RTI Laboratories, Inc.

Date: *20-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: 1107640

CASE NARRATIVE

SAMPLE RECEIPT:
Samples were received at the RTI Laboratory, Livonia, MI via commercial delivery on 7/21/2011. Samples were received in good condition. The sample set consisted of 50 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

The following samples were subcontracted to ALS Environmental, Salt Lake City, UT for:

1107640-010	VA0555	TO-15
1107640-023	VA0620	MA_APH
1107640-025	VA0622	MA_APH
1107640-026	VA0623	MA_APH
1107640-027	VA0624	MA_APH
1107640-028	VA0625	MA_APH
1107640-030	VA0627	MA_APH
1107640-031	VA0628	MA_APH
1107640-032	VA0629	MA_APH
1107640-033	VA0630	MA_APH
1107640-034	VA0631	MA_APH
1107640-035	VA0632	MA_APH
1107640-036	VA0633	MA_APH
1107640-037	VA0634	TO-15, MA_APH
1107640-038	VA0635	TO-15, MA_APH
1107640-039	VA0636	TO-15
1107640-041	VA0638	TO-15
1107640-042	VA0639	TO-15
1107640-043	VA0640	TO-15
1107640-048	VA0645	TO-15, MA_APH
1107640-049	VA0646	TO-15

Results from ALS have been sent as a separate file.

Note: There is no MA_APH data for RTI sample 1107640-029A (VA0626). Sample for TO-15 was sent to ALS in error.

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CASE NARRATIVE

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.

Analytical Sequence ID 42721:

- Sample ID 1107640-011Adup elevated RPD result limits for 1,1,2,2-Tetrachloroethane (200%) due to concentrations near or below the LOQ.

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.

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

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CASE NARRATIVE

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: 10/20/2011

1107640

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Shaw E & I, Inc.

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

Reference Document No: 140705-SV015

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

Samples Shipment Date: 15 JUL 2011
Lab Destination: RTI Laboratories
Lab Contact: Mike Trochan
Project Contact: Pamela Moss
Carrier/Waybill No: UPS/9323171065

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

Report To: Pamela Moss
7004 Technology Way Suite 300
Denver CO 80237

Special Instructions:

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

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

1. Relinquished By (Signature/Affiliation): [signature] Date: 7/15/11 Time: 16:00
2. Relinquished By (Signature/Affiliation): Date: Time:
3. Relinquished By (Signature/Affiliation): Date: Time:

1. Received By (Signature/Affiliation): [signature] Date: 7/21/11 Time: 11:00
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	[illegible]	[illegible]	08 JUL 2011	15:04	1 L Tedlar Bag	1	None Required	Fixed Gases by ASTM D2504			N		
	[illegible]	[illegible]	08 JUL 2011	14:48	1 L BOTTLE VAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		118
2	[illegible]	[illegible]	08 JUL 2011	14:48	1 L Tedlar Bag	1	None Required	Fixed Gases by ASTM D2504			N		
	[illegible]	[illegible]	08 JUL 2011	15:41	1 L BOTTLE VAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		105
3	[illegible]	[illegible]	08 JUL 2011	15:41	1 L Tedlar Bag	1	None Required	Fixed Gases by ASTM D2504			N		
	[illegible]	[illegible]	08 JUL 2011	14:17	1 L BOTTLE VAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		633
4	[illegible]	[illegible]	08 JUL 2011	14:17	1 L Tedlar Bag	1	None Required	Fixed Gases by ASTM D2504			N		

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Reference Document No 140705-SV015

Sample No	Sample Name	Sample Date	Sample Time	Container	Preservative	Requested Testing Program	Sample Vol	Units	Filt	CID	Condition On Receipt
5	[illegible]	[illegible]	14 46	1 L BOTTLEVAC	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		597
	[illegible]	[illegible]	14 46	1 L Tedlar Bag	None Required	Fixed Gases by ASTM D2504			N		
	[illegible]	[illegible]	15 15	1 L Tedlar Bag	None Required	Fixed Gases by ASTM D2504			N		
6	[illegible]	[illegible]	15 15	1 L BOTTLEVAC	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		98
	[illegible]	[illegible]	15 50	1 L BOTTLEVAC	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		808
7	[illegible]	[illegible]	15 50	1 L Tedlar Bag	None Required	Fixed Gases by ASTM D2504			N		
	[illegible]	[illegible]	8 38	1 L BOTTLEVAC	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		631
8	[illegible]	[illegible]	8 38	1 L Tedlar Bag	None Required	Fixed Gases by ASTM D2504			N		
	[illegible]	[illegible]	9 13	1 L BOTTLEVAC	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		627
9	[illegible]	[illegible]	9 13	1 L Tedlar Bag	None Required	Fixed Gases by ASTM D2504			N		
	[illegible]	[illegible]	14 18	1 L BOTTLEVAC	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		595
10	[illegible]	[illegible]	14 18	1 L Tedlar Bag	None Required	Fixed Gases by ASTM D2504			N		
	[illegible]	[illegible]	14 42	1 L Tedlar Bag	None Required	Fixed Gases by ASTM D2504			N		
11	[illegible]	[illegible]	14 42	1 L BOTTLEVAC	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		690
	[illegible]	[illegible]	15 15	1 L BOTTLEVAC	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		655
12	[illegible]	[illegible]	15 15	1 L Tedlar Bag	None Required	Fixed Gases by ASTM D2504			N		
	[illegible]	[illegible]	15 47	1 L BOTTLEVAC	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		706
13	[illegible]	[illegible]	15 47	1 L Tedlar Bag	None Required	Fixed Gases by ASTM D2504			N		
	[illegible]	[illegible]	16 23	1 L BOTTLEVAC	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		617
14	[illegible]	[illegible]	16 23	1 L Tedlar Bag	None Required	Fixed Gases by ASTM D2504			N		
	[illegible]	[illegible]	8 45	1 L BOTTLEVAC	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		661
15	[illegible]	[illegible]	8 45	1 L Tedlar Bag	None Required	Fixed Gases by ASTM D2504			N		
	[illegible]	[illegible]	8 59	1 L BOTTLEVAC	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		1
16	[illegible]	[illegible]	8 59	1 L Tedlar Bag	None Required	Fixed Gases by ASTM D2504			N		
	[illegible]	[illegible]	9 34	1 L BOTTLEVAC	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		633
17	[illegible]	[illegible]	9 34	1 L Tedlar Bag	None Required	Fixed Gases by ASTM D2504			N		
	[illegible]	[illegible]	10 05	1 L BOTTLEVAC	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		638
18	[illegible]	[illegible]	10 05	1 L Tedlar Bag	None Required	Fixed Gases by ASTM D2504			N		

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Shaw E & I, Inc.

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

Reference Document No. 140705-SV015

Sample No	Sample Name	Sample Date	Sample Time	Container	Preservative	Requested Testing Program	Sample Vol	Units	Filt	CID	Condition On Receipt
[illegible]	[illegible]	[illegible]	10 30	1 L BOTTLE VAC	1 None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		554
19 [illegible]	[illegible]	[illegible]	10 30	1 L Tedlar Bag	1 None Required	Fixed Gases by ASTM D2504			N		
[illegible]	[illegible]	[illegible]	10 30	1 L BOTTLE VAC	1 None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		595
20 [illegible]	[illegible]	[illegible]	10 30	1 L Tedlar Bag	1 None Required	Fixed Gases by ASTM D2504			N		
[illegible]	[illegible]	[illegible]	11 18	1 L Tedlar Bag	1 None Required	Fixed Gases by ASTM D2504			N		
21 [illegible]	[illegible]	[illegible]	11 18	1 L BOTTLE VAC	1 None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		655
[illegible]	[illegible]	[illegible]	11 57	1 L BOTTLE VAC	1 None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		102
22 [illegible]	[illegible]	[illegible]	11 57	1 L Tedlar Bag	1 None Required	Fixed Gases by ASTM D2504			N		
[illegible]	[illegible]	[illegible]	12 19	1 L BOTTLE VAC	1 None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		637
23 [illegible]	[illegible]	[illegible]	12 19	1 L Tedlar Bag	1 None Required	Fixed Gases by ASTM D2504			N		
[illegible]	[illegible]	[illegible]	12 45	1 L BOTTLE VAC	1 None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		94
24 [illegible]	[illegible]	[illegible]	12 45	1 L Tedlar Bag	1 None Required	Fixed Gases by ASTM D2504			N		
[illegible]	[illegible]	[illegible]	13 11	1 L BOTTLE VAC	1 None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		109
25 [illegible]	[illegible]	[illegible]	13 11	1 L Tedlar Bag	1 None Required	Fixed Gases by ASTM D2504			N		
[illegible]	[illegible]	[illegible]	13 11	1 L Tedlar Bag	1 None Required	Fixed Gases by ASTM D2504			N		
26 [illegible]	[illegible]	[illegible]	13 11	1 L BOTTLE VAC	1 None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		590
[illegible]	[illegible]	[illegible]	13 58	1 L BOTTLE VAC	1 None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		599
27 [illegible]	[illegible]	[illegible]	13 58	1 L Tedlar Bag	1 None Required	Fixed Gases by ASTM D2504			N		
[illegible]	[illegible]	[illegible]	14 30	1 L BOTTLE VAC	1 None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		609
28 [illegible]	[illegible]	[illegible]	14 30	1 L Tedlar Bag	1 None Required	Fixed Gases by ASTM D2504			N		
[illegible]	[illegible]	[illegible]	15 05	1 L BOTTLE VAC	1 None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		53
29 [illegible]	[illegible]	[illegible]	15 05	1 L Tedlar Bag	1 None Required	Fixed Gases by ASTM D2504			N		
[illegible]	[illegible]	[illegible]	8 19	1 L BOTTLE VAC	1 None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		657
30 [illegible]	[illegible]	[illegible]	8 19	1 L Tedlar Bag	1 None Required	Fixed Gases by ASTM D2504			N		
[illegible]	[illegible]	[illegible]	8 47	1 L Tedlar Bag	1 None Required	Fixed Gases by ASTM D2504			N		
31 [illegible]	[illegible]	[illegible]	8 47	1 L BOTTLE VAC	1 None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		660
[illegible]	[illegible]	[illegible]	9 18	1 L BOTTLE VAC	1 None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		658
32 [illegible]	[illegible]	[illegible]	9 18	1 L Tedlar Bag	1 None Required	Fixed Gases by ASTM D2504			N		

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ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

Reference Document No: 140705-SV015

Sample No	Sample Name	Sample Date	Sample Time	Container	Preservative	Requested Testing Program	Sample Vol	Units	Filt	CID	Condition On Receipt
[illegible]	[illegible]	[illegible]	9:51	1 L BOTTLE VAC	1 None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		683
33 [illegible]	[illegible]	[illegible]	9:51	1 L Tedlar Bag	1 None Required	Fixed Gases by ASTM D2504			N		
[illegible]	[illegible]	[illegible]	10:23	1 L BOTTLE VAC	1 None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		658
34 [illegible]	[illegible]	[illegible]	10:23	1 L Tedlar Bag	1 None Required	Fixed Gases by ASTM D2504			N		
[illegible]	[illegible]	[illegible]	11:02	1 L BOTTLE VAC	1 None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		623
35 [illegible]	[illegible]	[illegible]	11:02	1 L Tedlar Bag	1 None Required	Fixed Gases by ASTM D2504			N		
[illegible]	[illegible]	[illegible]	11:02	1 L BOTTLE VAC	1 None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		99
36 [illegible]	[illegible]	[illegible]	11:02	1 L Tedlar Bag	1 None Required	Fixed Gases by ASTM D2504			N		
[illegible]	[illegible]	[illegible]	8:39	1 L BOTTLE VAC	1 None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		75
37 [illegible]	[illegible]	[illegible]	8:39	1 L Tedlar Bag	1 None Required	Fixed Gases by ASTM D2504			N		
[illegible]	[illegible]	[illegible]	9:06	1 L BOTTLE VAC	1 None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		668
38 [illegible]	[illegible]	[illegible]	9:06	1 L Tedlar Bag	1 None Required	Fixed Gases by ASTM D2504			N		
[illegible]	[illegible]	[illegible]	9:35	1 L BOTTLE VAC	1 None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		616
39 [illegible]	[illegible]	[illegible]	9:35	1 L Tedlar Bag	1 None Required	Fixed Gases by ASTM D2504			N		
[illegible]	[illegible]	[illegible]	10:08	1 L BOTTLE VAC	1 None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		711
40 [illegible]	[illegible]	[illegible]	10:08	1 L Tedlar Bag	1 None Required	Fixed Gases by ASTM D2504			N		
[illegible]	[illegible]	[illegible]	10:08	1 L BOTTLE VAC	1 None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		661
41 [illegible]	[illegible]	[illegible]	10:08	1 L Tedlar Bag	1 None Required	Fixed Gases by ASTM D2504			N		
[illegible]	[illegible]	[illegible]	10:53	1 L BOTTLE VAC	1 None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		675
42 [illegible]	[illegible]	[illegible]	10:53	1 L Tedlar Bag	1 None Required	Fixed Gases by ASTM D2504			N		
[illegible]	[illegible]	[illegible]	11:25	1 L BOTTLE VAC	1 None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		712
43 [illegible]	[illegible]	[illegible]	11:25	1 L Tedlar Bag	1 None Required	Fixed Gases by ASTM D2504			N		
[illegible]	[illegible]	[illegible]	12:07	1 L BOTTLE VAC	1 None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		678
44 [illegible]	[illegible]	[illegible]	12:07	1 L Tedlar Bag	1 None Required	Fixed Gases by ASTM D2504			N		
[illegible]	[illegible]	[illegible]	12:49	1 L BOTTLE VAC	1 None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		593
45 [illegible]	[illegible]	[illegible]	12:49	1 L Tedlar Bag	1 None Required	Fixed Gases by ASTM D2504			N		
[illegible]	[illegible]	[illegible]	13:20	1 L Tedlar Bag	1 None Required	Fixed Gases by ASTM D2504			N		
46 [illegible]	[illegible]	[illegible]	13:20	1 L BOTTLE VAC	1 None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		619

1107640

Shaw
Shaw E & I, Inc.

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

Reference Document No: M0705-SV015

	Sample No	Sample Name	Sample Date	Sample Time	Container		Preservative	Requested Testing Program	Sample Vol	Units	Filt	CID	Condition On Receipt
	[illegible]	[illegible]	[illegible]	14:01	1 L BOTTLE VAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs + TPH by TO-15			N		689
47	[illegible]	[illegible]	[illegible]	14:01	1 L Tedlar Bag	1	None Required	Fixed Gases by ASTM D2504			N		
	[illegible]	[illegible]	[illegible]	15:26	1 L BOTTLE VAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs + TPH by TO-15			N		639
48	[illegible]	[illegible]	[illegible]	15:26	1 L Tedlar Bag	1	None Required	Fixed Gases by ASTM D2504			N		
	[illegible]	[illegible]	[illegible]	16:05	1 L BOTTLE VAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs + TPH by TO-15			N		688
49	[illegible]	[illegible]	[illegible]	16:05	1 L Tedlar Bag	1	None Required	Fixed Gases by ASTM D2504			N		
50	[illegible]	[illegible]	[illegible]	8:00	1 L BOTTLE VAC	1	None Required	VOCs + TPH by TO-15			N		738

RTI LABORATORIES
31628 GLENDALE ST
LIVONIA MI 48150
P: RED2 S: MNITE I: 3
19F – FL2
1Z10335E034134 7160

CUSTODY SEAL QEC Quality Environmental Consultants 313-255-3000 • 304-755-3000
DATE 7/15/11
SIGNATURE [illegible]

CUSTODY SEAL QEC Quality Environmental Consultants 313-255-3000 • 304-755-3000
DATE 7/15/11
SIGNATURE [illegible]

RTI LABORATORIES
31628 GLENDALE ST
LIVONIA MI 48150
P: RED2 S: MNITE I: 3
19F-FL2
1Z10335E034004 9768

RTI LABORATORIES
31628 GLENDALE ST
LIVONIA MI 48150
P: RED2 S: MNITE I: 3
19F – FL2
1Z10335E034260 2070

RTI LABORATORIES, INC.

CHAIN OF CUSTODY RECORD

COC ID: | PAGE: 1 | OF: 3

ADDRESS
RTI
31628 Glendale St.
Livonia, MI 48150
TEL: 7344228000
FAX: 7344223432
Website: www.rtilabs.com

Please Include Email Address of Report Recipient Whenever Possible!!!

SUB CONTRACTOR: ALS ENV
COMPANY: ALS Environmental
ADDRESS: 960 West Levoy Dr
CITY, STATE, ZIP: Salt Lake City, UT 84123
PHONE: (801) 266-7700
FAX: (801) 268-9992
ACCOUNT #:
EMAIL:

SPECIAL INSTRUCTIONS / COMMENTS

ANALYTICAL PARAMETERS

ITEM #	SAMPLE ID	Client Sample ID	Bottle Type	MATRIX	DATE COLLECTED	CONTAINERS NUMBER OF	TO-15	SIM-APH	COMMENTS Methanol Preservol Weights HOT Sample Notation Additional Sample Description etc.
1	1107640-010A	VA0555	BOTTLE-VAC	Air	7/14/2011 2:18:00 PM	1	√		695
2	1107640-023A	VA0620	BOTTLE-VAC	Air	7/12/2011 12:19:00 PM	1		√	637
3	1107640-025A	VA0622	BOTTLE-VAC	Air	7/12/2011 1:11:00 PM	1		√	109
4	1107640-026A	VA0623	BOTTLE-VAC	Air	7/12/2011 1:11:00 PM	1		√	590
5	1107640-027A	VA0624	BOTTLE-VAC	Air	7/12/2011 1:58:00 PM	1		√	599
6	1107640-028A	VA0625	BOTTLE-VAC	Air	7/12/2011 2:30:00 PM	1		√	601
7	1107640-029A	VA0626	BOTTLE-VAC	Air	7/12/2011 3:05:00 PM	1	√		23
8	1107640-030A	VA0627	BOTTLE-VAC	Air	7/13/2011 8:19:00 AM	1		√	657
9	1107640-031A	VA0628	BOTTLE-VAC	Air	7/13/2011 8:47:00 AM	1		√	660
10	1107640-032A	VA0629	BOTTLE-VAC	Air	7/13/2011 9:18:00 AM	1		√	658

Relinquished By	Date	Time	Received By	Date	Time
Relinquished By	Date	Time	Received By	Date	Time
Relinquished By	Date	Time	Received By	Date	Time

TAT: Standard ☐ RUSH Next BD ☐ 2nd BD ☐ 3rd BD ☐

Note: RUSH requests will incur surcharges!

REPORT TRANSMITTAL DESIRED:
☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE

FOR LAB USE ONLY
Temp of Sample(s): °C Attempt to Cool?:
Comments:

RTI LABORATORIES, INC.

CHAIN OF CUSTODY RECORD

COC ID: | PAGE 2 | OF 3

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

Please Include Email Address of Report Recipient Whenever Possible!!!

SUB CONTRATOR: ALS ENV | COMPANY: ALS Environmental
ADDRESS: 960 West Levoy Dr
CITY, STATE, ZIP: Salt Lake City, UT 84123
PHONE: (801) 266-7700 | FAX: (801) 268-9992
ACCOUNT #: | EMAIL:

SPECIAL INSTRUCTIONS / COMMENTS

ANALYTICAL PARAMETERS

ITEM #	SAMPLE ID	Client Sample ID	Bottle Type	MATRIX	DATE COLLECTED	NUMBER OF BOTTLES	TO-15	TO-15 SIM										COMMENTS Method Preserved Weights HOT Sample Notation Additional Sample Description, etc.
11	1107640-033A	VA0630	BOTTLE-VAC	Air	7/13/2011 9:51:00 AM	1		√										683
12	1107640-034A	VA0631	BOTTLE-VAC	Air	7/13/2011 10:23:00 AM	1		√										628
13	1107640-035A	VA0632	BOTTLE-VAC	Air	7/13/2011 11:02:00 AM	1		√										623
14	1107640-036A	VA0633	BOTTLE-VAC	Air	7/13/2011 11:02:00 AM	1		√										99
15	1107640-037A	VA0634	BOTTLE-VAC	Air	7/15/2011 8:39:00 AM	1	√	√										75
16	1107640-038A	VA0635	BOTTLE-VAC	Air	7/15/2011 9:06:00 AM	1	√	√										668
17	1107640-039A	VA0636	BOTTLE-VAC	Air	7/15/2011 9:35:00 AM	1	√											616
18	1107640-041A	VA0638	BOTTLE-VAC	Air	7/15/2011 10:08:00 AM	1	√											661
19	1107640-042A	VA0639	BOTTLE-VAC	Air	7/15/2011 10:53:00 AM	1	√											675
20	1107640-043A	VA0640	BOTTLE-VAC	Air	7/15/2011 11:25:00 AM	1	√											712

Relinquished By	Date	Time	Received By	Date	Time
Relinquished By	Date	Time	Received By	Date	Time
Relinquished By	Date	Time	Received By	Date	Time

TAT: Standard ☐ RUSH Next BD ☐ 2nd BD ☐ 3rd BD ☐

Note: RUSH requests will incur surcharges!

REPORT TRANSMITTAL DESIRED
☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE

FOR LAB USE ONLY
Temp of Samples: °C Attempt to Cool *
Comments:

www.ammara.com

RTI LABORATORIES, INC.

CHAIN OF CUSTODY RECORD

COC ID: | PAGE 3 | OF 3

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

Please Include Email Address of Report Recipient Whenever Possible!!!

SUB CONTRACTOR: ALS ENV | COMPANY: ALS Environmental
ADDRESS: 960 West Levoy Dr
CITY, STATE, ZIP: Salt Lake City, UT 84123
PHONE: (801) 266-7700 | FAX: (801) 268-9992
ACCOUNT #: | EMAIL:

SPECIAL INSTRUCTIONS / COMMENTS:

ANALYTICAL PARAMETERS

ITEM #	SAMPLE ID	Client Sample ID	Bottle Type	MATRIX	DATE COLLECTED	CONTAINERS ID REQUIRED	[illegible]	[illegible]	COMMENTS: Metalurgical Preserved Weights HOT Sample Matrices Additional Sample Description, etc.
21	1107640-048A	VA0645	BOTTLE-VAC	Air	7/14/2011 3:26:00 PM	1	✓	✓	629
22	1107640-049A	VA0646	BOTTLE-VAC	Air	7/14/2011 4:05:00 PM	1	✓		688
23						0			
24						0			
25						0			
26						0			
27						0			
28						0			
29						0			
30						0			

Relinquished By	Date	Time	Received By	Date	Time
Relinquished By	Date	Time	Received By	Date	Time
Relinquished By	Date	Time	Received By	Date	Time

TAT: Standard ☐ RUSH 5(s) BD ☐ 2nd BD ☐ 3rd BD ☐

Note: RUSH requests will incur surcharges!

REPORT TRANSMITTAL DESIRED
☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE

FOR LAB USE ONLY
Temp of Samples ____ °C Attempt to Cool ?
Comments:

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: **7/21/2011 11:00:00 AM**

Work Order Number **1107640** RcptNo: **1** Received by: **Christine Conradis**

Completed by: Reviewed by:

Completed Date: 7/21/2011 4:14:22 PM Reviewed Date: 7/22/2011 12:06:57 PM

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:	1Z10335E0341347156			
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
1107640-001A	Container-01 of 01	Bottle				
1107640-002A	Container-01 of 01	Bottle				
1107640-002B	Container-01 of 01	Bottle				
1107640-003A	Container-01 of 01	Bottle				
1107640-003B	Container-01 of 01	Bottle				
1107640-004A	Container-01 of 01	Bottle				
1107640-004B	Container-01 of 01	Bottle				
1107640-005A	Container-01 of 01	Bottle				
1107640-005B	Container-01 of 01	Bottle				
1107640-006A	Container-01 of 01	Bottle				
1107640-006B	Container-01 of 01	Bottle				
1107640-007A	Container-01 of 01	Bottle				
1107640-007B	Container-01 of 01	Bottle				
1107640-008A	Container-01 of 01	Bottle				
1107640-008B	Container-01 of 01	Bottle				
1107640-009A	Container-01 of 01	Bottle				
1107640-009B	Container-01 of 01	Bottle				
1107640-010A	Container-01 of 01	Bottle				
1107640-010B	Container-01 of 01	Bottle				
1107640-011A	Container-01 of 01	Bottle				
1107640-011B	Container-01 of 01	Bottle				
1107640-012A	Container-01 of 01	Bottle				
1107640-012B	Container-01 of 01	Bottle				
1107640-013A	Container-01 of 01	Bottle				
1107640-013B	Container-01 of 01	Bottle				
1107640-014A	Container-01 of 01	Bottle				
1107640-014B	Container-01 of 01	Bottle				
1107640-015A	Container-01 of 01	Bottle				
1107640-015B	Container-01 of 01	Bottle				
1107640-016A	Container-01 of 01	Bottle				
1107640-016B	Container-01 of 01	Bottle				
1107640-017A	Container-01 of 01	Bottle				
1107640-017B	Container-01 of 01	Bottle				
1107640-018A	Container-01 of 01	Bottle				

SampID	ContainerID	Type	Org pH	Adj pH	Req Min pH	Req Max pH
1107640-018B	Container-01 of 01	Bottle				
1107640-019A	Container-01 of 01	Bottle				
1107640-019B	Container-01 of 01	Bottle				
1107640-020A	Container-01 of 01	Bottle				
1107640-020B	Container-01 of 01	Bottle				
1107640-021A	Container-01 of 01	Bottle				
1107640-021B	Container-01 of 01	Bottle				
1107640-022A	Container-01 of 01	Bottle				
1107640-022B	Container-01 of 01	Bottle				
1107640-023A	Container-01 of 01	Bottle				
1107640-023B	Container-01 of 01	Bottle				
1107640-024A	Container-01 of 01	Bottle				
1107640-024B	Container-01 of 01	Bottle				
1107640-025A	Container-01 of 01	Bottle				
1107640-025B	Container-01 of 01	Bottle				
1107640-026A	Container-01 of 01	Bottle				
1107640-026B	Container-01 of 01	Bottle				
1107640-027A	Container-01 of 01	Bottle				
1107640-027B	Container-01 of 01	Bottle				
1107640-028A	Container-01 of 01	Bottle				
1107640-028B	Container-01 of 01	Bottle				
1107640-029A	Container-01 of 01	Bottle				
1107640-029B	Container-01 of 01	Bottle				
1107640-030A	Container-01 of 01	Bottle				
1107640-030B	Container-01 of 01	Bottle				
1107640-031A	Container-01 of 01	Bottle				
1107640-031B	Container-01 of 01	Bottle				
1107640-032A	Container-01 of 01	Bottle				
1107640-032B	Container-01 of 01	Bottle				
1107640-033A	Container-01 of 01	Bottle				
1107640-033B	Container-01 of 01	Bottle				
1107640-034A	Container-01 of 01	Bottle				
1107640-034B	Container-01 of 01	Bottle				
1107640-035A	Container-01 of 01	Bottle				

SampID	ContainerID	Type	Org pH	Adj pH	Req Min pH	Req Max pH
1107640-035B	Container-01 of 01	Bottle				
1107640-036A	Container-01 of 01	Bottle				
1107640-036B	Container-01 of 01	Bottle				
1107640-037A	Container-01 of 01	Bottle				
1107640-037B	Container-01 of 01	Bottle				
1107640-038A	Container-01 of 01	Bottle				
1107640-038B	Container-01 of 01	Bottle				
1107640-039A	Container-01 of 01	Bottle				
1107640-039B	Container-01 of 01	Bottle				
1107640-040A	Container-01 of 01	Bottle				
1107640-040B	Container-01 of 01	Bottle				
1107640-041A	Container-01 of 01	Bottle				
1107640-041B	Container-01 of 01	Bottle				
1107640-042A	Container-01 of 01	Bottle				
1107640-042B	Container-01 of 01	Bottle				
1107640-043A	Container-01 of 01	Bottle				
1107640-043B	Container-01 of 01	Bottle				
1107640-044A	Container-01 of 01	Bottle				
1107640-044B	Container-01 of 01	Bottle				
1107640-045A	Container-01 of 01	Bottle				
1107640-045B	Container-01 of 01	Bottle				
1107640-046A	Container-01 of 01	Bottle				
1107640-046B	Container-01 of 01	Bottle				
1107640-047A	Container-01 of 01	Bottle				
1107640-047B	Container-01 of 01	Bottle				
1107640-048A	Container-01 of 01	Bottle				
1107640-048B	Container-01 of 01	Bottle				
1107640-049A	Container-01 of 01	Bottle				
1107640-049B	Container-01 of 01	Bottle				
1107640-050A	Container-01 of 01	Bottle				

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

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#: **1107640**

20-Oct-11

CLIENT: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB-140705

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
1107640-001	VA0544R		7/8/2011 3:04:00 PM	7/21/2011 11:00:00 AM	Air
1107640-002	VA0547		7/8/2011 2:48:00 PM	7/21/2011 11:00:00 AM	Air
1107640-002	VA0547		7/8/2011 2:48:00 PM	7/21/2011 11:00:00 AM	Air
1107640-003	VA0548		7/8/2011 3:41:00 PM	7/21/2011 11:00:00 AM	Air
1107640-003	VA0548		7/8/2011 3:41:00 PM	7/21/2011 11:00:00 AM	Air
1107640-004	VA0549		7/11/2011 2:17:00 PM	7/21/2011 11:00:00 AM	Air
1107640-004	VA0549		7/11/2011 2:17:00 PM	7/21/2011 11:00:00 AM	Air
1107640-005	VA0550		7/11/2011 2:46:00 PM	7/21/2011 11:00:00 AM	Air
1107640-005	VA0550		7/11/2011 2:46:00 PM	7/21/2011 11:00:00 AM	Air
1107640-006	VA0551		7/11/2011 3:15:00 PM	7/21/2011 11:00:00 AM	Air
1107640-006	VA0551		7/11/2011 3:15:00 PM	7/21/2011 11:00:00 AM	Air
1107640-007	VA0552		7/11/2011 3:50:00 PM	7/21/2011 11:00:00 AM	Air
1107640-007	VA0552		7/11/2011 3:50:00 PM	7/21/2011 11:00:00 AM	Air
1107640-008	VA0553		7/12/2011 8:38:00 AM	7/21/2011 11:00:00 AM	Air
1107640-008	VA0553		7/12/2011 8:38:00 AM	7/21/2011 11:00:00 AM	Air
1107640-009	VA0554		7/12/2011 9:13:00 AM	7/21/2011 11:00:00 AM	Air
1107640-009	VA0554		7/12/2011 9:13:00 AM	7/21/2011 11:00:00 AM	Air
1107640-010	VA0555		7/14/2011 2:18:00 PM	7/21/2011 11:00:00 AM	Air
1107640-010	VA0555		7/14/2011 2:18:00 PM	7/21/2011 11:00:00 AM	Air
1107640-011	VA0556		7/13/2011 2:42:00 PM	7/21/2011 11:00:00 AM	Air
1107640-011	VA0556		7/13/2011 2:42:00 PM	7/21/2011 11:00:00 AM	Air
1107640-012	VA0557		7/13/2011 3:15:00 PM	7/21/2011 11:00:00 AM	Air
1107640-012	VA0557		7/13/2011 3:15:00 PM	7/21/2011 11:00:00 AM	Air
1107640-013	VA0558		7/13/2011 3:47:00 PM	7/21/2011 11:00:00 AM	Air
1107640-013	VA0558		7/13/2011 3:47:00 PM	7/21/2011 11:00:00 AM	Air
1107640-014	VA0559		7/13/2011 4:23:00 PM	7/21/2011 11:00:00 AM	Air
1107640-014	VA0559		7/13/2011 4:23:00 PM	7/21/2011 11:00:00 AM	Air
1107640-015	VA0560		7/14/2011 8:45:00 AM	7/21/2011 11:00:00 AM	Air
1107640-015	VA0560		7/14/2011 8:45:00 AM	7/21/2011 11:00:00 AM	Air
1107640-016	VA0613		7/11/2011 8:59:00 AM	7/21/2011 11:00:00 AM	Air
1107640-016	VA0613		7/11/2011 8:59:00 AM	7/21/2011 11:00:00 AM	Air
1107640-017	VA0614		7/11/2011 9:34:00 AM	7/21/2011 11:00:00 AM	Air
1107640-017	VA0614		7/11/2011 9:34:00 AM	7/21/2011 11:00:00 AM	Air
1107640-018	VA0615		7/11/2011 10:05:00 AM	7/21/2011 11:00:00 AM	Air

RTI LABORATORIES, INC.

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

Workorder Sample Summary

WO#: **1107640**

20-Oct-11

CLIENT: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB-140705

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
1107640-018	VA0615		7/11/2011 10:05:00 AM	7/21/2011 11:00:00 AM	Air
1107640-019	VA0616		7/11/2011 10:30:00 AM	7/21/2011 11:00:00 AM	Air
1107640-019	VA0616		7/11/2011 10:30:00 AM	7/21/2011 11:00:00 AM	Air
1107640-020	VA0617		7/11/2011 10:30:00 AM	7/21/2011 11:00:00 AM	Air
1107640-020	VA0617		7/11/2011 10:30:00 AM	7/21/2011 11:00:00 AM	Air
1107640-021	VA0618		7/11/2011 11:18:00 AM	7/21/2011 11:00:00 AM	Air
1107640-021	VA0618		7/11/2011 11:18:00 AM	7/21/2011 11:00:00 AM	Air
1107640-022	VA0619		7/11/2011 11:57:00 AM	7/21/2011 11:00:00 AM	Air
1107640-022	VA0619		7/11/2011 11:57:00 AM	7/21/2011 11:00:00 AM	Air
1107640-023	VA0620		7/12/2011 12:19:00 PM	7/21/2011 11:00:00 AM	Air
1107640-023	VA0620		7/12/2011 12:19:00 PM	7/21/2011 11:00:00 AM	Air
1107640-024	VA0621		7/12/2011 12:45:00 PM	7/21/2011 11:00:00 AM	Air
1107640-024	VA0621		7/12/2011 12:45:00 PM	7/21/2011 11:00:00 AM	Air
1107640-025	VA0622		7/12/2011 1:11:00 PM	7/21/2011 11:00:00 AM	Air
1107640-025	VA0622		7/12/2011 1:11:00 PM	7/21/2011 11:00:00 AM	Air
1107640-026	VA0623		7/12/2011 1:11:00 PM	7/21/2011 11:00:00 AM	Air
1107640-026	VA0623		7/12/2011 1:11:00 PM	7/21/2011 11:00:00 AM	Air
1107640-027	VA0624		7/12/2011 1:58:00 PM	7/21/2011 11:00:00 AM	Air
1107640-027	VA0624		7/12/2011 1:58:00 PM	7/21/2011 11:00:00 AM	Air
1107640-028	VA0625		7/12/2011 2:30:00 PM	7/21/2011 11:00:00 AM	Air
1107640-028	VA0625		7/12/2011 2:30:00 PM	7/21/2011 11:00:00 AM	Air
1107640-029	VA0626		7/12/2011 3:05:00 PM	7/21/2011 11:00:00 AM	Air
1107640-029	VA0626		7/12/2011 3:05:00 PM	7/21/2011 11:00:00 AM	Air
1107640-030	VA0627		7/13/2011 8:19:00 AM	7/21/2011 11:00:00 AM	Air
1107640-030	VA0627		7/13/2011 8:19:00 AM	7/21/2011 11:00:00 AM	Air
1107640-031	VA0628		7/13/2011 8:47:00 AM	7/21/2011 11:00:00 AM	Air
1107640-031	VA0628		7/13/2011 8:47:00 AM	7/21/2011 11:00:00 AM	Air
1107640-032	VA0629		7/13/2011 9:18:00 AM	7/21/2011 11:00:00 AM	Air
1107640-032	VA0629		7/13/2011 9:18:00 AM	7/21/2011 11:00:00 AM	Air
1107640-033	VA0630		7/13/2011 9:51:00 AM	7/21/2011 11:00:00 AM	Air
1107640-033	VA0630		7/13/2011 9:51:00 AM	7/21/2011 11:00:00 AM	Air
1107640-034	VA0631		7/13/2011 10:23:00 AM	7/21/2011 11:00:00 AM	Air
1107640-034	VA0631		7/13/2011 10:23:00 AM	7/21/2011 11:00:00 AM	Air
1107640-035	VA0632		7/13/2011 11:02:00 AM	7/21/2011 11:00:00 AM	Air

RTI LABORATORIES, INC.

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

Workorder Sample Summary

WO#: **1107640**

20-Oct-11

CLIENT: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB-140705

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
1107640-035	VA0632		7/13/2011 11:02:00 AM	7/21/2011 11:00:00 AM	Air
1107640-036	VA0633		7/13/2011 11:02:00 AM	7/21/2011 11:00:00 AM	Air
1107640-036	VA0633		7/13/2011 11:02:00 AM	7/21/2011 11:00:00 AM	Air
1107640-037	VA0634		7/15/2011 8:39:00 AM	7/21/2011 11:00:00 AM	Air
1107640-037	VA0634		7/15/2011 8:39:00 AM	7/21/2011 11:00:00 AM	Air
1107640-038	VA0635		7/15/2011 9:06:00 AM	7/21/2011 11:00:00 AM	Air
1107640-038	VA0635		7/15/2011 9:06:00 AM	7/21/2011 11:00:00 AM	Air
1107640-039	VA0636		7/15/2011 9:35:00 AM	7/21/2011 11:00:00 AM	Air
1107640-039	VA0636		7/15/2011 9:35:00 AM	7/21/2011 11:00:00 AM	Air
1107640-040	VA0637		7/15/2011 10:08:00 AM	7/21/2011 11:00:00 AM	Air
1107640-040	VA0637		7/15/2011 10:08:00 AM	7/21/2011 11:00:00 AM	Air
1107640-041	VA0638		7/15/2011 10:08:00 AM	7/21/2011 11:00:00 AM	Air
1107640-041	VA0638		7/15/2011 10:08:00 AM	7/21/2011 11:00:00 AM	Air
1107640-042	VA0639		7/15/2011 10:53:00 AM	7/21/2011 11:00:00 AM	Air
1107640-042	VA0639		7/15/2011 10:53:00 AM	7/21/2011 11:00:00 AM	Air
1107640-043	VA0640		7/15/2011 11:25:00 AM	7/21/2011 11:00:00 AM	Air
1107640-043	VA0640		7/15/2011 11:25:00 AM	7/21/2011 11:00:00 AM	Air
1107640-044	VA0641		7/14/2011 12:07:00 PM	7/21/2011 11:00:00 AM	Air
1107640-044	VA0641		7/14/2011 12:07:00 PM	7/21/2011 11:00:00 AM	Air
1107640-045	VA0642		7/14/2011 12:49:00 PM	7/21/2011 11:00:00 AM	Air
1107640-045	VA0642		7/14/2011 12:49:00 PM	7/21/2011 11:00:00 AM	Air
1107640-046	VA0643		7/14/2011 1:20:00 PM	7/21/2011 11:00:00 AM	Air
1107640-046	VA0643		7/14/2011 1:20:00 PM	7/21/2011 11:00:00 AM	Air
1107640-047	VA0644		7/14/2011 2:01:00 PM	7/21/2011 11:00:00 AM	Air
1107640-047	VA0644		7/14/2011 2:01:00 PM	7/21/2011 11:00:00 AM	Air
1107640-048	VA0645		7/14/2011 3:26:00 PM	7/21/2011 11:00:00 AM	Air
1107640-048	VA0645		7/14/2011 3:26:00 PM	7/21/2011 11:00:00 AM	Air
1107640-049	VA0646		7/14/2011 4:05:00 PM	7/21/2011 11:00:00 AM	Air
1107640-049	VA0646		7/14/2011 4:05:00 PM	7/21/2011 11:00:00 AM	Air
1107640-050	VA8032-TB		7/11/2011 8:00:00 AM	7/21/2011 11:00:00 AM	Air

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Livonia, MI 48150
TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

DATES REPORT

WO#: **1107640**

20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc

Project: Kirtland AFB-140705

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
1107640-001A	VA0544R	7/8/2011 3:04:00 PM	Air	Noncondensable Gases and Light Hydrocarbons			8/6/2011 12:15:00 PM
1107640-002A	VA0547	7/8/2011 2:48:00 PM		Air-Phase Petroleum Hydrocarbons			8/10/2011 9:14:00 AM
				Volatile Organic Compounds			8/6/2011 5:51:00 PM
1107640-002B				Noncondensable Gases and Light Hydrocarbons			8/6/2011 12:41:00 PM
1107640-003A	VA0548	7/8/2011 3:41:00 PM		Air-Phase Petroleum Hydrocarbons			8/9/2011 9:50:00 PM
				Volatile Organic Compounds			8/6/2011 8:16:00 PM
1107640-003B				Noncondensable Gases and Light Hydrocarbons			8/6/2011 1:06:00 PM
1107640-004A	VA0549	7/11/2011 2:17:00 PM		Air-Phase Petroleum Hydrocarbons			8/11/2011 5:11:00 PM
				Volatile Organic Compounds			8/10/2011 12:19:00 AM
1107640-004B				Noncondensable Gases and Light Hydrocarbons			8/6/2011 1:28:00 PM
1107640-005A	VA0550	7/11/2011 2:46:00 PM		Air-Phase Petroleum Hydrocarbons			8/11/2011 10:03:00 AM
				Volatile Organic Compounds			8/10/2011 1:03:00 AM
1107640-005B				Noncondensable Gases and Light Hydrocarbons			8/6/2011 1:50:00 PM
1107640-006A	VA0551	7/11/2011 3:15:00 PM		Air-Phase Petroleum Hydrocarbons			8/10/2011 9:08:00 PM
				Volatile Organic Compounds			8/10/2011 1:47:00 AM
1107640-006B				Noncondensable Gases and Light Hydrocarbons			8/6/2011 2:12:00 PM
1107640-007A	VA0552	7/11/2011 3:50:00 PM		Air-Phase Petroleum Hydrocarbons			8/10/2011 9:52:00 PM
				Volatile Organic Compounds			8/10/2011 2:31:00 AM
1107640-007B				Noncondensable Gases and Light Hydrocarbons			8/6/2011 2:36:00 PM
1107640-008A	VA0553	7/12/2011 8:38:00 AM		Air-Phase Petroleum Hydrocarbons			8/10/2011 10:37:00 PM
				Volatile Organic Compounds			8/8/2011 12:03:00 AM

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DATES REPORT

WO#: **1107640**

20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc

Project: Kirtland AFB-140705

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
1107640-008B	VA0553	7/12/2011 8:38:00 AM	Air	Noncondensable Gases and Light Hydrocarbons			8/8/2011 11:41:00 AM
1107640-009A	VA0554	7/12/2011 9:13:00 AM		Air-Phase Petroleum Hydrocarbons			8/10/2011 11:23:00 PM
				Volatile Organic Compounds			8/8/2011 12:51:00 AM
1107640-009B				Noncondensable Gases and Light Hydrocarbons			8/8/2011 12:02:00 PM
1107640-010A	VA0555	7/14/2011 2:18:00 PM		Air-Phase Petroleum Hydrocarbons			8/11/2011 7:31:00 PM
1107640-010B				Noncondensable Gases and Light Hydrocarbons			8/8/2011 12:45:00 PM
1107640-011A	VA0556	7/13/2011 2:42:00 PM		Air-Phase Petroleum Hydrocarbons			8/11/2011 8:20:00 PM
				Volatile Organic Compounds			8/30/2011 4:07:00 PM
1107640-011B				Noncondensable Gases and Light Hydrocarbons			8/8/2011 1:05:00 PM
1107640-012A	VA0557	7/13/2011 3:15:00 PM		Air-Phase Petroleum Hydrocarbons			8/11/2011 9:09:00 PM
				Volatile Organic Compounds			8/30/2011 8:30:00 PM
1107640-012B				Noncondensable Gases and Light Hydrocarbons			8/8/2011 1:34:00 PM
1107640-013A	VA0558	7/13/2011 3:47:00 PM		Air-Phase Petroleum Hydrocarbons			8/9/2011 8:18:00 PM
				Volatile Organic Compounds			8/30/2011 9:12:00 PM
1107640-013B				Noncondensable Gases and Light Hydrocarbons			8/8/2011 1:52:00 PM
1107640-014A	VA0559	7/13/2011 4:23:00 PM		Air-Phase Petroleum Hydrocarbons			8/9/2011 9:04:00 PM
				Volatile Organic Compounds			8/23/2011 1:41:00 AM
1107640-014B				Noncondensable Gases and Light Hydrocarbons			8/8/2011 2:12:00 PM
1107640-015A	VA0560	7/14/2011 8:45:00 AM		Air-Phase Petroleum Hydrocarbons			8/11/2011 9:58:00 PM
				Volatile Organic Compounds			8/23/2011 2:31:00 AM

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WO#: **1107640**

20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc

Project: Kirtland AFB-140705

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
1107640-015B	VA0560	7/14/2011 8:45:00 AM	Air	Noncondensable Gases and Light Hydrocarbons			8/8/2011 2:31:00 PM
1107640-016A	VA0613	7/11/2011 8:59:00 AM		Air-Phase Petroleum Hydrocarbons			8/11/2011 3:09:00 AM
				Volatile Organic Compounds			8/9/2011 7:10:00 PM
				Volatile Organic Compounds			8/7/2011 2:38:00 PM
1107640-016B				Noncondensable Gases and Light Hydrocarbons			8/8/2011 2:53:00 PM
1107640-017A	VA0614	7/11/2011 9:34:00 AM		Air-Phase Petroleum Hydrocarbons			8/11/2011 3:53:00 AM
				Volatile Organic Compounds			8/9/2011 7:54:00 PM
1107640-017B				Noncondensable Gases and Light Hydrocarbons			8/8/2011 3:53:00 PM
1107640-018A	VA0615	7/11/2011 10:05:00 AM		Air-Phase Petroleum Hydrocarbons			8/11/2011 10:41:00 PM
				Volatile Organic Compounds			8/9/2011 8:39:00 PM
1107640-018B				Noncondensable Gases and Light Hydrocarbons			8/8/2011 4:53:00 PM
1107640-019A	VA0616	7/11/2011 10:30:00 AM		Air-Phase Petroleum Hydrocarbons			8/11/2011 11:24:00 PM
				Volatile Organic Compounds			8/9/2011 9:22:00 PM
1107640-019B				Noncondensable Gases and Light Hydrocarbons			8/8/2011 5:12:00 PM
1107640-020A	VA0617			Air-Phase Petroleum Hydrocarbons			8/12/2011 12:08:00 AM
				Volatile Organic Compounds			8/9/2011 10:06:00 PM
1107640-020B				Noncondensable Gases and Light Hydrocarbons			8/8/2011 5:31:00 PM
1107640-021A	VA0618	7/11/2011 11:18:00 AM		Air-Phase Petroleum Hydrocarbons			8/12/2011 9:37:00 AM
				Volatile Organic Compounds			8/9/2011 10:51:00 PM
1107640-021B				Noncondensable Gases and Light Hydrocarbons			8/8/2011 6:02:00 PM
1107640-022A	VA0619	7/11/2011 11:57:00 AM		Air-Phase Petroleum Hydrocarbons			8/12/2011 1:34:00 AM

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WO#: **1107640**

20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc

Project: Kirtland AFB-140705

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
1107640-022A	VA0619	7/11/2011 11:57:00 AM	Air	Volatile Organic Compounds			8/9/2011 11:35:00 PM
1107640-022B				Noncondensable Gases and Light Hydrocarbons			8/8/2011 6:26:00 PM
1107640-023A	VA0620	7/12/2011 12:19:00 PM		Volatile Organic Compounds			8/22/2011 2:16:00 PM
1107640-023B				Noncondensable Gases and Light Hydrocarbons			8/8/2011 6:46:00 PM
1107640-024A	VA0621	7/12/2011 12:45:00 PM		Air-Phase Petroleum Hydrocarbons			8/26/2011 2:26:00 AM
				Volatile Organic Compounds			8/10/2011 4:10:00 AM
1107640-024B				Noncondensable Gases and Light Hydrocarbons			8/8/2011 7:17:00 PM
1107640-025A	VA0622	7/12/2011 1:11:00 PM		Volatile Organic Compounds			8/22/2011 3:00:00 PM
1107640-025B				Noncondensable Gases and Light Hydrocarbons			8/9/2011 12:00:00 PM
1107640-026A	VA0623			Volatile Organic Compounds			8/22/2011 3:44:00 PM
1107640-026B				Noncondensable Gases and Light Hydrocarbons			8/9/2011 12:29:00 PM
1107640-027A	VA0624	7/12/2011 1:58:00 PM		Volatile Organic Compounds			8/22/2011 4:27:00 PM
1107640-027B				Noncondensable Gases and Light Hydrocarbons			8/9/2011 12:48:00 PM
1107640-028A	VA0625	7/12/2011 2:30:00 PM		Volatile Organic Compounds			8/22/2011 12:51:00 PM
1107640-028B				Noncondensable Gases and Light Hydrocarbons			8/9/2011 1:08:00 PM
1107640-029A	VA0626	7/12/2011 3:05:00 PM		Volatile Organic Compounds			8/22/2011 5:10:00 PM
1107640-029B				Noncondensable Gases and Light Hydrocarbons			8/9/2011 1:28:00 PM
1107640-030A	VA0627	7/13/2011 8:19:00 AM		Volatile Organic Compounds			8/30/2011 5:35:00 PM
1107640-030B				Noncondensable Gases and Light Hydrocarbons			8/9/2011 1:47:00 PM
1107640-031A	VA0628	7/13/2011 8:47:00 AM		Volatile Organic Compounds			8/30/2011 6:19:00 PM

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WO#: **1107640**

20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc

Project: Kirtland AFB-140705

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
1107640-031B	VA0628	7/13/2011 8:47:00 AM	Air	Noncondensable Gases and Light Hydrocarbons			8/9/2011 2:17:00 PM
1107640-032A	VA0629	7/13/2011 9:18:00 AM		Volatile Organic Compounds			8/30/2011 7:03:00 PM
1107640-032B				Noncondensable Gases and Light Hydrocarbons			8/9/2011 2:50:00 PM
1107640-033A	VA0630	7/13/2011 9:51:00 AM		Volatile Organic Compounds			8/30/2011 7:47:00 PM
1107640-033B				Noncondensable Gases and Light Hydrocarbons			8/9/2011 3:10:00 PM
1107640-034A	VA0631	7/13/2011 10:23:00 AM		Volatile Organic Compounds			8/22/2011 8:42:00 PM
1107640-034B				Noncondensable Gases and Light Hydrocarbons			8/9/2011 3:30:00 PM
1107640-035A	VA0632	7/13/2011 11:02:00 AM		Volatile Organic Compounds			8/22/2011 9:33:00 PM
1107640-035B				Noncondensable Gases and Light Hydrocarbons			8/9/2011 7:11:00 PM
				Noncondensable Gases and Light Hydrocarbons			8/9/2011 4:37:00 PM
1107640-036A	VA0633			Volatile Organic Compounds			8/22/2011 10:21:00 PM
1107640-036B				Noncondensable Gases and Light Hydrocarbons			8/9/2011 5:49:00 PM
1107640-037B	VA0634	7/15/2011 8:39:00 AM		Noncondensable Gases and Light Hydrocarbons			8/9/2011 5:24:00 PM
1107640-038B	VA0635	7/15/2011 9:06:00 AM		Noncondensable Gases and Light Hydrocarbons			8/9/2011 6:28:00 PM
1107640-039A	VA0636	7/15/2011 9:35:00 AM		Air-Phase Petroleum Hydrocarbons			8/15/2011 8:24:00 PM
1107640-039B				Noncondensable Gases and Light Hydrocarbons			8/9/2011 6:47:00 PM
1107640-040A	VA0637	7/15/2011 10:08:00 AM		Air-Phase Petroleum Hydrocarbons			8/15/2011 9:11:00 PM
				Volatile Organic Compounds			9/1/2011 10:30:00 PM
1107640-040B				Noncondensable Gases and Light Hydrocarbons			8/10/2011 1:28:00 PM

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DATES REPORT

WO#: **1107640**

20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc

Project: Kirtland AFB-140705

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
1107640-041A	VA0638	7/15/2011 10:08:00 AM	Air	Air-Phase Petroleum Hydrocarbons			8/15/2011 9:56:00 PM
1107640-041B				Noncondensable Gases and Light Hydrocarbons			8/10/2011 1:52:00 PM
1107640-042A	VA0639	7/15/2011 10:53:00 AM		Air-Phase Petroleum Hydrocarbons			8/15/2011 6:09:00 PM
1107640-042B				Noncondensable Gases and Light Hydrocarbons			8/10/2011 2:14:00 PM
1107640-043A	VA0640	7/15/2011 11:25:00 AM		Air-Phase Petroleum Hydrocarbons			8/15/2011 6:54:00 PM
1107640-043B				Noncondensable Gases and Light Hydrocarbons			8/10/2011 2:38:00 PM
1107640-044A	VA0641	7/14/2011 12:07:00 PM		Air-Phase Petroleum Hydrocarbons			8/15/2011 10:40:00 PM
				Volatile Organic Compounds			8/23/2011 3:16:00 AM
1107640-044B				Noncondensable Gases and Light Hydrocarbons			8/10/2011 3:00:00 PM
1107640-045A	VA0642	7/14/2011 12:49:00 PM		Air-Phase Petroleum Hydrocarbons			8/15/2011 11:25:00 PM
				Volatile Organic Compounds			8/30/2011 9:57:00 PM
1107640-045B				Noncondensable Gases and Light Hydrocarbons			8/10/2011 3:29:00 PM
1107640-046A	VA0643	7/14/2011 1:20:00 PM		Air-Phase Petroleum Hydrocarbons			8/16/2011 12:10:00 AM
				Volatile Organic Compounds			8/30/2011 10:41:00 PM
1107640-046B				Noncondensable Gases and Light Hydrocarbons			8/10/2011 4:06:00 PM
1107640-047A	VA0644	7/14/2011 2:01:00 PM		Air-Phase Petroleum Hydrocarbons			8/16/2011 12:55:00 AM
				Volatile Organic Compounds			8/30/2011 11:25:00 PM
1107640-047B				Noncondensable Gases and Light Hydrocarbons			8/10/2011 4:30:00 PM
1107640-048B	VA0645	7/14/2011 3:26:00 PM		Noncondensable Gases and Light Hydrocarbons			8/10/2011 5:03:00 PM
1107640-049A	VA0646	7/14/2011 4:05:00 PM		Air-Phase Petroleum Hydrocarbons			8/26/2011 1:01:00 AM

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DATES REPORT

WO#: **1107640**

20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc

Project: Kirtland AFB-140705

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
1107640-049B	VA0646	7/14/2011 4:05:00 PM	Air	Noncondensable Gases and Light Hydrocarbons			8/10/2011 5:26:00 PM
1107640-050A	VA8032-TB	7/11/2011 8:00:00 AM		Volatile Organic Compounds			8/6/2011 9:05:00 PM

RTI LABORATORIES, INC.

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Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/8/2011 3:04:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-001 **Matrix:** AIR

Client Sample ID VA0544R

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.41	0.10	H	%	1	8/6/2011 12:15:00 PM
Carbon Monoxide	ND	0.10	H	%	1	8/6/2011 12:15:00 PM
Methane	ND	0.50	H	%	1	8/6/2011 12:15:00 PM
Nitrogen	78	0.10	H	%	1	8/6/2011 12:15:00 PM
Oxygen	21	0.10	H	%	1	8/6/2011 12:15:00 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 v3

RTI LABORATORIES, INC.

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Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/8/2011 2:48:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-002 **Matrix:** AIR

Client Sample ID VA0547

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.15	0.10	H	%	1	8/6/2011 12:41:00 PM
Carbon Monoxide	ND	0.10	H	%	1	8/6/2011 12:41:00 PM
Methane	ND	0.50	H	%	1	8/6/2011 12:41:00 PM
Nitrogen	80	0.10	H	%	1	8/6/2011 12:41:00 PM
Oxygen	20	0.10	H	%	1	8/6/2011 12:41:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	800		ppbv	800	8/6/2011 5:51:00 PM
1,1,2,2-Tetrachloroethane	ND	800		ppbv	800	8/6/2011 5:51:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	800		ppbv	800	8/6/2011 5:51:00 PM
1,1,2-Trichloroethane	ND	800		ppbv	800	8/6/2011 5:51:00 PM
1,1-Dichloroethane	ND	800		ppbv	800	8/6/2011 5:51:00 PM
1,1-Dichloroethene	ND	800		ppbv	800	8/6/2011 5:51:00 PM
1,2,4-Trichlorobenzene	ND	800		ppbv	800	8/6/2011 5:51:00 PM
1,2,4-Trimethylbenzene	ND	800		ppbv	800	8/6/2011 5:51:00 PM
1,2-Dibromoethane	ND	800		ppbv	800	8/6/2011 5:51:00 PM
1,2-Dichlorobenzene	ND	800		ppbv	800	8/6/2011 5:51:00 PM
1,2-Dichloroethane	ND	800		ppbv	800	8/6/2011 5:51:00 PM
1,2-Dichloropropane	ND	800		ppbv	800	8/6/2011 5:51:00 PM
1,3,5-Trimethylbenzene	ND	800		ppbv	800	8/6/2011 5:51:00 PM
1,3-Butadiene	ND	800		ppbv	800	8/6/2011 5:51:00 PM
1,3-Dichlorobenzene	ND	800		ppbv	800	8/6/2011 5:51:00 PM
1,4-Dichlorobenzene	ND	800		ppbv	800	8/6/2011 5:51:00 PM
1,4-Dioxane	ND	800		ppbv	800	8/6/2011 5:51:00 PM
2-Butanone	ND	800		ppbv	800	8/6/2011 5:51:00 PM
2-Hexanone	ND	800		ppbv	800	8/6/2011 5:51:00 PM
2-Propanol	ND	800		ppbv	800	8/6/2011 5:51:00 PM
4-Methyl-2-pentanone	ND	800		ppbv	800	8/6/2011 5:51:00 PM
Acetone	ND	800		ppbv	800	8/6/2011 5:51:00 PM
Benzene	4,700	800		ppbv	800	8/6/2011 5:51:00 PM
Benzyl chloride	ND	800		ppbv	800	8/6/2011 5:51:00 PM
Bromodichloromethane	ND	800		ppbv	800	8/6/2011 5:51:00 PM
Bromoform	ND	800		ppbv	800	8/6/2011 5:51:00 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 v3

RTI LABORATORIES, INC.

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Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/8/2011 2:48:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-002 **Matrix:** AIR

Client Sample ID VA0547

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	800		ppbv	800	8/6/2011 5:51:00 PM
Carbon disulfide	ND	800		ppbv	800	8/6/2011 5:51:00 PM
Carbon tetrachloride	ND	800		ppbv	800	8/6/2011 5:51:00 PM
Chlorobenzene	ND	800		ppbv	800	8/6/2011 5:51:00 PM
Chlorodibromomethane	ND	800		ppbv	800	8/6/2011 5:51:00 PM
Chloroethane	ND	800		ppbv	800	8/6/2011 5:51:00 PM
Chloroform	ND	800		ppbv	800	8/6/2011 5:51:00 PM
Chloromethane	ND	800		ppbv	800	8/6/2011 5:51:00 PM
cis-1,2-Dichloroethene	ND	800		ppbv	800	8/6/2011 5:51:00 PM
cis-1,3-dichloropropene	ND	800		ppbv	800	8/6/2011 5:51:00 PM
Cyclohexane	20,000	1,600		ppbv	800	8/6/2011 5:51:00 PM
Dichlorodifluoromethane	ND	800		ppbv	800	8/6/2011 5:51:00 PM
Ethanol	ND	4,000		ppbv	800	8/6/2011 5:51:00 PM
Ethyl acetate	ND	800		ppbv	800	8/6/2011 5:51:00 PM
Ethylbenzene	ND	1,600		ppbv	800	8/6/2011 5:51:00 PM
Heptane	6,600	800		ppbv	800	8/6/2011 5:51:00 PM
Hexachlorobutadiene	ND	1,600		ppbv	800	8/6/2011 5:51:00 PM
m,p-Xylene	ND	1,600		ppbv	800	8/6/2011 5:51:00 PM
Methylene chloride	ND	4,000		ppbv	800	8/6/2011 5:51:00 PM
Naphthalene	ND	800		ppbv	800	8/6/2011 5:51:00 PM
n-Hexane	20,000	1,600		ppbv	800	8/6/2011 5:51:00 PM
o-Xylene	ND	800		ppbv	800	8/6/2011 5:51:00 PM
Propylene	3,100	800		ppbv	800	8/6/2011 5:51:00 PM
Styrene	ND	800		ppbv	800	8/6/2011 5:51:00 PM
tert-Butyl Methyl Ether	ND	800		ppbv	800	8/6/2011 5:51:00 PM
Tetrachloroethene	ND	800		ppbv	800	8/6/2011 5:51:00 PM
Tetrahydrofuran	ND	800		ppbv	800	8/6/2011 5:51:00 PM
Toluene	13,000	800		ppbv	800	8/6/2011 5:51:00 PM
trans-1,2-Dichloroethene	ND	800		ppbv	800	8/6/2011 5:51:00 PM
trans-1,3-dichloropropene	ND	800		ppbv	800	8/6/2011 5:51:00 PM
Trichloroethene	ND	800		ppbv	800	8/6/2011 5:51:00 PM
Trichlorofluoromethane	ND	800		ppbv	800	8/6/2011 5:51:00 PM
Vinyl acetate	ND	800		ppbv	800	8/6/2011 5:51:00 PM
Vinyl chloride	ND	800		ppbv	800	8/6/2011 5:51:00 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.
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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/8/2011 2:48:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-002 **Matrix:** AIR

Client Sample ID VA0547

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	ND	2,400		ppbv	800	8/6/2011 5:51:00 PM
Surr: 4-Bromofluorobenzene	101	70-130		%REC	800	8/6/2011 5:51:00 PM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **MT3**
C5-C8 Aliphatic Hydrocarbons	6,200,000	940,000	H	µg/m³	8000	8/10/2011 9:14:00 AM
C9-C10 Aromatic Hydrocarbons	ND	1,100,000	H	µg/m³	8000	8/10/2011 9:14:00 AM
C9-C12 Aliphatic Hydrocarbons	ND	1,500,000	H	µg/m³	8000	8/10/2011 9:14:00 AM
Surr: 4-Bromofluorobenzene	93.8	70-130	H	%REC	8000	8/10/2011 9:14:00 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#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/8/2011 3:41:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-003 **Matrix:** AIR

Client Sample ID VA0548

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.10	0.10	H	%	1	8/6/2011 1:06:00 PM
Carbon Monoxide	ND	0.10	H	%	1	8/6/2011 1:06:00 PM
Methane	ND	0.50	H	%	1	8/6/2011 1:06:00 PM
Nitrogen	78	0.10	H	%	1	8/6/2011 1:06:00 PM
Oxygen	21	0.10	H	%	1	8/6/2011 1:06:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	800		ppbv	800	8/6/2011 8:16:00 PM
1,1,2,2-Tetrachloroethane	ND	800		ppbv	800	8/6/2011 8:16:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	800		ppbv	800	8/6/2011 8:16:00 PM
1,1,2-Trichloroethane	ND	800		ppbv	800	8/6/2011 8:16:00 PM
1,1-Dichloroethane	ND	800		ppbv	800	8/6/2011 8:16:00 PM
1,1-Dichloroethene	ND	800		ppbv	800	8/6/2011 8:16:00 PM
1,2,4-Trichlorobenzene	ND	800		ppbv	800	8/6/2011 8:16:00 PM
1,2,4-Trimethylbenzene	ND	800		ppbv	800	8/6/2011 8:16:00 PM
1,2-Dibromoethane	ND	800		ppbv	800	8/6/2011 8:16:00 PM
1,2-Dichlorobenzene	ND	800		ppbv	800	8/6/2011 8:16:00 PM
1,2-Dichloroethane	ND	800		ppbv	800	8/6/2011 8:16:00 PM
1,2-Dichloropropane	ND	800		ppbv	800	8/6/2011 8:16:00 PM
1,3,5-Trimethylbenzene	ND	800		ppbv	800	8/6/2011 8:16:00 PM
1,3-Butadiene	ND	800		ppbv	800	8/6/2011 8:16:00 PM
1,3-Dichlorobenzene	ND	800		ppbv	800	8/6/2011 8:16:00 PM
1,4-Dichlorobenzene	ND	800		ppbv	800	8/6/2011 8:16:00 PM
1,4-Dioxane	ND	800		ppbv	800	8/6/2011 8:16:00 PM
2-Butanone	ND	800		ppbv	800	8/6/2011 8:16:00 PM
2-Hexanone	ND	800		ppbv	800	8/6/2011 8:16:00 PM
2-Propanol	ND	800		ppbv	800	8/6/2011 8:16:00 PM
4-Methyl-2-pentanone	ND	800		ppbv	800	8/6/2011 8:16:00 PM
Acetone	1,200	800		ppbv	800	8/6/2011 8:16:00 PM
Benzene	ND	800		ppbv	800	8/6/2011 8:16:00 PM
Benzyl chloride	ND	800		ppbv	800	8/6/2011 8:16:00 PM
Bromodichloromethane	ND	800		ppbv	800	8/6/2011 8:16:00 PM
Bromoform	ND	800		ppbv	800	8/6/2011 8:16:00 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#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/8/2011 3:41:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-003 **Matrix:** AIR

Client Sample ID VA0548

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	800		ppbv	800	8/6/2011 8:16:00 PM
Carbon disulfide	ND	800		ppbv	800	8/6/2011 8:16:00 PM
Carbon tetrachloride	ND	800		ppbv	800	8/6/2011 8:16:00 PM
Chlorobenzene	ND	800		ppbv	800	8/6/2011 8:16:00 PM
Chlorodibromomethane	ND	800		ppbv	800	8/6/2011 8:16:00 PM
Chloroethane	ND	800		ppbv	800	8/6/2011 8:16:00 PM
Chloroform	ND	800		ppbv	800	8/6/2011 8:16:00 PM
Chloromethane	ND	800		ppbv	800	8/6/2011 8:16:00 PM
cis-1,2-Dichloroethene	ND	800		ppbv	800	8/6/2011 8:16:00 PM
cis-1,3-dichloropropene	ND	800		ppbv	800	8/6/2011 8:16:00 PM
Cyclohexane	1,300	1,600	J	ppbv	800	8/6/2011 8:16:00 PM
Dichlorodifluoromethane	ND	800		ppbv	800	8/6/2011 8:16:00 PM
Ethanol	ND	4,000		ppbv	800	8/6/2011 8:16:00 PM
Ethyl acetate	ND	800		ppbv	800	8/6/2011 8:16:00 PM
Ethylbenzene	ND	1,600		ppbv	800	8/6/2011 8:16:00 PM
Heptane	ND	800		ppbv	800	8/6/2011 8:16:00 PM
Hexachlorobutadiene	ND	1,600		ppbv	800	8/6/2011 8:16:00 PM
m,p-Xylene	ND	1,600		ppbv	800	8/6/2011 8:16:00 PM
Methylene chloride	5,100	4,000		ppbv	800	8/6/2011 8:16:00 PM
Naphthalene	ND	800		ppbv	800	8/6/2011 8:16:00 PM
n-Hexane	1,800	1,600		ppbv	800	8/6/2011 8:16:00 PM
o-Xylene	ND	800		ppbv	800	8/6/2011 8:16:00 PM
Propylene	ND	800		ppbv	800	8/6/2011 8:16:00 PM
Styrene	ND	800		ppbv	800	8/6/2011 8:16:00 PM
tert-Butyl Methyl Ether	ND	800		ppbv	800	8/6/2011 8:16:00 PM
Tetrachloroethene	ND	800		ppbv	800	8/6/2011 8:16:00 PM
Tetrahydrofuran	ND	800		ppbv	800	8/6/2011 8:16:00 PM
Toluene	1,600	800		ppbv	800	8/6/2011 8:16:00 PM
trans-1,2-Dichloroethene	ND	800		ppbv	800	8/6/2011 8:16:00 PM
trans-1,3-dichloropropene	ND	800		ppbv	800	8/6/2011 8:16:00 PM
Trichloroethene	ND	800		ppbv	800	8/6/2011 8:16:00 PM
Trichlorofluoromethane	ND	800		ppbv	800	8/6/2011 8:16:00 PM
Vinyl acetate	ND	800		ppbv	800	8/6/2011 8:16:00 PM
Vinyl chloride	ND	800		ppbv	800	8/6/2011 8:16:00 PM

Qualifiers:

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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#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/8/2011 3:41:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-003 **Matrix:** AIR

Client Sample ID VA0548

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	ND	2,400		ppbv	800	8/6/2011 8:16:00 PM
Surr: 4-Bromofluorobenzene	102	70-130		%REC	800	8/6/2011 8:16:00 PM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **MT3**
C5-C8 Aliphatic Hydrocarbons	260,000	94,000	H	µg/m³	800	8/9/2011 9:50:00 PM
C9-C10 Aromatic Hydrocarbons	ND	110,000	H	µg/m³	800	8/9/2011 9:50:00 PM
C9-C12 Aliphatic Hydrocarbons	ND	150,000	H	µg/m³	800	8/9/2011 9:50:00 PM
Surr: 4-Bromofluorobenzene	96.7	70-130	H	%REC	800	8/9/2011 9:50:00 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

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Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/11/2011 2:17:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-004 **Matrix:** AIR

Client Sample ID VA0549

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.72	0.10	H	%	1	8/6/2011 1:28:00 PM
Carbon Monoxide	ND	0.10	H	%	1	8/6/2011 1:28:00 PM
Methane	ND	0.50	H	%	1	8/6/2011 1:28:00 PM
Nitrogen	79	0.10	H	%	1	8/6/2011 1:28:00 PM
Oxygen	20	0.10	H	%	1	8/6/2011 1:28:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	8.0		ppbv	8	8/10/2011 12:19:00 AM
1,1,2,2-Tetrachloroethane	ND	8.0		ppbv	8	8/10/2011 12:19:00 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	8.0		ppbv	8	8/10/2011 12:19:00 AM
1,1,2-Trichloroethane	ND	8.0		ppbv	8	8/10/2011 12:19:00 AM
1,1-Dichloroethane	ND	8.0		ppbv	8	8/10/2011 12:19:00 AM
1,1-Dichloroethene	ND	8.0		ppbv	8	8/10/2011 12:19:00 AM
1,2,4-Trichlorobenzene	ND	8.0		ppbv	8	8/10/2011 12:19:00 AM
1,2,4-Trimethylbenzene	11	8.0		ppbv	8	8/10/2011 12:19:00 AM
1,2-Dibromoethane	ND	8.0		ppbv	8	8/10/2011 12:19:00 AM
1,2-Dichlorobenzene	ND	8.0		ppbv	8	8/10/2011 12:19:00 AM
1,2-Dichloroethane	ND	8.0		ppbv	8	8/10/2011 12:19:00 AM
1,2-Dichloropropane	ND	8.0		ppbv	8	8/10/2011 12:19:00 AM
1,3,5-Trimethylbenzene	ND	8.0		ppbv	8	8/10/2011 12:19:00 AM
1,3-Butadiene	ND	8.0		ppbv	8	8/10/2011 12:19:00 AM
1,3-Dichlorobenzene	ND	8.0		ppbv	8	8/10/2011 12:19:00 AM
1,4-Dichlorobenzene	ND	8.0		ppbv	8	8/10/2011 12:19:00 AM
1,4-Dioxane	ND	8.0		ppbv	8	8/10/2011 12:19:00 AM
2-Butanone	32	8.0		ppbv	8	8/10/2011 12:19:00 AM
2-Hexanone	ND	8.0		ppbv	8	8/10/2011 12:19:00 AM
2-Propanol	ND	8.0		ppbv	8	8/10/2011 12:19:00 AM
4-Methyl-2-pentanone	ND	8.0		ppbv	8	8/10/2011 12:19:00 AM
Acetone	34	8.0		ppbv	8	8/10/2011 12:19:00 AM
Benzene	46	8.0		ppbv	8	8/10/2011 12:19:00 AM
Benzyl chloride	ND	8.0		ppbv	8	8/10/2011 12:19:00 AM
Bromodichloromethane	92	8.0		ppbv	8	8/10/2011 12:19:00 AM
Bromoform	ND	8.0		ppbv	8	8/10/2011 12:19:00 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

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Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/11/2011 2:17:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-004 **Matrix:** AIR

Client Sample ID VA0549

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	8.0		ppbv	8	8/10/2011 12:19:00 AM
Carbon disulfide	ND	8.0		ppbv	8	8/10/2011 12:19:00 AM
Carbon tetrachloride	73	8.0		ppbv	8	8/10/2011 12:19:00 AM
Chlorobenzene	ND	8.0		ppbv	8	8/10/2011 12:19:00 AM
Chlorodibromomethane	23	8.0		ppbv	8	8/10/2011 12:19:00 AM
Chloroethane	ND	8.0		ppbv	8	8/10/2011 12:19:00 AM
Chloroform	700	8.0		ppbv	8	8/10/2011 12:19:00 AM
Chloromethane	ND	8.0		ppbv	8	8/10/2011 12:19:00 AM
cis-1,2-Dichloroethene	ND	8.0		ppbv	8	8/10/2011 12:19:00 AM
cis-1,3-dichloropropene	ND	8.0		ppbv	8	8/10/2011 12:19:00 AM
Cyclohexane	160	16		ppbv	8	8/10/2011 12:19:00 AM
Dichlorodifluoromethane	ND	8.0		ppbv	8	8/10/2011 12:19:00 AM
Ethanol	28	40	J	ppbv	8	8/10/2011 12:19:00 AM
Ethyl acetate	ND	8.0		ppbv	8	8/10/2011 12:19:00 AM
Ethylbenzene	13	16	J	ppbv	8	8/10/2011 12:19:00 AM
Heptane	28	8.0		ppbv	8	8/10/2011 12:19:00 AM
Hexachlorobutadiene	ND	16		ppbv	8	8/10/2011 12:19:00 AM
m,p-Xylene	35	16		ppbv	8	8/10/2011 12:19:00 AM
Methylene chloride	ND	40		ppbv	8	8/10/2011 12:19:00 AM
Naphthalene	ND	8.0		ppbv	8	8/10/2011 12:19:00 AM
n-Hexane	130	16		ppbv	8	8/10/2011 12:19:00 AM
o-Xylene	17	8.0		ppbv	8	8/10/2011 12:19:00 AM
Propylene	12	8.0		ppbv	8	8/10/2011 12:19:00 AM
Styrene	ND	8.0		ppbv	8	8/10/2011 12:19:00 AM
tert-Butyl Methyl Ether	ND	8.0		ppbv	8	8/10/2011 12:19:00 AM
Tetrachloroethene	ND	8.0		ppbv	8	8/10/2011 12:19:00 AM
Tetrahydrofuran	ND	8.0		ppbv	8	8/10/2011 12:19:00 AM
Toluene	98	8.0		ppbv	8	8/10/2011 12:19:00 AM
trans-1,2-Dichloroethene	ND	8.0		ppbv	8	8/10/2011 12:19:00 AM
trans-1,3-dichloropropene	ND	8.0		ppbv	8	8/10/2011 12:19:00 AM
Trichloroethene	ND	8.0		ppbv	8	8/10/2011 12:19:00 AM
Trichlorofluoromethane	ND	8.0		ppbv	8	8/10/2011 12:19:00 AM
Vinyl acetate	ND	8.0		ppbv	8	8/10/2011 12:19:00 AM
Vinyl chloride	ND	8.0		ppbv	8	8/10/2011 12:19:00 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
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Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/11/2011 2:17:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-004 **Matrix:** AIR

Client Sample ID VA0549

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	52	24		ppbv	8	8/10/2011 12:19:00 AM
Surr: 4-Bromofluorobenzene	110	70-130		%REC	8	8/10/2011 12:19:00 AM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **MT3**
C5-C8 Aliphatic Hydrocarbons	18,000	1,900	H	µg/m³	16	8/11/2011 5:11:00 PM
C9-C10 Aromatic Hydrocarbons	ND	2,100	H	µg/m³	16	8/11/2011 5:11:00 PM
C9-C12 Aliphatic Hydrocarbons	4,100	3,000	H	µg/m³	16	8/11/2011 5:11:00 PM
Surr: 4-Bromofluorobenzene	91.5	70-130	H	%REC	16	8/11/2011 5:11:00 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#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/11/2011 2:46:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-005 **Matrix:** AIR

Client Sample ID VA0550

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.63	0.10	H	%	1	8/6/2011 1:50:00 PM
Carbon Monoxide	ND	0.10	H	%	1	8/6/2011 1:50:00 PM
Methane	ND	0.50	H	%	1	8/6/2011 1:50:00 PM
Nitrogen	79	0.10	H	%	1	8/6/2011 1:50:00 PM
Oxygen	20	0.10	H	%	1	8/6/2011 1:50:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	8.0		ppbv	8	8/10/2011 1:03:00 AM
1,1,2,2-Tetrachloroethane	ND	8.0		ppbv	8	8/10/2011 1:03:00 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	8.0		ppbv	8	8/10/2011 1:03:00 AM
1,1,2-Trichloroethane	ND	8.0		ppbv	8	8/10/2011 1:03:00 AM
1,1-Dichloroethane	ND	8.0		ppbv	8	8/10/2011 1:03:00 AM
1,1-Dichloroethene	ND	8.0		ppbv	8	8/10/2011 1:03:00 AM
1,2,4-Trichlorobenzene	ND	8.0		ppbv	8	8/10/2011 1:03:00 AM
1,2,4-Trimethylbenzene	15	8.0		ppbv	8	8/10/2011 1:03:00 AM
1,2-Dibromoethane	ND	8.0		ppbv	8	8/10/2011 1:03:00 AM
1,2-Dichlorobenzene	ND	8.0		ppbv	8	8/10/2011 1:03:00 AM
1,2-Dichloroethane	ND	8.0		ppbv	8	8/10/2011 1:03:00 AM
1,2-Dichloropropane	ND	8.0		ppbv	8	8/10/2011 1:03:00 AM
1,3,5-Trimethylbenzene	8.4	8.0		ppbv	8	8/10/2011 1:03:00 AM
1,3-Butadiene	ND	8.0		ppbv	8	8/10/2011 1:03:00 AM
1,3-Dichlorobenzene	ND	8.0		ppbv	8	8/10/2011 1:03:00 AM
1,4-Dichlorobenzene	ND	8.0		ppbv	8	8/10/2011 1:03:00 AM
1,4-Dioxane	ND	8.0		ppbv	8	8/10/2011 1:03:00 AM
2-Butanone	37	8.0		ppbv	8	8/10/2011 1:03:00 AM
2-Hexanone	ND	8.0		ppbv	8	8/10/2011 1:03:00 AM
2-Propanol	ND	8.0		ppbv	8	8/10/2011 1:03:00 AM
4-Methyl-2-pentanone	ND	8.0		ppbv	8	8/10/2011 1:03:00 AM
Acetone	32	8.0		ppbv	8	8/10/2011 1:03:00 AM
Benzene	17	8.0		ppbv	8	8/10/2011 1:03:00 AM
Benzyl chloride	ND	8.0		ppbv	8	8/10/2011 1:03:00 AM
Bromodichloromethane	13	8.0		ppbv	8	8/10/2011 1:03:00 AM
Bromoform	ND	8.0		ppbv	8	8/10/2011 1:03:00 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#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/11/2011 2:46:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-005 **Matrix:** AIR

Client Sample ID VA0550

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	8.0		ppbv	8	8/10/2011 1:03:00 AM
Carbon disulfide	ND	8.0		ppbv	8	8/10/2011 1:03:00 AM
Carbon tetrachloride	68	8.0		ppbv	8	8/10/2011 1:03:00 AM
Chlorobenzene	ND	8.0		ppbv	8	8/10/2011 1:03:00 AM
Chlorodibromomethane	ND	8.0		ppbv	8	8/10/2011 1:03:00 AM
Chloroethane	ND	8.0		ppbv	8	8/10/2011 1:03:00 AM
Chloroform	130	8.0		ppbv	8	8/10/2011 1:03:00 AM
Chloromethane	16	8.0		ppbv	8	8/10/2011 1:03:00 AM
cis-1,2-Dichloroethene	ND	8.0		ppbv	8	8/10/2011 1:03:00 AM
cis-1,3-dichloropropene	ND	8.0		ppbv	8	8/10/2011 1:03:00 AM
Cyclohexane	67	16		ppbv	8	8/10/2011 1:03:00 AM
Dichlorodifluoromethane	ND	8.0		ppbv	8	8/10/2011 1:03:00 AM
Ethanol	ND	40		ppbv	8	8/10/2011 1:03:00 AM
Ethyl acetate	ND	8.0		ppbv	8	8/10/2011 1:03:00 AM
Ethylbenzene	16	16		ppbv	8	8/10/2011 1:03:00 AM
Heptane	26	8.0		ppbv	8	8/10/2011 1:03:00 AM
Hexachlorobutadiene	ND	16		ppbv	8	8/10/2011 1:03:00 AM
m,p-Xylene	46	16		ppbv	8	8/10/2011 1:03:00 AM
Methylene chloride	ND	40		ppbv	8	8/10/2011 1:03:00 AM
Naphthalene	ND	8.0		ppbv	8	8/10/2011 1:03:00 AM
n-Hexane	22	16		ppbv	8	8/10/2011 1:03:00 AM
o-Xylene	22	8.0		ppbv	8	8/10/2011 1:03:00 AM
Propylene	ND	8.0		ppbv	8	8/10/2011 1:03:00 AM
Styrene	ND	8.0		ppbv	8	8/10/2011 1:03:00 AM
tert-Butyl Methyl Ether	ND	8.0		ppbv	8	8/10/2011 1:03:00 AM
Tetrachloroethene	ND	8.0		ppbv	8	8/10/2011 1:03:00 AM
Tetrahydrofuran	ND	8.0		ppbv	8	8/10/2011 1:03:00 AM
Toluene	94	8.0		ppbv	8	8/10/2011 1:03:00 AM
trans-1,2-Dichloroethene	ND	8.0		ppbv	8	8/10/2011 1:03:00 AM
trans-1,3-dichloropropene	ND	8.0		ppbv	8	8/10/2011 1:03:00 AM
Trichloroethene	ND	8.0		ppbv	8	8/10/2011 1:03:00 AM
Trichlorofluoromethane	ND	8.0		ppbv	8	8/10/2011 1:03:00 AM
Vinyl acetate	ND	8.0		ppbv	8	8/10/2011 1:03:00 AM
Vinyl chloride	ND	8.0		ppbv	8	8/10/2011 1:03:00 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#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/11/2011 2:46:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-005 **Matrix:** AIR

Client Sample ID VA0550

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	68	24		ppbv	8	8/10/2011 1:03:00 AM
Surr: 4-Bromofluorobenzene	110	70-130		%REC	8	8/10/2011 1:03:00 AM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **MT3**
C5-C8 Aliphatic Hydrocarbons	14,000	1,900	H	µg/m³	16	8/11/2011 10:03:00 AM
C9-C10 Aromatic Hydrocarbons	ND	2,100	H	µg/m³	16	8/11/2011 10:03:00 AM
C9-C12 Aliphatic Hydrocarbons	8,100	3,000	H	µg/m³	16	8/11/2011 10:03:00 AM
Surr: 4-Bromofluorobenzene	92.5	70-130	H	%REC	16	8/11/2011 10:03:00 AM

Qualifiers:

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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#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/11/2011 3:15:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-006 **Matrix:** AIR

Client Sample ID VA0551

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.20	0.10	H	%	1	8/6/2011 2:12:00 PM
Carbon Monoxide	ND	0.10	H	%	1	8/6/2011 2:12:00 PM
Methane	ND	0.50	H	%	1	8/6/2011 2:12:00 PM
Nitrogen	79	0.10	H	%	1	8/6/2011 2:12:00 PM
Oxygen	20	0.10	H	%	1	8/6/2011 2:12:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	8.0		ppbv	8	8/10/2011 1:47:00 AM
1,1,2,2-Tetrachloroethane	ND	8.0		ppbv	8	8/10/2011 1:47:00 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	8.0		ppbv	8	8/10/2011 1:47:00 AM
1,1,2-Trichloroethane	ND	8.0		ppbv	8	8/10/2011 1:47:00 AM
1,1-Dichloroethane	ND	8.0		ppbv	8	8/10/2011 1:47:00 AM
1,1-Dichloroethene	ND	8.0		ppbv	8	8/10/2011 1:47:00 AM
1,2,4-Trichlorobenzene	ND	8.0		ppbv	8	8/10/2011 1:47:00 AM
1,2,4-Trimethylbenzene	ND	8.0		ppbv	8	8/10/2011 1:47:00 AM
1,2-Dibromoethane	ND	8.0		ppbv	8	8/10/2011 1:47:00 AM
1,2-Dichlorobenzene	ND	8.0		ppbv	8	8/10/2011 1:47:00 AM
1,2-Dichloroethane	ND	8.0		ppbv	8	8/10/2011 1:47:00 AM
1,2-Dichloropropane	ND	8.0		ppbv	8	8/10/2011 1:47:00 AM
1,3,5-Trimethylbenzene	ND	8.0		ppbv	8	8/10/2011 1:47:00 AM
1,3-Butadiene	ND	8.0		ppbv	8	8/10/2011 1:47:00 AM
1,3-Dichlorobenzene	ND	8.0		ppbv	8	8/10/2011 1:47:00 AM
1,4-Dichlorobenzene	ND	8.0		ppbv	8	8/10/2011 1:47:00 AM
1,4-Dioxane	ND	8.0		ppbv	8	8/10/2011 1:47:00 AM
2-Butanone	16	8.0		ppbv	8	8/10/2011 1:47:00 AM
2-Hexanone	ND	8.0		ppbv	8	8/10/2011 1:47:00 AM
2-Propanol	ND	8.0		ppbv	8	8/10/2011 1:47:00 AM
4-Methyl-2-pentanone	ND	8.0		ppbv	8	8/10/2011 1:47:00 AM
Acetone	13	8.0		ppbv	8	8/10/2011 1:47:00 AM
Benzene	9.5	8.0		ppbv	8	8/10/2011 1:47:00 AM
Benzyl chloride	ND	8.0		ppbv	8	8/10/2011 1:47:00 AM
Bromodichloromethane	ND	8.0		ppbv	8	8/10/2011 1:47:00 AM
Bromoform	ND	8.0		ppbv	8	8/10/2011 1:47:00 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 v3

RTI LABORATORIES, INC.

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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/11/2011 3:15:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-006 **Matrix:** AIR

Client Sample ID VA0551

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	8.0		ppbv	8	8/10/2011 1:47:00 AM
Carbon disulfide	ND	8.0		ppbv	8	8/10/2011 1:47:00 AM
Carbon tetrachloride	ND	8.0		ppbv	8	8/10/2011 1:47:00 AM
Chlorobenzene	ND	8.0		ppbv	8	8/10/2011 1:47:00 AM
Chlorodibromomethane	ND	8.0		ppbv	8	8/10/2011 1:47:00 AM
Chloroethane	ND	8.0		ppbv	8	8/10/2011 1:47:00 AM
Chloroform	ND	8.0		ppbv	8	8/10/2011 1:47:00 AM
Chloromethane	ND	8.0		ppbv	8	8/10/2011 1:47:00 AM
cis-1,2-Dichloroethene	ND	8.0		ppbv	8	8/10/2011 1:47:00 AM
cis-1,3-dichloropropene	ND	8.0		ppbv	8	8/10/2011 1:47:00 AM
Cyclohexane	22	16		ppbv	8	8/10/2011 1:47:00 AM
Dichlorodifluoromethane	ND	8.0		ppbv	8	8/10/2011 1:47:00 AM
Ethanol	110	40		ppbv	8	8/10/2011 1:47:00 AM
Ethyl acetate	ND	8.0		ppbv	8	8/10/2011 1:47:00 AM
Ethylbenzene	8.0	16	J	ppbv	8	8/10/2011 1:47:00 AM
Heptane	16	8.0		ppbv	8	8/10/2011 1:47:00 AM
Hexachlorobutadiene	ND	16		ppbv	8	8/10/2011 1:47:00 AM
m,p-Xylene	22	16		ppbv	8	8/10/2011 1:47:00 AM
Methylene chloride	ND	40		ppbv	8	8/10/2011 1:47:00 AM
Naphthalene	ND	8.0		ppbv	8	8/10/2011 1:47:00 AM
n-Hexane	8.1	16	J	ppbv	8	8/10/2011 1:47:00 AM
o-Xylene	10	8.0		ppbv	8	8/10/2011 1:47:00 AM
Propylene	ND	8.0		ppbv	8	8/10/2011 1:47:00 AM
Styrene	ND	8.0		ppbv	8	8/10/2011 1:47:00 AM
tert-Butyl Methyl Ether	ND	8.0		ppbv	8	8/10/2011 1:47:00 AM
Tetrachloroethene	ND	8.0		ppbv	8	8/10/2011 1:47:00 AM
Tetrahydrofuran	ND	8.0		ppbv	8	8/10/2011 1:47:00 AM
Toluene	59	8.0		ppbv	8	8/10/2011 1:47:00 AM
trans-1,2-Dichloroethene	ND	8.0		ppbv	8	8/10/2011 1:47:00 AM
trans-1,3-dichloropropene	ND	8.0		ppbv	8	8/10/2011 1:47:00 AM
Trichloroethene	ND	8.0		ppbv	8	8/10/2011 1:47:00 AM
Trichlorofluoromethane	ND	8.0		ppbv	8	8/10/2011 1:47:00 AM
Vinyl acetate	ND	8.0		ppbv	8	8/10/2011 1:47:00 AM
Vinyl chloride	ND	8.0		ppbv	8	8/10/2011 1:47:00 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

RTI LABORATORIES, INC.

