/SIM	7-10-13	7-10-13	
1-Methylnaphthalene	ND	0.0087	EPA 8270D/SIM	7-10-13	7-10-13	
Hexachlorocyclopentadiene	ND	0.043	EPA 8270D	7-10-13	7-11-13	
2,4,6-Trichlorophenol	ND	0.043	EPA 8270D	7-10-13	7-11-13	
2,3-Dichloroaniline	ND	0.043	EPA 8270D	7-10-13	7-11-13	
2,4,5-Trichlorophenol	ND	0.043	EPA 8270D	7-10-13	7-11-13	
2-Chloronaphthalene	ND	0.043	EPA 8270D	7-10-13	7-11-13	
2-Nitroaniline	ND	0.043	EPA 8270D	7-10-13	7-11-13	
1,4-Dinitrobenzene	ND	0.043	EPA 8270D	7-10-13	7-11-13	
Dimethylphthalate	ND	0.043	EPA 8270D	7-10-13	7-11-13	
1,3-Dinitrobenzene	ND	0.043	EPA 8270D	7-10-13	7-11-13	
2,6-Dinitrotoluene	ND	0.043	EPA 8270D	7-10-13	7-11-13	
1,2-Dinitrobenzene	ND	0.043	EPA 8270D	7-10-13	7-11-13	
Acenaphthylene	ND	0.0087	EPA 8270D/SIM	7-10-13	7-10-13	
3-Nitroaniline	ND	0.043	EPA 8270D	7-10-13	7-11-13	

# SEMIVOLATILES EPA 8270D/SIM

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	EX1-12.5				/	
_aboratory ID:	07-054-01					
2,4-Dinitrophenol	ND	0.22	EPA 8270D	7-10-13	7-11-13	
Acenaphthene	ND	0.0087	EPA 8270D/SIM	7-10-13	7-10-13	
1-Nitrophenol	ND	0.043	EPA 8270D	7-10-13	7-11-13	
2,4-Dinitrotoluene	ND	0.043	EPA 8270D	7-10-13	7-11-13	
Dibenzofuran	ND	0.043	EPA 8270D	7-10-13	7-11-13	
2,3,5,6-Tetrachlorophenol	ND	0.043	EPA 8270D	7-10-13	7-11-13	
2,3,4,6-Tetrachlorophenol	ND	0.043	EPA 8270D	7-10-13	7-11-13	
Diethylphthalate	ND	0.22	EPA 8270D	7-10-13	7-11-13	
1-Chlorophenyl-phenylether		0.043	EPA 8270D	7-10-13	7-11-13	
4-Nitroaniline	ND	0.043	EPA 8270D	7-10-13	7-11-13	
Fluorene	ND	0.0087	EPA 8270D/SIM	7-10-13	7-10-13	
4,6-Dinitro-2-methylphenol	ND	0.22	EPA 8270D	7-10-13	7-11-13	
n-Nitrosodiphenylamine	ND	0.043	EPA 8270D	7-10-13	7-11-13	
I,2-Diphenylhydrazine	ND	0.043	EPA 8270D	7-10-13	7-11-13	
1-Bromophenyl-phenylether		0.043	EPA 8270D	7-10-13	7-11-13	
Hexachlorobenzene	ND	0.043	EPA 8270D	7-10-13	7-11-13	
Pentachlorophenol	ND	0.22	EPA 8270D	7-10-13	7-11-13	
Phenanthrene	ND	0.0087	EPA 8270D/SIM	7-10-13	7-10-13	
Anthracene	ND	0.0087	EPA 8270D/SIM	7-10-13	7-10-13	
Carbazole	ND	0.043	EPA 8270D	7-10-13	7-11-13	
Di-n-butylphthalate	ND	0.043	EPA 8270D	7-10-13	7-11-13	
Fluoranthene	ND	0.0087	EPA 8270D/SIM	7-10-13	7-10-13	
Benzidine	ND	0.43	EPA 8270D	7-10-13	7-11-13	
Pyrene	ND	0.0087	EPA 8270D/SIM	7-10-13	7-10-13	
Butylbenzylphthalate	ND	0.043	EPA 8270D	7-10-13	7-11-13	
pis-2-Ethylhexyladipate	ND	0.043	EPA 8270D	7-10-13	7-11-13	
3,3'-Dichlorobenzidine	ND	0.22	EPA 8270D	7-10-13	7-11-13	
Benzo[a]anthracene	ND	0.0087	EPA 8270D/SIM	7-10-13	7-10-13	
Chrysene	ND	0.0087	EPA 8270D/SIM	7-10-13	7-10-13	
bis(2-Ethylhexyl)phthalate	ND	0.043	EPA 8270D	7-10-13	7-11-13	
Di-n-octylphthalate	ND	0.043	EPA 8270D	7-10-13	7-11-13	
Benzo[b]fluoranthene	ND	0.0087	EPA 8270D/SIM	7-10-13	7-10-13	
Benzo(j,k)fluoranthene	ND	0.0087	EPA 8270D/SIM	7-10-13	7-10-13	
Benzo[a]pyrene	ND	0.0087	EPA 8270D/SIM	7-10-13	7-10-13	
ndeno[1,2,3-cd]pyrene	ND	0.0087	EPA 8270D/SIM	7-10-13	7-10-13	
Dibenz[a,h]anthracene	ND	0.0087	EPA 8270D/SIM	7-10-13	7-10-13	
Benzo[g,h,i]perylene	ND	0.0087	EPA 8270D/SIM	7-10-13	7-10-13	
Surrogate:	Percent Recovery	Control Limits	2.7.02700,010	. 10 10	1 10 10	
2-Fluorophenol	50	24 - 95				
Phenol-d6	54	34 - 101				
Nitrobenzene-d5	44	32 - 102				
2-Fluorobiphenyl	56	44 - 97				
2,4,6-Tribromophenol	47	34 - 124				

