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: 1107364

CASE NARRATIVE

SAMPLE RECEIPT:
Samples were received at the RTI Laboratory, Livonia, MI via commercial delivery on 7/14/2011. Samples were received in good condition. The sample set consisted of 25 air samples.

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

QUALITY CONTROL:

Volatile Organic Compounds Analyses:

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

Surrogate recoveries were within established control limits.

Analytical Sequence ID 42025:
- Sample ID 1105678-024ADUP elevated RPD result for Acetone (25.3%),

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 limit except as noted below:

Sample ID	4-Bromofluorobenzene
1107364-015	134%

Analytical Sequence 42128:
- Sample ID 1107364-003ADUP elevated RPD result for C9-C10 Aromatic Hydrocarbons (200%).

RTI Laboratories, Inc.

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CASE NARRATIVE

Fixed Gases (Noncondensable Gases/Light Hydrocarbons) Analyses:

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

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

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

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

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

Date: 10/20/2011

1107364

Shaw
Shaw E & I, Inc.

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

Reference Document No: 140705-SV014

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

Samples Shipment Date: 08 JUL 2011
Lab Destination: RTI Laboratories
Lab Contact: Mike Truchan
Project Contact: Pamela Moss
Carrier/Waybill No.: UPS/2323121043

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

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

Special Instructions:

Possible Hazard Indentification:
Non-hazard ☐ Flammable ☒ Skin Irritant ☐ Poison B ☐ Radiological ☐ Unknown ☐

Sample Disposal:
Return to Client ☐ Disposal by Lab ☒ Archive ☐ (mos.)

1. Relinquished By (Signature/Affiliation) [signature] Date: 7/8/11 Time: 1600
2. Relinquished By (Signature/Affiliation) Date: Time:
3. Relinquished By (Signature/Affiliation) Date: Time:

1. Received By (Signature/Affiliation) Christa Camacho Date: 7/14/11 Time: 10:15 AM
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	Filt	CID	Condition On Receipt
1	VA0455	KAFB-106106025-GS-VA0455-REG	06 JUL 2011	14:22	3 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		22
	VA0455	KAFB-106106025-GS-VA0455-REG	06 JUL 2011	14:22	1 L Tedlar Bag	1	None Required	Fixed Gases by ASTM D2504			N		
2	VA0456	KAFB-106106016-GS-VA0456-REG	06 JUL 2011	14:45	1 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		9
	VA0456	KAFB-106106016-GS-VA0456-REG	06 JUL 2011	14:45	1 L Tedlar Bag	1	None Required	Fixed Gases by ASTM D2504			N		
3	VA0457	KAFB-106106050-GS-VA0457-FD	06 JUL 2011	14:45	1 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		119
	VA0457	KAFB-106106050-GS-VA0457-FD	06 JUL 2011	14:45	1 L Tedlar Bag	1	None Required	Fixed Gases by ASTM D2504			N		
4	VA0458	KAFB-106106010-GS-VA0458-REG	06 JUL 2011	15:32	1 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by			N		18

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Shaw E & I, Inc.

1107364

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

Reference Document No: 140705-SV014

	Sample No	Sample Name	Sample Date	Sample Time	Container		Preservative	Requested Testing Program	Sample Vol	Units	Fil	CID	Condition On Receipt
								MA DEP, VOCs / TPH by TO-15					
	VA0458	KAFB 106108 150 GS VA0458 REG	06 JUL 2011	15:32	1 L Tedlar Bag	1	None Required	Fixed Gases by ASTM D2504			N		
	VA0459	KAFB 106108 250 GS VA0459 REG	08 JUL 2011	8:18	1 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		120
5	VA0459	KAFB 106108 250 GS VA0459 REG	08 JUL 2011	8:18	1 L Tedlar Bag	1	None Required	Fixed Gases by ASTM D2504			N		
	VA0460	KAFB 106108 350 GS VA0460 REG	08 JUL 2011	8:56	1 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		16
6	VA0460	KAFB 106108 350 GS VA0460 REG	08 JUL 2011	8:56	1 L Tedlar Bag	1	None Required	Fixed Gases by ASTM D2504			N		
	VA0461	KAFB 106108 450 GS VA0461 REG	08 JUL 2011	9:34	1 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		41
7	VA0461	KAFB 106108 450 GS VA0461 REG	08 JUL 2011	9:34	1 L Tedlar Bag	1	None Required	Fixed Gases by ASTM D2504			N		
	VA0462	KAFB 106109 025 GS VA0462 REG	08 JUL 2011	10:58	1 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		672
8	VA0462	KAFB 106109 025 GS VA0462 REG	08 JUL 2011	10:58	1 L Tedlar Bag	1	None Required	Fixed Gases by ASTM D2504			N		
	VA0463	KAFB 106109 050 GS VA0463 REG	08 JUL 2011	11:24	1 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		702
9	VA0463	KAFB 106109 050 GS VA0463 REG	08 JUL 2011	11:24	1 L Tedlar Bag	1	None Required	Fixed Gases by ASTM D2504			N		
	VA0464	KAFB 106109 050 GS VA0464 FD	08 JUL 2011	11:24	1 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		7
10	VA0464	KAFB 106109 050 GS VA0464 FD	08 JUL 2011	11:24	1 L Tedlar Bag	1	None Required	Fixed Gases by ASTM D2504			N		
	VA0465	KAFB 106109 150 GS VA0465 REG	08 JUL 2011	13:30	1 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		14
11	VA0465	KAFB 106109 150 GS VA0465 REG	08 JUL 2011	13:30	1 L Tedlar Bag	1	None Required	Fixed Gases by ASTM D2504			N		
	VA0466	KAFB 106109 250 GS VA0466 REG	08 JUL 2011	14:08	1 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		820
12	VA0466	KAFB 106109 250 GS VA0466 REG	08 JUL 2011	14:08	1 L Tedlar Bag	1	None Required	Fixed Gases by ASTM D2504			N		
	VA0467	KAFB 106109 350 GS VA0467 REG	08 JUL 2011	14:50	1 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		121
13	VA0467	KAFB 106109 350 GS VA0467 REG	08 JUL 2011	14:50	1 L Tedlar Bag	1	None Required	Fixed Gases by ASTM D2504			N		
	VA0468	KAFB 106109 450 GS VA0468 REG	08 JUL 2011	15:37	1 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		10
14	VA0468	KAFB 106109 450 GS VA0468 REG	08 JUL 2011	15:37	1 L Tedlar Bag	1	None Required	Fixed Gases by ASTM D2504			N		
	VA0537	KAFB 106120 025 GS VA0537 REG	06 JUL 2011	09:01	1 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		30
15	VA0537	KAFB 106120 025 GS VA0537 REG	06 JUL 2011	09:01	1 L Tedlar Bag	1	None Required	Fixed Gases by ASTM D2504			N		
	VA0538	KAFB 106120 050 GS VA0538 REG	06 JUL 2011	09:31	1 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		8
16	VA0538	KAFB 106120 050 GS VA0538 REG	06 JUL 2011	09:31	1 L Tedlar Bag	1	None Required	Fixed Gases by ASTM D2504			N		
	VA0539	KAFB 106120 150 GS VA0539 REG	06 JUL 2011	09:58	1 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		17
17	VA0539	KAFB 106120 150 GS VA0539 REG	06 JUL 2011	09:58	1 L Tedlar Bag	1	None Required	Fixed Gases by ASTM D2504			N		

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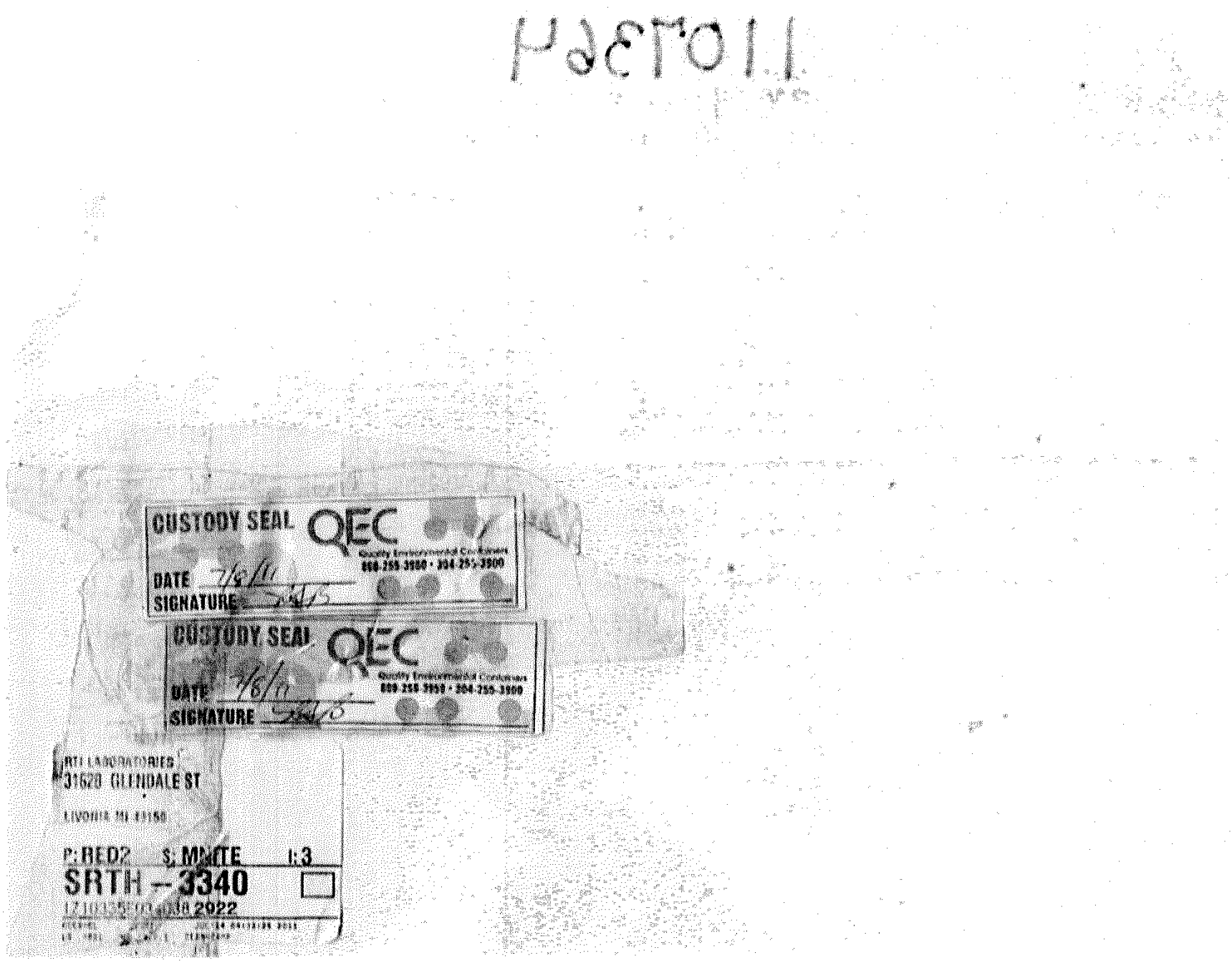
Shaw E & I, Inc.

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

Reference Document No: 140705-SV014

	Sample No.	Sample Name	Sample Date	Sample Time	Container		Preservative	Requested Testing Program	Sample Vol	Units	Filt	CID	Condition On Receipt
	VA0540	KAFB 106120-250-GS VA0540 REG	06 JUL 2011	10:23	1 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		21
18	VA0540	KAFB 106120-250-GS VA0540 REG	06 JUL 2011	10:23	1 L Tedlar Bag	1	None Required	Fixed Gases by ASTM D2504			N		
	VA0541	KAFB 106120-350-GS VA0541 REG	06 JUL 2011	10:56	1 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		32
19	VA0541	KAFB 106120-350-GS VA0541 REG	06 JUL 2011	10:56	1 L Tedlar Bag	1	None Required	Fixed Gases by ASTM D2504			N		
	VA0542	KAFB 106120-450-GS VA0542 REG	06 JUL 2011	12:36	1 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		35
20	VA0542	KAFB 106120-450-GS VA0542 REG	06 JUL 2011	12:36	1 L Tedlar Bag	1	None Required	Fixed Gases by ASTM D2504			N		
	VA0543	KAFB 106121-005-GS VA0543 REG	08 JUL 2011	8:52	1 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		100
21	VA0543	KAFB 106121-005-GS VA0543 REG	08 JUL 2011	8:52	1 L Tedlar Bag	1	None Required	Fixed Gases by ASTM D2504			N		
	VA0544	KAFB 106121-050-GS VA0544 REG	08 JUL 2011	9:22	1 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		639
22	~~VA0544~~	~~KAFB 106121-050-GS VA0544 REG~~	~~08 JUL 2011~~	~~9:22~~	~~1 L Tedlar Bag~~	~~1~~	~~None Required~~	~~Fixed Gases by ASTM D2504~~			N		
	VA0545	KAFB 106121-150-GS VA0545 REG	08 JUL 2011	9:53	1 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		546
23	VA0545	KAFB 106121-150-GS VA0545 REG	08 JUL 2011	9:53	1 L Tedlar Bag	1	None Required	Fixed Gases by ASTM D2504			N		
	VA0546	KAFB 106121-250-GS VA0546 REG	08 JUL 2011	10:18	1 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		836
24	VA0546	KAFB 106121-250-GS VA0546 REG	08 JUL 2011	10:18	1 L Tedlar Bag	1	None Required	* Fixed Gases by ASTM D2504			N		
25	VA0021-TB	FIELD QC AG VA0021-TB-TB	08 JUL 2011	08:00	1 L BOTTLEVAC	1	None Required	VOCs / TPH by TO-15			N		836


CUSTODY SEAL
QEC
DATE 7/6/11
SIGNATURE
CUSTODY SEAL
QEC
DATE 7/6/11
SIGNATURE
RTI LABORATORIES
31620 GLENDALE ST
P:RED2
S:MNTE
I:3
SRTH - 3340
2922

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: **7/14/2011 10:15:00 AM**

Work Order Number **1107364** RcptNo: **1**

Received by: **Christine Conradis**

Completed by:

Reviewed by:

Completed Date: 7/14/2011 12:45:52 PM

Reviewed Date: 7/15/2011 9:41:47 AM

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:	1Z10335EO340382922			
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
1107364-001A	Container-01 of 01	Bottle				
1107364-001B	Container-01 of 01	Bottle				
1107364-002A	Container-01 of 01	Bottle				
1107364-002B	Container-01 of 01	Bottle				
1107364-003A	Container-01 of 01	Bottle				
1107364-003B	Container-01 of 01	Bottle				
1107364-004A	Container-01 of 01	Bottle				
1107364-004B	Container-01 of 01	Bottle				
1107364-005A	Container-01 of 01	Bottle				
1107364-005B	Container-01 of 01	Bottle				
1107364-006A	Container-01 of 01	Bottle				
1107364-006B	Container-01 of 01	Bottle				
1107364-007A	Container-01 of 01	Bottle				
1107364-007B	Container-01 of 01	Bottle				
1107364-008A	Container-01 of 01	Bottle				
1107364-008B	Container-01 of 01	Bottle				
1107364-009A	Container-01 of 01	Bottle				
1107364-009B	Container-01 of 01	Bottle				
1107364-010A	Container-01 of 01	Bottle				
1107364-010B	Container-01 of 01	Bottle				
1107364-011A	Container-01 of 01	Bottle				
1107364-011B	Container-01 of 01	Bottle				
1107364-012A	Container-01 of 01	Bottle				
1107364-012B	Container-01 of 01	Bottle				
1107364-013A	Container-01 of 01	Bottle				
1107364-013B	Container-01 of 01	Bottle				
1107364-014A	Container-01 of 01	Bottle				
1107364-014B	Container-01 of 01	Bottle				
1107364-015A	Container-01 of 01	Bottle				
1107364-015B	Container-01 of 01	Bottle				
1107364-016A	Container-01 of 01	Bottle				
1107364-016B	Container-01 of 01	Bottle				
1107364-017A	Container-01 of 01	Bottle				
1107364-017B	Container-01 of 01	Bottle				

SampID	ContainerID	Type	Org pH	Adj pH	Req Min pH	Req Max pH
1107364-018A	Container-01 of 01	Bottle				
1107364-018B	Container-01 of 01	Bottle				
1107364-019A	Container-01 of 01	Bottle				
1107364-019B	Container-01 of 01	Bottle				
1107364-020A	Container-01 of 01	Bottle				
1107364-020B	Container-01 of 01	Bottle				
1107364-021A	Container-01 of 01	Bottle				
1107364-021B	Container-01 of 01	Bottle				
1107364-022A	Container-01 of 01	Bottle				
1107364-023A	Container-01 of 01	Bottle				
1107364-023B	Container-01 of 01	Bottle				
1107364-024A	Container-01 of 01	Bottle				
1107364-024B	Container-01 of 01	Bottle				
1107364-025A	Container-01 of 01	Bottle				

Adjusted? _____ Checked by _____

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

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

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

Client Instructions:

Date Contacted: Contacted By:

Regarding:

CorrectiveAction:

RTI LABORATORIES, INC.