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Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/11/2011 3:15:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-006 **Matrix:** AIR

Client Sample ID VA0551

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	32	24		ppbv	8	8/10/2011 1:47:00 AM
Surr: 4-Bromofluorobenzene	103	70-130		%REC	8	8/10/2011 1:47:00 AM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **MT3**
C5-C8 Aliphatic Hydrocarbons	ND	940	H	µg/m³	8	8/10/2011 9:08:00 PM
C9-C10 Aromatic Hydrocarbons	ND	1,100	H	µg/m³	8	8/10/2011 9:08:00 PM
C9-C12 Aliphatic Hydrocarbons	ND	1,500	H	µg/m³	8	8/10/2011 9:08:00 PM
Surr: 4-Bromofluorobenzene	95.3	70-130	H	%REC	8	8/10/2011 9:08:00 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#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/11/2011 3:50:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-007 **Matrix:** AIR

Client Sample ID VA0552

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.19	0.10	H	%	1	8/6/2011 2:36:00 PM
Carbon Monoxide	ND	0.10	H	%	1	8/6/2011 2:36:00 PM
Methane	ND	0.50	H	%	1	8/6/2011 2:36:00 PM
Nitrogen	79	0.10	H	%	1	8/6/2011 2:36:00 PM
Oxygen	21	0.10	H	%	1	8/6/2011 2:36:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	8.0		ppbv	8	8/10/2011 2:31:00 AM
1,1,2,2-Tetrachloroethane	ND	8.0		ppbv	8	8/10/2011 2:31:00 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	8.0		ppbv	8	8/10/2011 2:31:00 AM
1,1,2-Trichloroethane	ND	8.0		ppbv	8	8/10/2011 2:31:00 AM
1,1-Dichloroethane	ND	8.0		ppbv	8	8/10/2011 2:31:00 AM
1,1-Dichloroethene	ND	8.0		ppbv	8	8/10/2011 2:31:00 AM
1,2,4-Trichlorobenzene	ND	8.0		ppbv	8	8/10/2011 2:31:00 AM
1,2,4-Trimethylbenzene	ND	8.0		ppbv	8	8/10/2011 2:31:00 AM
1,2-Dibromoethane	ND	8.0		ppbv	8	8/10/2011 2:31:00 AM
1,2-Dichlorobenzene	ND	8.0		ppbv	8	8/10/2011 2:31:00 AM
1,2-Dichloroethane	ND	8.0		ppbv	8	8/10/2011 2:31:00 AM
1,2-Dichloropropane	ND	8.0		ppbv	8	8/10/2011 2:31:00 AM
1,3,5-Trimethylbenzene	ND	8.0		ppbv	8	8/10/2011 2:31:00 AM
1,3-Butadiene	ND	8.0		ppbv	8	8/10/2011 2:31:00 AM
1,3-Dichlorobenzene	ND	8.0		ppbv	8	8/10/2011 2:31:00 AM
1,4-Dichlorobenzene	ND	8.0		ppbv	8	8/10/2011 2:31:00 AM
1,4-Dioxane	ND	8.0		ppbv	8	8/10/2011 2:31:00 AM
2-Butanone	22	8.0		ppbv	8	8/10/2011 2:31:00 AM
2-Hexanone	ND	8.0		ppbv	8	8/10/2011 2:31:00 AM
2-Propanol	ND	8.0		ppbv	8	8/10/2011 2:31:00 AM
4-Methyl-2-pentanone	ND	8.0		ppbv	8	8/10/2011 2:31:00 AM
Acetone	31	8.0		ppbv	8	8/10/2011 2:31:00 AM
Benzene	ND	8.0		ppbv	8	8/10/2011 2:31:00 AM
Benzyl chloride	ND	8.0		ppbv	8	8/10/2011 2:31:00 AM
Bromodichloromethane	ND	8.0		ppbv	8	8/10/2011 2:31:00 AM
Bromoform	ND	8.0		ppbv	8	8/10/2011 2:31:00 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#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/11/2011 3:50:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-007 **Matrix:** AIR

Client Sample ID VA0552

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	8.0		ppbv	8	8/10/2011 2:31:00 AM
Carbon disulfide	ND	8.0		ppbv	8	8/10/2011 2:31:00 AM
Carbon tetrachloride	ND	8.0		ppbv	8	8/10/2011 2:31:00 AM
Chlorobenzene	ND	8.0		ppbv	8	8/10/2011 2:31:00 AM
Chlorodibromomethane	ND	8.0		ppbv	8	8/10/2011 2:31:00 AM
Chloroethane	ND	8.0		ppbv	8	8/10/2011 2:31:00 AM
Chloroform	ND	8.0		ppbv	8	8/10/2011 2:31:00 AM
Chloromethane	14	8.0		ppbv	8	8/10/2011 2:31:00 AM
cis-1,2-Dichloroethene	ND	8.0		ppbv	8	8/10/2011 2:31:00 AM
cis-1,3-dichloropropene	ND	8.0		ppbv	8	8/10/2011 2:31:00 AM
Cyclohexane	16	16		ppbv	8	8/10/2011 2:31:00 AM
Dichlorodifluoromethane	ND	8.0		ppbv	8	8/10/2011 2:31:00 AM
Ethanol	ND	40		ppbv	8	8/10/2011 2:31:00 AM
Ethyl acetate	ND	8.0		ppbv	8	8/10/2011 2:31:00 AM
Ethylbenzene	ND	16		ppbv	8	8/10/2011 2:31:00 AM
Heptane	9.4	8.0		ppbv	8	8/10/2011 2:31:00 AM
Hexachlorobutadiene	ND	16		ppbv	8	8/10/2011 2:31:00 AM
m,p-Xylene	21	16		ppbv	8	8/10/2011 2:31:00 AM
Methylene chloride	23	40	J	ppbv	8	8/10/2011 2:31:00 AM
Naphthalene	ND	8.0		ppbv	8	8/10/2011 2:31:00 AM
n-Hexane	11	16	J	ppbv	8	8/10/2011 2:31:00 AM
o-Xylene	9.5	8.0		ppbv	8	8/10/2011 2:31:00 AM
Propylene	ND	8.0		ppbv	8	8/10/2011 2:31:00 AM
Styrene	ND	8.0		ppbv	8	8/10/2011 2:31:00 AM
tert-Butyl Methyl Ether	ND	8.0		ppbv	8	8/10/2011 2:31:00 AM
Tetrachloroethene	ND	8.0		ppbv	8	8/10/2011 2:31:00 AM
Tetrahydrofuran	ND	8.0		ppbv	8	8/10/2011 2:31:00 AM
Toluene	51	8.0		ppbv	8	8/10/2011 2:31:00 AM
trans-1,2-Dichloroethene	ND	8.0		ppbv	8	8/10/2011 2:31:00 AM
trans-1,3-dichloropropene	ND	8.0		ppbv	8	8/10/2011 2:31:00 AM
Trichloroethene	ND	8.0		ppbv	8	8/10/2011 2:31:00 AM
Trichlorofluoromethane	ND	8.0		ppbv	8	8/10/2011 2:31:00 AM
Vinyl acetate	ND	8.0		ppbv	8	8/10/2011 2:31:00 AM
Vinyl chloride	ND	8.0		ppbv	8	8/10/2011 2:31:00 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#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/11/2011 3:50:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-007 **Matrix:** AIR

Client Sample ID VA0552

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	31	24		ppbv	8	8/10/2011 2:31:00 AM
Surr: 4-Bromofluorobenzene	103	70-130		%REC	8	8/10/2011 2:31:00 AM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **MT3**
C5-C8 Aliphatic Hydrocarbons	ND	940	H	µg/m³	8	8/10/2011 9:52:00 PM
C9-C10 Aromatic Hydrocarbons	ND	1,100	H	µg/m³	8	8/10/2011 9:52:00 PM
C9-C12 Aliphatic Hydrocarbons	ND	1,500	H	µg/m³	8	8/10/2011 9:52:00 PM
Surr: 4-Bromofluorobenzene	95.6	70-130	H	%REC	8	8/10/2011 9:52:00 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.

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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/12/2011 8:38:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-008 **Matrix:** AIR

Client Sample ID VA0553

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.16	0.10		%	1	8/8/2011 11:41:00 AM
Carbon Monoxide	ND	0.10		%	1	8/8/2011 11:41:00 AM
Methane	ND	0.50		%	1	8/8/2011 11:41:00 AM
Nitrogen	79	0.10		%	1	8/8/2011 11:41:00 AM
Oxygen	20	0.10		%	1	8/8/2011 11:41:00 AM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	800		ppbv	800	8/8/2011 12:03:00 AM
1,1,2,2-Tetrachloroethane	ND	800		ppbv	800	8/8/2011 12:03:00 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	800		ppbv	800	8/8/2011 12:03:00 AM
1,1,2-Trichloroethane	ND	800		ppbv	800	8/8/2011 12:03:00 AM
1,1-Dichloroethane	ND	800		ppbv	800	8/8/2011 12:03:00 AM
1,1-Dichloroethene	ND	800		ppbv	800	8/8/2011 12:03:00 AM
1,2,4-Trichlorobenzene	ND	800		ppbv	800	8/8/2011 12:03:00 AM
1,2,4-Trimethylbenzene	ND	800		ppbv	800	8/8/2011 12:03:00 AM
1,2-Dibromoethane	ND	800		ppbv	800	8/8/2011 12:03:00 AM
1,2-Dichlorobenzene	ND	800		ppbv	800	8/8/2011 12:03:00 AM
1,2-Dichloroethane	ND	800		ppbv	800	8/8/2011 12:03:00 AM
1,2-Dichloropropane	ND	800		ppbv	800	8/8/2011 12:03:00 AM
1,3,5-Trimethylbenzene	ND	800		ppbv	800	8/8/2011 12:03:00 AM
1,3-Butadiene	ND	800		ppbv	800	8/8/2011 12:03:00 AM
1,3-Dichlorobenzene	ND	800		ppbv	800	8/8/2011 12:03:00 AM
1,4-Dichlorobenzene	ND	800		ppbv	800	8/8/2011 12:03:00 AM
1,4-Dioxane	ND	800		ppbv	800	8/8/2011 12:03:00 AM
2-Butanone	ND	800		ppbv	800	8/8/2011 12:03:00 AM
2-Hexanone	ND	800		ppbv	800	8/8/2011 12:03:00 AM
2-Propanol	ND	800		ppbv	800	8/8/2011 12:03:00 AM
4-Methyl-2-pentanone	ND	800		ppbv	800	8/8/2011 12:03:00 AM
Acetone	ND	800		ppbv	800	8/8/2011 12:03:00 AM
Benzene	ND	800		ppbv	800	8/8/2011 12:03:00 AM
Benzyl chloride	ND	800		ppbv	800	8/8/2011 12:03:00 AM
Bromodichloromethane	ND	800		ppbv	800	8/8/2011 12:03:00 AM
Bromoform	ND	800		ppbv	800	8/8/2011 12:03:00 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

Revision v3

RTI LABORATORIES, INC.

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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/12/2011 8:38:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-008 **Matrix:** AIR

Client Sample ID VA0553

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	800		ppbv	800	8/8/2011 12:03:00 AM
Carbon disulfide	ND	800		ppbv	800	8/8/2011 12:03:00 AM
Carbon tetrachloride	ND	800		ppbv	800	8/8/2011 12:03:00 AM
Chlorobenzene	ND	800		ppbv	800	8/8/2011 12:03:00 AM
Chlorodibromomethane	ND	800		ppbv	800	8/8/2011 12:03:00 AM
Chloroethane	ND	800		ppbv	800	8/8/2011 12:03:00 AM
Chloroform	ND	800		ppbv	800	8/8/2011 12:03:00 AM
Chloromethane	ND	800		ppbv	800	8/8/2011 12:03:00 AM
cis-1,2-Dichloroethene	ND	800		ppbv	800	8/8/2011 12:03:00 AM
cis-1,3-dichloropropene	ND	800		ppbv	800	8/8/2011 12:03:00 AM
Cyclohexane	2,400	1,600		ppbv	800	8/8/2011 12:03:00 AM
Dichlorodifluoromethane	ND	800		ppbv	800	8/8/2011 12:03:00 AM
Ethanol	ND	4,000		ppbv	800	8/8/2011 12:03:00 AM
Ethyl acetate	ND	800		ppbv	800	8/8/2011 12:03:00 AM
Ethylbenzene	ND	1,600		ppbv	800	8/8/2011 12:03:00 AM
Heptane	ND	800		ppbv	800	8/8/2011 12:03:00 AM
Hexachlorobutadiene	ND	1,600		ppbv	800	8/8/2011 12:03:00 AM
m,p-Xylene	ND	1,600		ppbv	800	8/8/2011 12:03:00 AM
Methylene chloride	2,000	4,000	J	ppbv	800	8/8/2011 12:03:00 AM
Naphthalene	ND	800		ppbv	800	8/8/2011 12:03:00 AM
n-Hexane	2,500	1,600		ppbv	800	8/8/2011 12:03:00 AM
o-Xylene	ND	800		ppbv	800	8/8/2011 12:03:00 AM
Propylene	ND	800		ppbv	800	8/8/2011 12:03:00 AM
Styrene	ND	800		ppbv	800	8/8/2011 12:03:00 AM
tert-Butyl Methyl Ether	ND	800		ppbv	800	8/8/2011 12:03:00 AM
Tetrachloroethene	ND	800		ppbv	800	8/8/2011 12:03:00 AM
Tetrahydrofuran	ND	800		ppbv	800	8/8/2011 12:03:00 AM
Toluene	1,400	800		ppbv	800	8/8/2011 12:03:00 AM
trans-1,2-Dichloroethene	ND	800		ppbv	800	8/8/2011 12:03:00 AM
trans-1,3-dichloropropene	ND	800		ppbv	800	8/8/2011 12:03:00 AM
Trichloroethene	ND	800		ppbv	800	8/8/2011 12:03:00 AM
Trichlorofluoromethane	ND	800		ppbv	800	8/8/2011 12:03:00 AM
Vinyl acetate	ND	800		ppbv	800	8/8/2011 12:03:00 AM
Vinyl chloride	ND	800		ppbv	800	8/8/2011 12:03:00 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

Revision v3

RTI LABORATORIES, INC.

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

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/12/2011 8:38:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-008 **Matrix:** AIR

Client Sample ID VA0553

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	ND	2,400		ppbv	800	8/8/2011 12:03:00 AM
Surr: 4-Bromofluorobenzene	92.6	70-130		%REC	800	8/8/2011 12:03:00 AM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **MT3**
C5-C8 Aliphatic Hydrocarbons	ND	94,000		µg/m³	800	8/10/2011 10:37:00 PM
C9-C10 Aromatic Hydrocarbons	ND	110,000		µg/m³	800	8/10/2011 10:37:00 PM
C9-C12 Aliphatic Hydrocarbons	ND	150,000		µg/m³	800	8/10/2011 10:37:00 PM
Surr: 4-Bromofluorobenzene	95.4	70-130		%REC	800	8/10/2011 10:37:00 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.

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Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/12/2011 9:13:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-009 **Matrix:** AIR

Client Sample ID VA0554

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.11	0.10		%	1	8/8/2011 12:02:00 PM
Carbon Monoxide	ND	0.10		%	1	8/8/2011 12:02:00 PM
Methane	ND	0.50		%	1	8/8/2011 12:02:00 PM
Nitrogen	78	0.10		%	1	8/8/2011 12:02:00 PM
Oxygen	21	0.10		%	1	8/8/2011 12:02:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	800		ppbv	800	8/8/2011 12:51:00 AM
1,1,2,2-Tetrachloroethane	ND	800		ppbv	800	8/8/2011 12:51:00 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	800		ppbv	800	8/8/2011 12:51:00 AM
1,1,2-Trichloroethane	ND	800		ppbv	800	8/8/2011 12:51:00 AM
1,1-Dichloroethane	ND	800		ppbv	800	8/8/2011 12:51:00 AM
1,1-Dichloroethene	ND	800		ppbv	800	8/8/2011 12:51:00 AM
1,2,4-Trichlorobenzene	ND	800		ppbv	800	8/8/2011 12:51:00 AM
1,2,4-Trimethylbenzene	ND	800		ppbv	800	8/8/2011 12:51:00 AM
1,2-Dibromoethane	ND	800		ppbv	800	8/8/2011 12:51:00 AM
1,2-Dichlorobenzene	ND	800		ppbv	800	8/8/2011 12:51:00 AM
1,2-Dichloroethane	ND	800		ppbv	800	8/8/2011 12:51:00 AM
1,2-Dichloropropane	ND	800		ppbv	800	8/8/2011 12:51:00 AM
1,3,5-Trimethylbenzene	ND	800		ppbv	800	8/8/2011 12:51:00 AM
1,3-Butadiene	ND	800		ppbv	800	8/8/2011 12:51:00 AM
1,3-Dichlorobenzene	ND	800		ppbv	800	8/8/2011 12:51:00 AM
1,4-Dichlorobenzene	ND	800		ppbv	800	8/8/2011 12:51:00 AM
1,4-Dioxane	ND	800		ppbv	800	8/8/2011 12:51:00 AM
2-Butanone	ND	800		ppbv	800	8/8/2011 12:51:00 AM
2-Hexanone	ND	800		ppbv	800	8/8/2011 12:51:00 AM
2-Propanol	ND	800		ppbv	800	8/8/2011 12:51:00 AM
4-Methyl-2-pentanone	ND	800		ppbv	800	8/8/2011 12:51:00 AM
Acetone	840	800		ppbv	800	8/8/2011 12:51:00 AM
Benzene	1,100	800		ppbv	800	8/8/2011 12:51:00 AM
Benzyl chloride	ND	800		ppbv	800	8/8/2011 12:51:00 AM
Bromodichloromethane	ND	800		ppbv	800	8/8/2011 12:51:00 AM
Bromoform	ND	800		ppbv	800	8/8/2011 12:51:00 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

RTI LABORATORIES, INC.

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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/12/2011 9:13:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-009 **Matrix:** AIR

Client Sample ID VA0554

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	800		ppbv	800	8/8/2011 12:51:00 AM
Carbon disulfide	ND	800		ppbv	800	8/8/2011 12:51:00 AM
Carbon tetrachloride	ND	800		ppbv	800	8/8/2011 12:51:00 AM
Chlorobenzene	ND	800		ppbv	800	8/8/2011 12:51:00 AM
Chlorodibromomethane	ND	800		ppbv	800	8/8/2011 12:51:00 AM
Chloroethane	ND	800		ppbv	800	8/8/2011 12:51:00 AM
Chloroform	ND	800		ppbv	800	8/8/2011 12:51:00 AM
Chloromethane	ND	800		ppbv	800	8/8/2011 12:51:00 AM
cis-1,2-Dichloroethene	ND	800		ppbv	800	8/8/2011 12:51:00 AM
cis-1,3-dichloropropene	ND	800		ppbv	800	8/8/2011 12:51:00 AM
Cyclohexane	1,800	1,600		ppbv	800	8/8/2011 12:51:00 AM
Dichlorodifluoromethane	ND	800		ppbv	800	8/8/2011 12:51:00 AM
Ethanol	ND	4,000		ppbv	800	8/8/2011 12:51:00 AM
Ethyl acetate	ND	800		ppbv	800	8/8/2011 12:51:00 AM
Ethylbenzene	ND	1,600		ppbv	800	8/8/2011 12:51:00 AM
Heptane	ND	800		ppbv	800	8/8/2011 12:51:00 AM
Hexachlorobutadiene	ND	1,600		ppbv	800	8/8/2011 12:51:00 AM
m,p-Xylene	ND	1,600		ppbv	800	8/8/2011 12:51:00 AM
Methylene chloride	2,200	4,000	J	ppbv	800	8/8/2011 12:51:00 AM
Naphthalene	ND	800		ppbv	800	8/8/2011 12:51:00 AM
n-Hexane	2,100	1,600		ppbv	800	8/8/2011 12:51:00 AM
o-Xylene	ND	800		ppbv	800	8/8/2011 12:51:00 AM
Propylene	ND	800		ppbv	800	8/8/2011 12:51:00 AM
Styrene	ND	800		ppbv	800	8/8/2011 12:51:00 AM
tert-Butyl Methyl Ether	ND	800		ppbv	800	8/8/2011 12:51:00 AM
Tetrachloroethene	ND	800		ppbv	800	8/8/2011 12:51:00 AM
Tetrahydrofuran	ND	800		ppbv	800	8/8/2011 12:51:00 AM
Toluene	2,100	800		ppbv	800	8/8/2011 12:51:00 AM
trans-1,2-Dichloroethene	ND	800		ppbv	800	8/8/2011 12:51:00 AM
trans-1,3-dichloropropene	ND	800		ppbv	800	8/8/2011 12:51:00 AM
Trichloroethene	ND	800		ppbv	800	8/8/2011 12:51:00 AM
Trichlorofluoromethane	ND	800		ppbv	800	8/8/2011 12:51:00 AM
Vinyl acetate	ND	800		ppbv	800	8/8/2011 12:51:00 AM
Vinyl chloride	ND	800		ppbv	800	8/8/2011 12:51:00 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

RTI LABORATORIES, INC.

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

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/12/2011 9:13:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-009 **Matrix:** AIR

Client Sample ID VA0554

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	ND	2,400		ppbv	800	8/8/2011 12:51:00 AM
Surr: 4-Bromofluorobenzene	92.6	70-130		%REC	800	8/8/2011 12:51:00 AM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **MT3**
C5-C8 Aliphatic Hydrocarbons	ND	94,000		µg/m³	800	8/10/2011 11:23:00 PM
C9-C10 Aromatic Hydrocarbons	ND	110,000		µg/m³	800	8/10/2011 11:23:00 PM
C9-C12 Aliphatic Hydrocarbons	ND	150,000		µg/m³	800	8/10/2011 11:23:00 PM
Surr: 4-Bromofluorobenzene	95.9	70-130		%REC	800	8/10/2011 11:23:00 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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Livonia, MI 48150
TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/14/2011 2:18:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-010 **Matrix:** AIR

Client Sample ID VA0555

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.73	0.10		%	1	8/8/2011 12:45:00 PM
Carbon Monoxide	ND	0.10		%	1	8/8/2011 12:45:00 PM
Methane	ND	0.50		%	1	8/8/2011 12:45:00 PM
Nitrogen	79	0.10		%	1	8/8/2011 12:45:00 PM
Oxygen	20	0.10		%	1	8/8/2011 12:45:00 PM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **MT3**
C5-C8 Aliphatic Hydrocarbons	27,000	12,000		µg/m³	100	8/11/2011 7:31:00 PM
C9-C10 Aromatic Hydrocarbons	ND	13,000		µg/m³	100	8/11/2011 7:31:00 PM
C9-C12 Aliphatic Hydrocarbons	15,000	19,000	J	µg/m³	100	8/11/2011 7:31:00 PM
Surr: 4-Bromofluorobenzene	95.8	70-130		%REC	100	8/11/2011 7:31:00 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
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Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/13/2011 2:42:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-011 **Matrix:** AIR

Client Sample ID VA0556

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.98	0.10		%	1	8/8/2011 1:05:00 PM
Carbon Monoxide	ND	0.10		%	1	8/8/2011 1:05:00 PM
Methane	ND	0.50		%	1	8/8/2011 1:05:00 PM
Nitrogen	79	0.10		%	1	8/8/2011 1:05:00 PM
Oxygen	19	0.10		%	1	8/8/2011 1:05:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	8.0	H	ppbv	8	8/30/2011 4:07:00 PM
1,1,2,2-Tetrachloroethane	6.9	8.0	JH	ppbv	8	8/30/2011 4:07:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	8.0	H	ppbv	8	8/30/2011 4:07:00 PM
1,1,2-Trichloroethane	ND	8.0	H	ppbv	8	8/30/2011 4:07:00 PM
1,1-Dichloroethane	ND	8.0	H	ppbv	8	8/30/2011 4:07:00 PM
1,1-Dichloroethene	ND	8.0	H	ppbv	8	8/30/2011 4:07:00 PM
1,2,4-Trichlorobenzene	ND	8.0	H	ppbv	8	8/30/2011 4:07:00 PM
1,2,4-Trimethylbenzene	4.4	8.0	JH	ppbv	8	8/30/2011 4:07:00 PM
1,2-Dibromoethane	ND	8.0	H	ppbv	8	8/30/2011 4:07:00 PM
1,2-Dichlorobenzene	ND	8.0	H	ppbv	8	8/30/2011 4:07:00 PM
1,2-Dichloroethane	ND	8.0	H	ppbv	8	8/30/2011 4:07:00 PM
1,2-Dichloropropane	ND	8.0	H	ppbv	8	8/30/2011 4:07:00 PM
1,3,5-Trimethylbenzene	ND	8.0	H	ppbv	8	8/30/2011 4:07:00 PM
1,3-Butadiene	ND	8.0	H	ppbv	8	8/30/2011 4:07:00 PM
1,3-Dichlorobenzene	ND	8.0	H	ppbv	8	8/30/2011 4:07:00 PM
1,4-Dichlorobenzene	ND	8.0	H	ppbv	8	8/30/2011 4:07:00 PM
1,4-Dioxane	ND	8.0	H	ppbv	8	8/30/2011 4:07:00 PM
2-Butanone	30	8.0	H	ppbv	8	8/30/2011 4:07:00 PM
2-Hexanone	7.8	8.0	JH	ppbv	8	8/30/2011 4:07:00 PM
2-Propanol	ND	8.0	H	ppbv	8	8/30/2011 4:07:00 PM
4-Methyl-2-pentanone	ND	8.0	H	ppbv	8	8/30/2011 4:07:00 PM
Acetone	35	8.0	H	ppbv	8	8/30/2011 4:07:00 PM
Benzene	10	8.0	H	ppbv	8	8/30/2011 4:07:00 PM
Benzyl chloride	ND	8.0	H	ppbv	8	8/30/2011 4:07:00 PM
Bromodichloromethane	25	8.0	H	ppbv	8	8/30/2011 4:07:00 PM
Bromoform	ND	8.0	H	ppbv	8	8/30/2011 4:07:00 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 v3

RTI LABORATORIES, INC.

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31628 Glendale St.
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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/13/2011 2:42:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-011 **Matrix:** AIR

Client Sample ID VA0556

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	8.0	H	ppbv	8	8/30/2011 4:07:00 PM
Carbon disulfide	ND	8.0	H	ppbv	8	8/30/2011 4:07:00 PM
Carbon tetrachloride	58	8.0	H	ppbv	8	8/30/2011 4:07:00 PM
Chlorobenzene	ND	8.0	H	ppbv	8	8/30/2011 4:07:00 PM
Chlorodibromomethane	ND	8.0	H	ppbv	8	8/30/2011 4:07:00 PM
Chloroethane	ND	8.0	H	ppbv	8	8/30/2011 4:07:00 PM
Chloroform	110	8.0	H	ppbv	8	8/30/2011 4:07:00 PM
Chloromethane	ND	8.0	H	ppbv	8	8/30/2011 4:07:00 PM
cis-1,2-Dichloroethene	ND	8.0	H	ppbv	8	8/30/2011 4:07:00 PM
cis-1,3-dichloropropene	ND	8.0	H	ppbv	8	8/30/2011 4:07:00 PM
Cyclohexane	27	16	H	ppbv	8	8/30/2011 4:07:00 PM
Dichlorodifluoromethane	ND	8.0	H	ppbv	8	8/30/2011 4:07:00 PM
Ethanol	35	40	JH	ppbv	8	8/30/2011 4:07:00 PM
Ethyl acetate	ND	8.0	H	ppbv	8	8/30/2011 4:07:00 PM
Ethylbenzene	6.2	16	JH	ppbv	8	8/30/2011 4:07:00 PM
Heptane	16	8.0	H	ppbv	8	8/30/2011 4:07:00 PM
Hexachlorobutadiene	ND	16	H	ppbv	8	8/30/2011 4:07:00 PM
m,p-Xylene	17	16	H	ppbv	8	8/30/2011 4:07:00 PM
Methylene chloride	ND	40	H	ppbv	8	8/30/2011 4:07:00 PM
Naphthalene	ND	8.0	H	ppbv	8	8/30/2011 4:07:00 PM
n-Hexane	11	16	JH	ppbv	8	8/30/2011 4:07:00 PM
o-Xylene	7.0	8.0	JH	ppbv	8	8/30/2011 4:07:00 PM
Propylene	8.5	8.0	H	ppbv	8	8/30/2011 4:07:00 PM
Styrene	ND	8.0	H	ppbv	8	8/30/2011 4:07:00 PM
tert-Butyl Methyl Ether	ND	8.0	H	ppbv	8	8/30/2011 4:07:00 PM
Tetrachloroethene	ND	8.0	H	ppbv	8	8/30/2011 4:07:00 PM
Tetrahydrofuran	ND	8.0	H	ppbv	8	8/30/2011 4:07:00 PM
Toluene	76	8.0	H	ppbv	8	8/30/2011 4:07:00 PM
trans-1,2-Dichloroethene	ND	8.0	H	ppbv	8	8/30/2011 4:07:00 PM
trans-1,3-dichloropropene	ND	8.0	H	ppbv	8	8/30/2011 4:07:00 PM
Trichloroethene	ND	8.0	H	ppbv	8	8/30/2011 4:07:00 PM
Trichlorofluoromethane	ND	8.0	H	ppbv	8	8/30/2011 4:07:00 PM
Vinyl acetate	ND	8.0	H	ppbv	8	8/30/2011 4:07:00 PM
Vinyl chloride	ND	8.0	H	ppbv	8	8/30/2011 4:07:00 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.

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Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/13/2011 2:42:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-011 **Matrix:** AIR

Client Sample ID VA0556

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	24	24	H	ppbv	8	8/30/2011 4:07:00 PM
Surr: 4-Bromofluorobenzene	103	70-130	H	%REC	8	8/30/2011 4:07:00 PM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **MT3**
C5-C8 Aliphatic Hydrocarbons	21,000	12,000		µg/m³	100	8/11/2011 8:20:00 PM
C9-C10 Aromatic Hydrocarbons	ND	13,000		µg/m³	100	8/11/2011 8:20:00 PM
C9-C12 Aliphatic Hydrocarbons	ND	19,000		µg/m³	100	8/11/2011 8:20:00 PM
Surr: 4-Bromofluorobenzene	95.4	70-130		%REC	100	8/11/2011 8:20:00 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#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/13/2011 3:15:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-012 **Matrix:** AIR

Client Sample ID VA0557

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.15	0.10		%	1	8/8/2011 1:34:00 PM
Carbon Monoxide	ND	0.10		%	1	8/8/2011 1:34:00 PM
Methane	ND	0.50		%	1	8/8/2011 1:34:00 PM
Nitrogen	79	0.10		%	1	8/8/2011 1:34:00 PM
Oxygen	20	0.10		%	1	8/8/2011 1:34:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	40	H	ppbv	40	8/30/2011 8:30:00 PM
1,1,2,2-Tetrachloroethane	ND	40	H	ppbv	40	8/30/2011 8:30:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	40	H	ppbv	40	8/30/2011 8:30:00 PM
1,1,2-Trichloroethane	ND	40	H	ppbv	40	8/30/2011 8:30:00 PM
1,1-Dichloroethane	ND	40	H	ppbv	40	8/30/2011 8:30:00 PM
1,1-Dichloroethene	ND	40	H	ppbv	40	8/30/2011 8:30:00 PM
1,2,4-Trichlorobenzene	ND	40	H	ppbv	40	8/30/2011 8:30:00 PM
1,2,4-Trimethylbenzene	ND	40	H	ppbv	40	8/30/2011 8:30:00 PM
1,2-Dibromoethane	ND	40	H	ppbv	40	8/30/2011 8:30:00 PM
1,2-Dichlorobenzene	ND	40	H	ppbv	40	8/30/2011 8:30:00 PM
1,2-Dichloroethane	ND	40	H	ppbv	40	8/30/2011 8:30:00 PM
1,2-Dichloropropane	ND	40	H	ppbv	40	8/30/2011 8:30:00 PM
1,3,5-Trimethylbenzene	ND	40	H	ppbv	40	8/30/2011 8:30:00 PM
1,3-Butadiene	ND	40	H	ppbv	40	8/30/2011 8:30:00 PM
1,3-Dichlorobenzene	ND	40	H	ppbv	40	8/30/2011 8:30:00 PM
1,4-Dichlorobenzene	ND	40	H	ppbv	40	8/30/2011 8:30:00 PM
1,4-Dioxane	ND	40	H	ppbv	40	8/30/2011 8:30:00 PM
2-Butanone	46	40	H	ppbv	40	8/30/2011 8:30:00 PM
2-Hexanone	ND	40	H	ppbv	40	8/30/2011 8:30:00 PM
2-Propanol	ND	40	H	ppbv	40	8/30/2011 8:30:00 PM
4-Methyl-2-pentanone	ND	40	H	ppbv	40	8/30/2011 8:30:00 PM
Acetone	52	40	H	ppbv	40	8/30/2011 8:30:00 PM
Benzene	ND	40	H	ppbv	40	8/30/2011 8:30:00 PM
Benzyl chloride	ND	40	H	ppbv	40	8/30/2011 8:30:00 PM
Bromodichloromethane	ND	40	H	ppbv	40	8/30/2011 8:30:00 PM
Bromoform	ND	40	H	ppbv	40	8/30/2011 8:30:00 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.

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Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/13/2011 3:15:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-012 **Matrix:** AIR

Client Sample ID VA0557

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	40	H	ppbv	40	8/30/2011 8:30:00 PM
Carbon disulfide	ND	40	H	ppbv	40	8/30/2011 8:30:00 PM
Carbon tetrachloride	ND	40	H	ppbv	40	8/30/2011 8:30:00 PM
Chlorobenzene	ND	40	H	ppbv	40	8/30/2011 8:30:00 PM
Chlorodibromomethane	ND	40	H	ppbv	40	8/30/2011 8:30:00 PM
Chloroethane	ND	40	H	ppbv	40	8/30/2011 8:30:00 PM
Chloroform	ND	40	H	ppbv	40	8/30/2011 8:30:00 PM
Chloromethane	ND	40	H	ppbv	40	8/30/2011 8:30:00 PM
cis-1,2-Dichloroethene	ND	40	H	ppbv	40	8/30/2011 8:30:00 PM
cis-1,3-dichloropropene	ND	40	H	ppbv	40	8/30/2011 8:30:00 PM
Cyclohexane	43	80	JH	ppbv	40	8/30/2011 8:30:00 PM
Dichlorodifluoromethane	ND	40	H	ppbv	40	8/30/2011 8:30:00 PM
Ethanol	ND	200	H	ppbv	40	8/30/2011 8:30:00 PM
Ethyl acetate	ND	40	H	ppbv	40	8/30/2011 8:30:00 PM
Ethylbenzene	ND	80	H	ppbv	40	8/30/2011 8:30:00 PM
Heptane	ND	40	H	ppbv	40	8/30/2011 8:30:00 PM
Hexachlorobutadiene	ND	80	H	ppbv	40	8/30/2011 8:30:00 PM
m,p-Xylene	ND	80	H	ppbv	40	8/30/2011 8:30:00 PM
Methylene chloride	ND	200	H	ppbv	40	8/30/2011 8:30:00 PM
Naphthalene	ND	40	H	ppbv	40	8/30/2011 8:30:00 PM
n-Hexane	ND	80	H	ppbv	40	8/30/2011 8:30:00 PM
o-Xylene	ND	40	H	ppbv	40	8/30/2011 8:30:00 PM
Propylene	ND	40	H	ppbv	40	8/30/2011 8:30:00 PM
Styrene	ND	40	H	ppbv	40	8/30/2011 8:30:00 PM
tert-Butyl Methyl Ether	ND	40	H	ppbv	40	8/30/2011 8:30:00 PM
Tetrachloroethene	ND	40	H	ppbv	40	8/30/2011 8:30:00 PM
Tetrahydrofuran	ND	40	H	ppbv	40	8/30/2011 8:30:00 PM
Toluene	76	40	H	ppbv	40	8/30/2011 8:30:00 PM
trans-1,2-Dichloroethene	ND	40	H	ppbv	40	8/30/2011 8:30:00 PM
trans-1,3-dichloropropene	ND	40	H	ppbv	40	8/30/2011 8:30:00 PM
Trichloroethene	ND	40	H	ppbv	40	8/30/2011 8:30:00 PM
Trichlorofluoromethane	ND	40	H	ppbv	40	8/30/2011 8:30:00 PM
Vinyl acetate	ND	40	H	ppbv	40	8/30/2011 8:30:00 PM
Vinyl chloride	ND	40	H	ppbv	40	8/30/2011 8:30:00 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.

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Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/13/2011 3:15:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-012 **Matrix:** AIR

Client Sample ID VA0557

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	ND	120	H	ppbv	40	8/30/2011 8:30:00 PM
Surr: 4-Bromofluorobenzene	106	70-130	H	%REC	40	8/30/2011 8:30:00 PM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **MT3**
C5-C8 Aliphatic Hydrocarbons	23,000	12,000		µg/m³	100	8/11/2011 9:09:00 PM
C9-C10 Aromatic Hydrocarbons	ND	13,000		µg/m³	100	8/11/2011 9:09:00 PM
C9-C12 Aliphatic Hydrocarbons	3,500	19,000	J	µg/m³	100	8/11/2011 9:09:00 PM
Surr: 4-Bromofluorobenzene	95.4	70-130		%REC	100	8/11/2011 9:09:00 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

RTI LABORATORIES, INC.

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Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/13/2011 3:47:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-013 **Matrix:** AIR

Client Sample ID VA0558

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.19	0.10		%	1	8/8/2011 1:52:00 PM
Carbon Monoxide	ND	0.10		%	1	8/8/2011 1:52:00 PM
Methane	ND	0.50		%	1	8/8/2011 1:52:00 PM
Nitrogen	78	0.10		%	1	8/8/2011 1:52:00 PM
Oxygen	21	0.10		%	1	8/8/2011 1:52:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	40	H	ppbv	40	8/30/2011 9:12:00 PM
1,1,2,2-Tetrachloroethane	ND	40	H	ppbv	40	8/30/2011 9:12:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	40	H	ppbv	40	8/30/2011 9:12:00 PM
1,1,2-Trichloroethane	ND	40	H	ppbv	40	8/30/2011 9:12:00 PM
1,1-Dichloroethane	ND	40	H	ppbv	40	8/30/2011 9:12:00 PM
1,1-Dichloroethene	ND	40	H	ppbv	40	8/30/2011 9:12:00 PM
1,2,4-Trichlorobenzene	ND	40	H	ppbv	40	8/30/2011 9:12:00 PM
1,2,4-Trimethylbenzene	ND	40	H	ppbv	40	8/30/2011 9:12:00 PM
1,2-Dibromoethane	ND	40	H	ppbv	40	8/30/2011 9:12:00 PM
1,2-Dichlorobenzene	ND	40	H	ppbv	40	8/30/2011 9:12:00 PM
1,2-Dichloroethane	ND	40	H	ppbv	40	8/30/2011 9:12:00 PM
1,2-Dichloropropane	ND	40	H	ppbv	40	8/30/2011 9:12:00 PM
1,3,5-Trimethylbenzene	ND	40	H	ppbv	40	8/30/2011 9:12:00 PM
1,3-Butadiene	ND	40	H	ppbv	40	8/30/2011 9:12:00 PM
1,3-Dichlorobenzene	ND	40	H	ppbv	40	8/30/2011 9:12:00 PM
1,4-Dichlorobenzene	ND	40	H	ppbv	40	8/30/2011 9:12:00 PM
1,4-Dioxane	ND	40	H	ppbv	40	8/30/2011 9:12:00 PM
2-Butanone	46	40	H	ppbv	40	8/30/2011 9:12:00 PM
2-Hexanone	ND	40	H	ppbv	40	8/30/2011 9:12:00 PM
2-Propanol	ND	40	H	ppbv	40	8/30/2011 9:12:00 PM
4-Methyl-2-pentanone	ND	40	H	ppbv	40	8/30/2011 9:12:00 PM
Acetone	52	40	H	ppbv	40	8/30/2011 9:12:00 PM
Benzene	21	40	JH	ppbv	40	8/30/2011 9:12:00 PM
Benzyl chloride	ND	40	H	ppbv	40	8/30/2011 9:12:00 PM
Bromodichloromethane	ND	40	H	ppbv	40	8/30/2011 9:12:00 PM
Bromoform	ND	40	H	ppbv	40	8/30/2011 9:12:00 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 v3

RTI LABORATORIES, INC.

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

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/13/2011 3:47:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-013 **Matrix:** AIR

Client Sample ID VA0558

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	40	H	ppbv	40	8/30/2011 9:12:00 PM
Carbon disulfide	ND	40	H	ppbv	40	8/30/2011 9:12:00 PM
Carbon tetrachloride	ND	40	H	ppbv	40	8/30/2011 9:12:00 PM
Chlorobenzene	ND	40	H	ppbv	40	8/30/2011 9:12:00 PM
Chlorodibromomethane	ND	40	H	ppbv	40	8/30/2011 9:12:00 PM
Chloroethane	ND	40	H	ppbv	40	8/30/2011 9:12:00 PM
Chloroform	ND	40	H	ppbv	40	8/30/2011 9:12:00 PM
Chloromethane	ND	40	H	ppbv	40	8/30/2011 9:12:00 PM
cis-1,2-Dichloroethene	ND	40	H	ppbv	40	8/30/2011 9:12:00 PM
cis-1,3-dichloropropene	ND	40	H	ppbv	40	8/30/2011 9:12:00 PM
Cyclohexane	32	80	JH	ppbv	40	8/30/2011 9:12:00 PM
Dichlorodifluoromethane	ND	40	H	ppbv	40	8/30/2011 9:12:00 PM
Ethanol	ND	200	H	ppbv	40	8/30/2011 9:12:00 PM
Ethyl acetate	ND	40	H	ppbv	40	8/30/2011 9:12:00 PM
Ethylbenzene	ND	80	H	ppbv	40	8/30/2011 9:12:00 PM
Heptane	ND	40	H	ppbv	40	8/30/2011 9:12:00 PM
Hexachlorobutadiene	ND	80	H	ppbv	40	8/30/2011 9:12:00 PM
m,p-Xylene	22	80	JH	ppbv	40	8/30/2011 9:12:00 PM
Methylene chloride	ND	200	H	ppbv	40	8/30/2011 9:12:00 PM
Naphthalene	ND	40	H	ppbv	40	8/30/2011 9:12:00 PM
n-Hexane	ND	80	H	ppbv	40	8/30/2011 9:12:00 PM
o-Xylene	ND	40	H	ppbv	40	8/30/2011 9:12:00 PM
Propylene	ND	40	H	ppbv	40	8/30/2011 9:12:00 PM
Styrene	ND	40	H	ppbv	40	8/30/2011 9:12:00 PM
tert-Butyl Methyl Ether	ND	40	H	ppbv	40	8/30/2011 9:12:00 PM
Tetrachloroethene	ND	40	H	ppbv	40	8/30/2011 9:12:00 PM
Tetrahydrofuran	ND	40	H	ppbv	40	8/30/2011 9:12:00 PM
Toluene	78	40	H	ppbv	40	8/30/2011 9:12:00 PM
trans-1,2-Dichloroethene	ND	40	H	ppbv	40	8/30/2011 9:12:00 PM
trans-1,3-dichloropropene	ND	40	H	ppbv	40	8/30/2011 9:12:00 PM
Trichloroethene	ND	40	H	ppbv	40	8/30/2011 9:12:00 PM
Trichlorofluoromethane	ND	40	H	ppbv	40	8/30/2011 9:12:00 PM
Vinyl acetate	ND	40	H	ppbv	40	8/30/2011 9:12:00 PM
Vinyl chloride	ND	40	H	ppbv	40	8/30/2011 9:12:00 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.
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TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/13/2011 3:47:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-013 **Matrix:** AIR

Client Sample ID VA0558

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	ND	120	H	ppbv	40	8/30/2011 9:12:00 PM
Surr: 4-Bromofluorobenzene	107	70-130	H	%REC	40	8/30/2011 9:12:00 PM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **MT3**
C5-C8 Aliphatic Hydrocarbons	550,000	94,000		µg/m³	800	8/9/2011 8:18:00 PM
C9-C10 Aromatic Hydrocarbons	ND	110,000		µg/m³	800	8/9/2011 8:18:00 PM
C9-C12 Aliphatic Hydrocarbons	ND	150,000		µg/m³	800	8/9/2011 8:18:00 PM
Surr: 4-Bromofluorobenzene	97.7	70-130		%REC	800	8/9/2011 8:18:00 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#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/13/2011 4:23:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-014 **Matrix:** AIR

Client Sample ID VA0559

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.18	0.10		%	1	8/8/2011 2:12:00 PM
Carbon Monoxide	ND	0.10		%	1	8/8/2011 2:12:00 PM
Methane	ND	0.50		%	1	8/8/2011 2:12:00 PM
Nitrogen	79	0.10		%	1	8/8/2011 2:12:00 PM
Oxygen	20	0.10		%	1	8/8/2011 2:12:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	400	H	ppbv	400	8/23/2011 1:41:00 AM
1,1,2,2-Tetrachloroethane	ND	400	H	ppbv	400	8/23/2011 1:41:00 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	400	H	ppbv	400	8/23/2011 1:41:00 AM
1,1,2-Trichloroethane	ND	400	H	ppbv	400	8/23/2011 1:41:00 AM
1,1-Dichloroethane	ND	400	H	ppbv	400	8/23/2011 1:41:00 AM
1,1-Dichloroethene	ND	400	H	ppbv	400	8/23/2011 1:41:00 AM
1,2,4-Trichlorobenzene	ND	400	H	ppbv	400	8/23/2011 1:41:00 AM
1,2,4-Trimethylbenzene	ND	400	H	ppbv	400	8/23/2011 1:41:00 AM
1,2-Dibromoethane	ND	400	H	ppbv	400	8/23/2011 1:41:00 AM
1,2-Dichlorobenzene	ND	400	H	ppbv	400	8/23/2011 1:41:00 AM
1,2-Dichloroethane	ND	400	H	ppbv	400	8/23/2011 1:41:00 AM
1,2-Dichloropropane	ND	400	H	ppbv	400	8/23/2011 1:41:00 AM
1,3,5-Trimethylbenzene	ND	400	H	ppbv	400	8/23/2011 1:41:00 AM
1,3-Butadiene	ND	400	H	ppbv	400	8/23/2011 1:41:00 AM
1,3-Dichlorobenzene	ND	400	H	ppbv	400	8/23/2011 1:41:00 AM
1,4-Dichlorobenzene	ND	400	H	ppbv	400	8/23/2011 1:41:00 AM
1,4-Dioxane	ND	400	H	ppbv	400	8/23/2011 1:41:00 AM
2-Butanone	ND	400	H	ppbv	400	8/23/2011 1:41:00 AM
2-Hexanone	ND	400	H	ppbv	400	8/23/2011 1:41:00 AM
2-Propanol	ND	400	H	ppbv	400	8/23/2011 1:41:00 AM
4-Methyl-2-pentanone	ND	400	H	ppbv	400	8/23/2011 1:41:00 AM
Acetone	1,700	400	H	ppbv	400	8/23/2011 1:41:00 AM
Benzene	2,400	400	H	ppbv	400	8/23/2011 1:41:00 AM
Benzyl chloride	ND	400	H	ppbv	400	8/23/2011 1:41:00 AM
Bromodichloromethane	ND	400	H	ppbv	400	8/23/2011 1:41:00 AM
Bromoform	ND	400	H	ppbv	400	8/23/2011 1:41:00 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.

RTI
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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/13/2011 4:23:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-014 **Matrix:** AIR

Client Sample ID VA0559

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	400	H	ppbv	400	8/23/2011 1:41:00 AM
Carbon disulfide	ND	400	H	ppbv	400	8/23/2011 1:41:00 AM
Carbon tetrachloride	ND	400	H	ppbv	400	8/23/2011 1:41:00 AM
Chlorobenzene	ND	400	H	ppbv	400	8/23/2011 1:41:00 AM
Chlorodibromomethane	ND	400	H	ppbv	400	8/23/2011 1:41:00 AM
Chloroethane	ND	400	H	ppbv	400	8/23/2011 1:41:00 AM
Chloroform	ND	400	H	ppbv	400	8/23/2011 1:41:00 AM
Chloromethane	ND	400	H	ppbv	400	8/23/2011 1:41:00 AM
cis-1,2-Dichloroethene	ND	400	H	ppbv	400	8/23/2011 1:41:00 AM
cis-1,3-dichloropropene	ND	400	H	ppbv	400	8/23/2011 1:41:00 AM
Cyclohexane	9,400	800	H	ppbv	400	8/23/2011 1:41:00 AM
Dichlorodifluoromethane	ND	400	H	ppbv	400	8/23/2011 1:41:00 AM
Ethanol	ND	2,000	H	ppbv	400	8/23/2011 1:41:00 AM
Ethyl acetate	ND	400	H	ppbv	400	8/23/2011 1:41:00 AM
Ethylbenzene	ND	800	H	ppbv	400	8/23/2011 1:41:00 AM
Heptane	2,100	400	H	ppbv	400	8/23/2011 1:41:00 AM
Hexachlorobutadiene	ND	800	H	ppbv	400	8/23/2011 1:41:00 AM
m,p-Xylene	ND	800	H	ppbv	400	8/23/2011 1:41:00 AM
Methylene chloride	930	2,000	JH	ppbv	400	8/23/2011 1:41:00 AM
Naphthalene	ND	400	H	ppbv	400	8/23/2011 1:41:00 AM
n-Hexane	8,800	800	H	ppbv	400	8/23/2011 1:41:00 AM
o-Xylene	ND	400	H	ppbv	400	8/23/2011 1:41:00 AM
Propylene	1,400	400	H	ppbv	400	8/23/2011 1:41:00 AM
Styrene	ND	400	H	ppbv	400	8/23/2011 1:41:00 AM
tert-Butyl Methyl Ether	ND	400	H	ppbv	400	8/23/2011 1:41:00 AM
Tetrachloroethene	ND	400	H	ppbv	400	8/23/2011 1:41:00 AM
Tetrahydrofuran	ND	400	H	ppbv	400	8/23/2011 1:41:00 AM
Toluene	5,000	400	H	ppbv	400	8/23/2011 1:41:00 AM
trans-1,2-Dichloroethene	ND	400	H	ppbv	400	8/23/2011 1:41:00 AM
trans-1,3-dichloropropene	ND	400	H	ppbv	400	8/23/2011 1:41:00 AM
Trichloroethene	ND	400	H	ppbv	400	8/23/2011 1:41:00 AM
Trichlorofluoromethane	ND	400	H	ppbv	400	8/23/2011 1:41:00 AM
Vinyl acetate	ND	400	H	ppbv	400	8/23/2011 1:41:00 AM
Vinyl chloride	ND	400	H	ppbv	400	8/23/2011 1:41:00 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

Revision v3

RTI LABORATORIES, INC.

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

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/13/2011 4:23:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-014 **Matrix:** AIR

Client Sample ID VA0559

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	ND	1,200	H	ppbv	400	8/23/2011 1:41:00 AM
Surr: 4-Bromofluorobenzene	111	70-130	H	%REC	400	8/23/2011 1:41:00 AM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **MT3**
C5-C8 Aliphatic Hydrocarbons	280,000	94,000		µg/m³	800	8/9/2011 9:04:00 PM
C9-C10 Aromatic Hydrocarbons	ND	110,000		µg/m³	800	8/9/2011 9:04:00 PM
C9-C12 Aliphatic Hydrocarbons	ND	150,000		µg/m³	800	8/9/2011 9:04:00 PM
Surr: 4-Bromofluorobenzene	96.8	70-130		%REC	800	8/9/2011 9:04:00 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#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/14/2011 8:45:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-015 **Matrix:** AIR

Client Sample ID VA0560

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.098	0.10	J	%	1	8/8/2011 2:31:00 PM
Carbon Monoxide	ND	0.10		%	1	8/8/2011 2:31:00 PM
Methane	ND	0.50		%	1	8/8/2011 2:31:00 PM
Nitrogen	77	0.10		%	1	8/8/2011 2:31:00 PM
Oxygen	21	0.10		%	1	8/8/2011 2:31:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	400	H	ppbv	400	8/23/2011 2:31:00 AM
1,1,2,2-Tetrachloroethane	ND	400	H	ppbv	400	8/23/2011 2:31:00 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	400	H	ppbv	400	8/23/2011 2:31:00 AM
1,1,2-Trichloroethane	ND	400	H	ppbv	400	8/23/2011 2:31:00 AM
1,1-Dichloroethane	ND	400	H	ppbv	400	8/23/2011 2:31:00 AM
1,1-Dichloroethene	ND	400	H	ppbv	400	8/23/2011 2:31:00 AM
1,2,4-Trichlorobenzene	ND	400	H	ppbv	400	8/23/2011 2:31:00 AM
1,2,4-Trimethylbenzene	ND	400	H	ppbv	400	8/23/2011 2:31:00 AM
1,2-Dibromoethane	ND	400	H	ppbv	400	8/23/2011 2:31:00 AM
1,2-Dichlorobenzene	ND	400	H	ppbv	400	8/23/2011 2:31:00 AM
1,2-Dichloroethane	ND	400	H	ppbv	400	8/23/2011 2:31:00 AM
1,2-Dichloropropane	ND	400	H	ppbv	400	8/23/2011 2:31:00 AM
1,3,5-Trimethylbenzene	ND	400	H	ppbv	400	8/23/2011 2:31:00 AM
1,3-Butadiene	ND	400	H	ppbv	400	8/23/2011 2:31:00 AM
1,3-Dichlorobenzene	ND	400	H	ppbv	400	8/23/2011 2:31:00 AM
1,4-Dichlorobenzene	ND	400	H	ppbv	400	8/23/2011 2:31:00 AM
1,4-Dioxane	ND	400	H	ppbv	400	8/23/2011 2:31:00 AM
2-Butanone	ND	400	H	ppbv	400	8/23/2011 2:31:00 AM
2-Hexanone	ND	400	H	ppbv	400	8/23/2011 2:31:00 AM
2-Propanol	510	400	H	ppbv	400	8/23/2011 2:31:00 AM
4-Methyl-2-pentanone	ND	400	H	ppbv	400	8/23/2011 2:31:00 AM
Acetone	570	400	H	ppbv	400	8/23/2011 2:31:00 AM
Benzene	ND	400	H	ppbv	400	8/23/2011 2:31:00 AM
Benzyl chloride	ND	400	H	ppbv	400	8/23/2011 2:31:00 AM
Bromodichloromethane	ND	400	H	ppbv	400	8/23/2011 2:31:00 AM
Bromoform	ND	400	H	ppbv	400	8/23/2011 2:31:00 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#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/14/2011 8:45:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-015 **Matrix:** AIR

Client Sample ID VA0560

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	400	H	ppbv	400	8/23/2011 2:31:00 AM
Carbon disulfide	ND	400	H	ppbv	400	8/23/2011 2:31:00 AM
Carbon tetrachloride	ND	400	H	ppbv	400	8/23/2011 2:31:00 AM
Chlorobenzene	ND	400	H	ppbv	400	8/23/2011 2:31:00 AM
Chlorodibromomethane	ND	400	H	ppbv	400	8/23/2011 2:31:00 AM
Chloroethane	ND	400	H	ppbv	400	8/23/2011 2:31:00 AM
Chloroform	ND	400	H	ppbv	400	8/23/2011 2:31:00 AM
Chloromethane	ND	400	H	ppbv	400	8/23/2011 2:31:00 AM
cis-1,2-Dichloroethene	ND	400	H	ppbv	400	8/23/2011 2:31:00 AM
cis-1,3-dichloropropene	ND	400	H	ppbv	400	8/23/2011 2:31:00 AM
Cyclohexane	550	800	JH	ppbv	400	8/23/2011 2:31:00 AM
Dichlorodifluoromethane	ND	400	H	ppbv	400	8/23/2011 2:31:00 AM
Ethanol	ND	2,000	H	ppbv	400	8/23/2011 2:31:00 AM
Ethyl acetate	ND	400	H	ppbv	400	8/23/2011 2:31:00 AM
Ethylbenzene	ND	800	H	ppbv	400	8/23/2011 2:31:00 AM
Heptane	ND	400	H	ppbv	400	8/23/2011 2:31:00 AM
Hexachlorobutadiene	ND	800	H	ppbv	400	8/23/2011 2:31:00 AM
m,p-Xylene	ND	800	H	ppbv	400	8/23/2011 2:31:00 AM
Methylene chloride	1,400	2,000	JH	ppbv	400	8/23/2011 2:31:00 AM
Naphthalene	ND	400	H	ppbv	400	8/23/2011 2:31:00 AM
n-Hexane	1,300	800	H	ppbv	400	8/23/2011 2:31:00 AM
o-Xylene	ND	400	H	ppbv	400	8/23/2011 2:31:00 AM
Propylene	ND	400	H	ppbv	400	8/23/2011 2:31:00 AM
Styrene	ND	400	H	ppbv	400	8/23/2011 2:31:00 AM
tert-Butyl Methyl Ether	ND	400	H	ppbv	400	8/23/2011 2:31:00 AM
Tetrachloroethene	ND	400	H	ppbv	400	8/23/2011 2:31:00 AM
Tetrahydrofuran	ND	400	H	ppbv	400	8/23/2011 2:31:00 AM
Toluene	1,100	400	H	ppbv	400	8/23/2011 2:31:00 AM
trans-1,2-Dichloroethene	ND	400	H	ppbv	400	8/23/2011 2:31:00 AM
trans-1,3-dichloropropene	ND	400	H	ppbv	400	8/23/2011 2:31:00 AM
Trichloroethene	ND	400	H	ppbv	400	8/23/2011 2:31:00 AM
Trichlorofluoromethane	ND	400	H	ppbv	400	8/23/2011 2:31:00 AM
Vinyl acetate	ND	400	H	ppbv	400	8/23/2011 2:31:00 AM
Vinyl chloride	ND	400	H	ppbv	400	8/23/2011 2:31:00 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#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/14/2011 8:45:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-015 **Matrix:** AIR

Client Sample ID VA0560

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	ND	1,200	H	ppbv	400	8/23/2011 2:31:00 AM
Surr: 4-Bromofluorobenzene	107	70-130	H	%REC	400	8/23/2011 2:31:00 AM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **MT3**
C5-C8 Aliphatic Hydrocarbons	88,000	12,000		µg/m³	100	8/11/2011 9:58:00 PM
C9-C10 Aromatic Hydrocarbons	ND	13,000		µg/m³	100	8/11/2011 9:58:00 PM
C9-C12 Aliphatic Hydrocarbons	ND	19,000		µg/m³	100	8/11/2011 9:58:00 PM
Surr: 4-Bromofluorobenzene	94.5	70-130		%REC	100	8/11/2011 9:58:00 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#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/11/2011 8:59:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-016 **Matrix:** AIR

Client Sample ID VA0613

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.49	0.10		%	1	8/8/2011 2:53:00 PM
Carbon Monoxide	ND	0.10		%	1	8/8/2011 2:53:00 PM
Methane	ND	0.50		%	1	8/8/2011 2:53:00 PM
Nitrogen	79	0.10		%	1	8/8/2011 2:53:00 PM
Oxygen	20	0.10		%	1	8/8/2011 2:53:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	8.0		ppbv	8	8/9/2011 7:10:00 PM
1,1,2,2-Tetrachloroethane	ND	8.0		ppbv	8	8/9/2011 7:10:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	8.0		ppbv	8	8/9/2011 7:10:00 PM
1,1,2-Trichloroethane	ND	8.0		ppbv	8	8/9/2011 7:10:00 PM
1,1-Dichloroethane	ND	8.0		ppbv	8	8/9/2011 7:10:00 PM
1,1-Dichloroethene	ND	8.0		ppbv	8	8/9/2011 7:10:00 PM
1,2,4-Trichlorobenzene	ND	8.0		ppbv	8	8/9/2011 7:10:00 PM
1,2,4-Trimethylbenzene	16	8.0		ppbv	8	8/9/2011 7:10:00 PM
1,2-Dibromoethane	ND	8.0		ppbv	8	8/9/2011 7:10:00 PM
1,2-Dichlorobenzene	ND	8.0		ppbv	8	8/9/2011 7:10:00 PM
1,2-Dichloroethane	ND	8.0		ppbv	8	8/9/2011 7:10:00 PM
1,2-Dichloropropane	ND	8.0		ppbv	8	8/9/2011 7:10:00 PM
1,3,5-Trimethylbenzene	9.3	8.0		ppbv	8	8/9/2011 7:10:00 PM
1,3-Butadiene	ND	8.0		ppbv	8	8/9/2011 7:10:00 PM
1,3-Dichlorobenzene	ND	8.0		ppbv	8	8/9/2011 7:10:00 PM
1,4-Dichlorobenzene	ND	8.0		ppbv	8	8/9/2011 7:10:00 PM
1,4-Dioxane	ND	8.0		ppbv	8	8/9/2011 7:10:00 PM
2-Butanone	21	8.0		ppbv	8	8/9/2011 7:10:00 PM
2-Hexanone	ND	8.0		ppbv	8	8/9/2011 7:10:00 PM
2-Propanol	ND	8.0		ppbv	8	8/9/2011 7:10:00 PM
4-Methyl-2-pentanone	ND	8.0		ppbv	8	8/9/2011 7:10:00 PM
Acetone	18	8.0		ppbv	8	8/9/2011 7:10:00 PM
Benzene	25	8.0		ppbv	8	8/9/2011 7:10:00 PM
Benzyl chloride	ND	8.0		ppbv	8	8/9/2011 7:10:00 PM
Bromodichloromethane	ND	8.0		ppbv	8	8/9/2011 7:10:00 PM
Bromoform	ND	8.0		ppbv	8	8/9/2011 7:10:00 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.

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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/11/2011 8:59:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-016 **Matrix:** AIR

Client Sample ID VA0613

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	8.0		ppbv	8	8/9/2011 7:10:00 PM
Carbon disulfide	ND	8.0		ppbv	8	8/9/2011 7:10:00 PM
Carbon tetrachloride	ND	8.0		ppbv	8	8/9/2011 7:10:00 PM
Chlorobenzene	ND	8.0		ppbv	8	8/9/2011 7:10:00 PM
Chlorodibromomethane	ND	8.0		ppbv	8	8/9/2011 7:10:00 PM
Chloroethane	ND	8.0		ppbv	8	8/9/2011 7:10:00 PM
Chloroform	ND	8.0		ppbv	8	8/9/2011 7:10:00 PM
Chloromethane	ND	8.0		ppbv	8	8/9/2011 7:10:00 PM
cis-1,2-Dichloroethene	ND	8.0		ppbv	8	8/9/2011 7:10:00 PM
cis-1,3-dichloropropene	ND	8.0		ppbv	8	8/9/2011 7:10:00 PM
Cyclohexane	56	16		ppbv	8	8/9/2011 7:10:00 PM
Dichlorodifluoromethane	ND	8.0		ppbv	8	8/9/2011 7:10:00 PM
Ethanol	ND	40		ppbv	8	8/9/2011 7:10:00 PM
Ethyl acetate	ND	8.0		ppbv	8	8/9/2011 7:10:00 PM
Ethylbenzene	31	16		ppbv	8	8/9/2011 7:10:00 PM
Heptane	44	8.0		ppbv	8	8/9/2011 7:10:00 PM
Hexachlorobutadiene	ND	16		ppbv	8	8/9/2011 7:10:00 PM
m,p-Xylene	84	16		ppbv	8	8/9/2011 7:10:00 PM
Methylene chloride	ND	40		ppbv	8	8/9/2011 7:10:00 PM
Naphthalene	ND	8.0		ppbv	8	8/9/2011 7:10:00 PM
n-Hexane	16	16		ppbv	8	8/9/2011 7:10:00 PM
o-Xylene	35	8.0		ppbv	8	8/9/2011 7:10:00 PM
Propylene	ND	8.0		ppbv	8	8/9/2011 7:10:00 PM
Styrene	ND	8.0		ppbv	8	8/9/2011 7:10:00 PM
tert-Butyl Methyl Ether	ND	8.0		ppbv	8	8/9/2011 7:10:00 PM
Tetrachloroethene	ND	8.0		ppbv	8	8/9/2011 7:10:00 PM
Tetrahydrofuran	ND	8.0		ppbv	8	8/9/2011 7:10:00 PM
Toluene	150	8.0		ppbv	8	8/9/2011 7:10:00 PM
trans-1,2-Dichloroethene	ND	8.0		ppbv	8	8/9/2011 7:10:00 PM
trans-1,3-dichloropropene	ND	8.0		ppbv	8	8/9/2011 7:10:00 PM
Trichloroethene	ND	8.0		ppbv	8	8/9/2011 7:10:00 PM
Trichlorofluoromethane	ND	8.0		ppbv	8	8/9/2011 7:10:00 PM
Vinyl acetate	ND	8.0		ppbv	8	8/9/2011 7:10:00 PM
Vinyl chloride	ND	8.0		ppbv	8	8/9/2011 7:10:00 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
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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/11/2011 8:59:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-016 **Matrix:** AIR

Client Sample ID VA0613

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	120	24		ppbv	8	8/9/2011 7:10:00 PM
Surr: 4-Bromofluorobenzene	115	70-130		%REC	8	8/9/2011 7:10:00 PM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **MT3**
C5-C8 Aliphatic Hydrocarbons	ND	940	H	µg/m³	8	8/11/2011 3:09:00 AM
C9-C10 Aromatic Hydrocarbons	460	1,100	JH	µg/m³	8	8/11/2011 3:09:00 AM
C9-C12 Aliphatic Hydrocarbons	ND	1,500	H	µg/m³	8	8/11/2011 3:09:00 AM
Surr: 4-Bromofluorobenzene	101	70-130	H	%REC	8	8/11/2011 3:09:00 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

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Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/11/2011 9:34:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-017 **Matrix:** AIR

Client Sample ID VA0614

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.59	0.10		%	1	8/8/2011 3:53:00 PM
Carbon Monoxide	ND	0.10		%	1	8/8/2011 3:53:00 PM
Methane	ND	0.50		%	1	8/8/2011 3:53:00 PM
Nitrogen	79	0.10		%	1	8/8/2011 3:53:00 PM
Oxygen	20	0.10		%	1	8/8/2011 3:53:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	8.0		ppbv	8	8/9/2011 7:54:00 PM
1,1,2,2-Tetrachloroethane	ND	8.0		ppbv	8	8/9/2011 7:54:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	8.0		ppbv	8	8/9/2011 7:54:00 PM
1,1,2-Trichloroethane	ND	8.0		ppbv	8	8/9/2011 7:54:00 PM
1,1-Dichloroethane	ND	8.0		ppbv	8	8/9/2011 7:54:00 PM
1,1-Dichloroethene	ND	8.0		ppbv	8	8/9/2011 7:54:00 PM
1,2,4-Trichlorobenzene	ND	8.0		ppbv	8	8/9/2011 7:54:00 PM
1,2,4-Trimethylbenzene	13	8.0		ppbv	8	8/9/2011 7:54:00 PM
1,2-Dibromoethane	ND	8.0		ppbv	8	8/9/2011 7:54:00 PM
1,2-Dichlorobenzene	ND	8.0		ppbv	8	8/9/2011 7:54:00 PM
1,2-Dichloroethane	ND	8.0		ppbv	8	8/9/2011 7:54:00 PM
1,2-Dichloropropane	ND	8.0		ppbv	8	8/9/2011 7:54:00 PM
1,3,5-Trimethylbenzene	ND	8.0		ppbv	8	8/9/2011 7:54:00 PM
1,3-Butadiene	ND	8.0		ppbv	8	8/9/2011 7:54:00 PM
1,3-Dichlorobenzene	ND	8.0		ppbv	8	8/9/2011 7:54:00 PM
1,4-Dichlorobenzene	ND	8.0		ppbv	8	8/9/2011 7:54:00 PM
1,4-Dioxane	ND	8.0		ppbv	8	8/9/2011 7:54:00 PM
2-Butanone	28	8.0		ppbv	8	8/9/2011 7:54:00 PM
2-Hexanone	ND	8.0		ppbv	8	8/9/2011 7:54:00 PM
2-Propanol	ND	8.0		ppbv	8	8/9/2011 7:54:00 PM
4-Methyl-2-pentanone	ND	8.0		ppbv	8	8/9/2011 7:54:00 PM
Acetone	20	8.0		ppbv	8	8/9/2011 7:54:00 PM
Benzene	16	8.0		ppbv	8	8/9/2011 7:54:00 PM
Benzyl chloride	ND	8.0		ppbv	8	8/9/2011 7:54:00 PM
Bromodichloromethane	ND	8.0		ppbv	8	8/9/2011 7:54:00 PM
Bromoform	ND	8.0		ppbv	8	8/9/2011 7:54:00 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 v3

RTI LABORATORIES, INC.

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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/11/2011 9:34:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-017 **Matrix:** AIR

Client Sample ID VA0614

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	8.0		ppbv	8	8/9/2011 7:54:00 PM
Carbon disulfide	ND	8.0		ppbv	8	8/9/2011 7:54:00 PM
Carbon tetrachloride	ND	8.0		ppbv	8	8/9/2011 7:54:00 PM
Chlorobenzene	ND	8.0		ppbv	8	8/9/2011 7:54:00 PM
Chlorodibromomethane	ND	8.0		ppbv	8	8/9/2011 7:54:00 PM
Chloroethane	ND	8.0		ppbv	8	8/9/2011 7:54:00 PM
Chloroform	ND	8.0		ppbv	8	8/9/2011 7:54:00 PM
Chloromethane	ND	8.0		ppbv	8	8/9/2011 7:54:00 PM
cis-1,2-Dichloroethene	ND	8.0		ppbv	8	8/9/2011 7:54:00 PM
cis-1,3-dichloropropene	ND	8.0		ppbv	8	8/9/2011 7:54:00 PM
Cyclohexane	33	16		ppbv	8	8/9/2011 7:54:00 PM
Dichlorodifluoromethane	ND	8.0		ppbv	8	8/9/2011 7:54:00 PM
Ethanol	ND	40		ppbv	8	8/9/2011 7:54:00 PM
Ethyl acetate	ND	8.0		ppbv	8	8/9/2011 7:54:00 PM
Ethylbenzene	19	16		ppbv	8	8/9/2011 7:54:00 PM
Heptane	26	8.0		ppbv	8	8/9/2011 7:54:00 PM
Hexachlorobutadiene	ND	16		ppbv	8	8/9/2011 7:54:00 PM
m,p-Xylene	54	16		ppbv	8	8/9/2011 7:54:00 PM
Methylene chloride	ND	40		ppbv	8	8/9/2011 7:54:00 PM
Naphthalene	ND	8.0		ppbv	8	8/9/2011 7:54:00 PM
n-Hexane	10	16	J	ppbv	8	8/9/2011 7:54:00 PM
o-Xylene	23	8.0		ppbv	8	8/9/2011 7:54:00 PM
Propylene	ND	8.0		ppbv	8	8/9/2011 7:54:00 PM
Styrene	ND	8.0		ppbv	8	8/9/2011 7:54:00 PM
tert-Butyl Methyl Ether	ND	8.0		ppbv	8	8/9/2011 7:54:00 PM
Tetrachloroethene	ND	8.0		ppbv	8	8/9/2011 7:54:00 PM
Tetrahydrofuran	ND	8.0		ppbv	8	8/9/2011 7:54:00 PM
Toluene	100	8.0		ppbv	8	8/9/2011 7:54:00 PM
trans-1,2-Dichloroethene	ND	8.0		ppbv	8	8/9/2011 7:54:00 PM
trans-1,3-dichloropropene	ND	8.0		ppbv	8	8/9/2011 7:54:00 PM
Trichloroethene	ND	8.0		ppbv	8	8/9/2011 7:54:00 PM
Trichlorofluoromethane	ND	8.0		ppbv	8	8/9/2011 7:54:00 PM
Vinyl acetate	ND	8.0		ppbv	8	8/9/2011 7:54:00 PM
Vinyl chloride	ND	8.0		ppbv	8	8/9/2011 7:54:00 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 v3

RTI LABORATORIES, INC.

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

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/11/2011 9:34:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-017 **Matrix:** AIR

Client Sample ID VA0614

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	77	24		ppbv	8	8/9/2011 7:54:00 PM
Surr: 4-Bromofluorobenzene	110	70-130		%REC	8	8/9/2011 7:54:00 PM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **MT3**
C5-C8 Aliphatic Hydrocarbons	ND	940	H	µg/m³	8	8/11/2011 3:53:00 AM
C9-C10 Aromatic Hydrocarbons	310	1,100	JH	µg/m³	8	8/11/2011 3:53:00 AM
C9-C12 Aliphatic Hydrocarbons	ND	1,500	H	µg/m³	8	8/11/2011 3:53:00 AM
Surr: 4-Bromofluorobenzene	99.1	70-130	H	%REC	8	8/11/2011 3:53:00 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#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/11/2011 10:05:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-018 **Matrix:** AIR

Client Sample ID VA0615

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.13	0.10		%	1	8/8/2011 4:53:00 PM
Carbon Monoxide	ND	0.10		%	1	8/8/2011 4:53:00 PM
Methane	ND	0.50		%	1	8/8/2011 4:53:00 PM
Nitrogen	78	0.10		%	1	8/8/2011 4:53:00 PM
Oxygen	20	0.10		%	1	8/8/2011 4:53:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	8.0		ppbv	8	8/9/2011 8:39:00 PM
1,1,2,2-Tetrachloroethane	ND	8.0		ppbv	8	8/9/2011 8:39:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	8.0		ppbv	8	8/9/2011 8:39:00 PM
1,1,2-Trichloroethane	ND	8.0		ppbv	8	8/9/2011 8:39:00 PM
1,1-Dichloroethane	ND	8.0		ppbv	8	8/9/2011 8:39:00 PM
1,1-Dichloroethene	ND	8.0		ppbv	8	8/9/2011 8:39:00 PM
1,2,4-Trichlorobenzene	ND	8.0		ppbv	8	8/9/2011 8:39:00 PM
1,2,4-Trimethylbenzene	8.3	8.0		ppbv	8	8/9/2011 8:39:00 PM
1,2-Dibromoethane	ND	8.0		ppbv	8	8/9/2011 8:39:00 PM
1,2-Dichlorobenzene	ND	8.0		ppbv	8	8/9/2011 8:39:00 PM
1,2-Dichloroethane	ND	8.0		ppbv	8	8/9/2011 8:39:00 PM
1,2-Dichloropropane	ND	8.0		ppbv	8	8/9/2011 8:39:00 PM
1,3,5-Trimethylbenzene	ND	8.0		ppbv	8	8/9/2011 8:39:00 PM
1,3-Butadiene	ND	8.0		ppbv	8	8/9/2011 8:39:00 PM
1,3-Dichlorobenzene	ND	8.0		ppbv	8	8/9/2011 8:39:00 PM
1,4-Dichlorobenzene	ND	8.0		ppbv	8	8/9/2011 8:39:00 PM
1,4-Dioxane	ND	8.0		ppbv	8	8/9/2011 8:39:00 PM
2-Butanone	17	8.0		ppbv	8	8/9/2011 8:39:00 PM
2-Hexanone	ND	8.0		ppbv	8	8/9/2011 8:39:00 PM
2-Propanol	ND	8.0		ppbv	8	8/9/2011 8:39:00 PM
4-Methyl-2-pentanone	ND	8.0		ppbv	8	8/9/2011 8:39:00 PM
Acetone	14	8.0		ppbv	8	8/9/2011 8:39:00 PM
Benzene	12	8.0		ppbv	8	8/9/2011 8:39:00 PM
Benzyl chloride	ND	8.0		ppbv	8	8/9/2011 8:39:00 PM
Bromodichloromethane	ND	8.0		ppbv	8	8/9/2011 8:39:00 PM
Bromoform	ND	8.0		ppbv	8	8/9/2011 8:39:00 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#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/11/2011 10:05:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-018 **Matrix:** AIR

Client Sample ID VA0615

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	8.0		ppbv	8	8/9/2011 8:39:00 PM
Carbon disulfide	ND	8.0		ppbv	8	8/9/2011 8:39:00 PM
Carbon tetrachloride	ND	8.0		ppbv	8	8/9/2011 8:39:00 PM
Chlorobenzene	ND	8.0		ppbv	8	8/9/2011 8:39:00 PM
Chlorodibromomethane	ND	8.0		ppbv	8	8/9/2011 8:39:00 PM
Chloroethane	ND	8.0		ppbv	8	8/9/2011 8:39:00 PM
Chloroform	ND	8.0		ppbv	8	8/9/2011 8:39:00 PM
Chloromethane	ND	8.0		ppbv	8	8/9/2011 8:39:00 PM
cis-1,2-Dichloroethene	ND	8.0		ppbv	8	8/9/2011 8:39:00 PM
cis-1,3-dichloropropene	ND	8.0		ppbv	8	8/9/2011 8:39:00 PM
Cyclohexane	25	16		ppbv	8	8/9/2011 8:39:00 PM
Dichlorodifluoromethane	ND	8.0		ppbv	8	8/9/2011 8:39:00 PM
Ethanol	120	40		ppbv	8	8/9/2011 8:39:00 PM
Ethyl acetate	ND	8.0		ppbv	8	8/9/2011 8:39:00 PM
Ethylbenzene	12	16	J	ppbv	8	8/9/2011 8:39:00 PM
Heptane	21	8.0		ppbv	8	8/9/2011 8:39:00 PM
Hexachlorobutadiene	ND	16		ppbv	8	8/9/2011 8:39:00 PM
m,p-Xylene	35	16		ppbv	8	8/9/2011 8:39:00 PM
Methylene chloride	ND	40		ppbv	8	8/9/2011 8:39:00 PM
Naphthalene	ND	8.0		ppbv	8	8/9/2011 8:39:00 PM
n-Hexane	11	16	J	ppbv	8	8/9/2011 8:39:00 PM
o-Xylene	15	8.0		ppbv	8	8/9/2011 8:39:00 PM
Propylene	ND	8.0		ppbv	8	8/9/2011 8:39:00 PM
Styrene	ND	8.0		ppbv	8	8/9/2011 8:39:00 PM
tert-Butyl Methyl Ether	ND	8.0		ppbv	8	8/9/2011 8:39:00 PM
Tetrachloroethene	ND	8.0		ppbv	8	8/9/2011 8:39:00 PM
Tetrahydrofuran	ND	8.0		ppbv	8	8/9/2011 8:39:00 PM
Toluene	82	8.0		ppbv	8	8/9/2011 8:39:00 PM
trans-1,2-Dichloroethene	ND	8.0		ppbv	8	8/9/2011 8:39:00 PM
trans-1,3-dichloropropene	ND	8.0		ppbv	8	8/9/2011 8:39:00 PM
Trichloroethene	9.5	8.0		ppbv	8	8/9/2011 8:39:00 PM
Trichlorofluoromethane	ND	8.0		ppbv	8	8/9/2011 8:39:00 PM
Vinyl acetate	ND	8.0		ppbv	8	8/9/2011 8:39:00 PM
Vinyl chloride	ND	8.0		ppbv	8	8/9/2011 8:39:00 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 v3

RTI LABORATORIES, INC.

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

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/11/2011 10:05:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-018 **Matrix:** AIR

Client Sample ID VA0615

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	49	24		ppbv	8	8/9/2011 8:39:00 PM
Surr: 4-Bromofluorobenzene	106	70-130		%REC	8	8/9/2011 8:39:00 PM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **MT3**
C5-C8 Aliphatic Hydrocarbons	5,200	940	H	µg/m³	8	8/11/2011 10:41:00 PM
C9-C10 Aromatic Hydrocarbons	ND	1,100	H	µg/m³	8	8/11/2011 10:41:00 PM
C9-C12 Aliphatic Hydrocarbons	5,100	1,500	H	µg/m³	8	8/11/2011 10:41:00 PM
Surr: 4-Bromofluorobenzene	95.9	70-130	H	%REC	8	8/11/2011 10:41:00 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#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/11/2011 10:30:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-019 **Matrix:** AIR

Client Sample ID VA0616

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.14	0.10		%	1	8/8/2011 5:12:00 PM
Carbon Monoxide	ND	0.10		%	1	8/8/2011 5:12:00 PM
Methane	ND	0.50		%	1	8/8/2011 5:12:00 PM
Nitrogen	78	0.10		%	1	8/8/2011 5:12:00 PM
Oxygen	20	0.10		%	1	8/8/2011 5:12:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	8.0		ppbv	8	8/9/2011 9:22:00 PM
1,1,2,2-Tetrachloroethane	ND	8.0		ppbv	8	8/9/2011 9:22:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	8.0		ppbv	8	8/9/2011 9:22:00 PM
1,1,2-Trichloroethane	ND	8.0		ppbv	8	8/9/2011 9:22:00 PM
1,1-Dichloroethane	ND	8.0		ppbv	8	8/9/2011 9:22:00 PM
1,1-Dichloroethene	ND	8.0		ppbv	8	8/9/2011 9:22:00 PM
1,2,4-Trichlorobenzene	ND	8.0		ppbv	8	8/9/2011 9:22:00 PM
1,2,4-Trimethylbenzene	ND	8.0		ppbv	8	8/9/2011 9:22:00 PM
1,2-Dibromoethane	ND	8.0		ppbv	8	8/9/2011 9:22:00 PM
1,2-Dichlorobenzene	ND	8.0		ppbv	8	8/9/2011 9:22:00 PM
1,2-Dichloroethane	ND	8.0		ppbv	8	8/9/2011 9:22:00 PM
1,2-Dichloropropane	ND	8.0		ppbv	8	8/9/2011 9:22:00 PM
1,3,5-Trimethylbenzene	ND	8.0		ppbv	8	8/9/2011 9:22:00 PM
1,3-Butadiene	ND	8.0		ppbv	8	8/9/2011 9:22:00 PM
1,3-Dichlorobenzene	ND	8.0		ppbv	8	8/9/2011 9:22:00 PM
1,4-Dichlorobenzene	ND	8.0		ppbv	8	8/9/2011 9:22:00 PM
1,4-Dioxane	ND	8.0		ppbv	8	8/9/2011 9:22:00 PM
2-Butanone	12	8.0		ppbv	8	8/9/2011 9:22:00 PM
2-Hexanone	ND	8.0		ppbv	8	8/9/2011 9:22:00 PM
2-Propanol	ND	8.0		ppbv	8	8/9/2011 9:22:00 PM
4-Methyl-2-pentanone	ND	8.0		ppbv	8	8/9/2011 9:22:00 PM
Acetone	13	8.0		ppbv	8	8/9/2011 9:22:00 PM
Benzene	12	8.0		ppbv	8	8/9/2011 9:22:00 PM
Benzyl chloride	ND	8.0		ppbv	8	8/9/2011 9:22:00 PM
Bromodichloromethane	ND	8.0		ppbv	8	8/9/2011 9:22:00 PM
Bromoform	ND	8.0		ppbv	8	8/9/2011 9:22:00 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
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Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/11/2011 10:30:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-019 **Matrix:** AIR

Client Sample ID VA0616

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	8.0		ppbv	8	8/9/2011 9:22:00 PM
Carbon disulfide	ND	8.0		ppbv	8	8/9/2011 9:22:00 PM
Carbon tetrachloride	ND	8.0		ppbv	8	8/9/2011 9:22:00 PM
Chlorobenzene	ND	8.0		ppbv	8	8/9/2011 9:22:00 PM
Chlorodibromomethane	ND	8.0		ppbv	8	8/9/2011 9:22:00 PM
Chloroethane	ND	8.0		ppbv	8	8/9/2011 9:22:00 PM
Chloroform	ND	8.0		ppbv	8	8/9/2011 9:22:00 PM
Chloromethane	ND	8.0		ppbv	8	8/9/2011 9:22:00 PM
cis-1,2-Dichloroethene	ND	8.0		ppbv	8	8/9/2011 9:22:00 PM
cis-1,3-dichloropropene	ND	8.0		ppbv	8	8/9/2011 9:22:00 PM
Cyclohexane	22	16		ppbv	8	8/9/2011 9:22:00 PM
Dichlorodifluoromethane	ND	8.0		ppbv	8	8/9/2011 9:22:00 PM
Ethanol	54	40		ppbv	8	8/9/2011 9:22:00 PM
Ethyl acetate	ND	8.0		ppbv	8	8/9/2011 9:22:00 PM
Ethylbenzene	9.4	16	J	ppbv	8	8/9/2011 9:22:00 PM
Heptane	17	8.0		ppbv	8	8/9/2011 9:22:00 PM
Hexachlorobutadiene	ND	16		ppbv	8	8/9/2011 9:22:00 PM
m,p-Xylene	26	16		ppbv	8	8/9/2011 9:22:00 PM
Methylene chloride	ND	40		ppbv	8	8/9/2011 9:22:00 PM
Naphthalene	ND	8.0		ppbv	8	8/9/2011 9:22:00 PM
n-Hexane	10	16	J	ppbv	8	8/9/2011 9:22:00 PM
o-Xylene	11	8.0		ppbv	8	8/9/2011 9:22:00 PM
Propylene	ND	8.0		ppbv	8	8/9/2011 9:22:00 PM
Styrene	ND	8.0		ppbv	8	8/9/2011 9:22:00 PM
tert-Butyl Methyl Ether	ND	8.0		ppbv	8	8/9/2011 9:22:00 PM
Tetrachloroethene	ND	8.0		ppbv	8	8/9/2011 9:22:00 PM
Tetrahydrofuran	ND	8.0		ppbv	8	8/9/2011 9:22:00 PM
Toluene	60	8.0		ppbv	8	8/9/2011 9:22:00 PM
trans-1,2-Dichloroethene	ND	8.0		ppbv	8	8/9/2011 9:22:00 PM
trans-1,3-dichloropropene	ND	8.0		ppbv	8	8/9/2011 9:22:00 PM
Trichloroethene	15	8.0		ppbv	8	8/9/2011 9:22:00 PM
Trichlorofluoromethane	ND	8.0		ppbv	8	8/9/2011 9:22:00 PM
Vinyl acetate	ND	8.0		ppbv	8	8/9/2011 9:22:00 PM
Vinyl chloride	ND	8.0		ppbv	8	8/9/2011 9:22:00 PM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
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J	Estimated concentration	M	Manual Integration used to determine area response
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Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/11/2011 10:30:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-019 **Matrix:** AIR

Client Sample ID VA0616

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	38	24		ppbv	8	8/9/2011 9:22:00 PM
Surr: 4-Bromofluorobenzene	104	70-130		%REC	8	8/9/2011 9:22:00 PM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **MT3**
C5-C8 Aliphatic Hydrocarbons	4,800	940	H	µg/m³	8	8/11/2011 11:24:00 PM
C9-C10 Aromatic Hydrocarbons	ND	1,100	H	µg/m³	8	8/11/2011 11:24:00 PM
C9-C12 Aliphatic Hydrocarbons	4,000	1,500	H	µg/m³	8	8/11/2011 11:24:00 PM
Surr: 4-Bromofluorobenzene	94.6	70-130	H	%REC	8	8/11/2011 11:24:00 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#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/11/2011 10:30:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-020 **Matrix:** AIR

Client Sample ID VA0617

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.14	0.10		%	1	8/8/2011 5:31:00 PM
Carbon Monoxide	ND	0.10		%	1	8/8/2011 5:31:00 PM
Methane	ND	0.50		%	1	8/8/2011 5:31:00 PM
Nitrogen	78	0.10		%	1	8/8/2011 5:31:00 PM
Oxygen	21	0.10		%	1	8/8/2011 5:31:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	8.0		ppbv	8	8/9/2011 10:06:00 PM
1,1,2,2-Tetrachloroethane	ND	8.0		ppbv	8	8/9/2011 10:06:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	8.0		ppbv	8	8/9/2011 10:06:00 PM
1,1,2-Trichloroethane	ND	8.0		ppbv	8	8/9/2011 10:06:00 PM
1,1-Dichloroethane	ND	8.0		ppbv	8	8/9/2011 10:06:00 PM
1,1-Dichloroethene	ND	8.0		ppbv	8	8/9/2011 10:06:00 PM
1,2,4-Trichlorobenzene	ND	8.0		ppbv	8	8/9/2011 10:06:00 PM
1,2,4-Trimethylbenzene	9.8	8.0		ppbv	8	8/9/2011 10:06:00 PM
1,2-Dibromoethane	ND	8.0		ppbv	8	8/9/2011 10:06:00 PM
1,2-Dichlorobenzene	ND	8.0		ppbv	8	8/9/2011 10:06:00 PM
1,2-Dichloroethane	ND	8.0		ppbv	8	8/9/2011 10:06:00 PM
1,2-Dichloropropane	ND	8.0		ppbv	8	8/9/2011 10:06:00 PM
1,3,5-Trimethylbenzene	ND	8.0		ppbv	8	8/9/2011 10:06:00 PM
1,3-Butadiene	ND	8.0		ppbv	8	8/9/2011 10:06:00 PM
1,3-Dichlorobenzene	ND	8.0		ppbv	8	8/9/2011 10:06:00 PM
1,4-Dichlorobenzene	ND	8.0		ppbv	8	8/9/2011 10:06:00 PM
1,4-Dioxane	ND	8.0		ppbv	8	8/9/2011 10:06:00 PM
2-Butanone	15	8.0		ppbv	8	8/9/2011 10:06:00 PM
2-Hexanone	ND	8.0		ppbv	8	8/9/2011 10:06:00 PM
2-Propanol	ND	8.0		ppbv	8	8/9/2011 10:06:00 PM
4-Methyl-2-pentanone	ND	8.0		ppbv	8	8/9/2011 10:06:00 PM
Acetone	16	8.0		ppbv	8	8/9/2011 10:06:00 PM
Benzene	14	8.0		ppbv	8	8/9/2011 10:06:00 PM
Benzyl chloride	ND	8.0		ppbv	8	8/9/2011 10:06:00 PM
Bromodichloromethane	ND	8.0		ppbv	8	8/9/2011 10:06:00 PM
Bromoform	ND	8.0		ppbv	8	8/9/2011 10:06:00 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#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/11/2011 10:30:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-020 **Matrix:** AIR

Client Sample ID VA0617

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	8.0		ppbv	8	8/9/2011 10:06:00 PM
Carbon disulfide	ND	8.0		ppbv	8	8/9/2011 10:06:00 PM
Carbon tetrachloride	ND	8.0		ppbv	8	8/9/2011 10:06:00 PM
Chlorobenzene	ND	8.0		ppbv	8	8/9/2011 10:06:00 PM
Chlorodibromomethane	ND	8.0		ppbv	8	8/9/2011 10:06:00 PM
Chloroethane	ND	8.0		ppbv	8	8/9/2011 10:06:00 PM
Chloroform	ND	8.0		ppbv	8	8/9/2011 10:06:00 PM
Chloromethane	ND	8.0		ppbv	8	8/9/2011 10:06:00 PM
cis-1,2-Dichloroethene	ND	8.0		ppbv	8	8/9/2011 10:06:00 PM
cis-1,3-dichloropropene	ND	8.0		ppbv	8	8/9/2011 10:06:00 PM
Cyclohexane	26	16		ppbv	8	8/9/2011 10:06:00 PM
Dichlorodifluoromethane	ND	8.0		ppbv	8	8/9/2011 10:06:00 PM
Ethanol	61	40		ppbv	8	8/9/2011 10:06:00 PM
Ethyl acetate	ND	8.0		ppbv	8	8/9/2011 10:06:00 PM
Ethylbenzene	13	16	J	ppbv	8	8/9/2011 10:06:00 PM
Heptane	23	8.0		ppbv	8	8/9/2011 10:06:00 PM
Hexachlorobutadiene	ND	16		ppbv	8	8/9/2011 10:06:00 PM
m,p-Xylene	40	16		ppbv	8	8/9/2011 10:06:00 PM
Methylene chloride	ND	40		ppbv	8	8/9/2011 10:06:00 PM
Naphthalene	ND	8.0		ppbv	8	8/9/2011 10:06:00 PM
n-Hexane	13	16	J	ppbv	8	8/9/2011 10:06:00 PM
o-Xylene	16	8.0		ppbv	8	8/9/2011 10:06:00 PM
Propylene	ND	8.0		ppbv	8	8/9/2011 10:06:00 PM
Styrene	ND	8.0		ppbv	8	8/9/2011 10:06:00 PM
tert-Butyl Methyl Ether	ND	8.0		ppbv	8	8/9/2011 10:06:00 PM
Tetrachloroethene	ND	8.0		ppbv	8	8/9/2011 10:06:00 PM
Tetrahydrofuran	ND	8.0		ppbv	8	8/9/2011 10:06:00 PM
Toluene	75	8.0		ppbv	8	8/9/2011 10:06:00 PM
trans-1,2-Dichloroethene	ND	8.0		ppbv	8	8/9/2011 10:06:00 PM
trans-1,3-dichloropropene	ND	8.0		ppbv	8	8/9/2011 10:06:00 PM
Trichloroethene	ND	8.0		ppbv	8	8/9/2011 10:06:00 PM
Trichlorofluoromethane	ND	8.0		ppbv	8	8/9/2011 10:06:00 PM
Vinyl acetate	ND	8.0		ppbv	8	8/9/2011 10:06:00 PM
Vinyl chloride	ND	8.0		ppbv	8	8/9/2011 10:06:00 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#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/11/2011 10:30:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-020 **Matrix:** AIR

Client Sample ID VA0617

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	57	24		ppbv	8	8/9/2011 10:06:00 PM
Surr: 4-Bromofluorobenzene	107	70-130		%REC	8	8/9/2011 10:06:00 PM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **MT3**
C5-C8 Aliphatic Hydrocarbons	4,800	940	H	µg/m³	8	8/12/2011 12:08:00 AM
C9-C10 Aromatic Hydrocarbons	ND	1,100	H	µg/m³	8	8/12/2011 12:08:00 AM
C9-C12 Aliphatic Hydrocarbons	4,500	1,500	H	µg/m³	8	8/12/2011 12:08:00 AM
Surr: 4-Bromofluorobenzene	98.3	70-130	H	%REC	8	8/12/2011 12:08:00 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#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/11/2011 11:18:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-021 **Matrix:** AIR

Client Sample ID VA0618

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.44	0.10		%	1	8/8/2011 6:02:00 PM
Carbon Monoxide	ND	0.10		%	1	8/8/2011 6:02:00 PM
Methane	ND	0.50		%	1	8/8/2011 6:02:00 PM
Nitrogen	79	0.10		%	1	8/8/2011 6:02:00 PM
Oxygen	20	0.10		%	1	8/8/2011 6:02:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	8.0		ppbv	8	8/9/2011 10:51:00 PM
1,1,2,2-Tetrachloroethane	ND	8.0		ppbv	8	8/9/2011 10:51:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	8.0		ppbv	8	8/9/2011 10:51:00 PM
1,1,2-Trichloroethane	ND	8.0		ppbv	8	8/9/2011 10:51:00 PM
1,1-Dichloroethane	ND	8.0		ppbv	8	8/9/2011 10:51:00 PM
1,1-Dichloroethene	ND	8.0		ppbv	8	8/9/2011 10:51:00 PM
1,2,4-Trichlorobenzene	ND	8.0		ppbv	8	8/9/2011 10:51:00 PM
1,2,4-Trimethylbenzene	ND	8.0		ppbv	8	8/9/2011 10:51:00 PM
1,2-Dibromoethane	ND	8.0		ppbv	8	8/9/2011 10:51:00 PM
1,2-Dichlorobenzene	ND	8.0		ppbv	8	8/9/2011 10:51:00 PM
1,2-Dichloroethane	ND	8.0		ppbv	8	8/9/2011 10:51:00 PM
1,2-Dichloropropane	ND	8.0		ppbv	8	8/9/2011 10:51:00 PM
1,3,5-Trimethylbenzene	ND	8.0		ppbv	8	8/9/2011 10:51:00 PM
1,3-Butadiene	ND	8.0		ppbv	8	8/9/2011 10:51:00 PM
1,3-Dichlorobenzene	ND	8.0		ppbv	8	8/9/2011 10:51:00 PM
1,4-Dichlorobenzene	ND	8.0		ppbv	8	8/9/2011 10:51:00 PM
1,4-Dioxane	ND	8.0		ppbv	8	8/9/2011 10:51:00 PM
2-Butanone	14	8.0		ppbv	8	8/9/2011 10:51:00 PM
2-Hexanone	ND	8.0		ppbv	8	8/9/2011 10:51:00 PM
2-Propanol	ND	8.0		ppbv	8	8/9/2011 10:51:00 PM
4-Methyl-2-pentanone	ND	8.0		ppbv	8	8/9/2011 10:51:00 PM
Acetone	16	8.0		ppbv	8	8/9/2011 10:51:00 PM
Benzene	9.1	8.0		ppbv	8	8/9/2011 10:51:00 PM
Benzyl chloride	ND	8.0		ppbv	8	8/9/2011 10:51:00 PM
Bromodichloromethane	ND	8.0		ppbv	8	8/9/2011 10:51:00 PM
Bromoform	ND	8.0		ppbv	8	8/9/2011 10:51:00 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.
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TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/11/2011 11:18:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-021 **Matrix:** AIR

Client Sample ID VA0618

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	8.0		ppbv	8	8/9/2011 10:51:00 PM
Carbon disulfide	ND	8.0		ppbv	8	8/9/2011 10:51:00 PM
Carbon tetrachloride	ND	8.0		ppbv	8	8/9/2011 10:51:00 PM
Chlorobenzene	ND	8.0		ppbv	8	8/9/2011 10:51:00 PM
Chlorodibromomethane	ND	8.0		ppbv	8	8/9/2011 10:51:00 PM
Chloroethane	ND	8.0		ppbv	8	8/9/2011 10:51:00 PM
Chloroform	ND	8.0		ppbv	8	8/9/2011 10:51:00 PM
Chloromethane	ND	8.0		ppbv	8	8/9/2011 10:51:00 PM
cis-1,2-Dichloroethene	ND	8.0		ppbv	8	8/9/2011 10:51:00 PM
cis-1,3-dichloropropene	ND	8.0		ppbv	8	8/9/2011 10:51:00 PM
Cyclohexane	30	16		ppbv	8	8/9/2011 10:51:00 PM
Dichlorodifluoromethane	ND	8.0		ppbv	8	8/9/2011 10:51:00 PM
Ethanol	58	40		ppbv	8	8/9/2011 10:51:00 PM
Ethyl acetate	ND	8.0		ppbv	8	8/9/2011 10:51:00 PM
Ethylbenzene	9.1	16	J	ppbv	8	8/9/2011 10:51:00 PM
Heptane	20	8.0		ppbv	8	8/9/2011 10:51:00 PM
Hexachlorobutadiene	ND	16		ppbv	8	8/9/2011 10:51:00 PM
m,p-Xylene	26	16		ppbv	8	8/9/2011 10:51:00 PM
Methylene chloride	ND	40		ppbv	8	8/9/2011 10:51:00 PM
Naphthalene	ND	8.0		ppbv	8	8/9/2011 10:51:00 PM
n-Hexane	17	16		ppbv	8	8/9/2011 10:51:00 PM
o-Xylene	12	8.0		ppbv	8	8/9/2011 10:51:00 PM
Propylene	13	8.0		ppbv	8	8/9/2011 10:51:00 PM
Styrene	ND	8.0		ppbv	8	8/9/2011 10:51:00 PM
tert-Butyl Methyl Ether	ND	8.0		ppbv	8	8/9/2011 10:51:00 PM
Tetrachloroethene	ND	8.0		ppbv	8	8/9/2011 10:51:00 PM
Tetrahydrofuran	ND	8.0		ppbv	8	8/9/2011 10:51:00 PM
Toluene	72	8.0		ppbv	8	8/9/2011 10:51:00 PM
trans-1,2-Dichloroethene	ND	8.0		ppbv	8	8/9/2011 10:51:00 PM
trans-1,3-dichloropropene	ND	8.0		ppbv	8	8/9/2011 10:51:00 PM
Trichloroethene	ND	8.0		ppbv	8	8/9/2011 10:51:00 PM
Trichlorofluoromethane	ND	8.0		ppbv	8	8/9/2011 10:51:00 PM
Vinyl acetate	ND	8.0		ppbv	8	8/9/2011 10:51:00 PM
Vinyl chloride	ND	8.0		ppbv	8	8/9/2011 10:51:00 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 v3

RTI LABORATORIES, INC.