### SEMIVOLATILES EPA 8270D/SIM page 1 of 2

Matrix: Soil Units: mg/Kg

Analyta	Result	PQL	Method	Date Prepared	Date Analyzed	Flage
Analyte Client ID:	EX2-12.5	FQL	Wethod	Flepareu	Analyzeu	Flags
	07-054-02					
_aboratory ID: n-Nitrosodimethylamine	07-054-02 ND	0.042	EPA 8270D	7-10-13	7-11-13	
Pyridine	ND	0.042	EPA 8270D EPA 8270D	7-10-13	7-11-13	
Phenol	ND	0.42	EPA 8270D EPA 8270D	7-10-13	7-11-13	
Aniline	ND	0.042	EPA 8270D EPA 8270D	7-10-13	7-11-13	
bis(2-Chloroethyl)ether	ND	0.21	EPA 8270D	7-10-13	7-11-13	
	ND	0.042	EPA 8270D EPA 8270D	7-10-13	7-11-13	
2-Chlorophenol 1,3-Dichlorobenzene	ND	0.042	EPA 8270D	7-10-13	7-11-13	
1,4-Dichlorobenzene	ND	0.042	EPA 8270D	7-10-13	7-11-13	
Benzyl alcohol	ND	0.042	EPA 8270D	7-10-13	7-11-13	
1,2-Dichlorobenzene	ND	0.21	EPA 8270D	7-10-13	7-11-13	
2-Methylphenol (o-Cresol)	ND	0.042	EPA 8270D	7-10-13	7-11-13	
bis(2-Chloroisopropyl)ether	ND	0.042	EPA 8270D	7-10-13	7-11-13	
3+4)-Methylphenol (m,p-Cresol)	ND	0.042	EPA 8270D	7-10-13	7-11-13	
, , ,	ND	0.042	EPA 8270D	7-10-13	7-11-13	
n-Nitroso-di-n-propylamine Hexachloroethane	ND	0.042	EPA 8270D	7-10-13	7-11-13	
Nitrobenzene	ND	0.042	EPA 8270D	7-10-13	7-11-13	
sophorone	ND	0.042	EPA 8270D	7-10-13	7-11-13	
2-Nitrophenol	ND	0.042	EPA 8270D	7-10-13	7-11-13	
2,4-Dimethylphenol	ND	0.042	EPA 8270D	7-10-13	7-11-13	
bis(2-Chloroethoxy)methane	ND	0.042	EPA 8270D	7-10-13	7-11-13	
2,4-Dichlorophenol	ND	0.042	EPA 8270D	7-10-13	7-11-13	
1,2,4-Trichlorobenzene	ND	0.042	EPA 8270D	7-10-13	7-11-13	
Naphthalene	ND	0.0042	EPA 8270D/SIM	7-10-13	7-10-13	
1-Chloroaniline	ND	0.0084	EPA 8270D/310	7-10-13	7-10-13	
Hexachlorobutadiene	ND	0.21	EPA 8270D	7-10-13	7-11-13	
4-Chloro-3-methylphenol	ND	0.042	EPA 8270D	7-10-13	7-11-13	
2-Methylnaphthalene	ND	0.0042	EPA 8270D/SIM	7-10-13	7-10-13	
I-Methylnaphthalene	ND	0.0084	EPA 8270D/SIM	7-10-13	7-10-13	
Hexachlorocyclopentadiene	ND	0.0084	EPA 8270D/SIM	7-10-13	7-10-13	
2,4,6-Trichlorophenol	ND	0.042	EPA 8270D	7-10-13	7-11-13	
2,3-Dichloroaniline	ND	0.042	EPA 8270D	7-10-13	7-11-13	
2,4,5-Trichlorophenol	ND	0.042	EPA 8270D	7-10-13	7-11-13	
2,4,5-mcniorophenoi 2-Chloronaphthalene	ND	0.042	EPA 8270D EPA 8270D	7-10-13	7-11-13	
2-Onioronaphinalene 2-Nitroaniline	ND	0.042	EPA 8270D EPA 8270D	7-10-13	7-11-13	
	ND	0.042	EPA 8270D EPA 8270D	7-10-13	7-11-13	
I,4-Dinitrobenzene	ND			7-10-13	7-11-13	
Dimethylphthalate	ND	0.042 0.042	EPA 8270D	7-10-13	7-11-13	
1,3-Dinitrobenzene			EPA 8270D			
2,6-Dinitrotoluene	ND ND	0.042	EPA 8270D	7-10-13	7-11-13	
1,2-Dinitrobenzene	ND ND	0.042	EPA 8270D	7-10-13	7-11-13	
Acenaphthylene 3-Nitroaniline	ND ND	0.0084 0.042	EPA 8270D/SIM EPA 8270D	7-10-13 7-10-13	7-10-13 7-11-13	

