

**Port of Seattle  
Lora Lake Apartments Site**

**Remedial Investigation/  
Feasibility Study**

**Volume II**

**Appendix H  
1982 Dredged Material Containment  
Area Data Report**

**Attachment H.2  
Laboratory Analytical Data Reports**

FINAL

## DIOXIN/FURAN ANALYTICAL METHODS AND REPORTING LIMIT DEFINITIONS

Frontier Analytical Laboratories analyzed soil, groundwater, and sediment samples collected as part of the Lora Lake Apartments Remedial Investigation and Feasibility Study (RI/FS) for dioxins/furans using U.S. Environmental Protection Agency (USEPA) Method 1613.

Currently, there are eight analytical methods that are routinely used for the determination of dioxins and furans. Of those, USEPA Methods 8290 and 1613 are fine-scale analytical methods comparable in the quality of analysis and results.<sup>1</sup> Both employ high resolution gas chromatography/high-resolution mass spectrometry processes that provide test results as low as parts per trillion (ppt) for solid samples and parts per quadrillion (ppq) for aqueous samples.

Analytical requirements for dioxins/furans are unique compared to other routinely monitored contaminants. Because dioxins/furans are toxic at much lower concentrations than other contaminants and dioxin/furan analysis requires speciation of many congeners, the analytical requirements are far more sophisticated and sensitive. For instance, most contaminants are commonly measured in parts per million (ppm) and parts per billion (ppb) whereas dioxins/furans are commonly measured in ppt and ppq. Stable isotopically labeled analogs of the target compounds are used to determine exact retention times and to correct targets for recovery, providing a more analytically precise value for the dioxins/furans than most other analyte groups.

USEPA Method 1613 defines three analytical limits for dioxin/furan analysis that are critical to the evaluation of the reported data and assessment of data quality. The Minimum Limit (ML) is the highest (least fine scale) limit, the Detection Limit (DL) is a mid-range limit, and the Method Detection Limit (MDL) is the lowest (finest scale) limit (refer to Figure 1). These limit definitions have significant importance in the calculation of dioxin/furan toxic equivalency quotients (TEQs), as discussed below.

The MDL is defined as “The minimum concentration of a substance that can be measured and reported with 99 percent confidence that the value is above zero and is determined from analysis of a sample in a given matrix type containing the analyte.” (USEPA SW-846).<sup>2</sup> Therefore, there is a statistically valid 99 percent probability that any analyte observed greater than the MDL is, indeed, present in the sample. The USEPA has established the MDL as a reporting threshold. By laboratory and USEPA

<sup>1</sup> The primary differences in these methods are analyte recovery limits, internal standards, and sample holding times (described in detail in the Lora Lake Apartments RI/FS Work Plan). USEPA Method 1613 was selected to analyze the Lora Lake Apartments Site RI samples to take advantage of the method holding time of 1 year (in contrast to the USEPA Method 8290 holding time of 30 days). The longer holding time made it possible to follow the tiered dioxin/furan soil analysis approach described in the Lora Lake Apartments RI/FS Work Plan (Floyd|Snider 2010).

<sup>2</sup> The MDL is a statistically calculated value, and for operational purposes the USEPA states that when it is necessary to determine the MDL in a matrix, the MDL should be determined by multiplying the appropriate one-sided 99 percent t-statistic by the standard deviation obtained from a minimum of three analyses of matrix spike containing the analyte of interest at a concentration three to five times the estimated MDL, where the t-statistic is obtained from standard references or as described in Chapter 1 of SW-846 (USEPA 1992).

standards and industry convention, the analyte is considered “not present” even if a measured value less than this level is reported by the analytical process.

For USEPA Method 1613 the term Minimum Limit is used to represent the lowest point of calibration on the instrument or lowest standard. Minimum requirements for the MLs for dioxin/furan congeners are specified in the method. The ML is equivalent to a “reporting limit” (RL) as that term is used for other analytical methods (e.g., USEPA Method 6010 for metals or USEPA Method 8290 for semivolatile organic compounds). MLs and RLs are equivalent, and, in common practice are used interchangeably to refer to the lowest concentration of an analyte that the laboratory will routinely report or can reliably measure within specified control limits. Detected concentrations greater than or equal to the ML are quantified with a known and acceptable level of precision and accuracy.

MDLs and RLs are terms used to define analytical process limits used consistently across various analytical methods. USEPA Method 1613 dioxin/furan analysis also uses the term Detection Limit or DL. The DL is a “real response” that is based on the method-specific minimum signal-to-noise ratio for each congener, for each analysis run. The DL represents the sample- and matrix-specific level at which a congener can be detected. The DL level or concentration is greater than the MDL, but less than the ML. By definition, to designate a positive detection of an analyte, the analyte concentration must be measured at more than the method-specific minimum signal-to-noise ratio. A positive detection greater than the MDL and less than the ML is given a “J” qualifier to indicate that the analyte or congener was positively identified, but that the concentration was estimated because the precision and accuracy of the result is unknown at this low level. For USEPA Method 1613, the DL is effectively equivalent to the Estimated Detection Limit or EDL used for USEPA Method 8290. An EDL is often still calculated for USEPA Method 1613, per the Contract Laboratory Program requirements.

Given these definitions of analytical limits used for USEPA Method 1613, the common term “non-detect” or “non-detected” means that the analyte measurement was less than the MDL, where potential instrument responses are within the background noise associated with the equipment and analyses. When calculating dioxin/furan TEQ concentrations, non-detect congeners may be assigned a value of one-half of the DL, (WSDOE 2007) or may be assigned “zero.” Because dioxins/furans are toxic at very low concentrations, the approach of assigning one-half of the DL for non-detected congeners or setting non-detect compounds to zero for the calculation of dioxin/furan TEQ concentrations is important in evaluating environmental data. Risk-based cleanup levels are often at low levels that may be near or less than the DLs.

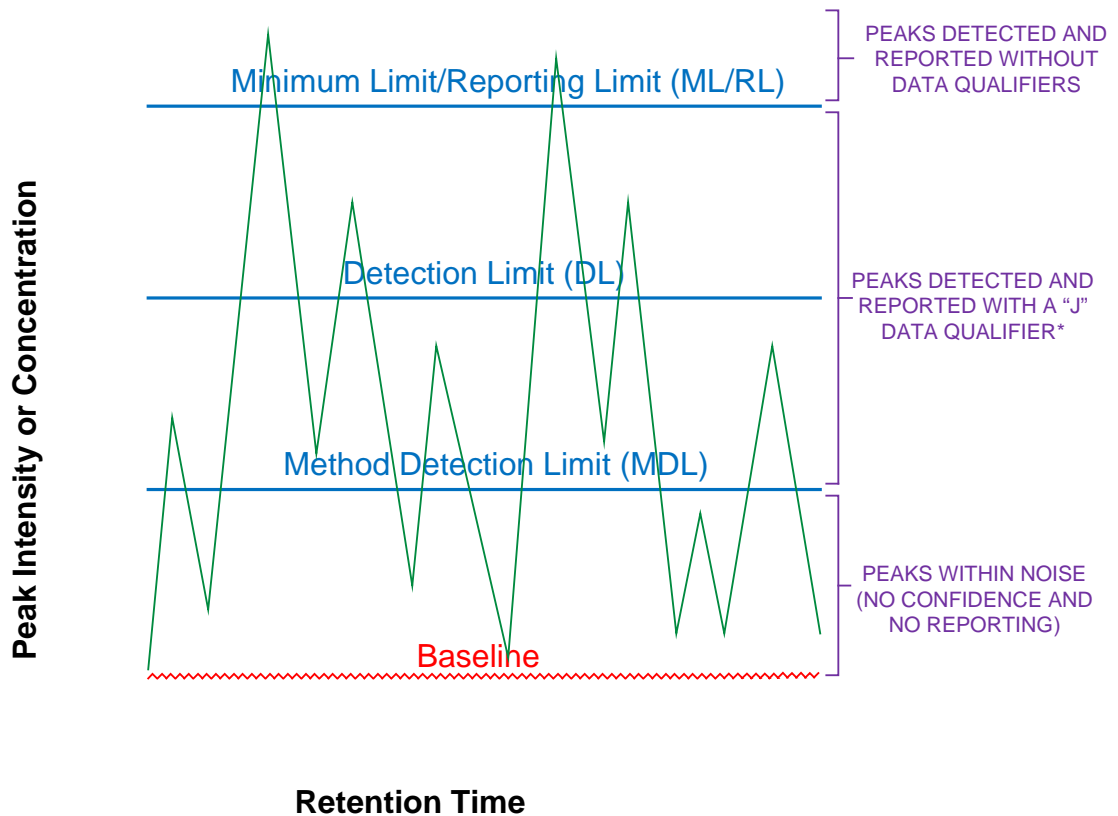
## REFERENCES

- Floyd|Snider. 2010. *Lora Lake Apartments Final Remedial Investigation/Feasibility Study Work Plan*. Prepared for Port of Seattle. 30 July.
- U.S. Environmental Protection Agency (USEPA). 1992. *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846)*. Third Edition. Chapter 1.

<http://www.epa.gov/epawaste/hazard/testmethods/sw846/online/index.htm>. Last accessed on November 29, 2011.

Washington State Department of Ecology (WSDOE). 2007. *Concise Explanatory Statement and Responsiveness Summary for the Amendment of Chapter 173-340 WAC, Model Toxics Control Act Cleanup Regulation*. Publication Number 07-09-108. October.

**Figure**



**Note:**

\* "J" qualifier indicated that the analyte was analyzed for and positively identified, but the associated numerical value is an estimated quantity.

## Laboratory Data

Table of Contents: ARI Job SS83

Client: Floyd Snider

Project: POS-LL Lora Lake Parcel:DMA

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BC  
Signature

April-29-2011  
Date



Table of Contents: ARI Job SS83

Client: Floyd Snider

Project: POS-LL Lora Lake Parcel:DMA

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        i3c          
Signature

April-29-2011  
Date



**Analytical Resources, Incorporated**  
Analytical Chemists and Consultants

May 17, 2011

Erin Breckel  
Floyd-Snyder Inc.  
601 Union Street, Suite 600  
Seattle, WA 98101-2341

**RE: Lora Lake Parcel: DMA, POS-LL**  
**ARI Job No: SS83**

Dear Erin:

Please find enclosed the original Chain-of-Custody (COC) records, sample receipt documentation, and the final data package for samples from the project referenced above.

Sample receipt and detail of these analyses are discussed in the Case Narrative.

An electronic copy of this package will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

*-for-* Susan D. Dunnihoo  
Director, Client Services  
sue@arilabs.com  
206-695-6207

Enclosures

cc: eFile SS83

**Chain of Custody Documentation**

**ARI Job ID: SS83**

# Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested: <b>STANDARD</b>	Page: <b>2</b> of <b>3</b>
ARI Client Company: <b>Floyd / Snider</b>	Phone: <b>206-292-2478</b>	Date: <b>4/20/11</b> Ice Present?
Client Contact: <b>Megan McCullough</b>	No. of Coolers:	Cooler Temps:



Analytical Resources, Incorporated  
 Analytical Chemists and Consultants  
 4611 South 134th Place, Suite 100  
 Tukwila, WA 98168  
 206-695-6200 206-695-6201 (fax)

Client Project Name:	Analysis Requested													Notes/Comments
	Client Project #:	Samplers:	PCP (5041)	C PAHs (6270 D- <del>5041</del> )	NWTPH-IX	NWTPH-GTX	BTEX (5021)	As / Pb (6010)	Dioxin 1613	VOLs *	SWPC	TOC (Pints)	ARCHIVE	
Sample ID	Date	Time	Matrix	No. Containers										
DMA-TP6-5-6-042011	4/19/11	15:00	S	9										✓
DMA-TP4-0-1.5-042011	4/20/11	0815	S	9	✓	✓	✓	✓	✓	✓	✓	✓	✓	
DMA-TP4-1.5-2-042011	4/20/11	0820	S	9	✓	✓	✓	✓	✓	✓	✓	✓	✓	
DMA-TP5-1.5-2-042011	4/20/11	0915	S	9	✓	✓	✓	✓	✓	✓	✓	✓	✓	
DMA-TP5-1.5-2-042011-D	4/20/11	0920	S	9	✓	✓	✓	✓	✓	✓	✓	✓	✓	
DMA-TP5-2-3-042011	4/20/11	0925	S	9	✓	✓	✓	✓	✓	✓	✓	✓	✓	
DMA-TP5-3.5-4.5-042011	4/20/11	0930	S	9										✓
DMA-TP3-2-3-042011	4/20/11	10:35	S	9	✓	✓	✓	✓	✓	✓	✓	✓	✓	
DMA-TP3-3-4-042011	4/20/11	1040	S	9	✓	✓	✓	✓	✓	✓	✓	✓	✓	
DMA-TP3-5-6-042011	4/20/11	10:45	S	27	✓	✓	✓	✓	✓	✓	✓	✓	✓	RUN MS/MSD
Comments/Special Instructions * VOL list: report only PCE, TCE, cis 1,2-DCE TRANS-1,2-DCE, 1,2-DCA	Relinquished by (Signature):	Received by (Signature):		Relinquished by (Signature):	Received by (Signature):									
	Printed Name:	Printed Name:		Printed Name:	Printed Name:									
	Company:	Company:		Company:	Company:									
	Date & Time:	Date & Time:		Date & Time:	Date & Time:									

**Limits of Liability:** ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

**Sample Retention Policy:** All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

# Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated  
 Analytical Chemists and Consultants  
 4611 South 134th Place, Suite 100  
 Tukwila, WA 98168  
 206-695-6200 206-695-6201 (fax)

ARI Assigned Number: <b>SS83</b>	Turn-around Requested: <b>STANDARD</b>	Page: <b>1</b> of <b>3</b>
ARI Client Company: <b>FLOYD SNIDER</b>	Phone: <b>206-292-2078</b>	Date: <b>4/19/11</b>
Client Contact: <b>MEGAN MCCULLOUGH</b>	No. of Coolers:	Ice Present? <b>No</b>
Client Project Name: <b>Low Lake Paved Pools: DMA</b>	Cooler Temps:	

Sample ID	Date	Time	Matrix	No Containers	Analysis Requested									Notes/Comments
					PCP (804)	CPAHs (8270-D)	NWTPH-DX	NWTPH-GX + BTEX (802)	As/Pb (6010)	Dioxins (1613)	Sulf. Vols* (8200C)	Pb (Pbms)	ARCHIVE	
DMA-TP1-0-3-041911	4/19/11	11:00	S	9	✓	✓	✓	✓	✓	✓	✓	✓	✓	
DMA-TP1-3-4-5-041911	4/19/11	10:50	S	9	✓	✓	✓	✓	✓	✓	✓	✓	✓	
DMA-TP1-4-5-5-041911	4/19/11	10:25	S	9	✓	✓	✓	✓	✓	✓	✓	✓	✓	
DMA-TP1-6-7-041911	4/19/11	10:20	S	9										✓
<del>DMA-TP2-0-2-5-041911</del>														
DMA-TP2-2-5-3-041911	4/19/11	12:05	S	9	✓	✓	✓	✓	✓	✓	✓	✓	✓	
DMA-TP2-5-4-041911	4/19/11	12:00	S	9	✓	✓	✓	✓	✓	✓	✓	✓	✓	
DMA-TP2-5-5-5-041911	4/19/11	11:50	S	9										✓
DMA-TP6-0-2-5-041911	4/19/11	15:10	S	9	✓	✓	✓	✓	✓	✓	✓	✓	✓	
DMA-TP6-2-5-5-041911	4/19/11	15:05	S	9	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Comments/Special Instructions * Vols - report only PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, 1,2-DLA	Relinquished by: (Signature)	Received by:			Relinquished by:	Received by:								
	Printed Name	Printed Name			Printed Name	Printed Name								
	Company:	Company			Company	Company								
	Date & Time	Date & Time			Date & Time	Date & Time								
	<i>[Signature]</i>	<i>[Signature]</i>			<i>[Signature]</i>	<i>[Signature]</i>								
	Kristin Anderson	ITIKKU Tulu mba												
	Floyd Snider	ARI												
	4/20/11 1259	4/20/11 1259												

**Limits of Liability:** ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

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# Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested: <i>Standard</i>	Page: <i>3</i> of <i>3</i>
ARI Client Company: <i>Floyd/Smider</i>	Phone: <i>206-292-2078</i>	Date: <i>4/20/11</i> Ice Present?
Client Contact: <i>Megan McLaughlin</i>	No. of Coolers:	Cooler Temps:



Analytical Resources, Incorporated  
 Analytical Chemists and Consultants  
 4611 South 134th Place, Suite 100  
 Tukwila, WA 98168  
 206-695-6200 206-695-6201 (fax)

Client Project Name: <i>Love Lake Parcel - DMA</i>					Analysis Requested								Notes/Comments
Client Project #: <i>POS-LL</i>		Samplers: <i>KA, MM</i>			PCP (SO4)	CPAHs (8270 D-SIM)	MMTPH-DX	MMTPH-6X + BTEX (SO4)	Pb + As-diss (200.8)	Dioxin - ARCHIVE	VOCs + (project list)		
Sample ID	Date	Time	Matrix	No. Containers									
<i>TP-TB-042011</i>	<i>4/20/11</i>	<i>-</i>	<i>W</i>	<i>4</i>				<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
<i>DMA-RB-042011</i>	<i>4/20/11</i>	<i>1150</i>	<i>W</i>	<i>13</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<i>Archive for dioxin Metals unrepresented lab filter</i>	
<i>[Large diagonal line through the table]</i>													
Comments/Special Instructions: <i>lab filter for dissolved metals.</i>					Relinquished by: (Signature) <i>[Signature]</i>	Received by: (Signature) <i>[Signature]</i>			Relinquished by: (Signature) <i>[Signature]</i>	Received by: (Signature) <i>[Signature]</i>			
					Printed Name: <i>Kristin Anderson</i>	Printed Name: <i>Mikko Tuomola</i>			Printed Name:	Printed Name:			
					Company: <i>Floyd Smider</i>	Company: <i>ARI</i>			Company:	Company:			
					Date & Time: <i>4/20/11 1259</i>	Date & Time: <i>4/20/11 1259</i>			Date & Time:	Date & Time:			

**Limits of Liability:** ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

**Sample Retention Policy:** All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.



# Cooler Receipt Form

ARI Client: FSI

Project Name: Lova Lake Parcel- P17A

COC No(s): \_\_\_\_\_ (NA)

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: \_\_\_\_\_

Assigned ARI Job No: 5883

Tracking No: \_\_\_\_\_ (NA)

**Preliminary Examination Phase:**

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES (NO)

Were custody papers included with the cooler? ..... (YES) NO

Were custody papers properly filled out (ink, signed, etc.) ..... (YES) NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)..... 2.9 5.1 4.0 1.3

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: 40941619

Cooler Accepted by: AM Date: 4/20/11 Time: 1259

**Complete custody forms and attach all shipping documents**

**Log-In Phase:**

Was a temperature blank included in the cooler? ..... YES (NO)

What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: \_\_\_\_\_

Was sufficient ice used (if appropriate)? ..... NA (YES) NO

Were all bottles sealed in individual plastic bags? ..... YES (NO)

Did all bottles arrive in good condition (unbroken)? ..... (YES) NO

Were all bottle labels complete and legible? ..... (YES) NO

Did the number of containers listed on COC match with the number of containers received? ..... (YES) NO

Did all bottle labels and tags agree with custody papers? ..... (YES) NO

Were all bottles used correct for the requested analyses? ..... (YES) NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA (YES) NO

Were all VOC vials free of air bubbles? ..... NA YES (NO)

Was sufficient amount of sample sent in each bottle? ..... (YES) NO

Date VOC Trip Blank was made at ARI..... NA 4/7/11

Was Sample Split by ARI : (NA) YES Date/Time: \_\_\_\_\_ Equipment: \_\_\_\_\_ Split by: \_\_\_\_\_

Samples Logged by: JM Date: 4/20/11 Time: 1418

**\*\* Notify Project Manager of discrepancies or concerns \*\***

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

**Additional Notes, Discrepancies, & Resolutions:**  
TP-TB-042011 = sm in 3 of 4

By: JM Date: 4/20/11

<b>Small Air Bubbles</b> ~2mm 	<b>Peabubbles</b> 2-4 mm 	<b>LARGE Air Bubbles</b> > 4 mm 
--------------------------------------	---------------------------------	--

- Small → "sm"
- Peabubbles → "pb"
- Large → "lg"
- Headspace → "hs"

**PRESERVATION VERIFICATION 04/20/11**

Page 1 of 1

Inquiry Number: NONE  
 Analysis Requested: 04/20/11  
 Contact: McCullough, Megan  
 Client: Floyd Snider  
 Logged by: JM  
 Sample Set Used: Yes-490  
 Validatable Package: Yes  
 Deliverables:



ARI Job No: **SS83**

PC: Sue D.  
 VTSR: 04/20/11

Project #: POS-LL  
 Project: Lora Lake Parcel:DMA  
 Sample Site:  
 SDG No:  
 Analytical Protocol: In-house

LOGNUM	ARI ID	CLIENT ID	CN	WAD	NH3	COD	FOG	MET	PHEN	PHOS	TKN	NO23	TOC	S2	AK102	Fe2+	DMET	DOC	FLT	FLT	PARAMETER	ADJUSTED TO	LOT NUMBER	AMOUNT ADDED	DATE/BY
11-8726			>12	>12	<2	<2	<2	<2	<2	<2	<2	<2	<2	>9	<2	<2	<2					←2	1110070	2.5mL	4/20/11 MH
<b>SS83P</b>		DMA-RB-042011						prod																	

SS83 . 00007<sup>9</sup>

Checked By JM Date 4/20/11



**Case Narrative, Data Qualifiers, Control Limits**

**ARI Job ID: SS83**



## **Case Narrative**

**Client: Floyd Snider**  
**Project: Lora Lake Parcel: DMA, POS-LL**  
**ARI Job No.: SS83**

### **Sample receipt**

Analytical Resources, Inc. (ARI) accepted nineteen soil samples, one water sample, and a trip blank on April 20, 2011 under ARI job SS83. Select samples were archived upon receipt. The cooler temperatures measured by IR thermometer following ARI SOP were between 1.3 and 5.1°C. For details regarding sample receipt, please refer to the enclosed Cooler Receipt Form.

Dioxin/Furan analyses were subcontracted to Frontier Analytical Laboratory in El Dorado Hills, CA. The dioxin data on CD as generated by Frontier is forwarded with this package.

### **Volatiles by SW8260C**

The samples and associated laboratory QC were analyzed within method recommended holding times.

Initial and continuing calibrations were within method requirements for requested compounds.

The internal standard areas of d4-1,4-Dichlorobenzene fell outside the control limits for several samples. The internal standard is not associated with requested compounds. No corrective action was taken.

The surrogate percent recoveries were within limits.

The method blanks were clean at the reporting limit. The LCS and LCSD percent recoveries were within control limits.

All matrix spike percent recoveries and the matrix spike duplicate percent recoveries of trans-1,2-Dichloroethene and cis-1,2-Dichloroethene were outside advisory control limits high for sample **DMA-TP3-5-6-042011**. No corrective action is required for matrix QC.

### **SIM PAHs by SW8270D**

The soil samples were initially screened to determine if a response was present that would require modifications in the extraction process. Based on the screen, no modifications were required. All samples and associated laboratory QC were extracted and analyzed within the method recommended holding times.



Initial and continuing calibrations were within method requirements. The internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blanks were clean at the reporting limits. The LCS and LCSD percent recoveries were within control limits.

The matrix spike and matrix spike duplicate percent recoveries were within advisory control limits.

The 'total' benzofluoranthenes result includes the response of the b, k and j isomers.

#### **Pentachlorophenol by SW8041**

The samples and associated laboratory QC were extracted and analyzed within the method recommended holding times.

Initial and continuing calibrations were within method requirements.

The surrogate percent recoveries were within control limits.

The method blanks were clean at the reporting limit. The LCS and LCSD percent recoveries were within control limits.

The matrix spike and spike duplicate percent recoveries were within advisory control limits.

#### **Acid/Silica Cleaned NWTPH-Dx**

The samples and associated laboratory QC were extracted and analyzed within the method recommended holding times.

Initial and continuing calibrations were within method requirements.

The surrogate percent recoveries were within control limits.

The method blanks were clean at the reporting limit. The LCS and LCSD percent recoveries were within control limits.

The matrix spike and spike duplicate percent recoveries were within advisory control limits.



**NWTPH-Gx and BETX by SW8021**

The samples and associated laboratory QC were analyzed within the method recommended holding times.

Initial and continuing calibrations were within method requirements.

The surrogate percent recoveries were within control limits.

The method blanks were clean at the reporting limit. The LCS and LCSD percent recoveries were within control limits.

All BETX matrix spike and matrix spike duplicate percent recoveries were outside advisory control limits high for sample **DMA-TP3-5-6-042011**, with the exception of the matrix spike duplicate of Benzene. No corrective action is required for matrix QC.

**Total Arsenic and Lead by SW846 6010B**

The samples and associated laboratory QC were digested and analyzed within the method recommended holding time.

The method blanks were clean at the reporting limits. The LCS percent recoveries were within control limits.

The matrix spike percent recoveries and duplicate RPDs were within control limits.

**General Chemistry**

The samples and associated laboratory QC were prepared and analyzed within the method recommended holding time.

The method blanks were clean at the reporting limits. The LCS percent recovery was within control limits.

The SRM percent recovery was within limits.

The matrix spike percent recovery and replicate RSDs were within control limits.

# Sample ID Cross Reference Report



ARI Job No: SS83  
Client: Floyd Snider  
Project Event: POS-LL  
Project Name: Lora Lake Parcel:DMA

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. DMA-TP1-0-3-041911	SS83A	11-8711	Soil	04/19/11 11:00	04/20/11 12:59
2. DMA-TP1-3-4.5-041911	SS83B	11-8712	Soil	04/19/11 10:50	04/20/11 12:59
3. DMA-TP1-4.5-5.5-041911	SS83C	11-8713	Soil	04/19/11 10:25	04/20/11 12:59
4. DMA-TP2-1.5-3-041911	SS83D	11-8714	Soil	04/19/11 12:05	04/20/11 12:59
5. DMA-TP2-3-4-041911	SS83E	11-8715	Soil	04/19/11 12:00	04/20/11 12:59
6. DMA-TP6-0-2.5-041911	SS83F	11-8716	Soil	04/19/11 15:10	04/20/11 12:59
7. DMA-TP6-2.5-5-041911	SS83G	11-8717	Soil	04/19/11 15:05	04/20/11 12:59
8. DMA-TP4-0-1.5-042011	SS83H	11-8718	Soil	04/20/11 08:15	04/20/11 12:59
9. DMA-TP4-1.5-2-042011	SS83I	11-8719	Soil	04/20/11 08:20	04/20/11 12:59
10. DMA-TP5-1.5-2-042011	SS83J	11-8720	Soil	04/20/11 09:15	04/20/11 12:59
11. DMA-TP5-1.5-2-042011-D	SS83K	11-8721	Soil	04/20/11 09:20	04/20/11 12:59
12. DMA-TP5-2-3-042011	SS83L	11-8722	Soil	04/20/11 09:25	04/20/11 12:59
13. DMA-TP3-2-3-042011	SS83M	11-8723	Soil	04/20/11 10:35	04/20/11 12:59
14. DMA-TP3-3-4-042011	SS83N	11-8724	Soil	04/20/11 10:40	04/20/11 12:59
15. DMA-TP3-5-6-042011	SS83O	11-8725	Soil	04/20/11 10:45	04/20/11 12:59
16. DMA-RB-042011	SS83P	11-8726	Water	04/20/11 11:50	04/20/11 12:59
17. TP-TB-042011	SS83Q	11-8727	Water	04/20/11	04/20/11 12:59
18. DMA-TP1-6-7-041911	SS83R	11-8728	Soil	04/19/11 10:20	04/20/11 12:59
19. DMA-TP2-5-5.5-041911	SS83S	11-8729	Soil	04/19/11 11:50	04/20/11 12:59
20. DMA-TP6-5-6-041911	SS83T	11-8730	Soil	04/19/11 15:00	04/20/11 12:59
21. DMA-TP5-3.5-4.5-042011	SS83U	11-8731	Soil	04/20/11 09:30	04/20/11 12:59

Printed 04/20/11



## Data Reporting Qualifiers

Effective 2/14/2011

### Inorganic Data

- U Indicates that the target analyte was not detected at the reported concentration
- \* Duplicate RPD is not within established control limits
- B Reported value is less than the CRDL but  $\geq$  the Reporting Limit
- N Matrix Spike recovery not within established control limits
- NA Not Applicable, analyte not spiked
- H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- L Analyte concentration is  $\leq 5$  times the Reporting Limit and the replicate control limit defaults to  $\pm 1$  RL instead of the normal 20% RPD

### Organic Data

- U Indicates that the target analyte was not detected at the reported concentration
- \* Flagged value is not within established control limits
- B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
- J Estimated concentration when the value is less than ARI's established reporting limits
- D The spiked compound was not detected due to sample extract dilution
- E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
- Q Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria ( $< 20\%$  RSD,  $< 20\%$  Drift or minimum RRF).



- S** Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte
- NA** The flagged analyte was not analyzed for
- NR** Spiked compound recovery is not reported due to chromatographic interference
- NS** The flagged analyte was not spiked into the sample
- M** Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
- M2** The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.
- N** The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
- Y** The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.
- EMPC** Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria" **(Dioxin/Furan analysis only)**
- C** The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
- P** The analyte was detected on both chromatographic columns but the quantified values differ by  $\geq 40\%$  RPD with no obvious chromatographic interference
- X** Analyte signal includes interference from polychlorinated diphenyl ethers. **(Dioxin/Furan analysis only)**
- Z** Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**



## **Geotechnical Data**

- A** The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
- F** Samples were frozen prior to particle size determination
- SM** Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
- SS** Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis
- W** Weight of sample in some pipette aliquots was below the level required for accurate weighting



## LCS SOLUTIONS

LABL SOLN ID	TEST	CONC. UG/ML	SOLVENT	EXP.
1	1837-2	PCB 1660	20	ACETONE 01/01/12
2#	NA	BCOC PEST	10	ACETONE NA
3	1793-3	PEST	01/02/10	ACETONE 12/15/11
4	1806-2	LOW PEST	.1/.2/1	ACETONE 12/15/11
5	1779-1	EPH	1500	MECL2 11/11/11
6	1791-5	PCP	12.5/125	ACETONE 12/10/11
7	1834-4	ABN	100	MEOH 08/21/11
8	1785-3	TBT	2.5	MECL2 11/27/11
9	1786-3	PORE TBT	.125/.25	MECL2 11/27/11
10	1790-1	ABN-ACID	100/200	MEOH 06/07/11
11	1777-2	TPHD	15000	ACETONE 11/01/11
12	1790-2	ABN BASE	200	MEOH 06/07/11
13	1838-4	LOW PCB	2	ACETONE 01/31/12
14	1822-2	LOW ABN ACID	10/20	MEOH 06/07/11
15	1814-2	SIM PNA	15/75	MEOH 01/04/12
16	1834-5	1,4-DIOXANE	100	MEOH 08/25/11
17	1772-3	1248 PCB	10	ACETONE 05/01/11
18	1814-3	LOW SIM PNA	1.5	ACETONE 01/04/12
19	1815-2	AK103	7500	ACETONE 06/02/11
20	1843-3	PNA	100	ACETONE 08/14/11
21	1844-3	SKY/BHT	100	MEOH 09/24/11
22	1781-1	HERB	05 to 4000	MEOH 04/15/11
23	1822-3	LW ABN BASE	20	MEOH 06/07/11
24	1822-4	LOW ABN	10	ACETONE 10/01/11
25#	NA	DIPHENYL	100	MEOH NA
26	1823-1	OP-PEST	25	MEOH 07/01/11
27	NA	STEROLS	200	MEOH NA
28#	1807-1	ADD. PEST	2	ACETONE 08/31/11
29#	NA	DECANES	100	MEOH NA

## LCS SOLUTIONS

30	NA	EDB/DBCP	0.2	MEOH	NA
31	1835-2	TERPINEOL	100	MEOH	09/02/11
32	NA	GUAIACOL	50-200	ACETONE	NA
33	NA	RETENE	100	MEOH	NA
34	1842-1	CONGENERS	0.5	ACETONE	03/14/12
35	NA	ALKYL PNA A	10	MEOH	NA
36	NA	ALKYL PNA B	10	MEOH	NA
37	1773-1	CAR/PERY	100	ACETONE	10/14/11
38	1846-2	ABN ACID	200-450	MEOH	09/25/11
50	1757-4	FULL RESIN	250	ACETONE	08/14/11
51	1772-1	DDTS	0.01	ACETONE	04/24/11
52	NA	1232 PCB	20	ACETONE	NA
53	1780-1	DALAPON	50	MEOH	05/07/11
54	1753-1	T-CHLORDANE	10	ACETONE	07/21/11
55	1753-2	TOXAPHENE	50	ACETONE	07/21/11
56	1846-3	ABN BASE	50-200	MEOH	09/25/11
		#=PROJECT SPECIFIC SOLUTION			
		*=REVERIFIED SOLUTION			

## SURRE SOLUTIONS

LABEL	SOLN ID	TEST	CONC. UG/ML	SOLVENT	EXP.
A	1824-2	ABN	100/150	MEOH	07/22/11
B	1834-6	SIM PNA	15/75	ACETONE	10/05/11
C	NA	SIM ABN	25/37.5	MEOH	03/08/11
D	1795-4	LOW PCB	0.2	ACETONE	12/16/11
E	1771-3	HERB	62.5	MEOH	10/06/11
F	1791-3	PCP	12.5	ACETONE	12/09/11
G	1824-1	d8-DIOXANE	100	MEOH	08/14/11
H	1847-2	OP-PEST	25	ACETONE	03/23/12
I	1835-1	LOW S. PNA	1.5	ACETONE	10/05/11
J	1787-2	TBT-PORE	0.125	MECL2	11/27/11
K	1795-2	MED PCB	20	ACETONE	12/16/11
L	1785-4	TBT	2.5	MECL2	11/27/11
M	1767-1	EPH	1500	MECL2	06/02/11
N	1795-3	PCB	2	ACETONE	12/16/11
O	1821-3	TPH	450	MECL2	09/07/11
P	1813-2	HCID	2250	MECL2	08/05/11
Q	NA	EDB	1	MEOH	NA
R	1757-3	RESIN ACID	250	ACETONE	08/14/11
S*	NA	PBDE	.25	MEOH	NA
T	1768-2	ALKYL PNA	10	MEOH	07/22/11
U	NA	CONGENER	2.5	ACETONE	NA
V	1791-4	LOW PCP	1.25	ACETONE	12/09/11
*reverified solution					



**Spike Recovery Control Limits for Analysis of Aqueous Samples  
Volatile Organic Compounds (VOA) EPA SW-846 Methods 8260C  
5 mL Purge Volume <sup>(9)</sup>**

Effective: 5/1/09

Control limits are updated periodically. Assure that you have ARI's current control limits by downloading the files at the time of use. <http://www.arilabs.com/portal/downloads/ARI-CLs.zip>

<b>Extraction Method:</b>	<b>ARI<sup>(1)</sup> Control Limits</b>	<b>ARI<sup>(1,2)</sup> ME Limits</b>	<b>DoD<sup>(6)</sup> Control Limits</b>	<b>DoD<sup>(2,6)</sup> ME Limits</b>
<b>LCS Spike Recovery <sup>(8)</sup></b>				-
Dichlorodifluoromethane	48 - 147	32 - 164	30 - 155	10 - 175
Chloromethane	66 - 130	55 - 141	40 - 125	25 - 140
<b>Vinyl Chloride</b>	73 - 130	64 - 140	50 - 145	35 - 165
Bromomethane	60 - 138	47 - 151	30 - 145	10 - 165
Chloroethane	52 - 151	36 - 168	60 - 135	50 - 145
Trichlorofluoromethane	36 - 175	13 - 198	60 - 145	45 - 160
Acrolein	34 - 164	12 - 186	(4)	(4)
1,1,2-Trichloro-1,2,2-trifluoroethane	69 - 132	59 - 143	(4)	(4)
Acetone	60 - 144	46 - 158	40 - 140	20 - 160
<b>1,1-Dichloroethene</b>	73 - 124	65 - 133	70 - 130	55 - 140
Bromoethane	70 - 133	60 - 144	(4)	(4)
Methyl Iodide	57 - 149	42 - 164	(4)	(4)
Methylene Chloride	74 - 121	66 - 129	55 - 140	40 - 155
Acrylonitrile	75 - 141	64 - 152	(4)	(4)
Methyl tert-Butyl Ether	79 - 127	71 - 135	65 - 125	55 - 135
Carbon Disulfide	67 - 133	56 - 144	35 - 160	15 - 185
trans-1,2-Dichloroethene	80 - <b>120</b>	74 - 126	60 - 140	45 - 150
Vinyl Acetate	61 - 145	47 - 159	(4)	(4)
1,1-Dichloroethane	80 - 123	73 - 130	70 - 135	60 - 145
2-Butanone	64 - 149	50 - 163	30 - 150	10 - 170
2,2-Dichloropropane	72 - 136	61 - 147	70 - 135	60 - 150
cis-1,2-Dichloroethene	<b>80 - 120</b>	78 - 125	70 - 125	60 - 135
<b>Chloroform</b>	80 - 121	73 - 128	65 - 135	50 - 150
Bromodichloromethane	80 - 122	73 - 129	75 - 120	70 - 130
1,1,1-Trichloroethane	80 - 124	73 - 131	65 - 130	55 - 145
1,1-Dichloropropene	<b>80 - 123</b>	76 - 130	75 - 130	65 - 140
Carbon Tetrachloride	77 - 123	69 - 131	65 - 140	55 - 150
1,2-Dichloroethane	78 - 121	71 - 128	70 - 130	60 - 140
<b>Benzene</b>	<b>80 - 120</b>	80 - 124	80 - 120	75 - 130
<b>Trichloroethene</b>	<b>80 - 120</b>	76 - 124	70 - 125	60 - 135
<b>1,2-Dichloropropane</b>	<b>80 - 120</b>	76 - 126	75 - 125	65 - 135
Bromochloromethane	<b>80 - 120</b>	77 - 126	65 - 130	55 - 140
Dibromomethane	<b>80 - 120</b>	76 - 122	75 - 125	65 - 135
2-Chloroethylvinylether	59 - 136	46 - 149	(4)	(4)
4-Methyl-2-Pentanone	68 - 138	56 - 150	60 - 135	45 - 145
cis-1,3-Dichloropropene	74 - 127	65 - 136	70 - 130	60 - 140



**Spike Recovery Control Limits for Analysis of Aqueous Samples  
Volatile Organic Compounds (VOA) EPA SW-846 Methods 8260C  
5 mL Purge Volume <sup>(9)</sup>**

Effective: 5/1/09

Control limits are updated periodically. Assure that you have ARI's current control limits by downloading the files at the time of use. <http://www.arilabs.com/portal/downloads/ARI-CLs.zip>

<b>Extraction Method:</b>	<b>ARI<sup>(1)</sup> Control Limits</b>	<b>ARI<sup>(1,2)</sup> ME Limits</b>	<b>DoD<sup>(6)</sup> Control Limits</b>	<b>DoD<sup>(2,6)</sup> ME Limits</b>
<b>Toluene</b>	<b>80 - 120</b>	78 - 122	75 - 120	70 - 130
trans-1,3-Dichloropropene	68 - 131	58 - 142	55 - 140	40 - 155
2-Hexanone	70 - 136	59 - 147	55 - 130	45 - 140
1,1,2-Trichloroethane	<b>80 - 120</b>	79 - 120	75 - 125	65 - 135
1,3-Dichloropropane	<b>80 - 120</b>	76 - 126	75 - 125	65 - 135
Tetrachloroethene	79 - <b>120</b>	73 - 125	45 - 150	25 - 165
Dibromochloromethane	77 - 123	69 - 131	60 - 135	45 - 145
Ethylene Dibromide	<b>80 - 121</b>	76 - 128	(4)	(4)
<b>Chlorobenzene</b>	<b>80 - 120</b>	77 - 121	80 - 120	75 - 130
<b>Ethylbenzene</b>	83 - 122	77 - 129	75 - 125	65 - 135
1,1,2,2-Tetrachloroethane	<b>80 - 121</b>	74 - 128	65 - 130	55 - 140
m,p-Xylene	<b>80 - 123</b>	79 - 129	75 - 130	65 - 135
o-Xylene	<b>80 - 125</b>	75 - 132	80 - 120	75 - 130
Styrene	72 - 130	62 - 140	65 - 135	55 - 145
Isopropylbenzene	<b>80 - 129</b>	78 - 136	75 - 125	65 - 135
Bromoform	71 - <b>120</b>	63 - 126	70 - 130	60 - 140
1,1,1,2-Tetrachloroethane	77 - 122	70 - 130	80 - 130	75 - 135
1,2,3-Trichloropropane	<b>80 - 120</b>	76 - 126	75 - 125	65 - 130
trans-1,4-Dichloro-2-butene	62 - 146	48 - 160	(4)	(4)
n-Propylbenzene	<b>80 - 128</b>	78 - 135	70 - 130	65 - 140
Bromobenzene	<b>80 - 120</b>	78 - 122	75 - 125	70 - 130
1,3,5-Trimethylbenzene	<b>80 - 129</b>	77 - 137	75 - 130	65 - 140
2-Chlorotoluene	<b>80 - 124</b>	75 - 131	75 - 125	65 - 135
4-Chlorotoluene	<b>80 - 124</b>	75 - 131	75 - 130	65 - 135
tert-Butylbenzene	<b>80 - 128</b>	76 - 136	70 - 130	60 - 140
1,2,4-Trimethylbenzene	<b>80 - 130</b>	75 - 138	75 - 130	65 - 140
sec-Butylbenzene	<b>80 - 129</b>	78 - 136	70 - 125	65 - 135
4-Isopropyltoluene	<b>80 - 133</b>	75 - 141	75 - 130	65 - 140
1,3-Dichlorobenzene	<b>80 - 120</b>	76 - 124	75 - 125	65 - 130
1,4-Dichlorobenzene	<b>80 - 120</b>	75 - 122	75 - 125	65 - 130
n-Butylbenzene	78 - 140	68 - 150	70 - 135	55 - 150
1,2-Dichlorobenzene	<b>80 - 120</b>	77 - 121	70 - 120	60 - 130
1,2-Dibromo-3-chloropropane	72 - 131	62 - 141	50 - 130	35 - 145
1,2,4-Trichlorobenzene	75 - 130	66 - 139	65 - 135	55 - 145
Hexachloro-1,3-butadiene	73 - 129	64 - 138	50 - 140	35 - 160
Naphthalene	66 - 140	54 - 152	55 - 140	40 - 150
1,2,3-Trichlorobenzene	74 - 130	65 - 139	55 - 140	45 - 155



**Spike Recovery Control Limits for Analysis of Aqueous Samples  
Volatile Organic Compounds (VOA) EPA SW-846 Methods 8260C  
5 mL Purge Volume <sup>(9)</sup>**

Effective: 5/1/09

Control limits are updated periodically. Assure that you have ARI's current control limits by downloading the files at the time of use. <http://www.arilabs.com/portal/downloads/ARI-CLs.zip>

<b>Extraction Method:</b>	<b>ARI<sup>(1)</sup> Control Limits</b>	<b>ARI<sup>(1,2)</sup> ME Limits</b>	<b>DoD<sup>(6)</sup> Control Limits</b>	<b>DoD<sup>(2,6)</sup> ME Limits</b>
<b>MB/LCS Surrogate Recovery</b>				
Dibromofluoromethane	<b>80 - 120</b>	(3)	85 - 115	(3)
d4-1,2-Dichloroethane	<b>80 - 122</b>	(3)	70 - 120	(3)
d8-Toluene	<b>80 - 120</b>	(3)	85 - 120	(3)
4-Bromofluorobenzene	<b>80 - 120</b>	(3)	75 - 120	(3)
d4-1,2-Dichlorobenzene	<b>80 - 120</b>	(3)	(4)	(3)(4)
<b>Sample Surrogate Recovery</b>				
Dibromofluoromethane	30 - 160 <sup>(7)</sup>	(3)	85 - 115	(3)
d4-1,2-Dichloroethane	<b>80 - 125</b>	(3)	70 - 120	(3)
d8-Toluene	<b>80 - 120</b>	(3)	85 - 120	(3)
4-Bromofluorobenzene	<b>80 - 120</b>	(3)	75 - 120	(3)
D4-1,2-Dichlorobenzene	<b>80 - 120</b>	(3)	(4)	(3)(4)

(1) Control Limits calculated using all data generated 1/1/08 through 12/31/08.

(2) **ME = A marginal exceedance** defined in the NELAC Standard<sup>(5)</sup> as beyond the LCS-CL but still within the ME limits. ME limits are between 3 and 4 standard deviations around the mean. A maximum of four marginal exceedances are acceptable. Five or more marginal exceedances require corrective action.

(3) Marginal Exceedances not allowed for surrogate standards.

(4) The DoD-QSM<sup>(6)</sup> does not list recovery limits for these compounds.

(5) **2003 NELAC Standard (EPA/600/R-04/003), July 2003**, Chapter 5, pages 251-252.

(6) Page 182 of: **Department of Defense Quality Systems Manual for Environmental Laboratories, Version 3 Final, March 2005** Prepared By Environmental Data Quality Workgroup, Department of Navy, Lead Service (Based On National Environmental Laboratory Accreditation Conference (NELAC) Chapter 5 (Quality Systems) NELAC Voted Version - 5 June 2003

(7) 30 - 160 are default, advisory control limits used when there is insufficient data to calculate historic control limits. **DO NOT** use these limits as the sole reason to reject the data from a batch of analyses

(8) Laboratory Control Sample (LCS) spike recovery control limits also used as advisory control limits for sample matrix spike (MS) analyzes. MS recovery values are advisory and not used to assess the acceptability of an analytical batch.

(9) Highlighted control limits (**bold font**) are adjusted from the calculated values as follows:

a) ARI does not use control limits < 10 for the lower limit or < 100 for the upper limit.

b) Control limits for analyzes with no separate preparation procedure are adjusted to reflect the minimum uncertainty in the calibration of the instrument allowed by the referenced analytical method.



**Spike Recovery Control Limits for Analysis of Solid Samples  
Volatile Organic Compounds (VOA) EPA SW-846 Methods 8260C  
5 mL Purge Volume <sup>(7)</sup>**

Effective:5/18/09

Control limits are updated periodically. Assure that you have ARI's current control limits by downloading the files at the time of use. <http://www.arilabs.com/portal/downloads/ARI-CLs.zip>

	Low Level <sup>(1)</sup>	Low Level ME Limits <sup>(3)</sup>	Medium Level <sup>(2)</sup>	Medium Level ME Limits <sup>(3)</sup>
<b>LCS Spike Recovery <sup>(8)</sup></b>				
Dichlorodifluoromethane	53 - 148	37 - 164	25 - 128	<b>10 - 145</b>
Chloromethane	64 - 125	54 - 135	55 - 121	<b>44 - 132</b>
Vinyl Chloride	63 - 137	51 - 149	66 - 123	<b>57 - 133</b>
Bromomethane	57 - 136	44 - 149	40 - 154	<b>21 - 173</b>
Chloroethane	64 - 131	53 - 142	72 - 128	<b>63 - 137</b>
Trichlorofluoromethane	69 - 132	59 - 143	69 - 135	<b>58 - 146</b>
Acrolein	54 - 137	40 - 151	39 - 135	<b>23 - 151</b>
1,1,2-Trichloro-1,2,2-trifluoroethane	74 - 130	65 - 139	65 - 139	<b>53 - 151</b>
Acetone	60 - 131	48 - 143	55 - 130	<b>43 - 143</b>
1,1-Dichloroethene	75 - 126	67 - 135	73 - 133	<b>63 - 143</b>
Bromoethane	76 - 126	68 - 134	74 - 133	<b>64 - 143</b>
Methyl Iodide	65 - 139	53 - 151	47 - 155	<b>29 - 173</b>
Methylene Chloride	70 - 123	61 - 132	<b>80 - 120</b>	<b>75 - 122</b>
Acrylonitrile	67 - 125	57 - 135	62 - 129	<b>51 - 140</b>
Methyl tert-Butyl Ether	70 - 120	62 - 128	69 - 128	<b>59 - 138</b>
Carbon Disulfide	71 - 129	61 - 139	64 - 135	<b>52 - 147</b>
trans-1,2-Dichloroethene	80 - <b>120</b>	74 - 126	78 - 125	<b>70 - 133</b>
Vinyl Acetate	60 - 136	47 - 149	66 - 132	<b>55 - 143</b>
1,1-Dichloroethane	<b>80 - 120</b>	75 - 124	77 - 124	<b>69 - 132</b>
2-Butanone	70 - <b>120</b>	62 - 127	65 - 126	<b>55 - 136</b>
2,2-Dichloropropane	74 - 123	66 - 131	75 - 127	<b>66 - 136</b>
cis-1,2-Dichloroethene	<b>80 - 120</b>	76 - 123	<b>80 - 125</b>	<b>74 - 132</b>
Chloroform	80 - <b>120</b>	74 - 123	<b>80 - 124</b>	<b>73 - 131</b>
Bromodichloromethane	77 - 121	70 - 128	78 - 130	<b>69 - 139</b>
1,1,1-Trichloroethane	77 - 121	70 - 128	76 - 130	<b>67 - 139</b>
1,1-Dichloropropene	<b>80 - 120</b>	77 - 123	77 - 131	<b>68 - 140</b>
Carbon Tetrachloride	77 - 122	70 - 130	74 - 129	<b>65 - 138</b>
1,2-Dichloroethane	76 - <b>120</b>	69 - 123	73 - 123	<b>65 - 131</b>
Benzene	<b>80 - 120</b>	80 - 126	<b>80 - 120</b>	<b>75 - 130</b>
Trichloroethene	<b>80 - 120</b>	77 - 123	<b>80 - 125</b>	<b>75 - 132</b>
1,2-Dichloropropane	<b>80 - 120</b>	76 - 120	<b>80 - 122</b>	<b>74 - 129</b>
Bromochloromethane	80 - 120	73 - 127	<b>80 - 127</b>	<b>73 - 135</b>
Dibromomethane	80 - <b>120</b>	74 - 121	<b>80 - 121</b>	<b>76 - 128</b>
2-Chloroethylvinylether	<b>10 - 191</b>	<b>10 - 222</b>	61 - 128	<b>50 - 139</b>



**Spike Recovery Control Limits for Analysis of Solid Samples  
Volatile Organic Compounds (VOA) EPA SW-846 Methods 8260C  
5 mL Purge Volume <sup>(7)</sup>  
Effective:5/18/09**

Control limits are updated periodically. Assure that you have ARI's current control limits by downloading the files at the time of use. <http://www.arilabs.com/portal/downloads/ARI-CLs.zip>

	Low Level <sup>(1)</sup>	Low Level ME Limits <sup>(3)</sup>	Medium Level <sup>(2)</sup>	Medium Level ME Limits <sup>(3)</sup>
4-Methyl-2-Pentanone	67 - 120	59 - 125	80 - 123	73 - 130
cis-1,3-Dichloropropene	74 - 120	67 - 125	80 - 122	73 - 129
Toluene	80 - 120	79 - 120	80 - 122	80 - 127
trans-1,3-Dichloropropene	65 - 120	57 - 125	80 - 123	79 - 129
2-Hexanone	65 - 130	54 - 141	58 - 129	46 - 141
1,1,2-Trichloroethane	80 - 120	75 - 122	80 - 120	77 - 126
1,3-Dichloropropane	80 - 120	74 - 122	80 - 120	76 - 126
Tetrachloroethene	80 - 121	79 - 127	80 - 130	73 - 138
Dibromochloromethane	64 - 120	55 - 128	77 - 120	70 - 127
Ethylene Dibromide	75 - 120	68 - 124	80 - 120	80 - 120
Chlorobenzene	80 - 120	82 - 120	80 - 121	80 - 127
Ethylbenzene	80 - 127	80 - 134	80 - 126	80 - 132
1,1,2,2-Tetrachloroethane	74 - 120	66 - 128	79 - 120	73 - 123
m,p-Xylene	80 - 125	80 - 131	80 - 130	80 - 137
o-Xylene	78 - 120	71 - 126	80 - 124	80 - 130
Styrene	80 - 123	78 - 130	80 - 132	77 - 140
Isopropylbenzene	80 - 127	84 - 133	80 - 130	80 - 137
Bromoform	60 - 120	50 - 128	68 - 129	58 - 139
1,1,1,2-Tetrachloroethane	69 - 121	60 - 130	80 - 126	76 - 133
1,2,3-Trichloropropane	72 - 121	64 - 129	77 - 120	71 - 121
trans-1,4-Dichloro-2-butene	65 - 126	55 - 136	66 - 127	56 - 137
n-Propylbenzene	80 - 132	80 - 139	80 - 132	77 - 140
Bromobenzene	80 - 120	78 - 122	80 - 121	80 - 127
1,3,5-Trimethylbenzene	80 - 125	80 - 131	78 - 137	68 - 147
2-Chlorotoluene	80 - 125	77 - 132	80 - 123	80 - 129
4-Chlorotoluene	80 - 127	77 - 134	80 - 130	74 - 138
tert-Butylbenzene	87 - 122	80 - 128	80 - 133	78 - 141
1,2,4-Trimethylbenzene	80 - 126	80 - 132	80 - 131	79 - 139
sec-Butylbenzene	80 - 134	80 - 142	80 - 136	76 - 146
4-Isopropyltoluene	80 - 131	80 - 138	80 - 141	71 - 151
1,3-Dichlorobenzene	80 - 120	80 - 126	80 126	77 - 133
1,4-Dichlorobenzene	80 - 120	79 - 126	80 121	77 - 127
n-Butylbenzene	80 - 138	80 - 146	80 - 138	77 - 147
1,2-Dichlorobenzene	80 - 120	78 - 122	80 - 120	80 - 121
1,2-Dibromo-3-chloropropane	59 - 120	49 - 130	67 - 121	58 - 130
1,2,4-Trichlorobenzene	78 - 130	69 - 139	80 - 133	72 - 142





**Spike Recovery Control Limits for Analysis of Solid Samples  
Volatile Organic Compounds (VOA) EPA SW-846 Methods 8260C  
5 mL Purge Volume <sup>(7)</sup>  
Effective:5/18/09**

Control limits are updated periodically. Assure that you have ARI's current control limits by downloading the files at the time of use. <http://www.arilabs.com/portal/downloads/ARI-CLs.zip>

	Low Level <sup>(1)</sup>	Low Level ME Limits <sup>(3)</sup>	Medium Level <sup>(2)</sup>	Medium Level ME Limits <sup>(3)</sup>
Hexachloro-1,3-butadiene	76 - 129	67 - 138	62 - 148	48 - 162
Naphthalene	66 - <b>120</b>	58 - 126	74 - 133	64 - 143
1,2,3-Trichlorobenzene	73 - 123	65 - 131	80 - 126	72 - 134
<b>MB/LCS Surrogate Recovery</b>				
Dibromofluoromethane	<b>80 - 120</b>	(4)	<b>80 - 120</b>	(4)
d4-1,2-Dichloroethane	79 - 121	(4)	76 - <b>120</b>	(4)
d8-Toluene	<b>80 - 120</b>	(4)	<b>80 - 120</b>	(4)
4-Bromofluorobenzene	<b>80 - 120</b>	(4)	<b>80 - 120</b>	(4)
d4-1,2-Dichlorobenzene	<b>80 - 120</b>	(4)	<b>80 - 120</b>	(4)
<b>Sample Surrogate Recovery</b>				
Dibromofluoromethane	30 - 160 <sup>(6)</sup>	(4)	30 - 160 <sup>(6)</sup>	(4)
d4-1,2-Dichloroethane	75 - 152	(4)	69 - <b>120</b>	(4)
d8-Toluene	82 - 115	(4)	<b>80 - 120</b>	(4)
4-Bromofluorobenzene	64 - <b>120</b>	(4)	76 - 128	(4)
d4-1,2-Dichlorobenzene	<b>80 - 120</b>	(4)	<b>80 - 120</b>	(4)

(1) Control Limits calculated using all data generated 1/1/08 through 12/31/08.