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

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/11/2011 11:18:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-021 **Matrix:** AIR

Client Sample ID VA0618

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	38	24		ppbv	8	8/9/2011 10:51:00 PM
Surr: 4-Bromofluorobenzene	106	70-130		%REC	8	8/9/2011 10:51:00 PM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **MT3**
C5-C8 Aliphatic Hydrocarbons	35,000	4,700	H	µg/m³	40	8/12/2011 9:37:00 AM
C9-C10 Aromatic Hydrocarbons	ND	5,300	H	µg/m³	40	8/12/2011 9:37:00 AM
C9-C12 Aliphatic Hydrocarbons	ND	7,600	H	µg/m³	40	8/12/2011 9:37:00 AM
Surr: 4-Bromofluorobenzene	97.1	70-130	H	%REC	40	8/12/2011 9:37:00 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#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/11/2011 11:57:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-022 **Matrix:** AIR

Client Sample ID VA0619

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.089	0.10	J	%	1	8/8/2011 6:26:00 PM
Carbon Monoxide	ND	0.10		%	1	8/8/2011 6:26:00 PM
Methane	ND	0.50		%	1	8/8/2011 6:26:00 PM
Nitrogen	78	0.10		%	1	8/8/2011 6:26:00 PM
Oxygen	21	0.10		%	1	8/8/2011 6:26:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	8.0		ppbv	8	8/9/2011 11:35:00 PM
1,1,2,2-Tetrachloroethane	ND	8.0		ppbv	8	8/9/2011 11:35:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	8.0		ppbv	8	8/9/2011 11:35:00 PM
1,1,2-Trichloroethane	ND	8.0		ppbv	8	8/9/2011 11:35:00 PM
1,1-Dichloroethane	ND	8.0		ppbv	8	8/9/2011 11:35:00 PM
1,1-Dichloroethene	ND	8.0		ppbv	8	8/9/2011 11:35:00 PM
1,2,4-Trichlorobenzene	ND	8.0		ppbv	8	8/9/2011 11:35:00 PM
1,2,4-Trimethylbenzene	9.2	8.0		ppbv	8	8/9/2011 11:35:00 PM
1,2-Dibromoethane	ND	8.0		ppbv	8	8/9/2011 11:35:00 PM
1,2-Dichlorobenzene	ND	8.0		ppbv	8	8/9/2011 11:35:00 PM
1,2-Dichloroethane	ND	8.0		ppbv	8	8/9/2011 11:35:00 PM
1,2-Dichloropropane	ND	8.0		ppbv	8	8/9/2011 11:35:00 PM
1,3,5-Trimethylbenzene	ND	8.0		ppbv	8	8/9/2011 11:35:00 PM
1,3-Butadiene	ND	8.0		ppbv	8	8/9/2011 11:35:00 PM
1,3-Dichlorobenzene	ND	8.0		ppbv	8	8/9/2011 11:35:00 PM
1,4-Dichlorobenzene	ND	8.0		ppbv	8	8/9/2011 11:35:00 PM
1,4-Dioxane	ND	8.0		ppbv	8	8/9/2011 11:35:00 PM
2-Butanone	23	8.0		ppbv	8	8/9/2011 11:35:00 PM
2-Hexanone	ND	8.0		ppbv	8	8/9/2011 11:35:00 PM
2-Propanol	ND	8.0		ppbv	8	8/9/2011 11:35:00 PM
4-Methyl-2-pentanone	ND	8.0		ppbv	8	8/9/2011 11:35:00 PM
Acetone	20	8.0		ppbv	8	8/9/2011 11:35:00 PM
Benzene	12	8.0		ppbv	8	8/9/2011 11:35:00 PM
Benzyl chloride	ND	8.0		ppbv	8	8/9/2011 11:35:00 PM
Bromodichloromethane	ND	8.0		ppbv	8	8/9/2011 11:35:00 PM
Bromoform	ND	8.0		ppbv	8	8/9/2011 11:35:00 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 v3

RTI LABORATORIES, INC.

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

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/11/2011 11:57:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-022 **Matrix:** AIR

Client Sample ID VA0619

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	8.0		ppbv	8	8/9/2011 11:35:00 PM
Carbon disulfide	ND	8.0		ppbv	8	8/9/2011 11:35:00 PM
Carbon tetrachloride	ND	8.0		ppbv	8	8/9/2011 11:35:00 PM
Chlorobenzene	ND	8.0		ppbv	8	8/9/2011 11:35:00 PM
Chlorodibromomethane	ND	8.0		ppbv	8	8/9/2011 11:35:00 PM
Chloroethane	ND	8.0		ppbv	8	8/9/2011 11:35:00 PM
Chloroform	ND	8.0		ppbv	8	8/9/2011 11:35:00 PM
Chloromethane	ND	8.0		ppbv	8	8/9/2011 11:35:00 PM
cis-1,2-Dichloroethene	ND	8.0		ppbv	8	8/9/2011 11:35:00 PM
cis-1,3-dichloropropene	ND	8.0		ppbv	8	8/9/2011 11:35:00 PM
Cyclohexane	39	16		ppbv	8	8/9/2011 11:35:00 PM
Dichlorodifluoromethane	ND	8.0		ppbv	8	8/9/2011 11:35:00 PM
Ethanol	52	40		ppbv	8	8/9/2011 11:35:00 PM
Ethyl acetate	ND	8.0		ppbv	8	8/9/2011 11:35:00 PM
Ethylbenzene	10	16	J	ppbv	8	8/9/2011 11:35:00 PM
Heptane	22	8.0		ppbv	8	8/9/2011 11:35:00 PM
Hexachlorobutadiene	ND	16		ppbv	8	8/9/2011 11:35:00 PM
m,p-Xylene	30	16		ppbv	8	8/9/2011 11:35:00 PM
Methylene chloride	ND	40		ppbv	8	8/9/2011 11:35:00 PM
Naphthalene	ND	8.0		ppbv	8	8/9/2011 11:35:00 PM
n-Hexane	24	16		ppbv	8	8/9/2011 11:35:00 PM
o-Xylene	14	8.0		ppbv	8	8/9/2011 11:35:00 PM
Propylene	ND	8.0		ppbv	8	8/9/2011 11:35:00 PM
Styrene	ND	8.0		ppbv	8	8/9/2011 11:35:00 PM
tert-Butyl Methyl Ether	ND	8.0		ppbv	8	8/9/2011 11:35:00 PM
Tetrachloroethene	ND	8.0		ppbv	8	8/9/2011 11:35:00 PM
Tetrahydrofuran	ND	8.0		ppbv	8	8/9/2011 11:35:00 PM
Toluene	73	8.0		ppbv	8	8/9/2011 11:35:00 PM
trans-1,2-Dichloroethene	ND	8.0		ppbv	8	8/9/2011 11:35:00 PM
trans-1,3-dichloropropene	ND	8.0		ppbv	8	8/9/2011 11:35:00 PM
Trichloroethene	ND	8.0		ppbv	8	8/9/2011 11:35:00 PM
Trichlorofluoromethane	ND	8.0		ppbv	8	8/9/2011 11:35:00 PM
Vinyl acetate	ND	8.0		ppbv	8	8/9/2011 11:35:00 PM
Vinyl chloride	ND	8.0		ppbv	8	8/9/2011 11:35:00 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 v3

RTI LABORATORIES, INC.

RTI
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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/11/2011 11:57:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-022 **Matrix:** AIR

Client Sample ID VA0619

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	44	24		ppbv	8	8/9/2011 11:35:00 PM
Surr: 4-Bromofluorobenzene	108	70-130		%REC	8	8/9/2011 11:35:00 PM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **MT3**
C5-C8 Aliphatic Hydrocarbons	11,000	940	H	µg/m³	8	8/12/2011 1:34:00 AM
C9-C10 Aromatic Hydrocarbons	ND	1,100	H	µg/m³	8	8/12/2011 1:34:00 AM
C9-C12 Aliphatic Hydrocarbons	4,600	1,500	H	µg/m³	8	8/12/2011 1:34:00 AM
Surr: 4-Bromofluorobenzene	94.6	70-130	H	%REC	8	8/12/2011 1:34:00 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

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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/12/2011 12:19:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-023 **Matrix:** AIR

Client Sample ID VA0620

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.57	0.10		%	1	8/8/2011 6:46:00 PM
Carbon Monoxide	ND	0.10		%	1	8/8/2011 6:46:00 PM
Methane	ND	0.50		%	1	8/8/2011 6:46:00 PM
Nitrogen	78	0.10		%	1	8/8/2011 6:46:00 PM
Oxygen	20	0.10		%	1	8/8/2011 6:46:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	8.0	H	ppbv	8	8/22/2011 2:16:00 PM
1,1,2,2-Tetrachloroethane	ND	8.0	H	ppbv	8	8/22/2011 2:16:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	8.0	H	ppbv	8	8/22/2011 2:16:00 PM
1,1,2-Trichloroethane	ND	8.0	H	ppbv	8	8/22/2011 2:16:00 PM
1,1-Dichloroethane	ND	8.0	H	ppbv	8	8/22/2011 2:16:00 PM
1,1-Dichloroethene	ND	8.0	H	ppbv	8	8/22/2011 2:16:00 PM
1,2,4-Trichlorobenzene	ND	8.0	H	ppbv	8	8/22/2011 2:16:00 PM
1,2,4-Trimethylbenzene	ND	8.0	H	ppbv	8	8/22/2011 2:16:00 PM
1,2-Dibromoethane	ND	8.0	H	ppbv	8	8/22/2011 2:16:00 PM
1,2-Dichlorobenzene	ND	8.0	H	ppbv	8	8/22/2011 2:16:00 PM
1,2-Dichloroethane	ND	8.0	H	ppbv	8	8/22/2011 2:16:00 PM
1,2-Dichloropropane	ND	8.0	H	ppbv	8	8/22/2011 2:16:00 PM
1,3,5-Trimethylbenzene	ND	8.0	H	ppbv	8	8/22/2011 2:16:00 PM
1,3-Butadiene	ND	8.0	H	ppbv	8	8/22/2011 2:16:00 PM
1,3-Dichlorobenzene	ND	8.0	H	ppbv	8	8/22/2011 2:16:00 PM
1,4-Dichlorobenzene	ND	8.0	H	ppbv	8	8/22/2011 2:16:00 PM
1,4-Dioxane	ND	8.0	H	ppbv	8	8/22/2011 2:16:00 PM
2-Butanone	14	8.0	H	ppbv	8	8/22/2011 2:16:00 PM
2-Hexanone	ND	8.0	H	ppbv	8	8/22/2011 2:16:00 PM
2-Propanol	26	8.0	H	ppbv	8	8/22/2011 2:16:00 PM
4-Methyl-2-pentanone	ND	8.0	H	ppbv	8	8/22/2011 2:16:00 PM
Acetone	16	8.0	H	ppbv	8	8/22/2011 2:16:00 PM
Benzene	16	8.0	H	ppbv	8	8/22/2011 2:16:00 PM
Benzyl chloride	ND	8.0	H	ppbv	8	8/22/2011 2:16:00 PM
Bromodichloromethane	ND	8.0	H	ppbv	8	8/22/2011 2:16:00 PM
Bromoform	ND	8.0	H	ppbv	8	8/22/2011 2:16:00 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.
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TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/12/2011 12:19:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-023 **Matrix:** AIR

Client Sample ID VA0620

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	8.0	H	ppbv	8	8/22/2011 2:16:00 PM
Carbon disulfide	ND	8.0	H	ppbv	8	8/22/2011 2:16:00 PM
Carbon tetrachloride	ND	8.0	H	ppbv	8	8/22/2011 2:16:00 PM
Chlorobenzene	ND	8.0	H	ppbv	8	8/22/2011 2:16:00 PM
Chlorodibromomethane	ND	8.0	H	ppbv	8	8/22/2011 2:16:00 PM
Chloroethane	ND	8.0	H	ppbv	8	8/22/2011 2:16:00 PM
Chloroform	ND	8.0	H	ppbv	8	8/22/2011 2:16:00 PM
Chloromethane	ND	8.0	H	ppbv	8	8/22/2011 2:16:00 PM
cis-1,2-Dichloroethene	ND	8.0	H	ppbv	8	8/22/2011 2:16:00 PM
cis-1,3-dichloropropene	ND	8.0	H	ppbv	8	8/22/2011 2:16:00 PM
Cyclohexane	28	16	H	ppbv	8	8/22/2011 2:16:00 PM
Dichlorodifluoromethane	ND	8.0	H	ppbv	8	8/22/2011 2:16:00 PM
Ethanol	88	40	H	ppbv	8	8/22/2011 2:16:00 PM
Ethyl acetate	ND	8.0	H	ppbv	8	8/22/2011 2:16:00 PM
Ethylbenzene	11	16	JH	ppbv	8	8/22/2011 2:16:00 PM
Heptane	19	8.0	H	ppbv	8	8/22/2011 2:16:00 PM
Hexachlorobutadiene	ND	16	H	ppbv	8	8/22/2011 2:16:00 PM
m,p-Xylene	27	16	H	ppbv	8	8/22/2011 2:16:00 PM
Methylene chloride	52	40	H	ppbv	8	8/22/2011 2:16:00 PM
Naphthalene	ND	8.0	H	ppbv	8	8/22/2011 2:16:00 PM
n-Hexane	31	16	H	ppbv	8	8/22/2011 2:16:00 PM
o-Xylene	11	8.0	H	ppbv	8	8/22/2011 2:16:00 PM
Propylene	ND	8.0	H	ppbv	8	8/22/2011 2:16:00 PM
Styrene	ND	8.0	H	ppbv	8	8/22/2011 2:16:00 PM
tert-Butyl Methyl Ether	ND	8.0	H	ppbv	8	8/22/2011 2:16:00 PM
Tetrachloroethene	ND	8.0	H	ppbv	8	8/22/2011 2:16:00 PM
Tetrahydrofuran	ND	8.0	H	ppbv	8	8/22/2011 2:16:00 PM
Toluene	76	8.0	H	ppbv	8	8/22/2011 2:16:00 PM
trans-1,2-Dichloroethene	ND	8.0	H	ppbv	8	8/22/2011 2:16:00 PM
trans-1,3-dichloropropene	ND	8.0	H	ppbv	8	8/22/2011 2:16:00 PM
Trichloroethene	ND	8.0	H	ppbv	8	8/22/2011 2:16:00 PM
Trichlorofluoromethane	ND	8.0	H	ppbv	8	8/22/2011 2:16:00 PM
Vinyl acetate	ND	8.0	H	ppbv	8	8/22/2011 2:16:00 PM
Vinyl chloride	ND	8.0	H	ppbv	8	8/22/2011 2:16:00 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#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/12/2011 12:19:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-023 **Matrix:** AIR

Client Sample ID VA0620

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	38	24	H	ppbv	8	8/22/2011 2:16:00 PM
Surr: 4-Bromofluorobenzene	101	70-130	H	%REC	8	8/22/2011 2:16:00 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#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/12/2011 12:45:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-024 **Matrix:** AIR

Client Sample ID VA0621

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.48	0.10		%	1	8/8/2011 7:17:00 PM
Carbon Monoxide	ND	0.10		%	1	8/8/2011 7:17:00 PM
Methane	ND	0.50		%	1	8/8/2011 7:17:00 PM
Nitrogen	79	0.10		%	1	8/8/2011 7:17:00 PM
Oxygen	20	0.10		%	1	8/8/2011 7:17:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	400		ppbv	400	8/10/2011 4:10:00 AM
1,1,2,2-Tetrachloroethane	ND	400		ppbv	400	8/10/2011 4:10:00 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	400		ppbv	400	8/10/2011 4:10:00 AM
1,1,2-Trichloroethane	ND	400		ppbv	400	8/10/2011 4:10:00 AM
1,1-Dichloroethane	ND	400		ppbv	400	8/10/2011 4:10:00 AM
1,1-Dichloroethene	ND	400		ppbv	400	8/10/2011 4:10:00 AM
1,2,4-Trichlorobenzene	ND	400		ppbv	400	8/10/2011 4:10:00 AM
1,2,4-Trimethylbenzene	970	400		ppbv	400	8/10/2011 4:10:00 AM
1,2-Dibromoethane	ND	400		ppbv	400	8/10/2011 4:10:00 AM
1,2-Dichlorobenzene	ND	400		ppbv	400	8/10/2011 4:10:00 AM
1,2-Dichloroethane	ND	400		ppbv	400	8/10/2011 4:10:00 AM
1,2-Dichloropropane	ND	400		ppbv	400	8/10/2011 4:10:00 AM
1,3,5-Trimethylbenzene	ND	400		ppbv	400	8/10/2011 4:10:00 AM
1,3-Butadiene	ND	400		ppbv	400	8/10/2011 4:10:00 AM
1,3-Dichlorobenzene	ND	400		ppbv	400	8/10/2011 4:10:00 AM
1,4-Dichlorobenzene	ND	400		ppbv	400	8/10/2011 4:10:00 AM
1,4-Dioxane	ND	400		ppbv	400	8/10/2011 4:10:00 AM
2-Butanone	ND	400		ppbv	400	8/10/2011 4:10:00 AM
2-Hexanone	ND	400		ppbv	400	8/10/2011 4:10:00 AM
2-Propanol	ND	400		ppbv	400	8/10/2011 4:10:00 AM
4-Methyl-2-pentanone	ND	400		ppbv	400	8/10/2011 4:10:00 AM
Acetone	670	400		ppbv	400	8/10/2011 4:10:00 AM
Benzene	3,100	400		ppbv	400	8/10/2011 4:10:00 AM
Benzyl chloride	ND	400		ppbv	400	8/10/2011 4:10:00 AM
Bromodichloromethane	ND	400		ppbv	400	8/10/2011 4:10:00 AM
Bromoform	ND	400		ppbv	400	8/10/2011 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
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RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v3

RTI LABORATORIES, INC.

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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/12/2011 12:45:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-024 **Matrix:** AIR

Client Sample ID VA0621

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	400		ppbv	400	8/10/2011 4:10:00 AM
Carbon disulfide	ND	400		ppbv	400	8/10/2011 4:10:00 AM
Carbon tetrachloride	ND	400		ppbv	400	8/10/2011 4:10:00 AM
Chlorobenzene	ND	400		ppbv	400	8/10/2011 4:10:00 AM
Chlorodibromomethane	ND	400		ppbv	400	8/10/2011 4:10:00 AM
Chloroethane	ND	400		ppbv	400	8/10/2011 4:10:00 AM
Chloroform	ND	400		ppbv	400	8/10/2011 4:10:00 AM
Chloromethane	ND	400		ppbv	400	8/10/2011 4:10:00 AM
cis-1,2-Dichloroethene	ND	400		ppbv	400	8/10/2011 4:10:00 AM
cis-1,3-dichloropropene	ND	400		ppbv	400	8/10/2011 4:10:00 AM
Cyclohexane	6,200	800		ppbv	400	8/10/2011 4:10:00 AM
Dichlorodifluoromethane	ND	400		ppbv	400	8/10/2011 4:10:00 AM
Ethanol	ND	2,000		ppbv	400	8/10/2011 4:10:00 AM
Ethyl acetate	ND	400		ppbv	400	8/10/2011 4:10:00 AM
Ethylbenzene	460	800	J	ppbv	400	8/10/2011 4:10:00 AM
Heptane	3,000	400		ppbv	400	8/10/2011 4:10:00 AM
Hexachlorobutadiene	ND	800		ppbv	400	8/10/2011 4:10:00 AM
m,p-Xylene	2,100	800		ppbv	400	8/10/2011 4:10:00 AM
Methylene chloride	1,200	2,000	J	ppbv	400	8/10/2011 4:10:00 AM
Naphthalene	ND	400		ppbv	400	8/10/2011 4:10:00 AM
n-Hexane	10,000	800		ppbv	400	8/10/2011 4:10:00 AM
o-Xylene	710	400		ppbv	400	8/10/2011 4:10:00 AM
Propylene	ND	400		ppbv	400	8/10/2011 4:10:00 AM
Styrene	ND	400		ppbv	400	8/10/2011 4:10:00 AM
tert-Butyl Methyl Ether	ND	400		ppbv	400	8/10/2011 4:10:00 AM
Tetrachloroethene	ND	400		ppbv	400	8/10/2011 4:10:00 AM
Tetrahydrofuran	ND	400		ppbv	400	8/10/2011 4:10:00 AM
Toluene	2,900	400		ppbv	400	8/10/2011 4:10:00 AM
trans-1,2-Dichloroethene	ND	400		ppbv	400	8/10/2011 4:10:00 AM
trans-1,3-dichloropropene	ND	400		ppbv	400	8/10/2011 4:10:00 AM
Trichloroethene	ND	400		ppbv	400	8/10/2011 4:10:00 AM
Trichlorofluoromethane	ND	400		ppbv	400	8/10/2011 4:10:00 AM
Vinyl acetate	ND	400		ppbv	400	8/10/2011 4:10:00 AM
Vinyl chloride	ND	400		ppbv	400	8/10/2011 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

Revision v3

RTI LABORATORIES, INC.

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

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/12/2011 12:45:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-024 **Matrix:** AIR

Client Sample ID VA0621

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	2,800	1,200		ppbv	400	8/10/2011 4:10:00 AM
Surr: 4-Bromofluorobenzene	103	70-130		%REC	400	8/10/2011 4:10:00 AM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **RH3**
C5-C8 Aliphatic Hydrocarbons	13,000	4,700	H	µg/m³	40	8/26/2011 2:26:00 AM
C9-C10 Aromatic Hydrocarbons	ND	5,300	H	µg/m³	40	8/26/2011 2:26:00 AM
C9-C12 Aliphatic Hydrocarbons	3,000	7,600	JH	µg/m³	40	8/26/2011 2:26:00 AM
Surr: 4-Bromofluorobenzene	99.2	70-130	H	%REC	40	8/26/2011 2:26:00 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#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/12/2011 1:11:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-025 **Matrix:** AIR

Client Sample ID VA0622

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.22	0.10		%	1	8/9/2011 12:00:00 PM
Carbon Monoxide	ND	0.10		%	1	8/9/2011 12:00:00 PM
Methane	ND	0.50		%	1	8/9/2011 12:00:00 PM
Nitrogen	78	0.10		%	1	8/9/2011 12:00:00 PM
Oxygen	20	0.10		%	1	8/9/2011 12:00:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	8.0	H	ppbv	8	8/22/2011 3:00:00 PM
1,1,2,2-Tetrachloroethane	ND	8.0	H	ppbv	8	8/22/2011 3:00:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	8.0	H	ppbv	8	8/22/2011 3:00:00 PM
1,1,2-Trichloroethane	ND	8.0	H	ppbv	8	8/22/2011 3:00:00 PM
1,1-Dichloroethane	ND	8.0	H	ppbv	8	8/22/2011 3:00:00 PM
1,1-Dichloroethene	ND	8.0	H	ppbv	8	8/22/2011 3:00:00 PM
1,2,4-Trichlorobenzene	ND	8.0	H	ppbv	8	8/22/2011 3:00:00 PM
1,2,4-Trimethylbenzene	ND	8.0	H	ppbv	8	8/22/2011 3:00:00 PM
1,2-Dibromoethane	ND	8.0	H	ppbv	8	8/22/2011 3:00:00 PM
1,2-Dichlorobenzene	ND	8.0	H	ppbv	8	8/22/2011 3:00:00 PM
1,2-Dichloroethane	ND	8.0	H	ppbv	8	8/22/2011 3:00:00 PM
1,2-Dichloropropane	ND	8.0	H	ppbv	8	8/22/2011 3:00:00 PM
1,3,5-Trimethylbenzene	ND	8.0	H	ppbv	8	8/22/2011 3:00:00 PM
1,3-Butadiene	ND	8.0	H	ppbv	8	8/22/2011 3:00:00 PM
1,3-Dichlorobenzene	ND	8.0	H	ppbv	8	8/22/2011 3:00:00 PM
1,4-Dichlorobenzene	ND	8.0	H	ppbv	8	8/22/2011 3:00:00 PM
1,4-Dioxane	ND	8.0	H	ppbv	8	8/22/2011 3:00:00 PM
2-Butanone	17	8.0	H	ppbv	8	8/22/2011 3:00:00 PM
2-Hexanone	ND	8.0	H	ppbv	8	8/22/2011 3:00:00 PM
2-Propanol	ND	8.0	H	ppbv	8	8/22/2011 3:00:00 PM
4-Methyl-2-pentanone	ND	8.0	H	ppbv	8	8/22/2011 3:00:00 PM
Acetone	13	8.0	H	ppbv	8	8/22/2011 3:00:00 PM
Benzene	ND	8.0	H	ppbv	8	8/22/2011 3:00:00 PM
Benzyl chloride	ND	8.0	H	ppbv	8	8/22/2011 3:00:00 PM
Bromodichloromethane	ND	8.0	H	ppbv	8	8/22/2011 3:00:00 PM
Bromoform	ND	8.0	H	ppbv	8	8/22/2011 3:00:00 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

RTI LABORATORIES, INC.

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Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/12/2011 1:11:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-025 **Matrix:** AIR

Client Sample ID VA0622

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	8.0	H	ppbv	8	8/22/2011 3:00:00 PM
Carbon disulfide	ND	8.0	H	ppbv	8	8/22/2011 3:00:00 PM
Carbon tetrachloride	ND	8.0	H	ppbv	8	8/22/2011 3:00:00 PM
Chlorobenzene	ND	8.0	H	ppbv	8	8/22/2011 3:00:00 PM
Chlorodibromomethane	ND	8.0	H	ppbv	8	8/22/2011 3:00:00 PM
Chloroethane	ND	8.0	H	ppbv	8	8/22/2011 3:00:00 PM
Chloroform	ND	8.0	H	ppbv	8	8/22/2011 3:00:00 PM
Chloromethane	ND	8.0	H	ppbv	8	8/22/2011 3:00:00 PM
cis-1,2-Dichloroethene	ND	8.0	H	ppbv	8	8/22/2011 3:00:00 PM
cis-1,3-dichloropropene	ND	8.0	H	ppbv	8	8/22/2011 3:00:00 PM
Cyclohexane	18	16	H	ppbv	8	8/22/2011 3:00:00 PM
Dichlorodifluoromethane	ND	8.0	H	ppbv	8	8/22/2011 3:00:00 PM
Ethanol	96	40	H	ppbv	8	8/22/2011 3:00:00 PM
Ethyl acetate	ND	8.0	H	ppbv	8	8/22/2011 3:00:00 PM
Ethylbenzene	ND	16	H	ppbv	8	8/22/2011 3:00:00 PM
Heptane	12	8.0	H	ppbv	8	8/22/2011 3:00:00 PM
Hexachlorobutadiene	ND	16	H	ppbv	8	8/22/2011 3:00:00 PM
m,p-Xylene	19	16	H	ppbv	8	8/22/2011 3:00:00 PM
Methylene chloride	ND	40	H	ppbv	8	8/22/2011 3:00:00 PM
Naphthalene	ND	8.0	H	ppbv	8	8/22/2011 3:00:00 PM
n-Hexane	8.4	16	JH	ppbv	8	8/22/2011 3:00:00 PM
o-Xylene	ND	8.0	H	ppbv	8	8/22/2011 3:00:00 PM
Propylene	ND	8.0	H	ppbv	8	8/22/2011 3:00:00 PM
Styrene	ND	8.0	H	ppbv	8	8/22/2011 3:00:00 PM
tert-Butyl Methyl Ether	ND	8.0	H	ppbv	8	8/22/2011 3:00:00 PM
Tetrachloroethene	ND	8.0	H	ppbv	8	8/22/2011 3:00:00 PM
Tetrahydrofuran	ND	8.0	H	ppbv	8	8/22/2011 3:00:00 PM
Toluene	49	8.0	H	ppbv	8	8/22/2011 3:00:00 PM
trans-1,2-Dichloroethene	ND	8.0	H	ppbv	8	8/22/2011 3:00:00 PM
trans-1,3-dichloropropene	ND	8.0	H	ppbv	8	8/22/2011 3:00:00 PM
Trichloroethene	ND	8.0	H	ppbv	8	8/22/2011 3:00:00 PM
Trichlorofluoromethane	ND	8.0	H	ppbv	8	8/22/2011 3:00:00 PM
Vinyl acetate	ND	8.0	H	ppbv	8	8/22/2011 3:00:00 PM
Vinyl chloride	ND	8.0	H	ppbv	8	8/22/2011 3:00:00 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

RTI LABORATORIES, INC.

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

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/12/2011 1:11:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-025 **Matrix:** AIR

Client Sample ID VA0622

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	19	24	JH	ppbv	8	8/22/2011 3:00:00 PM
Surr: 4-Bromofluorobenzene	103	70-130	H	%REC	8	8/22/2011 3:00:00 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#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/12/2011 1:11:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-026 **Matrix:** AIR

Client Sample ID VA0623

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.19	0.10		%	1	8/9/2011 12:29:00 PM
Carbon Monoxide	ND	0.10		%	1	8/9/2011 12:29:00 PM
Methane	ND	0.50		%	1	8/9/2011 12:29:00 PM
Nitrogen	78	0.10		%	1	8/9/2011 12:29:00 PM
Oxygen	20	0.10		%	1	8/9/2011 12:29:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	8.0	H	ppbv	8	8/22/2011 3:44:00 PM
1,1,2,2-Tetrachloroethane	ND	8.0	H	ppbv	8	8/22/2011 3:44:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	8.0	H	ppbv	8	8/22/2011 3:44:00 PM
1,1,2-Trichloroethane	ND	8.0	H	ppbv	8	8/22/2011 3:44:00 PM
1,1-Dichloroethane	ND	8.0	H	ppbv	8	8/22/2011 3:44:00 PM
1,1-Dichloroethene	ND	8.0	H	ppbv	8	8/22/2011 3:44:00 PM
1,2,4-Trichlorobenzene	ND	8.0	H	ppbv	8	8/22/2011 3:44:00 PM
1,2,4-Trimethylbenzene	ND	8.0	H	ppbv	8	8/22/2011 3:44:00 PM
1,2-Dibromoethane	ND	8.0	H	ppbv	8	8/22/2011 3:44:00 PM
1,2-Dichlorobenzene	ND	8.0	H	ppbv	8	8/22/2011 3:44:00 PM
1,2-Dichloroethane	ND	8.0	H	ppbv	8	8/22/2011 3:44:00 PM
1,2-Dichloropropane	ND	8.0	H	ppbv	8	8/22/2011 3:44:00 PM
1,3,5-Trimethylbenzene	ND	8.0	H	ppbv	8	8/22/2011 3:44:00 PM
1,3-Butadiene	ND	8.0	H	ppbv	8	8/22/2011 3:44:00 PM
1,3-Dichlorobenzene	ND	8.0	H	ppbv	8	8/22/2011 3:44:00 PM
1,4-Dichlorobenzene	ND	8.0	H	ppbv	8	8/22/2011 3:44:00 PM
1,4-Dioxane	ND	8.0	H	ppbv	8	8/22/2011 3:44:00 PM
2-Butanone	17	8.0	H	ppbv	8	8/22/2011 3:44:00 PM
2-Hexanone	ND	8.0	H	ppbv	8	8/22/2011 3:44:00 PM
2-Propanol	ND	8.0	H	ppbv	8	8/22/2011 3:44:00 PM
4-Methyl-2-pentanone	ND	8.0	H	ppbv	8	8/22/2011 3:44:00 PM
Acetone	16	8.0	H	ppbv	8	8/22/2011 3:44:00 PM
Benzene	13	8.0	H	ppbv	8	8/22/2011 3:44:00 PM
Benzyl chloride	ND	8.0	H	ppbv	8	8/22/2011 3:44:00 PM
Bromodichloromethane	ND	8.0	H	ppbv	8	8/22/2011 3:44:00 PM
Bromoform	ND	8.0	H	ppbv	8	8/22/2011 3:44:00 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.

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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/12/2011 1:11:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-026 **Matrix:** AIR

Client Sample ID VA0623

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	8.0	H	ppbv	8	8/22/2011 3:44:00 PM
Carbon disulfide	ND	8.0	H	ppbv	8	8/22/2011 3:44:00 PM
Carbon tetrachloride	ND	8.0	H	ppbv	8	8/22/2011 3:44:00 PM
Chlorobenzene	ND	8.0	H	ppbv	8	8/22/2011 3:44:00 PM
Chlorodibromomethane	ND	8.0	H	ppbv	8	8/22/2011 3:44:00 PM
Chloroethane	ND	8.0	H	ppbv	8	8/22/2011 3:44:00 PM
Chloroform	ND	8.0	H	ppbv	8	8/22/2011 3:44:00 PM
Chloromethane	ND	8.0	H	ppbv	8	8/22/2011 3:44:00 PM
cis-1,2-Dichloroethene	ND	8.0	H	ppbv	8	8/22/2011 3:44:00 PM
cis-1,3-dichloropropene	ND	8.0	H	ppbv	8	8/22/2011 3:44:00 PM
Cyclohexane	29	16	H	ppbv	8	8/22/2011 3:44:00 PM
Dichlorodifluoromethane	ND	8.0	H	ppbv	8	8/22/2011 3:44:00 PM
Ethanol	51	40	H	ppbv	8	8/22/2011 3:44:00 PM
Ethyl acetate	ND	8.0	H	ppbv	8	8/22/2011 3:44:00 PM
Ethylbenzene	13	16	JH	ppbv	8	8/22/2011 3:44:00 PM
Heptane	22	8.0	H	ppbv	8	8/22/2011 3:44:00 PM
Hexachlorobutadiene	ND	16	H	ppbv	8	8/22/2011 3:44:00 PM
m,p-Xylene	38	16	H	ppbv	8	8/22/2011 3:44:00 PM
Methylene chloride	ND	40	H	ppbv	8	8/22/2011 3:44:00 PM
Naphthalene	ND	8.0	H	ppbv	8	8/22/2011 3:44:00 PM
n-Hexane	13	16	JH	ppbv	8	8/22/2011 3:44:00 PM
o-Xylene	14	8.0	H	ppbv	8	8/22/2011 3:44:00 PM
Propylene	ND	8.0	H	ppbv	8	8/22/2011 3:44:00 PM
Styrene	ND	8.0	H	ppbv	8	8/22/2011 3:44:00 PM
tert-Butyl Methyl Ether	ND	8.0	H	ppbv	8	8/22/2011 3:44:00 PM
Tetrachloroethene	ND	8.0	H	ppbv	8	8/22/2011 3:44:00 PM
Tetrahydrofuran	ND	8.0	H	ppbv	8	8/22/2011 3:44:00 PM
Toluene	83	8.0	H	ppbv	8	8/22/2011 3:44:00 PM
trans-1,2-Dichloroethene	ND	8.0	H	ppbv	8	8/22/2011 3:44:00 PM
trans-1,3-dichloropropene	ND	8.0	H	ppbv	8	8/22/2011 3:44:00 PM
Trichloroethene	ND	8.0	H	ppbv	8	8/22/2011 3:44:00 PM
Trichlorofluoromethane	ND	8.0	H	ppbv	8	8/22/2011 3:44:00 PM
Vinyl acetate	ND	8.0	H	ppbv	8	8/22/2011 3:44:00 PM
Vinyl chloride	ND	8.0	H	ppbv	8	8/22/2011 3:44:00 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#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/12/2011 1:11:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-026 **Matrix:** AIR

Client Sample ID VA0623

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	53	24	H	ppbv	8	8/22/2011 3:44:00 PM
Surr: 4-Bromofluorobenzene	104	70-130	H	%REC	8	8/22/2011 3:44:00 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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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/12/2011 1:58:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-027 **Matrix:** AIR

Client Sample ID VA0624

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.21	0.10		%	1	8/9/2011 12:48:00 PM
Carbon Monoxide	ND	0.10		%	1	8/9/2011 12:48:00 PM
Methane	ND	0.50		%	1	8/9/2011 12:48:00 PM
Nitrogen	78	0.10		%	1	8/9/2011 12:48:00 PM
Oxygen	20	0.10		%	1	8/9/2011 12:48:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	8.0	H	ppbv	8	8/22/2011 4:27:00 PM
1,1,2,2-Tetrachloroethane	ND	8.0	H	ppbv	8	8/22/2011 4:27:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	8.0	H	ppbv	8	8/22/2011 4:27:00 PM
1,1,2-Trichloroethane	ND	8.0	H	ppbv	8	8/22/2011 4:27:00 PM
1,1-Dichloroethane	ND	8.0	H	ppbv	8	8/22/2011 4:27:00 PM
1,1-Dichloroethene	ND	8.0	H	ppbv	8	8/22/2011 4:27:00 PM
1,2,4-Trichlorobenzene	ND	8.0	H	ppbv	8	8/22/2011 4:27:00 PM
1,2,4-Trimethylbenzene	8.0	8.0	H	ppbv	8	8/22/2011 4:27:00 PM
1,2-Dibromoethane	ND	8.0	H	ppbv	8	8/22/2011 4:27:00 PM
1,2-Dichlorobenzene	ND	8.0	H	ppbv	8	8/22/2011 4:27:00 PM
1,2-Dichloroethane	ND	8.0	H	ppbv	8	8/22/2011 4:27:00 PM
1,2-Dichloropropane	ND	8.0	H	ppbv	8	8/22/2011 4:27:00 PM
1,3,5-Trimethylbenzene	ND	8.0	H	ppbv	8	8/22/2011 4:27:00 PM
1,3-Butadiene	ND	8.0	H	ppbv	8	8/22/2011 4:27:00 PM
1,3-Dichlorobenzene	ND	8.0	H	ppbv	8	8/22/2011 4:27:00 PM
1,4-Dichlorobenzene	ND	8.0	H	ppbv	8	8/22/2011 4:27:00 PM
1,4-Dioxane	ND	8.0	H	ppbv	8	8/22/2011 4:27:00 PM
2-Butanone	24	8.0	H	ppbv	8	8/22/2011 4:27:00 PM
2-Hexanone	ND	8.0	H	ppbv	8	8/22/2011 4:27:00 PM
2-Propanol	ND	8.0	H	ppbv	8	8/22/2011 4:27:00 PM
4-Methyl-2-pentanone	ND	8.0	H	ppbv	8	8/22/2011 4:27:00 PM
Acetone	23	8.0	H	ppbv	8	8/22/2011 4:27:00 PM
Benzene	9.1	8.0	H	ppbv	8	8/22/2011 4:27:00 PM
Benzyl chloride	ND	8.0	H	ppbv	8	8/22/2011 4:27:00 PM
Bromodichloromethane	ND	8.0	H	ppbv	8	8/22/2011 4:27:00 PM
Bromoform	ND	8.0	H	ppbv	8	8/22/2011 4:27:00 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.

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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/12/2011 1:58:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-027 **Matrix:** AIR

Client Sample ID VA0624

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	8.0	H	ppbv	8	8/22/2011 4:27:00 PM
Carbon disulfide	ND	8.0	H	ppbv	8	8/22/2011 4:27:00 PM
Carbon tetrachloride	ND	8.0	H	ppbv	8	8/22/2011 4:27:00 PM
Chlorobenzene	ND	8.0	H	ppbv	8	8/22/2011 4:27:00 PM
Chlorodibromomethane	ND	8.0	H	ppbv	8	8/22/2011 4:27:00 PM
Chloroethane	ND	8.0	H	ppbv	8	8/22/2011 4:27:00 PM
Chloroform	ND	8.0	H	ppbv	8	8/22/2011 4:27:00 PM
Chloromethane	ND	8.0	H	ppbv	8	8/22/2011 4:27:00 PM
cis-1,2-Dichloroethene	ND	8.0	H	ppbv	8	8/22/2011 4:27:00 PM
cis-1,3-dichloropropene	ND	8.0	H	ppbv	8	8/22/2011 4:27:00 PM
Cyclohexane	21	16	H	ppbv	8	8/22/2011 4:27:00 PM
Dichlorodifluoromethane	ND	8.0	H	ppbv	8	8/22/2011 4:27:00 PM
Ethanol	70	40	mH	ppbv	8	8/22/2011 4:27:00 PM
Ethyl acetate	ND	8.0	H	ppbv	8	8/22/2011 4:27:00 PM
Ethylbenzene	10	16	JH	ppbv	8	8/22/2011 4:27:00 PM
Heptane	15	8.0	H	ppbv	8	8/22/2011 4:27:00 PM
Hexachlorobutadiene	ND	16	H	ppbv	8	8/22/2011 4:27:00 PM
m,p-Xylene	30	16	H	ppbv	8	8/22/2011 4:27:00 PM
Methylene chloride	ND	40	H	ppbv	8	8/22/2011 4:27:00 PM
Naphthalene	ND	8.0	H	ppbv	8	8/22/2011 4:27:00 PM
n-Hexane	8.4	16	JH	ppbv	8	8/22/2011 4:27:00 PM
o-Xylene	13	8.0	H	ppbv	8	8/22/2011 4:27:00 PM
Propylene	ND	8.0	H	ppbv	8	8/22/2011 4:27:00 PM
Styrene	ND	8.0	H	ppbv	8	8/22/2011 4:27:00 PM
tert-Butyl Methyl Ether	ND	8.0	H	ppbv	8	8/22/2011 4:27:00 PM
Tetrachloroethene	ND	8.0	H	ppbv	8	8/22/2011 4:27:00 PM
Tetrahydrofuran	ND	8.0	H	ppbv	8	8/22/2011 4:27:00 PM
Toluene	60	8.0	H	ppbv	8	8/22/2011 4:27:00 PM
trans-1,2-Dichloroethene	ND	8.0	H	ppbv	8	8/22/2011 4:27:00 PM
trans-1,3-dichloropropene	ND	8.0	H	ppbv	8	8/22/2011 4:27:00 PM
Trichloroethene	ND	8.0	H	ppbv	8	8/22/2011 4:27:00 PM
Trichlorofluoromethane	ND	8.0	H	ppbv	8	8/22/2011 4:27:00 PM
Vinyl acetate	ND	8.0	H	ppbv	8	8/22/2011 4:27:00 PM
Vinyl chloride	ND	8.0	H	ppbv	8	8/22/2011 4:27:00 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#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/12/2011 1:58:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-027 **Matrix:** AIR

Client Sample ID VA0624

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	43	24	H	ppbv	8	8/22/2011 4:27:00 PM
Surr: 4-Bromofluorobenzene	105	70-130	H	%REC	8	8/22/2011 4:27:00 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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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/12/2011 2:30:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-028 **Matrix:** AIR

Client Sample ID VA0625

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.20	0.10		%	1	8/9/2011 1:08:00 PM
Carbon Monoxide	ND	0.10		%	1	8/9/2011 1:08:00 PM
Methane	ND	0.50		%	1	8/9/2011 1:08:00 PM
Nitrogen	78	0.10		%	1	8/9/2011 1:08:00 PM
Oxygen	20	0.10		%	1	8/9/2011 1:08:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	40	H	ppbv	40	8/22/2011 12:51:00 PM
1,1,2,2-Tetrachloroethane	ND	40	H	ppbv	40	8/22/2011 12:51:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	40	H	ppbv	40	8/22/2011 12:51:00 PM
1,1,2-Trichloroethane	ND	40	H	ppbv	40	8/22/2011 12:51:00 PM
1,1-Dichloroethane	ND	40	H	ppbv	40	8/22/2011 12:51:00 PM
1,1-Dichloroethene	ND	40	H	ppbv	40	8/22/2011 12:51:00 PM
1,2,4-Trichlorobenzene	ND	40	H	ppbv	40	8/22/2011 12:51:00 PM
1,2,4-Trimethylbenzene	ND	40	H	ppbv	40	8/22/2011 12:51:00 PM
1,2-Dibromoethane	ND	40	H	ppbv	40	8/22/2011 12:51:00 PM
1,2-Dichlorobenzene	ND	40	H	ppbv	40	8/22/2011 12:51:00 PM
1,2-Dichloroethane	ND	40	H	ppbv	40	8/22/2011 12:51:00 PM
1,2-Dichloropropane	ND	40	H	ppbv	40	8/22/2011 12:51:00 PM
1,3,5-Trimethylbenzene	ND	40	H	ppbv	40	8/22/2011 12:51:00 PM
1,3-Butadiene	ND	40	H	ppbv	40	8/22/2011 12:51:00 PM
1,3-Dichlorobenzene	ND	40	H	ppbv	40	8/22/2011 12:51:00 PM
1,4-Dichlorobenzene	ND	40	H	ppbv	40	8/22/2011 12:51:00 PM
1,4-Dioxane	ND	40	H	ppbv	40	8/22/2011 12:51:00 PM
2-Butanone	ND	40	H	ppbv	40	8/22/2011 12:51:00 PM
2-Hexanone	ND	40	H	ppbv	40	8/22/2011 12:51:00 PM
2-Propanol	ND	40	H	ppbv	40	8/22/2011 12:51:00 PM
4-Methyl-2-pentanone	ND	40	H	ppbv	40	8/22/2011 12:51:00 PM
Acetone	ND	40	H	ppbv	40	8/22/2011 12:51:00 PM
Benzene	230	40	H	ppbv	40	8/22/2011 12:51:00 PM
Benzyl chloride	ND	40	H	ppbv	40	8/22/2011 12:51:00 PM
Bromodichloromethane	ND	40	H	ppbv	40	8/22/2011 12:51:00 PM
Bromoform	ND	40	H	ppbv	40	8/22/2011 12:51:00 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
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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/12/2011 2:30:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-028 **Matrix:** AIR

Client Sample ID VA0625

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	40	H	ppbv	40	8/22/2011 12:51:00 PM
Carbon disulfide	ND	40	H	ppbv	40	8/22/2011 12:51:00 PM
Carbon tetrachloride	ND	40	H	ppbv	40	8/22/2011 12:51:00 PM
Chlorobenzene	ND	40	H	ppbv	40	8/22/2011 12:51:00 PM
Chlorodibromomethane	ND	40	H	ppbv	40	8/22/2011 12:51:00 PM
Chloroethane	ND	40	H	ppbv	40	8/22/2011 12:51:00 PM
Chloroform	ND	40	H	ppbv	40	8/22/2011 12:51:00 PM
Chloromethane	ND	40	H	ppbv	40	8/22/2011 12:51:00 PM
cis-1,2-Dichloroethene	ND	40	H	ppbv	40	8/22/2011 12:51:00 PM
cis-1,3-dichloropropene	ND	40	H	ppbv	40	8/22/2011 12:51:00 PM
Cyclohexane	190	80	H	ppbv	40	8/22/2011 12:51:00 PM
Dichlorodifluoromethane	ND	40	H	ppbv	40	8/22/2011 12:51:00 PM
Ethanol	ND	200	H	ppbv	40	8/22/2011 12:51:00 PM
Ethyl acetate	ND	40	H	ppbv	40	8/22/2011 12:51:00 PM
Ethylbenzene	ND	80	H	ppbv	40	8/22/2011 12:51:00 PM
Heptane	ND	40	H	ppbv	40	8/22/2011 12:51:00 PM
Hexachlorobutadiene	ND	80	H	ppbv	40	8/22/2011 12:51:00 PM
m,p-Xylene	ND	80	H	ppbv	40	8/22/2011 12:51:00 PM
Methylene chloride	ND	200	H	ppbv	40	8/22/2011 12:51:00 PM
Naphthalene	ND	40	H	ppbv	40	8/22/2011 12:51:00 PM
n-Hexane	150	80	H	ppbv	40	8/22/2011 12:51:00 PM
o-Xylene	ND	40	H	ppbv	40	8/22/2011 12:51:00 PM
Propylene	280	40	H	ppbv	40	8/22/2011 12:51:00 PM
Styrene	ND	40	H	ppbv	40	8/22/2011 12:51:00 PM
tert-Butyl Methyl Ether	ND	40	H	ppbv	40	8/22/2011 12:51:00 PM
Tetrachloroethene	ND	40	H	ppbv	40	8/22/2011 12:51:00 PM
Tetrahydrofuran	ND	40	H	ppbv	40	8/22/2011 12:51:00 PM
Toluene	340	40	H	ppbv	40	8/22/2011 12:51:00 PM
trans-1,2-Dichloroethene	ND	40	H	ppbv	40	8/22/2011 12:51:00 PM
trans-1,3-dichloropropene	ND	40	H	ppbv	40	8/22/2011 12:51:00 PM
Trichloroethene	ND	40	H	ppbv	40	8/22/2011 12:51:00 PM
Trichlorofluoromethane	ND	40	H	ppbv	40	8/22/2011 12:51:00 PM
Vinyl acetate	ND	40	H	ppbv	40	8/22/2011 12:51:00 PM
Vinyl chloride	ND	40	H	ppbv	40	8/22/2011 12:51:00 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 v3

RTI LABORATORIES, INC.

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Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/12/2011 2:30:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-028 **Matrix:** AIR

Client Sample ID VA0625

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	ND	120	H	ppbv	40	8/22/2011 12:51:00 PM
Surr: 4-Bromofluorobenzene	104	70-130	H	%REC	40	8/22/2011 12:51:00 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#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/12/2011 3:05:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-029 **Matrix:** AIR

Client Sample ID VA0626

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.14	0.10		%	1	8/9/2011 1:28:00 PM
Carbon Monoxide	ND	0.10		%	1	8/9/2011 1:28:00 PM
Methane	ND	0.50		%	1	8/9/2011 1:28:00 PM
Nitrogen	77	0.10		%	1	8/9/2011 1:28:00 PM
Oxygen	21	0.10		%	1	8/9/2011 1:28:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	40	H	ppbv	40	8/22/2011 5:10:00 PM
1,1,2,2-Tetrachloroethane	ND	40	H	ppbv	40	8/22/2011 5:10:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	40	H	ppbv	40	8/22/2011 5:10:00 PM
1,1,2-Trichloroethane	ND	40	H	ppbv	40	8/22/2011 5:10:00 PM
1,1-Dichloroethane	ND	40	H	ppbv	40	8/22/2011 5:10:00 PM
1,1-Dichloroethene	ND	40	H	ppbv	40	8/22/2011 5:10:00 PM
1,2,4-Trichlorobenzene	ND	40	H	ppbv	40	8/22/2011 5:10:00 PM
1,2,4-Trimethylbenzene	ND	40	H	ppbv	40	8/22/2011 5:10:00 PM
1,2-Dibromoethane	ND	40	H	ppbv	40	8/22/2011 5:10:00 PM
1,2-Dichlorobenzene	ND	40	H	ppbv	40	8/22/2011 5:10:00 PM
1,2-Dichloroethane	ND	40	H	ppbv	40	8/22/2011 5:10:00 PM
1,2-Dichloropropane	ND	40	H	ppbv	40	8/22/2011 5:10:00 PM
1,3,5-Trimethylbenzene	ND	40	H	ppbv	40	8/22/2011 5:10:00 PM
1,3-Butadiene	ND	40	H	ppbv	40	8/22/2011 5:10:00 PM
1,3-Dichlorobenzene	ND	40	H	ppbv	40	8/22/2011 5:10:00 PM
1,4-Dichlorobenzene	ND	40	H	ppbv	40	8/22/2011 5:10:00 PM
1,4-Dioxane	ND	40	H	ppbv	40	8/22/2011 5:10:00 PM
2-Butanone	ND	40	H	ppbv	40	8/22/2011 5:10:00 PM
2-Hexanone	ND	40	H	ppbv	40	8/22/2011 5:10:00 PM
2-Propanol	ND	40	H	ppbv	40	8/22/2011 5:10:00 PM
4-Methyl-2-pentanone	ND	40	H	ppbv	40	8/22/2011 5:10:00 PM
Acetone	ND	40	H	ppbv	40	8/22/2011 5:10:00 PM
Benzene	140	40	H	ppbv	40	8/22/2011 5:10:00 PM
Benzyl chloride	ND	40	H	ppbv	40	8/22/2011 5:10:00 PM
Bromodichloromethane	ND	40	H	ppbv	40	8/22/2011 5:10:00 PM
Bromoform	ND	40	H	ppbv	40	8/22/2011 5:10:00 PM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
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J	Estimated concentration	M	Manual Integration used to determine area response
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RTI LABORATORIES, INC.

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Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/12/2011 3:05:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-029 **Matrix:** AIR

Client Sample ID VA0626

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	40	H	ppbv	40	8/22/2011 5:10:00 PM
Carbon disulfide	ND	40	H	ppbv	40	8/22/2011 5:10:00 PM
Carbon tetrachloride	ND	40	H	ppbv	40	8/22/2011 5:10:00 PM
Chlorobenzene	ND	40	H	ppbv	40	8/22/2011 5:10:00 PM
Chlorodibromomethane	ND	40	H	ppbv	40	8/22/2011 5:10:00 PM
Chloroethane	ND	40	H	ppbv	40	8/22/2011 5:10:00 PM
Chloroform	ND	40	H	ppbv	40	8/22/2011 5:10:00 PM
Chloromethane	ND	40	H	ppbv	40	8/22/2011 5:10:00 PM
cis-1,2-Dichloroethene	ND	40	H	ppbv	40	8/22/2011 5:10:00 PM
cis-1,3-dichloropropene	ND	40	H	ppbv	40	8/22/2011 5:10:00 PM
Cyclohexane	360	80	H	ppbv	40	8/22/2011 5:10:00 PM
Dichlorodifluoromethane	ND	40	H	ppbv	40	8/22/2011 5:10:00 PM
Ethanol	100	200	JH	ppbv	40	8/22/2011 5:10:00 PM
Ethyl acetate	ND	40	H	ppbv	40	8/22/2011 5:10:00 PM
Ethylbenzene	ND	80	H	ppbv	40	8/22/2011 5:10:00 PM
Heptane	80	40	H	ppbv	40	8/22/2011 5:10:00 PM
Hexachlorobutadiene	ND	80	H	ppbv	40	8/22/2011 5:10:00 PM
m,p-Xylene	ND	80	H	ppbv	40	8/22/2011 5:10:00 PM
Methylene chloride	ND	200	H	ppbv	40	8/22/2011 5:10:00 PM
Naphthalene	ND	40	H	ppbv	40	8/22/2011 5:10:00 PM
n-Hexane	370	80	H	ppbv	40	8/22/2011 5:10:00 PM
o-Xylene	ND	40	H	ppbv	40	8/22/2011 5:10:00 PM
Propylene	210	40	H	ppbv	40	8/22/2011 5:10:00 PM
Styrene	ND	40	H	ppbv	40	8/22/2011 5:10:00 PM
tert-Butyl Methyl Ether	ND	40	H	ppbv	40	8/22/2011 5:10:00 PM
Tetrachloroethene	ND	40	H	ppbv	40	8/22/2011 5:10:00 PM
Tetrahydrofuran	ND	40	H	ppbv	40	8/22/2011 5:10:00 PM
Toluene	290	40	H	ppbv	40	8/22/2011 5:10:00 PM
trans-1,2-Dichloroethene	ND	40	H	ppbv	40	8/22/2011 5:10:00 PM
trans-1,3-dichloropropene	ND	40	H	ppbv	40	8/22/2011 5:10:00 PM
Trichloroethene	ND	40	H	ppbv	40	8/22/2011 5:10:00 PM
Trichlorofluoromethane	ND	40	H	ppbv	40	8/22/2011 5:10:00 PM
Vinyl acetate	ND	40	H	ppbv	40	8/22/2011 5:10:00 PM
Vinyl chloride	ND	40	H	ppbv	40	8/22/2011 5:10:00 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.

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Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/12/2011 3:05:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-029 **Matrix:** AIR

Client Sample ID VA0626

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	ND	120	H	ppbv	40	8/22/2011 5:10:00 PM
Surr: 4-Bromofluorobenzene	109	70-130	H	%REC	40	8/22/2011 5:10:00 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#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/13/2011 8:19:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-030 **Matrix:** AIR

Client Sample ID VA0627

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.14	0.10		%	1	8/9/2011 1:47:00 PM
Carbon Monoxide	ND	0.10		%	1	8/9/2011 1:47:00 PM
Methane	ND	0.50		%	1	8/9/2011 1:47:00 PM
Nitrogen	77	0.10		%	1	8/9/2011 1:47:00 PM
Oxygen	21	0.10		%	1	8/9/2011 1:47:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	8.0	H	ppbv	8	8/30/2011 5:35:00 PM
1,1,2,2-Tetrachloroethane	ND	8.0	H	ppbv	8	8/30/2011 5:35:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	8.0	H	ppbv	8	8/30/2011 5:35:00 PM
1,1,2-Trichloroethane	ND	8.0	H	ppbv	8	8/30/2011 5:35:00 PM
1,1-Dichloroethane	ND	8.0	H	ppbv	8	8/30/2011 5:35:00 PM
1,1-Dichloroethene	ND	8.0	H	ppbv	8	8/30/2011 5:35:00 PM
1,2,4-Trichlorobenzene	ND	8.0	H	ppbv	8	8/30/2011 5:35:00 PM
1,2,4-Trimethylbenzene	ND	8.0	H	ppbv	8	8/30/2011 5:35:00 PM
1,2-Dibromoethane	ND	8.0	H	ppbv	8	8/30/2011 5:35:00 PM
1,2-Dichlorobenzene	ND	8.0	H	ppbv	8	8/30/2011 5:35:00 PM
1,2-Dichloroethane	ND	8.0	H	ppbv	8	8/30/2011 5:35:00 PM
1,2-Dichloropropane	ND	8.0	H	ppbv	8	8/30/2011 5:35:00 PM
1,3,5-Trimethylbenzene	ND	8.0	H	ppbv	8	8/30/2011 5:35:00 PM
1,3-Butadiene	ND	8.0	H	ppbv	8	8/30/2011 5:35:00 PM
1,3-Dichlorobenzene	ND	8.0	H	ppbv	8	8/30/2011 5:35:00 PM
1,4-Dichlorobenzene	ND	8.0	H	ppbv	8	8/30/2011 5:35:00 PM
1,4-Dioxane	ND	8.0	H	ppbv	8	8/30/2011 5:35:00 PM
2-Butanone	18	8.0	H	ppbv	8	8/30/2011 5:35:00 PM
2-Hexanone	5.8	8.0	JH	ppbv	8	8/30/2011 5:35:00 PM
2-Propanol	11	8.0	H	ppbv	8	8/30/2011 5:35:00 PM
4-Methyl-2-pentanone	ND	8.0	H	ppbv	8	8/30/2011 5:35:00 PM
Acetone	24	8.0	H	ppbv	8	8/30/2011 5:35:00 PM
Benzene	9.4	8.0	H	ppbv	8	8/30/2011 5:35:00 PM
Benzyl chloride	ND	8.0	H	ppbv	8	8/30/2011 5:35:00 PM
Bromodichloromethane	ND	8.0	H	ppbv	8	8/30/2011 5:35:00 PM
Bromoform	ND	8.0	H	ppbv	8	8/30/2011 5:35:00 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#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/13/2011 8:19:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-030 **Matrix:** AIR

Client Sample ID VA0627

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	8.0	H	ppbv	8	8/30/2011 5:35:00 PM
Carbon disulfide	ND	8.0	H	ppbv	8	8/30/2011 5:35:00 PM
Carbon tetrachloride	ND	8.0	H	ppbv	8	8/30/2011 5:35:00 PM
Chlorobenzene	ND	8.0	H	ppbv	8	8/30/2011 5:35:00 PM
Chlorodibromomethane	ND	8.0	H	ppbv	8	8/30/2011 5:35:00 PM
Chloroethane	ND	8.0	H	ppbv	8	8/30/2011 5:35:00 PM
Chloroform	ND	8.0	H	ppbv	8	8/30/2011 5:35:00 PM
Chloromethane	ND	8.0	H	ppbv	8	8/30/2011 5:35:00 PM
cis-1,2-Dichloroethene	ND	8.0	H	ppbv	8	8/30/2011 5:35:00 PM
cis-1,3-dichloropropene	ND	8.0	H	ppbv	8	8/30/2011 5:35:00 PM
Cyclohexane	30	16	H	ppbv	8	8/30/2011 5:35:00 PM
Dichlorodifluoromethane	ND	8.0	H	ppbv	8	8/30/2011 5:35:00 PM
Ethanol	60	40	H	ppbv	8	8/30/2011 5:35:00 PM
Ethyl acetate	ND	8.0	H	ppbv	8	8/30/2011 5:35:00 PM
Ethylbenzene	ND	16	H	ppbv	8	8/30/2011 5:35:00 PM
Heptane	13	8.0	H	ppbv	8	8/30/2011 5:35:00 PM
Hexachlorobutadiene	ND	16	H	ppbv	8	8/30/2011 5:35:00 PM
m,p-Xylene	16	16	JH	ppbv	8	8/30/2011 5:35:00 PM
Methylene chloride	ND	40	H	ppbv	8	8/30/2011 5:35:00 PM
Naphthalene	ND	8.0	H	ppbv	8	8/30/2011 5:35:00 PM
n-Hexane	11	16	JH	ppbv	8	8/30/2011 5:35:00 PM
o-Xylene	6.6	8.0	JH	ppbv	8	8/30/2011 5:35:00 PM
Propylene	6.6	8.0	JH	ppbv	8	8/30/2011 5:35:00 PM
Styrene	ND	8.0	H	ppbv	8	8/30/2011 5:35:00 PM
tert-Butyl Methyl Ether	ND	8.0	H	ppbv	8	8/30/2011 5:35:00 PM
Tetrachloroethene	ND	8.0	H	ppbv	8	8/30/2011 5:35:00 PM
Tetrahydrofuran	ND	8.0	H	ppbv	8	8/30/2011 5:35:00 PM
Toluene	51	8.0	H	ppbv	8	8/30/2011 5:35:00 PM
trans-1,2-Dichloroethene	ND	8.0	H	ppbv	8	8/30/2011 5:35:00 PM
trans-1,3-dichloropropene	ND	8.0	H	ppbv	8	8/30/2011 5:35:00 PM
Trichloroethene	ND	8.0	H	ppbv	8	8/30/2011 5:35:00 PM
Trichlorofluoromethane	ND	8.0	H	ppbv	8	8/30/2011 5:35:00 PM
Vinyl acetate	ND	8.0	H	ppbv	8	8/30/2011 5:35:00 PM
Vinyl chloride	ND	8.0	H	ppbv	8	8/30/2011 5:35:00 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 v3

RTI LABORATORIES, INC.

RTI
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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/13/2011 8:19:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-030 **Matrix:** AIR

Client Sample ID VA0627

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	22	24	JH	ppbv	8	8/30/2011 5:35:00 PM
Surr: 4-Bromofluorobenzene	103	70-130	H	%REC	8	8/30/2011 5:35:00 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#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/13/2011 8:47:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-031 **Matrix:** AIR

Client Sample ID VA0628

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.088	0.10	J	%	1	8/9/2011 2:17:00 PM
Carbon Monoxide	ND	0.10		%	1	8/9/2011 2:17:00 PM
Methane	ND	0.50		%	1	8/9/2011 2:17:00 PM
Nitrogen	78	0.10		%	1	8/9/2011 2:17:00 PM
Oxygen	21	0.10		%	1	8/9/2011 2:17:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	8.0	H	ppbv	8	8/30/2011 6:19:00 PM
1,1,2,2-Tetrachloroethane	ND	8.0	H	ppbv	8	8/30/2011 6:19:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	8.0	H	ppbv	8	8/30/2011 6:19:00 PM
1,1,2-Trichloroethane	ND	8.0	H	ppbv	8	8/30/2011 6:19:00 PM
1,1-Dichloroethane	ND	8.0	H	ppbv	8	8/30/2011 6:19:00 PM
1,1-Dichloroethene	ND	8.0	H	ppbv	8	8/30/2011 6:19:00 PM
1,2,4-Trichlorobenzene	ND	8.0	H	ppbv	8	8/30/2011 6:19:00 PM
1,2,4-Trimethylbenzene	ND	8.0	H	ppbv	8	8/30/2011 6:19:00 PM
1,2-Dibromoethane	ND	8.0	H	ppbv	8	8/30/2011 6:19:00 PM
1,2-Dichlorobenzene	ND	8.0	H	ppbv	8	8/30/2011 6:19:00 PM
1,2-Dichloroethane	ND	8.0	H	ppbv	8	8/30/2011 6:19:00 PM
1,2-Dichloropropane	ND	8.0	H	ppbv	8	8/30/2011 6:19:00 PM
1,3,5-Trimethylbenzene	ND	8.0	H	ppbv	8	8/30/2011 6:19:00 PM
1,3-Butadiene	ND	8.0	H	ppbv	8	8/30/2011 6:19:00 PM
1,3-Dichlorobenzene	ND	8.0	H	ppbv	8	8/30/2011 6:19:00 PM
1,4-Dichlorobenzene	ND	8.0	H	ppbv	8	8/30/2011 6:19:00 PM
1,4-Dioxane	ND	8.0	H	ppbv	8	8/30/2011 6:19:00 PM
2-Butanone	7.4	8.0	JH	ppbv	8	8/30/2011 6:19:00 PM
2-Hexanone	ND	8.0	H	ppbv	8	8/30/2011 6:19:00 PM
2-Propanol	9.9	8.0	H	ppbv	8	8/30/2011 6:19:00 PM
4-Methyl-2-pentanone	ND	8.0	H	ppbv	8	8/30/2011 6:19:00 PM
Acetone	21	8.0	H	ppbv	8	8/30/2011 6:19:00 PM
Benzene	8.2	8.0	H	ppbv	8	8/30/2011 6:19:00 PM
Benzyl chloride	ND	8.0	H	ppbv	8	8/30/2011 6:19:00 PM
Bromodichloromethane	ND	8.0	H	ppbv	8	8/30/2011 6:19:00 PM
Bromoform	ND	8.0	H	ppbv	8	8/30/2011 6:19:00 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.

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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/13/2011 8:47:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-031 **Matrix:** AIR

Client Sample ID VA0628

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	8.0	H	ppbv	8	8/30/2011 6:19:00 PM
Carbon disulfide	ND	8.0	H	ppbv	8	8/30/2011 6:19:00 PM
Carbon tetrachloride	ND	8.0	H	ppbv	8	8/30/2011 6:19:00 PM
Chlorobenzene	ND	8.0	H	ppbv	8	8/30/2011 6:19:00 PM
Chlorodibromomethane	ND	8.0	H	ppbv	8	8/30/2011 6:19:00 PM
Chloroethane	ND	8.0	H	ppbv	8	8/30/2011 6:19:00 PM
Chloroform	ND	8.0	H	ppbv	8	8/30/2011 6:19:00 PM
Chloromethane	ND	8.0	H	ppbv	8	8/30/2011 6:19:00 PM
cis-1,2-Dichloroethene	ND	8.0	H	ppbv	8	8/30/2011 6:19:00 PM
cis-1,3-dichloropropene	ND	8.0	H	ppbv	8	8/30/2011 6:19:00 PM
Cyclohexane	31	16	H	ppbv	8	8/30/2011 6:19:00 PM
Dichlorodifluoromethane	ND	8.0	H	ppbv	8	8/30/2011 6:19:00 PM
Ethanol	65	40	H	ppbv	8	8/30/2011 6:19:00 PM
Ethyl acetate	ND	8.0	H	ppbv	8	8/30/2011 6:19:00 PM
Ethylbenzene	ND	16	H	ppbv	8	8/30/2011 6:19:00 PM
Heptane	5.3	8.0	JH	ppbv	8	8/30/2011 6:19:00 PM
Hexachlorobutadiene	ND	16	H	ppbv	8	8/30/2011 6:19:00 PM
m,p-Xylene	6.2	16	JH	ppbv	8	8/30/2011 6:19:00 PM
Methylene chloride	ND	40	H	ppbv	8	8/30/2011 6:19:00 PM
Naphthalene	ND	8.0	H	ppbv	8	8/30/2011 6:19:00 PM
n-Hexane	10	16	JH	ppbv	8	8/30/2011 6:19:00 PM
o-Xylene	ND	8.0	H	ppbv	8	8/30/2011 6:19:00 PM
Propylene	11	8.0	H	ppbv	8	8/30/2011 6:19:00 PM
Styrene	ND	8.0	H	ppbv	8	8/30/2011 6:19:00 PM
tert-Butyl Methyl Ether	ND	8.0	H	ppbv	8	8/30/2011 6:19:00 PM
Tetrachloroethene	ND	8.0	H	ppbv	8	8/30/2011 6:19:00 PM
Tetrahydrofuran	ND	8.0	H	ppbv	8	8/30/2011 6:19:00 PM
Toluene	32	8.0	H	ppbv	8	8/30/2011 6:19:00 PM
trans-1,2-Dichloroethene	ND	8.0	H	ppbv	8	8/30/2011 6:19:00 PM
trans-1,3-dichloropropene	ND	8.0	H	ppbv	8	8/30/2011 6:19:00 PM
Trichloroethene	ND	8.0	H	ppbv	8	8/30/2011 6:19:00 PM
Trichlorofluoromethane	ND	8.0	H	ppbv	8	8/30/2011 6:19:00 PM
Vinyl acetate	ND	8.0	H	ppbv	8	8/30/2011 6:19:00 PM
Vinyl chloride	ND	8.0	H	ppbv	8	8/30/2011 6:19:00 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.

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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/13/2011 8:47:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-031 **Matrix:** AIR

Client Sample ID VA0628

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	ND	24	H	ppbv	8	8/30/2011 6:19:00 PM
Surr: 4-Bromofluorobenzene	104	70-130	H	%REC	8	8/30/2011 6:19:00 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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Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/13/2011 9:18:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-032 **Matrix:** AIR

Client Sample ID VA0629

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.15	0.10		%	1	8/9/2011 2:50:00 PM
Carbon Monoxide	ND	0.10		%	1	8/9/2011 2:50:00 PM
Methane	ND	0.50		%	1	8/9/2011 2:50:00 PM
Nitrogen	79	0.10		%	1	8/9/2011 2:50:00 PM
Oxygen	20	0.10		%	1	8/9/2011 2:50:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	8.0	H	ppbv	8	8/30/2011 7:03:00 PM
1,1,2,2-Tetrachloroethane	ND	8.0	H	ppbv	8	8/30/2011 7:03:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	8.0	H	ppbv	8	8/30/2011 7:03:00 PM
1,1,2-Trichloroethane	ND	8.0	H	ppbv	8	8/30/2011 7:03:00 PM
1,1-Dichloroethane	ND	8.0	H	ppbv	8	8/30/2011 7:03:00 PM
1,1-Dichloroethene	ND	8.0	H	ppbv	8	8/30/2011 7:03:00 PM
1,2,4-Trichlorobenzene	ND	8.0	H	ppbv	8	8/30/2011 7:03:00 PM
1,2,4-Trimethylbenzene	ND	8.0	H	ppbv	8	8/30/2011 7:03:00 PM
1,2-Dibromoethane	ND	8.0	H	ppbv	8	8/30/2011 7:03:00 PM
1,2-Dichlorobenzene	ND	8.0	H	ppbv	8	8/30/2011 7:03:00 PM
1,2-Dichloroethane	ND	8.0	H	ppbv	8	8/30/2011 7:03:00 PM
1,2-Dichloropropane	ND	8.0	H	ppbv	8	8/30/2011 7:03:00 PM
1,3,5-Trimethylbenzene	ND	8.0	H	ppbv	8	8/30/2011 7:03:00 PM
1,3-Butadiene	ND	8.0	H	ppbv	8	8/30/2011 7:03:00 PM
1,3-Dichlorobenzene	ND	8.0	H	ppbv	8	8/30/2011 7:03:00 PM
1,4-Dichlorobenzene	ND	8.0	H	ppbv	8	8/30/2011 7:03:00 PM
1,4-Dioxane	ND	8.0	H	ppbv	8	8/30/2011 7:03:00 PM
2-Butanone	11	8.0	H	ppbv	8	8/30/2011 7:03:00 PM
2-Hexanone	ND	8.0	H	ppbv	8	8/30/2011 7:03:00 PM
2-Propanol	ND	8.0	H	ppbv	8	8/30/2011 7:03:00 PM
4-Methyl-2-pentanone	ND	8.0	H	ppbv	8	8/30/2011 7:03:00 PM
Acetone	14	8.0	H	ppbv	8	8/30/2011 7:03:00 PM
Benzene	6.9	8.0	JH	ppbv	8	8/30/2011 7:03:00 PM
Benzyl chloride	ND	8.0	H	ppbv	8	8/30/2011 7:03:00 PM
Bromodichloromethane	ND	8.0	H	ppbv	8	8/30/2011 7:03:00 PM
Bromoform	ND	8.0	H	ppbv	8	8/30/2011 7:03:00 PM

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
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Revision v3

RTI LABORATORIES, INC.

RTI
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Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/13/2011 9:18:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-032 **Matrix:** AIR

Client Sample ID VA0629

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	8.0	H	ppbv	8	8/30/2011 7:03:00 PM
Carbon disulfide	ND	8.0	H	ppbv	8	8/30/2011 7:03:00 PM
Carbon tetrachloride	ND	8.0	H	ppbv	8	8/30/2011 7:03:00 PM
Chlorobenzene	ND	8.0	H	ppbv	8	8/30/2011 7:03:00 PM
Chlorodibromomethane	ND	8.0	H	ppbv	8	8/30/2011 7:03:00 PM
Chloroethane	ND	8.0	H	ppbv	8	8/30/2011 7:03:00 PM
Chloroform	ND	8.0	H	ppbv	8	8/30/2011 7:03:00 PM
Chloromethane	ND	8.0	H	ppbv	8	8/30/2011 7:03:00 PM
cis-1,2-Dichloroethene	ND	8.0	H	ppbv	8	8/30/2011 7:03:00 PM
cis-1,3-dichloropropene	ND	8.0	H	ppbv	8	8/30/2011 7:03:00 PM
Cyclohexane	11	16	JH	ppbv	8	8/30/2011 7:03:00 PM
Dichlorodifluoromethane	ND	8.0	H	ppbv	8	8/30/2011 7:03:00 PM
Ethanol	24	40	JH	ppbv	8	8/30/2011 7:03:00 PM
Ethyl acetate	ND	8.0	H	ppbv	8	8/30/2011 7:03:00 PM
Ethylbenzene	ND	16	H	ppbv	8	8/30/2011 7:03:00 PM
Heptane	6.2	8.0	JH	ppbv	8	8/30/2011 7:03:00 PM
Hexachlorobutadiene	ND	16	H	ppbv	8	8/30/2011 7:03:00 PM
m,p-Xylene	7.6	16	JH	ppbv	8	8/30/2011 7:03:00 PM
Methylene chloride	ND	40	H	ppbv	8	8/30/2011 7:03:00 PM
Naphthalene	ND	8.0	H	ppbv	8	8/30/2011 7:03:00 PM
n-Hexane	ND	16	H	ppbv	8	8/30/2011 7:03:00 PM
o-Xylene	ND	8.0	H	ppbv	8	8/30/2011 7:03:00 PM
Propylene	10	8.0	H	ppbv	8	8/30/2011 7:03:00 PM
Styrene	ND	8.0	H	ppbv	8	8/30/2011 7:03:00 PM
tert-Butyl Methyl Ether	ND	8.0	H	ppbv	8	8/30/2011 7:03:00 PM
Tetrachloroethene	ND	8.0	H	ppbv	8	8/30/2011 7:03:00 PM
Tetrahydrofuran	ND	8.0	H	ppbv	8	8/30/2011 7:03:00 PM
Toluene	20	8.0	H	ppbv	8	8/30/2011 7:03:00 PM
trans-1,2-Dichloroethene	ND	8.0	H	ppbv	8	8/30/2011 7:03:00 PM
trans-1,3-dichloropropene	ND	8.0	H	ppbv	8	8/30/2011 7:03:00 PM
Trichloroethene	ND	8.0	H	ppbv	8	8/30/2011 7:03:00 PM
Trichlorofluoromethane	ND	8.0	H	ppbv	8	8/30/2011 7:03:00 PM
Vinyl acetate	ND	8.0	H	ppbv	8	8/30/2011 7:03:00 PM
Vinyl chloride	ND	8.0	H	ppbv	8	8/30/2011 7:03:00 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.

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Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/13/2011 9:18:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-032 **Matrix:** AIR

Client Sample ID VA0629

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	7.6	24	JH	ppbv	8	8/30/2011 7:03:00 PM
Surr: 4-Bromofluorobenzene	107	70-130	H	%REC	8	8/30/2011 7:03:00 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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Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/13/2011 9:51:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-033 **Matrix:** AIR

Client Sample ID VA0630

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.19	0.10		%	1	8/9/2011 3:10:00 PM
Carbon Monoxide	ND	0.10		%	1	8/9/2011 3:10:00 PM
Methane	ND	0.50		%	1	8/9/2011 3:10:00 PM
Nitrogen	78	0.10		%	1	8/9/2011 3:10:00 PM
Oxygen	20	0.10		%	1	8/9/2011 3:10:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	8.0	H	ppbv	8	8/30/2011 7:47:00 PM
1,1,2,2-Tetrachloroethane	ND	8.0	H	ppbv	8	8/30/2011 7:47:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	8.0	H	ppbv	8	8/30/2011 7:47:00 PM
1,1,2-Trichloroethane	ND	8.0	H	ppbv	8	8/30/2011 7:47:00 PM
1,1-Dichloroethane	ND	8.0	H	ppbv	8	8/30/2011 7:47:00 PM
1,1-Dichloroethene	ND	8.0	H	ppbv	8	8/30/2011 7:47:00 PM
1,2,4-Trichlorobenzene	ND	8.0	H	ppbv	8	8/30/2011 7:47:00 PM
1,2,4-Trimethylbenzene	ND	8.0	H	ppbv	8	8/30/2011 7:47:00 PM
1,2-Dibromoethane	ND	8.0	H	ppbv	8	8/30/2011 7:47:00 PM
1,2-Dichlorobenzene	ND	8.0	H	ppbv	8	8/30/2011 7:47:00 PM
1,2-Dichloroethane	ND	8.0	H	ppbv	8	8/30/2011 7:47:00 PM
1,2-Dichloropropane	ND	8.0	H	ppbv	8	8/30/2011 7:47:00 PM
1,3,5-Trimethylbenzene	ND	8.0	H	ppbv	8	8/30/2011 7:47:00 PM
1,3-Butadiene	21	8.0	H	ppbv	8	8/30/2011 7:47:00 PM
1,3-Dichlorobenzene	ND	8.0	H	ppbv	8	8/30/2011 7:47:00 PM
1,4-Dichlorobenzene	ND	8.0	H	ppbv	8	8/30/2011 7:47:00 PM
1,4-Dioxane	ND	8.0	H	ppbv	8	8/30/2011 7:47:00 PM
2-Butanone	14	8.0	H	ppbv	8	8/30/2011 7:47:00 PM
2-Hexanone	4.2	8.0	JH	ppbv	8	8/30/2011 7:47:00 PM
2-Propanol	7.0	8.0	JH	ppbv	8	8/30/2011 7:47:00 PM
4-Methyl-2-pentanone	ND	8.0	H	ppbv	8	8/30/2011 7:47:00 PM
Acetone	26	8.0	H	ppbv	8	8/30/2011 7:47:00 PM
Benzene	18	8.0	H	ppbv	8	8/30/2011 7:47:00 PM
Benzyl chloride	ND	8.0	H	ppbv	8	8/30/2011 7:47:00 PM
Bromodichloromethane	ND	8.0	H	ppbv	8	8/30/2011 7:47:00 PM
Bromoform	ND	8.0	H	ppbv	8	8/30/2011 7:47:00 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 v3

RTI LABORATORIES, INC.

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

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/13/2011 9:51:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-033 **Matrix:** AIR

Client Sample ID VA0630

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	8.0	H	ppbv	8	8/30/2011 7:47:00 PM
Carbon disulfide	ND	8.0	H	ppbv	8	8/30/2011 7:47:00 PM
Carbon tetrachloride	ND	8.0	H	ppbv	8	8/30/2011 7:47:00 PM
Chlorobenzene	ND	8.0	H	ppbv	8	8/30/2011 7:47:00 PM
Chlorodibromomethane	ND	8.0	H	ppbv	8	8/30/2011 7:47:00 PM
Chloroethane	ND	8.0	H	ppbv	8	8/30/2011 7:47:00 PM
Chloroform	ND	8.0	H	ppbv	8	8/30/2011 7:47:00 PM
Chloromethane	ND	8.0	H	ppbv	8	8/30/2011 7:47:00 PM
cis-1,2-Dichloroethene	ND	8.0	H	ppbv	8	8/30/2011 7:47:00 PM
cis-1,3-dichloropropene	ND	8.0	H	ppbv	8	8/30/2011 7:47:00 PM
Cyclohexane	18	16	H	ppbv	8	8/30/2011 7:47:00 PM
Dichlorodifluoromethane	ND	8.0	H	ppbv	8	8/30/2011 7:47:00 PM
Ethanol	49	40	H	ppbv	8	8/30/2011 7:47:00 PM
Ethyl acetate	ND	8.0	H	ppbv	8	8/30/2011 7:47:00 PM
Ethylbenzene	ND	16	H	ppbv	8	8/30/2011 7:47:00 PM
Heptane	11	8.0	H	ppbv	8	8/30/2011 7:47:00 PM
Hexachlorobutadiene	ND	16	H	ppbv	8	8/30/2011 7:47:00 PM
m,p-Xylene	15	16	JH	ppbv	8	8/30/2011 7:47:00 PM
Methylene chloride	ND	40	H	ppbv	8	8/30/2011 7:47:00 PM
Naphthalene	ND	8.0	H	ppbv	8	8/30/2011 7:47:00 PM
n-Hexane	9.1	16	JH	ppbv	8	8/30/2011 7:47:00 PM
o-Xylene	5.4	8.0	JH	ppbv	8	8/30/2011 7:47:00 PM
Propylene	6.4	8.0	JH	ppbv	8	8/30/2011 7:47:00 PM
Styrene	ND	8.0	H	ppbv	8	8/30/2011 7:47:00 PM
tert-Butyl Methyl Ether	ND	8.0	H	ppbv	8	8/30/2011 7:47:00 PM
Tetrachloroethene	ND	8.0	H	ppbv	8	8/30/2011 7:47:00 PM
Tetrahydrofuran	ND	8.0	H	ppbv	8	8/30/2011 7:47:00 PM
Toluene	80	8.0	H	ppbv	8	8/30/2011 7:47:00 PM
trans-1,2-Dichloroethene	ND	8.0	H	ppbv	8	8/30/2011 7:47:00 PM
trans-1,3-dichloropropene	ND	8.0	H	ppbv	8	8/30/2011 7:47:00 PM
Trichloroethene	ND	8.0	H	ppbv	8	8/30/2011 7:47:00 PM
Trichlorofluoromethane	ND	8.0	H	ppbv	8	8/30/2011 7:47:00 PM
Vinyl acetate	ND	8.0	H	ppbv	8	8/30/2011 7:47:00 PM
Vinyl chloride	ND	8.0	H	ppbv	8	8/30/2011 7:47:00 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#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/13/2011 9:51:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-033 **Matrix:** AIR

Client Sample ID VA0630

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	21	24	JH	ppbv	8	8/30/2011 7:47:00 PM
Surr: 4-Bromofluorobenzene	106	70-130	H	%REC	8	8/30/2011 7:47:00 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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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/13/2011 10:23:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-034 **Matrix:** AIR

Client Sample ID VA0631

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.25	0.10		%	1	8/9/2011 3:30:00 PM
Carbon Monoxide	ND	0.10		%	1	8/9/2011 3:30:00 PM
Methane	ND	0.50		%	1	8/9/2011 3:30:00 PM
Nitrogen	78	0.10		%	1	8/9/2011 3:30:00 PM
Oxygen	20	0.10		%	1	8/9/2011 3:30:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	40	H	ppbv	40	8/22/2011 8:42:00 PM
1,1,2,2-Tetrachloroethane	ND	40	H	ppbv	40	8/22/2011 8:42:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	40	H	ppbv	40	8/22/2011 8:42:00 PM
1,1,2-Trichloroethane	ND	40	H	ppbv	40	8/22/2011 8:42:00 PM
1,1-Dichloroethane	ND	40	H	ppbv	40	8/22/2011 8:42:00 PM
1,1-Dichloroethene	ND	40	H	ppbv	40	8/22/2011 8:42:00 PM
1,2,4-Trichlorobenzene	ND	40	H	ppbv	40	8/22/2011 8:42:00 PM
1,2,4-Trimethylbenzene	ND	40	H	ppbv	40	8/22/2011 8:42:00 PM
1,2-Dibromoethane	ND	40	H	ppbv	40	8/22/2011 8:42:00 PM
1,2-Dichlorobenzene	ND	40	H	ppbv	40	8/22/2011 8:42:00 PM
1,2-Dichloroethane	ND	40	H	ppbv	40	8/22/2011 8:42:00 PM
1,2-Dichloropropane	ND	40	H	ppbv	40	8/22/2011 8:42:00 PM
1,3,5-Trimethylbenzene	ND	40	H	ppbv	40	8/22/2011 8:42:00 PM
1,3-Butadiene	210	40	H	ppbv	40	8/22/2011 8:42:00 PM
1,3-Dichlorobenzene	ND	40	H	ppbv	40	8/22/2011 8:42:00 PM
1,4-Dichlorobenzene	ND	40	H	ppbv	40	8/22/2011 8:42:00 PM
1,4-Dioxane	ND	40	H	ppbv	40	8/22/2011 8:42:00 PM
2-Butanone	ND	40	H	ppbv	40	8/22/2011 8:42:00 PM
2-Hexanone	ND	40	H	ppbv	40	8/22/2011 8:42:00 PM
2-Propanol	ND	40	H	ppbv	40	8/22/2011 8:42:00 PM
4-Methyl-2-pentanone	ND	40	H	ppbv	40	8/22/2011 8:42:00 PM
Acetone	ND	40	H	ppbv	40	8/22/2011 8:42:00 PM
Benzene	54	40	H	ppbv	40	8/22/2011 8:42:00 PM
Benzyl chloride	ND	40	H	ppbv	40	8/22/2011 8:42:00 PM
Bromodichloromethane	ND	40	H	ppbv	40	8/22/2011 8:42:00 PM
Bromoform	ND	40	H	ppbv	40	8/22/2011 8:42:00 PM

Qualifiers:

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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#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/13/2011 10:23:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-034 **Matrix:** AIR

Client Sample ID VA0631

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	40	H	ppbv	40	8/22/2011 8:42:00 PM
Carbon disulfide	ND	40	H	ppbv	40	8/22/2011 8:42:00 PM
Carbon tetrachloride	ND	40	H	ppbv	40	8/22/2011 8:42:00 PM
Chlorobenzene	ND	40	H	ppbv	40	8/22/2011 8:42:00 PM
Chlorodibromomethane	ND	40	H	ppbv	40	8/22/2011 8:42:00 PM
Chloroethane	ND	40	H	ppbv	40	8/22/2011 8:42:00 PM
Chloroform	ND	40	H	ppbv	40	8/22/2011 8:42:00 PM
Chloromethane	ND	40	H	ppbv	40	8/22/2011 8:42:00 PM
cis-1,2-Dichloroethene	ND	40	H	ppbv	40	8/22/2011 8:42:00 PM
cis-1,3-dichloropropene	ND	40	H	ppbv	40	8/22/2011 8:42:00 PM
Cyclohexane	100	80	H	ppbv	40	8/22/2011 8:42:00 PM
Dichlorodifluoromethane	ND	40	H	ppbv	40	8/22/2011 8:42:00 PM
Ethanol	190	200	JH	ppbv	40	8/22/2011 8:42:00 PM
Ethyl acetate	ND	40	H	ppbv	40	8/22/2011 8:42:00 PM
Ethylbenzene	ND	80	H	ppbv	40	8/22/2011 8:42:00 PM
Heptane	ND	40	H	ppbv	40	8/22/2011 8:42:00 PM
Hexachlorobutadiene	ND	80	H	ppbv	40	8/22/2011 8:42:00 PM
m,p-Xylene	ND	80	H	ppbv	40	8/22/2011 8:42:00 PM
Methylene chloride	ND	200	H	ppbv	40	8/22/2011 8:42:00 PM
Naphthalene	ND	40	H	ppbv	40	8/22/2011 8:42:00 PM
n-Hexane	62	80	JH	ppbv	40	8/22/2011 8:42:00 PM
o-Xylene	ND	40	H	ppbv	40	8/22/2011 8:42:00 PM
Propylene	110	40	H	ppbv	40	8/22/2011 8:42:00 PM
Styrene	ND	40	H	ppbv	40	8/22/2011 8:42:00 PM
tert-Butyl Methyl Ether	ND	40	H	ppbv	40	8/22/2011 8:42:00 PM
Tetrachloroethene	ND	40	H	ppbv	40	8/22/2011 8:42:00 PM
Tetrahydrofuran	ND	40	H	ppbv	40	8/22/2011 8:42:00 PM
Toluene	230	40	H	ppbv	40	8/22/2011 8:42:00 PM
trans-1,2-Dichloroethene	ND	40	H	ppbv	40	8/22/2011 8:42:00 PM
trans-1,3-dichloropropene	ND	40	H	ppbv	40	8/22/2011 8:42:00 PM
Trichloroethene	ND	40	H	ppbv	40	8/22/2011 8:42:00 PM
Trichlorofluoromethane	ND	40	H	ppbv	40	8/22/2011 8:42:00 PM
Vinyl acetate	ND	40	H	ppbv	40	8/22/2011 8:42:00 PM
Vinyl chloride	ND	40	H	ppbv	40	8/22/2011 8:42:00 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
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TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/13/2011 10:23:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-034 **Matrix:** AIR

Client Sample ID VA0631

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	ND	120	H	ppbv	40	8/22/2011 8:42:00 PM
Surr: 4-Bromofluorobenzene	110	70-130	H	%REC	40	8/22/2011 8:42:00 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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RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

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Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/13/2011 11:02:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-035 **Matrix:** AIR

Client Sample ID VA0632

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.15	0.10		%	1	8/9/2011 4:37:00 PM
Carbon Monoxide	ND	0.10		%	1	8/9/2011 4:37:00 PM
Methane	ND	0.50		%	1	8/9/2011 4:37:00 PM
Nitrogen	78	0.10		%	1	8/9/2011 4:37:00 PM
Oxygen	20	0.10		%	1	8/9/2011 4:37:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	400	H	ppbv	400	8/22/2011 9:33:00 PM
1,1,2,2-Tetrachloroethane	ND	400	H	ppbv	400	8/22/2011 9:33:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	400	H	ppbv	400	8/22/2011 9:33:00 PM
1,1,2-Trichloroethane	ND	400	H	ppbv	400	8/22/2011 9:33:00 PM
1,1-Dichloroethane	ND	400	H	ppbv	400	8/22/2011 9:33:00 PM
1,1-Dichloroethene	ND	400	H	ppbv	400	8/22/2011 9:33:00 PM
1,2,4-Trichlorobenzene	ND	400	H	ppbv	400	8/22/2011 9:33:00 PM
1,2,4-Trimethylbenzene	ND	400	H	ppbv	400	8/22/2011 9:33:00 PM
1,2-Dibromoethane	ND	400	H	ppbv	400	8/22/2011 9:33:00 PM
1,2-Dichlorobenzene	ND	400	H	ppbv	400	8/22/2011 9:33:00 PM
1,2-Dichloroethane	ND	400	H	ppbv	400	8/22/2011 9:33:00 PM
1,2-Dichloropropane	ND	400	H	ppbv	400	8/22/2011 9:33:00 PM
1,3,5-Trimethylbenzene	ND	400	H	ppbv	400	8/22/2011 9:33:00 PM
1,3-Butadiene	ND	400	H	ppbv	400	8/22/2011 9:33:00 PM
1,3-Dichlorobenzene	ND	400	H	ppbv	400	8/22/2011 9:33:00 PM
1,4-Dichlorobenzene	ND	400	H	ppbv	400	8/22/2011 9:33:00 PM
1,4-Dioxane	ND	400	H	ppbv	400	8/22/2011 9:33:00 PM
2-Butanone	ND	400	H	ppbv	400	8/22/2011 9:33:00 PM
2-Hexanone	ND	400	H	ppbv	400	8/22/2011 9:33:00 PM
2-Propanol	740	400	H	ppbv	400	8/22/2011 9:33:00 PM
4-Methyl-2-pentanone	ND	400	H	ppbv	400	8/22/2011 9:33:00 PM
Acetone	2,200	400	H	ppbv	400	8/22/2011 9:33:00 PM
Benzene	1,100	400	H	ppbv	400	8/22/2011 9:33:00 PM
Benzyl chloride	ND	400	H	ppbv	400	8/22/2011 9:33:00 PM
Bromodichloromethane	ND	400	H	ppbv	400	8/22/2011 9:33:00 PM
Bromoform	ND	400	H	ppbv	400	8/22/2011 9:33:00 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 v3

RTI LABORATORIES, INC.