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

Workorder Sample Summary

WO#: **1107364**

20-Oct-11

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

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
1107364-001	VA0455		7/6/2011 2:22:00 PM	7/14/2011 10:15:00 AM	Air
1107364-001	VA0455		7/6/2011 2:22:00 PM	7/14/2011 10:15:00 AM	Air
1107364-002	VA0456		7/6/2011 2:45:00 PM	7/14/2011 10:15:00 AM	Air
1107364-002	VA0456		7/6/2011 2:45:00 PM	7/14/2011 10:15:00 AM	Air
1107364-003	VA0457		7/6/2011 2:45:00 PM	7/14/2011 10:15:00 AM	Air
1107364-003	VA0457		7/6/2011 2:45:00 PM	7/14/2011 10:15:00 AM	Air
1107364-004	VA0458		7/6/2011 3:32:00 PM	7/14/2011 10:15:00 AM	Air
1107364-004	VA0458		7/6/2011 3:32:00 PM	7/14/2011 10:15:00 AM	Air
1107364-005	VA0459		7/8/2011 8:18:00 AM	7/14/2011 10:15:00 AM	Air
1107364-005	VA0459		7/8/2011 8:18:00 AM	7/14/2011 10:15:00 AM	Air
1107364-006	VA0460		7/8/2011 8:56:00 AM	7/14/2011 10:15:00 AM	Air
1107364-006	VA0460		7/8/2011 8:56:00 AM	7/14/2011 10:15:00 AM	Air
1107364-007	VA0461		7/8/2011 9:34:00 AM	7/14/2011 10:15:00 AM	Air
1107364-007	VA0461		7/8/2011 9:34:00 AM	7/14/2011 10:15:00 AM	Air
1107364-008	VA0462		7/8/2011 10:58:00 AM	7/14/2011 10:15:00 AM	Air
1107364-008	VA0462		7/8/2011 10:58:00 AM	7/14/2011 10:15:00 AM	Air
1107364-009	VA0463		7/8/2011 11:24:00 AM	7/14/2011 10:15:00 AM	Air
1107364-009	VA0463		7/8/2011 11:24:00 AM	7/14/2011 10:15:00 AM	Air
1107364-010	VA0464		7/8/2011 11:24:00 AM	7/14/2011 10:15:00 AM	Air
1107364-010	VA0464		7/8/2011 11:24:00 AM	7/14/2011 10:15:00 AM	Air
1107364-011	VA0465		7/8/2011 1:30:00 PM	7/14/2011 10:15:00 AM	Air
1107364-011	VA0465		7/8/2011 1:30:00 PM	7/14/2011 10:15:00 AM	Air
1107364-012	VA0466		7/8/2011 2:08:00 PM	7/14/2011 10:15:00 AM	Air
1107364-012	VA0466		7/8/2011 2:08:00 PM	7/14/2011 10:15:00 AM	Air
1107364-013	VA0467		7/8/2011 2:50:00 PM	7/14/2011 10:15:00 AM	Air
1107364-013	VA0467		7/8/2011 2:50:00 PM	7/14/2011 10:15:00 AM	Air
1107364-014	VA0468		7/8/2011 3:37:00 PM	7/14/2011 10:15:00 AM	Air
1107364-014	VA0468		7/8/2011 3:37:00 PM	7/14/2011 10:15:00 AM	Air
1107364-015	VA0537		7/6/2011 9:01:00 AM	7/14/2011 10:15:00 AM	Air
1107364-015	VA0537		7/6/2011 9:01:00 AM	7/14/2011 10:15:00 AM	Air
1107364-016	VA0538		7/6/2011 9:31:00 AM	7/14/2011 10:15:00 AM	Air
1107364-016	VA0538		7/6/2011 9:31:00 AM	7/14/2011 10:15:00 AM	Air
1107364-017	VA0539		7/6/2011 9:58:00 AM	7/14/2011 10:15:00 AM	Air
1107364-017	VA0539		7/6/2011 9:58:00 AM	7/14/2011 10:15:00 AM	Air

Original

RTI LABORATORIES, INC.

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

Workorder Sample Summary

WO#: **1107364**

20-Oct-11

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

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
1107364-018	VA0540		7/6/2011 10:23:00 AM	7/14/2011 10:15:00 AM	Air
1107364-018	VA0540		7/6/2011 10:23:00 AM	7/14/2011 10:15:00 AM	Air
1107364-019	VA0541		7/6/2011 10:56:00 AM	7/14/2011 10:15:00 AM	Air
1107364-019	VA0541		7/6/2011 10:56:00 AM	7/14/2011 10:15:00 AM	Air
1107364-020	VA0542		7/6/2011 12:36:00 PM	7/14/2011 10:15:00 AM	Air
1107364-020	VA0542		7/6/2011 12:36:00 PM	7/14/2011 10:15:00 AM	Air
1107364-021	VA0543		7/8/2011 8:52:00 AM	7/14/2011 10:15:00 AM	Air
1107364-021	VA0543		7/8/2011 8:52:00 AM	7/14/2011 10:15:00 AM	Air
1107364-022	VA0544		7/8/2011 9:22:00 AM	7/14/2011 10:15:00 AM	Air
1107364-023	VA0545		7/8/2011 9:53:00 AM	7/14/2011 10:15:00 AM	Air
1107364-023	VA0545		7/8/2011 9:53:00 AM	7/14/2011 10:15:00 AM	Air
1107364-024	VA0546		7/8/2011 10:18:00 AM	7/14/2011 10:15:00 AM	Air
1107364-024	VA0546		7/8/2011 10:18:00 AM	7/14/2011 10:15:00 AM	Air
1107364-025	VA8031-TB		7/6/2011 8:00:00 AM	7/14/2011 10:15:00 AM	Air

RTI LABORATORIES, INC.

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

DATES REPORT

WO#: **1107364**

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
1107364-001A	VA0455	7/6/2011 2:22:00 PM	Air	Air-Phase Petroleum Hydrocarbons			8/8/2011 4:22:00 PM
				Volatile Organic Compounds			8/5/2011 8:08:00 AM
1107364-001B				Noncondensable Gases and Light Hydrocarbons			7/15/2011 12:34:00 PM
1107364-002A	VA0456	7/6/2011 2:45:00 PM		Air-Phase Petroleum Hydrocarbons			8/8/2011 5:04:00 PM
				Volatile Organic Compounds			8/5/2011 1:50:00 PM
1107364-002B				Noncondensable Gases and Light Hydrocarbons			7/15/2011 12:56:00 PM
1107364-003A	VA0457			Air-Phase Petroleum Hydrocarbons			8/8/2011 5:46:00 PM
				Volatile Organic Compounds			8/5/2011 10:12:00 AM
1107364-003B				Noncondensable Gases and Light Hydrocarbons			7/15/2011 1:16:00 PM
1107364-004A	VA0458	7/6/2011 3:32:00 PM		Air-Phase Petroleum Hydrocarbons			8/9/2011 4:31:00 PM
				Volatile Organic Compounds			8/5/2011 10:58:00 AM
1107364-004B				Noncondensable Gases and Light Hydrocarbons			7/15/2011 1:36:00 PM
1107364-005A	VA0459	7/8/2011 8:18:00 AM		Air-Phase Petroleum Hydrocarbons			8/9/2011 5:16:00 PM
				Volatile Organic Compounds			8/6/2011 2:26:00 AM
1107364-005B				Noncondensable Gases and Light Hydrocarbons			7/15/2011 2:04:00 PM
1107364-006A	VA0460	7/8/2011 8:56:00 AM		Air-Phase Petroleum Hydrocarbons			8/9/2011 6:01:00 PM
				Volatile Organic Compounds			8/6/2011 4:43:00 AM
1107364-006B				Noncondensable Gases and Light Hydrocarbons			7/15/2011 2:57:00 PM
1107364-007A	VA0461	7/8/2011 9:34:00 AM		Air-Phase Petroleum Hydrocarbons			8/9/2011 6:47:00 PM
				Volatile Organic Compounds			8/6/2011 6:17:00 AM
1107364-007B				Noncondensable Gases and Light Hydrocarbons			7/15/2011 3:23:00 PM

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DATES REPORT

WO#: **1107364**

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
1107364-008A	VA0462	7/8/2011 10:58:00 AM	Air	Air-Phase Petroleum Hydrocarbons			8/10/2011 10:41:00 AM
				Volatile Organic Compounds			8/6/2011 1:54:00 PM
1107364-008B				Noncondensable Gases and Light Hydrocarbons			7/15/2011 3:42:00 PM
1107364-009A	VA0463	7/8/2011 11:24:00 AM		Air-Phase Petroleum Hydrocarbons			8/8/2011 7:10:00 PM
				Volatile Organic Compounds			8/6/2011 2:39:00 PM
1107364-009B				Noncondensable Gases and Light Hydrocarbons			7/15/2011 4:01:00 PM
1107364-010A	VA0464			Air-Phase Petroleum Hydrocarbons			8/8/2011 7:52:00 PM
				Volatile Organic Compounds			8/8/2011 1:36:00 AM
1107364-010B				Noncondensable Gases and Light Hydrocarbons			7/18/2011 12:41:00 PM
1107364-011A	VA0465	7/8/2011 1:30:00 PM		Air-Phase Petroleum Hydrocarbons			8/8/2011 8:35:00 PM
				Volatile Organic Compounds			8/8/2011 2:21:00 AM
1107364-011B				Noncondensable Gases and Light Hydrocarbons			7/18/2011 1:01:00 PM
1107364-012A	VA0466	7/8/2011 2:08:00 PM		Air-Phase Petroleum Hydrocarbons			8/8/2011 9:17:00 PM
				Volatile Organic Compounds			8/9/2011 6:26:00 PM
1107364-012B				Noncondensable Gases and Light Hydrocarbons			7/18/2011 1:22:00 PM
1107364-013A	VA0467	7/8/2011 2:50:00 PM		Air-Phase Petroleum Hydrocarbons			8/10/2011 6:56:00 PM
				Volatile Organic Compounds			8/6/2011 6:39:00 PM
1107364-013B				Noncondensable Gases and Light Hydrocarbons			7/18/2011 1:42:00 PM
1107364-014A	VA0468	7/8/2011 3:37:00 PM		Air-Phase Petroleum Hydrocarbons			8/11/2011 6:42:00 PM
				Volatile Organic Compounds			8/6/2011 7:28:00 PM
1107364-014B				Noncondensable Gases and Light Hydrocarbons			7/18/2011 2:08:00 PM

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WO#: **1107364**

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
1107364-015A	VA0537	7/6/2011 9:01:00 AM	Air	Air-Phase Petroleum Hydrocarbons			8/4/2011 12:58:00 AM
				Volatile Organic Compounds			8/1/2011 10:15:00 PM
1107364-015B				Noncondensable Gases and Light Hydrocarbons			7/18/2011 2:33:00 PM
1107364-016A	VA0538	7/6/2011 9:31:00 AM		Air-Phase Petroleum Hydrocarbons			8/4/2011 1:43:00 AM
				Volatile Organic Compounds			8/2/2011 5:53:00 AM
1107364-016B				Noncondensable Gases and Light Hydrocarbons			7/18/2011 3:04:00 PM
1107364-017A	VA0539	7/6/2011 9:58:00 AM		Air-Phase Petroleum Hydrocarbons			8/4/2011 2:28:00 AM
				Volatile Organic Compounds			8/2/2011 10:23:00 AM
1107364-017B				Noncondensable Gases and Light Hydrocarbons			7/18/2011 3:24:00 PM
1107364-018A	VA0540	7/6/2011 10:23:00 AM		Air-Phase Petroleum Hydrocarbons			8/4/2011 3:13:00 AM
				Volatile Organic Compounds			8/2/2011 11:05:00 AM
1107364-018B				Noncondensable Gases and Light Hydrocarbons			7/18/2011 3:44:00 PM
1107364-019A	VA0541	7/6/2011 10:56:00 AM		Air-Phase Petroleum Hydrocarbons			8/4/2011 3:59:00 AM
				Volatile Organic Compounds			8/2/2011 11:48:00 AM
1107364-019B				Noncondensable Gases and Light Hydrocarbons			7/18/2011 4:47:00 PM
1107364-020A	VA0542	7/6/2011 12:36:00 PM		Air-Phase Petroleum Hydrocarbons			8/4/2011 5:23:00 AM
				Volatile Organic Compounds			8/2/2011 8:56:00 AM
1107364-020B				Noncondensable Gases and Light Hydrocarbons			7/18/2011 5:09:00 PM
1107364-021A	VA0543	7/8/2011 8:52:00 AM		Air-Phase Petroleum Hydrocarbons			8/10/2011 12:03:00 AM
				Volatile Organic Compounds			8/6/2011 10:55:00 AM
1107364-021B				Noncondensable Gases and Light Hydrocarbons			7/18/2011 5:29:00 PM

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WO#: **1107364**

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
1107364-022A	VA0544	7/8/2011 9:22:00 AM	Air	Air-Phase Petroleum Hydrocarbons			8/10/2011 12:48:00 AM
				Volatile Organic Compounds			8/6/2011 11:38:00 AM
1107364-023A	VA0545	7/8/2011 9:53:00 AM		Air-Phase Petroleum Hydrocarbons			8/10/2011 1:33:00 AM
				Volatile Organic Compounds			8/6/2011 12:23:00 PM
1107364-023B				Noncondensable Gases and Light Hydrocarbons			7/18/2011 5:59:00 PM
1107364-024A	VA0546	7/8/2011 10:18:00 AM		Air-Phase Petroleum Hydrocarbons			8/10/2011 2:18:00 AM
				Volatile Organic Compounds			8/6/2011 1:09:00 PM
1107364-024B				Noncondensable Gases and Light Hydrocarbons			7/18/2011 6:23:00 PM
1107364-025A	VA8031-TB	7/6/2011 8:00:00 AM		Volatile Organic Compounds			8/1/2011 9:33:00 PM

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Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/6/2011 2:22:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107364-001 **Matrix:** AIR

Client Sample ID VA0455

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.59	0.10		%	1	7/15/2011 12:34:00 PM
Carbon Monoxide	ND	0.10		%	1	7/15/2011 12:34:00 PM
Methane	ND	0.50		%	1	7/15/2011 12:34:00 PM
Nitrogen	78	0.10		%	1	7/15/2011 12:34:00 PM
Oxygen	21	0.10		%	1	7/15/2011 12:34:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	800		ppbv	800	8/5/2011 8:08:00 AM
1,1,2,2-Tetrachloroethane	ND	800		ppbv	800	8/5/2011 8:08:00 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	800		ppbv	800	8/5/2011 8:08:00 AM
1,1,2-Trichloroethane	ND	800		ppbv	800	8/5/2011 8:08:00 AM
1,1-Dichloroethane	ND	800		ppbv	800	8/5/2011 8:08:00 AM
1,1-Dichloroethene	ND	800		ppbv	800	8/5/2011 8:08:00 AM
1,2,4-Trichlorobenzene	ND	800		ppbv	800	8/5/2011 8:08:00 AM
1,2,4-Trimethylbenzene	ND	800		ppbv	800	8/5/2011 8:08:00 AM
1,2-Dibromoethane	ND	800		ppbv	800	8/5/2011 8:08:00 AM
1,2-Dichlorobenzene	ND	800		ppbv	800	8/5/2011 8:08:00 AM
1,2-Dichloroethane	ND	800		ppbv	800	8/5/2011 8:08:00 AM
1,2-Dichloropropane	ND	800		ppbv	800	8/5/2011 8:08:00 AM
1,3,5-Trimethylbenzene	ND	800		ppbv	800	8/5/2011 8:08:00 AM
1,3-Butadiene	ND	800		ppbv	800	8/5/2011 8:08:00 AM
1,3-Dichlorobenzene	ND	800		ppbv	800	8/5/2011 8:08:00 AM
1,4-Dichlorobenzene	ND	800		ppbv	800	8/5/2011 8:08:00 AM
1,4-Dioxane	ND	800		ppbv	800	8/5/2011 8:08:00 AM
2-Butanone	ND	800		ppbv	800	8/5/2011 8:08:00 AM
2-Hexanone	ND	800		ppbv	800	8/5/2011 8:08:00 AM
2-Propanol	ND	800		ppbv	800	8/5/2011 8:08:00 AM
4-Methyl-2-pentanone	ND	800		ppbv	800	8/5/2011 8:08:00 AM
Acetone	920	800		ppbv	800	8/5/2011 8:08:00 AM
Benzene	ND	800		ppbv	800	8/5/2011 8:08:00 AM
Benzyl chloride	ND	800		ppbv	800	8/5/2011 8:08:00 AM
Bromodichloromethane	ND	800		ppbv	800	8/5/2011 8:08:00 AM
Bromoform	ND	800		ppbv	800	8/5/2011 8:08:00 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

Original

RTI LABORATORIES, INC.