(2) Control Limits calculated using all data generated 3/1/07 through 11/15/07.

(3) **ME = A marginal exceedance** defined in the NELAC Standard<sup>(5)</sup> as beyond the LCS-CL but still within the ME limits. ME limits are between 3 and 4 standard deviations around the mean. A maximum of four marginal exceedances are acceptable. Five or more marginal exceedances require corrective action.

(4) Marginal Exceedances not allowed for surrogate standards

(5) **2003 NELAC Standard (EPA/600/R-04/003), July 2003**, Chapter 5, pages 251-252.

(6) 30 – 160 are default, advisory control limits used when there is insufficient data to calculate historic control limits. **DO NOT** use these limits as the sole reason to reject the data from a batch of analyses

(7) Highlighted control limits (**bold font**) are adjusted from the calculated values as follows:

a) ARI does not use control limits < 10

b) Control limits for analyzes with no separate preparation procedure are adjusted to reflect the minimum uncertainty in the calibration of the instrument allowed by the referenced analytical method.

(8) Laboratory Control Sample (LCS) spike recovery control limits also used as advisory control limits for sample matrix spike (MS) analyzes. MS recovery values are advisory and not used to assess the acceptability of an analytical batch.



## Spike Recovery Control Limits for Polycyclic Aromatic Hydrocarbons Selected Ion Monitoring (SIM) EPA Method SW-846-8270D-Modified <sup>(1,7)</sup> Effective 5/1/09

Control limits are updated periodically. Assure that you have ARI's current control limits by downloading the files at the time of use. <http://www.arilabs.com/portal/downloads/ARI-CLs.zip>

Sample Matrix	Water		Soil	
	500 mL to 0.5 mL		7.5 g / 0.5 mL	
Sample Volume / Final Volume	Control Limits	ME Limits <sup>(2)</sup>	Control Limits	ME Limits <sup>(2)</sup>
<b>LCS Spike Recovery <sup>(6)</sup></b>				
Napthalene	39 - <b>100</b>	30 - 102	37 - <b>100</b>	27 - 107
2-Methylnapthalene	39 - <b>100</b>	31 - <b>100</b>	37 - <b>100</b>	28 - <b>100</b>
1-Methylnapthalene	30 - 160 <sup>(3)</sup>	30 - 160 <sup>(3)</sup>	30 - 160 <sup>(3)</sup>	30 - 160 <sup>(3)</sup>
Acenaphthylene	37 - 100	27 - 111	35 - <b>100</b>	26 - 102
Acenaphthene	42 - <b>100</b>	33 - 107	39 - <b>100</b>	31 - <b>100</b>
Dibenzofuran	46 - <b>100</b>	38 - 101	39 - <b>100</b>	31 - <b>100</b>
Fluorene	49 - 101	40 - 110	42 - <b>100</b>	33 - 106
Phenanthrene	55 - 101	47 - 109	47 - <b>100</b>	38 - 108
Anthracene	47 - 102	38 - 111	41 - 106	30 - 117
Fluoranthene	60 - 106	52 - 114	52 - 109	43 - 119
Pyrene	55 - 110	46 - 119	47 - 111	36 - 122
Benz(a)anthracene	56 - 104	48 - 112	47 - 114	36 - 125
Chrysene	58 - 104	50 - 112	51 - 106	42 - 115
Benzofluoranthene(s) (Total)	30 - 160 <sup>(8)</sup>	30 - 160 <sup>(8)</sup>	30 - 160 <sup>(8)</sup>	30 - 160 <sup>(8)</sup>
Benzo(a)pyrene	32 - 110	19 - 123	44 - 111	33 - 122
Indeno(1,2,3-cd)pyrene	50 - 114	39 - 125	41 - 114	29 - 126
Dibenzo(a,h)anthracene	42 - 121	29 - 134	42 - 116	30 - 128
Benzo(g,h,i)perylene	50 - 113	40 - 124	37 - 115	27 - 107
<b>MB / LCS Surrogate Recovery</b>				
d10-2-Methylnaphthalene	36 - 101	(4)	35 - <b>100</b>	(4)
d14-Dibenzo(a,h)anthracene	42 - 121	(4)	37 - 120	(4)
<b>Sample Surrogate Recovery</b>				
d10-2-Methylnaphthalene	30 - 106	(4)	34 - <b>100</b>	(4)
d14-Dibenzo(a,h)anthracene	<b>10</b> - 130	(4)	<b>10</b> - 117	(4)

(1) ARI's Control limits calculated using all available spike recovery data from 1/1/08 through 12/31/08.

(2) ME = A **marginal exceedance** defined in the NELAC Standard <sup>(5)</sup> as beyond the LCS-CL but still within the ME limits. ME limits are between 3 and 4 standard deviations around the mean. A maximum of one marginal exceedance is acceptable. Two or more marginal exceedances require corrective action.

(3) 30 – 160 are default, advisory control limits used when there is insufficient data to calculate historic control limits. **DO NOT** use these limits as the sole reason to reject the data from a batch of analyses.

(4) Marginal Exceedances not allowed for surrogate standards.

(5) 2003 NELAC Standard (EPA/600/R-04/003), July 2003, Chapter 5, pages 251-252.

(6) Laboratory Control Sample (LCS) spike recovery control limits also used as advisory control limits for sample matrix spike (MS) analyzes. MS recovery values are advisory and not used to assess the acceptability of an analytical batch.

(7) Highlighted control limits (**bold font**) adjusted to demonstrate that ARI does not use control limits < 10 for the lower limit or < 100 for the upper limit.

(8) Default limits pending generation of historic limits for total benzofluoranthrenes (7/29/10)



**Spike Recovery Control Limits for Chlorinated Phenols**  
**EPA Method SW-846-8041<sup>(1,2)</sup>**  
Effective 5/1/09

Control limits are updated periodically. Assure that you have ARI's current control limits by downloading the files at the time of use. <http://www.arilabs.com/portal/downloads/ARI-CLs.zip>

	ARI's Calculated Control Limits	
	Water	Soil / Sediment
<b>Sample Matrix:</b>	Water	Soil / Sediment
<b>Sample Amount / Final Volume:</b>	500 / 50 mL	10 g / 25 mL
<b>LCS Spike Recovery<sup>(3)</sup></b>		
Pentachlorophenol	27 - 115	<b>10 - 162</b>
<b>Method Blank/LCS Surrogate Recovery</b>		
2,4,6-Tribromophenol	40 - 130	50 - 115
<b>Sample Surrogate Recovery</b>		
2,4,6-Tribromophenol	11 - 156	<b>10 - 146</b>

(1) ARI's Control limits calculated using all available spike recovery data from 1/1/08 through 12/1/08.

(2) Highlighted control limits (**bold font**) adjusted to demonstrate that ARI does not use control limits < 10.

(3) Laboratory Control Sample (LCS) spike recovery control limits also used as advisory control limits for sample matrix spike (MS) analyzes. MS recovery values are advisory and not used to assess the acceptability of an analytical batch.



<b>Spike Recovery Control Limits Hydrocarbon Identification (NWTPH-HCID) and Diesel Range Petroleum Hydrocarbons (NWTPH-D &amp; AK-102) <sup>(1)</sup></b> Effective 10/4/10				
Control limits are updated periodically. Assure that you have ARI's current control limits by downloading the files at the time of use. <a href="http://www.arilabs.com/portal/downloads/ARI-CLs.zip">http://www.arilabs.com/portal/downloads/ARI-CLs.zip</a>				
<b>Method:</b>	<b>NWTPH-HCID <sup>(2)</sup></b>	<b>NWTPH-D</b>		<b>AK102 <sup>(2)</sup></b>
<b>Sample Matrix:</b>	Water & Soil	Water <sup>(3)</sup>	Soil <sup>(4)</sup>	Water & Soil
<b>Preparation:</b>	500 to 1 mL	500 to 1 mL	10g to 1 mL	500 to 1 mL or 10g to 1 mL
<b>LCS Spike Recovery <sup>(5)</sup></b>				
Diesel	-	60 - 111	64 - 116	75 - 125
Diesel with Acid & Silica Clean-up	-	49 - 107	59 - 108	(6)
Diesel with Silica Clean-up		49 - 107	59 - 108	75 - 125
<b>Method Blank/LCS Surrogate Recovery</b>				
o-Terphenyl	-	56 - 130	64 - 134	60 - 120
o-Terphenyl with Acid & Silica Clean-up	-	53 - 123	59 - 134	(6)
o-Terphenyl Silica Clean-up		53 - 123	59 - 134	60 - 120
<b>Sample Surrogate Recovery</b>				
o-Terphenyl	50 - 150	52 - 134	52 - 130	50 - 150
o-Terphenyl with Acid & Silica Clean-up	-	49 - 118	43 - 137	(6)
o-Terphenyl with Silica Clean-up	-	49 - 118	43 - 137	50 - 150

1. Control Limits calculated using all data generated 1/1/10 through 9/1/10
2. Method specified, non-prescriptive limits. The NWTPH-HCID Method does not include LCS or MS analyses.
3. Separatory Funnel Extraction – EPA Method 3510C
4. Microwave Extraction – EPA Method 3546
5. Laboratory Control Sample (LCS) spike recovery control limits also used as advisory control limits for sample matrix spike (MS) analyzes. MS recovery values are advisory and not used to assess the acceptability of an analytical batch.
6. Alaska State UST Methods do not allow acid cleanup of sample extracts.



**Spike Recovery Control Limits BTEX – EPA Method 8021 &  
Gasoline – Methods NWTPH-G and AK101<sup>(1,2)</sup>**

Effective 5/1/09

Control limits are updated periodically. Assure that you have ARI's current control limits by downloading the files at the time of use. <http://www.arilabs.com/portal/downloads/ARI-CLs.zip>

Sample Matrix:	Aqueous Samples		Soil / Sediment Samples	
Analytical Method:	Method 8021B	NWTPH-G AK-101	Method 8021B	NWTPH-G AK-101
<b>LCS Spike Recovery<sup>(3)</sup></b>				
Benzene	73 - 120		72 - 120	
Toluene	73 - 120		72 - 120	
Ethyl benzene	69 - 120		71 - 120	
<i>m,p</i> -Xylenes	72 - 120		72 - 120	
<i>o</i> -Xlyene	73 - 120		72 - 120	
MTBE	30 - 182		40 - 163	
Gasoline		75 - 124		74 - 124
<b>Method Blank/LCS Surrogate Recovery</b>				
Trifluorotoluene (TFT)	79 - 120	80 - 120	80 - 120	80 - 120
Bromobenzene	79 - 120	80 - 120	77 - 120	80 - 120
<b>Sample Surrogate Recovery</b>				
Trifluorotoluene (TFT)	80 - 120	80 - 120	68 - 124	66 - 123
Bromobenzene	80 - 120	80 - 120	62 - 134	62 - 130

(1) Control Limits calculated using all data generated 1/1/08 through 12/31/08.

(2) Highlighted control limits (bold font) are adjusted from the calculated values as follows:

a) Highlighted control limits (**bold font**) adjusted to demonstrate that ARI does not use control limits < 10 for the lower limit or < 100 for the upper limit.

b) Control limits for analytes with no separate preparation procedure are adjusted to reflect the minimum uncertainty in the calibration of the instrument allowed by the referenced analytical method.

(3) Laboratory Control Sample (LCS) spike recovery control limits also used as advisory control limits for sample matrix spike (MS) analyzes. MS recovery values are advisory and not used to assess the acceptability of an analytical batch.



### Summary of Laboratory Control Limits Metals Analyses (All Methods & Sample Matrices)

Effective 5/1/09

Control limits are updated periodically. Assure that you have ARI's current control limits by downloading the files at the time of use. <http://www.arilabs.com/portal/downloads/ARI-CLs.zip>

Element	Matrix Spike Recovery	LCS Recovery	Replicate RPD
Aluminum	75 - 125	80 - 120	≤ 20%
Antimony	75 - 125	80 - 120	≤ 20%
Arsenic	75 - 125	80 - 120	≤ 20%
Barium	75 - 125	80 - 120	≤ 20%
Beryllium	75 - 125	80 - 120	≤ 20%
Boron	75 - 125	80 - 120	≤ 20%
Cadmium	75 - 125	80 - 120	≤ 20%
Calcium	75 - 125	80 - 120	≤ 20%
Chromium	75 - 125	80 - 120	≤ 20%
Cobalt	75 - 125	80 - 120	≤ 20%
Copper	75 - 125	80 - 120	≤ 20%
Iron	75 - 125	80 - 120	≤ 20%
Lead	75 - 125	80 - 120	≤ 20%
Magnesium	75 - 125	80 - 120	≤ 20%
Manganese	75 - 125	80 - 120	≤ 20%
Mercury	75 - 125	80 - 120	≤ 20%
Nickel	75 - 125	80 - 120	≤ 20%
Potassium	75 - 125	80 - 120	≤ 20%
Selenium	75 - 125	80 - 120	≤ 20%
Silica	75 - 125	80 - 120	≤ 20%
Silver	75 - 125	80 - 120	≤ 20%
Sodium	75 - 125	80 - 120	≤ 20%
Strontium	75 - 125	80 - 120	≤ 20%
Thallium	75 - 125	80 - 120	≤ 20%
Vanadium	75 - 125	80 - 120	≤ 20%
Zinc	75 - 125	80 - 120	≤ 20%



Spike Recovery Control Limits for Conventional Wet Chemistry Effective 5/1/09		
Control limits are updated periodically. Assure that you have ARI's current control limits by downloading the files at the time of use. <a href="http://www.arilabs.com/portal/downloads/ARI-CLs.zip">http://www.arilabs.com/portal/downloads/ARI-CLs.zip</a>		
Sample Matrix:	ARI's Control Limits	
	Water	Soil / Sediment
<b>Matrix Spike Recoveries</b>	% Recovery	% Recovery
Ammonia	75 - 125	75 - 125
Bromide	75 - 125	75 - 125
Chloride	75 - 125	75 - 125
Cyanide	75 - 125	75 - 125
Ferrous Iron	75 - 125	75 - 125
Fluoride	75 - 125	75 - 125
Formaldehyde	75 - 125	75 - 125
Hexane Extractable Material	-- - --	78 - 114
Hexavalent Chromium	75 - 125	75 - 125
Nitrate/Nitrite	75 - 125	75 - 125
Oil and Grease	75 - 125	75 - 125
Phenol	75 - 125	75 - 125
Phosphorous	75 - 125	75 - 125
Sulfate	75 - 125	75 - 125
Sulfide	75 - 125	75 - 125
Total Kjeldahl Nitrogen	75 - 125	75 - 125
Total Organic Carbon	75 - 125	75 - 125
<b>Duplicate RPDs</b>		
Acidity	±20%	±20%
Alkalinity	±20%	±20%
BOD	±20%	±20%
Cation Exchange	±20%	±20%
COD	±20%	±20%
Conductivity	±20%	±20%
Salinity	±20%	±20%
Solids	±20%	±20%
Turbidity	±20%	±20%

**Volatile Analysis  
Report and Summary QC Forms**

**ARI Job ID: SS83**



**ORGANICS ANALYSIS DATA SHEET**

**Volatiles by Purge & Trap GC/MS-Method SW8260C**

**Sample ID: DMA-TP1-0-3-041911**

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**SAMPLE**

Lab Sample ID: SS83A

QC Report No: SS83-Floyd Snider

LIMS ID: 11-8711

Project: Lora Lake Parcel:DMA

Matrix: Soil

POS-LL

Data Release Authorized: *MW*

Date Sampled: 04/19/11

Reported: 04/26/11

Date Received: 04/20/11

Instrument/Analyst: FINN5/PAB

Sample Amount: 8.71 g-dry-wt

Date Analyzed: 04/21/11 11:04

Purge Volume: 5.0 mL

Moisture: 10.8%

CAS Number	Analyte	RL	Result	Q
156-60-5	trans-1,2-Dichloroethene	0.6	< 0.6	U
156-59-2	cis-1,2-Dichloroethene	0.6	< 0.6	U
107-06-2	1,2-Dichloroethane	0.6	< 0.6	U
79-01-6	Trichloroethene	0.6	< 0.6	U
127-18-4	Tetrachloroethene	0.6	< 0.6	U

Reported in µg/kg (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	120%
d8-Toluene	92.9%
Bromofluorobenzene	85.5%
d4-1,2-Dichlorobenzene	101%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: DMA-TP1-3-4.5-041911

Page 1 of 1

**SAMPLE**

Lab Sample ID: SS83B

QC Report No: SS83-Floyd Snider

LIMS ID: 11-8712

Project: Lora Lake Parcel:DMA

Matrix: Soil

POS-LL

Data Release Authorized: *MW*

Date Sampled: 04/19/11

Reported: 04/26/11

Date Received: 04/20/11

Instrument/Analyst: FINN5/PAB

Sample Amount: 6.22 g-dry-wt

Date Analyzed: 04/21/11 11:39

Purge Volume: 5.0 mL

Moisture: 18.1%

CAS Number	Analyte	RL	Result	Q
156-60-5	trans-1,2-Dichloroethene	0.8	< 0.8	U
156-59-2	cis-1,2-Dichloroethene	0.8	< 0.8	U
107-06-2	1,2-Dichloroethane	0.8	< 0.8	U
79-01-6	Trichloroethene	0.8	< 0.8	U
127-18-4	Tetrachloroethene	0.8	< 0.8	U

Reported in µg/kg (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	129%
d8-Toluene	91.1%
Bromofluorobenzene	80.0%
d4-1,2-Dichlorobenzene	91.8%

**ORGANICS ANALYSIS DATA SHEET**

**Volatiles by Purge & Trap GC/MS-Method SW8260C**  
Page 1 of 1

**Sample ID: DMA-TP1-4.5-5.5-041911**  
**SAMPLE**

Lab Sample ID: SS83C  
LIMS ID: 11-8713  
Matrix: Soil  
Data Release Authorized: *MW*  
Reported: 04/26/11

QC Report No: SS83-Floyd Snider  
Project: Lora Lake Parcel:DMA  
POS-LL  
Date Sampled: 04/19/11  
Date Received: 04/20/11

Instrument/Analyst: FINN5/PAB  
Date Analyzed: 04/21/11 12:01

Sample Amount: 7.68 g-dry-wt  
Purge Volume: 5.0 mL  
Moisture: 10.8%

CAS Number	Analyte	RL	Result	Q
156-60-5	trans-1,2-Dichloroethene	0.7	< 0.7	U
156-59-2	cis-1,2-Dichloroethene	0.7	< 0.7	U
107-06-2	1,2-Dichloroethane	0.7	< 0.7	U
79-01-6	Trichloroethene	0.7	< 0.7	U
127-18-4	Tetrachloroethene	0.7	< 0.7	U

Reported in µg/kg (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	125%
d8-Toluene	96.4%
Bromofluorobenzene	94.8%
d4-1,2-Dichlorobenzene	101%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: DMA-TP2-1.5-3-041911

Page 1 of 1

**SAMPLE**

Lab Sample ID: SS83D

QC Report No: SS83-Floyd Snider

LIMS ID: 11-8714

Project: Lora Lake Parcel:DMA

Matrix: Soil

POS-LL

Data Release Authorized: *MW*

Date Sampled: 04/19/11

Reported: 04/26/11

Date Received: 04/20/11

Instrument/Analyst: FINN5/PAB

Sample Amount: 6.50 g-dry-wt

Date Analyzed: 04/21/11 12:29

Purge Volume: 5.0 mL

Moisture: 13.8%

CAS Number	Analyte	RL	Result	Q
156-60-5	trans-1,2-Dichloroethene	0.8	< 0.8	U
156-59-2	cis-1,2-Dichloroethene	0.8	< 0.8	U
107-06-2	1,2-Dichloroethane	0.8	< 0.8	U
79-01-6	Trichloroethene	0.8	< 0.8	U
127-18-4	Tetrachloroethene	0.8	< 0.8	U

Reported in µg/kg (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	125%
d8-Toluene	93.0%
Bromofluorobenzene	81.3%
d4-1,2-Dichlorobenzene	96.3%

**ORGANICS ANALYSIS DATA SHEET**

**Volatiles by Purge & Trap GC/MS-Method SW8260C**

**Sample ID: DMA-TP2-3-4-041911**

Page 1 of 1

**SAMPLE**

Lab Sample ID: SS83E

QC Report No: SS83-Floyd Snider

LIMS ID: 11-8715

Project: Lora Lake Parcel:DMA

Matrix: Soil

POS-LL

Data Release Authorized: *MW*

Date Sampled: 04/19/11

Reported: 04/26/11

Date Received: 04/20/11

Instrument/Analyst: FINN5/PAB

Sample Amount: 7.02 g-dry-wt

Date Analyzed: 04/21/11 12:57

Purge Volume: 5.0 mL

Moisture: 10.3%

CAS Number	Analyte	RL	Result	Q
156-60-5	trans-1,2-Dichloroethene	0.7	< 0.7	U
156-59-2	cis-1,2-Dichloroethene	0.7	< 0.7	U
107-06-2	1,2-Dichloroethane	0.7	< 0.7	U
79-01-6	Trichloroethene	0.7	< 0.7	U
127-18-4	Tetrachloroethene	0.7	< 0.7	U

Reported in µg/kg (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	126%
d8-Toluene	95.9%
Bromofluorobenzene	93.5%
d4-1,2-Dichlorobenzene	103%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C  
Page 1 of 1

Sample ID: DMA-TP6-0-2.5-041911  
SAMPLE

Lab Sample ID: SS83F  
LIMS ID: 11-8716  
Matrix: Soil  
Data Release Authorized: *WMM*  
Reported: 04/26/11

QC Report No: SS83-Floyd Snider  
Project: Lora Lake Parcel:DMA  
POS-LL  
Date Sampled: 04/19/11  
Date Received: 04/20/11

Instrument/Analyst: FINN5/PAB  
Date Analyzed: 04/21/11 13:25

Sample Amount: 7.22 g-dry-wt  
Purge Volume: 5.0 mL  
Moisture: 11.9%

CAS Number	Analyte	RL	Result	Q
156-60-5	trans-1,2-Dichloroethene	0.7	< 0.7	U
156-59-2	cis-1,2-Dichloroethene	0.7	< 0.7	U
107-06-2	1,2-Dichloroethane	0.7	< 0.7	U
79-01-6	Trichloroethene	0.7	< 0.7	U
127-18-4	Tetrachloroethene	0.7	< 0.7	U

Reported in µg/kg (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	127%
d8-Toluene	96.7%
Bromofluorobenzene	83.1%
d4-1,2-Dichlorobenzene	102%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: DMA-TP6-2.5-5-041911

Page 1 of 1

**SAMPLE**

Lab Sample ID: SS83G

QC Report No: SS83-Floyd Snider

LIMS ID: 11-8717

Project: Lora Lake Parcel:DMA

Matrix: Soil

POS-LL

Data Release Authorized: *MMW*

Date Sampled: 04/19/11

Reported: 04/26/11

Date Received: 04/20/11

Instrument/Analyst: FINN5/PAB

Sample Amount: 8.45 g-dry-wt

Date Analyzed: 04/21/11 13:53

Purge Volume: 5.0 mL

Moisture: 11.7%

CAS Number	Analyte	RL	Result	Q
156-60-5	trans-1,2-Dichloroethene	0.6	< 0.6	U
156-59-2	cis-1,2-Dichloroethene	0.6	< 0.6	U
107-06-2	1,2-Dichloroethane	0.6	< 0.6	U
79-01-6	Trichloroethene	0.6	< 0.6	U
127-18-4	Tetrachloroethene	0.6	< 0.6	U

Reported in µg/kg (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	127%
d8-Toluene	95.3%
Bromofluorobenzene	83.7%
d4-1,2-Dichlorobenzene	102%

**ORGANICS ANALYSIS DATA SHEET**

**Volatiles by Purge & Trap GC/MS-Method SW8260C**

**Sample ID: DMA-TP4-0-1.5-042011**

Page 1 of 1

**SAMPLE**

Lab Sample ID: SS83H

QC Report No: SS83-Floyd Snider

LIMS ID: 11-8718

Project: Lora Lake Parcel:DMA

Matrix: Soil

POS-LL

Data Release Authorized: *MW*

Date Sampled: 04/20/11

Reported: 04/26/11

Date Received: 04/20/11

Instrument/Analyst: FINN5/PAB

Sample Amount: 2.02 g-dry-wt

Date Analyzed: 04/21/11 14:20

Purge Volume: 5.0 mL

Moisture: 66.0%

CAS Number	Analyte	RL	Result	Q
156-60-5	trans-1,2-Dichloroethene	2.5	< 2.5	U
156-59-2	cis-1,2-Dichloroethene	2.5	< 2.5	U
107-06-2	1,2-Dichloroethane	2.5	< 2.5	U
79-01-6	Trichloroethene	2.5	< 2.5	U
127-18-4	Tetrachloroethene	2.5	< 2.5	U

Reported in µg/kg (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	122%
d8-Toluene	87.2%
Bromofluorobenzene	69.6%
d4-1,2-Dichlorobenzene	89.0%



**ORGANICS ANALYSIS DATA SHEET**

**Volatiles by Purge & Trap GC/MS-Method SW8260C**

**Sample ID: DMA-TP4-1.5-2-042011  
SAMPLE**

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Lab Sample ID: SS83I

QC Report No: SS83-Floyd Snider

LIMS ID: 11-8719

Project: Lora Lake Parcel:DMA

Matrix: Soil

POS-LL

Data Release Authorized: *WVW*

Date Sampled: 04/20/11

Reported: 04/26/11

Date Received: 04/20/11

Instrument/Analyst: FINN5/PAB

Sample Amount: 7.82 g-dry-wt

Date Analyzed: 04/21/11 14:48

Purge Volume: 5.0 mL

Moisture: 17.3%

CAS Number	Analyte	RL	Result	Q
156-60-5	trans-1,2-Dichloroethene	0.6	< 0.6	U
156-59-2	cis-1,2-Dichloroethene	0.6	< 0.6	U
107-06-2	1,2-Dichloroethane	0.6	< 0.6	U
79-01-6	Trichloroethene	0.6	< 0.6	U
127-18-4	Tetrachloroethene	0.6	< 0.6	U

Reported in µg/kg (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	124%
d8-Toluene	94.9%
Bromofluorobenzene	89.8%
d4-1,2-Dichlorobenzene	102%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: DMA-TP5-1.5-2-042011  
SAMPLE

Page 1 of 1

Lab Sample ID: SS83J

QC Report No: SS83-Floyd Snider

LIMS ID: 11-8720

Project: Lora Lake Parcel:DMA

Matrix: Soil

POS-LL

Data Release Authorized: *W*

Date Sampled: 04/20/11

Reported: 04/26/11

Date Received: 04/20/11

Instrument/Analyst: FINN5/PAB

Sample Amount: 3.26 g-dry-wt

Date Analyzed: 04/21/11 15:16

Purge Volume: 5.0 mL

Moisture: 49.8%

CAS Number	Analyte	RL	Result	Q
156-60-5	trans-1,2-Dichloroethene	1.5	< 1.5	U
156-59-2	cis-1,2-Dichloroethene	1.5	< 1.5	U
107-06-2	1,2-Dichloroethane	1.5	< 1.5	U
79-01-6	Trichloroethene	1.5	< 1.5	U
127-18-4	Tetrachloroethene	1.5	< 1.5	U

Reported in µg/kg (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	125%
d8-Toluene	89.7%
Bromofluorobenzene	81.9%
d4-1,2-Dichlorobenzene	91.7%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C  
Page 1 of 1

Sample ID: DMA-TP5-1.5-2-042011-D  
SAMPLE

Lab Sample ID: SS83K  
LIMS ID: 11-8721  
Matrix: Soil  
Data Release Authorized: *WW*  
Reported: 04/26/11

QC Report No: SS83-Floyd Snider  
Project: Lora Lake Parcel:DMA  
POS-LL  
Date Sampled: 04/20/11  
Date Received: 04/20/11

Instrument/Analyst: FINN5/PAB  
Date Analyzed: 04/21/11 15:44

Sample Amount: 3.13 g-dry-wt  
Purge Volume: 5.0 mL  
Moisture: 50.7%

CAS Number	Analyte	RL	Result	Q
156-60-5	trans-1,2-Dichloroethene	1.6	< 1.6	U
156-59-2	cis-1,2-Dichloroethene	1.6	< 1.6	U
107-06-2	1,2-Dichloroethane	1.6	< 1.6	U
79-01-6	Trichloroethene	1.6	< 1.6	U
127-18-4	Tetrachloroethene	1.6	< 1.6	U

Reported in µg/kg (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	130%
d8-Toluene	92.2%
Bromofluorobenzene	83.3%
d4-1,2-Dichlorobenzene	94.7%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: DMA-TP5-2-3-042011

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SAMPLE

Lab Sample ID: SS83L

QC Report No: SS83-Floyd Snider

LIMS ID: 11-8722

Project: Lora Lake Parcel:DMA

Matrix: Soil

POS-LL

Data Release Authorized: *WJW*

Date Sampled: 04/20/11

Reported: 04/26/11

Date Received: 04/20/11

Instrument/Analyst: FINN5/PAB

Sample Amount: 7.01 g-dry-wt

Date Analyzed: 04/21/11 16:12

Purge Volume: 5.0 mL

Moisture: 18.0%

CAS Number	Analyte	RL	Result	Q
156-60-5	trans-1,2-Dichloroethene	0.7	< 0.7	U
156-59-2	cis-1,2-Dichloroethene	0.7	< 0.7	U
107-06-2	1,2-Dichloroethane	0.7	< 0.7	U
79-01-6	Trichloroethene	0.7	< 0.7	U
127-18-4	Tetrachloroethene	0.7	< 0.7	U

Reported in µg/kg (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	126%
d8-Toluene	99.4%
Bromofluorobenzene	93.2%
d4-1,2-Dichlorobenzene	102%

**ORGANICS ANALYSIS DATA SHEET**

**Volatiles by Purge & Trap GC/MS-Method SW8260C**  
Page 1 of 1

**Sample ID: DMA-TP3-2-3-042011**  
**SAMPLE**

Lab Sample ID: SS83M  
LIMS ID: 11-8723  
Matrix: Soil  
Data Release Authorized: *WWW*  
Reported: 04/26/11

QC Report No: SS83-Floyd Snider  
Project: Lora Lake Parcel:DMA  
POS-LL  
Date Sampled: 04/20/11  
Date Received: 04/20/11

Instrument/Analyst: FINN5/PAB  
Date Analyzed: 04/21/11 16:40

Sample Amount: 7.51 g-dry-wt  
Purge Volume: 5.0 mL  
Moisture: 16.7%

CAS Number	Analyte	RL	Result	Q
156-60-5	trans-1,2-Dichloroethene	0.7	< 0.7	U
156-59-2	cis-1,2-Dichloroethene	0.7	< 0.7	U
107-06-2	1,2-Dichloroethane	0.7	< 0.7	U
79-01-6	Trichloroethene	0.7	< 0.7	U
127-18-4	Tetrachloroethene	0.7	< 0.7	U

Reported in µg/kg (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	129%
d8-Toluene	97.6%
Bromofluorobenzene	92.4%
d4-1,2-Dichlorobenzene	102%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: DMA-TP3-3-4-042011

Page 1 of 1

**SAMPLE**

Lab Sample ID: SS83N

QC Report No: SS83-Floyd Snider

LIMS ID: 11-8724

Project: Lora Lake Parcel:DMA

Matrix: Soil

POS-LL

Data Release Authorized: *MW*

Date Sampled: 04/20/11

Reported: 04/26/11

Date Received: 04/20/11

Instrument/Analyst: FINN5/PAB

Sample Amount: 2.17 g-dry-wt

Date Analyzed: 04/21/11 17:07

Purge Volume: 5.0 mL

Moisture: 51.1%

CAS Number	Analyte	RL	Result	Q
156-60-5	trans-1,2-Dichloroethene	2.3	< 2.3	U
156-59-2	cis-1,2-Dichloroethene	2.3	< 2.3	U
107-06-2	1,2-Dichloroethane	2.3	< 2.3	U
79-01-6	Trichloroethene	2.3	< 2.3	U
127-18-4	Tetrachloroethene	2.3	< 2.3	U

Reported in µg/kg (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	129%
d8-Toluene	96.8%
Bromofluorobenzene	84.7%
d4-1,2-Dichlorobenzene	96.2%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C  
Page 1 of 1

Sample ID: DMA-TP3-5-6-042011  
SAMPLE

Lab Sample ID: SS830  
LIMS ID: 11-8725  
Matrix: Soil  
Data Release Authorized: *MW*  
Reported: 04/26/11

QC Report No: SS83-Floyd Snider  
Project: Lora Lake Parcel:DMA  
POS-LL  
Date Sampled: 04/20/11  
Date Received: 04/20/11

Instrument/Analyst: FINN5/PAB  
Date Analyzed: 04/21/11 17:35

Sample Amount: 9.70 g-dry-wt  
Purge Volume: 5.0 mL  
Moisture: 12.6%

CAS Number	Analyte	RL	Result	Q
156-60-5	trans-1,2-Dichloroethene	0.5	< 0.5	U
156-59-2	cis-1,2-Dichloroethene	0.5	< 0.5	U
107-06-2	1,2-Dichloroethane	0.5	< 0.5	U
79-01-6	Trichloroethene	0.5	< 0.5	U
127-18-4	Tetrachloroethene	0.5	< 0.5	U

Reported in µg/kg (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	121%
d8-Toluene	95.8%
Bromofluorobenzene	88.5%
d4-1,2-Dichlorobenzene	103%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C  
Page 1 of 1

Sample ID: DMA-RB-042011  
SAMPLE

Lab Sample ID: SS83P  
LIMS ID: 11-8726  
Matrix: Water

QC Report No: SS83-Floyd Snider  
Project: Lora Lake Parcel:DMA  
POS-LL

Data Release Authorized: *MW*  
Reported: 04/26/11

Date Sampled: 04/20/11  
Date Received: 04/20/11

Instrument/Analyst: FINN5/PAB  
Date Analyzed: 04/21/11 18:03

Sample Amount: 5.00 mL  
Purge Volume: 5.0 mL

CAS Number	Analyte	RL	Result	Q
156-60-5	trans-1,2-Dichloroethene	1.0	< 1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	< 1.0	U
107-06-2	1,2-Dichloroethane	1.0	< 1.0	U
79-01-6	Trichloroethene	1.0	< 1.0	U
127-18-4	Tetrachloroethene	1.0	< 1.0	U

Reported in µg/L (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	116%
d8-Toluene	98.2%
Bromofluorobenzene	89.9%
d4-1,2-Dichlorobenzene	102%



**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C  
Page 1 of 1

Sample ID: TP-TB-042011  
SAMPLE

Lab Sample ID: SS83Q

QC Report No: SS83-Floyd Snider

LIMS ID: 11-8727

Project: Lora Lake Parcel:DMA

Matrix: Water

POS-LL

Data Release Authorized: *MW*

Date Sampled: 04/20/11

Reported: 04/26/11

Date Received: 04/20/11

Instrument/Analyst: FINN5/PAB

Sample Amount: 5.00 mL

Date Analyzed: 04/21/11 18:31

Purge Volume: 5.0 mL

CAS Number	Analyte	RL	Result	Q
156-60-5	trans-1,2-Dichloroethene	1.0	< 1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	< 1.0	U
107-06-2	1,2-Dichloroethane	1.0	< 1.0	U
79-01-6	Trichloroethene	1.0	< 1.0	U
127-18-4	Tetrachloroethene	1.0	< 1.0	U

Reported in µg/L (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	117%
d8-Toluene	98.0%
Bromofluorobenzene	90.7%
d4-1,2-Dichlorobenzene	102%

**VOA SURROGATE RECOVERY SUMMARY**

Matrix: Soil

QC Report No: SS83-Floyd Snider  
Project: Lora Lake Parcel:DMA  
POS-LL

ARI ID	Client ID	Level	DCE	TOL	BFB	DCB	TOT OUT
SS83A	DMA-TP1-0-3-041911	Low	120%	92.9%	85.5%	101%	0
SS83B	DMA-TP1-3-4.5-041911	Low	129%	91.1%	80.0%	91.8%	0
SS83C	DMA-TP1-4.5-5.5-041911	Low	125%	96.4%	94.8%	101%	0
SS83D	DMA-TP2-1.5-3-041911	Low	125%	93.0%	81.3%	96.3%	0
SS83E	DMA-TP2-3-4-041911	Low	126%	95.9%	93.5%	103%	0
SS83F	DMA-TP6-0-2.5-041911	Low	127%	96.7%	83.1%	102%	0
SS83G	DMA-TP6-2.5-5-041911	Low	127%	95.3%	83.7%	102%	0
SS83H	DMA-TP4-0-1.5-042011	Low	122%	87.2%	69.6%	89.0%	0
SS83I	DMA-TP4-1.5-2-042011	Low	124%	94.9%	89.8%	102%	0
SS83J	DMA-TP5-1.5-2-042011	Low	125%	89.7%	81.9%	91.7%	0
SS83K	DMA-TP5-1.5-2-042011-D	Low	130%	92.2%	83.3%	94.7%	0
SS83L	DMA-TP5-2-3-042011	Low	126%	99.4%	93.2%	102%	0
SS83M	DMA-TP3-2-3-042011	Low	129%	97.6%	92.4%	102%	0
SS83N	DMA-TP3-3-4-042011	Low	129%	96.8%	84.7%	96.2%	0
MB-042111	Method Blank	Low	119%	96.7%	94.5%	100%	0
LCS-042111	Lab Control	Low	106%	96.8%	96.7%	102%	0
LCSD-042111	Lab Control Dup	Low	106%	96.4%	97.4%	103%	0
SS83O	DMA-TP3-5-6-042011	Low	121%	95.8%	88.5%	103%	0
SS83OMS	DMA-TP3-5-6-042011	Low	115%	98.3%	94.5%	102%	0
SS83OMSD	DMA-TP3-5-6-042011	Low	112%	96.8%	96.3%	100%	0

**LCS/MB LIMITS**

**QC LIMITS**

SW8260C	LCS/MB LIMITS		QC LIMITS	
	Low	Med	Low	Med
(DCE) = d4-1,2-Dichloroethane	79-121	76-120	75-152	69-120
(TOL) = d8-Toluene	80-120	80-120	82-115	80-120
(BFB) = Bromofluorobenzene	80-120	80-120	64-120	76-128
(DCB) = d4-1,2-Dichlorobenzene	80-120	80-120	80-120	80-120

Log Number Range: 11-8711 to 11-8725

VOA SURROGATE RECOVERY SUMMARY



Matrix: Water

QC Report No: SS83-Floyd Snider  
 Project: Lora Lake Parcel:DMA  
 POS-LL

ARI ID	Client ID	PV	DCE	TOL	BFB	DCB	TOT OUT
MB-042111	Method Blank	5	119%	96.7%	94.5%	100%	0
LCS-042111	Lab Control	5	106%	96.8%	96.7%	102%	0
LCSD-042111	Lab Control Dup	5	106%	96.4%	97.4%	103%	0
SS83P	DMA-RB-042011	5	116%	98.2%	89.9%	102%	0
SS83Q	TP-TB-042011	5	117%	98.0%	90.7%	102%	0

LCS/MB LIMITS

QC LIMITS

SW8260C

(DCE) = d4-1,2-Dichloroethane	80-122	80-125
(TOL) = d8-Toluene	80-120	80-120
(BFB) = Bromofluorobenzene	80-120	80-120
(DCB) = d4-1,2-Dichlorobenzene	80-120	80-120

Prep Method: SW5030B  
 Log Number Range: 11-8726 to 11-8727

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C  
Page 1 of 1

Sample ID: DMA-TP3-5-6-042011  
MATRIX SPIKE

Lab Sample ID: SS830  
LIMS ID: 11-8725  
Matrix: Soil  
Data Release Authorized: *MW*  
Reported: 04/26/11

QC Report No: SS83-Floyd Snider  
Project: Lora Lake Parcel:DMA  
POS-LL  
Date Sampled: 04/20/11  
Date Received: 04/20/11

Instrument/Analyst MS: FINN5/PAB  
MSD: FINN5/PAB  
Date Analyzed MS: 04/21/11 18:58  
MSD: 04/21/11 19:26

Sample Amount MS: 9.00 g-dry-wt  
MSD: 9.09 g-dry-wt  
Purge Volume MS: 5.0 mL  
MSD: 5.0 mL  
Moisture: 12.6%

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
trans-1,2-Dichloroethene	< 0.5 U	38.8	27.8	140%	33.3	27.5	121%	15.3%
cis-1,2-Dichloroethene	< 0.5 U	39.3	27.8	141%	33.6	27.5	122%	15.6%
1,2-Dichloroethane	< 0.5 U	36.6	27.8	132%	32.1	27.5	117%	13.1%
Trichloroethene	< 0.5 U	37.1	27.8	133%	32.0	27.5	116%	14.8%
Tetrachloroethene	< 0.5 U	38.2	27.8	137%	33.0	27.5	120%	14.6%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C  
Page 1 of 1

Sample ID: DMA-TP3-5-6-042011  
MATRIX SPIKE

Lab Sample ID: SS830  
LIMS ID: 11-8725  
Matrix: Soil  
Data Release Authorized: *MW*  
Reported: 04/26/11

QC Report No: SS83-Floyd Snider  
Project: Lora Lake Parcel:DMA  
POS-LL  
Date Sampled: 04/20/11  
Date Received: 04/20/11

Instrument/Analyst: FINN5/PAB  
Date Analyzed: 04/21/11 18:58

Sample Amount: 9.00 g-dry-wt  
Purge Volume: 5.0 mL  
Moisture: 12.6%

CAS Number	Analyte	RL	Result	Q
156-60-5	trans-1,2-Dichloroethene	0.6	---	
156-59-2	cis-1,2-Dichloroethene	0.6	---	
107-06-2	1,2-Dichloroethane	0.6	---	
79-01-6	Trichloroethene	0.6	---	
127-18-4	Tetrachloroethene	0.6	---	

Reported in µg/kg (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	115%
d8-Toluene	98.3%
Bromofluorobenzene	94.5%
d4-1,2-Dichlorobenzene	102%

**ORGANICS ANALYSIS DATA SHEET**

**Volatiles by Purge & Trap GC/MS-Method SW8260C**  
Page 1 of 1

**Sample ID: DMA-TP3-5-6-042011**  
**MATRIX SPIKE DUP**

Lab Sample ID: SS830  
LIMS ID: 11-8725  
Matrix: Soil  
Data Release Authorized: *mm*  
Reported: 04/26/11

QC Report No: SS83-Floyd Snider  
Project: Lora Lake Parcel:DMA  
POS-LL  
Date Sampled: 04/20/11  
Date Received: 04/20/11

Instrument/Analyst: FINN5/PAB  
Date Analyzed: 04/21/11 19:26

Sample Amount: 9.09 g-dry-wt  
Purge Volume: 5.0 mL  
Moisture: 12.6%

CAS Number	Analyte	RL	Result	Q
156-60-5	trans-1,2-Dichloroethene	0.6	---	
156-59-2	cis-1,2-Dichloroethene	0.6	---	
107-06-2	1,2-Dichloroethane	0.6	---	
79-01-6	Trichloroethene	0.6	---	
127-18-4	Tetrachloroethene	0.6	---	

Reported in µg/kg (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	112%
d8-Toluene	96.8%
Bromofluorobenzene	96.3%
d4-1,2-Dichlorobenzene	100%

**ORGANICS ANALYSIS DATA SHEET**

**Volatiles by Purge & Trap GC/MS-Method SW8260C**

Page 1 of 1

**Sample ID: LCS-042111**

**LAB CONTROL SAMPLE**

Lab Sample ID: LCS-042111

LIMS ID: 11-8725

Matrix: Soil

Data Release Authorized: *AS*

Reported: 05/12/11

QC Report No: SS83-Floyd Snider

Project: Lora Lake Parcel:DMA

POS-LL

Date Sampled: NA

Date Received: NA

Instrument/Analyst LCS: FINN5/PAB

LCSD: FINN5/PAB

Date Analyzed LCS: 04/21/11 09:27

LCSD: 04/21/11 09:55

Sample Amount LCS: 5.00 g-dry-wt

LCSD: 5.00 g-dry-wt

Purge Volume LCS: 5.0 mL

LCSD: 5.0 mL

Moisture: NA

Analyte	LCS	Spike	LCS	LCSD	Spike	LCSD	RPD
		Added-LCS	Recovery		Added-LCSD	Recovery	
trans-1,2-Dichloroethene	52.7	50.0	105%	56.6	50.0	113%	7.1%
cis-1,2-Dichloroethene	53.2	50.0	106%	57.3	50.0	115%	7.4%
1,2-Dichloroethane	53.9	50.0	108%	58.4	50.0	117%	8.0%
Trichloroethene	54.4	50.0	109%	58.4	50.0	117%	7.1%
Tetrachloroethene	55.0	50.0	110%	60.2	50.0	120%	9.0%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

**Volatile Surrogate Recovery**

	LCS	LCSD
d4-1,2-Dichloroethane	106%	106%
d8-Toluene	96.8%	96.4%
Bromofluorobenzene	96.7%	97.4%
d4-1,2-Dichlorobenzene	102%	103%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: LCS-042111

Page 1 of 1

LAB CONTROL SAMPLE

Lab Sample ID: LCS-042111

QC Report No: SS83-Floyd Snider

LIMS ID: 11-8726

Project: Lora Lake Parcel:DMA

Matrix: Water

POS-LL

Data Release Authorized: *WW*

Date Sampled: NA

Reported: 04/26/11

Date Received: NA

Instrument/Analyst LCS: FINN5/PAB

Sample Amount LCS: 5.00 mL

LCSD: FINN5/PAB

LCSD: 5.00 mL

Date Analyzed LCS: 04/21/11 09:27

Purge Volume LCS: 5.0 mL

LCSD: 04/21/11 09:55

LCSD: 5.0 mL

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
trans-1,2-Dichloroethene	52.7	50.0	105%	56.6	50.0	113%	7.1%
cis-1,2-Dichloroethene	53.2	50.0	106%	57.3	50.0	115%	7.4%
1,2-Dichloroethane	53.9	50.0	108%	58.4	50.0	117%	8.0%
Trichloroethene	54.4	50.0	109%	58.4	50.0	117%	7.1%
Tetrachloroethene	55.0	50.0	110%	60.2	50.0	120%	9.0%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

**Volatile Surrogate Recovery**

	LCS	LCSD
d4-1,2-Dichloroethane	106%	106%
d8-Toluene	96.8%	96.4%
Bromofluorobenzene	96.7%	97.4%
d4-1,2-Dichlorobenzene	102%	103%



4A  
VOLATILE METHOD BLANK SUMMARY

Method Blank ID.