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Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/13/2011 11:02:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-035 **Matrix:** AIR

Client Sample ID VA0632

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	400	H	ppbv	400	8/22/2011 9:33:00 PM
Carbon disulfide	ND	400	H	ppbv	400	8/22/2011 9:33:00 PM
Carbon tetrachloride	ND	400	H	ppbv	400	8/22/2011 9:33:00 PM
Chlorobenzene	ND	400	H	ppbv	400	8/22/2011 9:33:00 PM
Chlorodibromomethane	ND	400	H	ppbv	400	8/22/2011 9:33:00 PM
Chloroethane	ND	400	H	ppbv	400	8/22/2011 9:33:00 PM
Chloroform	ND	400	H	ppbv	400	8/22/2011 9:33:00 PM
Chloromethane	ND	400	H	ppbv	400	8/22/2011 9:33:00 PM
cis-1,2-Dichloroethene	ND	400	H	ppbv	400	8/22/2011 9:33:00 PM
cis-1,3-dichloropropene	ND	400	H	ppbv	400	8/22/2011 9:33:00 PM
Cyclohexane	2,300	800	H	ppbv	400	8/22/2011 9:33:00 PM
Dichlorodifluoromethane	ND	400	H	ppbv	400	8/22/2011 9:33:00 PM
Ethanol	3,400	2,000	H	ppbv	400	8/22/2011 9:33:00 PM
Ethyl acetate	ND	400	H	ppbv	400	8/22/2011 9:33:00 PM
Ethylbenzene	ND	800	H	ppbv	400	8/22/2011 9:33:00 PM
Heptane	530	400	H	ppbv	400	8/22/2011 9:33:00 PM
Hexachlorobutadiene	ND	800	H	ppbv	400	8/22/2011 9:33:00 PM
m,p-Xylene	450	800	JH	ppbv	400	8/22/2011 9:33:00 PM
Methylene chloride	8,300	2,000	H	ppbv	400	8/22/2011 9:33:00 PM
Naphthalene	ND	400	H	ppbv	400	8/22/2011 9:33:00 PM
n-Hexane	9,400	800	H	ppbv	400	8/22/2011 9:33:00 PM
o-Xylene	ND	400	H	ppbv	400	8/22/2011 9:33:00 PM
Propylene	1,200	400	H	ppbv	400	8/22/2011 9:33:00 PM
Styrene	ND	400	H	ppbv	400	8/22/2011 9:33:00 PM
tert-Butyl Methyl Ether	ND	400	H	ppbv	400	8/22/2011 9:33:00 PM
Tetrachloroethene	ND	400	H	ppbv	400	8/22/2011 9:33:00 PM
Tetrahydrofuran	ND	400	H	ppbv	400	8/22/2011 9:33:00 PM
Toluene	5,600	400	H	ppbv	400	8/22/2011 9:33:00 PM
trans-1,2-Dichloroethene	ND	400	H	ppbv	400	8/22/2011 9:33:00 PM
trans-1,3-dichloropropene	ND	400	H	ppbv	400	8/22/2011 9:33:00 PM
Trichloroethene	ND	400	H	ppbv	400	8/22/2011 9:33:00 PM
Trichlorofluoromethane	ND	400	H	ppbv	400	8/22/2011 9:33:00 PM
Vinyl acetate	ND	400	H	ppbv	400	8/22/2011 9:33:00 PM
Vinyl chloride	ND	400	H	ppbv	400	8/22/2011 9:33:00 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 v3

RTI LABORATORIES, INC.

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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/13/2011 11:02:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-035 **Matrix:** AIR

Client Sample ID VA0632

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	450	1,200	JH	ppbv	400	8/22/2011 9:33:00 PM
Surr: 4-Bromofluorobenzene	107	70-130	H	%REC	400	8/22/2011 9:33:00 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#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/13/2011 11:02:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-036 **Matrix:** AIR

Client Sample ID VA0633

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.17	0.10		%	1	8/9/2011 5:49:00 PM
Carbon Monoxide	ND	0.10		%	1	8/9/2011 5:49:00 PM
Methane	ND	0.50		%	1	8/9/2011 5:49:00 PM
Nitrogen	78	0.10		%	1	8/9/2011 5:49:00 PM
Oxygen	20	0.10		%	1	8/9/2011 5:49:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	400	H	ppbv	400	8/22/2011 10:21:00 PM
1,1,2,2-Tetrachloroethane	ND	400	H	ppbv	400	8/22/2011 10:21:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	400	H	ppbv	400	8/22/2011 10:21:00 PM
1,1,2-Trichloroethane	ND	400	H	ppbv	400	8/22/2011 10:21:00 PM
1,1-Dichloroethane	ND	400	H	ppbv	400	8/22/2011 10:21:00 PM
1,1-Dichloroethene	ND	400	H	ppbv	400	8/22/2011 10:21:00 PM
1,2,4-Trichlorobenzene	ND	400	H	ppbv	400	8/22/2011 10:21:00 PM
1,2,4-Trimethylbenzene	ND	400	H	ppbv	400	8/22/2011 10:21:00 PM
1,2-Dibromoethane	ND	400	H	ppbv	400	8/22/2011 10:21:00 PM
1,2-Dichlorobenzene	ND	400	H	ppbv	400	8/22/2011 10:21:00 PM
1,2-Dichloroethane	ND	400	H	ppbv	400	8/22/2011 10:21:00 PM
1,2-Dichloropropane	ND	400	H	ppbv	400	8/22/2011 10:21:00 PM
1,3,5-Trimethylbenzene	ND	400	H	ppbv	400	8/22/2011 10:21:00 PM
1,3-Butadiene	ND	400	H	ppbv	400	8/22/2011 10:21:00 PM
1,3-Dichlorobenzene	ND	400	H	ppbv	400	8/22/2011 10:21:00 PM
1,4-Dichlorobenzene	ND	400	H	ppbv	400	8/22/2011 10:21:00 PM
1,4-Dioxane	ND	400	H	ppbv	400	8/22/2011 10:21:00 PM
2-Butanone	ND	400	H	ppbv	400	8/22/2011 10:21:00 PM
2-Hexanone	ND	400	H	ppbv	400	8/22/2011 10:21:00 PM
2-Propanol	ND	400	H	ppbv	400	8/22/2011 10:21:00 PM
4-Methyl-2-pentanone	ND	400	H	ppbv	400	8/22/2011 10:21:00 PM
Acetone	680	400	H	ppbv	400	8/22/2011 10:21:00 PM
Benzene	ND	400	H	ppbv	400	8/22/2011 10:21:00 PM
Benzyl chloride	ND	400	H	ppbv	400	8/22/2011 10:21:00 PM
Bromodichloromethane	ND	400	H	ppbv	400	8/22/2011 10:21:00 PM
Bromoform	ND	400	H	ppbv	400	8/22/2011 10:21:00 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#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/13/2011 11:02:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-036 **Matrix:** AIR

Client Sample ID VA0633

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	400	H	ppbv	400	8/22/2011 10:21:00 PM
Carbon disulfide	ND	400	H	ppbv	400	8/22/2011 10:21:00 PM
Carbon tetrachloride	ND	400	H	ppbv	400	8/22/2011 10:21:00 PM
Chlorobenzene	ND	400	H	ppbv	400	8/22/2011 10:21:00 PM
Chlorodibromomethane	ND	400	H	ppbv	400	8/22/2011 10:21:00 PM
Chloroethane	ND	400	H	ppbv	400	8/22/2011 10:21:00 PM
Chloroform	ND	400	H	ppbv	400	8/22/2011 10:21:00 PM
Chloromethane	ND	400	H	ppbv	400	8/22/2011 10:21:00 PM
cis-1,2-Dichloroethene	ND	400	H	ppbv	400	8/22/2011 10:21:00 PM
cis-1,3-dichloropropene	ND	400	H	ppbv	400	8/22/2011 10:21:00 PM
Cyclohexane	1,200	800	H	ppbv	400	8/22/2011 10:21:00 PM
Dichlorodifluoromethane	ND	400	H	ppbv	400	8/22/2011 10:21:00 PM
Ethanol	900	2,000	JH	ppbv	400	8/22/2011 10:21:00 PM
Ethyl acetate	ND	400	H	ppbv	400	8/22/2011 10:21:00 PM
Ethylbenzene	ND	800	H	ppbv	400	8/22/2011 10:21:00 PM
Heptane	440	400	H	ppbv	400	8/22/2011 10:21:00 PM
Hexachlorobutadiene	ND	800	H	ppbv	400	8/22/2011 10:21:00 PM
m,p-Xylene	ND	800	H	ppbv	400	8/22/2011 10:21:00 PM
Methylene chloride	1,700	2,000	JH	ppbv	400	8/22/2011 10:21:00 PM
Naphthalene	ND	400	H	ppbv	400	8/22/2011 10:21:00 PM
n-Hexane	1,600	800	H	ppbv	400	8/22/2011 10:21:00 PM
o-Xylene	ND	400	H	ppbv	400	8/22/2011 10:21:00 PM
Propylene	440	400	H	ppbv	400	8/22/2011 10:21:00 PM
Styrene	ND	400	H	ppbv	400	8/22/2011 10:21:00 PM
tert-Butyl Methyl Ether	ND	400	H	ppbv	400	8/22/2011 10:21:00 PM
Tetrachloroethene	ND	400	H	ppbv	400	8/22/2011 10:21:00 PM
Tetrahydrofuran	ND	400	H	ppbv	400	8/22/2011 10:21:00 PM
Toluene	2,100	400	H	ppbv	400	8/22/2011 10:21:00 PM
trans-1,2-Dichloroethene	ND	400	H	ppbv	400	8/22/2011 10:21:00 PM
trans-1,3-dichloropropene	ND	400	H	ppbv	400	8/22/2011 10:21:00 PM
Trichloroethene	ND	400	H	ppbv	400	8/22/2011 10:21:00 PM
Trichlorofluoromethane	ND	400	H	ppbv	400	8/22/2011 10:21:00 PM
Vinyl acetate	ND	400	H	ppbv	400	8/22/2011 10:21:00 PM
Vinyl chloride	ND	400	H	ppbv	400	8/22/2011 10:21:00 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 v3

RTI LABORATORIES, INC.

RTI
31628 Glendale St.
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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/13/2011 11:02:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-036 **Matrix:** AIR

Client Sample ID VA0633

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	ND	1,200	H	ppbv	400	8/22/2011 10:21:00 PM
Surr: 4-Bromofluorobenzene	108	70-130	H	%REC	400	8/22/2011 10:21:00 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#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/15/2011 8:39:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-037 **Matrix:** AIR

Client Sample ID VA0634

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.19	0.10		%	1	8/9/2011 5:24:00 PM
Carbon Monoxide	ND	0.10		%	1	8/9/2011 5:24:00 PM
Methane	ND	0.50		%	1	8/9/2011 5:24:00 PM
Nitrogen	78	0.10		%	1	8/9/2011 5:24:00 PM
Oxygen	21	0.10		%	1	8/9/2011 5:24:00 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#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/15/2011 9:06:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-038 **Matrix:** AIR

Client Sample ID VA0635

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.17	0.10		%	1	8/9/2011 6:28:00 PM
Carbon Monoxide	ND	0.10		%	1	8/9/2011 6:28:00 PM
Methane	ND	0.50		%	1	8/9/2011 6:28:00 PM
Nitrogen	77	0.10		%	1	8/9/2011 6:28:00 PM
Oxygen	21	0.10		%	1	8/9/2011 6:28:00 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#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/15/2011 9:35:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-039 **Matrix:** AIR

Client Sample ID VA0636

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.15	0.10		%	1	8/9/2011 6:47:00 PM
Carbon Monoxide	ND	0.10		%	1	8/9/2011 6:47:00 PM
Methane	ND	0.50		%	1	8/9/2011 6:47:00 PM
Nitrogen	77	0.10		%	1	8/9/2011 6:47:00 PM
Oxygen	21	0.10		%	1	8/9/2011 6:47:00 PM
MASS APH AIR				**MA_APH**		Analyst: **RH3**
AIR-PHASE PETROLEUM HYDROCARBONS						
C5-C8 Aliphatic Hydrocarbons	5,700	940	H	µg/m³	8	8/15/2011 8:24:00 PM
C9-C10 Aromatic Hydrocarbons	ND	1,100	H	µg/m³	8	8/15/2011 8:24:00 PM
C9-C12 Aliphatic Hydrocarbons	4,200	1,500	H	µg/m³	8	8/15/2011 8:24:00 PM
Surr: 4-Bromofluorobenzene	97.8	70-130	H	%REC	8	8/15/2011 8:24:00 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#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/15/2011 10:08:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-040 **Matrix:** AIR

Client Sample ID VA0637

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.12	0.10		%	1	8/10/2011 1:28:00 PM
Carbon Monoxide	ND	0.10		%	1	8/10/2011 1:28:00 PM
Methane	ND	0.50		%	1	8/10/2011 1:28:00 PM
Nitrogen	78	0.10		%	1	8/10/2011 1:28:00 PM
Oxygen	21	0.10		%	1	8/10/2011 1:28:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	8.0	H	ppbv	8	9/1/2011 10:30:00 PM
1,1,2,2-Tetrachloroethane	ND	8.0	H	ppbv	8	9/1/2011 10:30:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	8.0	H	ppbv	8	9/1/2011 10:30:00 PM
1,1,2-Trichloroethane	ND	8.0	H	ppbv	8	9/1/2011 10:30:00 PM
1,1-Dichloroethane	ND	8.0	H	ppbv	8	9/1/2011 10:30:00 PM
1,1-Dichloroethene	ND	8.0	H	ppbv	8	9/1/2011 10:30:00 PM
1,2,4-Trichlorobenzene	ND	8.0	H	ppbv	8	9/1/2011 10:30:00 PM
1,2,4-Trimethylbenzene	ND	8.0	H	ppbv	8	9/1/2011 10:30:00 PM
1,2-Dibromoethane	ND	8.0	H	ppbv	8	9/1/2011 10:30:00 PM
1,2-Dichlorobenzene	ND	8.0	H	ppbv	8	9/1/2011 10:30:00 PM
1,2-Dichloroethane	ND	8.0	H	ppbv	8	9/1/2011 10:30:00 PM
1,2-Dichloropropane	ND	8.0	H	ppbv	8	9/1/2011 10:30:00 PM
1,3,5-Trimethylbenzene	ND	8.0	H	ppbv	8	9/1/2011 10:30:00 PM
1,3-Butadiene	ND	8.0	H	ppbv	8	9/1/2011 10:30:00 PM
1,3-Dichlorobenzene	ND	8.0	H	ppbv	8	9/1/2011 10:30:00 PM
1,4-Dichlorobenzene	ND	8.0	H	ppbv	8	9/1/2011 10:30:00 PM
1,4-Dioxane	ND	8.0	H	ppbv	8	9/1/2011 10:30:00 PM
2-Butanone	33	8.0	H	ppbv	8	9/1/2011 10:30:00 PM
2-Hexanone	ND	8.0	H	ppbv	8	9/1/2011 10:30:00 PM
2-Propanol	34	8.0	H	ppbv	8	9/1/2011 10:30:00 PM
4-Methyl-2-pentanone	ND	8.0	H	ppbv	8	9/1/2011 10:30:00 PM
Acetone	64	8.0	H	ppbv	8	9/1/2011 10:30:00 PM
Benzene	320	8.0	H	ppbv	8	9/1/2011 10:30:00 PM
Benzyl chloride	ND	8.0	H	ppbv	8	9/1/2011 10:30:00 PM
Bromodichloromethane	ND	8.0	H	ppbv	8	9/1/2011 10:30:00 PM
Bromoform	ND	8.0	H	ppbv	8	9/1/2011 10:30:00 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 v3

RTI LABORATORIES, INC.

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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/15/2011 10:08:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-040 **Matrix:** AIR

Client Sample ID VA0637

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	8.0	H	ppbv	8	9/1/2011 10:30:00 PM
Carbon disulfide	ND	8.0	H	ppbv	8	9/1/2011 10:30:00 PM
Carbon tetrachloride	ND	8.0	H	ppbv	8	9/1/2011 10:30:00 PM
Chlorobenzene	ND	8.0	H	ppbv	8	9/1/2011 10:30:00 PM
Chlorodibromomethane	ND	8.0	H	ppbv	8	9/1/2011 10:30:00 PM
Chloroethane	ND	8.0	H	ppbv	8	9/1/2011 10:30:00 PM
Chloroform	ND	8.0	H	ppbv	8	9/1/2011 10:30:00 PM
Chloromethane	ND	8.0	H	ppbv	8	9/1/2011 10:30:00 PM
cis-1,2-Dichloroethene	ND	8.0	H	ppbv	8	9/1/2011 10:30:00 PM
cis-1,3-dichloropropene	ND	8.0	H	ppbv	8	9/1/2011 10:30:00 PM
Cyclohexane	100	16	H	ppbv	8	9/1/2011 10:30:00 PM
Dichlorodifluoromethane	ND	8.0	H	ppbv	8	9/1/2011 10:30:00 PM
Ethanol	68	40	H	ppbv	8	9/1/2011 10:30:00 PM
Ethyl acetate	ND	8.0	H	ppbv	8	9/1/2011 10:30:00 PM
Ethylbenzene	17	16	H	ppbv	8	9/1/2011 10:30:00 PM
Heptane	85	8.0	H	ppbv	8	9/1/2011 10:30:00 PM
Hexachlorobutadiene	ND	16	H	ppbv	8	9/1/2011 10:30:00 PM
m,p-Xylene	62	16	H	ppbv	8	9/1/2011 10:30:00 PM
Methylene chloride	55	40	H	ppbv	8	9/1/2011 10:30:00 PM
Naphthalene	ND	8.0	H	ppbv	8	9/1/2011 10:30:00 PM
n-Hexane	84	16	H	ppbv	8	9/1/2011 10:30:00 PM
o-Xylene	17	8.0	H	ppbv	8	9/1/2011 10:30:00 PM
Propylene	12	8.0	H	ppbv	8	9/1/2011 10:30:00 PM
Styrene	ND	8.0	H	ppbv	8	9/1/2011 10:30:00 PM
tert-Butyl Methyl Ether	ND	8.0	H	ppbv	8	9/1/2011 10:30:00 PM
Tetrachloroethene	ND	8.0	H	ppbv	8	9/1/2011 10:30:00 PM
Tetrahydrofuran	ND	8.0	H	ppbv	8	9/1/2011 10:30:00 PM
Toluene	700	8.0	H	ppbv	8	9/1/2011 10:30:00 PM
trans-1,2-Dichloroethene	ND	8.0	H	ppbv	8	9/1/2011 10:30:00 PM
trans-1,3-dichloropropene	ND	8.0	H	ppbv	8	9/1/2011 10:30:00 PM
Trichloroethene	ND	8.0	H	ppbv	8	9/1/2011 10:30:00 PM
Trichlorofluoromethane	ND	8.0	H	ppbv	8	9/1/2011 10:30:00 PM
Vinyl acetate	ND	8.0	H	ppbv	8	9/1/2011 10:30:00 PM
Vinyl chloride	ND	8.0	H	ppbv	8	9/1/2011 10:30:00 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 v3

RTI LABORATORIES, INC.

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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/15/2011 10:08:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-040 **Matrix:** AIR

Client Sample ID VA0637

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	79	24	H	ppbv	8	9/1/2011 10:30:00 PM
Surr: 4-Bromofluorobenzene	104	70-130	H	%REC	8	9/1/2011 10:30:00 PM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **RH3**
C5-C8 Aliphatic Hydrocarbons	13,000	940	H	µg/m³	8	8/15/2011 9:11:00 PM
C9-C10 Aromatic Hydrocarbons	450	1,100	JH	µg/m³	8	8/15/2011 9:11:00 PM
C9-C12 Aliphatic Hydrocarbons	6,700	1,500	H	µg/m³	8	8/15/2011 9:11:00 PM
Surr: 4-Bromofluorobenzene	94.4	70-130	H	%REC	8	8/15/2011 9:11:00 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#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/15/2011 10:08:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-041 **Matrix:** AIR

Client Sample ID VA0638

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.12	0.10		%	1	8/10/2011 1:52:00 PM
Carbon Monoxide	ND	0.10		%	1	8/10/2011 1:52:00 PM
Methane	ND	0.50		%	1	8/10/2011 1:52:00 PM
Nitrogen	78	0.10		%	1	8/10/2011 1:52:00 PM
Oxygen	21	0.10		%	1	8/10/2011 1:52:00 PM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **RH3**
C5-C8 Aliphatic Hydrocarbons	6,200	940	H	µg/m³	8	8/15/2011 9:56:00 PM
C9-C10 Aromatic Hydrocarbons	ND	1,100	H	µg/m³	8	8/15/2011 9:56:00 PM
C9-C12 Aliphatic Hydrocarbons	4,900	1,500	H	µg/m³	8	8/15/2011 9:56:00 PM
Surr: 4-Bromofluorobenzene	94.1	70-130	H	%REC	8	8/15/2011 9:56:00 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 v3

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Analytical Report

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WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/15/2011 10:53:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-042 **Matrix:** AIR

Client Sample ID VA0639

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.16	0.10		%	1	8/10/2011 2:14:00 PM
Carbon Monoxide	ND	0.10		%	1	8/10/2011 2:14:00 PM
Methane	ND	0.50		%	1	8/10/2011 2:14:00 PM
Nitrogen	78	0.10		%	1	8/10/2011 2:14:00 PM
Oxygen	21	0.10		%	1	8/10/2011 2:14:00 PM
MASS APH AIR				**MA_APH**		Analyst: **RH3**
AIR-PHASE PETROLEUM HYDROCARBONS						
C5-C8 Aliphatic Hydrocarbons	250,000	94,000	H	µg/m³	800	8/15/2011 6:09:00 PM
C9-C10 Aromatic Hydrocarbons	ND	110,000	H	µg/m³	800	8/15/2011 6:09:00 PM
C9-C12 Aliphatic Hydrocarbons	ND	150,000	H	µg/m³	800	8/15/2011 6:09:00 PM
Surr: 4-Bromofluorobenzene	94.0	70-130	H	%REC	800	8/15/2011 6:09:00 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

RTI LABORATORIES, INC.

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

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/15/2011 11:25:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-043 **Matrix:** AIR

Client Sample ID VA0640

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.23	0.10		%	1	8/10/2011 2:38:00 PM
Carbon Monoxide	ND	0.10		%	1	8/10/2011 2:38:00 PM
Methane	ND	0.50		%	1	8/10/2011 2:38:00 PM
Nitrogen	79	0.10		%	1	8/10/2011 2:38:00 PM
Oxygen	20	0.10		%	1	8/10/2011 2:38:00 PM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **RH3**
C5-C8 Aliphatic Hydrocarbons	1,200,000	94,000	H	µg/m³	800	8/15/2011 6:54:00 PM
C9-C10 Aromatic Hydrocarbons	ND	110,000	H	µg/m³	800	8/15/2011 6:54:00 PM
C9-C12 Aliphatic Hydrocarbons	ND	150,000	H	µg/m³	800	8/15/2011 6:54:00 PM
Surr: 4-Bromofluorobenzene	92.8	70-130	H	%REC	800	8/15/2011 6:54:00 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 v3

RTI LABORATORIES, INC.

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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/14/2011 12:07:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-044 **Matrix:** AIR

Client Sample ID VA0641

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.074	0.10	J	%	1	8/10/2011 3:00:00 PM
Carbon Monoxide	ND	0.10		%	1	8/10/2011 3:00:00 PM
Methane	ND	0.50		%	1	8/10/2011 3:00:00 PM
Nitrogen	78	0.10		%	1	8/10/2011 3:00:00 PM
Oxygen	21	0.10		%	1	8/10/2011 3:00:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	8.0	H	ppbv	8	8/23/2011 3:16:00 AM
1,1,2,2-Tetrachloroethane	ND	8.0	H	ppbv	8	8/23/2011 3:16:00 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	8.0	H	ppbv	8	8/23/2011 3:16:00 AM
1,1,2-Trichloroethane	ND	8.0	H	ppbv	8	8/23/2011 3:16:00 AM
1,1-Dichloroethane	ND	8.0	H	ppbv	8	8/23/2011 3:16:00 AM
1,1-Dichloroethene	ND	8.0	H	ppbv	8	8/23/2011 3:16:00 AM
1,2,4-Trichlorobenzene	ND	8.0	H	ppbv	8	8/23/2011 3:16:00 AM
1,2,4-Trimethylbenzene	8.2	8.0	H	ppbv	8	8/23/2011 3:16:00 AM
1,2-Dibromoethane	ND	8.0	H	ppbv	8	8/23/2011 3:16:00 AM
1,2-Dichlorobenzene	ND	8.0	H	ppbv	8	8/23/2011 3:16:00 AM
1,2-Dichloroethane	ND	8.0	H	ppbv	8	8/23/2011 3:16:00 AM
1,2-Dichloropropane	ND	8.0	H	ppbv	8	8/23/2011 3:16:00 AM
1,3,5-Trimethylbenzene	ND	8.0	H	ppbv	8	8/23/2011 3:16:00 AM
1,3-Butadiene	ND	8.0	H	ppbv	8	8/23/2011 3:16:00 AM
1,3-Dichlorobenzene	ND	8.0	H	ppbv	8	8/23/2011 3:16:00 AM
1,4-Dichlorobenzene	ND	8.0	H	ppbv	8	8/23/2011 3:16:00 AM
1,4-Dioxane	ND	8.0	H	ppbv	8	8/23/2011 3:16:00 AM
2-Butanone	43	8.0	H	ppbv	8	8/23/2011 3:16:00 AM
2-Hexanone	22	8.0	H	ppbv	8	8/23/2011 3:16:00 AM
2-Propanol	17	8.0	H	ppbv	8	8/23/2011 3:16:00 AM
4-Methyl-2-pentanone	ND	8.0	H	ppbv	8	8/23/2011 3:16:00 AM
Acetone	70	8.0	H	ppbv	8	8/23/2011 3:16:00 AM
Benzene	180	8.0	H	ppbv	8	8/23/2011 3:16:00 AM
Benzyl chloride	ND	8.0	H	ppbv	8	8/23/2011 3:16:00 AM
Bromodichloromethane	ND	8.0	H	ppbv	8	8/23/2011 3:16:00 AM
Bromoform	ND	8.0	H	ppbv	8	8/23/2011 3:16:00 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 v3

RTI LABORATORIES, INC.

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

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/14/2011 12:07:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-044 **Matrix:** AIR

Client Sample ID VA0641

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	8.0	H	ppbv	8	8/23/2011 3:16:00 AM
Carbon disulfide	ND	8.0	H	ppbv	8	8/23/2011 3:16:00 AM
Carbon tetrachloride	ND	8.0	H	ppbv	8	8/23/2011 3:16:00 AM
Chlorobenzene	ND	8.0	H	ppbv	8	8/23/2011 3:16:00 AM
Chlorodibromomethane	ND	8.0	H	ppbv	8	8/23/2011 3:16:00 AM
Chloroethane	ND	8.0	H	ppbv	8	8/23/2011 3:16:00 AM
Chloroform	ND	8.0	H	ppbv	8	8/23/2011 3:16:00 AM
Chloromethane	ND	8.0	H	ppbv	8	8/23/2011 3:16:00 AM
cis-1,2-Dichloroethene	ND	8.0	H	ppbv	8	8/23/2011 3:16:00 AM
cis-1,3-dichloropropene	ND	8.0	H	ppbv	8	8/23/2011 3:16:00 AM
Cyclohexane	89	16	H	ppbv	8	8/23/2011 3:16:00 AM
Dichlorodifluoromethane	ND	8.0	H	ppbv	8	8/23/2011 3:16:00 AM
Ethanol	21	40	JH	ppbv	8	8/23/2011 3:16:00 AM
Ethyl acetate	ND	8.0	H	ppbv	8	8/23/2011 3:16:00 AM
Ethylbenzene	21	16	H	ppbv	8	8/23/2011 3:16:00 AM
Heptane	77	8.0	H	ppbv	8	8/23/2011 3:16:00 AM
Hexachlorobutadiene	ND	16	H	ppbv	8	8/23/2011 3:16:00 AM
m,p-Xylene	70	16	H	ppbv	8	8/23/2011 3:16:00 AM
Methylene chloride	ND	40	H	ppbv	8	8/23/2011 3:16:00 AM
Naphthalene	ND	8.0	H	ppbv	8	8/23/2011 3:16:00 AM
n-Hexane	78	16	H	ppbv	8	8/23/2011 3:16:00 AM
o-Xylene	23	8.0	H	ppbv	8	8/23/2011 3:16:00 AM
Propylene	ND	8.0	H	ppbv	8	8/23/2011 3:16:00 AM
Styrene	ND	8.0	H	ppbv	8	8/23/2011 3:16:00 AM
tert-Butyl Methyl Ether	ND	8.0	H	ppbv	8	8/23/2011 3:16:00 AM
Tetrachloroethene	ND	8.0	H	ppbv	8	8/23/2011 3:16:00 AM
Tetrahydrofuran	ND	8.0	H	ppbv	8	8/23/2011 3:16:00 AM
Toluene	420	8.0	H	ppbv	8	8/23/2011 3:16:00 AM
trans-1,2-Dichloroethene	ND	8.0	H	ppbv	8	8/23/2011 3:16:00 AM
trans-1,3-dichloropropene	ND	8.0	H	ppbv	8	8/23/2011 3:16:00 AM
Trichloroethene	ND	8.0	H	ppbv	8	8/23/2011 3:16:00 AM
Trichlorofluoromethane	ND	8.0	H	ppbv	8	8/23/2011 3:16:00 AM
Vinyl acetate	ND	8.0	H	ppbv	8	8/23/2011 3:16:00 AM
Vinyl chloride	ND	8.0	H	ppbv	8	8/23/2011 3:16:00 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 v3

RTI LABORATORIES, INC.

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

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/14/2011 12:07:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-044 **Matrix:** AIR

Client Sample ID VA0641

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	93	24	H	ppbv	8	8/23/2011 3:16:00 AM
Surr: 4-Bromofluorobenzene	116	70-130	H	%REC	8	8/23/2011 3:16:00 AM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **RH3**
C5-C8 Aliphatic Hydrocarbons	18,000	940	H	µg/m³	8	8/15/2011 10:40:00 PM
C9-C10 Aromatic Hydrocarbons	470	1,100	JH	µg/m³	8	8/15/2011 10:40:00 PM
C9-C12 Aliphatic Hydrocarbons	11,000	1,500	H	µg/m³	8	8/15/2011 10:40:00 PM
Surr: 4-Bromofluorobenzene	96.3	70-130	H	%REC	8	8/15/2011 10:40:00 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#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/14/2011 12:49:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-045 **Matrix:** AIR

Client Sample ID VA0642

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.15	0.10		%	1	8/10/2011 3:29:00 PM
Carbon Monoxide	ND	0.10		%	1	8/10/2011 3:29:00 PM
Methane	ND	0.50		%	1	8/10/2011 3:29:00 PM
Nitrogen	79	0.10		%	1	8/10/2011 3:29:00 PM
Oxygen	21	0.10		%	1	8/10/2011 3:29:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	8.0	H	ppbv	8	8/30/2011 9:57:00 PM
1,1,2,2-Tetrachloroethane	ND	8.0	H	ppbv	8	8/30/2011 9:57:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	8.0	H	ppbv	8	8/30/2011 9:57:00 PM
1,1,2-Trichloroethane	ND	8.0	H	ppbv	8	8/30/2011 9:57:00 PM
1,1-Dichloroethane	ND	8.0	H	ppbv	8	8/30/2011 9:57:00 PM
1,1-Dichloroethene	ND	8.0	H	ppbv	8	8/30/2011 9:57:00 PM
1,2,4-Trichlorobenzene	ND	8.0	H	ppbv	8	8/30/2011 9:57:00 PM
1,2,4-Trimethylbenzene	ND	8.0	H	ppbv	8	8/30/2011 9:57:00 PM
1,2-Dibromoethane	ND	8.0	H	ppbv	8	8/30/2011 9:57:00 PM
1,2-Dichlorobenzene	ND	8.0	H	ppbv	8	8/30/2011 9:57:00 PM
1,2-Dichloroethane	ND	8.0	H	ppbv	8	8/30/2011 9:57:00 PM
1,2-Dichloropropane	ND	8.0	H	ppbv	8	8/30/2011 9:57:00 PM
1,3,5-Trimethylbenzene	ND	8.0	H	ppbv	8	8/30/2011 9:57:00 PM
1,3-Butadiene	ND	8.0	H	ppbv	8	8/30/2011 9:57:00 PM
1,3-Dichlorobenzene	ND	8.0	H	ppbv	8	8/30/2011 9:57:00 PM
1,4-Dichlorobenzene	ND	8.0	H	ppbv	8	8/30/2011 9:57:00 PM
1,4-Dioxane	ND	8.0	H	ppbv	8	8/30/2011 9:57:00 PM
2-Butanone	29	8.0	H	ppbv	8	8/30/2011 9:57:00 PM
2-Hexanone	7.3	8.0	JH	ppbv	8	8/30/2011 9:57:00 PM
2-Propanol	9.5	8.0	H	ppbv	8	8/30/2011 9:57:00 PM
4-Methyl-2-pentanone	ND	8.0	H	ppbv	8	8/30/2011 9:57:00 PM
Acetone	49	8.0	H	ppbv	8	8/30/2011 9:57:00 PM
Benzene	14	8.0	H	ppbv	8	8/30/2011 9:57:00 PM
Benzyl chloride	ND	8.0	H	ppbv	8	8/30/2011 9:57:00 PM
Bromodichloromethane	ND	8.0	H	ppbv	8	8/30/2011 9:57:00 PM
Bromoform	ND	8.0	H	ppbv	8	8/30/2011 9:57:00 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 v3

RTI LABORATORIES, INC.

RTI
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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/14/2011 12:49:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-045 **Matrix:** AIR

Client Sample ID VA0642

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	8.0	H	ppbv	8	8/30/2011 9:57:00 PM
Carbon disulfide	ND	8.0	H	ppbv	8	8/30/2011 9:57:00 PM
Carbon tetrachloride	ND	8.0	H	ppbv	8	8/30/2011 9:57:00 PM
Chlorobenzene	ND	8.0	H	ppbv	8	8/30/2011 9:57:00 PM
Chlorodibromomethane	ND	8.0	H	ppbv	8	8/30/2011 9:57:00 PM
Chloroethane	ND	8.0	H	ppbv	8	8/30/2011 9:57:00 PM
Chloroform	ND	8.0	H	ppbv	8	8/30/2011 9:57:00 PM
Chloromethane	ND	8.0	H	ppbv	8	8/30/2011 9:57:00 PM
cis-1,2-Dichloroethene	ND	8.0	H	ppbv	8	8/30/2011 9:57:00 PM
cis-1,3-dichloropropene	ND	8.0	H	ppbv	8	8/30/2011 9:57:00 PM
Cyclohexane	33	16	H	ppbv	8	8/30/2011 9:57:00 PM
Dichlorodifluoromethane	ND	8.0	H	ppbv	8	8/30/2011 9:57:00 PM
Ethanol	62	40	H	ppbv	8	8/30/2011 9:57:00 PM
Ethyl acetate	ND	8.0	H	ppbv	8	8/30/2011 9:57:00 PM
Ethylbenzene	ND	16	H	ppbv	8	8/30/2011 9:57:00 PM
Heptane	16	8.0	H	ppbv	8	8/30/2011 9:57:00 PM
Hexachlorobutadiene	ND	16	H	ppbv	8	8/30/2011 9:57:00 PM
m,p-Xylene	13	16	JH	ppbv	8	8/30/2011 9:57:00 PM
Methylene chloride	ND	40	H	ppbv	8	8/30/2011 9:57:00 PM
Naphthalene	ND	8.0	H	ppbv	8	8/30/2011 9:57:00 PM
n-Hexane	17	16	H	ppbv	8	8/30/2011 9:57:00 PM
o-Xylene	5.2	8.0	JH	ppbv	8	8/30/2011 9:57:00 PM
Propylene	7.4	8.0	JH	ppbv	8	8/30/2011 9:57:00 PM
Styrene	ND	8.0	H	ppbv	8	8/30/2011 9:57:00 PM
tert-Butyl Methyl Ether	ND	8.0	H	ppbv	8	8/30/2011 9:57:00 PM
Tetrachloroethene	ND	8.0	H	ppbv	8	8/30/2011 9:57:00 PM
Tetrahydrofuran	ND	8.0	H	ppbv	8	8/30/2011 9:57:00 PM
Toluene	57	8.0	H	ppbv	8	8/30/2011 9:57:00 PM
trans-1,2-Dichloroethene	ND	8.0	H	ppbv	8	8/30/2011 9:57:00 PM
trans-1,3-dichloropropene	ND	8.0	H	ppbv	8	8/30/2011 9:57:00 PM
Trichloroethene	ND	8.0	H	ppbv	8	8/30/2011 9:57:00 PM
Trichlorofluoromethane	ND	8.0	H	ppbv	8	8/30/2011 9:57:00 PM
Vinyl acetate	ND	8.0	H	ppbv	8	8/30/2011 9:57:00 PM
Vinyl chloride	ND	8.0	H	ppbv	8	8/30/2011 9:57:00 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 v3

RTI LABORATORIES, INC.

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

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/14/2011 12:49:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-045 **Matrix:** AIR

Client Sample ID VA0642

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	18	24	JH	ppbv	8	8/30/2011 9:57:00 PM
Surr: 4-Bromofluorobenzene	102	70-130	H	%REC	8	8/30/2011 9:57:00 PM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **RH3**
C5-C8 Aliphatic Hydrocarbons	12,000	940	H	µg/m³	8	8/15/2011 11:25:00 PM
C9-C10 Aromatic Hydrocarbons	390	1,100	JH	µg/m³	8	8/15/2011 11:25:00 PM
C9-C12 Aliphatic Hydrocarbons	8,500	1,500	H	µg/m³	8	8/15/2011 11:25:00 PM
Surr: 4-Bromofluorobenzene	93.8	70-130	H	%REC	8	8/15/2011 11:25:00 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 v3

RTI LABORATORIES, INC.

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Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/14/2011 1:20:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-046 **Matrix:** AIR

Client Sample ID VA0643

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.11	0.10		%	1	8/10/2011 4:06:00 PM
Carbon Monoxide	ND	0.10		%	1	8/10/2011 4:06:00 PM
Methane	ND	0.50		%	1	8/10/2011 4:06:00 PM
Nitrogen	79	0.10		%	1	8/10/2011 4:06:00 PM
Oxygen	21	0.10		%	1	8/10/2011 4:06:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	8.0	H	ppbv	8	8/30/2011 10:41:00 PM
1,1,2,2-Tetrachloroethane	ND	8.0	H	ppbv	8	8/30/2011 10:41:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	8.0	H	ppbv	8	8/30/2011 10:41:00 PM
1,1,2-Trichloroethane	ND	8.0	H	ppbv	8	8/30/2011 10:41:00 PM
1,1-Dichloroethane	ND	8.0	H	ppbv	8	8/30/2011 10:41:00 PM
1,1-Dichloroethene	ND	8.0	H	ppbv	8	8/30/2011 10:41:00 PM
1,2,4-Trichlorobenzene	ND	8.0	H	ppbv	8	8/30/2011 10:41:00 PM
1,2,4-Trimethylbenzene	4.4	8.0	JH	ppbv	8	8/30/2011 10:41:00 PM
1,2-Dibromoethane	ND	8.0	H	ppbv	8	8/30/2011 10:41:00 PM
1,2-Dichlorobenzene	ND	8.0	H	ppbv	8	8/30/2011 10:41:00 PM
1,2-Dichloroethane	ND	8.0	H	ppbv	8	8/30/2011 10:41:00 PM
1,2-Dichloropropane	ND	8.0	H	ppbv	8	8/30/2011 10:41:00 PM
1,3,5-Trimethylbenzene	ND	8.0	H	ppbv	8	8/30/2011 10:41:00 PM
1,3-Butadiene	ND	8.0	H	ppbv	8	8/30/2011 10:41:00 PM
1,3-Dichlorobenzene	ND	8.0	H	ppbv	8	8/30/2011 10:41:00 PM
1,4-Dichlorobenzene	ND	8.0	H	ppbv	8	8/30/2011 10:41:00 PM
1,4-Dioxane	ND	8.0	H	ppbv	8	8/30/2011 10:41:00 PM
2-Butanone	36	8.0	H	ppbv	8	8/30/2011 10:41:00 PM
2-Hexanone	7.4	8.0	JH	ppbv	8	8/30/2011 10:41:00 PM
2-Propanol	18	8.0	H	ppbv	8	8/30/2011 10:41:00 PM
4-Methyl-2-pentanone	ND	8.0	H	ppbv	8	8/30/2011 10:41:00 PM
Acetone	65	8.0	H	ppbv	8	8/30/2011 10:41:00 PM
Benzene	22	8.0	H	ppbv	8	8/30/2011 10:41:00 PM
Benzyl chloride	ND	8.0	H	ppbv	8	8/30/2011 10:41:00 PM
Bromodichloromethane	ND	8.0	H	ppbv	8	8/30/2011 10:41:00 PM
Bromoform	ND	8.0	H	ppbv	8	8/30/2011 10:41:00 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 v3

RTI LABORATORIES, INC.

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

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/14/2011 1:20:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-046 **Matrix:** AIR

Client Sample ID VA0643

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	8.0	H	ppbv	8	8/30/2011 10:41:00 PM
Carbon disulfide	ND	8.0	H	ppbv	8	8/30/2011 10:41:00 PM
Carbon tetrachloride	ND	8.0	H	ppbv	8	8/30/2011 10:41:00 PM
Chlorobenzene	ND	8.0	H	ppbv	8	8/30/2011 10:41:00 PM
Chlorodibromomethane	ND	8.0	H	ppbv	8	8/30/2011 10:41:00 PM
Chloroethane	ND	8.0	H	ppbv	8	8/30/2011 10:41:00 PM
Chloroform	ND	8.0	H	ppbv	8	8/30/2011 10:41:00 PM
Chloromethane	ND	8.0	H	ppbv	8	8/30/2011 10:41:00 PM
cis-1,2-Dichloroethene	ND	8.0	H	ppbv	8	8/30/2011 10:41:00 PM
cis-1,3-dichloropropene	ND	8.0	H	ppbv	8	8/30/2011 10:41:00 PM
Cyclohexane	36	16	H	ppbv	8	8/30/2011 10:41:00 PM
Dichlorodifluoromethane	ND	8.0	H	ppbv	8	8/30/2011 10:41:00 PM
Ethanol	35	40	JH	ppbv	8	8/30/2011 10:41:00 PM
Ethyl acetate	ND	8.0	H	ppbv	8	8/30/2011 10:41:00 PM
Ethylbenzene	7.4	16	JH	ppbv	8	8/30/2011 10:41:00 PM
Heptane	19	8.0	H	ppbv	8	8/30/2011 10:41:00 PM
Hexachlorobutadiene	ND	16	H	ppbv	8	8/30/2011 10:41:00 PM
m,p-Xylene	22	16	H	ppbv	8	8/30/2011 10:41:00 PM
Methylene chloride	ND	40	H	ppbv	8	8/30/2011 10:41:00 PM
Naphthalene	ND	8.0	H	ppbv	8	8/30/2011 10:41:00 PM
n-Hexane	17	16	H	ppbv	8	8/30/2011 10:41:00 PM
o-Xylene	7.8	8.0	JH	ppbv	8	8/30/2011 10:41:00 PM
Propylene	9.8	8.0	H	ppbv	8	8/30/2011 10:41:00 PM
Styrene	ND	8.0	H	ppbv	8	8/30/2011 10:41:00 PM
tert-Butyl Methyl Ether	ND	8.0	H	ppbv	8	8/30/2011 10:41:00 PM
Tetrachloroethene	ND	8.0	H	ppbv	8	8/30/2011 10:41:00 PM
Tetrahydrofuran	ND	8.0	H	ppbv	8	8/30/2011 10:41:00 PM
Toluene	78	8.0	H	ppbv	8	8/30/2011 10:41:00 PM
trans-1,2-Dichloroethene	ND	8.0	H	ppbv	8	8/30/2011 10:41:00 PM
trans-1,3-dichloropropene	ND	8.0	H	ppbv	8	8/30/2011 10:41:00 PM
Trichloroethene	ND	8.0	H	ppbv	8	8/30/2011 10:41:00 PM
Trichlorofluoromethane	ND	8.0	H	ppbv	8	8/30/2011 10:41:00 PM
Vinyl acetate	ND	8.0	H	ppbv	8	8/30/2011 10:41:00 PM
Vinyl chloride	ND	8.0	H	ppbv	8	8/30/2011 10:41:00 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 v3

RTI LABORATORIES, INC.

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

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/14/2011 1:20:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-046 **Matrix:** AIR

Client Sample ID VA0643

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	30	24	H	ppbv	8	8/30/2011 10:41:00 PM
Surr: 4-Bromofluorobenzene	102	70-130	H	%REC	8	8/30/2011 10:41:00 PM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **RH3**
C5-C8 Aliphatic Hydrocarbons	14,000	940	H	µg/m³	8	8/16/2011 12:10:00 AM
C9-C10 Aromatic Hydrocarbons	490	1,100	JH	µg/m³	8	8/16/2011 12:10:00 AM
C9-C12 Aliphatic Hydrocarbons	11,000	1,500	H	µg/m³	8	8/16/2011 12:10:00 AM
Surr: 4-Bromofluorobenzene	95.1	70-130	H	%REC	8	8/16/2011 12:10:00 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

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Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/14/2011 2:01:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-047 **Matrix:** AIR

Client Sample ID VA0644

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.12	0.10		%	1	8/10/2011 4:30:00 PM
Carbon Monoxide	ND	0.10		%	1	8/10/2011 4:30:00 PM
Methane	ND	0.50		%	1	8/10/2011 4:30:00 PM
Nitrogen	78	0.10		%	1	8/10/2011 4:30:00 PM
Oxygen	21	0.10		%	1	8/10/2011 4:30:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	8.0	H	ppbv	8	8/30/2011 11:25:00 PM
1,1,2,2-Tetrachloroethane	ND	8.0	H	ppbv	8	8/30/2011 11:25:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	8.0	H	ppbv	8	8/30/2011 11:25:00 PM
1,1,2-Trichloroethane	ND	8.0	H	ppbv	8	8/30/2011 11:25:00 PM
1,1-Dichloroethane	ND	8.0	H	ppbv	8	8/30/2011 11:25:00 PM
1,1-Dichloroethene	ND	8.0	H	ppbv	8	8/30/2011 11:25:00 PM
1,2,4-Trichlorobenzene	ND	8.0	H	ppbv	8	8/30/2011 11:25:00 PM
1,2,4-Trimethylbenzene	ND	8.0	H	ppbv	8	8/30/2011 11:25:00 PM
1,2-Dibromoethane	ND	8.0	H	ppbv	8	8/30/2011 11:25:00 PM
1,2-Dichlorobenzene	ND	8.0	H	ppbv	8	8/30/2011 11:25:00 PM
1,2-Dichloroethane	ND	8.0	H	ppbv	8	8/30/2011 11:25:00 PM
1,2-Dichloropropane	ND	8.0	H	ppbv	8	8/30/2011 11:25:00 PM
1,3,5-Trimethylbenzene	ND	8.0	H	ppbv	8	8/30/2011 11:25:00 PM
1,3-Butadiene	ND	8.0	H	ppbv	8	8/30/2011 11:25:00 PM
1,3-Dichlorobenzene	ND	8.0	H	ppbv	8	8/30/2011 11:25:00 PM
1,4-Dichlorobenzene	ND	8.0	H	ppbv	8	8/30/2011 11:25:00 PM
1,4-Dioxane	ND	8.0	H	ppbv	8	8/30/2011 11:25:00 PM
2-Butanone	51	8.0	H	ppbv	8	8/30/2011 11:25:00 PM
2-Hexanone	12	8.0	H	ppbv	8	8/30/2011 11:25:00 PM
2-Propanol	4.6	8.0	JH	ppbv	8	8/30/2011 11:25:00 PM
4-Methyl-2-pentanone	ND	8.0	H	ppbv	8	8/30/2011 11:25:00 PM
Acetone	53	8.0	H	ppbv	8	8/30/2011 11:25:00 PM
Benzene	11	8.0	H	ppbv	8	8/30/2011 11:25:00 PM
Benzyl chloride	ND	8.0	H	ppbv	8	8/30/2011 11:25:00 PM
Bromodichloromethane	ND	8.0	H	ppbv	8	8/30/2011 11:25:00 PM
Bromoform	ND	8.0	H	ppbv	8	8/30/2011 11:25:00 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 v3

RTI LABORATORIES, INC.

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

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/14/2011 2:01:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-047 **Matrix:** AIR

Client Sample ID VA0644

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	8.0	H	ppbv	8	8/30/2011 11:25:00 PM
Carbon disulfide	ND	8.0	H	ppbv	8	8/30/2011 11:25:00 PM
Carbon tetrachloride	ND	8.0	H	ppbv	8	8/30/2011 11:25:00 PM
Chlorobenzene	ND	8.0	H	ppbv	8	8/30/2011 11:25:00 PM
Chlorodibromomethane	ND	8.0	H	ppbv	8	8/30/2011 11:25:00 PM
Chloroethane	ND	8.0	H	ppbv	8	8/30/2011 11:25:00 PM
Chloroform	ND	8.0	H	ppbv	8	8/30/2011 11:25:00 PM
Chloromethane	ND	8.0	H	ppbv	8	8/30/2011 11:25:00 PM
cis-1,2-Dichloroethene	ND	8.0	H	ppbv	8	8/30/2011 11:25:00 PM
cis-1,3-dichloropropene	ND	8.0	H	ppbv	8	8/30/2011 11:25:00 PM
Cyclohexane	28	16	H	ppbv	8	8/30/2011 11:25:00 PM
Dichlorodifluoromethane	ND	8.0	H	ppbv	8	8/30/2011 11:25:00 PM
Ethanol	43	40	H	ppbv	8	8/30/2011 11:25:00 PM
Ethyl acetate	ND	8.0	H	ppbv	8	8/30/2011 11:25:00 PM
Ethylbenzene	ND	16	H	ppbv	8	8/30/2011 11:25:00 PM
Heptane	13	8.0	H	ppbv	8	8/30/2011 11:25:00 PM
Hexachlorobutadiene	ND	16	H	ppbv	8	8/30/2011 11:25:00 PM
m,p-Xylene	12	16	JH	ppbv	8	8/30/2011 11:25:00 PM
Methylene chloride	ND	40	H	ppbv	8	8/30/2011 11:25:00 PM
Naphthalene	ND	8.0	H	ppbv	8	8/30/2011 11:25:00 PM
n-Hexane	12	16	JH	ppbv	8	8/30/2011 11:25:00 PM
o-Xylene	5.0	8.0	JH	ppbv	8	8/30/2011 11:25:00 PM
Propylene	12	8.0	H	ppbv	8	8/30/2011 11:25:00 PM
Styrene	ND	8.0	H	ppbv	8	8/30/2011 11:25:00 PM
tert-Butyl Methyl Ether	ND	8.0	H	ppbv	8	8/30/2011 11:25:00 PM
Tetrachloroethene	ND	8.0	H	ppbv	8	8/30/2011 11:25:00 PM
Tetrahydrofuran	ND	8.0	H	ppbv	8	8/30/2011 11:25:00 PM
Toluene	41	8.0	H	ppbv	8	8/30/2011 11:25:00 PM
trans-1,2-Dichloroethene	ND	8.0	H	ppbv	8	8/30/2011 11:25:00 PM
trans-1,3-dichloropropene	ND	8.0	H	ppbv	8	8/30/2011 11:25:00 PM
Trichloroethene	ND	8.0	H	ppbv	8	8/30/2011 11:25:00 PM
Trichlorofluoromethane	ND	8.0	H	ppbv	8	8/30/2011 11:25:00 PM
Vinyl acetate	ND	8.0	H	ppbv	8	8/30/2011 11:25:00 PM
Vinyl chloride	ND	8.0	H	ppbv	8	8/30/2011 11:25:00 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 v3

RTI LABORATORIES, INC.

RTI
31628 Glendale St.
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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/14/2011 2:01:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-047 **Matrix:** AIR

Client Sample ID VA0644

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	17	24	JH	ppbv	8	8/30/2011 11:25:00 PM
Surr: 4-Bromofluorobenzene	104	70-130	H	%REC	8	8/30/2011 11:25:00 PM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **RH3**
C5-C8 Aliphatic Hydrocarbons	11,000	940	H	µg/m³	8	8/16/2011 12:55:00 AM
C9-C10 Aromatic Hydrocarbons	430	1,100	JH	µg/m³	8	8/16/2011 12:55:00 AM
C9-C12 Aliphatic Hydrocarbons	10,000	1,500	H	µg/m³	8	8/16/2011 12:55:00 AM
Surr: 4-Bromofluorobenzene	97.5	70-130	H	%REC	8	8/16/2011 12:55:00 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

RTI LABORATORIES, INC.

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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/14/2011 3:26:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-048 **Matrix:** AIR

Client Sample ID VA0645

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.12	0.10		%	1	8/10/2011 5:03:00 PM
Carbon Monoxide	ND	0.10		%	1	8/10/2011 5:03:00 PM
Methane	ND	0.50		%	1	8/10/2011 5:03:00 PM
Nitrogen	78	0.10		%	1	8/10/2011 5:03:00 PM
Oxygen	21	0.10		%	1	8/10/2011 5:03:00 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.

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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/14/2011 4:05:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107640-049 **Matrix:** AIR

Client Sample ID VA0646

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.12	0.10		%	1	8/10/2011 5:26:00 PM
Carbon Monoxide	ND	0.10		%	1	8/10/2011 5:26:00 PM
Methane	ND	0.50		%	1	8/10/2011 5:26:00 PM
Nitrogen	78	0.10		%	1	8/10/2011 5:26:00 PM
Oxygen	21	0.10		%	1	8/10/2011 5:26:00 PM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **RH3**
C5-C8 Aliphatic Hydrocarbons	13,000	4,700	H	µg/m³	40	8/26/2011 1:01:00 AM
C9-C10 Aromatic Hydrocarbons	ND	5,300	H	µg/m³	40	8/26/2011 1:01:00 AM
C9-C12 Aliphatic Hydrocarbons	ND	7,600	H	µg/m³	40	8/26/2011 1:01:00 AM
Surr: 4-Bromofluorobenzene	98.9	70-130	H	%REC	40	8/26/2011 1:01:00 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

RTI LABORATORIES, INC.

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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/11/2011 8:00:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-050 **Matrix:** AIR

Client Sample ID VA8032-TB

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	800		ppbv	800	8/6/2011 9:05:00 PM
1,1,2,2-Tetrachloroethane	ND	800		ppbv	800	8/6/2011 9:05:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	800		ppbv	800	8/6/2011 9:05:00 PM
1,1,2-Trichloroethane	ND	800		ppbv	800	8/6/2011 9:05:00 PM
1,1-Dichloroethane	ND	800		ppbv	800	8/6/2011 9:05:00 PM
1,1-Dichloroethene	ND	800		ppbv	800	8/6/2011 9:05:00 PM
1,2,4-Trichlorobenzene	ND	800		ppbv	800	8/6/2011 9:05:00 PM
1,2,4-Trimethylbenzene	ND	800		ppbv	800	8/6/2011 9:05:00 PM
1,2-Dibromoethane	ND	800		ppbv	800	8/6/2011 9:05:00 PM
1,2-Dichlorobenzene	ND	800		ppbv	800	8/6/2011 9:05:00 PM
1,2-Dichloroethane	ND	800		ppbv	800	8/6/2011 9:05:00 PM
1,2-Dichloropropane	ND	800		ppbv	800	8/6/2011 9:05:00 PM
1,3,5-Trimethylbenzene	ND	800		ppbv	800	8/6/2011 9:05:00 PM
1,3-Butadiene	ND	800		ppbv	800	8/6/2011 9:05:00 PM
1,3-Dichlorobenzene	ND	800		ppbv	800	8/6/2011 9:05:00 PM
1,4-Dichlorobenzene	ND	800		ppbv	800	8/6/2011 9:05:00 PM
1,4-Dioxane	ND	800		ppbv	800	8/6/2011 9:05:00 PM
2-Butanone	ND	800		ppbv	800	8/6/2011 9:05:00 PM
2-Hexanone	ND	800		ppbv	800	8/6/2011 9:05:00 PM
2-Propanol	4,800	800		ppbv	800	8/6/2011 9:05:00 PM
4-Methyl-2-pentanone	ND	800		ppbv	800	8/6/2011 9:05:00 PM
Acetone	2,900	800		ppbv	800	8/6/2011 9:05:00 PM
Benzene	ND	800		ppbv	800	8/6/2011 9:05:00 PM
Benzyl chloride	ND	800		ppbv	800	8/6/2011 9:05:00 PM
Bromodichloromethane	ND	800		ppbv	800	8/6/2011 9:05:00 PM
Bromoform	ND	800		ppbv	800	8/6/2011 9:05:00 PM
Bromomethane	ND	800		ppbv	800	8/6/2011 9:05:00 PM
Carbon disulfide	ND	800		ppbv	800	8/6/2011 9:05:00 PM
Carbon tetrachloride	ND	800		ppbv	800	8/6/2011 9:05:00 PM
Chlorobenzene	ND	800		ppbv	800	8/6/2011 9:05:00 PM
Chlorodibromomethane	ND	800		ppbv	800	8/6/2011 9:05:00 PM
Chloroethane	ND	800		ppbv	800	8/6/2011 9:05:00 PM
Chloroform	ND	800		ppbv	800	8/6/2011 9:05:00 PM
Chloromethane	ND	800		ppbv	800	8/6/2011 9:05:00 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 v3

RTI LABORATORIES, INC.

RTI
31628 Glendale St.
Livonia, MI 48150
TEL: 7344228000 FAX: 7344225342
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Analytical Report

(consolidated)

WO#: **1107640**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/11/2011 8:00:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107640-050 **Matrix:** AIR

Client Sample ID VA8032-TB

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
cis-1,2-Dichloroethene	ND	800		ppbv	800	8/6/2011 9:05:00 PM
cis-1,3-dichloropropene	ND	800		ppbv	800	8/6/2011 9:05:00 PM
Cyclohexane	ND	1,600		ppbv	800	8/6/2011 9:05:00 PM
Dichlorodifluoromethane	ND	800		ppbv	800	8/6/2011 9:05:00 PM
Ethanol	1,600	4,000	J	ppbv	800	8/6/2011 9:05:00 PM
Ethyl acetate	ND	800		ppbv	800	8/6/2011 9:05:00 PM
Ethylbenzene	ND	1,600		ppbv	800	8/6/2011 9:05:00 PM
Heptane	ND	800		ppbv	800	8/6/2011 9:05:00 PM
Hexachlorobutadiene	ND	1,600		ppbv	800	8/6/2011 9:05:00 PM
m,p-Xylene	ND	1,600		ppbv	800	8/6/2011 9:05:00 PM
Methylene chloride	18,000	4,000		ppbv	800	8/6/2011 9:05:00 PM
Naphthalene	ND	800		ppbv	800	8/6/2011 9:05:00 PM
n-Hexane	9,900	1,600		ppbv	800	8/6/2011 9:05:00 PM
o-Xylene	ND	800		ppbv	800	8/6/2011 9:05:00 PM
Propylene	ND	800		ppbv	800	8/6/2011 9:05:00 PM
Styrene	ND	800		ppbv	800	8/6/2011 9:05:00 PM
tert-Butyl Methyl Ether	ND	800		ppbv	800	8/6/2011 9:05:00 PM
Tetrachloroethene	ND	800		ppbv	800	8/6/2011 9:05:00 PM
Tetrahydrofuran	ND	800		ppbv	800	8/6/2011 9:05:00 PM
Toluene	ND	800		ppbv	800	8/6/2011 9:05:00 PM
trans-1,2-Dichloroethene	ND	800		ppbv	800	8/6/2011 9:05:00 PM
trans-1,3-dichloropropene	ND	800		ppbv	800	8/6/2011 9:05:00 PM
Trichloroethene	ND	800		ppbv	800	8/6/2011 9:05:00 PM
Trichlorofluoromethane	ND	800		ppbv	800	8/6/2011 9:05:00 PM
Vinyl acetate	ND	800		ppbv	800	8/6/2011 9:05:00 PM
Vinyl chloride	ND	800		ppbv	800	8/6/2011 9:05:00 PM
Xylenes, Total	ND	2,400		ppbv	800	8/6/2011 9:05:00 PM
Surr: 4-Bromofluorobenzene	99.7	70-130		%REC	800	8/6/2011 9:05:00 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 v3

RTI LABORATORIES, INC.

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QC SUMMARY REPORT

WO#: **1107640**

20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc

Project: Kirtland AFB-140705

BatchID: **R42065**

Sample ID: **Blank 080511a** SampType: **MBLK** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **42065**

Client ID: **PBW** Batch ID: **R42065** TestNo: **TO-15** Analysis Date: **8/6/2011** SeqNo: **813187**

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									
1,4-Dioxane	ND	1.0									
2-Butanone	ND	1.0									
2-Hexanone	ND	1.0									
2-Propanol	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									

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#: 1107640
20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB-140705

BatchID: R42065

Sample ID: **Blank 080511a** SampType: **MBLK** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **42065**
Client ID: **PBW** Batch ID: **R42065** TestNo: **TO-15** Analysis Date: **8/6/2011** SeqNo: **813187**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromomethane	ND	1.0									
Carbon disulfide	ND	1.0									
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									
Ethanol	ND	5.0									
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									

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#: **1107640**
20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB-140705
BatchID: **R42065**

Sample ID: **Blank 080511a** SampType: **MBLK** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **42065**
Client ID: **PBW** Batch ID: **R42065** TestNo: **TO-15** Analysis Date: **8/6/2011** SeqNo: **813187**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Tetrahydrofuran	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
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	12		12.50		97.7	70	130				

Sample ID: **1107364-005ADUP** SampType: **DUP** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **42065**
Client ID: **ZZZZZZ** Batch ID: **R42065** TestNo: **TO-15** Analysis Date: **8/6/2011** SeqNo: **813189**

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	

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#: **1107640**

20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB-140705

BatchID: **R42065**

Sample ID: **1107364-005ADUP** SampType: **DUP** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **42065**
Client ID: **ZZZZZZ** Batch ID: **R42065** TestNo: **TO-15** Analysis Date: **8/6/2011** SeqNo: **813189**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
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	
1,3-Dichlorobenzene	ND	8,000						0	0	25	
1,4-Dichlorobenzene	ND	8,000						0	0	25	
1,4-Dioxane	ND	8,000						0	0	25	
2-Butanone	ND	8,000						0	0	25	
2-Hexanone	ND	8,000						0	0	25	
2-Propanol	ND	8,000						0	0	25	
4-Methyl-2-pentanone	ND	8,000						0	0	25	
Acetone	ND	8,000						0	0	25	
Benzene	20,000	8,000						20,400	0.787	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	

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.

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QC SUMMARY REPORT

WO#: **1107640**

20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc

Project: Kirtland AFB-140705

BatchID: **R42065**

Sample ID: **1107364-005ADUP** SampType: **DUP** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **42065**

Client ID: **ZZZZZZ** Batch ID: **R42065** TestNo: **TO-15** Analysis Date: **8/6/2011** SeqNo: **813189**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane	ND	8,000						0	0	25	
Ethanol	ND	40,000						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	
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	37,000	8,000						45,120	19.0	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	100,000		100,000		99.8	70	130		0	25	

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#: **1107640**

20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB-140705

BatchID: **R42066**

Sample ID: **Blank 080711a** SampType: **MBLK** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **42066**
Client ID: **PBW** Batch ID: **R42066** TestNo: **TO-15** Analysis Date: **8/7/2011** SeqNo: **813207**

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									
1,4-Dioxane	ND	1.0									
2-Butanone	ND	1.0									
2-Hexanone	ND	1.0									
2-Propanol	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									

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#: **1107640**

20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB-140705

BatchID: **R42066**

Sample ID: **Blank 080711a** SampType: **MBLK** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **42066**
Client ID: **PBW** Batch ID: **R42066** TestNo: **TO-15** Analysis Date: **8/7/2011** SeqNo: **813207**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromomethane	ND	1.0									
Carbon disulfide	ND	1.0									
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									
Ethanol	ND	5.0									
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									

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#: 1107640
20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB-140705
BatchID: R42066

Sample ID: **Blank 080711a** SampType: **MBLK** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **42066**
Client ID: **PBW** Batch ID: **R42066** TestNo: **TO-15** Analysis Date: **8/7/2011** SeqNo: **813207**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Tetrahydrofuran	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
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	12		12.50		97.5	70	130				

Sample ID: **1107640-016ADUP** SampType: **DUP** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **42066**
Client ID: **VA0613** Batch ID: **R42066** TestNo: **TO-15** Analysis Date: **8/7/2011** SeqNo: **813214**

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	

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 exceeds
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits

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QC SUMMARY REPORT

WO#: **1107640**

20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB-140705

BatchID: **R42066**

Sample ID: **1107640-016ADUP** SampType: **DUP** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **42066**
Client ID: **VA0613** Batch ID: **R42066** TestNo: **TO-15** Analysis Date: **8/7/2011** SeqNo: **813214**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
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	
1,3-Dichlorobenzene	ND	8,000						0	0	25	
1,4-Dichlorobenzene	ND	8,000						0	0	25	
1,4-Dioxane	ND	8,000						0	0	25	
2-Butanone	ND	8,000						0	0	25	
2-Hexanone	ND	8,000						0	0	25	
2-Propanol	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	

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#: **1107640**

20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB-140705

BatchID: **R42066**

Sample ID: **1107640-016ADUP** SampType: **DUP** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **42066**
Client ID: **VA0613** Batch ID: **R42066** TestNo: **TO-15** Analysis Date: **8/7/2011** SeqNo: **813214**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane	ND	8,000						0	0	25	
Ethanol	ND	40,000						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	
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	97,000		100,000		97.4	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#: 1107640
20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB-140705

BatchID: R42093

Sample ID: **Blank 080911a** SampType: **MBLK** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **42093**
Client ID: **PBW** Batch ID: **R42093** TestNo: **TO-15** Analysis Date: **8/9/2011** SeqNo: **814548**

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									
1,4-Dioxane	ND	1.0									
2-Butanone	ND	1.0									
2-Hexanone	ND	1.0									
2-Propanol	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									

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#: **1107640**

20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB-140705

BatchID: **R42093**

Sample ID: **Blank 080911a** SampType: **MBLK** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **42093**
Client ID: **PBW** Batch ID: **R42093** TestNo: **TO-15** Analysis Date: **8/9/2011** SeqNo: **814548**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromomethane	ND	1.0									
Carbon disulfide	ND	1.0									
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									
Ethanol	ND	5.0									
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									

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#: 1107640
20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB-140705
BatchID: R42093

Sample ID: **Blank 080911a** SampType: **MBLK** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **42093**
Client ID: **PBW** Batch ID: **R42093** TestNo: **TO-15** Analysis Date: **8/9/2011** SeqNo: **814548**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Tetrahydrofuran	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
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	12		12.50		99.0	70	130				

Sample ID: **1108186-005ADUP** SampType: **DUP** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **42093**
Client ID: **ZZZZZZ** Batch ID: **R42093** TestNo: **TO-15** Analysis Date: **8/9/2011** SeqNo: **814568**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	40						0	0	25	
1,1,2,2-Tetrachloroethane	ND	40						0	0	25	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	40						0	0	25	
1,1,2-Trichloroethane	ND	40						0	0	25	
1,1-Dichloroethane	ND	40						0	0	25	
1,1-Dichloroethene	ND	40						0	0	25	
1,2,4-Trichlorobenzene	ND	40						0	0	25	
1,2,4-Trimethylbenzene	140	40						141.6	2.00	25	
1,2-Dibromoethane	ND	40						0	0	25	
1,2-Dichlorobenzene	ND	40						0	0	25	
1,2-Dichloroethane	ND	40						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#: **1107640**

20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB-140705

BatchID: **R42093**

Sample ID: **1108186-005ADUP** SampType: **DUP** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **42093**
Client ID: **ZZZZZZ** Batch ID: **R42093** TestNo: **TO-15** Analysis Date: **8/9/2011** SeqNo: **814568**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dichloropropane	ND	40						0	0	25	
1,3,5-Trimethylbenzene	52	40						52.80	1.53	25	
1,3-Butadiene	ND	40						0	0	25	
1,3-Dichlorobenzene	ND	40						0	0	25	
1,4-Dichlorobenzene	ND	40						0	0	25	
1,4-Dioxane	ND	40						0	0	25	
2-Butanone	ND	40						0	0	25	
2-Hexanone	ND	40						0	0	25	
2-Propanol	ND	40						0	0	25	
4-Methyl-2-pentanone	ND	40						0	0	25	
Acetone	ND	40						0	0	25	
Benzene	250	40						235.6	4.32	25	
Benzyl chloride	ND	40						0	0	25	
Bromodichloromethane	ND	40						0	0	25	
Bromoform	ND	40						0	0	25	
Bromomethane	ND	40						0	0	25	
Carbon disulfide	ND	40						0	0	25	
Carbon tetrachloride	ND	40						0	0	25	
Chlorobenzene	ND	40						0	0	25	
Chlorodibromomethane	ND	40						0	0	25	
Chloroethane	ND	40						0	0	25	
Chloroform	ND	40						0	0	25	
Chloromethane	ND	40						0	0	25	
cis-1,2-Dichloroethene	ND	40						0	0	25	
cis-1,3-dichloropropene	ND	40						0	0	25	
Cyclohexane	570	80						596.8	4.38	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#: **1107640**

20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB-140705

BatchID: **R42093**

Sample ID: **1108186-005ADUP** SampType: **DUP** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **42093**
Client ID: **ZZZZZZ** Batch ID: **R42093** TestNo: **TO-15** Analysis Date: **8/9/2011** SeqNo: **814568**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane	ND	40						0	0	25	
Ethanol	110	200						138.4	19.0	25	J
Ethyl acetate	ND	40						0	0	25	
Ethylbenzene	110	80						115.2	1.75	25	
Heptane	330	40						367.2	12.0	25	
Hexachlorobutadiene	ND	80						0	0	25	
m,p-Xylene	190	80						200.4	3.04	25	
Methylene chloride	ND	200						0	0	25	
Naphthalene	ND	40						0	0	25	
n-Hexane	1,100	80						1,170	5.37	25	
o-Xylene	ND	40						0	0	25	
Propylene	52	40						52.40	1.54	25	
Styrene	ND	40						0	0	25	
tert-Butyl Methyl Ether	ND	40						0	0	25	
Tetrachloroethene	ND	40						0	0	25	
Tetrahydrofuran	ND	40						0	0	25	
Toluene	40	40						45.20	11.2	25	
trans-1,2-Dichloroethene	ND	40						0	0	25	
trans-1,3-dichloropropene	ND	40						0	0	25	
Trichloroethene	ND	40						0	0	25	
Trichlorofluoromethane	ND	40						0	0	25	
Vinyl acetate	ND	40						0	0	25	
Vinyl chloride	ND	40						0	0	25	
Xylenes, Total	190	120						200.4	3.04	25	
Surr: 4-Bromofluorobenzene	510		500.0		102	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#: **1107640**
20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB-140705
BatchID: **R42129**

Sample ID: **MBLK 080911** SampType: **MBLK** TestCode: **MA_APH** Units: **µg/m³** Prep Date: RunNo: **42129**
Client ID: **PBW** Batch ID: **R42129** TestNo: **MA_APH** Analysis Date: **8/9/2011** SeqNo: **814593**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
C5-C8 Aliphatic Hydrocarbons	ND	120									
C9-C10 Aromatic Hydrocarbons	ND	130									
C9-C12 Aliphatic Hydrocarbons	ND	190									
Surr: 4-Bromofluorobenzene	85		89.50		95.3	70	130				

Sample ID: **1107640-002ADUP** SampType: **DUP** TestCode: **MA_APH** Units: **µg/m³** Prep Date: RunNo: **42129**
Client ID: **VA0547** Batch ID: **R42129** TestNo: **MA_APH** Analysis Date: **8/10/2011** SeqNo: **814982**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
C5-C8 Aliphatic Hydrocarbons	5,500,000	940,000						6,174,000	11.3	30	H
C9-C10 Aromatic Hydrocarbons	ND	1,100,000						0	0	30	H
C9-C12 Aliphatic Hydrocarbons	ND	1,500,000						0	0	30	H
Surr: 4-Bromofluorobenzene	670,000		716,000		94.2	70	130		0	30	H

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#: **1107640**

20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc

Project: Kirtland AFB-140705

BatchID: **R42164**

Sample ID: **MBLK 081011** SampType: **MBLK** TestCode: **MA_APH** Units: **µg/m³** Prep Date: RunNo: **42164**

Client ID: **PBW** Batch ID: **R42164** TestNo: **MA_APH** Analysis Date: **8/10/2011** SeqNo: **815433**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
C5-C8 Aliphatic Hydrocarbons	ND	120									
C9-C10 Aromatic Hydrocarbons	ND	130									
C9-C12 Aliphatic Hydrocarbons	ND	190									
Surr: 4-Bromofluorobenzene	85		89.50		95.0	70	130				

Sample ID: **1107640-005ADUP** SampType: **DUP** TestCode: **MA_APH** Units: **µg/m³** Prep Date: RunNo: **42164**

Client ID: **VA0550** Batch ID: **R42164** TestNo: **MA_APH** Analysis Date: **8/11/2011** SeqNo: **816032**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
C5-C8 Aliphatic Hydrocarbons	12,000	1,900						14,070	12.2	30	H
C9-C10 Aromatic Hydrocarbons	ND	2,100						0	0	30	H
C9-C12 Aliphatic Hydrocarbons	6,800	3,000						8,076	16.6	30	H
Surr: 4-Bromofluorobenzene	1,300		1,432		94.1	70	130		0	30	H

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#: **1107640**

20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB-140705

BatchID: **R42193**

Sample ID: **MBLK 081111** SampType: **MBLK** TestCode: **MA_APH** Units: **µg/m³** Prep Date: RunNo: **42193**
Client ID: **PBW** Batch ID: **R42193** TestNo: **MA_APH** Analysis Date: **8/11/2011** SeqNo: **816514**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
C5-C8 Aliphatic Hydrocarbons	ND	120									
C9-C10 Aromatic Hydrocarbons	ND	130									
C9-C12 Aliphatic Hydrocarbons	ND	190									
Surr: 4-Bromofluorobenzene	86		89.50		95.5	70	130				

Sample ID: **1107640-004ADUP** SampType: **DUP** TestCode: **MA_APH** Units: **µg/m³** Prep Date: RunNo: **42193**
Client ID: **VA0549** Batch ID: **R42193** TestNo: **MA_APH** Analysis Date: **8/11/2011** SeqNo: **816516**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
C5-C8 Aliphatic Hydrocarbons	24,000	1,900						18,430	24.8	30	H
C9-C10 Aromatic Hydrocarbons	ND	2,100						0	0	30	H
C9-C12 Aliphatic Hydrocarbons	5,600	3,000						4,144	29.2	30	H
Surr: 4-Bromofluorobenzene	1,400		1,432		98.7	70	130		0	30	H

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#: **1107640**

20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB-140705

BatchID: **R42238**

Sample ID: **MBLK 081511** SampType: **MBLK** TestCode: **MA_APH** Units: **µg/m³** Prep Date: RunNo: **42238**
Client ID: **PBW** Batch ID: **R42238** TestNo: **MA_APH** Analysis Date: **8/15/2011** SeqNo: **817247**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
C5-C8 Aliphatic Hydrocarbons	110	120									J
C9-C10 Aromatic Hydrocarbons	ND	130									
C9-C12 Aliphatic Hydrocarbons	ND	190									
Surr: 4-Bromofluorobenzene	83		89.50		92.8	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#: **1107640**

20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB-140705

BatchID: **R42333**

Sample ID: **mblk** SampType: **MBLK** TestCode: **ASTM-D2504** Units: **%** Prep Date: RunNo: **42333**
Client ID: **PBW** Batch ID: **R42333** TestNo: **ASTM-D2504** Analysis Date: **8/6/2011** SeqNo: **819134**

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: **42333**
Client ID: **LCSW** Batch ID: **R42333** TestNo: **ASTM-D2504** Analysis Date: **8/6/2011** SeqNo: **819136**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon dioxide	2.3	0.10	2.500	0	93.0	70	130	2.371	1.92	0	
Carbon Monoxide	2.2	0.10	2.500	0	87.2	70	130	2.427	10.8	0	
Methane	1.8	0.50	2.000	0	90.9	70	130	1.829	0.603	0	
Nitrogen	3.0	0.10	2.500	0	119	70	130	2.534	16.1	0	
Oxygen	2.4	0.10	2.500	0	97.8	70	130	2.261	7.78	0	

Sample ID: **1107640-007bdup** SampType: **DUP** TestCode: **ASTM-D2504** Units: **%** Prep Date: RunNo: **42333**
Client ID: **VA0552** Batch ID: **R42333** TestNo: **ASTM-D2504** Analysis Date: **8/6/2011** SeqNo: **819426**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon dioxide	0.19	0.10						0.1910	1.04	20	H
Carbon Monoxide	ND	0.10						0	0	20	H
Methane	ND	0.50						0	0	20	H
Nitrogen	79	0.10						78.74	0.153	20	H
Oxygen	21	0.10						20.76	0.145	20	H

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#: 1107640
20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB-140705
BatchID: R42334

Sample ID: **mblk** SampType: **MBLK** TestCode: **ASTM-D2504** Units: **%** Prep Date: RunNo: **42334**
Client ID: **PBW** Batch ID: **R42334** TestNo: **ASTM-D2504** Analysis Date: **8/8/2011** SeqNo: **819149**

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: **42334**
Client ID: **LCSW** Batch ID: **R42334** TestNo: **ASTM-D2504** Analysis Date: **8/8/2011** SeqNo: **819151**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon dioxide	2.3	0.10	2.500	0	90.3	70	130	2.406	6.35	0	
Carbon Monoxide	2.3	0.10	2.500	0	91.8	70	130	2.715	16.8	0	
Methane	1.8	0.50	2.000	0	91.8	70	130	2.053	11.1	0	
Nitrogen	2.7	0.10	2.500	0	109	70	130	2.477	9.28	0	
Oxygen	2.5	0.10	2.500	0	99.0	70	130	2.305	7.11	0	

Sample ID: **1107640-017bdup** SampType: **DUP** TestCode: **ASTM-D2504** Units: **%** Prep Date: RunNo: **42334**
Client ID: **VA0614** Batch ID: **R42334** TestNo: **ASTM-D2504** Analysis Date: **8/8/2011** SeqNo: **819163**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon dioxide	0.59	0.10						0.5880	0.678	20	
Carbon Monoxide	ND	0.10						0	0	20	
Methane	ND	0.50						0	0	20	
Nitrogen	78	0.10						79.24	0.993	20	
Oxygen	20	0.10						19.97	0.906	20	

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#: **1107640**
20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB-140705
BatchID: **R42335**

Sample ID: **mblk** SampType: **MBLK** TestCode: **ASTM-D2504** Units: **%** Prep Date: RunNo: **42335**
Client ID: **PBW** Batch ID: **R42335** TestNo: **ASTM-D2504** Analysis Date: **8/9/2011** SeqNo: **819174**

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: **42335**
Client ID: **LCSW** Batch ID: **R42335** TestNo: **ASTM-D2504** Analysis Date: **8/9/2011** SeqNo: **819176**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon dioxide	2.2	0.10	2.500	0	89.6	70	130	2.139	4.57	0	
Carbon Monoxide	2.2	0.10	2.500	0	89.6	70	130	2.128	5.08	0	
Methane	1.8	0.50	2.000	0	91.4	70	130	1.799	1.60	0	
Nitrogen	2.6	0.10	2.500	0	105	70	130	2.525	4.11	0	
Oxygen	2.4	0.10	2.500	0	95.0	70	130	2.273	4.43	0	

Sample ID: **1107640-034bdup** SampType: **DUP** TestCode: **ASTM-D2504** Units: **%** Prep Date: RunNo: **42335**
Client ID: **VA0631** Batch ID: **R42335** TestNo: **ASTM-D2504** Analysis Date: **8/9/2011** SeqNo: **819188**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon dioxide	0.26	0.10						0.2480	4.34	20	
Carbon Monoxide	ND	0.10						0	0	20	
Methane	ND	0.50						0	0	20	
Nitrogen	78	0.10						78.19	0.230	20	
Oxygen	20	0.10						19.71	0.290	20	

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#: **1107640**

20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB-140705

BatchID: **R42336**

Sample ID: **mblk** SampType: **MBLK** TestCode: **ASTM-D2504** Units: **%** Prep Date: RunNo: **42336**
Client ID: **PBW** Batch ID: **R42336** TestNo: **ASTM-D2504** Analysis Date: **8/10/2011** SeqNo: **819199**

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: **42336**
Client ID: **LCSW** Batch ID: **R42336** TestNo: **ASTM-D2504** Analysis Date: **8/10/2011** SeqNo: **819201**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon dioxide	2.2	0.10	2.500	0	88.0	70	130	2.265	2.91	0	
Carbon Monoxide	2.4	0.10	2.500	0	96.4	70	130	2.455	1.81	0	
Methane	2.0	0.50	2.000	0	97.6	70	130	1.997	2.33	0	
Nitrogen	2.4	0.10	2.500	0	95.5	70	130	2.392	0.167	0	
Oxygen	2.2	0.10	2.500	0	89.0	70	130	2.258	1.47	0	

Sample ID: **1107640-049bdup** SampType: **DUP** TestCode: **ASTM-D2504** Units: **%** Prep Date: RunNo: **42336**
Client ID: **VA0646** Batch ID: **R42336** TestNo: **ASTM-D2504** Analysis Date: **8/10/2011** SeqNo: **819213**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon dioxide	0.13	0.10						0.1200	6.45	20	
Carbon Monoxide	ND	0.10						0	0	20	
Methane	ND	0.50						0	0	20	
Nitrogen	78	0.10						78.19	0.0294	20	
Oxygen	21	0.10						21.35	0.00937	20	

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#: 1107640
20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB-140705

BatchID: R42378

Sample ID: **BLK VOA1 082211A** SampType: **MBLK** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **42378**
Client ID: **PBW** Batch ID: **R42378** TestNo: **TO-15** Analysis Date: **8/22/2011** SeqNo: **820204**

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									
1,4-Dioxane	ND	1.0									
2-Butanone	ND	1.0									
2-Hexanone	ND	1.0									
2-Propanol	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									

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#: **1107640**

20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc

Project: Kirtland AFB-140705

BatchID: **R42378**

Sample ID: **BLK VOA1 082211A** SampType: **MBLK** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **42378**

Client ID: **PBW** Batch ID: **R42378** TestNo: **TO-15** Analysis Date: **8/22/2011** SeqNo: **820204**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromomethane	ND	1.0									
Carbon disulfide	ND	1.0									
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									
Ethanol	ND	5.0									
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									

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#: 1107640
20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB-140705

BatchID: R42378

Sample ID: **BLK VOA1 082211A** SampType: **MBLK** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **42378**
Client ID: **PBW** Batch ID: **R42378** TestNo: **TO-15** Analysis Date: **8/22/2011** SeqNo: **820204**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Tetrahydrofuran	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
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	12		12.50		99.5	70	130				

Sample ID: **1107640-028ADUP** SampType: **DUP** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **42378**
Client ID: **VA0625** Batch ID: **R42378** TestNo: **TO-15** Analysis Date: **8/22/2011** SeqNo: **820206**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	40						0	0	25	H
1,1,2,2-Tetrachloroethane	ND	40						0	0	25	H
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	40						0	0	25	H
1,1,2-Trichloroethane	ND	40						0	0	25	H
1,1-Dichloroethane	ND	40						0	0	25	H
1,1-Dichloroethene	ND	40						0	0	25	H
1,2,4-Trichlorobenzene	ND	40						0	0	25	H
1,2,4-Trimethylbenzene	ND	40						0	0	25	H
1,2-Dibromoethane	ND	40						0	0	25	H
1,2-Dichlorobenzene	ND	40						0	0	25	H
1,2-Dichloroethane	ND	40						0	0	25	H

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#: **1107640**

20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB-140705

BatchID: **R42378**

Sample ID: **1107640-028ADUP** SampType: **DUP** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **42378**
Client ID: **VA0625** Batch ID: **R42378** TestNo: **TO-15** Analysis Date: **8/22/2011** SeqNo: **820206**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dichloropropane	ND	40						0	0	25	H
1,3,5-Trimethylbenzene	ND	40						0	0	25	H
1,3-Butadiene	ND	40						0	0	25	H
1,3-Dichlorobenzene	ND	40						0	0	25	H
1,4-Dichlorobenzene	ND	40						0	0	25	H
1,4-Dioxane	ND	40						0	0	25	H
2-Butanone	ND	40						0	0	25	H
2-Hexanone	ND	40						0	0	25	H
2-Propanol	ND	40						0	0	25	H
4-Methyl-2-pentanone	ND	40						0	0	25	H
Acetone	ND	40						0	0	25	H
Benzene	240	40						228.8	5.61	25	H
Benzyl chloride	ND	40						0	0	25	H
Bromodichloromethane	ND	40						0	0	25	H
Bromoform	ND	40						0	0	25	H
Bromomethane	ND	40						0	0	25	H
Carbon disulfide	ND	40						0	0	25	H
Carbon tetrachloride	ND	40						0	0	25	H
Chlorobenzene	ND	40						0	0	25	H
Chlorodibromomethane	ND	40						0	0	25	H
Chloroethane	ND	40						0	0	25	H
Chloroform	ND	40						0	0	25	H
Chloromethane	ND	40						0	0	25	H
cis-1,2-Dichloroethene	ND	40						0	0	25	H
cis-1,3-dichloropropene	ND	40						0	0	25	H
Cyclohexane	200	80						192.8	5.45	25	H

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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QC SUMMARY REPORT

WO#: 1107640
20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB-140705

BatchID: R42378

Sample ID: **1107640-028ADUP** SampType: **DUP** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **42378**
Client ID: **VA0625** Batch ID: **R42378** TestNo: **TO-15** Analysis Date: **8/22/2011** SeqNo: **820206**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane	ND	40						0	0	25	H
Ethanol	ND	200						0	0	25	H
Ethyl acetate	ND	40						0	0	25	H
Ethylbenzene	ND	80						0	0	25	H
Heptane	ND	40						0	0	25	H
Hexachlorobutadiene	ND	80						0	0	25	H
m,p-Xylene	ND	80						0	0	25	H
Methylene chloride	ND	200						0	0	25	H
Naphthalene	ND	40						0	0	25	H
n-Hexane	150	80						148.4	2.40	25	H
o-Xylene	ND	40						0	0	25	H
Propylene	280	40						282.4	0.283	25	H
Styrene	ND	40						0	0	25	H
tert-Butyl Methyl Ether	ND	40						0	0	25	H
Tetrachloroethene	ND	40						0	0	25	H
Tetrahydrofuran	ND	40						0	0	25	H
Toluene	360	40						339.6	5.50	25	H
trans-1,2-Dichloroethene	ND	40						0	0	25	H
trans-1,3-dichloropropene	ND	40						0	0	25	H
Trichloroethene	ND	40						0	0	25	H
Trichlorofluoromethane	ND	40						0	0	25	H
Vinyl acetate	ND	40						0	0	25	H
Vinyl chloride	ND	40						0	0	25	H
Xylenes, Total	ND	120						0	0	25	H
Surr: 4-Bromofluorobenzene	520		500.0		105	70	130		0	25	H

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#: 1107640
20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB-140705

BatchID: R42461

Sample ID: **MBLK 082511A VOA** SampType: **MBLK** TestCode: **MA_APH** Units: **µg/m³** Prep Date: RunNo: **42461**
Client ID: **PBW** Batch ID: **R42461** TestNo: **MA_APH** Analysis Date: **8/25/2011** SeqNo: **822175**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
C5-C8 Aliphatic Hydrocarbons	33	120									J
C9-C10 Aromatic Hydrocarbons	ND	130									
C9-C12 Aliphatic Hydrocarbons	ND	190									
Surr: 4-Bromofluorobenzene	87		89.50		97.5	70	130				

Sample ID: **1108344-012ADUP** SampType: **DUP** TestCode: **MA_APH** Units: **µg/m³** Prep Date: RunNo: **42461**
Client ID: **ZZZZZZ** Batch ID: **R42461** TestNo: **MA_APH** Analysis Date: **8/25/2011** SeqNo: **822177**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
C5-C8 Aliphatic Hydrocarbons	6,200	4,700						5,452	12.6	30	
C9-C10 Aromatic Hydrocarbons	ND	5,300						0	0	30	
C9-C12 Aliphatic Hydrocarbons	ND	7,600						0	0	30	
Surr: 4-Bromofluorobenzene	3,600		3,580		102	70	130		0	30	