# SEMIVOLATILES EPA 8270D/SIM

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	EX2-12.5				,	
Laboratory ID:	07-054-02					
2,4-Dinitrophenol	ND	0.21	EPA 8270D	7-10-13	7-11-13	
Acenaphthene	ND	0.0084	EPA 8270D/SIM	7-10-13	7-10-13	
4-Nitrophenol	ND	0.042	EPA 8270D	7-10-13	7-11-13	
2,4-Dinitrotoluene	ND	0.042	EPA 8270D	7-10-13	7-11-13	
Dibenzofuran	ND	0.042	EPA 8270D	7-10-13	7-11-13	
2,3,5,6-Tetrachlorophenol	ND	0.042	EPA 8270D	7-10-13	7-11-13	
2,3,4,6-Tetrachlorophenol	ND	0.042	EPA 8270D	7-10-13	7-11-13	
Diethylphthalate	ND	0.21	EPA 8270D	7-10-13	7-11-13	
4-Chlorophenyl-phenylether	ND	0.042	EPA 8270D	7-10-13	7-11-13	
4-Nitroaniline	ND	0.042	EPA 8270D	7-10-13	7-11-13	
Fluorene	ND	0.0084	EPA 8270D/SIM	7-10-13	7-10-13	
4,6-Dinitro-2-methylphenol	ND	0.21	EPA 8270D	7-10-13	7-11-13	
n-Nitrosodiphenylamine	ND	0.042	EPA 8270D	7-10-13	7-11-13	
1,2-Diphenylhydrazine	ND	0.042	EPA 8270D	7-10-13	7-11-13	
4-Bromophenyl-phenylether		0.042	EPA 8270D	7-10-13	7-11-13	
Hexachlorobenzene	ND	0.042	EPA 8270D	7-10-13	7-11-13	
Pentachlorophenol	ND	0.21	EPA 8270D	7-10-13	7-11-13	
Phenanthrene	ND	0.0084	EPA 8270D/SIM	7-10-13	7-10-13	
Anthracene	ND	0.0084	EPA 8270D/SIM	7-10-13	7-10-13	
Carbazole	ND	0.042	EPA 8270D	7-10-13	7-11-13	
Di-n-butylphthalate	ND	0.042	EPA 8270D	7-10-13	7-11-13	
Fluoranthene	ND	0.0084	EPA 8270D/SIM	7-10-13	7-10-13	
Benzidine	ND	0.42	EPA 8270D	7-10-13	7-11-13	
Pyrene	ND	0.0084	EPA 8270D/SIM	7-10-13	7-10-13	
Butylbenzylphthalate	ND	0.042	EPA 8270D	7-10-13	7-11-13	
bis-2-Ethylhexyladipate	ND	0.042	EPA 8270D	7-10-13	7-11-13	
3,3'-Dichlorobenzidine	ND	0.21	EPA 8270D	7-10-13	7-11-13	
Benzo[a]anthracene	ND	0.0084	EPA 8270D/SIM	7-10-13	7-10-13	
Chrysene	ND	0.0084	EPA 8270D/SIM	7-10-13	7-10-13	
bis(2-Ethylhexyl)phthalate	ND	0.042	EPA 8270D	7-10-13	7-11-13	
Di-n-octylphthalate	ND	0.042	EPA 8270D	7-10-13	7-11-13	
Benzo[b]fluoranthene	ND	0.0084	EPA 8270D/SIM	7-10-13	7-10-13	
Benzo(j,k)fluoranthene	ND	0.0084	EPA 8270D/SIM	7-10-13	7-10-13	
Benzo[a]pyrene	ND	0.0084	EPA 8270D/SIM	7-10-13	7-10-13	
Indeno[1,2,3-cd]pyrene	ND	0.0084	EPA 8270D/SIM	7-10-13	7-10-13	
Dibenz[a,h]anthracene	ND	0.0084	EPA 8270D/SIM	7-10-13	7-10-13	
Benzo[g,h,i]perylene	ND	0.0084	EPA 8270D/SIM	7-10-13	7-10-13	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	76	24 - 95				
Phenol-d6	77	34 - 101				
Nitrobenzene-d5	79	32 - 102				
2-Fluorobiphenyl	77	44 - 97				
2,4,6-Tribromophenol	60	34 - 124				
Terphenyl-d14	78	47 - 114				