MB0421

Lab Name: ANALYTICAL RESOURCES, INC  
 ARI Job No: SS83  
 Lab File ID: MB0421  
 Date Analyzed: 04/21/11  
 Instrument ID: FINN5

Client: FLOYD SNIDER  
 Project: LORA LAKE  
 Lab Sample ID: MB0421  
 Time Analyzed: 1023  
 Heated Purge: (Y/N) Y

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
	=====	=====	=====	=====
01	LCS0421	LCS0421	LCS0421	0927
02	LCS0421	LCS0421	LCS0421A	0955
03	DMA-TP1-0-3-	SS83A	SS83A	1104
04	DMA-TP1-3-4.	SS83B	SS83B	1139
05	DMA-TP1-4.5-	SS83C	SS83C	1201
06	DMA-TP2-1.5-	SS83D	SS83D	1229
07	DMA-TP2-3-4-	SS83E	SS83E	1257
08	DMA-TP6-0-2.	SS83F	SS83F	1325
09	DMA-TP6-2.5-	SS83G	SS83G	1353
10	DMA-TP4-0-1.	SS83H	SS83H	1420
11	DMA-TP4-1.5-	SS83I	SS83I	1448
12	DMA-TP5-1.5-	SS83J	SS83J	1516
13	DMA-TP5-1.5-	SS83K	SS83K	1544
14	DMA-TP5-2-3-	SS83L	SS83L	1612
15	DMA-TP3-2-3-	SS83M	SS83M	1640
16	DMA-TP3-3-4-	SS83N	SS83N	1707
17	DMA-TP3-5-6-	SS83O	SS83O	1735
18	DMA-RB-04201	SS83P	SS83P	1803
19	TP-TB-042011	SS83Q	SS83Q	1831
20	DMA-TP3-5-6-	SS83OMS	SS83OMS	1858
21	DMA-TP3-5-6-	SS83OMSD	SS83OMSD	1926
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS:

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**ORGANICS ANALYSIS DATA SHEET**

**Volatiles by Purge & Trap GC/MS-Method SW8260C**

**Sample ID: MB-042111**

Page 1 of 1

**METHOD BLANK**

Lab Sample ID: MB-042111

QC Report No: SS83-Floyd Snider

LIMS ID: 11-8726

Project: Lora Lake Parcel:DMA

Matrix: Water

POS-LL

Data Release Authorized: *MW*

Date Sampled: NA

Reported: 04/26/11

Date Received: NA

Instrument/Analyst: FINN5/PAB

Sample Amount: 5.00 mL

Date Analyzed: 04/21/11 10:23

Purge Volume: 5.0 mL

CAS Number	Analyte	RL	Result	Q
156-60-5	trans-1,2-Dichloroethene	1.0	< 1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	< 1.0	U
107-06-2	1,2-Dichloroethane	1.0	< 1.0	U
79-01-6	Trichloroethene	1.0	< 1.0	U
127-18-4	Tetrachloroethene	1.0	< 1.0	U

Reported in µg/L (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	119%
d8-Toluene	96.7%
Bromofluorobenzene	94.5%
d4-1,2-Dichlorobenzene	100%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C  
Page 1 of 1

Sample ID: MB-042111  
METHOD BLANK

Lab Sample ID: MB-042111  
LIMS ID: 11-8725  
Matrix: Soil  
Data Release Authorized: *WW*  
Reported: 04/26/11

QC Report No: SS83-Floyd Snider  
Project: Lora Lake Parcel:DMA  
POS-LL  
Date Sampled: NA  
Date Received: NA

Instrument/Analyst: FINN5/PAB  
Date Analyzed: 04/21/11 10:23

Sample Amount: 5.00 g-dry-wt  
Purge Volume: 5.0 mL  
Moisture: NA

CAS Number	Analyte	RL	Result	Q
156-60-5	trans-1,2-Dichloroethene	1.0	< 1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	< 1.0	U
107-06-2	1,2-Dichloroethane	1.0	< 1.0	U
79-01-6	Trichloroethene	1.0	< 1.0	U
127-18-4	Tetrachloroethene	1.0	< 1.0	U

Reported in µg/kg (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	119%
d8-Toluene	96.7%
Bromofluorobenzene	94.5%
d4-1,2-Dichlorobenzene	100%

5A  
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK  
BROMOFLUOROBENZENE (BFB)

Lab Name: ANALYTICAL RESOURCES, INC Contract: FLOYD SNIDER

Lab Code: ARI Case No.: LORA LAKE SDG No.: SS83

Lab File ID: BFB0309 BFB Injection Date: 03/09/11

Instrument ID: FINN5 BFB Injection Time: 1159

GC Column: RTX502.2 ID: 0.18 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	17.2
75	30.0 - 66.0% of mass 95	40.7
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.9
173	Less than 2.0% of mass 174	0.2 ( 0.3)1
174	50.0 - 101.0% of mass 95	86.0
175	4.0 - 9.0% of mass 174	6.4 ( 7.5)1
176	93.0 - 101.0% of mass 174	82.2 ( 95.6)1
177	5.0 - 9.0% of mass 176	5.4 ( 6.6)2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD1	IC0309	0010309	03/09/11	1310
02	VSTD200	IC0309	2000309	03/09/11	1353
03	VSTD150	IC0309	1500309	03/09/11	1427
04	VSTD100	IC0309	1000309	03/09/11	1455
05	VSTD50	IC0309	0500309	03/09/11	1522
06	VSTD10	IC0309	0100309	03/09/11	1550
07	VSTD5	IC0309	0050309	03/09/11	1618
08	VSTD2	IC0309	0020309	03/09/11	1651
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

5A  
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK  
BROMOFLUOROBENZENE (BFB)

Lab Name: ANALYTICAL RESOURCES, INC Contract: FLOYD SNIDER

Lab Code: ARI Case No.: LORA LAKE SDG No.: SS83

Lab File ID: BFB0421 BFB Injection Date: 04/21/11

Instrument ID: FINN5 BFB Injection Time: 0824

GC Column: RTX502.2 ID: 0.18 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	18.3
75	30.0 - 66.0% of mass 95	41.4
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.9
173	Less than 2.0% of mass 174	0.2 ( 0.3)1
174	50.0 - 101.0% of mass 95	77.0
175	4.0 - 9.0% of mass 174	5.4 ( 7.0)1
176	93.0 - 101.0% of mass 174	73.0 ( 94.7)1
177	5.0 - 9.0% of mass 176	4.8 ( 6.6)2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	CC0421	0500421	04/21/11	0845
02	LCS0421	LCS0421	LCS0421	04/21/11	0927
03	LCS0421	LCS0421	LCS0421A	04/21/11	0955
04	MB0421	MB0421	MB0421	04/21/11	1023
05	DMA-TP1-0-3-0419	SS83A	SS83A	04/21/11	1104
06	DMA-TP1-3-4.5-04	SS83B	SS83B	04/21/11	1139
07	DMA-TP1-4.5-5.5-	SS83C	SS83C	04/21/11	1201
08	DMA-TP2-1.5-3-04	SS83D	SS83D	04/21/11	1229
09	DMA-TP2-3-4-0419	SS83E	SS83E	04/21/11	1257
10	DMA-TP6-0-2.5-04	SS83F	SS83F	04/21/11	1325
11	DMA-TP6-2.5-5-04	SS83G	SS83G	04/21/11	1353
12	DMA-TP4-0-1.5-04	SS83H	SS83H	04/21/11	1420
13	DMA-TP4-1.5-2-04	SS83I	SS83I	04/21/11	1448
14	DMA-TP5-1.5-2-04	SS83J	SS83J	04/21/11	1516
15	DMA-TP5-1.5-2-04	SS83K	SS83K	04/21/11	1544
16	DMA-TP5-2-3-0420	SS83L	SS83L	04/21/11	1612
17	DMA-TP3-2-3-0420	SS83M	SS83M	04/21/11	1640
18	DMA-TP3-3-4-0420	SS83N	SS83N	04/21/11	1707
19	DMA-TP3-5-6-0420	SS83O	SS83O	04/21/11	1735
20	DMA-RB-042011	SS83P	SS83P	04/21/11	1803
21	TP-TB-042011	SS83Q	SS83Q	04/21/11	1831
22	DMA-TP3-5-6-042	SS83OMS	SS83OMS	04/21/11	1858

5A  
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK  
BROMOFLUOROBENZENE (BFB)

Lab Name: ANALYTICAL RESOURCES, INC Contract: FLOYD SNIDER

Lab Code: ARI Case No.: LORA LAKE SDG No.: SS83

Lab File ID: BFB0421 BFB Injection Date: 04/21/11

Instrument ID: FINN5 BFB Injection Time: 0824

GC Column: RTX502.2 ID: 0.18 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	18.3
75	30.0 - 66.0% of mass 95	41.4
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.9
173	Less than 2.0% of mass 174	0.2 ( 0.3)1
174	50.0 - 101.0% of mass 95	77.0
175	4.0 - 9.0% of mass 174	5.4 ( 7.0)1
176	93.0 - 101.0% of mass 174	73.0 ( 94.7)1
177	5.0 - 9.0% of mass 176	4.8 ( 6.6)2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	DMA-TP3-5-6-042	SS83OMSD	SS83OMSD	04/21/11	1926
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM 6  
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

ARI Job No: SS83

Project: LORA LAKE

Instrument ID: FINN5

Calibration Date: 03/09/11

LAB FILE ID: RF1: 0010309

RF2: 0020309

RF5: 0050309

RF10: 0100309

RF50: 0500309

COMPOUND	RF1	RF2	RF5	RF10	RF50
Chloromethane	1.171	1.006	0.919	0.820	0.825
Vinyl Chloride	1.353	1.373	1.210	1.054	1.151
Bromomethane	0.419	0.390	0.301	0.332	0.362
Chloroethane	0.774	0.674	0.933	0.869	0.688
Trichlorofluoromethane	1.030	1.046	1.050	1.026	0.985
Acrolein		0.173	0.167	0.160	0.157
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.771	0.872	0.872	0.821	0.779
Acetone	0.280	0.281	0.260	0.232	0.216
1,1-Dichloroethene	0.490	0.586	0.580	0.586	0.542
Bromoethane	0.415	0.436	0.462	0.432	0.450
Iodomethane	0.569	0.565	0.565	0.448	0.575
Methylene Chloride		0.712	0.704	0.682	0.655
Acrylonitrile		0.253	0.271	0.271	0.257
Carbon Disulfide	2.206	2.256	2.206	2.102	2.119
Trans-1,2-Dichloroethene	0.592	0.693	0.653	0.649	0.620
Vinyl Acetate	1.094	1.321	1.254	1.245	1.249
1,1-Dichloroethane	1.117	1.174	1.204	1.163	1.174
2-Butanone	0.275	0.354	0.362	0.351	0.341
2,2-Dichloropropane	0.731	0.772	0.764	0.759	0.786
Cis-1,2-Dichloroethene	0.596	0.714	0.697	0.708	0.672
Chloroform	1.008	1.149	1.099	1.100	1.075
Bromochloromethane	0.294	0.370	0.370	0.354	0.360
1,1,1-Trichloroethane	0.753	0.830	0.819	0.837	0.850
1,1-Dichloropropene	0.512	0.562	0.535	0.543	0.523
Carbon Tetrachloride	0.490	0.518	0.495	0.489	0.473
1,2-Dichloroethane	0.410	0.460	0.470	0.472	0.437
Benzene	1.455	1.526	1.506	1.535	1.436
Trichloroethene	0.377	0.399	0.415	0.420	0.403
1,2-Dichloropropane	0.407	0.440	0.441	0.460	0.438
Bromodichloromethane	0.473	0.515	0.496	0.505	0.498
Dibromomethane	0.235	0.277	0.269	0.279	0.260
2-Chloroethyl Vinyl Ether			0.076	0.090	0.087
4-Methyl-2-Pentanone	0.117	0.168	0.167	0.179	0.168
Cis 1,3-dichloropropene	0.522	0.547	0.562	0.582	0.599
Toluene	0.839	0.924	0.881	0.924	0.883
Trans 1,3-Dichloropropene	0.434	0.471	0.467	0.489	0.500
2-Hexanone	0.265	0.406	0.402	0.414	0.382

FORM VI VOA

FORM 6  
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

ARI Job No: SS83

Project: LORA LAKE

Instrument ID: FINN5

Calibration Date: 03/09/11

LAB FILE ID: RF1: 0010309

RF2: 0020309

RF5: 0050309

RF10: 0100309

RF50: 0500309

COMPOUND	RF1	RF2	RF5	RF10	RF50
1,1,2-Trichloroethane	0.277	0.355	0.343	0.345	0.324
1,3-Dichloropropane	0.551	0.670	0.668	0.641	0.650
Tetrachloroethene	0.456	0.473	0.456	0.447	0.447
Chlorodibromomethane	0.450	0.477	0.439	0.432	0.453
1,2-Dibromoethane	0.318	0.394	0.380	0.392	0.383
Chlorobenzene	1.006	1.131	1.065	1.048	1.023
Ethyl Benzene	1.602	1.809	1.710	1.697	1.677
1,1,1,2-Tetrachloroethane	0.376	0.405	0.380	0.377	0.372
m,p-xylene	0.637	0.684	0.664	0.659	0.651
o-Xylene	0.606	0.680	0.649	0.659	0.665
Styrene	0.988	1.142	1.097	1.093	1.062
Bromoform	0.500	0.610	0.586	0.574	0.588
1,1,2,2-Tetrachloroethane	0.998	1.109	1.027	1.034	1.009
1,2,3-Trichloropropane		0.238	0.256	0.254	0.242
Trans-1,4-Dichloro 2-Butene		0.278	0.274	0.262	0.260
N-Propyl Benzene	3.606	3.691	3.592	3.524	3.566
Bromobenzene	0.878	0.931	0.899	0.906	0.883
Isopropyl Benzene	3.047	3.236	3.096	3.061	3.136
2-Chloro Toluene	2.381	2.436	2.427	2.386	2.202
4-Chloro Toluene	2.467	2.711	2.397	2.399	2.401
T-Butyl Benzene	2.260	2.402	2.236	2.251	2.252
1,3,5-Trimethyl Benzene	2.424	2.456	2.348	2.368	2.441
1,2,4-Trimethylbenzene	2.405	2.474	2.437	2.415	2.430
S-Butyl Benzene	3.313	3.425	3.319	3.352	3.347
4-Isopropyl Toluene	2.495	2.581	2.498	2.517	2.570
1,3-Dichlorobenzene	1.631	1.700	1.578	1.576	1.557
1,4-Dichlorobenzene	1.698	1.711	1.588	1.551	1.524
N-Butyl Benzene	2.559	2.526	2.445	2.505	2.558
1,2-Dichlorobenzene	1.532	1.626	1.517	1.508	1.448
1,2-Dibromo 3-Chloropropane		0.210	0.197	0.194	0.176
1,2,4-Trichlorobenzene	1.019	1.143	1.088	1.084	1.064
Hexachloro 1,3-Butadiene	0.630	0.686	0.616	0.654	0.580
Naphthalene		2.735	2.619	2.683	2.416
1,2,3-Trichlorobenzene		1.211	1.122	1.140	1.022
Dichlorodifluoromethane	0.535	0.476	0.528	0.491	0.544
Methyl tert-Butyl Ether	2.401	3.027	3.020	2.966	2.890

FORM VI VOA



FORM 6  
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

ARI Job No: SS83

Project: LORA LAKE

Instrument ID: FINN5

Calibration Date: 03/09/11

LAB FILE ID: RF1: 0010309

RF2: 0020309

RF5: 0050309

RF10: 0100309

RF50: 0500309

COMPOUND	RF1	RF2	RF5	RF10	RF50
d4-1,2-Dichloroethane	0.508	0.570	0.587	0.596	0.567
d8-Toluene	1.113	1.120	1.120	1.149	1.121
4-Bromofluorobenzene	0.492	0.518	0.519	0.529	0.518
d4-1,2-Dichlorobenzene	0.871	0.883	0.880	0.885	0.900
Dibromofluoromethane	0.569	0.607	0.621	0.604	0.604

FORM VI VOA

FORM 6  
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

ARI Job No: SS83

Project: LORA LAKE

Instrument ID: FINN5

Calibration Date: 03/09/11

LAB FILE ID: RF100: 1000309

RF150: 1500309

RF200: 2000309

COMPOUND	RF100	RF150	RF200
Chloromethane	0.799	0.834	0.700
Vinyl Chloride	0.970	0.914	0.781
Bromomethane	0.428	0.451	0.370
Chloroethane	0.671	0.668	0.588
Trichlorofluoromethane	0.959	0.994	0.891
Acrolein	0.149	0.147	0.125
1,1,2-Trichloro-2,2-Trifluoroethane	0.752	0.780	0.707
Acetone	0.200	0.194	0.161
1,1-Dichloroethene	0.546	0.570	0.522
Bromoethane	0.438	0.440	0.401
Iodomethane	0.521	0.486	0.403
Methylene Chloride	0.639	0.648	0.582
Acrylonitrile	0.250	0.255	0.223
Carbon Disulfide	2.062	2.044	1.726
Trans-1,2-Dichloroethene	0.629	0.658	0.602
Vinyl Acetate	1.270	1.340	1.138
1,1-Dichloroethane	1.147	1.195	1.087
2-Butanone	0.333	0.334	0.284
2,2-Dichloropropane	0.793	0.826	0.738
Cis-1,2-Dichloroethene	0.676	0.704	0.638
Chloroform	1.082	1.092	1.011
Bromochloromethane	0.359	0.374	0.347
1,1,1-Trichloroethane	0.857	0.881	0.807
1,1-Dichloropropene	0.547	0.583	0.501
Carbon Tetrachloride	0.488	0.517	0.448
1,2-Dichloroethane	0.448	0.460	0.396
Benzene	1.422	1.327	1.035
Trichloroethene	0.427	0.456	0.400
1,2-Dichloropropane	0.455	0.476	0.414
Bromodichloromethane	0.514	0.536	0.464
Dibromomethane	0.264	0.272	0.238
2-Chloroethyl Vinyl Ether	0.100	0.116	0.101
4-Methyl-2-Pentanone	0.172	0.174	0.137
Cis 1,3-dichloropropene	0.638	0.678	0.581
Toluene	0.930	0.974	0.814
Trans 1,3-Dichloropropene	0.542	0.578	0.502
2-Hexanone	0.320	0.280	

FORM VI VOA

FORM 6  
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

ARI Job No: SS83

Project: LORA LAKE

Instrument ID: FINN5

Calibration Date: 03/09/11

LAB FILE ID: RF100: 1000309

RF150: 1500309

RF200: 2000309

COMPOUND	RF100	RF150	RF200
1,1,2-Trichloroethane	0.341	0.355	0.312
1,3-Dichloropropane	0.646	0.706	0.556
Tetrachloroethene	0.458	0.521	0.433
Chlorodibromomethane	0.461	0.508	0.409
1,2-Dibromoethane	0.404	0.428	0.374
Chlorobenzene	1.038	1.114	0.846
Ethyl Benzene	1.623	1.504	1.077
1,1,1,2-Tetrachloroethane	0.383	0.425	0.354
m,p-xylene	0.668	0.682	0.509
o-Xylene	0.687	0.770	0.639
Styrene	1.106	1.168	0.891
Bromoform	0.616	0.703	0.551
1,1,2,2-Tetrachloroethane	1.006	1.087	0.831
1,2,3-Trichloropropane	0.244	0.268	0.208
Trans-1,4-Dichloro 2-Butene	0.265	0.289	0.217
N-Propyl Benzene	3.293	3.066	2.111
Bromobenzene	0.928	1.067	0.878
Isopropyl Benzene	3.068	3.034	2.101
2-Chloro Toluene	2.301	2.397	1.757
4-Chloro Toluene	2.349	2.433	1.714
T-Butyl Benzene	2.349	2.550	1.893
1,3,5-Trimethyl Benzene	2.508	2.553	1.857
1,2,4-Trimethylbenzene	2.472	2.572	1.823
S-Butyl Benzene	3.260	3.130	2.220
4-Isopropyl Toluene	2.632	2.659	1.929
1,3-Dichlorobenzene	1.611	1.835	1.444
1,4-Dichlorobenzene	1.591	1.813	1.396
N-Butyl Benzene	2.621	2.580	1.815
1,2-Dichlorobenzene	1.498	1.677	1.314
1,2-Dibromo 3-Chloropropane	0.173	0.183	0.135
1,2,4-Trichlorobenzene	1.078	1.208	0.963
Hexachloro 1,3-Butadiene	0.594	0.665	0.543
Naphthalene	2.319	2.306	1.606
1,2,3-Trichlorobenzene	1.010	1.103	0.852
Dichlorodifluoromethane	0.512	0.517	0.453
Methyl tert-Butyl Ether	2.803	2.556	2.055

FORM VI VOA

FORM 6  
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

ARI Job No: SS83

Project: LORA LAKE

Instrument ID: FINN5

Calibration Date: 03/09/11

LAB FILE ID: RF100: 1000309

RF150: 1500309

RF200: 2000309

COMPOUND =====	RF100 =====	RF150 =====	RF200 =====
d4-1,2-Dichloroethane	0.531	0.476	0.569
d8-Toluene	1.142	1.135	1.142
4-Bromofluorobenzene	0.517	0.501	0.512
d4-1,2-Dichlorobenzene	0.901	0.883	0.899
Dibromofluoromethane	0.591	0.548	0.611

FORM VI VOA

FORM 6  
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

ARI Job No: SS83

Project: LORA LAKE

Instrument ID: FINN5

Calibration Date: 03/09/11

COMPOUND	CURVE TYPE	AVE RF	%RSD OR R <sup>2</sup>
Chloromethane	AVRG	0.884	16.6
Vinyl Chloride	AVRG	1.101	19.1
Bromomethane	AVRG	0.382	13.2
Chloroethane	AVRG	0.733	15.9
Trichlorofluoromethane	AVRG	0.998	5.3
Acrolein	AVRG	0.154	10.2
1,1,2-Trichloro-1,2,2-Trifluoroethane	AVRG	0.794	7.2
Acetone	AVRG	0.228	19.0
1,1-Dichloroethene	AVRG	0.553	6.2
Bromoethane	AVRG	0.434	4.4
Iodomethane	AVRG	0.516	12.5
Methylene Chloride	AVRG	0.660	6.7
Acrylonitrile	AVRG	0.254	6.3
Carbon Disulfide	AVRG	2.090	7.9
Trans-1,2-Dichloroethene	AVRG	0.637	5.2
Vinyl Acetate	AVRG	1.239	6.8
1,1-Dichloroethane	AVRG	1.158	3.4
2-Butanone	AVRG	0.329	9.8
2,2-Dichloropropane	AVRG	0.771	4.0
Cis-1,2-Dichloroethene	AVRG	0.676	6.0
Chloroform	AVRG	1.077	4.4
Bromochloromethane	AVRG	0.354	7.2
1,1,1-Trichloroethane	AVRG	0.829	4.6
1,1-Dichloropropene	AVRG	0.538	5.0
Carbon Tetrachloride	AVRG	0.490	4.6
1,2-Dichloroethane	AVRG	0.444	6.3
Benzene	AVRG	1.405	11.7
Trichloroethene	AVRG	0.412	5.7
1,2-Dichloropropane	AVRG	0.441	5.2
Bromodichloromethane	AVRG	0.500	4.7
Dibromomethane	AVRG	0.262	6.4
2-Chloroethyl Vinyl Ether	AVRG	0.095	14.6
4-Methyl-2-Pentanone	AVRG	0.160	13.4
Cis 1,3-dichloropropene	AVRG	0.589	8.5
Toluene	AVRG	0.896	5.8
Trans 1,3-Dichloropropene	AVRG	0.498	9.0
2-Hexanone	AVRG	0.353	17.9

<- Indicates value outside QC limits:  
(%RSD < 20% or R<sup>2</sup> > 0.990)

FORM 6  
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

ARI Job No: SS83

Project: LORA LAKE

Instrument ID: FINN5

Calibration Date: 03/09/11

COMPOUND	CURVE TYPE	AVE RF	%RSD OR R <sup>2</sup>
1,1,2-Trichloroethane	AVRG	0.332	8.0
1,3-Dichloropropane	AVRG	0.636	8.6
Tetrachloroethene	AVRG	0.461	5.8
Chlorodibromomethane	AVRG	0.454	6.6
1,2-Dibromoethane	AVRG	0.384	8.2
Chlorobenzene	AVRG	1.034	8.4
Ethyl Benzene	AVRG	1.587	14.1
1,1,1,2-Tetrachloroethane	AVRG	0.384	5.6
m,p-xylene	AVRG	0.644	8.8
o-Xylene	AVRG	0.669	7.2
Styrene	AVRG	1.068	8.4
Bromoform	AVRG	0.591	9.8
1,1,2,2-Tetrachloroethane	AVRG	1.013	8.3
1,2,3-Trichloropropane	AVRG	0.244	7.7
Trans-1,4-Dichloro 2-Butene	AVRG	0.264	8.7
N-Propyl Benzene	AVRG	3.306	15.8
Bromobenzene	AVRG	0.921	6.8
Isopropyl Benzene	AVRG	2.972	12.0
2-Chloro Toluene	AVRG	2.286	9.9
4-Chloro Toluene	AVRG	2.359	12.0
T-Butyl Benzene	AVRG	2.274	8.2
1,3,5-Trimethyl Benzene	AVRG	2.370	9.2
1,2,4-Trimethylbenzene	AVRG	2.378	9.7
S-Butyl Benzene	AVRG	3.171	12.4
4-Isopropyl Toluene	AVRG	2.485	9.4
1,3-Dichlorobenzene	AVRG	1.616	7.1
1,4-Dichlorobenzene	AVRG	1.609	8.0
N-Butyl Benzene	AVRG	2.451	10.7
1,2-Dichlorobenzene	AVRG	1.515	7.2
1,2-Dibromo 3-Chloropropane	AVRG	0.181	13.4
1,2,4-Trichlorobenzene	AVRG	1.081	6.8
Hexachloro 1,3-Butadiene	AVRG	0.621	7.6
Naphthalene	AVRG	2.383	16.1
1,2,3-Trichlorobenzene	AVRG	1.066	11.0
Dichlorodifluoromethane	AVRG	0.507	6.2
Methyl tert-Butyl Ether	AVRG	2.715	12.8

<- Indicates value outside QC limits:  
(%RSD < 20% or R<sup>2</sup> > 0.990)

FORM VI VOA

FORM 6  
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

ARI Job No: SS83

Project: LORA LAKE

Instrument ID: FINN5

Calibration Date: 03/09/11

COMPOUND	CURVE TYPE	AVE RF	%RSD OR R <sup>2</sup>
d4-1,2-Dichloroethane	AVRG	0.550	7.6
d8-Toluene	AVRG	1.130	1.2
4-Bromofluorobenzene	AVRG	0.513	2.3
d4-1,2-Dichlorobenzene	AVRG	0.888	1.2
Dibromofluoromethane	AVRG	0.594	4.1

<- Indicates value outside QC limits:  
(%RSD < 20% or R<sup>2</sup> > 0.990)

FORM VI VOA

7A  
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

ARI Job No: SS83

Project: LORA LAKE

Instrument ID: FINN5

Cont. Calib. Date: 04/21/11

Init. Calib. Date: 03/09/11

Cont. Calib. Time: 0845

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
Chloromethane	0.884	0.687	0.100	AVRG	-22.3
Vinyl Chloride	1.101	0.930	0.010	AVRG	-15.5
Bromomethane	0.382	0.312	0.010	AVRG	-18.3
Chloroethane	0.733	0.716	0.010	AVRG	-2.3
Trichlorofluoromethane	0.998	0.989	0.010	AVRG	-0.9
Acrolein	0.154	0.131	0.010	AVRG	-14.9
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.794	0.779	0.010	AVRG	-1.9
Acetone	0.228	0.202	0.010	AVRG	-11.4
1,1-Dichloroethene	0.553	0.535	0.010	AVRG	-3.2
Bromoethane	0.434	0.438	0.010	AVRG	0.9
Iodomethane	0.516	0.557	0.010	AVRG	7.9
Methylene Chloride	0.660	0.619	0.010	AVRG	-6.2
Acrylonitrile	0.254	0.192	0.010	AVRG	-24.4
Carbon Disulfide	2.090	1.903	0.010	AVRG	-8.9
Trans-1,2-Dichloroethene	0.637	0.616	0.010	AVRG	-3.3
Vinyl Acetate	1.239	1.141	0.010	AVRG	-7.9
1,1-Dichloroethane	1.158	1.085	0.100	AVRG	-6.3
2-Butanone	0.329	0.291	0.010	AVRG	-11.6
2,2-Dichloropropane	0.771	0.843	0.010	AVRG	9.3
Cis-1,2-Dichloroethene	0.676	0.681	0.010	AVRG	0.7
Chloroform	1.077	1.069	0.010	AVRG	-0.7
Bromochloromethane	0.354	0.352	0.010	AVRG	-0.6
1,1,1-Trichloroethane	0.829	0.906	0.010	AVRG	9.3
1,1-Dichloropropene	0.538	0.508	0.010	AVRG	-5.6
Carbon Tetrachloride	0.490	0.516	0.010	AVRG	5.3
1,2-Dichloroethane	0.444	0.434	0.010	AVRG	-2.2
Benzene	1.405	1.393	0.010	AVRG	-0.8
Trichloroethene	0.412	0.414	0.010	AVRG	0.5
1,2-Dichloropropane	0.441	0.416	0.010	AVRG	-5.7
Bromodichloromethane	0.500	0.508	0.010	AVRG	1.6
Dibromomethane	0.262	0.249	0.010	AVRG	-5.0
2-Chloroethyl Vinyl Ether	0.095	0.124	0.010	AVRG	30.5
4-Methyl-2-Pentanone	0.160	0.146	0.010	AVRG	-8.8
Cis 1,3-dichloropropene	0.589	0.595	0.010	AVRG	1.0
Toluene	0.896	0.898	0.010	AVRG	0.2
Trans 1,3-Dichloropropene	0.498	0.519	0.010	AVRG	4.2
2-Hexanone	0.353	0.299	0.010	AVRG	-15.3

<- Exceeds QC limit of 20% D  
\* RF less than minimum RF



7A  
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

ARI Job No: SS83

Project: LORA LAKE

Instrument ID: FINN5

Cont. Calib. Date: 04/21/11

Init. Calib. Date: 03/09/11

Cont. Calib. Time: 0845

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
1,1,2-Trichloroethane	0.332	0.327	0.010	AVRG	-1.5
1,3-Dichloropropane	0.636	0.618	0.010	AVRG	-2.8
Tetrachloroethene	0.461	0.454	0.010	AVRG	-1.5
Chlorodibromomethane	0.454	0.463	0.010	AVRG	2.0
1,2-Dibromoethane	0.384	0.388	0.010	AVRG	1.0
Chlorobenzene	1.034	1.012	0.300	AVRG	-2.1
Ethyl Benzene	1.587	1.614	0.010	AVRG	1.7
1,1,1,2-Tetrachloroethane	0.384	0.387	0.010	AVRG	0.8
m,p-xylene	0.644	0.650	0.010	AVRG	0.9
o-Xylene	0.669	0.658	0.010	AVRG	-1.6
Styrene	1.068	1.049	0.010	AVRG	-1.8
Bromoform	0.591	0.592	0.100	AVRG	0.2
1,1,2,2-Tetrachloroethane	1.013	0.966	0.300	AVRG	-4.6
1,2,3-Trichloropropane	0.244	0.246	0.010	AVRG	0.8
Trans-1,4-Dichloro 2-Butene	0.264	0.240	0.010	AVRG	-9.1
N-Propyl Benzene	3.306	3.594	0.010	AVRG	8.7
Bromobenzene	0.921	0.930	0.010	AVRG	1.0
Isopropyl Benzene	2.972	3.220	0.010	AVRG	8.3
2-Chloro Toluene	2.286	2.355	0.010	AVRG	3.0
4-Chloro Toluene	2.359	2.304	0.010	AVRG	-2.3
T-Butyl Benzene	2.274	2.364	0.010	AVRG	4.0
1,3,5-Trimethyl Benzene	2.369	2.495	0.010	AVRG	5.3
1,2,4-Trimethylbenzene	2.378	2.468	0.010	AVRG	3.8
S-Butyl Benzene	3.171	3.443	0.010	AVRG	8.6
4-Isopropyl Toluene	2.485	2.662	0.010	AVRG	7.1
1,3-Dichlorobenzene	1.616	1.636	0.010	AVRG	1.2
1,4-Dichlorobenzene	1.609	1.589	0.010	AVRG	-1.2
N-Butyl Benzene	2.451	2.550	0.010	AVRG	4.0
1,2-Dichlorobenzene	1.515	1.499	0.010	AVRG	-1.0
1,2-Dibromo 3-Chloropropane	0.181	0.152	0.010	AVRG	-16.0
1,2,4-Trichlorobenzene	1.081	0.953	0.010	AVRG	-11.8
Hexachloro 1,3-Butadiene	0.621	0.537	0.010	AVRG	-13.5
Naphthalene	2.383	1.972	0.010	AVRG	-17.2
1,2,3-Trichlorobenzene	1.066	0.871	0.010	AVRG	-18.3
Dichlorodifluoromethane	0.507	0.315	0.010	AVRG	-37.9
Methyl tert-Butyl Ether	2.715	2.795	0.010	AVRG	2.9
=====	=====	=====	=====	=====	=====

<-

<- Exceeds QC limit of 20% D  
\* RF less than minimum RF

7A  
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

ARI Job No: SS83

Project: LORA LAKE

Instrument ID: FINN5

Cont. Calib. Date: 04/21/11

Init. Calib. Date: 03/09/11

Cont. Calib. Time: 0845

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
=====	=====	=====	=====	=====	=====
d4-1,2-Dichloroethane	0.550	0.577	0.010	AVRG	4.9
d8-Toluene	1.130	1.135	0.010	AVRG	0.4
4-Bromofluorobenzene	0.513	0.496	0.010	AVRG	-3.3
d4-1,2-Dichlorobenzene	0.888	0.913	0.010	AVRG	2.8
Dibromofluoromethane	0.594	0.641	0.010	AVRG	7.9

<- Exceeds QC limit of 20% D

\* RF less than minimum RF

8A  
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC  
ARI Job No: SS83  
Ical Midpoint ID: 0500309  
Instrument ID: FINN5

Client: FLOYD SNIDER  
Project: LORA LAKE  
Ical Date: 03/09/11  
Project Run Date: 04/21/11

	IS1 (PFB) AREA #	RT #	IS2 (DFB) AREA #	RT #	IS3 (CLB) AREA #	RT #
ICAL MIDPT	91022	6.44	153104	7.45	143720	10.59
UPPER LIMIT	182044	6.94	306208	7.95	287440	11.09
LOWER LIMIT	45511	5.94	76552	6.95	71860	10.09
Sample ID						
01 LCS0421	94858	6.42	161101	7.43	155234	10.57
02 LCS0421	88745	6.44	146764	7.45	142730	10.59
03 MB0421	64828	6.43	111942	7.44	109630	10.57
04 DMA-TP1-0-3-	85594	6.42	147703	7.43	132603	10.57
05 DMA-TP1-3-4.	64702	6.42	112223	7.43	91377	10.57
06 DMA-TP1-4.5-	77563	6.43	134520	7.44	130270	10.58
07 DMA-TP2-1.5-	67917	6.44	118382	7.45	104708	10.59
08 DMA-TP2-3-4-	90118	6.43	157742	7.44	156685	10.58
09 DMA-TP6-0-2.	76462	6.44	135192	7.45	128520	10.58
10 DMA-TP6-2.5-	69080	6.42	121373	7.43	115458	10.57
11 DMA-TP4-0-1.	62469	6.42	109224	7.43	79551	10.57
12 DMA-TP4-1.5-	71412	6.42	125409	7.43	120700	10.57
13 DMA-TP5-1.5-	70490	6.42	121814	7.43	114711	10.57
14 DMA-TP5-1.5-	65022	6.44	113607	7.45	110122	10.58
15 DMA-TP5-2-3-	64614	6.44	113942	7.45	114907	10.58
16 DMA-TP3-2-3-	66997	6.43	117618	7.43	119347	10.57
17 DMA-TP3-3-4-	77484	6.44	136824	7.45	131621	10.58
18 DMA-TP3-5-6-	87257	6.44	150121	7.45	146225	10.59
19 DMA-RB-04201	86532	6.44	154314	7.45	155356	10.58
20 TP-TB-042011	85248	6.42	152131	7.43	153632	10.57
21 DMA-TP3-5-6-	74639	6.43	130809	7.44	130561	10.58
22 DMA-TP3-5-6-	83123	6.43	145400	7.44	141886	10.58

IS1 (PFB) = Pentafluorobenzene  
IS2 (DFB) = 1,4-Difluorobenzene  
IS3 (CLB) = d5-Chlorobenzene

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint  
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint  
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Ical midpoint  
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Ical midpoint

\* Values outside of QC limits.

8A  
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC  
ARI Job No: SS83  
Ical Midpoint ID: 0500309  
Instrument ID: FINN5

Client: FLOYD SNIDER  
Project: LORA LAKE  
Ical Date: 03/09/11  
Project Run Date: 04/21/11

	IS4 (DCB)					
	AREA #	RT #	AREA #	RT #	AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
ICAL MIDPT	77398	13.28				
UPPER LIMIT	154796	13.78				
LOWER LIMIT	38699	12.78				
=====	=====	=====	=====	=====	=====	=====
Sample ID						
=====	=====	=====	=====	=====	=====	=====
01 LCS0421	83116	13.26				
02 LCS0421	77088	13.27				
03 MB0421	56470	13.26				
04 DMA-TP1-0-3-	54242	13.26				
05 DMA-TP1-3-4.	30056*	13.26				
06 DMA-TP1-4.5-	64787	13.26				
07 DMA-TP2-1.5-	36883*	13.28				
08 DMA-TP2-3-4-	80568	13.27				
09 DMA-TP6-0-2.	51962	13.27				
10 DMA-TP6-2.5-	47591	13.25				
11 DMA-TP4-0-1.	21244*	13.25				
12 DMA-TP4-1.5-	58007	13.26				
13 DMA-TP5-1.5-	43569	13.25				
14 DMA-TP5-1.5-	43558	13.27				
15 DMA-TP5-2-3-	61035	13.27				
16 DMA-TP3-2-3-	61802	13.26				
17 DMA-TP3-3-4-	55965	13.27				
18 DMA-TP3-5-6-	70874	13.27				
19 DMA-RB-04201	79394	13.27				
20 TP-TB-042011	79171	13.25				
21 DMA-TP3-5-6-	67421	13.27				
22 DMA-TP3-5-6-	74648	13.27				

IS4 (DCB) = d4-1,4-Dichlorobenzene

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint  
 AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint  
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Ical midpoint  
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Ical midpoint


\* Values outside of QC limits.

**SIM PAH Analysis  
Report and Summary QC Forms**

**ARI Job ID: SS83**

**ORGANICS ANALYSIS DATA SHEET**  
**PNAs by SIM SW8270D-SIM GC/MS**  
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**Sample ID: DMA-TP1-0-3-041911**  
**SAMPLE**

Lab Sample ID: SS83A  
 LIMS ID: 11-8711  
 Matrix: Soil  
 Data Release Authorized:   
 Reported: 05/05/11

QC Report No: SS83-Floyd Snider  
 Project: Lora Lake Parcel:DMA  
 Event: POS-LL  
 Date Sampled: 04/19/11  
 Date Received: 04/20/11

Date Extracted: 05/01/11  
 Date Analyzed: 05/03/11 18:57  
 Instrument/Analyst: NT4/JZ  
 GPC Cleanup: No  
 Silica Gel Cleanup: Yes  
 Alumina Cleanup: No

Sample Amount: 10.93 g-dry-wt  
 Final Extract Volume: 0.5 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 10.8%

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	4.6	< 4.6 U
218-01-9	Chrysene	4.6	< 4.6 U
50-32-8	Benzo(a)pyrene	4.6	< 4.6 U
193-39-5	Indeno(1,2,3-cd)pyrene	4.6	< 4.6 U
53-70-3	Dibenz(a,h)anthracene	4.6	< 4.6 U
TOTBFA	Total Benzofluoranthenes	4.6	< 4.6 U

Reported in µg/kg (ppb)

**SIM Semivolatile Surrogate Recovery**

d10-2-Methylnaphthalene 62.7%  
 d14-Dibenzo(a,h)anthracen 75.3%

**ORGANICS ANALYSIS DATA SHEET**  
**PNA's by SIM SW8270D-SIM GC/MS**  
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**Sample ID: DMA-TP1-3-4.5-041911**  
**SAMPLE**

Lab Sample ID: SS83B  
 LIMS ID: 11-8712  
 Matrix: Soil  
 Data Release Authorized: *[Signature]*  
 Reported: 05/05/11

QC Report No: SS83-Floyd Snider  
 Project: Lora Lake Parcel:DMA  
 Event: POS-LL  
 Date Sampled: 04/19/11  
 Date Received: 04/20/11

Date Extracted: 05/01/11  
 Date Analyzed: 05/03/11 19:25  
 Instrument/Analyst: NT4/JZ  
 GPC Cleanup: No  
 Silica Gel Cleanup: Yes  
 Alumina Cleanup: No

Sample Amount: 11.31 g-dry-wt  
 Final Extract Volume: 0.5 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 18.1%

CAS Number	Analyte	RL	Result
56-55-3	Benzo (a) anthracene	4.4	5.7
218-01-9	Chrysene	4.4	13
50-32-8	Benzo (a) pyrene	4.4	6.8
193-39-5	Indeno (1,2,3-cd) pyrene	4.4	< 4.4 U
53-70-3	Dibenz (a,h) anthracene	4.4	< 4.4 U
<b>TOTBFA</b>	<b>Total Benzofluoranthenes</b>	<b>4.4</b>	<b>18</b>

Reported in µg/kg (ppb)

**SIM Semivolatile Surrogate Recovery**

d10-2-Methylnaphthalene 65.3%  
 d14-Dibenzo(a,h)anthracen 87.0%

**ORGANICS ANALYSIS DATA SHEET**  
**PNA's by SIM SW8270D-SIM GC/MS**  
 Page 1 of 1

**Sample ID: DMA-TP1-4.5-5.5-041911**  
**SAMPLE**

Lab Sample ID: SS83C  
 LIMS ID: 11-8713  
 Matrix: Soil  
 Data Release Authorized: *AS*  
 Reported: 05/05/11

QC Report No: SS83-Floyd Snider  
 Project: Lora Lake Parcel:DMA  
 Event: POS-LL  
 Date Sampled: 04/19/11  
 Date Received: 04/20/11

Date Extracted: 05/01/11  
 Date Analyzed: 05/03/11 19:53  
 Instrument/Analyst: NT4/JZ  
 GPC Cleanup: No  
 Silica Gel Cleanup: Yes  
 Alumina Cleanup: No

Sample Amount: 10.95 g-dry-wt  
 Final Extract Volume: 0.5 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 10.8%

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	4.6	< 4.6 U
218-01-9	Chrysene	4.6	< 4.6 U
50-32-8	Benzo(a)pyrene	4.6	< 4.6 U
193-39-5	Indeno(1,2,3-cd)pyrene	4.6	< 4.6 U
53-70-3	Dibenz(a,h)anthracene	4.6	< 4.6 U
TOTBFA	Total Benzofluoranthenes	4.6	< 4.6 U

Reported in µg/kg (ppb)

**SIM Semivolatile Surrogate Recovery**

d10-2-Methylnaphthalene 59.7%  
 d14-Dibenzo(a,h)anthracen 87.7%



**ORGANICS ANALYSIS DATA SHEET**  
**PNA's by SIM SW8270D-SIM GC/MS**  
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**Sample ID: DMA-TP2-1.5-3-041911**  
**SAMPLE**

Lab Sample ID: SS83D  
 LIMS ID: 11-8714  
 Matrix: Soil  
 Data Release Authorized:  
 Reported: 05/05/11

QC Report No: SS83-Floyd Snider  
 Project: Lora Lake Parcel:DMA  
 Event: POS-LL  
 Date Sampled: 04/19/11  
 Date Received: 04/20/11

Date Extracted: 05/01/11  
 Date Analyzed: 05/03/11 20:20  
 Instrument/Analyst: NT4/JZ  
 GPC Cleanup: No  
 Silica Gel Cleanup: Yes  
 Alumina Cleanup: No

Sample Amount: 11.02 g-dry-wt  
 Final Extract Volume: 0.5 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 13.8%

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	4.5	< 4.5 U
<b>218-01-9</b>	<b>Chrysene</b>	<b>4.5</b>	<b>4.9</b>
50-32-8	Benzo(a)pyrene	4.5	< 4.5 U
193-39-5	Indeno(1,2,3-cd)pyrene	4.5	< 4.5 U
53-70-3	Dibenz(a,h)anthracene	4.5	< 4.5 U
TOTBFA	Total Benzofluoranthenes	4.5	< 4.5 U

Reported in µg/kg (ppb)

**SIM Semivolatile Surrogate Recovery**

d10-2-Methylnaphthalene 59.7%  
 d14-Dibenzo(a,h)anthracen 84.0%

**ORGANICS ANALYSIS DATA SHEET**  
**PNA's by SIM SW8270D-SIM GC/MS**  
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**Sample ID: DMA-TP2-3-4-041911**  
**SAMPLE**

Lab Sample ID: SS83E  
 LIMS ID: 11-8715  
 Matrix: Soil  
 Data Release Authorized: *B*  
 Reported: 05/05/11

QC Report No: SS83-Floyd Snider  
 Project: Lora Lake Parcel:DMA  
 Event: POS-LL  
 Date Sampled: 04/19/11  
 Date Received: 04/20/11

Date Extracted: 05/01/11  
 Date Analyzed: 05/03/11 20:48  
 Instrument/Analyst: NT4/JZ  
 GPC Cleanup: No  
 Silica Gel Cleanup: Yes  
 Alumina Cleanup: No

Sample Amount: 11.10 g-dry-wt  
 Final Extract Volume: 0.5 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 10.3%

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	4.5	< 4.5 U
218-01-9	Chrysene	4.5	< 4.5 U
50-32-8	Benzo(a)pyrene	4.5	< 4.5 U
193-39-5	Indeno(1,2,3-cd)pyrene	4.5	< 4.5 U
53-70-3	Dibenz(a,h)anthracene	4.5	< 4.5 U
TOTBFA	Total Benzofluoranthenes	4.5	< 4.5 U

Reported in µg/kg (ppb)

**SIM Semivolatile Surrogate Recovery**

d10-2-Methylnaphthalene 58.0%  
 d14-Dibenzo(a,h)anthracen 78.7%

**ORGANICS ANALYSIS DATA SHEET**  
**PNA's by SIM SW8270D-SIM GC/MS**  
 Page 1 of 1

**Sample ID: DMA-TP6-0-2.5-041911**  
**SAMPLE**

Lab Sample ID: SS83F  
 LIMS ID: 11-8716  
 Matrix: Soil  
 Data Release Authorized: *[Signature]*  
 Reported: 05/05/11

QC Report No: SS83-Floyd Snider  
 Project: Lora Lake Parcel:DMA  
 Event: POS-LL  
 Date Sampled: 04/19/11  
 Date Received: 04/20/11

Date Extracted: 05/01/11  
 Date Analyzed: 05/03/11 21:16  
 Instrument/Analyst: NT4/JZ  
 GPC Cleanup: No  
 Silica Gel Cleanup: Yes  
 Alumina Cleanup: No

Sample Amount: 11.23 g-dry-wt  
 Final Extract Volume: 0.5 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 11.9%

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	4.4	< 4.4 U
218-01-9	Chrysene	4.4	< 4.4 U
50-32-8	Benzo(a)pyrene	4.4	< 4.4 U
193-39-5	Indeno(1,2,3-cd)pyrene	4.4	< 4.4 U
53-70-3	Dibenz(a,h)anthracene	4.4	< 4.4 U
TOTBFA	Total Benzofluoranthenes	4.4	< 4.4 U


Reported in µg/kg (ppb)

**SIM Semivolatile Surrogate Recovery**

d10-2-Methylnaphthalene 61.7%  
 d14-Dibenzo(a,h)anthracen 82.7%

**ORGANICS ANALYSIS DATA SHEET**  
**PNAs by SIM SW8270D-SIM GC/MS**  
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**Sample ID: DMA-TP6-2.5-5-041911**  
**SAMPLE**

Lab Sample ID: SS83G  
 LIMS ID: 11-8717  
 Matrix: Soil  
 Data Release Authorized:   
 Reported: 05/05/11

QC Report No: SS83-Floyd Snider  
 Project: Lora Lake Parcel:DMA  
 Event: POS-LL  
 Date Sampled: 04/19/11  
 Date Received: 04/20/11

Date Extracted: 05/01/11  
 Date Analyzed: 05/03/11 21:43  
 Instrument/Analyst: NT4/JZ  
 GPC Cleanup: No  
 Silica Gel Cleanup: Yes  
 Alumina Cleanup: No

Sample Amount: 11.42 g-dry-wt  
 Final Extract Volume: 0.5 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 11.7%

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	4.4	< 4.4 U
218-01-9	Chrysene	4.4	< 4.4 U
50-32-8	Benzo(a)pyrene	4.4	< 4.4 U
193-39-5	Indeno(1,2,3-cd)pyrene	4.4	< 4.4 U
53-70-3	Dibenz(a,h)anthracene	4.4	< 4.4 U
TOTBFA	Total Benzofluoranthenes	4.4	< 4.4 U


Reported in µg/kg (ppb)

**SIM Semivolatile Surrogate Recovery**

d10-2-Methylnaphthalene 63.3%  
 d14-Dibenzo(a,h)anthracen 90.7%

**ORGANICS ANALYSIS DATA SHEET**  
**PNAs by SIM SW8270D-SIM GC/MS**  
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**Sample ID: DMA-TP4-0-1.5-042011**  
**SAMPLE**

Lab Sample ID: SS83H  
 LIMS ID: 11-8718  
 Matrix: Soil  
 Data Release Authorized:   
 Reported: 05/05/11

QC Report No: SS83-Floyd Snider  
 Project: Lora Lake Parcel:DMA  
 Event: POS-LL  
 Date Sampled: 04/20/11  
 Date Received: 04/20/11

Date Extracted: 05/01/11  
 Date Analyzed: 05/03/11 22:11  
 Instrument/Analyst: NT4/JZ  
 GPC Cleanup: No  
 Silica Gel Cleanup: Yes  
 Alumina Cleanup: No

Sample Amount: 10.43 g-dry-wt  
 Final Extract Volume: 0.5 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 66.0%

CAS Number	Analyte	RL	Result
56-55-3	Benzo (a) anthracene	4.8	11
218-01-9	Chrysene	4.8	32
50-32-8	Benzo (a) pyrene	4.8	12
193-39-5	Indeno (1,2,3-cd) pyrene	4.8	< 4.8 U
53-70-3	Dibenz (a,h) anthracene	4.8	< 4.8 U
<b>TOTBFA</b>	<b>Total Benzofluoranthenes</b>	<b>4.8</b>	<b>44</b>

Reported in µg/kg (ppb)

**SIM Semivolatile Surrogate Recovery**

d10-2-Methylnaphthalene 62.7%  
 d14-Dibenzo (a,h) anthracen 55.7%

**ORGANICS ANALYSIS DATA SHEET**  
**PNAs by SIM SW8270D-SIM GC/MS**  
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**Sample ID: DMA-TP4-1.5-2-042011**  
**SAMPLE**

Lab Sample ID: SS831  
 LIMS ID: 11-8719  
 Matrix: Soil  
 Data Release Authorized: *[Signature]*  
 Reported: 05/05/11

QC Report No: SS83-Floyd Snider  
 Project: Lora Lake Parcel:DMA  
 Event: POS-LL  
 Date Sampled: 04/20/11  
 Date Received: 04/20/11

Date Extracted: 05/01/11  
 Date Analyzed: 05/03/11 22:39  
 Instrument/Analyst: NT4/JZ  
 GPC Cleanup: No  
 Silica Gel Cleanup: Yes  
 Alumina Cleanup: No

Sample Amount: 10.80 g-dry-wt  
 Final Extract Volume: 0.5 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 17.3%

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	4.6	< 4.6 U
218-01-9	Chrysene	4.6	< 4.6 U
50-32-8	Benzo(a)pyrene	4.6	< 4.6 U
193-39-5	Indeno(1,2,3-cd)pyrene	4.6	< 4.6 U
53-70-3	Dibenz(a,h)anthracene	4.6	< 4.6 U
TOTBFA	Total Benzofluoranthenes	4.6	< 4.6 U

Reported in µg/kg (ppb)

**SIM Semivolatile Surrogate Recovery**

d10-2-Methylnaphthalene 62.3%  
 d14-Dibenzo(a,h)anthracen 80.0%

**ORGANICS ANALYSIS DATA SHEET**  
**PNAs by SIM SW8270D-SIM GC/MS**  
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**Sample ID: DMA-TP5-1.5-2-042011**  
**SAMPLE**

Lab Sample ID: SS83J  
 LIMS ID: 11-8720  
 Matrix: Soil  
 Data Release Authorized: *AS*  
 Reported: 05/05/11

QC Report No: SS83-Floyd Snider  
 Project: Lora Lake Parcel:DMA  
 Event: POS-LL  
 Date Sampled: 04/20/11  
 Date Received: 04/20/11

Date Extracted: 05/01/11  
 Date Analyzed: 05/03/11 23:06  
 Instrument/Analyst: NT4/JZ  
 GPC Cleanup: No  
 Silica Gel Cleanup: Yes  
 Alumina Cleanup: No

Sample Amount: 10.18 g-dry-wt  
 Final Extract Volume: 0.5 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 49.8%

CAS Number	Analyte	RL	Result
56-55-3	Benzo (a) anthracene	4.9	14
218-01-9	Chrysene	4.9	44
50-32-8	Benzo (a) pyrene	4.9	12
193-39-5	Indeno (1,2,3-cd) pyrene	4.9	13
53-70-3	Dibenz (a,h) anthracene	4.9	< 4.9 U
TOTBFA	Total Benzofluoranthenes	4.9	54

Reported in µg/kg (ppb)

**SIM Semivolatile Surrogate Recovery**

d10-2-Methylnaphthalene 57.3%  
 d14-Dibenzo(a,h)anthracen 39.3%

**ORGANICS ANALYSIS DATA SHEET**  
**PNA's by SIM SW8270D-SIM GC/MS**  
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**Sample ID: DMA-TP5-1.5-2-042011-D**  
**SAMPLE**

Lab Sample ID: SS83K  
 LIMS ID: 11-8721  
 Matrix: Soil  
 Data Release Authorized: *[Signature]*  
 Reported: 05/05/11

QC Report No: SS83-Floyd Snider  
 Project: Lora Lake Parcel:DMA  
 Event: POS-LL  
 Date Sampled: 04/20/11  
 Date Received: 04/20/11

Date Extracted: 05/01/11  
 Date Analyzed: 05/03/11 23:34  
 Instrument/Analyst: NT4/JZ  
 GPC Cleanup: No  
 Silica Gel Cleanup: Yes  
 Alumina Cleanup: No

Sample Amount: 10.36 g-dry-wt  
 Final Extract Volume: 0.5 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 50.7%

CAS Number	Analyte	RL	Result
56-55-3	Benzo (a) anthracene	4.8	14
218-01-9	Chrysene	4.8	47
50-32-8	Benzo (a) pyrene	4.8	12
193-39-5	Indeno (1,2,3-cd) pyrene	4.8	12
53-70-3	Dibenz (a,h) anthracene	4.8	< 4.8 U
TOTBFA	Total Benzofluoranthenes	4.8	57

Reported in µg/kg (ppb)

**SIM Semivolatile Surrogate Recovery**

d10-2-Methylnaphthalene 58.7%  
 d14-Dibenzo (a,h) anthracen 35.0%



**ORGANICS ANALYSIS DATA SHEET**  
**PNA<sub>s</sub> by SIM SW8270D-SIM GC/MS**  
 Page 1 of 1

**Sample ID: DMA-TP5-2-3-042011**  
**SAMPLE**

Lab Sample ID: SS83L  
 LIMS ID: 11-8722  
 Matrix: Soil  
 Data Release Authorized: *[Signature]*  
 Reported: 05/05/11

QC Report No: SS83-Floyd Snider  
 Project: Lora Lake Parcel:DMA  
 Event: POS-LL  
 Date Sampled: 04/20/11  
 Date Received: 04/20/11

Date Extracted: 05/01/11  
 Date Analyzed: 05/04/11 00:02  
 Instrument/Analyst: NT4/JZ  
 GPC Cleanup: No  
 Silica Gel Cleanup: Yes  
 Alumina Cleanup: No

Sample Amount: 10.68 g-dry-wt  
 Final Extract Volume: 0.5 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 18.0%

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	4.7	< 4.7 U
218-01-9	Chrysene	4.7	< 4.7 U
50-32-8	Benzo(a)pyrene	4.7	< 4.7 U
193-39-5	Indeno(1,2,3-cd)pyrene	4.7	< 4.7 U
53-70-3	Dibenz(a,h)anthracene	4.7	< 4.7 U
TOTBFA	Total Benzofluoranthenes	4.7	< 4.7 U

Reported in µg/kg (ppb)

**SIM Semivolatile Surrogate Recovery**

d10-2-Methylnaphthalene 67.3%  
 d14-Dibenzo(a,h)anthracen 78.0%

**ORGANICS ANALYSIS DATA SHEET**  
**PNA's by SIM SW8270D-SIM GC/MS**  
 Page 1 of 1

**Sample ID: DMA-TP3-2-3-042011**  
**SAMPLE**

Lab Sample ID: SS83M  
 LIMS ID: 11-8723  
 Matrix: Soil  
 Data Release Authorized: *AS*  
 Reported: 05/05/11

QC Report No: SS83-Floyd Snider  
 Project: Lora Lake Parcel:DMA  
 Event: POS-LL  
 Date Sampled: 04/20/11  
 Date Received: 04/20/11