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Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/6/2011 2:22:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107364-001 **Matrix:** AIR

Client Sample ID VA0455

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	800		ppbv	800	8/5/2011 8:08:00 AM
Carbon disulfide	ND	800		ppbv	800	8/5/2011 8:08:00 AM
Carbon tetrachloride	ND	800		ppbv	800	8/5/2011 8:08:00 AM
Chlorobenzene	ND	800		ppbv	800	8/5/2011 8:08:00 AM
Chlorodibromomethane	ND	800		ppbv	800	8/5/2011 8:08:00 AM
Chloroethane	ND	800		ppbv	800	8/5/2011 8:08:00 AM
Chloroform	ND	800		ppbv	800	8/5/2011 8:08:00 AM
Chloromethane	ND	800		ppbv	800	8/5/2011 8:08:00 AM
cis-1,2-Dichloroethene	ND	800		ppbv	800	8/5/2011 8:08:00 AM
cis-1,3-dichloropropene	ND	800		ppbv	800	8/5/2011 8:08:00 AM
Cyclohexane	1,600	1,600		ppbv	800	8/5/2011 8:08:00 AM
Dichlorodifluoromethane	ND	800		ppbv	800	8/5/2011 8:08:00 AM
Ethanol	ND	4,000		ppbv	800	8/5/2011 8:08:00 AM
Ethyl acetate	ND	800		ppbv	800	8/5/2011 8:08:00 AM
Ethylbenzene	ND	1,600		ppbv	800	8/5/2011 8:08:00 AM
Heptane	1,100	800		ppbv	800	8/5/2011 8:08:00 AM
Hexachlorobutadiene	ND	1,600		ppbv	800	8/5/2011 8:08:00 AM
m,p-Xylene	ND	1,600		ppbv	800	8/5/2011 8:08:00 AM
Methylene chloride	ND	4,000		ppbv	800	8/5/2011 8:08:00 AM
Naphthalene	ND	800		ppbv	800	8/5/2011 8:08:00 AM
n-Hexane	1,800	1,600		ppbv	800	8/5/2011 8:08:00 AM
o-Xylene	ND	800		ppbv	800	8/5/2011 8:08:00 AM
Propylene	ND	800		ppbv	800	8/5/2011 8:08:00 AM
Styrene	ND	800		ppbv	800	8/5/2011 8:08:00 AM
tert-Butyl Methyl Ether	ND	800		ppbv	800	8/5/2011 8:08:00 AM
Tetrachloroethene	ND	800		ppbv	800	8/5/2011 8:08:00 AM
Tetrahydrofuran	ND	800		ppbv	800	8/5/2011 8:08:00 AM
Toluene	2,400	800		ppbv	800	8/5/2011 8:08:00 AM
trans-1,2-Dichloroethene	ND	800		ppbv	800	8/5/2011 8:08:00 AM
trans-1,3-dichloropropene	ND	800		ppbv	800	8/5/2011 8:08:00 AM
Trichloroethene	ND	800		ppbv	800	8/5/2011 8:08:00 AM
Trichlorofluoromethane	ND	800		ppbv	800	8/5/2011 8:08:00 AM
Vinyl acetate	ND	800		ppbv	800	8/5/2011 8:08:00 AM
Vinyl chloride	ND	800		ppbv	800	8/5/2011 8:08:00 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

Original

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Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/6/2011 2:22:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107364-001 **Matrix:** AIR

Client Sample ID VA0455

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	ND	2,400		ppbv	800	8/5/2011 8:08:00 AM
Surr: 4-Bromofluorobenzene	96.7	70-130		%REC	800	8/5/2011 8:08:00 AM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **MT3**
C5-C8 Aliphatic Hydrocarbons	28,000	4,700	H	µg/m³	40	8/8/2011 4:22:00 PM
C9-C10 Aromatic Hydrocarbons	ND	5,300	H	µg/m³	40	8/8/2011 4:22:00 PM
C9-C12 Aliphatic Hydrocarbons	10,000	7,600	H	µg/m³	40	8/8/2011 4:22:00 PM
Surr: 4-Bromofluorobenzene	99.6	70-130	H	%REC	40	8/8/2011 4:22:00 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
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#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/6/2011 2:45:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107364-002 **Matrix:** AIR

Client Sample ID VA0456

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	2.9	0.10		%	1	7/15/2011 12:56:00 PM
Carbon Monoxide	ND	0.10		%	1	7/15/2011 12:56:00 PM
Methane	ND	0.50		%	1	7/15/2011 12:56:00 PM
Nitrogen	78	0.10		%	1	7/15/2011 12:56:00 PM
Oxygen	18	0.10		%	1	7/15/2011 12:56:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	40		ppbv	40	8/5/2011 1:50:00 PM
1,1,2,2-Tetrachloroethane	ND	40		ppbv	40	8/5/2011 1:50:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	40		ppbv	40	8/5/2011 1:50:00 PM
1,1,2-Trichloroethane	ND	40		ppbv	40	8/5/2011 1:50:00 PM
1,1-Dichloroethane	ND	40		ppbv	40	8/5/2011 1:50:00 PM
1,1-Dichloroethene	ND	40		ppbv	40	8/5/2011 1:50:00 PM
1,2,4-Trichlorobenzene	ND	40		ppbv	40	8/5/2011 1:50:00 PM
1,2,4-Trimethylbenzene	ND	40		ppbv	40	8/5/2011 1:50:00 PM
1,2-Dibromoethane	ND	40		ppbv	40	8/5/2011 1:50:00 PM
1,2-Dichlorobenzene	ND	40		ppbv	40	8/5/2011 1:50:00 PM
1,2-Dichloroethane	ND	40		ppbv	40	8/5/2011 1:50:00 PM
1,2-Dichloropropane	ND	40		ppbv	40	8/5/2011 1:50:00 PM
1,3,5-Trimethylbenzene	ND	40		ppbv	40	8/5/2011 1:50:00 PM
1,3-Butadiene	ND	40		ppbv	40	8/5/2011 1:50:00 PM
1,3-Dichlorobenzene	ND	40		ppbv	40	8/5/2011 1:50:00 PM
1,4-Dichlorobenzene	ND	40		ppbv	40	8/5/2011 1:50:00 PM
1,4-Dioxane	ND	40		ppbv	40	8/5/2011 1:50:00 PM
2-Butanone	ND	40		ppbv	40	8/5/2011 1:50:00 PM
2-Hexanone	ND	40		ppbv	40	8/5/2011 1:50:00 PM
2-Propanol	ND	40		ppbv	40	8/5/2011 1:50:00 PM
4-Methyl-2-pentanone	ND	40		ppbv	40	8/5/2011 1:50:00 PM
Acetone	52	40		ppbv	40	8/5/2011 1:50:00 PM
Benzene	280	40		ppbv	40	8/5/2011 1:50:00 PM
Benzyl chloride	ND	40		ppbv	40	8/5/2011 1:50:00 PM
Bromodichloromethane	ND	40		ppbv	40	8/5/2011 1:50:00 PM
Bromoform	ND	40		ppbv	40	8/5/2011 1:50:00 PM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
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Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/6/2011 2:45:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107364-002 **Matrix:** AIR

Client Sample ID VA0456

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	40		ppbv	40	8/5/2011 1:50:00 PM
Carbon disulfide	ND	40		ppbv	40	8/5/2011 1:50:00 PM
Carbon tetrachloride	ND	40		ppbv	40	8/5/2011 1:50:00 PM
Chlorobenzene	ND	40		ppbv	40	8/5/2011 1:50:00 PM
Chlorodibromomethane	ND	40		ppbv	40	8/5/2011 1:50:00 PM
Chloroethane	ND	40		ppbv	40	8/5/2011 1:50:00 PM
Chloroform	ND	40		ppbv	40	8/5/2011 1:50:00 PM
Chloromethane	ND	40		ppbv	40	8/5/2011 1:50:00 PM
cis-1,2-Dichloroethene	ND	40		ppbv	40	8/5/2011 1:50:00 PM
cis-1,3-dichloropropene	ND	40		ppbv	40	8/5/2011 1:50:00 PM
Cyclohexane	320	80		ppbv	40	8/5/2011 1:50:00 PM
Dichlorodifluoromethane	ND	40		ppbv	40	8/5/2011 1:50:00 PM
Ethanol	ND	200		ppbv	40	8/5/2011 1:50:00 PM
Ethyl acetate	ND	40		ppbv	40	8/5/2011 1:50:00 PM
Ethylbenzene	75	80	J	ppbv	40	8/5/2011 1:50:00 PM
Heptane	170	40		ppbv	40	8/5/2011 1:50:00 PM
Hexachlorobutadiene	ND	80		ppbv	40	8/5/2011 1:50:00 PM
m,p-Xylene	150	80		ppbv	40	8/5/2011 1:50:00 PM
Methylene chloride	ND	200		ppbv	40	8/5/2011 1:50:00 PM
Naphthalene	ND	40		ppbv	40	8/5/2011 1:50:00 PM
n-Hexane	170	80		ppbv	40	8/5/2011 1:50:00 PM
o-Xylene	57	40		ppbv	40	8/5/2011 1:50:00 PM
Propylene	ND	40		ppbv	40	8/5/2011 1:50:00 PM
Styrene	ND	40		ppbv	40	8/5/2011 1:50:00 PM
tert-Butyl Methyl Ether	ND	40		ppbv	40	8/5/2011 1:50:00 PM
Tetrachloroethene	ND	40		ppbv	40	8/5/2011 1:50:00 PM
Tetrahydrofuran	ND	40		ppbv	40	8/5/2011 1:50:00 PM
Toluene	740	40		ppbv	40	8/5/2011 1:50:00 PM
trans-1,2-Dichloroethene	ND	40		ppbv	40	8/5/2011 1:50:00 PM
trans-1,3-dichloropropene	ND	40		ppbv	40	8/5/2011 1:50:00 PM
Trichloroethene	ND	40		ppbv	40	8/5/2011 1:50:00 PM
Trichlorofluoromethane	ND	40		ppbv	40	8/5/2011 1:50:00 PM
Vinyl acetate	ND	40		ppbv	40	8/5/2011 1:50:00 PM
Vinyl chloride	ND	40		ppbv	40	8/5/2011 1:50:00 PM

Qualifiers:

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

Original

RTI LABORATORIES, INC.

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

Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/6/2011 2:45:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107364-002 **Matrix:** AIR

Client Sample ID VA0456

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	200	120		ppbv	40	8/5/2011 1:50:00 PM
Surr: 4-Bromofluorobenzene	101	70-130		%REC	40	8/5/2011 1:50:00 PM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **MT3**
C5-C8 Aliphatic Hydrocarbons	41,000	4,700	H	µg/m³	40	8/8/2011 5:04:00 PM
C9-C10 Aromatic Hydrocarbons	ND	5,300	H	µg/m³	40	8/8/2011 5:04:00 PM
C9-C12 Aliphatic Hydrocarbons	15,000	7,600	H	µg/m³	40	8/8/2011 5:04:00 PM
Surr: 4-Bromofluorobenzene	101	70-130	H	%REC	40	8/8/2011 5:04:00 PM

Qualifiers:

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WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/6/2011 2:45:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107364-003 **Matrix:** AIR

Client Sample ID VA0457

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	2.8	0.10		%	1	7/15/2011 1:16:00 PM
Carbon Monoxide	ND	0.10		%	1	7/15/2011 1:16:00 PM
Methane	ND	0.50		%	1	7/15/2011 1:16:00 PM
Nitrogen	78	0.10		%	1	7/15/2011 1:16:00 PM
Oxygen	18	0.10		%	1	7/15/2011 1:16:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	800		ppbv	800	8/5/2011 10:12:00 AM
1,1,2,2-Tetrachloroethane	ND	800		ppbv	800	8/5/2011 10:12:00 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	800		ppbv	800	8/5/2011 10:12:00 AM
1,1,2-Trichloroethane	ND	800		ppbv	800	8/5/2011 10:12:00 AM
1,1-Dichloroethane	ND	800		ppbv	800	8/5/2011 10:12:00 AM
1,1-Dichloroethene	ND	800		ppbv	800	8/5/2011 10:12:00 AM
1,2,4-Trichlorobenzene	ND	800		ppbv	800	8/5/2011 10:12:00 AM
1,2,4-Trimethylbenzene	ND	800		ppbv	800	8/5/2011 10:12:00 AM
1,2-Dibromoethane	ND	800		ppbv	800	8/5/2011 10:12:00 AM
1,2-Dichlorobenzene	ND	800		ppbv	800	8/5/2011 10:12:00 AM
1,2-Dichloroethane	ND	800		ppbv	800	8/5/2011 10:12:00 AM
1,2-Dichloropropane	ND	800		ppbv	800	8/5/2011 10:12:00 AM
1,3,5-Trimethylbenzene	ND	800		ppbv	800	8/5/2011 10:12:00 AM
1,3-Butadiene	ND	800		ppbv	800	8/5/2011 10:12:00 AM
1,3-Dichlorobenzene	ND	800		ppbv	800	8/5/2011 10:12:00 AM
1,4-Dichlorobenzene	ND	800		ppbv	800	8/5/2011 10:12:00 AM
1,4-Dioxane	ND	800		ppbv	800	8/5/2011 10:12:00 AM
2-Butanone	ND	800		ppbv	800	8/5/2011 10:12:00 AM
2-Hexanone	ND	800		ppbv	800	8/5/2011 10:12:00 AM
2-Propanol	ND	800		ppbv	800	8/5/2011 10:12:00 AM
4-Methyl-2-pentanone	ND	800		ppbv	800	8/5/2011 10:12:00 AM
Acetone	1,100	800		ppbv	800	8/5/2011 10:12:00 AM
Benzene	1,200	800		ppbv	800	8/5/2011 10:12:00 AM
Benzyl chloride	ND	800		ppbv	800	8/5/2011 10:12:00 AM
Bromodichloromethane	ND	800		ppbv	800	8/5/2011 10:12:00 AM
Bromoform	ND	800		ppbv	800	8/5/2011 10:12:00 AM

Qualifiers:

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Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/6/2011 2:45:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107364-003 **Matrix:** AIR

Client Sample ID VA0457

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	800		ppbv	800	8/5/2011 10:12:00 AM
Carbon disulfide	ND	800		ppbv	800	8/5/2011 10:12:00 AM
Carbon tetrachloride	ND	800		ppbv	800	8/5/2011 10:12:00 AM
Chlorobenzene	ND	800		ppbv	800	8/5/2011 10:12:00 AM
Chlorodibromomethane	ND	800		ppbv	800	8/5/2011 10:12:00 AM
Chloroethane	ND	800		ppbv	800	8/5/2011 10:12:00 AM
Chloroform	ND	800		ppbv	800	8/5/2011 10:12:00 AM
Chloromethane	ND	800		ppbv	800	8/5/2011 10:12:00 AM
cis-1,2-Dichloroethene	ND	800		ppbv	800	8/5/2011 10:12:00 AM
cis-1,3-dichloropropene	ND	800		ppbv	800	8/5/2011 10:12:00 AM
Cyclohexane	1,800	1,600		ppbv	800	8/5/2011 10:12:00 AM
Dichlorodifluoromethane	ND	800		ppbv	800	8/5/2011 10:12:00 AM
Ethanol	ND	4,000		ppbv	800	8/5/2011 10:12:00 AM
Ethyl acetate	ND	800		ppbv	800	8/5/2011 10:12:00 AM
Ethylbenzene	ND	1,600		ppbv	800	8/5/2011 10:12:00 AM
Heptane	1,000	800		ppbv	800	8/5/2011 10:12:00 AM
Hexachlorobutadiene	ND	1,600		ppbv	800	8/5/2011 10:12:00 AM
m,p-Xylene	ND	1,600		ppbv	800	8/5/2011 10:12:00 AM
Methylene chloride	ND	4,000		ppbv	800	8/5/2011 10:12:00 AM
Naphthalene	ND	800		ppbv	800	8/5/2011 10:12:00 AM
n-Hexane	2,600	1,600		ppbv	800	8/5/2011 10:12:00 AM
o-Xylene	ND	800		ppbv	800	8/5/2011 10:12:00 AM
Propylene	ND	800		ppbv	800	8/5/2011 10:12:00 AM
Styrene	ND	800		ppbv	800	8/5/2011 10:12:00 AM
tert-Butyl Methyl Ether	ND	800		ppbv	800	8/5/2011 10:12:00 AM
Tetrachloroethene	ND	800		ppbv	800	8/5/2011 10:12:00 AM
Tetrahydrofuran	ND	800		ppbv	800	8/5/2011 10:12:00 AM
Toluene	3,800	800		ppbv	800	8/5/2011 10:12:00 AM
trans-1,2-Dichloroethene	ND	800		ppbv	800	8/5/2011 10:12:00 AM
trans-1,3-dichloropropene	ND	800		ppbv	800	8/5/2011 10:12:00 AM
Trichloroethene	ND	800		ppbv	800	8/5/2011 10:12:00 AM
Trichlorofluoromethane	ND	800		ppbv	800	8/5/2011 10:12:00 AM
Vinyl acetate	ND	800		ppbv	800	8/5/2011 10:12:00 AM
Vinyl chloride	ND	800		ppbv	800	8/5/2011 10:12:00 AM

Qualifiers:

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Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/6/2011 2:45:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107364-003 **Matrix:** AIR

Client Sample ID VA0457

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	ND	2,400		ppbv	800	8/5/2011 10:12:00 AM
Surr: 4-Bromofluorobenzene	96.1	70-130		%REC	800	8/5/2011 10:12:00 AM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **MT3**
C5-C8 Aliphatic Hydrocarbons	67,000	4,700	H	µg/m³	40	8/8/2011 5:46:00 PM
C9-C10 Aromatic Hydrocarbons	ND	5,300	H	µg/m³	40	8/8/2011 5:46:00 PM
C9-C12 Aliphatic Hydrocarbons	26,000	7,600	H	µg/m³	40	8/8/2011 5:46:00 PM
Surr: 4-Bromofluorobenzene	99.4	70-130	H	%REC	40	8/8/2011 5:46:00 PM

Qualifiers:

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

Original

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Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/6/2011 3:32:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107364-004 **Matrix:** AIR

Client Sample ID VA0458

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	3.6	0.10		%	1	7/15/2011 1:36:00 PM
Carbon Monoxide	ND	0.10		%	1	7/15/2011 1:36:00 PM
Methane	ND	0.50		%	1	7/15/2011 1:36:00 PM
Nitrogen	79	0.10		%	1	7/15/2011 1:36:00 PM
Oxygen	17	0.10		%	1	7/15/2011 1:36:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	800		ppbv	800	8/5/2011 10:58:00 AM
1,1,2,2-Tetrachloroethane	ND	800		ppbv	800	8/5/2011 10:58:00 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	800		ppbv	800	8/5/2011 10:58:00 AM
1,1,2-Trichloroethane	ND	800		ppbv	800	8/5/2011 10:58:00 AM
1,1-Dichloroethane	ND	800		ppbv	800	8/5/2011 10:58:00 AM
1,1-Dichloroethene	ND	800		ppbv	800	8/5/2011 10:58:00 AM
1,2,4-Trichlorobenzene	ND	800		ppbv	800	8/5/2011 10:58:00 AM
1,2,4-Trimethylbenzene	ND	800		ppbv	800	8/5/2011 10:58:00 AM
1,2-Dibromoethane	ND	800		ppbv	800	8/5/2011 10:58:00 AM
1,2-Dichlorobenzene	ND	800		ppbv	800	8/5/2011 10:58:00 AM
1,2-Dichloroethane	ND	800		ppbv	800	8/5/2011 10:58:00 AM
1,2-Dichloropropane	ND	800		ppbv	800	8/5/2011 10:58:00 AM
1,3,5-Trimethylbenzene	ND	800		ppbv	800	8/5/2011 10:58:00 AM
1,3-Butadiene	ND	800		ppbv	800	8/5/2011 10:58:00 AM
1,3-Dichlorobenzene	ND	800		ppbv	800	8/5/2011 10:58:00 AM
1,4-Dichlorobenzene	ND	800		ppbv	800	8/5/2011 10:58:00 AM
1,4-Dioxane	ND	800		ppbv	800	8/5/2011 10:58:00 AM
2-Butanone	ND	800		ppbv	800	8/5/2011 10:58:00 AM
2-Hexanone	ND	800		ppbv	800	8/5/2011 10:58:00 AM
2-Propanol	ND	800		ppbv	800	8/5/2011 10:58:00 AM
4-Methyl-2-pentanone	ND	800		ppbv	800	8/5/2011 10:58:00 AM
Acetone	950	800		ppbv	800	8/5/2011 10:58:00 AM
Benzene	4,300	800		ppbv	800	8/5/2011 10:58:00 AM
Benzyl chloride	ND	800		ppbv	800	8/5/2011 10:58:00 AM
Bromodichloromethane	ND	800		ppbv	800	8/5/2011 10:58:00 AM
Bromoform	ND	800		ppbv	800	8/5/2011 10:58:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
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WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/6/2011 3:32:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107364-004 **Matrix:** AIR