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#: 1107640
20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB-140705

BatchID: R42642

Sample ID: **BLK VOA1 083111** SampType: **MBLK** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **42642**
Client ID: **PBW** Batch ID: **R42642** TestNo: **TO-15** Analysis Date: **9/1/2011** SeqNo: **826650**

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									
1,4-Dioxane	ND	1.0									
2-Butanone	ND	1.0									
2-Hexanone	ND	1.0									
2-Propanol	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									

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#: 1107640
20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB-140705

BatchID: R42642

Sample ID: **BLK VOA1 083111** SampType: **MBLK** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **42642**
Client ID: **PBW** Batch ID: **R42642** TestNo: **TO-15** Analysis Date: **9/1/2011** SeqNo: **826650**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromomethane	ND	1.0									
Carbon disulfide	ND	1.0									
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									
Ethanol	ND	5.0									
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									

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#: **1107640**

20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc

Project: Kirtland AFB-140705

BatchID: **R42642**

Sample ID: **BLK VOA1 083111** SampType: **MBLK** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **42642**

Client ID: **PBW** Batch ID: **R42642** TestNo: **TO-15** Analysis Date: **9/1/2011** SeqNo: **826650**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Tetrahydrofuran	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
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		115	70	130				

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#: 1107640
20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB-140705

BatchID: R42721

Sample ID: **BLK VOA1 083011** SampType: **MBLK** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **42721**
Client ID: **PBW** Batch ID: **R42721** TestNo: **TO-15** Analysis Date: **8/30/2011** SeqNo: **829037**

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									
1,4-Dioxane	ND	1.0									
2-Butanone	ND	1.0									
2-Hexanone	ND	1.0									
2-Propanol	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									

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#: **1107640**

20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB-140705

BatchID: **R42721**

Sample ID: **BLK VOA1 083011** SampType: **MBLK** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **42721**
Client ID: **PBW** Batch ID: **R42721** TestNo: **TO-15** Analysis Date: **8/30/2011** SeqNo: **829037**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromomethane	ND	1.0									
Carbon disulfide	ND	1.0									
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									
Ethanol	ND	5.0									
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									

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#: 1107640
20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB-140705

BatchID: R42721

Sample ID: **BLK VOA1 083011** SampType: **MBLK** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **42721**
Client ID: **PBW** Batch ID: **R42721** TestNo: **TO-15** Analysis Date: **8/30/2011** SeqNo: **829037**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Tetrahydrofuran	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
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		110	70	130				

Sample ID: **1107640-011Adup** SampType: **DUP** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **42721**
Client ID: **VA0556** Batch ID: **R42721** TestNo: **TO-15** Analysis Date: **8/30/2011** SeqNo: **829039**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	8.0						0	0	25	H
1,1,2,2-Tetrachloroethane	ND	8.0						6.880	200	25	RH
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	8.0						0	0	25	H
1,1,2-Trichloroethane	ND	8.0						0	0	25	H
1,1-Dichloroethane	ND	8.0						0	0	25	H
1,1-Dichloroethene	ND	8.0						0	0	25	H
1,2,4-Trichlorobenzene	ND	8.0						0	0	25	H
1,2,4-Trimethylbenzene	4.9	8.0						4.400	10.3	25	JH
1,2-Dibromoethane	ND	8.0						0	0	25	H
1,2-Dichlorobenzene	ND	8.0						0	0	25	H
1,2-Dichloroethane	ND	8.0						0	0	25	H

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#: **1107640**

20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB-140705

BatchID: **R42721**

Sample ID: **1107640-011Adup** SampType: **DUP** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **42721**
Client ID: **VA0556** Batch ID: **R42721** TestNo: **TO-15** Analysis Date: **8/30/2011** SeqNo: **829039**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dichloropropane	ND	8.0						0	0	25	H
1,3,5-Trimethylbenzene	ND	8.0						0	0	25	H
1,3-Butadiene	ND	8.0						0	0	25	H
1,3-Dichlorobenzene	ND	8.0						0	0	25	H
1,4-Dichlorobenzene	ND	8.0						0	0	25	H
1,4-Dioxane	ND	8.0						0	0	25	H
2-Butanone	32	8.0						29.68	8.27	25	H
2-Hexanone	8.1	8.0						7.840	3.02	25	H
2-Propanol	ND	8.0						0	0	25	H
4-Methyl-2-pentanone	ND	8.0						0	0	25	H
Acetone	38	8.0						35.20	7.44	25	H
Benzene	11	8.0						10.40	3.77	25	H
Benzyl chloride	ND	8.0						0	0	25	H
Bromodichloromethane	25	8.0						25.36	0	25	H
Bromoform	ND	8.0						0	0	25	H
Bromomethane	ND	8.0						0	0	25	H
Carbon disulfide	ND	8.0						0	0	25	H
Carbon tetrachloride	60	8.0						58.08	2.72	25	H
Chlorobenzene	ND	8.0						0	0	25	H
Chlorodibromomethane	ND	8.0						0	0	25	H
Chloroethane	ND	8.0						0	0	25	H
Chloroform	120	8.0						113.9	2.02	25	H
Chloromethane	ND	8.0						0	0	25	H
cis-1,2-Dichloroethene	ND	8.0						0	0	25	H
cis-1,3-dichloropropene	ND	8.0						0	0	25	H
Cyclohexane	29	16						27.36	4.57	25	H

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#: **1107640**

20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB-140705

BatchID: **R42721**

Sample ID: **1107640-011Adup** SampType: **DUP** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **42721**
Client ID: **VA0556** Batch ID: **R42721** TestNo: **TO-15** Analysis Date: **8/30/2011** SeqNo: **829039**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane	ND	8.0						0	0	25	H
Ethanol	35	40						35.04	0	25	JH
Ethyl acetate	ND	8.0						0	0	25	H
Ethylbenzene	6.3	16						6.240	1.27	25	JH
Heptane	16	8.0						15.84	2.00	25	H
Hexachlorobutadiene	ND	16						0	0	25	H
m,p-Xylene	18	16						17.36	2.28	25	H
Methylene chloride	ND	40						0	0	25	H
Naphthalene	ND	8.0						0	0	25	H
n-Hexane	11	16						10.64	2.23	25	JH
o-Xylene	7.2	8.0						7.040	2.25	25	JH
Propylene	8.7	8.0						8.480	2.79	25	H
Styrene	ND	8.0						0	0	25	H
tert-Butyl Methyl Ether	ND	8.0						0	0	25	H
Tetrachloroethene	ND	8.0						0	0	25	H
Tetrahydrofuran	ND	8.0						0	0	25	H
Toluene	76	8.0						75.92	0.105	25	H
trans-1,2-Dichloroethene	ND	8.0						0	0	25	H
trans-1,3-dichloropropene	ND	8.0						0	0	25	H
Trichloroethene	ND	8.0						0	0	25	H
Trichlorofluoromethane	ND	8.0						0	0	25	H
Vinyl acetate	ND	8.0						0	0	25	H
Vinyl chloride	ND	8.0						0	0	25	H
Xylenes, Total	25	24						24.40	2.27	25	H
Surr: 4-Bromofluorobenzene	100		100.0		104	70	130		0	25	H

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_110805A **Run No.:** 42065

Analytical Run Date: 8/5/2011 **InstrumentID:** VOA1

Analyst: Rachel Hill **Column:**

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

Column Length: 30m

Run Comments: ch rev 8/8/11

SampID	TestCode	SampType	Batch ID	Analysis Date/Time	QA By	Q	Comments
BFB 50cc 080511A	BFB_TUNE	TUNE	R42065	8/5/2011 3:27:00 PM	Celeste Hoitash		
1ppbv TO15 ICAL	EPA_TO15	ICAL	R42065	8/5/2011 5:35:00 PM	Celeste Hoitash		
5ppbv TO15 ICAL	EPA_TO15	ICAL	R42065	8/5/2011 6:17:00 PM	Celeste Hoitash		
10ppbv TO15 ICAL	EPA_TO15	ICAL	R42065	8/5/2011 7:00:00 PM	Celeste Hoitash		
12ppbv TO15 ICAL	EPA_TO15	ICAL	R42065	8/5/2011 7:44:00 PM	Celeste Hoitash		
15ppbv TO15 ICAL	EPA_TO15	ICAL	R42065	8/5/2011 8:27:00 PM	Celeste Hoitash		
20ppbv TO15 ICAL	EPA_TO15	ICAL	R42065	8/5/2011 9:11:00 PM	Celeste Hoitash		
30ppbv TO15 ICAL	EPA_TO15	ICAL	R42065	8/5/2011 9:56:00 PM	Celeste Hoitash		
50ppbv TO15 ICAL	EPA_TO15	ICAL	R42065	8/5/2011 10:42:00 PM	Celeste Hoitash		
BFB 50cc 080511b	BFB_TUNE	TUNE	R42065	8/5/2011 11:25:00 PM	Celeste Hoitash		
TO15 10ppbv CCV	EPA_TO15	CCV	R42065	8/6/2011 12:08:00 AM	Celeste Hoitash		
TO15 1ppbv RLVS	EPA_TO15	RLVS	R42065	8/6/2011 12:53:00 AM	Celeste Hoitash		
Blank 080511a	EPA_TO15	MBLK	R42065	8/6/2011 1:43:00 AM	Celeste Hoitash		
1107364-005A	EPA_TO15	SAMP	R42065	8/6/2011 2:26:00 AM	Celeste Hoitash		
1107364-005ADUP	EPA_TO15	DUP	R42065	8/6/2011 3:10:00 AM	Celeste Hoitash		
1107364-006A	EPA_TO15	SAMP	R42065	8/6/2011 4:43:00 AM	Celeste Hoitash		
1107364-007A	EPA_TO15	SAMP	R42065	8/6/2011 6:17:00 AM	Celeste Hoitash		
1107364-021A	EPA_TO15	SAMP	R42065	8/6/2011 10:55:00 AM	Celeste Hoitash		
1107364-022A	EPA_TO15	SAMP	R42065	8/6/2011 11:38:00 AM	Celeste Hoitash		
1107364-023A	EPA_TO15	SAMP	R42065	8/6/2011 12:23:00 PM	Celeste Hoitash		
1107364-024A	EPA_TO15	SAMP	R42065	8/6/2011 1:09:00 PM	Celeste Hoitash		
1107364-008A	EPA_TO15	SAMP	R42065	8/6/2011 1:54:00 PM	Celeste Hoitash		
1107364-009A	EPA_TO15	SAMP	R42065	8/6/2011 2:39:00 PM	Celeste Hoitash		
1107640-002A	EPA_TO15	SAMP	R42065	8/6/2011 5:51:00 PM	Celeste Hoitash		
1107364-013A	EPA_TO15	SAMP	R42065	8/6/2011 6:39:00 PM	Celeste Hoitash		
1107364-014A	EPA_TO15	SAMP	R42065	8/6/2011 7:28:00 PM	Celeste Hoitash		
1107640-003A	EPA_TO15	SAMP	R42065	8/6/2011 8:16:00 PM	Celeste Hoitash		
1107640-050A	EPA_TO15	SAMP	R42065	8/6/2011 9:05:00 PM	Celeste Hoitash		
TO15 1ppbv RLVS	EPA_TO15	RLVS	R42065	8/7/2011 11:00:00 AM	Celeste Hoitash		

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
813176	BFB 50cc 080511b	BFB_TUNE	TUNE	\I\DATA\080511	8/5/2011 11:25:0	1	R42065		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
173	M		0.8	0.8		0	0	0	0	0	0	0%	0	2	0%	
174	M		74.6	74.6		0	0	0	0	0	0	0%	50	120	0%	
175	M		7.7	7.7		0	0	0	0	0	0	0%	4	9	0%	
176	M		100.9	100.9		0	0	0	0	0	0	0%	93	101	0%	
177	M		8.2	8.2		0	0	0	0	0	0	0%	5	9	0%	
50	M		17.9	17.9		0	0	0	0	0	0	0%	8	40	0%	
75	M		46.7	46.7		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		8.1	8.1		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
813185	TO15 10ppbv CCV	EPA_TO15	CCV	\I\DATA\080511	8/6/2011 12:08:0	1	R42065		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	9.61	9.61		9.6	0	0	0.107	1	0	100%	70	130	0%	
1,1,2,2-Tetrachloroethane	A	ppbv	9.61	9.61		10	0	0	0.211	1	0	96%	70	130	0%	
1,1,2-Trichloro-1,2,2-trifluoroethane	A	ppbv	9.7	9.7		9.8	0	0	0.108	1	0	99%	70	130	0%	
1,1,2-Trichloroethane	A	ppbv	10.3	10.3		9.8	0	0	0.2	1	0	105%	70	130	0%	
1,1-Dichloroethane	A	ppbv	9.52	9.52		9.7	0	0	0.111	1	0	98%	70	130	0%	
1,1-Dichloroethene	A	ppbv	9.62	9.62		9.9	0	0	0.097	1	0	97%	70	130	0%	
1,2,4-Trichlorobenzene	A	ppbv	9.4	9.4		9.1	0	0	0.271	1	0	103%	70	130	0%	
1,2,4-Trimethylbenzene	A	ppbv	10.49	10.49		9.8	0	0	0.245	1	0	107%	70	130	0%	
1,2-Dibromoethane	A	ppbv	10.25	10.25		9.6	0	0	0.186	1	0	107%	70	130	0%	
1,2-Dichlorobenzene	A	ppbv	11.17	11.17		9.7	0	0	0.208	1	0	115%	70	130	0%	
1,2-Dichloroethane	A	ppbv	9.54	9.54		9.7	0	0	0.196	1	0	98%	70	130	0%	
1,2-Dichloropropane	A	ppbv	10.26	10.26		9.8	0	0	0.224	1	0	105%	70	130	0%	
1,3,5-Trimethylbenzene	A	ppbv	10.19	10.19		9.7	0	0	0.24	1	0	105%	70	130	0%	
1,3-Butadiene	A	ppbv	9.84	9.84		9.8	0	0	0.152	1	0	100%	70	130	0%	
1,3-Dichlorobenzene	A	ppbv	10.39	10.39		9.7	0	0	0.202	1	0	107%	70	130	0%	
1,4-Dichlorobenzene	A	ppbv	10.48	10.48		9.6	0	0	0.194	1	0	109%	70	130	0%	
1,4-Dioxane	A	ppbv	9.88	9.88		9.6	0	0	0.128	1	0	103%	70	130	0%	
2-Butanone	A	ppbv	9.72	9.72		9.9	0	0	0.287	1	0	98%	70	130	0%	
2-Hexanone	A	ppbv	10.03	10.03		9.8	0	0	0.135	1	0	102%	70	130	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
813185	TO15 10ppbv CCV	EPA_TO15	CCV	\1\DATA\080511	8/6/2011 12:08:0	1	R42065		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
2-Propanol	A	ppbv	9.8	9.8		10.1	0	0	0.329	1	0	97%	70	130	0%	
4-Methyl-2-pentanone	A	ppbv	10.37	10.37		10	0	0	0.157	1	0	104%	70	130	0%	
Acetone	A	ppbv	9.36	9.36		10	0	0	0.43	1	0	94%	70	130	0%	
Benzene	A	ppbv	9.88	9.88		9.6	0	0	0.126	1	0	103%	70	130	0%	
Benzyl chloride	A	ppbv	11.04	11.04		9.7	0	0	0.155	1	0	114%	70	130	0%	
Bromodichloromethane	A	ppbv	10.02	10.02		9.6	0	0	0.156	1	0	104%	70	130	0%	
Bromoform	A	ppbv	10.29	10.29		9.6	0	0	0.197	1	0	107%	70	130	0%	
Bromomethane	A	ppbv	10.26	10.26		9.3	0	0	0.075	1	0	110%	70	130	0%	
Carbon disulfide	A	ppbv	9.8	9.8		9.7	0	0	0.093	1	0	101%	70	130	0%	
Carbon tetrachloride	A	ppbv	9.44	9.44		9.5	0	0	0.114	1	0	99%	70	130	0%	
Chlorobenzene	A	ppbv	10.38	10.38		9.9	0	0	0.275	1	0	105%	70	130	0%	
Chlorodibromomethane	A	ppbv	10.34	10.34		9.2	0	0	0.165	1	0	112%	70	130	0%	
Chloroethane	A	ppbv	9.82	9.82		9.8	0	0	0.063	1	0	100%	70	130	0%	
Chloroform	A	ppbv	9.77	9.77		9.4	0	0	0.126	1	0	104%	70	130	0%	
Chloromethane	A	ppbv	9.69	9.69		9.8	0	0	0.104	1	0	99%	70	130	0%	
cis-1,2-Dichloroethene	A	ppbv	9.94	9.94		9.8	0	0	0.107	1	0	101%	70	130	0%	
cis-1,3-dichloropropene	A	ppbv	10.12	10.12		9.5	0	0	0.166	1	0	107%	70	130	0%	
Cyclohexane	A	ppbv	9.99	9.99		9.8	0	0	0.684	2	0	102%	70	130	0%	
Dichlorodifluoromethane	A	ppbv	9	9		9.2	0	0	0.086	1	0	98%	70	130	0%	
Ethanol	A	ppbv	8.86	8.86		9.2	0	0	1.962	5	0	96%	70	130	0%	
Ethyl acetate	A	ppbv	9.86	9.86		9.8	0	0	0.157	1	0	101%	70	130	0%	
Ethylbenzene	A	ppbv	10.28	10.28		9.8	0	0	0.737	2	0	105%	70	130	0%	
Heptane	A	ppbv	9.92	9.92		9.9	0	0	0.249	1	0	100%	70	130	0%	
Hexachlorobutadiene	A	ppbv	9.64	9.64		9.4	0	0	0.374	2	0	103%	70	130	0%	
m,p-Xylene	A	ppbv	19.02	19.02		19.2	0	0	0.524	2	0	99%	70	130	0%	
Methylene chloride	A	ppbv	9.36	9.36		10	0	0	2.077	5	0	94%	70	130	0%	
n-Hexane	A	ppbv	10.04	10.04		10.1	0	0	0.692	2	0	99%	70	130	0%	
Naphthalene	A	ppbv	9.46	9.46		9.2	0	0	0.247	1	0	103%	70	130	0%	
o-Xylene	A	ppbv	10.51	10.51		10	0	0	0.258	1	0	105%	70	130	0%	
Propylene	A	ppbv	10.12	10.12		10.2	0	0	0.075	1	0	99%	70	130	0%	
Styrene	A	ppbv	10.44	10.44		9.8	0	0	0.263	1	0	107%	70	130	0%	
tert-Butyl Methyl Ether	A	ppbv	9.75	9.75		9.9	0	0	0.228	1	0	98%	70	130	0%	
Tetrachloroethene	A	ppbv	10.11	10.11		9.6	0	0	0.148	1	0	105%	70	130	0%	
Tetrahydrofuran	A	ppbv	9.83	9.83		10	0	0	0.201	1	0	98%	70	130	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
813185	TO15 10ppbv CCV	EPA_TO15	CCV	\1\DATA\080511	8/6/2011 12:08:0	1	R42065		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Toluene	A	ppbv	10.33	10.33		9.8	0	0	0.158	1	0	105%	70	130	0%	
trans-1,2-Dichloroethene	A	ppbv	9.5	9.5		9.8	0	0	0.117	1	0	97%	70	130	0%	
trans-1,3-dichloropropene	A	ppbv	9.59	9.59		9.1	0	0	0.171	1	0	105%	70	130	0%	
Trichloroethene	A	ppbv	10	10		9.6	0	0	0.119	1	0	104%	70	130	0%	
Trichlorofluoromethane	A	ppbv	9.42	9.42		9.6	0	0	0.148	1	0	98%	70	130	0%	
Vinyl acetate	A	ppbv	10.06	10.06		9.9	0	0	0.266	1	0	102%	70	130	0%	
Vinyl chloride	A	ppbv	9.59	9.59		9.4	0	0	0.072	1	0	102%	70	130	0%	
Xylenes, Total	C	ppbv	29.53	29.53		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	12.47	12.47		12.5	0	0	0	0	0	100%	70	130	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
813186	TO15 1ppbv RLVS	EPA_TO15	RLVS	\1\DATA\080511	8/6/2011 12:53:0	1	R42065		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	0.94	0.94		0.996	0	0	0.107	1	0	94%	70	130	0%	
1,1,2,2-Tetrachloroethane	A	ppbv	1.61	1.61		1	0	0	0.211	1	0	161%	70	130	0%	S
1,1,2-Trichloro-1,2,2-trifluoroethane	A	ppbv	1	1		0.98	0	0	0.108	1	0	102%	70	130	0%	
1,1,2-Trichloroethane	A	ppbv	1.28	1.28		0.98	0	0	0.2	1	0	131%	70	130	0%	S
1,1-Dichloroethane	A	ppbv	0.94	0.94		0.97	0	0	0.111	1	0	97%	70	130	0%	
1,1-Dichloroethene	A	ppbv	0.9	0.9		0.99	0	0	0.097	1	0	91%	70	130	0%	
1,2,4-Trichlorobenzene	A	ppbv	2.43	2.43		0.91	0	0	0.271	1	0	267%	70	130	0%	S
1,2,4-Trimethylbenzene	A	ppbv	2.04	2.04		0.98	0	0	0.245	1	0	208%	70	130	0%	S
1,2-Dibromoethane	A	ppbv	1.24	1.24		0.96	0	0	0.186	1	0	129%	70	130	0%	
1,2-Dichlorobenzene	A	ppbv	2	2		0.97	0	0	0.208	1	0	206%	70	130	0%	S
1,2-Dichloroethane	A	ppbv	1.03	1.03		0.97	0	0	0.196	1	0	106%	70	130	0%	
1,2-Dichloropropane	A	ppbv	1.28	1.28		0.98	0	0	0.224	1	0	131%	70	130	0%	S
1,3,5-Trimethylbenzene	A	ppbv	2.09	2.09		0.97	0	0	0.24	1	0	215%	70	130	0%	S
1,3-Butadiene	A	ppbv	0.8	0.8		0.98	0	0	0.152	1	0	82%	70	130	0%	
1,3-Dichlorobenzene	A	ppbv	1.77	1.77		0.97	0	0	0.202	1	0	182%	70	130	0%	S
1,4-Dichlorobenzene	A	ppbv	1.64	1.64		0.96	0	0	0.194	1	0	171%	70	130	0%	S

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\080511\08051113.D Vial: 2
Acq On : 6 Aug 2011 12:08 am Operator: RACHEL HILL
Sample : TO15 10ppbv CCV 080511a Inst : GC/MS Ins
Misc : CCV EPA_TO15 Multiplr: 1.00
MS Integration Params: CLME.P

Method : C:\HPCHEM\1\METHODS\080511V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Sat Aug 06 09:48:56 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	106	0.00
2	T	Propylene	1.212	1.203	0.7	104	0.00
3	T	Dichlorodifluoromethane	3.889	3.806	2.1	102	0.00
4	T	1,2-Dichloro-1,2,2,2-tetraf	3.063	3.144	-2.6	103	0.00
5	T	Chloromethane	1.210	1.233	-1.9	107	0.00
6	T	Vinyl chloride	0.990	1.010	-2.0	106	0.00
7	T	1,3-Butadiene	0.745	0.747	-0.3	104	0.01
8	T	Bromomethane	1.392	1.535	-10.3	102	0.00
9	T	Chloroethane	0.796	0.849	-6.7	100	0.01
10	T	Trichlorofluoromethane	3.702	3.633	1.9	97	0.00
11	T	Ethanol	0.272	0.262	3.7	106	0.00
12	T	Freon113	2.581	2.555	1.0	95	0.00
13	T	1,1-Dichloroethene	1.962	1.907	2.8	95	0.00
14	T	Acetone	1.505	1.409	6.4	99	0.00
15	T	Carbon disulfide	3.664	3.700	-1.0	99	0.00
16	T	2-Propanol	1.496	1.451	3.0	105	0.00
17	T	Methylene chloride	1.506	1.410	6.4	95	0.00
18	T	tert-Butyl Methyl Ether	2.257	2.222	1.6	103	0.00
19	T	trans-1,2-Dichloroethene	1.780	1.726	3.0	94	0.00
20	T	n-Hexane	1.901	1.890	0.6	96	0.00
21	T	1,1-Dichloroethane	1.971	1.934	1.9	96	0.00
22	T	Vinyl acetate	2.060	2.094	-1.7	103	0.00
23	T	cis-1,2-Dichloroethene	1.179	1.196	-1.4	99	0.00
24	T	2-Butanone	1.337	1.313	1.8	98	0.00
25	T	Ethyl acetate	1.830	1.841	-0.6	102	0.00
26	T	Tetrahydrofuran	0.797	0.783	1.8	103	0.00
27	T	Chloroform	1.910	1.904	0.3	99	0.00
28	T	1,1,1-Trichloroethane	2.114	2.117	-0.1	100	0.00
29	T	Cyclohexane	1.635	1.666	-1.9	98	0.00
30	T	Carbon tetrachloride	2.443	2.428	0.6	98	0.00
31	T	Benzene	2.634	2.710	-2.9	101	0.00
32	T	1,2-Dichloroethane	1.085	1.067	1.7	100	0.00
33	I	1,4-Difluorobenzene	1.000	1.000	0.0	106	0.00
34	T	Heptane	0.519	0.520	-0.2	102	0.00
35	T	Trichloroethene	0.410	0.426	-3.9	101	0.00
36	T	1,2-Dichloropropane	0.251	0.263	-4.8	103	0.00
37	T	1,4-Dioxane	0.129	0.133	-3.1	105	0.00
38	T	Bromodichloromethane	0.473	0.493	-4.2	102	0.00
39	T	cis-1,3-Dichloropropene	0.387	0.412	-6.5	104	0.00
40	T	4-Methyl-2-pentanone	0.178	0.184	-3.4	105	0.00
41	T	Toluene	0.715	0.753	-5.3	103	0.00
42	T	trans-1,3-Dichloropropene	0.341	0.360	-5.6	105	0.00
43	T	1,1,2-Trichloroethane	0.258	0.271	-5.0	104	0.00
44	T	Tetrachloroethene	0.456	0.480	-5.3	103	0.00
45	T	2-Hexanone	0.346	0.355	-2.6	106	0.00
46	T	Chlorodibromomethane	0.443	0.468	-5.6	104	0.00
47	T	1,2-Dibromoethane	0.401	0.428	-6.7	105	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\080511\08051113.D Vial: 2
Acq On : 6 Aug 2011 12:08 am Operator: RACHEL HILL
Sample : TO15 10ppbv CCV 080511a Inst : GC/MS Ins
Misc : CCV EPA_TO15 Multiplr: 1.00
MS Integration Params: CLME.P

Method : C:\HPCHEM\1\METHODS\080511V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Sat Aug 06 09:48:56 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	0.761	0.798	-4.9	105	0.00
50	T	Ethylbenzene	1.137	1.193	-4.9	105	0.00
51	T	m,p-Xylene	0.865	0.857	0.9	104	0.00
52	T	o-Xylene	0.830	0.872	-5.1	106	0.00
53	T	Styrene	0.661	0.705	-6.7	106	0.00
54	T	Bromoform	0.552	0.592	-7.2	109	0.00
55	S	4-Bromofluorobenzene	0.557	0.556	0.2	108	0.00
56	T	1,1,2,2-Tetrachloroethane	0.759	0.729	4.0	112	0.00
57	T	4-Ethyltoluene	1.123	1.231	-9.6	109	0.00
58	T	1,3,5-Trimethylbenzene	1.002	1.052	-5.0	110	0.00
59	T	1,2,4-Trimethylbenzene	0.943	1.010	-7.1	114	0.00
60	T	1,3-Dichlorobenzene	0.624	0.669	-7.2	116	0.00
61	T	1,4-Dichlorobenzene	0.557	0.608	-9.2	119	0.00
62	T	Benzyl chloride	0.630	0.717	-13.8	117	0.00
63	T	1,2-Dichlorobenzene	0.566	0.651	-15.0	118	0.00
64	T	1,2,4-Trichlorobenzene	0.067	0.069	-3.0	124	0.00
65	T	Hexachlorobutadiene	0.170	0.174	-2.4	107	0.00
66		Naphthalene	0.114	0.118	-3.5	120	0.00

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\080511\08051113.D Vial: 2
Acq On : 6 Aug 2011 12:08 am Operator: RACHEL HILL
Sample : TO15 10ppbv CCV 080511a Inst : GC/MS Ins
Misc : CCV EPA_TO15 Multiplr: 1.00
MS Integration Params: CLME.P
Quant Time: Aug 6 9:49 2011 Quant Results File: 080511V1.RES

Quant Method : C:\HPCHEM\1\METHODS\080511V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Sat Aug 06 09:48:56 2011
Response via : Initial Calibration
DataAcq Meth : 080511V1

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	10.58	130	1592326	12.50 ppbv	0.00
33) 1,4-Difluorobenzene	11.69	114	5760884	12.50 ppbv	0.00
48) Chlorobenzene-d5	15.54	117	3900432	12.50 ppbv	0.00

System Monitoring Compounds

55) 4-Bromofluorobenzene	17.19	95	2168536	12.47 ppbv	0.00

Spiked Amount 12.500 Range 70 - 113 Recovery = 99.76%

Target Compounds					Qvalue
2) Propylene	5.52	41	1562752	10.12 ppbv	99
3) Dichlorodifluoromethane	5.59	85	4460068	9.00 ppbv	99
4) 1,2-Dichloro-1,2,2,2-tetra	5.84	135	3804391	9.75 ppbv	98
5) Chloromethane	6.00	50	1492645	9.69 ppbv	99
6) Vinyl chloride	6.21	62	1209208	9.59 ppbv #	98
7) 1,3-Butadiene	6.27	39	933132	9.84 ppbv	97
8) Bromomethane	6.85	94	1818996	10.26 ppbv	100
9) Chloroethane	7.00	64	995458	9.82 ppbv	98
10) Trichlorofluoromethane	7.33	101	4442362	9.42 ppbv	99
11) Ethanol	7.57	45	306760	8.86 ppbv	98
12) Freon113	7.99	101	3189178	9.70 ppbv	98
13) 1,1-Dichloroethene	8.09	61	2405560	9.62 ppbv	99
14) Acetone	8.19	43	1794455	9.36 ppbv #	95
15) Carbon disulfide	8.46	76	4572241	9.80 ppbv #	100
16) 2-Propanol	8.23	45	1866360	9.80 ppbv #	75
17) Methylene chloride	8.75	49	1796305	9.36 ppbv	94
18) tert-Butyl Methyl Ether	8.95	73	2801792	9.75 ppbv	98
19) trans-1,2-Dichloroethene	9.04	61	2154435	9.50 ppbv	99
20) n-Hexane	9.22	57	2431828	10.04 ppbv	95
21) 1,1-Dichloroethane	9.59	63	2389221	9.52 ppbv	99
22) Vinyl acetate	9.53	43	2640248	10.06 ppbv	100
23) cis-1,2-Dichloroethene	10.28	96	1492815	9.94 ppbv	99
24) 2-Butanone	10.24	43	1656391	9.72 ppbv	99
25) Ethyl acetate	10.20	43	2298485	9.86 ppbv #	99
26) Tetrahydrofuran	10.58	42	997767	9.83 ppbv	97
27) Chloroform	10.60	83	2377421	9.77 ppbv	99
28) 1,1,1-Trichloroethane	10.85	97	2588346	9.61 ppbv	99
29) Cyclohexane	10.86	56	2079936	9.99 ppbv	96
30) Carbon tetrachloride	11.01	117	2938108	9.44 ppbv	99
31) Benzene	11.29	78	3313606	9.88 ppbv	99
32) 1,2-Dichloroethane	11.37	62	1318825	9.54 ppbv	99
34) Heptane	11.35	43	2373242	9.92 ppbv	97
35) Trichloroethene	12.03	130	1886391	10.00 ppbv	97
36) 1,2-Dichloropropane	12.38	63	1187080	10.26 ppbv	98
37) 1,4-Dioxane	12.46	88	586800	9.88 ppbv	98
38) Bromodichloromethane	12.66	83	2181653	10.02 ppbv	99
39) cis-1,3-Dichloropropene	13.22	75	1805123	10.12 ppbv	99
40) 4-Methyl-2-pentanone	13.33	58	849213	10.37 ppbv	97
41) Toluene	13.62	91	3402827	10.33 ppbv	100
42) trans-1,3-Dichloropropene	13.93	75	1509402	9.59 ppbv	98
43) 1,1,2-Trichloroethane	14.20	97	1225219	10.30 ppbv	99

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\080511\08051113.D Vial: 2
Acq On : 6 Aug 2011 12:08 am Operator: RACHEL HILL
Sample : TO15 10ppbv CCV 080511a Inst : GC/MS Ins
Misc : CCV EPA_TO15 Multiplr: 1.00
MS Integration Params: CLME.P
Quant Time: Aug 6 9:49 2011 Quant Results File: 080511V1.RES

Quant Method : C:\HPCHEM\1\METHODS\080511V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Sat Aug 06 09:48:56 2011
Response via : Initial Calibration
DataAcq Meth : 080511V1

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
44)	Tetrachloroethene	14.33	166	2122776	10.11 ppbv	99
45)	2-Hexanone	14.41	43	1601279	10.03 ppbv	96
46)	Chlorodibromomethane	14.75	129	2111797	10.34 ppbv	99
47)	1,2-Dibromoethane	14.99	107	1893054	10.25 ppbv	98
49)	Chlorobenzene	15.58	112	2463978	10.38 ppbv	98
50)	Ethylbenzene	15.62	91	3648653	10.28 ppbv	99
51)	m,p-Xylene	15.78	91	5133608	19.02 ppbv	99
52)	o-Xylene	16.37	91	2721349	10.51 ppbv	96
53)	Styrene	16.40	104	2155274	10.44 ppbv	98
54)	Bromoform	16.78	173	1773589	10.29 ppbv	99
56)	1,1,2,2-Tetrachloroethane	17.36	83	2274706	9.61 ppbv	100
57)	4-Ethyltoluene	17.60	105	3764797	10.75 ppbv	100
58)	1,3,5-Trimethylbenzene	17.68	105	3185275	10.19 ppbv	99
59)	1,2,4-Trimethylbenzene	18.27	105	3087199	10.49 ppbv	99
60)	1,3-Dichlorobenzene	18.82	146	2024631	10.39 ppbv	98
61)	1,4-Dichlorobenzene	18.96	146	1821725	10.48 ppbv	98
62)	Benzyl chloride	19.17	91	2170602	11.04 ppbv	96
63)	1,2-Dichlorobenzene	19.61	146	1971343	11.17 ppbv	98
64)	1,2,4-Trichlorobenzene	22.76	180	195453	9.40 ppbv	97
65)	Hexachlorobutadiene	22.96	225	509796	9.64 ppbv	99
66)	Naphthalene	23.45	128	337835	9.46 ppbv	99

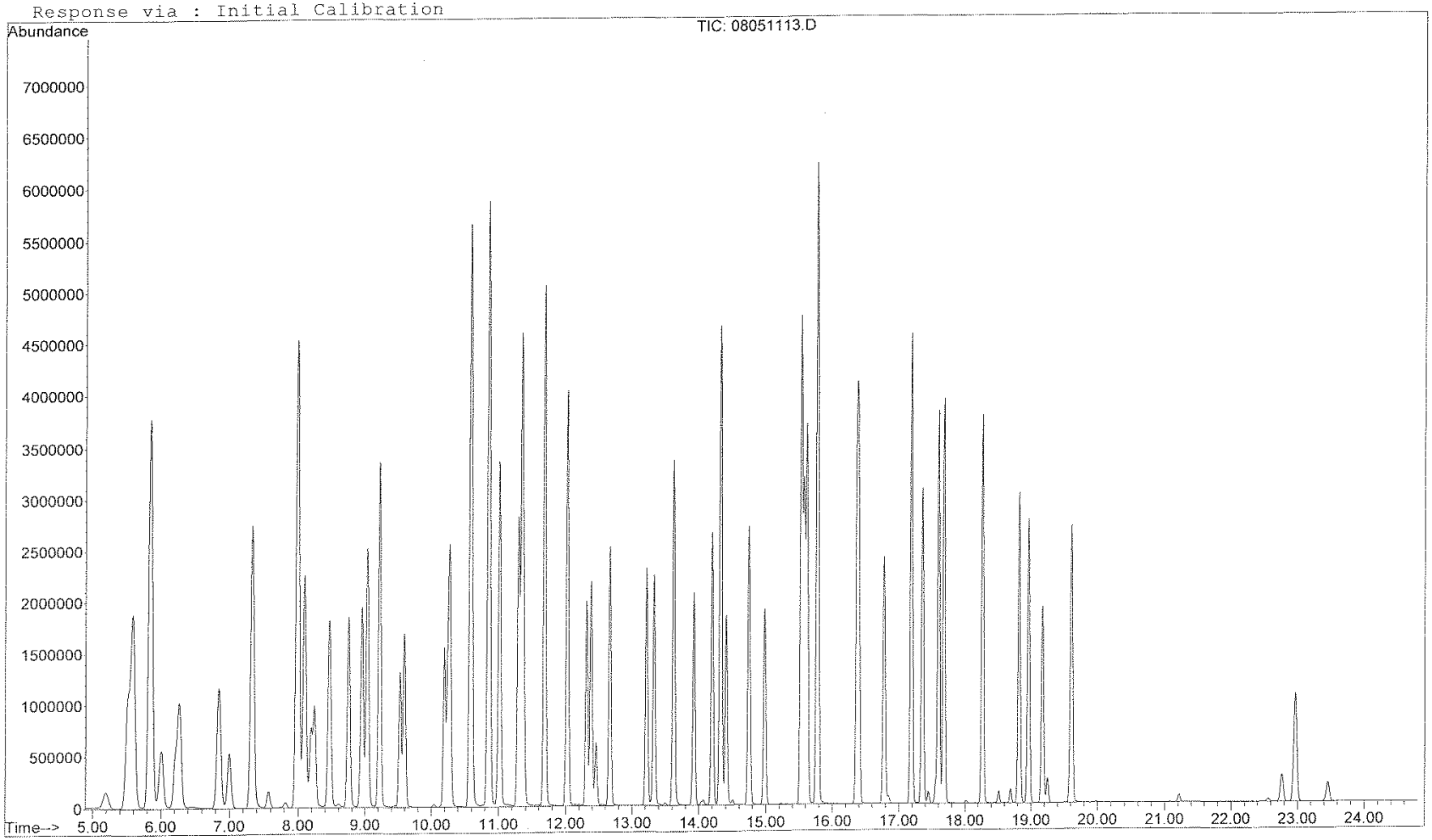
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\080511\08051113.D
Acq On : 6 Aug 2011 12:08 am
Sample : TO15 10ppbv CCV 080511a
Misc : CCV EPA_TO15
MS Integration Params: CLME.P
Quant Time: Aug 6 9:49 2011

Vial: 2
Operator: RACHEL HILL
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: 080511V1.RES

Method : C:\HPCHEM\1\METHODS\080511V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Sat Aug 06 09:48:56 2011
Response via : Initial Calibration



RTI Laboratories

Run ID: VOA1_110807A **Run No.:** 42066

Analytical Run Date: 8/7/2011 **InstrumentID:** VOA1

Analyst: Rachel Hill **Column:**

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

Column Length: 30m

Run Comments: ch rev 8/8/11

SampID	TestCode	SampType	Batch ID	Analysis Date/Time	QA By	Q	Comments
BFB 50cc 080711A	BFB_TUNE	TUNE	R42066	8/7/2011 11:40:00 AM	Celeste Hoitash		
TO15 10ppbv CCV	EPA_TO15	CCV	R42066	8/7/2011 12:21:00 PM	Celeste Hoitash		
TO15 1ppbv RLVS	EPA_TO15	RLVS	R42066	8/7/2011 1:04:00 PM	Celeste Hoitash		
Blank 080711a	EPA_TO15	MBLK	R42066	8/7/2011 1:54:00 PM	Celeste Hoitash		
1107640-016A	EPA_TO15	SAMP	R42066	8/7/2011 2:38:00 PM	Celeste Hoitash		Over-diluted sample. Will re-run at lower dilution. Reported here to show duplicate was analyzed.
1107640-016ADUP	EPA_TO15	DUP	R42066	8/7/2011 3:22:00 PM	Celeste Hoitash		Over-diluted sample. Will re-run at lower dilution. Reported here to show duplicate was analyzed.
1107640-008A	EPA_TO15	SAMP	R42066	8/8/2011 12:03:00 AM	Celeste Hoitash		
1107640-009A	EPA_TO15	SAMP	R42066	8/8/2011 12:51:00 AM	Celeste Hoitash		
1107364-010A	EPA_TO15	SAMP	R42066	8/8/2011 1:36:00 AM	Celeste Hoitash	H	
1107364-011A	EPA_TO15	SAMP	R42066	8/8/2011 2:21:00 AM	Celeste Hoitash	H	
TO15 1ppbv RLVS	EPA_TO15	RLVS	R42066	8/8/2011 3:08:00 AM	Celeste Hoitash		

RTI Laboratories

ANALYTICAL RUN Summary

25-Aug-11

RunNo 42066

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
813204	BFB 50cc 080711A	BFB_TUNE	TUNE	\1\DATA\080711	8/7/2011 11:40:0	1	R42066		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
173	M		0.5	0.5		0	0	0	0	0	0	0%	0	2	0%	
174	M		77.9	77.9		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		99	99		0	0	0	0	0	0	0%	93	101	0%	
177	M		7.2	7.2		0	0	0	0	0	0	0%	5	9	0%	
50	M		19.7	19.7		0	0	0	0	0	0	0%	8	40	0%	
75	M		47.1	47.1		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		7.9	7.9		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
813205	TO15 10ppbv CCV	EPA_TO15	CCV	\1\DATA\080711	8/7/2011 12:21:0	1	R42066		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	9		9.6	0	0	0.107	1	0	94%	70	130	0%	
1,1,2,2-Tetrachloroethane	A	ppbv	9.46	9.46		10	0	0	0.211	1	0	95%	70	130	0%	
1,1,2-Trichloro-1,2,2-trifluoroethane	A	ppbv	9.74	9.74		9.8	0	0	0.108	1	0	99%	70	130	0%	
1,1,2-Trichloroethane	A	ppbv	10.24	10.24		9.8	0	0	0.2	1	0	104%	70	130	0%	
1,1-Dichloroethane	A	ppbv	9.1	9.1		9.7	0	0	0.111	1	0	94%	70	130	0%	
1,1-Dichloroethene	A	ppbv	9.79	9.79		9.9	0	0	0.097	1	0	99%	70	130	0%	
1,2,4-Trichlorobenzene	A	ppbv	8.01	8.01		9.1	0	0	0.271	1	0	88%	70	130	0%	
1,2,4-Trimethylbenzene	A	ppbv	10.42	10.42		9.8	0	0	0.245	1	0	106%	70	130	0%	
1,2-Dibromoethane	A	ppbv	10.29	10.29		9.6	0	0	0.186	1	0	107%	70	130	0%	
1,2-Dichlorobenzene	A	ppbv	10.58	10.58		9.7	0	0	0.208	1	0	109%	70	130	0%	
1,2-Dichloroethane	A	ppbv	8.74	8.74		9.7	0	0	0.196	1	0	90%	70	130	0%	
1,2-Dichloropropane	A	ppbv	10.32	10.32		9.8	0	0	0.224	1	0	105%	70	130	0%	
1,3,5-Trimethylbenzene	A	ppbv	10.42	10.42		9.7	0	0	0.24	1	0	107%	70	130	0%	
1,3-Butadiene	A	ppbv	10.42	10.42		9.8	0	0	0.152	1	0	106%	70	130	0%	
1,3-Dichlorobenzene	A	ppbv	10.14	10.14		9.7	0	0	0.202	1	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
813205	TO15 10ppbv CCV	EPA_TO15	CCV	\I\DATA\080711	8/7/2011 12:21:0	1	R42066		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
1,4-Dichlorobenzene	A	ppbv	10.21	10.21		9.6	0	0	0.194	1	0	106%	70	130	0%	
1,4-Dioxane	A	ppbv	9.71	9.71		9.6	0	0	0.128	1	0	101%	70	130	0%	
2-Butanone	A	ppbv	9.33	9.33		9.9	0	0	0.287	1	0	94%	70	130	0%	
2-Hexanone	A	ppbv	10.23	10.23		9.8	0	0	0.135	1	0	104%	70	130	0%	
2-Propanol	A	ppbv	9.35	9.35		10.1	0	0	0.329	1	0	93%	70	130	0%	
4-Methyl-2-pentanone	A	ppbv	10.3	10.3		10	0	0	0.157	1	0	103%	70	130	0%	
Acetone	A	ppbv	8.81	8.81		10	0	0	0.43	1	0	88%	70	130	0%	
Benzene	A	ppbv	9	9		9.6	0	0	0.126	1	0	94%	70	130	0%	
Benzyl chloride	A	ppbv	10.29	10.29		9.7	0	0	0.155	1	0	106%	70	130	0%	
Bromodichloromethane	A	ppbv	9.87	9.87		9.6	0	0	0.156	1	0	103%	70	130	0%	
Bromoform	A	ppbv	10.14	10.14		9.6	0	0	0.197	1	0	106%	70	130	0%	
Bromomethane	A	ppbv	10.3	10.3		9.3	0	0	0.075	1	0	111%	70	130	0%	
Carbon disulfide	A	ppbv	9.93	9.93		9.7	0	0	0.093	1	0	102%	70	130	0%	
Carbon tetrachloride	A	ppbv	8.73	8.73		9.5	0	0	0.114	1	0	92%	70	130	0%	
Chlorobenzene	A	ppbv	10.48	10.48		9.9	0	0	0.275	1	0	106%	70	130	0%	
Chlorodibromomethane	A	ppbv	10.26	10.26		9.2	0	0	0.165	1	0	112%	70	130	0%	
Chloroethane	A	ppbv	9.94	9.94		9.8	0	0	0.063	1	0	101%	70	130	0%	
Chloroform	A	ppbv	9.27	9.27		9.4	0	0	0.126	1	0	99%	70	130	0%	
Chloromethane	A	ppbv	9.83	9.83		9.8	0	0	0.104	1	0	100%	70	130	0%	
cis-1,2-Dichloroethene	A	ppbv	9.4	9.4		9.8	0	0	0.107	1	0	96%	70	130	0%	
cis-1,3-dichloropropene	A	ppbv	9.85	9.85		9.5	0	0	0.166	1	0	104%	70	130	0%	
Cyclohexane	A	ppbv	9.85	9.85		9.8	0	0	0.684	2	0	101%	70	130	0%	
Dichlorodifluoromethane	A	ppbv	8.82	8.82		9.2	0	0	0.086	1	0	96%	70	130	0%	
Ethanol	A	ppbv	8.38	8.38		9.2	0	0	1.962	5	0	91%	70	130	0%	
Ethyl acetate	A	ppbv	9.42	9.42		9.8	0	0	0.157	1	0	96%	70	130	0%	
Ethylbenzene	A	ppbv	10.28	10.28		9.8	0	0	0.737	2	0	105%	70	130	0%	
Heptane	A	ppbv	10.03	10.03		9.9	0	0	0.249	1	0	101%	70	130	0%	
Hexachlorobutadiene	A	ppbv	10.07	10.07		9.4	0	0	0.374	2	0	107%	70	130	0%	
m,p-Xylene	A	ppbv	19.34	19.34		19.2	0	0	0.524	2	0	101%	70	130	0%	
Methylene chloride	A	ppbv	9.3	9.3		10	0	0	2.077	5	0	93%	70	130	0%	
n-Hexane	A	ppbv	9.87	9.87		10.1	0	0	0.692	2	0	98%	70	130	0%	
Naphthalene	A	ppbv	8.18	8.18		9.2	0	0	0.247	1	0	89%	70	130	0%	
o-Xylene	A	ppbv	10.29	10.29		10	0	0	0.258	1	0	103%	70	130	0%	
Propylene	A	ppbv	9.89	9.89		10.2	0	0	0.075	1	0	97%	70	130	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
813205	TO15 10ppbv CCV	EPA_TO15	CCV	\1\DATA\080711	8/7/2011 12:21:0	1	R42066		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Styrene	A	ppbv	10.62	10.62		9.8	0	0	0.263	1	0	108%	70	130	0%	
tert-Butyl Methyl Ether	A	ppbv	8.59	8.59		9.9	0	0	0.228	1	0	87%	70	130	0%	
Tetrachloroethene	A	ppbv	10.05	10.05		9.6	0	0	0.148	1	0	105%	70	130	0%	
Tetrahydrofuran	A	ppbv	9.42	9.42		10	0	0	0.201	1	0	94%	70	130	0%	
Toluene	A	ppbv	10.29	10.29		9.8	0	0	0.158	1	0	105%	70	130	0%	
trans-1,2-Dichloroethene	A	ppbv	9.39	9.39		9.8	0	0	0.117	1	0	96%	70	130	0%	
trans-1,3-dichloropropene	A	ppbv	9.44	9.44		9.1	0	0	0.171	1	0	104%	70	130	0%	
Trichloroethene	A	ppbv	9.88	9.88		9.6	0	0	0.119	1	0	103%	70	130	0%	
Trichlorofluoromethane	A	ppbv	9.37	9.37		9.6	0	0	0.148	1	0	98%	70	130	0%	
Vinyl acetate	A	ppbv	9.16	9.16		9.9	0	0	0.266	1	0	93%	70	130	0%	
Vinyl chloride	A	ppbv	10.07	10.07		9.4	0	0	0.072	1	0	107%	70	130	0%	
Xylenes, Total	C	ppbv	29.63	29.63		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	12.65	12.65		12.5	0	0	0	0	0	101%	70	130	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
813206	TO15 1ppbv RLVS	EPA_TO15	RLVS	\1\DATA\080711	8/7/2011 1:04:00	1	R42066		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	0.88	0.88		0.996	0	0	0.107	1	0	88%	70	130	0%	
1,1,2,2-Tetrachloroethane	A	ppbv	1.45	1.45		1	0	0	0.211	1	0	145%	70	130	0%	S
1,1,2-Trichloro-1,2,2-trifluoroethane	A	ppbv	0.98	0.98		0.98	0	0	0.108	1	0	100%	70	130	0%	
1,1,2-Trichloroethane	A	ppbv	1.12	1.12		0.98	0	0	0.2	1	0	114%	70	130	0%	
1,1-Dichloroethane	A	ppbv	0.85	0.85		0.97	0	0	0.111	1	0	88%	70	130	0%	
1,1-Dichloroethene	A	ppbv	0.89	0.89		0.99	0	0	0.097	1	0	90%	70	130	0%	
1,2,4-Trichlorobenzene	A	ppbv	2.17	2.17		0.91	0	0	0.271	1	0	238%	70	130	0%	S
1,2,4-Trimethylbenzene	A	ppbv	1.75	1.75		0.98	0	0	0.245	1	0	179%	70	130	0%	S
1,2-Dibromoethane	A	ppbv	1.11	1.11		0.96	0	0	0.186	1	0	116%	70	130	0%	
1,2-Dichlorobenzene	A	ppbv	1.78	1.78		0.97	0	0	0.208	1	0	184%	70	130	0%	S
1,2-Dichloroethane	A	ppbv	0.89	0.89		0.97	0	0	0.196	1	0	92%	70	130	0%	
1,2-Dichloropropane	A	ppbv	1.08	1.08		0.98	0	0	0.224	1	0	110%	70	130	0%	

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\080711\08071102.D Vial: 2
Acq On : 7 Aug 2011 12:21 pm Operator: RACHEL HILL
Sample : TO15 10ppbv CCV 080711a Inst : GC/MS Ins
Misc : CCV EPA_TO15 Multiplr: 1.00
MS Integration Params: CLME.P

Method : C:\HPCHEM\1\METHODS\080511V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Sat Aug 06 09:48:56 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	97	0.00
2	T	Propylene	1.212	1.175	3.1	93	0.00
3	T	Dichlorodifluoromethane	3.889	3.729	4.1	91	0.00
4	T	1,2-Dichloro-1,2,2,2-tetraf	3.063	3.069	-0.2	92	0.00
5	T	Chloromethane	1.210	1.251	-3.4	99	0.00
6	T	Vinyl chloride	0.990	1.060	-7.1	102	0.00
7	T	1,3-Butadiene	0.745	0.792	-6.3	101	0.00
8	T	Bromomethane	1.392	1.543	-10.8	94	0.00
9	T	Chloroethane	0.796	0.860	-8.0	93	0.00
10	T	Trichlorofluoromethane	3.702	3.613	2.4	88	0.00
11	T	Ethanol	0.272	0.247	9.2	92	0.00
12	T	Freon113	2.581	2.566	0.6	88	0.00
13	T	1,1-Dichloroethene	1.962	1.941	1.1	89	0.00
14	T	Acetone	1.505	1.326	11.9	86	0.00
15	T	Carbon disulfide	3.664	3.749	-2.3	92	0.00
16	T	2-Propanol	1.496	1.384	7.5	92	0.00
17	T	Methylene chloride	1.506	1.401	7.0	86	0.00
18	T	tert-Butyl Methyl Ether	2.257	1.958	13.2	84	0.00
19	T	trans-1,2-Dichloroethene	1.780	1.705	4.2	85	0.00
20	T	n-Hexane	1.901	1.859	2.2	87	0.00
21	T	1,1-Dichloroethane	1.971	1.849	6.2	84	0.00
22	T	Vinyl acetate	2.060	1.907	7.4	86	0.00
23	T	cis-1,2-Dichloroethene	1.179	1.131	4.1	86	0.00
24	T	2-Butanone	1.337	1.260	5.8	86	0.00
25	T	Ethyl acetate	1.830	1.759	3.9	90	0.00
26	T	Tetrahydrofuran	0.797	0.751	5.8	91	0.00
27	T	Chloroform	1.910	1.807	5.4	86	0.00
28	T	1,1,1-Trichloroethane	2.114	1.981	6.3	85	0.00
29	T	Cyclohexane	1.635	1.643	-0.5	89	0.00
30	T	Carbon tetrachloride	2.443	2.245	8.1	83	0.00
31	T	Benzene	2.634	2.468	6.3	84	0.00
32	T	1,2-Dichloroethane	1.085	0.977	10.0	84	0.00
33	I	1,4-Difluorobenzene	1.000	1.000	0.0	93	0.00
34	T	Heptane	0.519	0.526	-1.3	91	0.00
35	T	Trichloroethene	0.410	0.422	-2.9	88	0.00
36	T	1,2-Dichloropropane	0.251	0.264	-5.2	91	0.00
37	T	1,4-Dioxane	0.129	0.130	-0.8	91	0.00
38	T	Bromodichloromethane	0.473	0.486	-2.7	89	0.00
39	T	cis-1,3-Dichloropropene	0.387	0.402	-3.9	90	0.00
40	T	4-Methyl-2-pentanone	0.178	0.183	-2.8	92	0.00
41	T	Toluene	0.715	0.751	-5.0	91	0.00
42	T	trans-1,3-Dichloropropene	0.341	0.354	-3.8	91	0.00
43	T	1,1,2-Trichloroethane	0.258	0.270	-4.7	91	0.00
44	T	Tetrachloroethene	0.456	0.477	-4.6	91	0.00
45	T	2-Hexanone	0.346	0.361	-4.3	95	0.00
46	T	Chlorodibromomethane	0.443	0.464	-4.7	91	0.00
47	T	1,2-Dibromoethane	0.401	0.430	-7.2	93	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\080711\08071102.D Vial: 2
Acq On : 7 Aug 2011 12:21 pm Operator: RACHEL HILL
Sample : TO15 10ppbv CCV 080711a Inst : GC/MS Ins
Misc : CCV EPA_TO15 Multiplr: 1.00
MS Integration Params: CLME.P

Method : C:\HPCHEM\1\METHODS\080511V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Sat Aug 06 09:48:56 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	0.761	0.805	-5.8	94	0.00
50	T	Ethylbenzene	1.137	1.193	-4.9	93	0.00
51	T	m,p-Xylene	0.865	0.871	-0.7	94	0.00
52	T	o-Xylene	0.830	0.855	-3.0	92	0.00
53	T	Styrene	0.661	0.716	-8.3	96	0.00
54	T	Bromoform	0.552	0.584	-5.8	95	0.00
55	S	4-Bromofluorobenzene	0.557	0.564	-1.3	97	0.00
56	T	1,1,2,2-Tetrachloroethane	0.759	0.718	5.4	98	0.00
57	T	4-Ethyltoluene	1.123	1.262	-12.4	99	0.00
58	T	1,3,5-Trimethylbenzene	1.002	1.076	-7.4	99	0.00
59	T	1,2,4-Trimethylbenzene	0.943	1.003	-6.4	100	0.00
60	T	1,3-Dichlorobenzene	0.624	0.653	-4.6	101	0.00
61	T	1,4-Dichlorobenzene	0.557	0.592	-6.3	102	0.00
62	T	Benzyl chloride	0.630	0.668	-6.0	96	0.00
63	T	1,2-Dichlorobenzene	0.566	0.617	-9.0	99	0.00
64	T	1,2,4-Trichlorobenzene	0.067	0.059	11.9	94	0.00
65	T	Hexachlorobutadiene	0.170	0.182	-7.1	99	0.00
66		Naphthalene	0.114	0.102	10.5	92	0.00

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\080711\08071102.D Vial: 2
Acq On : 7 Aug 2011 12:21 pm Operator: RACHEL HILL
Sample : TO15 10ppbv CCV 080711a Inst : GC/MS Ins
Misc : CCV EPA_TO15 Multiplr: 1.00
MS Integration Params: CLME.P
Quant Time: Aug 7 12:46 2011 Quant Results File: 080511V1.RES

Quant Method : C:\HPCHEM\1\METHODS\080511V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Sat Aug 06 09:48:56 2011
Response via : Initial Calibration
DataAcq Meth : 080511V1

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	10.58	130	1459369	12.50 ppbv	0.00
33) 1,4-Difluorobenzene	11.69	114	5082210	12.50 ppbv	0.00
48) Chlorobenzene-d5	15.54	117	3453280	12.50 ppbv	0.00

System Monitoring Compounds

55) 4-Bromofluorobenzene	17.19	95	1947712	12.65 ppbv	0.00

Spiked Amount 12.500 Range 70 - 113 Recovery = 101.20%

Target Compounds					Qvalue
2) Propylene	5.52	41	1399330	9.89 ppbv	98
3) Dichlorodifluoromethane	5.58	85	4005142	8.82 ppbv	99
4) 1,2-Dichloro-1,2,2,2-tetra	5.84	135	3403984	9.52 ppbv	98
5) Chloromethane	6.00	50	1387944	9.83 ppbv	100
6) Vinyl chloride	6.21	62	1162978	10.07 ppbv #	98
7) 1,3-Butadiene	6.27	39	906394	10.42 ppbv	97
8) Bromomethane	6.84	94	1675043	10.30 ppbv	100
9) Chloroethane	7.00	64	923709	9.94 ppbv	98
10) Trichlorofluoromethane	7.33	101	4049935	9.37 ppbv	100
11) Ethanol	7.57	45	265675	8.38 ppbv	99
12) Freon113	7.98	101	2935898	9.74 ppbv	97
13) 1,1-Dichloroethene	8.09	61	2243599	9.79 ppbv	98
14) Acetone	8.18	43	1547756	8.81 ppbv #	95
15) Carbon disulfide	8.46	76	4245893	9.93 ppbv #	100
16) 2-Propanol	8.24	45	1632408	9.35 ppbv #	1
17) Methylene chloride	8.75	49	1636062	9.30 ppbv	93
18) tert-Butyl Methyl Ether	8.95	73	2263308	8.59 ppbv	96
19) trans-1,2-Dichloroethene	9.04	61	1950377	9.39 ppbv	99
20) n-Hexane	9.22	57	2191840	9.87 ppbv	95
21) 1,1-Dichloroethane	9.59	63	2093764	9.10 ppbv	99
22) Vinyl acetate	9.53	43	2203814	9.16 ppbv	100
23) cis-1,2-Dichloroethene	10.27	96	1294467	9.40 ppbv	98
24) 2-Butanone	10.24	43	1456607	9.33 ppbv	99
25) Ethyl acetate	10.20	43	2012763	9.42 ppbv #	100
26) Tetrahydrofuran	10.58	42	876257	9.42 ppbv	96
27) Chloroform	10.60	83	2066929	9.27 ppbv	99
28) 1,1,1-Trichloroethane	10.85	97	2220403	9.00 ppbv	99
29) Cyclohexane	10.86	56	1879782	9.85 ppbv	96
30) Carbon tetrachloride	11.02	117	2489531	8.73 ppbv	99
31) Benzene	11.29	78	2766405	9.00 ppbv	99
32) 1,2-Dichloroethane	11.37	62	1106942	8.74 ppbv	99
34) Heptane	11.34	43	2116701	10.03 ppbv	97
35) Trichloroethene	12.03	130	1645405	9.88 ppbv	98
36) 1,2-Dichloropropane	12.38	63	1053041	10.32 ppbv	97
37) 1,4-Dioxane	12.46	88	508677	9.71 ppbv	98
38) Bromodichloromethane	12.66	83	1896835	9.87 ppbv	99
39) cis-1,3-Dichloropropene	13.22	75	1550932	9.85 ppbv	99
40) 4-Methyl-2-pentanone	13.33	58	744231	10.30 ppbv	95
41) Toluene	13.63	91	2990874	10.29 ppbv	99
42) trans-1,3-Dichloropropene	13.93	75	1309718	9.44 ppbv	98
43) 1,1,2-Trichloroethane	14.20	97	1074497	10.24 ppbv	99

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\080711\08071102.D Vial: 2
Acq On : 7 Aug 2011 12:21 pm Operator: RACHEL HILL
Sample : TO15 10ppbv CCV 080711a Inst : GC/MS Ins
Misc : CCV EPA_TO15 Multiplr: 1.00
MS Integration Params: CLME.P
Quant Time: Aug 7 12:46 2011 Quant Results File: 080511V1.RES

Quant Method : C:\HPCHEM\1\METHODS\080511V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Sat Aug 06 09:48:56 2011
Response via : Initial Calibration
DataAcq Meth : 080511V1

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
44) Tetrachloroethene	14.33	166	1861656	10.05 ppbv	98
45) 2-Hexanone	14.41	43	1440108	10.23 ppbv	97
46) Chlorodibromomethane	14.75	129	1849581	10.26 ppbv	99
47) 1,2-Dibromoethane	14.98	107	1676455	10.29 ppbv	99
49) Chlorobenzene	15.58	112	2202611	10.48 ppbv	97
50) Ethylbenzene	15.63	91	3230740	10.28 ppbv	100
51) m,p-Xylene	15.78	91	4621577	19.34 ppbv	99
52) o-Xylene	16.37	91	2360989	10.29 ppbv	96
53) Styrene	16.40	104	1939623	10.62 ppbv	97
54) Bromoform	16.78	173	1547545	10.14 ppbv	100
56) 1,1,2,2-Tetrachloroethane	17.36	83	1983176	9.46 ppbv	99
57) 4-Ethyltoluene	17.60	105	3416970	11.02 ppbv	99
58) 1,3,5-Trimethylbenzene	17.68	105	2884080	10.42 ppbv	100
59) 1,2,4-Trimethylbenzene	18.27	105	2714634	10.42 ppbv	98
60) 1,3-Dichlorobenzene	18.82	146	1749004	10.14 ppbv	97
61) 1,4-Dichlorobenzene	18.96	146	1571287	10.21 ppbv	98
62) Benzyl chloride	19.17	91	1790829	10.29 ppbv	97
63) 1,2-Dichlorobenzene	19.61	146	1652978	10.58 ppbv	97
64) 1,2,4-Trichlorobenzene	22.76	180	147399	8.01 ppbv	99
65) Hexachlorobutadiene	22.97	225	471822	10.07 ppbv	99
66) Naphthalene	23.46	128	258668	8.18 ppbv	99

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

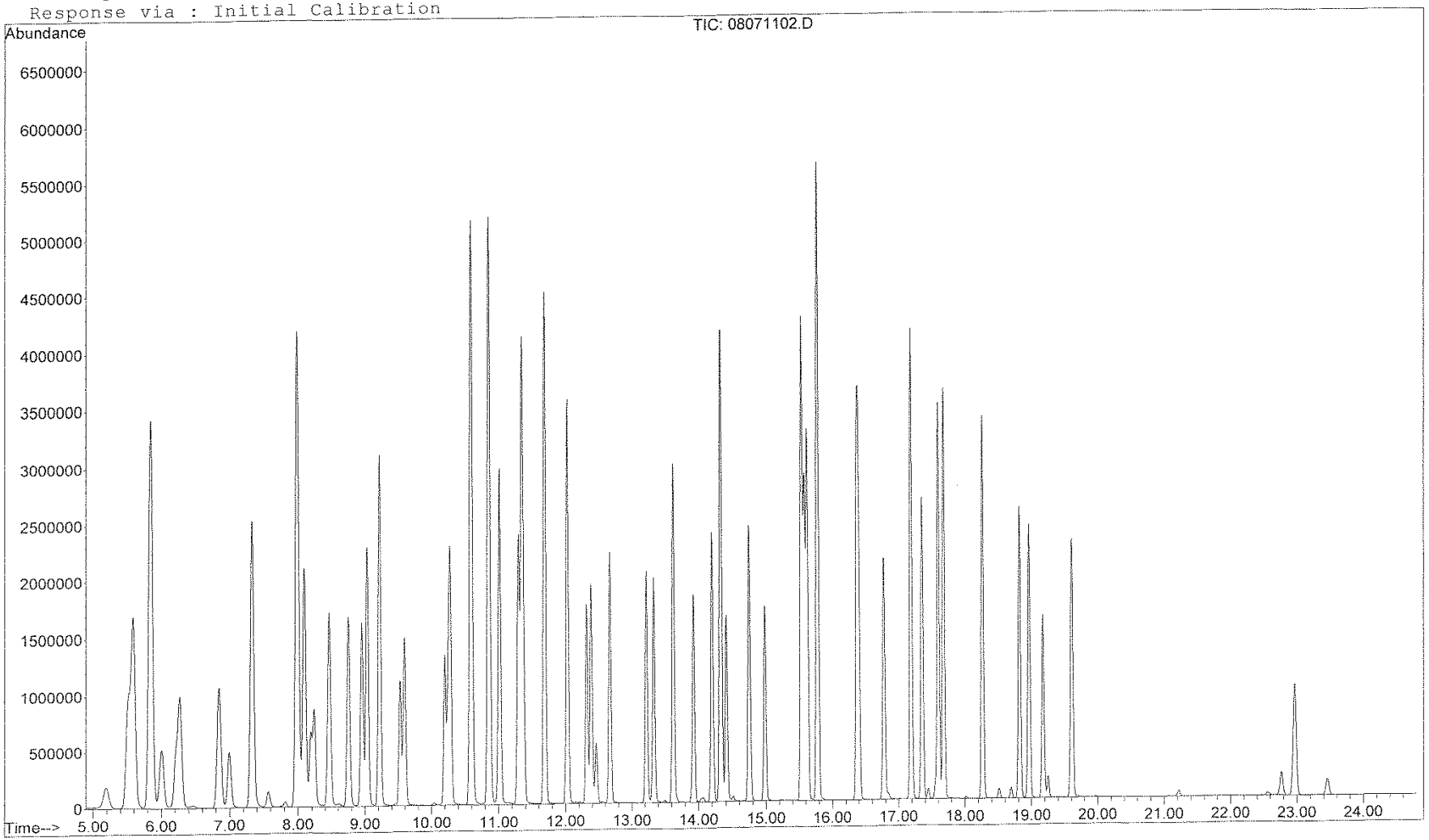
Quantitation Report

Data File : C:\HPCHEM\1\DATA\080711\08071102.D
Acq On : 7 Aug 2011 12:21 pm
Sample : TO15 10ppbv CCV 080711a
Misc : CCV EPA_TO15
MS Integration Params: CLME.P
Quant Time: Aug 7 12:46 2011

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

Quant Results File: 080511V1.RES

Method : C:\HPCHEM\1\METHODS\080511V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Sat Aug 06 09:48:56 2011
Response via : Initial Calibration



RTI Laboratories

Run ID: VOA1_110808A **Run No.:** 42093

Analytical Run Date: 8/8/2011 **InstrumentID:** VOA1

Analyst: Rachel Hill **Column:**

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

Column Length: 30m

Run Comments: ch rev 8/12/11 Actual run date: 8/9/2011 NOT 8/8/2011

SampID	TestCode	SampType	Batch ID	Analysis Date/Time	QA By	Q	Comments
BFB 50cc 080911A	BFB_TUNE	TUNE	R42093	8/9/2011 9:56:00 AM	Celeste Hoitash		
TO15 10ppbv CCV	EPA_TO15	CCV	R42093	8/9/2011 11:21:00 AM	Celeste Hoitash		
TO15 1ppbv RLVS	EPA_TO15	RLVS	R42093	8/9/2011 12:59:00 PM	Celeste Hoitash		
Blank 080911a	EPA_TO15	MBLK	R42093	8/9/2011 1:50:00 PM	Celeste Hoitash		
1108186-005A	EPA_TO15	SAMP	R42093	8/9/2011 2:34:00 PM	Celeste Hoitash		
1108186-005ADUP	EPA_TO15	DUP	R42093	8/9/2011 3:19:00 PM	Celeste Hoitash		
1108186-003A	EPA_TO15	SAMP	R42093	8/9/2011 4:11:00 PM	Celeste Hoitash		
1108186-004A	EPA_TO15	SAMP	R42093	8/9/2011 5:01:00 PM	Celeste Hoitash		
1108186-006A	EPA_TO15	SAMP	R42093	8/9/2011 5:44:00 PM	Celeste Hoitash		
1107364-012A	EPA_TO15	SAMP	R42093	8/9/2011 6:26:00 PM	Celeste Hoitash	H	
1107640-016A	EPA_TO15	SAMP	R42093	8/9/2011 7:10:00 PM	Celeste Hoitash		
1107640-017A	EPA_TO15	SAMP	R42093	8/9/2011 7:54:00 PM	Celeste Hoitash		
1107640-018A	EPA_TO15	SAMP	R42093	8/9/2011 8:39:00 PM	Celeste Hoitash		
1107640-019A	EPA_TO15	SAMP	R42093	8/9/2011 9:22:00 PM	Celeste Hoitash		
1107640-020A	EPA_TO15	SAMP	R42093	8/9/2011 10:06:00 PM	Celeste Hoitash		
1107640-021A	EPA_TO15	SAMP	R42093	8/9/2011 10:51:00 PM	Celeste Hoitash		
1107640-022A	EPA_TO15	SAMP	R42093	8/9/2011 11:35:00 PM	Celeste Hoitash		
1107640-004A	EPA_TO15	SAMP	R42093	8/10/2011 12:19:00 AM	Celeste Hoitash		
1107640-005A	EPA_TO15	SAMP	R42093	8/10/2011 1:03:00 AM	Celeste Hoitash		
1107640-006A	EPA_TO15	SAMP	R42093	8/10/2011 1:47:00 AM	Celeste Hoitash		
1107640-007A	EPA_TO15	SAMP	R42093	8/10/2011 2:31:00 AM	Celeste Hoitash		
1107640-024A	EPA_TO15	SAMP	R42093	8/10/2011 4:10:00 AM	Celeste Hoitash		
TO15 1ppbv RLVS	EPA_TO15	RLVS	R42093	8/10/2011 4:54:00 AM	Celeste Hoitash		

RTI Laboratories

ANALYTICAL RUN Summary

12-Aug-11

RunNo 42093

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
814545	BFB 50cc 080911A	BFB_TUNE	TUNE	\I\DATA\080911	8/9/2011 9:56:00	1	R42093		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		79.5	79.5		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		97.1	97.1		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		19.8	19.8		0	0	0	0	0	0	0%	8	40	0%	
75	M		45.6	45.6		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		8.1	8.1		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
814546	TO15 10ppbv CCV	EPA_TO15	CCV	\I\DATA\080911	8/9/2011 11:21:0	1	R42093		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	9.69	9.69		9.6	0	0	0.107	1	0	101%	70	130	0%	
1,1,2,2-Tetrachloroethane	A	ppbv	9.33	9.33		10	0	0	0.211	1	0	93%	70	130	0%	
1,1,2-Trichloro-1,2,2-trifluoroethane	A	ppbv	10.66	10.66		9.8	0	0	0.108	1	0	109%	70	130	0%	
1,1,2-Trichloroethane	A	ppbv	11.06	11.06		9.8	0	0	0.2	1	0	113%	70	130	0%	
1,1-Dichloroethane	A	ppbv	9.35	9.35		9.7	0	0	0.111	1	0	96%	70	130	0%	
1,1-Dichloroethene	A	ppbv	10.92	10.92		9.9	0	0	0.097	1	0	110%	70	130	0%	
1,2,4-Trichlorobenzene	A	ppbv	10.13	10.13		9.1	0	0	0.271	1	0	111%	70	130	0%	
1,2,4-Trimethylbenzene	A	ppbv	11.32	11.32		9.8	0	0	0.245	1	0	116%	70	130	0%	
1,2-Dibromoethane	A	ppbv	11.16	11.16		9.6	0	0	0.186	1	0	116%	70	130	0%	
1,2-Dichlorobenzene	A	ppbv	11.36	11.36		9.7	0	0	0.208	1	0	117%	70	130	0%	
1,2-Dichloroethane	A	ppbv	10.04	10.04		9.7	0	0	0.196	1	0	104%	70	130	0%	
1,2-Dichloropropane	A	ppbv	11.22	11.22		9.8	0	0	0.224	1	0	114%	70	130	0%	
1,3,5-Trimethylbenzene	A	ppbv	11.07	11.07		9.7	0	0	0.24	1	0	114%	70	130	0%	
1,3-Butadiene	A	ppbv	11.89	11.89		9.8	0	0	0.152	1	0	121%	70	130	0%	
1,3-Dichlorobenzene	A	ppbv	10.91	10.91		9.7	0	0	0.202	1	0	112%	70	130	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
814546	TO15 10ppbv CCV	EPA_TO15	CCV	\1\DATA\080911	8/9/2011 11:21:0	1	R42093		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
1,4-Dichlorobenzene	A	ppbv	10.87	10.87		9.6	0	0	0.194	1	0	113%	70	130	0%	
1,4-Dioxane	A	ppbv	10.36	10.36		9.6	0	0	0.128	1	0	108%	70	130	0%	
2-Butanone	A	ppbv	11.13	11.13		9.9	0	0	0.287	1	0	112%	70	130	0%	
2-Hexanone	A	ppbv	11.01	11.01		9.8	0	0	0.135	1	0	112%	70	130	0%	
2-Propanol	A	ppbv	10.56	10.56		10.1	0	0	0.329	1	0	105%	70	130	0%	
4-Methyl-2-pentanone	A	ppbv	11.76	11.76		10	0	0	0.157	1	0	118%	70	130	0%	
Acetone	A	ppbv	10.07	10.07		10	0	0	0.43	1	0	101%	70	130	0%	
Benzene	A	ppbv	9.53	9.53		9.6	0	0	0.126	1	0	99%	70	130	0%	
Benzyl chloride	A	ppbv	11.59	11.59		9.7	0	0	0.155	1	0	119%	70	130	0%	
Bromodichloromethane	A	ppbv	11.12	11.12		9.6	0	0	0.156	1	0	116%	70	130	0%	
Bromoform	A	ppbv	11.51	11.51		9.6	0	0	0.197	1	0	120%	70	130	0%	
Bromomethane	A	ppbv	8.48	8.48		9.3	0	0	0.075	1	0	91%	70	130	0%	
Carbon disulfide	A	ppbv	10.06	10.06		9.7	0	0	0.093	1	0	104%	70	130	0%	
Carbon tetrachloride	A	ppbv	9.6	9.6		9.5	0	0	0.114	1	0	101%	70	130	0%	
Chlorobenzene	A	ppbv	11.48	11.48		9.9	0	0	0.275	1	0	116%	70	130	0%	
Chlorodibromomethane	A	ppbv	11.51	11.51		9.2	0	0	0.165	1	0	125%	70	130	0%	
Chloroethane	A	ppbv	9.78	9.78		9.8	0	0	0.063	1	0	100%	70	130	0%	
Chloroform	A	ppbv	9.61	9.61		9.4	0	0	0.126	1	0	102%	70	130	0%	
Chloromethane	A	ppbv	10.84	10.84		9.8	0	0	0.104	1	0	111%	70	130	0%	
cis-1,2-Dichloroethene	A	ppbv	9.33	9.33		9.8	0	0	0.107	1	0	95%	70	130	0%	
cis-1,3-dichloropropene	A	ppbv	11.35	11.35		9.5	0	0	0.166	1	0	119%	70	130	0%	
Cyclohexane	A	ppbv	10.47	10.47		9.8	0	0	0.684	2	0	107%	70	130	0%	
Dichlorodifluoromethane	A	ppbv	9.34	9.34		9.2	0	0	0.086	1	0	102%	70	130	0%	
Ethanol	A	ppbv	9.44	9.44		9.2	0	0	1.962	5	0	103%	70	130	0%	
Ethyl acetate	A	ppbv	11.02	11.02		9.8	0	0	0.157	1	0	112%	70	130	0%	
Ethylbenzene	A	ppbv	11.02	11.02		9.8	0	0	0.737	2	0	112%	70	130	0%	
Heptane	A	ppbv	11.16	11.16		9.9	0	0	0.249	1	0	113%	70	130	0%	
Hexachlorobutadiene	A	ppbv	11.5	11.5		9.4	0	0	0.374	2	0	122%	70	130	0%	
m,p-Xylene	A	ppbv	20.9	20.9		19.2	0	0	0.524	2	0	109%	70	130	0%	
Methylene chloride	A	ppbv	10.21	10.21		10	0	0	2.077	5	0	102%	70	130	0%	
n-Hexane	A	ppbv	10.47	10.47		10.1	0	0	0.692	2	0	104%	70	130	0%	
Naphthalene	A	ppbv	9.95	9.95		9.2	0	0	0.247	1	0	108%	70	130	0%	
o-Xylene	A	ppbv	11.32	11.32		10	0	0	0.258	1	0	113%	70	130	0%	
Propylene	A	ppbv	10.59	10.59		10.2	0	0	0.075	1	0	104%	70	130	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
814546	TO15 10ppbv CCV	EPA_TO15	CCV	\1\DATA\080911	8/9/2011 11:21:0	1	R42093		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Styrene	A	ppbv	11.49	11.49		9.8	0	0	0.263	1	0	117%	70	130	0%	
tert-Butyl Methyl Ether	A	ppbv	10.42	10.42		9.9	0	0	0.228	1	0	105%	70	130	0%	
Tetrachloroethene	A	ppbv	11.48	11.48		9.6	0	0	0.148	1	0	120%	70	130	0%	
Tetrahydrofuran	A	ppbv	10.47	10.47		10	0	0	0.201	1	0	105%	70	130	0%	
Toluene	A	ppbv	11.38	11.38		9.8	0	0	0.158	1	0	116%	70	130	0%	
trans-1,2-Dichloroethene	A	ppbv	10.09	10.09		9.8	0	0	0.117	1	0	103%	70	130	0%	
trans-1,3-dichloropropene	A	ppbv	10.88	10.88		9.1	0	0	0.171	1	0	120%	70	130	0%	
Trichloroethene	A	ppbv	11	11		9.6	0	0	0.119	1	0	115%	70	130	0%	
Trichlorofluoromethane	A	ppbv	10.23	10.23		9.6	0	0	0.148	1	0	107%	70	130	0%	
Vinyl acetate	A	ppbv	10.52	10.52		9.9	0	0	0.266	1	0	106%	70	130	0%	
Vinyl chloride	A	ppbv	11.83	11.83		9.4	0	0	0.072	1	0	126%	70	130	0%	
Xylenes, Total	C	ppbv	32.22	32.22		29.2	0	0	0.782	3	0	110%	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	12.61	12.61		12.5	0	0	0	0	0	101%	70	130	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
814547	TO15 1ppbv RLVS	EPA_TO15	RLVS	\1\DATA\080911	8/9/2011 12:59:0	1	R42093		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	0.91	0.91		0.996	0	0	0.107	1	0	91%	70	130	0%	
1,1,2,2-Tetrachloroethane	A	ppbv	1.28	1.28		1	0	0	0.211	1	0	128%	70	130	0%	
1,1,2-Trichloro-1,2,2-trifluoroethane	A	ppbv	0.96	0.96		0.98	0	0	0.108	1	0	98%	70	130	0%	
1,1,2-Trichloroethane	A	ppbv	1.01	1.01		0.98	0	0	0.2	1	0	103%	70	130	0%	
1,1-Dichloroethane	A	ppbv	0.88	0.88		0.97	0	0	0.111	1	0	91%	70	130	0%	
1,1-Dichloroethene	A	ppbv	0.91	0.91		0.99	0	0	0.097	1	0	92%	70	130	0%	
1,2,4-Trichlorobenzene	A	ppbv	2.1	2.1		0.91	0	0	0.271	1	0	231%	70	130	0%	S
1,2,4-Trimethylbenzene	A	ppbv	1.94	1.94		0.98	0	0	0.245	1	0	198%	70	130	0%	S
1,2-Dibromoethane	A	ppbv	1.03	1.03		0.96	0	0	0.186	1	0	107%	70	130	0%	
1,2-Dichlorobenzene	A	ppbv	1.75	1.75		0.97	0	0	0.208	1	0	180%	70	130	0%	S
1,2-Dichloroethane	A	ppbv	0.87	0.87		0.97	0	0	0.196	1	0	90%	70	130	0%	
1,2-Dichloropropane	A	ppbv	0.96	0.96		0.98	0	0	0.224	1	0	98%	70	130	0%	

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\080911\08091103.D Vial: 3
Acq On : 9 Aug 2011 11:21 am Operator: RACHEL HILL
Sample : TO15 10ppbv CCV 080911a Inst : GC/MS Ins
Misc : CCV EPA_TO15 Multiplr: 1.00
MS Integration Params: CLME.P

Method : C:\HPCHEM\1\METHODS\080511V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Sat Aug 06 09:48:56 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	106	0.00
2	T	Propylene	1.212	1.258	-3.8	109	0.00
3	T	Dichlorodifluoromethane	3.889	3.950	-1.6	106	0.00
4	T	1,2-Dichloro-1,2,2,2-tetraf	3.063	3.254	-6.2	106	0.00
5	T	Chloromethane	1.210	1.380	-14.0	119	0.00
6	T	Vinyl chloride	0.990	1.245	-25.8	131	0.00
7	T	1,3-Butadiene	0.745	0.904	-21.3	125	0.00
8	T	Bromomethane	1.392	1.270	8.8	84	0.00
9	T	Chloroethane	0.796	0.846	-6.3	100	0.00
10	T	Trichlorofluoromethane	3.702	3.944	-6.5	105	0.00
11	T	Ethanol	0.272	0.279	-2.6	113	0.00
12	T	Freon113	2.581	2.808	-8.8	105	0.00
13	T	1,1-Dichloroethene	1.962	2.166	-10.4	108	0.00
14	T	Acetone	1.505	1.515	-0.7	107	0.00
15	T	Carbon disulfide	3.664	3.800	-3.7	102	0.00
16	T	2-Propanol	1.496	1.564	-4.5	113	0.00
17	T	Methylene chloride	1.506	1.538	-2.1	104	0.00
18	T	tert-Butyl Methyl Ether	2.257	2.375	-5.2	111	0.00
19	T	trans-1,2-Dichloroethene	1.780	1.833	-3.0	100	0.00
20	T	n-Hexane	1.901	1.970	-3.6	100	0.00
21	T	1,1-Dichloroethane	1.971	1.899	3.7	94	0.00
22	T	Vinyl acetate	2.060	2.190	-6.3	108	0.00
23	T	cis-1,2-Dichloroethene	1.179	1.123	4.7	93	0.00
24	T	2-Butanone	1.337	1.503	-12.4	113	0.00
25	T	Ethyl acetate	1.830	2.058	-12.5	114	0.00
26	T	Tetrahydrofuran	0.797	0.834	-4.6	110	0.00
27	T	Chloroform	1.910	1.874	1.9	97	0.00
28	T	1,1,1-Trichloroethane	2.114	2.133	-0.9	101	0.00
29	T	Cyclohexane	1.635	1.746	-6.8	103	0.00
30	T	Carbon tetrachloride	2.443	2.468	-1.0	100	0.00
31	T	Benzene	2.634	2.614	0.8	98	0.00
32	T	1,2-Dichloroethane	1.085	1.123	-3.5	105	0.00
33	I	1,4-Difluorobenzene	1.000	1.000	0.0	97	0.00
34	T	Heptane	0.519	0.585	-12.7	105	0.00
35	T	Trichloroethene	0.410	0.469	-14.4	102	0.00
36	T	1,2-Dichloropropane	0.251	0.287	-14.3	103	0.00
37	T	1,4-Dioxane	0.129	0.139	-7.8	101	0.00
38	T	Bromodichloromethane	0.473	0.547	-15.6	104	0.00
39	T	cis-1,3-Dichloropropene	0.387	0.463	-19.6	108	0.00
40	T	4-Methyl-2-pentanone	0.178	0.209	-17.4	109	0.00
41	T	Toluene	0.715	0.830	-16.1	104	0.00
42	T	trans-1,3-Dichloropropene	0.341	0.408	-19.6	109	0.00
43	T	1,1,2-Trichloroethane	0.258	0.291	-12.8	103	0.00
44	T	Tetrachloroethene	0.456	0.545	-19.5	108	0.00
45	T	2-Hexanone	0.346	0.389	-12.4	107	0.00
46	T	Chlorodibromomethane	0.443	0.520	-17.4	106	0.00
47	T	1,2-Dibromoethane	0.401	0.466	-16.2	105	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\080911\08091103.D Vial: 3
Acq On : 9 Aug 2011 11:21 am Operator: RACHEL HILL
Sample : TO15 10ppbv CCV 080911a Inst : GC/MS Ins
Misc : CCV EPA_TO15 Multiplr: 1.00
MS Integration Params: CLME.P

Method : C:\HPCHEM\1\METHODS\080511V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Sat Aug 06 09:48:56 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	0.761	0.882	-15.9	107	0.00
50	T	Ethylbenzene	1.137	1.279	-12.5	104	0.00
51	T	m,p-Xylene	0.865	0.942	-8.9	105	0.00
52	T	o-Xylene	0.830	0.939	-13.1	105	0.00
53	T	Styrene	0.661	0.775	-17.2	107	0.00
54	T	Bromoform	0.552	0.662	-19.9	112	0.00
55	S	4-Bromofluorobenzene	0.557	0.562	-0.9	100	0.00
56	T	1,1,2,2-Tetrachloroethane	0.759	0.708	6.7	100	0.00
57	T	4-Ethyltoluene	1.123	1.350	-20.2	110	0.00
58	T	1,3,5-Trimethylbenzene	1.002	1.143	-14.1	110	0.00
59	T	1,2,4-Trimethylbenzene	0.943	1.090	-15.6	113	0.00
60	T	1,3-Dichlorobenzene	0.624	0.702	-12.5	112	0.00
61	T	1,4-Dichlorobenzene	0.557	0.630	-13.1	113	0.00
62	T	Benzyl chloride	0.630	0.753	-19.5	113	0.00
63	T	1,2-Dichlorobenzene	0.566	0.663	-17.1	110	0.00
64	T	1,2,4-Trichlorobenzene	0.067	0.074	-10.4	123	0.00
65	T	Hexachlorobutadiene	0.170	0.207	-21.8	117	0.00
66		Naphthalene	0.114	0.124	-8.8	116	0.00

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\080911\08091103.D Vial: 3
Acq On : 9 Aug 2011 11:21 am Operator: RACHEL HILL
Sample : TO15 10ppbv CCV 080911a Inst : GC/MS Ins
Misc : CCV EPA_TO15 Multiplr: 1.00
MS Integration Params: CLME.P
Quant Time: Aug 9 11:46 2011 Quant Results File: 080511V1.RES

Quant Method : C:\HPCHEM\1\METHODS\080511V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Sat Aug 06 09:48:56 2011
Response via : Initial Calibration
DataAcq Meth : 080511V1

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	10.59	130	1593834	12.50 ppbv	0.00
33) 1,4-Difluorobenzene	11.68	114	5292301	12.50 ppbv	0.00
48) Chlorobenzene-d5	15.54	117	3583913	12.50 ppbv	0.00

System Monitoring Compounds

55) 4-Bromofluorobenzene	17.19	95	2015215	12.61 ppbv	0.00

Spiked Amount 12.500 Range 70 - 113 Recovery = 100.88%

Target Compounds					Qvalue
2) Propylene	5.51	41	1636647	10.59 ppbv	99
3) Dichlorodifluoromethane	5.59	85	4633425	9.34 ppbv	99
4) 1,2-Dichloro-1,2,2,2-tetra	5.84	135	3942121	10.09 ppbv	96
5) Chloromethane	6.00	50	1671568	10.84 ppbv	100
6) Vinyl chloride	6.21	62	1492000	11.83 ppbv #	98
7) 1,3-Butadiene	6.27	39	1129087	11.89 ppbv	93
8) Bromomethane	6.84	94	1505460	8.48 ppbv #	98
9) Chloroethane	6.99	64	992353	9.78 ppbv	97
10) Trichlorofluoromethane	7.33	101	4827278	10.23 ppbv	99
11) Ethanol	7.56	45	326847	9.44 ppbv	97
12) Freon113	7.99	101	3508312	10.66 ppbv	99
13) 1,1-Dichloroethene	8.09	61	2733643	10.92 ppbv	96
14) Acetone	8.18	43	1931861	10.07 ppbv #	96
15) Carbon disulfide	8.46	76	4699630	10.06 ppbv #	100
16) 2-Propanol	8.24	45	2013746	10.56 ppbv #	1
17) Methylene chloride	8.75	49	1961523	10.21 ppbv	90
18) tert-Butyl Methyl Ether	8.95	73	2997374	10.42 ppbv	97
19) trans-1,2-Dichloroethene	9.03	61	2289903	10.09 ppbv	95
20) n-Hexane	9.22	57	2537613	10.47 ppbv	95
21) 1,1-Dichloroethane	9.59	63	2348921	9.35 ppbv	98
22) Vinyl acetate	9.53	43	2763935	10.52 ppbv	99
23) cis-1,2-Dichloroethene	10.28	96	1403454	9.33 ppbv	96
24) 2-Butanone	10.25	43	1896851	11.13 ppbv	96
25) Ethyl acetate	10.20	43	2570998	11.02 ppbv #	100
26) Tetrahydrofuran	10.59	42	1063791	10.47 ppbv	95
27) Chloroform	10.60	83	2341213	9.61 ppbv	99
28) 1,1,1-Trichloroethane	10.85	97	2610360	9.69 ppbv	100
29) Cyclohexane	10.86	56	2181355	10.47 ppbv	94
30) Carbon tetrachloride	11.01	117	2989957	9.60 ppbv	99
31) Benzene	11.30	78	3200283	9.53 ppbv	97
32) 1,2-Dichloroethane	11.37	62	1389050	10.04 ppbv	98
34) Heptane	11.34	43	2451639	11.16 ppbv	95
35) Trichloroethene	12.02	130	1906939	11.00 ppbv	96
36) 1,2-Dichloropropane	12.38	63	1192563	11.22 ppbv	99
37) 1,4-Dioxane	12.46	88	565494	10.36 ppbv	95
38) Bromodichloromethane	12.67	83	2225296	11.12 ppbv	99
39) cis-1,3-Dichloropropene	13.22	75	1860744	11.35 ppbv	98
40) 4-Methyl-2-pentanone	13.33	58	884887	11.76 ppbv	98
41) Toluene	13.62	91	3441998	11.38 ppbv	99
42) trans-1,3-Dichloropropene	13.93	75	1573063	10.88 ppbv	98
43) 1,1,2-Trichloroethane	14.20	97	1208109	11.06 ppbv	99

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\080911\08091103.D Vial: 3
Acq On : 9 Aug 2011 11:21 am Operator: RACHEL HILL
Sample : TO15 10ppbv CCV 080911a Inst : GC/MS Ins
Misc : CCV EPA_TO15 Multiplr: 1.00
MS Integration Params: CLME.P
Quant Time: Aug 9 11:46 2011 Quant Results File: 080511V1.RES

Quant Method : C:\HPCHEM\1\METHODS\080511V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Sat Aug 06 09:48:56 2011
Response via : Initial Calibration
DataAcq Meth : 080511V1