Date Extracted: 05/01/11  
 Date Analyzed: 05/04/11 00:29  
 Instrument/Analyst: NT4/JZ  
 GPC Cleanup: No  
 Silica Gel Cleanup: Yes  
 Alumina Cleanup: No

Sample Amount: 10.18 g-dry-wt  
 Final Extract Volume: 0.5 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 16.7%

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	4.9	< 4.9 U
<b>218-01-9</b>	<b>Chrysene</b>	<b>4.9</b>	<b>10</b>
50-32-8	Benzo(a)pyrene	4.9	< 4.9 U
193-39-5	Indeno(1,2,3-cd)pyrene	4.9	< 4.9 U
53-70-3	Dibenz(a,h)anthracene	4.9	< 4.9 U
<b>TOTBFA</b>	<b>Total Benzofluoranthenes</b>	<b>4.9</b>	<b>6.3</b>


Reported in µg/kg (ppb)

**SIM Semivolatile Surrogate Recovery**

d10-2-Methylnaphthalene 64.0%  
 d14-Dibenzo(a,h)anthracen 70.3%

**ORGANICS ANALYSIS DATA SHEET**  
**PNA's by SIM SW8270D-SIM GC/MS**  
 Page 1 of 1

**Sample ID: DMA-TP3-3-4-042011**  
**SAMPLE**

Lab Sample ID: SS83N  
 LIMS ID: 11-8724  
 Matrix: Soil  
 Data Release Authorized:   
 Reported: 05/05/11

QC Report No: SS83-Floyd Snider  
 Project: Lora Lake Parcel:DMA  
 Event: POS-LL  
 Date Sampled: 04/20/11  
 Date Received: 04/20/11

Date Extracted: 05/01/11  
 Date Analyzed: 05/04/11 00:57  
 Instrument/Analyst: NT4/JZ  
 GPC Cleanup: No  
 Silica Gel Cleanup: Yes  
 Alumina Cleanup: No

Sample Amount: 10.28 g-dry-wt  
 Final Extract Volume: 0.5 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 51.1%

CAS Number	Analyte	RL	Result
56-55-3	Benzo (a) anthracene	4.9	5.7
218-01-9	Chrysene	4.9	18
50-32-8	Benzo (a) pyrene	4.9	< 4.9 U
193-39-5	Indeno (1,2,3-cd) pyrene	4.9	5.5
53-70-3	Dibenz (a,h) anthracene	4.9	< 4.9 U
TOTBFA	Total Benzofluoranthenes	4.9	23

Reported in µg/kg (ppb)

**SIM Semivolatile Surrogate Recovery**

d10-2-Methylnaphthalene 53.7%  
 d14-Dibenzo(a,h)anthracen 40.0%

**ORGANICS ANALYSIS DATA SHEET**  
**PNA's by SIM SW8270D-SIM GC/MS**  
 Page 1 of 1

**Sample ID: DMA-TP3-5-6-042011**  
**SAMPLE**

Lab Sample ID: SS830  
 LIMS ID: 11-8725  
 Matrix: Soil  
 Data Release Authorized: *AB*  
 Reported: 05/05/11

QC Report No: SS83-Floyd Snider  
 Project: Lora Lake Parcel:DMA  
 Event: POS-LL  
 Date Sampled: 04/20/11  
 Date Received: 04/20/11

Date Extracted: 05/01/11  
 Date Analyzed: 05/04/11 01:24  
 Instrument/Analyst: NT4/JZ  
 GPC Cleanup: No  
 Silica Gel Cleanup: Yes  
 Alumina Cleanup: No

Sample Amount: 10.73 g-dry-wt  
 Final Extract Volume: 0.5 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 12.6%

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	4.7	< 4.7 U
218-01-9	Chrysene	4.7	< 4.7 U
50-32-8	Benzo(a)pyrene	4.7	< 4.7 U
193-39-5	Indeno(1,2,3-cd)pyrene	4.7	< 4.7 U
53-70-3	Dibenz(a,h)anthracene	4.7	< 4.7 U
TOTBFA	Total Benzofluoranthenes	4.7	< 4.7 U

Reported in µg/kg (ppb)

**SIM Semivolatile Surrogate Recovery**

d10-2-Methylnaphthalene 58.3%  
 d14-Dibenzo(a,h)anthracen 74.3%

**SIM SW8270 SURROGATE RECOVERY SUMMARY**

Matrix: Soil

QC Report No: SS83-Floyd Snider  
Project: Lora Lake Parcel:DMA  
POS-LL

<u>Client ID</u>	<u>MNP</u>	<u>DBA</u>	<u>TOT OUT</u>
DMA-TP1-0-3-041911	62.7%	75.3%	0
DMA-TP1-3-4.5-041911	65.3%	87.0%	0
DMA-TP1-4.5-5.5-041911	59.7%	87.7%	0
DMA-TP2-1.5-3-041911	59.7%	84.0%	0
DMA-TP2-3-4-041911	58.0%	78.7%	0
DMA-TP6-0-2.5-041911	61.7%	82.7%	0
DMA-TP6-2.5-5-041911	63.3%	90.7%	0
DMA-TP4-0-1.5-042011	62.7%	55.7%	0
DMA-TP4-1.5-2-042011	62.3%	80.0%	0
DMA-TP5-1.5-2-042011	57.3%	39.3%	0
DMA-TP5-1.5-2-042011-D	58.7%	35.0%	0
DMA-TP5-2-3-042011	67.3%	78.0%	0
DMA-TP3-2-3-042011	64.0%	70.3%	0
DMA-TP3-3-4-042011	53.7%	40.0%	0
MB-050111	56.7%	74.7%	0
LCS-050111	66.0%	82.3%	0
LCSD-050111	61.3%	78.3%	0
DMA-TP3-5-6-042011	58.3%	74.3%	0
DMA-TP3-5-6-042011 MS	65.7%	75.0%	0
DMA-TP3-5-6-042011 MSD	69.0%	77.3%	0

**LCS/MB LIMITS      QC LIMITS**

(MNP) = d10-2-Methylnaphthalene      (35-100)      (34-100)  
(DBA) = d14-Dibenzo(a,h)anthracene      (37-120)      (10-117)

Prep Method: SW3580A  
Log Number Range: 11-8711 to 11-8725

**ORGANICS ANALYSIS DATA SHEET**  
**PNA's by SW8270D-SIM GC/MS**  
 Page 1 of 1

**Sample ID: DMA-TP3-5-6-042011**  
**MATRIX SPIKE**

Lab Sample ID: SS830  
 LIMS ID: 11-8725  
 Matrix: Soil  
 Data Release Authorized: *[Signature]*  
 Reported: 05/05/11

QC Report No: SS83-Floyd Snider  
 Project: Lora Lake Parcel:DMA  
 Event: POS-LL  
 Date Sampled: 04/20/11  
 Date Received: 04/20/11

Date Extracted MS/MSD: 05/01/11

Sample Amount MS: 10.9 g-dry-wt  
 MSD: 10.9 g-dry-wt

Date Analyzed MS: 05/04/11 01:52  
 MSD: 05/04/11 02:20

Final Extract Volume MS: 0.50 mL  
 MSD: 0.50 mL

Instrument/Analyst MS: NT4/JZ  
 MSD: NT4/JZ

Dilution Factor MS: 1.00  
 MSD: 1.00

Analyte	Sample	MS	Spike		MSD	MSD		RPD
			Added-MS	Recovery		Added-MSD	Recovery	
Benzo(a)anthracene	< 4.7 U	116	138	84.1%	120	138	87.0%	3.4%
Chrysene	< 4.7 U	116	138	84.1%	121	138	87.7%	4.2%
Benzo(a)pyrene	< 4.7 U	116	138	84.1%	117	138	84.8%	0.9%
Indeno(1,2,3-cd)pyrene	< 4.7 U	102	138	73.9%	107	138	77.5%	4.8%
Dibenz(a,h)anthracene	< 4.7 U	107	138	77.5%	110	138	79.7%	2.8%
Total Benzofluoranthenes	< 4.7 U	237	275	86.2%	240	276	87.0%	1.3%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

**ORGANICS ANALYSIS DATA SHEET**  
**PNA's by SIM SW8270D-SIM GC/MS**  
 Page 1 of 1

**Sample ID: DMA-TP3-5-6-042011**  
**MATRIX SPIKE**

Lab Sample ID: SS830  
 LIMS ID: 11-8725  
 Matrix: Soil  
 Data Release Authorized: *AS*  
 Reported: 05/05/11

QC Report No: SS83-Floyd Snider  
 Project: Lora Lake Parcel:DMA  
 Event: POS-LL  
 Date Sampled: 04/20/11  
 Date Received: 04/20/11

Date Extracted: 05/01/11  
 Date Analyzed: 05/04/11 01:52  
 Instrument/Analyst: NT4/JZ  
 GPC Cleanup: No  
 Silica Gel Cleanup: Yes  
 Alumina Cleanup: No

Sample Amount: 10.90 g-dry-wt  
 Final Extract Volume: 0.5 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 12.6%

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	4.7	---
218-01-9	Chrysene	4.7	---
50-32-8	Benzo(a)pyrene	4.7	---
193-39-5	Indeno(1,2,3-cd)pyrene	4.7	---
53-70-3	Dibenz(a,h)anthracene	4.7	---
TOTBFA	Total Benzofluoranthenes	4.7	---

Reported in µg/kg (ppb)

**SIM Semivolatile Surrogate Recovery**

d10-2-Methylnaphthalene 65.7%  
 d14-Dibenzo(a,h)anthracen 75.0%

**ORGANICS ANALYSIS DATA SHEET**  
**PNA's by SIM SW8270D-SIM GC/MS**  
 Page 1 of 1

**Sample ID: DMA-TP3-5-6-042011**  
**MATRIX SPIKE DUPLICATE**

Lab Sample ID: SS830  
 LIMS ID: 11-8725  
 Matrix: Soil  
 Data Release Authorized: *B*  
 Reported: 05/05/11

QC Report No: SS83-Floyd Snider  
 Project: Lora Lake Parcel:DMA  
 Event: POS-LL  
 Date Sampled: 04/20/11  
 Date Received: 04/20/11

Date Extracted: 05/01/11  
 Date Analyzed: 05/04/11 02:20  
 Instrument/Analyst: NT4/JZ  
 GPC Cleanup: No  
 Silica Gel Cleanup: Yes  
 Alumina Cleanup: No

Sample Amount: 10.86 g-dry-wt  
 Final Extract Volume: 0.5 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 12.6%

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	4.6	---
218-01-9	Chrysene	4.6	---
50-32-8	Benzo(a)pyrene	4.6	---
193-39-5	Indeno(1,2,3-cd)pyrene	4.6	---
53-70-3	Dibenz(a,h)anthracene	4.6	---
TOTBFA	Total Benzofluoranthenes	4.6	---

Reported in µg/kg (ppb)

**SIM Semivolatile Surrogate Recovery**

d10-2-Methylnaphthalene 69.0%  
 d14-Dibenzo(a,h)anthracen 77.3%



**ORGANICS ANALYSIS DATA SHEET**

**PNA's by SW8270D-SIM GC/MS**

Page 1 of 1

**Sample ID: LCS-050111**

**LAB CONTROL SAMPLE**

Lab Sample ID: LCS-050111

LIMS ID: 11-8725

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 05/05/11

QC Report No: SS83-Floyd Snider

Project: Lora Lake Parcel:DMA

Event: POS-LL

Date Sampled: NA

Date Received: NA

Date Extracted: 05/01/11

Sample Amount LCS: 10.0 g-dry-wt

LCS D: 10.0 g-dry-wt

Date Analyzed LCS: 05/03/11 17:34

Final Extract Volume LCS: 0.50 mL

LCS D: 05/03/11 18:02

LCS D: 0.50 mL

Instrument/Analyst LCS: NT4/JZ

Dilution Factor LCS: 1.00

LCS D: NT4/JZ

LCS D: 1.00

Analyte	LCS	Spike	LCS	LCS D	Spike	LCS D	RPD
		Added-LCS	Recovery		Added-LCS D	Recovery	
Benzo(a)anthracene	127	150	84.7%	123	150	82.0%	3.2%
Chrysene	130	150	86.7%	125	150	83.3%	3.9%
Benzo(a)pyrene	118	150	78.7%	116	150	77.3%	1.7%
Indeno(1,2,3-cd)pyrene	115	150	76.7%	116	150	77.3%	0.9%
Dibenz(a,h)anthracene	119	150	79.3%	119	150	79.3%	0.0%
Total Benzofluoranthenes	256	300	85.3%	248	300	82.7%	3.2%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

**SIM Semivolatile Surrogate Recovery**

	LCS	LCS D
d10-2-Methylnaphthalene	66.0%	61.3%
d14-Dibenzo(a,h)anthracen	82.3%	78.3%

4B  
SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

SS83MBS1
----------

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

ARI Job No: SS83

Project: LORA LAKE PARCEL:DMA

Lab File ID: 05031103

Date Extracted: 05/01/11

Instrument ID: NT4

Date Analyzed: 05/03/11

Matrix: SOLID

Time Analyzed: 1707

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	=====	=====	=====	=====
01	SS83LCSS1	SS83LCSS1	05031104	05/03/11
02	SS83LCSDS1	SS83LCSDS1	05031105	05/03/11
03	DMA-TP1-0-3-0419	SS83A	05031107	05/03/11
04	DMA-TP1-3-4.5-04	SS83B	05031108	05/03/11
05	DMA-TP1-4.5-5.5-	SS83C	05031109	05/03/11
06	DMA-TP2-1.5-3-04	SS83D	05031110	05/03/11
07	DMA-TP2-3-4-0419	SS83E	05031111	05/03/11
08	DMA-TP6-0-2.5-04	SS83F	05031112	05/03/11
09	DMA-TP6-2.5-5-04	SS83G	05031113	05/03/11
10	DMA-TP4-0-1.5-04	SS83H	05031114	05/03/11
11	DMA-TP4-1.5-2-04	SS83I	05031115	05/03/11
12	DMA-TP5-1.5-2-04	SS83J	05031116	05/03/11
13	DMA-TP5-1.5-2-04	SS83K	05031117	05/03/11
14	DMA-TP5-2-3-0420	SS83L	05031118	05/04/11
15	DMA-TP3-2-3-0420	SS83M	05031119	05/04/11
16	DMA-TP3-3-4-0420	SS83N	05031120	05/04/11
17	DMA-TP3-5-6-0420	SS83O	05031121	05/04/11
18	DMA-TP3-5-6-042	SS83OMS	05031122	05/04/11
19	DMA-TP3-5-6-042	SS83OMSD	05031123	05/04/11
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**ORGANICS ANALYSIS DATA SHEET**  
**PNA's by SIM SW8270D-SIM GC/MS**  
 Page 1 of 1

**Sample ID: MB-050111**  
**METHOD BLANK**

Lab Sample ID: MB-050111  
 LIMS ID: 11-8725  
 Matrix: Soil  
 Data Release Authorized: *[Signature]*  
 Reported: 05/05/11

QC Report No: SS83-Floyd Snider  
 Project: Lora Lake Parcel:DMA  
 Event: POS-LL  
 Date Sampled: NA  
 Date Received: NA

Date Extracted: 05/01/11  
 Date Analyzed: 05/03/11 17:07  
 Instrument/Analyst: NT4/JZ  
 GPC Cleanup: No  
 Silica Gel Cleanup: Yes  
 Alumina Cleanup: No

Sample Amount: 10.00 g-dry-wt  
 Final Extract Volume: 0.5 mL  
 Dilution Factor: 1.00  
 Percent Moisture: NA

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	5.0	< 5.0 U
218-01-9	Chrysene	5.0	< 5.0 U
50-32-8	Benzo(a)pyrene	5.0	< 5.0 U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	< 5.0 U
53-70-3	Dibenz(a,h)anthracene	5.0	< 5.0 U
TOTBFA	Total Benzofluoranthenes	5.0	< 5.0 U

Reported in µg/kg (ppb)

**SIM Semivolatile Surrogate Recovery**

d10-2-Methylnaphthalene 56.7%  
 d14-Dibenzo(a,h)anthracen 74.7%

**ORGANICS ANALYSIS DATA SHEET**

**PNA's by SW8270D-SIM GC/MS**

Page 1 of 1

**Sample ID: DMA-RB-042011**

**SAMPLE**

Lab Sample ID: SS83P

LIMS ID: 11-8726

Matrix: Water

Data Release Authorized: *AS*

Reported: 04/29/11

QC Report No: SS83-Floyd Snider

Project: Lora Lake Parcel:DMA

Event: POS-LL

Date Sampled: 04/20/11

Date Received: 04/20/11

Date Extracted: 04/21/11

Date Analyzed: 04/27/11 19:43

Instrument/Analyst: NT4/JZ

Sample Amount: 500 mL

Final Extract Volume: 0.5 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	0.10	< 0.10 U
218-01-9	Chrysene	0.10	< 0.10 U
50-32-8	Benzo(a)pyrene	0.10	< 0.10 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.10	< 0.10 U
53-70-3	Dibenz(a,h)anthracene	0.10	< 0.10 U
TOTBFA	Total Benzofluoranthenes	0.10	< 0.10 U

Reported in µg/L (ppb)

**SIM Semivolatile Surrogate Recovery**

d10-2-Methylnaphthalene 69.7%  
d14-Dibenzo(a,h)anthracene 66.0%

**SIM SW8270 SURROGATE RECOVERY SUMMARY**

Matrix: Water

QC Report No: SS83-Floyd Snider  
Project: Lora Lake Parcel:DMA  
POS-LL

<u>Client ID</u>	<u>MNP</u>	<u>DBA</u>	<u>TOT OUT</u>
MB-042111	68.0%	77.7%	0
LCS-042111	68.3%	81.7%	0
LCSD-042111	67.7%	74.0%	0
DMA-RB-042011	69.7%	66.0%	0

**LCS/MB LIMITS      QC LIMITS**

(MNP) = d10-2-Methylnaphthalene      (36-101)      (30-106)  
(DBA) = d14-Dibenzo(a,h)anthracene      (42-121)      (10-130)

Prep Method: SW3520C  
Log Number Range: 11-8726 to 11-8726

**ORGANICS ANALYSIS DATA SHEET**  
**PNA's by SW8270D-SIM GC/MS**  
 Page 1 of 1

**Sample ID: LCS-042111**  
**LAB CONTROL SAMPLE**

Lab Sample ID: LCS-042111  
 LIMS ID: 11-8726  
 Matrix: Water  
 Data Release Authorized: *AB*  
 Reported: 04/29/11

QC Report No: SS83-Floyd Snider  
 Project: Lora Lake Parcel:DMA  
 Event: POS-LL  
 Date Sampled: NA  
 Date Received: NA

Date Extracted LCS/LCSD: 04/21/11

Sample Amount LCS: 500 mL

Date Analyzed LCS: 04/27/11 17:52

LCSD: 500 mL

Final Extract Volume LCS: 0.50 mL

LCSD: 04/27/11 18:19

LCSD: 0.50 mL

Instrument/Analyst LCS: NT4/JZ

Dilution Factor LCS: 1.00

LCSD: NT4/JZ

LCSD: 1.00

Analyte	LCS			LCSD			RPD
	LCS	Spike Added-LCS	LCS Recovery	LCS	Spike Added-LCSD	LCSD Recovery	
Benzo(a)anthracene	2.53	3.00	84.3%	2.53	3.00	84.3%	0.0%
Chrysene	2.70	3.00	90.0%	2.77	3.00	92.3%	2.6%
Benzo(a)pyrene	2.19	3.00	73.0%	2.10	3.00	70.0%	4.2%
Indeno(1,2,3-cd)pyrene	2.46	3.00	82.0%	2.53	3.00	84.3%	2.8%
Dibenz(a,h)anthracene	2.52	3.00	84.0%	2.49	3.00	83.0%	1.2%
Total Benzofluoranthenes	5.41	6.00	90.2%	5.41	6.00	90.2%	0.0%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

**SIM Semivolatile Surrogate Recovery**

	LCS	LCSD
d10-2-Methylnaphthalene	68.3%	67.7%
d14-Dibenzo(a,h)anthracene	81.7%	74.0%

4B  
SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

SS71MBW1

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

ARI Job No: SS71

Project: LORA LAKE PARCEL

Lab File ID: 04271107

Date Extracted: 04/21/11

Instrument ID: NT4

Date Analyzed: 04/27/11

Matrix: LIQUID

Time Analyzed: 1724

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	SS71LCSW1	SS71LCSW1	04271108	04/27/11
02	SS71LCSDW1	SS71LCSDW1	04271109	04/27/11
03	LL-ER-041911	SS71T	04271111	04/27/11
04	DMA-RB-042011	SS83P	04271112	04/27/11
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**ORGANICS ANALYSIS DATA SHEET**

**PNAs by SW8270D-SIM GC/MS**

Page 1 of 1


**Sample ID: MB-042111**

**METHOD BLANK**

Lab Sample ID: MB-042111

LIMS ID: 11-8726

Matrix: Water

Data Release Authorized: 

Reported: 04/29/11

QC Report No: SS83-Floyd Snider

Project: Lora Lake Parcel:DMA

Event: POS-LL

Date Sampled: NA

Date Received: NA

Date Extracted: 04/21/11

Date Analyzed: 04/27/11 17:24

Instrument/Analyst: NT4/JZ

Sample Amount: 500 mL

Final Extract Volume: 0.5 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	0.10	< 0.10 U
218-01-9	Chrysene	0.10	< 0.10 U
50-32-8	Benzo(a)pyrene	0.10	< 0.10 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.10	< 0.10 U
53-70-3	Dibenz(a,h)anthracene	0.10	< 0.10 U
TOTBFA	Total Benzofluoranthenes	0.10	< 0.10 U

Reported in µg/L (ppb)

**SIM Semivolatile Surrogate Recovery**

d10-2-Methylnaphthalene	68.0%
d14-Dibenzo(a,h)anthracene	77.7%



5B  
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK  
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

Instrument ID: NT4

Project: LORA LAKE PARCEL

DFTPP Injection Date: 04/21/11

DFTPP Injection Time: 1952

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	28.6
68	Less than 2.0% of mass 69	0.0 ( 0.0)1
69	Mass 69 relative abundance	34.6
70	Less than 2.0% of mass 69	0.2 ( 0.6)1
127	10.0 - 80.0% of mass 198	54.4
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.0
275	10.0 - 60.0% of mass 198	24.3
365	Greater than 1.0% of mass 198	2.54
441	0.0 - 24.0% of mass 442	8.3 ( 8.8)2
442	50.0 - 200.0% of mass 198	94.4
443	15.0 - 24.0% of mass 442	19.2 ( 20.4)2

1-Value is % mass 69

2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	IC240521	IC250421	04211102	04/21/11	2007
02	IC010421	IC010421	04211103	04/21/11	2034
03	IC050421	IC050421	04211104	04/21/11	2102
04	IC10421	IC10421	04211105	04/21/11	2130
05	IC50421	IC50421	04211106	04/21/11	2158
06	IC100421	IC100421	04211107	04/21/11	2225
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22					

5B  
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK  
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

Instrument ID: NT4

Project: LORA LAKE PARCEL

DFTPP Injection Date: 04/27/11

DFTPP Injection Time: 1125

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	25.4
68	Less than 2.0% of mass 69	0.0 ( 0.0) 1
69	Mass 69 relative abundance	30.7
70	Less than 2.0% of mass 69	0.2 ( 0.5) 1
127	10.0 - 80.0% of mass 198	53.1
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.9
275	10.0 - 60.0% of mass 198	23.4
365	Greater than 1.0% of mass 198	2.37
441	0.0 - 24.0% of mass 442	14.2 ( 15.1) 2
442	50.0 - 200.0% of mass 198	93.9
443	15.0 - 24.0% of mass 442	19.3 ( 20.6) 2

1-Value is % mass 69

2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	CC0427	CC0427	04271102	04/27/11	1500
02	SS71MBW1	SS71MBW1	04271107	04/27/11	1724
03	SS71LCSW1	SS71LCSW1	04271108	04/27/11	1752
04	SS71LCSDW1	SS71LCSDW1	04271109	04/27/11	1819
05	LL-ER-041911	SS71T	04271111	04/27/11	1915
06	DMA-RB-042011	SS83P	04271112	04/27/11	1943
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08					
09					
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20					
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22					

5B  
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK  
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

Instrument ID: NT4

Project: LORA LAKE PARCEL

DFTPP Injection Date: 05/03/11

DFTPP Injection Time: 1620

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	25.3
68	Less than 2.0% of mass 69	0.0 ( 0.0)1
69	Mass 69 relative abundance	30.2
70	Less than 2.0% of mass 69	0.1 ( 0.5)1
127	10.0 - 80.0% of mass 198	52.9
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.2
275	10.0 - 60.0% of mass 198	27.2
365	Greater than 1.0% of mass 198	2.86
441	0.0 - 24.0% of mass 442	19.0 ( 15.4)2
442	50.0 - 200.0% of mass 198	124.0
443	15.0 - 24.0% of mass 442	25.2 ( 20.3)2

1-Value is % mass 69

2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	CC0503	CC0503	05031102	05/03/11	1633
02	SS83MBS1	SS83MBS1	05031103	05/03/11	1707
03	SS83LCSS1	SS83LCSS1	05031104	05/03/11	1734
04	SS83LCSDS1	SS83LCSDS1	05031105	05/03/11	1802
05	DMA-TP1-0-3-0419	SS83A	05031107	05/03/11	1857
06	DMA-TP1-3-4.5-04	SS83B	05031108	05/03/11	1925
07	DMA-TP1-4.5-5.5-	SS83C	05031109	05/03/11	1953
08	DMA-TP2-1.5-3-04	SS83D	05031110	05/03/11	2020
09	DMA-TP2-3-4-0419	SS83E	05031111	05/03/11	2048
10	DMA-TP6-0-2.5-04	SS83F	05031112	05/03/11	2116
11	DMA-TP6-2.5-5-04	SS83G	05031113	05/03/11	2143
12	DMA-TP4-0-1.5-04	SS83H	05031114	05/03/11	2211
13	DMA-TP4-1.5-2-04	SS83I	05031115	05/03/11	2239
14	DMA-TP5-1.5-2-04	SS83J	05031116	05/03/11	2306
15	DMA-TP5-1.5-2-04	SS83K	05031117	05/03/11	2334
16	DMA-TP5-2-3-0420	SS83L	05031118	05/04/11	0002
17	DMA-TP3-2-3-0420	SS83M	05031119	05/04/11	0029
18	DMA-TP3-3-4-0420	SS83N	05031120	05/04/11	0057
19	DMA-TP3-5-6-0420	SS83O	05031121	05/04/11	0124
20	DMA-TP3-5-6-042	SS83OMS	05031122	05/04/11	0152
21	DMA-TP3-5-6-042	SS83OMSD	05031123	05/04/11	0220
22					

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

ARI Job No: SS83

Project: LORA LAKE PARCEL

Instrument ID: NT4

Calibration Date: 04/21/11

LAB FILE ID:	RRF0.1=04211103	RRF0.5=04211104	RRF1 =04211105
	RRF2.5=04211102	RRF5 =04211106	RRF10 =04211107

COMPOUND	RRF 0.1	RRF 0.5	RRF 1	RRF 2.5	RRF 5	RRF 10	RRF	%RSD /R <sup>2</sup>
Naphthalene	1.072	0.889	0.858	0.933	0.872	0.785	0.902	10.7
2-Methylnaphthalene	0.589	0.495	0.485	0.526	0.495	0.446	0.506	9.5
Acenaphthylene	1.908	1.520	1.560	1.674	1.621	1.495	1.630	9.3
Acenaphthene	1.142	0.977	0.964	1.017	0.990	0.923	1.002	7.5
Dibenzofuran	1.536	1.304	1.315	1.416	1.376	1.278	1.371	6.9
Fluorene	1.330	1.131	1.108	1.203	1.177	1.108	1.176	7.2
Phenanthrene	1.173	0.930	0.929	0.977	0.966	0.898	0.979	10.2
Anthracene	1.168	0.984	0.974	1.042	1.003	0.916	1.014	8.4
Fluoranthene	1.278	1.030	1.010	1.079	1.074	1.016	1.081	9.3
Pyrene	1.142	0.957	0.906	1.011	1.025	0.992	1.006	7.9
Benzo (a) anthracene	1.036	0.875	0.874	0.962	0.937	0.913	0.933	6.6
Chrysene	1.034	0.852	0.840	0.922	0.906	0.870	0.904	7.9
Benzo (b) fluoranthene	1.247	1.012	1.055	1.088	1.077	1.032	1.085	7.7
Benzo (k) fluoranthene	1.238	1.138	1.047	1.107	1.086	1.083	1.116	6.0
Benzo (j) fluoranthene	1.258	1.034	1.196	1.079	1.018	0.985	1.095	9.9
Benzo (a) pyrene	1.108	0.916	0.889	0.992	0.982	0.940	0.971	8.0
Indeno (1,2,3-cd) pyrene	1.201	1.007	1.110	1.219	1.184	1.132	1.142	6.9
Dibenzo (a,h) anthracene	0.911	0.829	0.912	0.998	0.983	0.925	0.926	6.5
Benzo (g,h,i) perylene	1.073	0.898	0.922	1.008	0.999	0.952	0.975	6.6
1-methylnaphthalene	0.611	0.517	0.505	0.547	0.513	0.462	0.526	9.5
Perylene	0.942	0.773	0.772	0.846	0.823	0.784	0.823	8.0
2-Methylnaphthalene-d10	0.631	0.542	0.556	0.581	0.548	0.496	0.559	8.0
Dibenzo (a,h) anthracene-d14	0.824	0.749	0.799	0.890	0.871	0.831	0.827	6.1

<- Outside QC limits: %RSD <20% or R<sup>2</sup> > 0.990

## SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

ARI Job No: SS71

Project: LORA LAKE PARCEL

Instrument ID: NT4

Cont. Calib. Date: 04/27/11

Init. Calib. Date: 04/21/11

Cont. Calib. Time: 1500

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
=====	=====	=====	=====	=====	=====
Naphthalene	0.902	0.905	0.700	AVRG	0.3
2-Methylnaphthalene	0.506	0.501	0.400	AVRG	-1.0
Acenaphthylene	1.630	1.633	0.900	AVRG	0.2
Acenaphthene	1.002	0.988	0.900	AVRG	-1.4
Dibenzofuran	1.371	1.448	0.800	AVRG	5.6
Fluorene	1.176	1.203	0.900	AVRG	2.3
Phenanthrene	0.979	0.978	0.700	AVRG	-0.1
Anthracene	1.014	1.000	0.700	AVRG	-1.4
Fluoranthene	1.081	1.066	0.600	AVRG	-1.4
Pyrene	1.006	1.056	0.600	AVRG	5.0
Benzo(a)anthracene	0.933	0.949	0.800	AVRG	1.7
Chrysene	0.904	0.910	0.700	AVRG	0.7
Benzo(b)fluoranthene	1.085	1.121	0.700	AVRG	3.3
Benzo(k)fluoranthene	1.116	1.125	0.700	AVRG	0.8
Benzo(j)fluoranthene	1.095	1.056	0.010	AVRG	-3.6
Benzo(a)pyrene	0.971	1.012	0.700	AVRG	4.2
Indeno(1,2,3-cd)pyrene	1.142	1.220	0.500	AVRG	-6.8
Dibenzo(a,h)anthracene	0.926	0.988	0.400	AVRG	6.7
Benzo(g,h,i)perylene	0.975	1.049	0.500	AVRG	7.6
1-methylnaphthalene	0.526	0.520	0.010	AVRG	-1.1
Perylene	0.823	0.843	0.010	AVRG	2.4
=====	=====	=====	=====	=====	=====
2-Methylnaphthalene-d10	0.559	0.586	0.010	AVRG	4.8
Dibenzo(a,h)anthracene-d14	0.827	0.873	0.010	AVRG	5.6

&lt;- Exceeds QC limit of 20% D

\* RF less than minimum RF

## SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

ARI Job No: SS83

Project: LORA LAKE PARCEL

Instrument ID: NT4

Cont. Calib. Date: 05/03/11

Init. Calib. Date: 04/21/11

Cont. Calib. Time: 1633

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
=====	=====	=====	=====	=====	=====
Naphthalene	0.902	0.888	0.700	AVRG	-1.6
2-Methylnaphthalene	0.506	0.492	0.400	AVRG	-2.8
Acenaphthylene	1.630	1.621	0.900	AVRG	-0.6
Acenaphthene	1.002	0.970	0.900	AVRG	-3.2
Dibenzofuran	1.371	1.431	0.800	AVRG	4.4
Fluorene	1.176	1.203	0.900	AVRG	2.3
Phenanthrene	0.979	0.973	0.700	AVRG	-0.6
Anthracene	1.014	0.982	0.700	AVRG	-3.2
Fluoranthene	1.081	1.039	0.600	AVRG	-3.9
Pyrene	1.006	1.058	0.600	AVRG	5.2
Benzo(a)anthracene	0.933	0.946	0.800	AVRG	1.4
Chrysene	0.904	0.936	0.700	AVRG	3.5
Benzo(b)fluoranthene	1.085	1.124	0.700	AVRG	3.6
Benzo(k)fluoranthene	1.116	1.122	0.700	AVRG	0.5
Benzo(j)fluoranthene	1.095	1.074	0.010	AVRG	-1.9
Benzo(a)pyrene	0.971	0.997	0.700	AVRG	2.7
Indeno(1,2,3-cd)pyrene	1.142	1.184	0.500	AVRG	3.7
Dibenzo(a,h)anthracene	0.926	0.977	0.400	AVRG	5.5
Benzo(g,h,i)perylene	0.975	1.031	0.500	AVRG	5.7
1-methylnaphthalene	0.526	0.510	0.010	AVRG	-3.0
Perylene	0.823	0.831	0.010	AVRG	1.0
=====	=====	=====	=====	=====	=====
2-Methylnaphthalene-d10	0.559	0.557	0.010	AVRG	-0.4
Dibenzo(a,h)anthracene-d14	0.827	0.856	0.010	AVRG	3.5

&lt;- Exceeds QC limit of 20% D

\* RF less than minimum RF

8B  
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

ARI Job No: SS71

Project: LORA LAKE PARCEL

Ical Midpoint ID: 04211102

Ical Date: 04/21/11

Instrument ID: NT4

Cont. Cal Date: 04/27/11

	IS1 (NPT) AREA #	RT #	IS2 (ANT) AREA #	RT #	IS3 (PHN) AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
ICAL MIDPT	279997	5.49	158527	7.77	277528	9.74
UPPER LIMIT	559994		317054		555056	
LOWER LIMIT	139998		79264		138764	
=====	=====	=====	=====	=====	=====	=====
CCAL	249565	5.17	144429	7.44	246904	9.40
UPPER LIMIT		5.67		7.94		9.90
LOWER LIMIT		4.67		6.94		8.90
01 SS71MBW1	232939	5.16	143495	7.43	237941	9.39
02 SS71LCSW1	246394	5.16	148712	7.44	252927	9.39
03 SS71LCSDW1	244820	5.16	148105	7.43	247522	9.40
04 LL-ER-041911	245337	5.16	148022	7.43	245996	9.39
05 DMA-RB-04201	228702	5.16	134991	7.43	227818	9.39
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IS1 = Naphthalene-d8  
IS2 = Acenaphthene-d10  
IS3 = Phenanthrene-d10

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint  
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint  
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal  
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

\* Values outside of QC limits.

8B  
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC  
ARI Job No: SS71  
Ical Midpoint ID: 04211102  
Instrument ID: NT4

Client: FLOYD SNIDER  
Project: LORA LAKE PARCEL  
Ical Date: 04/21/11  
Cont. Cal Date: 04/27/11

	IS4 (CRY)		IS5 (PRY)			
	AREA #	RT #	AREA #	RT #	AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
ICAL MIDPT	304025	14.98	257984	18.83		
UPPER LIMIT	608050		515968			
LOWER LIMIT	152012		128992			
=====	=====	=====	=====	=====	=====	=====
CCAL	250091	14.40	213372	18.17		
UPPER LIMIT		14.90		18.67		
LOWER LIMIT		13.90		17.67		
01 SS71MBW1	240655	14.38	202907	18.16		
02 SS71LCSW1	260036	14.38	212958	18.16		
03 SS71LCSDW1	260450	14.38	215888	18.16		
04 LL-ER-041911	257042	14.38	209525	18.16		
05 DMA-RB-04201	236394	14.38	187726	18.16		
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IS4 = Chrysene-d12  
IS5 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint  
 AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint  
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal  
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

\* Values outside of QC limits.



## SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

ARI Job No: SS83

Project: LORA LAKE PARCEL

Ical Midpoint ID: 04211102

Ical Date: 04/21/11

Instrument ID: NT4

Cont. Cal Date: 05/03/11

	IS1 (NPT)		IS2 (ANT)		IS3 (PHN)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
ICAL MIDPT	279997	5.49	158527	7.77	277528	9.74
UPPER LIMIT	559994		317054		555056	
LOWER LIMIT	139998		79264		138764	
=====	=====	=====	=====	=====	=====	=====
CCAL	230643	4.80	128869	7.05	220116	8.99
UPPER LIMIT		5.30		7.55		9.49
LOWER LIMIT		4.30		6.55		8.49
01 SS83MBS1	235806	4.80	133181	7.05	229718	8.99
02 SS83LCSS1	245903	4.79	139349	7.04	244642	8.99
03 SS83LCSDS1	246666	4.79	138225	7.04	237712	8.99
04 DMA-TP1-0-3-	252741	4.79	148707	7.05	245414	8.99
05 DMA-TP1-3-4.	247467	4.79	141335	7.04	239255	8.99
06 DMA-TP1-4.5-	275821	4.79	158486	7.04	264064	8.99
07 DMA-TP2-1.5-	272221	4.79	161246	7.04	263626	8.99
08 DMA-TP2-3-4-	271406	4.79	155134	7.04	260660	8.99
09 DMA-TP6-0-2.	253566	4.79	145190	7.04	239228	8.99
10 DMA-TP6-2.5-	258457	4.79	150940	7.04	248035	8.99
11 DMA-TP4-0-1.	251052	4.79	152257	7.04	247679	8.99
12 DMA-TP4-1.5-	265412	4.79	159329	7.04	266793	8.99
13 DMA-TP5-1.5-	252929	4.79	158060	7.05	256690	8.99
14 DMA-TP5-1.5-	257541	4.80	164638	7.05	268030	8.99
15 DMA-TP5-2-3-	265370	4.79	154938	7.05	266029	8.99
16 DMA-TP3-2-3-	269185	4.80	155785	7.05	268836	8.99
17 DMA-TP3-3-4-	267120	4.80	158696	7.05	261321	8.99
18 DMA-TP3-5-6-	274253	4.80	160074	7.05	272916	8.99
19 DMA-TP3-5-6-	270585	4.79	156375	7.05	270564	8.99
20 DMA-TP3-5-6-	263739	4.79	155039	7.05	262291	8.99
21						
22						
23						
24						
25						

IS1 = Naphthalene-d8  
 IS2 = Acenaphthene-d10  
 IS3 = Phenanthrene-d10

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint  
 AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint  
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal  
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

\* Values outside of QC limits.

## SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

ARI Job No: SS83

Project: LORA LAKE PARCEL

Ical Midpoint ID: 04211102

Ical Date: 04/21/11

Instrument ID: NT4

Cont. Cal Date: 05/03/11

	IS4 (CRY)		IS5 (PRY)			
	AREA #	RT #	AREA #	RT #	AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
ICAL MIDPT	304025	14.98	257984	18.83		
UPPER LIMIT	608050		515968			
LOWER LIMIT	152012		128992			
=====	=====	=====	=====	=====	=====	=====
CCAL	222690	13.67	208231	17.33		
UPPER LIMIT		14.17		17.83		
LOWER LIMIT		13.17		16.83		
01 SS83MBS1	228531	13.68	206704	17.34		
02 SS83LCSS1	241954	13.66	214147	17.33		
03 SS83LCSDS1	240296	13.67	214827	17.32		
04 DMA-TP1-0-3-	246170	13.67	218245	17.32		
05 DMA-TP1-3-4.	240422	13.67	218746	17.33		
06 DMA-TP1-4.5-	260406	13.67	243764	17.32		
07 DMA-TP2-1.5-	270942	13.67	239371	17.33		
08 DMA-TP2-3-4-	264008	13.66	229433	17.33		
09 DMA-TP6-0-2.	248606	13.67	215772	17.33		
10 DMA-TP6-2.5-	255344	13.66	225094	17.33		
11 DMA-TP4-0-1.	279328	13.68	239515	17.36		
12 DMA-TP4-1.5-	275370	13.67	235139	17.33		
13 DMA-TP5-1.5-	292839	13.69	249846	17.37		
14 DMA-TP5-1.5-	290193	13.69	240258	17.37		
15 DMA-TP5-2-3-	272076	13.67	236441	17.34		
16 DMA-TP3-2-3-	272819	13.68	249784	17.35		
17 DMA-TP3-3-4-	283157	13.69	246265	17.35		
18 DMA-TP3-5-6-	282901	13.68	242471	17.33		
19 DMA-TP3-5-6-	283383	13.67	241320	17.34		
20 DMA-TP3-5-6-	281086	13.67	242617	17.34		
21						
22						
23						
24						
25						

IS4 = Chrysene-d12

IS5 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint  
 AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint  
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal  
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

\* Values outside of QC limits.

**PCP/Chlorophenols Analysis  
Report and Summary QC Forms**

**ARI Job ID: SS83**

**ORGANICS ANALYSIS DATA SHEET**

PCP by GC/ECD Method SW8041

Page 1 of 1


Sample ID: DMA-TP1-0-3-041911

**SAMPLE**

Lab Sample ID: SS83A

LIMS ID: 11-8711

Matrix: Soil

Data Release Authorized: 

Reported: 05/10/11

QC Report No: SS83-Floyd Snider

Project: Lora Lake Parcel:DMA

POS-LL

Date Sampled: 04/19/11

Date Received: 04/20/11

Date Extracted: 05/02/11

Date Analyzed: 05/06/11 22:48

Instrument/Analyst: ECD1/AAR

Sample Amount: 8.99 g-dry-wt

Final Extract Volume: 25 mL

Dilution Factor: 1.00

Percent Moisture: 10.8%

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	7.0	< 7.0 U


Reported in µg/kg (ppb)

**Chlorophenol Surrogate Recovery**

2,4,6-Tribromophenol	50.8%
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**ORGANICS ANALYSIS DATA SHEET**  
**PCP by GC/ECD Method SW8041**  
 Page 1 of 1

**Sample ID: DMA-TP1-3-4.5-041911**  
**SAMPLE**

Lab Sample ID: SS83B  
 LIMS ID: 11-8712  
 Matrix: Soil  
 Data Release Authorized:   
 Reported: 05/10/11

QC Report No: SS83-Floyd Snider  
 Project: Lora Lake Parcel:DMA  
 POS-LL  
 Date Sampled: 04/19/11  
 Date Received: 04/20/11


Date Extracted: 05/02/11  
 Date Analyzed: 05/06/11 23:24  
 Instrument/Analyst: ECD1/AAR

Sample Amount: 8.52 g-dry-wt  
 Final Extract Volume: 25 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 18.1%

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	7.3	< 7.3 U
Reported in µg/kg (ppb)			
<b>Chlorophenol Surrogate Recovery</b>			
	2,4,6-Tribromophenol	76.4%	

**ORGANICS ANALYSIS DATA SHEET**  
**PCP by GC/ECD Method SW8041**  
 Page 1 of 1

**Sample ID: DMA-TP1-4.5-5.5-041911**  
**SAMPLE**

Lab Sample ID: SS83C  
 LIMS ID: 11-8713  
 Matrix: Soil  
 Data Release Authorized:   
 Reported: 05/10/11

QC Report No: SS83-Floyd Snider  
 Project: Lora Lake Parcel:DMA  
 POS-LL  
 Date Sampled: 04/19/11  
 Date Received: 04/20/11

Date Extracted: 05/02/11  
 Date Analyzed: 05/07/11 00:00  
 Instrument/Analyst: ECD1/AAR

Sample Amount: 9.11 g-dry-wt  
 Final Extract Volume: 25 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 10.8%

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	6.9	< 6.9 U
Reported in µg/kg (ppb)			
<b>Chlorophenol Surrogate Recovery</b>			
	2,4,6-Tribromophenol	59.2%	

**ORGANICS ANALYSIS DATA SHEET**  
**PCP by GC/ECD Method SW8041**  
 Page 1 of 1

**Sample ID: DMA-TP2-1.5-3-041911**  
**SAMPLE**

Lab Sample ID: SS83D  
 LIMS ID: 11-8714  
 Matrix: Soil  
 Data Release Authorized: *AS*  
 Reported: 05/10/11

QC Report No: SS83-Floyd Snider  
 Project: Lora Lake Parcel:DMA  
 POS-LL  
 Date Sampled: 04/19/11  
 Date Received: 04/20/11

Date Extracted: 05/02/11  
 Date Analyzed: 05/07/11 00:36  
 Instrument/Analyst: ECD1/AAR

Sample Amount: 8.67 g-dry-wt  
 Final Extract Volume: 25 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 13.8%

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	7.2	< 7.2 U


Reported in µg/kg (ppb)

**Chlorophenol Surrogate Recovery**

2,4,6-Tribromophenol	79.2%
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**ORGANICS ANALYSIS DATA SHEET**  
**PCP by GC/ECD Method SW8041**  
 Page 1 of 1

**Sample ID: DMA-TP2-3-4-041911**  
**SAMPLE**

Lab Sample ID: SS83E  
 LIMS ID: 11-8715  
 Matrix: Soil  
 Data Release Authorized:   
 Reported: 05/10/11

QC Report No: SS83-Floyd Snider  
 Project: Lora Lake Parcel:DMA  
 POS-LL  
 Date Sampled: 04/19/11  
 Date Received: 04/20/11

Date Extracted: 05/02/11  
 Date Analyzed: 05/07/11 01:13  
 Instrument/Analyst: ECD1/AAR

Sample Amount: 8.99 g-dry-wt  
 Final Extract Volume: 25 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 10.3%

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	7.0	< 7.0 U

Reported in µg/kg (ppb)

**Chlorophenol Surrogate Recovery**

2,4,6-Tribromophenol	57.2%
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**ORGANICS ANALYSIS DATA SHEET**

PCP by GC/ECD Method SW8041

Page 1 of 1


Sample ID: DMA-TP6-0-2.5-041911

**SAMPLE**

Lab Sample ID: SS83F

LIMS ID: 11-8716

Matrix: Soil

Data Release Authorized: 

Reported: 05/10/11

QC Report No: SS83-Floyd Snider

Project: Lora Lake Parcel:DMA

POS-LL

Date Sampled: 04/19/11

Date Received: 04/20/11

Date Extracted: 05/02/11

Date Analyzed: 05/07/11 01:49

Instrument/Analyst: ECD1/AAR

Sample Amount: 8.94 g-dry-wt

Final Extract Volume: 25 mL

Dilution Factor: 1.00

Percent Moisture: 11.9%

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	7.0	< 7.0 U

Reported in µg/kg (ppb)

**Chlorophenol Surrogate Recovery**

2,4,6-Tribromophenol	63.2%
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**ORGANICS ANALYSIS DATA SHEET**

PCP by GC/ECD Method SW8041

Page 1 of 1

Sample ID: DMA-TP6-2.5-5-041911

**SAMPLE**

Lab Sample ID: SS83G

LIMS ID: 11-8717

Matrix: Soil

Data Release Authorized: *AS*

Reported: 05/10/11

QC Report No: SS83-Floyd Snider

Project: Lora Lake Parcel:DMA

POS-LL

Date Sampled: 04/19/11

Date Received: 04/20/11

Date Extracted: 05/02/11

Date Analyzed: 05/07/11 03:37

Instrument/Analyst: ECD1/AAR

Sample Amount: 8.90 g-dry-wt

Final Extract Volume: 25 mL

Dilution Factor: 1.00

Percent Moisture: 11.7%

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	7.0	< 7.0 U

Reported in µg/kg (ppb)

**Chlorophenol Surrogate Recovery**

2,4,6-Tribromophenol	59.6%
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**ORGANICS ANALYSIS DATA SHEET**  
**PCP by GC/ECD Method SW8041**  
 Page 1 of 1

**Sample ID: DMA-TP4-0-1.5-042011**  
**SAMPLE**

Lab Sample ID: SS83H  
 LIMS ID: 11-8718  
 Matrix: Soil  
 Data Release Authorized: *AS*  
 Reported: 05/10/11

QC Report No: SS83-Floyd Snider  
 Project: Lora Lake Parcel:DMA  
 POS-LL  
 Date Sampled: 04/20/11  
 Date Received: 04/20/11

Date Extracted: 05/02/11  
 Date Analyzed: 05/07/11 04:14  
 Instrument/Analyst: ECD1/AAR

Sample Amount: 3.44 g-dry-wt  
 Final Extract Volume: 25 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 66.0%

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	18	< 18 U

Reported in µg/kg (ppb)

**Chlorophenol Surrogate Recovery**

2,4,6-Tribromophenol	64.0%
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**ORGANICS ANALYSIS DATA SHEET**  
**PCP by GC/ECD Method SW8041**  
 Page 1 of 1

**Sample ID: DMA-TP4-1.5-2-042011**  
**SAMPLE**

Lab Sample ID: SS83I  
 LIMS ID: 11-8719  
 Matrix: Soil  
 Data Release Authorized: *[Signature]*  
 Reported: 05/10/11

QC Report No: SS83-Floyd Snider  
 Project: Lora Lake Parcel:DMA  
 POS-LL  
 Date Sampled: 04/20/11  
 Date Received: 04/20/11

Date Extracted: 05/02/11  
 Date Analyzed: 05/07/11 04:50  
 Instrument/Analyst: ECD1/AAR

Sample Amount: 8.42 g-dry-wt  
 Final Extract Volume: 25 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 17.3%

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	7.4	< 7.4 U
Reported in µg/kg (ppb)			
<b>Chlorophenol Surrogate Recovery</b>			
	2,4,6-Tribromophenol	52.4%	

**ORGANICS ANALYSIS DATA SHEET**  
**PCP by GC/ECD Method SW8041**  
 Page 1 of 1

**Sample ID: DMA-TP5-1.5-2-042011**  
**SAMPLE**

Lab Sample ID: SS83J  
 LIMS ID: 11-8720  
 Matrix: Soil  
 Data Release Authorized: *AS*  
 Reported: 05/10/11

QC Report No: SS83-Floyd Snider  
 Project: Lora Lake Parcel:DMA  
 POS-LL  
 Date Sampled: 04/20/11  
 Date Received: 04/20/11

Date Extracted: 05/02/11  
 Date Analyzed: 05/07/11 05:26  
 Instrument/Analyst: ECD1/AAR

Sample Amount: 5.09 g-dry-wt  
 Final Extract Volume: 25 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 49.8%

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	12	39 P

Reported in µg/kg (ppb)

**Chlorophenol Surrogate Recovery**

2,4,6-Tribromophenol	77.2%
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**ORGANICS ANALYSIS DATA SHEET**  
**PCP by GC/ECD Method SW8041**  
 Page 1 of 1

**Sample ID: DMA-TP5-1.5-2-042011-D**  
**SAMPLE**

Lab Sample ID: SS83K

QC Report No: SS83-Floyd Snider

LIMS ID: 11-8721

Project: Lora Lake Parcel:DMA

Matrix: Soil

POS-LL

Data Release Authorized: *RB*

Date Sampled: 04/20/11

Reported: 05/10/11

Date Received: 04/20/11

Date Extracted: 05/02/11

Sample Amount: 5.02 g-dry-wt

Date Analyzed: 05/07/11 06:02

Final Extract Volume: 25 mL

Instrument/Analyst: ECD1/AAR

Dilution Factor: 1.00

Percent Moisture: 50.7%

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	12	< 12 U

Reported in µg/kg (ppb)

**Chlorophenol Surrogate Recovery**

2,4,6-Tribromophenol	80.8%
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**ORGANICS ANALYSIS DATA SHEET**

PCP by GC/ECD Method SW8041

Page 1 of 1

Sample ID: DMA-TP5-2-3-042011

SAMPLE

Lab Sample ID: SS83L

LIMS ID: 11-8722

Matrix: Soil

Data Release Authorized: *B*

Reported: 05/10/11

QC Report No: SS83-Floyd Snider

Project: Lora Lake Parcel:DMA

POS-LL

Date Sampled: 04/20/11

Date Received: 04/20/11

Date Extracted: 05/02/11

Date Analyzed: 05/07/11 06:39

Instrument/Analyst: ECD1/AAR

Sample Amount: 8.42 g-dry-wt

Final Extract Volume: 25 mL

Dilution Factor: 1.00

Percent Moisture: 18.0%

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	7.4	< 7.4 U

Reported in µg/kg (ppb)

**Chlorophenol Surrogate Recovery**

2,4,6-Tribromophenol	90.8%
----------------------	-------

**ORGANICS ANALYSIS DATA SHEET**

PCP by GC/ECD Method SW8041

Page 1 of 1

Sample ID: DMA-TP3-2-3-042011

**SAMPLE**

Lab Sample ID: SS83M

LIMS ID: 11-8723

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 05/10/11

QC Report No: SS83-Floyd Snider

Project: Lora Lake Parcel:DMA

POS-LL

Date Sampled: 04/20/11

Date Received: 04/20/11

Date Extracted: 05/02/11

Date Analyzed: 05/07/11 07:15

Instrument/Analyst: ECD1/AAR

Sample Amount: 8.40 g-dry-wt

Final Extract Volume: 25 mL

Dilution Factor: 1.00

Percent Moisture: 16.7%

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	7.4	< 7.4 U

Reported in µg/kg (ppb)

**Chlorophenol Surrogate Recovery**

2,4,6-Tribromophenol	66.4%
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**ORGANICS ANALYSIS DATA SHEET**  
**PCP by GC/ECD Method SW8041**  
 Page 1 of 1

**Sample ID: DMA-TP3-3-4-042011**  
**SAMPLE**

Lab Sample ID: SS83N  
 LIMS ID: 11-8724  
 Matrix: Soil  
 Data Release Authorized: *[Signature]*  
 Reported: 05/10/11

QC Report No: SS83-Floyd Snider  
 Project: Lora Lake Parcel:DMA  
 POS-LL  
 Date Sampled: 04/20/11  
 Date Received: 04/20/11

Date Extracted: 05/02/11  
 Date Analyzed: 05/07/11 07:51  
 Instrument/Analyst: ECD1/AAR

Sample Amount: 4.95 g-dry-wt  
 Final Extract Volume: 25 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 51.1%

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	13	24

Reported in µg/kg (ppb)

**Chlorophenol Surrogate Recovery**

2,4,6-Tribromophenol	57.2%
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**ORGANICS ANALYSIS DATA SHEET**  
**PCP by GC/ECD Method SW8041**  
 Page 1 of 1

**Sample ID: DMA-TP3-5-6-042011**  
**SAMPLE**

Lab Sample ID: SS830  
 LIMS ID: 11-8725  
 Matrix: Soil  
 Data Release Authorized: *AB*  
 Reported: 05/10/11

QC Report No: SS83-Floyd Snider  
 Project: Lora Lake Parcel:DMA  
 POS-LL  
 Date Sampled: 04/20/11  
 Date Received: 04/20/11

Date Extracted: 05/02/11  
 Date Analyzed: 05/07/11 09:40  
 Instrument/Analyst: ECD1/AAR

Sample Amount: 8.87 g-dry-wt  
 Final Extract Volume: 25 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 12.6%

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	7.0	< 7.0 U
Reported in µg/kg (ppb)			
<b>Chlorophenol Surrogate Recovery</b>			
	2,4,6-Tribromophenol	64.8%	

**SW8041 CHLOROPHENOLICS SURROGATE RECOVERY SUMMARY**

Matrix: Soil

QC Report No: SS83-Floyd Snider  
Project: Lora Lake Parcel:DMA  
POS-LL

<u>Client ID</u>	<u>TBP</u>	<u>TOT OUT</u>
DMA-TP1-0-3-041911	50.8%	0
DMA-TP1-3-4.5-041911	76.4%	0
DMA-TP1-4.5-5.5-041911	59.2%	0
DMA-TP2-1.5-3-041911	79.2%	0
DMA-TP2-3-4-041911	57.2%	0
DMA-TP6-0-2.5-041911	63.2%	0
DMA-TP6-2.5-5-041911	59.6%	0
DMA-TP4-0-1.5-042011	64.0%	0
DMA-TP4-1.5-2-042011	52.4%	0
DMA-TP5-1.5-2-042011	77.2%	0
DMA-TP5-1.5-2-042011-D	80.8%	0
DMA-TP5-2-3-042011	90.8%	0
DMA-TP3-2-3-042011	66.4%	0
DMA-TP3-3-4-042011	57.2%	0
MB-050211	54.8%	0
LCS-050211	68.4%	0
LCSD-050211	63.8%	0
DMA-TP3-5-6-042011	64.8%	0
DMA-TP3-5-6-042011 MS	79.0%	0
DMA-TP3-5-6-042011 MSD	70.2%	0

**LCS/MB LIMITS      QC LIMITS**

(TBP) = 2,4,6-Tribromophenol


(50-115)

(10-146)

Prep Method: SW3550B  
Log Number Range: 11-8711 to 11-8725

**ORGANICS ANALYSIS DATA SHEET**  
**PCP by GC/ECD Method SW8041**  
 Page 1 of 1

**Sample ID: DMA-TP3-5-6-042011**  
**MS/MSD**

Lab Sample ID: SS830  
 LIMS ID: 11-8725  
 Matrix: Soil  
 Data Release Authorized:   
 Reported: 05/10/11

QC Report No: SS83-Floyd Snider  
 Project: Lora Lake Parcel:DMA  
 POS-LL  
 Date Sampled: 04/20/11  
 Date Received: 04/20/11

Date Extracted MS/MSD: 05/02/11  
 Date Analyzed MS: 05/07/11 10:16  
 MSD: 05/07/11 10:53  
 Instrument/Analyst MS: ECD1/AAR  
 MSD: ECD1/AAR  
 Percent Moisture: 12.6%

Sample Amount MS: 8.99 g-dry-wt  
 MSD: 8.91 g-dry-wt  
 Final Extract Volume MS: 25 mL  
 MSD: 25 mL  
 Dilution Factor MS: 1.00  
 MSD: 1.00

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Pentachlorophenol	< 7.05	56.0	69.5	80.6%	58.4	70.1	83.3%	4.2%

Results reported in µg/kg  
 RPD calculated using sample concentrations per SW846.