Client Sample ID VA0458

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	800		ppbv	800	8/5/2011 10:58:00 AM
Carbon disulfide	ND	800		ppbv	800	8/5/2011 10:58:00 AM
Carbon tetrachloride	ND	800		ppbv	800	8/5/2011 10:58:00 AM
Chlorobenzene	ND	800		ppbv	800	8/5/2011 10:58:00 AM
Chlorodibromomethane	ND	800		ppbv	800	8/5/2011 10:58:00 AM
Chloroethane	ND	800		ppbv	800	8/5/2011 10:58:00 AM
Chloroform	ND	800		ppbv	800	8/5/2011 10:58:00 AM
Chloromethane	ND	800		ppbv	800	8/5/2011 10:58:00 AM
cis-1,2-Dichloroethene	ND	800		ppbv	800	8/5/2011 10:58:00 AM
cis-1,3-dichloropropene	ND	800		ppbv	800	8/5/2011 10:58:00 AM
Cyclohexane	11,000	1,600		ppbv	800	8/5/2011 10:58:00 AM
Dichlorodifluoromethane	ND	800		ppbv	800	8/5/2011 10:58:00 AM
Ethanol	ND	4,000		ppbv	800	8/5/2011 10:58:00 AM
Ethyl acetate	ND	800		ppbv	800	8/5/2011 10:58:00 AM
Ethylbenzene	ND	1,600		ppbv	800	8/5/2011 10:58:00 AM
Heptane	1,800	800		ppbv	800	8/5/2011 10:58:00 AM
Hexachlorobutadiene	ND	1,600		ppbv	800	8/5/2011 10:58:00 AM
m,p-Xylene	980	1,600	J	ppbv	800	8/5/2011 10:58:00 AM
Methylene chloride	ND	4,000		ppbv	800	8/5/2011 10:58:00 AM
Naphthalene	ND	800		ppbv	800	8/5/2011 10:58:00 AM
n-Hexane	4,800	1,600		ppbv	800	8/5/2011 10:58:00 AM
o-Xylene	ND	800		ppbv	800	8/5/2011 10:58:00 AM
Propylene	ND	800		ppbv	800	8/5/2011 10:58:00 AM
Styrene	ND	800		ppbv	800	8/5/2011 10:58:00 AM
tert-Butyl Methyl Ether	ND	800		ppbv	800	8/5/2011 10:58:00 AM
Tetrachloroethene	ND	800		ppbv	800	8/5/2011 10:58:00 AM
Tetrahydrofuran	ND	800		ppbv	800	8/5/2011 10:58:00 AM
Toluene	4,100	800		ppbv	800	8/5/2011 10:58:00 AM
trans-1,2-Dichloroethene	ND	800		ppbv	800	8/5/2011 10:58:00 AM
trans-1,3-dichloropropene	ND	800		ppbv	800	8/5/2011 10:58:00 AM
Trichloroethene	ND	800		ppbv	800	8/5/2011 10:58:00 AM
Trichlorofluoromethane	ND	800		ppbv	800	8/5/2011 10:58:00 AM
Vinyl acetate	ND	800		ppbv	800	8/5/2011 10:58:00 AM
Vinyl chloride	ND	800		ppbv	800	8/5/2011 10:58:00 AM

Qualifiers:

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Analytical Report

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Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/6/2011 3:32:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107364-004 **Matrix:** AIR

Client Sample ID VA0458

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	980	2,400	J	ppbv	800	8/5/2011 10:58:00 AM
Surr: 4-Bromofluorobenzene	96.4	70-130		%REC	800	8/5/2011 10:58:00 AM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **MT3**
C5-C8 Aliphatic Hydrocarbons	530,000	94,000	H	µg/m³	800	8/9/2011 4:31:00 PM
C9-C10 Aromatic Hydrocarbons	ND	110,000	H	µg/m³	800	8/9/2011 4:31:00 PM
C9-C12 Aliphatic Hydrocarbons	46,000	150,000	JH	µg/m³	800	8/9/2011 4:31:00 PM
Surr: 4-Bromofluorobenzene	99.2	70-130	H	%REC	800	8/9/2011 4:31:00 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

Original

RTI LABORATORIES, INC.

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

Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/8/2011 8:18:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107364-005 **Matrix:** AIR

Client Sample ID VA0459

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.36	0.10		%	1	7/15/2011 2:04:00 PM
Carbon Monoxide	ND	0.10		%	1	7/15/2011 2:04:00 PM
Methane	ND	0.50		%	1	7/15/2011 2:04:00 PM
Nitrogen	79	0.10		%	1	7/15/2011 2:04:00 PM
Oxygen	21	0.10		%	1	7/15/2011 2:04:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	8,000		ppbv	8000	8/6/2011 2:26:00 AM
1,1,2,2-Tetrachloroethane	ND	8,000		ppbv	8000	8/6/2011 2:26:00 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	8,000		ppbv	8000	8/6/2011 2:26:00 AM
1,1,2-Trichloroethane	ND	8,000		ppbv	8000	8/6/2011 2:26:00 AM
1,1-Dichloroethane	ND	8,000		ppbv	8000	8/6/2011 2:26:00 AM
1,1-Dichloroethene	ND	8,000		ppbv	8000	8/6/2011 2:26:00 AM
1,2,4-Trichlorobenzene	ND	8,000		ppbv	8000	8/6/2011 2:26:00 AM
1,2,4-Trimethylbenzene	ND	8,000		ppbv	8000	8/6/2011 2:26:00 AM
1,2-Dibromoethane	ND	8,000		ppbv	8000	8/6/2011 2:26:00 AM
1,2-Dichlorobenzene	ND	8,000		ppbv	8000	8/6/2011 2:26:00 AM
1,2-Dichloroethane	ND	8,000		ppbv	8000	8/6/2011 2:26:00 AM
1,2-Dichloropropane	ND	8,000		ppbv	8000	8/6/2011 2:26:00 AM
1,3,5-Trimethylbenzene	ND	8,000		ppbv	8000	8/6/2011 2:26:00 AM
1,3-Butadiene	ND	8,000		ppbv	8000	8/6/2011 2:26:00 AM
1,3-Dichlorobenzene	ND	8,000		ppbv	8000	8/6/2011 2:26:00 AM
1,4-Dichlorobenzene	ND	8,000		ppbv	8000	8/6/2011 2:26:00 AM
1,4-Dioxane	ND	8,000		ppbv	8000	8/6/2011 2:26:00 AM
2-Butanone	ND	8,000		ppbv	8000	8/6/2011 2:26:00 AM
2-Hexanone	ND	8,000		ppbv	8000	8/6/2011 2:26:00 AM
2-Propanol	ND	8,000		ppbv	8000	8/6/2011 2:26:00 AM
4-Methyl-2-pentanone	ND	8,000		ppbv	8000	8/6/2011 2:26:00 AM
Acetone	ND	8,000		ppbv	8000	8/6/2011 2:26:00 AM
Benzene	20,000	8,000		ppbv	8000	8/6/2011 2:26:00 AM
Benzyl chloride	ND	8,000		ppbv	8000	8/6/2011 2:26:00 AM
Bromodichloromethane	ND	8,000		ppbv	8000	8/6/2011 2:26:00 AM
Bromoform	ND	8,000		ppbv	8000	8/6/2011 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

Original

RTI LABORATORIES, INC.

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

Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/8/2011 8:18:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107364-005 **Matrix:** AIR

Client Sample ID VA0459

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	8,000		ppbv	8000	8/6/2011 2:26:00 AM
Carbon disulfide	ND	8,000		ppbv	8000	8/6/2011 2:26:00 AM
Carbon tetrachloride	ND	8,000		ppbv	8000	8/6/2011 2:26:00 AM
Chlorobenzene	ND	8,000		ppbv	8000	8/6/2011 2:26:00 AM
Chlorodibromomethane	ND	8,000		ppbv	8000	8/6/2011 2:26:00 AM
Chloroethane	ND	8,000		ppbv	8000	8/6/2011 2:26:00 AM
Chloroform	ND	8,000		ppbv	8000	8/6/2011 2:26:00 AM
Chloromethane	ND	8,000		ppbv	8000	8/6/2011 2:26:00 AM
cis-1,2-Dichloroethene	ND	8,000		ppbv	8000	8/6/2011 2:26:00 AM
cis-1,3-dichloropropene	ND	8,000		ppbv	8000	8/6/2011 2:26:00 AM
Cyclohexane	ND	16,000		ppbv	8000	8/6/2011 2:26:00 AM
Dichlorodifluoromethane	ND	8,000		ppbv	8000	8/6/2011 2:26:00 AM
Ethanol	ND	40,000		ppbv	8000	8/6/2011 2:26:00 AM
Ethyl acetate	ND	8,000		ppbv	8000	8/6/2011 2:26:00 AM
Ethylbenzene	ND	16,000		ppbv	8000	8/6/2011 2:26:00 AM
Heptane	ND	8,000		ppbv	8000	8/6/2011 2:26:00 AM
Hexachlorobutadiene	ND	16,000		ppbv	8000	8/6/2011 2:26:00 AM
m,p-Xylene	ND	16,000		ppbv	8000	8/6/2011 2:26:00 AM
Methylene chloride	ND	40,000		ppbv	8000	8/6/2011 2:26:00 AM
Naphthalene	ND	8,000		ppbv	8000	8/6/2011 2:26:00 AM
n-Hexane	ND	16,000		ppbv	8000	8/6/2011 2:26:00 AM
o-Xylene	ND	8,000		ppbv	8000	8/6/2011 2:26:00 AM
Propylene	ND	8,000		ppbv	8000	8/6/2011 2:26:00 AM
Styrene	ND	8,000		ppbv	8000	8/6/2011 2:26:00 AM
tert-Butyl Methyl Ether	ND	8,000		ppbv	8000	8/6/2011 2:26:00 AM
Tetrachloroethene	ND	8,000		ppbv	8000	8/6/2011 2:26:00 AM
Tetrahydrofuran	ND	8,000		ppbv	8000	8/6/2011 2:26:00 AM
Toluene	45,000	8,000		ppbv	8000	8/6/2011 2:26:00 AM
trans-1,2-Dichloroethene	ND	8,000		ppbv	8000	8/6/2011 2:26:00 AM
trans-1,3-dichloropropene	ND	8,000		ppbv	8000	8/6/2011 2:26:00 AM
Trichloroethene	ND	8,000		ppbv	8000	8/6/2011 2:26:00 AM
Trichlorofluoromethane	ND	8,000		ppbv	8000	8/6/2011 2:26:00 AM
Vinyl acetate	ND	8,000		ppbv	8000	8/6/2011 2:26:00 AM
Vinyl chloride	ND	8,000		ppbv	8000	8/6/2011 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

Original

RTI LABORATORIES, INC.

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

Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/8/2011 8:18:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107364-005 **Matrix:** AIR

Client Sample ID VA0459

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	ND	24,000		ppbv	8000	8/6/2011 2:26:00 AM
Surr: 4-Bromofluorobenzene	99.4	70-130		%REC	8000	8/6/2011 2:26:00 AM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **MT3**
C5-C8 Aliphatic Hydrocarbons	530,000	94,000	H	µg/m³	800	8/9/2011 5:16:00 PM
C9-C10 Aromatic Hydrocarbons	ND	110,000	H	µg/m³	800	8/9/2011 5:16:00 PM
C9-C12 Aliphatic Hydrocarbons	ND	150,000	H	µg/m³	800	8/9/2011 5:16:00 PM
Surr: 4-Bromofluorobenzene	96.4	70-130	H	%REC	800	8/9/2011 5:16:00 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#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/8/2011 8:56:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107364-006 **Matrix:** AIR

Client Sample ID VA0460

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.20	0.10		%	1	7/15/2011 2:57:00 PM
Carbon Monoxide	ND	0.10		%	1	7/15/2011 2:57:00 PM
Methane	ND	0.50		%	1	7/15/2011 2:57:00 PM
Nitrogen	79	0.10		%	1	7/15/2011 2:57:00 PM
Oxygen	21	0.10		%	1	7/15/2011 2:57:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	800		ppbv	800	8/6/2011 4:43:00 AM
1,1,2,2-Tetrachloroethane	ND	800		ppbv	800	8/6/2011 4:43:00 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	800		ppbv	800	8/6/2011 4:43:00 AM
1,1,2-Trichloroethane	ND	800		ppbv	800	8/6/2011 4:43:00 AM
1,1-Dichloroethane	ND	800		ppbv	800	8/6/2011 4:43:00 AM
1,1-Dichloroethene	ND	800		ppbv	800	8/6/2011 4:43:00 AM
1,2,4-Trichlorobenzene	ND	800		ppbv	800	8/6/2011 4:43:00 AM
1,2,4-Trimethylbenzene	ND	800		ppbv	800	8/6/2011 4:43:00 AM
1,2-Dibromoethane	ND	800		ppbv	800	8/6/2011 4:43:00 AM
1,2-Dichlorobenzene	ND	800		ppbv	800	8/6/2011 4:43:00 AM
1,2-Dichloroethane	ND	800		ppbv	800	8/6/2011 4:43:00 AM
1,2-Dichloropropane	ND	800		ppbv	800	8/6/2011 4:43:00 AM
1,3,5-Trimethylbenzene	ND	800		ppbv	800	8/6/2011 4:43:00 AM
1,3-Butadiene	ND	800		ppbv	800	8/6/2011 4:43:00 AM
1,3-Dichlorobenzene	ND	800		ppbv	800	8/6/2011 4:43:00 AM
1,4-Dichlorobenzene	ND	800		ppbv	800	8/6/2011 4:43:00 AM
1,4-Dioxane	ND	800		ppbv	800	8/6/2011 4:43:00 AM
2-Butanone	ND	800		ppbv	800	8/6/2011 4:43:00 AM
2-Hexanone	ND	800		ppbv	800	8/6/2011 4:43:00 AM
2-Propanol	ND	800		ppbv	800	8/6/2011 4:43:00 AM
4-Methyl-2-pentanone	ND	800		ppbv	800	8/6/2011 4:43:00 AM
Acetone	ND	800		ppbv	800	8/6/2011 4:43:00 AM
Benzene	3,000	800		ppbv	800	8/6/2011 4:43:00 AM
Benzyl chloride	ND	800		ppbv	800	8/6/2011 4:43:00 AM
Bromodichloromethane	ND	800		ppbv	800	8/6/2011 4:43:00 AM
Bromoform	ND	800		ppbv	800	8/6/2011 4:43:00 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

Original

RTI LABORATORIES, INC.

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

Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/8/2011 8:56:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107364-006 **Matrix:** AIR

Client Sample ID VA0460

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	800		ppbv	800	8/6/2011 4:43:00 AM
Carbon disulfide	ND	800		ppbv	800	8/6/2011 4:43:00 AM
Carbon tetrachloride	ND	800		ppbv	800	8/6/2011 4:43:00 AM
Chlorobenzene	ND	800		ppbv	800	8/6/2011 4:43:00 AM
Chlorodibromomethane	ND	800		ppbv	800	8/6/2011 4:43:00 AM
Chloroethane	ND	800		ppbv	800	8/6/2011 4:43:00 AM
Chloroform	ND	800		ppbv	800	8/6/2011 4:43:00 AM
Chloromethane	ND	800		ppbv	800	8/6/2011 4:43:00 AM
cis-1,2-Dichloroethene	ND	800		ppbv	800	8/6/2011 4:43:00 AM
cis-1,3-dichloropropene	ND	800		ppbv	800	8/6/2011 4:43:00 AM
Cyclohexane	3,800	1,600		ppbv	800	8/6/2011 4:43:00 AM
Dichlorodifluoromethane	ND	800		ppbv	800	8/6/2011 4:43:00 AM
Ethanol	ND	4,000		ppbv	800	8/6/2011 4:43:00 AM
Ethyl acetate	ND	800		ppbv	800	8/6/2011 4:43:00 AM
Ethylbenzene	ND	1,600		ppbv	800	8/6/2011 4:43:00 AM
Heptane	1,300	800		ppbv	800	8/6/2011 4:43:00 AM
Hexachlorobutadiene	ND	1,600		ppbv	800	8/6/2011 4:43:00 AM
m,p-Xylene	1,300	1,600	J	ppbv	800	8/6/2011 4:43:00 AM
Methylene chloride	ND	4,000		ppbv	800	8/6/2011 4:43:00 AM
Naphthalene	ND	800		ppbv	800	8/6/2011 4:43:00 AM
n-Hexane	4,300	1,600		ppbv	800	8/6/2011 4:43:00 AM
o-Xylene	ND	800		ppbv	800	8/6/2011 4:43:00 AM
Propylene	ND	800		ppbv	800	8/6/2011 4:43:00 AM
Styrene	ND	800		ppbv	800	8/6/2011 4:43:00 AM
tert-Butyl Methyl Ether	ND	800		ppbv	800	8/6/2011 4:43:00 AM
Tetrachloroethene	ND	800		ppbv	800	8/6/2011 4:43:00 AM
Tetrahydrofuran	ND	800		ppbv	800	8/6/2011 4:43:00 AM
Toluene	13,000	800		ppbv	800	8/6/2011 4:43:00 AM
trans-1,2-Dichloroethene	ND	800		ppbv	800	8/6/2011 4:43:00 AM
trans-1,3-dichloropropene	ND	800		ppbv	800	8/6/2011 4:43:00 AM
Trichloroethene	ND	800		ppbv	800	8/6/2011 4:43:00 AM
Trichlorofluoromethane	ND	800		ppbv	800	8/6/2011 4:43:00 AM
Vinyl acetate	ND	800		ppbv	800	8/6/2011 4:43:00 AM
Vinyl chloride	ND	800		ppbv	800	8/6/2011 4:43:00 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

Original

RTI LABORATORIES, INC.

