



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

October 21, 2010

Dan Caputo  
Farallon Consulting, LLC  
975 5<sup>th</sup> Avenue NW  
Issaquah, WA 98027

Re: Analytical Data for Project 112-001  
Laboratory Reference No. 1010-137

Dear Dan:

Enclosed are the analytical results and associated quality control data for samples submitted on October 15, 2010.

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,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal flourish extending to the right.

David Baumeister  
Project Manager

Enclosures

Date of Report: October 21, 2010  
Samples Submitted: October 15, 2010  
Laboratory Reference: 1010-137  
Project: 112-001

### **Case Narrative**

Samples were collected on October 15, 2010 and received by the laboratory on October 15, 2010. They were maintained at the laboratory at a temperature of 2°C to 6°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.

Date of Report: October 21, 2010  
 Samples Submitted: October 15, 2010  
 Laboratory Reference: 1010-137  
 Project: 112-001

**PAHs by EPA 8270D/SIM  
 (with silica gel clean-up)**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>B2-3.0</b>					
Laboratory ID:	10-137-03					
Naphthalene	ND	0.0078	EPA 8270/SIM	10-19-10	10-19-10	
2-Methylnaphthalene	ND	0.0078	EPA 8270/SIM	10-19-10	10-19-10	
1-Methylnaphthalene	ND	0.0078	EPA 8270/SIM	10-19-10	10-19-10	
Acenaphthylene	ND	0.0078	EPA 8270/SIM	10-19-10	10-19-10	
Acenaphthene	ND	0.0078	EPA 8270/SIM	10-19-10	10-19-10	
Fluorene	ND	0.0078	EPA 8270/SIM	10-19-10	10-19-10	
Phenanthrene	ND	0.0078	EPA 8270/SIM	10-19-10	10-19-10	
Anthracene	ND	0.0078	EPA 8270/SIM	10-19-10	10-19-10	
Fluoranthene	ND	0.0078	EPA 8270/SIM	10-19-10	10-19-10	
Pyrene	ND	0.0078	EPA 8270/SIM	10-19-10	10-19-10	
Benzo[a]anthracene	ND	0.0078	EPA 8270/SIM	10-19-10	10-19-10	
Chrysene	ND	0.0078	EPA 8270/SIM	10-19-10	10-19-10	
Benzo[b]fluoranthene	ND	0.0078	EPA 8270/SIM	10-19-10	10-19-10	
Benzo[k]fluoranthene	ND	0.0078	EPA 8270/SIM	10-19-10	10-19-10	
Benzo[a]pyrene	ND	0.0078	EPA 8270/SIM	10-19-10	10-19-10	
Indeno(1,2,3-c,d)pyrene	ND	0.0078	EPA 8270/SIM	10-19-10	10-19-10	
Dibenz[a,h]anthracene	ND	0.0078	EPA 8270/SIM	10-19-10	10-19-10	
Benzo[g,h,i]perylene	ND	0.0078	EPA 8270/SIM	10-19-10	10-19-10	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>67</i>	<i>45 - 101</i>				
<i>Pyrene-d10</i>	<i>71</i>	<i>52 - 118</i>				
<i>Terphenyl-d14</i>	<i>82</i>	<i>41 - 106</i>				

