RTI Laboratories, Inc.

Date: *21-Oct.-11*

CLIENT: Shaw Environmental & Infrastructure, Inc.
Project: Kirtland AFB
CO#: 501
Tracking #: 140705-036A
Project No.: 140705
Prime Contract: W912DY-10-D0014
Task Order: 02
Lab Order: 1109988

CASE NARRATIVE

SAMPLE RECEIPT:
Samples were received at the RTI Laboratory, Livonia, MI via commercial delivery on 9/27/2011. Samples were received in good condition. The sample set consisted of 20 air samples.

SAMPLE ANALYSIS:
Samples were analyzed at the RTI Livonia Laboratory for:
- Volatile Organic Compounds – EPA Method TO15
- Air-Phase Petroleum Hydrocarbons – MA_APH (Massachusetts DEP APH Method)
- Fixed Gases (Noncondensable Gases/Light Hydrocarbons) – ASTM D2504

QUALITY CONTROL:

Volatile Organic Compounds Analyses:

All sample analyses included a Method Blank, CCV, RLVS (CRQL) and Duplicate. All QC parameters were within established control limits except where noted on the QC forms or below. Initial and continuing calibration results were within method specifications. MS tuning parameters were within the acceptable ranges for the method.

Surrogate recoveries were within established control limits.

Air-Phase Petroleum Hydrocarbons Analyses:

All sample analyses included a Method Blank, LCS, LCSD and Duplicate, where applicable. All QC parameters were within established control limits except where noted on the QC summary forms or below. Initial and continuing calibration results were within method specifications.

Surrogate recoveries were within established control limits.

RTI Laboratories, Inc.

Date: *21-Oct.-11*

CLIENT: Shaw Environmental & Infrastructure, Inc.
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CASE NARRATIVE

Fixed Gases (Noncondensable Gases/Light Hydrocarbons) Analyses:

All sample analyses included a Method Blank, LCS, LCSD and Duplicate, where applicable. All QC parameters were within established control limits except where noted on the QC summary forms or below. Initial and continuing calibration results were within method specifications.

Samples collected in Tedlar bags have a limited holding time as specified by the manufacturer for the collection of volatile organic compounds. There is no known stability data for the analytes of interest for this project collected in Tedlar bags. The standard holding time is 48 hours for Tedlar bags. Due to the nature of the project sample analysis within 48 hours was not feasible

No other problems were noted during the analytical events associated with this project.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted has been authorized by the Laboratory Director or his designee, as verified by the following signature.

Signed: Charles O'Bryan
Charles O'Bryan, Director, Quality Management

Date: 10/21/2011

DBPix Evaluation

Shaw
Shaw E & I, Inc.

1109988

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

Reference Document No: 140705/SV022

Project Number: 140705
Project Name: Kirtland AFB
Sample Coordinator: Mark Lyon
Turnaround Time:

Samples Shipment Date: 20 SEP 2011
Lab Destination: RTI Laboratories
Lab Contact: Mike Truchan
Project Contact: Pamela Moss
Carrier/Waybill No: UPS/2323121146

Bill To: Shaw Environmental, Inc. - Accounts P
PO Box 98519
Baton Rouge LA 70884

Report To: Pamela Moss
7604 Technology Way, Suite 300
Denver CO 80237

Special Instructions:

Possible Hazard Indentification:
Non-hazard | Flammable ✓ | Skin Irritant | Poison B | Radiological Unknown

1. Relinquished By (Signature/Affiliation): E. Nuger — Date: 9/20/11 Time: 1600
2. Relinquished By (Signature/Affiliation): — Date: Time:
3. Relinquished By (Signature/Affiliation): — Date: Time:

Sample Disposal:
Return to Client | Disposal by Lab ✓ | Archive (mos.)

1. Received By (Signature/Affiliation): Christian Comrada RTI Laboratories — Date: 9/27/11 Time: 9:20AM
2. Received By (Signature/Affiliation): — Date: Time:
3. Received By (Signature/Affiliation): — Date: Time:

Comments:

	Sample No	Sample Name	Sample Date	Sample Time	Container	Ctr Qty	Preservative	Requested Testing Program	Sample Vol	Units	Fil	CID	Condition On Receipt
1	VA0516	KAFB 106117 025 GS VA0516 REG	09 SEP 2011	11:48	1 L Tedlar Bag	1	None Required	Fixed Gases by ASTM D2504			N		
	VA0516	KAFB 106117 025 GS VA0516 REG	09 SEP 2011	11:48	1 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		1748
2	VA0517	KAFB 106117 050 GS VA0517 REG	09 SEP 2011	12:38	1 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		826
	VA0517	KAFB 106117 050 GS VA0517 REG	09 SEP 2011	12:38	1 L Tedlar Bag	1	None Required	Fixed Gases by ASTM D2504			N		
3	VA0518	KAFB 106117 050 GS VA0518 FD	09 SEP 2011	12:38	1 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		813
	VA0518	KAFB 106117 050 GS VA0518 FD	09 SEP 2011	12:38	1 L Tedlar Bag	1	None Required	Fixed Gases by ASTM D2504			N		
4	VA0519	KAFB 106117 150 GS VA0519 REG	09 SEP 2011	13:27	1 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by			N		693

DBPix Evaluation

Shaw

Shaw E & I, Inc.

1109988

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

Reference Document No: 140705/SV022

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	Sample No	Sample Name	Sample Date	Sample Time	Container		Preservative	Requested Testing Program	Sample Vol	Units	Fil	CID	Condition On Receipt
	VA0519	KAFB 106117 150 GS VA0519 REG	09 SEP 2011	13 27	1 L Tedlar Bag	1	None Required	MA DEP, VOCs / TPH by TO-15 Fixed Gases by ASTM D2504			N	N	
	VA0520	KAFB 106117 250 GS VA0520 REG	09 SEP 2011	14 06	1 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15 Fixed Gases by ASTM D2504			N	N	70
5	VA0520	KAFB 106117 250 GS VA0520 REG	09 SEP 2011	14 06	1 L Tedlar Bag	1	None Required				N	N	
	VA0521	KAFB 106117 350 GS VA0521 REG	09 SEP 2011	14 48	1 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15 Fixed Gases by ASTM D2504			N	N	768
6	VA0521	KAFB 106117 350 GS VA0521 REG	09 SEP 2011	14 48	1 L Tedlar Bag	1	None Required				N	N	
	VA0522	KAFB 106117 450 GS VA0522 REG	09 SEP 2011	15 48	1 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15 Fixed Gases by ASTM D2504			N	N	722
7	VA0522	KAFB 106117 450 GS VA0522 REG	09 SEP 2011	15 48	1 L Tedlar Bag	1	None Required				N	N	
	VA0530	KAFB 106119 025 GS VA0530 REG	19 SEP 2011	8 42	1 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15 Fixed Gases by ASTM D2504			N	N	811
8	VA0530	KAFB 106119 025 GS VA0530 REG	19 SEP 2011	8 42	1 L Tedlar Bag	1	None Required				N	N	
	VA0531	KAFB 106119 050 GS VA0531 REG	19 SEP 2011	9 20	1 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15 Fixed Gases by ASTM D2504			N	N	779
9	VA0531	KAFB 106119 050 GS VA0531 REG	19 SEP 2011	9 20	1 L Tedlar Bag	1	None Required				N	N	
	VA0532	KAFB 106119 100 GS VA0532 REG	19 SEP 2011	9 55	1 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15 Fixed Gases by ASTM D2504			N	N	756
10	VA0532	KAFB 106119 100 GS VA0532 REG	19 SEP 2011	9 55	1 L Tedlar Bag	1	None Required				N	N	
	VA0533	KAFB 106119 250 GS VA0533 REG	19 SEP 2011	10 37	1 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15 Fixed Gases by ASTM D2504			N	N	698
11	VA0533	KAFB 106119 250 GS VA0533 REG	19 SEP 2011	10 37	1 L Tedlar Bag	1	None Required				N	N	
	VA0534	KAFB 106119 250 GS VA0534 FD	19 SEP 2011	10 37	1 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15 Fixed Gases by ASTM D2504			N	N	822
12	VA0534	KAFB 106119 250 GS VA0534 FD	19 SEP 2011	10 37	1 L Tedlar Bag	1	None Required				N	N	
	VA0535	KAFB 106119 350 GS VA0535 REG	19 SEP 2011	11 24	1 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15 Fixed Gases by ASTM D2504			N	N	746
13	VA0535	KAFB 106119 350 GS VA0535 REG	19 SEP 2011	11 24	1 L Tedlar Bag	1	None Required				N	N	
	VA0536	KAFB 106119 450 GS VA0536 REG	19 SEP 2011	12 03	1 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15 Fixed Gases by ASTM D2504			N	N	828
14	VA0536	KAFB 106119 450 GS VA0536 REG	19 SEP 2011	12 03	1 L Tedlar Bag	1	None Required				N	N	
	VA0687	SVMW 01 050 GS VA0687 REG	19 SEP 2011	13 53	1 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15 Fixed Gases by ASTM D2504			N	N	830
15	VA0687	SVMW 01 050 GS VA0687 REG	19 SEP 2011	13 53	1 L Tedlar Bag	1	None Required				N	N	
	VA0688	SVMW 01 100 GS VA0688 REG	19 SEP 2011	14 28	1 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15 Fixed Gases by ASTM D2504			N	N	745
16	VA0688	SVMW 01 100 GS VA0688 REG	19 SEP 2011	14 28	1 L Tedlar Bag	1	None Required				N	N	
	VA0689	SVMW 01 100 GS VA0689 FD	19 SEP 2011	14 28	1 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15 Fixed Gases by ASTM D2504			N	N	771
17	VA0689	SVMW 01 100 GS VA0689 FD	19 SEP 2011	14 28	1 L Tedlar Bag	1	None Required				N	N	

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11099988

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

Reference Document No: 140705SV022

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	Sample No	Sample Name	Sample Date	Sample Time	Container	Preservative	Requested Testing Program	Sample Vol	Units	Filt	CIB	Condition On Receipt
							MA DEP_VOCs / TPH by TO-15					
	[illegible]	[illegible]	[illegible]	13:27	1 L Tedlar Bag	None Required	Fixed Gases by ASTM D2504				N	
	[illegible]	[illegible]	[illegible]	14:06	1 L BOTTLEVAC	None Required	Air Phase Petroleum Hydrocarbons by MA DEP_VOCs / TPH by TO-15				N	70
5	[illegible]	[illegible]	[illegible]	14:06	1 L Tedlar Bag	None Required	Fixed Gases by ASTM D2504				N	
	[illegible]	[illegible]	[illegible]	14:48	1 L BOTTLEVAC	None Required	Air Phase Petroleum Hydrocarbons by MA DEP_VOCs / TPH by TO-15				N	768
6	[illegible]	[illegible]	[illegible]	14:48	1 L Tedlar Bag	None Required	Fixed Gases by ASTM D2504				N	
7	[illegible]	[illegible]	[illegible]	15:48	1 L BOTTLEVAC	None Required	Air Phase Petroleum Hydrocarbons by MA DEP_VOCs / TPH by TO-15				N	722
	[illegible]	[illegible]	[illegible]	15:48	1 L Tedlar Bag	None Required	Fixed Gases by ASTM D2504				N	
8	[illegible]	[illegible]	[illegible]	8:42	1 L BOTTLEVAC	None Required	Air Phase Petroleum Hydrocarbons by MA DEP_VOCs / TPH by TO-15				N	811
	[illegible]	[illegible]	[illegible]	8:42	1 L Tedlar Bag	None Required	Fixed Gases by ASTM D2504				N	
9	[illegible]	[illegible]	[illegible]	9:20	1 L BOTTLEVAC	None Required	Air Phase Petroleum Hydrocarbons by MA DEP_VOCs / TPH by TO-15				N	779
	[illegible]	[illegible]	[illegible]	9:20	1 L Tedlar Bag	None Required	Fixed Gases by ASTM D2504				N	
10	[illegible]	[illegible]	[illegible]	9:55	1 L BOTTLEVAC	None Required	Air Phase Petroleum Hydrocarbons by MA DEP_VOCs / TPH by TO-15				N	756
	[illegible]	[illegible]	[illegible]	9:55	1 L Tedlar Bag	None Required	Fixed Gases by ASTM D2504				N	
11	[illegible]	[illegible]	[illegible]	10:37	1 L BOTTLEVAC	None Required	Air Phase Petroleum Hydrocarbons by MA DEP_VOCs / TPH by TO-15				N	698
	[illegible]	[illegible]	[illegible]	10:37	1 L Tedlar Bag	None Required	Fixed Gases by ASTM D2504				N	
12	[illegible]	[illegible]	[illegible]	10:37	1 L BOTTLEVAC	None Required	Air Phase Petroleum Hydrocarbons by MA DEP_VOCs / TPH by TO-15				N	828
	[illegible]	[illegible]	[illegible]	10:37	1 L Tedlar Bag	None Required	Fixed Gases by ASTM D2504				N	
13	[illegible]	[illegible]	[illegible]	11:24	1 L BOTTLEVAC	None Required	Air Phase Petroleum Hydrocarbons by MA DEP_VOCs / TPH by TO-15				N	746
	[illegible]	[illegible]	[illegible]	11:24	1 L Tedlar Bag	None Required	Fixed Gases by ASTM D2504				N	
14	[illegible]	[illegible]	[illegible]	12:03	1 L BOTTLEVAC	None Required	Air Phase Petroleum Hydrocarbons by MA DEP_VOCs / TPH by TO-15				N	828
	[illegible]	[illegible]	[illegible]	12:03	1 L Tedlar Bag	None Required	Fixed Gases by ASTM D2504				N	
15	[illegible]	[illegible]	[illegible]	13:53	1 L BOTTLEVAC	None Required	Air Phase Petroleum Hydrocarbons by MA DEP_VOCs / TPH by TO-15				N	830
	[illegible]	[illegible]	[illegible]	13:53	1 L Tedlar Bag	None Required	Fixed Gases by ASTM D2504				N	
16	[illegible]	[illegible]	[illegible]	14:28	1 L BOTTLEVAC	None Required	Air Phase Petroleum Hydrocarbons by MA DEP_VOCs / TPH by TO-15				N	795
	[illegible]	[illegible]	[illegible]	14:28	1 L Tedlar Bag	None Required	Fixed Gases by ASTM D2504				N	
17	[illegible]	[illegible]	[illegible]	14:28	1 L BOTTLEVAC	None Required	Air Phase Petroleum Hydrocarbons by MA DEP_VOCs / TPH by TO-15				N	771
	[illegible]	[illegible]	[illegible]	14:28	1 L Tedlar Bag	None Required	Fixed Gases by ASTM D2504				N	

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CUSTODY SEAL
DATE 9/20/11
SIGNATURE
QEC
Quality Environmental Containers
800-255-3950 • 304-255-3900
CUSTODY SEAL
DATE 9/20/11
SIGNATURE
QEC
Quality Environmental Containers
800-255-3950
TI LABORATORIES
1628 GLENDALE ST
LIVONIA MI 48150
:RED2 S: MNITE I:3
SRTH – 3406
Z10335E034113 3172
RTI LABORATORIES
31628 GLENDALE ST
LIVONIA MI 48150
P: RED2 S: MNITE I:3
19F – FL2
1Z10335E034260 7902

RTI LABORATORIES, INC.

RTI
31628 Glendale St.
Livonia, MI 48150
TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Sample Receipt Checklist

Client Name: **SHA04**

Date and Time Received: **9/27/2011 9:20:00 AM**

Work Order Number **1109988** RcptNo: **1**

Received by: **Christine Conradis**

Completed by:

Reviewed by:

Completed Date: 9/29/2011 1:47:06 PM

Reviewed Date:

Carrier name: UPS

Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐	Not Present	☐
Are matrices correctly identified on Chain of custody?	Yes ☑	No ☐		
Is it clear what analyses were requested?	Yes ☑	No ☐		
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present	☑
Samples in proper container/bottle?	Yes ☑	No ☐		
Were correct preservatives used and noted?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
Were container lables complete (ID, Pres, Date)?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Was an attempt made to cool the samples?	Yes ☑	No ☐		
All samples received at a temp. of > 0° C to 6.0° C?	Yes ☐	No ☑		
Response when temperature is outside of range:	Not required			
Preservative added to bottles:				
Sample Temp. taken and recorded upon receipt?	Yes ☐	No ☑	To	°C
Water - Were bubbles absent in VOC vials?	Yes ☐	No ☐	No Vials	☑
Water - Was there Chlorine Present?	Yes ☐	No ☐	NA	☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	No Water	☑
Are Samples considered acceptable?	Yes ☑	No ☐		
Custody Seals present?	Yes ☐	No ☑		
Traffic Report or Packing Lists present?	Yes ☐	No ☑		
Airbill or Sticker?	Air Bill ☐	Sticker ☑	Not Present	☐
Airbill No:	1Z10335E0342607962			
Sample Tags Present?	Yes ☐	No ☑		
Sample Tags Listed on COC?	Yes ☐	No ☑		
Tag Numbers:				
Sample Condition?	Intact ☑	Broken ☐	Leaking	☐

Case Number: SDG: SAS:

Adjusted? _____ Checked by

Any No and/or NA (not applicable) response must be detailed in the comments section below.

SampID	ContainerID	Type	Org pH	Adj pH	Req Min pH	Req Max pH
1109988-001A	Container-01 of 01	Bottle				
1109988-001B	Container-01 of 01	Bottle				
1109988-002A	Container-01 of 01	Bottle				
1109988-002B	Container-01 of 01	Bottle				
1109988-003A	Container-01 of 01	Bottle				
1109988-003B	Container-01 of 01	Bottle				
1109988-004A	Container-01 of 01	Bottle				
1109988-004B	Container-01 of 01	Bottle				
1109988-005A	Container-01 of 01	Bottle				
1109988-005B	Container-01 of 01	Bottle				
1109988-006A	Container-01 of 01	Bottle				
1109988-006B	Container-01 of 01	Bottle				
1109988-007A	Container-01 of 01	Bottle				
1109988-007B	Container-01 of 01	Bottle				
1109988-008A	Container-01 of 01	Bottle				
1109988-008B	Container-01 of 01	Bottle				
1109988-009A	Container-01 of 01	Bottle				
1109988-009B	Container-01 of 01	Bottle				
1109988-010A	Container-01 of 01	Bottle				
1109988-010B	Container-01 of 01	Bottle				
1109988-011A	Container-01 of 01	Bottle				
1109988-011B	Container-01 of 01	Bottle				
1109988-012A	Container-01 of 01	Bottle				
1109988-012B	Container-01 of 01	Bottle				
1109988-013A	Container-01 of 01	Bottle				
1109988-013B	Container-01 of 01	Bottle				
1109988-014A	Container-01 of 01	Bottle				
1109988-014B	Container-01 of 01	Bottle				
1109988-015A	Container-01 of 01	Bottle				
1109988-015B	Container-01 of 01	Bottle				
1109988-016A	Container-01 of 01	Bottle				
1109988-016B	Container-01 of 01	Bottle				
1109988-017A	Container-01 of 01	Bottle				
1109988-017B	Container-01 of 01	Bottle				

SampID	ContainerID	Type	Org pH	Adj pH	Req Min pH	Req Max pH
1109988-018A	Container-01 of 01	Bottle				
1109988-018B	Container-01 of 01	Bottle				
1109988-019A	Container-01 of 01	Bottle				
1109988-019B	Container-01 of 01	Bottle				
1109988-020A	Container-01 of 01	Bottle				

Adjusted? _____ Checked by _____

Any No and/or NA (not applicable) response must be detailed in the comments section below.

Client Contacted? ☐ Yes ☑ No ☐ NA Person Contacted: Comments:

Contact Mode: ☐ Phone: ☐ Fax: ☐ Email: ☐ In Person:

Client Instructions:

Date Contacted: Contacted By:

Regarding:

CorrectiveAction:

RTI LABORATORIES, INC.

RTI
31628 Glendale St.
Livonia, MI 48150
TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Workorder Sample Summary

WO#: **1109988**

20-Oct-11

CLIENT: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
1109988-001	VA0516		9/9/2011 11:48:00 AM	9/27/2011 9:20:00 AM	Air
1109988-001	VA0516		9/9/2011 11:48:00 AM	9/27/2011 9:20:00 AM	Air
1109988-002	VA0517		9/9/2011 12:38:00 PM	9/27/2011 9:20:00 AM	Air
1109988-002	VA0517		9/9/2011 12:38:00 PM	9/27/2011 9:20:00 AM	Air
1109988-003	VA0518		9/9/2011 12:38:00 PM	9/27/2011 9:20:00 AM	Air
1109988-003	VA0518		9/9/2011 12:38:00 PM	9/27/2011 9:20:00 AM	Air
1109988-004	VA0519		9/9/2011 1:27:00 PM	9/27/2011 9:20:00 AM	Air
1109988-004	VA0519		9/9/2011 1:27:00 PM	9/27/2011 9:20:00 AM	Air
1109988-005	VA0520		9/9/2011 2:06:00 PM	9/27/2011 9:20:00 AM	Air
1109988-005	VA0520		9/9/2011 2:06:00 PM	9/27/2011 9:20:00 AM	Air
1109988-006	VA0521		9/9/2011 2:48:00 PM	9/27/2011 9:20:00 AM	Air
1109988-006	VA0521		9/9/2011 2:48:00 PM	9/27/2011 9:20:00 AM	Air
1109988-007	VA0522		9/9/2011 3:48:00 PM	9/27/2011 9:20:00 AM	Air
1109988-007	VA0522		9/9/2011 3:48:00 PM	9/27/2011 9:20:00 AM	Air
1109988-008	VA0530		9/19/2011 8:42:00 AM	9/27/2011 9:20:00 AM	Air
1109988-008	VA0530		9/19/2011 8:42:00 AM	9/27/2011 9:20:00 AM	Air
1109988-009	VA0531		9/19/2011 9:20:00 AM	9/27/2011 9:20:00 AM	Air
1109988-009	VA0531		9/19/2011 9:20:00 AM	9/27/2011 9:20:00 AM	Air
1109988-010	VA0532		9/19/2011 9:55:00 AM	9/27/2011 9:20:00 AM	Air
1109988-010	VA0532		9/19/2011 9:55:00 AM	9/27/2011 9:20:00 AM	Air
1109988-011	VA0533		9/19/2011 10:37:00 AM	9/27/2011 9:20:00 AM	Air
1109988-011	VA0533		9/19/2011 10:37:00 AM	9/27/2011 9:20:00 AM	Air
1109988-012	VA0534		9/19/2011 10:37:00 AM	9/27/2011 9:20:00 AM	Air
1109988-012	VA0534		9/19/2011 10:37:00 AM	9/27/2011 9:20:00 AM	Air
1109988-013	VA0535		9/19/2011 11:24:00 AM	9/27/2011 9:20:00 AM	Air
1109988-013	VA0535		9/19/2011 11:24:00 AM	9/27/2011 9:20:00 AM	Air
1109988-014	VA0536		9/19/2011 12:03:00 PM	9/27/2011 9:20:00 AM	Air
1109988-014	VA0536		9/19/2011 12:03:00 PM	9/27/2011 9:20:00 AM	Air
1109988-015	VA0687		9/19/2011 1:53:00 PM	9/27/2011 9:20:00 AM	Air
1109988-015	VA0687		9/19/2011 1:53:00 PM	9/27/2011 9:20:00 AM	Air
1109988-016	VA0688		9/19/2011 2:28:00 PM	9/27/2011 9:20:00 AM	Air
1109988-016	VA0688		9/19/2011 2:28:00 PM	9/27/2011 9:20:00 AM	Air
1109988-017	VA0689		9/19/2011 2:28:00 PM	9/27/2011 9:20:00 AM	Air
1109988-017	VA0689		9/19/2011 2:28:00 PM	9/27/2011 9:20:00 AM	Air

RTI LABORATORIES, INC.

RTI
31628 Glendale St.
Livonia, MI 48150
TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Workorder Sample Summary

WO#: **1109988**

20-Oct-11

CLIENT: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
1109988-018	VA0690		9/19/2011 3:24:00 PM	9/27/2011 9:20:00 AM	Air
1109988-018	VA0690		9/19/2011 3:24:00 PM	9/27/2011 9:20:00 AM	Air
1109988-019	VA0691		9/19/2011 3:51:00 PM	9/27/2011 9:20:00 AM	Air
1109988-019	VA0691		9/19/2011 3:51:00 PM	9/27/2011 9:20:00 AM	Air
1109988-020	VA8039-TB		9/9/2011 2:00:00 PM	9/27/2011 9:20:00 AM	Air

RTI LABORATORIES, INC.

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DATES REPORT

WO#: **1109988**

20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc

Project: Kirtland AFB

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
1109988-001A	VA0516	9/9/2011 11:48:00 AM	Air	Noncondensable Gases and Light Hydrocarbons			10/11/2011 1:03:00 PM
1109988-001B				Air-Phase Petroleum Hydrocarbons			10/1/2011 5:30:00 AM
				Volatile Organic Compounds			10/11/2011 4:19:00 AM
1109988-002A	VA0517	9/9/2011 12:38:00 PM		Noncondensable Gases and Light Hydrocarbons			10/11/2011 1:25:00 PM
1109988-002B				Air-Phase Petroleum Hydrocarbons			10/1/2011 6:23:00 AM
				Volatile Organic Compounds			10/14/2011 1:48:00 AM
1109988-003A	VA0518			Noncondensable Gases and Light Hydrocarbons			10/11/2011 2:08:00 PM
1109988-003B				Air-Phase Petroleum Hydrocarbons			10/1/2011 7:14:00 AM
				Volatile Organic Compounds			10/11/2011 5:00:00 AM
				Volatile Organic Compounds			10/14/2011 2:35:00 AM
1109988-004A	VA0519	9/9/2011 1:27:00 PM		Noncondensable Gases and Light Hydrocarbons			10/11/2011 2:27:00 PM
1109988-004B				Air-Phase Petroleum Hydrocarbons			10/5/2011 4:53:00 AM
				Volatile Organic Compounds			10/11/2011 5:47:00 AM
				Volatile Organic Compounds			10/8/2011 5:10:00 AM
1109988-005A	VA0520	9/9/2011 2:06:00 PM		Noncondensable Gases and Light Hydrocarbons			10/11/2011 3:02:00 PM
1109988-005B				Air-Phase Petroleum Hydrocarbons			10/1/2011 8:55:00 AM
				Volatile Organic Compounds			10/8/2011 7:27:00 AM
1109988-006A	VA0521	9/9/2011 2:48:00 PM		Noncondensable Gases and Light Hydrocarbons			10/11/2011 3:30:00 PM
1109988-006B				Air-Phase Petroleum Hydrocarbons			10/4/2011 7:00:00 PM
				Volatile Organic Compounds			10/8/2011 8:09:00 AM
1109988-007A	VA0522	9/9/2011 3:48:00 PM		Noncondensable Gases and Light Hydrocarbons			10/11/2011 3:50:00 PM

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DATES REPORT

WO#: **1109988**

20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc

Project: Kirtland AFB

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
1109988-007B	VA0522	9/9/2011 3:48:00 PM	Air	Air-Phase Petroleum Hydrocarbons			10/4/2011 7:43:00 PM
				Air-Phase Petroleum Hydrocarbons			10/15/2011 1:58:00 AM
				Air-Phase Petroleum Hydrocarbons			10/1/2011 2:14:00 AM
				Volatile Organic Compounds			10/8/2011 8:51:00 AM
1109988-008A	VA0530	9/19/2011 8:42:00 AM		Noncondensable Gases and Light Hydrocarbons			10/11/2011 4:11:00 PM
1109988-008B				Air-Phase Petroleum Hydrocarbons			10/5/2011 5:41:00 AM
				Volatile Organic Compounds			10/11/2011 6:34:00 AM
1109988-009A	VA0531	9/19/2011 9:20:00 AM		Noncondensable Gases and Light Hydrocarbons			10/11/2011 4:39:00 PM
1109988-009B				Air-Phase Petroleum Hydrocarbons			10/5/2011 6:30:00 AM
				Volatile Organic Compounds			10/11/2011 7:22:00 AM
1109988-010A	VA0532	9/19/2011 9:55:00 AM		Noncondensable Gases and Light Hydrocarbons			10/11/2011 5:00:00 PM
1109988-010B				Air-Phase Petroleum Hydrocarbons			10/4/2011 11:14:00 PM
				Volatile Organic Compounds			10/11/2011 8:06:00 AM
1109988-011A	VA0533	9/19/2011 10:37:00 AM		Noncondensable Gases and Light Hydrocarbons			10/12/2011 12:28:00 PM
1109988-011B				Air-Phase Petroleum Hydrocarbons			10/5/2011 7:23:00 AM
				Volatile Organic Compounds			10/11/2011 8:53:00 AM
1109988-012A	VA0534			Noncondensable Gases and Light Hydrocarbons			10/12/2011 12:54:00 PM
1109988-012B				Air-Phase Petroleum Hydrocarbons			10/5/2011 8:12:00 AM
				Volatile Organic Compounds			10/11/2011 9:40:00 AM
				Volatile Organic Compounds			10/14/2011 4:01:00 AM
1109988-013A	VA0535	9/19/2011 11:24:00 AM		Noncondensable Gases and Light Hydrocarbons			10/12/2011 1:14:00 PM

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DATES REPORT

WO#: **1109988**

20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc

Project: Kirtland AFB

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
1109988-013B	VA0535	9/19/2011 11:24:00 AM	Air	Air-Phase Petroleum Hydrocarbons			10/5/2011 1:21:00 AM
				Volatile Organic Compounds			10/11/2011 10:21:00 AM
1109988-014A	VA0536	9/19/2011 12:03:00 PM		Noncondensable Gases and Light Hydrocarbons			10/12/2011 1:53:00 PM
1109988-014B				Air-Phase Petroleum Hydrocarbons			10/5/2011 2:03:00 AM
				Volatile Organic Compounds			10/11/2011 11:42:00 AM
1109988-015A	VA0687	9/19/2011 1:53:00 PM		Noncondensable Gases and Light Hydrocarbons			10/12/2011 2:29:00 PM
1109988-015B				Air-Phase Petroleum Hydrocarbons			10/5/2011 9:01:00 AM
				Volatile Organic Compounds			10/11/2011 12:29:00 PM
1109988-016A	VA0688	9/19/2011 2:28:00 PM		Noncondensable Gases and Light Hydrocarbons			10/12/2011 2:49:00 PM
1109988-016B				Air-Phase Petroleum Hydrocarbons			10/5/2011 3:28:00 AM
				Volatile Organic Compounds			10/11/2011 1:09:00 PM
				Volatile Organic Compounds			10/14/2011 4:44:00 AM
1109988-017A	VA0689			Noncondensable Gases and Light Hydrocarbons			10/12/2011 3:10:00 PM
1109988-017B				Air-Phase Petroleum Hydrocarbons			10/5/2011 4:10:00 AM
				Volatile Organic Compounds			10/11/2011 1:50:00 PM
1109988-018A	VA0690	9/19/2011 3:24:00 PM		Noncondensable Gases and Light Hydrocarbons			10/12/2011 3:50:00 PM
1109988-018B				Air-Phase Petroleum Hydrocarbons			10/5/2011 12:46:00 PM
				Volatile Organic Compounds			10/11/2011 2:38:00 PM
1109988-019A	VA0691	9/19/2011 3:51:00 PM		Noncondensable Gases and Light Hydrocarbons			10/12/2011 4:20:00 PM
1109988-019B				Air-Phase Petroleum Hydrocarbons			10/13/2011 4:26:00 PM
				Volatile Organic Compounds			10/11/2011 3:25:00 PM

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DATES REPORT

WO#: **1109988**

20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
1109988-020A	VA8039-TB	9/9/2011 2:00:00 PM	Air	Volatile Organic Compounds			10/14/2011 3:17:00 AM

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Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/9/2011 11:48:00 AM

Project: Kirtland AFB

Lab ID: 1109988-001 **Matrix:** AIR

Client Sample ID VA0516

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	1.1	0.10		%	1	10/11/2011 1:03:00 PM
Carbon Monoxide	ND	0.10		%	1	10/11/2011 1:03:00 PM
Methane	ND	0.50		%	1	10/11/2011 1:03:00 PM
Nitrogen	79	0.10		%	1	10/11/2011 1:03:00 PM
Oxygen	20	0.10		%	1	10/11/2011 1:03:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	40	H	ppbv	40	10/11/2011 4:19:00 AM
1,1,2,2-Tetrachloroethane	ND	40	H	ppbv	40	10/11/2011 4:19:00 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	40	H	ppbv	40	10/11/2011 4:19:00 AM
1,1,2-Trichloroethane	ND	40	H	ppbv	40	10/11/2011 4:19:00 AM
1,1-Dichloroethane	ND	40	H	ppbv	40	10/11/2011 4:19:00 AM
1,1-Dichloroethene	ND	40	H	ppbv	40	10/11/2011 4:19:00 AM
1,2,4-Trichlorobenzene	ND	40	H	ppbv	40	10/11/2011 4:19:00 AM
1,2,4-Trimethylbenzene	ND	40	H	ppbv	40	10/11/2011 4:19:00 AM
1,2-Dibromoethane	ND	40	H	ppbv	40	10/11/2011 4:19:00 AM
1,2-Dichlorobenzene	ND	40	H	ppbv	40	10/11/2011 4:19:00 AM
1,2-Dichloroethane	ND	40	H	ppbv	40	10/11/2011 4:19:00 AM
1,2-Dichloropropane	ND	40	H	ppbv	40	10/11/2011 4:19:00 AM
1,3,5-Trimethylbenzene	ND	40	H	ppbv	40	10/11/2011 4:19:00 AM
1,3-Butadiene	ND	40	H	ppbv	40	10/11/2011 4:19:00 AM
1,3-Dichlorobenzene	ND	40	H	ppbv	40	10/11/2011 4:19:00 AM
1,4-Dichlorobenzene	ND	40	H	ppbv	40	10/11/2011 4:19:00 AM
2-Butanone	ND	40	H	ppbv	40	10/11/2011 4:19:00 AM
2-Hexanone	ND	40	H	ppbv	40	10/11/2011 4:19:00 AM
4-Methyl-2-pentanone	ND	40	H	ppbv	40	10/11/2011 4:19:00 AM
Acetone	ND	40	H	ppbv	40	10/11/2011 4:19:00 AM
Benzene	930	40	H	ppbv	40	10/11/2011 4:19:00 AM
Benzyl chloride	ND	40	H	ppbv	40	10/11/2011 4:19:00 AM
Bromodichloromethane	ND	40	H	ppbv	40	10/11/2011 4:19:00 AM
Bromoform	ND	40	H	ppbv	40	10/11/2011 4:19:00 AM
Bromomethane	ND	40	H	ppbv	40	10/11/2011 4:19:00 AM
Carbon disulfide	ND	40	H	ppbv	40	10/11/2011 4:19:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v1

RTI LABORATORIES, INC.

RTI
31628 Glendale St.
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TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/9/2011 11:48:00 AM

Project: Kirtland AFB

Lab ID: 1109988-001 **Matrix:** AIR

Client Sample ID VA0516

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Carbon tetrachloride	ND	40	H	ppbv	40	10/11/2011 4:19:00 AM
Chlorobenzene	ND	40	H	ppbv	40	10/11/2011 4:19:00 AM
Chlorodibromomethane	ND	40	H	ppbv	40	10/11/2011 4:19:00 AM
Chloroethane	ND	40	H	ppbv	40	10/11/2011 4:19:00 AM
Chloroform	ND	40	H	ppbv	40	10/11/2011 4:19:00 AM
Chloromethane	ND	40	H	ppbv	40	10/11/2011 4:19:00 AM
cis-1,2-Dichloroethene	ND	40	H	ppbv	40	10/11/2011 4:19:00 AM
cis-1,3-dichloropropene	ND	40	H	ppbv	40	10/11/2011 4:19:00 AM
Cyclohexane	680	80	H	ppbv	40	10/11/2011 4:19:00 AM
Dichlorodifluoromethane	ND	40	H	ppbv	40	10/11/2011 4:19:00 AM
Ethyl acetate	ND	40	H	ppbv	40	10/11/2011 4:19:00 AM
Ethylbenzene	62	80	JH	ppbv	40	10/11/2011 4:19:00 AM
Heptane	560	40	H	ppbv	40	10/11/2011 4:19:00 AM
Hexachlorobutadiene	ND	80	H	ppbv	40	10/11/2011 4:19:00 AM
m,p-Xylene	200	80	H	ppbv	40	10/11/2011 4:19:00 AM
Methylene chloride	ND	200	H	ppbv	40	10/11/2011 4:19:00 AM
Naphthalene	ND	40	H	ppbv	40	10/11/2011 4:19:00 AM
n-Hexane	350	80	H	ppbv	40	10/11/2011 4:19:00 AM
o-Xylene	56	40	H	ppbv	40	10/11/2011 4:19:00 AM
Propylene	ND	40	H	ppbv	40	10/11/2011 4:19:00 AM
Styrene	ND	40	H	ppbv	40	10/11/2011 4:19:00 AM
tert-Butyl Methyl Ether	ND	40	H	ppbv	40	10/11/2011 4:19:00 AM
Tetrachloroethene	ND	40	H	ppbv	40	10/11/2011 4:19:00 AM
Tetrahydrofuran	ND	40	H	ppbv	40	10/11/2011 4:19:00 AM
Toluene	2,600	40	H	ppbv	40	10/11/2011 4:19:00 AM
trans-1,2-Dichloroethene	ND	40	H	ppbv	40	10/11/2011 4:19:00 AM
trans-1,3-dichloropropene	ND	40	H	ppbv	40	10/11/2011 4:19:00 AM
Trichloroethene	ND	40	H	ppbv	40	10/11/2011 4:19:00 AM
Trichlorofluoromethane	ND	40	H	ppbv	40	10/11/2011 4:19:00 AM
Vinyl acetate	ND	40	H	ppbv	40	10/11/2011 4:19:00 AM
Vinyl chloride	ND	40	H	ppbv	40	10/11/2011 4:19:00 AM
Xylenes, Total	260	120	H	ppbv	40	10/11/2011 4:19:00 AM
Surr: 4-Bromofluorobenzene	108	70-130	H	%REC	40	10/11/2011 4:19:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v1

RTI LABORATORIES, INC.

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Livonia, MI 48150
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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/9/2011 11:48:00 AM

Project: Kirtland AFB

Lab ID: 1109988-001 **Matrix:** AIR

Client Sample ID VA0516

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MASS APH AIR				**MA_APH**		Analyst: **RH3**
AIR-PHASE PETROLEUM HYDROCARBONS						
C5-C8 Aliphatic Hydrocarbons	160,000	47,000		µg/m³	400	10/1/2011 5:30:00 AM
C9-C10 Aromatic Hydrocarbons	ND	53,000		µg/m³	400	10/1/2011 5:30:00 AM
C9-C12 Aliphatic Hydrocarbons	26,000	76,000	J	µg/m³	400	10/1/2011 5:30:00 AM
Surr: 4-Bromofluorobenzene	112	70-130		%REC	400	10/1/2011 5:30:00 AM

Qualifiers:				
	*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Estimated concentration	M	Manual Integration used to determine area response
	ND	Not Detected at the Reporting Limit	PL	Permit Limit
	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

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Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/9/2011 12:38:00 PM

Project: Kirtland AFB

Lab ID: 1109988-002 **Matrix:** AIR

Client Sample ID VA0517

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	2.2	0.10		%	1	10/11/2011 1:25:00 PM
Carbon Monoxide	ND	0.10		%	1	10/11/2011 1:25:00 PM
Methane	ND	0.50		%	1	10/11/2011 1:25:00 PM
Nitrogen	80	0.10		%	1	10/11/2011 1:25:00 PM
Oxygen	18	0.10		%	1	10/11/2011 1:25:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	40	H	ppbv	40	10/14/2011 1:48:00 AM
1,1,2,2-Tetrachloroethane	ND	40	H	ppbv	40	10/14/2011 1:48:00 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	40	H	ppbv	40	10/14/2011 1:48:00 AM
1,1,2-Trichloroethane	ND	40	H	ppbv	40	10/14/2011 1:48:00 AM
1,1-Dichloroethane	ND	40	H	ppbv	40	10/14/2011 1:48:00 AM
1,1-Dichloroethene	ND	40	H	ppbv	40	10/14/2011 1:48:00 AM
1,2,4-Trichlorobenzene	ND	40	H	ppbv	40	10/14/2011 1:48:00 AM
1,2,4-Trimethylbenzene	ND	40	H	ppbv	40	10/14/2011 1:48:00 AM
1,2-Dibromoethane	ND	40	H	ppbv	40	10/14/2011 1:48:00 AM
1,2-Dichlorobenzene	ND	40	H	ppbv	40	10/14/2011 1:48:00 AM
1,2-Dichloroethane	ND	40	H	ppbv	40	10/14/2011 1:48:00 AM
1,2-Dichloropropane	ND	40	H	ppbv	40	10/14/2011 1:48:00 AM
1,3,5-Trimethylbenzene	ND	40	H	ppbv	40	10/14/2011 1:48:00 AM
1,3-Butadiene	ND	40	H	ppbv	40	10/14/2011 1:48:00 AM
1,3-Dichlorobenzene	ND	40	H	ppbv	40	10/14/2011 1:48:00 AM
1,4-Dichlorobenzene	ND	40	H	ppbv	40	10/14/2011 1:48:00 AM
2-Butanone	ND	40	H	ppbv	40	10/14/2011 1:48:00 AM
2-Hexanone	ND	40	H	ppbv	40	10/14/2011 1:48:00 AM
4-Methyl-2-pentanone	ND	40	H	ppbv	40	10/14/2011 1:48:00 AM
Acetone	ND	40	H	ppbv	40	10/14/2011 1:48:00 AM
Benzene	880	40	H	ppbv	40	10/14/2011 1:48:00 AM
Benzyl chloride	ND	40	H	ppbv	40	10/14/2011 1:48:00 AM
Bromodichloromethane	ND	40	H	ppbv	40	10/14/2011 1:48:00 AM
Bromoform	ND	40	H	ppbv	40	10/14/2011 1:48:00 AM
Bromomethane	ND	40	H	ppbv	40	10/14/2011 1:48:00 AM
Carbon disulfide	ND	40	H	ppbv	40	10/14/2011 1:48:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v1

RTI LABORATORIES, INC.

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Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/9/2011 12:38:00 PM

Project: Kirtland AFB

Lab ID: 1109988-002 **Matrix:** AIR

Client Sample ID VA0517

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Carbon tetrachloride	ND	40	H	ppbv	40	10/14/2011 1:48:00 AM
Chlorobenzene	ND	40	H	ppbv	40	10/14/2011 1:48:00 AM
Chlorodibromomethane	ND	40	H	ppbv	40	10/14/2011 1:48:00 AM
Chloroethane	ND	40	H	ppbv	40	10/14/2011 1:48:00 AM
Chloroform	ND	40	H	ppbv	40	10/14/2011 1:48:00 AM
Chloromethane	ND	40	H	ppbv	40	10/14/2011 1:48:00 AM
cis-1,2-Dichloroethene	ND	40	H	ppbv	40	10/14/2011 1:48:00 AM
cis-1,3-dichloropropene	ND	40	H	ppbv	40	10/14/2011 1:48:00 AM
Cyclohexane	620	80	H	ppbv	40	10/14/2011 1:48:00 AM
Dichlorodifluoromethane	ND	40	H	ppbv	40	10/14/2011 1:48:00 AM
Ethyl acetate	ND	40	H	ppbv	40	10/14/2011 1:48:00 AM
Ethylbenzene	82	80	H	ppbv	40	10/14/2011 1:48:00 AM
Heptane	540	40	H	ppbv	40	10/14/2011 1:48:00 AM
Hexachlorobutadiene	ND	80	H	ppbv	40	10/14/2011 1:48:00 AM
m,p-Xylene	290	80	H	ppbv	40	10/14/2011 1:48:00 AM
Methylene chloride	ND	200	H	ppbv	40	10/14/2011 1:48:00 AM
Naphthalene	ND	40	H	ppbv	40	10/14/2011 1:48:00 AM
n-Hexane	310	80	H	ppbv	40	10/14/2011 1:48:00 AM
o-Xylene	77	40	H	ppbv	40	10/14/2011 1:48:00 AM
Propylene	ND	40	H	ppbv	40	10/14/2011 1:48:00 AM
Styrene	ND	40	H	ppbv	40	10/14/2011 1:48:00 AM
tert-Butyl Methyl Ether	ND	40	H	ppbv	40	10/14/2011 1:48:00 AM
Tetrachloroethene	ND	40	H	ppbv	40	10/14/2011 1:48:00 AM
Tetrahydrofuran	ND	40	H	ppbv	40	10/14/2011 1:48:00 AM
Toluene	2,400	40	H	ppbv	40	10/14/2011 1:48:00 AM
trans-1,2-Dichloroethene	ND	40	H	ppbv	40	10/14/2011 1:48:00 AM
trans-1,3-dichloropropene	ND	40	H	ppbv	40	10/14/2011 1:48:00 AM
Trichloroethene	ND	40	H	ppbv	40	10/14/2011 1:48:00 AM
Trichlorofluoromethane	ND	40	H	ppbv	40	10/14/2011 1:48:00 AM
Vinyl acetate	ND	40	H	ppbv	40	10/14/2011 1:48:00 AM
Vinyl chloride	ND	40	H	ppbv	40	10/14/2011 1:48:00 AM
Xylenes, Total	360	120	H	ppbv	40	10/14/2011 1:48:00 AM
Surr: 4-Bromofluorobenzene	104	70-130	H	%REC	40	10/14/2011 1:48:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v1

RTI LABORATORIES, INC.

RTI
31628 Glendale St.
Livonia, MI 48150
TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/9/2011 12:38:00 PM

Project: Kirtland AFB

Lab ID: 1109988-002 **Matrix:** AIR

Client Sample ID VA0517

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MASS APH AIR				**MA_APH**		Analyst: **RH3**
AIR-PHASE PETROLEUM HYDROCARBONS						
C5-C8 Aliphatic Hydrocarbons	130,000	47,000		µg/m³	400	10/1/2011 6:23:00 AM
C9-C10 Aromatic Hydrocarbons	ND	53,000		µg/m³	400	10/1/2011 6:23:00 AM
C9-C12 Aliphatic Hydrocarbons	22,000	76,000	J	µg/m³	400	10/1/2011 6:23:00 AM
Surr: 4-Bromofluorobenzene	113	70-130		%REC	400	10/1/2011 6:23:00 AM

Qualifiers:

*X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v1

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Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/9/2011 12:38:00 PM

Project: Kirtland AFB

Lab ID: 1109988-003 **Matrix:** AIR

Client Sample ID VA0518

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	1.5	0.10		%	1	10/11/2011 2:08:00 PM
Carbon Monoxide	ND	0.10		%	1	10/11/2011 2:08:00 PM
Methane	ND	0.50		%	1	10/11/2011 2:08:00 PM
Nitrogen	79	0.10		%	1	10/11/2011 2:08:00 PM
Oxygen	19	0.10		%	1	10/11/2011 2:08:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	40	H	ppbv	40	10/11/2011 5:00:00 AM
1,1,2,2-Tetrachloroethane	ND	40	H	ppbv	40	10/11/2011 5:00:00 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	40	H	ppbv	40	10/11/2011 5:00:00 AM
1,1,2-Trichloroethane	ND	40	H	ppbv	40	10/11/2011 5:00:00 AM
1,1-Dichloroethane	ND	40	H	ppbv	40	10/11/2011 5:00:00 AM
1,1-Dichloroethene	ND	40	H	ppbv	40	10/11/2011 5:00:00 AM
1,2,4-Trichlorobenzene	ND	40	H	ppbv	40	10/11/2011 5:00:00 AM
1,2,4-Trimethylbenzene	ND	40	H	ppbv	40	10/11/2011 5:00:00 AM
1,2-Dibromoethane	ND	40	H	ppbv	40	10/11/2011 5:00:00 AM
1,2-Dichlorobenzene	ND	40	H	ppbv	40	10/11/2011 5:00:00 AM
1,2-Dichloroethane	ND	40	H	ppbv	40	10/11/2011 5:00:00 AM
1,2-Dichloropropane	ND	40	H	ppbv	40	10/11/2011 5:00:00 AM
1,3,5-Trimethylbenzene	ND	40	H	ppbv	40	10/11/2011 5:00:00 AM
1,3-Butadiene	ND	40	H	ppbv	40	10/11/2011 5:00:00 AM
1,3-Dichlorobenzene	ND	40	H	ppbv	40	10/11/2011 5:00:00 AM
1,4-Dichlorobenzene	ND	40	H	ppbv	40	10/11/2011 5:00:00 AM
2-Butanone	ND	40	H	ppbv	40	10/11/2011 5:00:00 AM
2-Hexanone	ND	40	H	ppbv	40	10/11/2011 5:00:00 AM
4-Methyl-2-pentanone	ND	40	H	ppbv	40	10/11/2011 5:00:00 AM
Acetone	45	40	H	ppbv	40	10/11/2011 5:00:00 AM
Benzene	680	40	H	ppbv	40	10/11/2011 5:00:00 AM
Benzyl chloride	ND	40	H	ppbv	40	10/11/2011 5:00:00 AM
Bromodichloromethane	ND	40	H	ppbv	40	10/11/2011 5:00:00 AM
Bromoform	ND	40	H	ppbv	40	10/11/2011 5:00:00 AM
Bromomethane	ND	40	H	ppbv	40	10/11/2011 5:00:00 AM
Carbon disulfide	ND	40	H	ppbv	40	10/11/2011 5:00:00 AM

Qualifiers:

*X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v1

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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/9/2011 12:38:00 PM

Project: Kirtland AFB

Lab ID: 1109988-003 **Matrix:** AIR

Client Sample ID VA0518

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Carbon tetrachloride	ND	40	H	ppbv	40	10/11/2011 5:00:00 AM
Chlorobenzene	ND	40	H	ppbv	40	10/11/2011 5:00:00 AM
Chlorodibromomethane	ND	40	H	ppbv	40	10/11/2011 5:00:00 AM
Chloroethane	ND	40	H	ppbv	40	10/11/2011 5:00:00 AM
Chloroform	ND	40	H	ppbv	40	10/11/2011 5:00:00 AM
Chloromethane	ND	40	H	ppbv	40	10/11/2011 5:00:00 AM
cis-1,2-Dichloroethene	ND	40	H	ppbv	40	10/11/2011 5:00:00 AM
cis-1,3-dichloropropene	ND	40	H	ppbv	40	10/11/2011 5:00:00 AM
Cyclohexane	520	80	H	ppbv	40	10/11/2011 5:00:00 AM
Dichlorodifluoromethane	ND	40	H	ppbv	40	10/11/2011 5:00:00 AM
Ethyl acetate	ND	40	H	ppbv	40	10/11/2011 5:00:00 AM
Ethylbenzene	90	80	H	ppbv	40	10/11/2011 5:00:00 AM
Heptane	500	40	H	ppbv	40	10/11/2011 5:00:00 AM
Hexachlorobutadiene	ND	80	H	ppbv	40	10/11/2011 5:00:00 AM
m,p-Xylene	320	80	H	ppbv	40	10/11/2011 5:00:00 AM
Methylene chloride	ND	200	H	ppbv	40	10/11/2011 5:00:00 AM
Naphthalene	ND	40	H	ppbv	40	10/11/2011 5:00:00 AM
n-Hexane	280	80	H	ppbv	40	10/11/2011 5:00:00 AM
o-Xylene	89	40	H	ppbv	40	10/11/2011 5:00:00 AM
Propylene	ND	40	H	ppbv	40	10/11/2011 5:00:00 AM
Styrene	ND	40	H	ppbv	40	10/11/2011 5:00:00 AM
tert-Butyl Methyl Ether	ND	40	H	ppbv	40	10/11/2011 5:00:00 AM
Tetrachloroethene	ND	40	H	ppbv	40	10/11/2011 5:00:00 AM
Tetrahydrofuran	ND	40	H	ppbv	40	10/11/2011 5:00:00 AM
Toluene	3,200	400	H	ppbv	400	10/14/2011 2:35:00 AM
trans-1,2-Dichloroethene	ND	40	H	ppbv	40	10/11/2011 5:00:00 AM
trans-1,3-dichloropropene	ND	40	H	ppbv	40	10/11/2011 5:00:00 AM
Trichloroethene	ND	40	H	ppbv	40	10/11/2011 5:00:00 AM
Trichlorofluoromethane	ND	40	H	ppbv	40	10/11/2011 5:00:00 AM
Vinyl acetate	ND	40	H	ppbv	40	10/11/2011 5:00:00 AM
Vinyl chloride	ND	40	H	ppbv	40	10/11/2011 5:00:00 AM
Xylenes, Total	410	120	H	ppbv	40	10/11/2011 5:00:00 AM
Surr: 4-Bromofluorobenzene	104	70-130	H	%REC	40	10/11/2011 5:00:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v1

RTI LABORATORIES, INC.

RTI
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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/9/2011 12:38:00 PM

Project: Kirtland AFB

Lab ID: 1109988-003 **Matrix:** AIR

Client Sample ID VA0518

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MASS APH AIR				**MA_APH**		Analyst: **RH3**
AIR-PHASE PETROLEUM HYDROCARBONS						
C5-C8 Aliphatic Hydrocarbons	99,000	47,000		µg/m³	400	10/1/2011 7:14:00 AM
C9-C10 Aromatic Hydrocarbons	ND	53,000		µg/m³	400	10/1/2011 7:14:00 AM
C9-C12 Aliphatic Hydrocarbons	ND	76,000		µg/m³	400	10/1/2011 7:14:00 AM
Surr: 4-Bromofluorobenzene	111	70-130		%REC	400	10/1/2011 7:14:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

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Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/9/2011 1:27:00 PM

Project: Kirtland AFB

Lab ID: 1109988-004 **Matrix:** AIR

Client Sample ID VA0519

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	1.4	0.10		%	1	10/11/2011 2:27:00 PM
Carbon Monoxide	ND	0.10		%	1	10/11/2011 2:27:00 PM
Methane	ND	0.50		%	1	10/11/2011 2:27:00 PM
Nitrogen	80	0.10		%	1	10/11/2011 2:27:00 PM
Oxygen	17	0.10		%	1	10/11/2011 2:27:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	400	H	ppbv	400	10/11/2011 5:47:00 AM
1,1,2,2-Tetrachloroethane	ND	400	H	ppbv	400	10/11/2011 5:47:00 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	400	H	ppbv	400	10/11/2011 5:47:00 AM
1,1,2-Trichloroethane	ND	400	H	ppbv	400	10/11/2011 5:47:00 AM
1,1-Dichloroethane	ND	400	H	ppbv	400	10/11/2011 5:47:00 AM
1,1-Dichloroethene	ND	400	H	ppbv	400	10/11/2011 5:47:00 AM
1,2,4-Trichlorobenzene	ND	400	H	ppbv	400	10/11/2011 5:47:00 AM
1,2,4-Trimethylbenzene	ND	400	H	ppbv	400	10/11/2011 5:47:00 AM
1,2-Dibromoethane	ND	400	H	ppbv	400	10/11/2011 5:47:00 AM
1,2-Dichlorobenzene	ND	400	H	ppbv	400	10/11/2011 5:47:00 AM
1,2-Dichloroethane	ND	400	H	ppbv	400	10/11/2011 5:47:00 AM
1,2-Dichloropropane	ND	400	H	ppbv	400	10/11/2011 5:47:00 AM
1,3,5-Trimethylbenzene	ND	400	H	ppbv	400	10/11/2011 5:47:00 AM
1,3-Butadiene	ND	400	H	ppbv	400	10/11/2011 5:47:00 AM
1,3-Dichlorobenzene	ND	400	H	ppbv	400	10/11/2011 5:47:00 AM
1,4-Dichlorobenzene	ND	400	H	ppbv	400	10/11/2011 5:47:00 AM
2-Butanone	ND	400	H	ppbv	400	10/11/2011 5:47:00 AM
2-Hexanone	ND	400	H	ppbv	400	10/11/2011 5:47:00 AM
4-Methyl-2-pentanone	ND	400	H	ppbv	400	10/11/2011 5:47:00 AM
Acetone	500	400	H	ppbv	400	10/11/2011 5:47:00 AM
Benzene	1,300	400	H	ppbv	400	10/11/2011 5:47:00 AM
Benzyl chloride	ND	400	H	ppbv	400	10/11/2011 5:47:00 AM
Bromodichloromethane	ND	400	H	ppbv	400	10/11/2011 5:47:00 AM
Bromoform	ND	400	H	ppbv	400	10/11/2011 5:47:00 AM
Bromomethane	ND	400	H	ppbv	400	10/11/2011 5:47:00 AM
Carbon disulfide	ND	400	H	ppbv	400	10/11/2011 5:47:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v1

RTI LABORATORIES, INC.