# SEMIVOLATILES by EPA 8270D/SIM METHOD BLANK QUALITY CONTROL page 1 of 2

Matrix: Soil Units: mg/Kg

Analyte Laboratory ID: n-Nitrosodimethylamine Pyridine Phenol Aniline bis(2-Chloroethyl)ether 2-Chlorophenol 1,3-Dichlorobenzene 1,4-Dichlorobenzene Benzyl alcohol	Result MB0710S2 ND ND ND ND ND ND ND ND	PQL 0.033 0.33 0.033 0.17 0.033 0.033	Method EPA 8270D EPA 8270D EPA 8270D EPA 8270D EPA 8270D	7-10-13 7-10-13 7-10-13 7-10-13 7-10-13	Analyzed 7-11-13 7-11-13 7-11-13	Flags
n-Nitrosodimethylamine Pyridine Phenol Aniline bis(2-Chloroethyl)ether 2-Chlorophenol 1,3-Dichlorobenzene 1,4-Dichlorobenzene	ND ND ND ND ND ND ND	0.33 0.033 0.17 0.033	EPA 8270D EPA 8270D EPA 8270D	7-10-13 7-10-13	7-11-13	
n-Nitrosodimethylamine Pyridine Phenol Aniline bis(2-Chloroethyl)ether 2-Chlorophenol 1,3-Dichlorobenzene 1,4-Dichlorobenzene	ND ND ND ND ND ND ND	0.33 0.033 0.17 0.033	EPA 8270D EPA 8270D EPA 8270D	7-10-13 7-10-13	7-11-13	
Pyridine Phenol Aniline bis(2-Chloroethyl)ether 2-Chlorophenol 1,3-Dichlorobenzene 1,4-Dichlorobenzene	ND ND ND ND ND ND	0.33 0.033 0.17 0.033	EPA 8270D EPA 8270D EPA 8270D	7-10-13 7-10-13	7-11-13	
Phenol Aniline bis(2-Chloroethyl)ether 2-Chlorophenol 1,3-Dichlorobenzene 1,4-Dichlorobenzene	ND ND ND ND ND	0.033 0.17 0.033	EPA 8270D EPA 8270D	7-10-13	-	
Aniline bis(2-Chloroethyl)ether 2-Chlorophenol 1,3-Dichlorobenzene 1,4-Dichlorobenzene	ND ND ND ND	0.17 0.033	EPA 8270D		7 11 10	
bis(2-Chloroethyl)ether 2-Chlorophenol 1,3-Dichlorobenzene 1,4-Dichlorobenzene	ND ND ND	0.033			7-11-13	
2-Chlorophenol 1,3-Dichlorobenzene 1,4-Dichlorobenzene	ND ND			7-10-13	7-11-13	
1,3-Dichlorobenzene 1,4-Dichlorobenzene	ND	0.000	EPA 8270D	7-10-13	7-11-13	
1,4-Dichlorobenzene		0.033	EPA 8270D	7-10-13	7-11-13	
	ND	0.033	EPA 8270D	7-10-13	7-11-13	
Donzyraioonor	ND	0.17	EPA 8270D	7-10-13	7-11-13	
1,2-Dichlorobenzene	ND	0.033	EPA 8270D	7-10-13	7-11-13	
2-Methylphenol (o-Cresol)	ND	0.033	EPA 8270D	7-10-13	7-11-13	
bis(2-Chloroisopropyl)ether	ND	0.033	EPA 8270D	7-10-13	7-11-13	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.033	EPA 8270D	7-10-13	7-11-13	
n-Nitroso-di-n-propylamine	ND	0.033	EPA 8270D	7-10-13	7-11-13	
Hexachloroethane	ND	0.033	EPA 8270D	7-10-13	7-11-13	
Nitrobenzene	ND	0.033	EPA 8270D	7-10-13	7-11-13	
Isophorone	ND	0.033	EPA 8270D	7-10-13	7-11-13	
2-Nitrophenol	ND	0.033	EPA 8270D	7-10-13	7-11-13	
2,4-Dimethylphenol	ND	0.033	EPA 8270D	7-10-13	7-11-13	
bis(2-Chloroethoxy)methane	ND	0.033	EPA 8270D	7-10-13	7-11-13	
2,4-Dichlorophenol	ND	0.033	EPA 8270D	7-10-13	7-11-13	
1,2,4-Trichlorobenzene	ND	0.033	EPA 8270D	7-10-13	7-11-13	
Naphthalene	ND	0.0067	EPA 8270D/SIM	7-10-13	7-11-13	
4-Chloroaniline	ND	0.17	EPA 8270D	7-10-13	7-11-13	
Hexachlorobutadiene	ND	0.033	EPA 8270D	7-10-13	7-11-13	
4-Chloro-3-methylphenol	ND	0.033	EPA 8270D	7-10-13	7-11-13	
2-Methylnaphthalene	ND	0.0067	EPA 8270D/SIM	7-10-13	7-11-13	
1-Methylnaphthalene	ND	0.0067	EPA 8270D/SIM	7-10-13	7-11-13	
Hexachlorocyclopentadiene	ND	0.033	EPA 8270D	7-10-13	7-11-13	
2,4,6-Trichlorophenol	ND	0.033	EPA 8270D	7-10-13	7-11-13	
2,3-Dichloroaniline	ND	0.033	EPA 8270D	7-10-13	7-11-13	
2,4,5-Trichlorophenol	ND	0.033	EPA 8270D	7-10-13	7-11-13	
2-Chloronaphthalene	ND	0.033	EPA 8270D	7-10-13	7-11-13	
2-Nitroaniline	ND	0.033	EPA 8270D	7-10-13	7-11-13	
1,4-Dinitrobenzene	ND	0.033	EPA 8270D	7-10-13	7-11-13	
Dimethylphthalate	ND	0.033	EPA 8270D	7-10-13	7-11-13	
1,3-Dinitrobenzene	ND	0.033	EPA 8270D	7-10-13	7-11-13	
2,6-Dinitrotoluene	ND	0.033	EPA 8270D	7-10-13	7-11-13	
1,2-Dinitrobenzene	ND	0.033	EPA 8270D	7-10-13	7-11-13	
Acenaphthylene	ND	0.0055	EPA 8270D/SIM	7-10-13	7-11-13	
3-Nitroaniline	ND	0.0007	EPA 8270D/310	7-10-13	7-11-13	