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 Project: 112-001

**PAHs by EPA 8270D/SIM  
 (with silica gel clean-up)**

Matrix: Soil  
 Units: mg/Kg

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>Client ID:</b>	<b>B4-3.0</b>					
Laboratory ID:	10-137-08					
Naphthalene	<b>ND</b>	0.0078	EPA 8270/SIM	10-19-10	10-19-10	
2-Methylnaphthalene	<b>ND</b>	0.0078	EPA 8270/SIM	10-19-10	10-19-10	
1-Methylnaphthalene	<b>ND</b>	0.0078	EPA 8270/SIM	10-19-10	10-19-10	
Acenaphthylene	<b>ND</b>	0.0078	EPA 8270/SIM	10-19-10	10-19-10	
Acenaphthene	<b>ND</b>	0.0078	EPA 8270/SIM	10-19-10	10-19-10	
Fluorene	<b>ND</b>	0.0078	EPA 8270/SIM	10-19-10	10-19-10	
Phenanthrene	<b>ND</b>	0.0078	EPA 8270/SIM	10-19-10	10-19-10	
Anthracene	<b>ND</b>	0.0078	EPA 8270/SIM	10-19-10	10-19-10	
Fluoranthene	<b>ND</b>	0.0078	EPA 8270/SIM	10-19-10	10-19-10	
Pyrene	<b>ND</b>	0.0078	EPA 8270/SIM	10-19-10	10-19-10	
Benzo[a]anthracene	<b>ND</b>	0.0078	EPA 8270/SIM	10-19-10	10-19-10	
Chrysene	<b>ND</b>	0.0078	EPA 8270/SIM	10-19-10	10-19-10	
Benzo[b]fluoranthene	<b>ND</b>	0.0078	EPA 8270/SIM	10-19-10	10-19-10	
Benzo[k]fluoranthene	<b>ND</b>	0.0078	EPA 8270/SIM	10-19-10	10-19-10	
Benzo[a]pyrene	<b>ND</b>	0.0078	EPA 8270/SIM	10-19-10	10-19-10	
Indeno(1,2,3-c,d)pyrene	<b>ND</b>	0.0078	EPA 8270/SIM	10-19-10	10-19-10	
Dibenz[a,h]anthracene	<b>ND</b>	0.0078	EPA 8270/SIM	10-19-10	10-19-10	
Benzo[g,h,i]perylene	<b>ND</b>	0.0078	EPA 8270/SIM	10-19-10	10-19-10	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>58</i>	<i>45 - 101</i>				
<i>Pyrene-d10</i>	<i>66</i>	<i>52 - 118</i>				
<i>Terphenyl-d14</i>	<i>76</i>	<i>41 - 106</i>				

Date of Report: October 21, 2010  
 Samples Submitted: October 15, 2010  
 Laboratory Reference: 1010-137  
 Project: 112-001

**PAHs by EPA 8270D/SIM  
 (with silica gel clean-up)  
 METHOD BLANK QUALITY CONTROL**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1019S2					
Naphthalene	ND	0.0067	EPA 8270/SIM	10-19-10	10-19-10	
2-Methylnaphthalene	ND	0.0067	EPA 8270/SIM	10-19-10	10-19-10	
1-Methylnaphthalene	ND	0.0067	EPA 8270/SIM	10-19-10	10-19-10	
Acenaphthylene	ND	0.0067	EPA 8270/SIM	10-19-10	10-19-10	
Acenaphthene	ND	0.0067	EPA 8270/SIM	10-19-10	10-19-10	
Fluorene	ND	0.0067	EPA 8270/SIM	10-19-10	10-19-10	
Phenanthrene	ND	0.0067	EPA 8270/SIM	10-19-10	10-19-10	
Anthracene	ND	0.0067	EPA 8270/SIM	10-19-10	10-19-10	
Fluoranthene	ND	0.0067	EPA 8270/SIM	10-19-10	10-19-10	
Pyrene	ND	0.0067	EPA 8270/SIM	10-19-10	10-19-10	
Benzo[a]anthracene	ND	0.0067	EPA 8270/SIM	10-19-10	10-19-10	
Chrysene	ND	0.0067	EPA 8270/SIM	10-19-10	10-19-10	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270/SIM	10-19-10	10-19-10	
Benzo[k]fluoranthene	ND	0.0067	EPA 8270/SIM	10-19-10	10-19-10	
Benzo[a]pyrene	ND	0.0067	EPA 8270/SIM	10-19-10	10-19-10	
Indeno(1,2,3-c,d)pyrene	ND	0.0067	EPA 8270/SIM	10-19-10	10-19-10	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270/SIM	10-19-10	10-19-10	
Benzo[g,h,i]perylene	ND	0.0067	EPA 8270/SIM	10-19-10	10-19-10	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>80</i>	<i>45 - 101</i>				
<i>Pyrene-d10</i>	<i>70</i>	<i>52 - 118</i>				
<i>Terphenyl-d14</i>	<i>80</i>	<i>41 - 106</i>				