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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/9/2011 1:27:00 PM

Project: Kirtland AFB

Lab ID: 1109988-004 **Matrix:** AIR

Client Sample ID VA0519

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Carbon tetrachloride	ND	400	H	ppbv	400	10/11/2011 5:47:00 AM
Chlorobenzene	ND	400	H	ppbv	400	10/11/2011 5:47:00 AM
Chlorodibromomethane	ND	400	H	ppbv	400	10/11/2011 5:47:00 AM
Chloroethane	ND	400	H	ppbv	400	10/11/2011 5:47:00 AM
Chloroform	ND	400	H	ppbv	400	10/11/2011 5:47:00 AM
Chloromethane	ND	400	H	ppbv	400	10/11/2011 5:47:00 AM
cis-1,2-Dichloroethene	ND	400	H	ppbv	400	10/11/2011 5:47:00 AM
cis-1,3-dichloropropene	ND	400	H	ppbv	400	10/11/2011 5:47:00 AM
Cyclohexane	1,100	800	H	ppbv	400	10/11/2011 5:47:00 AM
Dichlorodifluoromethane	ND	400	H	ppbv	400	10/11/2011 5:47:00 AM
Ethyl acetate	ND	400	H	ppbv	400	10/11/2011 5:47:00 AM
Ethylbenzene	ND	800	H	ppbv	400	10/11/2011 5:47:00 AM
Heptane	1,100	400	H	ppbv	400	10/11/2011 5:47:00 AM
Hexachlorobutadiene	ND	800	H	ppbv	400	10/11/2011 5:47:00 AM
m,p-Xylene	660	800	JH	ppbv	400	10/11/2011 5:47:00 AM
Methylene chloride	ND	2,000	H	ppbv	400	10/11/2011 5:47:00 AM
Naphthalene	ND	400	H	ppbv	400	10/11/2011 5:47:00 AM
n-Hexane	750	800	JH	ppbv	400	10/11/2011 5:47:00 AM
o-Xylene	ND	400	H	ppbv	400	10/11/2011 5:47:00 AM
Propylene	ND	400	H	ppbv	400	10/11/2011 5:47:00 AM
Styrene	ND	400	H	ppbv	400	10/11/2011 5:47:00 AM
tert-Butyl Methyl Ether	ND	400	H	ppbv	400	10/11/2011 5:47:00 AM
Tetrachloroethene	ND	400	H	ppbv	400	10/11/2011 5:47:00 AM
Tetrahydrofuran	ND	400	H	ppbv	400	10/11/2011 5:47:00 AM
Toluene	4,700	400	H	ppbv	400	10/11/2011 5:47:00 AM
trans-1,2-Dichloroethene	ND	400	H	ppbv	400	10/11/2011 5:47:00 AM
trans-1,3-dichloropropene	ND	400	H	ppbv	400	10/11/2011 5:47:00 AM
Trichloroethene	ND	400	H	ppbv	400	10/11/2011 5:47:00 AM
Trichlorofluoromethane	ND	400	H	ppbv	400	10/11/2011 5:47:00 AM
Vinyl acetate	ND	400	H	ppbv	400	10/11/2011 5:47:00 AM
Vinyl chloride	ND	400	H	ppbv	400	10/11/2011 5:47:00 AM
Xylenes, Total	660	1,200	JH	ppbv	400	10/11/2011 5:47:00 AM
Surr: 4-Bromofluorobenzene	110	70-130	H	%REC	400	10/11/2011 5:47:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v1

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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/9/2011 1:27:00 PM

Project: Kirtland AFB

Lab ID: 1109988-004 **Matrix:** AIR

Client Sample ID VA0519

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MASS APH AIR				**MA_APH**		Analyst: **RH3**
AIR-PHASE PETROLEUM HYDROCARBONS						
C5-C8 Aliphatic Hydrocarbons	6,500,000	940,000		µg/m³	8000	10/5/2011 4:53:00 AM
C9-C10 Aromatic Hydrocarbons	ND	1,100,000		µg/m³	8000	10/5/2011 4:53:00 AM
C9-C12 Aliphatic Hydrocarbons	ND	1,500,000		µg/m³	8000	10/5/2011 4:53:00 AM
Surr: 4-Bromofluorobenzene	110	70-130		%REC	8000	10/5/2011 4:53:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/9/2011 2:06:00 PM

Project: Kirtland AFB

Lab ID: 1109988-005 **Matrix:** AIR

Client Sample ID VA0520

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.58	0.10		%	1	10/11/2011 3:02:00 PM
Carbon Monoxide	ND	0.10		%	1	10/11/2011 3:02:00 PM
Methane	ND	0.50		%	1	10/11/2011 3:02:00 PM
Nitrogen	80	0.10		%	1	10/11/2011 3:02:00 PM
Oxygen	19	0.10		%	1	10/11/2011 3:02:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	400		ppbv	400	10/8/2011 7:27:00 AM
1,1,2,2-Tetrachloroethane	ND	400		ppbv	400	10/8/2011 7:27:00 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	400		ppbv	400	10/8/2011 7:27:00 AM
1,1,2-Trichloroethane	ND	400		ppbv	400	10/8/2011 7:27:00 AM
1,1-Dichloroethane	ND	400		ppbv	400	10/8/2011 7:27:00 AM
1,1-Dichloroethene	ND	400		ppbv	400	10/8/2011 7:27:00 AM
1,2,4-Trichlorobenzene	ND	400		ppbv	400	10/8/2011 7:27:00 AM
1,2,4-Trimethylbenzene	ND	400		ppbv	400	10/8/2011 7:27:00 AM
1,2-Dibromoethane	ND	400		ppbv	400	10/8/2011 7:27:00 AM
1,2-Dichlorobenzene	ND	400		ppbv	400	10/8/2011 7:27:00 AM
1,2-Dichloroethane	ND	400		ppbv	400	10/8/2011 7:27:00 AM
1,2-Dichloropropane	ND	400		ppbv	400	10/8/2011 7:27:00 AM
1,3,5-Trimethylbenzene	ND	400		ppbv	400	10/8/2011 7:27:00 AM
1,3-Butadiene	ND	400		ppbv	400	10/8/2011 7:27:00 AM
1,3-Dichlorobenzene	ND	400		ppbv	400	10/8/2011 7:27:00 AM
1,4-Dichlorobenzene	ND	400		ppbv	400	10/8/2011 7:27:00 AM
2-Butanone	ND	400		ppbv	400	10/8/2011 7:27:00 AM
2-Hexanone	ND	400		ppbv	400	10/8/2011 7:27:00 AM
4-Methyl-2-pentanone	ND	400		ppbv	400	10/8/2011 7:27:00 AM
Acetone	ND	400		ppbv	400	10/8/2011 7:27:00 AM
Benzene	10,000	400		ppbv	400	10/8/2011 7:27:00 AM
Benzyl chloride	ND	400		ppbv	400	10/8/2011 7:27:00 AM
Bromodichloromethane	ND	400		ppbv	400	10/8/2011 7:27:00 AM
Bromoform	ND	400		ppbv	400	10/8/2011 7:27:00 AM
Bromomethane	ND	400		ppbv	400	10/8/2011 7:27:00 AM
Carbon disulfide	ND	400		ppbv	400	10/8/2011 7:27:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v1

RTI LABORATORIES, INC.

RTI
31628 Glendale St.
Livonia, MI 48150
TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/9/2011 2:06:00 PM

Project: Kirtland AFB

Lab ID: 1109988-005 **Matrix:** AIR

Client Sample ID VA0520

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Carbon tetrachloride	ND	400		ppbv	400	10/8/2011 7:27:00 AM
Chlorobenzene	ND	400		ppbv	400	10/8/2011 7:27:00 AM
Chlorodibromomethane	ND	400		ppbv	400	10/8/2011 7:27:00 AM
Chloroethane	ND	400		ppbv	400	10/8/2011 7:27:00 AM
Chloroform	ND	400		ppbv	400	10/8/2011 7:27:00 AM
Chloromethane	ND	400		ppbv	400	10/8/2011 7:27:00 AM
cis-1,2-Dichloroethene	ND	400		ppbv	400	10/8/2011 7:27:00 AM
cis-1,3-dichloropropene	ND	400		ppbv	400	10/8/2011 7:27:00 AM
Cyclohexane	4,900	800		ppbv	400	10/8/2011 7:27:00 AM
Dichlorodifluoromethane	ND	400		ppbv	400	10/8/2011 7:27:00 AM
Ethyl acetate	ND	400		ppbv	400	10/8/2011 7:27:00 AM
Ethylbenzene	ND	800		ppbv	400	10/8/2011 7:27:00 AM
Heptane	1,500	400		ppbv	400	10/8/2011 7:27:00 AM
Hexachlorobutadiene	ND	800		ppbv	400	10/8/2011 7:27:00 AM
m,p-Xylene	470	800	J	ppbv	400	10/8/2011 7:27:00 AM
Methylene chloride	ND	2,000		ppbv	400	10/8/2011 7:27:00 AM
Naphthalene	ND	400		ppbv	400	10/8/2011 7:27:00 AM
n-Hexane	4,000	800		ppbv	400	10/8/2011 7:27:00 AM
o-Xylene	ND	400		ppbv	400	10/8/2011 7:27:00 AM
Propylene	ND	400		ppbv	400	10/8/2011 7:27:00 AM
Styrene	ND	400		ppbv	400	10/8/2011 7:27:00 AM
tert-Butyl Methyl Ether	ND	400		ppbv	400	10/8/2011 7:27:00 AM
Tetrachloroethene	ND	400		ppbv	400	10/8/2011 7:27:00 AM
Tetrahydrofuran	ND	400		ppbv	400	10/8/2011 7:27:00 AM
Toluene	15,000	400		ppbv	400	10/8/2011 7:27:00 AM
trans-1,2-Dichloroethene	ND	400		ppbv	400	10/8/2011 7:27:00 AM
trans-1,3-dichloropropene	ND	400		ppbv	400	10/8/2011 7:27:00 AM
Trichloroethene	ND	400		ppbv	400	10/8/2011 7:27:00 AM
Trichlorofluoromethane	ND	400		ppbv	400	10/8/2011 7:27:00 AM
Vinyl acetate	ND	400		ppbv	400	10/8/2011 7:27:00 AM
Vinyl chloride	ND	400		ppbv	400	10/8/2011 7:27:00 AM
Xylenes, Total	470	1,200	J	ppbv	400	10/8/2011 7:27:00 AM
Surr: 4-Bromofluorobenzene	113	70-130		%REC	400	10/8/2011 7:27:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v1

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Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/9/2011 2:06:00 PM

Project: Kirtland AFB

Lab ID: 1109988-005 **Matrix:** AIR

Client Sample ID VA0520

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MASS APH AIR				**MA_APH**		Analyst: **RH3**
AIR-PHASE PETROLEUM HYDROCARBONS						
C5-C8 Aliphatic Hydrocarbons	260,000	47,000		µg/m³	400	10/1/2011 8:55:00 AM
C9-C10 Aromatic Hydrocarbons	ND	53,000		µg/m³	400	10/1/2011 8:55:00 AM
C9-C12 Aliphatic Hydrocarbons	36,000	76,000	J	µg/m³	400	10/1/2011 8:55:00 AM
Surr: 4-Bromofluorobenzene	114	70-130		%REC	400	10/1/2011 8:55:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

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Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/9/2011 2:48:00 PM

Project: Kirtland AFB

Lab ID: 1109988-006 **Matrix:** AIR

Client Sample ID VA0521

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	1.5	0.10		%	1	10/11/2011 3:30:00 PM
Carbon Monoxide	ND	0.10		%	1	10/11/2011 3:30:00 PM
Methane	ND	0.50		%	1	10/11/2011 3:30:00 PM
Nitrogen	82	0.10		%	1	10/11/2011 3:30:00 PM
Oxygen	16	0.10		%	1	10/11/2011 3:30:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	20,000		ppbv	20000	10/8/2011 8:09:00 AM
1,1,2,2-Tetrachloroethane	ND	20,000		ppbv	20000	10/8/2011 8:09:00 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	20,000		ppbv	20000	10/8/2011 8:09:00 AM
1,1,2-Trichloroethane	ND	20,000		ppbv	20000	10/8/2011 8:09:00 AM
1,1-Dichloroethane	ND	20,000		ppbv	20000	10/8/2011 8:09:00 AM
1,1-Dichloroethene	ND	20,000		ppbv	20000	10/8/2011 8:09:00 AM
1,2,4-Trichlorobenzene	ND	20,000		ppbv	20000	10/8/2011 8:09:00 AM
1,2,4-Trimethylbenzene	ND	20,000		ppbv	20000	10/8/2011 8:09:00 AM
1,2-Dibromoethane	ND	20,000		ppbv	20000	10/8/2011 8:09:00 AM
1,2-Dichlorobenzene	ND	20,000		ppbv	20000	10/8/2011 8:09:00 AM
1,2-Dichloroethane	ND	20,000		ppbv	20000	10/8/2011 8:09:00 AM
1,2-Dichloropropane	ND	20,000		ppbv	20000	10/8/2011 8:09:00 AM
1,3,5-Trimethylbenzene	ND	20,000		ppbv	20000	10/8/2011 8:09:00 AM
1,3-Butadiene	ND	20,000		ppbv	20000	10/8/2011 8:09:00 AM
1,3-Dichlorobenzene	ND	20,000		ppbv	20000	10/8/2011 8:09:00 AM
1,4-Dichlorobenzene	ND	20,000		ppbv	20000	10/8/2011 8:09:00 AM
2-Butanone	ND	20,000		ppbv	20000	10/8/2011 8:09:00 AM
2-Hexanone	ND	20,000		ppbv	20000	10/8/2011 8:09:00 AM
4-Methyl-2-pentanone	ND	20,000		ppbv	20000	10/8/2011 8:09:00 AM
Acetone	ND	20,000		ppbv	20000	10/8/2011 8:09:00 AM
Benzene	460,000	20,000		ppbv	20000	10/8/2011 8:09:00 AM
Benzyl chloride	ND	20,000		ppbv	20000	10/8/2011 8:09:00 AM
Bromodichloromethane	ND	20,000		ppbv	20000	10/8/2011 8:09:00 AM
Bromoform	ND	20,000		ppbv	20000	10/8/2011 8:09:00 AM
Bromomethane	ND	20,000		ppbv	20000	10/8/2011 8:09:00 AM
Carbon disulfide	ND	20,000		ppbv	20000	10/8/2011 8:09:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v1

RTI LABORATORIES, INC.

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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/9/2011 2:48:00 PM

Project: Kirtland AFB

Lab ID: 1109988-006 **Matrix:** AIR

Client Sample ID VA0521

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Carbon tetrachloride	ND	20,000		ppbv	20000	10/8/2011 8:09:00 AM
Chlorobenzene	ND	20,000		ppbv	20000	10/8/2011 8:09:00 AM
Chlorodibromomethane	ND	20,000		ppbv	20000	10/8/2011 8:09:00 AM
Chloroethane	ND	20,000		ppbv	20000	10/8/2011 8:09:00 AM
Chloroform	ND	20,000		ppbv	20000	10/8/2011 8:09:00 AM
Chloromethane	ND	20,000		ppbv	20000	10/8/2011 8:09:00 AM
cis-1,2-Dichloroethene	ND	20,000		ppbv	20000	10/8/2011 8:09:00 AM
cis-1,3-dichloropropene	ND	20,000		ppbv	20000	10/8/2011 8:09:00 AM
Cyclohexane	1,200,000	40,000		ppbv	20000	10/8/2011 8:09:00 AM
Dichlorodifluoromethane	ND	20,000		ppbv	20000	10/8/2011 8:09:00 AM
Ethyl acetate	ND	20,000		ppbv	20000	10/8/2011 8:09:00 AM
Ethylbenzene	ND	40,000		ppbv	20000	10/8/2011 8:09:00 AM
Heptane	670,000	20,000		ppbv	20000	10/8/2011 8:09:00 AM
Hexachlorobutadiene	ND	40,000		ppbv	20000	10/8/2011 8:09:00 AM
m,p-Xylene	36,000	40,000	J	ppbv	20000	10/8/2011 8:09:00 AM
Methylene chloride	ND	100,000		ppbv	20000	10/8/2011 8:09:00 AM
Naphthalene	ND	20,000		ppbv	20000	10/8/2011 8:09:00 AM
n-Hexane	1,200,000	40,000		ppbv	20000	10/8/2011 8:09:00 AM
o-Xylene	ND	20,000		ppbv	20000	10/8/2011 8:09:00 AM
Propylene	ND	20,000		ppbv	20000	10/8/2011 8:09:00 AM
Styrene	ND	20,000		ppbv	20000	10/8/2011 8:09:00 AM
tert-Butyl Methyl Ether	ND	20,000		ppbv	20000	10/8/2011 8:09:00 AM
Tetrachloroethene	ND	20,000		ppbv	20000	10/8/2011 8:09:00 AM
Tetrahydrofuran	ND	20,000		ppbv	20000	10/8/2011 8:09:00 AM
Toluene	590,000	20,000		ppbv	20000	10/8/2011 8:09:00 AM
trans-1,2-Dichloroethene	ND	20,000		ppbv	20000	10/8/2011 8:09:00 AM
trans-1,3-dichloropropene	ND	20,000		ppbv	20000	10/8/2011 8:09:00 AM
Trichloroethene	ND	20,000		ppbv	20000	10/8/2011 8:09:00 AM
Trichlorofluoromethane	ND	20,000		ppbv	20000	10/8/2011 8:09:00 AM
Vinyl acetate	ND	20,000		ppbv	20000	10/8/2011 8:09:00 AM
Vinyl chloride	ND	20,000		ppbv	20000	10/8/2011 8:09:00 AM
Xylenes, Total	36,000	60,000	J	ppbv	20000	10/8/2011 8:09:00 AM
Surr: 4-Bromofluorobenzene	112	70-130		%REC	20000	10/8/2011 8:09:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v1

RTI LABORATORIES, INC.

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31628 Glendale St.
Livonia, MI 48150
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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/9/2011 2:48:00 PM

Project: Kirtland AFB

Lab ID: 1109988-006 **Matrix:** AIR

Client Sample ID VA0521

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MASS APH AIR				**MA_APH**		Analyst: **RH3**
AIR-PHASE PETROLEUM HYDROCARBONS						
C5-C8 Aliphatic Hydrocarbons	34,000,000	2,300,000		µg/m³	20000	10/4/2011 7:00:00 PM
C9-C10 Aromatic Hydrocarbons	ND	2,700,000		µg/m³	20000	10/4/2011 7:00:00 PM
C9-C12 Aliphatic Hydrocarbons	1,000,000	3,800,000	J	µg/m³	20000	10/4/2011 7:00:00 PM
Surr: 4-Bromofluorobenzene	106	70-130		%REC	20000	10/4/2011 7:00:00 PM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

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Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/9/2011 3:48:00 PM

Project: Kirtland AFB

Lab ID: 1109988-007 **Matrix:** AIR

Client Sample ID VA0522

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.63	0.10		%	1	10/11/2011 3:50:00 PM
Carbon Monoxide	ND	0.10		%	1	10/11/2011 3:50:00 PM
Methane	ND	0.50		%	1	10/11/2011 3:50:00 PM
Nitrogen	79	0.10		%	1	10/11/2011 3:50:00 PM
Oxygen	19	0.10		%	1	10/11/2011 3:50:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	40,000		ppbv	40000	10/8/2011 8:51:00 AM
1,1,2,2-Tetrachloroethane	ND	40,000		ppbv	40000	10/8/2011 8:51:00 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	40,000		ppbv	40000	10/8/2011 8:51:00 AM
1,1,2-Trichloroethane	ND	40,000		ppbv	40000	10/8/2011 8:51:00 AM
1,1-Dichloroethane	ND	40,000		ppbv	40000	10/8/2011 8:51:00 AM
1,1-Dichloroethene	ND	40,000		ppbv	40000	10/8/2011 8:51:00 AM
1,2,4-Trichlorobenzene	ND	40,000		ppbv	40000	10/8/2011 8:51:00 AM
1,2,4-Trimethylbenzene	ND	40,000		ppbv	40000	10/8/2011 8:51:00 AM
1,2-Dibromoethane	ND	40,000		ppbv	40000	10/8/2011 8:51:00 AM
1,2-Dichlorobenzene	ND	40,000		ppbv	40000	10/8/2011 8:51:00 AM
1,2-Dichloroethane	ND	40,000		ppbv	40000	10/8/2011 8:51:00 AM
1,2-Dichloropropane	ND	40,000		ppbv	40000	10/8/2011 8:51:00 AM
1,3,5-Trimethylbenzene	ND	40,000		ppbv	40000	10/8/2011 8:51:00 AM
1,3-Butadiene	ND	40,000		ppbv	40000	10/8/2011 8:51:00 AM
1,3-Dichlorobenzene	ND	40,000		ppbv	40000	10/8/2011 8:51:00 AM
1,4-Dichlorobenzene	ND	40,000		ppbv	40000	10/8/2011 8:51:00 AM
2-Butanone	ND	40,000		ppbv	40000	10/8/2011 8:51:00 AM
2-Hexanone	ND	40,000		ppbv	40000	10/8/2011 8:51:00 AM
4-Methyl-2-pentanone	ND	40,000		ppbv	40000	10/8/2011 8:51:00 AM
Acetone	ND	40,000		ppbv	40000	10/8/2011 8:51:00 AM
Benzene	840,000	40,000		ppbv	40000	10/8/2011 8:51:00 AM
Benzyl chloride	ND	40,000		ppbv	40000	10/8/2011 8:51:00 AM
Bromodichloromethane	ND	40,000		ppbv	40000	10/8/2011 8:51:00 AM
Bromoform	ND	40,000		ppbv	40000	10/8/2011 8:51:00 AM
Bromomethane	ND	40,000		ppbv	40000	10/8/2011 8:51:00 AM
Carbon disulfide	ND	40,000		ppbv	40000	10/8/2011 8:51:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v1

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Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/9/2011 3:48:00 PM

Project: Kirtland AFB

Lab ID: 1109988-007 **Matrix:** AIR

Client Sample ID VA0522

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Carbon tetrachloride	ND	40,000		ppbv	40000	10/8/2011 8:51:00 AM
Chlorobenzene	ND	40,000		ppbv	40000	10/8/2011 8:51:00 AM
Chlorodibromomethane	ND	40,000		ppbv	40000	10/8/2011 8:51:00 AM
Chloroethane	ND	40,000		ppbv	40000	10/8/2011 8:51:00 AM
Chloroform	ND	40,000		ppbv	40000	10/8/2011 8:51:00 AM
Chloromethane	ND	40,000		ppbv	40000	10/8/2011 8:51:00 AM
cis-1,2-Dichloroethene	ND	40,000		ppbv	40000	10/8/2011 8:51:00 AM
cis-1,3-dichloropropene	ND	40,000		ppbv	40000	10/8/2011 8:51:00 AM
Cyclohexane	2,400,000	80,000		ppbv	40000	10/8/2011 8:51:00 AM
Dichlorodifluoromethane	ND	40,000		ppbv	40000	10/8/2011 8:51:00 AM
Ethyl acetate	ND	40,000		ppbv	40000	10/8/2011 8:51:00 AM
Ethylbenzene	ND	80,000		ppbv	40000	10/8/2011 8:51:00 AM
Heptane	1,300,000	40,000		ppbv	40000	10/8/2011 8:51:00 AM
Hexachlorobutadiene	ND	80,000		ppbv	40000	10/8/2011 8:51:00 AM
m,p-Xylene	55,000	80,000	J	ppbv	40000	10/8/2011 8:51:00 AM
Methylene chloride	ND	200,000		ppbv	40000	10/8/2011 8:51:00 AM
Naphthalene	ND	40,000		ppbv	40000	10/8/2011 8:51:00 AM
n-Hexane	3,100,000	80,000		ppbv	40000	10/8/2011 8:51:00 AM
o-Xylene	ND	40,000		ppbv	40000	10/8/2011 8:51:00 AM
Propylene	ND	40,000		ppbv	40000	10/8/2011 8:51:00 AM
Styrene	ND	40,000		ppbv	40000	10/8/2011 8:51:00 AM
tert-Butyl Methyl Ether	ND	40,000		ppbv	40000	10/8/2011 8:51:00 AM
Tetrachloroethene	ND	40,000		ppbv	40000	10/8/2011 8:51:00 AM
Tetrahydrofuran	ND	40,000		ppbv	40000	10/8/2011 8:51:00 AM
Toluene	860,000	40,000		ppbv	40000	10/8/2011 8:51:00 AM
trans-1,2-Dichloroethene	ND	40,000		ppbv	40000	10/8/2011 8:51:00 AM
trans-1,3-dichloropropene	ND	40,000		ppbv	40000	10/8/2011 8:51:00 AM
Trichloroethene	ND	40,000		ppbv	40000	10/8/2011 8:51:00 AM
Trichlorofluoromethane	ND	40,000		ppbv	40000	10/8/2011 8:51:00 AM
Vinyl acetate	ND	40,000		ppbv	40000	10/8/2011 8:51:00 AM
Vinyl chloride	ND	40,000		ppbv	40000	10/8/2011 8:51:00 AM
Xylenes, Total	55,000	120,000	J	ppbv	40000	10/8/2011 8:51:00 AM
Surr: 4-Bromofluorobenzene	111	70-130		%REC	40000	10/8/2011 8:51:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v1

RTI LABORATORIES, INC.

RTI
31628 Glendale St.
Livonia, MI 48150
TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/9/2011 3:48:00 PM

Project: Kirtland AFB

Lab ID: 1109988-007 **Matrix:** AIR

Client Sample ID VA0522

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MASS APH AIR				**MA_APH**		Analyst: **RH3**
AIR-PHASE PETROLEUM HYDROCARBONS						
C5-C8 Aliphatic Hydrocarbons	76,000,000	4,700,000	H	µg/m³	40000	10/15/2011 1:58:00 AM
C9-C10 Aromatic Hydrocarbons	ND	5,300,000	H	µg/m³	40000	10/15/2011 1:58:00 AM
C9-C12 Aliphatic Hydrocarbons	ND	7,600,000	H	µg/m³	40000	10/15/2011 1:58:00 AM
Surr: 4-Bromofluorobenzene	102	70-130	H	%REC	40000	10/15/2011 1:58:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

RTI LABORATORIES, INC.

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Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/19/2011 8:42:00 AM

Project: Kirtland AFB

Lab ID: 1109988-008 **Matrix:** AIR

Client Sample ID VA0530

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.51	0.10		%	1	10/11/2011 4:11:00 PM
Carbon Monoxide	ND	0.10		%	1	10/11/2011 4:11:00 PM
Methane	ND	0.50		%	1	10/11/2011 4:11:00 PM
Nitrogen	77	0.10		%	1	10/11/2011 4:11:00 PM
Oxygen	21	0.10		%	1	10/11/2011 4:11:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	400		ppbv	400	10/11/2011 6:34:00 AM
1,1,2,2-Tetrachloroethane	ND	400		ppbv	400	10/11/2011 6:34:00 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	400		ppbv	400	10/11/2011 6:34:00 AM
1,1,2-Trichloroethane	ND	400		ppbv	400	10/11/2011 6:34:00 AM
1,1-Dichloroethane	ND	400		ppbv	400	10/11/2011 6:34:00 AM
1,1-Dichloroethene	ND	400		ppbv	400	10/11/2011 6:34:00 AM
1,2,4-Trichlorobenzene	ND	400		ppbv	400	10/11/2011 6:34:00 AM
1,2,4-Trimethylbenzene	ND	400		ppbv	400	10/11/2011 6:34:00 AM
1,2-Dibromoethane	ND	400		ppbv	400	10/11/2011 6:34:00 AM
1,2-Dichlorobenzene	ND	400		ppbv	400	10/11/2011 6:34:00 AM
1,2-Dichloroethane	ND	400		ppbv	400	10/11/2011 6:34:00 AM
1,2-Dichloropropane	ND	400		ppbv	400	10/11/2011 6:34:00 AM
1,3,5-Trimethylbenzene	ND	400		ppbv	400	10/11/2011 6:34:00 AM
1,3-Butadiene	ND	400		ppbv	400	10/11/2011 6:34:00 AM
1,3-Dichlorobenzene	ND	400		ppbv	400	10/11/2011 6:34:00 AM
1,4-Dichlorobenzene	ND	400		ppbv	400	10/11/2011 6:34:00 AM
2-Butanone	ND	400		ppbv	400	10/11/2011 6:34:00 AM
2-Hexanone	ND	400		ppbv	400	10/11/2011 6:34:00 AM
4-Methyl-2-pentanone	ND	400		ppbv	400	10/11/2011 6:34:00 AM
Acetone	520	400		ppbv	400	10/11/2011 6:34:00 AM
Benzene	800	400		ppbv	400	10/11/2011 6:34:00 AM
Benzyl chloride	ND	400		ppbv	400	10/11/2011 6:34:00 AM
Bromodichloromethane	ND	400		ppbv	400	10/11/2011 6:34:00 AM
Bromoform	ND	400		ppbv	400	10/11/2011 6:34:00 AM
Bromomethane	ND	400		ppbv	400	10/11/2011 6:34:00 AM
Carbon disulfide	ND	400		ppbv	400	10/11/2011 6:34:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

RTI LABORATORIES, INC.

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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/19/2011 8:42:00 AM

Project: Kirtland AFB

Lab ID: 1109988-008 **Matrix:** AIR

Client Sample ID VA0530

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Carbon tetrachloride	ND	400		ppbv	400	10/11/2011 6:34:00 AM
Chlorobenzene	ND	400		ppbv	400	10/11/2011 6:34:00 AM
Chlorodibromomethane	ND	400		ppbv	400	10/11/2011 6:34:00 AM
Chloroethane	ND	400		ppbv	400	10/11/2011 6:34:00 AM
Chloroform	ND	400		ppbv	400	10/11/2011 6:34:00 AM
Chloromethane	ND	400		ppbv	400	10/11/2011 6:34:00 AM
cis-1,2-Dichloroethene	ND	400		ppbv	400	10/11/2011 6:34:00 AM
cis-1,3-dichloropropene	ND	400		ppbv	400	10/11/2011 6:34:00 AM
Cyclohexane	1,400	800		ppbv	400	10/11/2011 6:34:00 AM
Dichlorodifluoromethane	ND	400		ppbv	400	10/11/2011 6:34:00 AM
Ethyl acetate	ND	400		ppbv	400	10/11/2011 6:34:00 AM
Ethylbenzene	ND	800		ppbv	400	10/11/2011 6:34:00 AM
Heptane	1,200	400		ppbv	400	10/11/2011 6:34:00 AM
Hexachlorobutadiene	ND	800		ppbv	400	10/11/2011 6:34:00 AM
m,p-Xylene	500	800	J	ppbv	400	10/11/2011 6:34:00 AM
Methylene chloride	ND	2,000		ppbv	400	10/11/2011 6:34:00 AM
Naphthalene	ND	400		ppbv	400	10/11/2011 6:34:00 AM
n-Hexane	1,200	800		ppbv	400	10/11/2011 6:34:00 AM
o-Xylene	ND	400		ppbv	400	10/11/2011 6:34:00 AM
Propylene	ND	400		ppbv	400	10/11/2011 6:34:00 AM
Styrene	ND	400		ppbv	400	10/11/2011 6:34:00 AM
tert-Butyl Methyl Ether	ND	400		ppbv	400	10/11/2011 6:34:00 AM
Tetrachloroethene	ND	400		ppbv	400	10/11/2011 6:34:00 AM
Tetrahydrofuran	ND	400		ppbv	400	10/11/2011 6:34:00 AM
Toluene	2,300	400		ppbv	400	10/11/2011 6:34:00 AM
trans-1,2-Dichloroethene	ND	400		ppbv	400	10/11/2011 6:34:00 AM
trans-1,3-dichloropropene	ND	400		ppbv	400	10/11/2011 6:34:00 AM
Trichloroethene	ND	400		ppbv	400	10/11/2011 6:34:00 AM
Trichlorofluoromethane	ND	400		ppbv	400	10/11/2011 6:34:00 AM
Vinyl acetate	ND	400		ppbv	400	10/11/2011 6:34:00 AM
Vinyl chloride	ND	400		ppbv	400	10/11/2011 6:34:00 AM
Xylenes, Total	500	1,200	J	ppbv	400	10/11/2011 6:34:00 AM
Surr: 4-Bromofluorobenzene	112	70-130		%REC	400	10/11/2011 6:34:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v1

RTI LABORATORIES, INC.

RTI
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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/19/2011 8:42:00 AM

Project: Kirtland AFB

Lab ID: 1109988-008 **Matrix:** AIR

Client Sample ID VA0530

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MASS APH AIR				**MA_APH**		Analyst: **RH3**
AIR-PHASE PETROLEUM HYDROCARBONS						
C5-C8 Aliphatic Hydrocarbons	220,000	47,000		µg/m³	400	10/5/2011 5:41:00 AM
C9-C10 Aromatic Hydrocarbons	ND	53,000		µg/m³	400	10/5/2011 5:41:00 AM
C9-C12 Aliphatic Hydrocarbons	29,000	76,000	J	µg/m³	400	10/5/2011 5:41:00 AM
Surr: 4-Bromofluorobenzene	109	70-130		%REC	400	10/5/2011 5:41:00 AM

Qualifiers:				
	*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Estimated concentration	M	Manual Integration used to determine area response
	ND	Not Detected at the Reporting Limit	PL	Permit Limit
	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

RTI LABORATORIES, INC.

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Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/19/2011 9:20:00 AM

Project: Kirtland AFB

Lab ID: 1109988-009 **Matrix:** AIR

Client Sample ID VA0531

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	2.7	0.10		%	1	10/11/2011 4:39:00 PM
Carbon Monoxide	ND	0.10		%	1	10/11/2011 4:39:00 PM
Methane	ND	0.50		%	1	10/11/2011 4:39:00 PM
Nitrogen	79	0.10		%	1	10/11/2011 4:39:00 PM
Oxygen	18	0.10		%	1	10/11/2011 4:39:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	400		ppbv	400	10/11/2011 7:22:00 AM
1,1,2,2-Tetrachloroethane	ND	400		ppbv	400	10/11/2011 7:22:00 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	400		ppbv	400	10/11/2011 7:22:00 AM
1,1,2-Trichloroethane	ND	400		ppbv	400	10/11/2011 7:22:00 AM
1,1-Dichloroethane	ND	400		ppbv	400	10/11/2011 7:22:00 AM
1,1-Dichloroethene	ND	400		ppbv	400	10/11/2011 7:22:00 AM
1,2,4-Trichlorobenzene	ND	400		ppbv	400	10/11/2011 7:22:00 AM
1,2,4-Trimethylbenzene	ND	400		ppbv	400	10/11/2011 7:22:00 AM
1,2-Dibromoethane	ND	400		ppbv	400	10/11/2011 7:22:00 AM
1,2-Dichlorobenzene	ND	400		ppbv	400	10/11/2011 7:22:00 AM
1,2-Dichloroethane	ND	400		ppbv	400	10/11/2011 7:22:00 AM
1,2-Dichloropropane	ND	400		ppbv	400	10/11/2011 7:22:00 AM
1,3,5-Trimethylbenzene	ND	400		ppbv	400	10/11/2011 7:22:00 AM
1,3-Butadiene	ND	400		ppbv	400	10/11/2011 7:22:00 AM
1,3-Dichlorobenzene	ND	400		ppbv	400	10/11/2011 7:22:00 AM
1,4-Dichlorobenzene	ND	400		ppbv	400	10/11/2011 7:22:00 AM
2-Butanone	ND	400		ppbv	400	10/11/2011 7:22:00 AM
2-Hexanone	ND	400		ppbv	400	10/11/2011 7:22:00 AM
4-Methyl-2-pentanone	ND	400		ppbv	400	10/11/2011 7:22:00 AM
Acetone	440	400		ppbv	400	10/11/2011 7:22:00 AM
Benzene	990	400		ppbv	400	10/11/2011 7:22:00 AM
Benzyl chloride	ND	400		ppbv	400	10/11/2011 7:22:00 AM
Bromodichloromethane	ND	400		ppbv	400	10/11/2011 7:22:00 AM
Bromoform	ND	400		ppbv	400	10/11/2011 7:22:00 AM
Bromomethane	ND	400		ppbv	400	10/11/2011 7:22:00 AM
Carbon disulfide	ND	400		ppbv	400	10/11/2011 7:22:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v1

RTI LABORATORIES, INC.

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Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/19/2011 9:20:00 AM

Project: Kirtland AFB

Lab ID: 1109988-009 **Matrix:** AIR

Client Sample ID VA0531

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Carbon tetrachloride	ND	400		ppbv	400	10/11/2011 7:22:00 AM
Chlorobenzene	ND	400		ppbv	400	10/11/2011 7:22:00 AM
Chlorodibromomethane	ND	400		ppbv	400	10/11/2011 7:22:00 AM
Chloroethane	ND	400		ppbv	400	10/11/2011 7:22:00 AM
Chloroform	ND	400		ppbv	400	10/11/2011 7:22:00 AM
Chloromethane	ND	400		ppbv	400	10/11/2011 7:22:00 AM
cis-1,2-Dichloroethene	ND	400		ppbv	400	10/11/2011 7:22:00 AM
cis-1,3-dichloropropene	ND	400		ppbv	400	10/11/2011 7:22:00 AM
Cyclohexane	1,800	800		ppbv	400	10/11/2011 7:22:00 AM
Dichlorodifluoromethane	ND	400		ppbv	400	10/11/2011 7:22:00 AM
Ethyl acetate	ND	400		ppbv	400	10/11/2011 7:22:00 AM
Ethylbenzene	ND	800		ppbv	400	10/11/2011 7:22:00 AM
Heptane	1,700	400		ppbv	400	10/11/2011 7:22:00 AM
Hexachlorobutadiene	ND	800		ppbv	400	10/11/2011 7:22:00 AM
m,p-Xylene	640	800	J	ppbv	400	10/11/2011 7:22:00 AM
Methylene chloride	ND	2,000		ppbv	400	10/11/2011 7:22:00 AM
Naphthalene	ND	400		ppbv	400	10/11/2011 7:22:00 AM
n-Hexane	1,300	800		ppbv	400	10/11/2011 7:22:00 AM
o-Xylene	ND	400		ppbv	400	10/11/2011 7:22:00 AM
Propylene	ND	400		ppbv	400	10/11/2011 7:22:00 AM
Styrene	ND	400		ppbv	400	10/11/2011 7:22:00 AM
tert-Butyl Methyl Ether	ND	400		ppbv	400	10/11/2011 7:22:00 AM
Tetrachloroethene	ND	400		ppbv	400	10/11/2011 7:22:00 AM
Tetrahydrofuran	ND	400		ppbv	400	10/11/2011 7:22:00 AM
Toluene	3,300	400		ppbv	400	10/11/2011 7:22:00 AM
trans-1,2-Dichloroethene	ND	400		ppbv	400	10/11/2011 7:22:00 AM
trans-1,3-dichloropropene	ND	400		ppbv	400	10/11/2011 7:22:00 AM
Trichloroethene	ND	400		ppbv	400	10/11/2011 7:22:00 AM
Trichlorofluoromethane	ND	400		ppbv	400	10/11/2011 7:22:00 AM
Vinyl acetate	ND	400		ppbv	400	10/11/2011 7:22:00 AM
Vinyl chloride	ND	400		ppbv	400	10/11/2011 7:22:00 AM
Xylenes, Total	640	1,200	J	ppbv	400	10/11/2011 7:22:00 AM
Surr: 4-Bromofluorobenzene	111	70-130		%REC	400	10/11/2011 7:22:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v1

RTI LABORATORIES, INC.

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Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/19/2011 9:20:00 AM

Project: Kirtland AFB

Lab ID: 1109988-009 **Matrix:** AIR

Client Sample ID VA0531

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MASS APH AIR				**MA_APH**		Analyst: **RH3**
AIR-PHASE PETROLEUM HYDROCARBONS						
C5-C8 Aliphatic Hydrocarbons	260,000	47,000		µg/m³	400	10/5/2011 6:30:00 AM
C9-C10 Aromatic Hydrocarbons	ND	53,000		µg/m³	400	10/5/2011 6:30:00 AM
C9-C12 Aliphatic Hydrocarbons	28,000	76,000	J	µg/m³	400	10/5/2011 6:30:00 AM
Surr: 4-Bromofluorobenzene	111	70-130		%REC	400	10/5/2011 6:30:00 AM

Qualifiers:				
	*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Estimated concentration	M	Manual Integration used to determine area response
	ND	Not Detected at the Reporting Limit	PL	Permit Limit
	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

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Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/19/2011 9:55:00 AM

Project: Kirtland AFB

Lab ID: 1109988-010 **Matrix:** AIR

Client Sample ID VA0532

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	4.1	0.10		%	1	10/11/2011 5:00:00 PM
Carbon Monoxide	ND	0.10		%	1	10/11/2011 5:00:00 PM
Methane	ND	0.50		%	1	10/11/2011 5:00:00 PM
Nitrogen	82	0.10		%	1	10/11/2011 5:00:00 PM
Oxygen	13	0.10		%	1	10/11/2011 5:00:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	800		ppbv	800	10/11/2011 8:06:00 AM
1,1,2,2-Tetrachloroethane	ND	800		ppbv	800	10/11/2011 8:06:00 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	800		ppbv	800	10/11/2011 8:06:00 AM
1,1,2-Trichloroethane	ND	800		ppbv	800	10/11/2011 8:06:00 AM
1,1-Dichloroethane	ND	800		ppbv	800	10/11/2011 8:06:00 AM
1,1-Dichloroethene	ND	800		ppbv	800	10/11/2011 8:06:00 AM
1,2,4-Trichlorobenzene	ND	800		ppbv	800	10/11/2011 8:06:00 AM
1,2,4-Trimethylbenzene	ND	800		ppbv	800	10/11/2011 8:06:00 AM
1,2-Dibromoethane	ND	800		ppbv	800	10/11/2011 8:06:00 AM
1,2-Dichlorobenzene	ND	800		ppbv	800	10/11/2011 8:06:00 AM
1,2-Dichloroethane	ND	800		ppbv	800	10/11/2011 8:06:00 AM
1,2-Dichloropropane	ND	800		ppbv	800	10/11/2011 8:06:00 AM
1,3,5-Trimethylbenzene	ND	800		ppbv	800	10/11/2011 8:06:00 AM
1,3-Butadiene	ND	800		ppbv	800	10/11/2011 8:06:00 AM
1,3-Dichlorobenzene	ND	800		ppbv	800	10/11/2011 8:06:00 AM
1,4-Dichlorobenzene	ND	800		ppbv	800	10/11/2011 8:06:00 AM
2-Butanone	ND	800		ppbv	800	10/11/2011 8:06:00 AM
2-Hexanone	ND	800		ppbv	800	10/11/2011 8:06:00 AM
4-Methyl-2-pentanone	ND	800		ppbv	800	10/11/2011 8:06:00 AM
Acetone	ND	800		ppbv	800	10/11/2011 8:06:00 AM
Benzene	12,000	800		ppbv	800	10/11/2011 8:06:00 AM
Benzyl chloride	ND	800		ppbv	800	10/11/2011 8:06:00 AM
Bromodichloromethane	ND	800		ppbv	800	10/11/2011 8:06:00 AM
Bromoform	ND	800		ppbv	800	10/11/2011 8:06:00 AM
Bromomethane	ND	800		ppbv	800	10/11/2011 8:06:00 AM
Carbon disulfide	ND	800		ppbv	800	10/11/2011 8:06:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v1

RTI LABORATORIES, INC.

RTI
31628 Glendale St.
Livonia, MI 48150
TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/19/2011 9:55:00 AM

Project: Kirtland AFB

Lab ID: 1109988-010 **Matrix:** AIR

Client Sample ID VA0532

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Carbon tetrachloride	ND	800		ppbv	800	10/11/2011 8:06:00 AM
Chlorobenzene	ND	800		ppbv	800	10/11/2011 8:06:00 AM
Chlorodibromomethane	ND	800		ppbv	800	10/11/2011 8:06:00 AM
Chloroethane	ND	800		ppbv	800	10/11/2011 8:06:00 AM
Chloroform	ND	800		ppbv	800	10/11/2011 8:06:00 AM
Chloromethane	ND	800		ppbv	800	10/11/2011 8:06:00 AM
cis-1,2-Dichloroethene	ND	800		ppbv	800	10/11/2011 8:06:00 AM
cis-1,3-dichloropropene	ND	800		ppbv	800	10/11/2011 8:06:00 AM
Cyclohexane	51,000	1,600		ppbv	800	10/11/2011 8:06:00 AM
Dichlorodifluoromethane	ND	800		ppbv	800	10/11/2011 8:06:00 AM
Ethyl acetate	ND	800		ppbv	800	10/11/2011 8:06:00 AM
Ethylbenzene	ND	1,600		ppbv	800	10/11/2011 8:06:00 AM
Heptane	11,000	800		ppbv	800	10/11/2011 8:06:00 AM
Hexachlorobutadiene	ND	1,600		ppbv	800	10/11/2011 8:06:00 AM
m,p-Xylene	ND	1,600		ppbv	800	10/11/2011 8:06:00 AM
Methylene chloride	ND	4,000		ppbv	800	10/11/2011 8:06:00 AM
Naphthalene	ND	800		ppbv	800	10/11/2011 8:06:00 AM
n-Hexane	31,000	1,600		ppbv	800	10/11/2011 8:06:00 AM
o-Xylene	ND	800		ppbv	800	10/11/2011 8:06:00 AM
Propylene	ND	800		ppbv	800	10/11/2011 8:06:00 AM
Styrene	ND	800		ppbv	800	10/11/2011 8:06:00 AM
tert-Butyl Methyl Ether	ND	800		ppbv	800	10/11/2011 8:06:00 AM
Tetrachloroethene	ND	800		ppbv	800	10/11/2011 8:06:00 AM
Tetrahydrofuran	ND	800		ppbv	800	10/11/2011 8:06:00 AM
Toluene	2,500	800		ppbv	800	10/11/2011 8:06:00 AM
trans-1,2-Dichloroethene	ND	800		ppbv	800	10/11/2011 8:06:00 AM
trans-1,3-dichloropropene	ND	800		ppbv	800	10/11/2011 8:06:00 AM
Trichloroethene	ND	800		ppbv	800	10/11/2011 8:06:00 AM
Trichlorofluoromethane	ND	800		ppbv	800	10/11/2011 8:06:00 AM
Vinyl acetate	ND	800		ppbv	800	10/11/2011 8:06:00 AM
Vinyl chloride	ND	800		ppbv	800	10/11/2011 8:06:00 AM
Xylenes, Total	ND	2,400		ppbv	800	10/11/2011 8:06:00 AM
Surr: 4-Bromofluorobenzene	113	70-130		%REC	800	10/11/2011 8:06:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v1

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Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/19/2011 9:55:00 AM

Project: Kirtland AFB

Lab ID: 1109988-010 **Matrix:** AIR

Client Sample ID VA0532

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MASS APH AIR				**MA_APH**		Analyst: **RH3**
AIR-PHASE PETROLEUM HYDROCARBONS						
C5-C8 Aliphatic Hydrocarbons	2,600,000	940,000		µg/m³	8000	10/4/2011 11:14:00 PM
C9-C10 Aromatic Hydrocarbons	ND	1,100,000		µg/m³	8000	10/4/2011 11:14:00 PM
C9-C12 Aliphatic Hydrocarbons	ND	1,500,000		µg/m³	8000	10/4/2011 11:14:00 PM
Surr: 4-Bromofluorobenzene	112	70-130		%REC	8000	10/4/2011 11:14:00 PM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
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Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/19/2011 10:37:00 AM

Project: Kirtland AFB

Lab ID: 1109988-011 **Matrix:** AIR

Client Sample ID VA0533

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.71	0.10		%	1	10/12/2011 12:28:00 PM
Carbon Monoxide	ND	0.10		%	1	10/12/2011 12:28:00 PM
Methane	ND	0.50		%	1	10/12/2011 12:28:00 PM
Nitrogen	80	0.10		%	1	10/12/2011 12:28:00 PM
Oxygen	18	0.10		%	1	10/12/2011 12:28:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	400		ppbv	400	10/11/2011 8:53:00 AM
1,1,2,2-Tetrachloroethane	ND	400		ppbv	400	10/11/2011 8:53:00 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	400		ppbv	400	10/11/2011 8:53:00 AM
1,1,2-Trichloroethane	ND	400		ppbv	400	10/11/2011 8:53:00 AM
1,1-Dichloroethane	ND	400		ppbv	400	10/11/2011 8:53:00 AM
1,1-Dichloroethene	ND	400		ppbv	400	10/11/2011 8:53:00 AM
1,2,4-Trichlorobenzene	ND	400		ppbv	400	10/11/2011 8:53:00 AM
1,2,4-Trimethylbenzene	ND	400		ppbv	400	10/11/2011 8:53:00 AM
1,2-Dibromoethane	ND	400		ppbv	400	10/11/2011 8:53:00 AM
1,2-Dichlorobenzene	ND	400		ppbv	400	10/11/2011 8:53:00 AM
1,2-Dichloroethane	ND	400		ppbv	400	10/11/2011 8:53:00 AM
1,2-Dichloropropane	ND	400		ppbv	400	10/11/2011 8:53:00 AM
1,3,5-Trimethylbenzene	ND	400		ppbv	400	10/11/2011 8:53:00 AM
1,3-Butadiene	ND	400		ppbv	400	10/11/2011 8:53:00 AM
1,3-Dichlorobenzene	ND	400		ppbv	400	10/11/2011 8:53:00 AM
1,4-Dichlorobenzene	ND	400		ppbv	400	10/11/2011 8:53:00 AM
2-Butanone	ND	400		ppbv	400	10/11/2011 8:53:00 AM
2-Hexanone	ND	400		ppbv	400	10/11/2011 8:53:00 AM
4-Methyl-2-pentanone	ND	400		ppbv	400	10/11/2011 8:53:00 AM
Acetone	ND	400		ppbv	400	10/11/2011 8:53:00 AM
Benzene	15,000	400		ppbv	400	10/11/2011 8:53:00 AM
Benzyl chloride	ND	400		ppbv	400	10/11/2011 8:53:00 AM
Bromodichloromethane	ND	400		ppbv	400	10/11/2011 8:53:00 AM
Bromoform	ND	400		ppbv	400	10/11/2011 8:53:00 AM
Bromomethane	ND	400		ppbv	400	10/11/2011 8:53:00 AM
Carbon disulfide	ND	400		ppbv	400	10/11/2011 8:53:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
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RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v1

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Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/19/2011 10:37:00 AM

Project: Kirtland AFB

Lab ID: 1109988-011 **Matrix:** AIR

Client Sample ID VA0533

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Carbon tetrachloride	ND	400		ppbv	400	10/11/2011 8:53:00 AM
Chlorobenzene	ND	400		ppbv	400	10/11/2011 8:53:00 AM
Chlorodibromomethane	ND	400		ppbv	400	10/11/2011 8:53:00 AM
Chloroethane	ND	400		ppbv	400	10/11/2011 8:53:00 AM
Chloroform	ND	400		ppbv	400	10/11/2011 8:53:00 AM
Chloromethane	ND	400		ppbv	400	10/11/2011 8:53:00 AM
cis-1,2-Dichloroethene	ND	400		ppbv	400	10/11/2011 8:53:00 AM
cis-1,3-dichloropropene	ND	400		ppbv	400	10/11/2011 8:53:00 AM
Cyclohexane	9,100	800		ppbv	400	10/11/2011 8:53:00 AM
Dichlorodifluoromethane	ND	400		ppbv	400	10/11/2011 8:53:00 AM
Ethyl acetate	ND	400		ppbv	400	10/11/2011 8:53:00 AM
Ethylbenzene	430	800	J	ppbv	400	10/11/2011 8:53:00 AM
Heptane	3,500	400		ppbv	400	10/11/2011 8:53:00 AM
Hexachlorobutadiene	ND	800		ppbv	400	10/11/2011 8:53:00 AM
m,p-Xylene	940	800		ppbv	400	10/11/2011 8:53:00 AM
Methylene chloride	ND	2,000		ppbv	400	10/11/2011 8:53:00 AM
Naphthalene	ND	400		ppbv	400	10/11/2011 8:53:00 AM
n-Hexane	7,900	800		ppbv	400	10/11/2011 8:53:00 AM
o-Xylene	ND	400		ppbv	400	10/11/2011 8:53:00 AM
Propylene	ND	400		ppbv	400	10/11/2011 8:53:00 AM
Styrene	ND	400		ppbv	400	10/11/2011 8:53:00 AM
tert-Butyl Methyl Ether	ND	400		ppbv	400	10/11/2011 8:53:00 AM
Tetrachloroethene	ND	400		ppbv	400	10/11/2011 8:53:00 AM
Tetrahydrofuran	ND	400		ppbv	400	10/11/2011 8:53:00 AM
Toluene	24,000	400		ppbv	400	10/11/2011 8:53:00 AM
trans-1,2-Dichloroethene	ND	400		ppbv	400	10/11/2011 8:53:00 AM
trans-1,3-dichloropropene	ND	400		ppbv	400	10/11/2011 8:53:00 AM
Trichloroethene	ND	400		ppbv	400	10/11/2011 8:53:00 AM
Trichlorofluoromethane	ND	400		ppbv	400	10/11/2011 8:53:00 AM
Vinyl acetate	ND	400		ppbv	400	10/11/2011 8:53:00 AM
Vinyl chloride	ND	400		ppbv	400	10/11/2011 8:53:00 AM
Xylenes, Total	940	1,200	J	ppbv	400	10/11/2011 8:53:00 AM
Surr: 4-Bromofluorobenzene	112	70-130		%REC	400	10/11/2011 8:53:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

RTI LABORATORIES, INC.