**ORGANICS ANALYSIS DATA SHEET**  
**PCP by GC/ECD Method SW8041**  
 Page 1 of 1

**Sample ID: DMA-TP3-5-6-042011**  
**MATRIX SPIKE**

Lab Sample ID: SS830  
 LIMS ID: 11-8725  
 Matrix: Soil  
 Data Release Authorized: *AS*  
 Reported: 05/10/11

QC Report No: SS83-Floyd Snider  
 Project: Lora Lake Parcel:DMA  
 POS-LL  
 Date Sampled: 04/20/11  
 Date Received: 04/20/11

Date Extracted: 05/02/11  
 Date Analyzed: 05/07/11 10:16  
 Instrument/Analyst: ECD1/AAR

Sample Amount: 8.99 g-dry-wt  
 Final Extract Volume: 25 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 12.6%

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	7.0	---
Reported in µg/kg (ppb)			
<b>Chlorophenol Surrogate Recovery</b>			
	2,4,6-Tribromophenol	79.0%	

**ORGANICS ANALYSIS DATA SHEET**  
**PCP by GC/ECD Method SW8041**  
 Page 1 of 1

**Sample ID: DMA-TP3-5-6-042011**  
**MATRIX SPIKE DUP**

Lab Sample ID: SS830  
 LIMS ID: 11-8725  
 Matrix: Soil  
 Data Release Authorized: *AS*  
 Reported: 05/10/11

QC Report No: SS83-Floyd Snider  
 Project: Lora Lake Parcel:DMA  
 POS-LL  
 Date Sampled: 04/20/11  
 Date Received: 04/20/11

Date Extracted: 05/02/11  
 Date Analyzed: 05/07/11 10:53  
 Instrument/Analyst: ECD1/AAR

Sample Amount: 8.91 g-dry-wt  
 Final Extract Volume: 25 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 12.6%

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	7.0	---
Reported in µg/kg (ppb)			
<b>Chlorophenol Surrogate Recovery</b>			
	2,4,6-Tribromophenol	70.2%	

**ORGANICS ANALYSIS DATA SHEET**

PCP by GC/ECD Method SW8041

Page 1 of 1


Sample ID: LCS-050211

LCS/LCSD

Lab Sample ID: LCS-050211

LIMS ID: 11-8725

Matrix: Soil

Data Release Authorized: 

Reported: 05/10/11

QC Report No: SS83-Floyd Snider

Project: Lora Lake Parcel:DMA

POS-LL

Date Sampled: 04/20/11

Date Received: 04/20/11

Date Extracted LCS/LCSD: 05/02/11

Sample Amount LCS: 10.0 g

LCSD: 10.0 g

Date Analyzed LCS: 05/06/11 20:59

Final Extract Volume LCS: 25 mL

LCSD: 05/06/11 21:35

LCSD: 25 mL

Instrument/Analyst LCS: ECD1/AAR

Dilution Factor LCS: 1.00

LCSD: ECD1/AAR

LCSD: 1.00

Analyte	Spike		LCS	LCSD	Spike		LCSD	RPD
	LCS	Added-LCS	Recovery		Added-LCSD	Recovery		
Pentachlorophenol	54.0	62.5	86.4%	52.1	62.5	83.4%	3.6%	

**Chlorophenols Surrogate Recovery**

	LCS	LCSD
2,4,6-Tribromophenol	68.4%	63.8%

Results reported in µg/kg  
RPD calculated using sample concentrations per SW846.

4  
CHLOROPHENOL METHOD BLANK SUMMARY

SAMPLE NO.

SS83MBS1
----------

Lab Name: ANALYTICAL RESOURCES, INC	Client: FLOYD SNIDER
ARI Job No.: SS83	Project: LORA LAKE PARCEL:DMA
Lab Sample ID: SS83MBS1	Lab File ID: 0506A011
Matrix (soil/water) SOLID	Extraction: (SepF/Cont/Sonc) SW3550C
Sulfur Cleanup (Y/N) Y	Date Extracted: 05/02/11
Date Analyzed (1): 05/06/11	Date Analyzed (2): 05/06/11
Time Analyzed (1): 2023	Time Analyzed (2): 2023
Instrument ID (1): ECD1	Instrument ID (2): ECD1
GC Column (1): STX CLP1 ID: 0.53 (mm)	GC Column (2): STX CLP2 ID: 0.53 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	SS83LCSS1	SS83LCSS1	05/06/11	05/06/11
02	SS83LCSDS1	SS83LCSDS1	05/06/11	05/06/11
03	DMA-TP1-0-3-	SS83A	05/06/11	05/06/11
04	DMA-TP1-3-4.	SS83B	05/06/11	05/06/11
05	DMA-TP1-4.5-	SS83C	05/07/11	05/07/11
06	DMA-TP2-1.5-	SS83D	05/07/11	05/07/11
07	DMA-TP2-3-4-	SS83E	05/07/11	05/07/11
08	DMA-TP6-0-2.	SS83F	05/07/11	05/07/11
09	DMA-TP6-2.5-	SS83G	05/07/11	05/07/11
10	DMA-TP4-0-1.	SS83H	05/07/11	05/07/11
11	DMA-TP4-1.5-	SS83I	05/07/11	05/07/11
12	DMA-TP5-1.5-	SS83J	05/07/11	05/07/11
13	DMA-TP5-1.5-	SS83J	05/07/11	05/07/11
14	DMA-TP5-2-3-	SS83L	05/07/11	05/07/11
15	DMA-TP3-2-3-	SS83M	05/07/11	05/07/11
16	DMA-TP3-3-4-	SS83N	05/07/11	05/07/11
17	DMA-TP3-5-6-	SS83O	05/07/11	05/07/11
18	DMA-TP3-5-6-	SS83OMS	05/07/11	05/07/11
19	DMA-TP3-5-6-	SS83OMSD	05/07/11	05/07/11



**ORGANICS ANALYSIS DATA SHEET**

PCP by GC/ECD Method SW8041

Page 1 of 1

Sample ID: MB-050211

METHOD BLANK

Lab Sample ID: MB-050211

LIMS ID: 11-8725

Matrix: Soil

Data Release Authorized: *RB*

Reported: 05/10/11

QC Report No: SS83-Floyd Snider

Project: Lora Lake Parcel:DMA

POS-LL

Date Sampled: NA

Date Received: NA

Date Extracted: 05/02/11

Date Analyzed: 05/06/11 20:23

Instrument/Analyst: ECD1/AAR

Sample Amount: 10.0 g

Final Extract Volume: 25 mL

Dilution Factor: 1.00

Percent Moisture: NA

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	6.2	< 6.2 U

Reported in µg/kg (ppb)

**Chlorophenol Surrogate Recovery**

2,4,6-Tribromophenol	54.8%
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**ORGANICS ANALYSIS DATA SHEET**  
**PCP by GC/ECD Method SW8041**  
 Page 1 of 1

**Sample ID: DMA-RB-042011**  
**SAMPLE**

Lab Sample ID: SS83P

QC Report No: SS83-Floyd Snider

LIMS ID: 11-8726

Project: Lora Lake Parcel:DMA

Matrix: Water

POS-LL

Data Release Authorized: *[Signature]*

Date Sampled: 04/20/11

Reported: 05/06/11

Date Received: 04/20/11

Date Extracted: 04/22/11

Sample Amount: 500 mL

Date Analyzed: 05/04/11 21:48

Final Extract Volume: 50 mL

Instrument/Analyst: ECD1/AAR

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.25	< 0.25 U
Reported in µg/L (ppb)			
<b>Chlorophenol Surrogate Recovery</b>			
	2,4,6-Tribromophenol	86.4%	

**SW8041 CHLOROPHENOLICS SURROGATE RECOVERY SUMMARY**

Matrix: Water

QC Report No: SS83-Floyd Snider  
Project: Lora Lake Parcel:DMA  
POS-LL

<b>Client ID</b>	<b>TBP</b>	<b>TOT OUT</b>
MB-042211	82.0%	0
LCS-042211	84.4%	0
LCSD-042211	81.2%	0
DMA-RB-042011	86.4%	0

**LCS/MB LIMITS      QC LIMITS**

(TBP) = 2,4,6-Tribromophenol

(40-130)

(11-156)

Prep Method: SW3510C  
Log Number Range: 11-8726 to 11-8726

**ORGANICS ANALYSIS DATA SHEET**  
PCP by GC/ECD Method SW8041  
Page 1 of 1

**Sample ID: LCS-042211**  
**LCS/LCSD**

Lab Sample ID: LCS-042211  
LIMS ID: 11-8726  
Matrix: Water  
Data Release Authorized: *JS*  
Reported: 05/06/11

QC Report No: SS83-Floyd Snider  
Project: Lora Lake Parcel:DMA  
POS-LL  
Date Sampled: 04/20/11  
Date Received: 04/20/11

Date Extracted LCS/LCSD: 04/22/11

Sample Amount LCS: 500 mL  
LCSD: 500 mL

Date Analyzed LCS: 05/04/11 19:22  
LCSD: 05/04/11 19:59

Final Extract Volume LCS: 50 mL  
LCSD: 50 mL

Instrument/Analyst LCS: ECD1/AAR  
LCSD: ECD1/AAR

Dilution Factor LCS: 1.00  
LCSD: 1.00

Analyte	Spike		LCS		Spike		LCSD		RPD
	LCS	Added-LCS	Recovery	LCSD	Added-LCSD	Recovery	LCSD		
Pentachlorophenol	2.28	2.50	91.2%	2.18	2.50	87.2%	4.5%		

**Chlorophenols Surrogate Recovery**

	LCS	LCSD
2,4,6-Tribromophenol	84.4%	81.2%

Results reported in µg/L  
RPD calculated using sample concentrations per SW846.

4  
CHLOROPHENOL METHOD BLANK SUMMARY

SAMPLE NO.

SS71MBW1
----------

Lab Name: ANALYTICAL RESOURCES, INC	Client: FLOYD SNIDER
ARI Job No.: SS71	Project: LORA LAKE PARCEL
Lab Sample ID: SS71MBW1	Lab File ID: 0504A017
Matrix (soil/water) LIQUID	Extraction: (SepF/Cont/Sonc) SW3510C
Sulfur Cleanup (Y/N) Y	Date Extracted: 04/22/11
Date Analyzed (1): 05/04/11	Date Analyzed (2): 05/04/11
Time Analyzed (1): 1846	Time Analyzed (2): 1846
Instrument ID (1): ECD1	Instrument ID (2): ECD1
GC Column (1): STX CLP1 ID: 0.53 (mm)	GC Column (2): STX CLP2 ID: 0.53 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	=====	=====	=====	=====
01	SS71LCSW1	SS71LCSW1	05/04/11	05/04/11
02	SS71LCSDW1	SS71LCSDW1	05/04/11	05/04/11
03	LL-ER-041911	SS71T	05/04/11	05/04/11
04	DMA-RB-04201	SS83P	05/04/11	05/04/11

**ORGANICS ANALYSIS DATA SHEET**

PCP by GC/ECD Method SW8041

Page 1 of 1

Sample ID: MB-042211

METHOD BLANK

Lab Sample ID: MB-042211

LIMS ID: 11-8726

Matrix: Water

Data Release Authorized: *[Signature]*

Reported: 05/06/11

QC Report No: SS83-Floyd Snider

Project: Lora Lake Parcel:DMA

POS-LL

Date Sampled: NA

Date Received: NA

Date Extracted: 04/22/11

Date Analyzed: 05/04/11 18:46

Instrument/Analyst: ECD1/AAR

Sample Amount: 500 mL

Final Extract Volume: 50 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.25	< 0.25 U

Reported in µg/L (ppb)

**Chlorophenol Surrogate Recovery**

2,4,6-Tribromophenol	82.0%
----------------------	-------

6D  
 CHLOROPHENOL INITIAL CALIBRATION  
 RETENTION TIME WINDOWS

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

ARI Job No.: SS83

Project: LORA LAKE PARCEL:DMA

GC Column: STX CLP1 ID: 0.53 (mm)

Instrument ID: ECD1

Calibration Date: 05/04/11

COMPOUND	RT OF STANDARDS						MEAN RT	RT WINDOW	
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6		FROM	TO
Pentachlorophenol	21.00	21.00	21.00	21.00	21.00	21.00	21.00	20.93	21.07
2,4,6-Trichloropheno	13.10	13.10	13.10	13.10	13.10	13.10	13.10	13.03	13.17
2,3,6-Trichloropheno	14.10	14.10	14.10	14.10	14.10	14.10	14.10	14.03	14.17
2,4,5-Trichloropheno	15.85	15.85	15.85	15.84	15.85	15.85	15.84	15.78	15.91
2,3,4-Trichloropheno	17.36	17.35	17.35	17.35	17.35	17.35	17.35	17.28	17.42
2,3,5,6-Tetrachlorop	17.16	17.15	17.15	17.15	17.15	17.15	17.15	17.08	17.22
2,3,4,5-Tetrachlorop	20.16	20.16	20.16	20.15	20.15	20.16	20.16	20.08	20.22
2,4-Dichlorophenol	12.56	12.56	12.56	12.56	12.56	12.56	12.56	12.48	12.62
2,4,6-Tribromophenol	18.60	18.60	18.60	18.60	18.60	18.60	18.60	18.53	18.67

6D  
 CHLOROPHENOL INITIAL CALIBRATION  
 RETENTION TIME WINDOWS

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

ARI Job No.: SS83

Project: LORA LAKE PARCEL:DMA

GC Column: STX CLP2 ID: 0.53 (mm)

Instrument ID: ECD1

Calibration Date: 05/04/11

COMPOUND	RT OF STANDARDS						MEAN RT	RT WINDOW	
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6		FROM	TO
Pentachlorophenol	22.97	22.97	22.97	22.97	22.97	22.97	22.97	22.90	23.04
2,4,6-Trichloropheno	14.31	14.31	14.31	14.31	14.31	14.31	14.31	14.24	14.38
2,3,6-Trichloropheno	15.56	15.56	15.56	15.56	15.56	15.56	15.56	15.49	15.63
2,4,5-Trichloropheno	17.48	17.47	17.47	17.47	17.47	17.47	17.47	17.40	17.54
2,3,4-Trichloropheno	19.03	19.02	19.02	19.02	19.02	19.02	19.02	18.95	19.09
2,3,5,6-Tetrachlorop	18.82	18.81	18.81	18.81	18.81	18.81	18.81	18.74	18.88
2,3,4,5-Tetrachlorop	22.08	22.08	22.08	22.08	22.08	22.08	22.08	22.01	22.15
2,4-Dichlorophenol	13.82	13.82	13.82	13.82	13.82	13.82	13.82	13.75	13.89
2,4,6-Tribromophenol	20.94	20.94	20.94	20.94	20.94	20.94	20.94	20.87	21.01



6E  
 CHLOROPHENOL INITIAL CALIBRATION  
 CALIBRATION FACTORS

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

ARI Job No.: SS83

Project: LORA LAKE PARCEL:DMA

GC Column: STX CLP1 ID: 0.53 (mm)

Instrument ID: ECD1

Calibration Date: 05/04/11

COMPOUND	CALIBRATION FACTORS						R <sup>2</sup> / %RSD	CT
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6		
Pentachlorophenol	24557	22356	20781	19124	17785	16292	15.1	A
2,4,6-Trichlorophenol	15281	13835	12795	11181	10412	9532	17.9	A
2,3,6-Trichlorophenol	14259	12818	11863	10765	9925	9085	16.7	A
2,4,5-Trichlorophenol	12140	8082	7421	6534	5905	5130	0.9996	Q
2,3,4-Trichlorophenol	10565	9519	8778	7811	7138	6322	18.8	A
2,3,5,6-Tetrachloroph	20194	18565	17499	16125	15182	13876	13.7	A
2,3,4,5-Tetrachloroph	16824	14772	13475	11938	10977	9904	19.7	A
2,4-Dichlorophenol	1040	896	796	655	559	482	0.9992	Q
2,4,6-Tribromophenol	18340	16896	15885	15230	14566	13549	10.8	A
AVE RSD							19.4	

CT stands for Curve Types:

- A Indicates an Average Response Factor Curve
- L Indicates a Linear Curve
- Q Indicates a Quadratic Curve

CALIBRATION FILES  
 -----

LVL 1: /chem2/ecd1.i/PCP20110504.b/ical-1.b/0504A010.d  
 LVL 2: /chem2/ecd1.i/PCP20110504.b/ical-1.b/0504A011.d  
 LVL 3: /chem2/ecd1.i/PCP20110504.b/ical-1.b/0504A012.d  
 LVL 4: /chem2/ecd1.i/PCP20110504.b/ical-1.b/0504A009.d  
 LVL 5: /chem2/ecd1.i/PCP20110504.b/ical-1.b/0504A013.d  
 LVL 6: /chem2/ecd1.i/PCP20110504.b/ical-1.b/0504A014.d

6E  
 CHLOROPHENOL INITIAL CALIBRATION  
 CALIBRATION FACTORS

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

ARI Job No.: SS83

Project: LORA LAKE PARCEL:DMA

GC Column: STX CLP2 ID: 0.53 (mm)

Instrument ID: ECD1

Calibration Date: 05/04/11

COMPOUND	CALIBRATION FACTORS						R <sup>2</sup> / %RSD	CT
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6		
Pentachlorophenol	35686	31408	28958	26156	24465	22293	17.4	A
2,4,6-Trichlorophenol	18173	16199	15364	13872	12302	11052	18.0	A
2,3,6-Trichlorophenol	17538	16304	15194	13812	12444	10948	17.1	A
2,4,5-Trichlorophenol	10375	9203	8375	7827	6888	5906	19.8	A
2,3,4-Trichlorophenol	13793	11382	10368	9080	8182	7194	0.9997	Q
2,3,5,6-Tetrachloroph	28198	24060	22545	20410	19063	17352	17.7	A
2,3,4,5-Tetrachloroph	21700	18848	16677	15352	13827	12342	0.9998	Q
2,4-Dichlorophenol	1124	962	835	702	594	505	0.9994	Q
2,4,6-Tribromophenol	26776	22121	21311	19850	18746	17341	15.7	A
AVE RSD							20.0	

CT stands for Curve Types:

- A Indicates an Average Response Factor Curve
- L Indicates a Linear Curve
- Q Indicates a Quadratic Curve

CALIBRATION FILES  
 -----

LVL 1: /chem2/ecd1.i/PCP20110504.b/ical-2.b/0504A010.d  
 LVL 2: /chem2/ecd1.i/PCP20110504.b/ical-2.b/0504A011.d  
 LVL 3: /chem2/ecd1.i/PCP20110504.b/ical-2.b/0504A012.d  
 LVL 4: /chem2/ecd1.i/PCP20110504.b/ical-2.b/0504A009.d  
 LVL 5: /chem2/ecd1.i/PCP20110504.b/ical-2.b/0504A013.d  
 LVL 6: /chem2/ecd1.i/PCP20110504.b/ical-2.b/0504A014.d

7E  
 CHLOROPHENOL CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

ARI Job No.: SS71

Project: LORA LAKE PARCEL

GC Column: STX CLP1 ID: 0.53 (mm)

Init. Calib. Date(s): 05/04/11 05/04/11

Client Sample No. (PCP):

Date Analyzed :05/04/11

Lab Sample ID (PCP): PCP CCAL

Time Analyzed :1810

PCP MIX COMPOUND	RT	RT WINDOW		CALC AMOUNT	NOM AMOUNT	%D
		FROM	TO			
Pentachlorophenol	21.00	20.93	21.07	23.5	25.0	-6.0
2,4,6-Trichlorophenol	13.10	13.03	13.17	23.3	25.0	-6.8
2,3,6-Trichlorophenol	14.10	14.03	14.17	23.2	25.0	-7.2
2,4,5-Trichlorophenol	15.85	15.78	15.91	24.7	25.0	-1.2
2,3,4-Trichlorophenol	17.35	17.28	17.42	23.2	25.0	-7.2
2,3,5,6-Tetrachlorophenol	17.15	17.08	17.22	23.7	25.0	-5.2
2,3,4,5-Tetrachlorophenol	20.16	20.08	20.22	22.4	25.0	-10.4
2,4-Dichlorophenol	12.56	12.48	12.62	260	250	4.0
2,4,6-Tribromophenol (surr	18.60	18.53	18.67	23.9	25.0	-4.4

AVERAGE %D = 5.8

FORM VII PCP

7E  
CHLOROPHENOL CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

ARI Job No.: SS71

Project: LORA LAKE PARCEL

GC Column: STX CLP2 ID: 0.53 (mm)

Init. Calib. Date(s): 05/04/11 05/04/11

Client Sample No.(PCP):

Date Analyzed :05/04/11

Lab Sample ID (PCP): PCP CCAL

Time Analyzed :1810

PCP MIX COMPOUND	RT	RT WINDOW		CALC AMOUNT	NOM AMOUNT	%D
		FROM	TO			
Pentachlorophenol	22.97	22.90	23.04	23.5	25.0	-6.0
2,4,6-Trichlorophenol	14.31	14.24	14.38	23.2	25.0	-7.2
2,3,6-Trichlorophenol	15.56	15.49	15.63	22.8	25.0	-8.8
2,4,5-Trichlorophenol	17.48	17.40	17.54	23.0	25.0	-8.0
2,3,4-Trichlorophenol	19.02	18.95	19.09	24.6	25.0	-1.6
2,3,5,6-Tetrachlorophenol	18.81	18.74	18.88	23.2	25.0	-7.2
2,3,4,5-Tetrachlorophenol	22.08	22.01	22.15	24.5	25.0	-2.0
2,4-Dichlorophenol	13.82	13.75	13.89	242	250	-3.2
2,4,6-Tribromophenol (surr)	20.94	20.87	21.01	23.4	25.0	-6.4

AVERAGE %D = 5.6

7E  
 CHLOROPHENOL CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

ARI Job No.: SS71

Project: LORA LAKE PARCEL

GC Column: STX CLP1 ID: 0.53 (mm)

Init. Calib. Date(s): 05/04/11 05/04/11

Client Sample No.(PCP):

Date Analyzed :05/05/11

Lab Sample ID (PCP): PCP CCAL

Time Analyzed :0125

PCP MIX COMPOUND	RT	RT WINDOW		CALC AMOUNT	NOM AMOUNT	%D
		FROM	TO			
Pentachlorophenol	21.00	20.93	21.07	24.1	25.0	-3.6
2,4,6-Trichlorophenol	13.11	13.03	13.17	23.6	25.0	-5.6
2,3,6-Trichlorophenol	14.10	14.03	14.17	23.5	25.0	-6.0
2,4,5-Trichlorophenol	15.85	15.78	15.91	24.7	25.0	-1.2
2,3,4-Trichlorophenol	17.36	17.28	17.42	23.4	25.0	-6.4
2,3,5,6-Tetrachlorophenol	17.16	17.08	17.22	24.1	25.0	-3.6
2,3,4,5-Tetrachlorophenol	20.16	20.08	20.22	23.2	25.0	-7.2
2,4-Dichlorophenol	12.56	12.48	12.62	261	250	4.4
2,4,6-Tribromophenol (surr)	18.60	18.53	18.67	24.4	25.0	-2.4

AVERAGE %D = 4.5

7E  
CHLOROPHENOL CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

ARI Job No.: SS71

Project: LORA LAKE PARCEL

GC Column: STX CLP2 ID: 0.53 (mm)

Init. Calib. Date(s): 05/04/11 05/04/11

Client Sample No.(PCP):

Date Analyzed :05/05/11

Lab Sample ID (PCP): PCP CCAL

Time Analyzed :0125

PCP MIX COMPOUND	RT	RT WINDOW		CALC AMOUNT	NOM AMOUNT	%D
		FROM	TO			
Pentachlorophenol	22.97	22.90	23.04	23.9	25.0	-4.4
2,4,6-Trichlorophenol	14.32	14.24	14.38	23.5	25.0	-6.0
2,3,6-Trichlorophenol	15.56	15.49	15.63	22.9	25.0	-8.4
2,4,5-Trichlorophenol	17.48	17.40	17.54	23.2	25.0	-7.2
2,3,4-Trichlorophenol	19.03	18.95	19.09	25.0	25.0	0.0
2,3,5,6-Tetrachlorophenol	18.82	18.74	18.88	23.6	25.0	-5.6
2,3,4,5-Tetrachlorophenol	22.09	22.01	22.15	25.2	25.0	0.8
2,4-Dichlorophenol	13.83	13.75	13.89	245	250	-2.0
2,4,6-Tribromophenol (surr	20.94	20.87	21.01	24.1	25.0	-3.6

AVERAGE %D = 4.2

FORM VII PCP

7E  
CHLOROPHENOL CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

ARI Job No.: SS83

Project: LORA LAKE PARCEL:DMA

GC Column: STX CLP1 ID: 0.53 (mm)

Init. Calib. Date(s): 05/04/11 05/04/11

Client Sample No.(PCP):

Date Analyzed :05/06/11

Lab Sample ID (PCP): PCP CCAL

Time Analyzed :1946

PCP MIX COMPOUND	RT	RT WINDOW		CALC AMOUNT	NOM AMOUNT	%D
		FROM	TO			
Pentachlorophenol	21.00	20.93	21.07	26.9	25.0	7.6
2,4,6-Trichlorophenol	13.10	13.03	13.17	26.6	25.0	6.4
2,3,6-Trichlorophenol	14.10	14.03	14.17	26.4	25.0	5.6
2,4,5-Trichlorophenol	15.85	15.78	15.91	27.8	25.0	11.2
2,3,4-Trichlorophenol	17.35	17.28	17.42	26.3	25.0	5.2
2,3,5,6-Tetrachlorophenol	17.15	17.08	17.22	27.2	25.0	8.8
2,3,4,5-Tetrachlorophenol	20.16	20.08	20.22	25.8	25.0	3.2
2,4-Dichlorophenol	12.56	12.48	12.62	286	250	14.4
2,4,6-Tribromophenol (surr	18.60	18.53	18.67	27.7	25.0	10.8

AVERAGE %D = 8.1

FORM VII PCP

7E  
CHLOROPHENOL CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

ARI Job No.: SS83

Project: LORA LAKE PARCEL:DMA

GC Column: STX CLP2 ID: 0.53 (mm)

Init. Calib. Date(s): 05/04/11 05/04/11

Client Sample No. (PCP):

Date Analyzed :05/06/11

Lab Sample ID (PCP): PCP CCAL

Time Analyzed :1946

PCP MIX COMPOUND	RT	RT WINDOW		CALC AMOUNT	NOM AMOUNT	%D
		FROM	TO			
Pentachlorophenol	22.97	22.90	23.04	26.8	25.0	7.2
2,4,6-Trichlorophenol	14.31	14.24	14.38	26.7	25.0	6.8
2,3,6-Trichlorophenol	15.56	15.49	15.63	26.8	25.0	7.2
2,4,5-Trichlorophenol	17.48	17.40	17.54	26.6	25.0	6.4
2,3,4-Trichlorophenol	19.02	18.95	19.09	28.4	25.0	13.6
2,3,5,6-Tetrachlorophenol	18.82	18.74	18.88	26.5	25.0	6.0
2,3,4,5-Tetrachlorophenol	22.08	22.01	22.15	28.5	25.0	14.0
2,4-Dichlorophenol	13.82	13.75	13.89	279	250	11.6
2,4,6-Tribromophenol (surr	20.94	20.87	21.01	27.0	25.0	8.0

AVERAGE %D = 9.0



7E  
CHLOROPHENOL CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

ARI Job No.: SS83

Project: LORA LAKE PARCEL:DMA

GC Column: STX CLP1 ID: 0.53 (mm)

Init. Calib. Date(s): 05/04/11 05/04/11

Client Sample No. (PCP):

Date Analyzed :05/07/11

Lab Sample ID (PCP): PCP CCAL

Time Analyzed :0301

PCP MIX COMPOUND	RT	RT WINDOW		CALC AMOUNT	NOM AMOUNT	%D
		FROM	TO			
Pentachlorophenol	21.00	20.93	21.07	25.3	25.0	1.2
2,4,6-Trichlorophenol	13.11	13.03	13.17	26.4	25.0	5.6
2,3,6-Trichlorophenol	14.10	14.03	14.17	26.6	25.0	6.4
2,4,5-Trichlorophenol	15.85	15.78	15.91	27.3	25.0	9.2
2,3,4-Trichlorophenol	17.36	17.28	17.42	25.9	25.0	3.6
2,3,5,6-Tetrachlorophenol	17.16	17.08	17.22	27.1	25.0	8.4
2,3,4,5-Tetrachlorophenol	20.16	20.08	20.22	24.6	25.0	-1.6
2,4-Dichlorophenol	12.56	12.48	12.62	285	250	14.0
2,4,6-Tribromophenol (surr	18.60	18.53	18.67	26.5	25.0	6.0

AVERAGE %D = 6.2

FORM VII PCP

7E  
CHLOROPHENOL CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

ARI Job No.: SS83

Project: LORA LAKE PARCEL:DMA

GC Column: STX CLP2 ID: 0.53 (mm)

Init. Calib. Date(s): 05/04/11 05/04/11

Client Sample No. (PCP):

Date Analyzed :05/07/11

Lab Sample ID (PCP): PCP CCAL

Time Analyzed :0301

PCP MIX COMPOUND	RT	RT WINDOW		CALC AMOUNT	NOM AMOUNT	%D
		FROM	TO			
Pentachlorophenol	22.97	22.90	23.04	27.0	25.0	8.0
2,4,6-Trichlorophenol	14.32	14.24	14.38	26.6	25.0	6.4
2,3,6-Trichlorophenol	15.56	15.49	15.63	27.2	25.0	8.8
2,4,5-Trichlorophenol	17.48	17.40	17.54	26.7	25.0	6.8
2,3,4-Trichlorophenol	19.03	18.95	19.09	28.5	25.0	14.0
2,3,5,6-Tetrachlorophenol	18.82	18.74	18.88	26.8	25.0	7.2
2,3,4,5-Tetrachlorophenol	22.09	22.01	22.15	28.7	25.0	14.8
2,4-Dichlorophenol	13.83	13.75	13.89	280	250	12.0
2,4,6-Tribromophenol (surr	20.94	20.87	21.01	27.3	25.0	9.2

AVERAGE %D = 9.7

7E  
 CHLOROPHENOL CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

ARI Job No.: SS83

Project: LORA LAKE PARCEL:DMA

GC Column: STX CLP1 ID: 0.53 (mm)

Init. Calib. Date(s): 05/04/11 05/04/11

Client Sample No. (PCP):

Date Analyzed :05/07/11

Lab Sample ID (PCP): PCP CCAL

Time Analyzed :0904

PCP MIX COMPOUND	RT	RT WINDOW		CALC AMOUNT	NOM AMOUNT	%D
		FROM	TO			
Pentachlorophenol	21.00	20.93	21.07	27.2	25.0	8.8
2,4,6-Trichlorophenol	13.11	13.03	13.17	27.3	25.0	9.2
2,3,6-Trichlorophenol	14.10	14.03	14.17	27.6	25.0	10.4
2,4,5-Trichlorophenol	15.85	15.78	15.91	28.9	25.0	15.6
2,3,4-Trichlorophenol	17.36	17.28	17.42	27.2	25.0	8.8
2,3,5,6-Tetrachlorophenol	17.16	17.08	17.22	28.5	25.0	14.0
2,3,4,5-Tetrachlorophenol	20.16	20.08	20.22	26.3	25.0	5.2
2,4-Dichlorophenol	12.56	12.48	12.62	294	250	17.6
2,4,6-Tribromophenol (surr)	18.60	18.53	18.67	28.4	25.0	13.6

AVERAGE %D = 11.5

7E  
 CHLOROPHENOL CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

ARI Job No.: SS83

Project: LORA LAKE PARCEL:DMA

GC Column: STX CLP2 ID: 0.53 (mm)

Init. Calib. Date(s): 05/04/11 05/04/11

Client Sample No. (PCP):

Date Analyzed :05/07/11

Lab Sample ID (PCP): PCP CCAL

Time Analyzed :0904

PCP MIX COMPOUND	RT	RT WINDOW		CALC AMOUNT	NOM AMOUNT	%D
		FROM	TO			
Pentachlorophenol	22.97	22.90	23.04	27.4	25.0	9.6
2,4,6-Trichlorophenol	14.32	14.24	14.38	27.7	25.0	10.8
2,3,6-Trichlorophenol	15.56	15.49	15.63	27.8	25.0	11.2
2,4,5-Trichlorophenol	17.48	17.40	17.54	27.2	25.0	8.8
2,3,4-Trichlorophenol	19.03	18.95	19.09	29.0	25.0	16.0
2,3,5,6-Tetrachlorophenol	18.82	18.74	18.88	27.6	25.0	10.4
2,3,4,5-Tetrachlorophenol	22.09	22.01	22.15	28.8	25.0	15.2
2,4-Dichlorophenol	13.82	13.75	13.89	289	250	15.6
2,4,6-Tribromophenol (surr	20.94	20.87	21.01	27.8	25.0	11.2

AVERAGE %D = 12.1

FORM VII PCP

7E  
 CHLOROPHENOL CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

ARI Job No.: SS83

Project: LORA LAKE PARCEL:DMA

GC Column: STX CLP1 ID: 0.53 (mm)

Init. Calib. Date(s): 05/04/11 05/04/11

Client Sample No. (PCP):

Date Analyzed :05/07/11

Lab Sample ID (PCP): PCP CCAL

Time Analyzed :1205

PCP MIX COMPOUND	RT	RT WINDOW		CALC AMOUNT	NOM AMOUNT	%D
		FROM	TO			
Pentachlorophenol	21.00	20.93	21.07	28.6	25.0	14.4
2,4,6-Trichlorophenol	13.10	13.03	13.17	27.6	25.0	10.4
2,3,6-Trichlorophenol	14.10	14.03	14.17	27.9	25.0	11.6
2,4,5-Trichlorophenol	15.85	15.78	15.91	29.2	25.0	16.8
2,3,4-Trichlorophenol	17.35	17.28	17.42	27.1	25.0	8.4
2,3,5,6-Tetrachlorophenol	17.15	17.08	17.22	29.0	25.0	16.0
2,3,4,5-Tetrachlorophenol	20.16	20.08	20.22	27.6	25.0	10.4
2,4-Dichlorophenol	12.56	12.48	12.62	295	250	18.0
2,4,6-Tribromophenol (surr	18.60	18.53	18.67	27.2	25.0	8.8

AVERAGE %D = 12.8

7E  
 CHLOROPHENOL CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

ARI Job No.: SS83

Project: LORA LAKE PARCEL:DMA

GC Column: STX CLP2 ID: 0.53 (mm)

Init. Calib. Date(s): 05/04/11 05/04/11

Client Sample No.(PCP):

Date Analyzed :05/07/11

Lab Sample ID (PCP): PCP CCAL

Time Analyzed :1205

PCP MIX COMPOUND	RT	RT WINDOW		CALC AMOUNT	NOM AMOUNT	%D
		FROM	TO			
Pentachlorophenol	22.97	22.90	23.04	28.0	25.0	12.0
2,4,6-Trichlorophenol	14.31	14.24	14.38	28.1	25.0	12.4
2,3,6-Trichlorophenol	15.56	15.49	15.63	28.2	25.0	12.8
2,4,5-Trichlorophenol	17.48	17.40	17.54	27.5	25.0	10.0
2,3,4-Trichlorophenol	19.02	18.95	19.09	30.3	25.0	21.2
2,3,5,6-Tetrachlorophenol	18.82	18.74	18.88	28.5	25.0	14.0
2,3,4,5-Tetrachlorophenol	22.08	22.01	22.15	28.9	25.0	15.6
2,4-Dichlorophenol	13.82	13.75	13.89	294	250	17.6
2,4,6-Tribromophenol (surr	20.94	20.87	21.01	28.4	25.0	13.6

AVERAGE %D = 14.4

8  
CHLOROPHENOL ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES, INC      Client: FLOYD SNIDER  
 ARI Job No.: SS71      Project: LORA LAKE PARCEL  
 GC Column: STX CLP1 ID: 0.53 (mm)      Instrument ID: ECD1  
 Init. Calib. Date(s): 05/04/11 05/04/11

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,  
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION					
S1 : 18.60					
CLIENT	LAB	DATE	TIME	S1	
SAMPLE NO.	SAMPLE ID	ANALYZED	ANALYZED	RT	#
=====	=====	=====	=====	=====	=====
01	PCPD	05/04/11	1356	18.60	
02	PCPA	05/04/11	1432	18.60	
03	PCPB	05/04/11	1508	18.60	
04	PCPC	05/04/11	1544	18.60	
05	PCPE	05/04/11	1621	18.60	
06	PCPF	05/04/11	1657	18.60	
07	ZZZZZ	05/04/11	1733	18.60	
08	PCP CCAL	05/04/11	1810	18.60	
09	SS71MBW1	05/04/11	1846	18.60	
10	SS71LCSW1	05/04/11	1922	18.60	
11	SS71LCSDW1	05/04/11	1959	18.60	
12	ZZZZZ	05/04/11	2035	18.60	
13	LL-ER-041911	05/04/11	2111	18.60	
14	DMA-RB-04201	05/04/11	2148	18.60	
15	PCP CCAL	05/05/11	0125	18.60	

QC LIMITS

S1 = 2,4,6-Tribromophenol (+/- 0.07 MINUTES)

\* Values outside of QC limits.

8  
CHLOROPHENOL ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES, INC                      Client: FLOYD SNIDER  
 ARI Job No.: SS71    Project: LORA LAKE PARCEL  
 GC Column: STX CLP2 ID: 0.53 (mm)                      Instrument ID: ECD1  
 Init. Calib. Date(s): 05/04/11 05/04/11

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,  
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION					
S1 : 20.94					
CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT	#
=====					
01	PCPD	05/04/11	1356	20.94	
02	PCPA	05/04/11	1432	20.94	
03	PCPB	05/04/11	1508	20.94	
04	PCPC	05/04/11	1544	20.94	
05	PCPE	05/04/11	1621	20.94	
06	PCPF	05/04/11	1657	20.94	
07	ZZZZZ	05/04/11	1733	20.94	
08	PCP CCAL	05/04/11	1810	20.94	
09	SS71MBW1	05/04/11	1846	20.94	
10	SS71LCSW1	05/04/11	1922	20.94	
11	SS71LCSDW1	05/04/11	1959	20.94	
12	ZZZZZ	05/04/11	2035	20.94	
13	LL-ER-041911	05/04/11	2111	20.94	
14	DMA-RB-04201	05/04/11	2148	20.94	
15	PCP CCAL	05/05/11	0125	20.94	

QC LIMITS  
 S1 = 2,4,6-Tribromophenol (+/- 0.07 MINUTES)

\* Values outside of QC limits.



8  
CHLOROPHENOL ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

ARI Job No.: SS83

Project: LORA LAKE PARCEL:DMA

GC Column: STX CLP1 ID: 0.53 (mm)

Instrument ID: ECD1

Init. Calib. Date(s): 05/04/11 05/04/11

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,  
SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION					
S1 : 18.60					
CLIENT	LAB	DATE	TIME	S1	
SAMPLE NO.	SAMPLE ID	ANALYZED	ANALYZED	RT	#
=====	=====	=====	=====	=====	=====
01	PCPD	05/04/11	1356	18.60	
02	PCPA	05/04/11	1432	18.60	
03	PCPB	05/04/11	1508	18.60	
04	PCPC	05/04/11	1544	18.60	
05	PCPE	05/04/11	1621	18.60	
06	PCPF	05/04/11	1657	18.60	
07	ZZZZZ	05/04/11	1733	18.60	
08	PCP CCAL	05/06/11	1946	18.60	
09	SS83MBS1	05/06/11	2023	18.60	
10	SS83LCSS1	05/06/11	2059	18.60	
11	SS83LCSDS1	05/06/11	2135	18.60	
12	ZZZZZ	05/06/11	2211	18.60	
13	DMA-TP1-0-3-	05/06/11	2248	18.60	
14	DMA-TP1-3-4.	05/06/11	2324	18.60	
15	DMA-TP1-4.5-	05/07/11	0000	18.60	
16	DMA-TP2-1.5-	05/07/11	0036	18.60	
17	DMA-TP2-3-4-	05/07/11	0113	18.60	
18	DMA-TP6-0-2.	05/07/11	0149	18.60	
19	ZZZZZ	05/07/11	0225	18.60	
20	PCP CCAL	05/07/11	0301	18.60	
21	DMA-TP6-2.5-	05/07/11	0337	18.60	
22	DMA-TP4-0-1.	05/07/11	0414	18.60	
23	DMA-TP4-1.5-	05/07/11	0450	18.60	
24	DMA-TP5-1.5-	05/07/11	0526	18.60	
25	DMA-TP5-1.5-	05/07/11	0602	18.60	
26	DMA-TP5-2-3-	05/07/11	0639	18.60	
27	DMA-TP3-2-3-	05/07/11	0715	18.60	
28	DMA-TP3-3-4-	05/07/11	0751	18.60	
29	ZZZZZ	05/07/11	0828	18.60	
30	PCP CCAL	05/07/11	0904	18.60	
31	DMA-TP3-5-6-	05/07/11	0940	18.60	
32	DMA-TP3-5-6-	05/07/11	1016	18.60	

QC LIMITS

S1 = 2,4,6-Tribromophenol (+/- 0.07 MINUTES)

\* Values outside of QC limits.

8  
CHLOROPHENOL ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES, INC                      Client: FLOYD SNIDER  
 ARI Job No.: SS83    Project: LORA LAKE PARCEL:DMA  
 GC Column: STX CLP1 ID: 0.53 (mm)                      Instrument ID: ECD1  
 Init. Calib. Date(s): 05/04/11 05/04/11

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,  
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION					
S1 : 18.60					
	CLIENT	LAB	DATE	TIME	S1
	SAMPLE NO.	SAMPLE ID	ANALYZED	ANALYZED	RT #
	=====	=====	=====	=====	=====
01	DMA-TP3-5-6-	SS83OMSD	05/07/11	1053	18.60
02	ZZZZZ	ZZZZZ	05/07/11	1129	18.60
03		PCP CCAL	05/07/11	1205	18.60

QC LIMITS

S1 = 2,4,6-Tribromophenol (+/- 0.07 MINUTES)

\* Values outside of QC limits.

8  
CHLOROPHENOL ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES, INC                      Client: FLOYD SNIDER  
 ARI Job No.: SS83    Project: LORA LAKE PARCEL:DMA  
 GC Column: STX CLP2 ID: 0.53 (mm)                      Instrument ID: ECD1  
 Init. Calib. Date(s): 05/04/11 05/04/11

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,  
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION					
S1 : 20.94					
CLIENT	LAB	DATE	TIME	S1	
SAMPLE NO.	SAMPLE ID	ANALYZED	ANALYZED	RT	#
=====	=====	=====	=====	=====	=====
01	PCPD	05/04/11	1356	20.94	
02	PCPA	05/04/11	1432	20.94	
03	PCPB	05/04/11	1508	20.94	
04	PCPC	05/04/11	1544	20.94	
05	PCPE	05/04/11	1621	20.94	
06	PCPF	05/04/11	1657	20.94	
07	ZZZZZ	05/04/11	1733	20.94	
08	PCP CCAL	05/06/11	1946	20.94	
09	SS83MBS1	05/06/11	2023	20.94	
10	SS83LCSS1	05/06/11	2059	20.94	
11	SS83LCSDS1	05/06/11	2135	20.94	
12	ZZZZZ	05/06/11	2211	20.94	
13	DMA-TP1-0-3-	05/06/11	2248	20.94	
14	DMA-TP1-3-4.	05/06/11	2324	20.94	
15	DMA-TP1-4.5-	05/07/11	0000	20.94	
16	DMA-TP2-1.5-	05/07/11	0036	20.94	
17	DMA-TP2-3-4-	05/07/11	0113	20.94	
18	DMA-TP6-0-2.	05/07/11	0149	20.94	
19	ZZZZZ	05/07/11	0225	20.94	
20	PCP CCAL	05/07/11	0301	20.94	
21	DMA-TP6-2.5-	05/07/11	0337	20.94	
22	DMA-TP4-0-1.	05/07/11	0414	20.94	
23	DMA-TP4-1.5-	05/07/11	0450	20.94	
24	DMA-TP5-1.5-	05/07/11	0526	20.94	
25	DMA-TP5-1.5-	05/07/11	0602	20.94	
26	DMA-TP5-2-3-	05/07/11	0639	20.94	
27	DMA-TP3-2-3-	05/07/11	0715	20.94	
28	DMA-TP3-3-4-	05/07/11	0751	20.94	
29	ZZZZZ	05/07/11	0828	20.94	
30	PCP CCAL	05/07/11	0904	20.94	
31	DMA-TP3-5-6-	05/07/11	0940	20.94	
32	DMA-TP3-5-6-	05/07/11	1016	20.94	

QC LIMITS  
 S1 = 2,4,6-Tribromophenol (+/- 0.07 MINUTES)

\* Values outside of QC limits.

8  
CHLOROPHENOL ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES, INC                      Client: FLOYD SNIDER  
 ARI Job No.: SS83    Project: LORA LAKE PARCEL:DMA  
 GC Column: STX CLP2 ID: 0.53 (mm)                      Instrument ID: ECD1  
 Init. Calib. Date(s): 05/04/11 05/04/11

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,  
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION					
S1 : 20.94					
	CLIENT	LAB	DATE	TIME	S1
	SAMPLE NO.	SAMPLE ID	ANALYZED	ANALYZED	RT #
	=====	=====	=====	=====	=====
01	DMA-TP3-5-6-	SS83OMSD	05/07/11	1053	20.94
02	ZZZZZ	ZZZZZ	05/07/11	1129	20.94
03		PCP CCAL	05/07/11	1205	20.94

QC LIMITS  
 S1 = 2,4,6-Tribromophenol (+/- 0.07 MINUTES)

\* Values outside of QC limits.


**TPHD Analysis  
Report and Summary QC Forms**

**ARI Job ID: SS83**

**ORGANICS ANALYSIS DATA SHEET  
TOTAL DIESEL RANGE HYDROCARBONS**

NWTPHD by GC/FID-Silica and Acid Cleaned  
Page 1 of 1  
Matrix: Water

QC Report No: SS83-Floyd Snider  
Project: Lora Lake Parcel:DMA  
POS-LL

Data Release Authorized:   
Reported: 04/26/11

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DL	Range	RL	Result
MB-042311	Method Blank	04/23/11	04/26/11	1.00	Diesel	0.10	< 0.10 U
11-8726	HC ID: ---		FID4A	1.0	Motor Oil	0.20	< 0.20 U
					o-Terphenyl		98.2%
SS83P	DMA-RB-042011	04/23/11	04/26/11	1.00	Diesel	0.10	< 0.10 U
11-8726	HC ID: ---		FID4A	1.0	Motor Oil	0.20	< 0.20 U
					o-Terphenyl		89.7%

Reported in mg/L (ppm)

EFV-Effective Final Volume in mL.

DL-Dilution of extract prior to analysis.

RL-Reporting limit.

Diesel quantitation on total peaks in the range from C12 to C24.

Motor Oil quantitation on total peaks in the range from C24 to C38.

HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.

**CLEANED TPHD SURROGATE RECOVERY SUMMARY**

Matrix: Water

QC Report No: SS83-Floyd Snider  
Project: Lora Lake Parcel:DMA  
POS-LL

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
MB-042311	98.2%	0
LCS-042311	88.7%	0
LCSD-042311	89.6%	0
DMA-RB-042011	89.7%	0

	<b>LCS/MB LIMITS</b>	<b>QC LIMITS</b>
(OTER) = o-Terphenyl	(53-123)	(49-118)

Prep Method: SW3510C  
Log Number Range: 11-8726 to 11-8726

**ORGANICS ANALYSIS DATA SHEET**

**NWTPHD by GC/FID-Silica and Acid Cleaned**

**Sample ID: LCS-042311**

Page 1 of 1

**LCS/LCSD**

Lab Sample ID: LCS-042311


QC Report No: SS83-Floyd Snider

LIMS ID: .11-8726

Project: Lora Lake Parcel:DMA

Matrix: Water

POS-LL

Data Release Authorized: 

Date Sampled: 04/20/11

Reported: 04/26/11

Date Received: 04/20/11

Date Extracted LCS/LCSD: 04/23/11

Sample Amount LCS: 500 mL

LCSD: 500 mL

Date Analyzed LCS: 04/26/11 11:21

Final Extract Volume LCS: 1.0 mL

LCSD: 04/26/11 11:45

LCSD: 1.0 mL

Instrument/Analyst LCS: FID/MS

Dilution Factor LCS: 1.00

LCSD: FID/MS

LCSD: 1.00

Range	Spike		LCS		Spike		LCSD		RPD
	LCS	Added-LCS	Recovery	LCSD	Added-LCSD	Recovery	LCSD		
Diesel	2.66	3.00	88.7%	2.67	3.00	89.0%	0.4%		

**TPHD Surrogate Recovery**

	LCS	LCSD
o-Terphenyl	88.7%	89.6%

Results reported in mg/L

RPD calculated using sample concentrations per SW846.



**TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT**

Matrix: Water  
Date Received: 04/20/11

ARI Job: SS83  
Project: Lora Lake Parcel:DMA  
POS-LL

<u>ARI ID</u>	<u>Client ID</u>	<u>Samp Amt</u>	<u>Final Vol</u>	<u>Prep Date</u>
11-8726-042311MB1	Method Blank	500 mL	1.00 mL	04/23/11
11-8726-042311LCS1	Lab Control	500 mL	1.00 mL	04/23/11
11-8726-042311LCSD1	Lab Control Dup	500 mL	1.00 mL	04/23/11
11-8726-SS83P	DMA-RB-042011	500 mL	1.00 mL	04/23/11

4  
TPH METHOD BLANK SUMMARY

BLANK NO.

SS71MBW1

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD-SNIDER

SDG No.: SS71,SS83

Project No.: LORA LAKE

Date Extracted: 04/23/11

Matrix: LIQUID

Date Analyzed : 04/26/11

Instrument ID : FID4A

Time Analyzed : 1057

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
	=====	=====	=====
01	SS71LCSW1	SS71LCSW1	04/26/11
02	SS71LCSDW1	SS71LCSDW1	04/26/11
03	LL-ER-041911	SS71T	04/26/11
04	DMA-RB-04201	SS83P	04/26/11
05			
06			
07			
08			
09			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			

6a  
DIESEL INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: FLOYD SNIDER

Instrument: FID4A.I

Project: LORA LAKE PARCEL

Calibration Date: 21-MAR-2011

SDG No.: SS71,SS83

Diesel Range	RF1 50	RF2 100	RF3 250	RF4 500	RF5 1000	RF6 2500	Ave RF	%RSD
WA Diesel	21003	19526	19442	19703	20026	19363	19844	3.1
AK Diesel	23452	21691	21713	21972	22362	21558	22125	3.2
OR Diesel	24212	21966	21934	22149	22514	21688	22410	4.1
Cal Diesel	23232	21603	21610	21876	22284	21486	22015	3.0
o-Terph	17994	17497	17465	17996	17929	15399	17380	5.8

<- Indicates %RSD outside limits  
Surrogate areas are not included in Diesel RF calculation.

Quant Ranges :   WA Diesel   C12-C24 (4.517-8.324)  
                  AK Diesel   C10-C25 (3.524-8.581)  
                  OR Diesel   C10-C28 (3.524-9.347)  
                  Cal Diesel   C10-C24 (3.524-8.324)

Calibration Files      Analysis Time

---

0321a004.d	21-MAR-2011 15:42
0321a005.d	21-MAR-2011 16:06
0321a006.d	21-MAR-2011 16:30
0321a007.d	21-MAR-2011 16:54
0321a008.d	21-MAR-2011 17:17
0321a009.d	21-MAR-2011 17:41

6a  
NW MOTOR OIL RANGE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: FLOYD SNIDER

Instrument: FID4A.I

Project: LORA LAKE PARCEL

Calibration Date: 21-MAR-2011

SDG No.: SS71,SS83

Product Range	RF1 100	RF2 250	RF3 500	RF4 1000	RF5 2500	RF6 5000	Ave RF	%RSD
WA M.Oil C24-C38	10649	11986	11403	11850	11711	10774	11395	5.0
Triac Surr	13444	18260	17392	17990	17972	16861	16986	10.6

<- Indicates %RSD outside limits  
Surrogate areas are not included in Motor Oil RF calculation.

Calibration Files      Analysis Time

0321a011.d	21-MAR-2011 18:28
0321a012.d	21-MAR-2011 18:52
0321a013.d	21-MAR-2011 19:16
0321a014.d	21-MAR-2011 19:39
0321a015.d	21-MAR-2011 20:03
0321a016.d	21-MAR-2011 20:27

in jetCurve macro

6a  
JET A INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: FLOYD SNIDER

Instrument: FID4A.I

Project: LORA LAKE PARCEL

Calibration Date: 13-APR-2011

SDG No.: SS71,SS83

Product Range	RF1 50	RF2 100	RF3 250	RF4 500	RF5 1000	RF6 2500	Ave RF	%RSD
JET A	15185	15040	14996	14809	14596	14425	14842	1.9
o-Terph	20223	19513	19642	19176	18937	18599	19348	3.0

<- Indicates %RSD outside limits  
Quant Ranges : JET A - C10-C18 (3.522-6.601)

Calibration Files      Analysis Time

---

0413a007.d	13-APR-2011 06:59
0413a008.d	13-APR-2011 07:22
0413a009.d	13-APR-2011 07:46
0413a010.d	13-APR-2011 08:09
0413a011.d	13-APR-2011 08:33
0413a012.d	13-APR-2011 08:56

7a  
DIESEL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.	Client: FLOYD-SNIDER
ICal Date: 21-MAR-2011	Project: LORA LAKE
CCal Date: 26-APR-2011	SDG No.: SS71,SS83
Analysis Time: 08:35	Lab ID: DIESEL#5
Instrument: FID4A.I	Lab File Name: 0425a046.d

Diesel Range	Area*	CalcAmt	NomAmt	% D
WADies (C12-C24)	5407190	272.5	250	9.0
AK102 (C10-C25)	5995517	271.0	250	8.4
Terphenyl	925551	47.8	45	6.3

\* Surrogate areas are subtracted from range areas  
 <- Indicates a %D outside QC limits

Quant Ranges :   WA Diesel    C12-C24  
                   AK Diesel    C10-C25

7a  
MOTOR OIL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.  
 ICal Date: 21-MAR-2011  
 CCal Date: 26-APR-2011  
 Analysis Time: 08:59  
 Instrument: FID4A.I

Client: FLOYD-SNIDER  
 Project: LORA LAKE  
 SDG No.: SS71,SS83  
 Lab ID: MOIL#5  
 Lab File Name: 0425a047.d

M.oil Range	Area*	CalcAmnt	NomAmnt	% D
WAMoil (C24-C38)	5294572	464.6	500	-7.1
AK103 (C25-C36)	4775780	691.9	500	38.4
CRUDE (Tot-C40)	6310109	835.5	500	67.1
n-Triacontane	844840	49.7	45	10.5

<-

\* Surrogate areas are subtracted from range areas  
 <- Indicates a %D outside QC limits

Quant Ranges :   WA M.Oil    C24-C38  
                   AK M.Oil    C25-C36

7a  
DIESEL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: FLOYD-SNIDER

ICal Date: 21-MAR-2011

Project: LORA LAKE

CCal Date: 26-APR-2011

SDG No.: SS71,SS83

Analysis Time: 13:21

Lab ID: DIESEL#6

Instrument: FID4A.I

Lab File Name: 0425a058.d

Diesel Range	Area*	CalcAmt	NomAmt	% D
WADies (C12-C24)	4977888	250.9	250	0.3
AK102 (C10-C25)	5531698	250.0	250	0.0
Terphenyl	835128	43.2	45	-4.1

\* Surrogate areas are subtracted from range areas  
 <- Indicates a %D outside QC limits

Quant Ranges :   WA Diesel   C12-C24  
                   AK Diesel   C10-C25



7a  
MOTOR OIL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: FLOYD-SNIDER

ICal Date: 21-MAR-2011

Project: LORA LAKE

CCal Date: 26-APR-2011

SDG No.: SS71,SS83

Analysis Time: 13:45

Lab ID: MOIL#6

Instrument: FID4A.I

Lab File Name: 0425a059.d

M.oil Range	Area*	CalcAmt	NomAmt	% D
WAMoil(C24-C38)	5136792	450.8	500	-9.8
AK103 (C25-C36)	4641896	672.5	500	34.5
CRUDE(Tol-C40)	6158979	815.5	500	63.1
n-Triacontane	823940	48.5	45	7.8

<-

\* Surrogate areas are subtracted from range areas  
<- Indicates a %D outside QC limits

Quant Ranges :   WA M.Oil    C24-C38  
                  AK M.Oil    C25-C36

8  
TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD-SNIDER

SDG No.: SS71,SS83

Project: LORA LAKE

Instrument ID: FID4A

GC Column: RTX-1

Run Date: 03/21/11

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS,  
IS GIVEN BELOW:

SURROGATE RT FROM DAILY STANDARD					
		TERPH: 6.77		TRIAIC: 9.89	
CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAIC RT #
=====	=====	=====	=====	=====	=====
01 RT	RT	03/21/11	1455	6.77	9.89
02 IB	IB	03/21/11	1519	6.77	9.89
03 DIESEL 50	DIESEL 50	03/21/11	1542	6.76	9.89
04 DIESEL 100	DIESEL 100	03/21/11	1606	6.76	9.90
05 DIESEL 250	DIESEL 250	03/21/11	1630	6.77	9.90
06 DIESEL 500	DIESEL 500	03/21/11	1654	6.78	9.90
07 DIESEL 1000	DIESEL 1000	03/21/11	1717	6.79	9.89
08 DIESEL 2500	DIESEL 2500	03/21/11	1741	6.82	9.89
09 DIESEL ICV	DIESEL ICV	03/21/11	1805	6.77	9.89

TERPH = o-terph  
TRIAIC = Triacon Surr

QC LIMITS  
(+/- 0.05 MINUTES)  
(+/- 0.05 MINUTES)

\* Values outside of QC limits.

8  
TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD-SNIDER

SDG No.: SS71,SS83

Project: LORA LAKE

Instrument ID: FID4A

GC Column: RTX-1

Run Date: 03/21/11

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS,  
IS GIVEN BELOW:

SURROGATE RT FROM DAILY STANDARD					
		TERPH: 6.77		TRIAAC: 9.89	
CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAAC RT #
=====					
01	RT	03/21/11	1455	6.77	9.89
02	IB	03/21/11	1519	6.77	9.89
03	MOIL 100	03/21/11	1828	6.76	9.87
04	MOIL 250	03/21/11	1852	6.76	9.88
05	MOIL 500	03/21/11	1916	6.76	9.89
06	MOIL 1000	03/21/11	1939	6.78	9.91
07	MOIL 2500	03/21/11	2003	6.76	9.94*
08	MOIL 5000	03/21/11	2027	6.76	9.98*
09	MOIL ICV	03/21/11	2050	6.76	9.89

QC LIMITS  
(+/- 0.05 MINUTES)  
(+/- 0.05 MINUTES)

TERPH = o-terph  
TRIAAC = Triacon Surr

\* Values outside of QC limits.  
\*Peak shifting occurs when column plates are close to overloaded.  
Sample surrogates are spiked at 45ppm. n-Triacontane quants %10.6 RSD and meets Ical criteria. No further corrective action needed.

8  
JET-A ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD-SNIDER

SDG No.: SS71,SS83

Project: LORA LAKE

Instrument ID: FID4A

GC Column: RTX-1

Run Date: 04/13/11

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS,  
IS GIVEN BELOW:

SURROGATE RT FROM DAILY STANDARD					
		TERPH: 6.76		TRAC: 9.88	
CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRAC RT #
01	RT	04/13/11	0549	6.76	9.88
02	IB	04/13/11	0612	6.76	9.88
03	JET 50	04/13/11	0659	6.75	9.88
04	JET 100	04/13/11	0722	6.76	9.88
05	JET 250	04/13/11	0746	6.76	9.88
06	JET 500	04/13/11	0809	6.77	9.88
07	JET 1000	04/13/11	0833	6.78	9.88
08	JET 2500	04/13/11	0856	6.80	9.88

TERPH = o-terph  
TRAC = Triacon Surr

QC LIMITS  
(+/- 0.05 MINUTES)  
(+/- 0.05 MINUTES)

\* Values outside of QC limits.

8  
TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD-SNIDER

SDG No.: SS71,SS83

Project: LORA LAKE

Instrument ID: FID4A

GC Column: RTX-1

Run Date: 04/25/11

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS,  
IS GIVEN BELOW:

SURROGATE RT FROM DAILY STANDARD					
		TERPH: 6.76		TRIAc: 9.88	
CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAc RT #
01	RT	04/25/11	1512	6.76	9.88
02	IB	04/25/11	1536	6.76	9.88
03	LORA LAKE DIESEL#5	04/26/11	0835	6.76	9.88
04	LORA LAKE MOIL#5	04/26/11	0859	6.77	9.88
05	ZZZZZ	04/26/11	0922	6.76	9.87
06	ZZZZZ	04/26/11	0946	6.76	9.87
07	ZZZZZ	04/26/11	1010	6.76	9.88
08	ZZZZZ	04/26/11	1033	6.76	9.87
09	SS71MBW1	04/26/11	1057	6.76	9.88
10	SS71LCSW1	04/26/11	1121	6.77	9.88
11	SS71LCSDW1	04/26/11	1145	6.77	9.87
12	ZZZZZ	04/26/11	1209	6.76	9.88
13	LL-ER-041911	04/26/11	1233	6.76	9.88
14	DMA-RB-04201	04/26/11	1257	6.76	9.88
15	LORA LAKE DIESEL#6	04/26/11	1321	6.76	9.89
16	LORA LAKE MOIL#6	04/26/11	1345	6.77	9.88

QC LIMITS

TERPH = o-terph  
TRIAc = Triacon Surr

(+/- 0.05 MINUTES)  
(+/- 0.05 MINUTES)

\* Values outside of QC limits.

**ORGANICS ANALYSIS DATA SHEET**

**TOTAL DIESEL RANGE HYDROCARBONS**

NWTPHD by GC/FID-Silica and Acid Cleaned  
Page 1 of 2  
Matrix: Soil

QC Report No: SS83-Floyd Snider  
Project: Lora Lake Parcel:DMA  
POS-LL

Data Release Authorized: *mmw*  
Reported: 04/27/11

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DL	Range	RL	Result
SS83A 11-8711	DMA-TP1-0-3-041911 HC ID: ---	04/22/11	04/25/11 FID9	1.00 1.0	Diesel Motor Oil o-Terphenyl	5.5 11	< 5.5 U < 11 U 86.1%
SS83B 11-8712	DMA-TP1-3-4.5-041911 HC ID: <b>MOTOR OIL</b>	04/22/11	04/25/11 FID9	1.00 1.0	Diesel <b>Motor Oil</b> o-Terphenyl	6.0 <b>12</b>	< 6.0 U <b>22</b> 86.6%
SS83C 11-8713	DMA-TP1-4.5-5.5-041911 HC ID: <b>MOTOR OIL</b>	04/22/11	04/25/11 FID9	1.00 1.0	Diesel <b>Motor Oil</b> o-Terphenyl	5.5 <b>11</b>	< 5.5 U <b>23</b> 90.2%
SS83D 11-8714	DMA-TP2-1.5-3-041911 HC ID: <b>MOTOR OIL</b>	04/22/11	04/25/11 FID9	1.00 1.0	Diesel <b>Motor Oil</b> o-Terphenyl	5.6 <b>11</b>	< 5.6 U <b>19</b> 87.2%
SS83E 11-8715	DMA-TP2-3-4-041911 HC ID: ---	04/22/11	04/25/11 FID9	1.00 1.0	Diesel Motor Oil o-Terphenyl	5.5 11	< 5.5 U < 11 U 90.1%
SS83F 11-8716	DMA-TP6-0-2.5-041911 HC ID: ---	04/22/11	04/25/11 FID9	1.00 1.0	Diesel Motor Oil o-Terphenyl	5.6 11	< 5.6 U < 11 U 84.2%
SS83G 11-8717	DMA-TP6-2.5-5-041911 HC ID: ---	04/22/11	04/25/11 FID9	1.00 1.0	Diesel Motor Oil o-Terphenyl	5.6 11	< 5.6 U < 11 U 88.6%
SS83H 11-8718	DMA-TP4-0-1.5-042011 HC ID: <b>DRO/MOTOR OIL</b>	04/22/11	04/26/11 FID9	1.00 1.0	<b>Diesel</b> <b>Motor Oil</b> o-Terphenyl	<b>14</b> <b>29</b>	<b>14</b> <b>100</b> 81.9%
SS83I 11-8719	DMA-TP4-1.5-2-042011 HC ID: ---	04/22/11	04/26/11 FID9	1.00 1.0	Diesel Motor Oil o-Terphenyl	6.0 12	< 6.0 U < 12 U 88.6%
SS83J 11-8720	DMA-TP5-1.5-2-042011 HC ID: <b>DRO/MOTOR OIL</b>	04/22/11	04/26/11 FID9	1.00 1.0	<b>Diesel</b> <b>Motor Oil</b> o-Terphenyl	<b>9.9</b> <b>20</b>	<b>21</b> <b>120</b> 73.4%
SS83K 11-8721	DMA-TP5-1.5-2-042011 HC ID: <b>DRO/MOTOR OIL</b>	04/22/11	04/26/11 FID9	1.00 1.0	<b>Diesel</b> <b>Motor Oil</b> o-Terphenyl	<b>10</b> <b>20</b>	<b>20</b> <b>110</b> 80.4%
SS83L 11-8722	DMA-TP5-2-3-042011 HC ID: ---	04/22/11	04/26/11 FID9	1.00 1.0	Diesel Motor Oil o-Terphenyl	6.0 12	< 6.0 U < 12 U 88.6%
SS83M 11-8723	DMA-TP3-2-3-042011 HC ID: <b>MOTOR OIL</b>	04/22/11	04/26/11 FID9	1.00 1.0	Diesel <b>Motor Oil</b> o-Terphenyl	5.8 <b>12</b>	< 5.8 U <b>18</b> 85.0%

**ORGANICS ANALYSIS DATA SHEET  
TOTAL DIESEL RANGE HYDROCARBONS**

NWTPHD by GC/FID-Silica and Acid Cleaned  
Page 2 of 2  
Matrix: Soil

QC Report No: SS83-Floyd Snider  
Project: Lora Lake Parcel:DMA  
POS-LL

Data Release Authorized: *[Signature]*  
Reported: 04/27/11

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DL	Range	RL	Result
SS83N 11-8724	DMA-TP3-3-4-042011 HC ID: <b>DRO/MOTOR OIL</b>	04/22/11	04/26/11 FID9	1.00 1.0	<b>Diesel</b> <b>Motor Oil</b> o-Terphenyl	<b>10</b> <b>20</b>	<b>16</b> <b>95</b> 78.5%
MB-042211 11-8725	Method Blank HC ID: ---	04/22/11	04/25/11 FID9	1.00 1.0	Diesel Motor Oil o-Terphenyl	5.0 10	< 5.0 U < 10 U 89.7%
SS830 11-8725	DMA-TP3-5-6-042011 HC ID: ---	04/22/11	04/26/11 FID9	1.00 1.0	Diesel Motor Oil o-Terphenyl	5.7 11	< 5.7 U < 11 U 84.8%

Reported in mg/kg (ppm)

EFV-Effective Final Volume in mL.  
DL-Dilution of extract prior to analysis.  
RL-Reporting limit.

Diesel quantitation on total peaks in the range from C12 to C24.  
Motor Oil quantitation on total peaks in the range from C24 to C38.  
HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.

**CLEANED TPHD SURROGATE RECOVERY SUMMARY**

Matrix: Soil

QC Report No: SS83-Floyd Snider  
Project: Lora Lake Parcel:DMA  
POS-LL

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
DMA-TP1-0-3-041911	86.1%	0
DMA-TP1-3-4.5-0419	86.6%	0
DMA-TP1-4.5-5.5-04	90.2%	0
DMA-TP2-1.5-3-0419	87.2%	0
DMA-TP2-3-4-041911	90.1%	0
DMA-TP6-0-2.5-0419	84.2%	0
DMA-TP6-2.5-5-0419	88.6%	0
DMA-TP4-0-1.5-0420	81.9%	0
DMA-TP4-1.5-2-0420	88.6%	0
DMA-TP5-1.5-2-0420	73.4%	0
DMA-TP5-1.5-2-0420	80.4%	0
DMA-TP5-2-3-042011	88.6%	0
DMA-TP3-2-3-042011	85.0%	0
DMA-TP3-3-4-042011	78.5%	0
MB-042211	89.7%	0
LCS-042211	83.9%	0
DMA-TP3-5-6-042011	84.8%	0
DMA-TP3-5-6-042011 MS	87.8%	0
DMA-TP3-5-6-042011 MSD	82.9%	0

**LCS/MB LIMITS      QC LIMITS**

(OTER) = o-Terphenyl

(59-134)

(43-137)

Prep Method: SW3546  
Log Number Range: 11-8711 to 11-8725



**ORGANICS ANALYSIS DATA SHEET**  
**NWTPHD by GC/FID-Silica and Acid Cleaned**  
 Page 1 of 1

**Sample ID: DMA-TP3-5-6-042011**  
**MS/MSD**

Lab Sample ID: SS830  
 LIMS ID: 11-8725  
 Matrix: Soil  
 Data Release Authorized: *mmw*  
 Reported: 04/27/11

QC Report No: SS83-Floyd Snider  
 Project: Lora Lake Parcel:DMA  
 POS-LL  
 Date Sampled: 04/20/11  
 Date Received: 04/20/11

Date Extracted MS/MSD: 04/22/11  
 Date Analyzed MS: 04/26/11 03:11  
 MSD: 04/26/11 03:32  
 Instrument/Analyst MS: FID/MS  
 MSD: FID/MS

Sample Amount MS: 8.83 g-dry-wt  
 MSD: 8.90 g-dry-wt  
 Final Extract Volume MS: 1.0 mL  
 MSD: 1.0 mL  
 Dilution Factor MS: 1.0  
 MSD: 1.0  
 Percent Moisture: 12.6%

Range	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Diesel	< 5.7	130	170	76.5%	131	169	77.5%	0.8%

**TPHD Surrogate Recovery**

	MS	MSD
o-Terphenyl	87.8%	82.9%

Results reported in mg/kg  
 RPD calculated using sample concentrations per SW846.

**ORGANICS ANALYSIS DATA SHEET**  
**NWTPHD by GC/FID-Silica and Acid Cleaned**  
 Page 1 of 1

**Sample ID: LCS-042211**  
**LAB CONTROL**

Lab Sample ID: LCS-042211  
 LIMS ID: 11-8725  
 Matrix: Soil  
 Data Release Authorized: *[Signature]*  
 Reported: 04/27/11

QC Report No: SS83-Floyd Snider  
 Project: Lora Lake Parcel:DMA  
 POS-LL  
 Date Sampled: 04/20/11  
 Date Received: 04/20/11

Date Extracted: 04/22/11  
 Date Analyzed: 04/25/11 20:22  
 Instrument/Analyst: FID/MS

Sample Amount: 10.0 g  
 Final Extract Volume: 1.0 mL  
 Dilution Factor: 1.0

Range	Lab Control	Spike Added	Recovery
Diesel	125	150	83.3%

**TPHD Surrogate Recovery**

o-Terphenyl	83.9%
-------------	-------

Results reported in mg/kg

**TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT**

Matrix: Soil  
Date Received: 04/20/11

ARI Job: SS83  
Project: Lora Lake Parcel:DMA  
POS-LL

ARI ID	Client ID	Client Amt	Final Vol	Basis	Prep Date
11-8711-SS83A	DMA-TP1-0-3-041911	9.12 g	1.00 mL	D	04/22/11
11-8712-SS83B	DMA-TP1-3-4.5-041918	18.29 g	1.00 mL	D	04/22/11
11-8713-SS83C	DMA-TP1-4.5-5.5-0419	0.06 g	1.00 mL	D	04/22/11
11-8714-SS83D	DMA-TP2-1.5-3-041918	8.89 g	1.00 mL	D	04/22/11
11-8715-SS83E	DMA-TP2-3-4-041911	9.02 g	1.00 mL	D	04/22/11
11-8716-SS83F	DMA-TP6-0-2.5-041918	8.87 g	1.00 mL	D	04/22/11
11-8717-SS83G	DMA-TP6-2.5-5-041918	8.88 g	1.00 mL	D	04/22/11
11-8718-SS83H	DMA-TP4-0-1.5-042013	3.48 g	1.00 mL	D	04/22/11
11-8719-SS83I	DMA-TP4-1.5-2-042018	8.33 g	1.00 mL	D	04/22/11
11-8720-SS83J	DMA-TP5-1.5-2-042015	5.06 g	1.00 mL	D	04/22/11
11-8721-SS83K	DMA-TP5-1.5-2-042014	4.96 g	1.00 mL	D	04/22/11
11-8722-SS83L	DMA-TP5-2-3-042011	8.27 g	1.00 mL	D	04/22/11
11-8723-SS83M	DMA-TP3-2-3-042011	8.55 g	1.00 mL	D	04/22/11
11-8724-SS83N	DMA-TP3-3-4-042011	4.91 g	1.00 mL	D	04/22/11
11-8725-042211MB1	Method Blank	10.0 g	1.00 mL	-	04/22/11
11-8725-042211LCS1	Lab Control	10.0 g	1.00 mL	-	04/22/11
11-8725-SS83O	DMA-TP3-5-6-042011	8.83 g	1.00 mL	D	04/22/11
11-8725-SS83OMS	DMA-TP3-5-6-042011	8.83 g	1.00 mL	D	04/22/11
11-8725-SS83OMSD	DMA-TP3-5-6-042011	8.90 g	1.00 mL	D	04/22/11

4  
TPH METHOD BLANK SUMMARY

BLANK NO.

SS83MBS1

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD-SNIDER

SDG No.: SS83

Project No.: LORA LAKE

Date Extracted: 04/22/11

Matrix: SOLID

Date Analyzed : 04/25/11

Instrument ID : FID9

Time Analyzed : 2001

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
	=====	=====	=====
01	SS83LCSS1	SS83LCSS1	04/25/11
02	DMA-TP1-0-3-	SS83A	04/25/11
03	DMA-TP1-3-4.	SS83B	04/25/11
04	DMA-TP1-4.5-	SS83C	04/25/11
05	DMA-TP2-1.5-	SS83D	04/25/11
06	DMA-TP2-3-4-	SS83E	04/25/11
07	DMA-TP6-0-2.	SS83F	04/25/11
08	DMA-TP6-2.5-	SS83G	04/25/11
09	DMA-TP4-0-1.	SS83H	04/26/11
10	DMA-TP4-1.5-	SS83I	04/26/11
11	DMA-TP5-1.5-	SS83J	04/26/11
12	DMA-TP5-1.5-	SS83K	04/26/11
13	DMA-TP5-2-3-	SS83L	04/26/11
14	DMA-TP3-2-3-	SS83M	04/26/11
15	DMA-TP3-3-4-	SS83N	04/26/11
16	DMA-TP3-5-6-	SS83O	04/26/11
17	DMA-TP3-5-6-	SS83OMS	04/26/11
18	DMA-TP3-5-6-	SS83OMSD	04/26/11
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			

6a  
NW DIESEL INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: FLOYD-SNIDER

Instrument: FID9.I

Project: LORA LAKE

Calibration Date: 20-JAN-2011

SDG No.: SS43

Diesel Range	RF1 50	RF2 100	RF3 250	RF4 500	RF5 1000	RF6 2500	Ave RF	%RSD
WA Diesel	24039	22507	22451	22137	23038	21746	22653	3.5
AK Diesel	27229	25485	25276	24857	25838	24470	25526	3.8
OR Diesel	27318	25588	25386	24978	25964	24607	25641	3.7
o-Terph	21882	20885	21247	21247	21987	21255	21417	2.0

<- Indicates %RSD outside limits  
Surrogate areas are not included in Diesel RF calculation.

Quant Ranges :   WA Diesel   C12-C24 (2.623-5.324)  
                  AK Diesel   C10-C25 (1.988-5.548)  
                  OR Diesel   C10-C28 (1.988-6.104)

Calibration Files      Analysis Time

---

0120A007.D	20-JAN-2011 16:13
0120A008.D	20-JAN-2011 16:34
0120A009.D	20-JAN-2011 16:56
0120A010.D	20-JAN-2011 17:17
0120A011.D	20-JAN-2011 17:39
0120A014.D	20-JAN-2011 18:43

6a  
NW MOTOR OIL RANGE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: FLOYD-SNIDER

Instrument: FID9.I

Project: LORA LAKE

Calibration Date: 20-JAN-2011

SDG No.: SS83

Product Range	RF1 100	RF2 250	RF3 500	RF4 1000	RF5 2500	RF6 5000	Ave RF	%RSD
WA M.Oil C24-C38	11365	12494	12640	13320	13928	15835	13264	11.5
Triac Surr	14163	16198	16626	17913	19039	21819	17626	14.9

<- Indicates %RSD outside limits  
Surrogate areas are not included in Motor Oil RF calculation.

Calibration Files      Analysis Time

---

0120A015.D	20-JAN-2011 19:04
0120A016.D	20-JAN-2011 19:26
0120A017.D	20-JAN-2011 19:47
0120A018.D	20-JAN-2011 20:08
0120A019.D	20-JAN-2011 20:30
0120A020.D	20-JAN-2011 20:51

7a  
DIESEL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.      Client: FLOYD-SNIDER  
 ICal Date: 20-JAN-2011                      Project: LORA LAKE  
 CCal Date: 25-APR-2011                      SDG No.: SS83  
 Analysis Time: 19:18                          Lab ID: DIESEL#1  
 Instrument: FID9.I                              Lab File Name: 0425A011.D

Diesel Range	Area*	CalcAmnt	NomAmnt	% D
WADies (C12-C24)	5052833	223.1	250	-10.8
AK102 (C10-C25)	5650824	221.4	250	-11.4
Terphenyl	865999	40.4	45	-10.1

\* Surrogate areas are subtracted from range areas  
 <- Indicates a %D outside QC limits

Quant Ranges :    WA Diesel    C12-C24  
                       AK Diesel    C10-C25

7a  
MOTOR OIL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.      Client: FLOYD-SNIDER  
 ICal Date: 20-JAN-2011                      Project: LORA LAKE  
 CCal Date: 25-APR-2011                      SDG No.: SS83  
 Analysis Time: 19:39                          Lab ID: MOIL#1  
 Instrument: FID9.I                              Lab File Name: 0425A012.D

M.oil Range	Area*	CalcAmnt	NomAmnt	% D	
WAMoil (C24-C38)	6585340	496.5	500	-0.7	<-
AK103 (C25-C36)	5537547	651.6	500	30.3	
n-Triacontane	796103	45.2	45	0.4	

\* Surrogate areas are subtracted from range areas  
 <- Indicates a %D outside QC limits

Quant Ranges :    WA M.Oil    C24-C38  
                   AK M.Oil    C25-C36



7a  
DIESEL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.      Client: FLOYD-SNIDER  
 ICal Date: 20-JAN-2011                      Project: LORA LAKE  
 CCal Date: 25-APR-2011                      SDG No.: SS83  
 Analysis Time: 23:36                          Lab ID: DIESEL#2  
 Instrument: FID9.I                              Lab File Name: 0425A023.D

Diesel Range	Area*	CalcAmnt	NomAmnt	% D
WADies (C12-C24)	5147353	227.2	250	-9.1
AK102 (C10-C25)	5770439	226.1	250	-9.6
Terphenyl	869305	40.6	45	-9.8

\* Surrogate areas are subtracted from range areas  
 <- Indicates a %D outside QC limits

Quant Ranges :    WA Diesel    C12-C24  
                       AK Diesel    C10-C25

7a  
MOTOR OIL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.      Client: FLOYD-SNIDER  
 ICal Date: 20-JAN-2011                      Project: LORA LAKE  
 CCal Date: 25-APR-2011                      SDG No.: SS83  
 Analysis Time: 23:57                          Lab ID: MOIL#2  
 Instrument: FID9.I                              Lab File Name: 0425A024.D

M.oil Range	Area*	CalcAmnt	NomAmnt	% D	
WAMoil (C24-C38)	6667642	502.7	500	0.5	
AK103 (C25-C36)	5585679	657.3	500	31.5	<-
n-Triacontane	825352	46.8	45	4.1	

\* Surrogate areas are subtracted from range areas  
 <- Indicates a %D outside QC limits

Quant Ranges :    WA M.Oil    C24-C38  
                   AK M.Oil    C25-C36

7a  
DIESEL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.      Client: FLOYD-SNIDER  
 ICal Date: 20-JAN-2011                      Project: LORA LAKE  
 CCal Date: 26-APR-2011                      SDG No.: SS83  
 Analysis Time: 03:54                          Lab ID: DIESEL#3  
 Instrument: FID9.I                              Lab File Name: 0425A035.D

Diesel Range	Area*	CalcAmnt	NomAmnt	% D
WADies (C12-C24)	5191194	229.2	250	-8.3
AK102 (C10-C25)	5803997	227.4	250	-9.0
Terphenyl	874308	40.8	45	-9.3

\* Surrogate areas are subtracted from range areas  
 <- Indicates a %D outside QC limits

Quant Ranges :    WA Diesel    C12-C24  
                       AK Diesel    C10-C25

7a  
MOTOR OIL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.      Client: FLOYD-SNIDER  
 ICal Date: 20-JAN-2011                      Project: LORA LAKE  
 CCal Date: 26-APR-2011                      SDG No.: SS83  
 Analysis Time: 04:15                          Lab ID: MOIL#3  
 Instrument: FID9.I                              Lab File Name: 0425A036.D

M.oil Range	Area*	CalcAmnt	NomAmnt	% D
WAMoil (C24-C38)	7116992	536.6	500	7.3
AK103 (C25-C36)	5971309	702.7	500	40.5
n-Triacontane	884421	50.2	45	11.5

<-

\* Surrogate areas are subtracted from range areas  
 <- Indicates a %D outside QC limits

Quant Ranges :    WA M.Oil    C24-C38  
                   AK M.Oil    C25-C36

8  
TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES, INC                      Client: FLOYD-SNIDER  
 SDG No.: SS83    Project: LORA LAKE  
 Instrument ID: FID9    GC Column: RTX-1  
 Run Date: 01/20/11

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS,  
 IS GIVEN BELOW:

SURROGATE RT FROM DAILY STANDARD					
		TERPH: 4.17		TRIAc: 6.42	
CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAc RT #
01	RT	01/20/11	1530	4.17	6.42
02	IB	01/20/11	1552	4.17	6.42
03	DIESEL 50	01/20/11	1613	4.16	6.41
04	DIESEL 100	01/20/11	1634	4.16	6.41
05	DIESEL 250	01/20/11	1656	4.17	6.41
06	DIESEL 500	01/20/11	1717	4.18	6.42
07	DIESEL 1000	01/20/11	1739	4.19	6.42
08	DIESEL ICV	01/20/11	1822	4.17	6.41
09	DIESEL 2500	01/20/11	1843	4.21	6.41

QC LIMITS  
 (+/- 0.05 MINUTES)  
 (+/- 0.05 MINUTES)

TERPH = o-terph  
 TRIAC = Triacon Surr

\* Values outside of QC limits.

## TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES, INC      Client: FLOYD-SNIDER  
 SDG No.: SS83      Project: LORA LAKE  
 Instrument ID: FID9      GC Column: RTX-1  
 Run Date: 01/20/11

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS,  
 IS GIVEN BELOW:

SURROGATE RT FROM DAILY STANDARD						
		TERPH: 4.17		TRIAIC: 6.42		
	CLIENT	LAB	DATE	TIME	TERPH	TRIAIC
	SAMPLE NO.	SAMPLE ID	ANALYZED	ANALYZED	RT #	RT #
=====						
01	RT	RT	01/20/11	1530	4.17	6.42
02		IB	01/20/11	1552	4.17	6.42
03	MOIL 100	MOIL 100	01/20/11	1904	4.17	6.41
04	MOIL 250	MOIL 250	01/20/11	1926	4.17	6.42
05	MOIL 500	MOIL 500	01/20/11	1947	4.17	6.42
06	MOIL 1000	MOIL 1000	01/20/11	2008	4.17	6.44
07	MOIL 2500	MOIL 2500	01/20/11	2030	4.17	6.46
08	MOIL 5000	MOIL 5000	01/20/11	2051	4.17	6.50*
09		MOIL ICV	01/20/11	2112	4.17	6.42

TERPH = o-terph  
 TRIAC = Triacon Surr

QC LIMITS  
 (+/- 0.05 MINUTES)  
 (+/- 0.05 MINUTES)

\* Values outside of QC limits.

\*Peak shifting occurs when column plates are close to overloaded.  
 Sample surrogates are spiked at 45ppm. n-Triacontane quants %14.9 RSD and  
 meets Ical criteria. No further corrective action needed.

8  
TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES, INC      Client: FLOYD-SNIDER  
 SDG No.: SS83      Project: LORA LAKE  
 Instrument ID: FID9      GC Column: RTX-1  
 Run Date: 04/25/11

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS,  
 IS GIVEN BELOW:

SURROGATE RT FROM DAILY STANDARD						
		TERPH: 4.15	TRIAC: 6.41			
CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #	
01	RT	04/25/11	1834	4.15	6.41	
02	IB	04/25/11	1856	4.16	6.41	
03	LORA LAKE	04/25/11	1918	4.15	6.41	
04	LORA LAKE	04/25/11	1939	4.16	6.41	
05	SS83MBS1	04/25/11	2001	4.16	6.40	
06	SS83LCSS1	04/25/11	2022	4.16	6.40	
07	ZZZZZ	04/25/11	2044	4.15	6.40	
08	DMA-TP1-0-3-	04/25/11	2106	4.15	6.40	
09	DMA-TP1-3-4.	04/25/11	2127	4.15	6.41	
10	DMA-TP1-4.5-	04/25/11	2148	4.15	6.40	
11	DMA-TP2-1.5-	04/25/11	2210	4.15	6.40	
12	DMA-TP2-3-4-	04/25/11	2231	4.15	6.40	
13	DMA-TP6-0-2.	04/25/11	2253	4.15	6.40	
14	DMA-TP6-2.5-	04/25/11	2314	4.15	6.40	
15	LORA LAKE	04/25/11	2336	4.15	6.41	
16	LORA LAKE	04/25/11	2357	4.16	6.41	
17	DMA-TP4-0-1.	04/26/11	0019	4.15	6.40	
18	DMA-TP4-1.5-	04/26/11	0040	4.15	6.40	
19	DMA-TP5-1.5-	04/26/11	0102	4.15	6.40	
20	DMA-TP5-1.5-	04/26/11	0123	4.15	6.40	
21	DMA-TP5-2-3-	04/26/11	0145	4.15	6.40	
22	DMA-TP3-2-3-	04/26/11	0206	4.15	6.40	
23	DMA-TP3-3-4-	04/26/11	0228	4.15	6.41	
24	DMA-TP3-5-6-	04/26/11	0249	4.15	6.40	
25	DMA-TP3-5-6-	04/26/11	0311	4.16	6.40	
26	DMA-TP3-5-6-	04/26/11	0332	4.16	6.40	
27	LORA LAKE	04/26/11	0354	4.16	6.40	
28	LORA LAKE	04/26/11	0415	4.16	6.41	

TERPH = o-terph      QC LIMITS  
 (+/- 0.05 MINUTES)  
 TRIAC = Triacon Surr      (+/- 0.05 MINUTES)

\* Values outside of QC limits.

**TPHG/BETX Analysis  
Report and Summary QC Forms**

**ARI Job ID: SS83**



**ORGANICS ANALYSIS DATA SHEET**

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: DMA-RB-042011

SAMPLE

Lab Sample ID: SS83P

LIMS ID: 11-8726

Matrix: Water

Data Release Authorized: *MW*

Reported: 04/27/11

QC Report No: SS83-Floyd Snider

Project: Lora Lake Parcel:DMA

Event: POS-LL

Date Sampled: 04/20/11

Date Received: 04/20/11

Date Analyzed: 04/21/11 09:13

Instrument/Analyst: PID1/MH

Purge Volume: 5.0 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
71-43-2	Benzene	1.0	< 1.0 U
108-88-3	Toluene	1.0	< 1.0 U
100-41-4	Ethylbenzene	1.0	< 1.0 U
179601-23-1	m,p-Xylene	1.0	< 1.0 U
95-47-6	o-Xylene	1.0	< 1.0 U

Gasoline Range Hydrocarbons	0.25	< 0.25 U	GAS ID ---
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**BETX Surrogate Recovery**

Trifluorotoluene	98.0%
Bromobenzene	95.3%

**Gasoline Surrogate Recovery**

Trifluorotoluene	100%
Bromobenzene	97.0%

BETX values reported in µg/L (ppb)  
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

**ORGANICS ANALYSIS DATA SHEET**

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: TP-TB-042011

SAMPLE

Lab Sample ID: SS83Q

LIMS ID: 11-8727

Matrix: Water

Data Release Authorized: *MW*

Reported: 04/27/11

QC Report No: SS83-Floyd Snider

Project: Lora Lake Parcel:DMA

Event: POS-LL

Date Sampled: 04/20/11

Date Received: 04/20/11

Date Analyzed: 04/21/11 08:44

Instrument/Analyst: PID1/MH

Purge Volume: 5.0 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
71-43-2	Benzene	1.0	< 1.0 U
108-88-3	Toluene	1.0	< 1.0 U
100-41-4	Ethylbenzene	1.0	< 1.0 U
179601-23-1	m,p-Xylene	1.0	< 1.0 U
95-47-6	o-Xylene	1.0	< 1.0 U

Gasoline Range Hydrocarbons	0.25	< 0.25 U	GAS ID ---
-----------------------------	------	----------	---------------

**BETX Surrogate Recovery**

Trifluorotoluene	99.4%
Bromobenzene	96.6%

**Gasoline Surrogate Recovery**

Trifluorotoluene	101%
Bromobenzene	97.4%

BETX values reported in µg/L (ppb)  
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

**BETX WATER SURROGATE RECOVERY SUMMARY**

ARI Job: SS83  
Matrix: Water

QC Report No: SS83-Floyd Snider  
Project: Lora Lake Parcel:DMA  
Event: POS-LL

<u>Client ID</u>	<u>TFT</u>	<u>BBZ</u>	<u>TOT OUT</u>
MB-042111	93.6%	95.0%	0
LCS-042111	96.7%	96.2%	0
LCSD-042111	96.8%	97.6%	0
DMA-RB-042011	98.0%	95.3%	0
TP-TB-042011	99.4%	96.6%	0

	<b>LCS/MB LIMITS</b>	<b>QC LIMITS</b>
(TFT) = Trifluorotoluene	(79-120)	(80-120)
(BBZ) = Bromobenzene	(79-120)	(80-120)

Log Number Range: 11-8726 to 11-8727

**TPHG WATER SURROGATE RECOVERY SUMMARY**

ARI Job: SS83  
Matrix: Water

QC Report No: SS83-Floyd Snider  
Project: Lora Lake Parcel:DMA  
Event: POS-LL

<u>Client ID</u>	<u>TFT</u>	<u>BBZ</u>	<u>TOT OUT</u>
MB-042111	96.2%	95.8%	0
LCS-042111	101%	97.6%	0
LCSD-042111	102%	98.3%	0
DMA-RB-042011	100%	97.0%	0
TP-TB-042011	101%	97.4%	0

	<b>LCS/MB LIMITS</b>	<b>QC LIMITS</b>
(TFT) = Trifluorotoluene	(80-120)	(80-120)
(BBZ) = Bromobenzene	(80-120)	(80-120)

Log Number Range: 11-8726 to 11-8727

**ORGANICS ANALYSIS DATA SHEET**

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: LCS-042111

LAB CONTROL SAMPLE

Lab Sample ID: LCS-042111

LIMS ID: 11-8726

Matrix: Water

Data Release Authorized: MW

Reported: 04/27/11

QC Report No: SS83-Floyd Snider

Project: Lora Lake Parcel:DMA

Event: POS-LL

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 04/21/11 07:00

Purge Volume: 5.0 mL

LCSD: 04/21/11 07:29

Instrument/Analyst LCS: PID1/MH

Dilution Factor LCS: 1.0

LCSD: PID1/MH

LCSD: 1.0

Analyte	LCS	Spike	LCS	LCSD	Spike	LCSD	RPD
		Added-LCS	Recovery		Added-LCSD	Recovery	
Benzene	3.24	3.70	87.6%	3.11	3.70	84.1%	4.1%
Toluene	36.7	36.5	101%	35.2	36.5	96.4%	4.2%
Ethylbenzene	10.8	10.7	101%	10.2	10.7	95.3%	5.7%
m,p-Xylene	39.3	40.1	98.0%	37.7	40.1	94.0%	4.2%
o-Xylene	18.2	18.1	101%	17.2	18.1	95.0%	5.6%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

**BETX Surrogate Recovery**

	LCS	LCSD
Trifluorotoluene	96.7%	96.8%
Bromobenzene	96.2%	97.6%

**ORGANICS ANALYSIS DATA SHEET**

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: LCS-042111

LAB CONTROL SAMPLE

Lab Sample ID: LCS-042111

LIMS ID: 11-8726

Matrix: Water

Data Release Authorized: *MW*

Reported: 04/27/11

QC Report No: SS83-Floyd Snider

Project: Lora Lake Parcel:DMA

Event: POS-LL

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 04/21/11 07:00

LCSD: 04/21/11 07:29

Instrument/Analyst LCS: PID1/MH

LCSD: PID1/MH

Purge Volume: 5.0 mL

Dilution Factor LCS: 1.0

LCSD: 1.0

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Gasoline Range Hydrocarbons	1.06	1.00	106%	0.91	1.00	91.0%	15.2%

Reported in mg/L (ppm)

RPD calculated using sample concentrations per SW846.

**TPHG Surrogate Recovery**

	LCS	LCSD
Trifluorotoluene	101%	102%
Bromobenzene	97.6%	98.3%

**ORGANICS ANALYSIS DATA SHEET**  
**BETX by Method SW8021EMod**  
**TPHG by Method NWTPHG**  
 Page 1 of 1

**Sample ID: DMA-TP1-0-3-041911**  
**SAMPLE**

Lab Sample ID: SS83A  
 LIMS ID: 11-8711  
 Matrix: Soil  
 Data Release Authorized: *W*  
 Reported: 04/27/11

QC Report No: SS83-Floyd Snider  
 Project: Lora Lake Parcel:DMA  
 Event: POS-LL  
 Date Sampled: 04/19/11  
 Date Received: 04/20/11

Date Analyzed: 04/21/11 09:42  
 Instrument/Analyst: PID1/MH

Purge Volume: 5.0 mL  
 Sample Amount: 120 mg-dry-wt  
 Percent Moisture: 10.8%

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	20	< 20 U	
108-88-3	Toluene	20	< 20 U	
100-41-4	Ethylbenzene	20	< 20 U	
179601-23-1	m,p-Xylene	41	< 41 U	
95-47-6	o-Xylene	20	< 20 U	
	Gasoline Range Hydrocarbons	4.1	< 4.1 U	---

**BETX Surrogate Recovery**

Trifluorotoluene	97.7%
Bromobenzene	98.0%

**Gasoline Surrogate Recovery**

Trifluorotoluene	98.1%
Bromobenzene	95.7%

BETX values reported in µg/kg (ppb)  
 Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.  
 GRO: Positive result that does not match an identifiable gasoline pattern.  
 Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.  
 Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

**ORGANICS ANALYSIS DATA SHEET**  
**BETX by Method SW8021BMod**  
**TPHG by Method NWTPHG**  
 Page 1 of 1

Sample ID: DMA-TP1-3-4.5-041911  
**SAMPLE**

Lab Sample ID: SS83B  
 LIMS ID: 11-8712  
 Matrix: Soil  
 Data Release Authorized: *MW*  
 Reported: 04/27/11

QC Report No: SS83-Floyd Snider  
 Project: Lora Lake Parcel:DMA  
 Event: POS-LL  
 Date Sampled: 04/19/11  
 Date Received: 04/20/11

Date Analyzed: 04/21/11 10:11  
 Instrument/Analyst: PID1/MH

Purge Volume: 5.0 mL  
 Sample Amount: 92 mg-dry-wt  
 Percent Moisture: 18.1%

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	27	< 27 U	
<b>108-88-3</b>	<b>Toluene</b>	<b>27</b>	<b>68</b>	
<b>100-41-4</b>	<b>Ethylbenzene</b>	<b>27</b>	<b>50</b>	
179601-23-1	m,p-Xylene	54	< 54 U	
95-47-6	o-Xylene	27	< 27 U	
	Gasoline Range Hydrocarbons	5.4	< 5.4 U	---

**BETX Surrogate Recovery**

Trifluorotoluene	98.6%
Bromobenzene	99.2%

**Gasoline Surrogate Recovery**

Trifluorotoluene	102%
Bromobenzene	99.6%

BETX values reported in µg/kg (ppb)  
 Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.  
 GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.