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# SEMIVOLATILES by EPA 8270D/SIM METHOD BLANK QUALITY CONTROL page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
_aboratory ID:	MB0710S2					
2,4-Dinitrophenol	ND	0.17	EPA 8270D	7-10-13	7-11-13	
Acenaphthene	ND	0.0067	EPA 8270D/SIM	7-10-13	7-11-13	
1-Nitrophenol	ND	0.033	EPA 8270D	7-10-13	7-11-13	
2,4-Dinitrotoluene	ND	0.033	EPA 8270D	7-10-13	7-11-13	
Dibenzofuran	ND	0.033	EPA 8270D	7-10-13	7-11-13	
2,3,5,6-Tetrachlorophenol	ND	0.033	EPA 8270D	7-10-13	7-11-13	
2,3,4,6-Tetrachlorophenol	ND	0.033	EPA 8270D	7-10-13	7-11-13	
Diethylphthalate	ND	0.17	EPA 8270D	7-10-13	7-11-13	
I-Chlorophenyl-phenylether	ND	0.033	EPA 8270D	7-10-13	7-11-13	
1-Nitroaniline	ND	0.033	EPA 8270D	7-10-13	7-11-13	
luorene	ND	0.0067	EPA 8270D/SIM	7-10-13	7-11-13	
4,6-Dinitro-2-methylphenol	ND	0.17	EPA 8270D	7-10-13	7-11-13	
n-Nitrosodiphenylamine	ND	0.033	EPA 8270D	7-10-13	7-11-13	
I,2-Diphenylhydrazine	ND	0.033	EPA 8270D	7-10-13	7-11-13	
I-Bromophenyl-phenylether	ND	0.033	EPA 8270D	7-10-13	7-11-13	
Hexachlorobenzene	ND	0.033	EPA 8270D	7-10-13	7-11-13	
Pentachlorophenol	ND	0.17	EPA 8270D	7-10-13	7-11-13	
Phenanthrene	ND	0.0067	EPA 8270D/SIM	7-10-13	7-11-13	
Anthracene	ND	0.0067	EPA 8270D/SIM	7-10-13	7-11-13	
Carbazole	ND	0.033	EPA 8270D	7-10-13	7-11-13	
Di-n-butylphthalate	ND	0.033	EPA 8270D	7-10-13	7-11-13	
Fluoranthene	ND	0.0067	EPA 8270D/SIM	7-10-13	7-11-13	
Benzidine	ND	0.33	EPA 8270D	7-10-13	7-11-13	
Pyrene	ND	0.0067	EPA 8270D/SIM	7-10-13	7-11-13	
Butylbenzylphthalate	ND	0.033	EPA 8270D	7-10-13	7-11-13	
pis-2-Ethylhexyladipate	ND	0.033	EPA 8270D	7-10-13	7-11-13	
3,3'-Dichlorobenzidine	ND	0.17	EPA 8270D	7-10-13	7-11-13	
Benzo[a]anthracene	ND	0.0067	EPA 8270D/SIM	7-10-13	7-11-13	
Chrysene	ND	0.0067	EPA 8270D/SIM	7-10-13	7-11-13	
bis(2-Ethylhexyl)phthalate	ND	0.033	EPA 8270D	7-10-13	7-11-13	
Di-n-octylphthalate	ND	0.033	EPA 8270D	7-10-13	7-11-13	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270D/SIM	7-10-13	7-11-13	
Benzo(j,k)fluoranthene	ND	0.0067	EPA 8270D/SIM	7-10-13	7-11-13	
Benzo[a]pyrene	ND	0.0067	EPA 8270D/SIM	7-10-13	7-11-13	
ndeno[1,2,3-cd]pyrene	ND	0.0067	EPA 8270D/SIM	7-10-13	7-11-13	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270D/SIM	7-10-13	7-11-13	
Benzo[g,h,i]perylene	ND	0.0067	EPA 8270D/SIM	7-10-13	7-11-13	
	Percent Recovery	Control Limits		7 10 10	7 11 10	
2-Fluorophenol	82	24 - 95				
Phenol-d6	84	34 - 101				
Nitrobenzene-d5	86	32 - 102				
2-Fluorobiphenyl	87	44 - 97				
2,4,6-Tribromophenol	72	34 - 124				
′.4.0-1/I0/0///00/IA/0/						