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Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/19/2011 10:37:00 AM

Project: Kirtland AFB

Lab ID: 1109988-011 **Matrix:** AIR

Client Sample ID VA0533

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MASS APH AIR				**MA_APH**		Analyst: **RH3**
AIR-PHASE PETROLEUM HYDROCARBONS						
C5-C8 Aliphatic Hydrocarbons	550,000	47,000		µg/m³	400	10/5/2011 7:23:00 AM
C9-C10 Aromatic Hydrocarbons	ND	53,000		µg/m³	400	10/5/2011 7:23:00 AM
C9-C12 Aliphatic Hydrocarbons	37,000	76,000	J	µg/m³	400	10/5/2011 7:23:00 AM
Surr: 4-Bromofluorobenzene	110	70-130		%REC	400	10/5/2011 7:23:00 AM

Qualifiers:				
	*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Estimated concentration	M	Manual Integration used to determine area response
	ND	Not Detected at the Reporting Limit	PL	Permit Limit
	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

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Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/19/2011 10:37:00 AM

Project: Kirtland AFB

Lab ID: 1109988-012 **Matrix:** AIR

Client Sample ID VA0534

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.66	0.10		%	1	10/12/2011 12:54:00 PM
Carbon Monoxide	ND	0.10		%	1	10/12/2011 12:54:00 PM
Methane	ND	0.50		%	1	10/12/2011 12:54:00 PM
Nitrogen	79	0.10		%	1	10/12/2011 12:54:00 PM
Oxygen	18	0.10		%	1	10/12/2011 12:54:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	400		ppbv	400	10/11/2011 9:40:00 AM
1,1,2,2-Tetrachloroethane	ND	400		ppbv	400	10/11/2011 9:40:00 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	400		ppbv	400	10/11/2011 9:40:00 AM
1,1,2-Trichloroethane	ND	400		ppbv	400	10/11/2011 9:40:00 AM
1,1-Dichloroethane	ND	400		ppbv	400	10/11/2011 9:40:00 AM
1,1-Dichloroethene	ND	400		ppbv	400	10/11/2011 9:40:00 AM
1,2,4-Trichlorobenzene	ND	400		ppbv	400	10/11/2011 9:40:00 AM
1,2,4-Trimethylbenzene	ND	400		ppbv	400	10/11/2011 9:40:00 AM
1,2-Dibromoethane	ND	400		ppbv	400	10/11/2011 9:40:00 AM
1,2-Dichlorobenzene	ND	400		ppbv	400	10/11/2011 9:40:00 AM
1,2-Dichloroethane	ND	400		ppbv	400	10/11/2011 9:40:00 AM
1,2-Dichloropropane	ND	400		ppbv	400	10/11/2011 9:40:00 AM
1,3,5-Trimethylbenzene	ND	400		ppbv	400	10/11/2011 9:40:00 AM
1,3-Butadiene	ND	400		ppbv	400	10/11/2011 9:40:00 AM
1,3-Dichlorobenzene	ND	400		ppbv	400	10/11/2011 9:40:00 AM
1,4-Dichlorobenzene	ND	400		ppbv	400	10/11/2011 9:40:00 AM
2-Butanone	ND	400		ppbv	400	10/11/2011 9:40:00 AM
2-Hexanone	ND	400		ppbv	400	10/11/2011 9:40:00 AM
4-Methyl-2-pentanone	ND	400		ppbv	400	10/11/2011 9:40:00 AM
Acetone	470	400		ppbv	400	10/11/2011 9:40:00 AM
Benzene	14,000	400		ppbv	400	10/11/2011 9:40:00 AM
Benzyl chloride	ND	400		ppbv	400	10/11/2011 9:40:00 AM
Bromodichloromethane	ND	400		ppbv	400	10/11/2011 9:40:00 AM
Bromoform	ND	400		ppbv	400	10/11/2011 9:40:00 AM
Bromomethane	ND	400		ppbv	400	10/11/2011 9:40:00 AM
Carbon disulfide	ND	400		ppbv	400	10/11/2011 9:40:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual integration used to determine area response
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Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/19/2011 10:37:00 AM

Project: Kirtland AFB

Lab ID: 1109988-012 **Matrix:** AIR

Client Sample ID VA0534

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Carbon tetrachloride	ND	400		ppbv	400	10/11/2011 9:40:00 AM
Chlorobenzene	ND	400		ppbv	400	10/11/2011 9:40:00 AM
Chlorodibromomethane	ND	400		ppbv	400	10/11/2011 9:40:00 AM
Chloroethane	ND	400		ppbv	400	10/11/2011 9:40:00 AM
Chloroform	ND	400		ppbv	400	10/11/2011 9:40:00 AM
Chloromethane	ND	400		ppbv	400	10/11/2011 9:40:00 AM
cis-1,2-Dichloroethene	ND	400		ppbv	400	10/11/2011 9:40:00 AM
cis-1,3-dichloropropene	ND	400		ppbv	400	10/11/2011 9:40:00 AM
Cyclohexane	11,000	800		ppbv	400	10/11/2011 9:40:00 AM
Dichlorodifluoromethane	ND	400		ppbv	400	10/11/2011 9:40:00 AM
Ethyl acetate	ND	400		ppbv	400	10/11/2011 9:40:00 AM
Ethylbenzene	640	800	J	ppbv	400	10/11/2011 9:40:00 AM
Heptane	6,600	400		ppbv	400	10/11/2011 9:40:00 AM
Hexachlorobutadiene	ND	800		ppbv	400	10/11/2011 9:40:00 AM
m,p-Xylene	1,600	800		ppbv	400	10/11/2011 9:40:00 AM
Methylene chloride	ND	2,000		ppbv	400	10/11/2011 9:40:00 AM
Naphthalene	ND	400		ppbv	400	10/11/2011 9:40:00 AM
n-Hexane	9,800	800		ppbv	400	10/11/2011 9:40:00 AM
o-Xylene	510	400		ppbv	400	10/11/2011 9:40:00 AM
Propylene	ND	400		ppbv	400	10/11/2011 9:40:00 AM
Styrene	ND	400		ppbv	400	10/11/2011 9:40:00 AM
tert-Butyl Methyl Ether	ND	400		ppbv	400	10/11/2011 9:40:00 AM
Tetrachloroethene	ND	400		ppbv	400	10/11/2011 9:40:00 AM
Tetrahydrofuran	ND	400		ppbv	400	10/11/2011 9:40:00 AM
Toluene	17,000	800		ppbv	800	10/14/2011 4:01:00 AM
trans-1,2-Dichloroethene	ND	400		ppbv	400	10/11/2011 9:40:00 AM
trans-1,3-dichloropropene	ND	400		ppbv	400	10/11/2011 9:40:00 AM
Trichloroethene	ND	400		ppbv	400	10/11/2011 9:40:00 AM
Trichlorofluoromethane	ND	400		ppbv	400	10/11/2011 9:40:00 AM
Vinyl acetate	ND	400		ppbv	400	10/11/2011 9:40:00 AM
Vinyl chloride	ND	400		ppbv	400	10/11/2011 9:40:00 AM
Xylenes, Total	2,100	1,200		ppbv	400	10/11/2011 9:40:00 AM
Surr: 4-Bromofluorobenzene	113	70-130		%REC	400	10/11/2011 9:40:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
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Revision v1

RTI LABORATORIES, INC.

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Analytical Report

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WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/19/2011 10:37:00 AM

Project: Kirtland AFB

Lab ID: 1109988-012 **Matrix:** AIR

Client Sample ID VA0534

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MASS APH AIR				**MA_APH**		Analyst: **RH3**
AIR-PHASE PETROLEUM HYDROCARBONS						
C5-C8 Aliphatic Hydrocarbons	480,000	47,000		µg/m³	400	10/5/2011 8:12:00 AM
C9-C10 Aromatic Hydrocarbons	ND	53,000		µg/m³	400	10/5/2011 8:12:00 AM
C9-C12 Aliphatic Hydrocarbons	41,000	76,000	J	µg/m³	400	10/5/2011 8:12:00 AM
Surr: 4-Bromofluorobenzene	110	70-130		%REC	400	10/5/2011 8:12:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

RTI LABORATORIES, INC.

RTI
31628 Glendale St.
Livonia, MI 48150
TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/19/2011 11:24:00 AM

Project: Kirtland AFB

Lab ID: 1109988-013 **Matrix:** AIR

Client Sample ID VA0535

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.42	0.10		%	1	10/12/2011 1:14:00 PM
Carbon Monoxide	ND	0.10		%	1	10/12/2011 1:14:00 PM
Methane	ND	0.50		%	1	10/12/2011 1:14:00 PM
Nitrogen	78	0.10		%	1	10/12/2011 1:14:00 PM
Oxygen	20	0.10		%	1	10/12/2011 1:14:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	8,000		ppbv	8000	10/11/2011 10:21:00 AM
1,1,2,2-Tetrachloroethane	ND	8,000		ppbv	8000	10/11/2011 10:21:00 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	8,000		ppbv	8000	10/11/2011 10:21:00 AM
1,1,2-Trichloroethane	ND	8,000		ppbv	8000	10/11/2011 10:21:00 AM
1,1-Dichloroethane	ND	8,000		ppbv	8000	10/11/2011 10:21:00 AM
1,1-Dichloroethene	ND	8,000		ppbv	8000	10/11/2011 10:21:00 AM
1,2,4-Trichlorobenzene	ND	8,000		ppbv	8000	10/11/2011 10:21:00 AM
1,2,4-Trimethylbenzene	ND	8,000		ppbv	8000	10/11/2011 10:21:00 AM
1,2-Dibromoethane	ND	8,000		ppbv	8000	10/11/2011 10:21:00 AM
1,2-Dichlorobenzene	ND	8,000		ppbv	8000	10/11/2011 10:21:00 AM
1,2-Dichloroethane	ND	8,000		ppbv	8000	10/11/2011 10:21:00 AM
1,2-Dichloropropane	ND	8,000		ppbv	8000	10/11/2011 10:21:00 AM
1,3,5-Trimethylbenzene	ND	8,000		ppbv	8000	10/11/2011 10:21:00 AM
1,3-Butadiene	ND	8,000		ppbv	8000	10/11/2011 10:21:00 AM
1,3-Dichlorobenzene	ND	8,000		ppbv	8000	10/11/2011 10:21:00 AM
1,4-Dichlorobenzene	ND	8,000		ppbv	8000	10/11/2011 10:21:00 AM
2-Butanone	ND	8,000		ppbv	8000	10/11/2011 10:21:00 AM
2-Hexanone	ND	8,000		ppbv	8000	10/11/2011 10:21:00 AM
4-Methyl-2-pentanone	ND	8,000		ppbv	8000	10/11/2011 10:21:00 AM
Acetone	ND	8,000		ppbv	8000	10/11/2011 10:21:00 AM
Benzene	130,000	8,000		ppbv	8000	10/11/2011 10:21:00 AM
Benzyl chloride	ND	8,000		ppbv	8000	10/11/2011 10:21:00 AM
Bromodichloromethane	ND	8,000		ppbv	8000	10/11/2011 10:21:00 AM
Bromoform	ND	8,000		ppbv	8000	10/11/2011 10:21:00 AM
Bromomethane	ND	8,000		ppbv	8000	10/11/2011 10:21:00 AM
Carbon disulfide	ND	8,000		ppbv	8000	10/11/2011 10:21:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v1

RTI LABORATORIES, INC.

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Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/19/2011 11:24:00 AM

Project: Kirtland AFB

Lab ID: 1109988-013 **Matrix:** AIR

Client Sample ID VA0535

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Carbon tetrachloride	ND	8,000		ppbv	8000	10/11/2011 10:21:00 AM
Chlorobenzene	ND	8,000		ppbv	8000	10/11/2011 10:21:00 AM
Chlorodibromomethane	ND	8,000		ppbv	8000	10/11/2011 10:21:00 AM
Chloroethane	ND	8,000		ppbv	8000	10/11/2011 10:21:00 AM
Chloroform	ND	8,000		ppbv	8000	10/11/2011 10:21:00 AM
Chloromethane	ND	8,000		ppbv	8000	10/11/2011 10:21:00 AM
cis-1,2-Dichloroethene	ND	8,000		ppbv	8000	10/11/2011 10:21:00 AM
cis-1,3-dichloropropene	ND	8,000		ppbv	8000	10/11/2011 10:21:00 AM
Cyclohexane	340,000	16,000		ppbv	8000	10/11/2011 10:21:00 AM
Dichlorodifluoromethane	ND	8,000		ppbv	8000	10/11/2011 10:21:00 AM
Ethyl acetate	ND	8,000		ppbv	8000	10/11/2011 10:21:00 AM
Ethylbenzene	ND	16,000		ppbv	8000	10/11/2011 10:21:00 AM
Heptane	180,000	8,000		ppbv	8000	10/11/2011 10:21:00 AM
Hexachlorobutadiene	ND	16,000		ppbv	8000	10/11/2011 10:21:00 AM
m,p-Xylene	16,000	16,000	J	ppbv	8000	10/11/2011 10:21:00 AM
Methylene chloride	ND	40,000		ppbv	8000	10/11/2011 10:21:00 AM
Naphthalene	ND	8,000		ppbv	8000	10/11/2011 10:21:00 AM
n-Hexane	200,000	16,000		ppbv	8000	10/11/2011 10:21:00 AM
o-Xylene	ND	8,000		ppbv	8000	10/11/2011 10:21:00 AM
Propylene	ND	8,000		ppbv	8000	10/11/2011 10:21:00 AM
Styrene	ND	8,000		ppbv	8000	10/11/2011 10:21:00 AM
tert-Butyl Methyl Ether	ND	8,000		ppbv	8000	10/11/2011 10:21:00 AM
Tetrachloroethene	ND	8,000		ppbv	8000	10/11/2011 10:21:00 AM
Tetrahydrofuran	ND	8,000		ppbv	8000	10/11/2011 10:21:00 AM
Toluene	220,000	8,000		ppbv	8000	10/11/2011 10:21:00 AM
trans-1,2-Dichloroethene	ND	8,000		ppbv	8000	10/11/2011 10:21:00 AM
trans-1,3-dichloropropene	ND	8,000		ppbv	8000	10/11/2011 10:21:00 AM
Trichloroethene	ND	8,000		ppbv	8000	10/11/2011 10:21:00 AM
Trichlorofluoromethane	ND	8,000		ppbv	8000	10/11/2011 10:21:00 AM
Vinyl acetate	ND	8,000		ppbv	8000	10/11/2011 10:21:00 AM
Vinyl chloride	ND	8,000		ppbv	8000	10/11/2011 10:21:00 AM
Xylenes, Total	16,000	24,000	J	ppbv	8000	10/11/2011 10:21:00 AM
Surr: 4-Bromofluorobenzene	114	70-130		%REC	8000	10/11/2011 10:21:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v1

RTI LABORATORIES, INC.

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Livonia, MI 48150
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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/19/2011 11:24:00 AM

Project: Kirtland AFB

Lab ID: 1109988-013 **Matrix:** AIR

Client Sample ID VA0535

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MASS APH AIR				**MA_APH**		Analyst: **RH3**
AIR-PHASE PETROLEUM HYDROCARBONS						
C5-C8 Aliphatic Hydrocarbons	9,400,000	940,000		µg/m³	8000	10/5/2011 1:21:00 AM
C9-C10 Aromatic Hydrocarbons	ND	1,100,000		µg/m³	8000	10/5/2011 1:21:00 AM
C9-C12 Aliphatic Hydrocarbons	260,000	1,500,000	J	µg/m³	8000	10/5/2011 1:21:00 AM
Surr: 4-Bromofluorobenzene	114	70-130		%REC	8000	10/5/2011 1:21:00 AM

Qualifiers:

*X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
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Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/19/2011 12:03:00 PM

Project: Kirtland AFB

Lab ID: 1109988-014 **Matrix:** AIR

Client Sample ID VA0536

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.59	0.10		%	1	10/12/2011 1:53:00 PM
Carbon Monoxide	ND	0.10		%	1	10/12/2011 1:53:00 PM
Methane	ND	0.50		%	1	10/12/2011 1:53:00 PM
Nitrogen	79	0.10		%	1	10/12/2011 1:53:00 PM
Oxygen	19	0.10		%	1	10/12/2011 1:53:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	8,000		ppbv	8000	10/11/2011 11:42:00 AM
1,1,2,2-Tetrachloroethane	ND	8,000		ppbv	8000	10/11/2011 11:42:00 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	8,000		ppbv	8000	10/11/2011 11:42:00 AM
1,1,2-Trichloroethane	ND	8,000		ppbv	8000	10/11/2011 11:42:00 AM
1,1-Dichloroethane	ND	8,000		ppbv	8000	10/11/2011 11:42:00 AM
1,1-Dichloroethene	ND	8,000		ppbv	8000	10/11/2011 11:42:00 AM
1,2,4-Trichlorobenzene	ND	8,000		ppbv	8000	10/11/2011 11:42:00 AM
1,2,4-Trimethylbenzene	ND	8,000		ppbv	8000	10/11/2011 11:42:00 AM
1,2-Dibromoethane	ND	8,000		ppbv	8000	10/11/2011 11:42:00 AM
1,2-Dichlorobenzene	ND	8,000		ppbv	8000	10/11/2011 11:42:00 AM
1,2-Dichloroethane	ND	8,000		ppbv	8000	10/11/2011 11:42:00 AM
1,2-Dichloropropane	ND	8,000		ppbv	8000	10/11/2011 11:42:00 AM
1,3,5-Trimethylbenzene	ND	8,000		ppbv	8000	10/11/2011 11:42:00 AM
1,3-Butadiene	ND	8,000		ppbv	8000	10/11/2011 11:42:00 AM
1,3-Dichlorobenzene	ND	8,000		ppbv	8000	10/11/2011 11:42:00 AM
1,4-Dichlorobenzene	ND	8,000		ppbv	8000	10/11/2011 11:42:00 AM
2-Butanone	ND	8,000		ppbv	8000	10/11/2011 11:42:00 AM
2-Hexanone	ND	8,000		ppbv	8000	10/11/2011 11:42:00 AM
4-Methyl-2-pentanone	ND	8,000		ppbv	8000	10/11/2011 11:42:00 AM
Acetone	ND	8,000		ppbv	8000	10/11/2011 11:42:00 AM
Benzene	90,000	8,000		ppbv	8000	10/11/2011 11:42:00 AM
Benzyl chloride	ND	8,000		ppbv	8000	10/11/2011 11:42:00 AM
Bromodichloromethane	ND	8,000		ppbv	8000	10/11/2011 11:42:00 AM
Bromoform	ND	8,000		ppbv	8000	10/11/2011 11:42:00 AM
Bromomethane	ND	8,000		ppbv	8000	10/11/2011 11:42:00 AM
Carbon disulfide	ND	8,000		ppbv	8000	10/11/2011 11:42:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v1

RTI LABORATORIES, INC.

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Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/19/2011 12:03:00 PM

Project: Kirtland AFB

Lab ID: 1109988-014 **Matrix:** AIR

Client Sample ID VA0536

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Carbon tetrachloride	ND	8,000		ppbv	8000	10/11/2011 11:42:00 AM
Chlorobenzene	ND	8,000		ppbv	8000	10/11/2011 11:42:00 AM
Chlorodibromomethane	ND	8,000		ppbv	8000	10/11/2011 11:42:00 AM
Chloroethane	ND	8,000		ppbv	8000	10/11/2011 11:42:00 AM
Chloroform	ND	8,000		ppbv	8000	10/11/2011 11:42:00 AM
Chloromethane	ND	8,000		ppbv	8000	10/11/2011 11:42:00 AM
cis-1,2-Dichloroethene	ND	8,000		ppbv	8000	10/11/2011 11:42:00 AM
cis-1,3-dichloropropene	ND	8,000		ppbv	8000	10/11/2011 11:42:00 AM
Cyclohexane	140,000	16,000		ppbv	8000	10/11/2011 11:42:00 AM
Dichlorodifluoromethane	ND	8,000		ppbv	8000	10/11/2011 11:42:00 AM
Ethyl acetate	ND	8,000		ppbv	8000	10/11/2011 11:42:00 AM
Ethylbenzene	ND	16,000		ppbv	8000	10/11/2011 11:42:00 AM
Heptane	79,000	8,000		ppbv	8000	10/11/2011 11:42:00 AM
Hexachlorobutadiene	ND	16,000		ppbv	8000	10/11/2011 11:42:00 AM
m,p-Xylene	12,000	16,000	J	ppbv	8000	10/11/2011 11:42:00 AM
Methylene chloride	ND	40,000		ppbv	8000	10/11/2011 11:42:00 AM
Naphthalene	ND	8,000		ppbv	8000	10/11/2011 11:42:00 AM
n-Hexane	130,000	16,000		ppbv	8000	10/11/2011 11:42:00 AM
o-Xylene	ND	8,000		ppbv	8000	10/11/2011 11:42:00 AM
Propylene	ND	8,000		ppbv	8000	10/11/2011 11:42:00 AM
Styrene	ND	8,000		ppbv	8000	10/11/2011 11:42:00 AM
tert-Butyl Methyl Ether	ND	8,000		ppbv	8000	10/11/2011 11:42:00 AM
Tetrachloroethene	ND	8,000		ppbv	8000	10/11/2011 11:42:00 AM
Tetrahydrofuran	ND	8,000		ppbv	8000	10/11/2011 11:42:00 AM
Toluene	140,000	8,000		ppbv	8000	10/11/2011 11:42:00 AM
trans-1,2-Dichloroethene	ND	8,000		ppbv	8000	10/11/2011 11:42:00 AM
trans-1,3-dichloropropene	ND	8,000		ppbv	8000	10/11/2011 11:42:00 AM
Trichloroethene	ND	8,000		ppbv	8000	10/11/2011 11:42:00 AM
Trichlorofluoromethane	ND	8,000		ppbv	8000	10/11/2011 11:42:00 AM
Vinyl acetate	ND	8,000		ppbv	8000	10/11/2011 11:42:00 AM
Vinyl chloride	ND	8,000		ppbv	8000	10/11/2011 11:42:00 AM
Xylenes, Total	12,000	24,000	J	ppbv	8000	10/11/2011 11:42:00 AM
Surr: 4-Bromofluorobenzene	112	70-130		%REC	8000	10/11/2011 11:42:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v1

RTI LABORATORIES, INC.

RTI
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Livonia, MI 48150
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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/19/2011 12:03:00 PM

Project: Kirtland AFB

Lab ID: 1109988-014 **Matrix:** AIR

Client Sample ID VA0536

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MASS APH AIR				**MA_APH**		Analyst: **RH3**
AIR-PHASE PETROLEUM HYDROCARBONS						
C5-C8 Aliphatic Hydrocarbons	6,800,000	940,000		µg/m³	8000	10/5/2011 2:03:00 AM
C9-C10 Aromatic Hydrocarbons	ND	1,100,000		µg/m³	8000	10/5/2011 2:03:00 AM
C9-C12 Aliphatic Hydrocarbons	240,000	1,500,000	J	µg/m³	8000	10/5/2011 2:03:00 AM
Surr: 4-Bromofluorobenzene	110	70-130		%REC	8000	10/5/2011 2:03:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

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Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/19/2011 1:53:00 PM

Project: Kirtland AFB

Lab ID: 1109988-015 **Matrix:** AIR

Client Sample ID VA0687

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	4.8	0.10		%	1	10/12/2011 2:29:00 PM
Carbon Monoxide	ND	0.10		%	1	10/12/2011 2:29:00 PM
Methane	ND	0.50		%	1	10/12/2011 2:29:00 PM
Nitrogen	81	0.10		%	1	10/12/2011 2:29:00 PM
Oxygen	13	0.10		%	1	10/12/2011 2:29:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	400		ppbv	400	10/11/2011 12:29:00 PM
1,1,2,2-Tetrachloroethane	ND	400		ppbv	400	10/11/2011 12:29:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	400		ppbv	400	10/11/2011 12:29:00 PM
1,1,2-Trichloroethane	ND	400		ppbv	400	10/11/2011 12:29:00 PM
1,1-Dichloroethane	ND	400		ppbv	400	10/11/2011 12:29:00 PM
1,1-Dichloroethene	ND	400		ppbv	400	10/11/2011 12:29:00 PM
1,2,4-Trichlorobenzene	ND	400		ppbv	400	10/11/2011 12:29:00 PM
1,2,4-Trimethylbenzene	ND	400		ppbv	400	10/11/2011 12:29:00 PM
1,2-Dibromoethane	ND	400		ppbv	400	10/11/2011 12:29:00 PM
1,2-Dichlorobenzene	ND	400		ppbv	400	10/11/2011 12:29:00 PM
1,2-Dichloroethane	ND	400		ppbv	400	10/11/2011 12:29:00 PM
1,2-Dichloropropane	ND	400		ppbv	400	10/11/2011 12:29:00 PM
1,3,5-Trimethylbenzene	ND	400		ppbv	400	10/11/2011 12:29:00 PM
1,3-Butadiene	ND	400		ppbv	400	10/11/2011 12:29:00 PM
1,3-Dichlorobenzene	ND	400		ppbv	400	10/11/2011 12:29:00 PM
1,4-Dichlorobenzene	ND	400		ppbv	400	10/11/2011 12:29:00 PM
2-Butanone	ND	400		ppbv	400	10/11/2011 12:29:00 PM
2-Hexanone	ND	400		ppbv	400	10/11/2011 12:29:00 PM
4-Methyl-2-pentanone	ND	400		ppbv	400	10/11/2011 12:29:00 PM
Acetone	470	400		ppbv	400	10/11/2011 12:29:00 PM
Benzene	2,000	400		ppbv	400	10/11/2011 12:29:00 PM
Benzyl chloride	ND	400		ppbv	400	10/11/2011 12:29:00 PM
Bromodichloromethane	ND	400		ppbv	400	10/11/2011 12:29:00 PM
Bromoform	ND	400		ppbv	400	10/11/2011 12:29:00 PM
Bromomethane	ND	400		ppbv	400	10/11/2011 12:29:00 PM
Carbon disulfide	ND	400		ppbv	400	10/11/2011 12:29:00 PM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v1

RTI LABORATORIES, INC.

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Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/19/2011 1:53:00 PM

Project: Kirtland AFB

Lab ID: 1109988-015 **Matrix:** AIR

Client Sample ID VA0687

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Carbon tetrachloride	ND	400		ppbv	400	10/11/2011 12:29:00 PM
Chlorobenzene	ND	400		ppbv	400	10/11/2011 12:29:00 PM
Chlorodibromomethane	ND	400		ppbv	400	10/11/2011 12:29:00 PM
Chloroethane	ND	400		ppbv	400	10/11/2011 12:29:00 PM
Chloroform	ND	400		ppbv	400	10/11/2011 12:29:00 PM
Chloromethane	ND	400		ppbv	400	10/11/2011 12:29:00 PM
cis-1,2-Dichloroethene	ND	400		ppbv	400	10/11/2011 12:29:00 PM
cis-1,3-dichloropropene	ND	400		ppbv	400	10/11/2011 12:29:00 PM
Cyclohexane	3,200	800		ppbv	400	10/11/2011 12:29:00 PM
Dichlorodifluoromethane	ND	400		ppbv	400	10/11/2011 12:29:00 PM
Ethyl acetate	ND	400		ppbv	400	10/11/2011 12:29:00 PM
Ethylbenzene	ND	800		ppbv	400	10/11/2011 12:29:00 PM
Heptane	2,700	400		ppbv	400	10/11/2011 12:29:00 PM
Hexachlorobutadiene	ND	800		ppbv	400	10/11/2011 12:29:00 PM
m,p-Xylene	1,200	800		ppbv	400	10/11/2011 12:29:00 PM
Methylene chloride	1,100	2,000	J	ppbv	400	10/11/2011 12:29:00 PM
Naphthalene	ND	400		ppbv	400	10/11/2011 12:29:00 PM
n-Hexane	1,900	800		ppbv	400	10/11/2011 12:29:00 PM
o-Xylene	400	400		ppbv	400	10/11/2011 12:29:00 PM
Propylene	ND	400		ppbv	400	10/11/2011 12:29:00 PM
Styrene	ND	400		ppbv	400	10/11/2011 12:29:00 PM
tert-Butyl Methyl Ether	ND	400		ppbv	400	10/11/2011 12:29:00 PM
Tetrachloroethene	ND	400		ppbv	400	10/11/2011 12:29:00 PM
Tetrahydrofuran	ND	400		ppbv	400	10/11/2011 12:29:00 PM
Toluene	7,000	400		ppbv	400	10/11/2011 12:29:00 PM
trans-1,2-Dichloroethene	ND	400		ppbv	400	10/11/2011 12:29:00 PM
trans-1,3-dichloropropene	ND	400		ppbv	400	10/11/2011 12:29:00 PM
Trichloroethene	ND	400		ppbv	400	10/11/2011 12:29:00 PM
Trichlorofluoromethane	ND	400		ppbv	400	10/11/2011 12:29:00 PM
Vinyl acetate	ND	400		ppbv	400	10/11/2011 12:29:00 PM
Vinyl chloride	ND	400		ppbv	400	10/11/2011 12:29:00 PM
Xylenes, Total	1,600	1,200		ppbv	400	10/11/2011 12:29:00 PM
Surr: 4-Bromofluorobenzene	107	70-130		%REC	400	10/11/2011 12:29:00 PM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v1

RTI LABORATORIES, INC.

RTI
31628 Glendale St.
Livonia, MI 48150
TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/19/2011 1:53:00 PM

Project: Kirtland AFB

Lab ID: 1109988-015 **Matrix:** AIR

Client Sample ID VA0687

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MASS APH AIR				**MA_APH**		Analyst: **RH3**
AIR-PHASE PETROLEUM HYDROCARBONS						
C5-C8 Aliphatic Hydrocarbons	310,000	47,000		µg/m³	400	10/5/2011 9:01:00 AM
C9-C10 Aromatic Hydrocarbons	ND	53,000		µg/m³	400	10/5/2011 9:01:00 AM
C9-C12 Aliphatic Hydrocarbons	86,000	76,000		µg/m³	400	10/5/2011 9:01:00 AM
Surr: 4-Bromofluorobenzene	112	70-130		%REC	400	10/5/2011 9:01:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

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Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/19/2011 2:28:00 PM

Project: Kirtland AFB

Lab ID: 1109988-016 **Matrix:** AIR

Client Sample ID VA0688

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	7.2	0.10		%	1	10/12/2011 2:49:00 PM
Carbon Monoxide	ND	0.10		%	1	10/12/2011 2:49:00 PM
Methane	ND	0.50		%	1	10/12/2011 2:49:00 PM
Nitrogen	82	0.10		%	1	10/12/2011 2:49:00 PM
Oxygen	7.9	0.10		%	1	10/12/2011 2:49:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	8,000		ppbv	8000	10/11/2011 1:09:00 PM
1,1,2,2-Tetrachloroethane	ND	8,000		ppbv	8000	10/11/2011 1:09:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	8,000		ppbv	8000	10/11/2011 1:09:00 PM
1,1,2-Trichloroethane	ND	8,000		ppbv	8000	10/11/2011 1:09:00 PM
1,1-Dichloroethane	ND	8,000		ppbv	8000	10/11/2011 1:09:00 PM
1,1-Dichloroethene	ND	8,000		ppbv	8000	10/11/2011 1:09:00 PM
1,2,4-Trichlorobenzene	ND	8,000		ppbv	8000	10/11/2011 1:09:00 PM
1,2,4-Trimethylbenzene	ND	8,000		ppbv	8000	10/11/2011 1:09:00 PM
1,2-Dibromoethane	ND	8,000		ppbv	8000	10/11/2011 1:09:00 PM
1,2-Dichlorobenzene	ND	8,000		ppbv	8000	10/11/2011 1:09:00 PM
1,2-Dichloroethane	ND	8,000		ppbv	8000	10/11/2011 1:09:00 PM
1,2-Dichloropropane	ND	8,000		ppbv	8000	10/11/2011 1:09:00 PM
1,3,5-Trimethylbenzene	ND	8,000		ppbv	8000	10/11/2011 1:09:00 PM
1,3-Butadiene	ND	8,000		ppbv	8000	10/11/2011 1:09:00 PM
1,3-Dichlorobenzene	ND	8,000		ppbv	8000	10/11/2011 1:09:00 PM
1,4-Dichlorobenzene	ND	8,000		ppbv	8000	10/11/2011 1:09:00 PM
2-Butanone	ND	8,000		ppbv	8000	10/11/2011 1:09:00 PM
2-Hexanone	ND	8,000		ppbv	8000	10/11/2011 1:09:00 PM
4-Methyl-2-pentanone	ND	8,000		ppbv	8000	10/11/2011 1:09:00 PM
Acetone	ND	8,000		ppbv	8000	10/11/2011 1:09:00 PM
Benzene	150,000	8,000		ppbv	8000	10/11/2011 1:09:00 PM
Benzyl chloride	ND	8,000		ppbv	8000	10/11/2011 1:09:00 PM
Bromodichloromethane	ND	8,000		ppbv	8000	10/11/2011 1:09:00 PM
Bromoform	ND	8,000		ppbv	8000	10/11/2011 1:09:00 PM
Bromomethane	ND	8,000		ppbv	8000	10/11/2011 1:09:00 PM
Carbon disulfide	ND	8,000		ppbv	8000	10/11/2011 1:09:00 PM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v1

RTI LABORATORIES, INC.

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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/19/2011 2:28:00 PM

Project: Kirtland AFB

Lab ID: 1109988-016 **Matrix:** AIR

Client Sample ID VA0688

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Carbon tetrachloride	ND	8,000		ppbv	8000	10/11/2011 1:09:00 PM
Chlorobenzene	ND	8,000		ppbv	8000	10/11/2011 1:09:00 PM
Chlorodibromomethane	ND	8,000		ppbv	8000	10/11/2011 1:09:00 PM
Chloroethane	ND	8,000		ppbv	8000	10/11/2011 1:09:00 PM
Chloroform	ND	8,000		ppbv	8000	10/11/2011 1:09:00 PM
Chloromethane	ND	8,000		ppbv	8000	10/11/2011 1:09:00 PM
cis-1,2-Dichloroethene	ND	8,000		ppbv	8000	10/11/2011 1:09:00 PM
cis-1,3-dichloropropene	ND	8,000		ppbv	8000	10/11/2011 1:09:00 PM
Cyclohexane	640,000	40,000		ppbv	20000	10/14/2011 4:44:00 AM
Dichlorodifluoromethane	ND	8,000		ppbv	8000	10/11/2011 1:09:00 PM
Ethyl acetate	ND	8,000		ppbv	8000	10/11/2011 1:09:00 PM
Ethylbenzene	ND	16,000		ppbv	8000	10/11/2011 1:09:00 PM
Heptane	310,000	8,000		ppbv	8000	10/11/2011 1:09:00 PM
Hexachlorobutadiene	ND	16,000		ppbv	8000	10/11/2011 1:09:00 PM
m,p-Xylene	18,000	16,000		ppbv	8000	10/11/2011 1:09:00 PM
Methylene chloride	ND	40,000		ppbv	8000	10/11/2011 1:09:00 PM
Naphthalene	ND	8,000		ppbv	8000	10/11/2011 1:09:00 PM
n-Hexane	800,000	40,000		ppbv	20000	10/14/2011 4:44:00 AM
o-Xylene	ND	8,000		ppbv	8000	10/11/2011 1:09:00 PM
Propylene	ND	8,000		ppbv	8000	10/11/2011 1:09:00 PM
Styrene	ND	8,000		ppbv	8000	10/11/2011 1:09:00 PM
tert-Butyl Methyl Ether	ND	8,000		ppbv	8000	10/11/2011 1:09:00 PM
Tetrachloroethene	ND	8,000		ppbv	8000	10/11/2011 1:09:00 PM
Tetrahydrofuran	ND	8,000		ppbv	8000	10/11/2011 1:09:00 PM
Toluene	100,000	8,000		ppbv	8000	10/11/2011 1:09:00 PM
trans-1,2-Dichloroethene	ND	8,000		ppbv	8000	10/11/2011 1:09:00 PM
trans-1,3-dichloropropene	ND	8,000		ppbv	8000	10/11/2011 1:09:00 PM
Trichloroethene	ND	8,000		ppbv	8000	10/11/2011 1:09:00 PM
Trichlorofluoromethane	ND	8,000		ppbv	8000	10/11/2011 1:09:00 PM
Vinyl acetate	ND	8,000		ppbv	8000	10/11/2011 1:09:00 PM
Vinyl chloride	ND	8,000		ppbv	8000	10/11/2011 1:09:00 PM
Xylenes, Total	18,000	24,000	J	ppbv	8000	10/11/2011 1:09:00 PM
Surr: 4-Bromofluorobenzene	113	70-130		%REC	8000	10/11/2011 1:09:00 PM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v1

RTI LABORATORIES, INC.

RTI
31628 Glendale St.
Livonia, MI 48150
TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/19/2011 2:28:00 PM

Project: Kirtland AFB

Lab ID: 1109988-016 **Matrix:** AIR

Client Sample ID VA0688

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MASS APH AIR				**MA_APH**		Analyst: **RH3**
AIR-PHASE PETROLEUM HYDROCARBONS						
C5-C8 Aliphatic Hydrocarbons	12,000,000	940,000		µg/m³	8000	10/5/2011 3:28:00 AM
C9-C10 Aromatic Hydrocarbons	ND	1,100,000		µg/m³	8000	10/5/2011 3:28:00 AM
C9-C12 Aliphatic Hydrocarbons	630,000	1,500,000	J	µg/m³	8000	10/5/2011 3:28:00 AM
Surr: 4-Bromofluorobenzene	112	70-130		%REC	8000	10/5/2011 3:28:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

RTI LABORATORIES, INC.

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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/19/2011 2:28:00 PM

Project: Kirtland AFB

Lab ID: 1109988-017 **Matrix:** AIR

Client Sample ID VA0689

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	5.3	0.10		%	1	10/12/2011 3:10:00 PM
Carbon Monoxide	ND	0.10		%	1	10/12/2011 3:10:00 PM
Methane	ND	0.50		%	1	10/12/2011 3:10:00 PM
Nitrogen	82	0.10		%	1	10/12/2011 3:10:00 PM
Oxygen	11	0.10		%	1	10/12/2011 3:10:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	8,000		ppbv	8000	10/11/2011 1:50:00 PM
1,1,2,2-Tetrachloroethane	ND	8,000		ppbv	8000	10/11/2011 1:50:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	8,000		ppbv	8000	10/11/2011 1:50:00 PM
1,1,2-Trichloroethane	ND	8,000		ppbv	8000	10/11/2011 1:50:00 PM
1,1-Dichloroethane	ND	8,000		ppbv	8000	10/11/2011 1:50:00 PM
1,1-Dichloroethene	ND	8,000		ppbv	8000	10/11/2011 1:50:00 PM
1,2,4-Trichlorobenzene	ND	8,000		ppbv	8000	10/11/2011 1:50:00 PM
1,2,4-Trimethylbenzene	ND	8,000		ppbv	8000	10/11/2011 1:50:00 PM
1,2-Dibromoethane	ND	8,000		ppbv	8000	10/11/2011 1:50:00 PM
1,2-Dichlorobenzene	ND	8,000		ppbv	8000	10/11/2011 1:50:00 PM
1,2-Dichloroethane	ND	8,000		ppbv	8000	10/11/2011 1:50:00 PM
1,2-Dichloropropane	ND	8,000		ppbv	8000	10/11/2011 1:50:00 PM
1,3,5-Trimethylbenzene	ND	8,000		ppbv	8000	10/11/2011 1:50:00 PM
1,3-Butadiene	ND	8,000		ppbv	8000	10/11/2011 1:50:00 PM
1,3-Dichlorobenzene	ND	8,000		ppbv	8000	10/11/2011 1:50:00 PM
1,4-Dichlorobenzene	ND	8,000		ppbv	8000	10/11/2011 1:50:00 PM
2-Butanone	ND	8,000		ppbv	8000	10/11/2011 1:50:00 PM
2-Hexanone	ND	8,000		ppbv	8000	10/11/2011 1:50:00 PM
4-Methyl-2-pentanone	ND	8,000		ppbv	8000	10/11/2011 1:50:00 PM
Acetone	ND	8,000		ppbv	8000	10/11/2011 1:50:00 PM
Benzene	61,000	8,000		ppbv	8000	10/11/2011 1:50:00 PM
Benzyl chloride	ND	8,000		ppbv	8000	10/11/2011 1:50:00 PM
Bromodichloromethane	ND	8,000		ppbv	8000	10/11/2011 1:50:00 PM
Bromoform	ND	8,000		ppbv	8000	10/11/2011 1:50:00 PM
Bromomethane	ND	8,000		ppbv	8000	10/11/2011 1:50:00 PM
Carbon disulfide	ND	8,000		ppbv	8000	10/11/2011 1:50:00 PM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v1

RTI LABORATORIES, INC.

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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/19/2011 2:28:00 PM

Project: Kirtland AFB

Lab ID: 1109988-017 **Matrix:** AIR

Client Sample ID VA0689

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Carbon tetrachloride	ND	8,000		ppbv	8000	10/11/2011 1:50:00 PM
Chlorobenzene	ND	8,000		ppbv	8000	10/11/2011 1:50:00 PM
Chlorodibromomethane	ND	8,000		ppbv	8000	10/11/2011 1:50:00 PM
Chloroethane	ND	8,000		ppbv	8000	10/11/2011 1:50:00 PM
Chloroform	ND	8,000		ppbv	8000	10/11/2011 1:50:00 PM
Chloromethane	ND	8,000		ppbv	8000	10/11/2011 1:50:00 PM
cis-1,2-Dichloroethene	ND	8,000		ppbv	8000	10/11/2011 1:50:00 PM
cis-1,3-dichloropropene	ND	8,000		ppbv	8000	10/11/2011 1:50:00 PM
Cyclohexane	490,000	16,000		ppbv	8000	10/11/2011 1:50:00 PM
Dichlorodifluoromethane	ND	8,000		ppbv	8000	10/11/2011 1:50:00 PM
Ethyl acetate	ND	8,000		ppbv	8000	10/11/2011 1:50:00 PM
Ethylbenzene	ND	16,000		ppbv	8000	10/11/2011 1:50:00 PM
Heptane	190,000	8,000		ppbv	8000	10/11/2011 1:50:00 PM
Hexachlorobutadiene	ND	16,000		ppbv	8000	10/11/2011 1:50:00 PM
m,p-Xylene	9,900	16,000	J	ppbv	8000	10/11/2011 1:50:00 PM
Methylene chloride	ND	40,000		ppbv	8000	10/11/2011 1:50:00 PM
Naphthalene	ND	8,000		ppbv	8000	10/11/2011 1:50:00 PM
n-Hexane	610,000	16,000		ppbv	8000	10/11/2011 1:50:00 PM
o-Xylene	ND	8,000		ppbv	8000	10/11/2011 1:50:00 PM
Propylene	ND	8,000		ppbv	8000	10/11/2011 1:50:00 PM
Styrene	ND	8,000		ppbv	8000	10/11/2011 1:50:00 PM
tert-Butyl Methyl Ether	ND	8,000		ppbv	8000	10/11/2011 1:50:00 PM
Tetrachloroethene	ND	8,000		ppbv	8000	10/11/2011 1:50:00 PM
Tetrahydrofuran	ND	8,000		ppbv	8000	10/11/2011 1:50:00 PM
Toluene	47,000	8,000		ppbv	8000	10/11/2011 1:50:00 PM
trans-1,2-Dichloroethene	ND	8,000		ppbv	8000	10/11/2011 1:50:00 PM
trans-1,3-dichloropropene	ND	8,000		ppbv	8000	10/11/2011 1:50:00 PM
Trichloroethene	ND	8,000		ppbv	8000	10/11/2011 1:50:00 PM
Trichlorofluoromethane	ND	8,000		ppbv	8000	10/11/2011 1:50:00 PM
Vinyl acetate	ND	8,000		ppbv	8000	10/11/2011 1:50:00 PM
Vinyl chloride	ND	8,000		ppbv	8000	10/11/2011 1:50:00 PM
Xylenes, Total	9,900	24,000	J	ppbv	8000	10/11/2011 1:50:00 PM
Surr: 4-Bromofluorobenzene	115	70-130		%REC	8000	10/11/2011 1:50:00 PM

Qualifiers:

*X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v1

RTI LABORATORIES, INC.

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TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/19/2011 2:28:00 PM

Project: Kirtland AFB

Lab ID: 1109988-017 **Matrix:** AIR

Client Sample ID VA0689

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MASS APH AIR				**MA_APH**		Analyst: **RH3**
AIR-PHASE PETROLEUM HYDROCARBONS						
C5-C8 Aliphatic Hydrocarbons	13,000,000	940,000		µg/m³	8000	10/5/2011 4:10:00 AM
C9-C10 Aromatic Hydrocarbons	ND	1,100,000		µg/m³	8000	10/5/2011 4:10:00 AM
C9-C12 Aliphatic Hydrocarbons	510,000	1,500,000	J	µg/m³	8000	10/5/2011 4:10:00 AM
Surr: 4-Bromofluorobenzene	110	70-130		%REC	8000	10/5/2011 4:10:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

RTI LABORATORIES, INC.

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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/19/2011 3:24:00 PM

Project: Kirtland AFB

Lab ID: 1109988-018 **Matrix:** AIR

Client Sample ID VA0690

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.47	0.10		%	1	10/12/2011 3:50:00 PM
Carbon Monoxide	ND	0.10		%	1	10/12/2011 3:50:00 PM
Methane	ND	0.50		%	1	10/12/2011 3:50:00 PM
Nitrogen	78	0.10		%	1	10/12/2011 3:50:00 PM
Oxygen	21	0.10		%	1	10/12/2011 3:50:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	400		ppbv	400	10/11/2011 2:38:00 PM
1,1,2,2-Tetrachloroethane	ND	400		ppbv	400	10/11/2011 2:38:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	400		ppbv	400	10/11/2011 2:38:00 PM
1,1,2-Trichloroethane	ND	400		ppbv	400	10/11/2011 2:38:00 PM
1,1-Dichloroethane	ND	400		ppbv	400	10/11/2011 2:38:00 PM
1,1-Dichloroethene	ND	400		ppbv	400	10/11/2011 2:38:00 PM
1,2,4-Trichlorobenzene	ND	400		ppbv	400	10/11/2011 2:38:00 PM
1,2,4-Trimethylbenzene	ND	400		ppbv	400	10/11/2011 2:38:00 PM
1,2-Dibromoethane	ND	400		ppbv	400	10/11/2011 2:38:00 PM
1,2-Dichlorobenzene	ND	400		ppbv	400	10/11/2011 2:38:00 PM
1,2-Dichloroethane	ND	400		ppbv	400	10/11/2011 2:38:00 PM
1,2-Dichloropropane	ND	400		ppbv	400	10/11/2011 2:38:00 PM
1,3,5-Trimethylbenzene	ND	400		ppbv	400	10/11/2011 2:38:00 PM
1,3-Butadiene	ND	400		ppbv	400	10/11/2011 2:38:00 PM
1,3-Dichlorobenzene	ND	400		ppbv	400	10/11/2011 2:38:00 PM
1,4-Dichlorobenzene	ND	400		ppbv	400	10/11/2011 2:38:00 PM
2-Butanone	ND	400		ppbv	400	10/11/2011 2:38:00 PM
2-Hexanone	ND	400		ppbv	400	10/11/2011 2:38:00 PM
4-Methyl-2-pentanone	ND	400		ppbv	400	10/11/2011 2:38:00 PM
Acetone	660	400		ppbv	400	10/11/2011 2:38:00 PM
Benzene	2,900	400		ppbv	400	10/11/2011 2:38:00 PM
Benzyl chloride	ND	400		ppbv	400	10/11/2011 2:38:00 PM
Bromodichloromethane	ND	400		ppbv	400	10/11/2011 2:38:00 PM
Bromoform	ND	400		ppbv	400	10/11/2011 2:38:00 PM
Bromomethane	ND	400		ppbv	400	10/11/2011 2:38:00 PM
Carbon disulfide	ND	400		ppbv	400	10/11/2011 2:38:00 PM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

RTI LABORATORIES, INC.

RTI
31628 Glendale St.
Livonia, MI 48150
TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/19/2011 3:24:00 PM

Project: Kirtland AFB

Lab ID: 1109988-018 **Matrix:** AIR

Client Sample ID VA0690

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Carbon tetrachloride	ND	400		ppbv	400	10/11/2011 2:38:00 PM
Chlorobenzene	ND	400		ppbv	400	10/11/2011 2:38:00 PM
Chlorodibromomethane	ND	400		ppbv	400	10/11/2011 2:38:00 PM
Chloroethane	ND	400		ppbv	400	10/11/2011 2:38:00 PM
Chloroform	ND	400		ppbv	400	10/11/2011 2:38:00 PM
Chloromethane	ND	400		ppbv	400	10/11/2011 2:38:00 PM
cis-1,2-Dichloroethene	ND	400		ppbv	400	10/11/2011 2:38:00 PM
cis-1,3-dichloropropene	ND	400		ppbv	400	10/11/2011 2:38:00 PM
Cyclohexane	9,000	800		ppbv	400	10/11/2011 2:38:00 PM
Dichlorodifluoromethane	ND	400		ppbv	400	10/11/2011 2:38:00 PM
Ethyl acetate	ND	400		ppbv	400	10/11/2011 2:38:00 PM
Ethylbenzene	470	800	J	ppbv	400	10/11/2011 2:38:00 PM
Heptane	6,000	400		ppbv	400	10/11/2011 2:38:00 PM
Hexachlorobutadiene	ND	800		ppbv	400	10/11/2011 2:38:00 PM
m,p-Xylene	1,700	800		ppbv	400	10/11/2011 2:38:00 PM
Methylene chloride	ND	2,000		ppbv	400	10/11/2011 2:38:00 PM
Naphthalene	ND	400		ppbv	400	10/11/2011 2:38:00 PM
n-Hexane	7,700	800		ppbv	400	10/11/2011 2:38:00 PM
o-Xylene	610	400		ppbv	400	10/11/2011 2:38:00 PM
Propylene	ND	400		ppbv	400	10/11/2011 2:38:00 PM
Styrene	ND	400		ppbv	400	10/11/2011 2:38:00 PM
tert-Butyl Methyl Ether	ND	400		ppbv	400	10/11/2011 2:38:00 PM
Tetrachloroethene	ND	400		ppbv	400	10/11/2011 2:38:00 PM
Tetrahydrofuran	ND	400		ppbv	400	10/11/2011 2:38:00 PM
Toluene	5,400	400		ppbv	400	10/11/2011 2:38:00 PM
trans-1,2-Dichloroethene	ND	400		ppbv	400	10/11/2011 2:38:00 PM
trans-1,3-dichloropropene	ND	400		ppbv	400	10/11/2011 2:38:00 PM
Trichloroethene	ND	400		ppbv	400	10/11/2011 2:38:00 PM
Trichlorofluoromethane	ND	400		ppbv	400	10/11/2011 2:38:00 PM
Vinyl acetate	ND	400		ppbv	400	10/11/2011 2:38:00 PM
Vinyl chloride	ND	400		ppbv	400	10/11/2011 2:38:00 PM
Xylenes, Total	2,300	1,200		ppbv	400	10/11/2011 2:38:00 PM
Surr: 4-Bromofluorobenzene	101	70-130		%REC	400	10/11/2011 2:38:00 PM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
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RTI LABORATORIES, INC.

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Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/19/2011 3:24:00 PM

Project: Kirtland AFB

Lab ID: 1109988-018 **Matrix:** AIR

Client Sample ID VA0690

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MASS APH AIR				**MA_APH**		Analyst: **RH3**
AIR-PHASE PETROLEUM HYDROCARBONS						
C5-C8 Aliphatic Hydrocarbons	440,000	47,000		µg/m³	400	10/5/2011 12:46:00 PM
C9-C10 Aromatic Hydrocarbons	ND	53,000		µg/m³	400	10/5/2011 12:46:00 PM
C9-C12 Aliphatic Hydrocarbons	140,000	76,000		µg/m³	400	10/5/2011 12:46:00 PM
Surr: 4-Bromofluorobenzene	110	70-130		%REC	400	10/5/2011 12:46:00 PM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

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Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/19/2011 3:51:00 PM

Project: Kirtland AFB

Lab ID: 1109988-019 **Matrix:** AIR

Client Sample ID VA0691

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.49	0.10		%	1	10/12/2011 4:20:00 PM
Carbon Monoxide	ND	0.10		%	1	10/12/2011 4:20:00 PM
Methane	ND	0.50		%	1	10/12/2011 4:20:00 PM
Nitrogen	78	0.10		%	1	10/12/2011 4:20:00 PM
Oxygen	20	0.10		%	1	10/12/2011 4:20:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	400		ppbv	400	10/11/2011 3:25:00 PM
1,1,2,2-Tetrachloroethane	ND	400		ppbv	400	10/11/2011 3:25:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	400		ppbv	400	10/11/2011 3:25:00 PM
1,1,2-Trichloroethane	ND	400		ppbv	400	10/11/2011 3:25:00 PM
1,1-Dichloroethane	ND	400		ppbv	400	10/11/2011 3:25:00 PM
1,1-Dichloroethene	ND	400		ppbv	400	10/11/2011 3:25:00 PM
1,2,4-Trichlorobenzene	ND	400		ppbv	400	10/11/2011 3:25:00 PM
1,2,4-Trimethylbenzene	ND	400		ppbv	400	10/11/2011 3:25:00 PM
1,2-Dibromoethane	ND	400		ppbv	400	10/11/2011 3:25:00 PM
1,2-Dichlorobenzene	ND	400		ppbv	400	10/11/2011 3:25:00 PM
1,2-Dichloroethane	ND	400		ppbv	400	10/11/2011 3:25:00 PM
1,2-Dichloropropane	ND	400		ppbv	400	10/11/2011 3:25:00 PM
1,3,5-Trimethylbenzene	ND	400		ppbv	400	10/11/2011 3:25:00 PM
1,3-Butadiene	ND	400		ppbv	400	10/11/2011 3:25:00 PM
1,3-Dichlorobenzene	ND	400		ppbv	400	10/11/2011 3:25:00 PM
1,4-Dichlorobenzene	ND	400		ppbv	400	10/11/2011 3:25:00 PM
2-Butanone	ND	400		ppbv	400	10/11/2011 3:25:00 PM
2-Hexanone	ND	400		ppbv	400	10/11/2011 3:25:00 PM
4-Methyl-2-pentanone	ND	400		ppbv	400	10/11/2011 3:25:00 PM
Acetone	ND	400		ppbv	400	10/11/2011 3:25:00 PM
Benzene	18,000	400		ppbv	400	10/11/2011 3:25:00 PM
Benzyl chloride	ND	400		ppbv	400	10/11/2011 3:25:00 PM
Bromodichloromethane	ND	400		ppbv	400	10/11/2011 3:25:00 PM
Bromoform	ND	400		ppbv	400	10/11/2011 3:25:00 PM
Bromomethane	ND	400		ppbv	400	10/11/2011 3:25:00 PM
Carbon disulfide	ND	400		ppbv	400	10/11/2011 3:25:00 PM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
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Revision v1

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Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/19/2011 3:51:00 PM

Project: Kirtland AFB

Lab ID: 1109988-019 **Matrix:** AIR

Client Sample ID VA0691

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Carbon tetrachloride	ND	400		ppbv	400	10/11/2011 3:25:00 PM
Chlorobenzene	ND	400		ppbv	400	10/11/2011 3:25:00 PM
Chlorodibromomethane	ND	400		ppbv	400	10/11/2011 3:25:00 PM
Chloroethane	ND	400		ppbv	400	10/11/2011 3:25:00 PM
Chloroform	ND	400		ppbv	400	10/11/2011 3:25:00 PM
Chloromethane	ND	400		ppbv	400	10/11/2011 3:25:00 PM
cis-1,2-Dichloroethene	ND	400		ppbv	400	10/11/2011 3:25:00 PM
cis-1,3-dichloropropene	ND	400		ppbv	400	10/11/2011 3:25:00 PM
Cyclohexane	18,000	800		ppbv	400	10/11/2011 3:25:00 PM
Dichlorodifluoromethane	ND	400		ppbv	400	10/11/2011 3:25:00 PM
Ethyl acetate	ND	400		ppbv	400	10/11/2011 3:25:00 PM
Ethylbenzene	ND	800		ppbv	400	10/11/2011 3:25:00 PM
Heptane	4,700	400		ppbv	400	10/11/2011 3:25:00 PM
Hexachlorobutadiene	ND	800		ppbv	400	10/11/2011 3:25:00 PM
m,p-Xylene	1,200	800		ppbv	400	10/11/2011 3:25:00 PM
Methylene chloride	ND	2,000		ppbv	400	10/11/2011 3:25:00 PM
Naphthalene	ND	400		ppbv	400	10/11/2011 3:25:00 PM
n-Hexane	19,000	800		ppbv	400	10/11/2011 3:25:00 PM
o-Xylene	540	400		ppbv	400	10/11/2011 3:25:00 PM
Propylene	1,300	400		ppbv	400	10/11/2011 3:25:00 PM
Styrene	ND	400		ppbv	400	10/11/2011 3:25:00 PM
tert-Butyl Methyl Ether	ND	400		ppbv	400	10/11/2011 3:25:00 PM
Tetrachloroethene	ND	400		ppbv	400	10/11/2011 3:25:00 PM
Tetrahydrofuran	ND	400		ppbv	400	10/11/2011 3:25:00 PM
Toluene	4,100	400		ppbv	400	10/11/2011 3:25:00 PM
trans-1,2-Dichloroethene	ND	400		ppbv	400	10/11/2011 3:25:00 PM
trans-1,3-dichloropropene	ND	400		ppbv	400	10/11/2011 3:25:00 PM
Trichloroethene	ND	400		ppbv	400	10/11/2011 3:25:00 PM
Trichlorofluoromethane	ND	400		ppbv	400	10/11/2011 3:25:00 PM
Vinyl acetate	ND	400		ppbv	400	10/11/2011 3:25:00 PM
Vinyl chloride	ND	400		ppbv	400	10/11/2011 3:25:00 PM
Xylenes, Total	1,700	1,200		ppbv	400	10/11/2011 3:25:00 PM
Surr: 4-Bromofluorobenzene	108	70-130		%REC	400	10/11/2011 3:25:00 PM

Qualifiers:

*X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v1

RTI LABORATORIES, INC.