**ORGANICS ANALYSIS DATA SHEET**  
**BETX by Method SW8021BMod**  
**TPHG by Method NWTPHG**  
 Page 1 of 1

**Sample ID: DMA-TP1-4.5-5.5-041911**  
**SAMPLE**

Lab Sample ID: SS83C  
 LIMS ID: 11-8713  
 Matrix: Soil  
 Data Release Authorized: *mw*  
 Reported: 04/27/11

QC Report No: SS83-Floyd Snider  
 Project: Lora Lake Parcel:DMA  
 Event: POS-LL  
 Date Sampled: 04/19/11  
 Date Received: 04/20/11

Date Analyzed: 04/21/11 10:40  
 Instrument/Analyst: PID1/MH

Purge Volume: 5.0 mL  
 Sample Amount: 130 mg-dry-wt  
 Percent Moisture: 10.8%

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	20	< 20 U	
108-88-3	Toluene	20	< 20 U	
100-41-4	Ethylbenzene	20	< 20 U	
179601-23-1	m,p-Xylene	40	< 40 U	
95-47-6	o-Xylene	20	< 20 U	
	Gasoline Range Hydrocarbons	4.0	< 4.0 U	---

**BETX Surrogate Recovery**

Trifluorotoluene	95.9%
Bromobenzene	95.1%

**Gasoline Surrogate Recovery**

Trifluorotoluene	98.4%
Bromobenzene	95.8%

BETX values reported in µg/kg (ppb)  
 Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.  
 GRO: Positive result that does not match an identifiable gasoline pattern.  
 Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.  
 Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

**ORGANICS ANALYSIS DATA SHEET**  
**BETX by Method SW8021BMod**  
**TPHG by Method NWTPHG**  
 Page 1 of 1

**Sample ID: DMA-TP2-1.5-3-041911**  
**SAMPLE**

Lab Sample ID: SS83D  
 LIMS ID: 11-8714  
 Matrix: Soil  
 Data Release Authorized: *WV*  
 Reported: 04/27/11

QC Report No: SS83-Floyd Snider  
 Project: Lora Lake Parcel:DMA  
 Event: POS-LL  
 Date Sampled: 04/19/11  
 Date Received: 04/20/11

Date Analyzed: 04/21/11 11:10  
 Instrument/Analyst: PID1/MH

Purge Volume: 5.0 mL  
 Sample Amount: 110 mg-dry-wt  
 Percent Moisture: 13.8%

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	23	< 23 U	
<b>108-88-3</b>	<b>Toluene</b>	<b>23</b>	<b>32</b>	
100-41-4	Ethylbenzene	23	< 23 U	
179601-23-1	m,p-Xylene	46	< 46 U	
95-47-6	o-Xylene	23	< 23 U	
Gasoline Range Hydrocarbons		4.6	< 4.6 U	---

**BETX Surrogate Recovery**

Trifluorotoluene	93.8%
Bromobenzene	93.1%

**Gasoline Surrogate Recovery**

Trifluorotoluene	95.9%
Bromobenzene	94.6%

BETX values reported in µg/kg (ppb)  
 Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.  
 GRO: Positive result that does not match an identifiable gasoline pattern.  
 Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.  
 Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

**ORGANICS ANALYSIS DATA SHEET**

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: DMA-TP2-3-4-041911

SAMPLE

Lab Sample ID: SS83E

LIMS ID: 11-8715

Matrix: Soil

Data Release Authorized: *MW*

Reported: 04/27/11

QC Report No: SS83-Floyd Snider

Project: Lora Lake Parcel:DMA

Event: POS-LL

Date Sampled: 04/19/11

Date Received: 04/20/11

Date Analyzed: 04/21/11 13:06

Instrument/Analyst: PID1/MH

Purge Volume: 5.0 mL

Sample Amount: 110 mg-dry-wt

Percent Moisture: 10.3%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	22	< 22 U
108-88-3	Toluene	22	< 22 U
100-41-4	Ethylbenzene	22	< 22 U
179601-23-1	m,p-Xylene	44	< 44 U
95-47-6	o-Xylene	22	< 22 U

<b>Gasoline Range Hydrocarbons</b>	<b>4.4</b>	<b>5.9</b>	<b>GAS ID GRO</b>
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**BETX Surrogate Recovery**

Trifluorotoluene	92.2%
Bromobenzene	92.6%

**Gasoline Surrogate Recovery**

Trifluorotoluene	93.7%
Bromobenzene	92.1%

BETX values reported in µg/kg (ppb)  
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

**ORGANICS ANALYSIS DATA SHEET**  
**BETX by Method SW8021BMod**  
**TPHG by Method NWTPHG**  
 Page 1 of 1

Sample ID: DMA-TP6-0-2.5-041911  
**SAMPLE**

Lab Sample ID: SS83F  
 LIMS ID: 11-8716  
 Matrix: Soil  
 Data Release Authorized: *mw*  
 Reported: 04/27/11

QC Report No: SS83-Floyd Snider  
 Project: Lora Lake Parcel:DMA  
 Event: POS-LL  
 Date Sampled: 04/19/11  
 Date Received: 04/20/11

Date Analyzed: 04/21/11 13:36  
 Instrument/Analyst: PID1/MH

Purge Volume: 5.0 mL  
 Sample Amount: 130 mg-dry-wt  
 Percent Moisture: 11.9%

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	20	< 20 U	
108-88-3	Toluene	20	< 20 U	
100-41-4	Ethylbenzene	20	< 20 U	
179601-23-1	m,p-Xylene	39	< 39 U	
95-47-6	o-Xylene	20	< 20 U	
	Gasoline Range Hydrocarbons	3.9	< 3.9 U	---

**BETX Surrogate Recovery**

Trifluorotoluene	95.7%
Bromobenzene	96.2%

**Gasoline Surrogate Recovery**

Trifluorotoluene	97.5%
Bromobenzene	96.2%

BETX values reported in µg/kg (ppb)  
 Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.  
 GRO: Positive result that does not match an identifiable gasoline pattern.  
 Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.  
 Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

**ORGANICS ANALYSIS DATA SHEET**  
**BETX by Method SW8021BMod**  
**TPHG by Method NWTPHG**  
 Page 1 of 1

**Sample ID: DMA-TP6-2.5-5-041911**  
**SAMPLE**

Lab Sample ID: SS83G  
 LIMS ID: 11-8717  
 Matrix: Soil  
 Data Release Authorized: *MW*  
 Reported: 04/27/11

QC Report No: SS83-Floyd Snider  
 Project: Lora Lake Parcel:DMA  
 Event: POS-LL  
 Date Sampled: 04/19/11  
 Date Received: 04/20/11

Date Analyzed: 04/21/11 14:05  
 Instrument/Analyst: PID1/MH

Purge Volume: 5.0 mL  
 Sample Amount: 140 mg-dry-wt  
 Percent Moisture: 11.7%

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	18	< 18 U	
108-88-3	Toluene	18	< 18 U	
100-41-4	Ethylbenzene	18	< 18 U	
179601-23-1	m,p-Xylene	36	< 36 U	
95-47-6	o-Xylene	18	< 18 U	
	Gasoline Range Hydrocarbons	3.6	< 3.6 U	---

**BETX Surrogate Recovery**

Trifluorotoluene	95.5%
Bromobenzene	96.3%

**Gasoline Surrogate Recovery**

Trifluorotoluene	97.2%
Bromobenzene	96.6%

BETX values reported in µg/kg (ppb)  
 Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.  
 GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

**ORGANICS ANALYSIS DATA SHEET**  
**BETX by Method SW8021BMod**  
**TPHG by Method NWTPHG**  
 Page 1 of 1

**Sample ID: DMA-TP4-0-1.5-042011**  
**SAMPLE**

Lab Sample ID: SS83H  
 LIMS ID: 11-8718  
 Matrix: Soil  
 Data Release Authorized: *mm*  
 Reported: 04/27/11

QC Report No: SS83-Floyd Snider  
 Project: Lora Lake Parcel:DMA  
 Event: POS-LL  
 Date Sampled: 04/20/11  
 Date Received: 04/20/11

Date Analyzed: 04/21/11 14:34  
 Instrument/Analyst: PID1/MH

Purge Volume: 5.0 mL  
 Sample Amount: 22 mg-dry-wt  
 Percent Moisture: 66.0%

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	120	< 120 U	
108-88-3	Toluene	120	< 120 U	
100-41-4	Ethylbenzene	120	< 120 U	
179601-23-1	m,p-Xylene	230	< 230 U	
95-47-6	o-Xylene	120	< 120 U	
Gasoline Range Hydrocarbons		23	< 23 U	---

**BETX Surrogate Recovery**

Trifluorotoluene	94.4%
Bromobenzene	95.5%

**Gasoline Surrogate Recovery**

Trifluorotoluene	96.4%
Bromobenzene	96.0%

BETX values reported in µg/kg (ppb)  
 Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.  
 GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

**ORGANICS ANALYSIS DATA SHEET**  
**BETX by Method SW8021EMod**  
**TPHG by Method NWTPHG**  
 Page 1 of 1

Sample ID: DMA-TP4-1.5-2-042011  
**SAMPLE**

Lab Sample ID: SS83I  
 LIMS ID: 11-8719  
 Matrix: Soil  
 Data Release Authorized: *MMW*  
 Reported: 04/27/11

QC Report No: SS83-Floyd Snider  
 Project: Lora Lake Parcel:DMA  
 Event: POS-LL  
 Date Sampled: 04/20/11  
 Date Received: 04/20/11

Date Analyzed: 04/21/11 15:03  
 Instrument/Analyst: PID1/MH

Purge Volume: 5.0 mL  
 Sample Amount: 120 mg-dry-wt  
 Percent Moisture: 17.3%

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	22	< 22 U	
108-88-3	Toluene	22	< 22 U	
100-41-4	Ethylbenzene	22	< 22 U	
179601-23-1	m,p-Xylene	44	< 44 U	
95-47-6	o-Xylene	22	< 22 U	
	Gasoline Range Hydrocarbons	4.4	< 4.4 U	---

**BETX Surrogate Recovery**

Trifluorotoluene	96.0%
Bromobenzene	96.4%

**Gasoline Surrogate Recovery**

Trifluorotoluene	97.7%
Bromobenzene	95.9%

BETX values reported in µg/kg (ppb)  
 Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.  
 GRO: Positive result that does not match an identifiable gasoline pattern.  
 Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.  
 Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

**ORGANICS ANALYSIS DATA SHEET**  
**BETX by Method SW8021BMod**  
**TPHG by Method NWTPHG**  
 Page 1 of 1

Sample ID: DMA-TP5-1.5-2-042011  
**SAMPLE**

Lab Sample ID: SS83J  
 LIMS ID: 11-8720  
 Matrix: Soil  
 Data Release Authorized: *MW*  
 Reported: 04/27/11

QC Report No: SS83-Floyd Snider  
 Project: Lora Lake Parcel:DMA  
 Event: POS-LL  
 Date Sampled: 04/20/11  
 Date Received: 04/20/11

Date Analyzed: 04/21/11 15:32  
 Instrument/Analyst: PID1/MH

Purge Volume: 5.0 mL  
 Sample Amount: 39 mg-dry-wt  
 Percent Moisture: 49.8%

CAS Number	Analyte	RL	Result	
71-43-2	Benzene	64	< 64 U	
<b>108-88-3</b>	<b>Toluene</b>	<b>64</b>	<b>5,200</b>	
100-41-4	Ethylbenzene	64	< 64 U	
179601-23-1	m,p-Xylene	130	< 130 U	
95-47-6	o-Xylene	64	< 64 U	
<b>Gasoline Range Hydrocarbons</b>		<b>13</b>	<b>18</b>	<b>GAS ID GRO</b>
<b>BETX Surrogate Recovery</b>				
	Trifluorotoluene	94.8%		
	Bromobenzene	97.0%		
<b>Gasoline Surrogate Recovery</b>				
	Trifluorotoluene	97.4%		
	Bromobenzene	97.5%		

BETX values reported in µg/kg (ppb)  
 Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.  
 GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.



**ORGANICS ANALYSIS DATA SHEET**

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: DMA-TP5-1.5-2-042011-D  
SAMPLE

Lab Sample ID: SS83K

LIMS ID: 11-8721

Matrix: Soil

Data Release Authorized: *mm*

Reported: 04/27/11

QC Report No: SS83-Floyd Snider

Project: Lora Lake Parcel:DMA

Event: POS-LL

Date Sampled: 04/20/11

Date Received: 04/20/11

Date Analyzed: 04/21/11 16:02

Instrument/Analyst: PID1/MH

Purge Volume: 5.0 mL

Sample Amount: 37 mg-dry-wt

Percent Moisture: 50.7%

CAS Number	Analyte	RL	Result
71-43-2	Benzene	67	< 67 U
<b>108-88-3</b>	<b>Toluene</b>	<b>67</b>	<b>6,500</b>
100-41-4	Ethylbenzene	67	< 67 U
179601-23-1	m,p-Xylene	130	< 130 U
95-47-6	o-Xylene	67	< 67 U

<b>Gasoline Range Hydrocarbons</b>	<b>13</b>	<b>23</b>	GAS ID <b>GRO</b>
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**BETX Surrogate Recovery**

Trifluorotoluene	92.8%
Bromobenzene	94.5%

**Gasoline Surrogate Recovery**

Trifluorotoluene	95.1%
Bromobenzene	94.6%

BETX values reported in µg/kg (ppb)  
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

**ORGANICS ANALYSIS DATA SHEET**

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: DMA-TP5-2-3-042011

SAMPLE

Lab Sample ID: SS83L

LIMS ID: 11-8722

Matrix: Soil

Data Release Authorized: *MW*

Reported: 04/27/11

QC Report No: SS83-Floyd Snider

Project: Lora Lake Parcel:DMA

Event: POS-LL

Date Sampled: 04/20/11

Date Received: 04/20/11

Date Analyzed: 04/21/11 16:31

Instrument/Analyst: PID1/MH

Purge Volume: 5.0 mL

Sample Amount: 110 mg-dry-wt

Percent Moisture: 18.0%

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	23	< 23 U	
108-88-3	Toluene	23	< 23 U	
100-41-4	Ethylbenzene	23	< 23 U	
179601-23-1	m,p-Xylene	46	< 46 U	
95-47-6	o-Xylene	23	< 23 U	
	Gasoline Range Hydrocarbons	4.6	< 4.6 U	---

**BETX Surrogate Recovery**

Trifluorotoluene	92.8%
Bromobenzene	95.2%

**Gasoline Surrogate Recovery**

Trifluorotoluene	95.1%
Bromobenzene	94.5%

BETX values reported in µg/kg (ppb)  
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

**ORGANICS ANALYSIS DATA SHEET**  
**BETX by Method SW8021BMod**  
**TPHG by Method NWTPHG**  
 Page 1 of 1

Sample ID: DMA-TP3-2-3-042011  
**SAMPLE**

Lab Sample ID: SS83M  
 LIMS ID: 11-8723  
 Matrix: Soil  
 Data Release Authorized: *MW*  
 Reported: 04/27/11

QC Report No: SS83-Floyd Snider  
 Project: Lora Lake Parcel:DMA  
 Event: POS-LL  
 Date Sampled: 04/20/11  
 Date Received: 04/20/11

Date Analyzed: 04/21/11 17:00  
 Instrument/Analyst: PID1/MH

Purge Volume: 5.0 mL  
 Sample Amount: 110 mg-dry-wt  
 Percent Moisture: 16.7%

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	22	< 22 U	
108-88-3	Toluene	22	< 22 U	
100-41-4	Ethylbenzene	22	< 22 U	
179601-23-1	m,p-Xylene	44	< 44 U	
95-47-6	o-Xylene	22	< 22 U	
	Gasoline Range Hydrocarbons	4.4	< 4.4 U	---

**BETX Surrogate Recovery**

Trifluorotoluene	94.3%
Bromobenzene	95.9%

**Gasoline Surrogate Recovery**

Trifluorotoluene	96.0%
Bromobenzene	95.6%

BETX values reported in µg/kg (ppb)  
 Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.  
 GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

**ORGANICS ANALYSIS DATA SHEET**  
**BETX by Method SW8021BMod**  
**TPHG by Method NWTPHG**  
 Page 1 of 1

**Sample ID: DMA-TP3-3-4-042011**  
**SAMPLE**

Lab Sample ID: SS83N  
 LIMS ID: 11-8724  
 Matrix: Soil  
 Data Release Authorized: *MW*  
 Reported: 04/27/11

QC Report No: SS83-Floyd Snider  
 Project: Lora Lake Parcel:DMA  
 Event: POS-LL  
 Date Sampled: 04/20/11  
 Date Received: 04/20/11

Date Analyzed: 04/21/11 18:57  
 Instrument/Analyst: PID1/MH

Purge Volume: 5.0 mL  
 Sample Amount: 35 mg-dry-wt  
 Percent Moisture: 51.1%

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	71	< 71 U	
<b>108-88-3</b>	<b>Toluene</b>	<b>71</b>	<b>71</b>	
100-41-4	Ethylbenzene	71	< 71 U	
179601-23-1	m,p-Xylene	140	< 140 U	
95-47-6	o-Xylene	71	< 71 U	
	Gasoline Range Hydrocarbons	14	< 14 U	---

**BETX Surrogate Recovery**

Trifluorotoluene	91.6%
Bromobenzene	95.0%

**Gasoline Surrogate Recovery**

Trifluorotoluene	93.8%
Bromobenzene	95.9%

BETX values reported in µg/kg (ppb)  
 Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.  
 GRO: Positive result that does not match an identifiable gasoline pattern.  
 Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.  
 Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

**ORGANICS ANALYSIS DATA SHEET**

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: DMA-TP3-5-6-042011

SAMPLE

Lab Sample ID: SS830

LIMS ID: 11-8725

Matrix: Soil

Data Release Authorized: *mw*

Reported: 04/27/11

QC Report No: SS83-Floyd Snider

Project: Lora Lake Parcel:DMA

Event: POS-LL

Date Sampled: 04/20/11

Date Received: 04/20/11

Date Analyzed: 04/21/11 19:26

Instrument/Analyst: PID1/MH

Purge Volume: 5.0 mL

Sample Amount: 140 mg-dry-wt

Percent Moisture: 12.6%

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	17	< 17 U	
108-88-3	Toluene	17	< 17 U	
100-41-4	Ethylbenzene	17	< 17 U	
179601-23-1	m,p-Xylene	35	< 35 U	
95-47-6	o-Xylene	17	< 17 U	
	Gasoline Range Hydrocarbons	3.5	< 3.5 U	---

**BETX Surrogate Recovery**

Trifluorotoluene	91.9%
Bromobenzene	95.0%

**Gasoline Surrogate Recovery**

Trifluorotoluene	93.5%
Bromobenzene	95.6%

BETX values reported in µg/kg (ppb)  
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

**BETX SOIL SURROGATE RECOVERY SUMMARY**

ARI Job: SS83  
Matrix: Soil

QC Report No: SS83-Floyd Snider  
Project: Lora Lake Parcel:DMA  
Event: POS-LL

<u>Client ID</u>	<u>TFT</u>	<u>BBZ</u>	<u>TOT OUT</u>
MB-042111	93.6%	95.0%	0
LCS-042111	96.7%	96.2%	0
LCSD-042111	96.8%	97.6%	0
DMA-TP1-0-3-041911	97.7%	98.0%	0
DMA-TP1-3-4.5-041911	98.6%	99.2%	0
DMA-TP1-4.5-5.5-041911	95.9%	95.1%	0
DMA-TP2-1.5-3-041911	93.8%	93.1%	0
DMA-TP2-3-4-041911	92.2%	92.6%	0
DMA-TP6-0-2.5-041911	95.7%	96.2%	0
DMA-TP6-2.5-5-041911	95.5%	96.3%	0
DMA-TP4-0-1.5-042011	94.4%	95.5%	0
DMA-TP4-1.5-2-042011	96.0%	96.4%	0
DMA-TP5-1.5-2-042011	94.8%	97.0%	0
DMA-TP5-1.5-2-042011-D	92.8%	94.5%	0
DMA-TP5-2-3-042011	92.8%	95.2%	0
DMA-TP3-2-3-042011	94.3%	95.9%	0
DMA-TP3-3-4-042011	91.6%	95.0%	0
DMA-TP3-5-6-042011	91.9%	95.0%	0
DMA-TP3-5-6-042011 MS	93.9%	96.1%	0
DMA-TP3-5-6-042011 MSD	91.3%	94.6%	0

	<b>LCS/MB LIMITS</b>	<b>QC LIMITS</b>
(TFT) = Trifluorotoluene	(80-120)	(68-124)
(BBZ) = Bromobenzene	(77-120)	(62-134)

Log Number Range: 11-8711 to 11-8725

**TPHG SOIL SURROGATE RECOVERY SUMMARY**

ARI Job: SS83  
Matrix: Soil

QC Report No: SS83-Floyd Snider  
Project: Lora Lake Parcel:DMA  
Event: POS-LL

<u>Client ID</u>	<u>BFB</u>	<u>TFT</u>	<u>BBZ</u>	<u>TOT</u>	<u>OUT</u>
MB-042111	NA	96.2%	95.8%	0	0
LCS-042111	NA	101%	97.6%	0	0
LCSD-042111	NA	102%	98.3%	0	0
DMA-TP1-0-3-041911	NA	98.1%	95.7%	0	0
DMA-TP1-3-4.5-041911	NA	102%	99.6%	0	0
DMA-TP1-4.5-5.5-041911	NA	98.4%	95.8%	0	0
DMA-TP2-1.5-3-041911	NA	95.9%	94.6%	0	0
DMA-TP2-3-4-041911	NA	93.7%	92.1%	0	0
DMA-TP6-0-2.5-041911	NA	97.5%	96.2%	0	0
DMA-TP6-2.5-5-041911	NA	97.2%	96.6%	0	0
DMA-TP4-0-1.5-042011	NA	96.4%	96.0%	0	0
DMA-TP4-1.5-2-042011	NA	97.7%	95.9%	0	0
DMA-TP5-1.5-2-042011	NA	97.4%	97.5%	0	0
DMA-TP5-1.5-2-042011-D	NA	95.1%	94.6%	0	0
DMA-TP5-2-3-042011	NA	95.1%	94.5%	0	0
DMA-TP3-2-3-042011	NA	96.0%	95.6%	0	0
DMA-TP3-3-4-042011	NA	93.8%	95.9%	0	0
DMA-TP3-5-6-042011	NA	93.5%	95.6%	0	0
DMA-TP3-5-6-042011 MS	NA	97.2%	95.2%	0	0
DMA-TP3-5-6-042011 MSD	NA	95.3%	94.2%	0	0

	<b>LCS/MB LIMITS</b>	<b>QC LIMITS</b>
(BFB) = Bromofluorobenzene	(70-130)	(70-130)
(TFT) = Trifluorotoluene	(80-120)	(66-123)
(BBZ) = Bromobenzene	(80-120)	(62-130)

Log Number Range: 11-8711 to 11-8725

**ORGANICS ANALYSIS DATA SHEET**

**BETX by Method SW8021BMod**

Page 1 of 1

Sample ID: DMA-TP3-5-6-042011

**MATRIX SPIKE**

Lab Sample ID: SS830

LIMS ID: 11-8725

Matrix: Soil

Data Release Authorized: *WW*

Reported: 04/27/11

QC Report No: SS83-Floyd Snider

Project: Lora Lake Parcel:DMA

Event: POS-LL

Date Sampled: 04/20/11

Date Received: 04/20/11

Date Analyzed MS: 04/21/11 19:55

MSD: 04/21/11 20:24

Instrument/Analyst MS: PID1/MH

MSD: PID1/MH

Purge Volume: 5.0 mL

Sample Amount MS: 144 mg-dry-wt

MSD: 144 mg-dry-wt

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Benzene	< 17.4 U	114	102	112%	111	102	109%	2.7%
Toluene	< 17.4 U	1280	1000	128%	1250	1000	125%	2.4%
Ethylbenzene	< 17.4 U	364	294	124%	361	294	123%	0.8%
m,p-Xylene	< 34.7 U	1340	1100	122%	1340	1100	122%	0.0%
o-Xylene	< 17.4 U	619	497	125%	613	497	123%	1.0%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

**BETX Surrogate Recovery**

	MS	MSD
Trifluorotoluene	93.9%	91.3%
Bromobenzene	96.1%	94.6%



**ORGANICS ANALYSIS DATA SHEET**

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: DMA-TP3-5-6-042011

MATRIX SPIKE

Lab Sample ID: SS830

LIMS ID: 11-8725

Matrix: Soil

Data Release Authorized: *mw*

Reported: 04/27/11

QC Report No: SS83-Floyd Snider

Project: Lora Lake Parcel:DMA

Event: POS-LL

Date Sampled: 04/20/11

Date Received: 04/20/11

Date Analyzed MS: 04/21/11 19:55

MSD: 04/21/11 20:24

Instrument/Analyst MS: PID1/MH

MSD: PID1/MH

Purge Volume: 5.0 mL

Sample Amount MS: 144 mg-dry-wt

MSD: 144 mg-dry-wt

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Gasoline Range Hydrocarbons < 3.47 U	32.3	27.5	117%	31.4	27.5	114%	2.8%	

Reported in mg/kg (ppm)

RPD calculated using sample concentrations per SW846.

**TPHG Surrogate Recovery**

	MS	MSD
Trifluorotoluene	97.2%	95.3%
Bromobenzene	95.2%	94.2%

**ORGANICS ANALYSIS DATA SHEET**  
**BETX by Method SW8021BMod**  
 Page 1 of 1

**Sample ID: LCS-042111**  
**LAB CONTROL SAMPLE**

Lab Sample ID: LCS-042111  
 LIMS ID: 11-8711  
 Matrix: Soil  
 Data Release Authorized: *mw*  
 Reported: 04/27/11

QC Report No: SS83-Floyd Snider  
 Project: Lora Lake Parcel:DMA  
 Event: POS-LL  
 Date Sampled: NA  
 Date Received: NA

Date Analyzed LCS: 04/21/11 07:00  
 LCSD: 04/21/11 07:29  
 Instrument/Analyst LCS: PID1/MH  
 LCSD: PID1/MH

Purge Volume: 5.0 mL  
 Sample Amount LCS: 100 mg-dry-wt  
 LCSD: 100 mg-dry-wt

Analyte	Spike		LCS		Spike		RPD
	LCS	Added-LCS	Recovery	LCSD	Added-LCSD	Recovery	
Benzene	162	185	87.6%	156	185	84.3%	3.8%
Toluene	1840	1820	101%	1760	1820	96.7%	4.4%
Ethylbenzene	538	535	101%	510	535	95.3%	5.3%
m,p-Xylene	1970	2000	98.5%	1880	2000	94.0%	4.7%
o-Xylene	910	905	101%	860	905	95.0%	5.6%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

**BETX Surrogate Recovery**

	LCS	LCSD
Trifluorotoluene	96.7%	96.8%
Bromobenzene	96.2%	97.6%

**ORGANICS ANALYSIS DATA SHEET**

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: LCS-042111

LAB CONTROL SAMPLE

Lab Sample ID: LCS-042111

LIMS ID: 11-8711

Matrix: Soil

Data Release Authorized: *mw*

Reported: 04/27/11

QC Report No: SS83-Floyd Snider

Project: Lora Lake Parcel:DMA

Event: POS-LL

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 04/21/11 07:00

LCSD: 04/21/11 07:29

Instrument/Analyst LCS: PID1/MH

LCSD: PID1/MH

Purge Volume: 5.0 mL

Sample Amount LCS: 100 mg-dry-wt

LCSD: 100 mg-dry-wt

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Gasoline Range Hydrocarbons	53.0	50.0	106%	45.6	50.0	91.2%	15.0%

Reported in mg/kg (ppm)

RPD calculated using sample concentrations per SW846.

**TPHG Surrogate Recovery**

	LCS	LCSD
Trifluorotoluene	101%	102%
Bromobenzene	97.6%	98.3%

4  
BETX/GAS METHOD BLANK SUMMARY

BLANK NO.

MB0421S1

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

SDG No.: SS83

Project No.: LORA LAKE PARCEL:DMA

Date Analyzed : 04/21/11

Matrix: SOIL

Time Analyzed : 0758

Instrument ID : PID1

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
	=====	=====	=====
01	LCS0421S1	LCS0421	04/21/11
02	LCSD0421S1	LCSD0421	04/21/11
03	DMA-TP1-0-3-	SS83A	04/21/11
04	DMA-TP1-3-4.	SS83B	04/21/11
05	DMA-TP1-4.5-	SS83C	04/21/11
06	DMA-TP2-1.5-	SS83D	04/21/11
07	DMA-TP2-3-4-	SS83E	04/21/11
08	DMA-TP6-0-2.	SS83F	04/21/11
09	DMA-TP6-2.5-	SS83G	04/21/11
10	DMA-TP4-0-1.	SS83H	04/21/11
11	DMA-TP4-1.5-	SS83I	04/21/11
12	DMA-TP5-1.5-	SS83J	04/21/11
13	DMA-TP5-1.5-	SS83K	04/21/11
14	DMA-TP5-2-3-	SS83L	04/21/11
15	DMA-TP3-2-3-	SS83M	04/21/11
16	DMA-TP3-3-4-	SS83N	04/21/11
17	DMA-TP3-5-6-	SS83O	04/21/11
18	DMA-TP3-5-6-	SS83OMS	04/21/11
19	DMA-TP3-5-6-	SS83OMSD	04/21/11
20			
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28			
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30			

**ORGANICS ANALYSIS DATA SHEET**

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: MB-042111

METHOD BLANK

Lab Sample ID: MB-042111

LIMS ID: 11-8711

Matrix: Soil

Data Release Authorized: *MW*

Reported: 04/27/11

QC Report No: SS83-Floyd Snider

Project: Lora Lake Parcel:DMA

Event: POS-LL

Date Sampled: NA

Date Received: NA

Date Analyzed: 04/21/11 07:58

Instrument/Analyst: PID1/MH

Purge Volume: 5.0 mL

Sample Amount: 100 mg-dry-wt

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	25	< 25 U	
108-88-3	Toluene	25	< 25 U	
100-41-4	Ethylbenzene	25	< 25 U	
179601-23-1	m,p-Xylene	50	< 50 U	
95-47-6	o-Xylene	25	< 25 U	
	Gasoline Range Hydrocarbons	5.0	< 5.0 U	---

**BETX Surrogate Recovery**

Trifluorotoluene	93.6%
Bromobenzene	95.0%

**Gasoline Surrogate Recovery**

Trifluorotoluene	96.2%
Bromobenzene	95.8%

BETX values reported in µg/kg (ppb)  
Gasoline values reported in mg/kg (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

4  
BETX/GAS METHOD BLANK SUMMARY

BLANK NO.

MB0421S1

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

SDG No.: SS83

Project No.: LORA LAKE PARCEL:DMA

Date Analyzed : 04/21/11

Matrix: WATER

Time Analyzed : 0758

Instrument ID : PID1

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
	=====	=====	=====
01	LCS0421S1	LCS0421	04/21/11
02	LCSD0421S1	LCSD0421	04/21/11
03	TP-TB-042011	SS83Q	04/21/11
04	DMA-RB-04201	SS83P	04/21/11
05			
06			
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11			
12			
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**ORGANICS ANALYSIS DATA SHEET**  
**BETX by Method SW8021BMod**  
**TPHG by Method NWTPHG**  
 Page 1 of 1

**Sample ID: MB-042111**  
**METHOD BLANK**

Lab Sample ID: MB-042111  
 LIMS ID: 11-8726  
 Matrix: Water  
 Data Release Authorized: *mw*  
 Reported: 04/27/11

QC Report No: SS83-Floyd Snider  
 Project: Lora Lake Parcel:DMA  
 Event: POS-LL  
 Date Sampled: NA  
 Date Received: NA

Date Analyzed: 04/21/11 07:58  
 Instrument/Analyst: PID1/MH

Purge Volume: 5.0 mL  
 Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
71-43-2	Benzene	1.0	< 1.0 U
108-88-3	Toluene	1.0	< 1.0 U
100-41-4	Ethylbenzene	1.0	< 1.0 U
179601-23-1	m,p-Xylene	1.0	< 1.0 U
95-47-6	o-Xylene	1.0	< 1.0 U

Gasoline Range Hydrocarbons	0.25	< 0.25 U	GAS ID ---
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**BETX Surrogate Recovery**

Trifluorotoluene	93.6%
Bromobenzene	95.0%

**Gasoline Surrogate Recovery**

Trifluorotoluene	96.2%
Bromobenzene	95.8%

BETX values reported in µg/L (ppb)  
 Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.  
 GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

6a  
GAS INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.  
Instrument/Det: PID1.I/RTX 502-2 FID  
Calibration Date: 16-APR-2011

Client: FLOYD SNIDER  
Project: LORA LAKE PARCEL:DMA  
SDG No.: SS83

Gas Range	RF1 0.1	RF2 0.25	RF3 1.0	RF4 2.5	RF5 5.0	RF6 20	Ave RF	%RSD
WA Gas	473250	380984	347138	343150	344223	359894	374773	13.4
AK Gas	727610	621608	562218	550059	548531	614349	604063	11.3
NW Gas	520635	420932	371165	363968	364413	379420	403422	15.2
Cal Gas	903420	770886	701902	689102	686110	751141	750427	11.0
8015Gas	881800	768758	703324	689546	685838	752838	747017	10.0
\$TFT(Surr)	31.27273 26.40500	29.79545	27.23881	28.27000	27.63910	27.41011	28.29017	5.953
\$BB(Surr)	22.59091 19.47500	21.52273	20.02985	21.00000	20.45113	20.64607	20.85510	4.632

<- Indicates %RSD outside limits  
Surrogate areas are not included in RF calculation.

Quant Ranges :   WA Gas    Toluene - nC12  
                  AK Gas    nC6 - nC10  
                  NW Gas    Toluene - Naphthalene  
                  Cal Gas    nC6 - nC12  
                  8015 Gas  2-Methylpentane - 1,2,4-Trimethylbenzene

Calibration Files      Analysis Time

0416a013.d	16-APR-2011 14:50
0416a014.d	16-APR-2011 15:19
0416a015.d	16-APR-2011 15:48
0416a016.d	16-APR-2011 16:17
0416a017.d	16-APR-2011 16:47
0416a018.d	16-APR-2011 17:16

Surr Calibration Files      Analysis Time

0416a004.d	16-APR-2011 10:27
0416a005.d	16-APR-2011 10:56
0416a006.d	16-APR-2011 11:26
0416a007.d	16-APR-2011 11:55
0416a008.d	16-APR-2011 12:24
0416a009.d	16-APR-2011 12:53
0416a010.d	16-APR-2011 13:22



6  
BETX INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

SDG No.: SS83

Project No.: LORA LAKE PARCEL: DMA

Instrument/Det: PID1 /RTX 502-2 PID

Calibration Date: 04/16/11

COMPOUND	CALIBRATION FACTORS					MEAN	%RSD
	0.25	0.5	5	25	50		
Benzene	524	488	441	415	406		
Toluene	412	408	378	389	387		
Ethylbenzene	352	340	331	350	345		
M/P-Xylene	376	364	353	374	372		
O-Xylene	260	270	284	300	298		
MTBE	148	166	172	178	177		
TFT (Surr)	69	67	62	65	65		
BB (Surr)	138	135	127	134	136		

Calibration Files

/chem3/pid1.i/vpcc0416-2.b/0416a004.d  
 /chem3/pid1.i/vpcc0416-2.b/0416a005.d  
 /chem3/pid1.i/vpcc0416-2.b/0416a006.d  
 /chem3/pid1.i/vpcc0416-2.b/0416a007.d  
 /chem3/pid1.i/vpcc0416-2.b/0416a008.d  
 /chem3/pid1.i/vpcc0416-2.b/0416a009.d  
 /chem3/pid1.i/vpcc0416-2.b/0416a010.d

6  
BETX INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

SDG No.: SS83

Project No.: LORA LAKE PARCEL: DMA

Instrument/Det: PID1 /RTX 502-2 PID

Calibration Date: 04/16/11

COMPOUND	CALIBRATION FACTORS						
	100	200	MEAN	%RSD			
Benzene	398	397	438	11.30			
Toluene	386	377	391	3.52			
Ethylbenzene	340	334	342	2.26			
M/P-Xylene	372	360	367	2.34			
O-Xylene	297	296	286	5.52			
MTBE	174	173	170	6.12			
TFT (Surr)	65	63	65	3.74			
BB (Surr)	138	134	134	2.70			

7  
BETX CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

SDG No.: SS83

Project No.: LORA LAKE PARCEL:DMA

Instrument/Det: PID1/RTX 502-2 PID

Calibration Date: 04/21/11

Init. Calib. Date(s): 04/16/11

Calib. File: 0421A002.D

COMPOUND	RT	RT WINDOW		CALC AMOUNT (ng/mL)	NOM AMOUNT (ng/mL)	%D
		FROM	TO			
=====	=====	=====	=====	=====	=====	=====
Benzene	7.06	7.01	7.11	21.65	25.00	-13.4
Toluene	9.95	9.90	10.00	22.89	25.00	-8.4
Ethylbenzene	12.85	12.80	12.90	23.47	25.00	-6.1
M/P-Xylene	13.01	12.96	13.06	46.91	50.00	-6.2
O-Xylene	13.97	13.94	14.00	23.91	25.00	-4.4
MTBE	4.53	4.48	4.58	22.86	25.00	-8.6
TFT (Surr)	7.90	7.85	7.95	94.99	100.0	-5.0
BB (Surr)	15.45	15.40	15.50	93.93	100.0	-6.1

7a  
GAS CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: FLOYD SNIDER

ICal Date: 16-APRIL-2011

Project: LORA LAKE PARCEL: D

CCal Date: 21-APR-2011

SDG No.: SS83

Lab File Name: 0421a003.d

Inst/Det: PID1.I/RTX 502-2 FID

Gas Range	Area*	CalcAmt	NomAmt	%D
WAGas (Tol-C12)	930364	2.48	2.50	-0.7
AKGas (C6-C10)	1523549	2.52	2.50	0.9
NWGas (Tol-Nap)	988508	2.45	2.50	-2.0
8015B (2MP-TMB)	1897894	2.54	2.50	1.6

\* Surrogate areas are subtracted from Total Area  
 <- Indicates an RPD outside QC limits

7b  
FID SURROGATE CONTINUING CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: FLOYD SNIDER

ICal Date: 16-APRIL-2011

Project: LORA LAKE PARCEL: D

CCal Date: 21-APR-2011

SDG No.: SS83

Lab File Name: 0421a003.d

Inst/Det: PID1.I/RTX 502-2 FID

Surrogate	Area	CalcAmnt	NomAmnt	RPD
Trifluorotol	54339	110.0	100.0	10.0
Bromoflrbenz	19166	98.2	100.0	-1.8

7  
BETX CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

SDG No.: SS83

Project No.: LORA LAKE PARCEL:DMA

Instrument/Det: PID1/RTX 502-2 PID

Calibration Date: 04/21/11

Init. Calib. Date(s): 04/16/11

Calib. File: 0421A014.D

COMPOUND	RT	RT WINDOW		CALC AMOUNT (ng/mL)	NOM AMOUNT (ng/mL)	%D
		FROM	TO			
Benzene	7.05	7.01	7.11	24.31	25.00	-2.8
Toluene	9.95	9.90	10.00	23.91	25.00	-4.4
Ethylbenzene	12.85	12.80	12.90	24.40	25.00	-2.4
M/P-Xylene	13.01	12.96	13.06	48.74	50.00	-2.5
O-Xylene	13.97	13.94	14.00	25.08	25.00	0.3
MTBE	4.53	4.48	4.58	23.22	25.00	-7.1
TFT (Surr)	7.90	7.85	7.95	96.94	100.0	-3.1
BB (Surr)	15.45	15.40	15.50	97.02	100.0	-3.0

7a  
GAS CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: FLOYD SNIDER

ICal Date: 16-APRIL-2011

Project: LORA LAKE PARCEL: D

CCal Date: 21-APR-2011

SDG No.: SS83

Lab File Name: 0421a015.d

Inst/Det: PID1.I/RTX 502-2 FID

Gas Range	Area*	CalcAmnt	NomAmnt	%D
WAGas (Tol-C12)	882116	2.35	2.50	-5.9
AKGas (C6-C10)	1468806	2.43	2.50	-2.7
NWGas (Tol-Nap)	931537	2.31	2.50	-7.6
8015B (2MP-TMB)	1824390	2.44	2.50	-2.3

\* Surrogate areas are subtracted from Total Area  
<- Indicates an RPD outside QC limits

7b  
FID SURROGATE CONTINUING CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: FLOYD SNIDER

ICal Date: 16-APRIL-2011

Project: LORA LAKE PARCEL: D

CCal Date: 21-APR-2011

SDG No.: SS83

Lab File Name: 0421a015.d

Inst/Det: PID1.I/RTX 502-2 FID

Surrogate	Area	CalcAmnt	NomAmnt	RPD
Trifluorotol	53557	108.5	100.0	8.5
Bromoflrbenz	18615	98.7	100.0	-1.3



7  
BETX CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

SDG No.: SS83

Project No.: LORA LAKE PARCEL:DMA

Instrument/Det: PID1/RTX 502-2 PID

Calibration Date: 04/21/11

Init. Calib. Date(s): 04/16/11

Calib. File: 0421A026.D

COMPOUND	RT	RT WINDOW		CALC AMOUNT (ng/mL)	NOM AMOUNT (ng/mL)	%D
		FROM	TO			
=====	=====	=====	=====	=====	=====	=====
Benzene	7.05	7.01	7.11	23.89	25.00	-4.4
Toluene	9.94	9.90	10.00	23.35	25.00	-6.6
Ethylbenzene	12.85	12.80	12.90	23.88	25.00	-4.5
M/P-Xylene	13.01	12.96	13.06	47.35	50.00	-5.3
O-Xylene	13.97	13.94	14.00	24.45	25.00	-2.2
MTBE	4.53	4.48	4.58	23.10	25.00	-7.6
TFT (Surr)	7.90	7.85	7.95	91.90	100.0	-8.1
BB (Surr)	15.45	15.40	15.50	94.43	100.0	-5.6

7a  
GAS CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: FLOYD SNIDER

ICal Date: 16-APRIL-2011

Project: LORA LAKE PARCEL: D

CCal Date: 21-APR-2011

SDG No.: SS83

Lab File Name: 0421a027.d

Inst/Det: PID1.I/RTX 502-2 FID

Gas Range	Area*	CalcAmnt	NomAmnt	%D
WAGas (Tol-C12)	818506	2.18	2.50	-12.6
AKGas (C6-C10)	1321847	2.19	2.50	-12.5
NWGas (Tol-Nap)	863176	2.14	2.50	-14.4
8015B (2MP-TMB)	1649768	2.21	2.50	-11.7

\* Surrogate areas are subtracted from Total Area  
<- Indicates an RPD outside QC limits

7b  
FID SURROGATE CONTINUING CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: FLOYD SNIDER

ICal Date: 16-APRIL-2011

Project: LORA LAKE PARCEL: D

CCal Date: 21-APR-2011

SDG No.: SS83

Lab File Name: 0421a027.d

Inst/Det: PID1.I/RTX 502-2 FID

Surrogate	Area	CalcAmt	NomAmt	RPD
Trifluorotol	50547	103.3	100.0	3.3
Bromoflrbenz	18362	97.0	100.0	-3.0

7  
 BETX CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC  
 SDG No.: SS83  
 Instrument/Det: PID1/RTX 502-2 PID  
 Init. Calib. Date(s): 04/16/11

Client: FLOYD SNIDER  
 Project No.: LORA LAKE PARCEL:DMA  
 Calibration Date: 04/21/11  
 Calib. File: 0421A033.D

COMPOUND	RT	RT WINDOW		CALC AMOUNT (ng/mL)	NOM AMOUNT (ng/mL)	%D
		FROM	TO			
=====	=====	=====	=====	=====	=====	=====
Benzene	7.05	7.01	7.11	23.39	25.00	-6.4
Toluene	9.94	9.90	10.00	22.64	25.00	-9.4
Ethylbenzene	12.85	12.80	12.90	23.06	25.00	-7.8
M/P-Xylene	13.01	12.96	13.06	45.82	50.00	-8.4
O-Xylene	13.97	13.94	14.00	23.93	25.00	-4.3
MTBE	4.53	4.48	4.58	22.27	25.00	-10.9
TFT (Surr)	7.90	7.85	7.95	87.46	100.0	-12.5
BB (Surr)	15.45	15.40	15.50	93.37	100.0	-6.6

7a  
GAS CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: FLOYD SNIDER

ICal Date: 16-APRIL-2011

Project: LORA LAKE PARCEL: D

CCal Date: 21-APR-2011

SDG No.: SS83

Lab File Name: 0421a034.d

Inst/Det: PID1.I/RTX 502-2 FID

Gas Range	Area*	CalcAmnt	NomAmnt	%D
WAGas (Tol-C12)	821185	2.19	2.50	-12.4
AKGas (C6-C10)	1278782	2.12	2.50	-15.3
NWGas (Tol-Nap)	867836	2.15	2.50	-14.0
8015B (2MP-TMB)	1604232	2.15	2.50	-14.1

\* Surrogate areas are subtracted from Total Area  
<- Indicates an RPD outside QC limits

7b  
FID SURROGATE CONTINUING CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: FLOYD SNIDER

ICal Date: 16-APRIL-2011

Project: LORA LAKE PARCEL: D

CCal Date: 21-APR-2011

SDG No.: SS83

Lab File Name: 0421a034.d

Inst/Det: PID1.I/RTX 502-2 FID

Surrogate	Area	CalcAmnt	NomAmnt	RPD
Trifluorotol	50292	102.5	100.0	2.5
Bromoflrbenz	18336	98.1	100.0	-1.9

8  
BETX/GAS ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES, INC  
 SDG No.: SS71  
 Instrument ID: PID1  
 Run Date: 04/16/11

Client: FLOYD SNIDER  
 Project: LORA LAKE PARCEL  
 GC Detector: RTX 502-2 FID

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS,  
 IS GIVEN BELOW:

METHOD SURROGATE RT							
		S1 : 7.90		S2 : 15.45			
CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT	#	S2 RT	#
=====							
01	RINSE	04/16/11	0900				
02	RT+BCAL 1	04/16/11	0929	7.90		15.45	
03	RINSE	04/16/11	0958				
04	BETX .25	04/16/11	1027	7.90		15.45	
05	BETX .5	04/16/11	1056	7.90		15.45	
06	BETX 5	04/16/11	1126	7.90		15.45	
07	BETX 25	04/16/11	1155	7.90		15.45	
08	BETX 50	04/16/11	1224	7.90		15.45	
09	BETX 100	04/16/11	1253	7.90		15.45	
10	BETX 200	04/16/11	1322	7.90		15.45	
11	BETX ICV	04/16/11	1352	7.90		15.45	
12	RINSE	04/16/11	1421				
13	GAS .1	04/16/11	1450	7.90		15.45	
14	GAS .25	04/16/11	1519	7.90		15.45	
15	GAS 1	04/16/11	1548	7.90		15.45	
16	GAS 2.5	04/16/11	1617	7.90		15.45	
17	GAS 5	04/16/11	1647	7.90		15.45	
18	GAS 20	04/16/11	1716				
19	RINSE	04/16/11	1745	7.89		15.40	
20	GAS ICV	04/16/11	1814	7.90		15.45	

QC LIMITS

S1 = TFT(Surr) (+/- 0.07 MINUTES)  
 S2 = BB(Surr) (+/- 0.07 MINUTES)

\* Values outside of QC limits.

## BETX/GAS ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

SDG No.: SS83

Project: LORA LAKE PARCEL:DMA

Instrument ID: PID1

GC Detector: RTX 502-2 PID

Run Date: 04/21/11

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS,  
IS GIVEN BELOW:

METHOD SURROGATE RT							
S1 : 7.90		S2 : 15.45					
CLIENT	LAB	DATE	TIME	S1	S2		
SAMPLE NO.	SAMPLE ID	ANALYZED	ANALYZED	RT	RT	#	#
=====	=====	=====	=====	=====	=====	=====	=====
01	ZZZZZ	ZZZZZ	04/21/11	0532			
02	RT+BCAL 1	RT+BCAL 1	04/21/11	0601	7.90		15.45
03	GCAL 1	GCAL 1	04/21/11	0631	7.90		15.45
04	LCS0421S1	LCS0421	04/21/11	0700	7.90		15.45
05	LCSD0421S1	LCSD0421	04/21/11	0729	7.90		15.45
06	MB0421S1	MB0421	04/21/11	0758	7.90		15.45
07	TP-TB-042011	SS83Q	04/21/11	0844	7.90		15.45
08	DMA-RB-04201	SS83P	04/21/11	0913	7.90		15.45
09	DMA-TP1-0-3-	SS83A	04/21/11	0942	7.90		15.45
10	DMA-TP1-3-4.	SS83B	04/21/11	1011	7.90		15.45
11	DMA-TP1-4.5-	SS83C	04/21/11	1040	7.90		15.45
12	DMA-TP2-1.5-	SS83D	04/21/11	1110	7.90		15.45
13	ZZZZZ	ZZZZZ	04/21/11	1139			
14	BCAL 2	BCAL 2	04/21/11	1208	7.90		15.45
15	GCAL 2	GCAL 2	04/21/11	1237	7.90		15.45
16	DMA-TP2-3-4-	SS83E	04/21/11	1306	7.90		15.45
17	DMA-TP6-0-2.	SS83F	04/21/11	1336	7.90		15.45
18	DMA-TP6-2.5-	SS83G	04/21/11	1405	7.90		15.45
19	DMA-TP4-0-1.	SS83H	04/21/11	1434	7.90		15.45
20	DMA-TP4-1.5-	SS83I	04/21/11	1503	7.90		15.45
21	DMA-TP5-1.5-	SS83J	04/21/11	1532	7.90		15.45
22	DMA-TP5-1.5-	SS83K	04/21/11	1602	7.90		15.45
23	DMA-TP5-2-3-	SS83L	04/21/11	1631	7.90		15.45
24	DMA-TP3-2-3-	SS83M	04/21/11	1700	7.90		15.45
25	ZZZZZ	ZZZZZ	04/21/11	1729			
26	BCAL 3	BCAL 3	04/21/11	1758	7.90		15.45
27	GCAL 3	GCAL 3	04/21/11	1827	7.90		15.45
28	DMA-TP3-3-4-	SS83N	04/21/11	1857	7.90		15.45
29	DMA-TP3-5-6-	SS83O	04/21/11	1926	7.90		15.45
30	DMA-TP3-5-6-	SS83OMS	04/21/11	1955	7.90		15.45
31	DMA-TP3-5-6-	SS83OMSD	04/21/11	2024	7.90		15.45
32	ZZZZZ	ZZZZZ	04/21/11	2053			

## QC LIMITS

S1 = TFT(Surr) (+/- 0.05 MINUTES)  
S2 = BB(Surr) (+/- 0.05 MINUTES)

\* Values outside of QC limits.



8  
BETX/GAS ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

SDG No.: SS83

Project: LORA LAKE PARCEL:DMA

Instrument ID: PID1

GC Detector: RTX 502-2 PID

Run Date: 04/21/11

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS,  
IS GIVEN BELOW:

METHOD SURROGATE RT							
		S1 : 7.90		S2 : 15.45			
CLIENT	SAMPLE NO.	LAB	SAMPLE ID	DATE	ANALYZED	TIME	ANALYZED
S1	RT	#	S2	RT	#		
01	BCAL 4	BCAL 4	04/21/11	2122		7.90	15.45
02	GCAL 4	GCAL 4	04/21/11	2152		7.90	15.45

QC LIMITS  
S1 = TFT(Surr)                   (+/- 0.05 MINUTES)  
S2 = BB(Surr)                   (+/- 0.05 MINUTES)

\* Values outside of QC limits.