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

Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/8/2011 8:56:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107364-006 **Matrix:** AIR

Client Sample ID VA0460

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	1,300	2,400	J	ppbv	800	8/6/2011 4:43:00 AM
Surr: 4-Bromofluorobenzene	99.1	70-130		%REC	800	8/6/2011 4:43:00 AM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **MT3**
C5-C8 Aliphatic Hydrocarbons	480,000	94,000	H	µg/m³	800	8/9/2011 6:01:00 PM
C9-C10 Aromatic Hydrocarbons	ND	110,000	H	µg/m³	800	8/9/2011 6:01:00 PM
C9-C12 Aliphatic Hydrocarbons	21,000	150,000	JH	µg/m³	800	8/9/2011 6:01:00 PM
Surr: 4-Bromofluorobenzene	98.3	70-130	H	%REC	800	8/9/2011 6:01:00 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

Original

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Livonia, MI 48150
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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/8/2011 9:34:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107364-007 **Matrix:** AIR

Client Sample ID VA0461

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.18	0.10		%	1	7/15/2011 3:23:00 PM
Carbon Monoxide	ND	0.10		%	1	7/15/2011 3:23:00 PM
Methane	ND	0.50		%	1	7/15/2011 3:23:00 PM
Nitrogen	78	0.10		%	1	7/15/2011 3:23:00 PM
Oxygen	21	0.10		%	1	7/15/2011 3:23:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	800		ppbv	800	8/6/2011 6:17:00 AM
1,1,2,2-Tetrachloroethane	ND	800		ppbv	800	8/6/2011 6:17:00 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	800		ppbv	800	8/6/2011 6:17:00 AM
1,1,2-Trichloroethane	ND	800		ppbv	800	8/6/2011 6:17:00 AM
1,1-Dichloroethane	ND	800		ppbv	800	8/6/2011 6:17:00 AM
1,1-Dichloroethene	ND	800		ppbv	800	8/6/2011 6:17:00 AM
1,2,4-Trichlorobenzene	ND	800		ppbv	800	8/6/2011 6:17:00 AM
1,2,4-Trimethylbenzene	ND	800		ppbv	800	8/6/2011 6:17:00 AM
1,2-Dibromoethane	ND	800		ppbv	800	8/6/2011 6:17:00 AM
1,2-Dichlorobenzene	ND	800		ppbv	800	8/6/2011 6:17:00 AM
1,2-Dichloroethane	ND	800		ppbv	800	8/6/2011 6:17:00 AM
1,2-Dichloropropane	ND	800		ppbv	800	8/6/2011 6:17:00 AM
1,3,5-Trimethylbenzene	ND	800		ppbv	800	8/6/2011 6:17:00 AM
1,3-Butadiene	ND	800		ppbv	800	8/6/2011 6:17:00 AM
1,3-Dichlorobenzene	ND	800		ppbv	800	8/6/2011 6:17:00 AM
1,4-Dichlorobenzene	ND	800		ppbv	800	8/6/2011 6:17:00 AM
1,4-Dioxane	ND	800		ppbv	800	8/6/2011 6:17:00 AM
2-Butanone	ND	800		ppbv	800	8/6/2011 6:17:00 AM
2-Hexanone	ND	800		ppbv	800	8/6/2011 6:17:00 AM
2-Propanol	ND	800		ppbv	800	8/6/2011 6:17:00 AM
4-Methyl-2-pentanone	ND	800		ppbv	800	8/6/2011 6:17:00 AM
Acetone	ND	800		ppbv	800	8/6/2011 6:17:00 AM
Benzene	1,800	800		ppbv	800	8/6/2011 6:17:00 AM
Benzyl chloride	ND	800		ppbv	800	8/6/2011 6:17:00 AM
Bromodichloromethane	ND	800		ppbv	800	8/6/2011 6:17:00 AM
Bromoform	ND	800		ppbv	800	8/6/2011 6:17:00 AM

Qualifiers:

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

Original

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

Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/8/2011 9:34:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107364-007 **Matrix:** AIR

Client Sample ID VA0461

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	800		ppbv	800	8/6/2011 6:17:00 AM
Carbon disulfide	ND	800		ppbv	800	8/6/2011 6:17:00 AM
Carbon tetrachloride	ND	800		ppbv	800	8/6/2011 6:17:00 AM
Chlorobenzene	ND	800		ppbv	800	8/6/2011 6:17:00 AM
Chlorodibromomethane	ND	800		ppbv	800	8/6/2011 6:17:00 AM
Chloroethane	ND	800		ppbv	800	8/6/2011 6:17:00 AM
Chloroform	ND	800		ppbv	800	8/6/2011 6:17:00 AM
Chloromethane	ND	800		ppbv	800	8/6/2011 6:17:00 AM
cis-1,2-Dichloroethene	ND	800		ppbv	800	8/6/2011 6:17:00 AM
cis-1,3-dichloropropene	ND	800		ppbv	800	8/6/2011 6:17:00 AM
Cyclohexane	3,400	1,600		ppbv	800	8/6/2011 6:17:00 AM
Dichlorodifluoromethane	ND	800		ppbv	800	8/6/2011 6:17:00 AM
Ethanol	ND	4,000		ppbv	800	8/6/2011 6:17:00 AM
Ethyl acetate	ND	800		ppbv	800	8/6/2011 6:17:00 AM
Ethylbenzene	ND	1,600		ppbv	800	8/6/2011 6:17:00 AM
Heptane	ND	800		ppbv	800	8/6/2011 6:17:00 AM
Hexachlorobutadiene	ND	1,600		ppbv	800	8/6/2011 6:17:00 AM
m,p-Xylene	ND	1,600		ppbv	800	8/6/2011 6:17:00 AM
Methylene chloride	ND	4,000		ppbv	800	8/6/2011 6:17:00 AM
Naphthalene	ND	800		ppbv	800	8/6/2011 6:17:00 AM
n-Hexane	1,900	1,600		ppbv	800	8/6/2011 6:17:00 AM
o-Xylene	ND	800		ppbv	800	8/6/2011 6:17:00 AM
Propylene	ND	800		ppbv	800	8/6/2011 6:17:00 AM
Styrene	ND	800		ppbv	800	8/6/2011 6:17:00 AM
tert-Butyl Methyl Ether	ND	800		ppbv	800	8/6/2011 6:17:00 AM
Tetrachloroethene	ND	800		ppbv	800	8/6/2011 6:17:00 AM
Tetrahydrofuran	ND	800		ppbv	800	8/6/2011 6:17:00 AM
Toluene	7,100	800		ppbv	800	8/6/2011 6:17:00 AM
trans-1,2-Dichloroethene	ND	800		ppbv	800	8/6/2011 6:17:00 AM
trans-1,3-dichloropropene	ND	800		ppbv	800	8/6/2011 6:17:00 AM
Trichloroethene	ND	800		ppbv	800	8/6/2011 6:17:00 AM
Trichlorofluoromethane	ND	800		ppbv	800	8/6/2011 6:17:00 AM
Vinyl acetate	ND	800		ppbv	800	8/6/2011 6:17:00 AM
Vinyl chloride	ND	800		ppbv	800	8/6/2011 6:17:00 AM

Qualifiers:

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

Original

RTI LABORATORIES, INC.

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

Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/8/2011 9:34:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107364-007 **Matrix:** AIR

Client Sample ID VA0461

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 6:17:00 AM
Surr: 4-Bromofluorobenzene	99.4	70-130		%REC	800	8/6/2011 6:17:00 AM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **MT3**
C5-C8 Aliphatic Hydrocarbons	450,000	94,000	H	µg/m³	800	8/9/2011 6:47:00 PM
C9-C10 Aromatic Hydrocarbons	ND	110,000	H	µg/m³	800	8/9/2011 6:47:00 PM
C9-C12 Aliphatic Hydrocarbons	23,000	150,000	JH	µg/m³	800	8/9/2011 6:47:00 PM
Surr: 4-Bromofluorobenzene	97.8	70-130	H	%REC	800	8/9/2011 6:47:00 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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Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/8/2011 10:58:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107364-008 **Matrix:** AIR

Client Sample ID VA0462

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.49	0.10		%	1	7/15/2011 3:42:00 PM
Carbon Monoxide	ND	0.10		%	1	7/15/2011 3:42:00 PM
Methane	ND	0.50		%	1	7/15/2011 3:42:00 PM
Nitrogen	78	0.10		%	1	7/15/2011 3:42:00 PM
Oxygen	21	0.10		%	1	7/15/2011 3:42:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	40		ppbv	40	8/6/2011 1:54:00 PM
1,1,2,2-Tetrachloroethane	ND	40		ppbv	40	8/6/2011 1:54:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	40		ppbv	40	8/6/2011 1:54:00 PM
1,1,2-Trichloroethane	ND	40		ppbv	40	8/6/2011 1:54:00 PM
1,1-Dichloroethane	ND	40		ppbv	40	8/6/2011 1:54:00 PM
1,1-Dichloroethene	ND	40		ppbv	40	8/6/2011 1:54:00 PM
1,2,4-Trichlorobenzene	ND	40		ppbv	40	8/6/2011 1:54:00 PM
1,2,4-Trimethylbenzene	ND	40		ppbv	40	8/6/2011 1:54:00 PM
1,2-Dibromoethane	ND	40		ppbv	40	8/6/2011 1:54:00 PM
1,2-Dichlorobenzene	ND	40		ppbv	40	8/6/2011 1:54:00 PM
1,2-Dichloroethane	ND	40		ppbv	40	8/6/2011 1:54:00 PM
1,2-Dichloropropane	ND	40		ppbv	40	8/6/2011 1:54:00 PM
1,3,5-Trimethylbenzene	ND	40		ppbv	40	8/6/2011 1:54:00 PM
1,3-Butadiene	ND	40		ppbv	40	8/6/2011 1:54:00 PM
1,3-Dichlorobenzene	ND	40		ppbv	40	8/6/2011 1:54:00 PM
1,4-Dichlorobenzene	ND	40		ppbv	40	8/6/2011 1:54:00 PM
1,4-Dioxane	ND	40		ppbv	40	8/6/2011 1:54:00 PM
2-Butanone	ND	40		ppbv	40	8/6/2011 1:54:00 PM
2-Hexanone	ND	40		ppbv	40	8/6/2011 1:54:00 PM
2-Propanol	ND	40		ppbv	40	8/6/2011 1:54:00 PM
4-Methyl-2-pentanone	ND	40		ppbv	40	8/6/2011 1:54:00 PM
Acetone	40	40		ppbv	40	8/6/2011 1:54:00 PM
Benzene	72	40		ppbv	40	8/6/2011 1:54:00 PM
Benzyl chloride	ND	40		ppbv	40	8/6/2011 1:54:00 PM
Bromodichloromethane	ND	40		ppbv	40	8/6/2011 1:54:00 PM
Bromoform	ND	40		ppbv	40	8/6/2011 1:54:00 PM

Qualifiers:

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RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Original

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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/8/2011 10:58:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107364-008 **Matrix:** AIR

Client Sample ID VA0462

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	40		ppbv	40	8/6/2011 1:54:00 PM
Carbon disulfide	ND	40		ppbv	40	8/6/2011 1:54:00 PM
Carbon tetrachloride	ND	40		ppbv	40	8/6/2011 1:54:00 PM
Chlorobenzene	ND	40		ppbv	40	8/6/2011 1:54:00 PM
Chlorodibromomethane	ND	40		ppbv	40	8/6/2011 1:54:00 PM
Chloroethane	ND	40		ppbv	40	8/6/2011 1:54:00 PM
Chloroform	ND	40		ppbv	40	8/6/2011 1:54:00 PM
Chloromethane	ND	40		ppbv	40	8/6/2011 1:54:00 PM
cis-1,2-Dichloroethene	ND	40		ppbv	40	8/6/2011 1:54:00 PM
cis-1,3-dichloropropene	ND	40		ppbv	40	8/6/2011 1:54:00 PM
Cyclohexane	95	80		ppbv	40	8/6/2011 1:54:00 PM
Dichlorodifluoromethane	ND	40		ppbv	40	8/6/2011 1:54:00 PM
Ethanol	ND	200		ppbv	40	8/6/2011 1:54:00 PM
Ethyl acetate	ND	40		ppbv	40	8/6/2011 1:54:00 PM
Ethylbenzene	46	80	J	ppbv	40	8/6/2011 1:54:00 PM
Heptane	60	40		ppbv	40	8/6/2011 1:54:00 PM
Hexachlorobutadiene	ND	80		ppbv	40	8/6/2011 1:54:00 PM
m,p-Xylene	140	80		ppbv	40	8/6/2011 1:54:00 PM
Methylene chloride	ND	200		ppbv	40	8/6/2011 1:54:00 PM
Naphthalene	ND	40		ppbv	40	8/6/2011 1:54:00 PM
n-Hexane	ND	80		ppbv	40	8/6/2011 1:54:00 PM
o-Xylene	70	40		ppbv	40	8/6/2011 1:54:00 PM
Propylene	ND	40		ppbv	40	8/6/2011 1:54:00 PM
Styrene	ND	40		ppbv	40	8/6/2011 1:54:00 PM
tert-Butyl Methyl Ether	ND	40		ppbv	40	8/6/2011 1:54:00 PM
Tetrachloroethene	ND	40		ppbv	40	8/6/2011 1:54:00 PM
Tetrahydrofuran	ND	40		ppbv	40	8/6/2011 1:54:00 PM
Toluene	650	40		ppbv	40	8/6/2011 1:54:00 PM
trans-1,2-Dichloroethene	ND	40		ppbv	40	8/6/2011 1:54:00 PM
trans-1,3-dichloropropene	ND	40		ppbv	40	8/6/2011 1:54:00 PM
Trichloroethene	ND	40		ppbv	40	8/6/2011 1:54:00 PM
Trichlorofluoromethane	ND	40		ppbv	40	8/6/2011 1:54:00 PM
Vinyl acetate	ND	40		ppbv	40	8/6/2011 1:54:00 PM
Vinyl chloride	ND	40		ppbv	40	8/6/2011 1:54:00 PM

Qualifiers:

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

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/8/2011 10:58:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107364-008 **Matrix:** AIR

Client Sample ID VA0462

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	210	120		ppbv	40	8/6/2011 1:54:00 PM
Surr: 4-Bromofluorobenzene	106	70-130		%REC	40	8/6/2011 1:54:00 PM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **MT3**
C5-C8 Aliphatic Hydrocarbons	17,000	4,700	H	µg/m³	40	8/10/2011 10:41:00 AM
C9-C10 Aromatic Hydrocarbons	ND	5,300	H	µg/m³	40	8/10/2011 10:41:00 AM
C9-C12 Aliphatic Hydrocarbons	6,600	7,600	JH	µg/m³	40	8/10/2011 10:41:00 AM
Surr: 4-Bromofluorobenzene	96.0	70-130	H	%REC	40	8/10/2011 10:41:00 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

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Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/8/2011 11:24:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107364-009 **Matrix:** AIR

Client Sample ID VA0463

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.68	0.10		%	1	7/15/2011 4:01:00 PM
Carbon Monoxide	ND	0.10		%	1	7/15/2011 4:01:00 PM
Methane	ND	0.50		%	1	7/15/2011 4:01:00 PM
Nitrogen	78	0.10		%	1	7/15/2011 4:01:00 PM
Oxygen	21	0.10		%	1	7/15/2011 4:01:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	40		ppbv	40	8/6/2011 2:39:00 PM
1,1,2,2-Tetrachloroethane	ND	40		ppbv	40	8/6/2011 2:39:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	40		ppbv	40	8/6/2011 2:39:00 PM
1,1,2-Trichloroethane	ND	40		ppbv	40	8/6/2011 2:39:00 PM
1,1-Dichloroethane	ND	40		ppbv	40	8/6/2011 2:39:00 PM
1,1-Dichloroethene	ND	40		ppbv	40	8/6/2011 2:39:00 PM
1,2,4-Trichlorobenzene	ND	40		ppbv	40	8/6/2011 2:39:00 PM
1,2,4-Trimethylbenzene	46	40		ppbv	40	8/6/2011 2:39:00 PM
1,2-Dibromoethane	ND	40		ppbv	40	8/6/2011 2:39:00 PM
1,2-Dichlorobenzene	ND	40		ppbv	40	8/6/2011 2:39:00 PM
1,2-Dichloroethane	ND	40		ppbv	40	8/6/2011 2:39:00 PM
1,2-Dichloropropane	ND	40		ppbv	40	8/6/2011 2:39:00 PM
1,3,5-Trimethylbenzene	ND	40		ppbv	40	8/6/2011 2:39:00 PM
1,3-Butadiene	ND	40		ppbv	40	8/6/2011 2:39:00 PM
1,3-Dichlorobenzene	ND	40		ppbv	40	8/6/2011 2:39:00 PM
1,4-Dichlorobenzene	ND	40		ppbv	40	8/6/2011 2:39:00 PM
1,4-Dioxane	ND	40		ppbv	40	8/6/2011 2:39:00 PM
2-Butanone	55	40		ppbv	40	8/6/2011 2:39:00 PM
2-Hexanone	ND	40		ppbv	40	8/6/2011 2:39:00 PM
2-Propanol	ND	40		ppbv	40	8/6/2011 2:39:00 PM
4-Methyl-2-pentanone	ND	40		ppbv	40	8/6/2011 2:39:00 PM
Acetone	56	40		ppbv	40	8/6/2011 2:39:00 PM
Benzene	200	40		ppbv	40	8/6/2011 2:39:00 PM
Benzyl chloride	ND	40		ppbv	40	8/6/2011 2:39:00 PM
Bromodichloromethane	ND	40		ppbv	40	8/6/2011 2:39:00 PM
Bromoform	ND	40		ppbv	40	8/6/2011 2:39:00 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
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RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

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Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/8/2011 11:24:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107364-009 **Matrix:** AIR