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Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/19/2011 3:51:00 PM

Project: Kirtland AFB

Lab ID: 1109988-019 **Matrix:** AIR

Client Sample ID VA0691

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MASS APH AIR				**MA_APH**		Analyst: **RH3**
AIR-PHASE PETROLEUM HYDROCARBONS						
C5-C8 Aliphatic Hydrocarbons	1,300,000	94,000		µg/m³	800	10/13/2011 4:26:00 PM
C9-C10 Aromatic Hydrocarbons	ND	110,000		µg/m³	800	10/13/2011 4:26:00 PM
C9-C12 Aliphatic Hydrocarbons	41,000	150,000	J	µg/m³	800	10/13/2011 4:26:00 PM
Surr: 4-Bromofluorobenzene	108	70-130		%REC	800	10/13/2011 4:26:00 PM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

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Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/9/2011 2:00:00 PM

Project: Kirtland AFB

Lab ID: 1109988-020 **Matrix:** AIR

Client Sample ID VA8039-TB

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	8.0	H	ppbv	8	10/14/2011 3:17:00 AM
1,1,2,2-Tetrachloroethane	ND	8.0	H	ppbv	8	10/14/2011 3:17:00 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	8.0	H	ppbv	8	10/14/2011 3:17:00 AM
1,1,2-Trichloroethane	ND	8.0	H	ppbv	8	10/14/2011 3:17:00 AM
1,1-Dichloroethane	ND	8.0	H	ppbv	8	10/14/2011 3:17:00 AM
1,1-Dichloroethene	ND	8.0	H	ppbv	8	10/14/2011 3:17:00 AM
1,2,4-Trichlorobenzene	ND	8.0	H	ppbv	8	10/14/2011 3:17:00 AM
1,2,4-Trimethylbenzene	ND	8.0	H	ppbv	8	10/14/2011 3:17:00 AM
1,2-Dibromoethane	ND	8.0	H	ppbv	8	10/14/2011 3:17:00 AM
1,2-Dichlorobenzene	ND	8.0	H	ppbv	8	10/14/2011 3:17:00 AM
1,2-Dichloroethane	ND	8.0	H	ppbv	8	10/14/2011 3:17:00 AM
1,2-Dichloropropane	ND	8.0	H	ppbv	8	10/14/2011 3:17:00 AM
1,3,5-Trimethylbenzene	ND	8.0	H	ppbv	8	10/14/2011 3:17:00 AM
1,3-Butadiene	ND	8.0	H	ppbv	8	10/14/2011 3:17:00 AM
1,3-Dichlorobenzene	ND	8.0	H	ppbv	8	10/14/2011 3:17:00 AM
1,4-Dichlorobenzene	ND	8.0	H	ppbv	8	10/14/2011 3:17:00 AM
2-Butanone	68	8.0	H	ppbv	8	10/14/2011 3:17:00 AM
2-Hexanone	ND	8.0	H	ppbv	8	10/14/2011 3:17:00 AM
4-Methyl-2-pentanone	ND	8.0	H	ppbv	8	10/14/2011 3:17:00 AM
Acetone	100	8.0	H	ppbv	8	10/14/2011 3:17:00 AM
Benzene	ND	8.0	H	ppbv	8	10/14/2011 3:17:00 AM
Benzyl chloride	ND	8.0	H	ppbv	8	10/14/2011 3:17:00 AM
Bromodichloromethane	ND	8.0	H	ppbv	8	10/14/2011 3:17:00 AM
Bromoform	ND	8.0	H	ppbv	8	10/14/2011 3:17:00 AM
Bromomethane	ND	8.0	H	ppbv	8	10/14/2011 3:17:00 AM
Carbon disulfide	ND	8.0	H	ppbv	8	10/14/2011 3:17:00 AM
Carbon tetrachloride	ND	8.0	H	ppbv	8	10/14/2011 3:17:00 AM
Chlorobenzene	ND	8.0	H	ppbv	8	10/14/2011 3:17:00 AM
Chlorodibromomethane	ND	8.0	H	ppbv	8	10/14/2011 3:17:00 AM
Chloroethane	ND	8.0	H	ppbv	8	10/14/2011 3:17:00 AM
Chloroform	ND	8.0	H	ppbv	8	10/14/2011 3:17:00 AM
Chloromethane	ND	8.0	H	ppbv	8	10/14/2011 3:17:00 AM
cis-1,2-Dichloroethene	ND	8.0	H	ppbv	8	10/14/2011 3:17:00 AM
cis-1,3-dichloropropene	ND	8.0	H	ppbv	8	10/14/2011 3:17:00 AM

Qualifiers:

*X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
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Revision v1

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Analytical Report

(consolidated)

WO#: **1109988**

Date Reported: **10/20/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 9/9/2011 2:00:00 PM

Project: Kirtland AFB

Lab ID: 1109988-020 **Matrix:** AIR

Client Sample ID VA8039-TB

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Cyclohexane	13	16	JH	ppbv	8	10/14/2011 3:17:00 AM
Dichlorodifluoromethane	ND	8.0	H	ppbv	8	10/14/2011 3:17:00 AM
Ethyl acetate	ND	8.0	H	ppbv	8	10/14/2011 3:17:00 AM
Ethylbenzene	ND	16	H	ppbv	8	10/14/2011 3:17:00 AM
Heptane	9.6	8.0	H	ppbv	8	10/14/2011 3:17:00 AM
Hexachlorobutadiene	ND	16	H	ppbv	8	10/14/2011 3:17:00 AM
m,p-Xylene	ND	16	H	ppbv	8	10/14/2011 3:17:00 AM
Methylene chloride	59	40	H	ppbv	8	10/14/2011 3:17:00 AM
Naphthalene	ND	8.0	H	ppbv	8	10/14/2011 3:17:00 AM
n-Hexane	25	16	H	ppbv	8	10/14/2011 3:17:00 AM
o-Xylene	ND	8.0	H	ppbv	8	10/14/2011 3:17:00 AM
Propylene	ND	8.0	H	ppbv	8	10/14/2011 3:17:00 AM
Styrene	ND	8.0	H	ppbv	8	10/14/2011 3:17:00 AM
tert-Butyl Methyl Ether	ND	8.0	H	ppbv	8	10/14/2011 3:17:00 AM
Tetrachloroethene	ND	8.0	H	ppbv	8	10/14/2011 3:17:00 AM
Tetrahydrofuran	ND	8.0	H	ppbv	8	10/14/2011 3:17:00 AM
Toluene	39	8.0	H	ppbv	8	10/14/2011 3:17:00 AM
trans-1,2-Dichloroethene	ND	8.0	H	ppbv	8	10/14/2011 3:17:00 AM
trans-1,3-dichloropropene	ND	8.0	H	ppbv	8	10/14/2011 3:17:00 AM
Trichloroethene	ND	8.0	H	ppbv	8	10/14/2011 3:17:00 AM
Trichlorofluoromethane	ND	8.0	H	ppbv	8	10/14/2011 3:17:00 AM
Vinyl acetate	ND	8.0	H	ppbv	8	10/14/2011 3:17:00 AM
Vinyl chloride	ND	8.0	H	ppbv	8	10/14/2011 3:17:00 AM
Xylenes, Total	ND	24	H	ppbv	8	10/14/2011 3:17:00 AM
Surr: 4-Bromofluorobenzene	115	70-130	H	%REC	8	10/14/2011 3:17:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v1

RTI LABORATORIES, INC.

RTI
31628 Glendale St.
Livonia, MI 48150
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Website: www.rtilabs.com

QC SUMMARY REPORT

WO#: 1109988
20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB

BatchID: R43191

Sample ID: **BLK1093011 VOA9** SampType: **MBLK** TestCode: **MA_APH** Units: **µg/m³** Prep Date: RunNo: **43191**
Client ID: **PBW** Batch ID: **R43191** TestNo: **MA_APH** Analysis Date: **9/30/2011** SeqNo: **841719**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
C5-C8 Aliphatic Hydrocarbons	89	120									J
C9-C10 Aromatic Hydrocarbons	ND	130									
C9-C12 Aliphatic Hydrocarbons	ND	190									
Surr: 4-Bromofluorobenzene	100		89.50		114	70	130				

Sample ID: **1109988-007BDUP** SampType: **DUP** TestCode: **MA_APH** Units: **µg/m³** Prep Date: RunNo: **43191**
Client ID: **VA0522** Batch ID: **R43191** TestNo: **MA_APH** Analysis Date: **10/1/2011** SeqNo: **841733**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
C5-C8 Aliphatic Hydrocarbons	60,000,000	940,000						56,960,000	4.82	30	
C9-C10 Aromatic Hydrocarbons	ND	1,100,000						0	0	30	
C9-C12 Aliphatic Hydrocarbons	1,400,000	1,500,000						1,402,000	1.10	30	J
Surr: 4-Bromofluorobenzene	770,000		716,000		107	70	130		0	30	

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	E	Value above quantitation range	H	Holding times for preparation or analysis exceeds
J	Estimated concentration	M	Manual Integration used to determine area response	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

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QC SUMMARY REPORT

WO#: **1109988**

20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB

BatchID: **R43242**

Sample ID: **BLK1 100411 VOA9** SampType: **MBLK** TestCode: **MA_APH** Units: **µg/m³** Prep Date: RunNo: **43242**
Client ID: **PBW** Batch ID: **R43242** TestNo: **MA_APH** Analysis Date: **10/4/2011** SeqNo: **843241**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
C5-C8 Aliphatic Hydrocarbons	80	120									J
C9-C10 Aromatic Hydrocarbons	ND	130									
C9-C12 Aliphatic Hydrocarbons	ND	190									
Surr: 4-Bromofluorobenzene	100		89.50		112	70	130				

Sample ID: **1109988-007BDUP** SampType: **DUP** TestCode: **MA_APH** Units: **µg/m³** Prep Date: RunNo: **43242**
Client ID: **VA0522** Batch ID: **R43242** TestNo: **MA_APH** Analysis Date: **10/4/2011** SeqNo: **843258**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
C5-C8 Aliphatic Hydrocarbons	52,000,000	2,300,000						55,370,000	5.79	30	
C9-C10 Aromatic Hydrocarbons	ND	2,700,000						0	0	30	
C9-C12 Aliphatic Hydrocarbons	1,000,000	3,800,000						1,036,000	0.736	30	J
Surr: 4-Bromofluorobenzene	1,900,000		1,790,000		105	70	130		0	30	

Qualifiers:

*X	Value exceeds Maximum Contaminant Level	E	Value above quantitation range	H	Holding times for preparation or analysis exceeds
J	Estimated concentration	M	Manual Integration used to determine area response	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

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QC SUMMARY REPORT

WO#: **1109988**

20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB

BatchID: **R43338**

Sample ID: **BLANK VOA1 10061** SampType: **MBLK** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **43338**
Client ID: **PBW** Batch ID: **R43338** TestNo: **TO-15** Analysis Date: **10/7/2011** SeqNo: **845977**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,4-Trichlorobenzene	ND	1.0									
1,2,4-Trimethylbenzene	ND	1.0									
1,2-Dibromoethane	ND	1.0									
1,2-Dichlorobenzene	ND	1.0									
1,2-Dichloroethane	ND	1.0									
1,2-Dichloropropane	ND	1.0									
1,3,5-Trimethylbenzene	ND	1.0									
1,3-Butadiene	ND	1.0									
1,3-Dichlorobenzene	ND	1.0									
1,4-Dichlorobenzene	ND	1.0									
2-Butanone	ND	1.0									
2-Hexanone	ND	1.0									
4-Methyl-2-pentanone	ND	1.0									
Acetone	ND	1.0									
Benzene	ND	1.0									
Benzyl chloride	ND	1.0									
Bromodichloromethane	ND	1.0									
Bromoform	ND	1.0									
Bromomethane	ND	1.0									
Carbon disulfide	ND	1.0									

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

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QC SUMMARY REPORT

WO#: **1109988**

20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc

Project: Kirtland AFB

BatchID: **R43338**

Sample ID: **BLANK VOA1 10061** SampType: **MBLK** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **43338**

Client ID: **PBW** Batch ID: **R43338** TestNo: **TO-15** Analysis Date: **10/7/2011** SeqNo: **845977**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chlorodibromomethane	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Chloromethane	ND	1.0									
cis-1,2-Dichloroethene	ND	1.0									
cis-1,3-dichloropropene	ND	1.0									
Cyclohexane	ND	2.0									
Dichlorodifluoromethane	ND	1.0									
Ethyl acetate	ND	1.0									
Ethylbenzene	ND	2.0									
Heptane	ND	1.0									
Hexachlorobutadiene	ND	2.0									
m,p-Xylene	ND	2.0									
Methylene chloride	ND	5.0									
Naphthalene	ND	1.0									
n-Hexane	ND	2.0									
o-Xylene	ND	1.0									
Propylene	ND	1.0									
Styrene	ND	1.0									
tert-Butyl Methyl Ether	ND	1.0									
Tetrachloroethene	ND	1.0									
Tetrahydrofuran	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	E	Value above quantitation range	H	Holding times for preparation or analysis exceede
J	Estimated concentration	M	Manual Integration used to determine area response	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

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QC SUMMARY REPORT

WO#: **1109988**

20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB

BatchID: **R43338**

Sample ID: **BLANK VOA1 10061** SampType: **MBLK** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **43338**
Client ID: **PBW** Batch ID: **R43338** TestNo: **TO-15** Analysis Date: **10/7/2011** SeqNo: **845977**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,3-dichloropropene	ND	1.0									
Trichloroethene	ND	1.0									
Trichlorofluoromethane	ND	1.0									
Vinyl acetate	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	3.0									
Surr: 4-Bromofluorobenzene	14		12.50		114	70	130				

Sample ID: **1109988-004BDUP** SampType: **DUP** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **43338**
Client ID: **VA0519** Batch ID: **R43338** TestNo: **TO-15** Analysis Date: **10/8/2011** SeqNo: **845983**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	8,000						0	0	25	
1,1,2,2-Tetrachloroethane	ND	8,000						0	0	25	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	8,000						0	0	25	
1,1,2-Trichloroethane	ND	8,000						0	0	25	
1,1-Dichloroethane	ND	8,000						0	0	25	
1,1-Dichloroethene	ND	8,000						0	0	25	
1,2,4-Trichlorobenzene	ND	8,000						0	0	25	
1,2,4-Trimethylbenzene	ND	8,000						0	0	25	
1,2-Dibromoethane	ND	8,000						0	0	25	
1,2-Dichlorobenzene	ND	8,000						0	0	25	
1,2-Dichloroethane	ND	8,000						0	0	25	
1,2-Dichloropropane	ND	8,000						0	0	25	
1,3,5-Trimethylbenzene	ND	8,000						0	0	25	
1,3-Butadiene	ND	8,000						0	0	25	

Qualifiers:
- */X Value exceeds Maximum Contaminant Level
- J Estimated concentration
- R RPD outside accepted recovery limits
- E Value above quantitation range
- M Manual Integration used to determine area response
- RL Reporting Limit
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike Recovery outside accepted recovery limits

RTI LABORATORIES, INC.

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QC SUMMARY REPORT

WO#: **1109988**

20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc

Project: Kirtland AFB

BatchID: **R43338**

Sample ID: **1109988-004BDUP** SampType: **DUP** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **43338**

Client ID: **VA0519** Batch ID: **R43338** TestNo: **TO-15** Analysis Date: **10/8/2011** SeqNo: **845983**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,3-Dichlorobenzene	ND	8,000						0	0	25	
1,4-Dichlorobenzene	ND	8,000						0	0	25	
2-Butanone	ND	8,000						0	0	25	
2-Hexanone	ND	8,000						0	0	25	
4-Methyl-2-pentanone	ND	8,000						0	0	25	
Acetone	ND	8,000						0	0	25	
Benzene	ND	8,000						0	0	25	
Benzyl chloride	ND	8,000						0	0	25	
Bromodichloromethane	ND	8,000						0	0	25	
Bromoform	ND	8,000						0	0	25	
Bromomethane	ND	8,000						0	0	25	
Carbon disulfide	ND	8,000						0	0	25	
Carbon tetrachloride	ND	8,000						0	0	25	
Chlorobenzene	ND	8,000						0	0	25	
Chlorodibromomethane	ND	8,000						0	0	25	
Chloroethane	ND	8,000						0	0	25	
Chloroform	ND	8,000						0	0	25	
Chloromethane	ND	8,000						0	0	25	
cis-1,2-Dichloroethene	ND	8,000						0	0	25	
cis-1,3-dichloropropene	ND	8,000						0	0	25	
Cyclohexane	ND	16,000						0	0	25	
Dichlorodifluoromethane	ND	8,000						0	0	25	
Ethyl acetate	ND	8,000						0	0	25	
Ethylbenzene	ND	16,000						0	0	25	
Heptane	ND	8,000						0	0	25	
Hexachlorobutadiene	ND	16,000						0	0	25	

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	E	Value above quantitation range	H	Holding times for preparation or analysis exceede
J	Estimated concentration	M	Manual Integration used to determine area response	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

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QC SUMMARY REPORT

WO#: **1109988**

20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB

BatchID: **R43338**

Sample ID: **1109988-004BDUP** SampType: **DUP** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **43338**
Client ID: **VA0519** Batch ID: **R43338** TestNo: **TO-15** Analysis Date: **10/8/2011** SeqNo: **845983**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
m,p-Xylene	ND	16,000						0	0	25	
Methylene chloride	ND	40,000						0	0	25	
Naphthalene	ND	8,000						0	0	25	
n-Hexane	ND	16,000						0	0	25	
o-Xylene	ND	8,000						0	0	25	
Propylene	ND	8,000						0	0	25	
Styrene	ND	8,000						0	0	25	
tert-Butyl Methyl Ether	ND	8,000						0	0	25	
Tetrachloroethene	ND	8,000						0	0	25	
Tetrahydrofuran	ND	8,000						0	0	25	
Toluene	ND	8,000						0	0	25	
trans-1,2-Dichloroethene	ND	8,000						0	0	25	
trans-1,3-dichloropropene	ND	8,000						0	0	25	
Trichloroethene	ND	8,000						0	0	25	
Trichlorofluoromethane	ND	8,000						0	0	25	
Vinyl acetate	ND	8,000						0	0	25	
Vinyl chloride	ND	8,000						0	0	25	
Xylenes, Total	ND	24,000						0	0	25	
Surr: 4-Bromofluorobenzene	110,000		100,000		112	70	130		0	25	

Sample ID: **1109988-020A** SampType: **DUP** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **43338**
Client ID: **VA8039-TB** Batch ID: **R43338** TestNo: **TO-15** Analysis Date: **10/8/2011** SeqNo: **845984**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	4.0									
1,1,2,2-Tetrachloroethane	ND	4.0									

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

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QC SUMMARY REPORT

WO#: 1109988
20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB

BatchID: R43338

Sample ID: **1109988-020A** SampType: **DUP** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **43338**
Client ID: **VA8039-TB** Batch ID: **R43338** TestNo: **TO-15** Analysis Date: **10/8/2011** SeqNo: **845984**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	4.0									
1,1,2-Trichloroethane	ND	4.0									
1,1-Dichloroethane	ND	4.0									
1,1-Dichloroethene	ND	4.0									
1,2,4-Trichlorobenzene	ND	4.0									
1,2,4-Trimethylbenzene	ND	4.0									
1,2-Dibromoethane	ND	4.0									
1,2-Dichlorobenzene	ND	4.0									
1,2-Dichloroethane	ND	4.0									
1,2-Dichloropropane	ND	4.0									
1,3,5-Trimethylbenzene	ND	4.0									
1,3-Butadiene	ND	4.0									
1,3-Dichlorobenzene	ND	4.0									
1,4-Dichlorobenzene	ND	4.0									
2-Butanone	49	4.0									
2-Hexanone	ND	4.0									
4-Methyl-2-pentanone	ND	4.0									
Acetone	73	4.0									
Benzene	ND	4.0									
Benzyl chloride	ND	4.0									
Bromodichloromethane	ND	4.0									
Bromoform	ND	4.0									
Bromomethane	ND	4.0									
Carbon disulfide	ND	4.0									
Carbon tetrachloride	ND	4.0									
Chlorobenzene	ND	4.0									

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

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QC SUMMARY REPORT

WO#: 1109988
20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB

BatchID: R43338

Sample ID: **1109988-020A** SampType: **DUP** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **43338**
Client ID: **VA8039-TB** Batch ID: **R43338** TestNo: **TO-15** Analysis Date: **10/8/2011** SeqNo: **845984**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorodibromomethane	ND	4.0									
Chloroethane	ND	4.0									
Chloroform	ND	4.0									
Chloromethane	ND	4.0									
cis-1,2-Dichloroethene	ND	4.0									
cis-1,3-dichloropropene	ND	4.0									
Cyclohexane	11	8.0									
Dichlorodifluoromethane	ND	4.0									
Ethyl acetate	ND	4.0									
Ethylbenzene	ND	8.0									
Heptane	7.4	4.0									
Hexachlorobutadiene	ND	8.0									
m,p-Xylene	ND	8.0									
Methylene chloride	65	20									
Naphthalene	ND	4.0									
n-Hexane	24	8.0									
o-Xylene	ND	4.0									
Propylene	6.2	4.0									
Styrene	ND	4.0									
tert-Butyl Methyl Ether	ND	4.0									
Tetrachloroethene	ND	4.0									
Tetrahydrofuran	ND	4.0									
Toluene	29	4.0									
trans-1,2-Dichloroethene	ND	4.0									
trans-1,3-dichloropropene	ND	4.0									
Trichloroethene	ND	4.0									

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	E	Value above quantitation range	H	Holding times for preparation or analysis exceede
J	Estimated concentration	M	Manual Integration used to determine area response	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

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QC SUMMARY REPORT

WO#: **1109988**

20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc

Project: Kirtland AFB

BatchID: **R43338**

Sample ID: **1109988-020A** SampType: **DUP** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **43338**

Client ID: **VA8039-TB** Batch ID: **R43338** TestNo: **TO-15** Analysis Date: **10/8/2011** SeqNo: **845984**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Trichlorofluoromethane	ND	4.0									
Vinyl acetate	ND	4.0									
Vinyl chloride	ND	4.0									
Xylenes, Total	ND	12									
Surr: 4-Bromofluorobenzene	54		50.00		109	70	130				

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	E	Value above quantitation range	H	Holding times for preparation or analysis exceede
J	Estimated concentration	M	Manual Integration used to determine area response	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

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QC SUMMARY REPORT

WO#: 1109988
20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB
BatchID: R43399

Sample ID: **BLANK VOA1 10101** SampType: **MBLK** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **43399**
Client ID: **PBW** Batch ID: **R43399** TestNo: **TO-15** Analysis Date: **10/10/2011** SeqNo: **847558**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,4-Trichlorobenzene	ND	1.0									
1,2,4-Trimethylbenzene	ND	1.0									
1,2-Dibromoethane	ND	1.0									
1,2-Dichlorobenzene	ND	1.0									
1,2-Dichloroethane	ND	1.0									
1,2-Dichloropropane	ND	1.0									
1,3,5-Trimethylbenzene	ND	1.0									
1,3-Butadiene	ND	1.0									
1,3-Dichlorobenzene	ND	1.0									
1,4-Dichlorobenzene	ND	1.0									
2-Butanone	ND	1.0									
2-Hexanone	ND	1.0									
4-Methyl-2-pentanone	ND	1.0									
Acetone	ND	1.0									
Benzene	ND	1.0									
Benzyl chloride	ND	1.0									
Bromodichloromethane	ND	1.0									
Bromoform	ND	1.0									
Bromomethane	ND	1.0									
Carbon disulfide	ND	1.0									

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	E	Value above quantitation range	H	Holding times for preparation or analysis exceede
J	Estimated concentration	M	Manual Integration used to determine area response	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

RTI LABORATORIES, INC.

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Livonia, MI 48150
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Website: www.rtilabs.com

QC SUMMARY REPORT

WO#: **1109988**

20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB

BatchID: **R43399**

Sample ID: **BLANK VOA1 10101** SampType: **MBLK** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **43399**
Client ID: **PBW** Batch ID: **R43399** TestNo: **TO-15** Analysis Date: **10/10/2011** SeqNo: **847558**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chlorodibromomethane	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Chloromethane	ND	1.0									
cis-1,2-Dichloroethene	ND	1.0									
cis-1,3-dichloropropene	ND	1.0									
Cyclohexane	ND	2.0									
Dichlorodifluoromethane	ND	1.0									
Ethyl acetate	ND	1.0									
Ethylbenzene	ND	2.0									
Heptane	ND	1.0									
Hexachlorobutadiene	ND	2.0									
m,p-Xylene	ND	2.0									
Methylene chloride	ND	5.0									
Naphthalene	ND	1.0									
n-Hexane	ND	2.0									
o-Xylene	ND	1.0									
Propylene	ND	1.0									
Styrene	ND	1.0									
tert-Butyl Methyl Ether	ND	1.0									
Tetrachloroethene	ND	1.0									
Tetrahydrofuran	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									

Qualifiers:

*,X	Value exceeds Maximum Contaminant Level	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

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QC SUMMARY REPORT

WO#: **1109988**
20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB
BatchID: **R43399**

Sample ID: **BLANK VOA1 10101** SampType: **MBLK** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **43399**
Client ID: **PBW** Batch ID: **R43399** TestNo: **TO-15** Analysis Date: **10/10/2011** SeqNo: **847558**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,3-dichloropropene	ND	1.0									
Trichloroethene	ND	1.0									
Trichlorofluoromethane	ND	1.0									
Vinyl acetate	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	3.0									
Surr: 4-Bromofluorobenzene	15		12.50		116	70	130				

Sample ID: **1109988-013BDUP** SampType: **DUP** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **43399**
Client ID: **VA0535** Batch ID: **R43399** TestNo: **TO-15** Analysis Date: **10/11/2011** SeqNo: **847575**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	8,000						0	0	25	
1,1,2,2-Tetrachloroethane	ND	8,000						0	0	25	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	8,000						0	0	25	
1,1,2-Trichloroethane	ND	8,000						0	0	25	
1,1-Dichloroethane	ND	8,000						0	0	25	
1,1-Dichloroethene	ND	8,000						0	0	25	
1,2,4-Trichlorobenzene	ND	8,000						0	0	25	
1,2,4-Trimethylbenzene	ND	8,000						0	0	25	
1,2-Dibromoethane	ND	8,000						0	0	25	
1,2-Dichlorobenzene	ND	8,000						0	0	25	
1,2-Dichloroethane	ND	8,000						0	0	25	
1,2-Dichloropropane	ND	8,000						0	0	25	
1,3,5-Trimethylbenzene	ND	8,000						0	0	25	
1,3-Butadiene	ND	8,000						0	0	25	

Qualifiers:
- */X Value exceeds Maximum Contaminant Level
- J Estimated concentration
- R RPD outside accepted recovery limits
- E Value above quantitation range
- M Manual Integration used to determine area response
- RL Reporting Limit
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike Recovery outside accepted recovery limits

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QC SUMMARY REPORT

WO#: **1109988**

20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB

BatchID: **R43399**

Sample ID: **1109988-013BDUP** SampType: **DUP** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **43399**
Client ID: **VA0535** Batch ID: **R43399** TestNo: **TO-15** Analysis Date: **10/11/2011** SeqNo: **847575**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,3-Dichlorobenzene	ND	8,000						0	0	25	
1,4-Dichlorobenzene	ND	8,000						0	0	25	
2-Butanone	ND	8,000						0	0	25	
2-Hexanone	ND	8,000						0	0	25	
4-Methyl-2-pentanone	ND	8,000						0	0	25	
Acetone	ND	8,000						0	0	25	
Benzene	130,000	8,000						127,400	0.501	25	
Benzyl chloride	ND	8,000						0	0	25	
Bromodichloromethane	ND	8,000						0	0	25	
Bromoform	ND	8,000						0	0	25	
Bromomethane	ND	8,000						0	0	25	
Carbon disulfide	ND	8,000						0	0	25	
Carbon tetrachloride	ND	8,000						0	0	25	
Chlorobenzene	ND	8,000						0	0	25	
Chlorodibromomethane	ND	8,000						0	0	25	
Chloroethane	ND	8,000						0	0	25	
Chloroform	ND	8,000						0	0	25	
Chloromethane	ND	8,000						0	0	25	
cis-1,2-Dichloroethene	ND	8,000						0	0	25	
cis-1,3-dichloropropene	ND	8,000						0	0	25	
Cyclohexane	340,000	16,000						338,200	1.29	25	
Dichlorodifluoromethane	ND	8,000						0	0	25	
Ethyl acetate	ND	8,000						0	0	25	
Ethylbenzene	ND	16,000						0	0	25	
Heptane	180,000	8,000						178,800	0.980	25	
Hexachlorobutadiene	ND	16,000						0	0	25	

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	E	Value above quantitation range	H	Holding times for preparation or analysis exceede
J	Estimated concentration	M	Manual Integration used to determine area response	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

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QC SUMMARY REPORT

WO#: **1109988**

20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB

BatchID: **R43399**

Sample ID: **1109988-013BDUP** SampType: **DUP** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **43399**
Client ID: **VA0535** Batch ID: **R43399** TestNo: **TO-15** Analysis Date: **10/11/2011** SeqNo: **847575**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
m,p-Xylene	15,000	16,000						15,520	1.04	25	J
Methylene chloride	ND	40,000						0	0	25	
Naphthalene	ND	8,000						0	0	25	
n-Hexane	210,000	16,000						203,700	2.52	25	
o-Xylene	ND	8,000						0	0	25	
Propylene	ND	8,000						0	0	25	
Styrene	ND	8,000						0	0	25	
tert-Butyl Methyl Ether	ND	8,000						0	0	25	
Tetrachloroethene	ND	8,000						0	0	25	
Tetrahydrofuran	ND	8,000						0	0	25	
Toluene	220,000	8,000						219,700	0.0728	25	
trans-1,2-Dichloroethene	ND	8,000						0	0	25	
trans-1,3-dichloropropene	ND	8,000						0	0	25	
Trichloroethene	ND	8,000						0	0	25	
Trichlorofluoromethane	ND	8,000						0	0	25	
Vinyl acetate	ND	8,000						0	0	25	
Vinyl chloride	ND	8,000						0	0	25	
Xylenes, Total	15,000	24,000						15,520	1.04	25	J
Surr: 4-Bromofluorobenzene	120,000		100,000		116	70	130		0	25	

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

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QC SUMMARY REPORT

WO#: 1109988
20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB

BatchID: R43464

Sample ID: **BLK2 VOA1 101211** SampType: **MBLK** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **43464**
Client ID: **PBW** Batch ID: **R43464** TestNo: **TO-15** Analysis Date: **10/13/2011** SeqNo: **849098**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,4-Trichlorobenzene	ND	1.0									
1,2,4-Trimethylbenzene	ND	1.0									
1,2-Dibromoethane	ND	1.0									
1,2-Dichlorobenzene	ND	1.0									
1,2-Dichloroethane	ND	1.0									
1,2-Dichloropropane	ND	1.0									
1,3,5-Trimethylbenzene	ND	1.0									
1,3-Butadiene	ND	1.0									
1,3-Dichlorobenzene	ND	1.0									
1,4-Dichlorobenzene	ND	1.0									
2-Butanone	ND	1.0									
2-Hexanone	ND	1.0									
4-Methyl-2-pentanone	ND	1.0									
Acetone	ND	1.0									
Benzene	ND	1.0									
Benzyl chloride	ND	1.0									
Bromodichloromethane	ND	1.0									
Bromoform	ND	1.0									
Bromomethane	ND	1.0									
Carbon disulfide	ND	1.0									

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

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QC SUMMARY REPORT

WO#: **1109988**

20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB

BatchID: **R43464**

Sample ID: **BLK2 VOA1 101211** SampType: **MBLK** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **43464**
Client ID: **PBW** Batch ID: **R43464** TestNo: **TO-15** Analysis Date: **10/13/2011** SeqNo: **849098**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chlorodibromomethane	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Chloromethane	ND	1.0									
cis-1,2-Dichloroethene	ND	1.0									
cis-1,3-dichloropropene	ND	1.0									
Cyclohexane	ND	2.0									
Dichlorodifluoromethane	ND	1.0									
Ethyl acetate	ND	1.0									
Ethylbenzene	ND	2.0									
Heptane	ND	1.0									
Hexachlorobutadiene	ND	2.0									
m,p-Xylene	ND	2.0									
Methylene chloride	ND	5.0									
Naphthalene	ND	1.0									
n-Hexane	ND	2.0									
o-Xylene	ND	1.0									
Propylene	ND	1.0									
Styrene	ND	1.0									
tert-Butyl Methyl Ether	ND	1.0									
Tetrachloroethene	ND	1.0									
Tetrahydrofuran	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	E	Value above quantitation range	H	Holding times for preparation or analysis exceede
J	Estimated concentration	M	Manual Integration used to determine area response	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

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QC SUMMARY REPORT

WO#: **1109988**

20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB

BatchID: **R43464**

Sample ID: **BLK2 VOA1 101211** SampType: **MBLK** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **43464**
Client ID: **PBW** Batch ID: **R43464** TestNo: **TO-15** Analysis Date: **10/13/2011** SeqNo: **849098**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,3-dichloropropene	ND	1.0									
Trichloroethene	ND	1.0									
Trichlorofluoromethane	ND	1.0									
Vinyl acetate	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	3.0									
Surr: 4-Bromofluorobenzene	15		12.50		121	70	130				

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	E	Value above quantitation range	H	Holding times for preparation or analysis exceede
J	Estimated concentration	M	Manual Integration used to determine area response	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

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QC SUMMARY REPORT

WO#: **1109988**

20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB

BatchID: **R43474**

Sample ID: **BLK1 101311 VOA9** SampType: **MBLK** TestCode: **MA_APH** Units: **µg/m³** Prep Date: RunNo: **43474**
Client ID: **PBW** Batch ID: **R43474** TestNo: **MA_APH** Analysis Date: **10/13/2011** SeqNo: **849497**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
C5-C8 Aliphatic Hydrocarbons	47	120									J
C9-C10 Aromatic Hydrocarbons	ND	130									
C9-C12 Aliphatic Hydrocarbons	ND	190									
Surr: 4-Bromofluorobenzene	93		89.50		104	70	130				

Sample ID: **1110367-002BDUP** SampType: **DUP** TestCode: **MA_APH** Units: **µg/m³** Prep Date: RunNo: **43474**
Client ID: **ZZZZZZ** Batch ID: **R43474** TestNo: **MA_APH** Analysis Date: **10/13/2011** SeqNo: **849504**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
C5-C8 Aliphatic Hydrocarbons	35,000,000	940,000						35,490,000	2.64	30	
C9-C10 Aromatic Hydrocarbons	ND	1,100,000						0	0	30	
C9-C12 Aliphatic Hydrocarbons	1,400,000	1,500,000						1,576,000	9.29	30	J
Surr: 4-Bromofluorobenzene	750,000		716,000		105	70	130		0	30	

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	E	Value above quantitation range	H	Holding times for preparation or analysis exceeds
J	Estimated concentration	M	Manual Integration used to determine area response	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

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QC SUMMARY REPORT

WO#: **1109988**

20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc

Project: Kirtland AFB

BatchID: **R43496**

Sample ID: **BLK2 101311 VOA9** SampType: **MBLK** TestCode: **MA_APH** Units: **µg/m³** Prep Date: RunNo: **43496**

Client ID: **PBW** Batch ID: **R43496** TestNo: **MA_APH** Analysis Date: **10/14/2011** SeqNo: **850033**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
C5-C8 Aliphatic Hydrocarbons	39	120									J
C9-C10 Aromatic Hydrocarbons	ND	130									
C9-C12 Aliphatic Hydrocarbons	ND	190									
Surr: 4-Bromofluorobenzene	94		89.50		105	70	130				

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	E	Value above quantitation range	H	Holding times for preparation or analysis exceede
J	Estimated concentration	M	Manual Integration used to determine area response	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

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QC SUMMARY REPORT

WO#: **1109988**
20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB
BatchID: **R43559**

Sample ID: **mblk** SampType: **MBLK** TestCode: **ASTM-D2504** Units: **%** Prep Date: RunNo: **43559**
Client ID: **PBW** Batch ID: **R43559** TestNo: **ASTM-D2504** Analysis Date: **10/11/2011** SeqNo: **851760**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon dioxide	ND	0.10									
Carbon Monoxide	ND	0.10									
Methane	ND	0.50									
Nitrogen	ND	0.10									
Oxygen	ND	0.10									

Sample ID: **lcs** SampType: **LCS** TestCode: **ASTM-D2504** Units: **%** Prep Date: RunNo: **43559**
Client ID: **LCSW** Batch ID: **R43559** TestNo: **ASTM-D2504** Analysis Date: **10/11/2011** SeqNo: **851762**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon dioxide	2.6	0.10	2.500	0	102	70	130	2.564	0.273	0	
Carbon Monoxide	2.5	0.10	2.500	0	99.3	70	130	2.496	0.522	0	
Methane	2.0	0.50	2.000	0	98.9	70	130	1.947	1.53	0	
Nitrogen	2.8	0.10	2.500	0	111	70	130	2.857	2.77	0	
Oxygen	2.5	0.10	2.500	0	100	70	130	2.570	2.48	0	

Sample ID: **1109988-010ADUP** SampType: **DUP** TestCode: **ASTM-D2504** Units: **%** Prep Date: RunNo: **43559**
Client ID: **VA0532** Batch ID: **R43559** TestNo: **ASTM-D2504** Analysis Date: **10/11/2011** SeqNo: **851774**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon dioxide	4.1	0.10						4.079	0.514	20	
Carbon Monoxide	ND	0.10						0	0	20	
Methane	ND	0.50						0	0	20	
Nitrogen	82	0.10						82.00	0.559	20	
Oxygen	13	0.10						12.94	0.509	20	

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

RTI LABORATORIES, INC.

RTI
31628 Glendale St.
Livonia, MI 48150
TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

QC SUMMARY REPORT

WO#: **1109988**
20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB

BatchID: **R43560**

Sample ID: **mblk** SampType: **MBLK** TestCode: **ASTM-D2504** Units: **%** Prep Date: RunNo: **43560**
Client ID: **PBW** Batch ID: **R43560** TestNo: **ASTM-D2504** Analysis Date: **10/12/2011** SeqNo: **851777**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon dioxide	ND	0.10									
Carbon Monoxide	ND	0.10									
Methane	ND	0.50									
Nitrogen	ND	0.10									
Oxygen	ND	0.10									

Sample ID: **lcs** SampType: **LCS** TestCode: **ASTM-D2504** Units: **%** Prep Date: RunNo: **43560**
Client ID: **LCSW** Batch ID: **R43560** TestNo: **ASTM-D2504** Analysis Date: **10/12/2011** SeqNo: **851779**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon dioxide	2.4	0.10	2.500	0	97.3	70	130	2.414	0.743	0	
Carbon Monoxide	2.4	0.10	2.500	0	97.5	70	130	2.402	1.45	0	
Methane	2.0	0.50	2.000	0	100	70	130	2.050	2.32	0	
Nitrogen	2.7	0.10	2.500	0	109	70	130	2.667	1.97	0	
Oxygen	2.5	0.10	2.500	0	101	70	130	2.494	1.16	0	

Sample ID: **1109988-019adup** SampType: **DUP** TestCode: **ASTM-D2504** Units: **%** Prep Date: RunNo: **43560**
Client ID: **VA0691** Batch ID: **R43560** TestNo: **ASTM-D2504** Analysis Date: **10/12/2011** SeqNo: **851790**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon dioxide	0.48	0.10						0.4880	1.03	20	
Carbon Monoxide	ND	0.10						0	0	20	
Methane	ND	0.50						0	0	20	
Nitrogen	77	0.10						77.66	0.742	20	
Oxygen	20	0.10						20.14	0.0546	20	

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

RTI Laboratories

Run ID: VOA1_111006B **Run No.:** 43338

Analytical Run Date: 10/6/2011 **InstrumentID:** VOA1

Analyst: Rachel Hill **Column:**

Calibration ID: 43330 **Column ID:** 0.25mm, 1.4umFT

Column Length: 30m

Run Comments: ch rev 10/10/11 Ran on 10.7.11 - Created sequence w/ wrong date. RH

SampID	TestCode	SampType	Batch ID	Analysis Date/Time	QA By	Q	Comments
BFB1 VOA1 100611	BFB_TUNE	TUNE	R43338	10/7/2011 6:07:00 PM	Celeste Hoitash		
CCV1 VOA1 100611	EPA_TO15	ICV	R43338	10/7/2011 6:49:00 PM	Celeste Hoitash		
RLVS1 VOA1 10061	EPA_TO15	RLVS	R43338	10/7/2011 7:33:00 PM	Celeste Hoitash		
BLANK VOA1 10061	EPA_TO15	MBLK	R43338	10/7/2011 8:21:00 PM	Celeste Hoitash		
1109555-020A	EPA_TO15	SAMP	R43338	10/7/2011 9:10:00 PM	Celeste Hoitash		
1109555-021A	EPA_TO15	SAMP	R43338	10/7/2011 9:58:00 PM	Celeste Hoitash		
1109555-022A	EPA_TO15	SAMP	R43338	10/7/2011 10:47:00 PM	Celeste Hoitash		
1109555-024A	EPA_TO15	SAMP	R43338	10/8/2011 12:25:00 AM	Celeste Hoitash		
1109988-004B	EPA_TO15	SAMP	R43338	10/8/2011 5:10:00 AM	Celeste Hoitash		Accidentally over diluted sample. Reported here to show that sample and duplicate were analyzed. Will re-run at a lower dilution.
1109988-004BDUP	EPA_TO15	DUP	R43338	10/8/2011 5:52:00 AM	Celeste Hoitash		
1109988-020A	EPA_TO15	DUP	R43338	10/8/2011 6:38:00 AM	Celeste Hoitash		
1109988-005B	EPA_TO15	SAMP	R43338	10/8/2011 7:27:00 AM	Celeste Hoitash		
1109988-006B	EPA_TO15	SAMP	R43338	10/8/2011 8:09:00 AM	Celeste Hoitash		
1109988-007B	EPA_TO15	SAMP	R43338	10/8/2011 8:51:00 AM	Celeste Hoitash		
RLVS1 VOA1 10061	EPA_TO15	RLVS	R43338	10/8/2011 9:34:00 AM	Celeste Hoitash		

RTI Laboratories

ANALYTICAL RUN Summary

11-Oct-11

RunNo 43338

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
845974	BFB1 VOA1 100611	BFB_TUNE	TUNE	\1\DATA\100611	10/7/2011 6:07:0	1	R43338		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
173	M		0.6	0.6		0	0	0	0	0	0	0%	0	2	0%	
174	M		70.7	70.7		0	0	0	0	0	0	0%	50	120	0%	
175	M		7.4	7.4		0	0	0	0	0	0	0%	4	9	0%	
176	M		99.2	99.2		0	0	0	0	0	0	0%	93	101	0%	
177	M		6.9	6.9		0	0	0	0	0	0	0%	5	9	0%	
50	M		26.6	26.6		0	0	0	0	0	0	0%	8	40	0%	
75	M		53.5	53.5		0	0	0	0	0	0	0%	30	66	0%	
95	M		100	100		0	0	0	0	0	0	0%	100	100	0%	
96	M		7.4	7.4		0	0	0	0	0	0	0%	5	9	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
845975	CCV1 VOA1 100611	EPA_TO15	ICV	\1\DATA\100611	10/7/2011 6:49:0	1	R43338		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
1,1,1-Trichloroethane	A	ppbv	9.97	9.97		9.6	0	0	0.107	1	0	104%	70	130	0%	
1,1,2,2-Tetrachloroethane	A	ppbv	9.16	9.16		10	0	0	0.211	1	0	92%	70	130	0%	
1,1,2-Trichloro-1,2,2-trifluoroethane	A	ppbv	10.29	10.29		9.8	0	0	0.108	1	0	105%	70	130	0%	
1,1,2-Trichloroethane	A	ppbv	8.36	8.36		9.8	0	0	0.2	1	0	85%	70	130	0%	
1,1-Dichloroethane	A	ppbv	9.77	9.77		9.7	0	0	0.111	1	0	101%	70	130	0%	
1,1-Dichloroethene	A	ppbv	11.04	11.04		9.9	0	0	0.097	1	0	112%	70	130	0%	
1,2,4-Trichlorobenzene	A	ppbv	8.03	8.03		9.1	0	0	0.271	1	0	88%	70	130	0%	
1,2,4-Trimethylbenzene	A	ppbv	8.65	8.65		9.8	0	0	0.245	1	0	88%	70	130	0%	
1,2-Dibromoethane	A	ppbv	8.28	8.28		9.6	0	0	0.186	1	0	86%	70	130	0%	
1,2-Dichlorobenzene	A	ppbv	8.82	8.82		9.7	0	0	0.208	1	0	91%	70	130	0%	
1,2-Dichloroethane	A	ppbv	9.47	9.47		9.7	0	0	0.196	1	0	98%	70	130	0%	
1,2-Dichloropropane	A	ppbv	8.51	8.51		9.8	0	0	0.224	1	0	87%	70	130	0%	
1,3,5-Trimethylbenzene	A	ppbv	8.38	8.38		9.7	0	0	0.24	1	0	86%	70	130	0%	
1,3-Butadiene	A	ppbv	12.54	12.54		9.8	0	0	0.152	1	0	128%	70	130	0%	
1,3-Dichlorobenzene	A	ppbv	8.73	8.73		9.7	0	0	0.202	1	0	90%	70	130	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
845975	CCV1 VOA1 100611	EPA_TO15	ICV	\I\DATA\100611\	10/7/2011 6:49:0	1	R43338		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
1,4-Dichlorobenzene	A	ppbv	8.55	8.55		9.6	0	0	0.194	1	0	89%	70	130	0%	
1,4-Dioxane	A	ppbv	8.5	8.5		9.6	0	0	0.128	1	0	89%	70	130	0%	
2-Butanone	A	ppbv	9.82	9.82		9.9	0	0	0.287	1	0	99%	70	130	0%	
2-Hexanone	A	ppbv	8.88	8.88		9.8	0	0	0.135	1	0	91%	70	130	0%	
2-Propanol	A	ppbv	10.54	10.54		10.1	0	0	0.329	1	0	104%	70	130	0%	
4-Methyl-2-pentanone	A	ppbv	8.87	8.87		10	0	0	0.157	1	0	89%	70	130	0%	
Acetone	A	ppbv	9.99	9.99		10	0	0	0.43	1	0	100%	70	130	0%	
Benzene	A	ppbv	9.14	9.14		9.6	0	0	0.126	1	0	95%	70	130	0%	
Benzyl chloride	A	ppbv	9.17	9.17		9.7	0	0	0.155	1	0	95%	70	130	0%	
Bromodichloromethane	A	ppbv	8.25	8.25		9.6	0	0	0.156	1	0	86%	70	130	0%	
Bromoform	A	ppbv	8.12	8.12		9.6	0	0	0.197	1	0	85%	70	130	0%	
Bromomethane	A	ppbv	10.04	10.04		9.3	0	0	0.075	1	0	108%	70	130	0%	
Carbon disulfide	A	ppbv	10.76	10.76		9.7	0	0	0.093	1	0	111%	70	130	0%	
Carbon tetrachloride	A	ppbv	9.35	9.35		9.5	0	0	0.114	1	0	98%	70	130	0%	M
Chlorobenzene	A	ppbv	8.25	8.25		9.9	0	0	0.275	1	0	83%	70	130	0%	
Chlorodibromomethane	A	ppbv	8.22	8.22		9.2	0	0	0.165	1	0	89%	70	130	0%	
Chloroethane	A	ppbv	10.21	10.21		9.8	0	0	0.063	1	0	104%	70	130	0%	
Chloroform	A	ppbv	10.2	10.2		9.4	0	0	0.126	1	0	109%	70	130	0%	
Chloromethane	A	ppbv	11.35	11.35		9.8	0	0	0.104	1	0	116%	70	130	0%	
cis-1,2-Dichloroethene	A	ppbv	9.66	9.66		9.8	0	0	0.107	1	0	99%	70	130	0%	
cis-1,3-dichloropropene	A	ppbv	8.25	8.25		9.5	0	0	0.166	1	0	87%	70	130	0%	
Cyclohexane	A	ppbv	10.85	10.85		9.8	0	0	0.684	2	0	111%	70	130	0%	
Dichlorodifluoromethane	A	ppbv	9.88	9.88		9.2	0	0	0.086	1	0	107%	70	130	0%	
Ethanol	A	ppbv	9.39	9.39		9.2	0	0	1.962	5	0	102%	70	130	0%	
Ethyl acetate	A	ppbv	9.94	9.94		9.8	0	0	0.157	1	0	101%	70	130	0%	
Ethylbenzene	A	ppbv	8.28	8.28		9.8	0	0	0.737	2	0	84%	70	130	0%	
Heptane	A	ppbv	9.87	9.87		9.9	0	0	0.249	1	0	100%	70	130	0%	
Hexachlorobutadiene	A	ppbv	8.71	8.71		9.4	0	0	0.374	2	0	93%	70	130	0%	
m,p-Xylene	A	ppbv	17	17		19.2	0	0	0.524	2	0	89%	70	130	0%	
Methylene chloride	A	ppbv	10.73	10.73		10	0	0	2.077	5	0	107%	70	130	0%	
n-Hexane	A	ppbv	10.54	10.54		10.1	0	0	0.692	2	0	104%	70	130	0%	
Naphthalene	A	ppbv	8.21	8.21		9.2	0	0	0.247	1	0	89%	70	130	0%	
o-Xylene	A	ppbv	8.43	8.43		10	0	0	0.258	1	0	84%	70	130	0%	
Propylene	A	ppbv	11.42	11.42		10.2	0	0	0.075	1	0	112%	70	130	0%	

2

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
845975	CCV1 VOA1 100611	EPA_TO15	ICV	\I\DATA\100611	10/7/2011 6:49:0	1	R43338		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Styrene	A	ppbv	8.26	8.26		9.8	0	0	0.263	1	0	84%	70	130	0%	
tert-Butyl Methyl Ether	A	ppbv	9.11	9.11		9.9	0	0	0.228	1	0	92%	70	130	0%	
Tetrachloroethene	A	ppbv	8.66	8.66		9.6	0	0	0.148	1	0	90%	70	130	0%	
Tetrahydrofuran	A	ppbv	10.3	10.3		10	0	0	0.201	1	0	103%	70	130	0%	
Toluene	A	ppbv	8.47	8.47		9.8	0	0	0.158	1	0	86%	70	130	0%	
trans-1,2-Dichloroethene	A	ppbv	10.32	10.32		9.8	0	0	0.117	1	0	105%	70	130	0%	
trans-1,3-dichloropropene	A	ppbv	7.97	7.97		9.1	0	0	0.171	1	0	88%	70	130	0%	
Trichloroethene	A	ppbv	8.55	8.55		9.6	0	0	0.119	1	0	89%	70	130	0%	
Trichlorofluoromethane	A	ppbv	10.16	10.16		9.6	0	0	0.148	1	0	106%	70	130	0%	
Vinyl acetate	A	ppbv	10.2	10.2		9.9	0	0	0.266	1	0	103%	70	130	0%	
Vinyl chloride	A	ppbv	11.4	11.4		9.4	0	0	0.072	1	0	121%	70	130	0%	
Xylenes, Total	C	ppbv	25.43	25.43		29.2	0	0	0.782	3	0	87%	70	130	0%	
1,4-Difluorobenzene	I	ppbv	12.5	12.5		12.5	0	0	0	0	0	100%			0%	
Bromochloromethane	I	ppbv	12.5	12.5		1.25	0	0	0	0	0	1000%			0%	
Chlorobenzene-d5	I	ppbv	12.5	12.5		12.5	0	0	0	0	0	100%			0%	
4-Bromofluorobenzene	S	ppbv	13.08	13.08		12.5	0	0	0	0	0	105%	70	130	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
845976	RLVS1 VOA1 10061	EPA_TO15	RLVS	\I\DATA\100611	10/7/2011 7:33:0	1	R43338		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
1,1,1-Trichloroethane	A	ppbv	0.79	0.79		0.996	0	0	0.107	1	0	79%	70	130	0%	
1,1,2,2-Tetrachloroethane	A	ppbv	1.1	1.1		1	0	0	0.211	1	0	110%	70	130	0%	
1,1,2-Trichloro-1,2,2-trifluoroethane	A	ppbv	0.88	0.88		0.98	0	0	0.108	1	0	90%	70	130	0%	
1,1,2-Trichloroethane	A	ppbv	0.74	0.74		0.98	0	0	0.2	1	0	76%	70	130	0%	
1,1-Dichloroethane	A	ppbv	1	1		0.97	0	0	0.111	1	0	103%	70	130	0%	
1,1-Dichloroethene	A	ppbv	1.02	1.02		0.99	0	0	0.097	1	0	103%	70	130	0%	
1,2,4-Trichlorobenzene	A	ppbv	1.76	1.76		0.91	0	0	0.271	1	0	193%	70	130	0%	S
1,2,4-Trimethylbenzene	A	ppbv	1.29	1.29		0.98	0	0	0.245	1	0	132%	70	130	0%	S
1,2-Dibromoethane	A	ppbv	0.73	0.73		0.96	0	0	0.186	1	0	76%	70	130	0%	
1,2-Dichlorobenzene	A	ppbv	1.4	1.4		0.97	0	0	0.208	1	0	144%	70	130	0%	S
1,2-Dichloroethane	A	ppbv	0.95	0.95		0.97	0	0	0.196	1	0	98%	70	130	0%	
1,2-Dichloropropane	A	ppbv	0.74	0.74		0.98	0	0	0.224	1	0	76%	70	130	0%	

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\100611\10061134.D Vial: 2
Acq On : 7 Oct 2011 6:49 pm Operator: RACHEL HILL
Sample : CCV1 VOA1 100611 Inst : VOA 1
Misc : ICV EPA_TO15 Multiplr: 1.00
MS Integration Params: CLME.P

Method : C:\HPCHEM\1\METHODS\100611V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Thu Oct 06 20:53:18 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Bromochloromethane	1.000	1.000	0.0	102	0.00
2	T	Propylene	1.304	1.460	-12.0	101	0.00
3	T	Dichlorodifluoromethane	3.309	3.555	-7.4	101	0.00
4	T	1,2-Dichloro-1,2,2,2-tetraf	2.171	2.299	-5.9	100	0.00
5	T	Chloromethane	1.531	1.829	-19.5	101	0.00
6	T	Vinyl chloride	1.379	1.673	-21.3	102	0.00
7	T	1,3-Butadiene	1.286	1.645	-27.9	102	0.00
8	T	Bromomethane	1.173	1.266	-7.9	100	0.00
9	T	Chloroethane	0.744	0.826	-11.0	99	0.00
10	T	Trichlorofluoromethane	3.006	3.180	-5.8	99	0.00
11	T	Ethanol	0.374	0.382	-2.1	82	0.00
12	T	Freon113	2.482	2.606	-5.0	93	0.00
13	T	1,1-Dichloroethene	2.049	2.284	-11.5	98	0.00
14	T	Acetone	2.170	2.168	0.1	81	0.00
15	T	Carbon disulfide	3.246	3.601	-10.9	99	0.00
16	T	2-Propanol	1.896	1.978	-4.3	84	0.00
17	T	Methylene chloride	1.636	1.756	-7.3	93	0.00
18	T	tert-Butyl Methyl Ether	2.877	2.648	8.0	76	0.00
19	T	trans-1,2-Dichloroethene	1.981	2.086	-5.3	92	0.00
20	T	n-Hexane	2.203	2.299	-4.4	90	0.00
21	T	1,1-Dichloroethane	2.213	2.229	-0.7	85	0.00
22	T	Vinyl acetate	3.355	3.457	-3.0	77	0.00
23	T	cis-1,2-Dichloroethene	1.183	1.166	1.4	88	0.00
24	T	2-Butanone	2.302	2.284	0.8	79	0.00
25	T	Ethyl acetate	2.992	3.035	-1.4	79	0.00
26	T	Tetrahydrofuran	1.500	1.545	-3.0	81	0.00
27	T	Chloroform	2.595	2.702	-4.1	86	0.00
28	T	1,1,1-Trichloroethane	2.490	2.588	-3.9	87	0.00
29	T	Cyclohexane	2.294	2.540	-10.7	89	0.00
30	T	Carbon tetrachloride	2.155	2.120	1.6	88	0.00
31	T	Benzene	3.091	2.941	4.9	80	0.00
32	T	1,2-Dichloroethane	1.585	1.548	2.3	79	0.00
33	I	1,4-Difluorobenzene	1.000	1.000	0.0	108	0.00
34	T	Heptane	1.015	1.012	0.3	88	0.00
35	T	Trichloroethene	0.493	0.438	11.2	89	0.00
36	T	1,2-Dichloropropane	0.425	0.369	13.2	79	0.00
37	T	1,4-Dioxane	0.138	0.123	10.9	83	0.00
38	T	Bromodichloromethane	0.756	0.649	14.2	81	0.00
39	T	cis-1,3-Dichloropropene	0.612	0.531	13.2	81	0.00
40	T	4-Methyl-2-pentanone	0.281	0.249	11.4	81	0.00
41	T	Toluene	1.089	0.941	13.6	82	0.00
42	T	trans-1,3-Dichloropropene	0.526	0.460	12.5	82	0.00
43	T	1,1,2-Trichloroethane	0.364	0.310	14.8	83	0.00
44	T	Tetrachloroethene	0.546	0.493	9.7	91	0.00
45	T	2-Hexanone	0.592	0.537	9.3	80	0.00
46	T	Chlorodibromomethane	0.560	0.470	16.1	83	0.00
47	T	1,2-Dibromoethane	0.518	0.447	13.7	84	0.00

(#) = Out of Range
10061134.D 100611V1.M Thu Oct 20 17:50:31 2011

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\100611\10061134.D Vial: 2
Acq On : 7 Oct 2011 6:49 pm Operator: RACHEL HILL
Sample : CCV1 VOA1 100611 Inst : VOA 1
Misc : ICV EPA_TO15 Multiplr: 1.00
MS Integration Params: CLME.P

Method : C:\HPCHEM\1\METHODS\100611V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Thu Oct 06 20:53:18 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
49	T	Chlorobenzene	1.075	0.895	16.7	85	0.00
50	T	Ethylbenzene	1.853	1.566	15.5	85	0.00
51	T	m,p-Xylene	1.541	1.364	11.5	84	0.00
52	T	o-Xylene	1.353	1.140	15.7	87	0.00
53	T	Styrene	0.921	0.777	15.6	88	0.00
54	T	Bromoform	0.664	0.562	15.4	89	0.00
55	S	4-Bromofluorobenzene	0.546	0.572	-4.8	120	0.00
56	T	1,1,2,2-Tetrachloroethane	0.927	0.849	8.4	96	0.00
57	T	4-Ethyltoluene	1.496	1.287	14.0	95	0.00
58	T	1,3,5-Trimethylbenzene	1.265	1.092	13.7	97	0.00
59	T	1,2,4-Trimethylbenzene	1.155	1.019	11.8	101	0.00
60	T	1,3-Dichlorobenzene	0.691	0.623	9.8	97	0.00
61	T	1,4-Dichlorobenzene	0.645	0.575	10.9	95	0.00
62	T	Benzyl chloride	0.798	0.754	5.5	91	0.00
63	T	1,2-Dichlorobenzene	0.629	0.572	9.1	99	0.00
64	T	1,2,4-Trichlorobenzene	0.096	0.085	11.5	84	0.00
65	T	Hexachlorobutadiene	0.227	0.210	7.5	85	0.00
66		Naphthalene	0.145	0.130	10.3	86	0.00