# SEMIVOLATILES by EPA 8270D/SIM MS/MSD QUALITY CONTROL

Matrix: Soil Units: mg/Kg

					Source	Per	cent	Recovery		RPD	
Analyte	Re	sult	Spike	Level	Result	Rec	overy	Limits	RPD	Limit	Flags
MATRIX SPIKES											
Laboratory ID:	07-0	54-01									
	MS	MSD	MS	MSD		MS	MSD				
Phenol	0.848	0.925	1.33	1.33	ND	64	70	43 - 104	9	25	
2-Chlorophenol	0.886	0.971	1.33	1.33	ND	67	73	41 - 104	9	32	
1,4-Dichlorobenzene	0.424	0.480	0.667	0.667	ND	64	72	23 - 95	12	42	
n-Nitroso-di-n-propylamine	0.439	0.469	0.667	0.667	ND	66	70	34 - 105	7	27	
1,2,4-Trichlorobenzene	0.411	0.454	0.667	0.667	ND	62	68	26 - 106	10	32	
4-Chloro-3-methylphenol	1.05	1.06	1.33	1.33	ND	79	80	52 - 109	1	20	
Acenaphthene	0.428	0.442	0.667	0.667	ND	64	66	51 - 104	3	21	
4-Nitrophenol	0.831	0.821	1.33	1.33	ND	62	62	52 - 121	1	22	
2,4-Dinitrotoluene	0.396	0.396	0.667	0.667	ND	59	59	53 - 115	0	22	
Pentachlorophenol	0.889	0.822	1.33	1.33	ND	67	62	29 - 131	8	28	
Pyrene	0.492	0.478	0.667	0.667	ND	74	72	41 - 123	3	35	
Surrogate:											
2-Fluorophenol						66	72	24 - 95			
Phenol-d6						67	71	34 - 101			
Nitrobenzene-d5						65	69	32 - 102			
2-Fluorobiphenyl						67	70	44 - 97			
2,4,6-Tribromophenol						60	58	34 - 124			
Terphenyl-d14						75	71	47 - 114			