Client Sample ID VA0463

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	40		ppbv	40	8/6/2011 2:39:00 PM
Carbon disulfide	ND	40		ppbv	40	8/6/2011 2:39:00 PM
Carbon tetrachloride	ND	40		ppbv	40	8/6/2011 2:39:00 PM
Chlorobenzene	ND	40		ppbv	40	8/6/2011 2:39:00 PM
Chlorodibromomethane	ND	40		ppbv	40	8/6/2011 2:39:00 PM
Chloroethane	ND	40		ppbv	40	8/6/2011 2:39:00 PM
Chloroform	ND	40		ppbv	40	8/6/2011 2:39:00 PM
Chloromethane	ND	40		ppbv	40	8/6/2011 2:39:00 PM
cis-1,2-Dichloroethene	ND	40		ppbv	40	8/6/2011 2:39:00 PM
cis-1,3-dichloropropene	ND	40		ppbv	40	8/6/2011 2:39:00 PM
Cyclohexane	210	80		ppbv	40	8/6/2011 2:39:00 PM
Dichlorodifluoromethane	ND	40		ppbv	40	8/6/2011 2:39:00 PM
Ethanol	ND	200		ppbv	40	8/6/2011 2:39:00 PM
Ethyl acetate	ND	40		ppbv	40	8/6/2011 2:39:00 PM
Ethylbenzene	75	80	J	ppbv	40	8/6/2011 2:39:00 PM
Heptane	110	40		ppbv	40	8/6/2011 2:39:00 PM
Hexachlorobutadiene	ND	80		ppbv	40	8/6/2011 2:39:00 PM
m,p-Xylene	240	80		ppbv	40	8/6/2011 2:39:00 PM
Methylene chloride	ND	200		ppbv	40	8/6/2011 2:39:00 PM
Naphthalene	ND	40		ppbv	40	8/6/2011 2:39:00 PM
n-Hexane	70	80	J	ppbv	40	8/6/2011 2:39:00 PM
o-Xylene	120	40		ppbv	40	8/6/2011 2:39:00 PM
Propylene	ND	40		ppbv	40	8/6/2011 2:39:00 PM
Styrene	ND	40		ppbv	40	8/6/2011 2:39:00 PM
tert-Butyl Methyl Ether	ND	40		ppbv	40	8/6/2011 2:39:00 PM
Tetrachloroethene	ND	40		ppbv	40	8/6/2011 2:39:00 PM
Tetrahydrofuran	ND	40		ppbv	40	8/6/2011 2:39:00 PM
Toluene	1,300	40		ppbv	40	8/6/2011 2:39:00 PM
trans-1,2-Dichloroethene	ND	40		ppbv	40	8/6/2011 2:39:00 PM
trans-1,3-dichloropropene	ND	40		ppbv	40	8/6/2011 2:39:00 PM
Trichloroethene	ND	40		ppbv	40	8/6/2011 2:39:00 PM
Trichlorofluoromethane	ND	40		ppbv	40	8/6/2011 2:39:00 PM
Vinyl acetate	ND	40		ppbv	40	8/6/2011 2:39:00 PM
Vinyl chloride	ND	40		ppbv	40	8/6/2011 2:39:00 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
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Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/8/2011 11:24:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107364-009 **Matrix:** AIR

Client Sample ID VA0463

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	360	120		ppbv	40	8/6/2011 2:39:00 PM
Surr: 4-Bromofluorobenzene	106	70-130		%REC	40	8/6/2011 2:39:00 PM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **MT3**
C5-C8 Aliphatic Hydrocarbons	17,000	4,700	H	µg/m³	40	8/8/2011 7:10:00 PM
C9-C10 Aromatic Hydrocarbons	ND	5,300	H	µg/m³	40	8/8/2011 7:10:00 PM
C9-C12 Aliphatic Hydrocarbons	8,000	7,600	H	µg/m³	40	8/8/2011 7:10:00 PM
Surr: 4-Bromofluorobenzene	97.0	70-130	H	%REC	40	8/8/2011 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

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Analytical Report

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WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/8/2011 11:24:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107364-010 **Matrix:** AIR

Client Sample ID VA0464

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.64	0.10		%	1	7/18/2011 12:41:00 PM
Carbon Monoxide	ND	0.10		%	1	7/18/2011 12:41:00 PM
Methane	ND	0.50		%	1	7/18/2011 12:41:00 PM
Nitrogen	78	0.10		%	1	7/18/2011 12:41:00 PM
Oxygen	21	0.10		%	1	7/18/2011 12:41:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	40	H	ppbv	40	8/8/2011 1:36:00 AM
1,1,2,2-Tetrachloroethane	ND	40	H	ppbv	40	8/8/2011 1:36:00 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	40	H	ppbv	40	8/8/2011 1:36:00 AM
1,1,2-Trichloroethane	ND	40	H	ppbv	40	8/8/2011 1:36:00 AM
1,1-Dichloroethane	ND	40	H	ppbv	40	8/8/2011 1:36:00 AM
1,1-Dichloroethene	ND	40	H	ppbv	40	8/8/2011 1:36:00 AM
1,2,4-Trichlorobenzene	ND	40	H	ppbv	40	8/8/2011 1:36:00 AM
1,2,4-Trimethylbenzene	ND	40	H	ppbv	40	8/8/2011 1:36:00 AM
1,2-Dibromoethane	ND	40	H	ppbv	40	8/8/2011 1:36:00 AM
1,2-Dichlorobenzene	ND	40	H	ppbv	40	8/8/2011 1:36:00 AM
1,2-Dichloroethane	ND	40	H	ppbv	40	8/8/2011 1:36:00 AM
1,2-Dichloropropane	ND	40	H	ppbv	40	8/8/2011 1:36:00 AM
1,3,5-Trimethylbenzene	ND	40	H	ppbv	40	8/8/2011 1:36:00 AM
1,3-Butadiene	ND	40	H	ppbv	40	8/8/2011 1:36:00 AM
1,3-Dichlorobenzene	ND	40	H	ppbv	40	8/8/2011 1:36:00 AM
1,4-Dichlorobenzene	ND	40	H	ppbv	40	8/8/2011 1:36:00 AM
1,4-Dioxane	ND	40	H	ppbv	40	8/8/2011 1:36:00 AM
2-Butanone	ND	40	H	ppbv	40	8/8/2011 1:36:00 AM
2-Hexanone	ND	40	H	ppbv	40	8/8/2011 1:36:00 AM
2-Propanol	ND	40	H	ppbv	40	8/8/2011 1:36:00 AM
4-Methyl-2-pentanone	ND	40	H	ppbv	40	8/8/2011 1:36:00 AM
Acetone	ND	40	H	ppbv	40	8/8/2011 1:36:00 AM
Benzene	96	40	H	ppbv	40	8/8/2011 1:36:00 AM
Benzyl chloride	ND	40	H	ppbv	40	8/8/2011 1:36:00 AM
Bromodichloromethane	ND	40	H	ppbv	40	8/8/2011 1:36:00 AM
Bromoform	ND	40	H	ppbv	40	8/8/2011 1:36:00 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

Original

RTI LABORATORIES, INC.

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

Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/8/2011 11:24:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107364-010 **Matrix:** AIR

Client Sample ID VA0464

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	40	H	ppbv	40	8/8/2011 1:36:00 AM
Carbon disulfide	ND	40	H	ppbv	40	8/8/2011 1:36:00 AM
Carbon tetrachloride	ND	40	H	ppbv	40	8/8/2011 1:36:00 AM
Chlorobenzene	ND	40	H	ppbv	40	8/8/2011 1:36:00 AM
Chlorodibromomethane	ND	40	H	ppbv	40	8/8/2011 1:36:00 AM
Chloroethane	ND	40	H	ppbv	40	8/8/2011 1:36:00 AM
Chloroform	ND	40	H	ppbv	40	8/8/2011 1:36:00 AM
Chloromethane	ND	40	H	ppbv	40	8/8/2011 1:36:00 AM
cis-1,2-Dichloroethene	ND	40	H	ppbv	40	8/8/2011 1:36:00 AM
cis-1,3-dichloropropene	ND	40	H	ppbv	40	8/8/2011 1:36:00 AM
Cyclohexane	150	80	H	ppbv	40	8/8/2011 1:36:00 AM
Dichlorodifluoromethane	ND	40	H	ppbv	40	8/8/2011 1:36:00 AM
Ethanol	ND	200	H	ppbv	40	8/8/2011 1:36:00 AM
Ethyl acetate	ND	40	H	ppbv	40	8/8/2011 1:36:00 AM
Ethylbenzene	47	80	JH	ppbv	40	8/8/2011 1:36:00 AM
Heptane	100	40	H	ppbv	40	8/8/2011 1:36:00 AM
Hexachlorobutadiene	ND	80	H	ppbv	40	8/8/2011 1:36:00 AM
m,p-Xylene	150	80	H	ppbv	40	8/8/2011 1:36:00 AM
Methylene chloride	ND	200	H	ppbv	40	8/8/2011 1:36:00 AM
Naphthalene	ND	40	H	ppbv	40	8/8/2011 1:36:00 AM
n-Hexane	53	80	JH	ppbv	40	8/8/2011 1:36:00 AM
o-Xylene	65	40	H	ppbv	40	8/8/2011 1:36:00 AM
Propylene	ND	40	H	ppbv	40	8/8/2011 1:36:00 AM
Styrene	ND	40	H	ppbv	40	8/8/2011 1:36:00 AM
tert-Butyl Methyl Ether	ND	40	H	ppbv	40	8/8/2011 1:36:00 AM
Tetrachloroethene	ND	40	H	ppbv	40	8/8/2011 1:36:00 AM
Tetrahydrofuran	ND	40	H	ppbv	40	8/8/2011 1:36:00 AM
Toluene	570	40	H	ppbv	40	8/8/2011 1:36:00 AM
trans-1,2-Dichloroethene	ND	40	H	ppbv	40	8/8/2011 1:36:00 AM
trans-1,3-dichloropropene	ND	40	H	ppbv	40	8/8/2011 1:36:00 AM
Trichloroethene	ND	40	H	ppbv	40	8/8/2011 1:36:00 AM
Trichlorofluoromethane	ND	40	H	ppbv	40	8/8/2011 1:36:00 AM
Vinyl acetate	ND	40	H	ppbv	40	8/8/2011 1:36:00 AM
Vinyl chloride	ND	40	H	ppbv	40	8/8/2011 1:36:00 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#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/8/2011 11:24:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107364-010 **Matrix:** AIR

Client Sample ID VA0464

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	210	120	H	ppbv	40	8/8/2011 1:36:00 AM
Surr: 4-Bromofluorobenzene	102	70-130	H	%REC	40	8/8/2011 1:36:00 AM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **MT3**
C5-C8 Aliphatic Hydrocarbons	17,000	4,700	H	µg/m³	40	8/8/2011 7:52:00 PM
C9-C10 Aromatic Hydrocarbons	ND	5,300	H	µg/m³	40	8/8/2011 7:52:00 PM
C9-C12 Aliphatic Hydrocarbons	8,300	7,600	H	µg/m³	40	8/8/2011 7:52:00 PM
Surr: 4-Bromofluorobenzene	96.9	70-130	H	%REC	40	8/8/2011 7:52:00 PM

Qualifiers:

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

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/8/2011 1:30:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107364-011 **Matrix:** AIR

Client Sample ID VA0465

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.21	0.10		%	1	7/18/2011 1:01:00 PM
Carbon Monoxide	ND	0.10		%	1	7/18/2011 1:01:00 PM
Methane	ND	0.50		%	1	7/18/2011 1:01:00 PM
Nitrogen	78	0.10		%	1	7/18/2011 1:01:00 PM
Oxygen	21	0.10		%	1	7/18/2011 1:01:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	40	H	ppbv	40	8/8/2011 2:21:00 AM
1,1,2,2-Tetrachloroethane	ND	40	H	ppbv	40	8/8/2011 2:21:00 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	40	H	ppbv	40	8/8/2011 2:21:00 AM
1,1,2-Trichloroethane	ND	40	H	ppbv	40	8/8/2011 2:21:00 AM
1,1-Dichloroethane	ND	40	H	ppbv	40	8/8/2011 2:21:00 AM
1,1-Dichloroethene	ND	40	H	ppbv	40	8/8/2011 2:21:00 AM
1,2,4-Trichlorobenzene	ND	40	H	ppbv	40	8/8/2011 2:21:00 AM
1,2,4-Trimethylbenzene	ND	40	H	ppbv	40	8/8/2011 2:21:00 AM
1,2-Dibromoethane	ND	40	H	ppbv	40	8/8/2011 2:21:00 AM
1,2-Dichlorobenzene	ND	40	H	ppbv	40	8/8/2011 2:21:00 AM
1,2-Dichloroethane	ND	40	H	ppbv	40	8/8/2011 2:21:00 AM
1,2-Dichloropropane	ND	40	H	ppbv	40	8/8/2011 2:21:00 AM
1,3,5-Trimethylbenzene	ND	40	H	ppbv	40	8/8/2011 2:21:00 AM
1,3-Butadiene	ND	40	H	ppbv	40	8/8/2011 2:21:00 AM
1,3-Dichlorobenzene	ND	40	H	ppbv	40	8/8/2011 2:21:00 AM
1,4-Dichlorobenzene	ND	40	H	ppbv	40	8/8/2011 2:21:00 AM
1,4-Dioxane	ND	40	H	ppbv	40	8/8/2011 2:21:00 AM
2-Butanone	ND	40	H	ppbv	40	8/8/2011 2:21:00 AM
2-Hexanone	ND	40	H	ppbv	40	8/8/2011 2:21:00 AM
2-Propanol	ND	40	H	ppbv	40	8/8/2011 2:21:00 AM
4-Methyl-2-pentanone	ND	40	H	ppbv	40	8/8/2011 2:21:00 AM
Acetone	ND	40	H	ppbv	40	8/8/2011 2:21:00 AM
Benzene	58	40	H	ppbv	40	8/8/2011 2:21:00 AM
Benzyl chloride	ND	40	H	ppbv	40	8/8/2011 2:21:00 AM
Bromodichloromethane	ND	40	H	ppbv	40	8/8/2011 2:21:00 AM
Bromoform	ND	40	H	ppbv	40	8/8/2011 2:21:00 AM

Qualifiers:

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Analytical Report

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WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/8/2011 1:30:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107364-011 **Matrix:** AIR

Client Sample ID VA0465

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	40	H	ppbv	40	8/8/2011 2:21:00 AM
Carbon disulfide	ND	40	H	ppbv	40	8/8/2011 2:21:00 AM
Carbon tetrachloride	ND	40	H	ppbv	40	8/8/2011 2:21:00 AM
Chlorobenzene	ND	40	H	ppbv	40	8/8/2011 2:21:00 AM
Chlorodibromomethane	ND	40	H	ppbv	40	8/8/2011 2:21:00 AM
Chloroethane	ND	40	H	ppbv	40	8/8/2011 2:21:00 AM
Chloroform	ND	40	H	ppbv	40	8/8/2011 2:21:00 AM
Chloromethane	ND	40	H	ppbv	40	8/8/2011 2:21:00 AM
cis-1,2-Dichloroethene	ND	40	H	ppbv	40	8/8/2011 2:21:00 AM
cis-1,3-dichloropropene	ND	40	H	ppbv	40	8/8/2011 2:21:00 AM
Cyclohexane	88	80	H	ppbv	40	8/8/2011 2:21:00 AM
Dichlorodifluoromethane	ND	40	H	ppbv	40	8/8/2011 2:21:00 AM
Ethanol	ND	200	H	ppbv	40	8/8/2011 2:21:00 AM
Ethyl acetate	ND	40	H	ppbv	40	8/8/2011 2:21:00 AM
Ethylbenzene	ND	80	H	ppbv	40	8/8/2011 2:21:00 AM
Heptane	58	40	H	ppbv	40	8/8/2011 2:21:00 AM
Hexachlorobutadiene	ND	80	H	ppbv	40	8/8/2011 2:21:00 AM
m,p-Xylene	100	80	H	ppbv	40	8/8/2011 2:21:00 AM
Methylene chloride	ND	200	H	ppbv	40	8/8/2011 2:21:00 AM
Naphthalene	ND	40	H	ppbv	40	8/8/2011 2:21:00 AM
n-Hexane	ND	80	H	ppbv	40	8/8/2011 2:21:00 AM
o-Xylene	50	40	H	ppbv	40	8/8/2011 2:21:00 AM
Propylene	ND	40	H	ppbv	40	8/8/2011 2:21:00 AM
Styrene	ND	40	H	ppbv	40	8/8/2011 2:21:00 AM
tert-Butyl Methyl Ether	ND	40	H	ppbv	40	8/8/2011 2:21:00 AM
Tetrachloroethene	ND	40	H	ppbv	40	8/8/2011 2:21:00 AM
Tetrahydrofuran	ND	40	H	ppbv	40	8/8/2011 2:21:00 AM
Toluene	350	40	H	ppbv	40	8/8/2011 2:21:00 AM
trans-1,2-Dichloroethene	ND	40	H	ppbv	40	8/8/2011 2:21:00 AM
trans-1,3-dichloropropene	ND	40	H	ppbv	40	8/8/2011 2:21:00 AM
Trichloroethene	ND	40	H	ppbv	40	8/8/2011 2:21:00 AM
Trichlorofluoromethane	ND	40	H	ppbv	40	8/8/2011 2:21:00 AM
Vinyl acetate	ND	40	H	ppbv	40	8/8/2011 2:21:00 AM
Vinyl chloride	ND	40	H	ppbv	40	8/8/2011 2:21:00 AM

Qualifiers:

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

Original

RTI LABORATORIES, INC.