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\100611\10061134.D Vial: 2
Acq On : 7 Oct 2011 6:49 pm Operator: RACHEL HILL
Sample : CCV1 VOA1 100611 Inst : VOA 1
Misc : ICV EPA_TO15 Multiplr: 1.00
MS Integration Params: CLME.P
Quant Time: Oct 9 19:02 2011 Quant Results File: 100611V1.RES

Quant Method : C:\HPCHEM\1\METHODS\100611V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Thu Oct 06 20:53:18 2011
Response via : Initial Calibration
DataAcq Meth : 100411V1

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	10.59	130	406287	12.50 ppbv	0.00
33) 1,4-Difluorobenzene	11.69	114	1292758	12.50 ppbv	0.00
48) Chlorobenzene-d5	15.54	117	816280	12.50 ppbv	0.00

System Monitoring Compounds					
55) 4-Bromofluorobenzene	17.18	95	466682	13.08 ppbv	0.00
Spiked Amount 12.500	Range 70 - 113		Recovery = 104.64%		

Target Compounds					Qvalue
2) Propylene	5.52	41	483911	11.42 ppbv	98
3) Dichlorodifluoromethane	5.58	85	1063103	9.88 ppbv	98
4) 1,2-Dichloro-1,2,2,2-tetra	5.84	135	709855	10.06 ppbv #	67
5) Chloromethane	6.00	50	564755	11.35 ppbv	99
6) Vinyl chloride	6.20	62	511144	11.40 ppbv #	98
7) 1,3-Butadiene	6.26	39	524101	12.54 ppbv	93
8) Bromomethane	6.85	94	382658	10.04 ppbv #	98
9) Chloroethane	7.00	64	246901	10.21 ppbv #	95
10) Trichlorofluoromethane	7.33	101	992366	10.16 ppbv #	97
11) Ethanol	7.56	45	114185	9.39 ppbv	98
12) Freon113	7.99	101	830138	10.29 ppbv	86
13) 1,1-Dichloroethene	8.09	61	735061	11.04 ppbv #	85
14) Acetone	8.18	43	704659	9.99 ppbv #	89
15) Carbon disulfide	8.46	76	1135415	10.76 ppbv #	99
16) 2-Propanol	8.23	45	649328	10.54 ppbv	85
17) Methylene chloride	8.75	49	570666	10.73 ppbv #	74
18) tert-Butyl Methyl Ether	8.95	73	852087	9.11 ppbv #	85
19) trans-1,2-Dichloroethene	9.03	61	664531	10.32 ppbv #	80
20) n-Hexane	9.22	57	754735	10.54 ppbv #	85
21) 1,1-Dichloroethane	9.59	63	702640	9.77 ppbv #	97
22) Vinyl acetate	9.53	43	1112264	10.20 ppbv #	94
23) cis-1,2-Dichloroethene	10.28	96	371523	9.66 ppbv #	78
24) 2-Butanone	10.24	43	735077	9.82 ppbv #	86
25) Ethyl acetate	10.20	43	966581	9.94 ppbv #	99
26) Tetrahydrofuran	10.58	42	502299	10.30 ppbv #	84
27) Chloroform	10.60	83	860653	10.20 ppbv	100
28) 1,1,1-Trichloroethane	10.85	97	807410	9.97 ppbv #	92
29) Cyclohexane	10.86	56	808951	10.85 ppbv #	82
30) Carbon tetrachloride	11.01	117	654509m	9.35 ppbv	
31) Benzene	11.30	78	917747	9.14 ppbv	93
32) 1,2-Dichloroethane	11.37	62	488152	9.47 ppbv #	97
34) Heptane	11.34	43	1036166	9.87 ppbv #	85
35) Trichloroethene	12.03	130	435338	8.55 ppbv	92
36) 1,2-Dichloropropane	12.38	63	373830	8.51 ppbv	96
37) 1,4-Dioxane	12.46	88	121682	8.50 ppbv #	79
38) Bromodichloromethane	12.67	83	644706	8.25 ppbv	98
39) cis-1,3-Dichloropropene	13.22	75	521997	8.25 ppbv	96
40) 4-Methyl-2-pentanone	13.33	58	257898	8.87 ppbv #	90
41) Toluene	13.62	91	953879	8.47 ppbv	97
42) trans-1,3-Dichloropropene	13.93	75	433263	7.97 ppbv	95
43) 1,1,2-Trichloroethane	14.20	97	314306	8.36 ppbv	95

(#) = qualifier out of range (m) = manual integration
10061134.D 100611V1.M Mon Oct 10 13:50:51 2011

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\100611\10061134.D Vial: 2
Acq On : 7 Oct 2011 6:49 pm Operator: RACHEL HILL
Sample : CCV1 VOA1 100611 Inst : VOA 1
Misc : ICV EPA_TO15 Multiplr: 1.00
MS Integration Params: CLME.P
Quant Time: Oct 9 19:02 2011 Quant Results File: 100611V1.RES

Quant Method : C:\HPCHEM\1\METHODS\100611V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Thu Oct 06 20:53:18 2011
Response via : Initial Calibration
DataAcq Meth : 100411V1

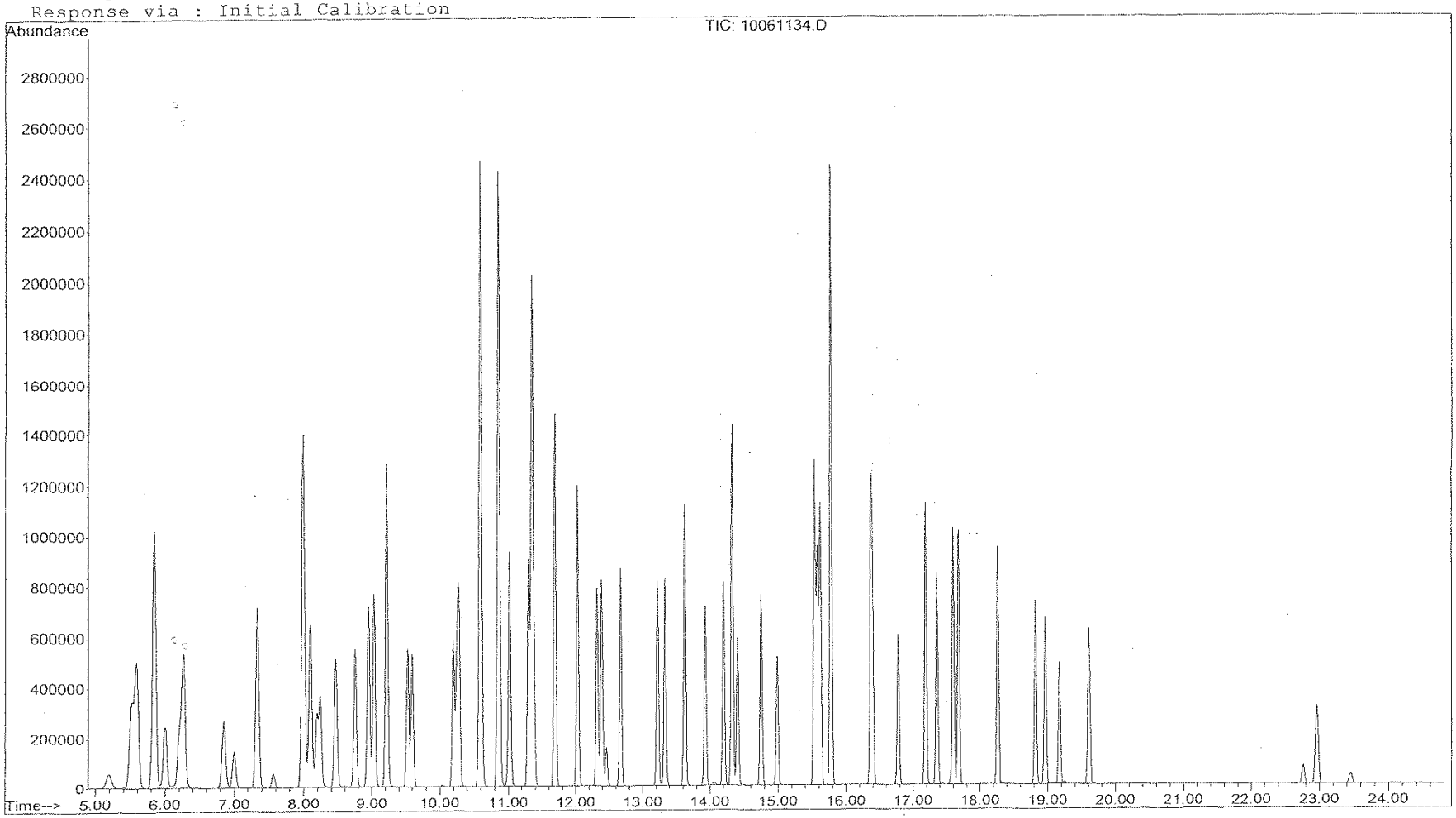
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
44)	Tetrachloroethene	14.32	166	489094	8.66 ppbv	98
45)	2-Hexanone	14.41	43	543982	8.88 ppbv	91
46)	Chlorodibromomethane	14.75	129	475870	8.22 ppbv	99
47)	1,2-Dibromoethane	14.98	107	443441	8.28 ppbv	100
49)	Chlorobenzene	15.58	112	578861	8.25 ppbv #	83
50)	Ethylbenzene	15.62	91	1002151	8.28 ppbv	92
51)	m,p-Xylene	15.78	91	1710694	17.00 ppbv	89
52)	o-Xylene	16.37	91	744445	8.43 ppbv #	86
53)	Styrene	16.40	104	497257	8.26 ppbv	96
54)	Bromoform	16.78	173	352097	8.12 ppbv #	97
56)	1,1,2,2-Tetrachloroethane	17.36	83	554111	9.16 ppbv #	99
57)	4-Ethyltoluene	17.60	105	823762	8.43 ppbv	96
58)	1,3,5-Trimethylbenzene	17.68	105	691952	8.38 ppbv	96
59)	1,2,4-Trimethylbenzene	18.26	105	652360	8.65 ppbv	96
60)	1,3-Dichlorobenzene	18.82	146	394376	8.73 ppbv	97
61)	1,4-Dichlorobenzene	18.96	146	360303	8.55 ppbv #	97
62)	Benzyl chloride	19.17	91	477526	9.17 ppbv	96
63)	1,2-Dichlorobenzene	19.61	146	362189	8.82 ppbv	97
64)	1,2,4-Trichlorobenzene	22.77	180	50360	8.03 ppbv	98
65)	Hexachlorobutadiene	22.96	225	129033	8.71 ppbv	98
66)	Naphthalene	23.46	128	77932	8.21 ppbv	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\100611\10061134.D Vial: 2
Acq On : 7 Oct 2011 6:49 pm Operator: RACHEL HILL
Sample : CCV1 VOA1 100611 Inst : VOA 1
Misc : ICV EPA_TO15 Multiplr: 1.00
MS Integration Params: CLME.P
Quant Time: Oct 9 19:02 2011 Quant Results File: 100611V1.RES

Method : C:\HPCHEM\1\METHODS\100611V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Thu Oct 06 20:53:18 2011
Response via : Initial Calibration



RTI Laboratories

Run ID: VOA1_111010A

Run No.: 43399

Analytical Run Date: 10/10/2011

InstrumentID: VOA1

Analyst: Rachel Hill

Column:

Calibration ID:

Column ID: 0.25mm, 1.4umFT

Column Length: 30m

SampID	TestCode	SampType	Batch ID	Analysis Date/Time	QA By	Q	Comments
BFB1 VOA1 101011	BFB_TUNE	TUNE	R43399	10/10/2011 10:00:00 AM	Robert Lynch		
1ppbv ICAL	EPA_TO15	ICAL	R43399	10/10/2011 1:03:00 PM	Robert Lynch		
10ppbv ICAL	EPA_TO15	ICAL	R43399	10/10/2011 1:45:00 PM	Robert Lynch		
12ppbv ICAL	EPA_TO15	ICAL	R43399	10/10/2011 2:27:00 PM	Robert Lynch		
15ppbv ICAL	EPA_TO15	ICAL	R43399	10/10/2011 3:09:00 PM	Robert Lynch		
20ppbv ICAL	EPA_TO15	ICAL	R43399	10/10/2011 5:57:00 PM	Robert Lynch		
30ppbv ICAL	EPA_TO15	ICAL	R43399	10/10/2011 6:39:00 PM	Robert Lynch		
50ppbv ICAL	EPA_TO15	ICAL	R43399	10/10/2011 7:23:00 PM	Robert Lynch		
BFB2 VOA1 101011	BFB_TUNE	TUNE	R43399	10/10/2011 8:03:00 PM	Robert Lynch		
ICV1 VOA1 101011	EPA_TO15	ICV	R43399	10/10/2011 10:05:00 PM	Robert Lynch		
RLVS1 VOA1 10101	EPA_TO15	RLVS	R43399	10/10/2011 10:46:00 PM	Robert Lynch		
BLANK VOA1 10101	EPA_TO15	MBLK	R43399	10/10/2011 11:34:00 PM	Robert Lynch		
1108688-007A	EPA_TO15	SAMP	R43399	10/11/2011 12:16:00 AM	Robert Lynch	H	
1109555-031A	EPA_TO15	SAMP	R43399	10/11/2011 12:56:00 AM	Robert Lynch	H	
1109555-032A	EPA_TO15	SAMP	R43399	10/11/2011 1:37:00 AM	Robert Lynch	H	
1109555-023A	EPA_TO15	SAMP	R43399	10/11/2011 2:17:00 AM	Robert Lynch	H	
1109555-025A	EPA_TO15	SAMP	R43399	10/11/2011 2:58:00 AM	Robert Lynch	H	
1109555-026A	EPA_TO15	SAMP	R43399	10/11/2011 3:39:00 AM	Robert Lynch	H	
1109988-001B	EPA_TO15	SAMP	R43399	10/11/2011 4:19:00 AM	Robert Lynch	H	
1109988-003B	EPA_TO15	SAMP	R43399	10/11/2011 5:00:00 AM	Robert Lynch	H	
1109988-004B	EPA_TO15	SAMP	R43399	10/11/2011 5:47:00 AM	Robert Lynch	H	
1109988-008B	EPA_TO15	SAMP	R43399	10/11/2011 6:34:00 AM	Robert Lynch		
1109988-009B	EPA_TO15	SAMP	R43399	10/11/2011 7:22:00 AM	Robert Lynch		
1109988-010B	EPA_TO15	SAMP	R43399	10/11/2011 8:06:00 AM	Robert Lynch		
1109988-011B	EPA_TO15	SAMP	R43399	10/11/2011 8:53:00 AM	Robert Lynch		
1109988-012B	EPA_TO15	SAMP	R43399	10/11/2011 9:40:00 AM	Robert Lynch		
1109988-013B	EPA_TO15	SAMP	R43399	10/11/2011 10:21:00 AM	Robert Lynch		
1109988-013BDUP	EPA_TO15	DUP	R43399	10/11/2011 11:02:00 AM	Robert Lynch		
1109988-014B	EPA_TO15	SAMP	R43399	10/11/2011 11:42:00 AM	Robert Lynch		
1109988-015B	EPA_TO15	SAMP	R43399	10/11/2011 12:29:00 PM	Robert Lynch		
1109988-016B	EPA_TO15	SAMP	R43399	10/11/2011 1:09:00 PM	Robert Lynch		
1109988-017B	EPA_TO15	SAMP	R43399	10/11/2011 1:50:00 PM	Robert Lynch		
1109988-018B	EPA_TO15	SAMP	R43399	10/11/2011 2:38:00 PM	Robert Lynch		
1109988-019B	EPA_TO15	SAMP	R43399	10/11/2011 3:25:00 PM	Robert Lynch		
1110067-046A	EPA_TO15	SAMP	R43399	10/11/2011 4:07:00 PM	Robert Lynch		
1110067-044B	EPA_TO15	SAMP	R43399	10/11/2011 4:51:00 PM	Robert Lynch		

RTI Laboratories

Run ID: VOA1_111010A **Run No.:** 43399

1110067-045B	EPA_TO15	SAMP	R43399	10/11/2011 5:35:00 PM	Robert Lynch		
RLVS2 VOA1 10101	EPA_TO15	RLVS	R43399	10/11/2011 6:17:00 PM	Robert Lynch		

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
847556	ICV1 VOA1 101011	EPA_TO15	ICV	\I\DATA\101011	10/10/2011 10:0	1	R43399		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
1,1,1-Trichloroethane	A	ppbv	11.09	11.09		9.6	0	0	0.107	1	0	116%	70	130	0%	
1,1,2,2-Tetrachloroethane	A	ppbv	10.6	10.6		10	0	0	0.211	1	0	106%	70	130	0%	
1,1,2-Trichloro-1,2,2-trifluoroethane	A	ppbv	10.89	10.89		9.8	0	0	0.108	1	0	111%	70	130	0%	
1,1,2-Trichloroethane	A	ppbv	9.92	9.92		9.8	0	0	0.2	1	0	101%	70	130	0%	
1,1-Dichloroethane	A	ppbv	10.62	10.62		9.7	0	0	0.111	1	0	109%	70	130	0%	
1,1-Dichloroethene	A	ppbv	11.04	11.04		9.9	0	0	0.097	1	0	112%	70	130	0%	
1,2,4-Trichlorobenzene	A	ppbv	8.46	8.46		9.1	0	0	0.271	1	0	93%	70	130	0%	
1,2,4-Trimethylbenzene	A	ppbv	9.77	9.77		9.8	0	0	0.245	1	0	100%	70	130	0%	
1,2-Dibromoethane	A	ppbv	9.73	9.73		9.6	0	0	0.186	1	0	101%	70	130	0%	
1,2-Dichlorobenzene	A	ppbv	10.17	10.17		9.7	0	0	0.208	1	0	105%	70	130	0%	
1,2-Dichloroethane	A	ppbv	10.96	10.96		9.7	0	0	0.196	1	0	113%	70	130	0%	
1,2-Dichloropropane	A	ppbv	10.25	10.25		9.8	0	0	0.224	1	0	105%	70	130	0%	
1,3,5-Trimethylbenzene	A	ppbv	9.5	9.5		9.7	0	0	0.24	1	0	98%	70	130	0%	
1,3-Butadiene	A	ppbv	12.71	12.71		9.8	0	0	0.152	1	0	130%	70	130	0%	
1,3-Dichlorobenzene	A	ppbv	10.01	10.01		9.7	0	0	0.202	1	0	103%	70	130	0%	
1,4-Dichlorobenzene	A	ppbv	9.96	9.96		9.6	0	0	0.194	1	0	104%	70	130	0%	
1,4-Dioxane	A	ppbv	10.12	10.12		9.6	0	0	0.128	1	0	105%	70	130	0%	
2-Butanone	A	ppbv	11.02	11.02		9.9	0	0	0.287	1	0	111%	70	130	0%	
2-Hexanone	A	ppbv	10.27	10.27		9.8	0	0	0.135	1	0	105%	70	130	0%	
2-Propanol	A	ppbv	11.18	11.18		10.1	0	0	0.329	1	0	111%	70	130	0%	
4-Methyl-2-pentanone	A	ppbv	10.4	10.4		10	0	0	0.157	1	0	104%	70	130	0%	
Acetone	A	ppbv	11.06	11.06		10	0	0	0.43	1	0	111%	70	130	0%	
Benzene	A	ppbv	10.37	10.37		9.6	0	0	0.126	1	0	108%	70	130	0%	
Benzyl chloride	A	ppbv	10.96	10.96		9.7	0	0	0.155	1	0	113%	70	130	0%	
Bromodichloromethane	A	ppbv	10.07	10.07		9.6	0	0	0.156	1	0	105%	70	130	0%	
Bromoform	A	ppbv	9.82	9.82		9.6	0	0	0.197	1	0	102%	70	130	0%	
Bromomethane	A	ppbv	10.37	10.37		9.3	0	0	0.075	1	0	112%	70	130	0%	
Carbon disulfide	A	ppbv	10.84	10.84		9.7	0	0	0.093	1	0	112%	70	130	0%	
Carbon tetrachloride	A	ppbv	10.41	10.41		9.5	0	0	0.114	1	0	110%	70	130	0%	M
Chlorobenzene	A	ppbv	10.07	10.07		9.9	0	0	0.275	1	0	102%	70	130	0%	
Chlorodibromomethane	A	ppbv	9.76	9.76		9.2	0	0	0.165	1	0	106%	70	130	0%	
Chloroethane	A	ppbv	10.27	10.27		9.8	0	0	0.063	1	0	105%	70	130	0%	
Chloroform	A	ppbv	11.28	11.28		9.4	0	0	0.126	1	0	120%	70	130	0%	
Chloromethane	A	ppbv	10.34	10.34		9.8	0	0	0.104	1	0	106%	70	130	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
847556	ICV1 VOA1 101011	EPA_TO15	ICV	\1\DATA\101011	10/10/2011 10:0	1	R43399		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
cis-1,2-Dichloroethene	A	ppbv	10.46	10.46		9.8	0	0	0.107	1	0	107%	70	130	0%	
cis-1,3-dichloropropene	A	ppbv	9.96	9.96		9.5	0	0	0.166	1	0	105%	70	130	0%	
Cyclohexane	A	ppbv	11.23	11.23		9.8	0	0	0.684	2	0	115%	70	130	0%	
Dichlorodifluoromethane	A	ppbv	10.07	10.07		9.2	0	0	0.086	1	0	109%	70	130	0%	
Ethanol	A	ppbv	10.37	10.37		9.2	0	0	1.962	5	0	113%	70	130	0%	
Ethyl acetate	A	ppbv	11.1	11.1		9.8	0	0	0.157	1	0	113%	70	130	0%	
Ethylbenzene	A	ppbv	10.06	10.06		9.8	0	0	0.737	2	0	103%	70	130	0%	
Heptane	A	ppbv	10.93	10.93		9.9	0	0	0.249	1	0	110%	70	130	0%	
Hexachlorobutadiene	A	ppbv	9.58	9.58		9.4	0	0	0.374	2	0	102%	70	130	0%	
m,p-Xylene	A	ppbv	20.61	20.61		19.2	0	0	0.524	2	0	107%	70	130	0%	
Methylene chloride	A	ppbv	10.62	10.62		10	0	0	2.077	5	0	106%	70	130	0%	
n-Hexane	A	ppbv	10.94	10.94		10.1	0	0	0.692	2	0	108%	70	130	0%	
Naphthalene	A	ppbv	8.64	8.64		9.2	0	0	0.247	1	0	94%	70	130	0%	
o-Xylene	A	ppbv	9.99	9.99		10	0	0	0.258	1	0	100%	70	130	0%	
Propylene	A	ppbv	11.06	11.06		10.2	0	0	0.075	1	0	108%	70	130	0%	
Styrene	A	ppbv	9.86	9.86		9.8	0	0	0.263	1	0	101%	70	130	0%	
tert-Butyl Methyl Ether	A	ppbv	10.96	10.96		9.9	0	0	0.228	1	0	111%	70	130	0%	
Tetrachloroethene	A	ppbv	9.71	9.71		9.6	0	0	0.148	1	0	101%	70	130	0%	
Tetrahydrofuran	A	ppbv	11	11		10	0	0	0.201	1	0	110%	70	130	0%	
Toluene	A	ppbv	9.97	9.97		9.8	0	0	0.158	1	0	102%	70	130	0%	
trans-1,2-Dichloroethene	A	ppbv	10.71	10.71		9.8	0	0	0.117	1	0	109%	70	130	0%	
trans-1,3-dichloropropene	A	ppbv	9.67	9.67		9.1	0	0	0.171	1	0	106%	70	130	0%	
Trichloroethene	A	ppbv	9.74	9.74		9.6	0	0	0.119	1	0	101%	70	130	0%	
Trichlorofluoromethane	A	ppbv	10.7	10.7		9.6	0	0	0.148	1	0	111%	70	130	0%	
Vinyl acetate	A	ppbv	11.69	11.69		9.9	0	0	0.266	1	0	118%	70	130	0%	
Vinyl chloride	A	ppbv	10.6	10.6		9.4	0	0	0.072	1	0	113%	70	130	0%	
Xylenes, Total	C	ppbv	30.6	30.6		29.2	0	0	0.782	3	0	105%	70	130	0%	
1,4-Difluorobenzene	I	ppbv	12.5	12.5		12.5	0	0	0	0	0	100%			0%	
Bromochloromethane	I	ppbv	12.5	12.5		1.25	0	0	0	0	0	1000%			0%	
Chlorobenzene-d5	I	ppbv	12.5	12.5		12.5	0	0	0	0	0	100%			0%	
4-Bromofluorobenzene	S	ppbv	12.96	12.96		12.5	0	0	0	0	0	104%	70	130	0%	

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\101011\10101116.D
Acq On : 10 Oct 2011 10:05 pm
Sample : ICV1 VOA1 101011
Misc : ICV EPA_TO15
MS Integration Params: CLME.P

Vial: 4
Operator: RACHEL HILL
Inst : VOA 1
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\101011V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Tue Oct 11 12:39:37 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Bromochloromethane	1.000	1.000	0.0	120	0.00
2	T	Propylene	1.309	1.418	-8.3	112	0.00
3	T	Dichlorodifluoromethane	3.291	3.603	-9.5	120	0.00
4	T	1,2-Dichloro-1,2,2,2-tetraf	2.188	2.358	-7.8	118	0.00
5	T	Chloromethane	1.550	1.687	-8.8	106	0.00
6	T	Vinyl chloride	1.365	1.540	-12.8	107	0.00
7	T	1,3-Butadiene	1.184	1.535	-29.6	125	0.00
8	T	Bromomethane	1.168	1.303	-11.6	117	0.01
9	T	Chloroethane	0.736	0.821	-11.5	113	0.00
10	T	Trichlorofluoromethane	2.930	3.265	-11.4	118	0.00
11	T	Ethanol	0.361	0.407	-12.7	103	-0.01
12	T	Freon113	2.418	2.687	-11.1	112	0.00
13	T	1,1-Dichloroethene	1.995	2.226	-11.6	111	0.00
14	T	Acetone	2.049	2.265	-10.5	106	0.00
15	T	Carbon disulfide	3.202	3.578	-11.7	113	0.00
16	T	2-Propanol	1.848	2.047	-10.8	107	0.00
17	T	Methylene chloride	1.619	1.719	-6.2	106	0.00
18	T	tert-Butyl Methyl Ether	2.651	2.936	-10.8	110	0.00
19	T	trans-1,2-Dichloroethene	1.925	2.104	-9.3	109	0.00
20	T	n-Hexane	2.142	2.320	-8.3	107	0.00
21	T	1,1-Dichloroethane	2.117	2.318	-9.5	107	0.00
22	T	Vinyl acetate	3.132	3.700	-18.1	106	0.00
23	T	cis-1,2-Dichloroethene	1.143	1.220	-6.7	109	0.00
24	T	2-Butanone	2.190	2.438	-11.3	105	0.00
25	T	Ethyl acetate	2.785	3.154	-13.2	105	0.00
26	T	Tetrahydrofuran	1.417	1.559	-10.0	104	0.00
27	T	Chloroform	2.487	2.863	-15.1	113	0.00
28	T	1,1,1-Trichloroethane	2.371	2.738	-15.5	113	0.00
29	T	Cyclohexane	2.213	2.536	-14.6	106	0.00
30	T	Carbon tetrachloride	2.060	2.257	-9.6	114	0.00
31	T	Benzene	2.902	3.134	-8.0	107	0.00
32	T	1,2-Dichloroethane	1.467	1.658	-13.0	109	0.00
33	I	1,4-Difluorobenzene	1.000	1.000	0.0	119	0.00
34	T	Heptane	0.966	1.066	-10.4	107	0.00
35	T	Trichloroethene	0.475	0.482	-1.5	111	0.00
36	T	1,2-Dichloropropane	0.394	0.412	-4.6	106	0.00
37	T	1,4-Dioxane	0.132	0.139	-5.3	107	0.00
38	T	Bromodichloromethane	0.705	0.740	-5.0	111	0.00
39	T	cis-1,3-Dichloropropene	0.575	0.603	-4.9	109	0.00
40	T	4-Methyl-2-pentanone	0.262	0.272	-3.8	107	0.00
41	T	Toluene	1.014	1.031	-1.7	107	0.00
42	T	trans-1,3-Dichloropropene	0.495	0.526	-6.3	110	0.00
43	T	1,1,2-Trichloroethane	0.340	0.345	-1.5	108	0.00
44	T	Tetrachloroethene	0.522	0.528	-1.1	110	0.00
45	T	2-Hexanone	0.561	0.588	-4.8	104	0.00
46	T	Chlorodibromomethane	0.529	0.526	0.6	109	0.00
47	T	1,2-Dibromoethane	0.492	0.498	-1.2	109	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\101011\10101116.D
Acq On : 10 Oct 2011 10:05 pm
Sample : ICV1 VOA1 101011
Misc : ICV EPA_TO15
MS Integration Params: CLME.P

Vial: 4
Operator: RACHEL HILL
Inst : VOA 1
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\101011V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Tue Oct 11 12:39:37 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
49	T	Chlorobenzene	1.004	1.021	-1.7	108	0.00
50	T	Ethylbenzene	1.718	1.764	-2.7	108	0.00
51	T	m,p-Xylene	1.425	1.530	-7.4	107	0.00
52	T	o-Xylene	1.264	1.263	0.1	107	0.00
53	T	Styrene	0.862	0.867	-0.6	108	0.00
54	T	Bromoform	0.637	0.652	-2.4	109	0.00
55	S	4-Bromofluorobenzene	0.545	0.565	-3.7	117	0.00
56	T	1,1,2,2-Tetrachloroethane	0.884	0.937	-6.0	112	0.00
57	T	4-Ethyltoluene	1.424	1.410	1.0	108	0.00
58	T	1,3,5-Trimethylbenzene	1.208	1.183	2.1	108	0.00
59	T	1,2,4-Trimethylbenzene	1.105	1.101	0.4	112	0.00
60	T	1,3-Dichlorobenzene	0.661	0.682	-3.2	111	0.00
61	T	1,4-Dichlorobenzene	0.614	0.637	-3.7	109	0.00
62	T	Benzyl chloride	0.754	0.852	-13.0	110	0.00
63	T	1,2-Dichlorobenzene	0.594	0.623	-4.9	111	0.00
64	T	1,2,4-Trichlorobenzene	0.091	0.084	7.7	88	0.00
65	T	Hexachlorobutadiene	0.206	0.210	-1.9	93	0.00
66		Naphthalene	0.137	0.129	5.8	88	0.00

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\101011\10101116.D
Acq On : 10 Oct 2011 10:05 pm
Sample : ICV1 VOA1 101011
Misc : ICV EPA_TO15
MS Integration Params: CLME.P
Quant Time: Oct 11 12:40 2011

Vial: 4
Operator: RACHEL HILL
Inst : VOA 1
Multiplr: 1.00

Quant Results File: 101011V1.RES

Quant Method : C:\HPCHEM\1\METHODS\101011V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Tue Oct 11 12:39:37 2011
Response via : Initial Calibration
DataAcq Meth : 101011V1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.59	130	469165	12.50	ppbv	0.00
33) 1,4-Difluorobenzene	11.69	114	1405947	12.50	ppbv	0.00
48) Chlorobenzene-d5	15.54	117	846557	12.50	ppbv	0.00

System Monitoring Compounds						
55) 4-Bromofluorobenzene	17.18	95	478028	12.96	ppbv	0.00
Spiked Amount 12.500	Range 70 - 113		Recovery = 103.68%			

Target Compounds						Qvalue
2) Propylene	5.51	41	543006	11.06	ppbv	98
3) Dichlorodifluoromethane	5.59	85	1244148	10.07	ppbv	99
4) 1,2-Dichloro-1,2,2,2-tetra	5.84	135	840619	10.23	ppbv #	68
5) Chloromethane	6.00	50	601484	10.34	ppbv	99
6) Vinyl chloride	6.21	62	543296	10.60	ppbv #	98
7) 1,3-Butadiene	6.26	39	564755	12.71	ppbv	94
8) Bromomethane	6.85	94	454688	10.37	ppbv #	97
9) Chloroethane	6.99	64	283668	10.27	ppbv #	95
10) Trichlorofluoromethane	7.33	101	1176431	10.70	ppbv #	98
11) Ethanol	7.56	45	140532	10.37	ppbv	98
12) Freon113	7.99	101	988176	10.89	ppbv	87
13) 1,1-Dichloroethene	8.09	61	827015	11.04	ppbv #	86
14) Acetone	8.18	43	850176	11.06	ppbv	92
15) Carbon disulfide	8.46	76	1302720	10.84	ppbv #	99
16) 2-Propanol	8.23	45	775893	11.18	ppbv #	1
17) Methylene chloride	8.75	49	645333	10.62	ppbv #	77
18) tert-Butyl Methyl Ether	8.95	73	1091022	10.96	ppbv #	87
19) trans-1,2-Dichloroethene	9.03	61	773826	10.71	ppbv #	82
20) n-Hexane	9.22	57	879613	10.94	ppbv #	87
21) 1,1-Dichloroethane	9.59	63	843951	10.62	ppbv #	97
22) Vinyl acetate	9.53	43	1374865	11.69	ppbv #	95
23) cis-1,2-Dichloroethene	10.27	96	448600	10.46	ppbv #	79
24) 2-Butanone	10.24	43	906093	11.02	ppbv #	87
25) Ethyl acetate	10.20	43	1160095	11.10	ppbv #	99
26) Tetrahydrofuran	10.58	42	585037	11.00	ppbv	87
27) Chloroform	10.60	83	1053064	11.28	ppbv	100
28) 1,1,1-Trichloroethane	10.85	97	986423	11.09	ppbv #	94
29) Cyclohexane	10.86	56	932661	11.23	ppbv	85
30) Carbon tetrachloride	11.01	117	804750m	10.41	ppbv	
31) Benzene	11.29	78	1129231	10.37	ppbv	94
32) 1,2-Dichloroethane	11.37	62	603728	10.96	ppbv #	97
34) Heptane	11.35	43	1187445	10.93	ppbv #	87
35) Trichloroethene	12.03	130	520377	9.74	ppbv	92
36) 1,2-Dichloropropane	12.38	63	453917	10.25	ppbv	97
37) 1,4-Dioxane	12.46	88	149811	10.12	ppbv #	80
38) Bromodichloromethane	12.66	83	798905	10.07	ppbv	98
39) cis-1,3-Dichloropropene	13.22	75	644327	9.96	ppbv	96
40) 4-Methyl-2-pentanone	13.33	58	306340	10.40	ppbv #	91
41) Toluene	13.62	91	1136659	9.97	ppbv	97
42) trans-1,3-Dichloropropene	13.92	75	538792	9.67	ppbv	95
43) 1,1,2-Trichloroethane	14.20	97	379783	9.92	ppbv	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\101011\10101116.D
Acq On : 10 Oct 2011 10:05 pm
Sample : ICV1 VOA1 101011
Misc : ICV EPA_TO15
MS Integration Params: CLME.P
Quant Time: Oct 11 12:40 2011

Vial: 4
Operator: RACHEL HILL
Inst : VOA 1
Multiplr: 1.00

Quant Results File: 101011V1.RES

Quant Method : C:\HPCHEM\1\METHODS\101011V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Tue Oct 11 12:39:37 2011
Response via : Initial Calibration
DataAcq Meth : 101011V1

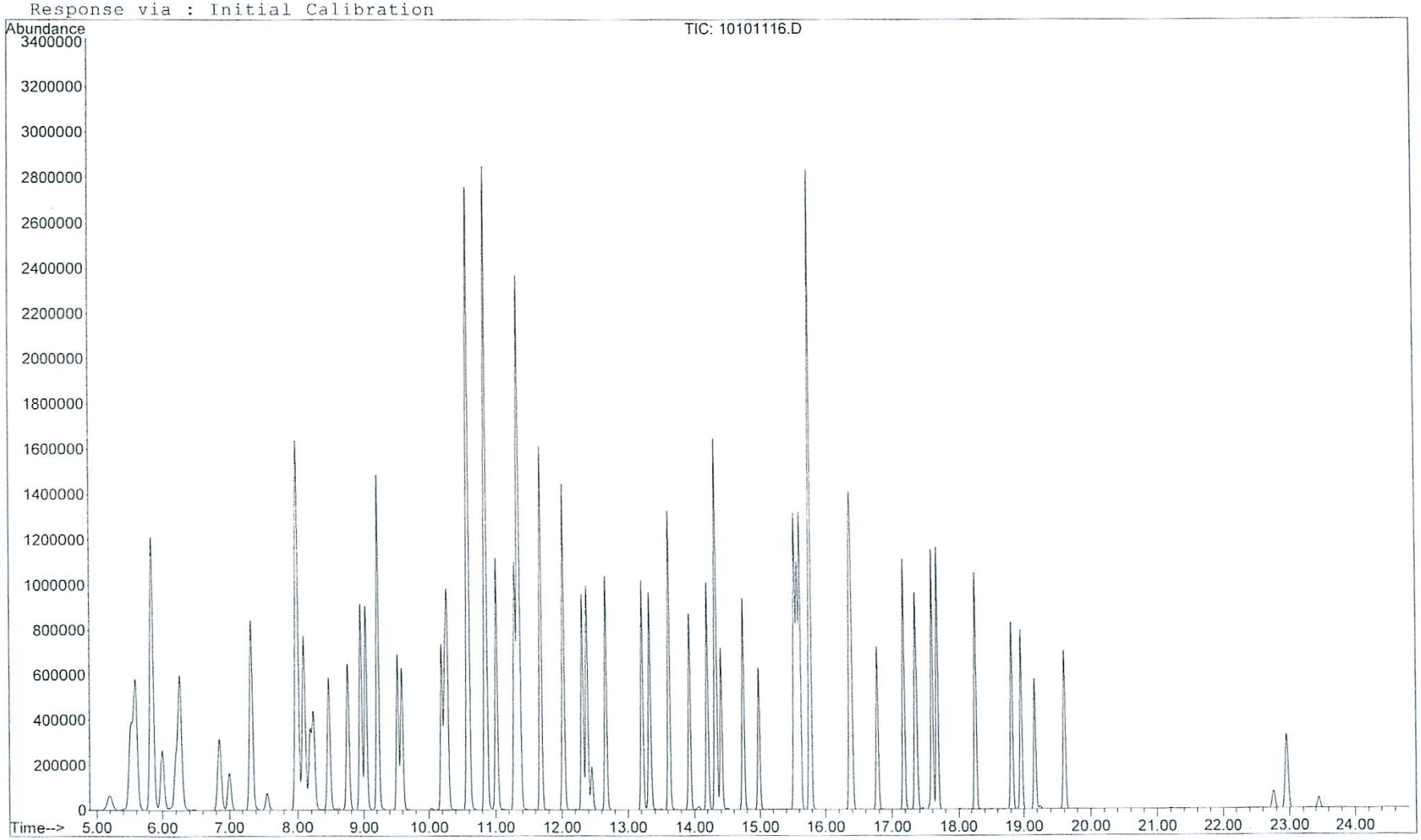
Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
44) Tetrachloroethene	14.33	166	569961	9.71	ppbv		98
45) 2-Hexanone	14.41	43	647684	10.27	ppbv		91
46) Chlorodibromomethane	14.75	129	580262	9.76	ppbv		99
47) 1,2-Dibromoethane	14.98	107	538092	9.73	ppbv		99
49) Chlorobenzene	15.58	112	684260	10.07	ppbv	#	85
50) Ethylbenzene	15.62	91	1170488	10.06	ppbv		91
51) m,p-Xylene	15.78	91	1989630	20.61	ppbv		89
52) o-Xylene	16.37	91	855138	9.99	ppbv	#	87
53) Styrene	16.39	104	575592	9.86	ppbv		96
54) Bromoform	16.78	173	423660	9.82	ppbv	#	97
56) 1,1,2,2-Tetrachloroethane	17.36	83	634805	10.60	ppbv	#	98
57) 4-Ethyltoluene	17.60	105	935703	9.70	ppbv		96
58) 1,3,5-Trimethylbenzene	17.68	105	777087	9.50	ppbv		96
59) 1,2,4-Trimethylbenzene	18.27	105	730677	9.77	ppbv		96
60) 1,3-Dichlorobenzene	18.82	146	447838	10.01	ppbv		97
61) 1,4-Dichlorobenzene	18.96	146	414202	9.96	ppbv		97
62) Benzyl chloride	19.17	91	559740	10.96	ppbv		96
63) 1,2-Dichlorobenzene	19.61	146	409028	10.17	ppbv		97
64) 1,2,4-Trichlorobenzene	22.76	180	51931	8.46	ppbv		97
65) Hexachlorobutadiene	22.96	225	133957	9.58	ppbv		99
66) Naphthalene	23.45	128	80490	8.64	ppbv		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\101011\10101116.D Vial: 4
Acq On : 10 Oct 2011 10:05 pm Operator: RACHEL HILL
Sample : ICV1 VOA1 101011 Inst : VOA 1
Misc : ICV EPA_TO15 Multiplr: 1.00
MS Integration Params: CLME.P
Quant Time: Oct 11 12:40 2011 Quant Results File: 101011V1.RES

Method : C:\HPCHEM\1\METHODS\101011V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Tue Oct 11 12:39:37 2011
Response via : Initial Calibration



RTI Laboratories

Run ID: VOA1_111013A

Run No.: 43464

Analytical Run Date: 10/13/2011

InstrumentID: VOA1

Analyst: Rachel Hill

Column:

Calibration ID: 43433

Column ID: 0.25mm, 1.4umFT

Column Length: 30m

SampID	TestCode	SampType	Batch ID	Analysis Date/Time	QA By	Q	Comments
VOA1 BFB3 101311	BFB_TUNE	TUNE	R43464	10/13/2011 6:13:00 PM	Robert Lynch		
VOA1 CCV2 101211	EPA_TO15	CCV	R43464	10/13/2011 6:54:00 PM	Robert Lynch		
RLVS3 VOA1 10121	EPA_TO15	RLVS	R43464	10/13/2011 7:36:00 PM	Robert Lynch		
BLK2 VOA1 101211	EPA_TO15	MBLK	R43464	10/13/2011 8:23:00 PM	Robert Lynch		
1110067-033B	EPA_TO15	SAMP	R43464	10/13/2011 9:11:00 PM	Robert Lynch		
1110067-034B	EPA_TO15	SAMP	R43464	10/13/2011 9:53:00 PM	Robert Lynch		Over-diluted sample. Will re-run at a lower dilution. Reporting here to show that sample and duplicate were analyzed.
1110067-034BDUP	EPA_TO15	SAMP	R43464	10/13/2011 10:37:00 PM	Robert Lynch		
1110067-035B	EPA_TO15	SAMP	R43464	10/13/2011 11:25:00 PM	Robert Lynch		
1110067-036B	EPA_TO15	SAMP	R43464	10/14/2011 12:19:00 AM	Robert Lynch		
1110067-037B	EPA_TO15	SAMP	R43464	10/14/2011 1:06:00 AM	Robert Lynch		
1109988-002B	EPA_TO15	SAMP	R43464	10/14/2011 1:48:00 AM	Robert Lynch	H	
1109988-003B	EPA_TO15	SAMP	R43464	10/14/2011 2:35:00 AM	Robert Lynch	H	
1109988-020A	EPA_TO15	SAMP	R43464	10/14/2011 3:17:00 AM	Robert Lynch	H	
1109988-012B	EPA_TO15	SAMP	R43464	10/14/2011 4:01:00 AM	Robert Lynch		
1109988-016B	EPA_TO15	SAMP	R43464	10/14/2011 4:44:00 AM	Robert Lynch		
1110067-001B	EPA_TO15	SAMP	R43464	10/14/2011 5:27:00 AM	Robert Lynch		
1110067-002B	EPA_TO15	SAMP	R43464	10/14/2011 6:11:00 AM	Robert Lynch		
1110067-003B	EPA_TO15	SAMP	R43464	10/14/2011 6:55:00 AM	Robert Lynch		
1110067-040B	EPA_TO15	SAMP	R43464	10/14/2011 9:37:00 AM	Robert Lynch		
1110067-041B	EPA_TO15	SAMP	R43464	10/14/2011 10:19:00 AM	Robert Lynch		
1110067-042B	EPA_TO15	SAMP	R43464	10/14/2011 11:01:00 AM	Robert Lynch		
1110067-038B	EPA_TO15	SAMP	R43464	10/14/2011 11:41:00 AM	Robert Lynch		
1110067-039B	EPA_TO15	SAMP	R43464	10/14/2011 12:22:00 PM	Robert Lynch		
1110067-015B	EPA_TO15	SAMP	R43464	10/14/2011 1:06:00 PM	Robert Lynch		
1110067-013B	EPA_TO15	SAMP	R43464	10/14/2011 1:47:00 PM	Robert Lynch		
1110067-014B	EPA_TO15	SAMP	R43464	10/14/2011 2:28:00 PM	Robert Lynch		
1110067-012B	EPA_TO15	SAMP	R43464	10/14/2011 3:12:00 PM	Robert Lynch		
1110067-012B	EPA_TO15	SAMP	R43464	10/14/2011 3:53:00 PM	Robert Lynch		
RLVS4 VOA1 10131	EPA_TO15	RLVS	R43464	10/14/2011 4:34:00 PM	Robert Lynch		

RTI Laboratories

ANALYTICAL RUN Summary

21-Oct-11

RunNo 43464

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
849095	VOA1 BFB3 101311	BFB_TUNE	TUNE	\1\DATA\101211'	10/13/2011 6:13:	1	R43464		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
173	M		0.6	0.6		0	0	0	0	0	0	0%	0	2	0%	
174	M		72.1	72.1		0	0	0	0	0	0	0%	50	120	0%	
175	M		7.1	7.1		0	0	0	0	0	0	0%	4	9	0%	
176	M		100.6	100.6		0	0	0	0	0	0	0%	93	101	0%	
177	M		7	7		0	0	0	0	0	0	0%	5	9	0%	
50	M		23.1	23.1		0	0	0	0	0	0	0%	8	40	0%	
75	M		49.2	49.2		0	0	0	0	0	0	0%	30	66	0%	
95	M		100	100		0	0	0	0	0	0	0%	100	100	0%	
96	M		6.9	6.9		0	0	0	0	0	0	0%	5	9	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
849096	VOA1 CCV2 101211	EPA_TO15	CCV	\1\DATA\101211'	10/13/2011 6:54:	1	R43464		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
1,1,1-Trichloroethane	A	ppbv	11.22	11.22		9.6	0	0	0.107	1	0	117%	70	130	0%	
1,1,2,2-Tetrachloroethane	A	ppbv	9.68	9.68		10	0	0	0.211	1	0	97%	70	130	0%	
1,1,2-Trichloro-1,2,2-trifluoroethane	A	ppbv	11.02	11.02		9.8	0	0	0.108	1	0	112%	70	130	0%	
1,1,2-Trichloroethane	A	ppbv	9.44	9.44		9.8	0	0	0.2	1	0	96%	70	130	0%	
1,1-Dichloroethane	A	ppbv	10.46	10.46		9.7	0	0	0.111	1	0	108%	70	130	0%	
1,1-Dichloroethene	A	ppbv	11.14	11.14		9.9	0	0	0.097	1	0	113%	70	130	0%	
1,2,4-Trichlorobenzene	A	ppbv	7.83	7.83		9.1	0	0	0.271	1	0	86%	70	130	0%	
1,2,4-Trimethylbenzene	A	ppbv	9.02	9.02		9.8	0	0	0.245	1	0	92%	70	130	0%	
1,2-Dibromoethane	A	ppbv	9.26	9.26		9.6	0	0	0.186	1	0	96%	70	130	0%	
1,2-Dichlorobenzene	A	ppbv	8.9	8.9		9.7	0	0	0.208	1	0	92%	70	130	0%	
1,2-Dichloroethane	A	ppbv	10.91	10.91		9.7	0	0	0.196	1	0	112%	70	130	0%	
1,2-Dichloropropane	A	ppbv	9.68	9.68		9.8	0	0	0.224	1	0	99%	70	130	0%	
1,3,5-Trimethylbenzene	A	ppbv	8.94	8.94		9.7	0	0	0.24	1	0	92%	70	130	0%	
1,3-Butadiene	A	ppbv	10.75	10.75		9.8	0	0	0.152	1	0	110%	70	130	0%	
1,3-Dichlorobenzene	A	ppbv	9.08	9.08		9.7	0	0	0.202	1	0	94%	70	130	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
849096	VOA1 CCV2 101211	EPA_TO15	CCV	\1\DATA\101211\	10/13/2011 6:54:	1	R43464		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
1,4-Dichlorobenzene	A	ppbv	9	9		9.6	0	0	0.194	1	0	94%	70	130	0%	
1,4-Dioxane	A	ppbv	9.09	9.09		9.6	0	0	0.128	1	0	95%	70	130	0%	
2-Butanone	A	ppbv	10.94	10.94		9.9	0	0	0.287	1	0	111%	70	130	0%	
2-Hexanone	A	ppbv	9.37	9.37		9.8	0	0	0.135	1	0	96%	70	130	0%	
2-Propanol	A	ppbv	10.92	10.92		10.1	0	0	0.329	1	0	108%	70	130	0%	
4-Methyl-2-pentanone	A	ppbv	9.74	9.74		10	0	0	0.157	1	0	97%	70	130	0%	
Acetone	A	ppbv	10.88	10.88		10	0	0	0.43	1	0	109%	70	130	0%	
Benzene	A	ppbv	10.12	10.12		9.6	0	0	0.126	1	0	105%	70	130	0%	
Benzyl chloride	A	ppbv	10.02	10.02		9.7	0	0	0.155	1	0	103%	70	130	0%	
Bromodichloromethane	A	ppbv	9.75	9.75		9.6	0	0	0.156	1	0	102%	70	130	0%	
Bromoform	A	ppbv	9.44	9.44		9.6	0	0	0.197	1	0	98%	70	130	0%	
Bromomethane	A	ppbv	10.31	10.31		9.3	0	0	0.075	1	0	111%	70	130	0%	
Carbon disulfide	A	ppbv	10.49	10.49		9.7	0	0	0.093	1	0	108%	70	130	0%	
Carbon tetrachloride	A	ppbv	10.94	10.94		9.5	0	0	0.114	1	0	115%	70	130	0%	
Chlorobenzene	A	ppbv	9.59	9.59		9.9	0	0	0.275	1	0	97%	70	130	0%	
Chlorodibromomethane	A	ppbv	9.54	9.54		9.2	0	0	0.165	1	0	104%	70	130	0%	
Chloroethane	A	ppbv	10.18	10.18		9.8	0	0	0.063	1	0	104%	70	130	0%	
Chloroform	A	ppbv	10.98	10.98		9.4	0	0	0.126	1	0	117%	70	130	0%	
Chloromethane	A	ppbv	10.25	10.25		9.8	0	0	0.104	1	0	105%	70	130	0%	
cis-1,2-Dichloroethene	A	ppbv	10.38	10.38		9.8	0	0	0.107	1	0	106%	70	130	0%	
cis-1,3-dichloropropene	A	ppbv	9.45	9.45		9.5	0	0	0.166	1	0	99%	70	130	0%	
Cyclohexane	A	ppbv	11.4	11.4		9.8	0	0	0.684	2	0	116%	70	130	0%	
Dichlorodifluoromethane	A	ppbv	10.2	10.2		9.2	0	0	0.086	1	0	111%	70	130	0%	
Ethanol	A	ppbv	9.84	9.84		9.2	0	0	1.962	5	0	107%	70	130	0%	
Ethyl acetate	A	ppbv	10.87	10.87		9.8	0	0	0.157	1	0	111%	70	130	0%	
Ethylbenzene	A	ppbv	9.61	9.61		9.8	0	0	0.737	2	0	98%	70	130	0%	
Heptane	A	ppbv	10.87	10.87		9.9	0	0	0.249	1	0	110%	70	130	0%	
Hexachlorobutadiene	A	ppbv	8.92	8.92		9.4	0	0	0.374	2	0	95%	70	130	0%	
m,p-Xylene	A	ppbv	19.75	19.75		19.2	0	0	0.524	2	0	103%	70	130	0%	
Methylene chloride	A	ppbv	10.92	10.92		10	0	0	2.077	5	0	109%	70	130	0%	
n-Hexane	A	ppbv	11.24	11.24		10.1	0	0	0.692	2	0	111%	70	130	0%	
Naphthalene	A	ppbv	7.73	7.73		9.2	0	0	0.247	1	0	84%	70	130	0%	
o-Xylene	A	ppbv	9.7	9.7		10	0	0	0.258	1	0	97%	70	130	0%	
Propylene	A	ppbv	11.24	11.24		10.2	0	0	0.075	1	0	110%	70	130	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
849096	VOA1 CCV2 101211	EPA_TO15	CCV	\1\DATA\101211	10/13/2011 6:54:	1	R43464		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Styrene	A	ppbv	9.26	9.26		9.8	0	0	0.263	1	0	94%	70	130	0%	
tert-Butyl Methyl Ether	A	ppbv	10.53	10.53		9.9	0	0	0.228	1	0	106%	70	130	0%	
Tetrachloroethene	A	ppbv	9.9	9.9		9.6	0	0	0.148	1	0	103%	70	130	0%	
Tetrahydrofuran	A	ppbv	10.76	10.76		10	0	0	0.201	1	0	108%	70	130	0%	
Toluene	A	ppbv	9.47	9.47		9.8	0	0	0.158	1	0	97%	70	130	0%	
trans-1,2-Dichloroethene	A	ppbv	10.97	10.97		9.8	0	0	0.117	1	0	112%	70	130	0%	
trans-1,3-dichloropropene	A	ppbv	9.07	9.07		9.1	0	0	0.171	1	0	100%	70	130	0%	
Trichloroethene	A	ppbv	9.75	9.75		9.6	0	0	0.119	1	0	102%	70	130	0%	
Trichlorofluoromethane	A	ppbv	10.92	10.92		9.6	0	0	0.148	1	0	114%	70	130	0%	
Vinyl acetate	A	ppbv	11.41	11.41		9.9	0	0	0.266	1	0	115%	70	130	0%	
Vinyl chloride	A	ppbv	10.03	10.03		9.4	0	0	0.072	1	0	107%	70	130	0%	
Xylenes, Total	C	ppbv	29.45	29.45		29.2	0	0	0.782	3	0	101%	70	130	0%	
1,4-Difluorobenzene	I	ppbv	12.5	12.5		12.5	0	0	0	0	0	100%			0%	
Bromochloromethane	I	ppbv	12.5	12.5		1.25	0	0	0	0	0	1000%			0%	
Chlorobenzene-d5	I	ppbv	12.5	12.5		12.5	0	0	0	0	0	100%			0%	
4-Bromofluorobenzene	S	ppbv	13.16	13.16		12.5	0	0	0	0	0	105%	70	130	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
849097	RLVS3 VOA1 10121	EPA_TO15	RLVS	\1\DATA\101211	10/13/2011 7:36:	1	R43464		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
1,1,1-Trichloroethane	A	ppbv	0.87	0.87		0.996	0	0	0.107	1	0	87%	70	130	0%	
1,1,2,2-Tetrachloroethane	A	ppbv	1.15	1.15		1	0	0	0.211	1	0	115%	70	130	0%	
1,1,2-Trichloro-1,2,2-trifluoroethane	A	ppbv	0.9	0.9		0.98	0	0	0.108	1	0	92%	70	130	0%	
1,1,2-Trichloroethane	A	ppbv	0.81	0.81		0.98	0	0	0.2	1	0	83%	70	130	0%	
1,1-Dichloroethane	A	ppbv	1.03	1.03		0.97	0	0	0.111	1	0	106%	70	130	0%	
1,1-Dichloroethene	A	ppbv	1.05	1.05		0.99	0	0	0.097	1	0	106%	70	130	0%	
1,2,4-Trichlorobenzene	A	ppbv	1.97	1.97		0.91	0	0	0.271	1	0	216%	70	130	0%	S
1,2,4-Trimethylbenzene	A	ppbv	1.36	1.36		0.98	0	0	0.245	1	0	139%	70	130	0%	S
1,2-Dibromoethane	A	ppbv	0.82	0.82		0.96	0	0	0.186	1	0	85%	70	130	0%	
1,2-Dichlorobenzene	A	ppbv	1.39	1.39		0.97	0	0	0.208	1	0	143%	70	130	0%	S
1,2-Dichloroethane	A	ppbv	1.09	1.09		0.97	0	0	0.196	1	0	112%	70	130	0%	
1,2-Dichloropropane	A	ppbv	0.82	0.82		0.98	0	0	0.224	1	0	84%	70	130	0%	