#### TOTAL METALS EPA 6010C/7471B

Matrix:	Soil
Units:	mg/kg (ppm)

onito.				Date	Date	
Analyte	Result	PQL	EPA Method	Prepared	Analyzed	Flags
Lab ID: Client ID:	07-054-01 <b>EX1-12.5</b>					
Cadmium	ND	0.65	6010C	7-10-13	7-10-13	
Mercury	ND	0.32	7471B	7-10-13	7-10-13	
Lab ID: <b>Client ID:</b>	07-054-02 <b>EX2-12.5</b>					
Cadmium	ND	0.63	6010C	7-10-13	7-10-13	
Mercury	ND	0.31	7471B	7-10-13	7-10-13	
Lab ID: Client ID:	07-054-03 <b>SP1-070913</b>					
Arsenic	ND	13	6010C	7-10-13	7-10-13	
Barium	87	3.3	6010C	7-10-13	7-10-13	
Cadmium	ND	0.65	6010C	7-10-13	7-10-13	
Chromium	46	0.65	6010C	7-10-13	7-10-13	
Lead	12	6.5	6010C	7-10-13	7-10-13	
Mercury	ND	0.33	7471B	7-10-13	7-10-13	
Selenium	ND	13	6010C	7-10-13	7-10-13	
Silver	ND	1.3	6010C	7-10-13	7-10-13	

#### TOTAL METALS EPA 6010C/7471B METHOD BLANK QUALITY CONTROL

Date Extracted:	7-10-13
Date Analyzed:	7-10-13
Matrix:	Soil
Units:	mg/kg (ppm)

Lab ID: MB0710SM1&MB0710S1

Analyte	Method	Result	PQL
Arsenic	6010C	ND	10
Barium	6010C	ND	2.5
Cadmium	6010C	ND	0.50
Chromium	6010C	ND	0.50
Lead	6010C	ND	5.0
Mercury	7471B	ND	0.25
Selenium	6010C	ND	10
Silver	6010C	ND	1.0

#### TOTAL METALS EPA 6010C/7471B DUPLICATE QUALITY CONTROL

Date Extracted:	7-10-13
Date Analyzed:	7-10-13

Matrix:	Soil
Units:	mg/kg (ppm)

Lab ID: 07-041-03

	Sample	Duplicate			
Analyte	Result	Result	RPD	PQL	Flags
Arsenic	ND	ND	NA	10	
Barium	44.8	51.0	13	2.5	
Cadmium	ND	ND	NA	0.50	
Chromium	28.0	47.6	52	0.50	К
Lead	ND	ND	NA	5.0	
Mercury	ND	ND	NA	0.25	
Selenium	ND	ND	NA	10	
Silver	ND	ND	NA	1.0	

#### TOTAL METALS EPA 6010C/7471B MS/MSD QUALITY CONTROL

Date Extracted:	7-10-13
Date Analyzed:	7-10-13

Matrix:	Soil
Units:	mg/kg (ppm)

Lab ID: 07-041-03

	Spike		Percent		Percent		
Analyte	Level	MS	Recovery	MSD	Recovery	RPD	Flags
Arsenic	100	101	101	103	103	3	
Barium	100	147	102	150	106	2	
Cadmium	50.0	46.8	94	47.2	94	1	
Chromium	100	121	93	121	93	0	
Lead	250	229	92	229	92	0	
Mercury	0.500	0.474	95	0.493	99	4	
Selenium	100	96.2	96	98.1	98	2	
Silver	25.0	21.4	86	21.6	86	1	

and is intended only for the use of the individual or company to whom it is addressed.

#### TCLP METALS EPA 1311/6010C/7470A

Matrix:	TCLP Extract
Units:	mg/L (ppm)

				Date	Date	
Analyte	Result	PQL	EPA Method	Prepared	Analyzed	Flags
Lab ID: Client ID:	07-054-03 <b>SP1-070913</b>					
Arsenic	ND	0.40	6010C	7-12-13	7-12-13	
Barium	0.24	0.20	6010C	7-12-13	7-12-13	
Cadmium	ND	0.020	6010C	7-12-13	7-12-13	
Chromium	ND	0.020	6010C	7-12-13	7-12-13	
Lead	ND	0.20	6010C	7-12-13	7-12-13	
Mercury	ND	0.0050	7470A	7-12-13	7-12-13	
Selenium	ND	0.40	6010C	7-12-13	7-12-13	
Silver	ND	0.040	6010C	7-12-13	7-12-13	

#### TCLP METALS EPA 1311/6010C/7470A METHOD BLANK QUALITY CONTROL

Date Prepared:	7-11-13
Date Extracted:	7-12-13
Date Analyzed:	7-12-13
Matrix:	TCLP Extract

Units: mg/L (ppm)