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
44)	Tetrachloroethene	14.32	166	2215962	11.48 ppbv	99
45)	2-Hexanone	14.41	43	1614538	11.01 ppbv	96
46)	Chlorodibromomethane	14.75	129	2159604	11.51 ppbv	99
47)	1,2-Dibromoethane	14.98	107	1893331	11.16 ppbv	98
49)	Chlorobenzene	15.58	112	2503150	11.48 ppbv	97
50)	Ethylbenzene	15.62	91	3593333	11.02 ppbv	98
51)	m,p-Xylene	15.77	91	5183062	20.90 ppbv	99
52)	o-Xylene	16.37	91	2693139	11.32 ppbv	96
53)	Styrene	16.40	104	2178848	11.49 ppbv	98
54)	Bromoform	16.78	173	1822393	11.51 ppbv	99
56)	1,1,2,2-Tetrachloroethane	17.35	83	2030117	9.33 ppbv	100
57)	4-Ethyltoluene	17.60	105	3794094	11.79 ppbv	100
58)	1,3,5-Trimethylbenzene	17.68	105	3178617	11.07 ppbv	99
59)	1,2,4-Trimethylbenzene	18.27	105	3061300	11.32 ppbv	100
60)	1,3-Dichlorobenzene	18.82	146	1953298	10.91 ppbv	98
61)	1,4-Dichlorobenzene	18.96	146	1735401	10.87 ppbv	98
62)	Benzyl chloride	19.17	91	2094916	11.59 ppbv	96
63)	1,2-Dichlorobenzene	19.61	146	1842564	11.36 ppbv	98
64)	1,2,4-Trichlorobenzene	22.77	180	193519	10.13 ppbv	97
65)	Hexachlorobutadiene	22.96	225	559057	11.50 ppbv	99
66)	Naphthalene	23.46	128	326664	9.95 ppbv	99

(#) = qualifier out of range (m) = manual integration
08091103.D 080511V1.M Tue Sep 13 14:40:08 2011

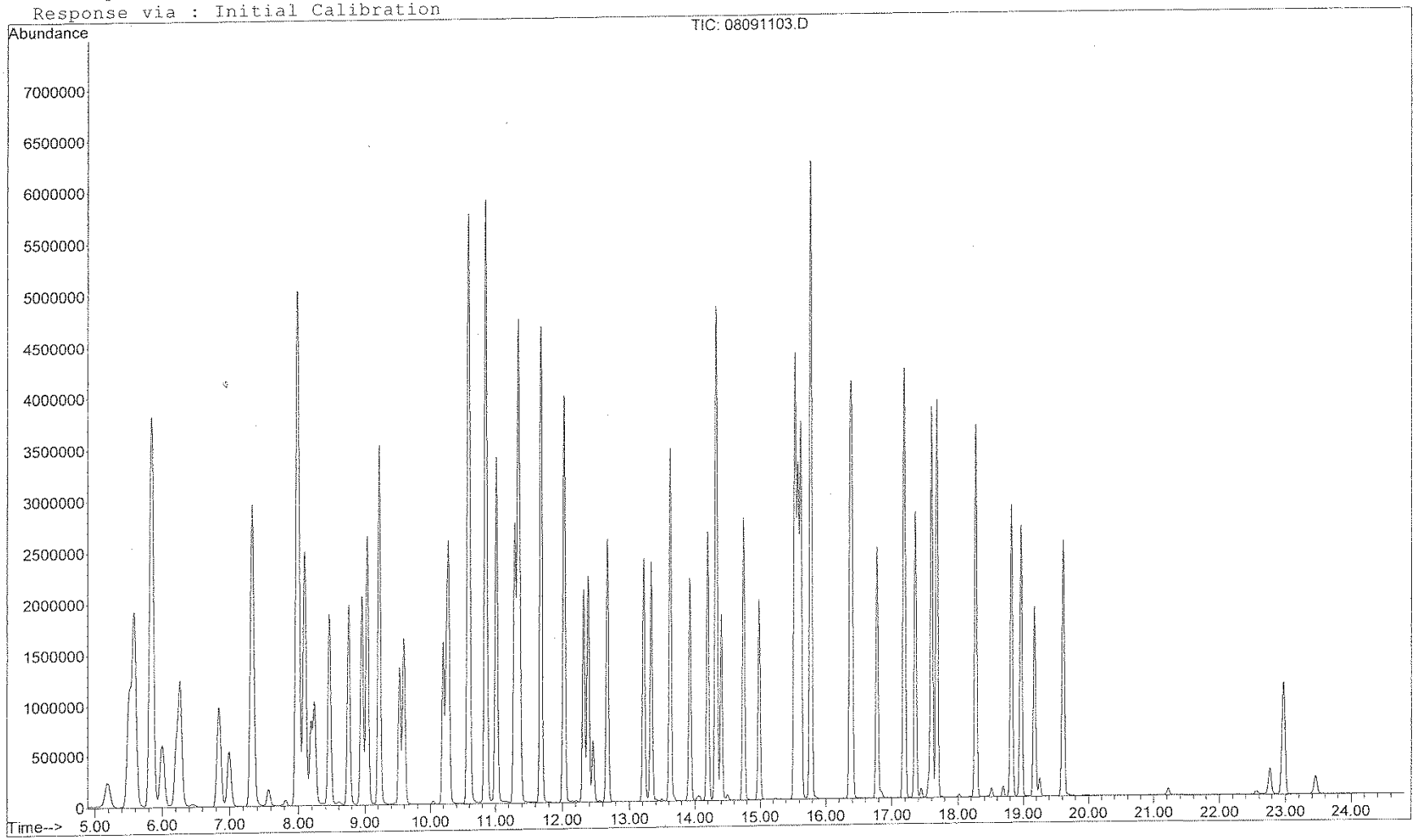
Quantitation Report

Data File : C:\HPCHEM\1\DATA\080911\08091103.D
Acq On : 9 Aug 2011 11:21 am
Sample : TO15 10ppbv CCV 080911a
Misc : CCV EPA_TO15
MS Integration Params: CLME.P
Quant Time: Aug 9 11:46 2011

Vial: 3
Operator: RACHEL HILL
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: 080511V1.RES

Method : C:\HPCHEM\1\METHODS\080511V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Sat Aug 06 09:48:56 2011
Response via : Initial Calibration



RTI Laboratories

Run ID: VOA1_110822A **Run No.:** 42378

Analytical Run Date: 8/22/2011 **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
BFB VOA1 082211A	BFB_TUNE	TUNE	R42378	8/21/2011 10:47:00 AM	Robert Lynch		
1ppbv ICAL	EPA_TO15	ICAL	R42378	8/21/2011 12:55:00 PM	Robert Lynch		
10ppbv ICAL	EPA_TO15	ICAL	R42378	8/21/2011 1:37:00 PM	Robert Lynch		
12ppbv ICAL	EPA_TO15	ICAL	R42378	8/21/2011 2:19:00 PM	Robert Lynch		
15ppbv ICAL	EPA_TO15	ICAL	R42378	8/21/2011 3:02:00 PM	Robert Lynch		
20ppbv ICAL	EPA_TO15	ICAL	R42378	8/21/2011 3:45:00 PM	Robert Lynch		
30ppbv ICAL	EPA_TO15	ICAL	R42378	8/21/2011 4:28:00 PM	Robert Lynch		
50ppbv ICAL	EPA_TO15	ICAL	R42378	8/21/2011 5:13:00 PM	Robert Lynch		
BFB VOA1 082211B	BFB_TUNE	TUNE	R42378	8/22/2011 9:51:00 AM	Robert Lynch		
ICV VOA1 082211	EPA_TO15	CCV	R42378	8/22/2011 10:33:00 AM	Robert Lynch		
RLVS VOA1 082211	EPA_TO15	RLVS	R42378	8/22/2011 11:14:00 AM	Robert Lynch		
BLK VOA1 082211A	EPA_TO15	MBLK	R42378	8/22/2011 12:08:00 PM	Robert Lynch		
1107640-028A	EPA_TO15	SAMP	R42378	8/22/2011 12:51:00 PM	Robert Lynch	H	
1107640-028ADUP	EPA_TO15	DUP	R42378	8/22/2011 1:33:00 PM	Robert Lynch	H	
1107640-023A	EPA_TO15	SAMP	R42378	8/22/2011 2:16:00 PM	Robert Lynch	H	
1107640-025A	EPA_TO15	SAMP	R42378	8/22/2011 3:00:00 PM	Robert Lynch	H	
1107640-026A	EPA_TO15	SAMP	R42378	8/22/2011 3:44:00 PM	Robert Lynch	H	
1107640-027A	EPA_TO15	SAMP	R42378	8/22/2011 4:27:00 PM	Robert Lynch	H	
1107640-029A	EPA_TO15	SAMP	R42378	8/22/2011 5:10:00 PM	Robert Lynch	H	
1107640-034A	EPA_TO15	SAMP	R42378	8/22/2011 8:42:00 PM	Robert Lynch	H	
1107640-035A	EPA_TO15	SAMP	R42378	8/22/2011 9:33:00 PM	Robert Lynch	H	
1107640-036A	EPA_TO15	SAMP	R42378	8/22/2011 10:21:00 PM	Robert Lynch	H	
1107640-014A	EPA_TO15	SAMP	R42378	8/23/2011 1:41:00 AM	Robert Lynch	H	
1107640-015A	EPA_TO15	SAMP	R42378	8/23/2011 2:31:00 AM	Robert Lynch	H	
1107640-044A	EPA_TO15	SAMP	R42378	8/23/2011 3:16:00 AM	Robert Lynch	H	
RLVSB 082211A VO	EPA_TO15	RLVS	R42378	8/23/2011 5:28:00 AM	Robert Lynch		

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
820202	ICV VOA1 082211	EPA_TO15	CCV	\1\DATA\082211	8/22/2011 10:33:	1	R42378		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	10.31	10.31		9.6	0	0	0.107	1	0	107%	70	130	0%	
1,1,2,2-Tetrachloroethane	A	ppbv	10.92	10.92		10	0	0	0.211	1	0	109%	70	130	0%	
1,1,2-Trichloro-1,2,2-trifluoroethane	A	ppbv	10.71	10.71		9.8	0	0	0.108	1	0	109%	70	130	0%	
1,1,2-Trichloroethane	A	ppbv	11.18	11.18		9.8	0	0	0.2	1	0	114%	70	130	0%	
1,1-Dichloroethane	A	ppbv	10.27	10.27		9.7	0	0	0.111	1	0	106%	70	130	0%	
1,1-Dichloroethene	A	ppbv	10.28	10.28		9.9	0	0	0.097	1	0	104%	70	130	0%	
1,2,4-Trichlorobenzene	A	ppbv	8.87	8.87		9.1	0	0	0.271	1	0	97%	70	130	0%	
1,2,4-Trimethylbenzene	A	ppbv	10.89	10.89		9.8	0	0	0.245	1	0	111%	70	130	0%	
1,2-Dibromoethane	A	ppbv	11.08	11.08		9.6	0	0	0.186	1	0	115%	70	130	0%	
1,2-Dichlorobenzene	A	ppbv	10.54	10.54		9.7	0	0	0.208	1	0	109%	70	130	0%	
1,2-Dichloroethane	A	ppbv	10.19	10.19		9.7	0	0	0.196	1	0	105%	70	130	0%	
1,2-Dichloropropane	A	ppbv	10.98	10.98		9.8	0	0	0.224	1	0	112%	70	130	0%	
1,3,5-Trimethylbenzene	A	ppbv	10.92	10.92		9.7	0	0	0.24	1	0	113%	70	130	0%	
1,3-Butadiene	A	ppbv	10.2	10.2		9.8	0	0	0.152	1	0	104%	70	130	0%	
1,3-Dichlorobenzene	A	ppbv	10.73	10.73		9.7	0	0	0.202	1	0	111%	70	130	0%	
1,4-Dichlorobenzene	A	ppbv	10.71	10.71		9.6	0	0	0.194	1	0	112%	70	130	0%	
1,4-Dioxane	A	ppbv	11.56	11.56		9.6	0	0	0.128	1	0	120%	70	130	0%	
2-Butanone	A	ppbv	11.21	11.21		9.9	0	0	0.287	1	0	113%	70	130	0%	
2-Hexanone	A	ppbv	10.02	10.02		9.8	0	0	0.135	1	0	102%	70	130	0%	
2-Propanol	A	ppbv	10.65	10.65		10.1	0	0	0.329	1	0	105%	70	130	0%	
4-Methyl-2-pentanone	A	ppbv	10.12	10.12		10	0	0	0.157	1	0	101%	70	130	0%	
Acetone	A	ppbv	10.59	10.59		10	0	0	0.43	1	0	106%	70	130	0%	
Benzene	A	ppbv	10.39	10.39		9.6	0	0	0.126	1	0	108%	70	130	0%	
Benzyl chloride	A	ppbv	12.31	12.31		9.7	0	0	0.155	1	0	127%	70	130	0%	
Bromodichloromethane	A	ppbv	10.75	10.75		9.6	0	0	0.156	1	0	112%	70	130	0%	
Bromoform	A	ppbv	11.08	11.08		9.6	0	0	0.197	1	0	115%	70	130	0%	
Bromomethane	A	ppbv	9.79	9.79		9.3	0	0	0.075	1	0	105%	70	130	0%	
Carbon disulfide	A	ppbv	10.26	10.26		9.7	0	0	0.093	1	0	106%	70	130	0%	
Carbon tetrachloride	A	ppbv	10.16	10.16		9.5	0	0	0.114	1	0	107%	70	130	0%	
Chlorobenzene	A	ppbv	11.27	11.27		9.9	0	0	0.275	1	0	114%	70	130	0%	
Chlorodibromomethane	A	ppbv	11.17	11.17		9.2	0	0	0.165	1	0	121%	70	130	0%	
Chloroethane	A	ppbv	9.41	9.41		9.8	0	0	0.063	1	0	96%	70	130	0%	
Chloroform	A	ppbv	10.5	10.5		9.4	0	0	0.126	1	0	112%	70	130	0%	
Chloromethane	A	ppbv	9.6	9.6		9.8	0	0	0.104	1	0	98%	70	130	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
820202	ICV VOA1 082211	EPA_TO15	CCV	\1\DATA\082211	8/22/2011 10:33:	1	R42378		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	10.58	10.58		9.8	0	0	0.107	1	0	108%	70	130	0%	
cis-1,3-dichloropropene	A	ppbv	10.68	10.68		9.5	0	0	0.166	1	0	112%	70	130	0%	
Cyclohexane	A	ppbv	10.8	10.8		9.8	0	0	0.684	2	0	110%	70	130	0%	
Dichlorodifluoromethane	A	ppbv	9.31	9.31		9.2	0	0	0.086	1	0	101%	70	130	0%	
Ethanol	A	ppbv	8.39	8.39		9.2	0	0	1.962	5	0	91%	70	130	0%	
Ethyl acetate	A	ppbv	10.91	10.91		9.8	0	0	0.157	1	0	111%	70	130	0%	
Ethylbenzene	A	ppbv	11.55	11.55		9.8	0	0	0.737	2	0	118%	70	130	0%	
Heptane	A	ppbv	10.88	10.88		9.9	0	0	0.249	1	0	110%	70	130	0%	
Hexachlorobutadiene	A	ppbv	10.87	10.87		9.4	0	0	0.374	2	0	116%	70	130	0%	
m,p-Xylene	A	ppbv	22.06	22.06		19.2	0	0	0.524	2	0	115%	70	130	0%	
Methylene chloride	A	ppbv	10.35	10.35		10	0	0	2.077	5	0	104%	70	130	0%	
n-Hexane	A	ppbv	10.58	10.58		10.1	0	0	0.692	2	0	105%	70	130	0%	
Naphthalene	A	ppbv	9.43	9.43		9.2	0	0	0.247	1	0	103%	70	130	0%	
o-Xylene	A	ppbv	11.64	11.64		10	0	0	0.258	1	0	116%	70	130	0%	
Propylene	A	ppbv	10.32	10.32		10.2	0	0	0.075	1	0	101%	70	130	0%	
Styrene	A	ppbv	11.62	11.62		9.8	0	0	0.263	1	0	119%	70	130	0%	
tert-Butyl Methyl Ether	A	ppbv	10.9	10.9		9.9	0	0	0.228	1	0	110%	70	130	0%	
Tetrachloroethene	A	ppbv	10.82	10.82		9.6	0	0	0.148	1	0	113%	70	130	0%	
Tetrahydrofuran	A	ppbv	11.37	11.37		10	0	0	0.201	1	0	114%	70	130	0%	
Toluene	A	ppbv	11.29	11.29		9.8	0	0	0.158	1	0	115%	70	130	0%	
trans-1,2-Dichloroethene	A	ppbv	10.27	10.27		9.8	0	0	0.117	1	0	105%	70	130	0%	
trans-1,3-dichloropropene	A	ppbv	10.45	10.45		9.1	0	0	0.171	1	0	115%	70	130	0%	
Trichloroethene	A	ppbv	10.87	10.87		9.6	0	0	0.119	1	0	113%	70	130	0%	
Trichlorofluoromethane	A	ppbv	10.1	10.1		9.6	0	0	0.148	1	0	105%	70	130	0%	
Vinyl acetate	A	ppbv	11.72	11.72		9.9	0	0	0.266	1	0	118%	70	130	0%	
Vinyl chloride	A	ppbv	9.69	9.69		9.4	0	0	0.072	1	0	103%	70	130	0%	
Xylenes, Total	C	ppbv	33.7	33.7		29.2	0	0	0.782	3	0	115%	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	12.52	12.52		12.5	0	0	0	0	0	100%	70	130	0%	

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\082211\08221113.D Vial: 12
Acq On : 22 Aug 2011 10:33 am Operator: michael truchan
Sample : CCV VOA1 082211 Inst : VOA 1
Misc : CCV EPA_TO15 Multiplr: 1.00
MS Integration Params: CLME.P

Method : C:\HPCHEM\1\METHODS\082211V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Tue Aug 23 10:14:32 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	101	0.00
2	T	Propylene	1.333	1.348	-1.1	95	0.00
3	T	Dichlorodifluoromethane	4.524	4.577	-1.2	93	0.00
4	T	1,2-Dichloro-1,2,2,2-tetraf	2.914	3.100	-6.4	95	0.00
5	T	Chloromethane	1.389	1.403	-1.0	92	0.00
6	T	Vinyl chloride	1.246	1.285	-3.1	98	0.00
7	T	1,3-Butadiene	0.793	0.826	-4.2	97	0.00
8	T	Bromomethane	0.997	1.049	-5.2	99	0.00
9	T	Chloroethane	0.551	0.564	-2.4	96	0.00
10	T	Trichlorofluoromethane	3.480	3.662	-5.2	97	0.00
11	T	Ethanol	0.245	0.223	9.0	105	0.00
12	T	Freon113	2.604	2.846	-9.3	95	0.00
13	T	1,1-Dichloroethene	2.379	2.470	-3.8	93	0.00
14	T	Acetone	1.999	2.117	-5.9	112	0.00
15	T	Carbon disulfide	3.872	4.095	-5.8	94	0.00
16	T	2-Propanol	1.751	1.846	-5.4	105	0.00
17	T	Methylene chloride	1.771	1.833	-3.5	95	0.00
18	T	tert-Butyl Methyl Ether	3.017	3.321	-10.1	116	0.00
19	T	trans-1,2-Dichloroethene	2.235	2.341	-4.7	94	0.00
20	T	n-Hexane	2.314	2.425	-4.8	94	0.00
21	T	1,1-Dichloroethane	2.659	2.817	-5.9	96	0.00
22	T	Vinyl acetate	2.751	3.255	-18.3	121	0.00
23	T	cis-1,2-Dichloroethene	1.373	1.482	-7.9	96	0.00
24	T	2-Butanone	1.796	2.033	-13.2	128	0.00
25	T	Ethyl acetate	2.492	2.773	-11.3	131	0.00
26	T	Tetrahydrofuran	1.003	1.140	-13.7	116	0.00
27	T	Chloroform	2.511	2.690	-7.1	98	0.00
28	T	1,1,1-Trichloroethane	2.845	3.056	-7.4	98	0.00
29	T	Cyclohexane	2.061	2.271	-10.2	95	0.00
30	T	Carbon tetrachloride	2.940	3.146	-7.0	97	0.00
31	T	Benzene	3.470	3.755	-8.2	98	0.00
32	T	1,2-Dichloroethane	1.840	1.933	-5.1	100	0.00
33	I	1,4-Difluorobenzene	1.000	1.000	0.0	103	0.00
34	T	Heptane	0.569	0.626	-10.0	98	0.00
35	T	Trichloroethene	0.417	0.473	-13.4	99	0.00
36	T	1,2-Dichloropropane	0.331	0.371	-12.1	103	0.00
37	T	1,4-Dioxane	0.106	0.128	-20.8	106	0.00
38	T	Bromodichloromethane	0.653	0.731	-11.9	101	0.00
39	T	cis-1,3-Dichloropropene	0.508	0.570	-12.2	105	0.00
40	T	4-Methyl-2-pentanone	0.197	0.199	-1.0	102	0.00
41	T	Toluene	0.883	1.017	-15.2	106	0.00
42	T	trans-1,3-Dichloropropene	0.455	0.522	-14.7	110	0.00
43	T	1,1,2-Trichloroethane	0.314	0.359	-14.3	107	0.00
44	T	Tetrachloroethene	0.488	0.550	-12.7	102	0.00
45	T	2-Hexanone	0.401	0.411	-2.5	107	0.00
46	T	Chlorodibromomethane	0.543	0.618	-13.8	105	0.00
47	T	1,2-Dibromoethane	0.464	0.536	-15.5	107	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\082211\08221113.D Vial: 12
Acq On : 22 Aug 2011 10:33 am Operator: michael truchan
Sample : CCV VOA1 082211 Inst : VOA 1
Misc : CCV EPA_TO15 Multiplr: 1.00
MS Integration Params: CLME.P

Method : C:\HPCHEM\1\METHODS\082211V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Tue Aug 23 10:14:32 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	0.812	0.924	-13.8	107	0.00
50	T	Ethylbenzene	1.265	1.491	-17.9	113	0.00
51	T	m,p-Xylene	0.952	1.094	-14.9	112	0.00
52	T	o-Xylene	0.941	1.095	-16.4	114	0.00
53	T	Styrene	0.686	0.813	-18.5	113	0.00
54	T	Bromoform	0.649	0.749	-15.4	110	0.00
55	S	4-Bromofluorobenzene	0.636	0.637	-0.2	101	0.00
56	T	1,1,2,2-Tetrachloroethane	0.739	0.807	-9.2	117	0.00
57	T	4-Ethyltoluene	1.227	1.418	-15.6	119	0.00
58	T	1,3,5-Trimethylbenzene	1.072	1.206	-12.5	121	0.00
59	T	1,2,4-Trimethylbenzene	1.047	1.163	-11.1	121	0.00
60	T	1,3-Dichlorobenzene	0.748	0.828	-10.7	114	0.00
61	T	1,4-Dichlorobenzene	0.692	0.772	-11.6	114	0.00
62	T	Benzyl chloride	0.863	1.095	-26.9	141	0.00
63	T	1,2-Dichlorobenzene	0.733	0.797	-8.7	119	0.00
64	T	1,2,4-Trichlorobenzene	0.161	0.157	2.5	145	0.00
65	T	Hexachlorobutadiene	0.397	0.459	-15.6	142	0.00
66		Naphthalene	0.237	0.243	-2.5	160#	0.00

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\082211\08221113.D Vial: 12
Acq On : 22 Aug 2011 10:33 am Operator: michael truchan
Sample : CCV VOA1 082211 Inst : VOA 1
Misc : CCV EPA_TO15 Multiplr: 1.00
MS Integration Params: CLME.P
Quant Time: Aug 23 10:21 2011 Quant Results File: 082211V1.RES

Quant Method : C:\HPCHEM\1\METHODS\082211V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Tue Aug 23 10:14:32 2011
Response via : Initial Calibration
DataAcq Meth : 082211V1

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	10.58	130	748438	12.50 ppbv	0.00
33) 1,4-Difluorobenzene	11.68	114	2815842	12.50 ppbv	0.00
48) Chlorobenzene-d5	15.53	117	2046010	12.50 ppbv	0.00
System Monitoring Compounds					
55) 4-Bromofluorobenzene	17.19	95	1302331	12.52 ppbv	0.00
Spiked Amount 12.500	Range 70 - 113		Recovery = 100.16%		
Target Compounds					Qvalue
2) Propylene	5.51	41	823503	10.32 ppbv	99
3) Dichlorodifluoromethane	5.57	85	2521049	9.31 ppbv	100
4) 1,2-Dichloro-1,2,2,2-tetra	5.83	135	1763563	10.11 ppbv	87
5) Chloromethane	5.99	50	797862	9.60 ppbv	100
6) Vinyl chloride	6.20	62	723086	9.69 ppbv #	99
7) 1,3-Butadiene	6.25	39	484587	10.20 ppbv #	82
8) Bromomethane	6.82	94	584105	9.79 ppbv #	96
9) Chloroethane	6.98	64	310645	9.41 ppbv #	96
10) Trichlorofluoromethane	7.31	101	2104732	10.10 ppbv	99
11) Ethanol	7.57	45	123092	8.39 ppbv #	94
12) Freon113	7.96	101	1669862	10.71 ppbv	98
13) 1,1-Dichloroethene	8.07	61	1464022	10.28 ppbv	91
14) Acetone	8.18	43	1267824	10.59 ppbv #	93
15) Carbon disulfide	8.44	76	2378227	10.26 ppbv #	100
16) 2-Propanol	8.25	45	1116549	10.65 ppbv #	1
17) Methylene chloride	8.74	49	1097677	10.35 ppbv	88
18) tert-Butyl Methyl Ether	8.95	73	1968407	10.90 ppbv	97
19) trans-1,2-Dichloroethene	9.02	61	1373611	10.27 ppbv	90
20) n-Hexane	9.21	57	1466240	10.58 ppbv	92
21) 1,1-Dichloroethane	9.59	63	1635908	10.27 ppbv	98
22) Vinyl acetate	9.53	43	1929737	11.72 ppbv	99
23) cis-1,2-Dichloroethene	10.28	96	869845	10.58 ppbv	89
24) 2-Butanone	10.25	43	1204923	11.21 ppbv	95
25) Ethyl acetate	10.20	43	1627126	10.91 ppbv #	99
26) Tetrahydrofuran	10.59	42	682284	11.37 ppbv	94
27) Chloroform	10.60	83	1578467	10.50 ppbv	99
28) 1,1,1-Trichloroethane	10.85	97	1756736	10.31 ppbv	98
29) Cyclohexane	10.86	56	1332647	10.80 ppbv	86
30) Carbon tetrachloride	11.01	117	1789293	10.16 ppbv	99
31) Benzene	11.29	78	2158367	10.39 ppbv	95
32) 1,2-Dichloroethane	11.37	62	1122634	10.19 ppbv #	97
34) Heptane	11.34	43	1395442	10.88 ppbv	93
35) Trichloroethene	12.02	130	1022360	10.87 ppbv	95
36) 1,2-Dichloropropane	12.38	63	818576	10.98 ppbv	98
37) 1,4-Dioxane	12.46	88	276199	11.56 ppbv	92
38) Bromodichloromethane	12.66	83	1580114	10.75 ppbv	99
39) cis-1,3-Dichloropropene	13.22	75	1220846	10.68 ppbv	99
40) 4-Methyl-2-pentanone	13.33	58	449313	10.12 ppbv	94
41) Toluene	13.62	91	2245421	11.29 ppbv	99
42) trans-1,3-Dichloropropene	13.93	75	1070979	10.45 ppbv	98
43) 1,1,2-Trichloroethane	14.20	97	792262	11.18 ppbv	99

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\082211\08221113.D Vial: 12
Acq On : 22 Aug 2011 10:33 am Operator: michael truchan
Sample : CCV VOA1 082211 Inst : VOA 1
Misc : CCV EPA_TO15 Multiplr: 1.00
MS Integration Params: CLME.P
Quant Time: Aug 23 10:21 2011 Quant Results File: 082211V1.RES

Quant Method : C:\HPCHEM\1\METHODS\082211V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Tue Aug 23 10:14:32 2011
Response via : Initial Calibration
DataAcq Meth : 082211V1

Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
44) Tetrachloroethene	14.32	166	1189637	10.82	ppbv		99
45) 2-Hexanone	14.41	43	906239	10.02	ppbv		92
46) Chlorodibromomethane	14.75	129	1365068	11.17	ppbv		99
47) 1,2-Dibromoethane	14.98	107	1159039	11.08	ppbv		99
49) Chlorobenzene	15.58	112	1497130	11.27	ppbv	#	94
50) Ethylbenzene	15.62	91	2391492	11.55	ppbv		93
51) m,p-Xylene	15.77	91	3437463	22.06	ppbv		90
52) o-Xylene	16.36	91	1792433	11.64	ppbv	#	91
53) Styrene	16.40	104	1303960	11.62	ppbv		96
54) Bromoform	16.78	173	1177218	11.08	ppbv		99
56) 1,1,2,2-Tetrachloroethane	17.35	83	1320934	10.92	ppbv		100
57) 4-Ethyltoluene	17.60	105	2275223	11.33	ppbv		98
58) 1,3,5-Trimethylbenzene	17.68	105	1915318	10.92	ppbv		98
59) 1,2,4-Trimethylbenzene	18.26	105	1865239	10.89	ppbv		98
60) 1,3-Dichlorobenzene	18.82	146	1314852	10.73	ppbv		99
61) 1,4-Dichlorobenzene	18.96	146	1212928	10.71	ppbv		99
62) Benzyl chloride	19.17	91	1738086	12.31	ppbv		99
63) 1,2-Dichlorobenzene	19.61	146	1265482	10.54	ppbv		99
64) 1,2,4-Trichlorobenzene	22.76	180	233357	8.87	ppbv		98
65) Hexachlorobutadiene	22.96	225	705920	10.87	ppbv		99
66) Naphthalene	23.45	128	365348	9.43	ppbv		100

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

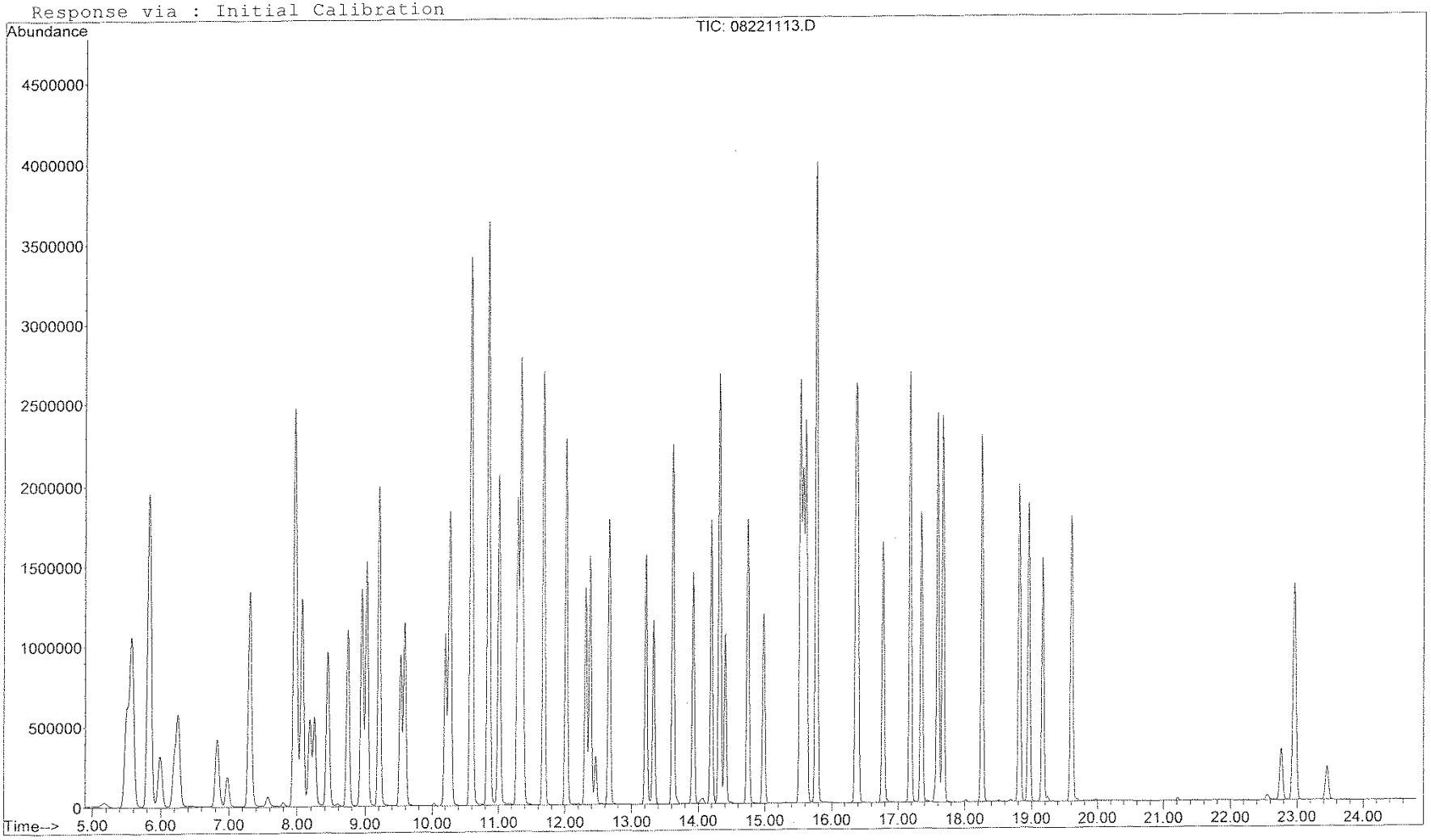
Quantitation Report

Data File : C:\HPCHEM\1\DATA\082211\08221113.D
Acq On : 22 Aug 2011 10:33 am
Sample : CCV VOA1 082211
Misc : CCV EPA_TO15
MS Integration Params: CLME.P
Quant Time: Aug 23 10:21 2011

Vial: 12
Operator: michael truchan
Inst : VOA 1
Multiplr: 1.00

Quant Results File: 082211V1.RES

Method : C:\HPCHEM\1\METHODS\082211V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Tue Aug 23 10:14:32 2011
Response via : Initial Calibration



RTI Laboratories

Run ID: VOA1_110830A **Run No.:** 42721

Analytical Run Date: 8/30/2011 **InstrumentID:** VOA1

Analyst: Rachel Hill **Column:**

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

Column Length: 30m

Run Comments: Data worked up by JW.

SampID	TestCode	SampType	Batch ID	Analysis Date/Time	QA By	Q	Comments
BFB1 VOA1 083011	BFB_TUNE	TUNE	R42721	8/30/2011 7:26:00 AM	Robert Lynch		
1ppbv ICAL	EPA_TO15	ICAL	R42721	8/30/2011 8:09:00 AM	Robert Lynch		
10ppbv ICAL	EPA_TO15	ICAL	R42721	8/30/2011 8:51:00 AM	Robert Lynch		
12ppbv ICAL	EPA_TO15	ICAL	R42721	8/30/2011 9:33:00 AM	Robert Lynch		
15ppbv ICAL	EPA_TO15	ICAL	R42721	8/30/2011 10:16:00 AM	Robert Lynch		
20ppbv ICAL	EPA_TO15	ICAL	R42721	8/30/2011 10:59:00 AM	Robert Lynch		
30ppbv ICAL	EPA_TO15	ICAL	R42721	8/30/2011 11:42:00 AM	Robert Lynch		
50ppbv ICAL	EPA_TO15	ICAL	R42721	8/30/2011 12:27:00 PM	Robert Lynch		
ICV1 VOA1 083011	EPA_TO15	ICV	R42721	8/30/2011 1:10:00 PM	Robert Lynch		
RLVS1 VOA1 08301	EPA_TO15	RLVS	R42721	8/30/2011 2:34:00 PM	Robert Lynch		
BLK VOA1 083011	EPA_TO15	MBLK	R42721	8/30/2011 3:22:00 PM	Robert Lynch		
1107640-011A	EPA_TO15	SAMP	R42721	8/30/2011 4:07:00 PM	Robert Lynch	H	
1107640-011Adup	EPA_TO15	DUP	R42721	8/30/2011 4:51:00 PM	Robert Lynch	H	
1107640-030A	EPA_TO15	SAMP	R42721	8/30/2011 5:35:00 PM	Robert Lynch	H	
1107640-031A	EPA_TO15	SAMP	R42721	8/30/2011 6:19:00 PM	Robert Lynch	H	
1107640-032A	EPA_TO15	SAMP	R42721	8/30/2011 7:03:00 PM	Robert Lynch	H	
1107640-033A	EPA_TO15	SAMP	R42721	8/30/2011 7:47:00 PM	Robert Lynch	H	
1107640-012A	EPA_TO15	SAMP	R42721	8/30/2011 8:30:00 PM	Robert Lynch	H	
1107640-013A	EPA_TO15	SAMP	R42721	8/30/2011 9:12:00 PM	Robert Lynch	H	
1107640-045A	EPA_TO15	SAMP	R42721	8/30/2011 9:57:00 PM	Robert Lynch	H	
1107640-046A	EPA_TO15	SAMP	R42721	8/30/2011 10:41:00 PM	Robert Lynch	H	
1107640-047A	EPA_TO15	SAMP	R42721	8/30/2011 11:25:00 PM	Robert Lynch	H	
RLVS2 VOA1 08301	EPA_TO15	RLVS	R42721	8/31/2011 11:43:00 AM	Robert Lynch		RLVS run outside 24-hr time clock; liquid nitrogen depleted before RLVS analyzed.

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
829034	50ppbv ICAL	EPA_TO15	ICAL	\1\DATA\083011	8/30/2011 12:27:	1	R42721		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Tetrachloroethene	A	ppbv	38.94	38.94		0	0	0	0.148	1	0	0%	0	0	0%	
Tetrahydrofuran	A	ppbv	39.11	39.11		0	0	0	0.201	1	0	0%	0	0	0%	
Toluene	A	ppbv	42.83	42.83		0	0	0	0.158	1	0	0%	0	0	0%	
trans-1,2-Dichloroethene	A	ppbv	39.72	39.72		0	0	0	0.117	1	0	0%	0	0	0%	
trans-1,3-dichloropropene	A	ppbv	42.14	42.14		0	0	0	0.171	1	0	0%	0	0	0%	
Trichloroethene	A	ppbv	40.2	40.2		0	0	0	0.119	1	0	0%	0	0	0%	
Trichlorofluoromethane	A	ppbv	57.81	57.81		0	0	0	0.148	1	0	0%	0	0	0%	
Vinyl acetate	A	ppbv	39.96	39.96		0	0	0	0.266	1	0	0%	0	0	0%	
Vinyl chloride	A	ppbv	35.2	35.2		0	0	0	0.072	1	0	0%	0	0	0%	
Xylenes, Total	C	ppbv	112.61	112.61		0	0	0	0.782	3	0	0%	0	0	0%	
1,4-Difluorobenzene	I	ppbv	12.5	12.5		0	0	0	0	0	0	0%	0	0	0%	
Bromochloromethane	I	ppbv	12.5	12.5		0	0	0	0	0	0	0%	0	0	0%	
Chlorobenzene-d5	I	ppbv	12.5	12.5		0	0	0	0	0	0	0%	0	0	0%	
4-Bromofluorobenzene	S	ppbv	11.67	11.67		0	0	0	0	0	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
829035	ICV1 VOA1 083011	EPA_TO15	ICV	\1\DATA\083011	8/30/2011 1:10:0	1	R42721		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	11.91	11.91		9.6	0	0	0.107	1	0	124%	70	130	0%	
1,1,2,2-Tetrachloroethane	A	ppbv	10.99	10.99		10	0	0	0.211	1	0	110%	70	130	0%	
1,1,2-Trichloro-1,2,2-trifluoroethane	A	ppbv	11.51	11.51		9.8	0	0	0.108	1	0	117%	70	130	0%	
1,1,2-Trichloroethane	A	ppbv	10.61	10.61		9.8	0	0	0.2	1	0	108%	70	130	0%	
1,1-Dichloroethane	A	ppbv	11.16	11.16		9.7	0	0	0.111	1	0	115%	70	130	0%	
1,1-Dichloroethene	A	ppbv	11.09	11.09		9.9	0	0	0.097	1	0	112%	70	130	0%	
1,2,4-Trichlorobenzene	A	ppbv	8.88	8.88		9.1	0	0	0.271	1	0	98%	70	130	0%	
1,2,4-Trimethylbenzene	A	ppbv	10.16	10.16		9.8	0	0	0.245	1	0	104%	70	130	0%	
1,2-Dibromoethane	A	ppbv	10.31	10.31		9.6	0	0	0.186	1	0	107%	70	130	0%	
1,2-Dichlorobenzene	A	ppbv	9.68	9.68		9.7	0	0	0.208	1	0	100%	70	130	0%	
1,2-Dichloroethane	A	ppbv	11.58	11.58		9.7	0	0	0.196	1	0	119%	70	130	0%	
1,2-Dichloropropane	A	ppbv	11.04	11.04		9.8	0	0	0.224	1	0	113%	70	130	0%	
1,3,5-Trimethylbenzene	A	ppbv	10.19	10.19		9.7	0	0	0.24	1	0	105%	70	130	0%	
1,3-Butadiene	A	ppbv	12.15	12.15		9.8	0	0	0.152	1	0	124%	70	130	0%	
1,3-Dichlorobenzene	A	ppbv	9.58	9.58		9.7	0	0	0.202	1	0	99%	70	130	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
829035	ICV1 VOA1 083011	EPA_TO15	ICV	\1\DATA\083011	8/30/2011 1:10:0	1	R42721		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
1,4-Dichlorobenzene	A	ppbv	9.43	9.43		9.6	0	0	0.194	1	0	98%	70	130	0%	
1,4-Dioxane	A	ppbv	11.14	11.14		9.6	0	0	0.128	1	0	116%	70	130	0%	
2-Butanone	A	ppbv	12.11	12.11		9.9	0	0	0.287	1	0	122%	70	130	0%	
2-Hexanone	A	ppbv	10.62	10.62		9.8	0	0	0.135	1	0	108%	70	130	0%	
2-Propanol	A	ppbv	11.23	11.23		10.1	0	0	0.329	1	0	111%	70	130	0%	
4-Methyl-2-pentanone	A	ppbv	11.35	11.35		10	0	0	0.157	1	0	114%	70	130	0%	
Acetone	A	ppbv	10.99	10.99		10	0	0	0.43	1	0	110%	70	130	0%	
Benzene	A	ppbv	10.91	10.91		9.6	0	0	0.126	1	0	114%	70	130	0%	
Benzyl chloride	A	ppbv	10.52	10.52		9.7	0	0	0.155	1	0	108%	70	130	0%	
Bromodichloromethane	A	ppbv	10.86	10.86		9.6	0	0	0.156	1	0	113%	70	130	0%	
Bromoform	A	ppbv	10.58	10.58		9.6	0	0	0.197	1	0	110%	70	130	0%	
Bromomethane	A	ppbv	10.28	10.28		9.3	0	0	0.075	1	0	111%	70	130	0%	
Carbon disulfide	A	ppbv	10.47	10.47		9.7	0	0	0.093	1	0	108%	70	130	0%	
Carbon tetrachloride	A	ppbv	11.39	11.39		9.5	0	0	0.114	1	0	120%	70	130	0%	
Chlorobenzene	A	ppbv	10.44	10.44		9.9	0	0	0.275	1	0	105%	70	130	0%	
Chlorodibromomethane	A	ppbv	10.88	10.88		9.2	0	0	0.165	1	0	118%	70	130	0%	
Chloroethane	A	ppbv	10.52	10.52		9.8	0	0	0.063	1	0	107%	70	130	0%	
Chloroform	A	ppbv	11.46	11.46		9.4	0	0	0.126	1	0	122%	70	130	0%	
Chloromethane	A	ppbv	10.48	10.48		9.8	0	0	0.104	1	0	107%	70	130	0%	
cis-1,2-Dichloroethene	A	ppbv	10.81	10.81		9.8	0	0	0.107	1	0	110%	70	130	0%	
cis-1,3-dichloropropene	A	ppbv	10.52	10.52		9.5	0	0	0.166	1	0	111%	70	130	0%	
Cyclohexane	A	ppbv	12.21	12.21		9.8	0	0	0.684	2	0	125%	70	130	0%	
Dichlorodifluoromethane	A	ppbv	9.7	9.7		9.2	0	0	0.086	1	0	105%	70	130	0%	
Ethanol	A	ppbv	11.55	11.55		9.2	0	0	1.962	5	0	126%	70	130	0%	
Ethyl acetate	A	ppbv	12.32	12.32		9.8	0	0	0.157	1	0	126%	70	130	0%	
Ethylbenzene	A	ppbv	10.76	10.76		9.8	0	0	0.737	2	0	110%	70	130	0%	
Heptane	A	ppbv	12.01	12.01		9.9	0	0	0.249	1	0	121%	70	130	0%	
Hexachlorobutadiene	A	ppbv	9.21	9.21		9.4	0	0	0.374	2	0	98%	70	130	0%	
m,p-Xylene	A	ppbv	22.96	22.96		19.2	0	0	0.524	2	0	120%	70	130	0%	
Methylene chloride	A	ppbv	11.29	11.29		10	0	0	2.077	5	0	113%	70	130	0%	
n-Hexane	A	ppbv	11.76	11.76		10.1	0	0	0.692	2	0	116%	70	130	0%	
Naphthalene	A	ppbv	8.33	8.33		9.2	0	0	0.247	1	0	91%	70	130	0%	
o-Xylene	A	ppbv	11.01	11.01		10	0	0	0.258	1	0	110%	70	130	0%	
Propylene	A	ppbv	10.71	10.71		10.2	0	0	0.075	1	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
829035	ICV1 VOA1 083011	EPA_TO15	ICV	\1\DATA\083011	8/30/2011 1:10:0	1	R42721		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Styrene	A	ppbv	10.41	10.41		9.8	0	0	0.263	1	0	106%	70	130	0%	
tert-Butyl Methyl Ether	A	ppbv	11.86	11.86		9.9	0	0	0.228	1	0	120%	70	130	0%	
Tetrachloroethene	A	ppbv	10.79	10.79		9.6	0	0	0.148	1	0	112%	70	130	0%	
Tetrahydrofuran	A	ppbv	11.78	11.78		10	0	0	0.201	1	0	118%	70	130	0%	
Toluene	A	ppbv	10.84	10.84		9.8	0	0	0.158	1	0	111%	70	130	0%	
trans-1,2-Dichloroethene	A	ppbv	11.33	11.33		9.8	0	0	0.117	1	0	116%	70	130	0%	
trans-1,3-dichloropropene	A	ppbv	10.01	10.01		9.1	0	0	0.171	1	0	110%	70	130	0%	
Trichloroethene	A	ppbv	10.72	10.72		9.6	0	0	0.119	1	0	112%	70	130	0%	
Trichlorofluoromethane	A	ppbv	10.66	10.66		9.6	0	0	0.148	1	0	111%	70	130	0%	
Vinyl acetate	A	ppbv	12.07	12.07		9.9	0	0	0.266	1	0	122%	70	130	0%	
Vinyl chloride	A	ppbv	11.45	11.45		9.4	0	0	0.072	1	0	122%	70	130	0%	
Xylenes, Total	C	ppbv	33.97	33.97		29.2	0	0	0.782	3	0	116%	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	12.4	12.4		12.5	0	0	0	0	0	99%	70	130	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
829036	RLVS1 VOA1 08301	EPA_TO15	RLVS	\1\DATA\083011	8/30/2011 2:34:0	1	R42721		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	1.08	1.08		0.996	0	0	0.107	1	0	108%	70	130	0%	
1,1,2,2-Tetrachloroethane	A	ppbv	1.09	1.09		1	0	0	0.211	1	0	109%	70	130	0%	
1,1,2-Trichloro-1,2,2-trifluoroethane	A	ppbv	1.13	1.13		0.98	0	0	0.108	1	0	115%	70	130	0%	
1,1,2-Trichloroethane	A	ppbv	0.93	0.93		0.98	0	0	0.2	1	0	95%	70	130	0%	
1,1-Dichloroethane	A	ppbv	1.23	1.23		0.97	0	0	0.111	1	0	127%	70	130	0%	
1,1-Dichloroethene	A	ppbv	1.26	1.26		0.99	0	0	0.097	1	0	127%	70	130	0%	
1,2,4-Trichlorobenzene	A	ppbv	1.84	1.84		0.91	0	0	0.271	1	0	202%	70	130	0%	S
1,2,4-Trimethylbenzene	A	ppbv	1.08	1.08		0.98	0	0	0.245	1	0	110%	70	130	0%	
1,2-Dibromoethane	A	ppbv	1	1		0.96	0	0	0.186	1	0	104%	70	130	0%	
1,2-Dichlorobenzene	A	ppbv	1.31	1.31		0.97	0	0	0.208	1	0	135%	70	130	0%	S
1,2-Dichloroethane	A	ppbv	1.39	1.39		0.97	0	0	0.196	1	0	143%	70	130	0%	S
1,2-Dichloropropane	A	ppbv	0.99	0.99		0.98	0	0	0.224	1	0	101%	70	130	0%	

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\083011\08301109.D Vial: 9
Acq On : 30 Aug 2011 1:10 pm Operator: RACHEL HILL
Sample : ICV1 VOA1 083011 Inst : VOA 1
Misc : ICV EPA_TO15 Multiplr: 1.00
MS Integration Params: CLME.P

Method : C:\HPCHEM\1\METHODS\083011V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Wed Aug 31 12:29:35 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	96	0.00
2	T	Propylene	1.245	1.307	-5.0	102	0.00
3	T	Dichlorodifluoromethane	3.132	3.304	-5.5	102	0.00
4	T	1,2-Dichloro-1,2,2,2-tetraf	2.132	2.283	-7.1	100	0.00
5	T	Chloromethane	1.181	1.303	-10.3	100	-0.01
6	T	Vinyl chloride	0.977	1.190	-21.8	115	0.00
7	T	1,3-Butadiene	0.948	1.176	-24.1	138	0.00
8	T	Bromomethane	1.104	1.220	-10.5	100	0.00
9	T	Chloroethane	0.656	0.750	-14.3	101	0.00
10	T	Trichlorofluoromethane	2.719	3.019	-11.0	103	0.00
11	T	Ethanol	0.253	0.318	-25.7	190#	-0.02
12	T	Freon113	2.026	2.379	-17.4	110	0.00
13	T	1,1-Dichloroethene	1.749	1.960	-12.1	107	0.00
14	T	Acetone	1.682	1.849	-9.9	133	0.00
15	T	Carbon disulfide	3.052	3.293	-7.9	103	0.00
16	T	2-Propanol	1.712	1.904	-11.2	121	-0.02
17	T	Methylene chloride	1.281	1.446	-12.9	112	0.00
18	T	tert-Butyl Methyl Ether	2.223	2.663	-19.8	125	0.00
19	T	trans-1,2-Dichloroethene	1.624	1.877	-15.6	113	0.00
20	T	n-Hexane	1.751	2.040	-16.5	113	0.00
21	T	1,1-Dichloroethane	1.774	2.041	-15.1	116	0.00
22	T	Vinyl acetate	2.351	2.866	-21.9	130	0.00
23	T	cis-1,2-Dichloroethene	1.016	1.121	-10.3	113	0.00
24	T	2-Butanone	1.580	1.932	-22.3	135	-0.01
25	T	Ethyl acetate	2.018	2.537	-25.7	131	-0.01
26	T	Tetrahydrofuran	1.080	1.273	-17.9	119	-0.01
27	T	Chloroform	1.962	2.294	-16.9	109	0.00
28	T	1,1,1-Trichloroethane	1.900	2.357	-24.1	114	0.00
29	T	Cyclohexane	1.675	2.088	-24.7	110	0.00
30	T	Carbon tetrachloride	1.808	2.169	-20.0	119	0.00
31	T	Benzene	2.426	2.756	-13.6	124	0.00
32	T	1,2-Dichloroethane	1.117	1.335	-19.5	121	0.00
33	I	1,4-Difluorobenzene	1.000	1.000	0.0	98	0.00
34	T	Heptane	0.672	0.815	-21.3	110	0.00
35	T	Trichloroethene	0.395	0.442	-11.9	113	0.00
36	T	1,2-Dichloropropane	0.292	0.329	-12.7	121	0.00
37	T	1,4-Dioxane	0.098	0.114	-16.3	166#	-0.02
38	T	Bromodichloromethane	0.542	0.613	-13.1	118	0.00
39	T	cis-1,3-Dichloropropene	0.457	0.506	-10.7	119	0.00
40	T	4-Methyl-2-pentanone	0.230	0.261	-13.5	119	0.00
41	T	Toluene	0.779	0.862	-10.7	118	0.00
42	T	trans-1,3-Dichloropropene	0.401	0.442	-10.2	120	0.00
43	T	1,1,2-Trichloroethane	0.278	0.301	-8.3	118	0.00
44	T	Tetrachloroethene	0.439	0.493	-12.3	111	0.00
45	T	2-Hexanone	0.492	0.533	-8.3	134	0.00
46	T	Chlorodibromomethane	0.438	0.486	-11.0	120	0.00
47	T	1,2-Dibromoethane	0.414	0.445	-7.5	116	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\083011\08301109.D Vial: 9
Acq On : 30 Aug 2011 1:10 pm Operator: RACHEL HILL
Sample : ICV1 VOA1 083011 Inst : VOA 1
Misc : ICV EPA_TO15 Multiplr: 1.00
MS Integration Params: CLME.P

Method : C:\HPCHEM\1\METHODS\083011V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Wed Aug 31 12:29:35 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	0.821	0.867	-5.6	114	0.00
50	T	Ethylbenzene	1.318	1.447	-9.8	115	0.00
51	T	m,p-Xylene	1.025	1.226	-19.6	114	0.00
52	T	o-Xylene	0.986	1.085	-10.0	114	0.00
53	T	Styrene	0.754	0.801	-6.2	112	0.00
54	T	Bromoform	0.543	0.598	-10.1	116	0.00
55	S	4-Bromofluorobenzene	0.604	0.599	0.8	93	0.00
56	T	1,1,2,2-Tetrachloroethane	0.756	0.830	-9.8	109	0.00
57	T	4-Ethyltoluene	1.229	1.284	-4.5	107	0.00
58	T	1,3,5-Trimethylbenzene	1.055	1.109	-5.1	108	0.00
59	T	1,2,4-Trimethylbenzene	1.004	1.041	-3.7	105	0.00
60	T	1,3-Dichlorobenzene	0.632	0.625	1.1	104	0.00
61	T	1,4-Dichlorobenzene	0.580	0.569	1.9	104	0.00
62	T	Benzyl chloride	0.801	0.869	-8.5	111	0.00
63	T	1,2-Dichlorobenzene	0.587	0.586	0.2	103	0.00
64	T	1,2,4-Trichlorobenzene	0.085	0.083	2.4	96	0.00
65	T	Hexachlorobutadiene	0.219	0.215	1.8	94	0.00
66		Naphthalene	0.170	0.154	9.4	98	0.00

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\083011\08301109.D Vial: 9
Acq On : 30 Aug 2011 1:10 pm Operator: RACHEL HILL
Sample : ICV1 VOA1 083011 Inst : VOA 1
Misc : ICV EPA_TO15 Multiplr: 1.00
MS Integration Params: CLME.P
Quant Time: Aug 31 12:30 2011 Quant Results File: 083011V1.RES

Quant Method : C:\HPCHEM\1\METHODS\083011V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Wed Aug 31 12:29:35 2011
Response via : Initial Calibration
DataAcq Meth : 083011V1

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	10.58	130	736284	12.50 ppbv	0.00
33) 1,4-Difluorobenzene	11.68	114	2356718	12.50 ppbv	0.00
48) Chlorobenzene-d5	15.53	117	1501952	12.50 ppbv	0.00

System Monitoring Compounds					
55) 4-Bromofluorobenzene	17.19	95	900129	12.40 ppbv	0.00

Spiked Amount 12.500 Range 70 - 113 Recovery = 99.20%

Target Compounds					Qvalue
2) Propylene	5.51	41	785281	10.71 ppbv	96
3) Dichlorodifluoromethane	5.58	85	1790355	9.70 ppbv	99
4) 1,2-Dichloro-1,2,2,2-tetra	5.84	135	1277760	10.18 ppbv #	77
5) Chloromethane	5.99	50	728881	10.48 ppbv	99
6) Vinyl chloride	6.20	62	658732	11.45 ppbv #	98
7) 1,3-Butadiene	6.26	39	678661	12.15 ppbv	96
8) Bromomethane	6.84	94	668314	10.28 ppbv	99
9) Chloroethane	6.99	64	406443	10.52 ppbv	97
10) Trichlorofluoromethane	7.33	101	1707048	10.66 ppbv	98
11) Ethanol	7.55	45	172272	11.55 ppbv	99
12) Freon113	7.99	101	1373037	11.51 ppbv	92
13) 1,1-Dichloroethene	8.09	61	1142846	11.09 ppbv	88
14) Acetone	8.18	43	1089364	10.99 ppbv #	88
15) Carbon disulfide	8.46	76	1881467	10.47 ppbv #	100
16) 2-Propanol	8.23	45	1132713	11.23 ppbv #	1
17) Methylene chloride	8.75	49	851549	11.29 ppbv #	81
18) tert-Butyl Methyl Ether	8.94	73	1552727	11.86 ppbv #	91
19) trans-1,2-Dichloroethene	9.03	61	1083352	11.33 ppbv #	84
20) n-Hexane	9.22	57	1213536	11.76 ppbv	91
21) 1,1-Dichloroethane	9.59	63	1166360	11.16 ppbv	98
22) Vinyl acetate	9.52	43	1671423	12.07 ppbv #	96
23) cis-1,2-Dichloroethene	10.27	96	647011	10.81 ppbv #	84
24) 2-Butanone	10.24	43	1126555	12.11 ppbv #	90
25) Ethyl acetate	10.19	43	1464455	12.32 ppbv #	100
26) Tetrahydrofuran	10.58	42	749898	11.78 ppbv	92
27) Chloroform	10.60	83	1323952	11.46 ppbv	100
28) 1,1,1-Trichloroethane	10.85	97	1333059	11.91 ppbv	97
29) Cyclohexane	10.86	56	1205167	12.21 ppbv	91
30) Carbon tetrachloride	11.01	117	1213514	11.39 ppbv	99
31) Benzene	11.29	78	1558373	10.91 ppbv	95
32) 1,2-Dichloroethane	11.37	62	762523	11.58 ppbv #	98
34) Heptane	11.34	43	1521371	12.01 ppbv #	91
35) Trichloroethene	12.02	130	799319	10.72 ppbv	94
36) 1,2-Dichloropropane	12.38	63	607738	11.04 ppbv	97
37) 1,4-Dioxane	12.45	88	206557	11.14 ppbv #	83
38) Bromodichloromethane	12.66	83	1108686	10.86 ppbv	99
39) cis-1,3-Dichloropropene	13.22	75	905674	10.52 ppbv	97
40) 4-Methyl-2-pentanone	13.33	58	491508	11.35 ppbv	93
41) Toluene	13.62	91	1591962	10.84 ppbv	98
42) trans-1,3-Dichloropropene	13.93	75	757505	10.01 ppbv	96
43) 1,1,2-Trichloroethane	14.20	97	555541	10.61 ppbv	97

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\083011\08301109.D Vial: 9
Acq On : 30 Aug 2011 1:10 pm Operator: RACHEL HILL
Sample : ICV1 VOA1 083011 Inst : VOA 1
Misc : ICV EPA_TO15 Multiplr: 1.00
MS Integration Params: CLME.P
Quant Time: Aug 31 12:30 2011 Quant Results File: 083011V1.RES

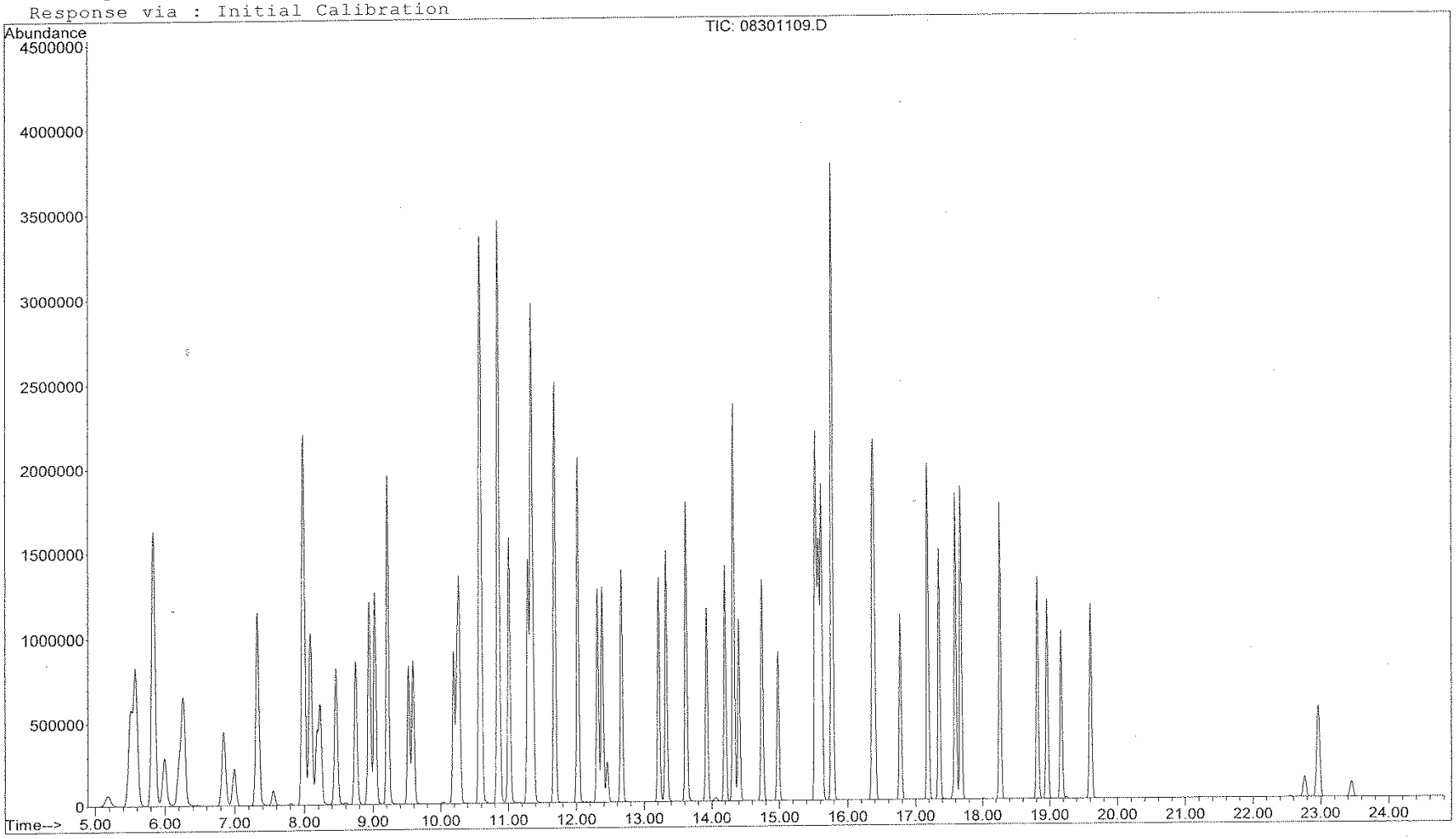
Quant Method : C:\HPCHEM\1\METHODS\083011V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Wed Aug 31 12:29:35 2011
Response via : Initial Calibration
DataAcq Meth : 083011V1

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
44)	Tetrachloroethene	14.33	166	892224	10.79	ppbv		98
45)	2-Hexanone	14.40	43	985668	10.62	ppbv		94
46)	Chlorodibromomethane	14.75	129	898468	10.88	ppbv		99
47)	1,2-Dibromoethane	14.98	107	805317	10.31	ppbv		99
49)	Chlorobenzene	15.58	112	1030897	10.44	ppbv	#	88
50)	Ethylbenzene	15.62	91	1704305	10.76	ppbv		92
51)	m,p-Xylene	15.77	91	2827690	22.96	ppbv		93
52)	o-Xylene	16.37	91	1303814	11.01	ppbv	#	89
53)	Styrene	16.39	104	943600	10.41	ppbv		96
54)	Bromoform	16.77	173	690091	10.58	ppbv	#	98
56)	1,1,2,2-Tetrachloroethane	17.35	83	997628	10.99	ppbv		99
57)	4-Ethyltoluene	17.60	105	1512104	10.24	ppbv		96
58)	1,3,5-Trimethylbenzene	17.68	105	1292128	10.19	ppbv		97
59)	1,2,4-Trimethylbenzene	18.26	105	1225441	10.16	ppbv		97
60)	1,3-Dichlorobenzene	18.82	146	728049	9.58	ppbv		98
61)	1,4-Dichlorobenzene	18.96	146	656604	9.43	ppbv		97
62)	Benzyl chloride	19.17	91	1012496	10.52	ppbv		96
63)	1,2-Dichlorobenzene	19.61	146	682759	9.68	ppbv		98
64)	1,2,4-Trichlorobenzene	22.76	180	90758	8.88	ppbv		97
65)	Hexachlorobutadiene	22.97	225	242479	9.21	ppbv		99
66)	Naphthalene	23.46	128	169966	8.33	ppbv		100

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

Data File : C:\HPCHEM\1\DATA\083011\08301109.D Vial: 9
Acq On : 30 Aug 2011 1:10 pm Operator: RACHEL HILL
Sample : ICV1 VOA1 083011 Inst : VOA 1
Misc : ICV EPA_TO15 Multiplr: 1.00
MS Integration Params: CLME.P
Quant Time: Aug 31 12:30 2011 Quant Results File: 083011V1.RES

Method : C:\HPCHEM\1\METHODS\083011V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Wed Aug 31 12:29:35 2011
Response via : Initial Calibration



RTI Laboratories

Run ID: VOA1_110831A **Run No.:** 42642

Analytical Run Date: 8/31/2011 **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 083111	BFB_TUNE	TUNE	R42642	8/31/2011 6:37:00 PM	Charles O`Bryan		
1ppbv ICAL	EPA_TO15	ICAL	R42642	8/31/2011 7:22:00 PM	Charles O`Bryan		
10ppbv ICAL	EPA_TO15	ICAL	R42642	8/31/2011 8:05:00 PM	Charles O`Bryan		
12ppbv ICAL	EPA_TO15	ICAL	R42642	8/31/2011 8:49:00 PM	Charles O`Bryan		
15ppbv ICAL	EPA_TO15	ICAL	R42642	8/31/2011 9:33:00 PM	Charles O`Bryan		
20ppbv ICAL	EPA_TO15	ICAL	R42642	8/31/2011 10:17:00 PM	Charles O`Bryan		
30ppbv ICAL	EPA_TO15	ICAL	R42642	8/31/2011 11:02:00 PM	Charles O`Bryan		
50ppbv ICAL	EPA_TO15	ICAL	R42642	8/31/2011 11:48:00 PM	Charles O`Bryan		
BFB2 VOA1 083111	BFB_TUNE	TUNE	R42642	9/1/2011 6:27:00 AM	Charles O`Bryan		
ICV1 VOA1 083111	EPA_TO15	ICV	R42642	9/1/2011 7:11:00 AM	Charles O`Bryan		
RLVS1 VOA1 08311	EPA_TO15	RLVS	R42642	9/1/2011 9:23:00 AM	Charles O`Bryan		
BLK VOA1 083111	EPA_TO15	MBLK	R42642	9/1/2011 10:13:00 AM	Charles O`Bryan		
1108A24-001A	EPA_TO15	SAMP	R42642	9/1/2011 11:40:00 AM	Charles O`Bryan		
1108A24-002A	EPA_TO15	SAMP	R42642	9/1/2011 12:24:00 PM	Charles O`Bryan		
1108A63-001A	EPA_TO15	SAMP	R42642	9/1/2011 4:33:00 PM	Charles O`Bryan		
1108A63-002A	EPA_TO15	SAMP	R42642	9/1/2011 5:17:00 PM	Charles O`Bryan		
1108A63-003A	EPA_TO15	SAMP	R42642	9/1/2011 6:02:00 PM	Charles O`Bryan		
1108A63-004A	EPA_TO15	SAMP	R42642	9/1/2011 6:44:00 PM	Charles O`Bryan		
1108A63-004ADUP	EPA_TO15	SAMP	R42642	9/1/2011 7:29:00 PM	Charles O`Bryan		
1107640-040A	EPA_TO15	SAMP	R42642	9/1/2011 10:30:00 PM	Charles O`Bryan	H	
RLVS2 VOA1 08311	EPA_TO15	RLVS	R42642	9/2/2011 12:02:00 AM	Charles O`Bryan		

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
826648	ICV1 VOA1 083111	EPA_TO15	ICV	\1\DATA\083111	9/1/2011 7:11:00	1	R42642		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	11.58	11.58		9.6	0	0	0.107	1	0	121%	70	130	0%	
1,1,2,2-Tetrachloroethane	A	ppbv	11.38	11.38		10	0	0	0.211	1	0	114%	70	130	0%	
1,1,2-Trichloro-1,2,2-trifluoroethane	A	ppbv	11.16	11.16		9.8	0	0	0.108	1	0	114%	70	130	0%	
1,1,2-Trichloroethane	A	ppbv	10.76	10.76		9.8	0	0	0.2	1	0	110%	70	130	0%	
1,1-Dichloroethane	A	ppbv	11.14	11.14		9.7	0	0	0.111	1	0	115%	70	130	0%	
1,1-Dichloroethene	A	ppbv	10.83	10.83		9.9	0	0	0.097	1	0	109%	70	130	0%	
1,2,4-Trichlorobenzene	A	ppbv	10.59	10.59		9.1	0	0	0.271	1	0	116%	70	130	0%	
1,2,4-Trimethylbenzene	A	ppbv	10.93	10.93		9.8	0	0	0.245	1	0	112%	70	130	0%	
1,2-Dibromoethane	A	ppbv	10.74	10.74		9.6	0	0	0.186	1	0	112%	70	130	0%	
1,2-Dichlorobenzene	A	ppbv	11.28	11.28		9.7	0	0	0.208	1	0	116%	70	130	0%	
1,2-Dichloroethane	A	ppbv	11.78	11.78		9.7	0	0	0.196	1	0	121%	70	130	0%	
1,2-Dichloropropane	A	ppbv	11.29	11.29		9.8	0	0	0.224	1	0	115%	70	130	0%	
1,3,5-Trimethylbenzene	A	ppbv	10.63	10.63		9.7	0	0	0.24	1	0	110%	70	130	0%	
1,3-Butadiene	A	ppbv	10.6	10.6		9.8	0	0	0.152	1	0	108%	70	130	0%	
1,3-Dichlorobenzene	A	ppbv	10.94	10.94		9.7	0	0	0.202	1	0	113%	70	130	0%	
1,4-Dichlorobenzene	A	ppbv	10.89	10.89		9.6	0	0	0.194	1	0	113%	70	130	0%	
1,4-Dioxane	A	ppbv	10.04	10.04		9.6	0	0	0.128	1	0	105%	70	130	0%	
2-Butanone	A	ppbv	11.57	11.57		9.9	0	0	0.287	1	0	117%	70	130	0%	
2-Hexanone	A	ppbv	10.29	10.29		9.8	0	0	0.135	1	0	105%	70	130	0%	
2-Propanol	A	ppbv	10.74	10.74		10.1	0	0	0.329	1	0	106%	70	130	0%	
4-Methyl-2-pentanone	A	ppbv	10.87	10.87		10	0	0	0.157	1	0	109%	70	130	0%	
Acetone	A	ppbv	11.54	11.54		10	0	0	0.43	1	0	115%	70	130	0%	
Benzene	A	ppbv	11.1	11.1		9.6	0	0	0.126	1	0	116%	70	130	0%	
Benzyl chloride	A	ppbv	11.55	11.55		9.7	0	0	0.155	1	0	119%	70	130	0%	
Bromodichloromethane	A	ppbv	10.88	10.88		9.6	0	0	0.156	1	0	113%	70	130	0%	
Bromoform	A	ppbv	10.53	10.53		9.6	0	0	0.197	1	0	110%	70	130	0%	
Bromomethane	A	ppbv	9.69	9.69		9.3	0	0	0.075	1	0	104%	70	130	0%	
Carbon disulfide	A	ppbv	10.1	10.1		9.7	0	0	0.093	1	0	104%	70	130	0%	
Carbon tetrachloride	A	ppbv	10.65	10.65		9.5	0	0	0.114	1	0	112%	70	130	0%	
Chlorobenzene	A	ppbv	10.67	10.67		9.9	0	0	0.275	1	0	108%	70	130	0%	
Chlorodibromomethane	A	ppbv	10.61	10.61		9.2	0	0	0.165	1	0	115%	70	130	0%	
Chloroethane	A	ppbv	9.95	9.95		9.8	0	0	0.063	1	0	102%	70	130	0%	
Chloroform	A	ppbv	11.78	11.78		9.4	0	0	0.126	1	0	125%	70	130	0%	
Chloromethane	A	ppbv	10.31	10.31		9.8	0	0	0.104	1	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
826648	ICV1 VOA1 083111	EPA_TO15	ICV	\1\DATA\083111	9/1/2011 7:11:00	1	R42642		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	10.81	10.81		9.8	0	0	0.107	1	0	110%	70	130	0%	
cis-1,3-dichloropropene	A	ppbv	10.66	10.66		9.5	0	0	0.166	1	0	112%	70	130	0%	
Cyclohexane	A	ppbv	11.93	11.93		9.8	0	0	0.684	2	0	122%	70	130	0%	
Dichlorodifluoromethane	A	ppbv	9.42	9.42		9.2	0	0	0.086	1	0	102%	70	130	0%	
Ethanol	A	ppbv	10.7	10.7		9.2	0	0	1.962	5	0	116%	70	130	0%	
Ethyl acetate	A	ppbv	12.03	12.03		9.8	0	0	0.157	1	0	123%	70	130	0%	
Ethylbenzene	A	ppbv	10.87	10.87		9.8	0	0	0.737	2	0	111%	70	130	0%	
Heptane	A	ppbv	12.22	12.22		9.9	0	0	0.249	1	0	123%	70	130	0%	
Hexachlorobutadiene	A	ppbv	10.66	10.66		9.4	0	0	0.374	2	0	113%	70	130	0%	
m,p-Xylene	A	ppbv	23.26	23.26		19.2	0	0	0.524	2	0	121%	70	130	0%	
Methylene chloride	A	ppbv	11.02	11.02		10	0	0	2.077	5	0	110%	70	130	0%	
n-Hexane	A	ppbv	11.36	11.36		10.1	0	0	0.692	2	0	112%	70	130	0%	
Naphthalene	A	ppbv	11.11	11.11		9.2	0	0	0.247	1	0	121%	70	130	0%	
o-Xylene	A	ppbv	11.14	11.14		10	0	0	0.258	1	0	111%	70	130	0%	
Propylene	A	ppbv	10.55	10.55		10.2	0	0	0.075	1	0	103%	70	130	0%	
Styrene	A	ppbv	10.79	10.79		9.8	0	0	0.263	1	0	110%	70	130	0%	
tert-Butyl Methyl Ether	A	ppbv	12.23	12.23		9.9	0	0	0.228	1	0	124%	70	130	0%	
Tetrachloroethene	A	ppbv	10.82	10.82		9.6	0	0	0.148	1	0	113%	70	130	0%	
Tetrahydrofuran	A	ppbv	12.4	12.4		10	0	0	0.201	1	0	124%	70	130	0%	
Toluene	A	ppbv	11.18	11.18		9.8	0	0	0.158	1	0	114%	70	130	0%	
trans-1,2-Dichloroethene	A	ppbv	10.96	10.96		9.8	0	0	0.117	1	0	112%	70	130	0%	
trans-1,3-dichloropropene	A	ppbv	10.29	10.29		9.1	0	0	0.171	1	0	113%	70	130	0%	
Trichloroethene	A	ppbv	10.73	10.73		9.6	0	0	0.119	1	0	112%	70	130	0%	
Trichlorofluoromethane	A	ppbv	9.95	9.95		9.6	0	0	0.148	1	0	104%	70	130	0%	
Vinyl acetate	A	ppbv	12.68	12.68		9.9	0	0	0.266	1	0	128%	70	130	0%	
Vinyl chloride	A	ppbv	10.19	10.19		9.4	0	0	0.072	1	0	108%	70	130	0%	
Xylenes, Total	C	ppbv	34.4	34.4		29.2	0	0	0.782	3	0	118%	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	13.2	13.2		12.5	0	0	0	0	0	106%	70	130	0%	

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\083111\08311110.D Vial: 9
Acq On : 1 Sep 2011 7:11 am Operator: RACHEL HILL
Sample : ICV1 VOA1 083111 Inst : VOA 1
Misc : ICV EPA_TO15 Multiplr: 1.00
MS Integration Params: CLME.P

Method : C:\HPCHEM\1\METHODS\083111V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Thu Sep 01 08:55:24 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	106	0.00
2	T	Propylene	1.185	1.225	-3.4	105	0.00
3	T	Dichlorodifluoromethane	2.944	3.015	-2.4	106	0.00
4	T	1,2-Dichloro-1,2,2,2-tetraf	1.986	2.057	-3.6	107	0.00
5	T	Chloromethane	1.295	1.406	-8.6	105	0.00
6	T	Vinyl chloride	1.339	1.453	-8.5	100	0.00
7	T	1,3-Butadiene	1.019	1.102	-8.1	100	0.00
8	T	Bromomethane	1.123	1.171	-4.3	107	0.00
9	T	Chloroethane	0.657	0.711	-8.2	106	0.00
10	T	Trichlorofluoromethane	2.825	2.929	-3.7	107	0.00
11	T	Ethanol	0.263	0.306	-16.3	120	0.00
12	T	Freon113	2.169	2.469	-13.8	105	0.00
13	T	1,1-Dichloroethene	1.806	1.976	-9.4	105	0.00
14	T	Acetone	1.601	1.848	-15.4	110	0.00
15	T	Carbon disulfide	3.037	3.162	-4.1	105	0.00
16	T	2-Propanol	1.641	1.744	-6.3	110	0.00
17	T	Methylene chloride	1.354	1.492	-10.2	105	0.00
18	T	tert-Butyl Methyl Ether	2.139	2.641	-23.5	110	0.00
19	T	trans-1,2-Dichloroethene	1.719	1.923	-11.9	106	0.00
20	T	n-Hexane	1.855	2.087	-12.5	104	0.00
21	T	1,1-Dichloroethane	1.893	2.174	-14.8	106	0.00
22	T	Vinyl acetate	2.225	2.850	-28.1	110	0.00
23	T	cis-1,2-Dichloroethene	1.019	1.123	-10.2	107	0.00
24	T	2-Butanone	1.596	1.866	-16.9	112	0.00
25	T	Ethyl acetate	1.909	2.344	-22.8	117	0.00
26	T	Tetrahydrofuran	1.078	1.336	-23.9	107	0.00
27	T	Chloroform	2.038	2.451	-20.3	104	0.00
28	T	1,1,1-Trichloroethane	1.976	2.384	-20.6	105	0.00
29	T	Cyclohexane	1.829	2.226	-21.7	104	0.00
30	T	Carbon tetrachloride	1.829	2.050	-12.1	107	0.00
31	T	Benzene	2.442	2.823	-15.6	109	0.00
32	T	1,2-Dichloroethane	1.137	1.381	-21.5	108	0.00
33	I	1,4-Difluorobenzene	1.000	1.000	0.0	106	0.00
34	T	Heptane	0.698	0.861	-23.4	106	0.00
35	T	Trichloroethene	0.397	0.444	-11.8	108	0.00
36	T	1,2-Dichloropropane	0.284	0.327	-15.1	108	0.00
37	T	1,4-Dioxane	0.090	0.094	-4.4	116	0.00
38	T	Bromodichloromethane	0.543	0.616	-13.4	110	0.00
39	T	cis-1,3-Dichloropropene	0.430	0.483	-12.3	110	0.00
40	T	4-Methyl-2-pentanone	0.218	0.237	-8.7	108	0.00
41	T	Toluene	0.739	0.844	-14.2	109	0.00
42	T	trans-1,3-Dichloropropene	0.370	0.419	-13.2	111	0.00
43	T	1,1,2-Trichloroethane	0.260	0.286	-10.0	110	0.00
44	T	Tetrachloroethene	0.424	0.479	-13.0	109	0.00
45	T	2-Hexanone	0.445	0.468	-5.2	113	0.00
46	T	Chlorodibromomethane	0.419	0.454	-8.4	111	0.00
47	T	1,2-Dibromoethane	0.383	0.428	-11.7	112	0.00

(#) = Out of Range
08311110.D 083111V1.M Thu Oct 20 11:05:25 2011

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\083111\08311110.D Vial: 9
Acq On : 1 Sep 2011 7:11 am Operator: RACHEL HILL
Sample : ICV1 VOA1 083111 Inst : VOA 1
Misc : ICV EPA_TO15 Multiplr: 1.00
MS Integration Params: CLME.P

Method : C:\HPCHEM\1\METHODS\083111V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Thu Sep 01 08:55:24 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	0.768	0.827	-7.7	111	0.00
50	T	Ethylbenzene	1.230	1.364	-10.9	110	0.00
51	T	m,p-Xylene	0.985	1.193	-21.1	109	0.00
52	T	o-Xylene	0.919	1.023	-11.3	111	0.00
53	T	Styrene	0.688	0.758	-10.2	111	0.00
54	T	Bromoform	0.491	0.538	-9.6	114	0.00
55	S	4-Bromofluorobenzene	0.586	0.619	-5.6	111	0.00
56	T	1,1,2,2-Tetrachloroethane	0.664	0.756	-13.9	111	0.00
57	T	4-Ethyltoluene	1.051	1.159	-10.3	111	0.00
58	T	1,3,5-Trimethylbenzene	0.906	0.993	-9.6	110	0.00
59	T	1,2,4-Trimethylbenzene	0.836	0.933	-11.6	111	0.00
60	T	1,3-Dichlorobenzene	0.528	0.595	-12.7	115	0.00
61	T	1,4-Dichlorobenzene	0.486	0.552	-13.6	115	0.00
62	T	Benzyl chloride	0.662	0.788	-19.0	117	0.00
63	T	1,2-Dichlorobenzene	0.479	0.557	-16.3	117	0.00
64	T	1,2,4-Trichlorobenzene	0.081	0.094	-16.0	134	0.00
65	T	Hexachlorobutadiene	0.227	0.258	-13.7	131	0.00
66		Naphthalene	0.144	0.174	-20.8	140	0.00

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\083111\08311110.D Vial: 9
Acq On : 1 Sep 2011 7:11 am Operator: RACHEL HILL
Sample : ICV1 VOA1 083111 Inst : VOA 1
Misc : ICV EPA_TO15 Multiplr: 1.00
MS Integration Params: CLME.P
Quant Time: Sep 1 15:46 2011 Quant Results File: 083111V1.RES

Quant Method : C:\HPCHEM\1\METHODS\083111V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Thu Sep 01 08:55:24 2011
Response via : Initial Calibration
DataAcq Meth : 083111V1

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	10.58	130	678446	12.50 ppbv	0.00
33) 1,4-Difluorobenzene	11.69	114	2090715	12.50 ppbv	0.00
48) Chlorobenzene-d5	15.54	117	1358349	12.50 ppbv	0.00

System Monitoring Compounds

55) 4-Bromofluorobenzene	17.19	95	840196	13.20 ppbv	0.00

Spiked Amount 12.500 Range 70 - 113 Recovery = 105.60%

Target Compounds					Qvalue
2) Propylene	5.51	41	678254	10.55 ppbv	95
3) Dichlorodifluoromethane	5.58	85	1505514	9.42 ppbv	99
4) 1,2-Dichloro-1,2,2,2-tetra	5.84	135	1060659	9.84 ppbv #	74
5) Chloromethane	6.00	50	724790	10.31 ppbv	99
6) Vinyl chloride	6.21	62	741124	10.19 ppbv	99
7) 1,3-Butadiene	6.26	39	586088	10.60 ppbv	97
8) Bromomethane	6.83	94	591013	9.69 ppbv	99
9) Chloroethane	6.99	64	354830	9.95 ppbv	96
10) Trichlorofluoromethane	7.33	101	1526289	9.95 ppbv #	98
11) Ethanol	7.57	45	152819	10.70 ppbv	99
12) Freon113	7.98	101	1313175	11.16 ppbv	90
13) 1,1-Dichloroethene	8.09	61	1061785	10.83 ppbv #	87
14) Acetone	8.18	43	1003031	11.54 ppbv #	89
15) Carbon disulfide	8.46	76	1664486	10.10 ppbv #	100
16) 2-Propanol	8.24	45	956192	10.74 ppbv #	1
17) Methylene chloride	8.75	49	809705	11.02 ppbv #	80
18) tert-Butyl Methyl Ether	8.95	73	1419333	12.23 ppbv #	89
19) trans-1,2-Dichloroethene	9.03	61	1022969	10.96 ppbv #	83
20) n-Hexane	9.22	57	1143821	11.36 ppbv	89
21) 1,1-Dichloroethane	9.59	63	1144790	11.14 ppbv #	97
22) Vinyl acetate	9.53	43	1531381	12.68 ppbv #	95
23) cis-1,2-Dichloroethene	10.28	96	597491	10.81 ppbv #	82
24) 2-Butanone	10.24	43	1002584	11.57 ppbv #	89
25) Ethyl acetate	10.20	43	1246967	12.03 ppbv #	100
26) Tetrahydrofuran	10.58	42	725267	12.40 ppbv	90
27) Chloroform	10.60	83	1303643	11.78 ppbv	100
28) 1,1,1-Trichloroethane	10.85	97	1242423	11.58 ppbv	96
29) Cyclohexane	10.86	56	1184265	11.93 ppbv	89
30) Carbon tetrachloride	11.01	117	1056875	10.65 ppbv	98
31) Benzene	11.30	78	1470772	11.10 ppbv	95
32) 1,2-Dichloroethane	11.37	62	727232	11.78 ppbv #	98
34) Heptane	11.34	43	1426467	12.22 ppbv #	89
35) Trichloroethene	12.03	130	712175	10.73 ppbv	93
36) 1,2-Dichloropropane	12.38	63	536789	11.29 ppbv	97
37) 1,4-Dioxane	12.46	88	151057	10.04 ppbv #	82
38) Bromodichloromethane	12.67	83	988649	10.88 ppbv	99
39) cis-1,3-Dichloropropene	13.22	75	767366	10.66 ppbv	96
40) 4-Methyl-2-pentanone	13.33	58	397196	10.87 ppbv #	92
41) Toluene	13.62	91	1382766	11.18 ppbv	97
42) trans-1,3-Dichloropropene	13.93	75	637065	10.29 ppbv	95
43) 1,1,2-Trichloroethane	14.20	97	468119	10.76 ppbv	97

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\083111\08311110.D Vial: 9
Acq On : 1 Sep 2011 7:11 am Operator: RACHEL HILL
Sample : ICV1 VOA1 083111 Inst : VOA 1
Misc : ICV EPA_TO15 Multiplr: 1.00
MS Integration Params: CLME.P
Quant Time: Sep 1 15:46 2011 Quant Results File: 083111V1.RES

Quant Method : C:\HPCHEM\1\METHODS\083111V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Thu Sep 01 08:55:24 2011
Response via : Initial Calibration
DataAcq Meth : 083111V1

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
44)	Tetrachloroethene	14.33	166	768374	10.82 ppbv		98
45)	2-Hexanone	14.41	43	766357	10.29 ppbv		93
46)	Chlorodibromomethane	14.75	129	743864	10.61 ppbv		99
47)	1,2-Dibromoethane	14.98	107	687804	10.74 ppbv		100
49)	Chlorobenzene	15.58	112	889725	10.67 ppbv	#	87
50)	Ethylbenzene	15.62	91	1452867	10.87 ppbv		91
51)	m,p-Xylene	15.78	91	2489746	23.26 ppbv		92
52)	o-Xylene	16.37	91	1111964	11.14 ppbv	#	88
53)	Styrene	16.39	104	806975	10.79 ppbv		95
54)	Bromoform	16.78	173	561543	10.53 ppbv	#	98
56)	1,1,2,2-Tetrachloroethane	17.36	83	821664	11.38 ppbv	#	99
57)	4-Ethyltoluene	17.60	105	1234346	10.81 ppbv		96
58)	1,3,5-Trimethylbenzene	17.68	105	1046274	10.63 ppbv		96
59)	1,2,4-Trimethylbenzene	18.27	105	993215	10.93 ppbv		97
60)	1,3-Dichlorobenzene	18.82	146	627270	10.94 ppbv		97
61)	1,4-Dichlorobenzene	18.96	146	575887	10.89 ppbv		97
62)	Benzyl chloride	19.17	91	830636	11.55 ppbv		96
63)	1,2-Dichlorobenzene	19.61	146	586732	11.28 ppbv		97
64)	1,2,4-Trichlorobenzene	22.77	180	92981	10.59 ppbv		97
65)	Hexachlorobutadiene	22.97	225	263286	10.66 ppbv		99
66)	Naphthalene	23.45	128	173939	11.11 ppbv		100

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

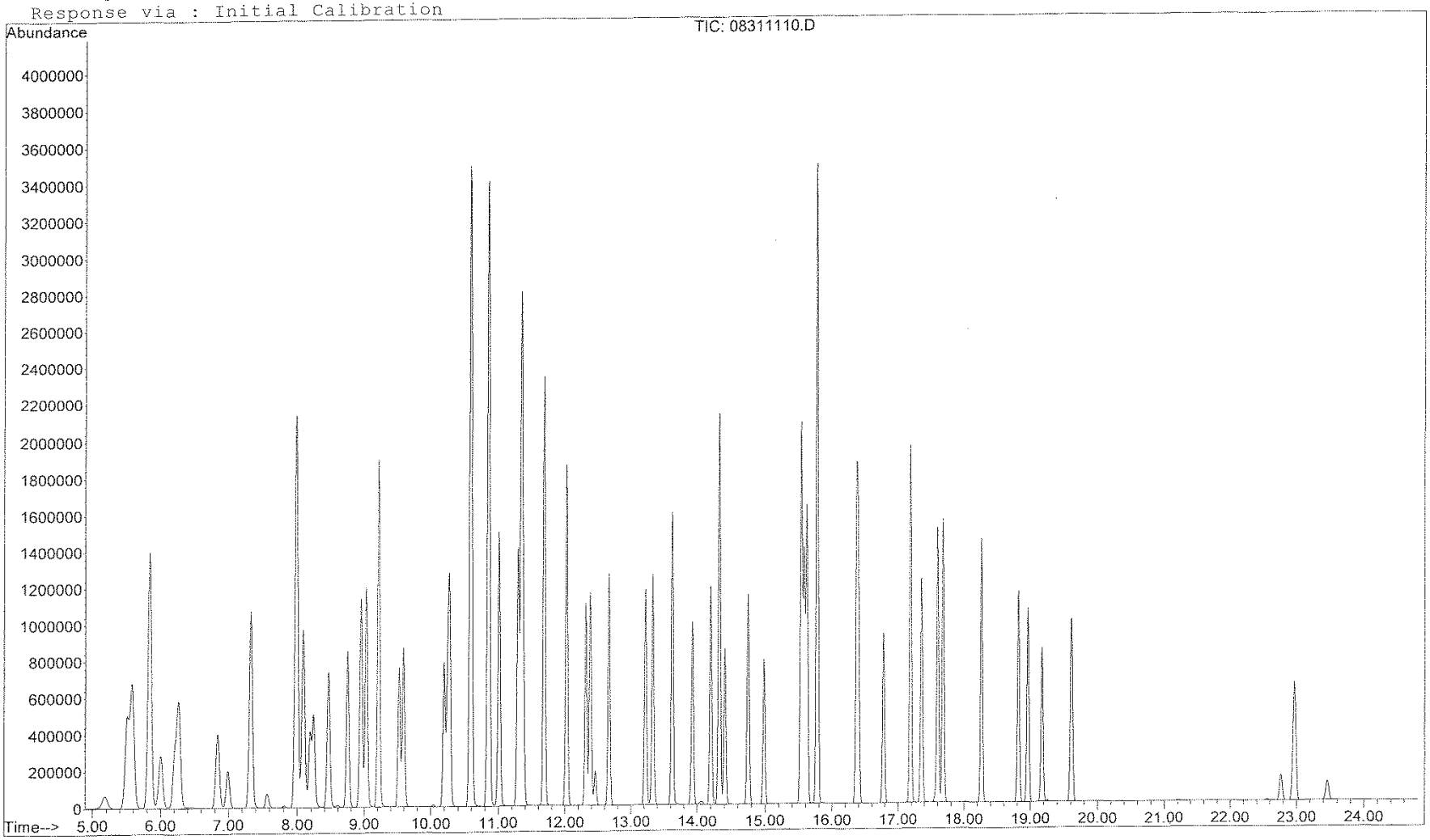
Quantitation Report

Data File : C:\HPCHEM\1\DATA\083111\08311110.D
Acq On : 1 Sep 2011 7:11 am
Sample : ICV1 VOA1 083111
Misc : ICV EPA_TO15
MS Integration Params: CLME.P
Quant Time: Sep 1 15:46 2011