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\101211\10121139.D Vial: 1
Acq On : 13 Oct 2011 6:54 pm Operator: RACHEL HILL
Sample : VOA1 CCV2 101211 Inst : VOA 1
Misc : CCV EPA_TO15 Multiplr: 1.00
MS Integration Params: CLME.P

Method : C:\HPCHEM\1\METHODS\101211V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Thu Oct 13 09:38:24 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Bromochloromethane	1.000	1.000	0.0	134	0.00
2	T	Propylene	1.322	1.458	-10.3	131	0.00
3	T	Dichlorodifluoromethane	3.419	3.791	-10.9	138	0.00
4	T	1,2-Dichloro-1,2,2,2-tetraf	2.236	2.449	-9.5	136	0.00
5	T	Chloromethane	1.526	1.646	-7.9	121	0.00
6	T	Vinyl chloride	1.358	1.449	-6.7	115	0.00
7	T	1,3-Butadiene	1.213	1.330	-9.6	110	0.00
8	T	Bromomethane	1.184	1.312	-10.8	132	0.00
9	T	Chloroethane	0.740	0.819	-10.7	127	0.00
10	T	Trichlorofluoromethane	2.967	3.376	-13.8	136	0.00
11	T	Ethanol	0.358	0.383	-7.0	119	-0.01
12	T	Freon113	2.415	2.716	-12.5	127	0.00
13	T	1,1-Dichloroethene	1.995	2.246	-12.6	128	0.00
14	T	Acetone	2.058	2.239	-8.8	119	0.00
15	T	Carbon disulfide	3.218	3.480	-8.1	125	0.00
16	T	2-Propanol	1.859	2.009	-8.1	122	0.00
17	T	Methylene chloride	1.589	1.734	-9.1	123	0.00
18	T	tert-Butyl Methyl Ether	2.698	2.871	-6.4	117	0.00
19	T	trans-1,2-Dichloroethene	1.922	2.153	-12.0	126	0.00
20	T	n-Hexane	2.121	2.361	-11.3	125	0.00
21	T	1,1-Dichloroethane	2.113	2.280	-7.9	120	0.00
22	T	Vinyl acetate	3.116	3.592	-15.3	115	0.00
23	T	cis-1,2-Dichloroethene	1.153	1.221	-5.9	124	0.00
24	T	2-Butanone	2.155	2.380	-10.4	118	0.00
25	T	Ethyl acetate	2.755	3.056	-10.9	116	0.00
26	T	Tetrahydrofuran	1.390	1.496	-7.6	116	0.00
27	T	Chloroform	2.488	2.786	-12.0	123	0.00
28	T	1,1,1-Trichloroethane	2.386	2.787	-16.8	129	0.00
29	T	Cyclohexane	2.184	2.539	-16.3	124	0.00
30	T	Carbon tetrachloride	2.076	2.390	-15.1	134	0.00
31	T	Benzene	2.902	3.060	-5.4	118	0.00
32	T	1,2-Dichloroethane	1.469	1.651	-12.4	122	0.00
33	I	1,4-Difluorobenzene	1.000	1.000	0.0	139	0.00
34	T	Heptane	0.953	1.047	-9.9	125	0.00
35	T	Trichloroethene	0.472	0.480	-1.7	130	0.00
36	T	1,2-Dichloropropane	0.393	0.388	1.3	117	0.00
37	T	1,4-Dioxane	0.132	0.125	5.3	118	0.00
38	T	Bromodichloromethane	0.704	0.715	-1.6	125	0.00
39	T	cis-1,3-Dichloropropene	0.572	0.569	0.5	121	0.00
40	T	4-Methyl-2-pentanone	0.259	0.252	2.7	119	0.00
41	T	Toluene	1.005	0.971	3.4	118	0.00
42	T	trans-1,3-Dichloropropene	0.496	0.495	0.2	122	0.00
43	T	1,1,2-Trichloroethane	0.340	0.328	3.5	122	0.00
44	T	Tetrachloroethene	0.517	0.533	-3.1	133	0.00
45	T	2-Hexanone	0.552	0.528	4.3	116	0.00
46	T	Chlorodibromomethane	0.518	0.504	2.7	127	0.00
47	T	1,2-Dibromoethane	0.489	0.471	3.7	123	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\101211\10121139.D Vial: 1
Acq On : 13 Oct 2011 6:54 pm Operator: RACHEL HILL
Sample : VOA1 CCV2 101211 Inst : VOA 1
Misc : CCV EPA_TO15 Multiplr: 1.00
MS Integration Params: CLME.P

Method : C:\HPCHEM\1\METHODS\101211V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Thu Oct 13 09:38:24 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
49	T	Chlorobenzene	1.005	0.974	3.1	123	0.00
50	T	Ethylbenzene	1.727	1.693	2.0	121	0.00
51	T	m,p-Xylene	1.422	1.463	-2.9	122	0.00
52	T	o-Xylene	1.265	1.226	3.1	122	0.00
53	T	Styrene	0.862	0.815	5.5	121	0.00
54	T	Bromoform	0.630	0.619	1.7	126	0.00
55	S	4-Bromofluorobenzene	0.554	0.583	-5.2	142	0.00
56	T	1,1,2,2-Tetrachloroethane	0.920	0.891	3.2	123	0.00
57	T	4-Ethyltoluene	1.440	1.347	6.5	124	0.00
58	T	1,3,5-Trimethylbenzene	1.245	1.148	7.8	125	0.00
59	T	1,2,4-Trimethylbenzene	1.160	1.068	7.9	126	0.00
60	T	1,3-Dichlorobenzene	0.689	0.644	6.5	124	0.00
61	T	1,4-Dichlorobenzene	0.633	0.594	6.2	123	0.00
62	T	Benzyl chloride	0.777	0.803	-3.3	123	0.00
63	T	1,2-Dichlorobenzene	0.634	0.582	8.2	123	0.00
64	T	1,2,4-Trichlorobenzene	0.089	0.077	13.5	107	0.00
65	T	Hexachlorobutadiene	0.209	0.198	5.3	113	0.00
66		Naphthalene	0.136	0.114	16.2	104	0.00

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\101211\10121139.D
Acq On : 13 Oct 2011 6:54 pm
Sample : VOA1 CCV2 101211
Misc : CCV EPA_TO15
MS Integration Params: CLME.P
Quant Time: Oct 13 19:19 2011

Vial: 1
Operator: RACHEL HILL
Inst : VOA 1
Multiplr: 1.00

Quant Results File: 101211V1.RES

Quant Method : C:\HPCHEM\1\METHODS\101211V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Thu Oct 13 09:38:24 2011
Response via : Initial Calibration
DataAcq Meth : 101211V1

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane	10.59	130	535115	12.50	ppbv		0.00
33) 1,4-Difluorobenzene	11.69	114	1656512	12.50	ppbv		0.00
48) Chlorobenzene-d5	15.54	117	977952	12.50	ppbv		0.00

System Monitoring Compounds							
55) 4-Bromofluorobenzene	17.18	95	569877	13.16	ppbv		0.00
Spiked Amount 12.500	Range 70 - 113		Recovery = 105.28%				

Target Compounds							Qvalue
2) Propylene	5.52	41	636464	11.24	ppbv		97
3) Dichlorodifluoromethane	5.59	85	1492908	10.20	ppbv		99
4) 1,2-Dichloro-1,2,2,2-tetra	5.85	135	996058	10.41	ppbv	#	70
5) Chloromethane	6.00	50	669515	10.25	ppbv		99
6) Vinyl chloride	6.21	62	582965	10.03	ppbv	#	98
7) 1,3-Butadiene	6.26	39	558056	10.75	ppbv		96
8) Bromomethane	6.84	94	522445	10.31	ppbv	#	98
9) Chloroethane	7.00	64	322572	10.18	ppbv	#	95
10) Trichlorofluoromethane	7.33	101	1387285	10.92	ppbv	#	98
11) Ethanol	7.56	45	150665	9.84	ppbv		98
12) Freon113	7.99	101	1139492	11.02	ppbv		88
13) 1,1-Dichloroethene	8.09	61	951733	11.14	ppbv	#	86
14) Acetone	8.18	43	958605	10.88	ppbv	#	87
15) Carbon disulfide	8.46	76	1444912	10.49	ppbv	#	100
16) 2-Propanol	8.23	45	868443	10.92	ppbv	#	1
17) Methylene chloride	8.75	49	742349	10.92	ppbv	#	76
18) tert-Butyl Methyl Ether	8.95	73	1216555	10.53	ppbv	#	86
19) trans-1,2-Dichloroethene	9.04	61	903183	10.97	ppbv	#	81
20) n-Hexane	9.22	57	1020799	11.24	ppbv	#	86
21) 1,1-Dichloroethane	9.60	63	946617	10.46	ppbv	#	97
22) Vinyl acetate	9.53	43	1522142	11.41	ppbv	#	94
23) cis-1,2-Dichloroethene	10.28	96	512328	10.38	ppbv	#	80
24) 2-Butanone	10.24	43	1008852	10.94	ppbv	#	86
25) Ethyl acetate	10.20	43	1282225	10.87	ppbv	#	99
26) Tetrahydrofuran	10.58	42	640261	10.76	ppbv	#	87
27) Chloroform	10.60	83	1168879	10.98	ppbv		100
28) 1,1,1-Trichloroethane	10.85	97	1145355	11.22	ppbv		95
29) Cyclohexane	10.86	56	1065253	11.40	ppbv		86
30) Carbon tetrachloride	11.01	117	972146	10.94	ppbv		98
31) Benzene	11.30	78	1257684	10.12	ppbv		93
32) 1,2-Dichloroethane	11.37	62	685777	10.91	ppbv	#	97
34) Heptane	11.34	43	1373652	10.87	ppbv	#	87
35) Trichloroethene	12.03	130	610089	9.75	ppbv		92
36) 1,2-Dichloropropane	12.38	63	503585	9.68	ppbv		97
37) 1,4-Dioxane	12.46	88	159119	9.09	ppbv	#	79
38) Bromodichloromethane	12.67	83	909629	9.75	ppbv		99
39) cis-1,3-Dichloropropene	13.22	75	716322	9.45	ppbv		96
40) 4-Methyl-2-pentanone	13.33	58	334235	9.74	ppbv	#	91
41) Toluene	13.62	91	1261333	9.47	ppbv		97
42) trans-1,3-Dichloropropene	13.93	75	597047	9.07	ppbv		95
43) 1,1,2-Trichloroethane	14.20	97	425403	9.44	ppbv		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\101211\10121139.D
Acq On : 13 Oct 2011 6:54 pm
Sample : VOA1 CCV2 101211
Misc : CCV EPA_TO15
MS Integration Params: CLME.P
Quant Time: Oct 13 19:19 2011

Vial: 1
Operator: RACHEL HILL
Inst : VOA 1
Multiplr: 1.00
Quant Results File: 101211V1.RES

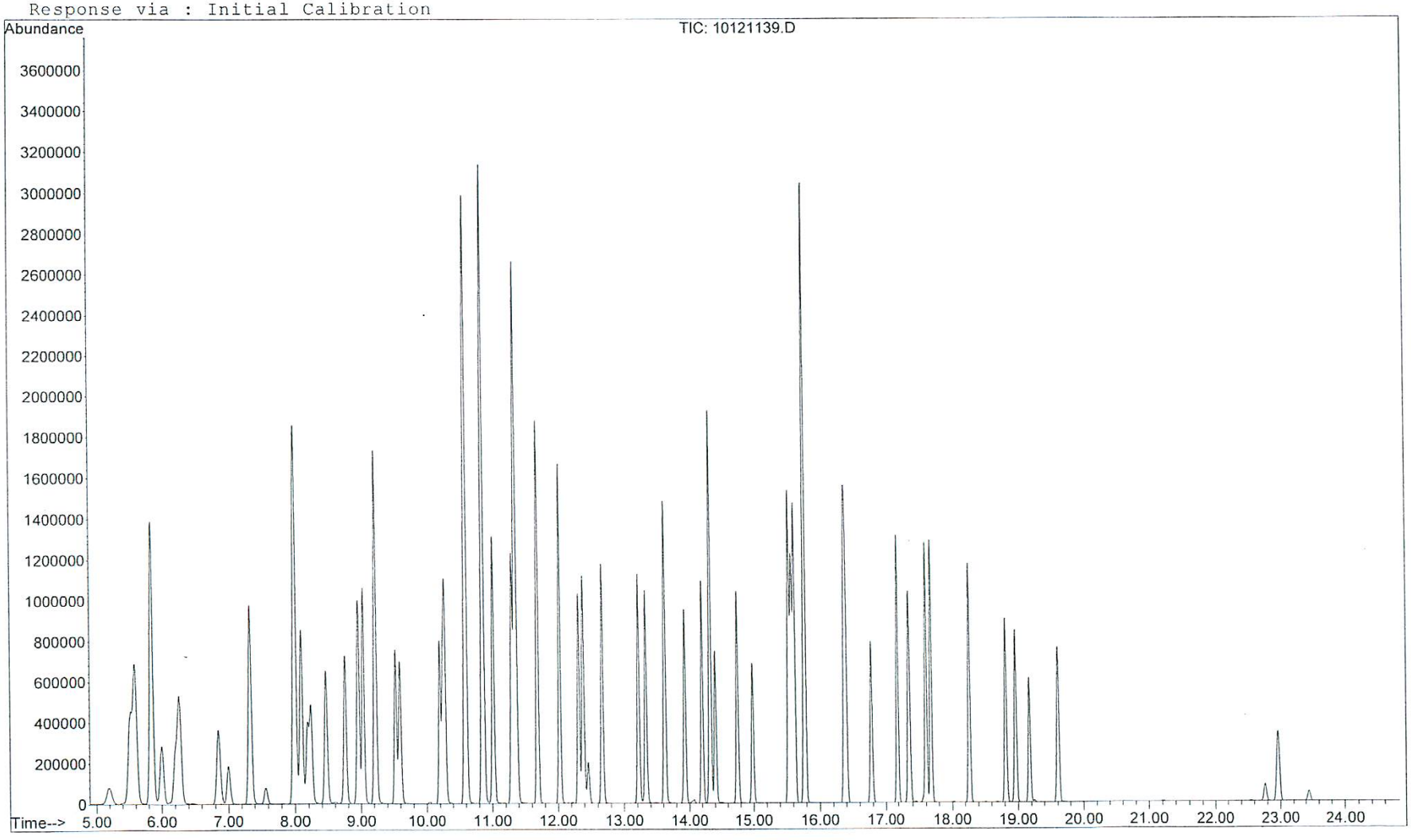
Quant Method : C:\HPCHEM\1\METHODS\101211V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Thu Oct 13 09:38:24 2011
Response via : Initial Calibration
DataAcq Meth : 101211V1

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
44) Tetrachloroethene	14.32	166	678281	9.90 ppbv	98
45) 2-Hexanone	14.41	43	685378	9.37 ppbv	91
46) Chlorodibromomethane	14.75	129	655082	9.54 ppbv	99
47) 1,2-Dibromoethane	14.98	107	599672	9.26 ppbv	99
49) Chlorobenzene	15.58	112	754410	9.59 ppbv #	84
50) Ethylbenzene	15.62	91	1298417	9.61 ppbv	90
51) m,p-Xylene	15.78	91	2198257	19.75 ppbv	89
52) o-Xylene	16.37	91	959492	9.70 ppbv #	86
53) Styrene	16.39	104	624547	9.26 ppbv	95
54) Bromoform	16.78	173	464837	9.44 ppbv #	98
56) 1,1,2,2-Tetrachloroethane	17.36	83	696774	9.68 ppbv #	98
57) 4-Ethyltoluene	17.60	105	1032811	9.17 ppbv	95
58) 1,3,5-Trimethylbenzene	17.68	105	871266	8.94 ppbv	95
59) 1,2,4-Trimethylbenzene	18.26	105	818531	9.02 ppbv	95
60) 1,3-Dichlorobenzene	18.82	146	488867	9.08 ppbv #	97
61) 1,4-Dichlorobenzene	18.96	146	446074	9.00 ppbv #	96
62) Benzyl chloride	19.17	91	609063	10.02 ppbv	95
63) 1,2-Dichlorobenzene	19.61	146	441851	8.90 ppbv #	97
64) 1,2,4-Trichlorobenzene	22.77	180	54666	7.83 ppbv	97
65) Hexachlorobutadiene	22.97	225	145527	8.92 ppbv	99
66) Naphthalene	23.45	128	82337	7.73 ppbv	99

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\101211\10121139.D Vial: 1
Acq On : 13 Oct 2011 6:54 pm Operator: RACHEL HILL
Sample : VOA1 CCV2 101211 Inst : VOA 1
Misc : CCV EPA_TO15 Multiplr: 1.00
MS Integration Params: CLME.P
Quant Time: Oct 13 19:19 2011 Quant Results File: 101211V1.RES

Method : C:\HPCHEM\1\METHODS\101211V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Thu Oct 13 09:38:24 2011
Response via : Initial Calibration



Response Factor Report VOA 1

Method : C:\HPCHEM\1\METHODS\100611V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Thu Oct 06 20:53:18 2011
Response via : Initial Calibration

Calibration Files
2 =10061104.D 4 =10061105.D 5 =10061106.D
6 =10061107.D 7 =10061108.D 8 =10061109.D

		Compound	2	4	5	6	7	8	Avg	%RSD
1)	I	Bromochloromethane	----------ISTD----------							
2)	T	Propylene	1.584	1.474	1.359	1.243	1.178	1.115	1.304	13.35
3)	T	Dichlorodifluoromet	3.811	3.575	3.330	3.124	3.003	2.977	3.309	9.25
4)	T	1,2-Dichloro-1,2,2,	2.126	2.342	2.194	2.088	2.078	2.145	2.171	4.24
5)	T	Chloromethane	1.939	1.850	1.654	1.493	1.361	1.235	1.531	19.25
6)	T	Vinyl chloride	1.839	1.676	1.543	1.337	1.192	1.064	1.379	22.98
7)	T	1,3-Butadiene	1.822	1.641	1.525	1.292	1.032	0.872	1.286	30.47
8)	T	Bromomethane	1.247	1.298	1.217	1.122	1.080	1.056	1.173	7.63
9)	T	Chloroethane	0.815	0.852	0.791	0.728	0.682	0.648	0.744	10.22
10)	T	Trichlorofluorometh	3.006	3.279	3.105	2.958	2.843	2.890	3.006	4.87
11)	T	Ethanol		0.478	0.425	0.385	0.331	0.311	0.374	17.98
12)	T	Freon113	2.339	2.849	2.728	2.645	2.443	2.324	2.482	11.12
13)	T	1,1-Dichloroethene	2.225	2.383	2.185	2.035	1.860	1.808	2.049	10.84
14)	T	Acetone	2.760	2.742	2.431	2.182	1.807	1.639	2.170	22.66
15)	T	Carbon disulfide	3.565	3.697	3.408	3.171	2.955	2.867	3.246	9.75
16)	T	2-Propanol	1.839	2.417	2.126	1.939	1.717	1.600	1.896	15.50
17)	T	Methylene chloride	2.104	1.922	1.752	1.609	1.407	1.321	1.636	18.59
18)	T	tert-Butyl Methyl E	3.192	3.565	3.195	2.916	2.449	2.355	2.877	16.19
19)	T	trans-1,2-Dichloroe	2.118	2.320	2.151	2.007	1.777	1.743	1.981	11.57
20)	T	n-Hexane	2.355	2.619	2.420	2.245	2.003	1.937	2.203	12.90
21)	T	1,1-Dichloroethane	2.372	2.682	2.449	2.249	1.935	1.865	2.213	13.98
22)	T	Vinyl acetate	2.733	4.587	4.046	3.652	2.998	2.741	3.355	22.30
23)	T	cis-1,2-Dichloroeth	1.193	1.355	1.252	1.180	1.063	1.087	1.183	8.36
24)	T	2-Butanone	2.560	2.945	2.613	2.288	2.064	1.846	2.302	18.53
25)	T	Ethyl acetate	3.138	3.936	3.430	3.036	2.615	2.324	2.992	19.16
26)	T	Tetrahydrofuran	1.801	1.943	1.719	1.553	1.299	1.147	1.500	23.01
27)	T	Chloroform	2.605	3.198	2.949	2.766	2.451	2.214	2.595	16.20
28)	T	1,1,1-Trichloroetha	2.198	3.052	2.895	2.758	2.466	2.189	2.490	17.25
29)	T	Cyclohexane	2.390	2.898	2.692	2.495	2.157	1.866	2.294	20.38
30)	T	Carbon tetrachlorid	1.984	2.466	2.322	2.223	2.082	2.067	2.155	8.86
31)	T	Benzene	3.394	3.755	3.384	3.142	2.677	2.572	3.091	14.50
32)	T	1,2-Dichloroethane	1.653	2.004	1.811	1.691	1.447	1.306	1.585	18.19
33)	I	1,4-Difluorobenzene	----------ISTD----------							
34)	T	Heptane	0.882	1.234	1.179	1.120	1.036	0.916	1.015	17.61
35)	T	Trichloroethene	0.398	0.529	0.515	0.513	0.504	0.520	0.493	9.33
36)	T	1,2-Dichloropropane	0.356	0.502	0.464	0.449	0.402	0.402	0.425	11.64
37)	T	1,4-Dioxane	0.147	0.159	0.148	0.141	0.128	0.123	0.138	10.20
38)	T	Bromodichloromethan	0.583	0.861	0.815	0.800	0.750	0.762	0.756	11.81
39)	T	cis-1,3-Dichloropro	0.489	0.704	0.660	0.634	0.592	0.593	0.612	11.00
40)	T	4-Methyl-2-pentanon	0.224	0.331	0.308	0.293	0.270	0.270	0.281	12.11
41)	T	Toluene	0.971	1.241	1.162	1.123	1.046	1.054	1.089	8.40
42)	T	trans-1,3-Dichlorop	0.404	0.602	0.567	0.546	0.514	0.508	0.526	11.86
43)	T	1,1,2-Trichloroetha	0.314	0.402	0.379	0.369	0.351	0.360	0.364	7.49
44)	T	Tetrachloroethene	0.490	0.584	0.571	0.560	0.577	0.560	0.546	7.77
45)	T	2-Hexanone	0.524	0.723	0.653	0.622	0.564	0.537	0.592	12.85
46)	T	Chlorodibromomethan	0.417	0.611	0.579	0.581	0.572	0.602	0.560	11.72
47)	T	1,2-Dibromoethane	0.445	0.573	0.539	0.533	0.507	0.511	0.518	7.53
48)	I	Chlorobenzene-d5	----------ISTD----------							
49)	T	Chlorobenzene	0.996	1.199	1.117	1.072	1.021	1.041	1.075	6.29

(#) = Out of Range ### Number of calibration levels exceeded format ###

Response Factor Report VOA 1

Method : C:\HPCHEM\1\METHODS\100611V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Thu Oct 06 20:53:18 2011
Response via : Initial Calibration

Calibration Files
2 =10061104.D 4 =10061105.D 5 =10061106.D
6 =10061107.D 7 =10061108.D 8 =10061109.D

		Compound	2	4	5	6	7	8	Avg	%RSD
50)	T	Ethylbenzene	1.730	2.101	1.960	1.885	1.769	1.811	1.853	7.55
51)	T	m,p-Xylene	1.353	1.853	1.762	1.715	1.578	1.418	1.541	17.11
52)	T	o-Xylene	1.257	1.496	1.413	1.368	1.313	1.378	1.353	6.57
53)	T	Styrene	0.906	1.008	0.939	0.913	0.882	0.924	0.921	4.78
54)	T	Bromoform	0.580	0.718	0.688	0.678	0.661	0.681	0.664	6.59
55)	S	4-Bromofluorobenzen	0.644	0.543	0.540	0.546	0.531	0.518	0.546	8.33
56)	T	1,1,2,2-Tetrachloro	1.134	1.011	0.948	0.903	0.850	0.830	0.927	12.45
57)	T	4-Ethyltoluene	2.069	1.540	1.435	1.395	1.316	1.377	1.496	17.62
58)	T	1,3,5-Trimethylbenz	1.764	1.284	1.208	1.163	1.116	1.182	1.265	17.93
59)	T	1,2,4-Trimethylbenz	1.753	1.153	1.072	1.049	0.994	1.036	1.155	23.23
60)	T	1,3-Dichlorobenzene	1.054	0.733	0.677	0.651	0.589	0.557	0.691	24.80
61)	T	1,4-Dichlorobenzene	0.946	0.691	0.637	0.622	0.553	0.520	0.645	22.54
62)	T	Benzyl chloride	0.614	0.950	0.901	0.862	0.781	0.733	0.798	14.37
63)	T	1,2-Dichlorobenzene	1.030	0.660	0.610	0.584	0.538	0.485	0.629	29.80
64)	T	1,2,4-Trichlorobenz		0.114	0.103	0.103	0.092	0.077	0.096	14.22
65)	T	Hexachlorobutadiene		0.283	0.248	0.245	0.212	0.180	0.227	17.04
66)		Naphthalene		0.172	0.157	0.157	0.140	0.117	0.145	14.13

(#) = Out of Range ### Number of calibration levels exceeded format ###

Compound List Report VOA 1

Method : C:\HPCHEM\1\METHODS\100611V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Thu Oct 06 20:53:18 2011
Response via : Initial Calibration
Total Cpnds : 66

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	Bromochloromethane	130	10.58	1.000	A	2	A	B
2	T	Propylene	41	5.51	0.521	A	2	A	B
3	T	Dichlorodifluoromethane	85	5.58	0.528	A	3	A	B
4	T	1,2-Dichloro-1,2,2,2-tetrafluo	135	5.84	0.552	A	2	A	B
5	T	Chloromethane	50	5.99	0.566	A	3	A	B
6	T	Vinyl chloride	62	6.20	0.585	A	2	A	B
7	T	1,3-Butadiene	39	6.26	0.592	A	2	A	B
8	T	Bromomethane	94	6.84	0.647	A	3	A	B
9	T	Chloroethane	64	7.00	0.661	A	3	A	B
10	T	Trichlorofluoromethane	101	7.33	0.693	A	3	A	B
11	T	Ethanol	45	7.55	0.714	A	2	A	B
12	T	Freon113	101	7.99	0.755	A	2	A	B
13	T	1,1-Dichloroethene	61	8.09	0.764	A	2	A	B
14	T	Acetone	43	8.18	0.773	A	2	A	B
15	T	Carbon disulfide	76	8.46	0.799	A	3	A	B
16	T	2-Propanol	45	8.23	0.778	A	2	A	B
17	T	Methylene chloride	49	8.75	0.827	A	2	A	B
18	T	tert-Butyl Methyl Ether	73	8.95	0.845	A	2	A	B
19	T	trans-1,2-Dichloroethene	61	9.03	0.853	A	2	A	B
20	T	n-Hexane	57	9.22	0.871	A	3	A	B
21	T	1,1-Dichloroethane	63	9.59	0.906	A	3	A	B
22	T	Vinyl acetate	43	9.53	0.900	A	2	A	B
23	T	cis-1,2-Dichloroethene	96	10.27	0.971	A	3	A	B
24	T	2-Butanone	43	10.24	0.968	A	2	A	B
25	T	Ethyl acetate	43	10.20	0.963	A	3	A	B
26	T	Tetrahydrofuran	42	10.58	1.000	A	2	A	B
27	T	Chloroform	83	10.60	1.001	A	2	A	B
28	T	1,1,1-Trichloroethane	97	10.85	1.025	A	3	A	B
29	T	Cyclohexane	56	10.86	1.026	A	2	A	B
30	T	Carbon tetrachloride	117	11.01	1.041	A	3	A	B
31	T	Benzene	78	11.29	1.067	A	3	A	B
32	T	1,2-Dichloroethane	62	11.37	1.074	A	3	A	B
33	I	1,4-Difluorobenzene	114	11.69	1.000	A	2	A	B
34	T	Heptane	43	11.35	0.971	A	3	A	B
35	T	Trichloroethene	130	12.03	1.029	A	3	A	B
36	T	1,2-Dichloropropane	63	12.38	1.060	A	3	A	B
37	T	1,4-Dioxane	88	12.46	1.066	A	2	A	B
38	T	Bromodichloromethane	83	12.66	1.084	A	2	A	B
39	T	cis-1,3-Dichloropropene	75	13.22	1.131	A	2	A	B
40	T	4-Methyl-2-pentanone	58	13.33	1.141	A	3	A	B
41	T	Toluene	91	13.63	1.166	A	2	A	B
42	T	trans-1,3-Dichloropropene	75	13.93	1.192	A	3	A	B
43	T	1,1,2-Trichloroethane	97	14.20	1.215	A	3	A	B
44	T	Tetrachloroethene	166	14.33	1.226	A	3	A	B
45	T	2-Hexanone	43	14.41	1.233	A	2	A	B
46	T	Chlorodibromomethane	129	14.75	1.262	A	2	A	B
47	T	1,2-Dibromoethane	107	14.99	1.282	A	2	A	B
48	I	Chlorobenzene-d5	117	15.54	1.000	A	2	A	B
49	T	Chlorobenzene	112	15.58	1.003	A	3	A	B
50	T	Ethylbenzene	91	15.62	1.005	A	2	A	B
51	T	m,p-Xylene	91	15.78	1.015	A	2	A	B
52	T	o-Xylene	91	16.37	1.054	A	2	A	B
53	T	Styrene	104	16.39	1.055	A	3	A	B
54	T	Bromoform	173	16.78	1.080	A	3	A	B
55	S	4-Bromofluorobenzene	95	17.19	1.106	A	2	A	B
56	T	1,1,2,2-Tetrachloroethane	83	17.36	1.117	A	2	A	B
57	T	4-Ethyltoluene	105	17.60	1.133	A	1	A	B
58	T	1,3,5-Trimethylbenzene	105	17.68	1.138	A	2	A	B
59	T	1,2,4-Trimethylbenzene	105	18.27	1.176	A	2	A	B

60	T	1,3-Dichlorobenzene	146	18.82	1.211	A	3	A	B
61	T	1,4-Dichlorobenzene	146	18.96	1.221	A	3	A	B
62	T	Benzyl chloride	91	19.17	1.234	A	2	A	B
63	T	1,2-Dichlorobenzene	146	19.61	1.262	A	3	A	B
64	T	1,2,4-Trichlorobenzene	180	22.76	1.465	A	3	A	B
65	T	Hexachlorobutadiene	225	22.96	1.478	A	2	A	B
66		Naphthalene	128	23.45	1.509	A	2	A	B

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

100611V1.M Mon Oct 10 13:53:21 2011

Response Factor Report VOA 1

Method : C:\HPCHEM\1\METHODS\101011V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Tue Oct 11 12:39:37 2011
Response via : Initial Calibration

Calibration Files
2 =10101105.D 4 =10101106.D 5 =10101107.D
6 =10101108.D 7 =10101112.D 8 =10101113.D

		Compound	2	4	5	6	7	8	Avg	%RSD
1)	I	Bromochloromethane	----------ISTD----------							
2)	T	Propylene	1.465	1.525	1.400	1.277	1.184	1.115	1.309	11.94
3)	T	Dichlorodifluoromet	3.495	3.620	3.390	3.146	3.030	2.975	3.291	7.41
4)	T	1,2-Dichloro-1,2,2,	1.995	2.408	2.255	2.120	2.114	2.153	2.188	6.16
5)	T	Chloromethane	1.872	1.923	1.748	1.566	1.358	1.199	1.550	19.99
6)	T	Vinyl chloride	1.644	1.739	1.559	1.395	1.181	1.037	1.365	21.75
7)	T	1,3-Butadiene	1.582	1.481	1.384	1.191	0.977	0.852	1.184	26.06
8)	T	Bromomethane	1.181	1.335	1.241	1.160	1.054	1.019	1.168	9.18
9)	T	Chloroethane	0.755	0.877	0.813	0.744	0.656	0.618	0.736	12.27
10)	T	Trichlorofluorometh	2.805	3.322	3.155	2.942	2.672	2.686	2.930	8.20
11)	T	Ethanol		0.476	0.415	0.363	0.299	0.300	0.361	19.87
12)	T	Freon113	2.180	2.899	2.768	2.557	2.257	2.221	2.418	13.46
13)	T	1,1-Dichloroethene	2.076	2.415	2.235	2.020	1.728	1.685	1.995	13.62
14)	T	Acetone	2.638	2.579	2.359	1.990	1.626	1.568	2.049	23.22
15)	T	Carbon disulfide	3.384	3.811	3.522	3.226	2.795	2.691	3.202	12.62
16)	T	2-Propanol	1.974	2.300	2.092	1.814	1.602	1.546	1.848	15.44
17)	T	Methylene chloride	2.111	1.953	1.800	1.572	1.317	1.264	1.619	21.05
18)	T	tert-Butyl Methyl E	2.896	3.212	3.044	2.607	2.184	2.223	2.651	15.39
19)	T	trans-1,2-Dichloroe	1.978	2.328	2.167	1.930	1.667	1.673	1.925	13.25
20)	T	n-Hexane	2.214	2.609	2.452	2.154	1.871	1.855	2.142	14.31
21)	T	1,1-Dichloroethane	2.207	2.599	2.440	2.097	1.790	1.787	2.117	15.06
22)	T	Vinyl acetate	2.561	4.213	3.924	3.287	2.686	2.610	3.132	22.01
23)	T	cis-1,2-Dichloroeth	1.101	1.344	1.251	1.116	0.999	1.048	1.143	10.38
24)	T	2-Butanone	2.559	2.784	2.495	2.069	1.860	1.787	2.190	18.99
25)	T	Ethyl acetate	2.996	3.610	3.185	2.751	2.320	2.291	2.785	18.20
26)	T	Tetrahydrofuran	1.733	1.812	1.679	1.441	1.174	1.084	1.417	23.64
27)	T	Chloroform	2.401	3.060	2.913	2.627	2.303	2.139	2.487	16.09
28)	T	1,1,1-Trichloroetha	1.991	2.911	2.841	2.604	2.294	2.088	2.371	17.66
29)	T	Cyclohexane	2.191	2.870	2.702	2.395	2.009	1.773	2.213	21.63
30)	T	Carbon tetrachlorid	1.854	2.386	2.297	2.080	1.916	1.971	2.060	10.01
31)	T	Benzene	3.104	3.525	3.329	2.851	2.425	2.451	2.902	14.89
32)	T	1,2-Dichloroethane	1.461	1.823	1.758	1.514	1.297	1.250	1.467	17.15
33)	I	1,4-Difluorobenzene	----------ISTD----------							
34)	T	Heptane	0.795	1.184	1.152	1.048	0.951	0.893	0.966	17.74
35)	T	Trichloroethene	0.379	0.515	0.509	0.478	0.465	0.511	0.475	9.98
36)	T	1,2-Dichloropropane	0.327	0.460	0.445	0.398	0.358	0.383	0.394	11.78
37)	T	1,4-Dioxane	0.146	0.154	0.144	0.130	0.112	0.118	0.132	12.57
38)	T	Bromodichloromethan	0.518	0.793	0.787	0.715	0.676	0.742	0.705	13.17
39)	T	cis-1,3-Dichloropro	0.439	0.655	0.645	0.578	0.530	0.583	0.575	12.75
40)	T	4-Methyl-2-pentanon	0.222	0.302	0.288	0.263	0.240	0.257	0.262	10.40
41)	T	Toluene	0.892	1.141	1.120	1.011	0.924	1.011	1.014	9.05
42)	T	trans-1,3-Dichlorop	0.361	0.566	0.553	0.501	0.460	0.508	0.495	13.87
43)	T	1,1,2-Trichloroetha	0.278	0.378	0.367	0.335	0.312	0.352	0.340	10.33
44)	T	Tetrachloroethene	0.445	0.569	0.565	0.524	0.525	0.549	0.522	8.83
45)	T	2-Hexanone	0.550	0.670	0.631	0.562	0.497	0.517	0.561	11.90
46)	T	Chlorodibromomethan	0.388	0.574	0.566	0.529	0.509	0.587	0.529	12.79
47)	T	1,2-Dibromoethane	0.403	0.541	0.534	0.487	0.452	0.519	0.492	10.03
48)	I	Chlorobenzene-d5	----------ISTD----------							
49)	T	Chlorobenzene	0.915	1.090	1.068	0.986	0.923	1.000	1.004	6.81

(#) = Out of Range ### Number of calibration levels exceeded format ###

Response Factor Report VOA 1

Method : C:\HPCHEM\1\METHODS\101011V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Tue Oct 11 12:39:37 2011
Response via : Initial Calibration

Calibration Files
2 =10101105.D 4 =10101106.D 5 =10101107.D
6 =10101108.D 7 =10101112.D 8 =10101113.D

		Compound	2	4	5	6	7	8	Avg	%RSD
50)	T	Ethylbenzene	1.608	1.888	1.838	1.702	1.607	1.710	1.718	6.27
51)	T	m,p-Xylene	1.263	1.651	1.649	1.533	1.440	1.348	1.425	14.49
52)	T	o-Xylene	1.201	1.363	1.337	1.240	1.187	1.291	1.264	5.36
53)	T	Styrene	0.814	0.925	0.915	0.848	0.796	0.874	0.862	5.57
54)	T	Bromoform	0.546	0.691	0.691	0.633	0.600	0.667	0.637	8.19
55)	S	4-Bromofluorobenzen	0.590	0.556	0.562	0.552	0.535	0.515	0.545	5.41
56)	T	1,1,2,2-Tetrachloro	1.036	0.970	0.956	0.863	0.784	0.789	0.884	11.63
57)	T	4-Ethyltoluene	1.816	1.508	1.469	1.338	1.238	1.288	1.424	13.96
58)	T	1,3,5-Trimethylbenz	1.565	1.261	1.236	1.121	1.053	1.102	1.208	14.44
59)	T	1,2,4-Trimethylbenz	1.527	1.141	1.128	1.030	0.938	0.965	1.105	18.20
60)	T	1,3-Dichlorobenzene	0.962	0.712	0.707	0.628	0.548	0.535	0.661	23.23
61)	T	1,4-Dichlorobenzene	0.850	0.675	0.662	0.592	0.515	0.500	0.614	20.78
62)	T	Benzyl chloride	0.611	0.899	0.910	0.798	0.702	0.683	0.754	15.49
63)	T	1,2-Dichlorobenzene	0.915	0.647	0.646	0.562	0.480	0.463	0.594	27.71
64)	T	1,2,4-Trichlorobenz		0.110	0.114	0.094	0.076	0.083	0.091	20.56
65)	T	Hexachlorobutadiene		0.261	0.254	0.217	0.178	0.182	0.206	22.13
66)		Naphthalene		0.169	0.175	0.142	0.116	0.124	0.137	21.82

(#) = Out of Range ### Number of calibration levels exceeded format ###

Compound List Report VOA 1

Method : C:\HPCHEM\1\METHODS\101011V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Tue Oct 11 12:39:37 2011
Response via : Initial Calibration
Total Cpnds : 66

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	Bromochloromethane	130	10.59	1.000	A	2	A	B
2	T	Propylene	41	5.51	0.521	A	2	A	B
3	T	Dichlorodifluoromethane	85	5.59	0.528	A	3	A	B
4	T	1,2-Dichloro-1,2,2,2-tetrafluo	135	5.84	0.552	A	2	A	B
5	T	Chloromethane	50	5.99	0.566	A	3	A	B
6	T	Vinyl chloride	62	6.20	0.585	A	2	A	B
7	T	1,3-Butadiene	39	6.26	0.591	A	2	A	B
8	T	Bromomethane	94	6.84	0.646	A	3	A	B
9	T	Chloroethane	64	6.99	0.660	A	3	A	B
10	T	Trichlorofluoromethane	101	7.33	0.692	A	3	A	B
11	T	Ethanol	45	7.57	0.715	A	2	A	B
12	T	Freon113	101	7.99	0.754	A	2	A	B
13	T	1,1-Dichloroethene	61	8.09	0.764	A	2	A	B
14	T	Acetone	43	8.19	0.773	A	2	A	B
15	T	Carbon disulfide	76	8.46	0.799	A	3	A	B
16	T	2-Propanol	45	8.24	0.778	A	2	A	B
17	T	Methylene chloride	49	8.75	0.827	A	2	A	B
18	T	tert-Butyl Methyl Ether	73	8.95	0.846	A	2	A	B
19	T	trans-1,2-Dichloroethene	61	9.03	0.853	A	2	A	B
20	T	n-Hexane	57	9.22	0.871	A	3	A	B
21	T	1,1-Dichloroethane	63	9.59	0.906	A	3	A	B
22	T	Vinyl acetate	43	9.53	0.900	A	2	A	B
23	T	cis-1,2-Dichloroethene	96	10.28	0.971	A	3	A	B
24	T	2-Butanone	43	10.25	0.968	A	2	A	B
25	T	Ethyl acetate	43	10.20	0.963	A	3	A	B
26	T	Tetrahydrofuran	42	10.58	1.000	A	2	A	B
27	T	Chloroform	83	10.61	1.002	A	2	A	B
28	T	1,1,1-Trichloroethane	97	10.85	1.025	A	3	A	B
29	T	Cyclohexane	56	10.86	1.026	A	2	A	B
30	T	Carbon tetrachloride	117	11.01	1.041	A	3	A	B
31	T	Benzene	78	11.30	1.067	A	3	A	B
32	T	1,2-Dichloroethane	62	11.38	1.075	A	3	A	B
33	I	1,4-Difluorobenzene	114	11.68	1.000	A	2	A	B
34	T	Heptane	43	11.34	0.971	A	3	A	B
35	T	Trichloroethene	130	12.02	1.029	A	3	A	B
36	T	1,2-Dichloropropane	63	12.39	1.060	A	3	A	B
37	T	1,4-Dioxane	88	12.46	1.066	A	2	A	B
38	T	Bromodichloromethane	83	12.67	1.084	A	2	A	B
39	T	cis-1,3-Dichloropropene	75	13.22	1.131	A	2	A	B
40	T	4-Methyl-2-pentanone	58	13.33	1.141	A	3	A	B
41	T	Toluene	91	13.62	1.166	A	2	A	B
42	T	trans-1,3-Dichloropropene	75	13.93	1.192	A	3	A	B
43	T	1,1,2-Trichloroethane	97	14.20	1.215	A	3	A	B
44	T	Tetrachloroethene	166	14.33	1.226	A	3	A	B
45	T	2-Hexanone	43	14.41	1.233	A	2	A	B
46	T	Chlorodibromomethane	129	14.75	1.262	A	2	A	B
47	T	1,2-Dibromoethane	107	14.98	1.282	A	2	A	B
48	I	Chlorobenzene-d5	117	15.54	1.000	A	2	A	B
49	T	Chlorobenzene	112	15.58	1.003	A	3	A	B
50	T	Ethylbenzene	91	15.62	1.005	A	2	A	B
51	T	m,p-Xylene	91	15.78	1.015	A	2	A	B
52	T	o-Xylene	91	16.37	1.054	A	2	A	B
53	T	Styrene	104	16.40	1.055	A	3	A	B
54	T	Bromoform	173	16.78	1.080	A	3	A	B
55	S	4-Bromofluorobenzene	95	17.19	1.106	A	2	A	B
56	T	1,1,2,2-Tetrachloroethane	83	17.35	1.117	A	2	A	B
57	T	4-Ethyltoluene	105	17.60	1.133	A	1	A	B
58	T	1,3,5-Trimethylbenzene	105	17.68	1.138	A	2	A	B
59	T	1,2,4-Trimethylbenzene	105	18.26	1.175	A	2	A	B

60	T	1,3-Dichlorobenzene	146	18.82	1.211	A	3	A	B
61	T	1,4-Dichlorobenzene	146	18.96	1.220	A	3	A	B
62	T	Benzyl chloride	91	19.17	1.234	A	2	A	B
63	T	1,2-Dichlorobenzene	146	19.61	1.262	A	3	A	B
64	T	1,2,4-Trichlorobenzene	180	22.77	1.465	A	3	A	B
65	T	Hexachlorobutadiene	225	22.97	1.478	A	2	A	B
66		Naphthalene	128	23.45	1.509	A	2	A	B

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

101011V1.M Thu Oct 20 10:39:41 2011

Response Factor Report VOA 1

Method : C:\HPCHEM\1\METHODS\101211V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Thu Oct 13 09:38:24 2011
Response via : Initial Calibration

Calibration Files
2 =10121104.D 4 =10121105.D 5 =10121106.D
6 =10121107.D 7 =10121108.D 8 =10121109.D

		Compound	2	4	5	6	7	8	Avg	%RSD
1)	I	Bromochloromethane	----------ISTD----------							
2)	T	Propylene	1.523	1.497	1.408	1.293	1.199	1.124	1.322	11.77
3)	T	Dichlorodifluoromet	3.855	3.686	3.527	3.293	3.104	3.026	3.419	8.80
4)	T	1,2-Dichloro-1,2,2,	2.084	2.414	2.317	2.188	2.158	2.183	2.236	5.09
5)	T	Chloromethane	1.875	1.819	1.695	1.516	1.376	1.207	1.526	18.30
6)	T	Vinyl chloride	1.661	1.689	1.542	1.351	1.200	1.043	1.358	20.75
7)	T	1,3-Butadiene	1.579	1.616	1.436	1.176	0.987	0.860	1.213	27.45
8)	T	Bromomethane	1.225	1.331	1.262	1.150	1.074	1.039	1.184	8.72
9)	T	Chloroethane	0.781	0.862	0.824	0.726	0.669	0.627	0.740	11.53
10)	T	Trichlorofluorometh	2.949	3.319	3.222	2.888	2.711	2.734	2.967	7.73
11)	T	Ethanol		0.431	0.410	0.352	0.323	0.309	0.358	14.22
12)	T	Freon113	2.255	2.868	2.734	2.420	2.314	2.245	2.415	11.85
13)	T	1,1-Dichloroethene	2.182	2.357	2.211	1.919	1.771	1.713	1.995	12.63
14)	T	Acetone	2.756	2.526	2.321	1.903	1.695	1.599	2.058	22.98
15)	T	Carbon disulfide	3.523	3.735	3.548	3.104	2.846	2.752	3.218	11.88
16)	T	2-Propanol	2.091	2.205	2.064	1.784	1.659	1.565	1.859	13.79
17)	T	Methylene chloride	2.016	1.893	1.751	1.484	1.351	1.284	1.589	18.58
18)	T	tert-Butyl Methyl E	3.082	3.280	3.037	2.486	2.280	2.269	2.698	15.61
19)	T	trans-1,2-Dichloroe	2.034	2.285	2.130	1.838	1.718	1.689	1.922	11.94
20)	T	n-Hexane	2.250	2.531	2.386	2.044	1.912	1.869	2.121	12.73
21)	T	1,1-Dichloroethane	2.279	2.557	2.399	1.982	1.824	1.807	2.113	14.06
22)	T	Vinyl acetate	2.468	4.192	3.852	3.101	2.805	2.681	3.116	21.01
23)	T	cis-1,2-Dichloroeth	1.162	1.318	1.236	1.083	1.036	1.063	1.153	8.78
24)	T	2-Butanone	2.497	2.697	2.391	2.013	1.898	1.847	2.155	17.15
25)	T	Ethyl acetate	2.901	3.534	3.152	2.576	2.497	2.308	2.755	16.73
26)	T	Tetrahydrofuran	1.750	1.729	1.603	1.331	1.210	1.097	1.390	21.85
27)	T	Chloroform	2.494	3.027	2.875	2.516	2.342	2.152	2.488	14.72
28)	T	1,1,1-Trichloroetha	2.087	2.888	2.832	2.494	2.357	2.122	2.386	15.70
29)	T	Cyclohexane	2.238	2.742	2.595	2.247	2.065	1.803	2.184	18.65
30)	T	Carbon tetrachlorid	1.911	2.386	2.277	2.019	1.966	1.992	2.076	8.68
31)	T	Benzene	3.113	3.492	3.268	2.710	2.522	2.492	2.902	13.42
32)	T	1,2-Dichloroethane	1.536	1.808	1.703	1.427	1.342	1.261	1.469	15.37
33)	I	1,4-Difluorobenzene	----------ISTD----------							
34)	T	Heptane	0.822	1.161	1.113	0.990	0.953	0.894	0.953	15.76
35)	T	Trichloroethene	0.382	0.513	0.502	0.459	0.468	0.508	0.472	9.57
36)	T	1,2-Dichloropropane	0.334	0.461	0.436	0.373	0.365	0.386	0.393	10.99
37)	T	1,4-Dioxane	0.153	0.147	0.142	0.122	0.119	0.120	0.132	11.12
38)	T	Bromodichloromethan	0.540	0.797	0.777	0.679	0.682	0.739	0.704	12.07
39)	T	cis-1,3-Dichloropro	0.448	0.654	0.623	0.546	0.539	0.581	0.572	11.95
40)	T	4-Methyl-2-pentanon	0.229	0.294	0.283	0.248	0.241	0.253	0.259	8.95
41)	T	Toluene	0.889	1.139	1.091	0.950	0.941	1.009	1.005	8.73
42)	T	trans-1,3-Dichlorop	0.382	0.563	0.539	0.477	0.466	0.509	0.496	12.38
43)	T	1,1,2-Trichloroetha	0.293	0.373	0.359	0.317	0.317	0.350	0.340	9.13
44)	T	Tetrachloroethene	0.457	0.557	0.550	0.498	0.525	0.544	0.517	7.16
45)	T	2-Hexanone	0.585	0.631	0.601	0.524	0.506	0.507	0.552	9.45
46)	T	Chlorodibromomethan	0.393	0.553	0.546	0.493	0.504	0.576	0.518	12.13
47)	T	1,2-Dibromoethane	0.417	0.531	0.514	0.463	0.457	0.513	0.489	8.86
48)	I	Chlorobenzene-d5	----------ISTD----------							
49)	T	Chlorobenzene	0.945	1.089	1.059	0.940	0.935	1.010	1.005	6.47

(#) = Out of Range ### Number of calibration levels exceeded format ###

Response Factor Report VOA 1

Method : C:\HPCHEM\1\METHODS\101211V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Thu Oct 13 09:38:24 2011
Response via : Initial Calibration

Calibration Files
2 =10121104.D 4 =10121105.D 5 =10121106.D
6 =10121107.D 7 =10121108.D 8 =10121109.D

		Compound	2	4	5	6	7	8	Avg	%RSD
50)	T	Ethylbenzene	1.625	1.914	1.865	1.641	1.629	1.747	1.727	6.91
51)	T	m,p-Xylene	1.296	1.649	1.638	1.461	1.451	1.376	1.422	13.83
52)	T	o-Xylene	1.196	1.376	1.348	1.189	1.204	1.318	1.265	6.30
53)	T	Styrene	0.845	0.926	0.897	0.807	0.809	0.886	0.862	5.20
54)	T	Bromoform	0.548	0.671	0.668	0.608	0.602	0.668	0.630	7.32
55)	S	4-Bromofluorobenzen	0.643	0.563	0.556	0.550	0.538	0.517	0.554	8.01
56)	T	1,1,2,2-Tetrachloro	1.137	0.989	0.969	0.855	0.814	0.844	0.920	12.80
57)	T	4-Ethyltoluene	1.951	1.491	1.443	1.266	1.268	1.310	1.440	16.72
58)	T	1,3,5-Trimethylbenz	1.725	1.263	1.241	1.085	1.087	1.145	1.245	17.85
59)	T	1,2,4-Trimethylbenz	1.723	1.165	1.131	1.003	0.986	1.028	1.160	22.16
60)	T	1,3-Dichlorobenzene	1.043	0.711	0.691	0.611	0.575	0.582	0.689	23.95
61)	T	1,4-Dichlorobenzene	0.904	0.661	0.642	0.569	0.537	0.549	0.633	20.25
62)	T	Benzyl chloride	0.576	0.897	0.897	0.790	0.735	0.766	0.777	13.99
63)	T	1,2-Dichlorobenzene	1.000	0.647	0.637	0.566	0.518	0.527	0.634	26.67
64)	T	1,2,4-Trichlorobenz		0.099	0.095	0.083	0.082	0.091	0.089	7.66
65)	T	Hexachlorobutadiene		0.241	0.232	0.196	0.187	0.204	0.209	10.77
66)		Naphthalene		0.151	0.148	0.126	0.123	0.139	0.136	8.75

(#) = Out of Range ### Number of calibration levels exceeded format ###

Compound List Report VOA 1

Method : C:\HPCHEM\1\METHODS\101211V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Thu Oct 13 09:38:24 2011
Response via : Initial Calibration
Total Cpnds : 66

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	Bromochloromethane	130	10.59	1.000	A	2	A	B
2	T	Propylene	41	5.51	0.521	A	2	A	B
3	T	Dichlorodifluoromethane	85	5.59	0.528	A	3	A	B
4	T	1,2-Dichloro-1,2,2,2-tetrafluo	135	5.84	0.552	A	2	A	B
5	T	Chloromethane	50	5.99	0.566	A	3	A	B
6	T	Vinyl chloride	62	6.20	0.585	A	2	A	B
7	T	1,3-Butadiene	39	6.26	0.591	A	2	A	B
8	T	Bromomethane	94	6.84	0.646	A	3	A	B
9	T	Chloroethane	64	6.99	0.660	A	3	A	B
10	T	Trichlorofluoromethane	101	7.33	0.692	A	3	A	B
11	T	Ethanol	45	7.57	0.715	A	2	A	B
12	T	Freon113	101	7.99	0.754	A	2	A	B
13	T	1,1-Dichloroethene	61	8.09	0.764	A	2	A	B
14	T	Acetone	43	8.19	0.773	A	2	A	B
15	T	Carbon disulfide	76	8.46	0.799	A	3	A	B
16	T	2-Propanol	45	8.24	0.778	A	2	A	B
17	T	Methylene chloride	49	8.75	0.827	A	2	A	B
18	T	tert-Butyl Methyl Ether	73	8.95	0.846	A	2	A	B
19	T	trans-1,2-Dichloroethene	61	9.03	0.853	A	2	A	B
20	T	n-Hexane	57	9.22	0.871	A	3	A	B
21	T	1,1-Dichloroethane	63	9.59	0.906	A	3	A	B
22	T	Vinyl acetate	43	9.53	0.900	A	2	A	B
23	T	cis-1,2-Dichloroethene	96	10.28	0.971	A	3	A	B
24	T	2-Butanone	43	10.25	0.968	A	2	A	B
25	T	Ethyl acetate	43	10.20	0.963	A	3	A	B
26	T	Tetrahydrofuran	42	10.58	1.000	A	2	A	B
27	T	Chloroform	83	10.61	1.002	A	2	A	B
28	T	1,1,1-Trichloroethane	97	10.85	1.025	A	3	A	B
29	T	Cyclohexane	56	10.86	1.026	A	2	A	B
30	T	Carbon tetrachloride	117	11.01	1.041	A	3	A	B
31	T	Benzene	78	11.30	1.067	A	3	A	B
32	T	1,2-Dichloroethane	62	11.38	1.075	A	3	A	B
33	I	1,4-Difluorobenzene	114	11.68	1.000	A	2	A	B
34	T	Heptane	43	11.34	0.971	A	3	A	B
35	T	Trichloroethene	130	12.02	1.029	A	3	A	B
36	T	1,2-Dichloropropane	63	12.39	1.060	A	3	A	B
37	T	1,4-Dioxane	88	12.46	1.066	A	2	A	B
38	T	Bromodichloromethane	83	12.67	1.084	A	2	A	B
39	T	cis-1,3-Dichloropropene	75	13.22	1.131	A	2	A	B
40	T	4-Methyl-2-pentanone	58	13.33	1.141	A	3	A	B
41	T	Toluene	91	13.62	1.166	A	2	A	B
42	T	trans-1,3-Dichloropropene	75	13.93	1.192	A	3	A	B
43	T	1,1,2-Trichloroethane	97	14.20	1.215	A	3	A	B
44	T	Tetrachloroethene	166	14.33	1.226	A	3	A	B
45	T	2-Hexanone	43	14.41	1.233	A	2	A	B
46	T	Chlorodibromomethane	129	14.75	1.262	A	2	A	B
47	T	1,2-Dibromoethane	107	14.98	1.282	A	2	A	B
48	I	Chlorobenzene-d5	117	15.54	1.000	A	2	A	B
49	T	Chlorobenzene	112	15.58	1.003	A	3	A	B
50	T	Ethylbenzene	91	15.62	1.005	A	2	A	B
51	T	m,p-Xylene	91	15.78	1.015	A	2	A	B
52	T	o-Xylene	91	16.37	1.054	A	2	A	B
53	T	Styrene	104	16.40	1.055	A	3	A	B
54	T	Bromoform	173	16.78	1.080	A	3	A	B
55	S	4-Bromofluorobenzene	95	17.19	1.106	A	2	A	B
56	T	1,1,2,2-Tetrachloroethane	83	17.35	1.117	A	2	A	B
57	T	4-Ethyltoluene	105	17.60	1.133	A	1	A	B
58	T	1,3,5-Trimethylbenzene	105	17.68	1.138	A	2	A	B
59	T	1,2,4-Trimethylbenzene	105	18.26	1.175	A	2	A	B