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**PAHs by EPA 8270D/SIM  
 (with silica gel clean-up)  
 MS/MSD QUALITY CONTROL**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result		Spike Level		Source	Percent	Recovery	RPD		Flags
					Result	Recovery	Limits	RPD	Limit	
<b>MATRIX SPIKES</b>										
Laboratory ID:	10-137-08									
	MS	MSD	MS	MSD		MS	MSD			
Naphthalene	0.0517	0.0517	0.0833	0.0833	ND	62	62	31 - 115	0	19
Acenaphthylene	0.0694	0.0653	0.0833	0.0833	ND	83	78	40 - 134	6	22
Acenaphthene	0.0688	0.0648	0.0833	0.0833	ND	83	78	48 - 118	6	17
Fluorene	0.0772	0.0758	0.0833	0.0833	ND	93	91	54 - 122	2	16
Phenanthrene	0.0744	0.0726	0.0833	0.0833	ND	89	87	46 - 123	2	19
Anthracene	0.0719	0.0703	0.0833	0.0833	ND	86	84	53 - 123	2	27
Fluoranthene	0.0685	0.0671	0.0833	0.0833	ND	82	81	47 - 132	2	26
Pyrene	0.0630	0.0615	0.0833	0.0833	ND	76	74	41 - 137	2	25
Benzo[a]anthracene	0.0748	0.0730	0.0833	0.0833	ND	90	88	43 - 132	2	26
Chrysene	0.0769	0.0750	0.0833	0.0833	ND	92	90	46 - 126	3	24
Benzo[b]fluoranthene	0.0757	0.0762	0.0833	0.0833	ND	91	91	44 - 134	1	24
Benzo[k]fluoranthene	0.0759	0.0740	0.0833	0.0833	ND	91	89	45 - 132	3	20
Benzo[a]pyrene	0.0717	0.0709	0.0833	0.0833	ND	86	85	36 - 136	1	23
Indeno(1,2,3-c,d)pyrene	0.0807	0.0783	0.0833	0.0833	ND	97	94	40 - 136	3	16
Dibenz[a,h]anthracene	0.0841	0.0810	0.0833	0.0833	ND	101	97	40 - 142	4	13
Benzo[g,h,i]perylene	0.0808	0.0778	0.0833	0.0833	ND	97	93	37 - 137	4	18
<i>Surrogate:</i>										
<i>2-Fluorobiphenyl</i>						<i>68</i>	<i>65</i>	<i>45 - 101</i>		
<i>Pyrene-d10</i>						<i>74</i>	<i>75</i>	<i>52 - 118</i>		
<i>Terphenyl-d14</i>						<i>83</i>	<i>81</i>	<i>41 - 106</i>		

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**% MOISTURE**

Date Analyzed: 10-19-10

Client ID	Lab ID	% Moisture
B2-3.0	10-137-03	15
B4-3.0	10-137-08	15



### 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-naphthalene) 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.
- Y - Sample extract treated with an acid/silica gel cleanup procedure.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference





**OnSite Environmental Inc.**  
 14648 NE 95th Street • Redmond, WA 98052  
 Phone: (425) 883-3881 • Fax: (425) 885-4603

# Chain of Custody

**Turnaround Request**  
 (in working days)

(Check One)

Same Day  1 Day

2 Day  3 Day

Standard (7 working days)  
 (TPH analysis 5 working days)

(other)

**Laboratory Number:**

**10-137**

**Requested Analysis**

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270C	PAHs by 8270C / SIM	PCBs by 8082	Pesticides by 8081A	Herbicides by 8151A	Total RCRA Metals (8)	TCLP Metals	HEM by 1664	VPH	EPH	% Moisture	
1	R/L-3.0	10/15/10	0900	S	1							<input checked="" type="checkbox"/>										
2	R/L-4.5		0903									<input checked="" type="checkbox"/>										
3	R/L-3.0		0940									<input checked="" type="checkbox"/>										
4	R/L-4.0		0956																			
5	R/L-3.0		1000																			
6	R/L-4.0		1010																			
7	R/L-3.5		1103																			
8	R/L-3.0		1110																			

Relinquished by	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished by		Farrellon	10/15/10	1200	Hold Remaining SAMPLES
Received by		Farrellon	10/15/10	1200	Thank you,
Relinquished by					
Received by					
Relinquished by					
Received by					
Reviewed by/Date					Chromatograms with final report <input type="checkbox"/>