Vial: 9
Operator: RACHEL HILL
Inst : VOA 1
Multiplr: 1.00

Quant Results File: 083111V1.RES

Method : C:\HPCHEM\1\METHODS\083111V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Thu Sep 01 08:55:24 2011
Response via : Initial Calibration



Response Factor Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\080511V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Sat Aug 06 09:48:56 2011
Response via : Initial Calibration

Calibration Files
2 =08051104.D 3 =08051105.D 4 =08051106.D
5 =08051107.D 6 =08051108.D 7 =08051109.D

		Compound	2	3	4	5	6	7	Avg	%RSD
1)	I	Bromochloromethane	----------ISTD----------							
2)	T	Propylene	1.193	1.503	1.218	1.213	1.147	1.107	1.212	10.19
3)	T	Dichlorodifluoromet	4.091	4.931	3.946	3.902	3.651	3.473	3.889	12.21
4)	T	1,2-Dichloro-1,2,2,	3.045	4.131	3.231	3.157	2.944	2.735	3.063	16.07
5)	T	Chloromethane	1.167	1.492	1.221	1.209	1.131	1.098	1.210	9.99
6)	T	Vinyl chloride	0.907	1.233	1.003	0.992	0.949	0.918	0.990	10.47
7)	T	1,3-Butadiene	0.705	0.937	0.762	0.738	0.712	0.683	0.745	10.91
8)	T	Bromomethane	1.431	2.009	1.594	1.564	1.457	1.347	1.392	27.35
9)	T	Chloroethane	0.765	1.094	0.896	0.875	0.810	0.753	0.796	23.92
10)	T	Trichlorofluorometh	3.656	5.003	3.958	3.852	3.555	3.253	3.702	16.45
11)	T	Ethanol		0.354	0.261	0.270	0.248	0.234	0.272	14.18
12)	T	Freon113	2.791	3.804	2.830	2.723	2.445	2.121	2.581	23.74
13)	T	1,1-Dichloroethene	1.975	2.695	2.117	2.059	1.888	1.677	1.962	17.92
14)	T	Acetone	1.549	2.311	1.498	1.533	1.313	1.191	1.505	23.23
15)	T	Carbon disulfide	3.612	4.986	3.941	3.855	3.566	3.253	3.664	17.41
16)	T	2-Propanol	1.560	1.976	1.462	1.485	1.351	1.306	1.496	14.00
17)	T	Methylene chloride	1.842	2.085	1.569	1.534	1.371	1.203	1.506	21.38
18)	T	tert-Butyl Methyl E	2.136	3.556	2.268	2.324	1.995	1.816	2.257	24.45
19)	T	trans-1,2-Dichloroe	1.822	2.571	1.932	1.861	1.678	1.464	1.780	21.06
20)	T	n-Hexane	1.879	2.823	2.073	2.017	1.775	1.590	1.901	22.69
21)	T	1,1-Dichloroethane	1.765	3.113	2.135	2.125	1.830	1.574	1.971	26.01
22)	T	Vinyl acetate	1.586	3.319	2.147	2.200	1.921	1.681	2.060	26.76
23)	T	cis-1,2-Dichloroeth	1.116	1.797	1.275	1.265	1.102	0.972	1.179	23.94
24)	T	2-Butanone	1.384	1.921	1.410	1.424	1.231	1.041	1.337	20.61
25)	T	Ethyl acetate	1.664	2.689	1.899	1.912	1.746	1.519	1.830	20.52
26)	T	Tetrahydrofuran	0.796	1.176	0.802	0.815	0.714	0.663	0.797	20.45
27)	T	Chloroform	1.752	2.889	2.037	2.010	1.781	1.585	1.910	22.64
28)	T	1,1,1-Trichloroetha	1.959	3.181	2.242	2.229	1.971	1.768	2.114	22.35
29)	T	Cyclohexane	1.767	2.546	1.794	1.738	1.511	1.339	1.635	27.35
30)	T	Carbon tetrachlorid	2.331	3.652	2.608	2.574	2.271	2.035	2.443	22.19
31)	T	Benzene	2.520	4.219	2.832	2.810	2.421	2.120	2.634	27.08
32)	T	1,2-Dichloroethane	0.959	1.648	1.127	1.133	1.002	0.882	1.085	22.45
33)	I	1,4-Difluorobenzene	----------ISTD----------							
34)	T	Heptane	0.556	0.804	0.543	0.525	0.450	0.397	0.519	28.23
35)	T	Trichloroethene	0.483	0.643	0.446	0.434	0.381	0.331	0.410	29.85
36)	T	1,2-Dichloropropane	0.255	0.398	0.271	0.269	0.235	0.205	0.251	27.45
37)	T	1,4-Dioxane		0.192	0.134	0.136	0.119	0.108	0.129	23.83
38)	T	Bromodichloromethan	0.463	0.729	0.513	0.504	0.447	0.394	0.473	25.24
39)	T	cis-1,3-Dichloropro	0.350	0.589	0.418	0.417	0.369	0.331	0.387	23.87
40)	T	4-Methyl-2-pentanon	0.192	0.262	0.186	0.184	0.164	0.150	0.178	22.39
41)	T	Toluene	0.754	1.115	0.774	0.755	0.667	0.594	0.715	26.81
42)	T	trans-1,3-Dichlorop	0.290	0.508	0.363	0.369	0.326	0.299	0.341	22.09
43)	T	1,1,2-Trichloroetha	0.266	0.392	0.276	0.273	0.242	0.220	0.258	24.44
44)	T	Tetrachloroethene	0.565	0.702	0.493	0.481	0.409	0.373	0.456	29.51
45)	T	2-Hexanone	0.381	0.506	0.354	0.359	0.317	0.299	0.346	21.76
46)	T	Chlorodibromomethan	0.435	0.673	0.477	0.470	0.422	0.380	0.443	24.11
47)	T	1,2-Dibromoethane	0.408	0.614	0.430	0.427	0.379	0.341	0.401	25.17
48)	I	Chlorobenzene-d5	----------ISTD----------							
49)	T	Chlorobenzene	0.881	1.144	0.811	0.780	0.710	0.645	0.761	25.72

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

Response Factor Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\080511V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Sat Aug 06 09:48:56 2011
Response via : Initial Calibration

Calibration Files
2 =08051104.D 3 =08051105.D 4 =08051106.D
5 =08051107.D 6 =08051108.D 7 =08051109.D

		Compound	2	3	4	5	6	7	Avg	%RSD
50)	T	Ethylbenzene	1.398	1.711	1.215	1.160	1.042	0.953	1.137	27.24
51)	T	m,p-Xylene	1.079	1.253	0.880	0.833	0.742	0.666	0.865	26.77
52)	T	o-Xylene	1.024	1.233	0.879	0.835	0.766	0.694	0.830	26.17
53)	T	Styrene	0.744	1.004	0.711	0.681	0.624	0.561	0.661	25.94
54)	T	Bromoform	0.589	0.821	0.583	0.574	0.524	0.476	0.552	23.30
55)	S	4-Bromofluorobenzen	0.549	0.571	0.554	0.554	0.557	0.551	0.557	1.44
56)	T	1,1,2,2-Tetrachloro	0.985	1.051	0.696	0.671	0.606	0.544	0.759	27.50
57)	T	4-Ethyltoluene		1.796	1.207	1.164	1.060	0.965	1.123	29.67
58)	T	1,3,5-Trimethylbenz		1.524	1.028	0.998	0.893	0.815	1.002	27.59
59)	T	1,2,4-Trimethylbenz		1.448	0.952	0.929	0.849	0.767	0.943	27.99
60)	T	1,3-Dichlorobenzene	0.864	0.913	0.615	0.615	0.564	0.512	0.624	28.10
61)	T	1,4-Dichlorobenzene	0.724	0.809	0.550	0.550	0.513	0.473	0.557	25.36
62)	T	Benzyl chloride	0.519	0.897	0.659	0.663	0.621	0.583	0.630	19.03
63)	T	1,2-Dichlorobenzene		0.879	0.591	0.589	0.542	0.494	0.566	27.08
64)	T	1,2,4-Trichlorobenz		0.084	0.059	0.062	0.061	0.060	0.067	14.15
65)	T	Hexachlorobutadiene		0.251	0.174	0.169	0.159	0.149	0.170	22.41
66)		Naphthalene		0.149	0.105	0.108	0.105	0.103	0.114	14.72

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

Compound List Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\080511V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Sat Aug 06 09:48:56 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	6.00	0.567	A	3	A	B
6	T	Vinyl chloride	62	6.21	0.587	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	6.99	0.660	A	3	A	B
10	T	Trichlorofluoromethane	101	7.32	0.692	A	3	A	B
11	T	Ethanol	45	7.56	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	0.846	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	10.27	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	1.002	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	11.29	1.067	A	3	A	B
32	T	1,2-Dichloroethane	62	11.37	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	12.03	1.030	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	13.21	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	14.32	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	1.263	A	2	A	B
47	T	1,2-Dibromoethane	107	14.98	1.283	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	17.18	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	1.220	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	22.76	1.465	A	3	A	B
65	T	Hexachlorobutadiene	225	22.96	1.478	A	2	A	B
66		Naphthalene	128	23.45	1.510	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

080511V1.M Wed Aug 10 15:25:08 2011

Response Factor Report VOA 1

Method : C:\HPCHEM\1\METHODS\082211V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Tue Aug 23 10:14:32 2011
Response via : Initial Calibration

Calibration Files
2 =08221103.D 4 =08221104.D 5 =08221105.D
6 =08221106.D 7 =08221107.D 8 =08221108.D

		Compound	2	4	5	6	7	8	Avg	%RSD
1)	I	Bromochloromethane	----------ISTD----------							
2)	T	Propylene	1.209	1.436	1.382	1.375	1.300	1.286	1.333	5.60
3)	T	Dichlorodifluoromet	4.167	4.951	4.682	4.672	4.436	4.314	4.524	5.81
4)	T	1,2-Dichloro-1,2,2,	2.739	3.307	3.104	3.046	2.875	2.701	2.914	8.50
5)	T	Chloromethane	1.175	1.534	1.456	1.453	1.385	1.329	1.389	8.27
6)	T	Vinyl chloride	0.995	1.328	1.285	1.303	1.253	1.242	1.246	9.25
7)	T	1,3-Butadiene	0.674	0.860	0.819	0.821	0.781	0.780	0.793	7.49
8)	T	Bromomethane	0.808	1.068	1.008	1.026	0.995	0.994	0.997	8.99
9)	T	Chloroethane	0.427	0.592	0.565	0.566	0.548	0.555	0.551	10.57
10)	T	Trichlorofluorometh	3.109	3.799	3.612	3.567	3.446	3.353	3.480	6.23
11)	T	Ethanol		0.216	0.249	0.171	0.315	0.299	0.245	22.08
12)	T	Freon113	2.439	3.027	2.830	2.738	2.547	2.356	2.604	10.41
13)	T	1,1-Dichloroethene	2.133	2.679	2.507	2.449	2.347	2.251	2.379	7.61
14)	T	Acetone	1.701	1.910	2.013	2.023	2.099	2.007	1.999	8.31
15)	T	Carbon disulfide	3.568	4.386	4.141	4.043	3.796	3.600	3.872	8.36
16)	T	2-Propanol	2.132	1.787	1.636	1.674	1.658	1.636	1.751	10.10
17)	T	Methylene chloride	1.668	1.955	1.852	1.844	1.752	1.643	1.771	6.58
18)	T	tert-Butyl Methyl E	1.842	2.895	3.197	3.172	3.366	3.181	3.017	18.16
19)	T	trans-1,2-Dichloroe	1.984	2.508	2.358	2.328	2.232	2.110	2.235	7.97
20)	T	n-Hexane	2.114	2.608	2.488	2.428	2.318	2.149	2.314	8.74
21)	T	1,1-Dichloroethane	2.110	2.978	2.865	2.813	2.720	2.554	2.659	10.75
22)	T	Vinyl acetate	1.538	2.712	2.936	2.918	3.110	2.919	2.751	20.08
23)	T	cis-1,2-Dichloroeth	1.217	1.563	1.499	1.464	1.369	1.275	1.373	10.13
24)	T	2-Butanone	1.564	1.609	1.830	1.875	2.004	1.810	1.796	8.70
25)	T	Ethyl acetate	1.702	2.148	2.604	2.564	2.871	2.760	2.492	16.92
26)	T	Tetrahydrofuran	0.768	0.997	1.080	1.063	1.095	1.000	1.003	11.02
27)	T	Chloroform	2.028	2.776	2.673	2.668	2.560	2.419	2.511	9.86
28)	T	1,1,1-Trichloroetha	2.416	3.145	3.040	2.997	2.856	2.707	2.845	8.64
29)	T	Cyclohexane	2.149	2.415	2.257	2.190	1.998	1.783	2.061	13.33
30)	T	Carbon tetrachlorid	2.523	3.286	3.154	3.080	2.946	2.779	2.940	8.80
31)	T	Benzene	3.075	3.889	3.751	3.751	3.519	3.213	3.470	9.85
32)	T	1,2-Dichloroethane	1.467	1.960	1.917	1.922	1.879	1.811	1.840	9.29
33)	I	1,4-Difluorobenzene	----------ISTD----------							
34)	T	Heptane	0.572	0.655	0.616	0.592	0.526	0.456	0.569	12.38
35)	T	Trichloroethene	0.441	0.494	0.470	0.448	0.402	0.359	0.417	15.68
36)	T	1,2-Dichloropropane	0.285	0.370	0.368	0.363	0.344	0.310	0.331	12.14
37)	T	1,4-Dioxane		0.124	0.104	0.110	0.108	0.096	0.106	10.34
38)	T	Bromodichloromethan	0.593	0.746	0.720	0.702	0.655	0.604	0.653	11.21
39)	T	cis-1,3-Dichloropro	0.464	0.558	0.556	0.543	0.520	0.477	0.508	9.67
40)	T	4-Methyl-2-pentanon	0.245	0.201	0.187	0.185	0.188	0.185	0.197	11.10
41)	T	Toluene	0.783	0.984	0.995	0.962	0.914	0.814	0.883	12.12
42)	T	trans-1,3-Dichlorop	0.367	0.490	0.503	0.487	0.478	0.440	0.455	10.81
43)	T	1,1,2-Trichloroetha	0.295	0.345	0.349	0.340	0.321	0.289	0.314	10.57
44)	T	Tetrachloroethene	0.589	0.557	0.534	0.498	0.461	0.413	0.488	16.39
45)	T	2-Hexanone	0.672	0.395	0.361	0.358	0.345	0.343	0.401	30.07
46)	T	Chlorodibromomethan	0.544	0.610	0.590	0.579	0.539	0.489	0.543	10.61
47)	T	1,2-Dibromoethane	0.458	0.515	0.521	0.497	0.469	0.419	0.464	11.69
48)	I	Chlorobenzene-d5	----------ISTD----------							
49)	T	Chlorobenzene	0.913	0.873	0.885	0.834	0.824	0.708	0.812	12.21

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

Response Factor Report VOA 1

Method : C:\HPCHEM\1\METHODS\082211V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Tue Aug 23 10:14:32 2011
Response via : Initial Calibration

Calibration Files
2 =08221103.D 4 =08221104.D 5 =08221105.D
6 =08221106.D 7 =08221107.D 8 =08221108.D

		Compound	2	4	5	6	7	8	Avg	%RSD
50)	T	Ethylbenzene	1.239	1.329	1.407	1.333	1.331	1.157	1.265	9.63
51)	T	m,p-Xylene	0.974	0.985	1.027	0.967	0.948	0.810	0.952	7.80
52)	T	o-Xylene	0.942	0.969	1.031	0.977	0.983	0.863	0.941	7.89
53)	T	Styrene	0.716	0.724	0.764	0.715	0.710	0.609	0.686	10.56
54)	T	Bromoform	0.715	0.690	0.706	0.662	0.655	0.575	0.649	10.37
55)	S	4-Bromofluorobenzen	0.618	0.636	0.639	0.640	0.637	0.629	0.636	1.54
56)	T	1,1,2,2-Tetrachloro	0.825	0.695	0.756	0.713	0.705		0.739	7.23
57)	T	4-Ethyltoluene	1.464	1.210	1.312	1.241	1.255	1.089	1.227	11.86
58)	T	1,3,5-Trimethylbenz	1.313	1.010	1.098	1.032	1.061	0.917	1.072	12.41
59)	T	1,2,4-Trimethylbenz	1.309	0.970	1.062	1.005	1.035	0.899	1.047	13.42
60)	T	1,3-Dichlorobenzene	1.038	0.737	0.793	0.737	0.730	0.632	0.748	19.76
61)	T	1,4-Dichlorobenzene	0.894	0.682	0.742	0.693	0.687	0.599	0.692	15.97
62)	T	Benzyl chloride	0.844	0.785	0.936	0.895	0.934	0.837	0.863	6.93
63)	T	1,2-Dichlorobenzene	1.006	0.677	0.745	0.693	0.690	0.588	0.733	19.51
64)	T	1,2,4-Trichlorobenz	0.223	0.109	0.152	0.152	0.166	0.154	0.161	21.06
65)	T	Hexachlorobutadiene	0.790	0.328	0.370	0.360	0.340	0.300	0.397	44.36
66)		Naphthalene	0.346	0.154	0.212	0.220	0.247	0.224	0.237	24.60

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

Compound List Report VOA 1

Method : C:\HPCHEM\1\METHODS\082211V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Tue Aug 23 10:14:32 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	5.50	0.520	A	2	A	B
3	T	Dichlorodifluoromethane	85	5.57	0.527	A	3	A	B
4	T	1,2-Dichloro-1,2,2,2-tetrafluo	135	5.82	0.551	A	2	A	B
5	T	Chloromethane	50	5.99	0.566	A	3	A	B
6	T	Vinyl chloride	62	6.20	0.586	A	2	A	B
7	T	1,3-Butadiene	39	6.25	0.591	A	2	A	B
8	T	Bromomethane	94	6.82	0.645	A	3	A	B
9	T	Chloroethane	64	6.98	0.660	A	3	A	B
10	T	Trichlorofluoromethane	101	7.30	0.690	A	3	A	B
11	T	Ethanol	45	7.58	0.716	A	2	A	B
12	T	Freon113	101	7.97	0.753	A	2	A	B
13	T	1,1-Dichloroethene	61	8.07	0.763	A	2	A	B
14	T	Acetone	43	8.18	0.774	A	2	A	B
15	T	Carbon disulfide	76	8.44	0.798	A	3	A	B
16	T	2-Propanol	45	8.25	0.779	A	2	A	B
17	T	Methylene chloride	49	8.74	0.826	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	9.21	0.870	A	3	A	B
21	T	1,1-Dichloroethane	63	9.58	0.906	A	3	A	B
22	T	Vinyl acetate	43	9.53	0.901	A	2	A	B
23	T	cis-1,2-Dichloroethene	96	10.28	0.971	A	3	A	B
24	T	2-Butanone	43	10.24	0.968	A	2	A	B
25	T	Ethyl acetate	43	10.20	0.964	A	3	A	B
26	T	Tetrahydrofuran	42	10.58	1.000	A	2	A	B
27	T	Chloroform	83	10.60	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	11.29	1.067	A	3	A	B
32	T	1,2-Dichloroethane	62	11.37	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	0.970	A	3	A	B
35	T	Trichloroethene	130	12.02	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	1.067	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	1.132	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	14.32	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	1.283	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	1.056	A	3	A	B
54	T	Bromoform	173	16.78	1.080	A	3	A	B
55	S	4-Bromofluorobenzene	95	17.18	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	1.220	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	22.76	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

082211V1.M Thu Oct 20 10:22:55 2011

Response Factor Report VOA 1

Method : C:\HPCHEM\1\METHODS\083011V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Wed Aug 31 12:29:35 2011
Response via : Initial Calibration

Calibration Files
2 =08301102.D 4 =08301103.D 5 =08301104.D
6 =08301105.D 7 =08301106.D 8 =08301107.D

		Compound	2	4	5	6	7	8	Avg	%RSD
1)	I	Bromochloromethane	----------ISTD----------							
2)	T	Propylene	1.387	1.228	1.260	1.226	1.149	1.181	1.245	6.21
3)	T	Dichlorodifluoromet	3.367	3.116	3.080	3.087	2.903	3.065	3.132	5.02
4)	T	1,2-Dichloro-1,2,2,	1.943	2.198	2.183	2.154	2.059	2.191	2.132	4.53
5)	T	Chloromethane	1.275	1.255	1.218	1.193	1.091	1.098	1.181	6.28
6)	T	Vinyl chloride	0.990	1.000	1.101	1.044	0.910	0.872	0.977	8.30
7)	T	1,3-Butadiene	0.863	0.821	1.135	1.054	0.868		0.948	14.53
8)	T	Bromomethane	0.788	1.176	1.144	1.118	1.081	1.157	1.104	13.57
9)	T	Chloroethane	0.385	0.715	0.702	0.684	0.657	0.702	0.656	18.72
10)	T	Trichlorofluorometh	2.668	2.816	2.740	2.726	2.642	2.761	2.719	2.21
11)	T	Ethanol		0.161	0.223	0.274	0.263	0.283	0.253	21.40
12)	T	Freon113	2.166	2.083	2.006	2.111	2.018	2.005	2.026	5.94
13)	T	1,1-Dichloroethene	1.957	1.770	1.710	1.724	1.652	1.727	1.749	5.62
14)	T	Acetone	2.843	1.342	1.338	1.607	1.453	1.567	1.682	31.23
15)	T	Carbon disulfide	3.245	3.089	3.026	2.975	2.872	3.026	3.052	3.88
16)	T	2-Propanol	2.108	1.519	1.588	1.744	1.618	1.654	1.712	11.30
17)	T	Methylene chloride	1.635	1.243	1.176	1.242	1.166	1.239	1.281	12.53
18)	T	tert-Butyl Methyl E	2.367	2.043	1.880	2.288	2.132	2.400	2.223	9.50
19)	T	trans-1,2-Dichloroe	1.878	1.601	1.506	1.616	1.539	1.630	1.624	7.43
20)	T	n-Hexane	1.976	1.746	1.653	1.781	1.680	1.754	1.751	6.30
21)	T	1,1-Dichloroethane	2.123	1.693	1.555	1.736	1.643	1.831	1.774	10.35
22)	T	Vinyl acetate	2.807	2.116	2.008	2.407	2.234	2.417	2.351	11.20
23)	T	cis-1,2-Dichloroeth	1.081	0.958	0.910	1.011	0.971	1.074	1.016	7.21
24)	T	2-Butanone	1.856	1.380	1.418	1.701	1.592	1.568	1.580	10.29
25)	T	Ethyl acetate	2.127	1.862	1.745	2.219	2.006	2.067	2.018	8.09
26)	T	Tetrahydrofuran	1.376	1.028	1.009	1.160	1.028	1.007	1.080	13.40
27)	T	Chloroform	2.307	2.027	1.927	2.067	1.882	1.834	1.962	10.05
28)	T	1,1,1-Trichloroetha	2.044	1.992	1.926	2.083	1.884	1.777	1.900	8.91
29)	T	Cyclohexane	1.957	1.826	1.706	1.798	1.601	1.507	1.675	12.67
30)	T	Carbon tetrachlorid	1.807	1.762	1.708	1.893	1.822	1.899	1.808	3.88
31)	T	Benzene	3.044	2.147	2.028	2.394	2.241	2.532	2.426	14.01
32)	T	1,2-Dichloroethane	1.487	1.064	1.006	1.165	1.052	1.058	1.117	15.41
33)	I	1,4-Difluorobenzene	----------ISTD----------							
34)	T	Heptane	0.710	0.725	0.721	0.808	0.679	0.591	0.672	16.43
35)	T	Trichloroethene	0.363	0.384	0.393	0.460	0.420	0.408	0.395	9.88
36)	T	1,2-Dichloropropane	0.310	0.267	0.261	0.331	0.297	0.302	0.292	8.72
37)	T	1,4-Dioxane	0.107	0.067	0.091	0.116	0.102	0.102	0.098	15.78
38)	T	Bromodichloromethan	0.521	0.506	0.512	0.633	0.567	0.564	0.542	9.24
39)	T	cis-1,3-Dichloropro	0.461	0.414	0.417	0.518	0.468	0.475	0.457	7.85
40)	T	4-Methyl-2-pentanon	0.187	0.215	0.224	0.273	0.245	0.242	0.230	11.76
41)	T	Toluene	0.805	0.713	0.715	0.889	0.800	0.804	0.779	8.27
42)	T	trans-1,3-Dichlorop	0.393	0.361	0.374	0.458	0.411	0.416	0.401	7.87
43)	T	1,1,2-Trichloroetha	0.273	0.249	0.255	0.318	0.284	0.292	0.278	8.34
44)	T	Tetrachloroethene	0.425	0.433	0.452	0.512	0.469	0.426	0.439	11.20
45)	T	2-Hexanone	0.633	0.390	0.468	0.563	0.493	0.470	0.492	16.73
46)	T	Chlorodibromomethan	0.383	0.396	0.417	0.523	0.475	0.470	0.438	11.85
47)	T	1,2-Dibromoethane	0.418	0.374	0.388	0.477	0.428	0.426	0.414	8.39
48)	I	Chlorobenzene-d5	----------ISTD----------							
49)	T	Chlorobenzene	0.900	0.736	0.749	0.895	0.836	0.848	0.821	8.07

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

Response Factor Report VOA 1

Method : C:\HPCHEM\1\METHODS\083011V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Wed Aug 31 12:29:35 2011
Response via : Initial Calibration

Calibration Files
2 =08301102.D 4 =08301103.D 5 =08301104.D
6 =08301105.D 7 =08301106.D 8 =08301107.D

		Compound	2	4	5	6	7	8	Avg	%RSD
50)	T	Ethylbenzene	1.410	1.222	1.241	1.479	1.362	1.349	1.318	8.54
51)	T	m,p-Xylene	1.125	1.047	1.066	1.232	1.078	0.917	1.025	16.42
52)	T	o-Xylene	1.044	0.921	0.950	1.118	1.031	1.002	0.986	9.42
53)	T	Styrene	0.801	0.696	0.723	0.850	0.781	0.769	0.754	8.64
54)	T	Bromoform	0.502	0.500	0.535	0.634	0.577	0.567	0.543	9.90
55)	S	4-Bromofluorobenzen	0.641	0.624	0.636	0.631	0.597	0.555	0.604	6.62
56)	T	1,1,2,2-Tetrachloro	0.864	0.741	0.740	0.862	0.735	0.703	0.756	10.67
57)	T	4-Ethyltoluene	1.507	1.161	1.177	1.353	1.205	1.148	1.229	12.43
58)	T	1,3,5-Trimethylbenz	1.261	0.997	1.019	1.167	1.049	0.993	1.055	11.44
59)	T	1,2,4-Trimethylbenz	1.238	0.962	0.962	1.110	0.962	0.923	1.004	12.59
60)	T	1,3-Dichlorobenzene	0.903	0.583	0.586	0.683	0.568	0.550	0.632	20.11
61)	T	1,4-Dichlorobenzene	0.805	0.531	0.533	0.628	0.526	0.510	0.580	18.39
62)	T	Benzyl chloride	0.749	0.763	0.791	0.945	0.790	0.767	0.801	8.24
63)	T	1,2-Dichlorobenzene	0.872	0.551	0.542	0.636	0.510	0.486	0.587	22.93
64)	T	1,2,4-Trichlorobenz		0.084	0.084	0.097	0.080	0.082	0.085	7.26
65)	T	Hexachlorobutadiene		0.222	0.223	0.253	0.205	0.206	0.219	8.40
66)		Naphthalene	0.281	0.153	0.154	0.177	0.140	0.141	0.170	29.81

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

Compound List Report VOA 1

Method : C:\HPCHEM\1\METHODS\083011V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Wed Aug 31 12:29:35 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	0.520	A	2	A	B
3		T	Dichlorodifluoromethane	85	5.58	0.527	A	3	A	B
4		T	1,2-Dichloro-1,2,2,2-tetrafluo	135	5.84	0.551	A	2	A	B
5		T	Chloromethane	50	6.00	0.567	A	3	A	B
6		T	Vinyl chloride	62	6.21	0.586	A	2	A	B
7		T	1,3-Butadiene	39	6.27	0.592	A	2	A	B
8		T	Bromomethane	94	6.84	0.646	A	3	A	B
9		T	Chloroethane	64	6.99	0.661	A	3	A	B
10		T	Trichlorofluoromethane	101	7.32	0.692	A	3	A	B
11		T	Ethanol	45	7.57	0.715	A	2	A	B
12		T	Freon113	101	7.98	0.754	A	2	A	B
13		T	1,1-Dichloroethene	61	8.08	0.763	A	2	A	B
14		T	Acetone	43	8.18	0.773	A	2	A	B
15		T	Carbon disulfide	76	8.45	0.798	A	3	A	B
16		T	2-Propanol	45	8.24	0.779	A	2	A	B
17		T	Methylene chloride	49	8.74	0.826	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	9.21	0.870	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	0.964	A	3	A	B
26		T	Tetrahydrofuran	42	10.59	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	11.34	0.970	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	12.47	1.067	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	1.140	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	1.191	A	3	A	B
43		T	1,1,2-Trichloroethane	97	14.21	1.215	A	3	A	B
44		T	Tetrachloroethene	166	14.33	1.225	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	17.36	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	1.220	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	23.46	1.510	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

083011V1.M Thu Sep 29 10:37:01 2011

Response Factor Report VOA 1

Method : C:\HPCHEM\1\METHODS\083111V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Thu Sep 01 08:55:24 2011
Response via : Initial Calibration

Calibration Files
2 =08311102.D 4 =08311103.D 5 =08311104.D
6 =08311105.D 7 =08311106.D 8 =08311107.D

		Compound	2	4	5	6	7	8	Avg	%RSD
1)	I	Bromochloromethane	----------ISTD----------							
2)	T	Propylene	1.297	1.236	1.188	1.105	1.090	1.118	1.185	6.93
3)	T	Dichlorodifluoromet	3.040	3.005	2.889	2.744	2.746	2.876	2.944	6.67
4)	T	1,2-Dichloro-1,2,2,	1.713	2.036	1.970	1.912	1.970	2.092	1.986	7.78
5)	T	Chloromethane	1.422	1.420	1.351	1.241	1.204	1.180	1.295	7.81
6)	T	Vinyl chloride	1.483	1.532	1.414	1.313	1.243	1.187	1.339	10.35
7)	T	1,3-Butadiene	1.190	1.161	1.071	0.984	0.935	0.885	1.019	12.14
8)	T	Bromomethane	1.165	1.157	1.112	1.080	1.193	1.242	1.123	9.46
9)	T	Chloroethane	0.622	0.705	0.666	0.638	0.636	0.657	0.657	4.32
10)	T	Trichlorofluorometh	2.999	2.901	2.797	2.688	2.727	2.811	2.825	3.72
11)	T	Ethanol		0.270	0.256	0.258	0.243	0.262	0.263	5.87
12)	T	Freon113	1.847	2.484	2.337	2.278	2.235	2.111	2.169	10.79
13)	T	1,1-Dichloroethene	1.695	1.979	1.870	1.771	1.758	1.768	1.806	5.12
14)	T	Acetone	2.017	1.772	1.535	1.549	1.368	1.437	1.601	13.85
15)	T	Carbon disulfide	3.119	3.171	3.022	2.857	2.846	2.962	3.037	5.35
16)	T	2-Propanol	2.181	1.671	1.553	1.495	1.420	1.507	1.641	15.53
17)	T	Methylene chloride	1.576	1.501	1.370	1.300	1.213	1.225	1.354	10.19
18)	T	tert-Butyl Methyl E	1.335	2.540	2.186	2.274	2.017	2.205	2.139	18.32
19)	T	trans-1,2-Dichloroe	1.733	1.925	1.763	1.701	1.612	1.640	1.719	6.10
20)	T	n-Hexane	1.735	2.124	1.947	1.871	1.793	1.794	1.855	7.65
21)	T	1,1-Dichloroethane	1.623	2.173	1.965	1.907	1.764	1.855	1.893	9.15
22)	T	Vinyl acetate	1.248	2.747	2.390	2.419	2.142	2.223	2.225	21.17
23)	T	cis-1,2-Dichloroeth	0.839	1.111	1.011	1.017	0.969	1.050	1.019	9.59
24)	T	2-Butanone	1.485	1.754	1.626	1.666	1.474	1.547	1.596	6.30
25)	T	Ethyl acetate	1.571	2.115	1.958	1.929	1.817	1.929	1.909	9.25
26)	T	Tetrahydrofuran	0.933	1.316	1.150	1.142	1.047	0.998	1.078	12.45
27)	T	Chloroform	1.755	2.479	2.216	2.171	1.987	1.882	2.038	12.95
28)	T	1,1,1-Trichloroetha	1.548	2.410	2.227	2.169	1.995	1.819	1.976	15.91
29)	T	Cyclohexane	1.805	2.270	2.083	1.945	1.753	1.564	1.829	16.49
30)	T	Carbon tetrachlorid	1.486	2.021	1.888	1.893	1.821	1.866	1.829	9.02
31)	T	Benzene	2.060	2.728	2.447	2.487	2.279	2.408	2.442	9.39
32)	T	1,2-Dichloroethane	1.000	1.345	1.206	1.211	1.098	1.066	1.137	10.75
33)	I	1,4-Difluorobenzene	----------ISTD----------							
34)	T	Heptane	0.527	0.865	0.796	0.786	0.729	0.659	0.698	19.17
35)	T	Trichloroethene	0.282	0.435	0.407	0.427	0.418	0.435	0.397	13.85
36)	T	1,2-Dichloropropane	0.171	0.320	0.291	0.304	0.290	0.311	0.284	17.96
37)	T	1,4-Dioxane	0.115	0.086	0.083	0.086	0.083	0.086	0.090	12.46
38)	T	Bromodichloromethan	0.367	0.594	0.551	0.579	0.564	0.603	0.543	14.81
39)	T	cis-1,3-Dichloropro	0.271	0.467	0.430	0.447	0.437	0.483	0.430	16.94
40)	T	4-Methyl-2-pentanon	0.164	0.232	0.218	0.222	0.219	0.239	0.218	11.60
41)	T	Toluene	0.408	0.820	0.755	0.783	0.771	0.837	0.739	20.10
42)	T	trans-1,3-Dichlorop	0.212	0.399	0.372	0.384	0.377	0.422	0.370	19.62
43)	T	1,1,2-Trichloroetha	0.156	0.276	0.256	0.267	0.268	0.301	0.260	18.81
44)	T	Tetrachloroethene	0.305	0.466	0.444	0.451	0.463	0.459	0.424	14.10
45)	T	2-Hexanone	0.549	0.441	0.417	0.422	0.413	0.443	0.445	10.55
46)	T	Chlorodibromomethan	0.255	0.433	0.410	0.443	0.450	0.499	0.419	18.46
47)	T	1,2-Dibromoethane	0.245	0.405	0.377	0.396	0.394	0.444	0.383	16.86
48)	I	Chlorobenzene-d5	----------ISTD----------							
49)	T	Chlorobenzene	0.547	0.808	0.762	0.777	0.782	0.867	0.768	13.53

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

Response Factor Report VOA 1

Method : C:\HPCHEM\1\METHODS\083111V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Thu Sep 01 08:55:24 2011
Response via : Initial Calibration

Calibration Files
2 =08311102.D 4 =08311103.D 5 =08311104.D
6 =08311105.D 7 =08311106.D 8 =08311107.D

		Compound	2	4	5	6	7	8	Avg	%RSD
50)	T	Ethylbenzene	0.720	1.353	1.284	1.303	1.307	1.397	1.230	18.70
51)	T	m,p-Xylene	0.562	1.187	1.135	1.146	1.100	1.003	0.985	23.87
52)	T	o-Xylene	0.536	1.006	0.960	0.990	0.997	1.046	0.919	19.02
53)	T	Styrene	0.417	0.740	0.702	0.728	0.731	0.802	0.688	18.06
54)	T	Bromoform	0.301	0.512	0.491	0.521	0.527	0.583	0.491	18.04
55)	S	4-Bromofluorobenzen	0.651	0.609	0.586	0.590	0.567	0.567	0.586	6.52
56)	T	1,1,2,2-Tetrachloro	0.520	0.739	0.670	0.690	0.661	0.722	0.664	10.75
57)	T	4-Ethyltoluene	0.822	1.141	1.057	1.066	1.052	1.158	1.051	10.43
58)	T	1,3,5-Trimethylbenz	0.711	0.980	0.909	0.921	0.905	1.008	0.906	10.50
59)	T	1,2,4-Trimethylbenz	0.694	0.911	0.823	0.847	0.818	0.916	0.836	8.85
60)	T	1,3-Dichlorobenzene	0.538	0.564	0.503	0.524	0.494	0.550	0.528	4.75
61)	T	1,4-Dichlorobenzene	0.487	0.520	0.460	0.485	0.455	0.514	0.486	5.02
62)	T	Benzyl chloride	0.414	0.734	0.672	0.705	0.664	0.738	0.662	17.01
63)	T	1,2-Dichlorobenzene	0.527	0.516	0.454	0.477	0.438	0.485	0.479	6.92
64)	T	1,2,4-Trichlorobenz	0.107	0.076	0.070	0.075	0.072	0.083	0.081	15.75
65)	T	Hexachlorobutadiene	0.372	0.215	0.188	0.201	0.186	0.214	0.227	28.51
66)		Naphthalene	0.200	0.135	0.125	0.135	0.126	0.142	0.144	17.84

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

Compound List Report VOA 1

Method : C:\HPCHEM\1\METHODS\083111V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Thu Sep 01 08:55:24 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	10.58	1.000	A	2	A	B
2	T	Propylene	41	5.50	0.520	A	2	A	B
3	T	Dichlorodifluoromethane	85	5.58	0.527	A	3	A	B
4	T	1,2-Dichloro-1,2,2,2-tetrafluo	135	5.83	0.552	A	2	A	B
5	T	Chloromethane	50	6.00	0.567	A	3	A	B
6	T	Vinyl chloride	62	6.21	0.587	A	2	A	B
7	T	1,3-Butadiene	39	6.26	0.592	A	2	A	B
8	T	Bromomethane	94	6.84	0.646	A	3	A	B
9	T	Chloroethane	64	6.99	0.661	A	3	A	B
10	T	Trichlorofluoromethane	101	7.32	0.692	A	3	A	B
11	T	Ethanol	45	7.57	0.715	A	2	A	B
12	T	Freon113	101	7.98	0.754	A	2	A	B
13	T	1,1-Dichloroethene	61	8.08	0.764	A	2	A	B
14	T	Acetone	43	8.18	0.774	A	2	A	B
15	T	Carbon disulfide	76	8.45	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	0.854	A	2	A	B
20	T	n-Hexane	57	9.21	0.871	A	3	A	B
21	T	1,1-Dichloroethane	63	9.59	0.907	A	3	A	B
22	T	Vinyl acetate	43	9.53	0.901	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	0.964	A	3	A	B
26	T	Tetrahydrofuran	42	10.58	1.000	A	2	A	B
27	T	Chloroform	83	10.60	1.002	A	2	A	B
28	T	1,1,1-Trichloroethane	97	10.84	1.025	A	3	A	B
29	T	Cyclohexane	56	10.86	1.027	A	2	A	B
30	T	Carbon tetrachloride	117	11.01	1.041	A	3	A	B
31	T	Benzene	78	11.29	1.068	A	3	A	B
32	T	1,2-Dichloroethane	62	11.37	1.075	A	3	A	B
33	I	1,4-Difluorobenzene	114	11.69	1.000	A	2	A	B
34	T	Heptane	43	11.34	0.970	A	3	A	B
35	T	Trichloroethene	130	12.02	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	12.67	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	13.63	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	15.63	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	1.053	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	17.36	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	17.69	1.138	A	2	A	B
59	T	1,2,4-Trimethylbenzene	105	18.27	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	18.97	1.220	A	3	A	B
62	T	Benzyl chloride	91	19.18	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	22.97	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

083111V1.M Thu Oct 20 10:23:41 2011

RTI Laboratories

Run ID: VOA9_110809A **Run No.:** 42129

Analytical Run Date: 8/9/2011 **InstrumentID:** VOA9

Analyst: Michael Truchan **Column:**

Calibration ID: 42128 **Column ID:**

Column Length:

SampID	TestCode	SampType	Batch ID	Analysis Date/Time	QA By	Q	Comments
BFB	BFB_TUNE	TUNE	R42129	8/9/2011 1:30:00 PM	Celeste Hoitash		
MASS APH CCV	MA_APH	CCV	R42129	8/9/2011 2:14:00 PM	Charles O`Bryan		
MASS APH RLVS 0809	MA_APH	RLVS	R42129	8/9/2011 2:57:00 PM	Charles O`Bryan		
MBLK 080911	MA_APH	MBLK	R42129	8/9/2011 3:45:00 PM	Charles O`Bryan		
1107364-004A	MA_APH	SAMP	R42129	8/9/2011 4:31:00 PM	Charles O`Bryan	H	
1107364-005A	MA_APH	SAMP	R42129	8/9/2011 5:16:00 PM	Charles O`Bryan	H	
1107364-006A	MA_APH	SAMP	R42129	8/9/2011 6:01:00 PM	Charles O`Bryan	H	
1107364-007A	MA_APH	SAMP	R42129	8/9/2011 6:47:00 PM	Charles O`Bryan	H	
1107640-013A	MA_APH	SAMP	R42129	8/9/2011 8:18:00 PM	Charles O`Bryan		
1107640-014A	MA_APH	SAMP	R42129	8/9/2011 9:04:00 PM	Charles O`Bryan		
1107640-003A	MA_APH	SAMP	R42129	8/9/2011 9:50:00 PM	Charles O`Bryan	H	
1107364-021A	MA_APH	SAMP	R42129	8/10/2011 12:03:00 AM	Charles O`Bryan	H	
1107364-022A	MA_APH	SAMP	R42129	8/10/2011 12:48:00 AM	Charles O`Bryan	H	
1107364-023A	MA_APH	SAMP	R42129	8/10/2011 1:33:00 AM	Charles O`Bryan	H	
1107364-024A	MA_APH	SAMP	R42129	8/10/2011 2:18:00 AM	Charles O`Bryan	H	
1107640-002A	MA_APH	SAMP	R42129	8/10/2011 9:14:00 AM	Charles O`Bryan	H	
1107640-002ADUP	MA_APH	DUP	R42129	8/10/2011 9:58:00 AM	Charles O`Bryan	H	
1107364-008A	MA_APH	SAMP	R42129	8/10/2011 10:41:00 AM	Charles O`Bryan	H	
MASS APH RLVS	MA_APH	RLVS	R42129	8/10/2011 11:24:00 AM	Charles O`Bryan		

RTI Laboratories

ANALYTICAL RUN Summary

19-Oct-11

RunNo 42129

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
851596	BFB	BFB_TUNE	TUNE	\1\DATA\080911	8/9/2011 1:30:00	1	R42129		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		76.4	76.4		0	0	0	0	0	0	0%	50	120	0%	
175	M		8.1	8.1		0	0	0	0	0	0	0%	4	9	0%	
176	M		96.7	96.7		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		23.9	23.9		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		6.5	6.5		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
814591	MASS APH CCV	MA_APH	CCV	\1\DATA\080911	8/9/2011 2:14:00	1	R42129		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	256.24	256.24		222	0	0	0	0	0	115%	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	226.17	226.17		185	0	0	0	0	0	122%	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	269.46	269.46		221	0	0	0	0	0	122%	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	90.66	90.66		89.5	0	0	0	0	0	101%	70	130	0%	

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\080911\08091102.D Vial: 2
Acq On : 9 Aug 2011 2:14 pm Operator: MICHAEL TRUCHAN
Sample : MASS APH CCV Inst : GC/MS Ins
Misc : CCV MA_APH Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 10 9:17 2011 Quant Results File: 080711V9.RES

Quant Method : C:\HPCHEM\1\METHODS\080711V9.M (RTE Integrator)
Title : MASS APH
Last Update : Mon Aug 08 16:51:21 2011
Response via : Initial Calibration
DataAcq Meth : 080711V9

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
40) Chlorobenzene-d5	16.52	117	581007	12.50 ug/m3	0.00

System Monitoring Compounds

41) 4-Bromofluorobenzene	18.35	95	420671	90.66 ug/m3	0.00

Spiked Amount 89.500 Range 70 - 130 Recovery = 101.30%

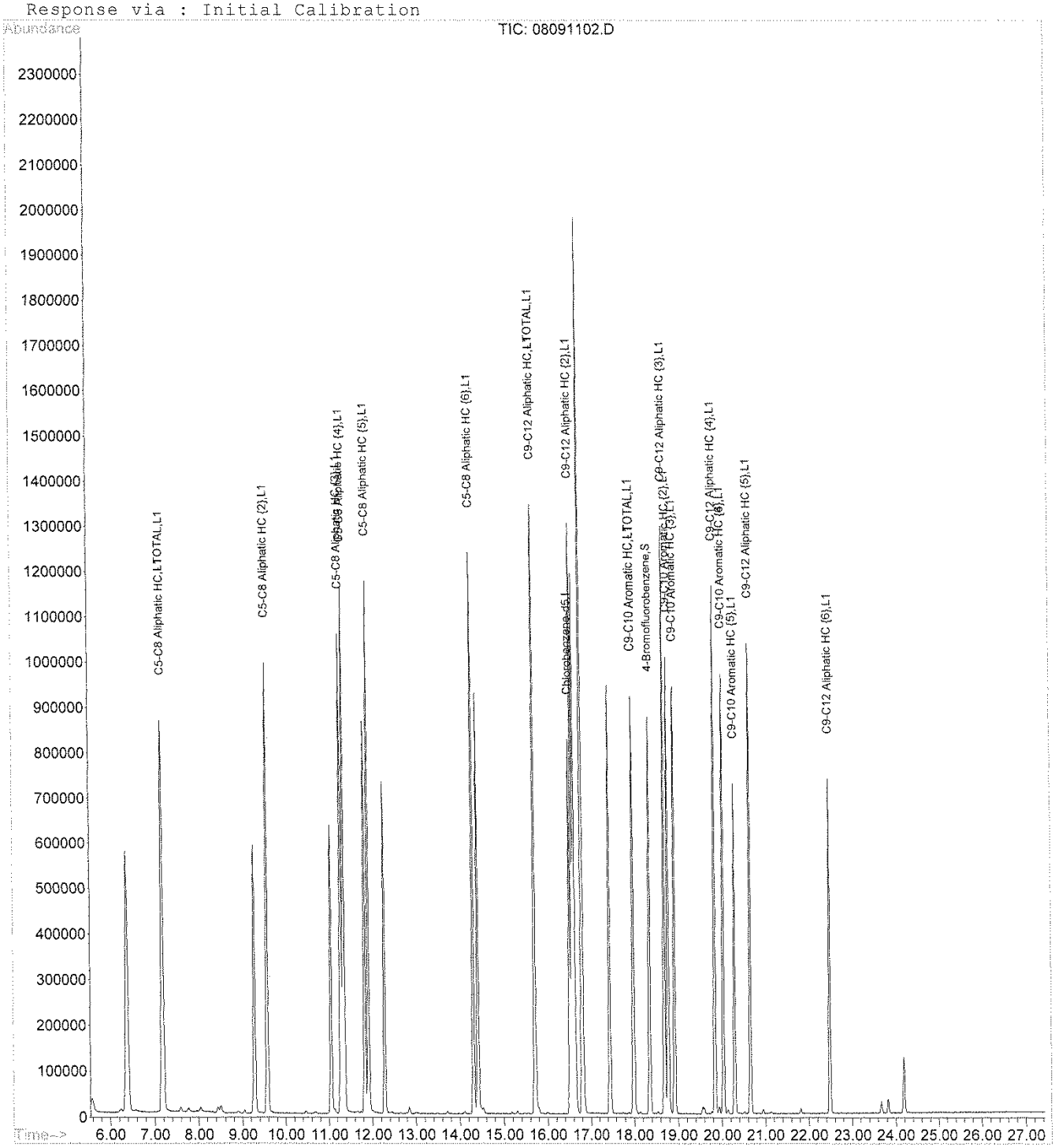
Target Compounds					Qvalue
1) C5-C8 Aliphatic HC	7.18	TIC	2957216	38.07 ug/m3	100
2) C5-C8 Aliphatic HC {2}	9.58	TIC	2482384	42.05 ug/m3	100
3) C5-C8 Aliphatic HC {3}	11.28	TIC	2727576	42.15 ug/m3	100
4) C5-C8 Aliphatic HC {4}	11.36	TIC	2957576	49.97 ug/m3	100
5) C5-C8 Aliphatic HC {5}	11.92	TIC	2595953	41.53 ug/m3	100
6) C5-C8 Aliphatic HC {6}	14.30	TIC	2637682	41.94 ug/m3	100
7) C5-C8 Aliphatic HC - TOTAL	7.18	TIC	16358387m	256.24 ug/m3	
8) C9-C12 Aliphatic HC	15.71	TIC	3222707	47.53 ug/m3	100
9) C9-C12 Aliphatic HC {2}	16.58	TIC	2825386	42.44 ug/m3	100
10) C9-C12 Aliphatic HC {3}	18.69	TIC	2702542	46.08 ug/m3	100
11) C9-C12 Aliphatic HC {4}	19.84	TIC	2580632	45.00 ug/m3	100
12) C9-C12 Aliphatic HC {5}	20.65	TIC	2157759	42.75 ug/m3	100
13) C9-C12 Aliphatic HC {6}	22.48	TIC	1489619	37.36 ug/m3	100
14) C9-C12 Aliphatic HC - TOTA	15.71	TIC	14978645m	269.46 ug/m3	
15) C9-C10 Aromatic HC	17.98	120	204736	41.85 ug/m3	100
16) C9-C10 Aromatic HC {2}	18.78	120	251073	48.21 ug/m3	100
17) C9-C10 Aromatic HC {3}	18.92	120	342584	45.63 ug/m3	100
18) C9-C10 Aromatic HC {4}	20.03	120	74476	48.87 ug/m3	100
19) C9-C10 Aromatic HC {5}	20.29	120	230265	40.80 ug/m3	100
20) C9-C10 Aromatic HC {6}	20.04	134	195927	49.32 ug/m3	100
21) C9-C10 Aromatic HC - TOTAL	17.98	TIC	1299061m	226.17 ug/m3	

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

Quantitation Report

Data File : C:\HPCHEM\1\DATA\080911\08091102.D Vial: 2
Acq On : 9 Aug 2011 2:14 pm Operator: MICHAEL TRUCHAN
Sample : MASS APH CCV Inst : GC/MS Ins
Misc : CCV MA_APH Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 10 9:17 2011 Quant Results File: 080711V9.RES

Method : C:\HPCHEM\1\METHODS\080711V9.M (RTE Integrator)
Title : MASS APH
Last Update : Mon Aug 08 16:51:21 2011
Response via : Initial Calibration



RTI Laboratories

Run ID: VOA9_110810A **Run No.:** 42164

Analytical Run Date: 8/10/2011 **InstrumentID:** VOA9

Analyst: Michael Truchan **Column:**

Calibration ID: **Column ID:**

Column Length:

SampID	TestCode	SampType	Batch ID	Analysis Date/Time	QA By	Q	Comments
BFB	BFB_TUNE	TUNE	R42164	8/10/2011 12:23:00 PM	Celeste Hoitash		
MASS APH CCV	MA_APH	CCV	R42164	8/10/2011 2:35:00 PM	Charles O`Bryan		
MASS APH RLVS 0810 11A	MA_APH	RLVS	R42164	8/10/2011 3:18:00 PM	Charles O`Bryan		
MBLK 081011	MA_APH	MBLK	R42164	8/10/2011 4:07:00 PM	Charles O`Bryan		
1107364-013A	MA_APH	SAMP	R42164	8/10/2011 6:56:00 PM	Charles O`Bryan	H	
1107640-006A	MA_APH	SAMP	R42164	8/10/2011 9:08:00 PM	Charles O`Bryan	H	
1107640-007A	MA_APH	SAMP	R42164	8/10/2011 9:52:00 PM	Charles O`Bryan	H	
1107640-008A	MA_APH	SAMP	R42164	8/10/2011 10:37:00 PM	Charles O`Bryan		
1107640-009A	MA_APH	SAMP	R42164	8/10/2011 11:23:00 PM	Charles O`Bryan		
1107640-016A	MA_APH	SAMP	R42164	8/11/2011 3:09:00 AM	Charles O`Bryan	H	
1107640-017A	MA_APH	SAMP	R42164	8/11/2011 3:53:00 AM	Charles O`Bryan	H	
1107640-005A	MA_APH	SAMP	R42164	8/11/2011 10:03:00 AM	Charles O`Bryan	H	
1107640-005ADUP	MA_APH	DUP	R42164	8/11/2011 10:46:00 AM	Charles O`Bryan	H	
MASS APH RLVS 0810 11B	MA_APH	RLVS	R42164	8/11/2011 1:09:00 PM	Charles O`Bryan		

RTI Laboratories

ANALYTICAL RUN Summary

20-Oct-11

RunNo 42164

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
851595	BFB	BFB_TUNE	TUNE	\I\DATA\081011	8/10/2011 12:23:	1	R42164		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		74.9	74.9		0	0	0	0	0	0	0%	50	120	0%	
175	M		7.9	7.9		0	0	0	0	0	0	0%	4	9	0%	
176	M		97.2	97.2		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		23.8	23.8		0	0	0	0	0	0	0%	8	40	0%	
75	M		45.5	45.5		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	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
815429	MASS APH CCV	MA_APH	CCV	\I\DATA\081011	8/10/2011 2:35:0	1	R42164		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	267.43	267.43		222	0	0	0	0	0	120%	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	225.77	225.77		185	0	0	0	0	0	122%	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	268.21	268.21		221	0	0	0	0	0	121%	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	89.12	89.12		89.5	0	0	0	0	0	100%	70	130	0%	

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\081011\08101103.D Vial: 3
Acq On : 10 Aug 2011 2:35 pm Operator: MICHAEL TRUCHAN
Sample : MASS APH CCV Inst : GC/MS Ins
Misc : CCV MA_APH Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 10 15:20 2011 Quant Results File: 080711V9.RES

Quant Method : C:\HPCHEM\1\METHODS\080711V9.M (RTE Integrator)
Title : MASS APH
Last Update : Mon Aug 08 16:51:21 2011
Response via : Initial Calibration
DataAcq Meth : 080711V9

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
40) Chlorobenzene-d5	16.51	117	584813	12.50	ug/m3	0.00
System Monitoring Compounds						
41) 4-Bromofluorobenzene	18.35	95	416226	89.12	ug/m3	0.00
Spiked Amount 89.500	Range 70 - 130		Recovery = 99.58%			
Target Compounds						Qvalue
1) C5-C8 Aliphatic HC	7.18	TIC	2953754	38.03	ug/m3	100
2) C5-C8 Aliphatic HC {2}	9.58	TIC	2609407	44.20	ug/m3	100
3) C5-C8 Aliphatic HC {3}	11.29	TIC	2805619	43.35	ug/m3	100
4) C5-C8 Aliphatic HC {4}	11.36	TIC	3206210	54.17	ug/m3	100
5) C5-C8 Aliphatic HC {5}	11.93	TIC	2752538	44.04	ug/m3	100
6) C5-C8 Aliphatic HC {6}	14.31	TIC	2744698	43.64	ug/m3	100
7) C5-C8 Aliphatic HC - TOTAL	7.18	TIC	17072226m	267.43	ug/m3	
8) C9-C12 Aliphatic HC	15.71	TIC	3324158	49.02	ug/m3	100
9) C9-C12 Aliphatic HC {2}	16.57	TIC	2862171	42.99	ug/m3	100
10) C9-C12 Aliphatic HC {3}	18.69	TIC	2676937	45.65	ug/m3	100
11) C9-C12 Aliphatic HC {4}	19.84	TIC	2581766	45.02	ug/m3	100
12) C9-C12 Aliphatic HC {5}	20.65	TIC	2087389	41.36	ug/m3	100
13) C9-C12 Aliphatic HC {6}	22.48	TIC	1376784	34.53	ug/m3	100
14) C9-C12 Aliphatic HC - TOTA	15.71	TIC	14909205m	268.21	ug/m3	
15) C9-C10 Aromatic HC	17.98	120	208950	42.72	ug/m3	100
16) C9-C10 Aromatic HC {2}	18.78	120	252548	48.49	ug/m3	100
17) C9-C10 Aromatic HC {3}	18.92	120	341792	45.52	ug/m3	100
18) C9-C10 Aromatic HC {4}	20.04	120	74276	48.74	ug/m3	100
19) C9-C10 Aromatic HC {5}	20.30	120	226389	40.11	ug/m3	100
20) C9-C10 Aromatic HC {6}	20.04	134	192800	48.54	ug/m3	100
21) C9-C10 Aromatic HC - TOTAL	17.98	TIC	1296755m	225.77	ug/m3	

(#) = qualifier out of range (m) = manual integration
08101103.D 080711V9.M Thu Sep 08 13:13:15 2011

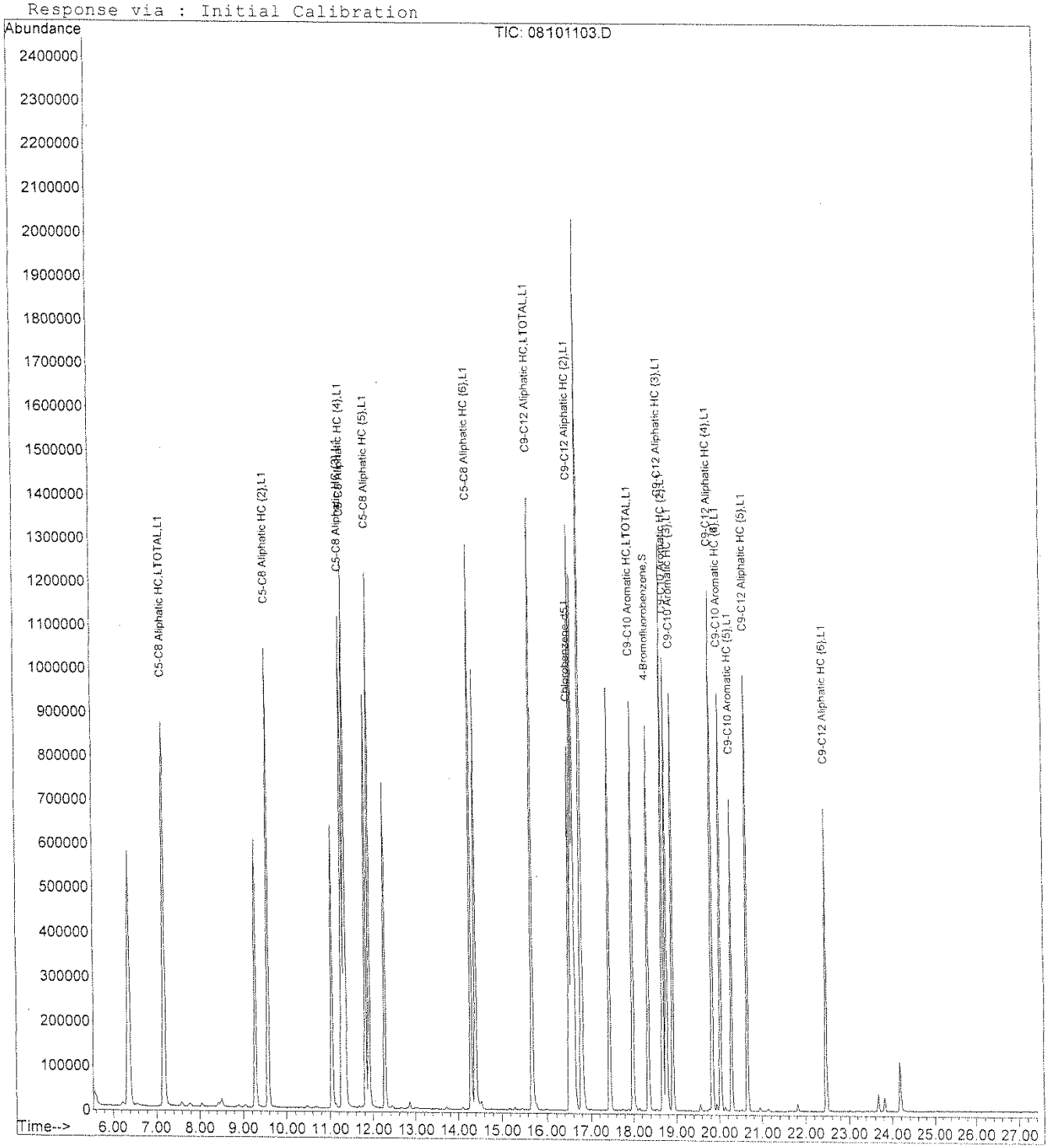
Quantitation Report

Data File : C:\HPCHEM\1\DATA\081011\08101103.D
Acq On : 10 Aug 2011 2:35 pm
Sample : MASS APH CCV
Misc : CCV MA_APH
MS Integration Params: rteint.p
Quant Time: Aug 10 15:20 2011

Vial: 3
Operator: MICHAEL TRUCHAN
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: 080711V9.RES

Method : C:\HPCHEM\1\METHODS\080711V9.M (RTE Integrator)
Title : MASS APH
Last Update : Mon Aug 08 16:51:21 2011
Response via : Initial Calibration



RTI Laboratories

Run ID: VOA9_110811A **Run No.:** 42193

Analytical Run Date: 8/11/2011 **InstrumentID:** VOA9

Analyst: Michael Truchan **Column:**

Calibration ID: **Column ID:**

Column Length:

SampID	TestCode	SampType	Batch ID	Analysis Date/Time	QA By	Q	Comments
BFB	BFB_TUNE	TUNE	R42193	8/11/2011 2:03:00 PM	Celeste Hoitash		
MASS APH CCV	MA_APH	CCV	R42193	8/11/2011 2:47:00 PM	Charles O`Bryan		
MASS APH RLVS 0811 11A	MA_APH	RLVS	R42193	8/11/2011 3:30:00 PM	Charles O`Bryan		
MBLK 081111	MA_APH	MBLK	R42193	8/11/2011 4:18:00 PM	Charles O`Bryan		
1107640-004A	MA_APH	SAMP	R42193	8/11/2011 5:11:00 PM	Charles O`Bryan	H	
1107640-004ADUP	MA_APH	DUP	R42193	8/11/2011 5:54:00 PM	Charles O`Bryan	H	
1107364-014A	MA_APH	SAMP	R42193	8/11/2011 6:42:00 PM	Charles O`Bryan	H	
1107640-010A	MA_APH	SAMP	R42193	8/11/2011 7:31:00 PM	Charles O`Bryan		
1107640-011A	MA_APH	SAMP	R42193	8/11/2011 8:20:00 PM	Charles O`Bryan		
1107640-012A	MA_APH	SAMP	R42193	8/11/2011 9:09:00 PM	Charles O`Bryan		
1107640-015A	MA_APH	SAMP	R42193	8/11/2011 9:58:00 PM	Charles O`Bryan		
1107640-018A	MA_APH	SAMP	R42193	8/11/2011 10:41:00 PM	Charles O`Bryan	H	
1107640-019A	MA_APH	SAMP	R42193	8/11/2011 11:24:00 PM	Charles O`Bryan	H	
1107640-020A	MA_APH	SAMP	R42193	8/12/2011 12:08:00 AM	Charles O`Bryan	H	
1107640-022A	MA_APH	SAMP	R42193	8/12/2011 1:34:00 AM	Charles O`Bryan	H	
1107640-021A	MA_APH	SAMP	R42193	8/12/2011 9:37:00 AM	Charles O`Bryan	H	
MASS APH RLVS 0811 11B	MA_APH	RLVS	R42193	8/12/2011 10:19:00 AM	Charles O`Bryan		

RTI Laboratories

ANALYTICAL RUN Summary

19-Oct-11

RunNo 42193

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
851604	BFB	BFB_TUNE	TUNE	\I\DATA\081111	8/11/2011 2:03:0	1	R42193		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		76.5	76.5		0	0	0	0	0	0	0%	50	120	0%	
175	M		7.8	7.8		0	0	0	0	0	0	0%	4	9	0%	
176	M		96.3	96.3		0	0	0	0	0	0	0%	93	101	0%	
177	M		6.7	6.7		0	0	0	0	0	0	0%	5	9	0%	
50	M		24	24		0	0	0	0	0	0	0%	8	40	0%	
75	M		45.8	45.8		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		6.7	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
816512	MASS APH CCV	MA_APH	CCV	\I\DATA\081111	8/11/2011 2:47:0	1	R42193		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	263.93	263.93		222	0	0	0	0	0	119%	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	227.37	227.37		185	0	0	0	0	0	123%	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	270.22	270.22		221	0	0	0	0	0	122%	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	88.29	88.29		89.5	0	0	0	0	0	99%	70	130	0%	

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\081111\08111102.D Vial: 3
Acq On : 11 Aug 2011 2:47 pm Operator: MICHAEL TRUCHAN
Sample : MASS APH CCV Inst : GC/MS Ins
Misc : CCV MA_APH Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 8:24 2011 Quant Results File: 080711V9.RES

Quant Method : C:\HPCHEM\1\METHODS\080711V9.M (RTE Integrator)
Title : MASS APH
Last Update : Mon Aug 08 16:51:21 2011
Response via : Initial Calibration
DataAcq Meth : 080711V9

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
40) Chlorobenzene-d5	16.52	117	883225	12.50 ug/m3	0.00

System Monitoring Compounds

41) 4-Bromofluorobenzene	18.35	95	622787	88.29 ug/m3	0.00

Spiked Amount 89.500 Range 70 - 130 Recovery = 98.65%

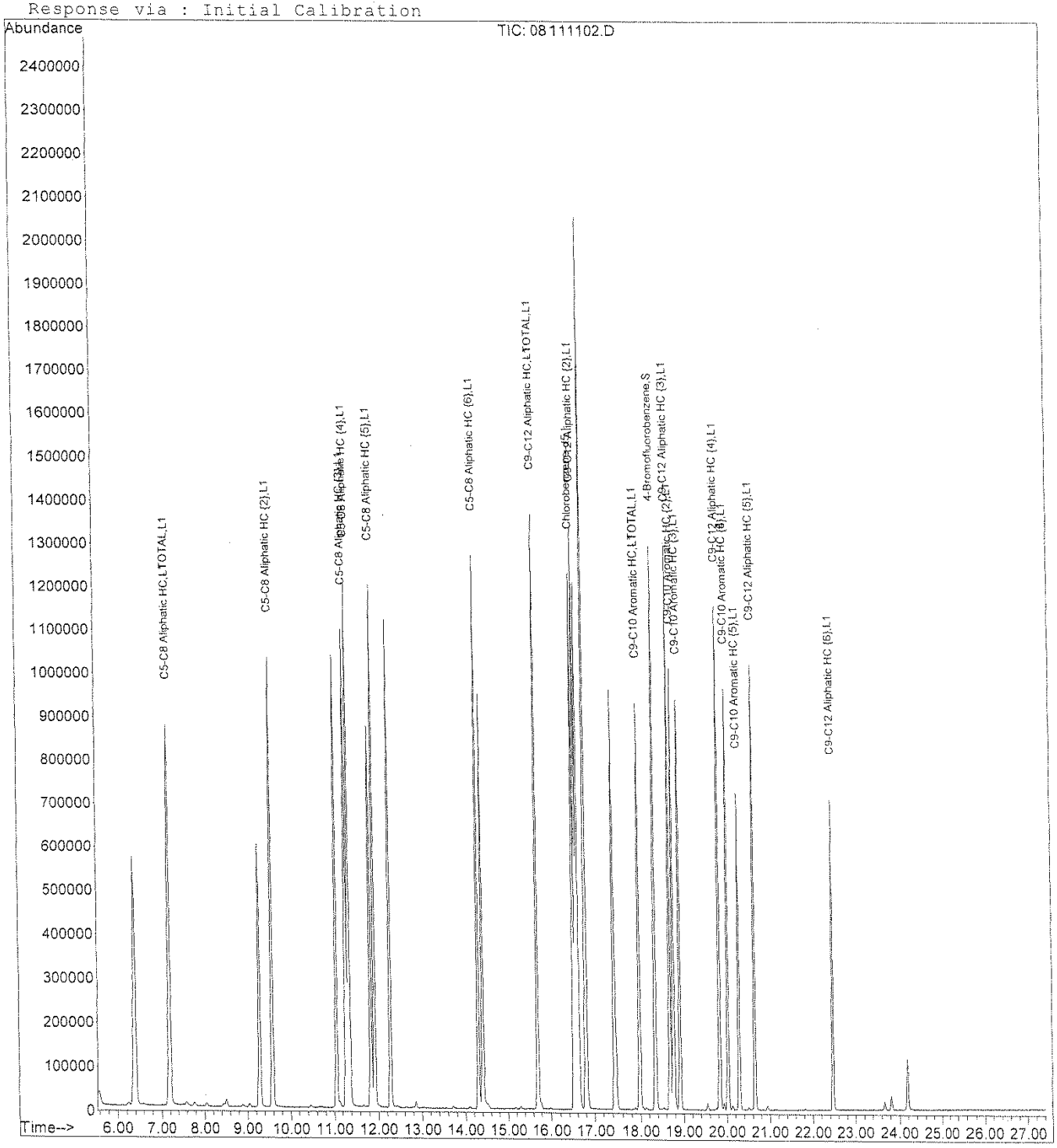
Target Compounds					Qvalue
1) C5-C8 Aliphatic HC	7.18	TIC	2991445	38.51 ug/m3	100
2) C5-C8 Aliphatic HC {2}	9.58	TIC	2580501	43.71 ug/m3	100
3) C5-C8 Aliphatic HC {3}	11.28	TIC	2818270	43.55 ug/m3	100
4) C5-C8 Aliphatic HC {4}	11.36	TIC	3071017	51.89 ug/m3	100
5) C5-C8 Aliphatic HC {5}	11.92	TIC	2675872	42.81 ug/m3	100
6) C5-C8 Aliphatic HC {6}	14.30	TIC	2712126	43.13 ug/m3	100
7) C5-C8 Aliphatic HC - TOTAL	7.18	TIC	16849231m	263.93 ug/m3	
8) C9-C12 Aliphatic HC	15.71	TIC	3244431	47.85 ug/m3	100
9) C9-C12 Aliphatic HC {2}	16.58	TIC	2934842	44.08 ug/m3	100
10) C9-C12 Aliphatic HC {3}	18.69	TIC	2712379	46.25 ug/m3	100
11) C9-C12 Aliphatic HC {4}	19.84	TIC	2565055	44.73 ug/m3	100
12) C9-C12 Aliphatic HC {5}	20.65	TIC	2124266	42.09 ug/m3	100
13) C9-C12 Aliphatic HC {6}	22.48	TIC	1439822	36.11 ug/m3	100
14) C9-C12 Aliphatic HC - TOTA	15.71	TIC	15020795m	270.22 ug/m3	
15) C9-C10 Aromatic HC	17.99	120	209451	42.82 ug/m3	100
16) C9-C10 Aromatic HC {2}	18.78	120	253693	48.71 ug/m3	100
17) C9-C10 Aromatic HC {3}	18.92	120	345027	45.95 ug/m3	100
18) C9-C10 Aromatic HC {4}	20.03	120	74704	49.02 ug/m3	100
19) C9-C10 Aromatic HC {5}	20.29	120	229311	40.63 ug/m3	100
20) C9-C10 Aromatic HC {6}	20.03	134	193764	48.78 ug/m3	100
21) C9-C10 Aromatic HC - TOTAL	17.98	TIC	1305950m	227.37 ug/m3	

(#) = qualifier out of range (m) = manual integration
08111102.D 080711V9.M Thu Sep 08 13:21:54 2011

Quantitation Report

Data File : C:\HPCHEM\1\DATA\081111\08111102.D Vial: 3
Acq On : 11 Aug 2011 2:47 pm Operator: MICHAEL TRUCHAN
Sample : MASS APH CCV Inst : GC/MS Ins
Misc : CCV MA_APH Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 8:24 2011 Quant Results File: 080711V9.RES

Method : C:\HPCHEM\1\METHODS\080711V9.M (RTE Integrator)
Title : MASS APH
Last Update : Mon Aug 08 16:51:21 2011
Response via : Initial Calibration



RTI Laboratories

Run ID: VOA9_110815A **Run No.:** 42238

Analytical Run Date: 8/15/2011 **InstrumentID:** VOA9

Analyst: Rachel Hill **Column:**

Calibration ID: **Column ID:**

Column Length:

SampID	TestCode	SampType	Batch ID	Analysis Date/Time	QA By	Q	Comments
BFB	BFB_TUNE	TUNE	R42238	8/15/2011 10:09:00 AM	Fred J Hoitash		
MASS APH CCV	MA_APH	CCV	R42238	8/15/2011 10:55:00 AM	Fred J Hoitash		
MASS APH RLVS	MA_APH	RLVS	R42238	8/15/2011 11:37:00 AM	Fred J Hoitash		
MBLK 081511	MA_APH	MBLK	R42238	8/15/2011 12:54:00 PM	Fred J Hoitash		
1107640-042A	MA_APH	SAMP	R42238	8/15/2011 6:09:00 PM	Fred J Hoitash	H	
1107640-043A	MA_APH	SAMP	R42238	8/15/2011 6:54:00 PM	Fred J Hoitash	H	
1107640-043ADUP	MA_APH	SAMP	R42238	8/15/2011 7:39:00 PM	Fred J Hoitash	H	
1107640-039A	MA_APH	SAMP	R42238	8/15/2011 8:24:00 PM	Fred J Hoitash	H	
1107640-040A	MA_APH	SAMP	R42238	8/15/2011 9:11:00 PM	Fred J Hoitash	H	
1107640-041A	MA_APH	SAMP	R42238	8/15/2011 9:56:00 PM	Fred J Hoitash	H	
1107640-044A	MA_APH	SAMP	R42238	8/15/2011 10:40:00 PM	Fred J Hoitash	H	
1107640-045A	MA_APH	SAMP	R42238	8/15/2011 11:25:00 PM	Fred J Hoitash	H	
1107640-046A	MA_APH	SAMP	R42238	8/16/2011 12:10:00 AM	Fred J Hoitash	H	
1107640-047A	MA_APH	SAMP	R42238	8/16/2011 12:55:00 AM	Fred J Hoitash	H	
MASS APH RLVS	MA_APH	RLVS	R42238	8/16/2011 3:08:00 AM	Fred J Hoitash		

RTI Laboratories

ANALYTICAL RUN Summary

20-Oct-11

RunNo 42238

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
817259	BFB	BFB_TUNE	TUNE	\1\DATA\081511	8/15/2011 10:09:	1	R42238		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		74.9	74.9		0	0	0	0	0	0	0%	50	120	0%	
175	M		8.1	8.1		0	0	0	0	0	0	0%	4	9	0%	
176	M		96.3	96.3		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		24.8	24.8		0	0	0	0	0	0	0%	8	40	0%	
75	M		47.7	47.7		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
817245	MASS APH CCV	MA_APH	CCV	\1\DATA\081511	8/15/2011 10:55:	1	R42238		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	255.14	255.14		222	0	0	0	0	0	115%	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	229.38	229.38		185	0	0	0	0	0	124%	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	282.79	282.79		281	0	0	0	0	0	101%	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	89.27	89.27		89.5	0	0	0	0	0	100%	70	130	0%	

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\081511\08151102.D Vial: 2
Acq On : 15 Aug 2011 10:55 am Operator: MICHAEL TRUCHAN
Sample : MASS APH CCV Inst : GC/MS Ins
Misc : CCV MA_APH Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 16 11:57 2011 Quant Results File: 080711V9.RES

Quant Method : C:\HPCHEM\1\METHODS\080711V9.M (RTE Integrator)
Title : MASS APH
Last Update : Mon Aug 08 16:51:21 2011
Response via : Initial Calibration
DataAcq Meth : 080711V9

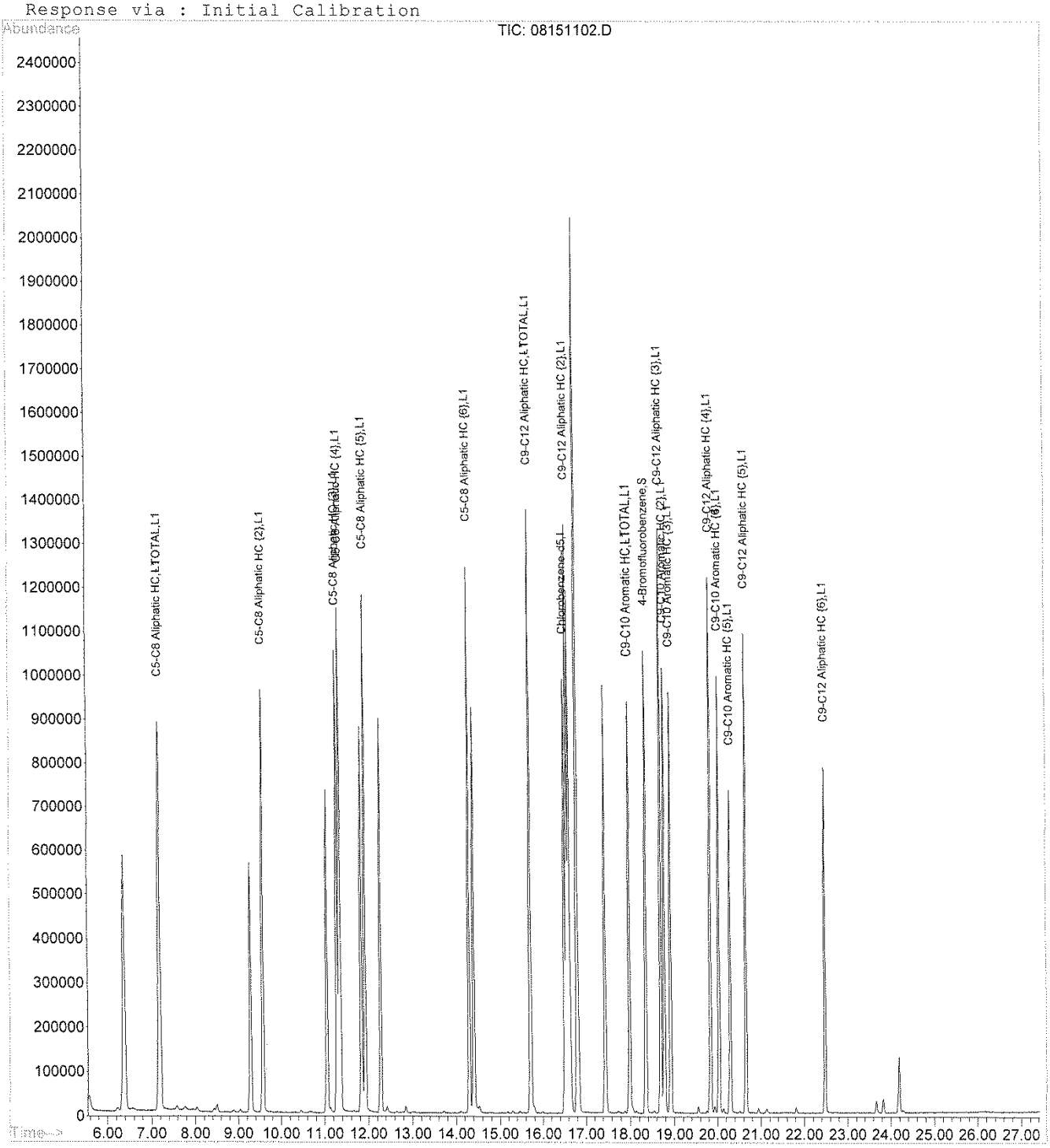
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
40) Chlorobenzene-d5	16.51	117	698865	12.50	ug/m3	0.00
System Monitoring Compounds						
41) 4-Bromofluorobenzene	18.35	95	498248	89.27	ug/m3	0.00
Spiked Amount 89.500	Range 70 - 130		Recovery = 99.74%			
Target Compounds						Qvalue
1) C5-C8 Aliphatic HC	7.18	TIC	2995378	38.56	ug/m3	100
2) C5-C8 Aliphatic HC {2}	9.57	TIC	2416883	40.94	ug/m3	100
3) C5-C8 Aliphatic HC {3}	11.28	TIC	2594493	40.09	ug/m3	100
4) C5-C8 Aliphatic HC {4}	11.35	TIC	2991723	50.55	ug/m3	100
5) C5-C8 Aliphatic HC {5}	11.92	TIC	2655402	42.49	ug/m3	100
6) C5-C8 Aliphatic HC {6}	14.30	TIC	2634251	41.89	ug/m3	100
7) C5-C8 Aliphatic HC - TOTAL	7.18	TIC	16288130m	255.14	ug/m3	
8) C9-C12 Aliphatic HC	15.71	TIC	3271175	48.24	ug/m3	100
9) C9-C12 Aliphatic HC {2}	16.57	TIC	3074366	46.18	ug/m3	100
10) C9-C12 Aliphatic HC {3}	18.68	TIC	2790898	47.59	ug/m3	100
11) C9-C12 Aliphatic HC {4}	19.83	TIC	2708866	47.24	ug/m3	100
12) C9-C12 Aliphatic HC {5}	20.65	TIC	2266283	44.90	ug/m3	100
13) C9-C12 Aliphatic HC {6}	22.47	TIC	1608014	40.33	ug/m3	100
14) C9-C12 Aliphatic HC - TOTA	15.71	TIC	15719602m	282.79	ug/m3	
15) C9-C10 Aromatic HC	17.98	120	207288	42.38	ug/m3	100
16) C9-C10 Aromatic HC {2}	18.78	120	254191	48.81	ug/m3	100
17) C9-C10 Aromatic HC {3}	18.91	120	348373	46.40	ug/m3	100
18) C9-C10 Aromatic HC {4}	20.03	120	75694	49.67	ug/m3	100
19) C9-C10 Aromatic HC {5}	20.29	120	233701	41.41	ug/m3	100
20) C9-C10 Aromatic HC {6}	20.03	134	198235	49.90	ug/m3	100
21) C9-C10 Aromatic HC - TOTAL	17.98	TIC	1317482m	229.38	ug/m3	

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

Quantitation Report

Data File : C:\HPCHEM\1\DATA\081511\08151102.D Vial: 2
Acq On : 15 Aug 2011 10:55 am Operator: MICHAEL TRUCHAN
Sample : MASS APH CCV Inst : GC/MS Ins
Misc : CCV MA_APH Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 16 11:57 2011 Quant Results File: 080711V9.RES

Method : C:\HPCHEM\1\METHODS\080711V9.M (RTE Integrator)
Title : MASS APH
Last Update : Mon Aug 08 16:51:21 2011
Response via : Initial Calibration



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Run ID: **VOA9_110825A** **Run No.:** 42461

Analytical Run Date: 8/25/2011 **InstrumentID:** VOA9

Analyst: Rachel Hill **Column:**

Calibration ID: 42263 **Column ID:**

Column Length:

SampID	TestCode	SampType	Batch ID	Analysis Date/Time	QA By	Q	Comments
BFB 082511A VOA9	BFB_TUNE	TUNE	R42461	8/25/2011 9:30:00 AM	Fred J Hoitash		
CCV 082511A VOA9	MA_APH	CCV	R42461	8/25/2011 11:01:00 AM	Fred J Hoitash		
RLVS 082511A VOA	MA_APH	RLVS	R42461	8/25/2011 12:27:00 PM	Fred J Hoitash		
MBLK 082511A VOA	MA_APH	MBLK	R42461	8/25/2011 2:52:00 PM	Fred J Hoitash		
1108344-012A	MA_APH	SAMP	R42461	8/25/2011 3:34:00 PM	Fred J Hoitash		
1108344-012ADUP	MA_APH	DUP	R42461	8/25/2011 4:26:00 PM	Fred J Hoitash		
1108344-013A	MA_APH	SAMP	R42461	8/25/2011 5:09:00 PM	Fred J Hoitash		
1108344-014A	MA_APH	SAMP	R42461	8/25/2011 5:52:00 PM	Fred J Hoitash		
1108688-020A	MA_APH	SAMP	R42461	8/25/2011 6:35:00 PM	Fred J Hoitash		
1108688-021A	MA_APH	SAMP	R42461	8/25/2011 7:18:00 PM	Fred J Hoitash		
1108688-022A	MA_APH	SAMP	R42461	8/25/2011 8:01:00 PM	Fred J Hoitash		
1108688-023A	MA_APH	SAMP	R42461	8/25/2011 8:45:00 PM	Fred J Hoitash		
1108688-013A	MA_APH	SAMP	R42461	8/25/2011 9:28:00 PM	Fred J Hoitash		
1108688-014A	MA_APH	SAMP	R42461	8/25/2011 10:11:00 PM	Fred J Hoitash		
1108688-015A	MA_APH	SAMP	R42461	8/25/2011 10:54:00 PM	Fred J Hoitash		
1108688-016A	MA_APH	SAMP	R42461	8/25/2011 11:37:00 PM	Fred J Hoitash		
1107640-049A	MA_APH	SAMP	R42461	8/26/2011 1:01:00 AM	Fred J Hoitash	H	
1107640-024A	MA_APH	SAMP	R42461	8/26/2011 2:26:00 AM	Fred J Hoitash	H	
RLVS2 082511 VOA	MA_APH	RLVS	R42461	8/26/2011 3:50:00 AM	Fred J Hoitash		

RTI Laboratories

ANALYTICAL RUN Summary

20-Oct-11

RunNo 42461

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
822172	BFB 082511A VOA9	BFB_TUNE	TUNE	\1\DATA\082511	8/25/2011 9:30:0	1	R42461		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		71.4	71.4		0	0	0	0	0	0	0%	50	120	0%	
175	M		7.6	7.6		0	0	0	0	0	0	0%	4	9	0%	
176	M		96.9	96.9		0	0	0	0	0	0	0%	93	101	0%	
177	M		6.8	6.8		0	0	0	0	0	0	0%	5	9	0%	
50	M		23.4	23.4		0	0	0	0	0	0	0%	8	40	0%	
75	M		44.6	44.6		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		6.5	6.5		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
822173	CCV 082511A VOA9	MA_APH	CCV	\1\DATA\082511	8/25/2011 11:01:	1	R42461		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	218.86	218.86		222	0	0	0	0	0	99%	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	220.71	220.71		185	0	0	0	0	0	119%	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	248.71	248.71		221	0	0	0	0	0	113%	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	93.19	93.19		89.5	0	0	0	0	0	104%	70	130	0%	

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\082511\08251102.D
Acq On : 25 Aug 2011 11:01 am
Sample : CCV 082511A VOA9
Misc : CCV MA_APH
MS Integration Params: rteint.p
Quant Time: Aug 26 9:12 2011

Vial: 2
Operator: RACHEL HILL
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: 081611V9.RES

Quant Method : C:\HPCHEM\1\METHODS\081611V9.M (RTE Integrator)
Title : MASS APH
Last Update : Wed Aug 17 10:38:55 2011
Response via : Initial Calibration
DataAcq Meth : 081611V9

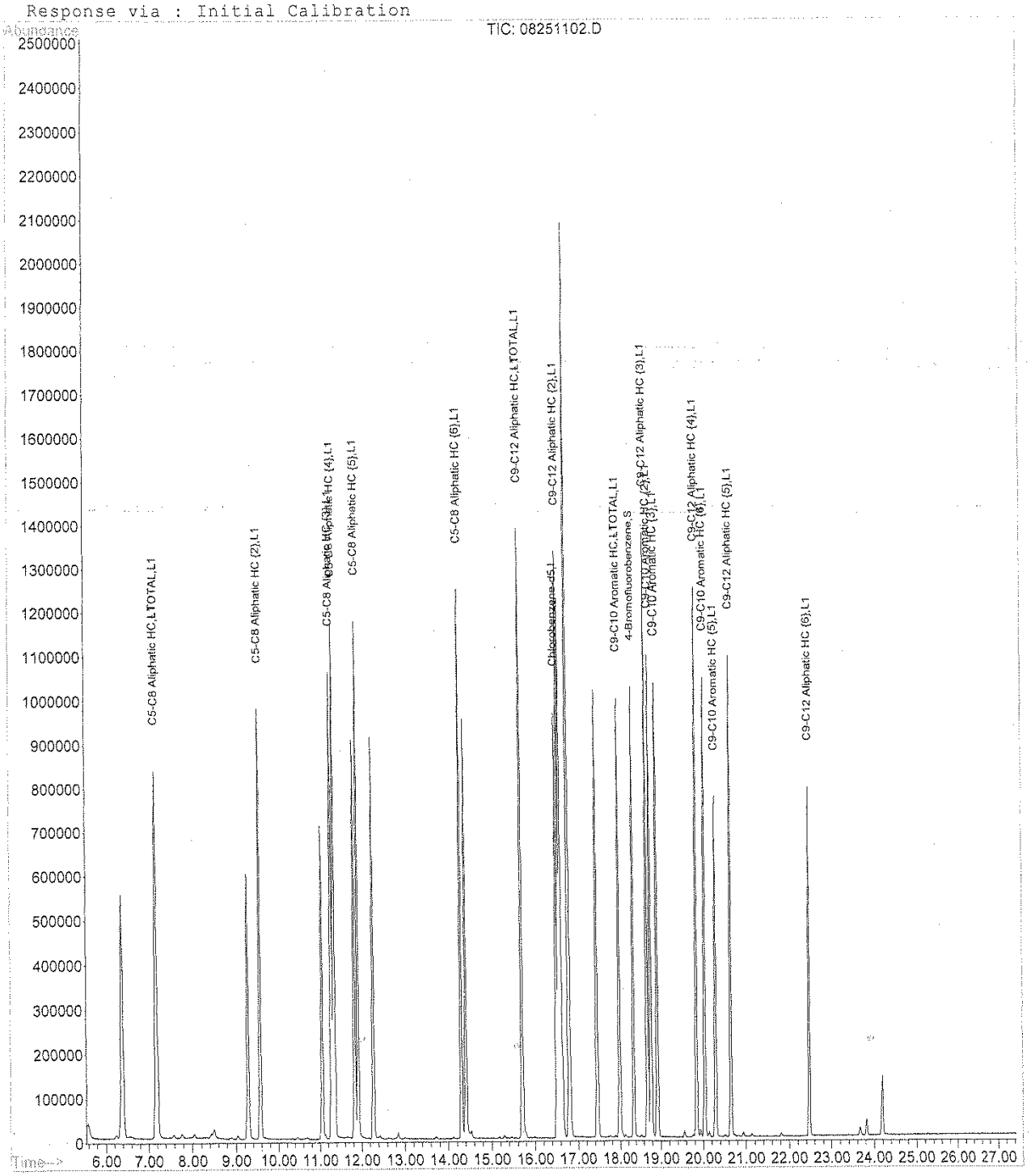
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
40) Chlorobenzene-d5	16.51	117	706066	12.50 ug/m3	0.00
System Monitoring Compounds					
41) 4-Bromofluorobenzene	18.34	95	500609	93.19 ug/m3	0.00
Spiked Amount 89.500	Range 70 - 130		Recovery = 104.12%		
Target Compounds					Qvalue
1) C5-C8 Aliphatic HC	7.18	TIC	2870735	32.22 ug/m3	100
2) C5-C8 Aliphatic HC {2}	9.57	TIC	2434564	35.07 ug/m3	100
3) C5-C8 Aliphatic HC {3}	11.28	TIC	2671555	35.26 ug/m3	100
4) C5-C8 Aliphatic HC {4}	11.35	TIC	3028415	43.26 ug/m3	100
5) C5-C8 Aliphatic HC {5}	11.91	TIC	2644891	36.25 ug/m3	100
6) C5-C8 Aliphatic HC {6}	14.30	TIC	2661400	36.38 ug/m3	100
7) C5-C8 Aliphatic HC - TOTAL	7.18	TIC	16311560m	218.86 ug/m3	
8) C9-C12 Aliphatic HC	15.70	TIC	3305090	41.99 ug/m3	100
9) C9-C12 Aliphatic HC {2}	16.57	TIC	2898649	38.35 ug/m3	100
10) C9-C12 Aliphatic HC {3}	18.68	TIC	2828641	42.74 ug/m3	100
11) C9-C12 Aliphatic HC {4}	19.83	TIC	2766354	42.69 ug/m3	100
12) C9-C12 Aliphatic HC {5}	20.65	TIC	2291717	40.48 ug/m3	100
13) C9-C12 Aliphatic HC {6}	22.47	TIC	1573054	35.28 ug/m3	100
14) C9-C12 Aliphatic HC - TOTA	15.70	TIC	15663505m	248.71 ug/m3	
15) C9-C10 Aromatic HC	17.98	120	229150	40.59 ug/m3	100
16) C9-C10 Aromatic HC {2}	18.77	120	279914	47.00 ug/m3	100
17) C9-C10 Aromatic HC {3}	18.91	120	382124	44.87 ug/m3	100
18) C9-C10 Aromatic HC {4}	20.03	120	81657	47.09 ug/m3	100
19) C9-C10 Aromatic HC {5}	20.29	120	255002	39.80 ug/m3	100
20) C9-C10 Aromatic HC {6}	20.03	134	217571	48.10 ug/m3	100
21) C9-C10 Aromatic HC - TOTAL	17.98	TIC	1445418m	220.71 ug/m3	