60	T	1,3-Dichlorobenzene	146	18.82	1.211	A	3	A	B
61	T	1,4-Dichlorobenzene	146	18.96	1.220	A	3	A	B
62	T	Benzyl chloride	91	19.17	1.234	A	2	A	B
63	T	1,2-Dichlorobenzene	146	19.61	1.262	A	3	A	B
64	T	1,2,4-Trichlorobenzene	180	22.77	1.465	A	3	A	B
65	T	Hexachlorobutadiene	225	22.97	1.478	A	2	A	B
66		Naphthalene	128	23.45	1.509	A	2	A	B

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

101211V1.M Thu Oct 20 10:43:33 2011

RTI Laboratories

Run ID: VOA9_110930A

Run No.: 43191

Analytical Run Date: 9/30/2011

InstrumentID: VOA9

Analyst: Rachel Hill

Column:

Calibration ID: 42997

Column ID:

Column Length:

SampID	TestCode	SampType	Batch ID	Analysis Date/Time	QA By	Q	Comments
BFB1 093011 VOA9	BFB_TUNE	TUNE	R43191	9/30/2011 11:56:00 AM	Charles O`Bryan		
CCV1 093011 VOA9	MA_APH	CCV	R43191	9/30/2011 12:39:00 PM	Charles O`Bryan		
RLVS1 093011 VOA	MA_APH	RLVS	R43191	9/30/2011 1:35:00 PM	Charles O`Bryan		
BLK1093011 VOA9	MA_APH	MBLK	R43191	9/30/2011 2:24:00 PM	Charles O`Bryan		
1109555-018A	MA_APH	SAMP	R43191	9/30/2011 3:06:00 PM	Charles O`Bryan		
1109555-022A	MA_APH	SAMP	R43191	9/30/2011 5:39:00 PM	Charles O`Bryan		
1109555-023A	MA_APH	SAMP	R43191	9/30/2011 6:30:00 PM	Charles O`Bryan		
1109555-024A	MA_APH	SAMP	R43191	9/30/2011 7:20:00 PM	Charles O`Bryan		
1109988-007B	MA_APH	SAMP	R43191	10/1/2011 2:14:00 AM	Charles O`Bryan		Sample needs higher dilution. Reported here to show that sample and duplicate were analyzed.
1109988-007BDUP	MA_APH	DUP	R43191	10/1/2011 2:58:00 AM	Charles O`Bryan		
1109555-025a	MA_APH	SAMP	R43191	10/1/2011 3:48:00 AM	Charles O`Bryan		
1109555-026a	MA_APH	SAMP	R43191	10/1/2011 4:39:00 AM	Charles O`Bryan		
1109988-001B	MA_APH	SAMP	R43191	10/1/2011 5:30:00 AM	Charles O`Bryan		
1109988-002B	MA_APH	SAMP	R43191	10/1/2011 6:23:00 AM	Charles O`Bryan		
1109988-003B	MA_APH	SAMP	R43191	10/1/2011 7:14:00 AM	Charles O`Bryan		
1109988-005B	MA_APH	SAMP	R43191	10/1/2011 8:55:00 AM	Charles O`Bryan		
RLVS2 093011 VOA	MA_APH	RLVS	R43191	10/1/2011 9:39:00 AM	Charles O`Bryan		

RTI Laboratories

ANALYTICAL RUN Summary

20-Oct-11

RunNo 43191

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
841716	BFB1 093011 VOA9	BFB_TUNE	TUNE	\1\DATA\093011	9/30/2011 11:56:	1	R43191		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
173	M		0	0		0	0	0	0	0	0	0%	0	2	0%	
174	M		98.4	98.4		0	0	0	0	0	0	0%	50	120	0%	
175	M		8.2	8.2		0	0	0	0	0	0	0%	4	9	0%	
176	M		97.7	97.7		0	0	0	0	0	0	0%	93	101	0%	
177	M		6.5	6.5		0	0	0	0	0	0	0%	5	9	0%	
50	M		21.7	21.7		0	0	0	0	0	0	0%	8	40	0%	
75	M		45.9	45.9		0	0	0	0	0	0	0%	30	66	0%	
95	M		100	100		0	0	0	0	0	0	0%	100	100	0%	
96	M		6.7	6.7		0	0	0	0	0	0	0%	5	9	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
841717	CCV1 093011 VOA9	MA_APH	CCV	\1\DATA\093011	9/30/2011 12:39:	1	R43191		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
C5-C8 Aliphatic	A	µg/m³		0		0	0	0	0	0	0	0%	0	0	0%	
C5-C8 Aliphatic HC - TOTAL	A	µg/m³	192.89	192.89		234	0	0	0	0	0	82%	70	130	0%	
C5-C8 Aliphatic Hydrocarbons	A	µg/m³		0		0	0	0	29.876	117	0	0%	0	0	0%	
C9-C10 Aromatic HC - TOTAL	A	µg/m³	215.1	215.1		266	0	0	0	0	0	81%	70	130	0%	
C9-C10 Aromatic Hydrocarbons	A	µg/m³		0		0	0	0	35.658	133	0	0%	0	0	0%	
C9-C12 Aliphatic	A	µg/m³		0		0	0	0	0	0	0	0%	0	0	0%	
C9-C12 Aliphatic HC - TOTAL	A	µg/m³	331.3	331.3		378	0	0	0	0	0	88%	70	130	0%	
C9-C12 Aliphatic Hydrocarbons	A	µg/m³		0		0	0	0	25.766	189	0	0%	0	0	0%	
C9-C12 Aliphatic-Aromatic Hydrocarbons	A	µg/m³		0		0	0	0	0	0	0	0%	0	0	0%	
non C5-C8 - TOTAL	A	µg/m³		0		0	0	0	0	0	0	0%	0	0	0%	
non C9-C12 - TOTAL	A	µg/m³		0		0	0	0	0	0	0	0%	0	0	0%	
Chlorobenzene-d5	I	ppbv	12.5	12.5		12.5	0	0	0	0	0	100%	80	120	0%	
4-Bromofluorobenzene	S	µg/m³	101.26	101.26		89.5	0	0	0	0	0	113%	70	130	0%	

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\093011\09301102.D
Acq On : 30 Sep 2011 12:39 pm
Sample : CCV1 093011 VOA9
Misc : CCV MA_APH
MS Integration Params: rteint.p
Quant Time: Oct 2 11:06 2011

Vial: 2
Operator: RACHEL HILL
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: 092111V9.RES

Quant Method : C:\HPCHEM\1\METHODS\092111V9.M (RTE Integrator)
Title : MASS APH
Last Update : Thu Sep 22 10:01:26 2011
Response via : Initial Calibration
DataAcq Meth : 092111V9

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
40) Chlorobenzene-d5	16.51	117	430964	12.50	ug/m3	0.00
System Monitoring Compounds						
41) 4-Bromofluorobenzene	18.34	95	312576	101.26	ug/m3	0.00
Spiked Amount 89.500	Range 70 - 130		Recovery = 113.14%			

Target Compounds						Qvalue
1) C5-C8 Aliphatic HC	7.17	TIC	871754	28.01	ug/m3	100
2) C5-C8 Aliphatic HC {2}	9.57	TIC	881520	29.26	ug/m3	100
3) C5-C8 Aliphatic HC {3}	11.28	TIC	1141665	34.20	ug/m3	100
4) C5-C8 Aliphatic HC {4}	11.34	TIC	858093	26.98	ug/m3	100
5) C5-C8 Aliphatic HC {5}	11.91	TIC	1083208	33.88	ug/m3	100
6) C5-C8 Aliphatic HC {6}	14.30	TIC	1327002	40.63	ug/m3	100
7) C5-C8 Aliphatic HC - TOTAL	7.17	TIC	6163242m	192.89	ug/m3	
8) C9-C12 Aliphatic HC	15.70	TIC	1631198	46.14	ug/m3	100
9) C9-C12 Aliphatic HC {2}	16.56	TIC	1640109	48.33	ug/m3	100
10) C9-C12 Aliphatic HC {3}	18.68	TIC	1583437	53.04	ug/m3	100
11) C9-C12 Aliphatic HC {4}	19.83	TIC	1671239	53.68	ug/m3	100
12) C9-C12 Aliphatic HC {5}	20.65	TIC	1648401	62.79	ug/m3	100
13) C9-C12 Aliphatic HC {6}	22.47	TIC	1520342	67.92	ug/m3	100
14) C9-C12 Aliphatic HC - TOTA	15.70	TIC	9694726m	331.30	ug/m3	
15) C9-C10 Aromatic HC	17.98	120	147794	40.34	ug/m3	100
16) C9-C10 Aromatic HC {2}	18.76	120	158381	40.88	ug/m3	100
17) C9-C10 Aromatic HC {3}	18.91	120	235136	41.68	ug/m3	100
18) C9-C10 Aromatic HC {4}	20.03	120	58733	50.49	ug/m3	100
19) C9-C10 Aromatic HC {5}	20.29	120	182481	42.21	ug/m3	100
20) C9-C10 Aromatic HC {6}	20.03	134	157692	49.44	ug/m3	100
21) C9-C10 Aromatic HC - TOTAL	17.98	TIC	940217m	215.10	ug/m3	

(#) = qualifier out of range (m) = manual integration
09301102.D 092111V9.M Thu Oct 20 11:01:47 2011

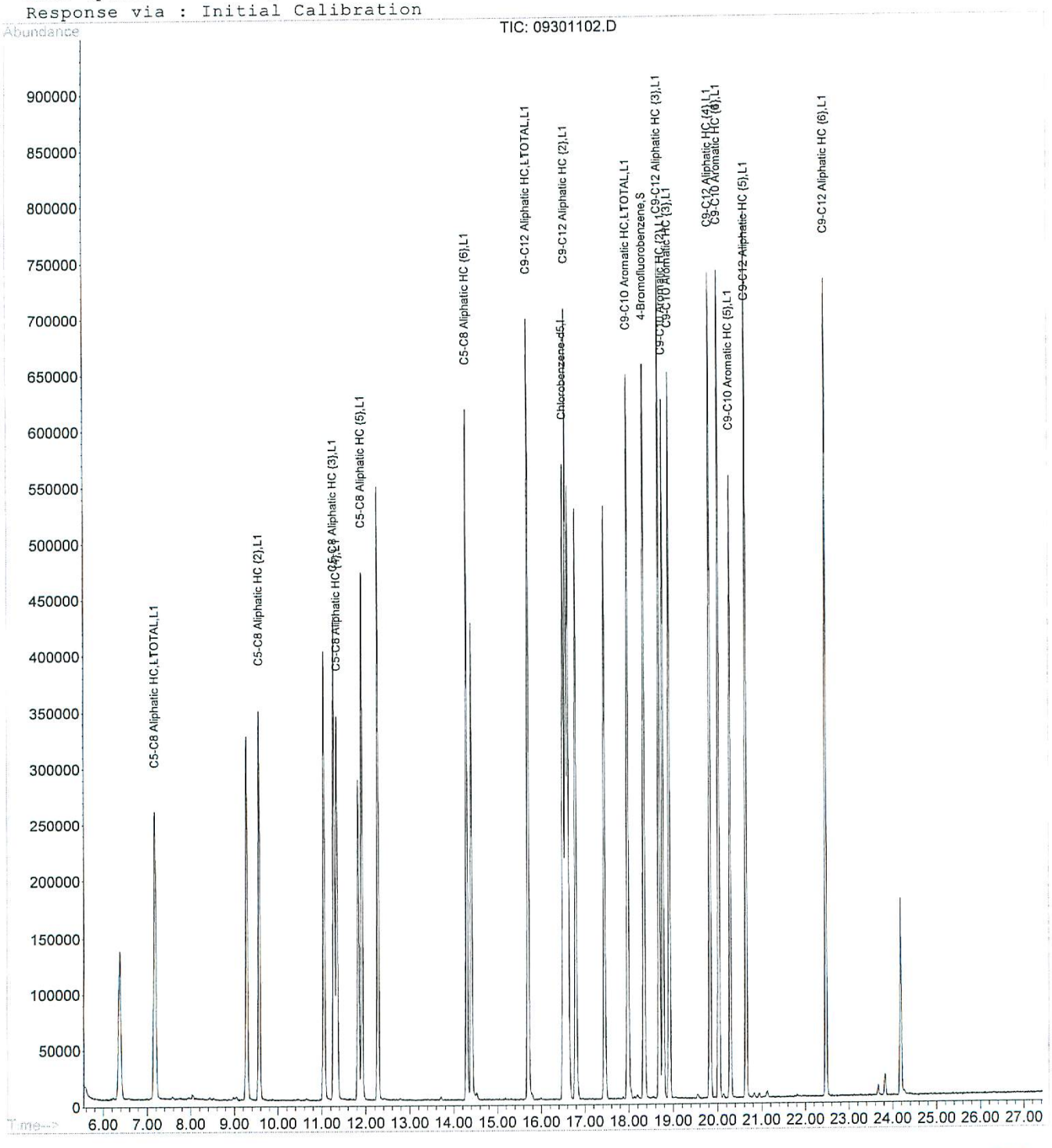
Quantitation Report

Data File : C:\HPCHEM\1\DATA\093011\09301102.D
Acq On : 30 Sep 2011 12:39 pm
Sample : CCV1 093011 VOA9
Misc : CCV MA_APH
MS Integration Params: rteint.p
Quant Time: Oct 2 11:06 2011

Vial: 2
Operator: RACHEL HILL
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: 092111V9.RES

Method : C:\HPCHEM\1\METHODS\092111V9.M (RTE Integrator)
Title : MASS APH
Last Update : Thu Sep 22 10:01:26 2011
Response via : Initial Calibration



RTI Laboratories

Run ID: VOA9_111004A **Run No.:** 43242

Analytical Run Date: 10/4/2011 **InstrumentID:** VOA9

Analyst: Rachel Hill **Column:**

Calibration ID: 42997 **Column ID:**

Column Length:

SampID	TestCode	SampType	Batch ID	Analysis Date/Time	QA By	Q	Comments
BFB1 100411 VOA9	BFB_TUNE	TUNE	R43242	10/4/2011 2:04:00 PM	Charles O'Bryan		
CCV1 100411 VOA9	MA_APH	CCV	R43242	10/4/2011 2:47:00 PM	Charles O'Bryan		
RLVS1 100411 VOA	MA_APH	RLVS	R43242	10/4/2011 4:43:00 PM	Charles O'Bryan		
BLK1 100411 VOA9	MA_APH	MBLK	R43242	10/4/2011 5:29:00 PM	Charles O'Bryan		
1109988-006B	MA_APH	SAMP	R43242	10/4/2011 7:00:00 PM	Charles O'Bryan		
1109988-007B	MA_APH	SAMP	R43242	10/4/2011 7:43:00 PM	Charles O'Bryan		Sample not analyzed at high enough dilution. Will re-run at lower dilution. Reporting here to show sample and duplicate were analyzed.
1109988-007BDUP	MA_APH	DUP	R43242	10/4/2011 8:25:00 PM	Charles O'Bryan		
1109988-010B	MA_APH	SAMP	R43242	10/4/2011 11:14:00 PM	Charles O'Bryan		
1109988-013B	MA_APH	SAMP	R43242	10/5/2011 1:21:00 AM	Charles O'Bryan		
1109988-014B	MA_APH	SAMP	R43242	10/5/2011 2:03:00 AM	Charles O'Bryan		
1109988-016B	MA_APH	SAMP	R43242	10/5/2011 3:28:00 AM	Charles O'Bryan		
1109988-017B	MA_APH	SAMP	R43242	10/5/2011 4:10:00 AM	Charles O'Bryan		
1109988-004B	MA_APH	SAMP	R43242	10/5/2011 4:53:00 AM	Charles O'Bryan		
1109988-008B	MA_APH	SAMP	R43242	10/5/2011 5:41:00 AM	Charles O'Bryan		
1109988-009B	MA_APH	SAMP	R43242	10/5/2011 6:30:00 AM	Charles O'Bryan		
1109988-011B	MA_APH	SAMP	R43242	10/5/2011 7:23:00 AM	Charles O'Bryan		
1109988-012B	MA_APH	SAMP	R43242	10/5/2011 8:12:00 AM	Charles O'Bryan		
1109988-015B	MA_APH	SAMP	R43242	10/5/2011 9:01:00 AM	Charles O'Bryan		
1109988-018B	MA_APH	SAMP	R43242	10/5/2011 12:46:00 PM	Charles O'Bryan		
RLVS2 100411 VOA	MA_APH	RLVS	R43242	10/5/2011 1:31:00 PM	Charles O'Bryan		

RTI Laboratories

ANALYTICAL RUN Summary

20-Oct-11

RunNo 43242

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
843238	BFB1 100411 VOA9	BFB_TUNE	TUNE	\1\DATA\100411	10/4/2011 2:04:0	1	R43242		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
173	M		0	0		0	0	0	0	0	0	0%	0	2	0%	
174	M		93.4	93.4		0	0	0	0	0	0	0%	50	120	0%	
175	M		8.4	8.4		0	0	0	0	0	0	0%	4	9	0%	
176	M		97.5	97.5		0	0	0	0	0	0	0%	93	101	0%	
177	M		6.4	6.4		0	0	0	0	0	0	0%	5	9	0%	
50	M		22.5	22.5		0	0	0	0	0	0	0%	8	40	0%	
75	M		46.4	46.4		0	0	0	0	0	0	0%	30	66	0%	
95	M		100	100		0	0	0	0	0	0	0%	100	100	0%	
96	M		6.9	6.9		0	0	0	0	0	0	0%	5	9	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
843239	CCV1 100411 VOA9	MA_APH	CCV	\1\DATA\100411	10/4/2011 2:47:0	1	R43242		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
C5-C8 Aliphatic	A	µg/m³		0		0	0	0	0	0	0	0%	0	0	0%	
C5-C8 Aliphatic HC - TOTAL	A	µg/m³	172	172		222	0	0	0	0	0	77%	70	130	0%	
C5-C8 Aliphatic Hydrocarbons	A	µg/m³		0		0	0	0	29.876	117	0	0%	0	0	0%	
C9-C10 Aromatic HC - TOTAL	A	µg/m³	187.98	187.98		185	0	0	0	0	0	102%	70	130	0%	
C9-C10 Aromatic Hydrocarbons	A	µg/m³		0		0	0	0	35.658	133	0	0%	0	0	0%	
C9-C12 Aliphatic	A	µg/m³		0		0	0	0	0	0	0	0%	0	0	0%	
C9-C12 Aliphatic HC - TOTAL	A	µg/m³	293.58	293.58		281	0	0	0	0	0	104%	70	130	0%	
C9-C12 Aliphatic Hydrocarbons	A	µg/m³		0		0	0	0	25.766	189	0	0%	0	0	0%	
C9-C12 Aliphatic-Aromatic Hydrocarbons	A	µg/m³		0		0	0	0	0	0	0	0%	0	0	0%	
non C5-C8 - TOTAL	A	µg/m³		0		0	0	0	0	0	0	0%	0	0	0%	
non C9-C12 - TOTAL	A	µg/m³		0		0	0	0	0	0	0	0%	0	0	0%	
Chlorobenzene-d5	I	ppbv	12.5	12.5		12.5	0	0	0	0	0	100%	80	120	0%	
4-Bromofluorobenzene	S	µg/m³	96.79	96.79		89.5	0	0	0	0	0	108%	70	130	0%	

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\100411\10041102.D Vial: 2
Acq On : 4 Oct 2011 2:47 pm Operator: RACHEL HILL
Sample : CCV1 100411 VOA9 Inst : GC/MS Ins
Misc : CCV MA_APH Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 5 7:03 2011 Quant Results File: 092111V9.RES

Quant Method : C:\HPCHEM\1\METHODS\092111V9.M (RTE Integrator)
Title : MASS APH
Last Update : Thu Sep 22 10:01:26 2011
Response via : Initial Calibration
DataAcq Meth : 092111V9

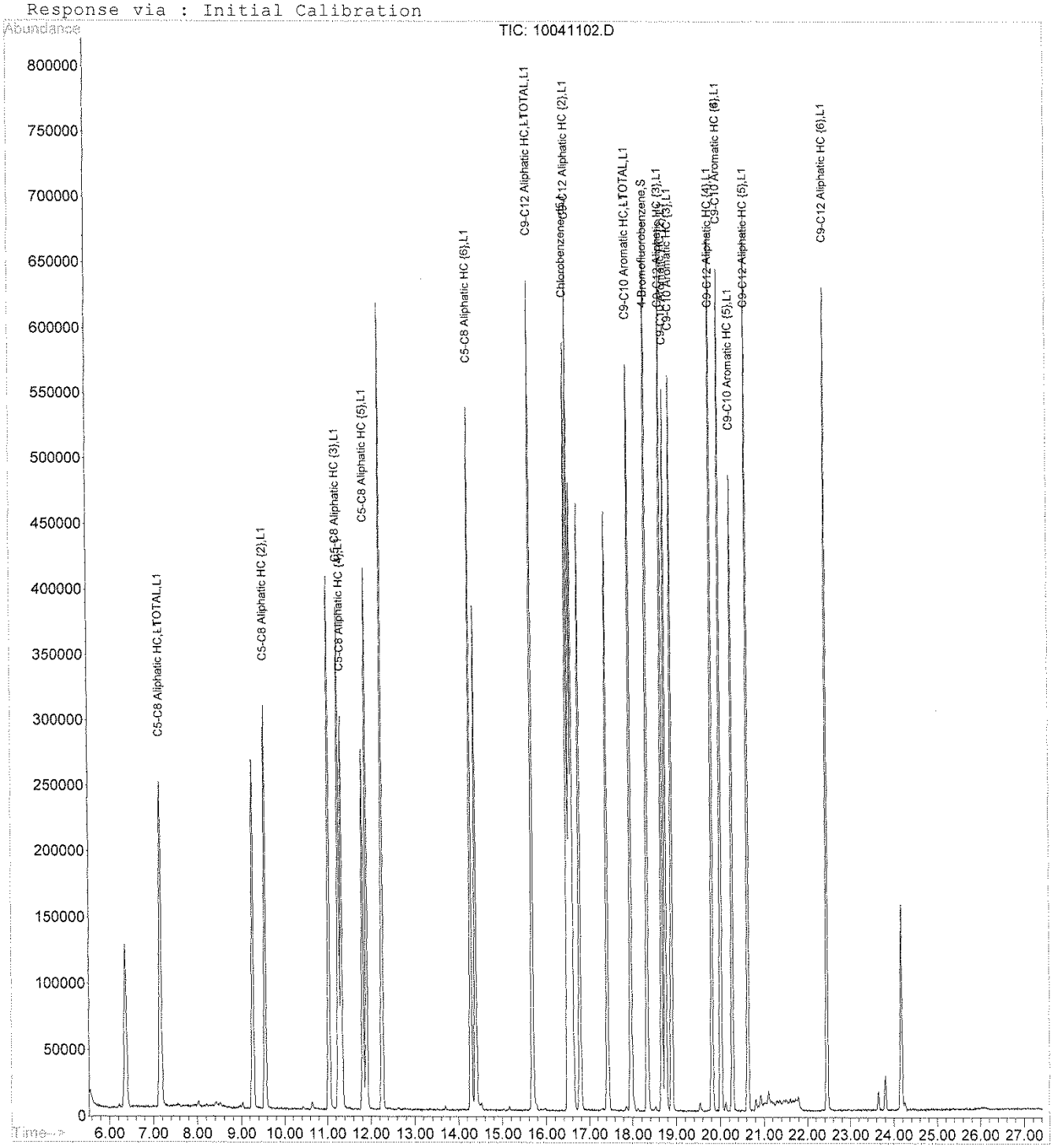
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
40) Chlorobenzene-d5	16.50	117	449156	12.50	ug/m3	-0.02
System Monitoring Compounds						
41) 4-Bromofluorobenzene	18.34	95	311397	96.79	ug/m3	-0.01
Spiked Amount 89.500	Range 70 - 130		Recovery = 108.15%			
Target Compounds						Qvalue
1) C5-C8 Aliphatic HC	7.17	TIC	840860	27.02	ug/m3	100
2) C5-C8 Aliphatic HC {2}	9.56	TIC	788724	26.18	ug/m3	100
3) C5-C8 Aliphatic HC {3}	11.27	TIC	976324	29.25	ug/m3	100
4) C5-C8 Aliphatic HC {4}	11.34	TIC	766478	24.10	ug/m3	100
5) C5-C8 Aliphatic HC {5}	11.91	TIC	939883	29.40	ug/m3	100
6) C5-C8 Aliphatic HC {6}	14.30	TIC	1183551	36.24	ug/m3	100
7) C5-C8 Aliphatic HC - TOTAL	7.17	TIC	5495820m	172.00	ug/m3	
8) C9-C12 Aliphatic HC	15.70	TIC	1478317	41.82	ug/m3	100
9) C9-C12 Aliphatic HC {2}	16.56	TIC	1423547	41.95	ug/m3	100
10) C9-C12 Aliphatic HC {3}	18.68	TIC	1414166	47.37	ug/m3	100
11) C9-C12 Aliphatic HC {4}	19.83	TIC	1532614	49.23	ug/m3	100
12) C9-C12 Aliphatic HC {5}	20.64	TIC	1434042	54.62	ug/m3	100
13) C9-C12 Aliphatic HC {6}	22.46	TIC	1308298	58.45	ug/m3	100
14) C9-C12 Aliphatic HC - TOTA	15.70	TIC	8590984m	293.58	ug/m3	
15) C9-C10 Aromatic HC	17.97	120	131238	35.82	ug/m3	100
16) C9-C10 Aromatic HC {2}	18.76	120	137725	35.55	ug/m3	100
17) C9-C10 Aromatic HC {3}	18.91	120	204901	36.32	ug/m3	100
18) C9-C10 Aromatic HC {4}	20.02	120	51394	44.18	ug/m3	100
19) C9-C10 Aromatic HC {5}	20.28	120	157602	36.45	ug/m3	100
20) C9-C10 Aromatic HC {6}	20.03	134	138799	43.52	ug/m3	100
21) C9-C10 Aromatic HC - TOTAL	17.97	TIC	821659m	187.98	ug/m3	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\100411\10041102.D Vial: 2
Acq On : 4 Oct 2011 2:47 pm Operator: RACHEL HILL
Sample : CCV1 100411 VOA9 Inst : GC/MS Ins
Misc : CCV MA_APH Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 5 7:03 2011 Quant Results File: 092111V9.RES

Method : C:\HPCHEM\1\METHODS\092111V9.M (RTE Integrator)
Title : MASS APH
Last Update : Thu Sep 22 10:01:26 2011
Response via : Initial Calibration



RTI Laboratories

Run ID: VOA9_111013A **Run No.:** 43474

Analytical Run Date: 10/13/2011 **InstrumentID:** VOA9

Analyst: Rachel Hill **Column:**

Calibration ID: 43407 **Column ID:**

Column Length:

SampID	TestCode	SampType	Batch ID	Analysis Date/Time	QA By	Q	Comments
BFB2 101311 VOA9	BFB_TUNE	TUNE	R43474	10/13/2011 10:17:00 AM	Charles O`Bryan		
CCV 101311 VOA9	MA_APH	CCV	R43474	10/13/2011 11:00:00 AM	Charles O`Bryan		
RLVS1 101311 VOA	MA_APH	RLVS	R43474	10/13/2011 11:58:00 AM	Charles O`Bryan		
BLK1 101311 VOA9	MA_APH	MBLK	R43474	10/13/2011 12:47:00 PM	Charles O`Bryan		
1110067-014B	MA_APH	SAMP	R43474	10/13/2011 1:30:00 PM	Charles O`Bryan		
1109988-019B	MA_APH	SAMP	R43474	10/13/2011 4:26:00 PM	Charles O`Bryan		
1110067-015B	MA_APH	SAMP	R43474	10/13/2011 5:09:00 PM	Charles O`Bryan		
1110367-002B	MA_APH	SAMP	R43474	10/13/2011 6:34:00 PM	Charles O`Bryan		Needs higher dilution. Reported here to show that sample and duplicate were analyzed.
1110367-002BDUP	MA_APH	DUP	R43474	10/13/2011 7:17:00 PM	Charles O`Bryan		
1110367-004B	MA_APH	SAMP	R43474	10/13/2011 8:42:00 PM	Charles O`Bryan		
1110367-005B	MA_APH	SAMP	R43474	10/13/2011 9:24:00 PM	Charles O`Bryan		
1110367-006B	MA_APH	SAMP	R43474	10/13/2011 10:07:00 PM	Charles O`Bryan		
RLVS2 101311 VOA	MA_APH	RLVS	R43474	10/14/2011 9:06:00 AM	Charles O`Bryan		

RTI Laboratories

ANALYTICAL RUN Summary

20-Oct-11

RunNo 43474

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
849494	BFB2 101311 VOA9	BFB_TUNE	TUNE	\1\DATA\101311\	10/13/2011 10:1	1	R43474		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
173	M		0	0		0	0	0	0	0	0	0%	0	2	0%	
174	M		60.6	60.6		0	0	0	0	0	0	0%	50	120	0%	
175	M		7.3	7.3		0	0	0	0	0	0	0%	4	9	0%	
176	M		96.8	96.8		0	0	0	0	0	0	0%	93	101	0%	
177	M		6.1	6.1		0	0	0	0	0	0	0%	5	9	0%	
50	M		23.5	23.5		0	0	0	0	0	0	0%	8	40	0%	
75	M		48.9	48.9		0	0	0	0	0	0	0%	30	66	0%	
95	M		100	100		0	0	0	0	0	0	0%	100	100	0%	
96	M		6.8	6.8		0	0	0	0	0	0	0%	5	9	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
849495	CCV 101311 VOA9	MA_APH	CCV	\1\DATA\101311\	10/13/2011 11:0	1	R43474		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
C5-C8 Aliphatic	A	µg/m³		0		0	0	0	0	0	0	0%	0	0	0%	
C5-C8 Aliphatic HC - TOTAL	A	µg/m³	245.12	245.12		234	0	0	0	0	0	105%	70	130	0%	
C5-C8 Aliphatic Hydrocarbons	A	µg/m³		0		0	0	0	29.876	117	0	0%	0	0	0%	
C9-C10 Aromatic HC - TOTAL	A	µg/m³	250.26	250.26		266	0	0	0	0	0	94%	70	130	0%	
C9-C10 Aromatic Hydrocarbons	A	µg/m³		0		0	0	0	35.658	133	0	0%	0	0	0%	
C9-C12 Aliphatic	A	µg/m³		0		0	0	0	0	0	0	0%	0	0	0%	
C9-C12 Aliphatic HC - TOTAL	A	µg/m³	401.69	401.69		378	0	0	0	0	0	106%	70	130	0%	
C9-C12 Aliphatic Hydrocarbons	A	µg/m³		0		0	0	0	25.766	189	0	0%	0	0	0%	
C9-C12 Aliphatic-Aromatic Hydrocarbons	A	µg/m³		0		0	0	0	0	0	0	0%	0	0	0%	
non C5-C8 - TOTAL	A	µg/m³		0		0	0	0	0	0	0	0%	0	0	0%	
non C9-C12 - TOTAL	A	µg/m³		0		0	0	0	0	0	0	0%	0	0	0%	
Chlorobenzene-d5	I	ppbv	12.5	12.5		12.5	0	0	0	0	0	100%	80	120	0%	
4-Bromofluorobenzene	S	µg/m³	89.01	89.01		89.5	0	0	0	0	0	99%	70	130	0%	

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\101311\10131102.D Vial: 2
Acq On : 13 Oct 2011 11:00 am Operator: RACHEL HILL
Sample : CCV 101311 VOA9 Inst : GC/MS Ins
Misc : CCV MA_APH Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 14 13:47 2011 Quant Results File: 101111V9.RES

Quant Method : C:\HPCHEM\1\METHODS\101111V9.M (RTE Integrator)
Title : MASS APH
Last Update : Tue Oct 11 16:43:25 2011
Response via : Initial Calibration
DataAcq Meth : 101111V9

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
40) Chlorobenzene-d5	16.51	117	943068	12.50	ug/m3	-0.01

System Monitoring Compounds

41) 4-Bromofluorobenzene	18.34	95	604994	89.01	ug/m3	-0.01

Spiked Amount 89.500 Range 70 - 130 Recovery = 99.45%

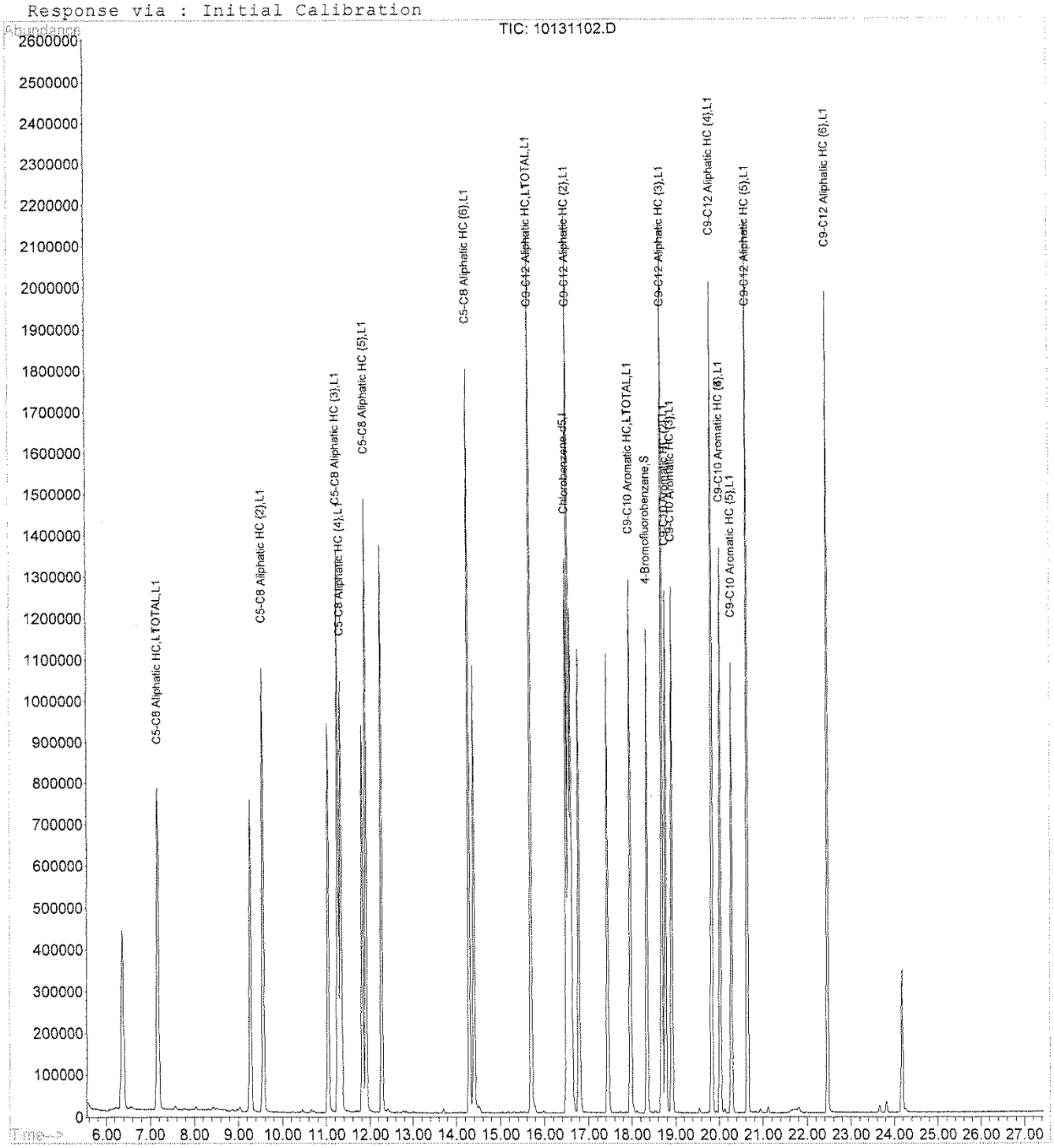
Target Compounds						Qvalue
1) C5-C8 Aliphatic HC	7.17	TIC	2624258	32.44	ug/m3	100
2) C5-C8 Aliphatic HC {2}	9.56	TIC	2746860	37.72	ug/m3	100
3) C5-C8 Aliphatic HC {3}	11.27	TIC	3450266	43.09	ug/m3	100
4) C5-C8 Aliphatic HC {4}	11.34	TIC	2659982	36.37	ug/m3	100
5) C5-C8 Aliphatic HC {5}	11.91	TIC	3308094	43.84	ug/m3	100
6) C5-C8 Aliphatic HC {6}	14.29	TIC	3932967	51.57	ug/m3	100
7) C5-C8 Aliphatic HC - TOTAL	7.17	TIC	18722427m	245.12	ug/m3	
8) C9-C12 Aliphatic HC	15.70	TIC	4867399	57.98	ug/m3	100
9) C9-C12 Aliphatic HC {2}	16.56	TIC	4810447	59.49	ug/m3	100
10) C9-C12 Aliphatic HC {3}	18.68	TIC	4504966	65.13	ug/m3	100
11) C9-C12 Aliphatic HC {4}	19.83	TIC	4451402	63.55	ug/m3	100
12) C9-C12 Aliphatic HC {5}	20.64	TIC	4512716	74.98	ug/m3	100
13) C9-C12 Aliphatic HC {6}	22.47	TIC	4025690	80.05	ug/m3	100
14) C9-C12 Aliphatic HC - TOTA	15.70	TIC	27172620m	401.69	ug/m3	
15) C9-C10 Aromatic HC	17.97	120	295450	48.14	ug/m3	100
16) C9-C10 Aromatic HC {2}	18.76	120	311945	48.33	ug/m3	100
17) C9-C10 Aromatic HC {3}	18.91	120	459299	49.68	ug/m3	100
18) C9-C10 Aromatic HC {4}	20.02	120	105917	55.21	ug/m3	100
19) C9-C10 Aromatic HC {5}	20.28	120	353089	49.08	ug/m3	100
20) C9-C10 Aromatic HC {6}	20.02	134	264214	54.40	ug/m3	100
21) C9-C10 Aromatic HC - TOTAL	17.97	TIC	1789914m	250.26	ug/m3	

(#) = qualifier out of range (m) = manual integration
10131102.D 101111V9.M Thu Oct 20 11:05:57 2011

Quantitation Report

Data File : C:\HPCHEM\1\DATA\101311\10131102.D Vial: 2
Acq On : 13 Oct 2011 11:00 am Operator: RACHEL HILL
Sample : CCV 101311 VOA9 Inst : GC/MS Ins
Misc : CCV MA_APH Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 14 13:47 2011 Quant Results File: 101111V9.RES

Method : C:\HPCHEM\1\METHODS\101111V9.M (RTE Integrator)
Title : MASS APH
Last Update : Tue Oct 11 16:43:25 2011
Response via : Initial Calibration



RTI Laboratories

Run ID: VOA9_111013B **Run No.:** 43496

Analytical Run Date: 10/13/2011 **InstrumentID:** VOA9

Analyst: Rachel Hill **Column:**

Calibration ID: **Column ID:**

Column Length:

SampID	TestCode	SampType	Batch ID	Analysis Date/Time	QA By	Q	Comments
BFB3 101311 VOA9	BFB_TUNE	TUNE	R43496	10/14/2011 9:49:00 AM	Charles O`Bryan		
CCV2 101311 VOA9	MA_APH	CCV	R43496	10/14/2011 10:33:00 AM	Charles O`Bryan		
RLVS3 101311 VOA	MA_APH	RLVS	R43496	10/14/2011 11:17:00 AM	Charles O`Bryan		
BLK2 101311 VOA9	MA_APH	MBLK	R43496	10/14/2011 12:10:00 PM	Charles O`Bryan		
1110367-014B	MA_APH	SAMP	R43496	10/14/2011 1:40:00 PM	Charles O`Bryan		
1110367-015B	MA_APH	SAMP	R43496	10/14/2011 2:23:00 PM	Charles O`Bryan		
1110367-027B	MA_APH	SAMP	R43496	10/14/2011 3:55:00 PM	Charles O`Bryan		
1110367-017B	MA_APH	SAMP	R43496	10/14/2011 4:38:00 PM	Charles O`Bryan		
1110367-019B	MA_APH	SAMP	R43496	10/14/2011 6:05:00 PM	Charles O`Bryan		Over diluted sample. Will re-run at lower dilution. Reporting here to show that sample and duplicate were analyzed.
1110367-019BDUP	MA_APH	SAMP	R43496	10/14/2011 6:48:00 PM	Charles O`Bryan		
1110367-020B	MA_APH	SAMP	R43496	10/14/2011 7:31:00 PM	Charles O`Bryan		
1110367-026B	MA_APH	SAMP	R43496	10/14/2011 11:49:00 PM	Charles O`Bryan		
1109988-007B	MA_APH	SAMP	R43496	10/15/2011 1:58:00 AM	Charles O`Bryan	H	
1110067-012B	MA_APH	SAMP	R43496	10/15/2011 2:41:00 AM	Charles O`Bryan		
1110367-018B	MA_APH	SAMP	R43496	10/15/2011 3:31:00 AM	Charles O`Bryan		
1110367-021B	MA_APH	SAMP	R43496	10/15/2011 5:10:00 AM	Charles O`Bryan		
1110367-024B	MA_APH	SAMP	R43496	10/15/2011 5:56:00 AM	Charles O`Bryan		
1110367-025B	MA_APH	SAMP	R43496	10/15/2011 6:46:00 AM	Charles O`Bryan		
RLVS4 101311 VOA	MA_APH	RLVS	R43496	10/15/2011 7:29:00 AM	Charles O`Bryan		

RTI Laboratories

ANALYTICAL RUN Summary

20-Oct-11

RunNo 43496

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
850030	BFB3 101311 VOA9	BFB_TUNE	TUNE	\1\DATA\101311\	10/14/2011 9:49:	1	R43496		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
173	M		0	0		0	0	0	0	0	0	0%	0	2	0%	
174	M		57	57		0	0	0	0	0	0	0%	50	120	0%	
175	M		7.5	7.5		0	0	0	0	0	0	0%	4	9	0%	
176	M		96.5	96.5		0	0	0	0	0	0	0%	93	101	0%	
177	M		6.6	6.6		0	0	0	0	0	0	0%	5	9	0%	
50	M		25.1	25.1		0	0	0	0	0	0	0%	8	40	0%	
75	M		49.8	49.8		0	0	0	0	0	0	0%	30	66	0%	
95	M		100	100		0	0	0	0	0	0	0%	100	100	0%	
96	M		6.9	6.9		0	0	0	0	0	0	0%	5	9	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
850031	CCV2 101311 VOA9	MA_APH	CCV	\1\DATA\101311\	10/14/2011 10:3	1	R43496		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
C5-C8 Aliphatic	A	µg/m³		0		0	0	0	0	0	0	0%	0	0	0%	
C5-C8 Aliphatic HC - TOTAL	A	µg/m³	257.24	257.24		234	0	0	0	0	0	110%	70	130	0%	
C5-C8 Aliphatic Hydrocarbons	A	µg/m³		0		0	0	0	29.876	117	0	0%	0	0	0%	
C9-C10 Aromatic HC - TOTAL	A	µg/m³	250.4	250.4		266	0	0	0	0	0	94%	70	130	0%	
C9-C10 Aromatic Hydrocarbons	A	µg/m³		0		0	0	0	35.658	133	0	0%	0	0	0%	
C9-C12 Aliphatic	A	µg/m³		0		0	0	0	0	0	0	0%	0	0	0%	
C9-C12 Aliphatic HC - TOTAL	A	µg/m³	416.96	416.96		378	0	0	0	0	0	110%	70	130	0%	
C9-C12 Aliphatic Hydrocarbons	A	µg/m³		0		0	0	0	25.766	189	0	0%	0	0	0%	
C9-C12 Aliphatic-Aromatic Hydrocarbons	A	µg/m³		0		0	0	0	0	0	0	0%	0	0	0%	
non C5-C8 - TOTAL	A	µg/m³		0		0	0	0	0	0	0	0%	0	0	0%	
non C9-C12 - TOTAL	A	µg/m³		0		0	0	0	0	0	0	0%	0	0	0%	
Chlorobenzene-d5	I	ppbv	12.5	12.5		12.5	0	0	0	0	0	100%	80	120	0%	
4-Bromofluorobenzene	S	µg/m³	92.44	92.44		89.5	0	0	0	0	0	103%	70	130	0%	

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\101311\10131128.D Vial: 2
Acq On : 14 Oct 2011 10:33 am Operator: RACHEL HILL
Sample : CCV2 101311 VOA9 Inst : GC/MS Ins
Misc : CCV MA_APH Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Oct 17 10:25 2011 Quant Results File: 101111V9.RES

Quant Method : C:\HPCHEM\1\METHODS\101111V9.M (RTE Integrator)
Title : MASS APH
Last Update : Tue Oct 11 16:43:25 2011
Response via : Initial Calibration
DataAcq Meth : 101111V9

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
40) Chlorobenzene-d5	16.51	117	820480	12.50	ug/m3	-0.01

System Monitoring Compounds

41) 4-Bromofluorobenzene	18.34	95	546660	92.44	ug/m3	0.00

Spiked Amount 89.500 Range 70 - 130 Recovery = 103.28%

Target Compounds						Qvalue
1) C5-C8 Aliphatic HC	7.18	TIC	2832560	35.02	ug/m3	100
2) C5-C8 Aliphatic HC {2}	9.56	TIC	2870634	39.42	ug/m3	100
3) C5-C8 Aliphatic HC {3}	11.28	TIC	3627398	45.30	ug/m3	100
4) C5-C8 Aliphatic HC {4}	11.35	TIC	2727926	37.29	ug/m3	100
5) C5-C8 Aliphatic HC {5}	11.91	TIC	3466601	45.94	ug/m3	100
6) C5-C8 Aliphatic HC {6}	14.30	TIC	4123082	54.06	ug/m3	100
7) C5-C8 Aliphatic HC - TOTAL	7.18	TIC	19648201m	257.24	ug/m3	
8) C9-C12 Aliphatic HC	15.70	TIC	5093644	60.68	ug/m3	100
9) C9-C12 Aliphatic HC {2}	16.57	TIC	4982811	61.62	ug/m3	100
10) C9-C12 Aliphatic HC {3}	18.68	TIC	4733998	68.44	ug/m3	100
11) C9-C12 Aliphatic HC {4}	19.83	TIC	4607856	65.78	ug/m3	100
12) C9-C12 Aliphatic HC {5}	20.64	TIC	4754541	79.00	ug/m3	100
13) C9-C12 Aliphatic HC {6}	22.47	TIC	4032606	80.18	ug/m3	100
14) C9-C12 Aliphatic HC - TOTA	15.70	TIC	28205456m	416.96	ug/m3	
15) C9-C10 Aromatic HC	17.97	120	297457	48.47	ug/m3	100
16) C9-C10 Aromatic HC {2}	18.77	120	313486	48.57	ug/m3	100
17) C9-C10 Aromatic HC {3}	18.91	120	457542	49.49	ug/m3	100
18) C9-C10 Aromatic HC {4}	20.03	120	108251	56.43	ug/m3	100
19) C9-C10 Aromatic HC {5}	20.28	120	352930	49.06	ug/m3	100
20) C9-C10 Aromatic HC {6}	20.03	134	261287	53.80	ug/m3	100
21) C9-C10 Aromatic HC - TOTAL	17.97	TIC	1790953m	250.40	ug/m3	

(#) = qualifier out of range (m) = manual integration

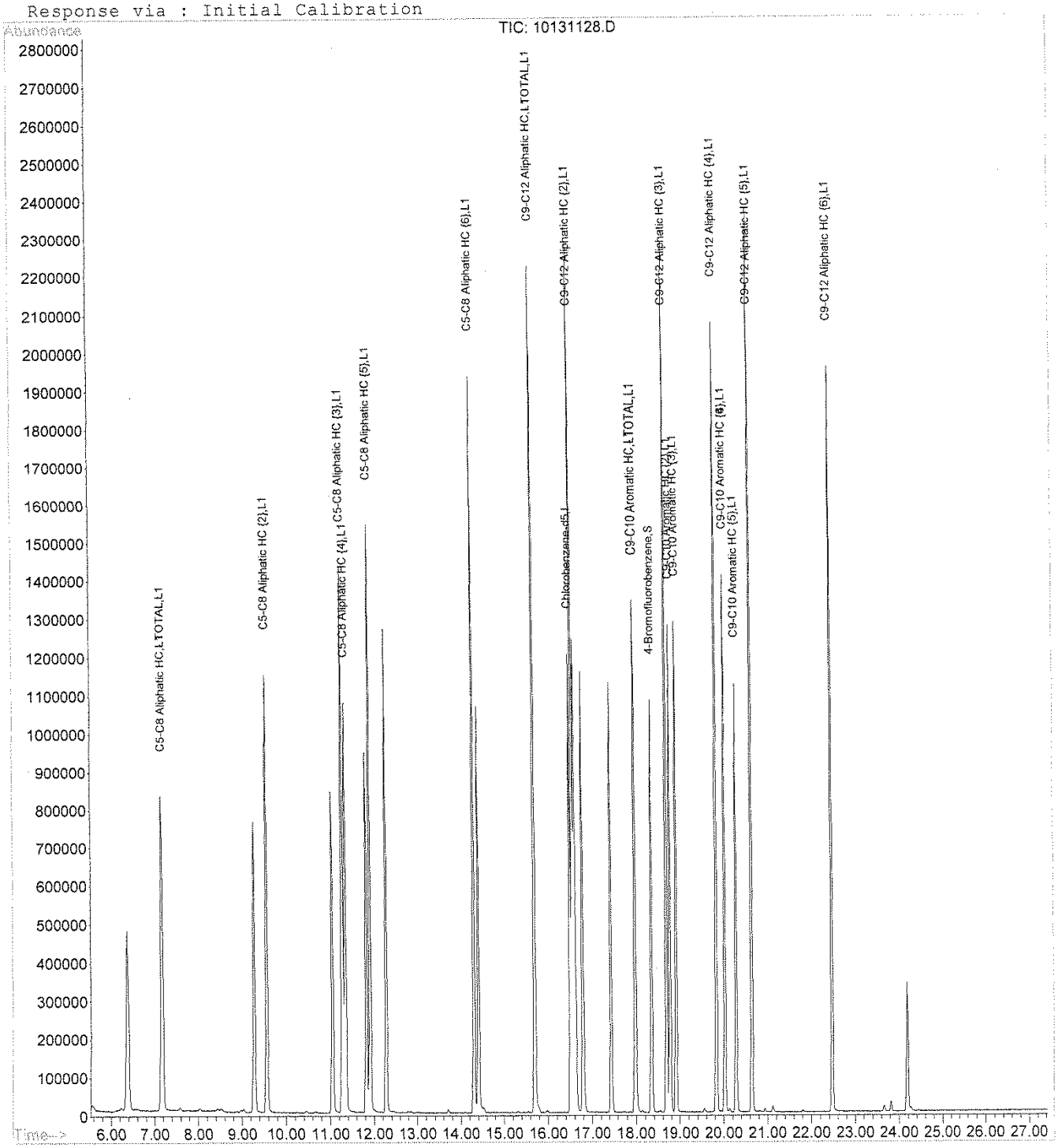
Quantitation Report

Data File : C:\HPCHEM\1\DATA\101311\10131128.D
Acq On : 14 Oct 2011 10:33 am
Sample : CCV2 101311 VOA9
Misc : CCV MA_APH
MS Integration Params: rteint.p
Quant Time: Oct 17 10:25 2011

Vial: 2
Operator: RACHEL HILL
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: 101111V9.RES

Method : C:\HPCHEM\1\METHODS\101111V9.M (RTE Integrator)
Title : MASS APH
Last Update : Tue Oct 11 16:43:25 2011
Response via : Initial Calibration



Response Factor Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\092111V9.M (RTE Integrator)
Title : MASS APH
Last Update : Thu Sep 22 10:01:26 2011
Response via : Initial Calibration

Calibration Files
1 =09211103.D 2 =09211104.D 3 =09211105.D
4 =09211106.D 5 =09211107.D 6 =09211108.D

		Compound	1	2	3	4	5	6	Avg		%RSD
1)	L1	C5-C8 Aliphatic HC	3.342	3.501	3.431	3.048	2.961	2.792	3.112	E4	10.14
2)	L1	C5-C8 Aliphatic HC	3.085	3.144	3.314	3.157	3.035	2.776	3.013	E4	8.35
3)	L1	C5-C8 Aliphatic HC	3.482	3.500	3.661	3.492	3.355	3.043	3.338	E4	8.81
4)	L1	C5-C8 Aliphatic HC	3.266	3.329	3.432	3.293	3.244	2.975	3.180	E4	7.73
5)	L1	C5-C8 Aliphatic HC	3.409	3.292	3.437	3.366	3.216	2.933	3.197	E4	8.39
6)	L1	C5-C8 Aliphatic HC	3.531	3.389	3.563	3.402	3.284	2.973	3.266	E4	9.52
7)	L1	C5-C8 Aliphatic HC	3.367	3.358	3.481	3.317	3.202	2.924	3.195	E4	8.60
8)	L1	C9-C12 Aliphatic HC	3.835	3.715	3.856	3.686	3.548	3.204	3.535	E4	10.07
9)	L1	C9-C12 Aliphatic HC	3.862	3.468	3.551	3.532	3.337	3.128	3.393	E4	9.41
10)	L1	C9-C12 Aliphatic HC	3.397	3.098	3.226	3.063	2.977	2.651	2.985	E4	10.66
11)	L1	C9-C12 Aliphatic HC	3.530	3.258	3.337	3.218	3.094	2.779	3.113	E4	10.60
12)	L1	C9-C12 Aliphatic HC	3.001	2.731	2.825	2.691	2.573	2.324	2.625	E4	10.37
13)	L1	C9-C12 Aliphatic HC	2.572	2.269	2.387	2.288	2.231	2.003	2.238	E4	9.90
14)	L1	C9-C12 Aliphatic HC	3.308	3.031	3.139	3.020	2.904	2.628	2.926	E4	10.08
15)	L1	C9-C10 Aromatic HC	4.152	3.792	3.941	3.790	3.620	3.289	3.663	E3	10.30
16)	L1	C9-C10 Aromatic HC	4.471	4.015	4.104	3.947	3.798	3.490	3.874	E3	10.14
17)	L1	C9-C10 Aromatic HC	6.548	5.926	5.959	5.780	5.547	5.034	5.641	E3	10.97
18)	L1	C9-C10 Aromatic HC	1.324	1.207	1.250	1.181	1.141	1.042	1.163	E3	9.79
19)	L1	C9-C10 Aromatic HC	5.007	4.496	4.588	4.444	4.249	3.863	4.323	E3	10.77
20)	L1	C9-C10 Aromatic HC	3.712	3.332	3.387	3.235	3.158	2.825	3.189	E3	10.94
21)	L1	C9-C10 Aromatic HC	5.054	4.563	4.642	4.466	4.290	3.912	4.371	E3	10.62
22)		C5-C8 Aliphatic	3.367	3.358	3.481	3.317	3.202	2.924	3.195	E4	8.60
23)	L1	non C5-C8	2.485	2.302	2.785	2.563	2.422	2.260	2.422	E4	8.87
24)	L1	non C5-C8 {2}	2.950	2.744	2.795	2.687	2.592	2.369	2.629	E4	9.15
25)	L1	non C5-C8 {3}	1.800	2.105	2.247	2.164	2.090	2.028	2.049	E4	7.42
26)	L1	non C5-C8 {4}	2.957	2.860	2.965	2.850	2.769	2.509	2.757	E4	8.12
27)	L1	non C5-C8 {5}	2.635	3.065	3.334	3.156	3.074	2.978	2.984	E4	8.72
28)	L1	non C5-C8 {6}	3.653	3.195	3.353	3.122	3.047	2.900	3.147	E4	9.36
29)	L1	non C5-C8 - TOTAL	2.502	2.694	2.894	2.759	2.681	2.526	2.636	E4	6.48
30)		C9-C12 Aliphatic	3.308	3.031	3.139	3.020	2.904	2.628	2.926	E4	10.08
31)	L1	non C9-C12	2.660	2.963	3.258	3.026	2.928	2.829	2.900	E4	7.49
32)	L1	non C9-C12 {2}	3.509	3.217	3.358	3.219	3.177	2.702	3.102	E4	11.42
33)	L1	non C9-C12 {3}	3.768	3.330	3.474	3.327	3.232	2.980	3.280	E4	9.28
34)	L1	non C9-C12 {4}	3.594	3.238	3.370	3.251	3.157	2.910	3.182	E4	8.82
35)	L1	non C9-C12 {5}	2.094	2.244	2.445	2.372	2.319	2.288	2.267	E4	5.75
36)	L1	non C9-C12 - TOTAL	2.426	2.421	2.560	2.434	2.357	2.139	2.332	E4	8.48
37)	L1	C9-C10 Aromatic	5.054	4.563	4.642	4.466	4.290	3.912	4.371	E3	10.62
38)	L1	C9-C10 Aromatic {2}	5.054	4.563	4.642	4.466	4.290	3.912	4.371	E3	10.62
39)	L1	C9-C10 Aromatic - T	5.054	4.563	4.642	4.466	4.290	3.912	4.371	E3	10.62
40)	I	Chlorobenzene-d5	----------ISTD----------								
41)	S	4-Bromofluorobenzen	0.090	0.088	0.088	0.089	0.091	0.090	0.090		1.33