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

Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/8/2011 1:30:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107364-011 **Matrix:** AIR

Client Sample ID VA0465

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	150	120	H	ppbv	40	8/8/2011 2:21:00 AM
Surr: 4-Bromofluorobenzene	100	70-130	H	%REC	40	8/8/2011 2:21:00 AM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **MT3**
C5-C8 Aliphatic Hydrocarbons	13,000	4,700	H	µg/m³	40	8/8/2011 8:35:00 PM
C9-C10 Aromatic Hydrocarbons	ND	5,300	H	µg/m³	40	8/8/2011 8:35:00 PM
C9-C12 Aliphatic Hydrocarbons	7,900	7,600	H	µg/m³	40	8/8/2011 8:35:00 PM
Surr: 4-Bromofluorobenzene	98.0	70-130	H	%REC	40	8/8/2011 8:35:00 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
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Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/8/2011 2:08:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107364-012 **Matrix:** AIR

Client Sample ID VA0466

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.33	0.10		%	1	7/18/2011 1:22:00 PM
Carbon Monoxide	ND	0.10		%	1	7/18/2011 1:22:00 PM
Methane	ND	0.50		%	1	7/18/2011 1:22:00 PM
Nitrogen	78	0.10		%	1	7/18/2011 1:22:00 PM
Oxygen	21	0.10		%	1	7/18/2011 1:22:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	40	H	ppbv	40	8/9/2011 6:26:00 PM
1,1,2,2-Tetrachloroethane	ND	40	H	ppbv	40	8/9/2011 6:26:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	40	H	ppbv	40	8/9/2011 6:26:00 PM
1,1,2-Trichloroethane	ND	40	H	ppbv	40	8/9/2011 6:26:00 PM
1,1-Dichloroethane	ND	40	H	ppbv	40	8/9/2011 6:26:00 PM
1,1-Dichloroethene	ND	40	H	ppbv	40	8/9/2011 6:26:00 PM
1,2,4-Trichlorobenzene	ND	40	H	ppbv	40	8/9/2011 6:26:00 PM
1,2,4-Trimethylbenzene	ND	40	H	ppbv	40	8/9/2011 6:26:00 PM
1,2-Dibromoethane	ND	40	H	ppbv	40	8/9/2011 6:26:00 PM
1,2-Dichlorobenzene	ND	40	H	ppbv	40	8/9/2011 6:26:00 PM
1,2-Dichloroethane	ND	40	H	ppbv	40	8/9/2011 6:26:00 PM
1,2-Dichloropropane	ND	40	H	ppbv	40	8/9/2011 6:26:00 PM
1,3,5-Trimethylbenzene	ND	40	H	ppbv	40	8/9/2011 6:26:00 PM
1,3-Butadiene	ND	40	H	ppbv	40	8/9/2011 6:26:00 PM
1,3-Dichlorobenzene	ND	40	H	ppbv	40	8/9/2011 6:26:00 PM
1,4-Dichlorobenzene	ND	40	H	ppbv	40	8/9/2011 6:26:00 PM
1,4-Dioxane	ND	40	H	ppbv	40	8/9/2011 6:26:00 PM
2-Butanone	ND	40	H	ppbv	40	8/9/2011 6:26:00 PM
2-Hexanone	ND	40	H	ppbv	40	8/9/2011 6:26:00 PM
2-Propanol	ND	40	H	ppbv	40	8/9/2011 6:26:00 PM
4-Methyl-2-pentanone	ND	40	H	ppbv	40	8/9/2011 6:26:00 PM
Acetone	ND	40	H	ppbv	40	8/9/2011 6:26:00 PM
Benzene	190	40	H	ppbv	40	8/9/2011 6:26:00 PM
Benzyl chloride	ND	40	H	ppbv	40	8/9/2011 6:26:00 PM
Bromodichloromethane	ND	40	H	ppbv	40	8/9/2011 6:26:00 PM
Bromoform	ND	40	H	ppbv	40	8/9/2011 6:26:00 PM

Qualifiers:

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

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WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/8/2011 2:08:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107364-012 **Matrix:** AIR

Client Sample ID VA0466

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	40	H	ppbv	40	8/9/2011 6:26:00 PM
Carbon disulfide	ND	40	H	ppbv	40	8/9/2011 6:26:00 PM
Carbon tetrachloride	ND	40	H	ppbv	40	8/9/2011 6:26:00 PM
Chlorobenzene	ND	40	H	ppbv	40	8/9/2011 6:26:00 PM
Chlorodibromomethane	ND	40	H	ppbv	40	8/9/2011 6:26:00 PM
Chloroethane	ND	40	H	ppbv	40	8/9/2011 6:26:00 PM
Chloroform	ND	40	H	ppbv	40	8/9/2011 6:26:00 PM
Chloromethane	ND	40	H	ppbv	40	8/9/2011 6:26:00 PM
cis-1,2-Dichloroethene	ND	40	H	ppbv	40	8/9/2011 6:26:00 PM
cis-1,3-dichloropropene	ND	40	H	ppbv	40	8/9/2011 6:26:00 PM
Cyclohexane	160	80	H	ppbv	40	8/9/2011 6:26:00 PM
Dichlorodifluoromethane	ND	40	H	ppbv	40	8/9/2011 6:26:00 PM
Ethanol	ND	200	H	ppbv	40	8/9/2011 6:26:00 PM
Ethyl acetate	ND	40	H	ppbv	40	8/9/2011 6:26:00 PM
Ethylbenzene	ND	80	H	ppbv	40	8/9/2011 6:26:00 PM
Heptane	ND	40	H	ppbv	40	8/9/2011 6:26:00 PM
Hexachlorobutadiene	ND	80	H	ppbv	40	8/9/2011 6:26:00 PM
m,p-Xylene	54	80	JH	ppbv	40	8/9/2011 6:26:00 PM
Methylene chloride	ND	200	H	ppbv	40	8/9/2011 6:26:00 PM
Naphthalene	ND	40	H	ppbv	40	8/9/2011 6:26:00 PM
n-Hexane	ND	80	H	ppbv	40	8/9/2011 6:26:00 PM
o-Xylene	ND	40	H	ppbv	40	8/9/2011 6:26:00 PM
Propylene	52	40	H	ppbv	40	8/9/2011 6:26:00 PM
Styrene	ND	40	H	ppbv	40	8/9/2011 6:26:00 PM
tert-Butyl Methyl Ether	ND	40	H	ppbv	40	8/9/2011 6:26:00 PM
Tetrachloroethene	ND	40	H	ppbv	40	8/9/2011 6:26:00 PM
Tetrahydrofuran	ND	40	H	ppbv	40	8/9/2011 6:26:00 PM
Toluene	210	40	H	ppbv	40	8/9/2011 6:26:00 PM
trans-1,2-Dichloroethene	ND	40	H	ppbv	40	8/9/2011 6:26:00 PM
trans-1,3-dichloropropene	ND	40	H	ppbv	40	8/9/2011 6:26:00 PM
Trichloroethene	ND	40	H	ppbv	40	8/9/2011 6:26:00 PM
Trichlorofluoromethane	ND	40	H	ppbv	40	8/9/2011 6:26:00 PM
Vinyl acetate	ND	40	H	ppbv	40	8/9/2011 6:26:00 PM
Vinyl chloride	ND	40	H	ppbv	40	8/9/2011 6:26:00 PM

Qualifiers:

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

Original

RTI LABORATORIES, INC.

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

Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/8/2011 2:08:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107364-012 **Matrix:** AIR

Client Sample ID VA0466

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	54	120	JH	ppbv	40	8/9/2011 6:26:00 PM
Surr: 4-Bromofluorobenzene	103	70-130	H	%REC	40	8/9/2011 6:26:00 PM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **MT3**
C5-C8 Aliphatic Hydrocarbons	37,000	4,700	H	µg/m³	40	8/8/2011 9:17:00 PM
C9-C10 Aromatic Hydrocarbons	ND	5,300	H	µg/m³	40	8/8/2011 9:17:00 PM
C9-C12 Aliphatic Hydrocarbons	9,400	7,600	H	µg/m³	40	8/8/2011 9:17:00 PM
Surr: 4-Bromofluorobenzene	98.3	70-130	H	%REC	40	8/8/2011 9:17:00 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#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/8/2011 2:50:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107364-013 **Matrix:** AIR

Client Sample ID VA0467

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.19	0.10		%	1	7/18/2011 1:42:00 PM
Carbon Monoxide	ND	0.10		%	1	7/18/2011 1:42:00 PM
Methane	ND	0.50		%	1	7/18/2011 1:42:00 PM
Nitrogen	78	0.10		%	1	7/18/2011 1:42:00 PM
Oxygen	21	0.10		%	1	7/18/2011 1:42:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	800		ppbv	800	8/6/2011 6:39:00 PM
1,1,2,2-Tetrachloroethane	ND	800		ppbv	800	8/6/2011 6:39:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	800		ppbv	800	8/6/2011 6:39:00 PM
1,1,2-Trichloroethane	ND	800		ppbv	800	8/6/2011 6:39:00 PM
1,1-Dichloroethane	ND	800		ppbv	800	8/6/2011 6:39:00 PM
1,1-Dichloroethene	ND	800		ppbv	800	8/6/2011 6:39:00 PM
1,2,4-Trichlorobenzene	ND	800		ppbv	800	8/6/2011 6:39:00 PM
1,2,4-Trimethylbenzene	ND	800		ppbv	800	8/6/2011 6:39:00 PM
1,2-Dibromoethane	ND	800		ppbv	800	8/6/2011 6:39:00 PM
1,2-Dichlorobenzene	ND	800		ppbv	800	8/6/2011 6:39:00 PM
1,2-Dichloroethane	ND	800		ppbv	800	8/6/2011 6:39:00 PM
1,2-Dichloropropane	ND	800		ppbv	800	8/6/2011 6:39:00 PM
1,3,5-Trimethylbenzene	ND	800		ppbv	800	8/6/2011 6:39:00 PM
1,3-Butadiene	ND	800		ppbv	800	8/6/2011 6:39:00 PM
1,3-Dichlorobenzene	ND	800		ppbv	800	8/6/2011 6:39:00 PM
1,4-Dichlorobenzene	ND	800		ppbv	800	8/6/2011 6:39:00 PM
1,4-Dioxane	ND	800		ppbv	800	8/6/2011 6:39:00 PM
2-Butanone	ND	800		ppbv	800	8/6/2011 6:39:00 PM
2-Hexanone	ND	800		ppbv	800	8/6/2011 6:39:00 PM
2-Propanol	920	800		ppbv	800	8/6/2011 6:39:00 PM
4-Methyl-2-pentanone	ND	800		ppbv	800	8/6/2011 6:39:00 PM
Acetone	2,100	800		ppbv	800	8/6/2011 6:39:00 PM
Benzene	1,400	800		ppbv	800	8/6/2011 6:39:00 PM
Benzyl chloride	ND	800		ppbv	800	8/6/2011 6:39:00 PM
Bromodichloromethane	ND	800		ppbv	800	8/6/2011 6:39:00 PM
Bromoform	ND	800		ppbv	800	8/6/2011 6:39:00 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

Original

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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/8/2011 2:50:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107364-013 **Matrix:** AIR

Client Sample ID VA0467

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	800		ppbv	800	8/6/2011 6:39:00 PM
Carbon disulfide	ND	800		ppbv	800	8/6/2011 6:39:00 PM
Carbon tetrachloride	ND	800		ppbv	800	8/6/2011 6:39:00 PM
Chlorobenzene	ND	800		ppbv	800	8/6/2011 6:39:00 PM
Chlorodibromomethane	ND	800		ppbv	800	8/6/2011 6:39:00 PM
Chloroethane	ND	800		ppbv	800	8/6/2011 6:39:00 PM
Chloroform	ND	800		ppbv	800	8/6/2011 6:39:00 PM
Chloromethane	ND	800		ppbv	800	8/6/2011 6:39:00 PM
cis-1,2-Dichloroethene	ND	800		ppbv	800	8/6/2011 6:39:00 PM
cis-1,3-dichloropropene	ND	800		ppbv	800	8/6/2011 6:39:00 PM
Cyclohexane	2,400	1,600		ppbv	800	8/6/2011 6:39:00 PM
Dichlorodifluoromethane	ND	800		ppbv	800	8/6/2011 6:39:00 PM
Ethanol	ND	4,000		ppbv	800	8/6/2011 6:39:00 PM
Ethyl acetate	ND	800		ppbv	800	8/6/2011 6:39:00 PM
Ethylbenzene	ND	1,600		ppbv	800	8/6/2011 6:39:00 PM
Heptane	ND	800		ppbv	800	8/6/2011 6:39:00 PM
Hexachlorobutadiene	ND	1,600		ppbv	800	8/6/2011 6:39:00 PM
m,p-Xylene	ND	1,600		ppbv	800	8/6/2011 6:39:00 PM
Methylene chloride	8,500	4,000		ppbv	800	8/6/2011 6:39:00 PM
Naphthalene	ND	800		ppbv	800	8/6/2011 6:39:00 PM
n-Hexane	6,000	1,600		ppbv	800	8/6/2011 6:39:00 PM
o-Xylene	ND	800		ppbv	800	8/6/2011 6:39:00 PM
Propylene	ND	800		ppbv	800	8/6/2011 6:39:00 PM
Styrene	ND	800		ppbv	800	8/6/2011 6:39:00 PM
tert-Butyl Methyl Ether	ND	800		ppbv	800	8/6/2011 6:39:00 PM
Tetrachloroethene	ND	800		ppbv	800	8/6/2011 6:39:00 PM
Tetrahydrofuran	ND	800		ppbv	800	8/6/2011 6:39:00 PM
Toluene	3,400	800		ppbv	800	8/6/2011 6:39:00 PM
trans-1,2-Dichloroethene	ND	800		ppbv	800	8/6/2011 6:39:00 PM
trans-1,3-dichloropropene	ND	800		ppbv	800	8/6/2011 6:39:00 PM
Trichloroethene	ND	800		ppbv	800	8/6/2011 6:39:00 PM
Trichlorofluoromethane	ND	800		ppbv	800	8/6/2011 6:39:00 PM
Vinyl acetate	ND	800		ppbv	800	8/6/2011 6:39:00 PM
Vinyl chloride	ND	800		ppbv	800	8/6/2011 6:39:00 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

Original

RTI LABORATORIES, INC.

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

Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/8/2011 2:50:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107364-013 **Matrix:** AIR

Client Sample ID VA0467

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 6:39:00 PM
Surr: 4-Bromofluorobenzene	101	70-130		%REC	800	8/6/2011 6:39:00 PM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **MT3**
C5-C8 Aliphatic Hydrocarbons	690,000	94,000	H	µg/m³	800	8/10/2011 6:56:00 PM
C9-C10 Aromatic Hydrocarbons	ND	110,000	H	µg/m³	800	8/10/2011 6:56:00 PM
C9-C12 Aliphatic Hydrocarbons	ND	150,000	H	µg/m³	800	8/10/2011 6:56:00 PM
Surr: 4-Bromofluorobenzene	96.5	70-130	H	%REC	800	8/10/2011 6:56:00 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

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Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/8/2011 3:37:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107364-014 **Matrix:** AIR

Client Sample ID VA0468

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.32	0.10		%	1	7/18/2011 2:08:00 PM
Carbon Monoxide	ND	0.10		%	1	7/18/2011 2:08:00 PM
Methane	ND	0.50		%	1	7/18/2011 2:08:00 PM
Nitrogen	78	0.10		%	1	7/18/2011 2:08:00 PM
Oxygen	21	0.10		%	1	7/18/2011 2:08:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	800		ppbv	800	8/6/2011 7:28:00 PM
1,1,2,2-Tetrachloroethane	ND	800		ppbv	800	8/6/2011 7:28:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	800		ppbv	800	8/6/2011 7:28:00 PM
1,1,2-Trichloroethane	ND	800		ppbv	800	8/6/2011 7:28:00 PM
1,1-Dichloroethane	ND	800		ppbv	800	8/6/2011 7:28:00 PM
1,1-Dichloroethene	ND	800		ppbv	800	8/6/2011 7:28:00 PM
1,2,4-Trichlorobenzene	ND	800		ppbv	800	8/6/2011 7:28:00 PM
1,2,4-Trimethylbenzene	ND	800		ppbv	800	8/6/2011 7:28:00 PM
1,2-Dibromoethane	ND	800		ppbv	800	8/6/2011 7:28:00 PM
1,2-Dichlorobenzene	ND	800		ppbv	800	8/6/2011 7:28:00 PM
1,2-Dichloroethane	ND	800		ppbv	800	8/6/2011 7:28:00 PM
1,2-Dichloropropane	ND	800		ppbv	800	8/6/2011 7:28:00 PM
1,3,5-Trimethylbenzene	ND	800		ppbv	800	8/6/2011 7:28:00 PM
1,3-Butadiene	ND	800		ppbv	800	8/6/2011 7:28:00 PM
1,3-Dichlorobenzene	ND	800		ppbv	800	8/6/2011 7:28:00 PM
1,4-Dichlorobenzene	ND	800		ppbv	800	8/6/2011 7:28:00 PM
1,4-Dioxane	ND	800		ppbv	800	8/6/2011 7:28:00 PM
2-Butanone	ND	800		ppbv	800	8/6/2011 7:28:00 PM
2-Hexanone	ND	800		ppbv	800	8/6/2011 7:28:00 PM
2-Propanol	ND	800		ppbv	800	8/6/2011 7:28:00 PM
4-Methyl-2-pentanone	ND	800		ppbv	800	8/6/2011 7:28:00 PM
Acetone	2,300	800		ppbv	800	8/6/2011 7:28:00 PM
Benzene	ND	800		ppbv	800	8/6/2011 7:28:00 PM
Benzyl chloride	ND	800		ppbv	800	8/6/2011 7:28:00 PM
Bromodichloromethane	ND	800		ppbv	800	8/6/2011 7:28:00 PM
Bromoform	ND	800		ppbv	800	8/6/2011 7:28:00 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
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Original

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Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/8/2011 3:37:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107364-014 **Matrix:** AIR