Lab ID: MB0712T1&MB0712T2

Analyte	Method	Result	PQL
Arsenic	6010C	ND	0.40
Barium	6010C	ND	0.20
Cadmium	6010C	ND	0.020
Chromium	6010C	ND	0.020
Lead	6010C	ND	0.20
Mercury	7470A	ND	0.0050
Selenium	6010C	ND	0.40
Silver	6010C	ND	0.040

#### TCLP METALS EPA 1311/6010C/7470A DUPLICATE QUALITY CONTROL

Date Prepared:	7-11-13
Date Extracted:	7-12-13
Date Analyzed:	7-12-13

Matrix:	TCLP Extract
Units:	mg/L (ppm)

Lab ID: 07-083-01

	Sample	Duplicate			
Analyte	Result	Result	RPD	PQL	Flags
Arsenic	ND	ND	NA	0.40	
Barium	ND	ND	NA	0.20	
Danum	ND	ND	INA	0.20	
Cadmium	0.0403	0.0501	22	0.020	С
Chromium	ND	ND	NA	0.020	
Lead	ND	ND	NA	0.20	
Mercury	ND	ND	NA	0.0050	
horodry				0.0000	
Selenium	ND	ND	NA	0.40	
Silver	ND	ND	NA	0.040	

### TCLP METALS EPA 1311/6010C/7470A MS/MSD QUALITY CONTROL

7-11-13
7-12-13
7-12-13

Matrix:	TCLP Extract
Units:	mg/L (ppm)

Lab ID: 07-083-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	4.00	4.21	105	4.19	105	0	- 5
Barium	4.00	3.97	99	3.92	98	1	
Cadmium	2.00	2.00	98	1.98	97	1	
Chromium	4.00	3.76	94	3.73	93	1	
Lead	10.0	8.96	90	8.85	89	1	
Mercury	0.0500	0.0465	93	0.0454	91	2	
Selenium	4.00	4.26	107	4.24	106	1	
Silver	1.00	0.990	99	0.979	98	1	

OnSite Environmental, Inc. 14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

# % MOISTURE

Date Analyzed: 7-10-13

Client ID	Lab ID	% Moisture
EX1-12.5	07-054-01	23
EX2-12.5	07-054-02	20
SP1-070913	07-054-03	23

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This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.



#### **Data Qualifiers and Abbreviations**

- A Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B The analyte indicated was also found in the blank sample.
- C The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E The value reported exceeds the quantitation range and is an estimate.
- F Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I Compound recovery is outside of the control limits.
- J The value reported was below the practical quantitation limit. The value is an estimate.
- K Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L The RPD is outside of the control limits.
- M Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.
- N Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 Hydrocarbons in diesel range are impacting lube oil range results.
- O Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P The RPD of the detected concentrations between the two columns is greater than 40.
- Q Surrogate recovery is outside of the control limits.
- S Surrogate recovery data is not available due to the necessary dilution of the sample.
- T The sample chromatogram is not similar to a typical \_\_\_\_\_
- U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 The practical quantitation limit is elevated due to interferences present in the sample.
- V Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X Sample extract treated with a mercury cleanup procedure.
- X1- Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.
- Y The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL PQL - Practical Quantitation Limit RPD - Relative Percent Difference

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Reviewed/Date Dat	Received	Relinquished	Received	Relinquished	Received	Relinquished	Signature					5 501-070913	× EX2-12.5	1 EX 1-12:5	0	Lab ID Sample Identification	Samples by	Riley Conkin	MJB North Dock Area	299-001	Project Number:	Company:	Analytical Laboratory Testing Services 14648 NE 95th Street • Redmond, WA 98052	OnSite Environmental Inc.
Data Package: Level III D Level IV E					(ODE	FARALLON	Company					V 1020 5 6	925 5 6	7/9/13 840 S 6	A visual v	Sampled Sampled Matrix			(TPH analysis 5 Days)	2 Days 3 Days	Same Day 1 Day	(Check One)	Turnaround Request (in working days)	Chain of Custody
Electronic Data Deliverables (EDDs)					7/9/13 1300	7/9/13 1300	Date Time		(	140						Semivo with lo	H-Gx H-Dx s 8260 nated latiles w-leve	DC Volatil 8270I PAH	s) 🧲	PAL			Laboratory Number:	istody
Chromatograms with final report					possible tullan up ANAlysis	used samples	Comments/Special Instructions								C C C T T	PCBs 8 Drgano Drgano Chlorin Tota TCLP N HEM (c	chlorir phosph ated A CRA N Metals pil and	ne Pes norus F cid He Aetals greas	ticides a resticide MTCA (CR + e) 1664/	8081B s 8270E s 8151A Metals <b>+ 9</b> A	A (circle on	e)	0	Page
					45151	PT-						E		2	5 %	% Mois	sture			•			7-051	of