(#) = Out of Range ### Number of calibration levels exceeded format ###

Compound List Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\092111V9.M (RTE Integrator)
Title : MASS APH
Last Update : Thu Sep 22 10:01:26 2011
Response via : Initial Calibration
Total Cpnds : 41

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	L1	C5-C8 Aliphatic HC	TIC	7.21	1.000	A	0	A	B
2	L1	C5-C8 Aliphatic HC {2}	TIC	9.59	1.000	A	0	A	B
3	L1	C5-C8 Aliphatic HC {3}	TIC	11.30	1.000	A	0	A	B
4	L1	C5-C8 Aliphatic HC {4}	TIC	11.37	1.000	A	0	A	B
5	L1	C5-C8 Aliphatic HC {5}	TIC	11.93	1.000	A	0	A	B
6	L1	C5-C8 Aliphatic HC {6}	TIC	14.31	1.000	A	0	A	B
7	L1	C5-C8 Aliphatic HC - TOTAL	TIC	7.00	1.000	A	0	A	B
8	L1	C9-C12 Aliphatic HC	TIC	15.71	1.000	A	0	A	B
9	L1	C9-C12 Aliphatic HC {2}	TIC	16.58	1.000	A	0	A	B
10	L1	C9-C12 Aliphatic HC {3}	TIC	18.69	1.000	A	0	A	B
11	L1	C9-C12 Aliphatic HC {4}	TIC	19.84	1.000	A	0	A	B
12	L1	C9-C12 Aliphatic HC {5}	TIC	20.66	1.000	A	0	A	B
13	L1	C9-C12 Aliphatic HC {6}	TIC	22.48	1.000	A	0	A	B
14	L1	C9-C12 Aliphatic HC - TOTAL	TIC	15.71	1.000	A	0	A	B
15	L1	C9-C10 Aromatic HC	120	17.99	1.000	A	0	A	B
16	L1	C9-C10 Aromatic HC {2}	120	18.78	1.000	A	0	A	B
17	L1	C9-C10 Aromatic HC {3}	120	18.92	1.000	A	0	A	B
18	L1	C9-C10 Aromatic HC {4}	120	20.04	1.000	A	0	A	B
19	L1	C9-C10 Aromatic HC {5}	120	20.30	1.000	A	0	A	B
20	L1	C9-C10 Aromatic HC {6}	134	20.04	1.000	A	0	A	B
21	L1	C9-C10 Aromatic HC - TOTAL	TIC	17.99	1.000	A	0	A	B
22		C5-C8 Aliphatic	TIC	7.00	1.000	A	0	A	B
23	L1	non C5-C8	TIC	6.41	1.000	A	0	A	B
24	L1	non C5-C8 {2}	TIC	9.30	1.000	A	0	A	B
25	L1	non C5-C8 {3}	TIC	11.07	1.000	A	0	A	B
26	L1	non C5-C8 {4}	TIC	11.84	1.000	A	0	A	B
27	L1	non C5-C8 {5}	TIC	12.29	1.000	A	0	A	B
28	L1	non C5-C8 {6}	TIC	14.42	1.000	A	0	A	B
29	L1	non C5-C8 - TOTAL	TIC	6.41	1.000	A	0	A	B
30		C9-C12 Aliphatic	TIC	16.54	1.000	A	0	A	B
31	L1	non C9-C12	TIC	16.52	1.000	A	0	A	B
32	L1	non C9-C12 {2}	TIC	16.63	1.000	A	0	A	B
33	L1	non C9-C12 {3}	TIC	16.80	1.000	A	0	A	B
34	L1	non C9-C12 {4}	TIC	17.45	1.000	A	0	A	B
35	L1	non C9-C12 {5}	TIC	18.35	1.000	A	0	A	B
36	L1	non C9-C12 - TOTAL	TIC	16.52	1.000	A	0	A	B
37	L1	C9-C10 Aromatic	120	17.62	1.000	A	0	A	B
38	L1	C9-C10 Aromatic {2}	134	17.62	1.000	A	0	A	B
39	L1	C9-C10 Aromatic - TOTAL	134	0.00	1.000	A	1	A	B
40	I	Chlorobenzene-d5	117	16.52	1.000	A	2	A	B
41	S	4-Bromofluorobenzene	95	18.35	1.111	A	2	A	B

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

092111V9.M Thu Oct 20 11:01:42 2011

Response Factor Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\101111V9.M (RTE Integrator)
Title : MASS APH
Last Update : Tue Oct 11 16:43:25 2011
Response via : Initial Calibration

Calibration Files
1 =10111103.D 2 =10111104.D 3 =10111105.D
4 =10111106.D 5 =10111107.D 6 =10111108.D

		Compound	1	2	3	4	5	6	Avg		%RSD
1)	L1	C5-C8 Aliphatic HC	9.890	8.523	8.255	8.056	7.739	7.306	8.088	E4	12.08
2)	L1	C5-C8 Aliphatic HC	9.106	7.873	7.399	7.239	6.879	6.476	7.282	E4	13.89
3)	L1	C5-C8 Aliphatic HC	9.980	8.743	8.224	7.857	7.654	7.172	8.007	E4	14.28
4)	L1	C5-C8 Aliphatic HC	8.816	7.700	7.378	7.418	6.924	6.592	7.315	E4	11.13
5)	L1	C5-C8 Aliphatic HC	9.283	8.120	7.709	7.646	7.258	6.700	7.546	E4	13.51
6)	L1	C5-C8 Aliphatic HC	9.395	8.276	8.020	7.710	7.314	6.720	7.627	E4	14.59
7)	L1	C5-C8 Aliphatic HC	9.409	8.212	7.830	7.659	7.297	6.808	7.638	E4	13.34
8)	L1	C9-C12 Aliphatic HC	1.049	0.916	0.886	0.855	0.801	0.735	0.839	E5	15.87
9)	L1	C9-C12 Aliphatic HC	9.874	8.947	8.514	8.172	7.613	7.184	8.087	E4	14.58
10)	L1	C9-C12 Aliphatic HC	8.599	7.639	7.437	6.998	6.546	6.048	6.917	E4	16.32
11)	L1	C9-C12 Aliphatic HC	8.742	7.741	7.468	7.138	6.609	6.098	7.005	E4	16.37
12)	L1	C9-C12 Aliphatic HC	7.428	6.630	6.495	6.127	5.726	5.262	6.018	E4	16.18
13)	L1	C9-C12 Aliphatic HC	5.988	5.459	5.425	5.139	4.757	4.533	5.029	E4	13.73
14)	L1	C9-C12 Aliphatic HC	8.333	7.436	7.224	6.876	6.406	5.953	6.765	E4	15.52
15)	L1	C9-C10 Aromatic HC	7.342	6.577	6.323	6.148	5.885	5.623	6.137	E3	11.83
16)	L1	C9-C10 Aromatic HC	7.710	6.919	6.622	6.419	6.171	5.935	6.454	E3	11.44
17)	L1	C9-C10 Aromatic HC	1.115	0.990	0.948	0.925	0.887	0.850	0.924	E4	12.20
18)	L1	C9-C10 Aromatic HC	2.297	2.079	2.008	1.928	1.825	1.753	1.918	E3	12.74
19)	L1	C9-C10 Aromatic HC	8.631	7.775	7.398	7.121	6.815	6.601	7.194	E3	11.82
20)	L1	C9-C10 Aromatic HC	5.825	5.221	5.063	4.866	4.639	4.440	4.856	E3	12.38
21)	L1	C9-C10 Aromatic HC	8.598	7.701	7.366	7.124	6.810	6.569	7.152	E3	12.06
22)		C5-C8 Aliphatic	9.409	8.212	7.830	7.659	7.297	6.808	7.638	E4	13.34
23)	L1	non C5-C8	7.955	6.956	6.894	6.603	6.360	6.045	6.643	E4	11.04
24)	L1	non C5-C8 {2}	7.000	6.146	5.794	5.513	5.295	4.830	5.585	E4	14.90
25)	L1	non C5-C8 {3}	3.412	3.296	3.297	3.303	3.249	3.234	3.286	E4	2.01
26)	L1	non C5-C8 {4}	8.559	7.448	7.065	6.877	6.604	6.242	6.950	E4	12.70
27)	L1	non C5-C8 {5}	5.179	4.983	5.007	5.023	4.891	4.696	4.909	E4	4.18
28)	L1	non C5-C8 {6}	8.059	6.933	6.548	6.387	6.031	5.591	6.394	E4	14.65
29)	L1	non C5-C8 - TOTAL	5.500	5.498	5.454	5.459	5.378	5.221	5.364	E4	3.24
30)		C9-C12 Aliphatic	8.333	7.436	7.224	6.876	6.406	5.953	6.765	E4	15.52
31)	L1	non C9-C12	5.078	4.786	4.716	4.896	4.810	4.493	4.725	E4	5.49
32)	L1	non C9-C12 {2}	7.165	6.398	6.232	5.887	5.691	5.059	5.834	E4	15.53
33)	L1	non C9-C12 {3}	7.390	6.569	6.269	6.054	5.829	5.531	6.100	E4	12.34
34)	L1	non C9-C12 {4}	7.301	6.528	6.224	5.984	5.723	5.452	6.032	E4	12.43
35)	L1	non C9-C12 {5}	2.980	2.959	2.929	2.919	2.900	2.835	2.909	E4	1.88
36)	L1	non C9-C12 - TOTAL	4.363	4.230	4.131	4.074	3.981	3.757	3.997	E4	7.75
37)	L1	C9-C10 Aromatic	8.598	7.701	7.366	7.124	6.810	6.569	7.152	E3	12.06
38)	L1	C9-C10 Aromatic {2}	8.598	7.701	7.366	7.124	6.810	6.569	7.152	E3	12.06
39)	L1	C9-C10 Aromatic - T	8.598	7.701	7.366	7.124	6.810	6.569	7.152	E3	12.06
40)	I	Chlorobenzene-d5	----------ISTD----------								
41)	S	4-Bromofluorobenzen	0.088	0.090	0.089	0.089	0.090	0.092	0.090		1.92

(#) = Out of Range ### Number of calibration levels exceeded format ###

Compound List Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\101111V9.M (RTE Integrator)
Title : MASS APH
Last Update : Tue Oct 11 16:43:25 2011
Response via : Initial Calibration
Total Cpnds : 41

PK#	Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1 L1	C5-C8 Aliphatic HC	TIC	7.21	1.000	A	0	A	B
2 L1	C5-C8 Aliphatic HC {2}	TIC	9.59	1.000	A	0	A	B
3 L1	C5-C8 Aliphatic HC {3}	TIC	11.30	1.000	A	0	A	B
4 L1	C5-C8 Aliphatic HC {4}	TIC	11.37	1.000	A	0	A	B
5 L1	C5-C8 Aliphatic HC {5}	TIC	11.93	1.000	A	0	A	B
6 L1	C5-C8 Aliphatic HC {6}	TIC	14.31	1.000	A	0	A	B
7 L1	C5-C8 Aliphatic HC - TOTAL	TIC	7.00	1.000	A	0	A	B
8 L1	C9-C12 Aliphatic HC	TIC	15.71	1.000	A	0	A	B
9 L1	C9-C12 Aliphatic HC {2}	TIC	16.58	1.000	A	0	A	B
10 L1	C9-C12 Aliphatic HC {3}	TIC	18.69	1.000	A	0	A	B
11 L1	C9-C12 Aliphatic HC {4}	TIC	19.84	1.000	A	0	A	B
12 L1	C9-C12 Aliphatic HC {5}	TIC	20.66	1.000	A	0	A	B
13 L1	C9-C12 Aliphatic HC {6}	TIC	22.48	1.000	A	0	A	B
14 L1	C9-C12 Aliphatic HC - TOTAL	TIC	15.71	1.000	A	0	A	B
15 L1	C9-C10 Aromatic HC	120	17.99	1.000	A	0	A	B
16 L1	C9-C10 Aromatic HC {2}	120	18.78	1.000	A	0	A	B
17 L1	C9-C10 Aromatic HC {3}	120	18.92	1.000	A	0	A	B
18 L1	C9-C10 Aromatic HC {4}	120	20.04	1.000	A	0	A	B
19 L1	C9-C10 Aromatic HC {5}	120	20.30	1.000	A	0	A	B
20 L1	C9-C10 Aromatic HC {6}	134	20.04	1.000	A	0	A	B
21 L1	C9-C10 Aromatic HC - TOTAL	TIC	17.99	1.000	A	0	A	B
22	C5-C8 Aliphatic	TIC	7.00	1.000	A	0	A	B
23 L1	non C5-C8	TIC	6.41	1.000	A	0	A	B
24 L1	non C5-C8 {2}	TIC	9.30	1.000	A	0	A	B
25 L1	non C5-C8 {3}	TIC	11.07	1.000	A	0	A	B
26 L1	non C5-C8 {4}	TIC	11.84	1.000	A	0	A	B
27 L1	non C5-C8 {5}	TIC	12.29	1.000	A	0	A	B
28 L1	non C5-C8 {6}	TIC	14.42	1.000	A	0	A	B
29 L1	non C5-C8 - TOTAL	TIC	6.41	1.000	A	0	A	B
30	C9-C12 Aliphatic	TIC	16.54	1.000	A	0	A	B
31 L1	non C9-C12	TIC	16.52	1.000	A	0	A	B
32 L1	non C9-C12 {2}	TIC	16.63	1.000	A	0	A	B
33 L1	non C9-C12 {3}	TIC	16.80	1.000	A	0	A	B
34 L1	non C9-C12 {4}	TIC	17.45	1.000	A	0	A	B
35 L1	non C9-C12 {5}	TIC	18.35	1.000	A	0	A	B
36 L1	non C9-C12 - TOTAL	TIC	16.52	1.000	A	0	A	B
37 L1	C9-C10 Aromatic	120	17.62	1.000	A	0	A	B
38 L1	C9-C10 Aromatic {2}	134	17.62	1.000	A	0	A	B
39 L1	C9-C10 Aromatic - TOTAL	134	0.00	1.000	A	1	A	B
40 I	Chlorobenzene-d5	117	16.52	1.000	A	2	A	B
41 S	4-Bromofluorobenzene	95	18.35	1.111	A	2	A	B

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

101111V9.M Thu Oct 20 11:05:51 2011

RTI Laboratories

Run ID: GC-TCD 1_111011A **Run No.:** 43559

Analytical Run Date: 10/11/2011 **InstrumentID:** GC-TCD 1

Analyst: Mike Budziak **Column:** GC-TCD 1

Calibration ID: **Column ID:** 100/120mesh x 1mm ID

Column Length: 2m

SampID	TestCode	SampType	Batch ID	Analysis Date/Time	QA By	Q	Comments
mblk	ASTM-D2504	MBLK	R43559	10/11/2011 11:09:00 AM	Charles O`Bryan		
ccv std 1-2 a	ASTM-D2504	CCV	R43559	10/11/2011 11:36:00 AM	Charles O`Bryan		
lcs	ASTM-D2504	LCS	R43559	10/11/2011 12:12:00 PM	Charles O`Bryan		
crql std 2% a	ASTM-D2504	CRQL	R43559	10/11/2011 12:34:00 PM	Charles O`Bryan		
1109988-001A	ASTM-D2504	SAMP	R43559	10/11/2011 1:03:00 PM	Charles O`Bryan		
1109988-002A	ASTM-D2504	SAMP	R43559	10/11/2011 1:25:00 PM	Charles O`Bryan		
1109988-003A	ASTM-D2504	SAMP	R43559	10/11/2011 2:08:00 PM	Charles O`Bryan		
1109988-004A	ASTM-D2504	SAMP	R43559	10/11/2011 2:27:00 PM	Charles O`Bryan		
1109988-005A	ASTM-D2504	SAMP	R43559	10/11/2011 3:02:00 PM	Charles O`Bryan		
1109988-006A	ASTM-D2504	SAMP	R43559	10/11/2011 3:30:00 PM	Charles O`Bryan		
1109988-007A	ASTM-D2504	SAMP	R43559	10/11/2011 3:50:00 PM	Charles O`Bryan		
1109988-008A	ASTM-D2504	SAMP	R43559	10/11/2011 4:11:00 PM	Charles O`Bryan		
1109988-009A	ASTM-D2504	SAMP	R43559	10/11/2011 4:39:00 PM	Charles O`Bryan		
1109988-010A	ASTM-D2504	SAMP	R43559	10/11/2011 5:00:00 PM	Charles O`Bryan		
1109988-010ADUP	ASTM-D2504	DUP	R43559	10/11/2011 5:28:00 PM	Charles O`Bryan		
ccv std 1-2 b	ASTM-D2504	CCV	R43559	10/11/2011 5:56:00 PM	Charles O`Bryan		
crql std 2% b	ASTM-D2504	CRQL	R43559	10/11/2011 6:19:00 PM	Charles O`Bryan		

RTI Laboratories

ANALYTICAL RUN Summary

20-Oct-11

RunNo 43559

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
851760	mblk	ASTM-D2504	MBLK	ATA\101111\1011	10/11/2011 11:0	1	R43559		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	0	0		0	0	0	0.025	0.1	0	0%	0	0	0%	
Carbon Monoxide	A	%	0	0		0	0	0	0.025	0.1	0	0%	0	0	0%	
Ethane	A	%		0		0	0	0	0.025	0.5	0	0%	0	0	0%	
Hydrogen	A	%		0		0	0	0	0.025	0.5	0	0%	0	0	0%	
Methane	A	%	0	0		0	0	0	0.025	0.5	0	0%	0	0	0%	
Nitrogen	A	%	0	0		0	0	0	0.025	0.1	0	0%	0	0	0%	
Oxygen	A	%	0	0		0	0	0	0.025	0.1	0	0%	0	0	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
851761	ccv std 1-2 a	ASTM-D2504	CCV	ATA\101111\1011	10/11/2011 11:3	1	R43559		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	2.564	2.564		2.5	0	0	0.025	0.1	0	103%	85	115	0%	
Carbon Monoxide	A	%	2.496	2.496		2.5	0	0	0.025	0.1	0	100%	85	115	0%	
Ethane	A	%		0		0	0	0	0.025	0.5	0	0%	85	115	0%	
Hydrogen	A	%		0		0	0	0	0.025	0.5	0	0%	85	115	0%	
Methane	A	%	1.947	1.947		2	0	0	0.025	0.5	0	97%	85	115	0%	
Nitrogen	A	%	2.857	2.857		2.5	0	0	0.025	0.1	0	114%	85	115	0%	
Oxygen	A	%	2.57	2.57		2.5	0	0	0.025	0.1	0	103%	85	115	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
851762	lcs	ASTM-D2504	LCS	ATA\101111\1011	10/11/2011 12:1	1	R43559		0	851761	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	2.557	2.557		2.5	0	2.564	0.025	0.1	0	102%	70	130	0%	
Carbon Monoxide	A	%	2.483	2.483		2.5	0	2.496	0.025	0.1	0	99%	70	130	1%	
Ethane	A	%		0		0	0	0	0.025	0.5	0	0%	70	130	0%	
Hydrogen	A	%		0		0	0	0	0.025	0.5	0	0%	70	130	0%	
Methane	A	%	1.977	1.977		2	0	1.947	0.025	0.5	0	99%	70	130	2%	
Nitrogen	A	%	2.779	2.779		2.5	0	2.857	0.025	0.1	0	111%	70	130	3%	
Oxygen	A	%	2.507	2.507		2.5	0	2.57	0.025	0.1	0	100%	70	130	2%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
851773	1109988-010A (Container-01 of 01)	ASTM-D2504	SAMP	.TA\101111\1011	10/11/2011 5:00:	1	R43559		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Nitrogen	A	%	82.001	82.001		0	0	0	0.025	0.1	0	0%	0	0	0%	
Oxygen	A	%	12.944	12.944		0	0	0	0.025	0.1	0	0%	0	0	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
851774	1109988-010ADUP	ASTM-D2504	DUP	.TA\101111\1011	10/11/2011 5:28:	1	R43559		0	851773	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	4.1	4.1		0	0	4.079	0.025	0.1	0	0%	0	0	1%	
Carbon Monoxide	A	%	0	0		0	0	0	0.025	0.1	0	0%	0	0	0%	
Ethane	A	%		0		0	0	0	0.025	0.5	0	0%	0	0	0%	
Hydrogen	A	%		0		0	0	0	0.025	0.5	0	0%	0	0	0%	
Methane	A	%	0	0		0	0	0	0.025	0.5	0	0%	0	0	0%	
Nitrogen	A	%	82.461	82.461		0	0	82.001	0.025	0.1	0	0%	0	0	1%	
Oxygen	A	%	13.01	13.01		0	0	12.944	0.025	0.1	0	0%	0	0	1%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
851775	ccv std 1-2 b	ASTM-D2504	CCV	.TA\101111\1011	10/11/2011 5:56:	1	R43559		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	2.673	2.673		2.5	0	0	0.025	0.1	0	107%	85	115	0%	
Carbon Monoxide	A	%	2.576	2.576		2.5	0	0	0.025	0.1	0	103%	85	115	0%	
Ethane	A	%		0		0	0	0	0.025	0.5	0	0%	85	115	0%	
Hydrogen	A	%		0		0	0	0	0.025	0.5	0	0%	85	115	0%	
Methane	A	%	2.108	2.108		2	0	0	0.025	0.5	0	105%	85	115	0%	
Nitrogen	A	%	2.81	2.81		2.5	0	0	0.025	0.1	0	112%	85	115	0%	
Oxygen	A	%	2.609	2.609		2.5	0	0	0.025	0.1	0	104%	85	115	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
851776	crql std 2% b	ASTM-D2504	CRQL	.TA\101111\1011	10/11/2011 6:19:	1	R43559		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\2\DATA\101111\10111102.D Vial: 1
Acq On : 11 Oct 2011 11:36 am Operator:
Sample : ccv std 1-2 a Inst : GC/TCD
Misc : CCV ASTM-D2504 Multiplr: 1.00
IntFile : EVENTS.E

Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title : Method d2504 air analysis
Last Update : Thu May 12 16:13:25 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
1	Oxygen	2.500	2.570	-2.8	0	0.03
2	Nitrogen	2.500	2.857	-14.3	0	0.02
3	Carbon Monoxide	2.500	2.496	0.2	0	-0.02
4	Methane	2.000	1.947	2.6	0	-0.03
5	Carbon dioxide	2.500	2.564	-2.6	0	-0.06

Evaluate Continuing Calibration Report - Not Founds

Data File : C:\HPCHEM\2\DATA\101111\10111102.D Vial: 1
Acq On : 11 Oct 2011 11:36 am Operator:
Sample : ccv std 1-2 a Inst : GC/TCD
Misc : CCV ASTM-D2504 Multiplr: 1.00
IntFile : EVENTS.E

Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title : Method d2504 air analysis
Last Update : Thu May 12 16:13:25 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

Compound	Amount	Calc.	%Dev	Area%	Dev(Min)

(#) = Out of Range SPCC's out = 0 CCC's out = 0
03051113.D 030511.M Thu Oct 20 14:54:18 2011 TESTCAL

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\101111\10111102.D Vial: 1
Acq On : 11 Oct 2011 11:36 am Operator:
Sample : ccv std 1-2 a Inst : GC/TCD
Misc : CCV ASTM-D2504 Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 11 16:52 2011 Quant Results File: 030511.RES

Quant Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
Last Update : Wed May 25 15:37:00 2011
Response via : Initial Calibration
DataAcq Meth : TCD.M

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	Target Compounds			
1)	Oxygen	2.13	368438	2.570 %
2)	Nitrogen	2.32	492207	2.857 %
3)	Carbon Monoxide	3.01	393142	2.496 %
4)	Methane	6.22	250330	1.947 %
5)	Carbon dioxide	11.12f	464872	2.564 %

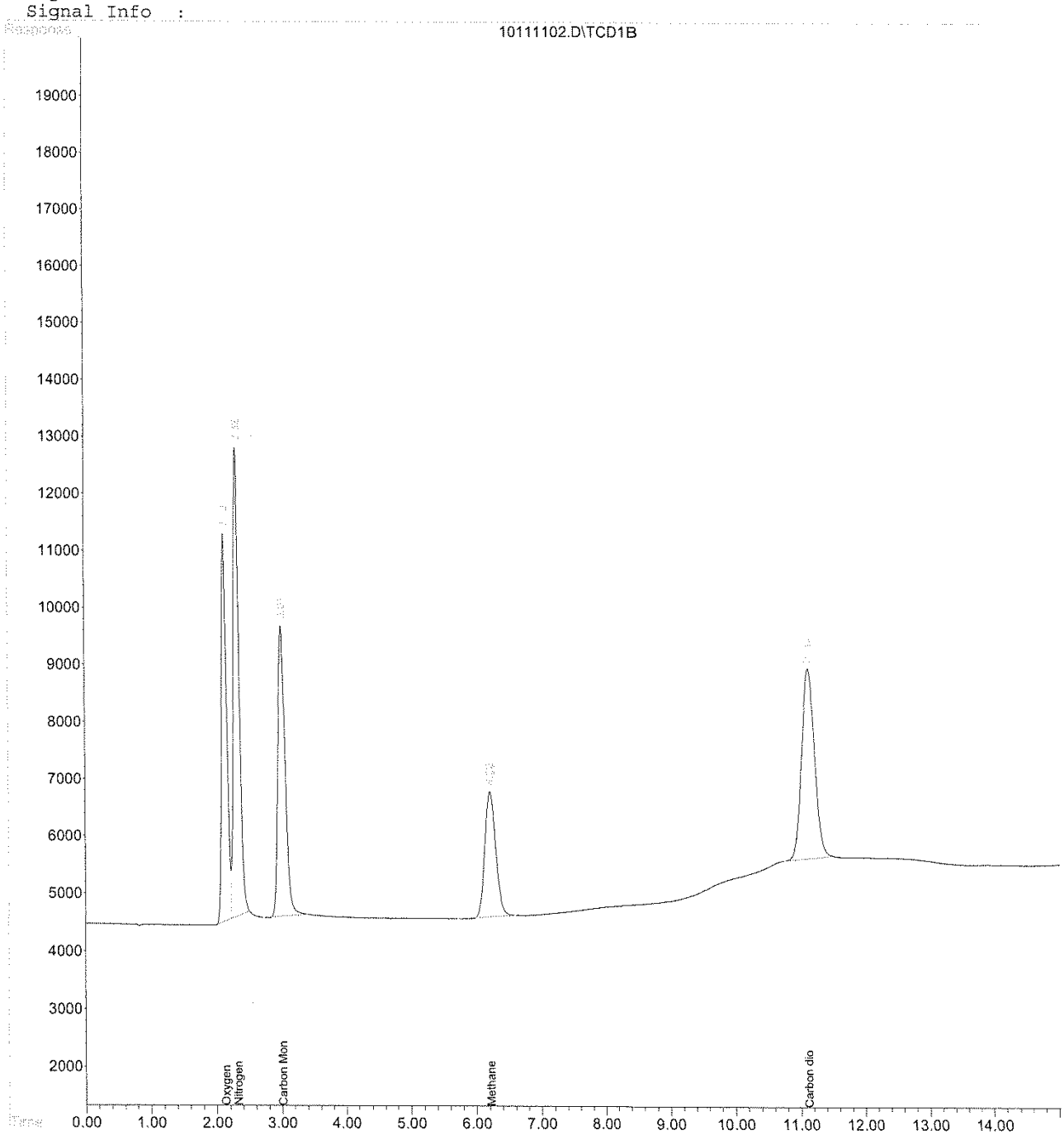
(f)=RT Delta > 1/2 Window (m)=manual int.
10111102.D 030511.M Thu Oct 20 14:54:10 2011 TESTCAL

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\101111\10111102.D Vial: 1
Acq On : 11 Oct 2011 11:36 am Operator:
Sample : ccv std 1-2 a Inst : GC/TCD
Misc : CCV ASTM-D2504 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Oct 11 16:52 2011 Quant Results File: 030511.RES

Quant Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
Last Update : Wed May 25 15:37:00 2011
Response via : Multiple Level Calibration
DataAcq Meth : TCD.M

Volume Inj. :
Signal Phase :
Signal Info :



Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\2\DATA\101111\10111116.D Vial: 1
Acq On : 11 Oct 2011 5:56 pm Operator:
Sample : ccv std 1-2 b Inst : GC/TCD
Misc : CCV ASTM-D2504 Multiplr: 1.00
IntFile : EVENTS.E

Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title : Method d2504 air analysis
Last Update : Thu May 12 16:13:25 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
1	Oxygen	2.500	2.609	-4.4	0	0.02
2	Nitrogen	2.500	2.810	-12.4	0	0.00
3	Carbon Monoxide	2.500	2.576	-3.0	0	-0.03
4	Methane	2.000	2.108	-5.4	0	-0.05
5	Carbon dioxide	2.500	2.673	-6.9	0	-0.09

Evaluate Continuing Calibration Report - Not Founds

Data File : C:\HPCHEM\2\DATA\101111\10111116.D Vial: 1
Acq On : 11 Oct 2011 5:56 pm Operator:
Sample : ccv std 1-2 b Inst : GC/TCD
Misc : CCV ASTM-D2504 Multiplr: 1.00
IntFile : EVENTS.E

Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title : Method d2504 air analysis
Last Update : Thu May 12 16:13:25 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

Compound	Amount	Calc.	%Dev	Area%	Dev(Min)

(#) = Out of Range SPCC's out = 0 CCC's out = 0
03051113.D 030511.M Thu Oct 20 14:55:21 2011 TESTCAL

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\101111\10111116.D Vial: 1
Acq On : 11 Oct 2011 5:56 pm Operator:
Sample : ccv std 1-2 b Inst : GC/TCD
Misc : CCV ASTM-D2504 Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 18 12:09 2011 Quant Results File: 030511.RES

Quant Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
Last Update : Wed May 25 15:37:00 2011
Response via : Initial Calibration
DataAcq Meth : TCD.M

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	Target Compounds			
1)	Oxygen	2.12	374102	2.609 %
2)	Nitrogen	2.31	484002	2.810 %
3)	Carbon Monoxide	2.99	405708	2.576 %
4)	Methane	6.19f	272831	2.108 %
5)	Carbon dioxide	11.09f	485397	2.673 %

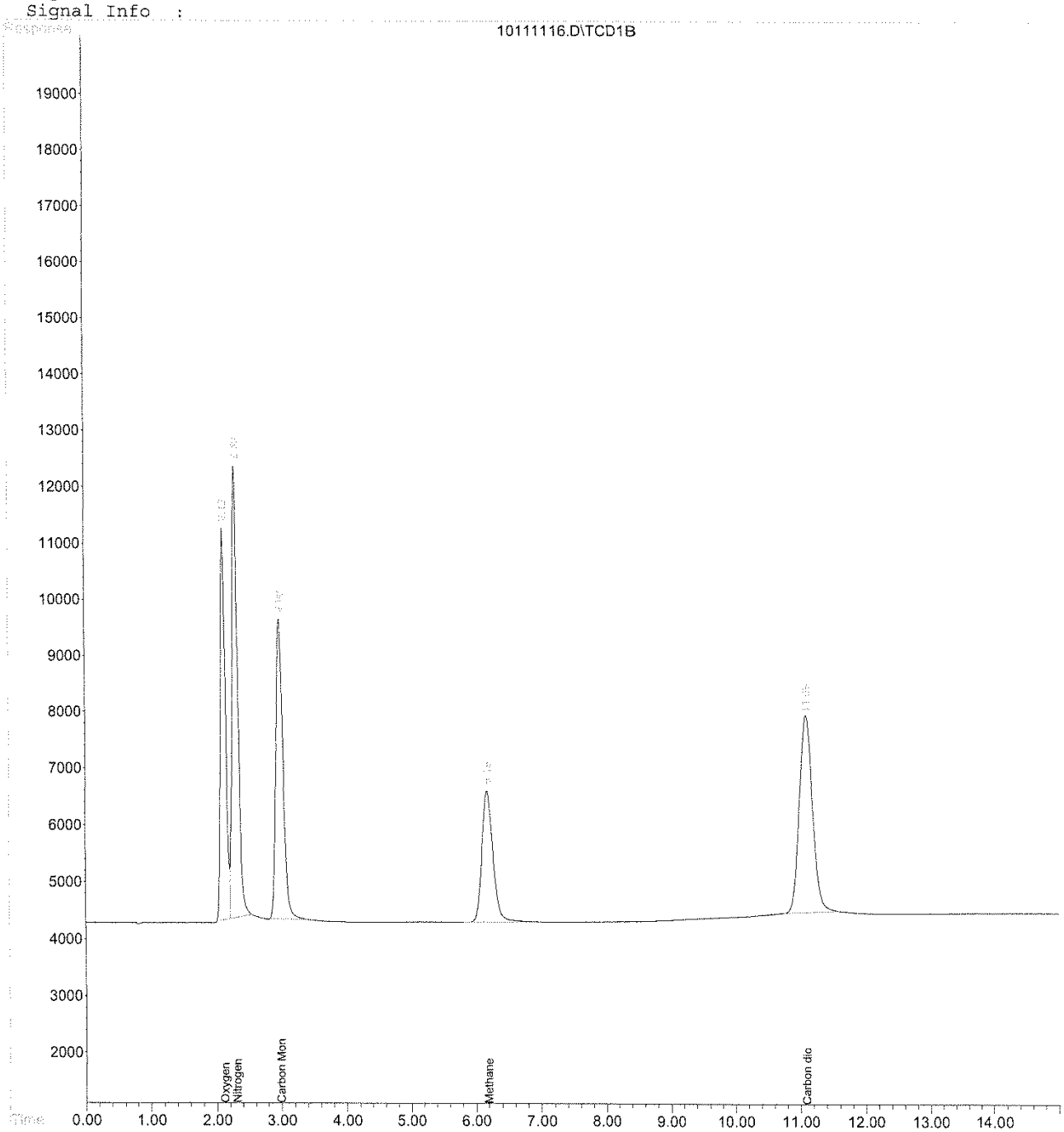
(f)=RT Delta > 1/2 Window (m)=manual int.
10111116.D 030511.M Thu Oct 20 14:55:17 2011 TESTCAL

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\101111\10111116.D Vial: 1
Acq On : 11 Oct 2011 5:56 pm Operator:
Sample : ccv std 1-2 b Inst : GC/TCD
Misc : CCV ASTM-D2504 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Oct 18 12:09 2011 Quant Results File: 030511.RES

Quant Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
Last Update : Wed May 25 15:37:00 2011
Response via : Multiple Level Calibration
DataAcq Meth : TCD.M

Volume Inj. :
Signal Phase :
Signal Info :



RTI Laboratories

Run ID: GC-TCD 1_111012A **Run No.:** 43560

Analytical Run Date: 10/12/2011 **InstrumentID:** GC-TCD 1

Analyst: Mike Budziak **Column:** GC-TCD 1

Calibration ID: **Column ID:** 100/120mesh x 1mm ID

Column Length: 2m

SampID	TestCode	SampType	Batch ID	Analysis Date/Time	QA By	Q	Comments
mblk	ASTM-D2504	MBLK	R43560	10/12/2011 10:55:00 AM	Charles O`Bryan		
ccv std 1-2 a	ASTM-D2504	CCV	R43560	10/12/2011 11:16:00 AM	Charles O`Bryan		
lcs	ASTM-D2504	LCS	R43560	10/12/2011 11:37:00 AM	Charles O`Bryan		
crql std 2% a	ASTM-D2504	CRQL	R43560	10/12/2011 12:04:00 PM	Charles O`Bryan		
1109988-011A	ASTM-D2504	SAMP	R43560	10/12/2011 12:28:00 PM	Charles O`Bryan		
1109988-012a	ASTM-D2504	SAMP	R43560	10/12/2011 12:54:00 PM	Charles O`Bryan		
1109988-013a	ASTM-D2504	SAMP	R43560	10/12/2011 1:14:00 PM	Charles O`Bryan		
1109988-014a	ASTM-D2504	SAMP	R43560	10/12/2011 1:53:00 PM	Charles O`Bryan		
1109988-015a	ASTM-D2504	SAMP	R43560	10/12/2011 2:29:00 PM	Charles O`Bryan		
1109988-016a	ASTM-D2504	SAMP	R43560	10/12/2011 2:49:00 PM	Charles O`Bryan		
1109988-017a	ASTM-D2504	SAMP	R43560	10/12/2011 3:10:00 PM	Charles O`Bryan		
1109988-018a	ASTM-D2504	SAMP	R43560	10/12/2011 3:50:00 PM	Charles O`Bryan		
1109988-019a	ASTM-D2504	SAMP	R43560	10/12/2011 4:20:00 PM	Charles O`Bryan		
1109988-019adup	ASTM-D2504	DUP	R43560	10/12/2011 4:39:00 PM	Charles O`Bryan		
ccv std 1-2 b	ASTM-D2504	CCV	R43560	10/12/2011 5:04:00 PM	Charles O`Bryan		
crql std 2% b	ASTM-D2504	CRQL	R43560	10/12/2011 5:51:00 PM	Charles O`Bryan		

RTI Laboratories

ANALYTICAL RUN Summary

20-Oct-11

RunNo 43560

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
851777	mblk	ASTM-D2504	MBLK	ATA\101211\1012	10/12/2011 10:5	1	R43560		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	0	0		0	0	0	0.025	0.1	0	0%	0	0	0%	
Carbon Monoxide	A	%	0	0		0	0	0	0.025	0.1	0	0%	0	0	0%	
Ethane	A	%		0		0	0	0	0.025	0.5	0	0%	0	0	0%	
Hydrogen	A	%		0		0	0	0	0.025	0.5	0	0%	0	0	0%	
Methane	A	%	0	0		0	0	0	0.025	0.5	0	0%	0	0	0%	
Nitrogen	A	%	0	0		0	0	0	0.025	0.1	0	0%	0	0	0%	
Oxygen	A	%	0	0		0	0	0	0.025	0.1	0	0%	0	0	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
851778	ccv std 1-2 a	ASTM-D2504	CCV	ATA\101211\1012	10/12/2011 11:1	1	R43560		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	2.414	2.414		2.5	0	0	0.025	0.1	0	97%	85	115	0%	
Carbon Monoxide	A	%	2.402	2.402		2.5	0	0	0.025	0.1	0	96%	85	115	0%	
Ethane	A	%		0		0	0	0	0.025	0.5	0	0%	85	115	0%	
Hydrogen	A	%		0		0	0	0	0.025	0.5	0	0%	85	115	0%	
Methane	A	%	2.05	2.05		2	0	0	0.025	0.5	0	103%	85	115	0%	
Nitrogen	A	%	2.667	2.667		2.5	0	0	0.025	0.1	0	107%	85	115	0%	
Oxygen	A	%	2.494	2.494		2.5	0	0	0.025	0.1	0	100%	85	115	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
851779	lcs	ASTM-D2504	LCS	ATA\101211\1012	10/12/2011 11:3	1	R43560		0	851778	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	2.432	2.432		2.5	0	2.414	0.025	0.1	0	97%	70	130	1%	
Carbon Monoxide	A	%	2.437	2.437		2.5	0	2.402	0.025	0.1	0	97%	70	130	1%	
Ethane	A	%		0		0	0	0	0.025	0.5	0	0%	70	130	0%	
Hydrogen	A	%		0		0	0	0	0.025	0.5	0	0%	70	130	0%	
Methane	A	%	2.003	2.003		2	0	2.05	0.025	0.5	0	100%	70	130	2%	
Nitrogen	A	%	2.72	2.72		2.5	0	2.667	0.025	0.1	0	109%	70	130	2%	
Oxygen	A	%	2.523	2.523		2.5	0	2.494	0.025	0.1	0	101%	70	130	1%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
851790	1109988-019adup	ASTM-D2504	DUP	.TA\101211\1012	10/12/2011 4:39:	1	R43560		0	851789	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Oxygen	A	%	20.131	20.131		0	0	20.142	0.025	0.1	0	0%	0	0	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
851791	ccv std 1-2 b	ASTM-D2504	CCV	.TA\101211\1012	10/12/2011 5:04:	1	R43560		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	2.441	2.441		2.5	0	0	0.025	0.1	0	98%	85	115	0%	
Carbon Monoxide	A	%	2.458	2.458		2.5	0	0	0.025	0.1	0	98%	85	115	0%	
Ethane	A	%		0		0	0	0	0.025	0.5	0	0%	85	115	0%	
Hydrogen	A	%		0		0	0	0	0.025	0.5	0	0%	85	115	0%	
Methane	A	%	2.025	2.025		2	0	0	0.025	0.5	0	101%	85	115	0%	
Nitrogen	A	%	2.871	2.871		2.5	0	0	0.025	0.1	0	115%	85	115	0%	
Oxygen	A	%	2.572	2.572		2.5	0	0	0.025	0.1	0	103%	85	115	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
851792	crql std 2% b	ASTM-D2504	CRQL	.TA\101211\1012	10/12/2011 5:51:	1	R43560		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	0.342	0.342		0.3	0	0	0.025	0.1	0	114%	80	120	0%	
Carbon Monoxide	A	%	0.145	0.145		0.14	0	0	0.025	0.1	0	104%	80	120	0%	
Ethane	A	%		0		0	0	0	0.025	0.5	0	0%	80	120	0%	
Hydrogen	A	%		0		0	0	0	0.025	0.5	0	0%	80	120	0%	
Methane	A	%	0.099	0.099		0.09	0	0	0.025	0.5	0	110%	80	120	0%	
Nitrogen	A	%	1.361	1.361		1.39	0	0	0.025	0.1	0	98%	80	120	0%	
Oxygen	A	%	0.076	0.076		0.08	0	0	0.025	0.1	0	95%	80	120	0%	

Evaluate Continuing Calibration Report

```
Data File : C:\HPCHEM\2\DATA\101211\10121102.D          Vial: 1
Acq On    : 12 Oct 2011  11:16 am                    Operator:
Sample    : ccv std 1-2 a                            Inst     : GC/TCD
Misc      : CCV  ASTM-D2504                          Multiplr: 1.00
IntFile   : EVENTS.E

Method       : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title        : Method d2504 air analysis
Last Update  : Thu May 12 16:13:25 2011
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  15%     Max. Rel. Area : 150%
```

	Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
1	Oxygen	2.500	2.494	0.2	0	0.03
2	Nitrogen	2.500	2.667	-6.7	0	0.02
3	Carbon Monoxide	2.500	2.402	3.9	0	-0.02
4	Methane	2.000	2.050	-2.5	0	-0.03
5	Carbon dioxide	2.500	2.414	3.4	0	-0.06

Evaluate Continuing Calibration Report - Not Founds

```
Data File : C:\HPCHEM\2\DATA\101211\10121102.D          Vial: 1
Acq On    : 12 Oct 2011  11:16 am                    Operator:
Sample    : ccv std 1-2 a                            Inst     : GC/TCD
Misc      : CCV  ASTM-D2504                          Multiplr: 1.00
IntFile   : EVENTS.E

Method       : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title        : Method d2504 air analysis
Last Update  : Thu May 12 16:13:25 2011
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  15%     Max. Rel. Area : 150%
```

Compound	Amount	Calc.	%Dev	Area%	Dev(Min)

(#) = Out of Range SPCC's out = 0 CCC's out = 0
03051113.D 030511.M Thu Oct 20 14:57:08 2011 TESTCAL

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\101211\10121102.D Vial: 1
Acq On : 12 Oct 2011 11:16 am Operator:
Sample : ccv std 1-2 a Inst : GC/TCD
Misc : CCV ASTM-D2504 Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 12 10:33 2011 Quant Results File: 030511.RES

Quant Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
Last Update : Wed May 25 15:37:00 2011
Response via : Initial Calibration
DataAcq Meth : TCD.M

Volume Inj. :
Signal Phase :
Signal Info :

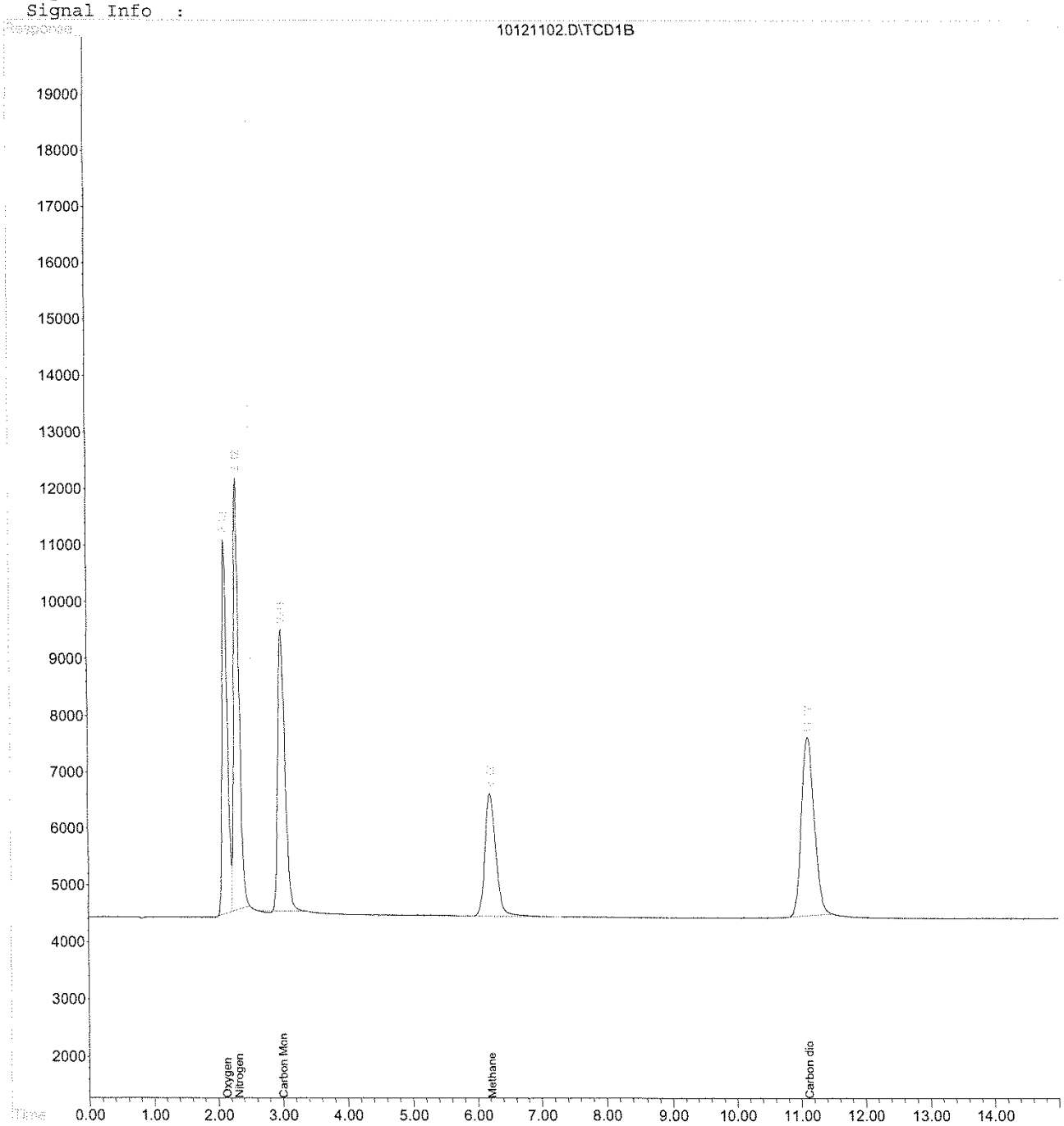
	Compound	R.T.	Response	Conc Units
	Target Compounds			
1)	Oxygen	2.13	357439	2.494 %
2)	Nitrogen	2.32	459453	2.667 %
3)	Carbon Monoxide	3.01	378286	2.402 %
4)	Methane	6.22	264666	2.050 %
5)	Carbon dioxide	11.12f	436941	2.414 %

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\101211\10121102.D Vial: 1
Acq On : 12 Oct 2011 11:16 am Operator:
Sample : ccv std 1-2 a Inst : GC/TCD
Misc : CCV ASTM-D2504 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Oct 12 10:33 2011 Quant Results File: 030511.RES

Quant Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
Last Update : Wed May 25 15:37:00 2011
Response via : Multiple Level Calibration
DataAcq Meth : TCD.M

Volume Inj. :
Signal Phase :
Signal Info :



Evaluate Continuing Calibration Report

```
Data File : C:\HPCHEM\2\DATA\101211\10121115.D          Vial: 1
Acq On    : 12 Oct 2011   5:04 pm                   Operator:
Sample    : ccv std 1-2 b                           Inst     : GC/TCD
Misc      : CCV  ASTM-D2504                         Multiplr: 1.00
IntFile   : EVENTS.E

Method       : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title        : Method d2504 air analysis
Last Update  : Thu May 12 16:13:25 2011
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  15%     Max. Rel. Area : 150%
```

	Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
1	Oxygen	2.500	2.572	-2.9	0	0.02
2	Nitrogen	2.500	2.871	-14.8	0	0.00
3	Carbon Monoxide	2.500	2.458	1.7	0	-0.04
4	Methane	2.000	2.025	-1.2	0	-0.06
5	Carbon dioxide	2.500	2.441	2.4	0	-0.09

Evaluate Continuing Calibration Report - Not Founds

```
Data File : C:\HPCHEM\2\DATA\101211\10121115.D          Vial: 1
Acq On    : 12 Oct 2011   5:04 pm                   Operator:
Sample    : ccv std 1-2 b                           Inst     : GC/TCD
Misc      : CCV  ASTM-D2504                         Multiplr: 1.00
IntFile   : EVENTS.E

Method       : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title        : Method d2504 air analysis
Last Update  : Thu May 12 16:13:25 2011
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  15%     Max. Rel. Area : 150%
```

Compound	Amount	Calc.	%Dev	Area%	Dev(Min)

(#) = Out of Range SPCC's out = 0 CCC's out = 0
03051113.D 030511.M Thu Oct 20 14:58:21 2011 TESTCAL

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\101211\10121115.D Vial: 1
Acq On : 12 Oct 2011 5:04 pm Operator:
Sample : ccv std 1-2 b Inst : GC/TCD
Misc : CCV ASTM-D2504 Multiplr: 1.00
IntFile : events.e
Quant Time: Oct 12 16:38 2011 Quant Results File: 030511.RES

Quant Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
Last Update : Wed May 25 15:37:00 2011
Response via : Initial Calibration
DataAcq Meth : TCD.M

Volume Inj. :
Signal Phase :
Signal Info :

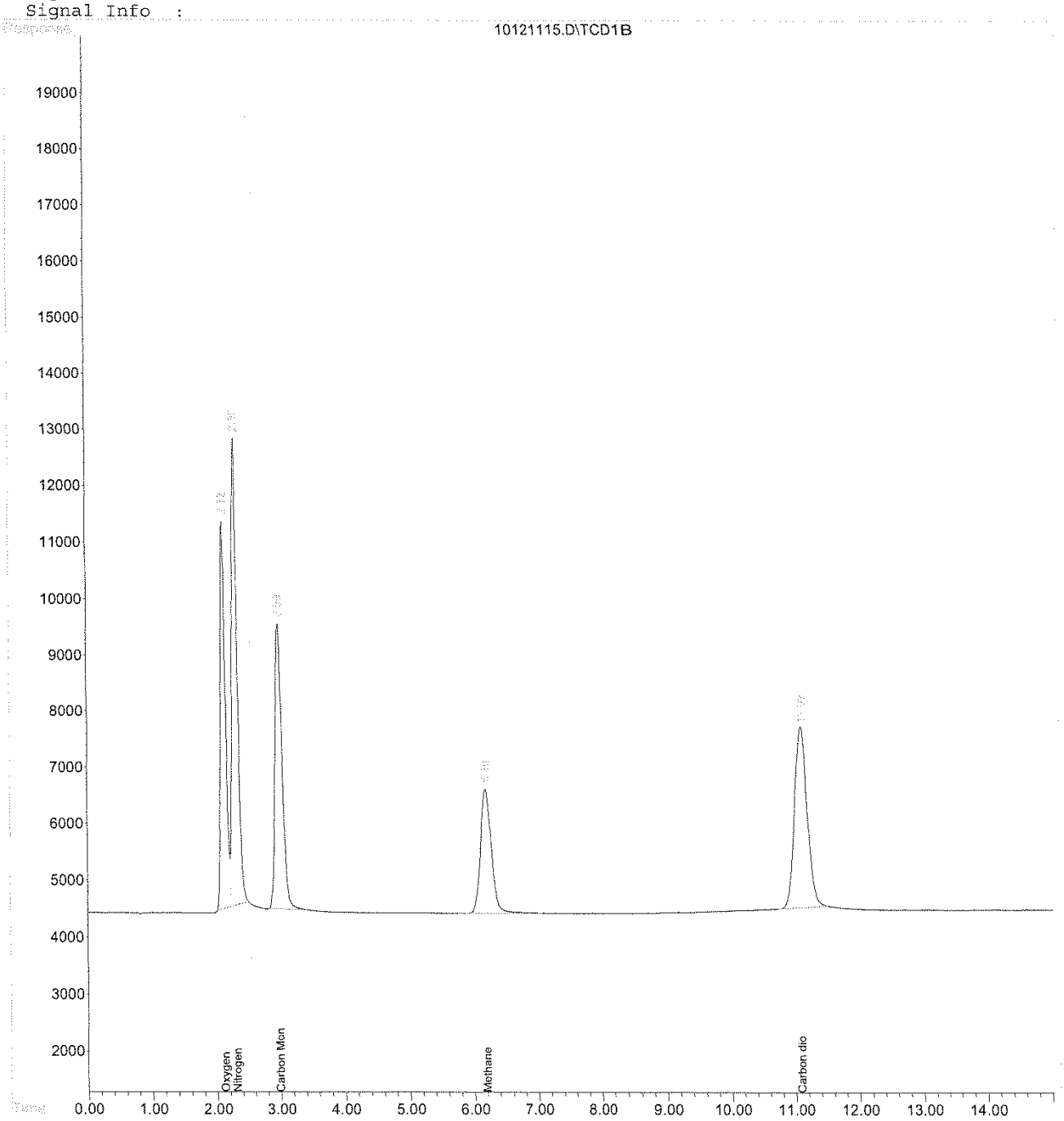
	Compound	R.T.	Response	Conc Units
	Target Compounds			
1)	Oxygen	2.12	368701	2.572 %
2)	Nitrogen	2.30	494528	2.871 %
3)	Carbon Monoxide	2.99	387161	2.458 %
4)	Methane	6.19f	261215	2.025 %
5)	Carbon dioxide	11.09f	441882	2.441 %

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\101211\10121115.D Vial: 1
Acq On : 12 Oct 2011 5:04 pm Operator:
Sample : ccv std 1-2 b Inst : GC/TCD
Misc : CCV ASTM-D2504 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Oct 12 16:38 2011 Quant Results File: 030511.RES

Quant Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
Last Update : Wed May 25 15:37:00 2011
Response via : Multiple Level Calibration
DataAcq Meth : TCD.M

Volume Inj. :
Signal Phase :
Signal Info :



Response Factor Report GC/TCD

Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title : Method d2504 air analysis
Last Update : Thu May 12 16:13:25 2011

Calibration Files
1 =03051102.D 2 =03051103.D 3 =03051104.D
4 =03051105.D 5 =03051106.D 6 =03051107.D

	Compound	1	2	3	4	5	6	Avg	%RSD
1)	Oxygen	1.450	1.444	1.427	1.365	1.324	2.791	1.624 E5	32.03
2)	Nitrogen	1.748	1.695	1.678	1.586	1.522	2.053	1.723 E5	9.90
3)	Carbon Monoxide	1.690	1.628	1.621	1.517	1.472	1.522	1.575 E5	5.32
4)	Methane	1.422	1.364	1.344	1.267	1.212	1.210	1.303 E5	6.66
5)	Carbon dioxide	2.121	2.009	2.012	1.874	1.813	1.842	1.945 E5	6.21

(#) = Out of Range ### Number of calibration levels exceeded format ###

030511.M Thu Oct 20 10:42:38 2011 TESTCAL

Compound List Report GC/TCD

Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title : Method d2504 air analysis
Last Update : Thu May 12 16:13:25 2011
Response via : Initial Calibration
Total Cpnds : 5

PK#	Type	Compound Name	Exp RT	Rel RT	Cal	A/H	ID
1		Oxygen	2.10	1.000	Q	A	R
2		Nitrogen	2.30	1.000	A	A	R
3		Carbon Monoxide	3.03	1.000	A	A	R
4		Methane	6.25	1.000	Q	A	R
5		Carbon dioxide	11.18	1.000	Q	A	R

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

030511.M Thu Oct 20 10:42:24 2011 TESTCAL