**Metals Analysis  
Report and Summary QC Forms**

**ARI Job ID: SS83**

# Cover Page

## INORGANIC ANALYSIS DATA PACKAGE



CLIENT: Floyd Snider

PROJECT: Lora Lake Parcel:DMA

SDG: SS83

CLIENT ID	ARI ID	ARI LIMS ID	REPREP
DMA-TP1-0-3-041911	SS83A	11-8711	
PBS	SS83MB1	11-8711	
LCSS	SS83MB1SPK	11-8711	
DMA-TP1-3-4.5-0419	SS83B	11-8712	
DMA-TP1-4.5-5.5-04	SS83C	11-8713	
DMA-TP2-1.5-3-0419	SS83D	11-8714	
DMA-TP2-3-4-041911	SS83E	11-8715	
DMA-TP6-0-2.5-0419	SS83F	11-8716	
DMA-TP6-2.5-5-0419	SS83G	11-8717	
DMA-TP4-0-1.5-0420	SS83H	11-8718	
DMA-TP4-1.5-2-0420	SS83I	11-8719	
DMA-TP5-1.5-2-0420	SS83J	11-8720	
DMA-TP5-1.5-2-0420	SS83K	11-8721	
DMA-TP5-2-3-042011	SS83L	11-8722	
DMA-TP3-2-3-042011	SS83M	11-8723	
DMA-TP3-3-4-042011	SS83N	11-8724	
DMA-TP3-5-6-042011	SS83O	11-8725	
DMA-TP3-5-6-042011D	SS83ODUP	11-8725	
DMA-TP3-5-6-042011S	SS83OSPK	11-8725	
PBW	SS83MB2	11-8726	
LCSW	SS83MB2SPK	11-8726	

Were ICP interelement corrections applied ? Yes/No YES

Were ICP background corrections applied ? Yes/No YES

If yes - were raw data generated before application of background corrections ? Yes/No NO

Comments:

THIS DATA PACKAGE HAS BEEN REVIEWED AND AUTHORIZED FOR RELEASE BY:

Signature:

Name: Jay Kuhn

Date:

4/20/11

Title: Inorganics Director

COVER PAGE

# Cover Page

## INORGANIC ANALYSIS DATA PACKAGE



CLIENT: Floyd Snider

PROJECT: Lora Lake Parcel:DMA

SDG: SS83

CLIENT ID	ARI ID	ARI LIMS ID	REPREP
DMA-RB-042011	SS83P	11-8726	

Were ICP interelement corrections applied ?                      Yes/No    YES  
Were ICP background corrections applied ?                      Yes/No    YES  
If yes - were raw data generated before  
application of background corrections ?                      Yes/No    NO

Comments: \_\_\_\_\_  
                  \_\_\_\_\_  
                  \_\_\_\_\_


THIS DATA PACKAGE HAS BEEN REVIEWED AND AUTHORIZED FOR RELEASE BY:

Signature: Jay Kuhn                      Name: Jay Kuhn  
Date: 4/28/11                      Title: Inorganics Director

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**  
Page 1 of 1

**Sample ID: DMA-TP1-0-3-041911**  
**SAMPLE**

Lab Sample ID: SS83A  
LIMS ID: 11-8711  
Matrix: Soil  
Data Release Authorized:   
Reported: 04/28/11

QC Report No: SS83-Floyd Snider  
Project: Lora Lake Parcel:DMA  
POS-LL  
Date Sampled: 04/19/11  
Date Received: 04/20/11

Percent Total Solids: 88.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/21/11	6010B	04/27/11	7440-38-2	Arsenic	5	8	
3050B	04/21/11	6010B	04/27/11	7439-92-1	Lead	2	15	

U-Analyte undetected at given RL  
RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1

**Sample ID: DMA-TP1-3-4.5-041911**

**SAMPLE**

Lab Sample ID: SS83B

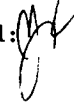
QC Report No: SS83-Floyd Snider

LIMS ID: 11-8712

Project: Lora Lake Parcel:DMA

Matrix: Soil

POS-LL

Data Release Authorized: 

Date Sampled: 04/19/11

Reported: 04/28/11

Date Received: 04/20/11

Percent Total Solids: 79.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/21/11	6010B	04/27/11	7440-38-2	Arsenic	6	15	
3050B	04/21/11	6010B	04/27/11	7439-92-1	Lead	2	18	

U-Analyte undetected at given RL


RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1

Sample ID: DMA-TP1-4.5-5.5-041911  
SAMPLE

Lab Sample ID: SS83C  
LIMS ID: 11-8713  
Matrix: Soil  
Data Release Authorized:   
Reported: 04/28/11

QC Report No: SS83-Floyd Snider  
Project: Lora Lake Parcel:DMA  
POS-LL  
Date Sampled: 04/19/11  
Date Received: 04/20/11

Percent Total Solids: 90.1%


Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/21/11	6010B	04/27/11	7440-38-2	Arsenic	5	6	
3050B	04/21/11	6010B	04/27/11	7439-92-1	Lead	2	29	

U-Analyte undetected at given RL  
RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**  
Page 1 of 1

Sample ID: DMA-TP2-1.5-3-041911  
SAMPLE

Lab Sample ID: SS83D  
LIMS ID: 11-8714  
Matrix: Soil  
Data Release Authorized:   
Reported: 04/28/11

QC Report No: SS83-Floyd Snider  
Project: Lora Lake Parcel:DMA  
POS-LL  
Date Sampled: 04/19/11  
Date Received: 04/20/11

Percent Total Solids: 86.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/21/11	6010B	04/27/11	7440-38-2	Arsenic	6	10	
3050B	04/21/11	6010B	04/27/11	7439-92-1	Lead	2	18	


U-Analyte undetected at given RL  
RL-Reporting Limit



**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**  
Page 1 of 1

Sample ID: DMA-TP2-3-4-041911  
SAMPLE

Lab Sample ID: SS83E  
LIMS ID: 11-8715  
Matrix: Soil  
Data Release Authorized:   
Reported: 04/28/11

QC Report No: SS83-Floyd Snider  
Project: Lora Lake Parcel:DMA  
POS-LL  
Date Sampled: 04/19/11  
Date Received: 04/20/11

Percent Total Solids: 89.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/21/11	6010B	04/27/11	7440-38-2	Arsenic	5	5	U
3050B	04/21/11	6010B	04/27/11	7439-92-1	Lead	2	2	U

U-Analyte undetected at given RL  
RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1

Sample ID: DMA-TP6-0-2.5-041911  
SAMPLE

Lab Sample ID: SS83F

LIMS ID: 11-8716

Matrix: Soil

Data Release Authorized: 

Reported: 04/28/11

QC Report No: SS83-Floyd Snider

Project: Lora Lake Parcel:DMA

POS-LL

Date Sampled: 04/19/11

Date Received: 04/20/11

Percent Total Solids: 86.7%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/21/11	6010B	04/27/11	7440-38-2	Arsenic	5	6	
3050B	04/21/11	6010B	04/27/11	7439-92-1	Lead	2	7	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: DMA-TP6-2.5-5-041911  
SAMPLE

Lab Sample ID: SS83G

LIMS ID: 11-8717

Matrix: Soil

Data Release Authorized: 

Reported: 04/28/11

QC Report No: SS83-Floyd Snider

Project: Lora Lake Parcel:DMA

POS-LL

Date Sampled: 04/19/11

Date Received: 04/20/11

Percent Total Solids: 88.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/21/11	6010B	04/27/11	7440-38-2	Arsenic	5	7	
3050B	04/21/11	6010B	04/27/11	7439-92-1	Lead	2	8	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1

Sample ID: DMA-TP4-0-1.5-042011

SAMPLE

Lab Sample ID: SS83H

QC Report No: SS83-Floyd Snider

LIMS ID: 11-8718

Project: Lora Lake Parcel:DMA

Matrix: Soil

POS-LL

Data Release Authorized: 

Date Sampled: 04/20/11

Reported: 04/28/11

Date Received: 04/20/11

Percent Total Solids: 33.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/21/11	6010B	04/27/11	7440-38-2	Arsenic	10	60	
3050B	04/21/11	6010B	04/27/11	7439-92-1	Lead	6	119	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1


Sample ID: DMA-TP4-1.5-2-042011

SAMPLE

Lab Sample ID: SS83I

LIMS ID: 11-8719

Matrix: Soil

Data Release Authorized 

Reported: 04/28/11

QC Report No: SS83-Floyd Snider

Project: Lora Lake Parcel:DMA

POS-LL

Date Sampled: 04/20/11

Date Received: 04/20/11

Percent Total Solids: 83.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/21/11	6010B	04/27/11	7440-38-2	Arsenic	6	6	U
3050B	04/21/11	6010B	04/27/11	7439-92-1	Lead	2	2	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1


Sample ID: DMA-TP5-1.5-2-042011

SAMPLE

Lab Sample ID: SS83J

LIMS ID: 11-8720

Matrix: Soil

Data Release Authorized: 

Reported: 04/28/11

QC Report No: SS83-Floyd Snider

Project: Lora Lake Parcel:DMA

POS-LL

Date Sampled: 04/20/11

Date Received: 04/20/11

Percent Total Solids: 50.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/21/11	6010B	04/27/11	7440-38-2	Arsenic	9	50	
3050B	04/21/11	6010B	04/27/11	7439-92-1	Lead	4	160	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

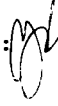
Page 1 of 1

Sample ID: DMA-TP5-1.5-2-042011-D  
SAMPLE

Lab Sample ID: SS83K

LIMS ID: 11-8721

Matrix: Soil

Data Release Authorized:   
Reported: 04/28/11

QC Report No: SS83-Floyd Snider

Project: Lora Lake Parcel:DMA

POS-LL

Date Sampled: 04/20/11

Date Received: 04/20/11

Percent Total Solids: 49.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/21/11	6010B	04/27/11	7440-38-2	Arsenic	9	47	
3050B	04/21/11	6010B	04/27/11	7439-92-1	Lead	4	153	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1


Sample ID: DMA-TP5-2-3-042011

**SAMPLE**

Lab Sample ID: SS83L

LIMS ID: 11-8722

Matrix: Soil

Data Release Authorized: 

Reported: 04/28/11

QC Report No: SS83-Floyd Snider

Project: Lora Lake Parcel:DMA

POS-LL

Date Sampled: 04/20/11

Date Received: 04/20/11

Percent Total Solids: 81.7%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/21/11	6010B	04/27/11	7440-38-2	Arsenic	6	6	U
3050B	04/21/11	6010B	04/27/11	7439-92-1	Lead	2	2	U

U-Analyte undetected at given RL

RL-Reporting Limit



**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: DMA-TP3-2-3-042011  
SAMPLE

Lab Sample ID: SS83M

LIMS ID: 11-8723

Matrix: Soil

Data Release Authorized: 

Reported: 04/28/11

QC Report No: SS83-Floyd Snider

Project: Lora Lake Parcel:DMA

POS-LL

Date Sampled: 04/20/11

Date Received: 04/20/11

Percent Total Solids: 82.9%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/21/11	6010B	04/27/11	7440-38-2	Arsenic	6	7	
3050B	04/21/11	6010B	04/27/11	7439-92-1	Lead	2	10	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

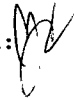
Page 1 of 1

Sample ID: DMA-TP3-3-4-042011  
SAMPLE

Lab Sample ID: SS83N

LIMS ID: 11-8724

Matrix: Soil

Data Release Authorized: 

Reported: 04/28/11

QC Report No: SS83-Floyd Snider

Project: Lora Lake Parcel:DMA

POS-LL

Date Sampled: 04/20/11

Date Received: 04/20/11

Percent Total Solids: 41.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/21/11	6010B	04/27/11	7440-38-2	Arsenic	10	50	
3050B	04/21/11	6010B	04/27/11	7439-92-1	Lead	5	165	

U-Analyte undetected at given RL  
RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1

**Sample ID: DMA-TP3-5-6-042011**

**SAMPLE**

Lab Sample ID: SS830


QC Report No: SS83-Floyd Snider

LIMS ID: 11-8725

Project: Lora Lake Parcel:DMA

Matrix: Soil

POS-LL

Data Release Authorized: 

Date Sampled: 04/20/11

Reported: 04/28/11

Date Received: 04/20/11

Percent Total Solids: 83.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/21/11	6010B	04/27/11	7440-38-2	Arsenic	6	7	
3050B	04/21/11	6010B	04/27/11	7439-92-1	Lead	2	3	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1

Sample ID: DMA-TP3-5-6-042011  
MATRIX SPIKE

Lab Sample ID: SS830

LIMS ID: 11-8725

Matrix: Soil

Data Release Authorized: 

Reported: 04/28/11

QC Report No: SS83-Floyd Snider

Project: Lora Lake Parcel:DMA

POS-LL

Date Sampled: 04/20/11

Date Received: 04/20/11

**MATRIX SPIKE QUALITY CONTROL REPORT**

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Arsenic	6010B	7	226	225	97.3%	
Lead	6010B	3	219	225	96.0%	

Reported in mg/kg-dry

N-Control Limit Not Met

H-% Recovery Not Applicable, Sample Concentration Too High

NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: DMA-TP3-5-6-042011  
DUPLICATE

Lab Sample ID: SS830

LIMS ID: 11-8725

Matrix: Soil

Data Release Authorized: 

Reported: 04/28/11

QC Report No: SS83-Floyd Snider

Project: Lora Lake Parcel:DMA

POS-LL

Date Sampled: 04/20/11

Date Received: 04/20/11

**MATRIX DUPLICATE QUALITY CONTROL REPORT**

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Arsenic	6010B	7	7	0.0%	+/- 6	L
Lead	6010B	3	3	0.0%	+/- 2	L

Reported in mg/kg-dry

\*-Control Limit Not Met

L-RPD Invalid, Limit = Detection Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

**Sample ID: LAB CONTROL**

Lab Sample ID: SS83LCS

LIMS ID: 11-8711

Matrix: Soil

Data Release Authorized: 

Reported: 04/28/11

QC Report No: SS83-Floyd Snider

Project: Lora Lake Parcel:DMA

POS-LL

Date Sampled: NA

Date Received: NA

**BLANK SPIKE QUALITY CONTROL REPORT**

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	6010B	206	200	103%	
Lead	6010B	201	200	100%	

Reported in mg/kg-dry

N-Control limit not met

NA-Not Applicable, Analyte Not Spiked

Control Limits: 80-120%

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1

Sample ID: METHOD BLANK

Lab Sample ID: SS83MB

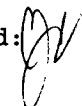
QC Report No: SS83-Floyd Snider

LIMS ID: 11-8711

Project: Lora Lake Parcel:DMA

Matrix: Soil

POS-LL

Data Release Authorized: 

Date Sampled: NA

Reported: 04/28/11

Date Received: NA

Percent Total Solids: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	04/21/11	6010B	04/27/11	7440-38-2	Arsenic	5	5	U
3050B	04/21/11	6010B	04/27/11	7439-92-1	Lead	2	2	U

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: DMA-RB-042011  
SAMPLE

Lab Sample ID: SS83P

LIMS ID: 11-8726

Matrix: Water

Data Release Authorized: 

Reported: 04/28/11

QC Report No: SS83-Floyd Snider

Project: Lora Lake Parcel:DMA

POS-LL

Date Sampled: 04/20/11

Date Received: 04/20/11

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
3010A	04/21/11	6010B	04/27/11	7440-38-2	Arsenic	0.05	0.05	U
3010A	04/21/11	6010B	04/27/11	7439-92-1	Lead	0.02	0.02	U

U-Analyte undetected at given RL

RL-Reporting Limit



**INORGANICS ANALYSIS DATA SHEET**  
**TOTAL METALS**  
 Page 1 of 1

**Sample ID: LAB CONTROL**

Lab Sample ID: SS83LCS

QC Report No: SS83-Floyd Snider

LIMS ID: 11-8726

Project: Lora Lake Parcel:DMA

Matrix: Water

POS-LL

Data Release Authorized: 

Date Sampled: NA

Reported: 04/28/11

Date Received: NA

**BLANK SPIKE QUALITY CONTROL REPORT**

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	6010B	2.05	2.00	102%	
Lead	6010B	2.00	2.00	100%	

Reported in mg/L

N-Control limit not met

Control Limits: 80-120%

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

**Sample ID: METHOD BLANK**

Page 1 of 1

Lab Sample ID: SS83MB


QC Report No: SS83-Floyd Snider

LIMS ID: 11-8726

Project: Lora Lake Parcel:DMA

Matrix: Water

POS-LL

Data Release Authorized: 

Date Sampled: NA

Reported: 04/28/11

Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
3010A	04/21/11	6010B	04/27/11	7440-38-2	Arsenic	0.05	0.05	U
3010A	04/21/11	6010B	04/27/11	7439-92-1	Lead	0.02	0.02	U

U-Analyte undetected at given RL

RL-Reporting Limit

**Calibration Verification**

CLIENT: Floyd Snider

PROJECT: Lora Lake Parcel:DMA

SDG: SS83

UNITS: ug/L

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Arsenic	AS	ICP	IP042771	2000.0	2037.86	101.9	2000.0	2020.46	101.0	1952.24	97.6	1995.46	99.8	1977.26	98.9	1994.33	99.7
Lead	PB	ICP	IP042771	2000.0	1996.87	99.8	2000.0	2029.85	101.5	1964.86	98.2	1940.36	97.0	1986.87	99.3	1934.33	96.7

Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (1)

# Calibration Verification



CLIENT: Floyd Snider

PROJECT: Lora Lake Parcel:DMA

SDG: SS83

UNITS: ug/L

ANALYTE	EL	M	RUN	CCVTV	CCV6	%R	CCV7	%R	CCV8	%R	CCV9	%R	CCV10	%R	CCV11	%R
Arsenic	AS	ICP	IP042771	2000.0	1970.47	98.5	1983.44	99.2								
Lead	PB	ICP	IP042771	2000.0	1925.22	96.3	1942.96	97.1								

Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (1)

# CRDL Standard

CLIENT: Floyd Snider

PROJECT: Lora Lake Parcel:DMA

SDG: SS83



UNITS: ug/L

ANALYTE EL M RUN CRA/I TV CR-1 %R CR-2 %R CR-3 %R CR-4 %R CR-5 %R CR-6 %R

Arsenic AS ICP IP042771 50.0 52.47 104.9  
Lead PB ICP IP042771 20.0 22.44 112.2

Control Limits: no control limits have been established by the EPA at this time.

FORM II (2)

# Calibration Blanks

CLIENT: Floyd Snider

PROJECT: Lora Lake Parcel:DMA

SDG: SS83



UNITS: ug/L

ANALYTE	EL METH	RUN	CRDL	IDL	ICB	ICB C	CCB1	CCB1 C	CCB2	CCB2 C	CCB3	CCB3 C	CCB4	CCB4 C	CCB5	CCB5 C
Arsenic	AS ICP	IP042771	10.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
Lead	PB ICP	IP042771	3.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0

# Calibration Blanks

CLIENT: Floyd Snider

PROJECT: Lora Lake Parcel:DMA

SDG: SS83



UNITS: ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	CCB6	CCB7	CCB8	CCB9	CCB10	CCB11	C
Arsenic	AS	ICP	IP042771	10.0	50.0	50.0	50.0					U
Lead	PB	ICP	IP042771	3.0	20.0	20.0	20.0					U

# ICP Interference Check Sample



CLIENT: Floyd Snider

ICS SOURCE: I.V.

PROJECT: Lora Lake Parcel:DMA

RUNID: IP042771

SDG: SS83

INSTRUMENT ID: OPTIMA ICP 2

UNITS: ug/L

ANALYTE	ICSA TV	ICSA TV	ICSA2	ICSA1	ICSA1	ICSA1	ICSA2	ICSA2	ICSA2	ICSA2	ICSA3	ICSA3	ICSA3	%R	%R	%R
Aluminum	200000	200000	200000	201378.0	201378.0	201255.2	100.6									
Antimony	1000	1000	1000	1.9	1.9	1009.8	101.0									
Arsenic	1000	1000	1000	20.8	20.8	1026.0	102.6									
Barium	1000	1000	1000	-1.0	-1.0	1006.4	100.6									
Beryllium	1000	1000	1000	0.1	0.1	1027.2	102.7									
Boron				-6.4	-6.4		-7.2									
Cadmium	1000	1000	1000	1.0	1.0	990.7	99.1									
Calcium	100000	100000	100000	98806.8	98806.8	99532.2	99.5									
Chromium	1000	1000	1000	-1.1	-1.1	1021.5	102.2									
Cobalt	1000	1000	1000	1.3	1.3	919.3	91.9									
Copper	1000	1000	1000	-1.3	-1.3	1007.4	100.7									
Iron	200000	200000	200000	196895.9	196895.9	197826.6	98.9									
Lead	1000	1000	1000	-4.3	-4.3	952.6	95.3									
Magnesium	100000	100000	100000	99029.0	99029.0	99376.3	99.4									
Manganese	1000	1000	1000	0.4	0.4	950.9	95.1									
Molybdenum				3.1	3.1	3.3										
Nickel	1000	1000	1000	3.9	3.9	1009.7	101.0									
Potassium				45.7	45.7	599.2										
Selenium	1000	1000	1000	25.4	25.4	1043.2	104.3									
Silicon				-6.5	-6.5	-11.5										
Silver	1000	1000	1000	0.2	0.2	1032.1	103.2									
Sodium				-8.5	-8.5	-16.0										
Strontium				3.9	3.9	3.9										
Thallium	1000	1000	1000	11.3	11.3	958.7	95.9									
Tin				4.8	4.8	3.9										
Titanium				-4.1	-4.1	-3.5										
Vanadium	1000	1000	1000	1.3	1.3	962.7	96.3									
Zinc	1000	1000	1000	3.8	3.8	999.1	99.9									



# IDLs and ICP Linear Ranges



CLIENT: Floyd Snider

PROJECT: Lora Lake Parcel:DMA

SDG: SS83

UNITS: ug/L

ANALYTE	EL	METH	INSTRUMENT	WAVELENGTH (nm)	GFA BACK- GROUND	CLP CRDL	RL	RL DATE	ICP LINEAR RANGE (ug/L)	ICP LR DATE
Arsenic	AS	ICP	OPTIMA ICP 2	197.20		10	50.0	4/1/2011	30000.0	2/3/2011
Lead	PB	ICP	OPTIMA ICP 2	220.35		3	20.0	4/1/2011	300000.0	2/3/2011

# ICP Interelement Correction Factors



CLIENT: Floyd Snider

PROJECT: Lora Lake Parcel:DMA

IEC DATE: 3/14/2011

SDG: SS83

INSTRUMENT ID: OPTIMA ICP 2

ANALYTE	WAVELENGTH	AL	AS	BA	BE	CA	CD	CO	CR	CU	FE
Aluminum	308.22	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.84	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	9.9066900	0.0000000	0.0000000
Arsenic	188.98	0.0000000	0.0000000	0.0000000	0.0000000	0.0893242	0.0000000	-1.0280600	0.9896930	0.0000000	0.0000000
Barium	233.53	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.1423420	0.0000000	0.0000000	0.0649797
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	228.80	0.0000000	3.6086500	0.0000000	0.0000000	0.0000000	0.0000000	0.1351930	0.0000000	0.0000000	0.0000000
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0000000	0.0000000	0.0000000	0.0000000	0.0148832	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.62	0.0000000	0.0000000	0.0227510	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.0451581
Copper	324.75	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.1969920	-0.0283867	0.0000000	0.0000000
Iron	273.96	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.35	-0.1952990	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-1.9460200	1.1789000	0.0588763
Magnesium	279.08	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.8349460	0.0000000	0.4579600
Manganese	257.61	0.0056707	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.0082982
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0185703	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.03	0.0000000	0.0000000	0.0000000	0.0000000	0.1513640	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silicon	288.16	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-3.7058000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.07	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.59	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.80	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Tin	189.93	0.0000000	0.0000000	0.0000000	0.0000000	-0.2650000	0.0000000	0.0000000	0.0000000	0.0000000	-0.1350510
Titanium	334.90	0.0000000	0.0000000	0.0000000	0.0000000	0.1735400	0.0000000	0.0000000	0.1546720	0.0000000	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-4.7348500	0.0000000	0.0820500
Zinc	206.20	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0805698	0.0000000	0.0000000

# ICP Interlement Correction Factors



CLIENT: Floyd Snider

PROJECT: Lora Lake Parcel:DMA

SDG: SS83

IEC DATE: 3/14/2011

INSTRUMENT ID: OPTIMA ICP 2

ANALYTE	WAVELENGTH	MG	MN	MO	NI	PB	SB	TI	TL	V	ZN
Aluminum	308.22	0.000000	1.878880	12.130700	0.000000	0.000000	0.000000	2.350330	0.000000	18.036400	0.000000
Antimony	206.84	0.000000	0.000000	0.000000	-0.385518	0.000000	0.000000	-1.514710	0.000000	-3.206310	0.000000
Arsenic	188.98	0.000000	0.000000	1.362000	0.000000	0.000000	0.000000	-8.144460	0.000000	0.000000	0.000000
Barium	233.53	0.000000	0.000000	0.000000	0.075900	0.000000	0.000000	0.000000	0.000000	0.490078	0.000000
Beryllium	313.04	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.537185	0.000000
Cadmium	228.80	0.000000	0.000000	0.000000	-0.621208	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Calcium	317.93	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Chromium	267.72	0.068552	0.000000	0.219900	0.000000	0.000000	0.000000	0.000000	0.000000	0.268954	0.000000
Cobalt	228.62	0.000000	0.000000	-0.253629	0.158455	0.000000	0.000000	1.615940	0.000000	0.000000	0.000000
Copper	324.75	0.004001	0.000000	0.155843	0.000000	0.000000	0.000000	0.303169	0.000000	0.000000	0.000000
Iron	273.96	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Lead	220.35	0.000000	0.000000	-0.372923	0.000000	0.000000	0.000000	0.000000	0.000000	5.275560	0.000000
Magnesium	279.08	0.000000	0.000000	-2.695300	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Manganese	257.61	0.005883	0.000000	0.000000	0.000000	-0.265904	0.000000	0.000000	0.000000	-0.024588	0.000000
Molybdenum	202.03	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Nickel	231.60	0.000000	0.000000	0.000000	0.000000	0.000000	-0.589798	0.000000	0.000000	0.000000	0.000000
Potassium	766.49	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Selenium	196.03	0.085910	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Silicon	288.16	-0.119790	0.000000	-1.847410	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Silver	328.07	0.000000	0.177307	0.106727	0.000000	0.000000	0.000000	0.000000	0.000000	-0.222475	0.000000
Sodium	589.59	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	137.740000	0.000000	0.000000	162.929000
Thallium	190.80	0.000000	0.000000	-3.913880	0.000000	0.000000	0.000000	0.000000	0.000000	1.622560	0.000000
Tin	189.93	0.000000	0.000000	0.000000	0.000000	0.000000	-0.636504	-0.351610	0.000000	0.000000	0.000000
Titanium	334.90	0.000000	0.000000	1.236370	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Vanadium	292.40	0.000000	-0.161968	-0.951633	0.000000	0.000000	0.000000	0.620997	0.000000	0.000000	0.000000
Zinc	206.20	0.000000	0.000000	0.254730	0.000000	-0.067358	0.000000	0.000000	0.000000	0.000000	0.000000

FORM XI

# Preparation Log



CLIENT: Floyd Snider

ANALYSIS METHOD: ICP

PROJECT: Lora Lake Parcel:DMA

ARI PREP CODE: SWC

SDG: SS83

PREPDATE: 4/21/2011

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
DMA-TP1-0-3-041911	SS83A	1.055	0.0	50.0
DMA-TP1-3-4.5-0419	SS83B	1.027	0.0	50.0
DMA-TP1-4.5-5.5-04	SS83C	1.050	0.0	50.0
DMA-TP2-1.5-3-0419	SS83D	1.043	0.0	50.0
DMA-TP2-3-4-041911	SS83E	1.028	0.0	50.0
DMA-TP6-0-2.5-0419	SS83F	1.071	0.0	50.0
DMA-TP6-2.5-5-0419	SS83G	1.053	0.0	50.0
DMA-TP4-0-1.5-0420	SS83H	1.054	0.0	50.0
DMA-TP4-1.5-2-0420	SS83I	1.059	0.0	50.0
DMA-TP5-1.5-2-0420	SS83J	1.081	0.0	50.0
DMA-TP5-1.5-2-0420	SS83K	1.093	0.0	50.0
DMA-TP5-2-3-042011	SS83L	1.049	0.0	50.0
DMA-TP3-2-3-042011	SS83M	1.066	0.0	50.0
PBS	SS83MB1	1.000	0.0	50.0
LCSS	SS83MB1SPK	1.000	0.0	50.0
DMA-TP3-3-4-042011	SS83N	1.050	0.0	50.0
DMA-TP3-5-6-042011	SS83O	1.068	0.0	50.0
DMA-TP3-5-6-042011D	SS83ODUP	1.067	0.0	50.0
DMA-TP3-5-6-042011S	SS83OSPK	1.065	0.0	50.0

# Preparation Log



CLIENT: Floyd Snider

ANALYSIS METHOD: ICP

PROJECT: Lora Lake Parcel:DMA

ARI PREP CODE: TWC

SDG: SS83

PREPDATE: 4/21/2011

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
PBW	SS83MB2	0.000	50.0	50.0
LCSW	SS83MB2SPK	0.000	50.0	50.0
DMA-RB-042011	SS83P	0.000	50.0	50.0

**Analysis Run Log**

CLIENT: Floyd Snider  
 PROJECT: Lora Lake Parcel:DMA  
 SDG: SS83  
 INSTRUMENT ID: OPTIMA ICP 2  
 RUNID: IP042771 METHOD: ICP  
 START DATE: 4/27/2011  
 END DATE: 4/27/2011

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN			
S0		1.00	08434		X																													X		
S2		1.00	08475																																X	
S3		1.00	08494		X																														X	
S4		1.00	08521																																	
S5		1.00	08542																																	
ICV		1.00	08584		X																														X	
ICB		1.00	09020		X																															X
CRI		1.00	09061		X																															X
ICSA		1.00	09102		X																															X
ICSAB		1.00	09144		X																															X
CCV		1.00	09193		X																															X
CCB		1.00	09223		X																															X
ZZZZZZ	ST70MB	2.00	09264																																	
ZZZZZZ	ST42MB2	5.00	09305																																	
ZZZZZZ	ST42Bc	5.00	09352																																	
ZZZZZZ	ST42Ct	5.00	09395																																	
ZZZZZZ	ST42Dc	5.00	09441																																	
ZZZZZZ	ST42ACDUP	5.00	09484																																	
ZZZZZZ	ST42At	5.00	09525																																	
ZZZZZZ	ST42AtSPK	5.00	09572																																	
ZZZZZZ	ST70B	2.00	10013																																	
ZZZZZZ	ST70MBSPK	2.00	10053																																	
CCV	CCV2	1.00	10093		X																															X
CCB	CCB2	1.00	10123		X																															X
ZZZZZZ	SS71MB2	1.00	10164																																	
ZZZZZZ	SS71T	1.00	10210																																	
ZZZZZZ	SS71A	2.00	10251																																	
ZZZZZZ	SS71B	2.00	10290																																	
ZZZZZZ	SS71C	2.00	10330																																	
ZZZZZZ	SS71IDUP	2.00	10370																																	
ZZZZZZ	SS71I	2.00	10410																																	
ZZZZZZ	SS71ISPK	2.00	10445																																	
ZZZZZZ	SS71M	2.00	10485																																	
ZZZZZZ	SS71MB2SPK	1.00	10525																																	
CCV	CCV3	1.00	10565		X																															X

# Analysis Run Log



CLIENT: Floyd Snider  
 PROJECT: Lora Lake Parcel:DMA  
 SDG: SS83  
 INSTRUMENT ID: OPTIMA ICP 2  
 RUNID: IP042771  
 METHOD: ICP  
 START DATE: 4/27/2011  
 END DATE: 4/27/2011

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SM	TI	TL	U	V	ZN					
CCB	CCB3	1.00	11000																																			
ZZZZZZ	SS71MB1	2.00	11042																																			X
ZZZZZZ	SS71D	2.00	11083																																			
ZZZZZZ	SS71E	2.00	11123																																			
ZZZZZZ	SS71F	2.00	11162																																			
ZZZZZZ	SS71G	2.00	11202																																			
ZZZZZZ	SS71H	2.00	11242																																			
ZZZZZZ	SS71J	2.00	11281																																			
ZZZZZZ	SS71K	2.00	11321																																			
ZZZZZZ	SS71L	2.00	11361																																			
ZZZZZZ	SS71MB1SPK	2.00	11401																																			
CCV	CCV4	1.00	11440					X																													X	
CCB	CCB4	1.00	11471					X																														X
PBW	SS83MB2	1.00	11512					X																														X
ZZZZZZ	SS71I	2.00	11552																																			
ZZZZZZ	SS71IDUP	2.00	11591																																			
ZZZZZZ	SS71N	2.00	12031																																			
ZZZZZZ	SS71O	2.00	12071																																			
ZZZZZZ	SS71P	2.00	12111																																			
ZZZZZZ	SS71Q	2.00	12151																																			
ZZZZZZ	SS71R	2.00	12191																																			
ZZZZZZ	SS71S	2.00	12230																																			
LCSW	SS83MB2SPK	1.00	12270						X																												X	
CCV	CCV5	1.00	12310					X																													X	
CCB	CCB5	1.00	12341					X																													X	
PBS	SS83MB1	2.00	12383					X																													X	
DMA-RB-042011	SS83P	1.00	12424					X																													X	
DMA-TP1-0-3-041911	SS83A	2.00	12464					X																													X	
DMA-TP1-3-4-5-0419	SS83B	2.00	12502					X																													X	
DMA-TP1-4-5-5-5-04	SS83C	2.00	12542					X																													X	
DMA-TP2-1.5-3-0419	SS83D	2.00	12581					X																													X	
DMA-TP3-5-6-042011D	SS83ODUP	2.00	13021					X																													X	
DMA-TP3-5-6-042011	SS83O	2.00	13061					X																													X	
DMA-TP3-5-6-042011S	SS83OSP	2.00	13101					X																													X	
LCSW	SS83MB1SPK	2.00	13131					X																													X	

SS83 : SS83S

**Analysis Run Log**

CLIENT: Floyd Snider

PROJECT: Lora Lake Parcel:DMA

SDG: SS83

INSTRUMENT ID: OPTIMA ICP 2

RUNID: IP042771 METHOD: ICP

START DATE: 4/27/2011

END DATE: 4/27/2011

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	V	ZN	
CCV	CCV6	1.00	13171																														X
CCB	CCB6	1.00	13202																														X
DMA-TP2-3-4-041911	SS83E	2.00	13243																														X
DMA-TP6-0-2.5-0419	SS83F	2.00	13283																														X
DMA-TP6-2.5-5-0419	SS83G	2.00	13323																														X
DMA-TP4-0-1.5-0420	SS83H	2.00	13363																														X
DMA-TP4-1.5-2-0420	SS83I	2.00	13402																														X
DMA-TP5-1.5-2-0420	SS83J	2.00	13442																														X
DMA-TP5-1.5-2-0420	SS83K	2.00	13482																														X
DMA-TP5-2-3-042011	SS83L	2.00	13522																														X
DMA-TP3-2-3-042011	SS83M	2.00	13561																														X
DMA-TP3-3-4-042011	SS83N	2.00	14001																														X
CCV	CCV7	1.00	14041																														X
CCB	CCB7	1.00	14072																														X



**General Chemistry Analysis  
Report and Summary QC Forms**

**ARI Job ID: SS83**

SAMPLE RESULTS-CONVENTIONALS  
SS83-Floyd Snider



Matrix: Soil  
Data Release Authorized:  
Reported: 05/11/11

A handwritten signature in black ink, appearing to be 'F. Snider', written over the 'Data Release Authorized' line.

Project: Lora Lake Parcel:DMA  
Event: POS-LL  
Date Sampled: 04/19/11  
Date Received: 04/20/11


Client ID: DMA-TP1-0-3-041911  
ARI ID: 11-8711 SS83A

Analyte	Date	Method	Units	RL	Sample
Total Solids	04/22/11 042211#1	EPA 160.3	Percent	0.01	88.00
Total Organic Carbon	05/10/11 051011#1	Plumb,1981	Percent	0.020	0.871

RL Analytical reporting limit  
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS  
SS83-Floyd Snider



Matrix: Soil  
Data Release Authorized:   
Reported: 05/11/11

Project: Lora Lake Parcel:DMA  
Event: POS-LL  
Date Sampled: 04/19/11  
Date Received: 04/20/11

Client ID: DMA-TP1-3-4.5-041911  
ARI ID: 11-8712 SS83B

Analyte	Date	Method	Units	RL	Sample
Total Solids	04/22/11 042211#1	EPA 160.3	Percent	0.01	81.80
Total Organic Carbon	05/10/11 051011#1	Plumb,1981	Percent	0.020	7.23

RL Analytical reporting limit  
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS  
SS83-Floyd Snider



Matrix: Soil  
Data Release Authorized:  
Reported: 05/11/11

A handwritten signature in black ink, appearing to be 'F. Snider', written over the 'Data Release Authorized' line.

Project: Lora Lake Parcel:DMA  
Event: POS-LL  
Date Sampled: 04/19/11  
Date Received: 04/20/11


Client ID: DMA-TP1-4.5-5.5-041911  
ARI ID: 11-8713 SS83C

Analyte	Date	Method	Units	RL	Sample
Total Solids	04/22/11 042211#1	EPA 160.3	Percent	0.01	89.40
Total Organic Carbon	05/10/11 051011#1	Plumb,1981	Percent	0.020	0.562

RL Analytical reporting limit  
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS  
SS83-Floyd Snider



Matrix: Soil  
Data Release Authorized:   
Reported: 05/11/11

Project: Lora Lake Parcel:DMA  
Event: POS-LL  
Date Sampled: 04/19/11  
Date Received: 04/20/11

Client ID: DMA-TP2-1.5-3-041911


ARI ID: 11-8714 SS83D

Analyte	Date	Method	Units	RL	Sample
Total Solids	04/22/11 042211#1	EPA 160.3	Percent	0.01	85.10
Total Organic Carbon	05/10/11 051011#1	Plumb,1981	Percent	0.020	2.05

RL Analytical reporting limit  
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS  
SS83-Floyd Snider



Matrix: Soil  
Data Release Authorized:   
Reported: 05/11/11

Project: Lora Lake Parcel:DMA  
Event: POS-LL  
Date Sampled: 04/19/11  
Date Received: 04/20/11

Client ID: DMA-TP2-3-4-041911  
ARI ID: 11-8715 SS83E

Analyte	Date	Method	Units	RL	Sample
Total Solids	04/22/11 042211#1	EPA 160.3	Percent	0.01	89.60
Total Organic Carbon	05/10/11 051011#1	Plumb,1981	Percent	0.020	0.617

RL Analytical reporting limit  
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS  
SS83-Floyd Snider



Matrix: Soil  
Data Release Authorized: *[Signature]*  
Reported: 05/11/11

Project: Lora Lake Parcel:DMA  
Event: POS-LL  
Date Sampled: 04/19/11  
Date Received: 04/20/11


Client ID: DMA-TP6-0-2.5-041911  
ARI ID: 11-8716 SS83F

Analyte	Date	Method	Units	RL	Sample
Total Solids	04/22/11 042211#1	EPA 160.3	Percent	0.01	88.00
Total Organic Carbon	05/10/11 051011#1	Plumb,1981	Percent	0.020	0.586

RL Analytical reporting limit  
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS  
SS83-Floyd Snider



Matrix: Soil  
Data Release Authorized:   
Reported: 05/11/11

Project: Lora Lake Parcel:DMA  
Event: POS-LL  
Date Sampled: 04/19/11  
Date Received: 04/20/11

Client ID: DMA-TP6-2.5-5-041911  
ARI ID: 11-8717 SS83G


Analyte	Date	Method	Units	RL	Sample
Total Solids	04/22/11 042211#1	EPA 160.3	Percent	0.01	89.20
Total Organic Carbon	05/10/11 051011#1	Plumb,1981	Percent	0.020	0.495

RL Analytical reporting limit  
U Undetected at reported detection limit



SAMPLE RESULTS-CONVENTIONALS  
SS83-Floyd Snider



Matrix: Soil  
Data Release Authorized:   
Reported: 05/11/11

Project: Lora Lake Parcel:DMA  
Event: POS-LL  
Date Sampled: 04/20/11  
Date Received: 04/20/11


Client ID: DMA-TP4-0-1.5-042011  
ARI ID: 11-8718 SS83H

Analyte	Date	Method	Units	RL	Sample
Total Solids	04/22/11 042211#1	EPA 160.3	Percent	0.01	33.40
Total Organic Carbon	05/10/11 051011#1	Plumb,1981	Percent	0.020	11.1

RL Analytical reporting limit  
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS  
SS83-Floyd Snider



Matrix: Soil  
Data Release Authorized:   
Reported: 05/11/11

Project: Lora Lake Parcel:DMA  
Event: POS-LL  
Date Sampled: 04/20/11  
Date Received: 04/20/11

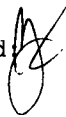
Client ID: DMA-TP4-1.5-2-042011  
ARI ID: 11-8719 SS83I

Analyte	Date	Method	Units	RL	Sample
Total Solids	04/22/11 042211#1	EPA 160.3	Percent	0.01	84.10
Total Organic Carbon	05/10/11 051011#1	Plumb,1981	Percent	0.020	0.259

RL Analytical reporting limit  
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS  
SS83-Floyd Snider



Matrix: Soil  
Data Release Authorized   
Reported: 05/11/11

Project: Lora Lake Parcel:DMA  
Event: POS-LL  
Date Sampled: 04/20/11  
Date Received: 04/20/11

Client ID: DMA-TP5-1.5-2-042011  
ARI ID: 11-8720 SS83J

Analyte	Date	Method	Units	RL	Sample
Total Solids	04/22/11 042211#1	EPA 160.3	Percent	0.01	48.00
Total Organic Carbon	05/10/11 051011#1	Plumb,1981	Percent	0.020	10.7

RL Analytical reporting limit  
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS  
SS83-Floyd Snider



Matrix: Soil  
Data Release Authorized  
Reported: 05/11/11

Project: Lora Lake Parcel:DMA  
Event: POS-LL  
Date Sampled: 04/20/11  
Date Received: 04/20/11


Client ID: DMA-TP5-1.5-2-042011-D  
ARI ID: 11-8721 SS83K

Analyte	Date	Method	Units	RL	Sample
Total Solids	04/22/11 042211#1	EPA 160.3	Percent	0.01	50.10
Total Organic Carbon	05/10/11 051011#1	Plumb,1981	Percent	0.020	11.2

RL Analytical reporting limit  
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS  
SS83-Floyd Snider



Matrix: Soil  
Data Release Authorized:   
Reported: 05/11/11

Project: Lora Lake Parcel:DMA  
Event: POS-LL  
Date Sampled: 04/20/11  
Date Received: 04/20/11


Client ID: DMA-TP5-2-3-042011  
ARI ID: 11-8722 SS83L

Analyte	Date	Method	Units	RL	Sample
Total Solids	04/22/11 042211#1	EPA 160.3	Percent	0.01	79.80
Total Organic Carbon	05/10/11 051011#1	Plumb,1981	Percent	0.020	0.168

RL Analytical reporting limit  
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS  
SS83-Floyd Snider



Matrix: Soil  
Data Release Authorized   
Reported: 05/11/11

Project: Lora Lake Parcel:DMA  
Event: POS-LL  
Date Sampled: 04/20/11  
Date Received: 04/20/11


Client ID: DMA-TP3-2-3-042011  
ARI ID: 11-8723 SS83M

Analyte	Date	Method	Units	RL	Sample
Total Solids	04/22/11 042211#1	EPA 160.3	Percent	0.01	82.30
Total Organic Carbon	05/10/11 051011#1	Plumb,1981	Percent	0.020	1.32

RL Analytical reporting limit  
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS  
SS83-Floyd Snider



Matrix: Soil  
Data Release Authorized:   
Reported: 05/11/11

Project: Lora Lake Parcel:DMA  
Event: POS-LL  
Date Sampled: 04/20/11  
Date Received: 04/20/11


Client ID: DMA-TP3-3-4-042011  
ARI ID: 11-8724 SS83N

Analyte	Date	Method	Units	RL	Sample
Total Solids	04/22/11 042211#1	EPA 160.3	Percent	0.01	34.30
Total Organic Carbon	05/10/11 051011#1	Plumb, 1981	Percent	0.020	6.30

RL Analytical reporting limit  
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS  
SS83-Floyd Snider



Matrix: Soil  
Data Release Authorized:   
Reported: 05/11/11

Project: Lora Lake Parcel:DMA  
Event: POS-LL  
Date Sampled: 04/20/11  
Date Received: 04/20/11

Client ID: DMA-TP3-5-6-042011  
ARI ID: 11-8725 SS830

Analyte	Date	Method	Units	RL	Sample
Total Solids	04/22/11 042211#1	EPA 160.3	Percent	0.01	85.40
Total Organic Carbon	05/10/11 051011#1	Plumb,1981	Percent	0.020	0.519

RL Analytical reporting limit  
U Undetected at reported detection limit



MS/MSD RESULTS-CONVENTIONALS  
SS83-Floyd Snider



Matrix: Soil  
Data Release Authorized: *[Signature]*  
Reported: 05/11/11

Project: Lora Lake Parcel:DMA  
Event: POS-LL  
Date Sampled: 04/20/11  
Date Received: 04/20/11

Analyte	Date	Units	Sample	Spike	Spike Added	Recovery
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ARI ID: SS830 Client ID: DMA-TP3-5-6-042011

Total Organic Carbon	05/10/11	Percent	0.519	1.03	0.567	90.1%
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REPLICATE RESULTS-CONVENTIONALS  
SS83-Floyd Snider



Matrix: Soil  
Data Release Authorized:  
Reported: 05/11/11

A handwritten signature in black ink, appearing to be 'F. Snider', written over the 'Data Release Authorized' line.

Project: Lora Lake Parcel:DMA  
Event: POS-LL  
Date Sampled: 04/20/11  
Date Received: 04/20/11

Analyte	Date	Units	Sample	Replicate (s)	RPD/RSD
<b>ARI ID: SS830 Client ID: DMA-TP3-5-6-042011</b>					
Total Solids	04/22/11	Percent	85.40	85.80 83.60	1.4%
Total Organic Carbon	05/10/11	Percent	0.519	0.568 0.502	6.5%

LAB CONTROL RESULTS-CONVENTIONALS  
SS83-Floyd Snider




Matrix: Soil  
Data Release Authorized: *[Signature]*  
Reported: 05/11/11

Project: Lora Lake Parcel:DMA  
Event: POS-LL  
Date Sampled: NA  
Date Received: NA

Analyte/Method	QC ID	Date	Units	LCS	Spike Added	Recovery
Total Organic Carbon Plumb, 1981	ICVL	05/10/11	Percent	0.097	0.100	97.0%

METHOD BLANK RESULTS-CONVENTIONALS  
SS83-Floyd Snider



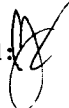
Matrix: Soil  
Data Release Authorized:   
Reported: 05/11/11

Project: Lora Lake Parcel:DMA  
Event: POS-LL  
Date Sampled: NA  
Date Received: NA

Analyte	Date	Units	Blank
Total Solids	04/22/11	Percent	< 0.01 U
Total Organic Carbon	05/10/11	Percent	< 0.020 U

STANDARD REFERENCE RESULTS-CONVENTIONALS  
SS83-Floyd Snider



Matrix: Soil  
Data Release Authorized:   
Reported: 05/11/11

Project: Lora Lake Parcel:DMA  
Event: POS-LL  
Date Sampled: NA  
Date Received: NA

Analyte/SRM ID	Date	Units	SRM	True Value	Recovery
Total Organic Carbon NIST 1941B	05/10/11	Percent	3.01	2.99	100.7%

**Total Solids**

**ARI Job ID: SS83**

Volatiles Total Solids-voats  
Data By: Pat Basilio  
Created: 4/25/11

Worklist: 8333  
Analyst: PAB  
Comments:

Oven ID: \_\_\_\_\_

Balance ID: \_\_\_\_\_

Samples In:           Date: \_\_\_\_\_ Time: \_\_\_\_\_ Temp: \_\_\_\_\_ Analyst: \_\_\_\_\_

Samples Out:          Date: \_\_\_\_\_ Time: \_\_\_\_\_ Temp: \_\_\_\_\_ Analyst: \_\_\_\_\_

ARI ID	Tare Wt (g)	Wet Wt (g)	Dry Wt (g)	% Solids
1. SS83A 11-8711	_____	_____	_____	* 89.20
2. SS83B 11-8712	_____	_____	_____	* 81.90
3. SS83C 11-8713	_____	_____	_____	* 89.20
4. SS83D 11-8714	_____	_____	_____	* 86.20
5. SS83E 11-8715	_____	_____	_____	* 89.70
6. SS83F 11-8716	_____	_____	_____	* 88.10
7. SS83G 11-8717	_____	_____	_____	* 88.30
8. SS83H 11-8718	_____	_____	_____	* 34.00
9. SS83I 11-8719	_____	_____	_____	* 82.70
10. SS83J 11-8720	_____	_____	_____	* 50.20
11. SS83K 11-8721	_____	_____	_____	* 49.30
12. SS83L 11-8722	_____	_____	_____	* 82.00
13. SS83M 11-8723	_____	_____	_____	* 83.30
14. SS83N 11-8724	_____	_____	_____	* 48.90
15. SS83O 11-8725	_____	_____	_____	* 87.40

Extractions Total Solids-extts  
Data By: Woo suk Chang  
Created: 4/22/11

Worklist: 7737  
Analyst: WC  
Comments:

Oven ID: \_\_\_\_\_

Balance ID: \_\_\_\_\_

Samples In:            Date: \_\_\_\_\_ Time: \_\_\_\_\_ Temp: \_\_\_\_\_ Analyst: \_\_\_\_\_

Samples Out:           Date: \_\_\_\_\_ Time: \_\_\_\_\_ Temp: \_\_\_\_\_ Analyst: \_\_\_\_\_

	ARI ID CLIENT ID	Tare Wt (g)	Wet Wt (g)	Dry Wt (g)	% Solids	pH
1.	SS83A 11-8711 DMA-TP1-0-3-041911	1.16	11.44	10.33	89.2	NR
2.	SS83B 11-8712 DMA-TP1-3-4.5-041911	1.18	12.45	10.41	81.9	NR
3.	SS83C 11-8713 DMA-TP1-4.5-5.5-041911	1.17	12.58	11.35	89.2	NR
4.	SS83D 11-8714 DMA-TP2-1.5-3-041911	1.18	12.65	11.07	86.2	NR
5.	SS83E 11-8715 DMA-TP2-3-4-041911	1.17	11.22	10.18	89.7	NR
6.	SS83F 11-8716 DMA-TP6-0-2.5-041911	1.16	11.51	10.28	88.1	NR
7.	SS83G 11-8717 DMA-TP6-2.5-5-041911	1.17	11.57	10.35	88.3	NR
8.	SS83H 11-8718 DMA-TP4-0-1.5-042011	1.16	11.23	4.58	34.0	NR
9.	SS83I 11-8719 DMA-TP4-1.5-2-042011	1.17	11.23	9.49	82.7	NR
10.	SS83J 11-8720 DMA-TP5-1.5-2-042011	1.18	11.70	6.46	50.2	NR
11.	SS83K 11-8721 DMA-TP5-1.5-2-042011-D	1.17	11.59	6.31	49.3	NR
12.	SS83L 11-8722 DMA-TP5-2-3-042011	1.18	12.36	10.35	82.0	NR
13.	SS83M 11-8723 DMA-TP3-2-3-042011	1.17	12.40	10.53	83.3	NR



Extractions Total Solids-extts  
Data By: Woo suk Chang  
Created: 4/22/11

Worklist: 7737  
Analyst: WC  
Comments:

Oven ID: \_\_\_\_\_

Balance ID: \_\_\_\_\_

Samples In:            Date: \_\_\_\_\_ Time: \_\_\_\_\_ Temp: \_\_\_\_\_ Analyst: \_\_\_\_\_

Samples Out:          Date: \_\_\_\_\_ Time: \_\_\_\_\_ Temp: \_\_\_\_\_ Analyst: \_\_\_\_\_

	ARI ID CLIENT ID	Tare Wt (g)	Wet Wt (g)	Dry Wt (g)	% Solids	pH
14.	SS83N 11-8724 DMA-TP3-3-4-042011	1.17	11.83	6.38	48.9	NR
15.	SS83O 11-8725 DMA-TP3-5-6-042011	1.18	11.71	10.38	87.4	NR

Extractions Total Solids-exttts  
Data By: Woo suk Chang  
Created: 4/22/11

Worklist: 7737  
Analyst: WC  
Comments:

Oven ID: 015

Balance ID: 21754520

Samples In: Date: 4/22/11 Time: 19:00 Temp: 103 Analyst: WC

Samples Out: Date: 4/23/11 Time: 13:00 Temp: 100 Analyst: TH

ARI ID CLIENT ID	Tare Wt (g)	Wet Wt (g)	Dry Wt (g)	% Solids	pH
1. SS83A 11-8711 DMA-TP1-0-3-041911	1.16g	11.44g	10.33		NR
2. SS83B 11-8712 DMA-TP1-3-4.5-041911	1.18g	12.45g	10.41		NR
3. SS83C 11-8713 DMA-TP1-4.5-5.5-041911	1.17g	12.58g	11.35		NR
4. SS83D 11-8714 DMA-TP2-1.5-3-041911	1.18g	12.65g	11.07		NR
5. SS83E 11-8715 DMA-TP2-3-4-041911	1.17g	11.22g	10.18		NR
6. SS83F 11-8716 DMA-TP6-0-2.5-041911	1.16g	11.51g	10.28		NR
7. SS83G 11-8717 DMA-TP6-2.5-5-041911	1.17g	11.57g	10.35		NR
8. SS83H 11-8718 DMA-TP4-0-1.5-042011	1.16g	11.23g	4.58		NR
9. SS83I 11-8719 DMA-TP4-1.5-2-042011	1.17g	11.23g	9.49		NR
10. SS83J 11-8720 DMA-TP5-1.5-2-042011	1.18g	11.70g	6.46		NR
11. SS83K 11-8721 DMA-TP5-1.5-2-042011-D	1.17g	11.59g	6.31		NR
12. SS83L 11-8722 DMA-TP5-2-3-042011	1.18g	12.36g	10.35		NR
13. SS83M 11-8723 DMA-TP3-2-3-042011	1.17g	12.40g	10.53		NR

Extractions Total Solids-exttts  
Data By: Woo suk Chang  
Created: 4/22/11

Worklist: 7737  
Analyst: WC  
Comments:

Oven ID: \_\_\_\_\_

Balance ID: \_\_\_\_\_

Samples In:            Date: \_\_\_\_\_ Time: \_\_\_\_\_ Temp: \_\_\_\_\_ Analyst: \_\_\_\_\_

Samples Out:           Date: \_\_\_\_\_ Time: \_\_\_\_\_ Temp: \_\_\_\_\_ Analyst: \_\_\_\_\_

	ARI ID CLIENT ID	Tare Wt (g)	Wet Wt (g)	Dry Wt (g)	% Solids	pH
14.	SS83N 11-8724 DMA-TP3-3-4-042011	1.17g	11.83g	6.38		NR
15.	SS830 11-8725 DMA-TP3-5-6-042011	1.18g	11.71g	10.38		NR

BETX/TPHG Total Solids-betxts  
Data By: Monica Herbert  
Created: 4/25/11

Worklist: 7914  
Analyst: MH  
Comments:

Oven ID: \_\_\_\_\_

Balance ID: \_\_\_\_\_

Samples In:           Date: \_\_\_\_\_ Time: \_\_\_\_\_ Temp: \_\_\_\_\_ Analyst: \_\_\_\_\_

Samples Out:          Date: \_\_\_\_\_ Time: \_\_\_\_\_ Temp: \_\_\_\_\_ Analyst: \_\_\_\_\_

ARI ID	Tare Wt (g)	Wet Wt (g)	Dry Wt (g)	% Solids
1. SS83A 11-8711	_____	_____	_____	\$ 89.2
2. SS83B 11-8712	_____	_____	_____	\$ 81.9
3. SS83C 11-8713	_____	_____	_____	\$ 89.2
4. SS83D 11-8714	_____	_____	_____	\$ 86.2
5. SS83E 11-8715	_____	_____	_____	\$ 89.7
6. SS83F 11-8716	_____	_____	_____	\$ 88.1
7. SS83G 11-8717	_____	_____	_____	\$ 88.3
8. SS83H 11-8718	_____	_____	_____	\$ 34.0
9. SS83I 11-8719	_____	_____	_____	\$ 82.7
10. SS83J 11-8720	_____	_____	_____	\$ 50.2
11. SS83K 11-8721	_____	_____	_____	\$ 49.3
12. SS83L 11-8722	_____	_____	_____	\$ 82.0
13. SS83M 11-8723	_____	_____	_____	\$ 83.3
14. SS83N 11-8724	_____	_____	_____	\$ 48.9
15. SS83O 11-8725	_____	_____	_____	\$ 87.4

Solids Data Entry Report  
Date: 04/22/11

Checked by: KM Date: 4/22/11  
Data Analyst: DM

Solids Determination performed on 04/21/11 by MH

JOB	SAMPLE	CLIENTID	TAREWEIGHT	SAMPDISH	DRYWEIGHT	SOLIDS
SS83	A	DMA-TP1-0-3-041911	1.001	10.683	9.553	88.33
SS83	B	DMA-TP1-3-4.5-04191	1.006	10.847	8.861	79.82
SS83	C	DMA-TP1-4.5-5.5-041	0.988	10.260	9.346	90.14
SS83	D	DMA-TP2-1.5-3-04191	0.988	10.104	8.870	86.46
SS83	E	DMA-TP2-3-4-041911	1.002	10.275	9.267	89.13
SS83	F	DMA-TP6-0-2.5-04191	1.012	10.615	9.342	86.74
SS83	G	DMA-TP6-2.5-5-04191	1.001	10.610	9.487	88.31
SS83	H	DMA-TP4-0-1.5-04201	1.014	10.257	4.087	33.25
SS83	I	DMA-TP4-1.5-2-04201	0.986	10.558	9.007	83.80
SS83	J	DMA-TP5-1.5-2-04201	0.994	10.160	5.605	50.31
SS83	K	DMA-TP5-1.5-2-04201	0.973	10.623	5.778	49.79
SS83	L	DMA-TP5-2-3-042011	1.019	10.257	8.570	81.74
SS83	M	DMA-TP3-2-3-042011	1.009	10.326	8.729	82.86
SS83	N	DMA-TP3-3-4-042011	1.007	10.446	4.908	41.33
SS83	O	DMA-TP3-5-6-042011	0.973	10.672	9.075	83.53



Analytical Resources, Incorporated  
Analytical Chemists and Consultants

## Total Solids Bench Sheet

Laboratory Section Metals

Oven Identification: 07 Balance ID: 068755

Samples in Oven: Date: 4/21/11 Time: 1340 Temp: 103°C Analyst: MH

Removed from Oven: Date: 4-22-11 Time: 0600 Temp: 101°C Analyst: DM

Source of Total Solids Data If From A Different Lab: \_\_\_\_\_

ARI Sample ID	Tare Weight (g)	Tare + Sample Wet (g)	Tare + Sample Dry (g)	Date & Time Last Weight	Final Weighting >12 hrs <sup>1</sup>
<del>SS83</del> A	1.001	10.683	9.553	-	✓
" B	1.006	10.847	8.861	-	✓
" C	0.988	10.260	9.346	-	✓
" D	0.988	10.104	8.870	-	✓
" E	1.002	10.275	9.267	-	✓
" F	1.012	10.615	9.342	-	✓
" G	1.001	10.610	9.487	-	✓
" H	1.014	10.257	4.087	-	✓
" I	0.986	10.558	9.007	-	✓
" J	0.994	10.160	5.605	-	✓
" K	0.973	10.623	5.778	-	✓
" L	1.019	10.257	8.570	-	✓
" M	1.009	10.326	8.729	-	✓
" N	1.007	10.446	4.908	-	✓
" O	0.973	10.672	9.075	-	✓
<del>MH 4/21/11</del>					

1) Place a check mark in this column if samples have dried > 12 but < 24 hours. When samples have been at 104°C < 12 hours, constant weight must be verified as described in SOP 10023S. Use a 2<sup>nd</sup> bench sheet for additional weightings.