(#) = qualifier out of range (m) = manual integration
08251102.D 081611V9.M Thu Oct 20 14:36:39 2011

Quantitation Report

Data File : C:\HPCHEM\1\DATA\082511\08251102.D Vial: 2
Acq On : 25 Aug 2011 11:01 am Operator: RACHEL HILL
Sample : CCV 082511A VOA9 Inst : GC/MS Ins
Misc : CCV MA_APH Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 26 9:12 2011 Quant Results File: 081611V9.RES

Method : C:\HPCHEM\1\METHODS\081611V9.M (RTE Integrator)
Title : MASS APH
Last Update : Wed Aug 17 10:38:55 2011
Response via : Initial Calibration



Response Factor Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\080711V9.M (RTE Integrator)
Title : MASS APH
Last Update : Mon Aug 08 16:51:21 2011
Response via : Initial Calibration

Calibration Files
1 =08071103.D 2 =08071104.D 3 =08071105.D
4 =08071106.D 5 =08071107.D 6 =08071108.D

		Compound	1	2	3	4	5	6	Avg		%RSD
1)	L1	C5-C8 Aliphatic HC	9.131	7.729	7.946	7.811	7.554	7.218	7.768	E4	8.88
2)	L1	C5-C8 Aliphatic HC	6.680	5.643	6.013	5.885	5.835	5.688	5.904	E4	6.33
3)	L1	C5-C8 Aliphatic HC	7.335	6.218	6.590	6.395	6.296	6.346	6.472	E4	6.31
4)	L1	C5-C8 Aliphatic HC	6.572	5.736	6.033	5.922	5.878	5.644	5.918	E4	5.46
5)	L1	C5-C8 Aliphatic HC	6.981	6.147	6.411	6.265	6.177	5.983	6.250	E4	6.06
6)	L1	C5-C8 Aliphatic HC	7.135	6.288	6.460	6.278	6.236	6.043	6.289	E4	7.43
7)	L1	C5-C8 Aliphatic HC	7.236	6.246	6.521	6.380	6.289	6.113	6.384	E4	6.64
8)	L1	C9-C12 Aliphatic HC	7.845	6.779	6.913	6.868	6.726	6.451	6.781	E4	8.67
9)	L1	C9-C12 Aliphatic HC	7.920	6.704	7.006	6.457	6.707	6.247	6.658	E4	10.84
10)	L1	C9-C12 Aliphatic HC	6.979	5.878	6.073	5.871	5.778	5.519	5.864	E4	10.43
11)	L1	C9-C12 Aliphatic HC	6.818	5.715	5.859	5.737	5.591	5.437	5.734	E4	9.72
12)	L1	C9-C12 Aliphatic HC	6.052	5.056	5.158	5.063	4.987	4.719	5.047	E4	10.54
13)	L1	C9-C12 Aliphatic HC	4.704	3.873	3.988	3.968	4.027	3.778	3.987	E4	8.83
14)	L1	C9-C12 Aliphatic HC	6.581	5.543	5.705	5.543	5.517	5.243	5.559	E4	9.79
15)	L1	C9-C10 Aromatic HC	5.534	4.702	4.958	4.855	4.778	4.757	4.892	E3	6.14
16)	L1	C9-C10 Aromatic HC	5.930	4.998	5.215	5.085	5.099	5.123	5.208	E3	6.27
17)	L1	C9-C10 Aromatic HC	8.633	7.291	7.522	7.400	7.340	7.330	7.508	E3	6.88
18)	L1	C9-C10 Aromatic HC	1.732	1.468	1.533	1.499	1.506	1.494	1.524	E3	6.33
19)	L1	C9-C10 Aromatic HC	6.455	5.436	5.681	5.538	5.517	5.481	5.644	E3	6.53
20)	L1	C9-C10 Aromatic HC	4.574	3.853	4.022	3.906	3.912	3.857	3.972	E3	7.15
21)	L1	C9-C10 Aromatic HC	6.579	5.556	5.776	5.640	5.608	5.608	5.744	E3	6.64
22)		C5-C8 Aliphatic	7.236	6.246	6.521	6.380	6.289	6.113	6.384	E4	6.64
23)	L1	non C5-C8	6.827	5.979	5.949	5.825	5.758	5.572	5.916	E4	7.43
24)	L1	non C5-C8 {2}	4.833	4.008	4.264	4.056	3.960	3.793	4.100	E4	8.84
25)	L1	non C5-C8 {3}	2.218	2.082	2.351	2.266	2.282	2.303	2.289	E4	5.82
26)	L1	non C5-C8 {4}	5.471	4.527	4.945	4.748	4.714	4.585	4.802	E4	6.77
27)	L1	non C5-C8 {5}	2.664	2.482	2.854	2.681	2.611	2.649	2.698	E4	5.70
28)	L1	non C5-C8 {6}	5.813	4.898	5.219	5.012	5.014	4.936	5.132	E4	6.18
29)	L1	non C5-C8 - TOTAL	3.537	3.537	3.940	3.911	4.020	4.132	3.919	E4	7.62
30)		C9-C12 Aliphatic	6.581	5.543	5.705	5.543	5.517	5.243	5.559	E4	9.79
31)	L1	non C9-C12	2.870	2.857	3.011	2.882	2.861	2.881	2.938	E4	4.34
32)	L1	non C9-C12 {2}	5.660	4.602	4.801	4.697	4.661	4.791	4.778	E4	9.08
33)	L1	non C9-C12 {3}	5.892	4.990	5.200	5.064	5.034	4.968	5.146	E4	6.68
34)	L1	non C9-C12 {4}	5.706	4.861	5.038	4.888	4.876	4.824	4.982	E4	6.76
35)	L1	non C9-C12 {5}	2.113	1.986	2.239	2.120	2.105	2.147	2.157	E4	5.83
36)	L1	non C9-C12 - TOTAL	3.078	2.960	3.169	3.122	3.170	3.267	3.139	E4	3.16
37)	L1	C9-C10 Aromatic	6.579	5.556	5.776	5.640	5.608	5.608	5.744	E3	6.64
38)	L1	C9-C10 Aromatic {2}	6.579	5.556	5.776	5.640	5.608	5.608	5.744	E3	6.64
39)	L1	C9-C10 Aromatic - T	6.579	5.556	5.776	5.640	5.608	5.608	5.744	E3	6.64
40)	I	Chlorobenzene-d5	----------ISTD----------								
41)	S	4-Bromofluorobenzen	0.101	0.098	0.100	0.100	0.100	0.100	0.100		1.00

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

Compound List Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\080711V9.M (RTE Integrator)
Title : MASS APH
Last Update : Mon Aug 08 16:51:21 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

080711V9.M Thu Oct 20 10:10:19 2011

Response Factor Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\081611V9.M (RTE Integrator)
Title : MASS APH
Last Update : Wed Aug 17 10:38:55 2011
Response via : Initial Calibration

Calibration Files
1 =08161105.D 2 =08161106.D 3 =08161107.D
4 =08161108.D 5 =08161109.D 6 =08161110.D

		Compound	1	2	3	4	5	6	Avg		%RSD
1)	L1	C5-C8 Aliphatic HC	9.819	9.091	8.932	8.680	8.763	8.725	8.909	E4	5.19
2)	L1	C5-C8 Aliphatic HC	8.117	7.136	7.040	6.542	6.567	6.719	6.942	E4	8.30
3)	L1	C5-C8 Aliphatic HC	8.923	7.767	7.617	7.238	7.278	7.273	7.578	E4	8.59
4)	L1	C5-C8 Aliphatic HC	7.905	7.052	7.185	6.596	6.571	6.934	7.001	E4	6.55
5)	L1	C5-C8 Aliphatic HC	8.403	7.440	7.432	7.002	7.033	7.078	7.297	E4	7.57
6)	L1	C5-C8 Aliphatic HC	8.351	7.452	7.529	7.126	7.110	7.076	7.315	E4	7.57
7)	L1	C5-C8 Aliphatic HC	8.542	7.601	7.569	7.155	7.172	7.236	7.453	E4	7.23
8)	L1	C9-C12 Aliphatic HC	9.103	8.077	8.074	7.734	7.681	7.516	7.872	E4	8.51
9)	L1	C9-C12 Aliphatic HC	8.763	7.528	7.897	7.424	7.358	7.348	7.558	E4	8.72
10)	L1	C9-C12 Aliphatic HC	7.593	6.794	6.896	6.507	6.536	6.289	6.619	E4	8.73
11)	L1	C9-C12 Aliphatic HC	7.358	6.622	6.697	6.363	6.356	6.239	6.480	E4	7.71
12)	L1	C9-C12 Aliphatic HC	6.393	5.843	5.848	5.629	5.569	5.405	5.661	E4	7.90
13)	L1	C9-C12 Aliphatic HC	4.745	4.487	4.533	4.413	4.532	4.410	4.459	E4	4.40
14)	L1	C9-C12 Aliphatic HC	7.142	6.415	6.508	6.206	6.204	6.065	6.298	E4	7.70
15)	L1	C9-C10 Aromatic HC	6.298	5.586	5.706	5.410	5.472	5.608	5.646	E3	5.41
16)	L1	C9-C10 Aromatic HC	6.517	5.918	6.008	5.679	5.773	5.924	5.955	E3	4.54
17)	L1	C9-C10 Aromatic HC	9.376	8.453	8.598	8.172	8.336	8.421	8.515	E3	4.74
18)	L1	C9-C10 Aromatic HC	1.920	1.716	1.755	1.667	1.697	1.724	1.734	E3	5.11
19)	L1	C9-C10 Aromatic HC	7.038	6.311	6.455	6.152	6.240	6.358	6.407	E3	4.59
20)	L1	C9-C10 Aromatic HC	4.927	4.476	4.586	4.411	4.450	4.513	4.523	E3	4.39
21)	L1	C9-C10 Aromatic HC	7.221	6.498	6.609	6.280	6.367	6.509	6.549	E3	4.84
22)		C5-C8 Aliphatic	8.542	7.601	7.569	7.155	7.172	7.236	7.453	E4	7.23
23)	L1	non C5-C8	6.927	6.469	6.553	6.443	6.396	6.454	6.517	E4	2.91
24)	L1	non C5-C8 {2}	5.846	5.052	4.954	4.429	4.413	4.581	4.810	E4	11.01
25)	L1	non C5-C8 {3}	3.629	3.375	3.542	3.745	3.605	3.865	3.632	E4	4.25
26)	L1	non C5-C8 {4}	6.915	5.929	5.921	5.290	5.308	5.566	5.766	E4	9.91
27)	L1	non C5-C8 {5}	4.665	4.235	4.548	5.016	4.637	5.181	4.694	E4	6.69
28)	L1	non C5-C8 {6}	6.985	6.362	6.068	5.604	5.883	6.110	6.133	E4	7.20
29)	L1	non C5-C8 - TOTAL	4.992	4.867	5.013	4.961	4.988	5.344	5.057	E4	3.33
30)		C9-C12 Aliphatic	7.142	6.415	6.508	6.206	6.204	6.065	6.298	E4	7.70
31)	L1	non C9-C12	5.017	4.705	4.895	5.120	4.992	5.243	4.971	E4	3.65
32)	L1	non C9-C12 {2}	6.664	6.084	5.810	5.719	5.502	5.600	5.736	E4	10.03
33)	L1	non C9-C12 {3}	6.743	5.980	6.047	5.656	5.673	5.837	5.947	E4	6.45
34)	L1	non C9-C12 {4}	6.557	5.818	5.833	5.442	5.498	5.629	5.750	E4	6.78
35)	L1	non C9-C12 {5}	3.303	3.137	3.349	3.535	3.400	3.749	3.414	E4	5.62
36)	L1	non C9-C12 - TOTAL	4.290	4.047	4.110	4.058	3.988	4.122	4.063	E4	3.49
37)	L1	C9-C10 Aromatic	7.221	6.498	6.609	6.280	6.367	6.509	6.549	E3	4.84
38)	L1	C9-C10 Aromatic {2}	7.221	6.498	6.609	6.280	6.367	6.509	6.549	E3	4.84
39)	L1	C9-C10 Aromatic - T	7.221	6.498	6.609	6.280	6.367	6.509	6.549	E3	4.84
40)	I	Chlorobenzene-d5	----------ISTD----------								
41)	S	4-Bromofluorobenzen	0.094	0.096	0.096	0.094	0.096	0.095	0.095		0.84

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

Compound List Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\081611V9.M (RTE Integrator)
Title : MASS APH
Last Update : Wed Aug 17 10:38:55 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

081611V9.M Thu Oct 20 14:36:28 2011

RTI Laboratories

Run ID: GC-TCD 1_110806A **Run No.:** 42333

Analytical Run Date: 8/6/2011 **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	R42333	8/6/2011 9:24:00 AM	Robert Lynch		
ccv std 1-2 a	ASTM-D2504	CCV	R42333	8/6/2011 9:56:00 AM	Robert Lynch		
lcs	ASTM-D2504	LCS	R42333	8/6/2011 10:16:00 AM	Robert Lynch		
crql std 2% a	ASTM-D2504	CRQL	R42333	8/6/2011 11:33:00 AM	Robert Lynch		
1107640-001a	ASTM-D2504	SAMP	R42333	8/6/2011 12:15:00 PM	Robert Lynch	H	
1107640-002b	ASTM-D2504	SAMP	R42333	8/6/2011 12:41:00 PM	Robert Lynch	H	
1107640-003b	ASTM-D2504	SAMP	R42333	8/6/2011 1:06:00 PM	Robert Lynch	H	
1107640-004b	ASTM-D2504	SAMP	R42333	8/6/2011 1:28:00 PM	Robert Lynch	H	
1107640-005b	ASTM-D2504	SAMP	R42333	8/6/2011 1:50:00 PM	Robert Lynch	H	
1107640-006b	ASTM-D2504	SAMP	R42333	8/6/2011 2:12:00 PM	Robert Lynch	H	
1107640-007b	ASTM-D2504	SAMP	R42333	8/6/2011 2:36:00 PM	Robert Lynch	H	
1107640-007bdup	ASTM-D2504	DUP	R42333	8/6/2011 2:57:00 PM	Robert Lynch	H	
ccv std 1-2 b	ASTM-D2504	CCV	R42333	8/6/2011 4:17:00 PM	Robert Lynch		
crql std 2% b	ASTM-D2504	CRQL	R42333	8/6/2011 5:54:00 PM	Robert Lynch		

RTI Laboratories

ANALYTICAL RUN Summary

20-Oct-11

RunNo 42333

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
819134	mblk	ASTM-D2504	MBLK	.TA\080611\0806	8/6/2011 9:24:00	1	R42333		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
819135	ccv std 1-2 a	ASTM-D2504	CCV	.TA\080611\0806	8/6/2011 9:56:00	1	R42333		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	2.371	2.371		2.5	0	0	0.025	0.1	0	95%	85	115	0%	
Carbon Monoxide	A	%	2.427	2.427		2.5	0	0	0.025	0.1	0	97%	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	%	1.829	1.829		2	0	0	0.025	0.5	0	91%	85	115	0%	
Nitrogen	A	%	2.534	2.534		2.5	0	0	0.025	0.1	0	101%	85	115	0%	
Oxygen	A	%	2.261	2.261		2.5	0	0	0.025	0.1	0	90%	85	115	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
819136	lcs	ASTM-D2504	LCS	.TA\080611\0806	8/6/2011 10:16:0	1	R42333		0	819135	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	2.326	2.326		2.5	0	2.371	0.025	0.1	0	93%	70	130	2%	
Carbon Monoxide	A	%	2.179	2.179		2.5	0	2.427	0.025	0.1	0	87%	70	130	11%	
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	%	1.818	1.818		2	0	1.829	0.025	0.5	0	91%	70	130	1%	
Nitrogen	A	%	2.977	2.977		2.5	0	2.534	0.025	0.1	0	119%	70	130	16%	
Oxygen	A	%	2.444	2.444		2.5	0	2.261	0.025	0.1	0	98%	70	130	8%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
819426	1107640-007bdup	ASTM-D2504	DUP	.TA\080611\0806	8/6/2011 2:57:00	1	R42333		0	819425	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	0.193	0.193		0	0	0.191	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	%	78.619	78.619		0	0	78.739	0.025	0.1	0	0%	0	0	0%	
Oxygen	A	%	20.729	20.729		0	0	20.759	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
819146	ccv std 1-2 b	ASTM-D2504	CCV	.TA\080611\0806	8/6/2011 4:17:00	1	R42333		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	2.175	2.175		2.5	0	0	0.025	0.1	0	87%	85	115	0%	
Carbon Monoxide	A	%	2.333	2.333		2.5	0	0	0.025	0.1	0	93%	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	%	1.747	1.747		2	0	0	0.025	0.5	0	87%	85	115	0%	
Nitrogen	A	%	2.423	2.423		2.5	0	0	0.025	0.1	0	97%	85	115	0%	
Oxygen	A	%	2.199	2.199		2.5	0	0	0.025	0.1	0	88%	85	115	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
819148	crql std 2% b	ASTM-D2504	CRQL	.TA\080611\0806	8/6/2011 5:54:00	1	R42333		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	0.357	0.357		0.3	0	0	0.025	0.1	0	119%	80	120	0%	
Carbon Monoxide	A	%	0.136	0.136		0.14	0	0	0.025	0.1	0	97%	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	%	0.107	0.107		0.09	0	0	0.025	0.5	0	119%	80	120	0%	
Nitrogen	A	%	1.541	1.541		1.39	0	0	0.025	0.1	0	111%	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\080611\08061102.D Vial: 1
Acq On : 6 Aug 2011 9:56 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	2.261	9.6	0	0.04
2	Nitrogen	2.500	2.534	-1.4	0	0.03
3	Carbon Monoxide	2.500	2.427	2.9	0	0.00
4	Methane	2.000	1.829	8.6	0	-0.01
5	Carbon dioxide	2.500	2.371	5.2	0	-0.03

Evaluate Continuing Calibration Report - Not Founds

Data File : C:\HPCHEM\2\DATA\080611\08061102.D Vial: 1
Acq On : 6 Aug 2011 9:56 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 11:50:08 2011 TESTCAL

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080611\08061102.D Vial: 1
Acq On : 6 Aug 2011 9:56 am Operator:
Sample : ccv std 1-2 a Inst : GC/TCD
Misc : CCV ASTM-D2504 Multiplr: 1.00
IntFile : events.e
Quant Time: Aug 6 9:59 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 :

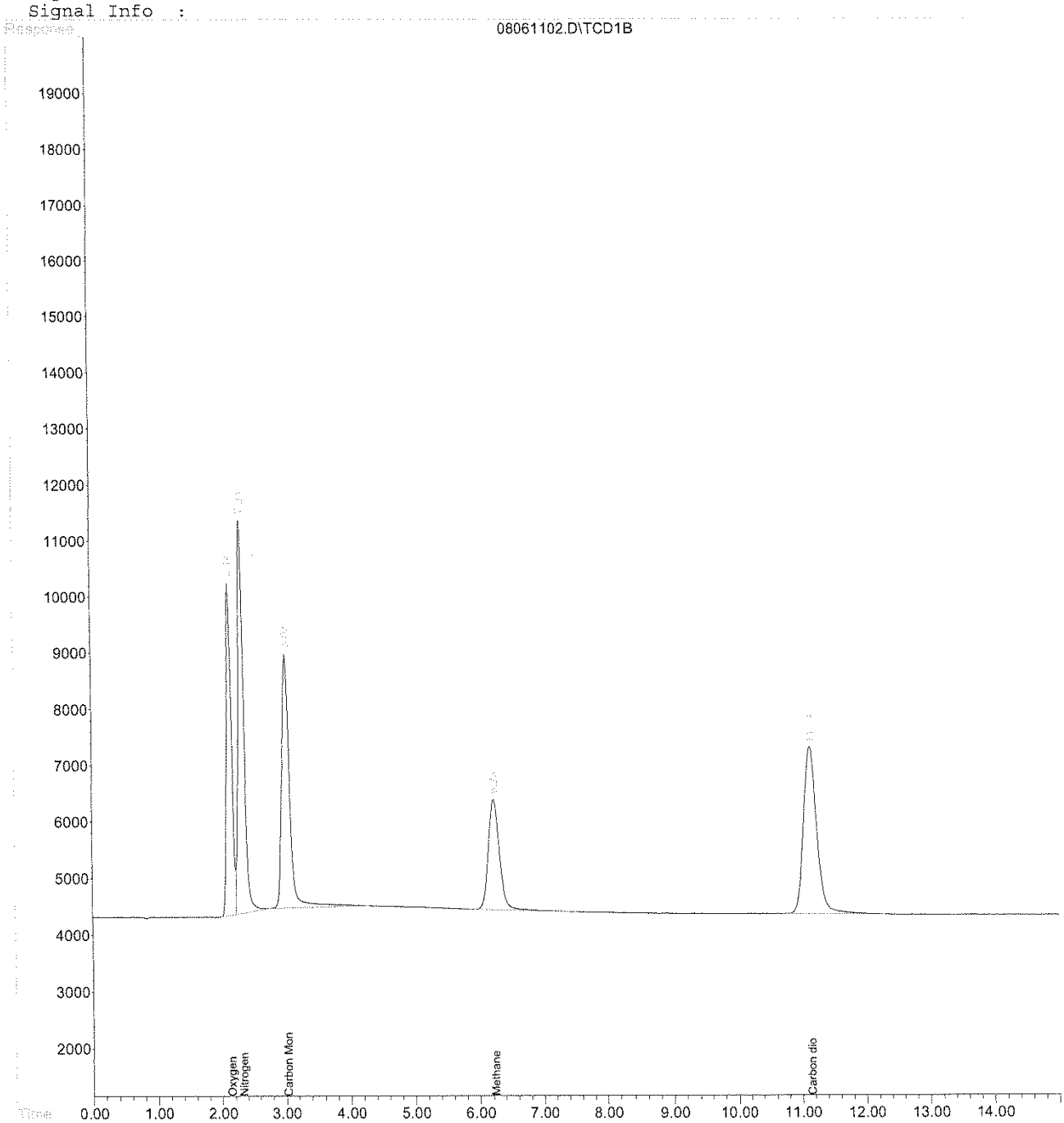
	Compound	R.T.	Response	Conc Units
	Target Compounds			
1)	Oxygen	2.14	323833	2.261 %
2)	Nitrogen	2.33	436539	2.534 %
3)	Carbon Monoxide	3.02	382334	2.427 %
4)	Methane	6.24	233934	1.829 %
5)	Carbon dioxide	11.14	428871	2.371 %

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080611\08061102.D Vial: 1
Acq On : 6 Aug 2011 9:56 am Operator:
Sample : ccv std 1-2 a Inst : GC/TCD
Misc : CCV ASTM-D2504 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 6 9:59 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\080611\08061113.D Vial: 1
Acq On : 6 Aug 2011 4:17 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	2.199	12.0	0	0.04
2	Nitrogen	2.500	2.423	3.1	0	0.03
3	Carbon Monoxide	2.500	2.333	6.7	0	0.00
4	Methane	2.000	1.747	12.6	0	-0.02
5	Carbon dioxide	2.500	2.175	13.0	0	-0.05

Evaluate Continuing Calibration Report - Not Founds

Data File : C:\HPCHEM\2\DATA\080611\08061113.D Vial: 1
Acq On : 6 Aug 2011 4:17 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 11:50:22 2011 TESTCAL

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\2\DATA\080611\08061113.D Vial: 1
Acq On : 6 Aug 2011 4:17 pm Operator:
Sample : ccv std 1-2 b Inst : GC/TCD
Misc : CCV ASTM-D2504 Multiplr: 1.00
IntFile : events.e
Quant Time: Aug 17 17:48 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 :

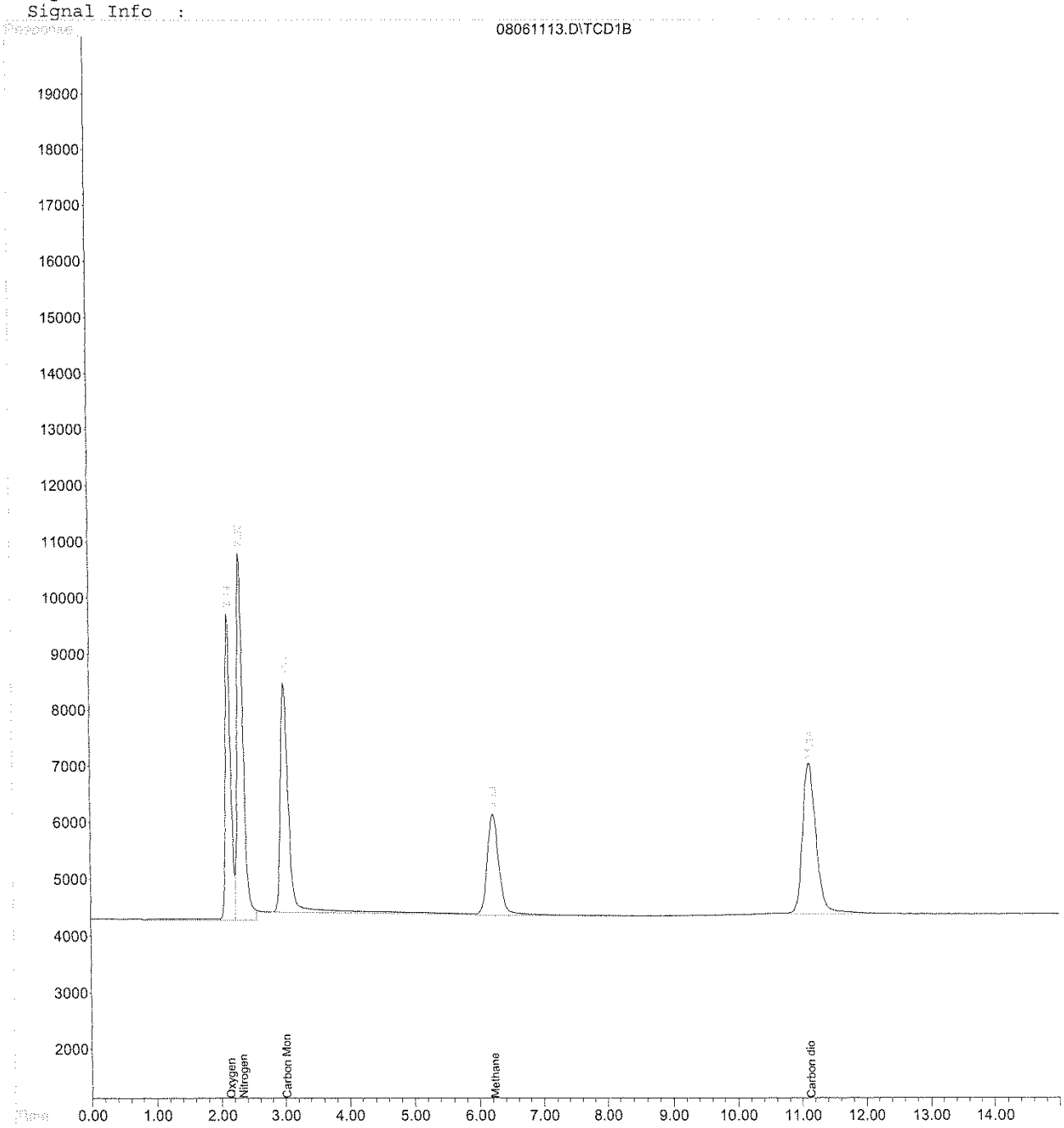
	Compound	R.T.	Response	Conc Units
	Target Compounds			
1)	Oxygen	2.14	314801	2.199 %
2)	Nitrogen	2.33	417384	2.423 %
3)	Carbon Monoxide	3.02	367416	2.333 %
4)	Methane	6.23	222701	1.747 %
5)	Carbon dioxide	11.13	392379	2.175 %

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\2\DATA\080611\08061113.D Vial: 1
Acq On : 6 Aug 2011 4:17 pm Operator:
Sample : ccv std 1-2 b Inst : GC/TCD
Misc : CCV ASTM-D2504 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 17 17:48 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_110808A **Run No.:** 42334

Analytical Run Date: 8/8/2011 **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	R42334	8/8/2011 9:48:00 AM	Robert Lynch		
ccv std 1-2 a	ASTM-D2504	CCV	R42334	8/8/2011 10:19:00 AM	Robert Lynch		
lcs	ASTM-D2504	LCS	R42334	8/8/2011 10:44:00 AM	Robert Lynch		
crql std 2% a	ASTM-D2504	CRQL	R42334	8/8/2011 11:05:00 AM	Robert Lynch		
1107640-008b	ASTM-D2504	SAMP	R42334	8/8/2011 11:41:00 AM	Robert Lynch		
1107640-009b	ASTM-D2504	SAMP	R42334	8/8/2011 12:02:00 PM	Robert Lynch		
1107640-010b	ASTM-D2504	SAMP	R42334	8/8/2011 12:45:00 PM	Robert Lynch		
1107640-011b	ASTM-D2504	SAMP	R42334	8/8/2011 1:05:00 PM	Robert Lynch		
1107640-012b	ASTM-D2504	SAMP	R42334	8/8/2011 1:34:00 PM	Robert Lynch		
1107640-013b	ASTM-D2504	SAMP	R42334	8/8/2011 1:52:00 PM	Robert Lynch		
1107640-014b	ASTM-D2504	SAMP	R42334	8/8/2011 2:12:00 PM	Robert Lynch		
1107640-015b	ASTM-D2504	SAMP	R42334	8/8/2011 2:31:00 PM	Robert Lynch		
1107640-016b	ASTM-D2504	SAMP	R42334	8/8/2011 2:53:00 PM	Robert Lynch		
1107640-017b	ASTM-D2504	SAMP	R42334	8/8/2011 3:53:00 PM	Robert Lynch		
1107640-017bdup	ASTM-D2504	DUP	R42334	8/8/2011 4:11:00 PM	Robert Lynch		
ccv std 1-2 b	ASTM-D2504	CCV	R42334	8/8/2011 4:32:00 PM	Robert Lynch		
1107640-018b	ASTM-D2504	SAMP	R42334	8/8/2011 4:53:00 PM	Robert Lynch		
1107640-019b	ASTM-D2504	SAMP	R42334	8/8/2011 5:12:00 PM	Robert Lynch		
1107640-020b	ASTM-D2504	SAMP	R42334	8/8/2011 5:31:00 PM	Robert Lynch		
1107640-021b	ASTM-D2504	SAMP	R42334	8/8/2011 6:02:00 PM	Robert Lynch		
1107640-022b	ASTM-D2504	SAMP	R42334	8/8/2011 6:26:00 PM	Robert Lynch		
1107640-023b	ASTM-D2504	SAMP	R42334	8/8/2011 6:46:00 PM	Robert Lynch		
1107640-024b	ASTM-D2504	SAMP	R42334	8/8/2011 7:17:00 PM	Robert Lynch		
ccv std 1-2 c	ASTM-D2504	CCV	R42334	8/8/2011 7:38:00 PM	Robert Lynch		
crql std 2% c	ASTM-D2504	CRQL	R42334	8/8/2011 7:59:00 PM	Robert Lynch		

RTI Laboratories

ANALYTICAL RUN Summary

20-Oct-11

RunNo 42334

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
819149	mblk	ASTM-D2504	MBLK	.TA\080811\0808	8/8/2011 9:48:00	1	R42334		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
819150	ccv std 1-2 a	ASTM-D2504	CCV	.TA\080811\0808	8/8/2011 10:19:0	1	R42334		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	2.406	2.406		2.5	0	0	0.025	0.1	0	96%	85	115	0%	
Carbon Monoxide	A	%	2.715	2.715		2.5	0	0	0.025	0.1	0	109%	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	%	2.053	2.053		2	0	0	0.025	0.5	0	103%	85	115	0%	
Nitrogen	A	%	2.477	2.477		2.5	0	0	0.025	0.1	0	99%	85	115	0%	
Oxygen	A	%	2.305	2.305		2.5	0	0	0.025	0.1	0	92%	85	115	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
819151	lcs	ASTM-D2504	LCS	.TA\080811\0808	8/8/2011 10:44:0	1	R42334		0	819150	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	2.258	2.258		2.5	0	2.406	0.025	0.1	0	90%	70	130	6%	
Carbon Monoxide	A	%	2.295	2.295		2.5	0	2.715	0.025	0.1	0	92%	70	130	17%	
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	%	1.837	1.837		2	0	2.053	0.025	0.5	0	92%	70	130	11%	
Nitrogen	A	%	2.718	2.718		2.5	0	2.477	0.025	0.1	0	109%	70	130	9%	
Oxygen	A	%	2.475	2.475		2.5	0	2.305	0.025	0.1	0	99%	70	130	7%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
819162	1107640-017b (Container-01 of 01)	ASTM-D2504	SAMP	.TA\080811\0808	8/8/2011 3:53:00	1	R42334		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Nitrogen	A	%	79.244	79.244		0	0	0	0.025	0.1	0	0%	0	0	0%	
Oxygen	A	%	19.967	19.967		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
819163	1107640-017bdup	ASTM-D2504	DUP	.TA\080811\0808	8/8/2011 4:11:00	1	R42334		0	819162	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	0.592	0.592		0	0	0.588	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	%	78.461	78.461		0	0	79.244	0.025	0.1	0	0%	0	0	1%	
Oxygen	A	%	19.787	19.787		0	0	19.967	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
819164	ccv std 1-2 b	ASTM-D2504	CCV	.TA\080811\0808	8/8/2011 4:32:00	1	R42334		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	2.327	2.327		2.5	0	0	0.025	0.1	0	93%	85	115	0%	
Carbon Monoxide	A	%	2.153	2.153		2.5	0	0	0.025	0.1	0	86%	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	%	1.924	1.924		2	0	0	0.025	0.5	0	96%	85	115	0%	
Nitrogen	A	%	2.786	2.786		2.5	0	0	0.025	0.1	0	111%	85	115	0%	
Oxygen	A	%	2.501	2.501		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
819170	1107640-023b (Container-01 of 01)	ASTM-D2504	SAMP	.TA\080811\0808	8/8/2011 6:46:00	1	R42334		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	0.57	0.57		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	%	77.949	77.949		0	0	0	0.025	0.1	0	0%	0	0	0%	
Oxygen	A	%	20.46	20.46		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
819171	1107640-024b (Container-01 of 01)	ASTM-D2504	SAMP	.TA\080811\0808	8/8/2011 7:17:00	1	R42334		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	0.475	0.475		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	%	78.633	78.633		0	0	0	0.025	0.1	0	0%	0	0	0%	
Oxygen	A	%	20.462	20.462		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
819172	ccv std 1-2 c	ASTM-D2504	CCV	.TA\080811\0808	8/8/2011 7:38:00	1	R42334		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	2.319	2.319		2.5	0	0	0.025	0.1	0	93%	85	115	0%	
Carbon Monoxide	A	%	2.155	2.155		2.5	0	0	0.025	0.1	0	86%	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	%	1.924	1.924		2	0	0	0.025	0.5	0	96%	85	115	0%	
Nitrogen	A	%	2.747	2.747		2.5	0	0	0.025	0.1	0	110%	85	115	0%	
Oxygen	A	%	2.484	2.484		2.5	0	0	0.025	0.1	0	99%	85	115	0%	

Evaluate Continuing Calibration Report

```
Data File : C:\HPCHEM\2\DATA\080811\08081102.D          Vial: 1
Acq On    :  8 Aug 2011  10:19 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	2.305	7.8	0	0.03
2	Nitrogen	2.500	2.477	0.9	0	0.02
3	Carbon Monoxide	2.500	2.715	-8.6	0	-0.01
4	Methane	2.000	2.053	-2.6	0	-0.02
5	Carbon dioxide	2.500	2.406	3.8	0	-0.06

Evaluate Continuing Calibration Report - Not Founds

```
Data File : C:\HPCHEM\2\DATA\080811\08081102.D          Vial: 1
Acq On    :  8 Aug 2011  10:19 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 11:53:16 2011 TESTCAL

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080811\08081102.D Vial: 1
Acq On : 8 Aug 2011 10:19 am Operator:
Sample : ccv std 1-2 a Inst : GC/TCD
Misc : CCV ASTM-D2504 Multiplr: 1.00
IntFile : events.e
Quant Time: Aug 17 18:11 2011 Quant Results File: 030511.RES

Quant Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
Last Update : Wed Aug 17 19:07:55 2011
Response via : Initial Calibration
DataAcq Meth : TCD.M

Volume Inj. :
Signal Phase :
Signal Info :

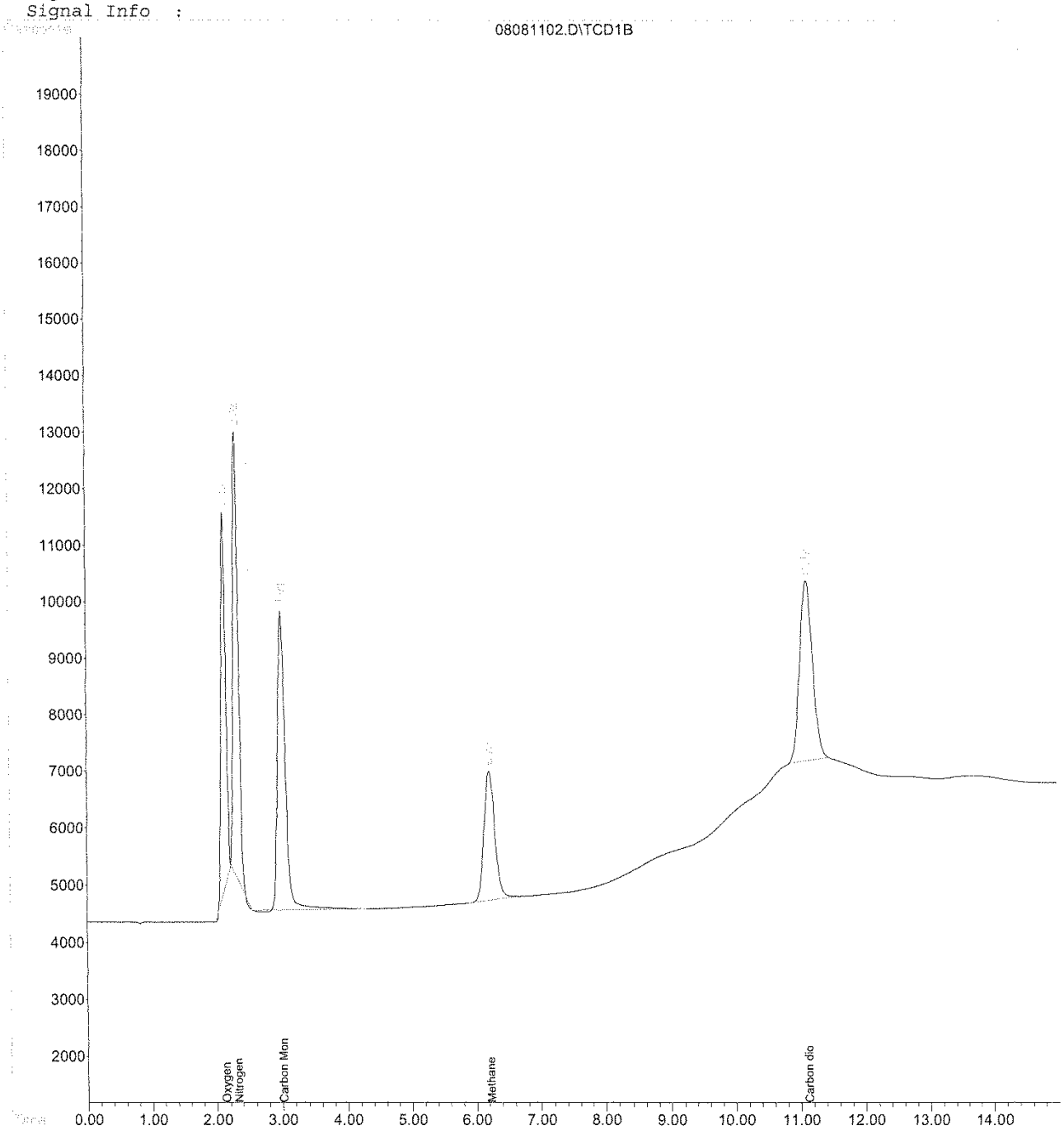
	Compound	R.T.	Response	Conc Units
	Target Compounds			
1)	Oxygen	2.13	330178	2.305 %
2)	Nitrogen	2.32	426786	2.477 %
3)	Carbon Monoxide	3.01	427575	2.715 %
4)	Methane	6.22	265047	2.053 %
5)	Carbon dioxide	11.12	435338	2.406 %

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080811\08081102.D Vial: 1
Acq On : 8 Aug 2011 10:19 am Operator:
Sample : ccv std 1-2 a Inst : GC/TCD
Misc : CCV ASTM-D2504 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 17 18:11 2011 Quant Results File: 030511.RES

Quant Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
Last Update : Wed Aug 17 19:07:55 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\080811\08081116.D Vial: 1
Acq On : 8 Aug 2011 4:32 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	2.501	-0.0	0	0.00
2	Nitrogen	2.500	2.786	-11.4	0	0.00
3	Carbon Monoxide	2.500	2.153	13.9	0	-0.05
4	Methane	2.000	1.924	3.8	0	-0.07
5	Carbon dioxide	2.500	2.327	6.9	0	-0.10

Evaluate Continuing Calibration Report - Not Founds

Data File : C:\HPCHEM\2\DATA\080811\08081116.D Vial: 1
Acq On : 8 Aug 2011 4:32 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 11:53:34 2011 TESTCAL

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080811\08081116.D Vial: 1
Acq On : 8 Aug 2011 4:32 pm Operator:
Sample : ccv std 1-2 b Inst : GC/TCD
Misc : CCV ASTM-D2504 Multiplr: 1.00
IntFile : events.e
Quant Time: Aug 17 18:09 2011 Quant Results File: 030511.RES

Quant Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
Last Update : Wed Aug 17 19:07:55 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	2.11	358440	2.501 %
2)	Nitrogen	2.29	479853	2.786 %
3)	Carbon Monoxide	2.98f	339174	2.153 %
4)	Methane	6.17f	247076	1.924 %
5)	Carbon dioxide	11.07f	420773	2.327 %

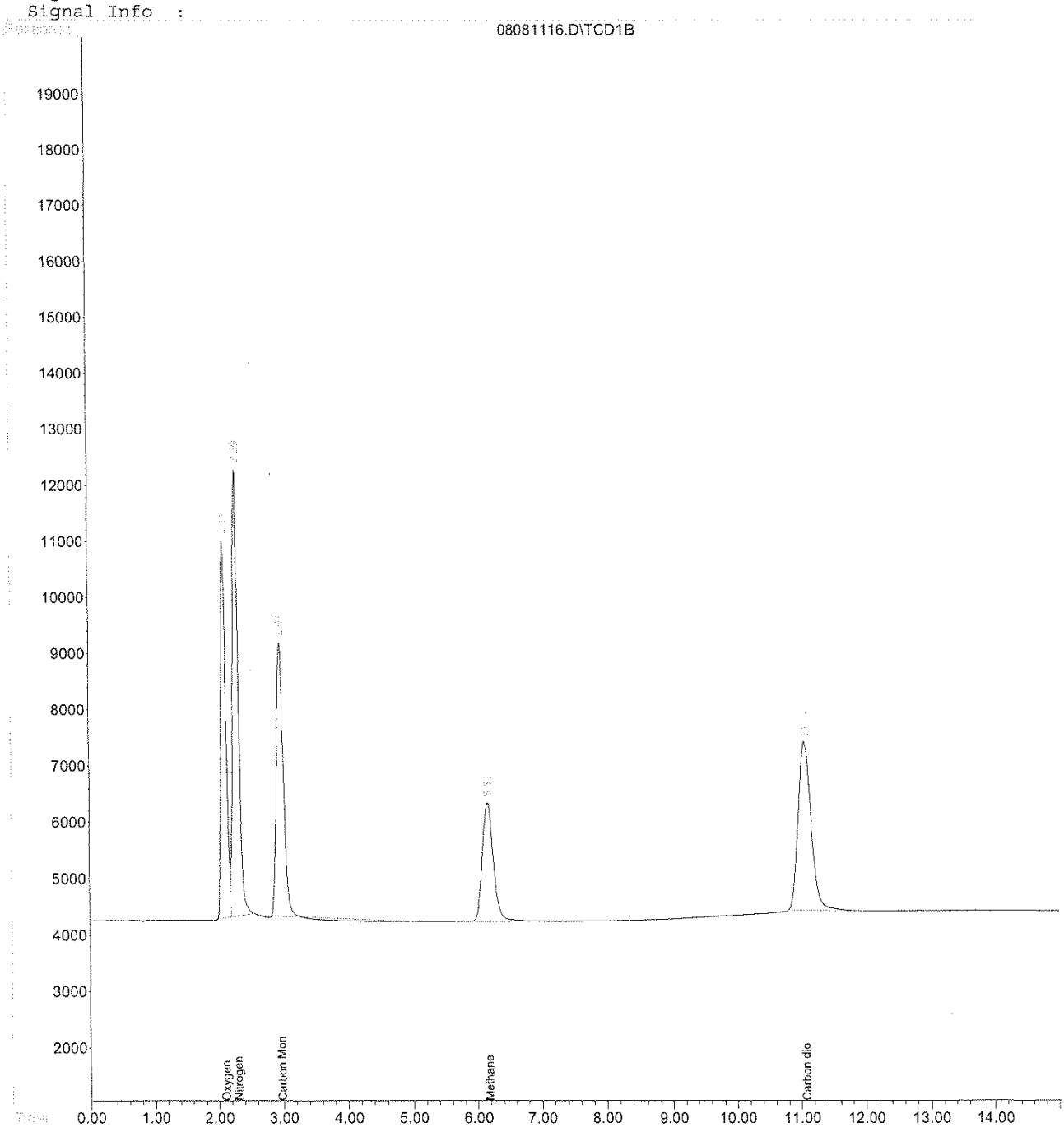
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080811\08081116.D Vial: 1
Acq On : 8 Aug 2011 4:32 pm Operator:
Sample : ccv std 1-2 b Inst : GC/TCD
Misc : CCV ASTM-D2504 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 17 18:09 2011 Quant Results File: 030511.RES

Quant Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
Last Update : Wed Aug 17 19:07:55 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\080811\08081124.D Vial: 1
Acq On : 8 Aug 2011 7:38 pm Operator:
Sample : ccv std 1-2 c 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	2.484	0.6	0	0.02
2	Nitrogen	2.500	2.747	-9.9	0	0.01
3	Carbon Monoxide	2.500	2.155	13.8	0	-0.03
4	Methane	2.000	1.924	3.8	0	-0.04
5	Carbon dioxide	2.500	2.319	7.2	0	-0.07

Evaluate Continuing Calibration Report - Not Founds

Data File : C:\HPCHEM\2\DATA\080811\08081124.D Vial: 1
Acq On : 8 Aug 2011 7:38 pm Operator:
Sample : ccv std 1-2 c 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 11:53:48 2011 TESTCAL

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080811\08081124.D Vial: 1
Acq On : 8 Aug 2011 7:38 pm Operator:
Sample : ccv std 1-2 c Inst : GC/TCD
Misc : CCV ASTM-D2504 Multiplr: 1.00
IntFile : events.e
Quant Time: Aug 17 18:09 2011 Quant Results File: 030511.RES

Quant Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
Last Update : Wed Aug 17 19:07:55 2011
Response via : Initial Calibration
DataAcq Meth : TCD.M

Volume Inj. :
Signal Phase :
Signal Info :

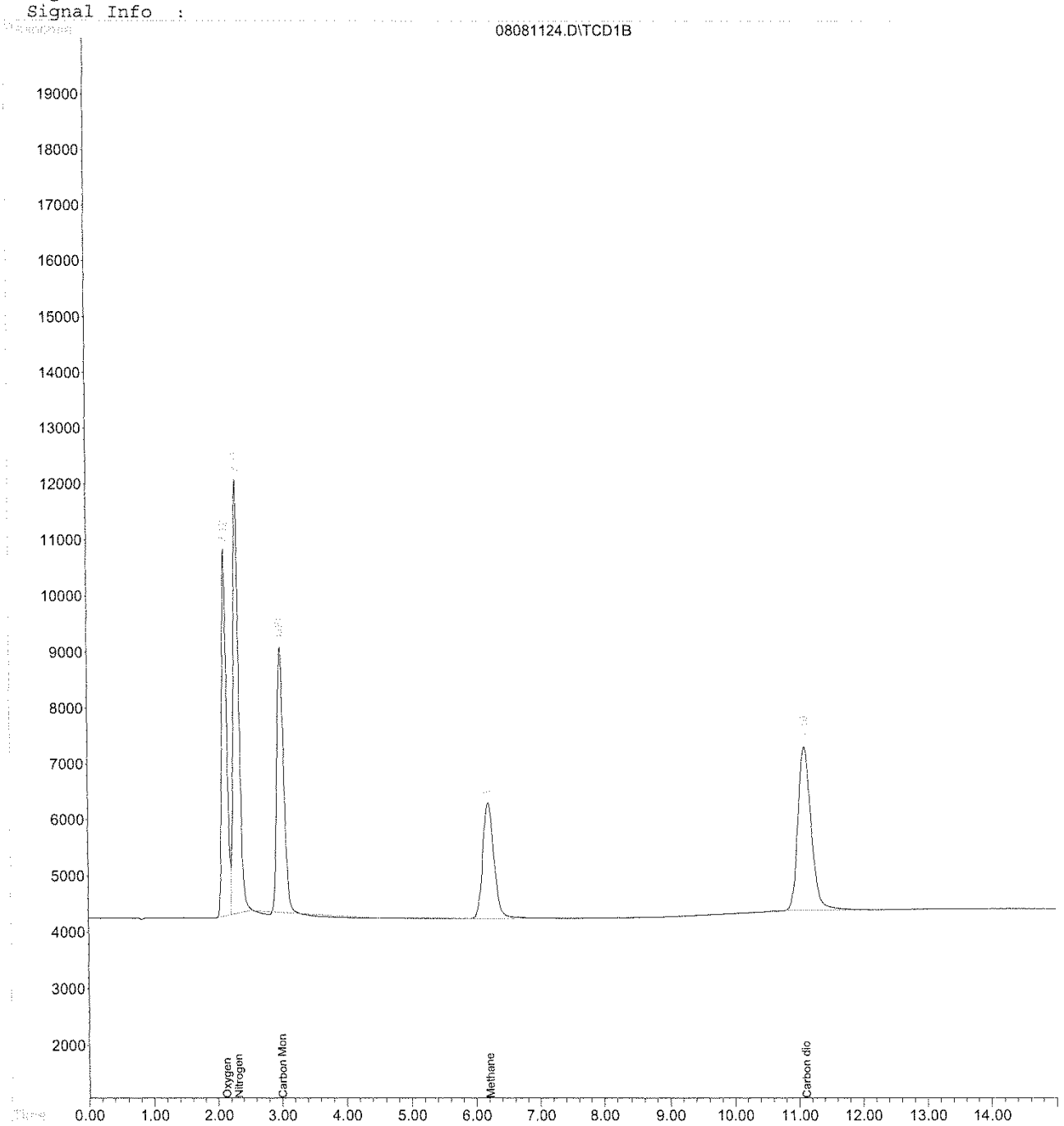
	Compound	R.T.	Response	Conc Units
	Target Compounds			
1)	Oxygen	2.12	356070	2.484 %
2)	Nitrogen	2.31	473150	2.747 %
3)	Carbon Monoxide	3.00	339429	2.155 %
4)	Methane	6.20	247125	1.924 %
5)	Carbon dioxide	11.10	419284	2.319 %

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080811\08081124.D Vial: 1
Acq On : 8 Aug 2011 7:38 pm Operator:
Sample : ccv std 1-2 c Inst : GC/TCD
Misc : CCV ASTM-D2504 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 17 18:09 2011 Quant Results File: 030511.RES

Quant Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
Last Update : Wed Aug 17 19:07:55 2011
Response via : Multiple Level Calibration
DataAcq Meth : TCD.M

Volume Inj. :
Signal Phase :
Signal Info :



RTI Laboratories

Run ID: GC-TCD 1_110809A **Run No.:** 42335

Analytical Run Date: 8/9/2011 **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	R42335	8/9/2011 9:51:00 AM	Robert Lynch		
ccv std 1-2 a	ASTM-D2504	CCV	R42335	8/9/2011 10:17:00 AM	Robert Lynch		
lcs	ASTM-D2504	LCS	R42335	8/9/2011 10:42:00 AM	Robert Lynch		
crql std 2% a	ASTM-D2504	CRQL	R42335	8/9/2011 11:32:00 AM	Robert Lynch		
1107640-025b	ASTM-D2504	SAMP	R42335	8/9/2011 12:00:00 PM	Robert Lynch		
1107640-026b	ASTM-D2504	SAMP	R42335	8/9/2011 12:29:00 PM	Robert Lynch		
1107640-027b	ASTM-D2504	SAMP	R42335	8/9/2011 12:48:00 PM	Robert Lynch		
1107640-028b	ASTM-D2504	SAMP	R42335	8/9/2011 1:08:00 PM	Robert Lynch		
1107640-029b	ASTM-D2504	SAMP	R42335	8/9/2011 1:28:00 PM	Robert Lynch		
1107640-030b	ASTM-D2504	SAMP	R42335	8/9/2011 1:47:00 PM	Robert Lynch		
1107640-031b	ASTM-D2504	SAMP	R42335	8/9/2011 2:17:00 PM	Robert Lynch		
1107640-032b	ASTM-D2504	SAMP	R42335	8/9/2011 2:50:00 PM	Robert Lynch		
1107640-033b	ASTM-D2504	SAMP	R42335	8/9/2011 3:10:00 PM	Robert Lynch		
1107640-034b	ASTM-D2504	SAMP	R42335	8/9/2011 3:30:00 PM	Robert Lynch		
1107640-034bdup	ASTM-D2504	DUP	R42335	8/9/2011 3:50:00 PM	Robert Lynch		
ccv std 1-2 b	ASTM-D2504	CCV	R42335	8/9/2011 4:13:00 PM	Robert Lynch		
1107640-035b	ASTM-D2504	SAMP	R42335	8/9/2011 4:37:00 PM	Robert Lynch		
1107640-037b	ASTM-D2504	SAMP	R42335	8/9/2011 5:24:00 PM	Robert Lynch		
1107640-036b	ASTM-D2504	SAMP	R42335	8/9/2011 5:49:00 PM	Robert Lynch		
1107640-038b	ASTM-D2504	SAMP	R42335	8/9/2011 6:28:00 PM	Robert Lynch		
1107640-039b	ASTM-D2504	SAMP	R42335	8/9/2011 6:47:00 PM	Robert Lynch		
1107640-035b	ASTM-D2504	SAMP	R42335	8/9/2011 7:11:00 PM	Robert Lynch	H	
ccv std 1-2 c	ASTM-D2504	CCV	R42335	8/9/2011 7:35:00 PM	Robert Lynch		
crql std 2% c	ASTM-D2504	CRQL	R42335	8/9/2011 8:18:00 PM	Robert Lynch		

RTI Laboratories

ANALYTICAL RUN Summary

20-Oct-11

RunNo 42335

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
819174	mblk	ASTM-D2504	MBLK	.TA\080911\0809	8/9/2011 9:51:00	1	R42335		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
819175	ccv std 1-2 a	ASTM-D2504	CCV	.TA\080911\0809	8/9/2011 10:17:0	1	R42335		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	2.139	2.139		2.5	0	0	0.025	0.1	0	86%	85	115	0%	
Carbon Monoxide	A	%	2.128	2.128		2.5	0	0	0.025	0.1	0	85%	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	%	1.799	1.799		2	0	0	0.025	0.5	0	90%	85	115	0%	
Nitrogen	A	%	2.525	2.525		2.5	0	0	0.025	0.1	0	101%	85	115	0%	
Oxygen	A	%	2.273	2.273		2.5	0	0	0.025	0.1	0	91%	85	115	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
819176	lcs	ASTM-D2504	LCS	.TA\080911\0809	8/9/2011 10:42:0	1	R42335		0	819175	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	2.239	2.239		2.5	0	2.139	0.025	0.1	0	90%	70	130	5%	
Carbon Monoxide	A	%	2.239	2.239		2.5	0	2.128	0.025	0.1	0	90%	70	130	5%	
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	%	1.828	1.828		2	0	1.799	0.025	0.5	0	91%	70	130	2%	
Nitrogen	A	%	2.631	2.631		2.5	0	2.525	0.025	0.1	0	105%	70	130	4%	
Oxygen	A	%	2.376	2.376		2.5	0	2.273	0.025	0.1	0	95%	70	130	4%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
819187	1107640-034b (Container-01 of 01)	ASTM-D2504	SAMP	.TA\080911\0809	8/9/2011 3:30:00	1	R42335		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Nitrogen	A	%	78.189	78.189		0	0	0	0.025	0.1	0	0%	0	0	0%	
Oxygen	A	%	19.712	19.712		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
819188	1107640-034bdup	ASTM-D2504	DUP	.TA\080911\0809	8/9/2011 3:50:00	1	R42335		0	819187	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	0.259	0.259		0	0	0.248	0.025	0.1	0	0%	0	0	4%	
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	%	78.009	78.009		0	0	78.189	0.025	0.1	0	0%	0	0	0%	
Oxygen	A	%	19.655	19.655		0	0	19.712	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
819189	ccv std 1-2 b	ASTM-D2504	CCV	.TA\080911\0809	8/9/2011 4:13:00	1	R42335		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	2.138	2.138		2.5	0	0	0.025	0.1	0	86%	85	115	0%	
Carbon Monoxide	A	%	2.144	2.144		2.5	0	0	0.025	0.1	0	86%	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	%	1.737	1.737		2	0	0	0.025	0.5	0	87%	85	115	0%	
Nitrogen	A	%	2.535	2.535		2.5	0	0	0.025	0.1	0	101%	85	115	0%	
Oxygen	A	%	2.256	2.256		2.5	0	0	0.025	0.1	0	90%	85	115	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
819195	1107640-035b (Container-01 of 01)	ASTM-D2504	SAMP	.TA\080911\0809	8/9/2011 7:11:00	1	R42335		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	0.147	0.147		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	%	78.05	78.05		0	0	0	0.025	0.1	0	0%	0	0	0%	
Oxygen	A	%	20.124	20.124		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
819196	ccv std 1-2 c	ASTM-D2504	CCV	.TA\080911\0809	8/9/2011 7:35:00	1	R42335		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	2.268	2.268		2.5	0	0	0.025	0.1	0	91%	85	115	0%	
Carbon Monoxide	A	%	2.297	2.297		2.5	0	0	0.025	0.1	0	92%	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	%	1.873	1.873		2	0	0	0.025	0.5	0	94%	85	115	0%	
Nitrogen	A	%	2.756	2.756		2.5	0	0	0.025	0.1	0	110%	85	115	0%	
Oxygen	A	%	2.479	2.479		2.5	0	0	0.025	0.1	0	99%	85	115	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
819197	crql std 2% c	ASTM-D2504	CRQL	.TA\080911\0809	8/9/2011 8:18:00	1	R42335		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	%	0.143	0.143		0.14	0	0	0.025	0.1	0	102%	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	%	0.102	0.102		0.09	0	0	0.025	0.5	0	113%	80	120	0%	
Nitrogen	A	%	1.327	1.327		1.39	0	0	0.025	0.1	0	95%	80	120	0%	
Oxygen	A	%	0.08	0.08		0.08	0	0	0.025	0.1	0	100%	80	120	0%	

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\2\DATA\080911\08091102.D Vial: 1
Acq On : 9 Aug 2011 10:17 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	2.273	9.1	0	0.02
2	Nitrogen	2.500	2.525	-1.0	0	0.00
3	Carbon Monoxide	2.500	2.128	14.9	0	-0.03
4	Methane	2.000	1.799	10.1	0	-0.05
5	Carbon dioxide	2.500	2.139	14.4	0	-0.08

Evaluate Continuing Calibration Report - Not Founds

Data File : C:\HPCHEM\2\DATA\080911\08091102.D Vial: 1
Acq On : 9 Aug 2011 10:17 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 11:55:51 2011 TESTCAL

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080911\08091102.D Vial: 1
Acq On : 9 Aug 2011 10:17 am Operator:
Sample : ccv std 1-2 a Inst : GC/TCD
Misc : CCV ASTM-D2504 Multiplr: 1.00
IntFile : events.e
Quant Time: Aug 17 18:29 2011 Quant Results File: 030511.RES

Quant Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
Last Update : Wed Aug 17 19:07:55 2011
Response via : Initial Calibration
DataAcq Meth : TCD.M

Volume Inj. :
Signal Phase :
Signal Info :

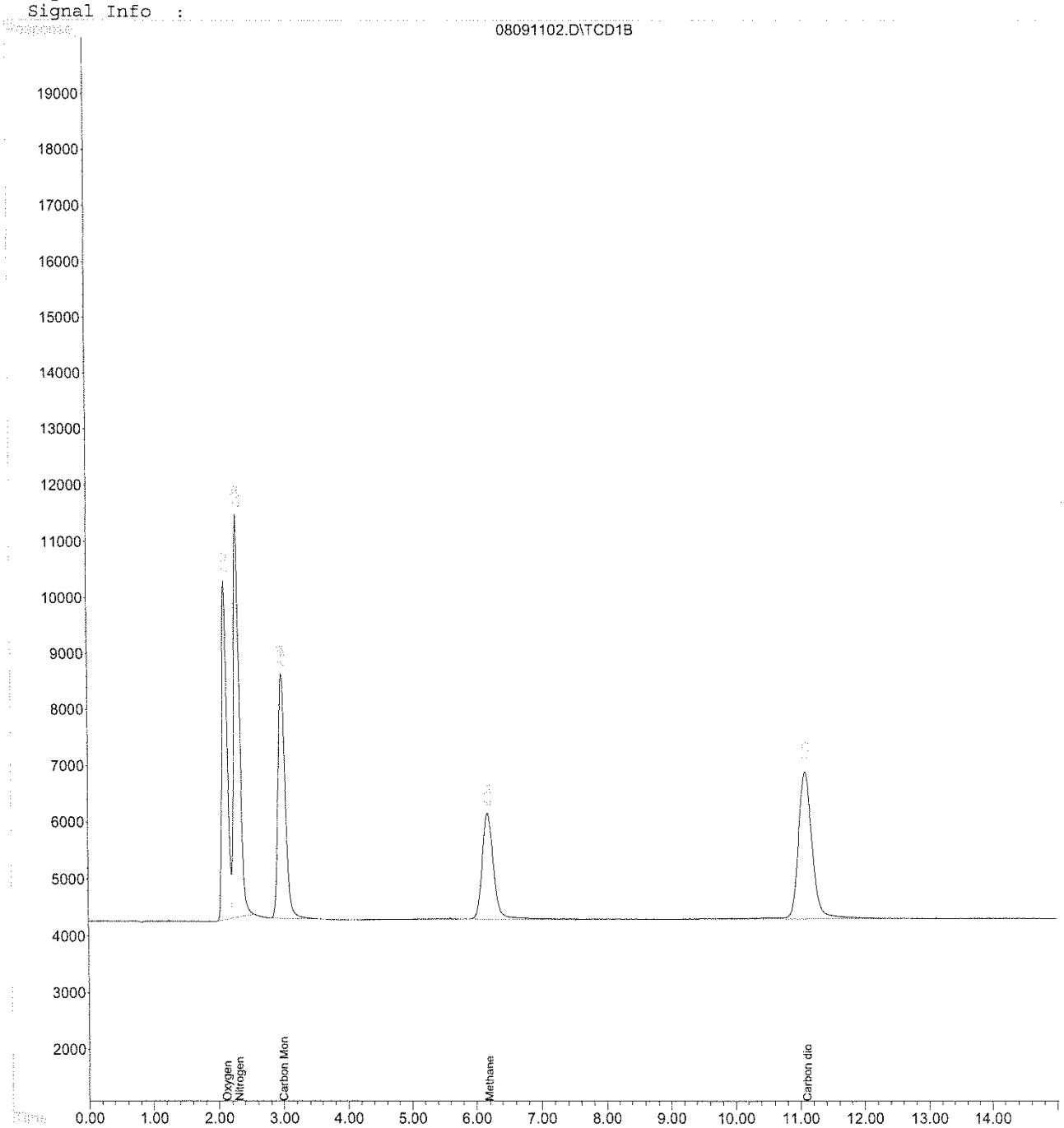
	Compound	R.T.	Response	Conc Units
	Target Compounds			
1)	Oxygen	2.12	325479	2.273 %
2)	Nitrogen	2.31	434936	2.525 %
3)	Carbon Monoxide	2.99	335171	2.128 %
4)	Methane	6.19f	229824	1.799 %
5)	Carbon dioxide	11.09f	385791	2.139 %

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080911\08091102.D Vial: 1
Acq On : 9 Aug 2011 10:17 am Operator:
Sample : ccv std 1-2 a Inst : GC/TCD
Misc : CCV ASTM-D2504 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 17 18:29 2011 Quant Results File: 030511.RES

Quant Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
Last Update : Wed Aug 17 19:07:55 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\080911\08091116.D Vial: 1
Acq On : 9 Aug 2011 4:13 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	2.256	9.8	0	0.00
2	Nitrogen	2.500	2.535	-1.4	0	-0.02
3	Carbon Monoxide	2.500	2.144	14.2	0	-0.06
4	Methane	2.000	1.737	13.1	0	-0.09
5	Carbon dioxide	2.500	2.138	14.5	0	-0.12

Evaluate Continuing Calibration Report - Not Founds

Data File : C:\HPCHEM\2\DATA\080911\08091116.D Vial: 1
Acq On : 9 Aug 2011 4:13 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 11:56:06 2011 TESTCAL

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080911\08091116.D Vial: 1
Acq On : 9 Aug 2011 4:13 pm Operator:
Sample : ccv std 1-2 b Inst : GC/TCD
Misc : CCV ASTM-D2504 Multiplr: 1.00
IntFile : events.e
Quant Time: Aug 17 18:32 2011 Quant Results File: 030511.RES

Quant Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
Last Update : Wed Aug 17 19:07:55 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	2.10	323140	2.256 %
2)	Nitrogen	2.28	436641	2.535 %
3)	Carbon Monoxide	2.96f	337632	2.144 %
4)	Methane	6.16f	221277	1.737 %
5)	Carbon dioxide	11.05f	385595	2.138 %

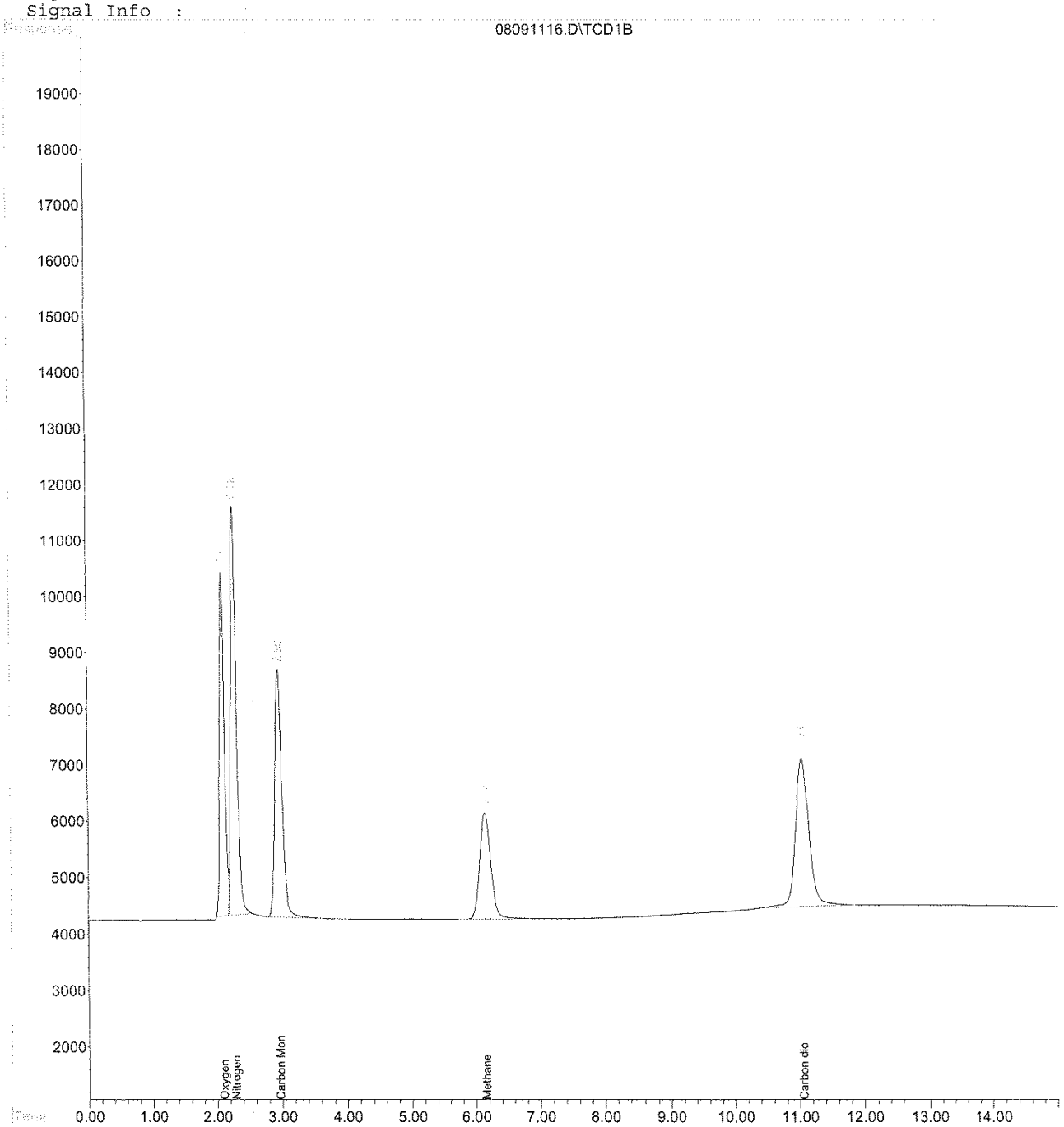
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080911\08091116.D Vial: 1
Acq On : 9 Aug 2011 4:13 pm Operator:
Sample : ccv std 1-2 b Inst : GC/TCD
Misc : CCV ASTM-D2504 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 17 18:32 2011 Quant Results File: 030511.RES

Quant Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
Last Update : Wed Aug 17 19:07:55 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\080911\08091124.D Vial: 1
Acq On : 9 Aug 2011 7:35 pm Operator:
Sample : ccv std 1-2 c 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	2.479	0.8	0	0.02
2	Nitrogen	2.500	2.756	-10.2	0	0.00
3	Carbon Monoxide	2.500	2.297	8.1	0	-0.03
4	Methane	2.000	1.873	6.3	0	-0.05
5	Carbon dioxide	2.500	2.268	9.3	0	-0.09

Evaluate Continuing Calibration Report - Not Founds

Data File : C:\HPCHEM\2\DATA\080911\08091124.D Vial: 1
Acq On : 9 Aug 2011 7:35 pm Operator:
Sample : ccv std 1-2 c 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 11:56:21 2011 TESTCAL

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080911\08091124.D Vial: 1
Acq On : 9 Aug 2011 7:35 pm Operator:
Sample : ccv std 1-2 c Inst : GC/TCD
Misc : CCV ASTM-D2504 Multiplr: 1.00
IntFile : events.e
Quant Time: Aug 17 18:32 2011 Quant Results File: 030511.RES

Quant Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
Last Update : Wed Aug 17 19:07:55 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	355261	2.479 %
2)	Nitrogen	2.31	474810	2.756 %
3)	Carbon Monoxide	2.99	361764	2.297 %
4)	Methane	6.19f	240102	1.873 %
5)	Carbon dioxide	11.09f	409752	2.268 %

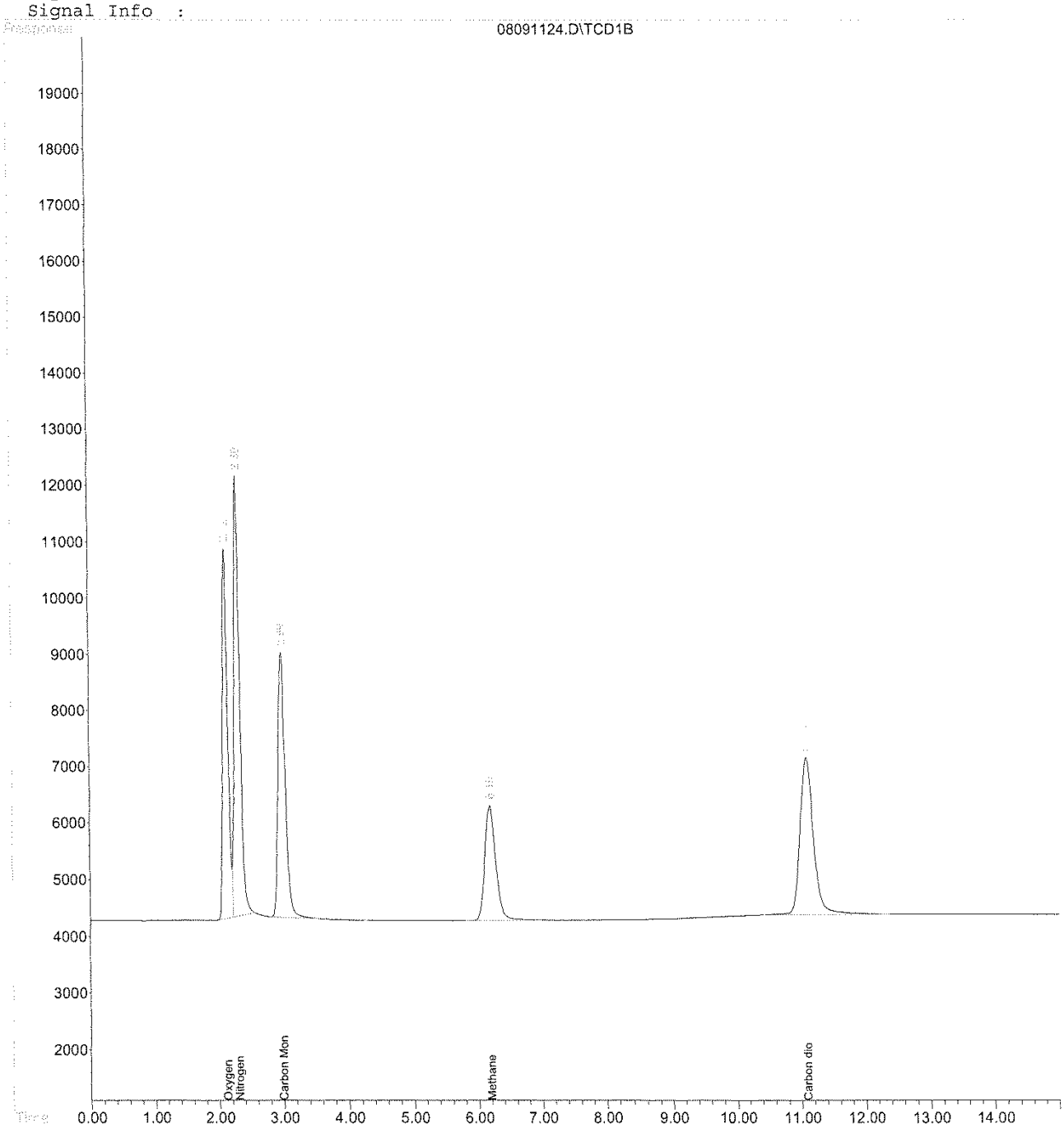
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\080911\08091124.D Vial: 1
Acq On : 9 Aug 2011 7:35 pm Operator:
Sample : ccv std 1-2 c Inst : GC/TCD
Misc : CCV ASTM-D2504 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 17 18:32 2011 Quant Results File: 030511.RES

Quant Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
Last Update : Wed Aug 17 19:07:55 2011
Response via : Multiple Level Calibration
DataAcq Meth : TCD.M

Volume Inj. :
Signal Phase :
Signal Info :



RTI Laboratories

Run ID: GC-TCD 1_110810A **Run No.:** 42336

Analytical Run Date: 8/10/2011 **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	R42336	8/10/2011 10:43:00 AM	Robert Lynch		
ccv std 1-2 a	ASTM-D2504	CCV	R42336	8/10/2011 12:11:00 PM	Robert Lynch		
lcs	ASTM-D2504	LCS	R42336	8/10/2011 12:36:00 PM	Robert Lynch		
crql std 2% a	ASTM-D2504	CRQL	R42336	8/10/2011 1:04:00 PM	Robert Lynch		
1107640-040b	ASTM-D2504	SAMP	R42336	8/10/2011 1:28:00 PM	Robert Lynch		
1107640-041b	ASTM-D2504	SAMP	R42336	8/10/2011 1:52:00 PM	Robert Lynch		
1107640-042b	ASTM-D2504	SAMP	R42336	8/10/2011 2:14:00 PM	Robert Lynch		
1107640-043b	ASTM-D2504	SAMP	R42336	8/10/2011 2:38:00 PM	Robert Lynch		
1107640-044b	ASTM-D2504	SAMP	R42336	8/10/2011 3:00:00 PM	Robert Lynch		
1107640-045b	ASTM-D2504	SAMP	R42336	8/10/2011 3:29:00 PM	Robert Lynch		
1107640-046b	ASTM-D2504	SAMP	R42336	8/10/2011 4:06:00 PM	Robert Lynch		
1107640-047b	ASTM-D2504	SAMP	R42336	8/10/2011 4:30:00 PM	Robert Lynch		
1107640-048b	ASTM-D2504	SAMP	R42336	8/10/2011 5:03:00 PM	Robert Lynch		
1107640-049b	ASTM-D2504	SAMP	R42336	8/10/2011 5:26:00 PM	Robert Lynch		
1107640-049bdup	ASTM-D2504	DUP	R42336	8/10/2011 5:51:00 PM	Robert Lynch		
ccv std 1-2 b	ASTM-D2504	CCV	R42336	8/10/2011 7:03:00 PM	Robert Lynch		
crql std 2% b	ASTM-D2504	CRQL	R42336	8/10/2011 7:55:00 PM	Robert Lynch		

RTI Laboratories

ANALYTICAL RUN Summary

20-Oct-11

RunNo 42336

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
819199	mblk	ASTM-D2504	MBLK	.TA\081011\0810	8/10/2011 10:43:	1	R42336		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
819200	ccv std 1-2 a	ASTM-D2504	CCV	.TA\081011\0810	8/10/2011 12:11:	1	R42336		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	2.265	2.265		2.5	0	0	0.025	0.1	0	91%	85	115	0%	
Carbon Monoxide	A	%	2.455	2.455		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	%	1.997	1.997		2	0	0	0.025	0.5	0	100%	85	115	0%	
Nitrogen	A	%	2.392	2.392		2.5	0	0	0.025	0.1	0	96%	85	115	0%	
Oxygen	A	%	2.258	2.258		2.5	0	0	0.025	0.1	0	90%	85	115	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
819201	lcs	ASTM-D2504	LCS	.TA\081011\0810	8/10/2011 12:36:	1	R42336		0	819200	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	2.2	2.2		2.5	0	2.265	0.025	0.1	0	88%	70	130	3%	
Carbon Monoxide	A	%	2.411	2.411		2.5	0	2.455	0.025	0.1	0	96%	70	130	2%	
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	%	1.951	1.951		2	0	1.997	0.025	0.5	0	98%	70	130	2%	
Nitrogen	A	%	2.388	2.388		2.5	0	2.392	0.025	0.1	0	96%	70	130	0%	
Oxygen	A	%	2.225	2.225		2.5	0	2.258	0.025	0.1	0	89%	70	130	1%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
819212	1107640-049b (Container-01 of 01)	ASTM-D2504	SAMP	.TA\081011\0810	8/10/2011 5:26:0	1	R42336		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Nitrogen	A	%	78.194	78.194		0	0	0	0.025	0.1	0	0%	0	0	0%	
Oxygen	A	%	21.354	21.354		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
819213	1107640-049bdup	ASTM-D2504	DUP	.TA\081011\0810	8/10/2011 5:51:0	1	R42336		0	819212	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	0.128	0.128		0	0	0.12	0.025	0.1	0	0%	0	0	6%	
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	%	78.217	78.217		0	0	78.194	0.025	0.1	0	0%	0	0	0%	
Oxygen	A	%	21.356	21.356		0	0	21.354	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
819214	ccv std 1-2 b	ASTM-D2504	CCV	.TA\081011\0810	8/10/2011 7:03:0	1	R42336		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	2.702	2.702		2.5	0	0	0.025	0.1	0	108%	85	115	0%	
Carbon Monoxide	A	%	2.485	2.485		2.5	0	0	0.025	0.1	0	99%	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	%	2.016	2.016		2	0	0	0.025	0.5	0	101%	85	115	0%	
Nitrogen	A	%	2.615	2.615		2.5	0	0	0.025	0.1	0	105%	85	115	0%	
Oxygen	A	%	2.212	2.212		2.5	0	0	0.025	0.1	0	88%	85	115	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
819215	crql std 2% b	ASTM-D2504	CRQL	.TA\081011\0810	8/10/2011 7:55:0	1	R42336		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\081011\08101102.D Vial: 1
Acq On : 10 Aug 2011 12:11 pm 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	2.258	9.7	0	0.03
2	Nitrogen	2.500	2.392	4.3	0	0.01
3	Carbon Monoxide	2.500	2.455	1.8	0	-0.03
4	Methane	2.000	1.997	0.1	0	-0.04
5	Carbon dioxide	2.500	2.265	9.4	0	-0.07

Evaluate Continuing Calibration Report - Not Founds

Data File : C:\HPCHEM\2\DATA\081011\08101102.D Vial: 1
Acq On : 10 Aug 2011 12:11 pm 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 11:58:48 2011 TESTCAL

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\081011\08101102.D Vial: 1
Acq On : 10 Aug 2011 12:11 pm Operator:
Sample : ccv std 1-2 a Inst : GC/TCD
Misc : CCV ASTM-D2504 Multiplr: 1.00
IntFile : events.e
Quant Time: Aug 17 18:45 2011 Quant Results File: 030511.RES

Quant Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
Last Update : Wed Aug 17 19:07:55 2011
Response via : Initial Calibration
DataAcq Meth : TCD.M

Volume Inj. :
Signal Phase :
Signal Info :

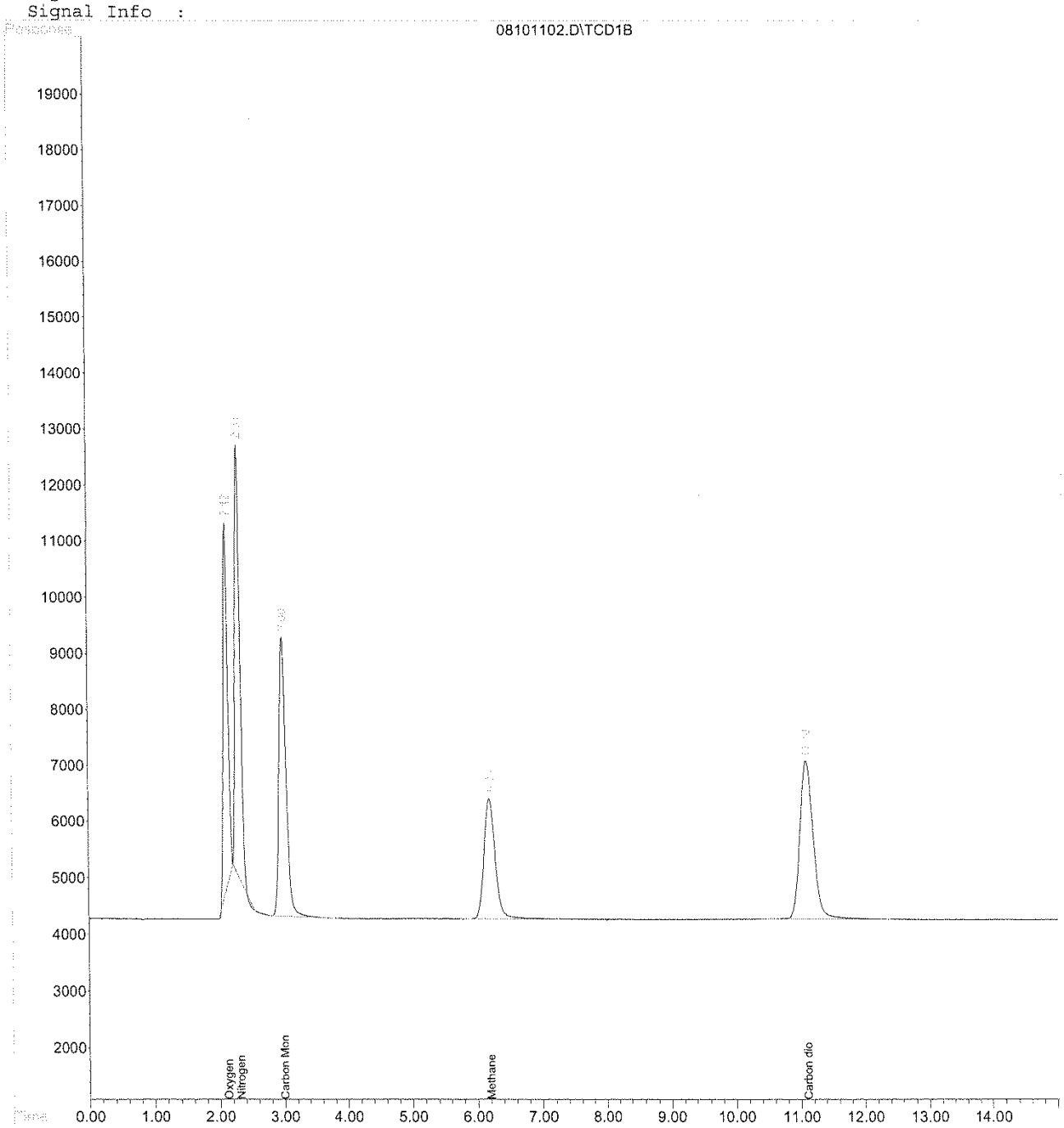
	Compound	R.T.	Response	Conc Units
	Target Compounds			
1)	Oxygen	2.13	323305	2.258 %
2)	Nitrogen	2.31	412150	2.392 %
3)	Carbon Monoxide	3.00	386679	2.455 %
4)	Methane	6.21	257203	1.997 %
5)	Carbon dioxide	11.11	409170	2.265 %

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\081011\08101102.D Vial: 1
Acq On : 10 Aug 2011 12:11 pm Operator:
Sample : ccv std 1-2 a Inst : GC/TCD
Misc : CCV ASTM-D2504 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 17 18:45 2011 Quant Results File: 030511.RES

Quant Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
Last Update : Wed Aug 17 19:07:55 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\081011\08101116.D          Vial: 1
Acq On    : 10 Aug 2011   7:03 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	2.212	11.5	0	0.03
2	Nitrogen	2.500	2.615	-4.6	0	0.02
3	Carbon Monoxide	2.500	2.485	0.6	0	-0.02
4	Methane	2.000	2.016	-0.8	0	-0.03
5	Carbon dioxide	2.500	2.702	-8.1	0	-0.07

Evaluate Continuing Calibration Report - Not Founds

```
Data File : C:\HPCHEM\2\DATA\081011\08101116.D          Vial: 1
Acq On    : 10 Aug 2011   7:03 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 11:59:01 2011 TESTCAL

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\081011\08101116.D Vial: 1
Acq On : 10 Aug 2011 7:03 pm Operator:
Sample : ccv std 1-2 b Inst : GC/TCD
Misc : CCV ASTM-D2504 Multiplr: 1.00
IntFile : events.e
Quant Time: Aug 17 18:46 2011 Quant Results File: 030511.RES

Quant Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
Last Update : Wed Aug 17 19:07:55 2011
Response via : Initial Calibration
DataAcq Meth : TCD.M

Volume Inj. :
Signal Phase :
Signal Info :

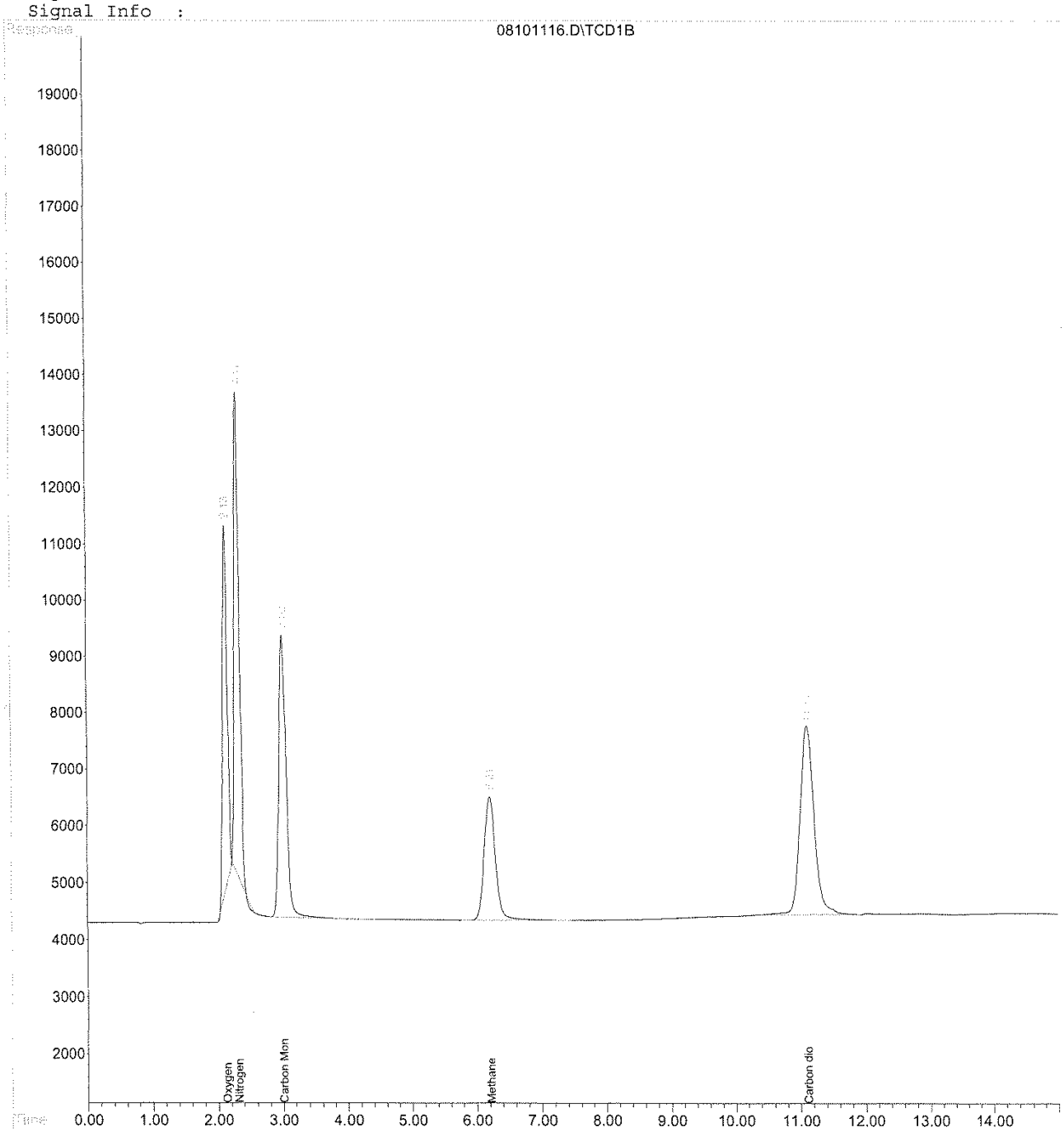
	Compound	R.T.	Response	Conc Units
	Target Compounds			
1)	Oxygen	2.13	316679	2.212 %
2)	Nitrogen	2.32	450481	2.615 %
3)	Carbon Monoxide	3.01	391370	2.485 %
4)	Methane	6.21	259923	2.016 %
5)	Carbon dioxide	11.11	490859	2.702 %

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\081011\08101116.D Vial: 1
Acq On : 10 Aug 2011 7:03 pm Operator:
Sample : ccv std 1-2 b Inst : GC/TCD
Misc : CCV ASTM-D2504 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 17 18:46 2011 Quant Results File: 030511.RES

Quant Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
Last Update : Wed Aug 17 19:07:55 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