Client Sample ID VA0468

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	800		ppbv	800	8/6/2011 7:28:00 PM
Carbon disulfide	ND	800		ppbv	800	8/6/2011 7:28:00 PM
Carbon tetrachloride	ND	800		ppbv	800	8/6/2011 7:28:00 PM
Chlorobenzene	ND	800		ppbv	800	8/6/2011 7:28:00 PM
Chlorodibromomethane	ND	800		ppbv	800	8/6/2011 7:28:00 PM
Chloroethane	ND	800		ppbv	800	8/6/2011 7:28:00 PM
Chloroform	ND	800		ppbv	800	8/6/2011 7:28:00 PM
Chloromethane	ND	800		ppbv	800	8/6/2011 7:28:00 PM
cis-1,2-Dichloroethene	ND	800		ppbv	800	8/6/2011 7:28:00 PM
cis-1,3-dichloropropene	ND	800		ppbv	800	8/6/2011 7:28:00 PM
Cyclohexane	1,700	1,600		ppbv	800	8/6/2011 7:28:00 PM
Dichlorodifluoromethane	ND	800		ppbv	800	8/6/2011 7:28:00 PM
Ethanol	ND	4,000		ppbv	800	8/6/2011 7:28:00 PM
Ethyl acetate	ND	800		ppbv	800	8/6/2011 7:28:00 PM
Ethylbenzene	ND	1,600		ppbv	800	8/6/2011 7:28:00 PM
Heptane	ND	800		ppbv	800	8/6/2011 7:28:00 PM
Hexachlorobutadiene	ND	1,600		ppbv	800	8/6/2011 7:28:00 PM
m,p-Xylene	ND	1,600		ppbv	800	8/6/2011 7:28:00 PM
Methylene chloride	8,200	4,000		ppbv	800	8/6/2011 7:28:00 PM
Naphthalene	ND	800		ppbv	800	8/6/2011 7:28:00 PM
n-Hexane	2,800	1,600		ppbv	800	8/6/2011 7:28:00 PM
o-Xylene	ND	800		ppbv	800	8/6/2011 7:28:00 PM
Propylene	ND	800		ppbv	800	8/6/2011 7:28:00 PM
Styrene	ND	800		ppbv	800	8/6/2011 7:28:00 PM
tert-Butyl Methyl Ether	ND	800		ppbv	800	8/6/2011 7:28:00 PM
Tetrachloroethene	ND	800		ppbv	800	8/6/2011 7:28:00 PM
Tetrahydrofuran	ND	800		ppbv	800	8/6/2011 7:28:00 PM
Toluene	1,200	800		ppbv	800	8/6/2011 7:28:00 PM
trans-1,2-Dichloroethene	ND	800		ppbv	800	8/6/2011 7:28:00 PM
trans-1,3-dichloropropene	ND	800		ppbv	800	8/6/2011 7:28:00 PM
Trichloroethene	ND	800		ppbv	800	8/6/2011 7:28:00 PM
Trichlorofluoromethane	ND	800		ppbv	800	8/6/2011 7:28:00 PM
Vinyl acetate	ND	800		ppbv	800	8/6/2011 7:28:00 PM
Vinyl chloride	ND	800		ppbv	800	8/6/2011 7:28:00 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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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/8/2011 3:37:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107364-014 **Matrix:** AIR

Client Sample ID VA0468

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 7:28:00 PM
Surr: 4-Bromofluorobenzene	98.5	70-130		%REC	800	8/6/2011 7:28:00 PM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **MT3**
C5-C8 Aliphatic Hydrocarbons	200,000	12,000	H	µg/m³	100	8/11/2011 6:42:00 PM
C9-C10 Aromatic Hydrocarbons	ND	13,000	H	µg/m³	100	8/11/2011 6:42:00 PM
C9-C12 Aliphatic Hydrocarbons	11,000	19,000	JH	µg/m³	100	8/11/2011 6:42:00 PM
Surr: 4-Bromofluorobenzene	95.9	70-130	H	%REC	100	8/11/2011 6:42:00 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

Original

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Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/6/2011 9:01:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107364-015 **Matrix:** AIR

Client Sample ID VA0537

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.78	0.10		%	1	7/18/2011 2:33:00 PM
Carbon Monoxide	ND	0.10		%	1	7/18/2011 2:33:00 PM
Methane	ND	0.50		%	1	7/18/2011 2:33:00 PM
Nitrogen	78	0.10		%	1	7/18/2011 2:33:00 PM
Oxygen	21	0.10		%	1	7/18/2011 2:33:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	40		ppbv	40	8/1/2011 10:15:00 PM
1,1,2,2-Tetrachloroethane	ND	40		ppbv	40	8/1/2011 10:15:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	40		ppbv	40	8/1/2011 10:15:00 PM
1,1,2-Trichloroethane	ND	40		ppbv	40	8/1/2011 10:15:00 PM
1,1-Dichloroethane	ND	40		ppbv	40	8/1/2011 10:15:00 PM
1,1-Dichloroethene	ND	40		ppbv	40	8/1/2011 10:15:00 PM
1,2,4-Trichlorobenzene	ND	40		ppbv	40	8/1/2011 10:15:00 PM
1,2,4-Trimethylbenzene	ND	40		ppbv	40	8/1/2011 10:15:00 PM
1,2-Dibromoethane	ND	40		ppbv	40	8/1/2011 10:15:00 PM
1,2-Dichlorobenzene	ND	40		ppbv	40	8/1/2011 10:15:00 PM
1,2-Dichloroethane	ND	40		ppbv	40	8/1/2011 10:15:00 PM
1,2-Dichloropropane	ND	40		ppbv	40	8/1/2011 10:15:00 PM
1,3,5-Trimethylbenzene	ND	40		ppbv	40	8/1/2011 10:15:00 PM
1,3-Butadiene	ND	40		ppbv	40	8/1/2011 10:15:00 PM
1,3-Dichlorobenzene	ND	40		ppbv	40	8/1/2011 10:15:00 PM
1,4-Dichlorobenzene	ND	40		ppbv	40	8/1/2011 10:15:00 PM
1,4-Dioxane	ND	40		ppbv	40	8/1/2011 10:15:00 PM
2-Butanone	ND	40		ppbv	40	8/1/2011 10:15:00 PM
2-Hexanone	ND	40		ppbv	40	8/1/2011 10:15:00 PM
2-Propanol	ND	40		ppbv	40	8/1/2011 10:15:00 PM
4-Methyl-2-pentanone	ND	40		ppbv	40	8/1/2011 10:15:00 PM
Acetone	320	40		ppbv	40	8/1/2011 10:15:00 PM
Benzene	130	40		ppbv	40	8/1/2011 10:15:00 PM
Benzyl chloride	ND	40		ppbv	40	8/1/2011 10:15:00 PM
Bromodichloromethane	ND	40		ppbv	40	8/1/2011 10:15:00 PM
Bromoform	ND	40		ppbv	40	8/1/2011 10:15:00 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

Original

RTI LABORATORIES, INC.

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

Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/6/2011 9:01:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107364-015 **Matrix:** AIR

Client Sample ID VA0537

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	40		ppbv	40	8/1/2011 10:15:00 PM
Carbon disulfide	ND	40		ppbv	40	8/1/2011 10:15:00 PM
Carbon tetrachloride	ND	40		ppbv	40	8/1/2011 10:15:00 PM
Chlorobenzene	ND	40		ppbv	40	8/1/2011 10:15:00 PM
Chlorodibromomethane	ND	40		ppbv	40	8/1/2011 10:15:00 PM
Chloroethane	ND	40		ppbv	40	8/1/2011 10:15:00 PM
Chloroform	70	40		ppbv	40	8/1/2011 10:15:00 PM
Chloromethane	ND	40		ppbv	40	8/1/2011 10:15:00 PM
cis-1,2-Dichloroethene	ND	40		ppbv	40	8/1/2011 10:15:00 PM
cis-1,3-dichloropropene	ND	40		ppbv	40	8/1/2011 10:15:00 PM
Cyclohexane	200	80		ppbv	40	8/1/2011 10:15:00 PM
Dichlorodifluoromethane	ND	40		ppbv	40	8/1/2011 10:15:00 PM
Ethanol	ND	200		ppbv	40	8/1/2011 10:15:00 PM
Ethyl acetate	ND	40		ppbv	40	8/1/2011 10:15:00 PM
Ethylbenzene	ND	80		ppbv	40	8/1/2011 10:15:00 PM
Heptane	79	40		ppbv	40	8/1/2011 10:15:00 PM
Hexachlorobutadiene	ND	80		ppbv	40	8/1/2011 10:15:00 PM
m,p-Xylene	73	80	J	ppbv	40	8/1/2011 10:15:00 PM
Methylene chloride	ND	200		ppbv	40	8/1/2011 10:15:00 PM
Naphthalene	ND	40		ppbv	40	8/1/2011 10:15:00 PM
n-Hexane	ND	80		ppbv	40	8/1/2011 10:15:00 PM
o-Xylene	ND	40		ppbv	40	8/1/2011 10:15:00 PM
Propylene	ND	40		ppbv	40	8/1/2011 10:15:00 PM
Styrene	ND	40		ppbv	40	8/1/2011 10:15:00 PM
tert-Butyl Methyl Ether	ND	40		ppbv	40	8/1/2011 10:15:00 PM
Tetrachloroethene	ND	40		ppbv	40	8/1/2011 10:15:00 PM
Tetrahydrofuran	ND	40		ppbv	40	8/1/2011 10:15:00 PM
Toluene	160	40		ppbv	40	8/1/2011 10:15:00 PM
trans-1,2-Dichloroethene	ND	40		ppbv	40	8/1/2011 10:15:00 PM
trans-1,3-dichloropropene	ND	40		ppbv	40	8/1/2011 10:15:00 PM
Trichloroethene	ND	40		ppbv	40	8/1/2011 10:15:00 PM
Trichlorofluoromethane	ND	40		ppbv	40	8/1/2011 10:15:00 PM
Vinyl acetate	ND	40		ppbv	40	8/1/2011 10:15:00 PM
Vinyl chloride	ND	40		ppbv	40	8/1/2011 10:15:00 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

Original

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Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/6/2011 9:01:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107364-015 **Matrix:** AIR

Client Sample ID VA0537

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	73	120	J	ppbv	40	8/1/2011 10:15:00 PM
Surr: 4-Bromofluorobenzene	98.6	70-130		%REC	40	8/1/2011 10:15:00 PM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **MT3**
C5-C8 Aliphatic Hydrocarbons	310,000	4,700		µg/m³	40	8/4/2011 12:58:00 AM
C9-C10 Aromatic Hydrocarbons	11,000	5,300		µg/m³	40	8/4/2011 12:58:00 AM
C9-C12 Aliphatic Hydrocarbons	170,000	7,600		µg/m³	40	8/4/2011 12:58:00 AM
Surr: 4-Bromofluorobenzene	134	70-130	S	%REC	40	8/4/2011 12:58:00 AM

Qualifiers:

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

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Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/6/2011 9:31:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107364-016 **Matrix:** AIR

Client Sample ID VA0538

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.51	0.10		%	1	7/18/2011 3:04:00 PM
Carbon Monoxide	ND	0.10		%	1	7/18/2011 3:04:00 PM
Methane	ND	0.50		%	1	7/18/2011 3:04:00 PM
Nitrogen	77	0.10		%	1	7/18/2011 3:04:00 PM
Oxygen	21	0.10		%	1	7/18/2011 3:04:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	800		ppbv	800	8/2/2011 5:53:00 AM
1,1,2,2-Tetrachloroethane	ND	800		ppbv	800	8/2/2011 5:53:00 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	800		ppbv	800	8/2/2011 5:53:00 AM
1,1,2-Trichloroethane	ND	800		ppbv	800	8/2/2011 5:53:00 AM
1,1-Dichloroethane	ND	800		ppbv	800	8/2/2011 5:53:00 AM
1,1-Dichloroethene	ND	800		ppbv	800	8/2/2011 5:53:00 AM
1,2,4-Trichlorobenzene	ND	800		ppbv	800	8/2/2011 5:53:00 AM
1,2,4-Trimethylbenzene	ND	800		ppbv	800	8/2/2011 5:53:00 AM
1,2-Dibromoethane	ND	800		ppbv	800	8/2/2011 5:53:00 AM
1,2-Dichlorobenzene	ND	800		ppbv	800	8/2/2011 5:53:00 AM
1,2-Dichloroethane	ND	800		ppbv	800	8/2/2011 5:53:00 AM
1,2-Dichloropropane	ND	800		ppbv	800	8/2/2011 5:53:00 AM
1,3,5-Trimethylbenzene	ND	800		ppbv	800	8/2/2011 5:53:00 AM
1,3-Butadiene	ND	800		ppbv	800	8/2/2011 5:53:00 AM
1,3-Dichlorobenzene	ND	800		ppbv	800	8/2/2011 5:53:00 AM
1,4-Dichlorobenzene	ND	800		ppbv	800	8/2/2011 5:53:00 AM
1,4-Dioxane	ND	800		ppbv	800	8/2/2011 5:53:00 AM
2-Butanone	ND	800		ppbv	800	8/2/2011 5:53:00 AM
2-Hexanone	ND	800		ppbv	800	8/2/2011 5:53:00 AM
2-Propanol	1,300	800		ppbv	800	8/2/2011 5:53:00 AM
4-Methyl-2-pentanone	ND	800		ppbv	800	8/2/2011 5:53:00 AM
Acetone	3,800	800		ppbv	800	8/2/2011 5:53:00 AM
Benzene	ND	800		ppbv	800	8/2/2011 5:53:00 AM
Benzyl chloride	ND	800		ppbv	800	8/2/2011 5:53:00 AM
Bromodichloromethane	ND	800		ppbv	800	8/2/2011 5:53:00 AM
Bromoform	ND	800		ppbv	800	8/2/2011 5:53:00 AM

Qualifiers:

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

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/6/2011 9:31:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107364-016 **Matrix:** AIR

Client Sample ID VA0538

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	800		ppbv	800	8/2/2011 5:53:00 AM
Carbon disulfide	ND	800		ppbv	800	8/2/2011 5:53:00 AM
Carbon tetrachloride	ND	800		ppbv	800	8/2/2011 5:53:00 AM
Chlorobenzene	ND	800		ppbv	800	8/2/2011 5:53:00 AM
Chlorodibromomethane	ND	800		ppbv	800	8/2/2011 5:53:00 AM
Chloroethane	ND	800		ppbv	800	8/2/2011 5:53:00 AM
Chloroform	ND	800		ppbv	800	8/2/2011 5:53:00 AM
Chloromethane	ND	800		ppbv	800	8/2/2011 5:53:00 AM
cis-1,2-Dichloroethene	ND	800		ppbv	800	8/2/2011 5:53:00 AM
cis-1,3-dichloropropene	ND	800		ppbv	800	8/2/2011 5:53:00 AM
Cyclohexane	ND	1,600		ppbv	800	8/2/2011 5:53:00 AM
Dichlorodifluoromethane	ND	800		ppbv	800	8/2/2011 5:53:00 AM
Ethanol	2,500	4,000	J	ppbv	800	8/2/2011 5:53:00 AM
Ethyl acetate	ND	800		ppbv	800	8/2/2011 5:53:00 AM
Ethylbenzene	ND	1,600		ppbv	800	8/2/2011 5:53:00 AM
Heptane	ND	800		ppbv	800	8/2/2011 5:53:00 AM
Hexachlorobutadiene	ND	1,600		ppbv	800	8/2/2011 5:53:00 AM
m,p-Xylene	ND	1,600		ppbv	800	8/2/2011 5:53:00 AM
Methylene chloride	26,000	4,000		ppbv	800	8/2/2011 5:53:00 AM
Naphthalene	ND	800		ppbv	800	8/2/2011 5:53:00 AM
n-Hexane	15,000	1,600		ppbv	800	8/2/2011 5:53:00 AM
o-Xylene	ND	800		ppbv	800	8/2/2011 5:53:00 AM
Propylene	ND	800		ppbv	800	8/2/2011 5:53:00 AM
Styrene	ND	800		ppbv	800	8/2/2011 5:53:00 AM
tert-Butyl Methyl Ether	ND	800		ppbv	800	8/2/2011 5:53:00 AM
Tetrachloroethene	ND	800		ppbv	800	8/2/2011 5:53:00 AM
Tetrahydrofuran	ND	800		ppbv	800	8/2/2011 5:53:00 AM
Toluene	1,000	800		ppbv	800	8/2/2011 5:53:00 AM
trans-1,2-Dichloroethene	ND	800		ppbv	800	8/2/2011 5:53:00 AM
trans-1,3-dichloropropene	ND	800		ppbv	800	8/2/2011 5:53:00 AM
Trichloroethene	ND	800		ppbv	800	8/2/2011 5:53:00 AM
Trichlorofluoromethane	ND	800		ppbv	800	8/2/2011 5:53:00 AM
Vinyl acetate	ND	800		ppbv	800	8/2/2011 5:53:00 AM
Vinyl chloride	ND	800		ppbv	800	8/2/2011 5:53:00 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

Original

RTI LABORATORIES, INC.

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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/6/2011 9:31:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107364-016 **Matrix:** AIR

Client Sample ID VA0538

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	ND	2,400		ppbv	800	8/2/2011 5:53:00 AM
Surr: 4-Bromofluorobenzene	92.6	70-130		%REC	800	8/2/2011 5:53:00 AM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **MT3**
C5-C8 Aliphatic Hydrocarbons	260,000	94,000		µg/m³	800	8/4/2011 1:43:00 AM
C9-C10 Aromatic Hydrocarbons	ND	110,000		µg/m³	800	8/4/2011 1:43:00 AM
C9-C12 Aliphatic Hydrocarbons	90,000	150,000	J	µg/m³	800	8/4/2011 1:43:00 AM
Surr: 4-Bromofluorobenzene	98.8	70-130		%REC	800	8/4/2011 1:43:00 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#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/6/2011 9:58:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107364-017 **Matrix:** AIR

Client Sample ID VA0539

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.33	0.10		%	1	7/18/2011 3:24:00 PM
Carbon Monoxide	ND	0.10		%	1	7/18/2011 3:24:00 PM
Methane	ND	0.50		%	1	7/18/2011 3:24:00 PM
Nitrogen	79	0.10		%	1	7/18/2011 3:24:00 PM
Oxygen	20	0.10		%	1	7/18/2011 3:24:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	40		ppbv	40	8/2/2011 10:23:00 AM
1,1,2,2-Tetrachloroethane	ND	40		ppbv	40	8/2/2011 10:23:00 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	40		ppbv	40	8/2/2011 10:23:00 AM
1,1,2-Trichloroethane	ND	40		ppbv	40	8/2/2011 10:23:00 AM
1,1-Dichloroethane	ND	40		ppbv	40	8/2/2011 10:23:00 AM
1,1-Dichloroethene	ND	40		ppbv	40	8/2/2011 10:23:00 AM
1,2,4-Trichlorobenzene	ND	40		ppbv	40	8/2/2011 10:23:00 AM
1,2,4-Trimethylbenzene	ND	40		ppbv	40	8/2/2011 10:23:00 AM
1,2-Dibromoethane	ND	40		ppbv	40	8/2/2011 10:23:00 AM
1,2-Dichlorobenzene	ND	40		ppbv	40	8/2/2011 10:23:00 AM
1,2-Dichloroethane	ND	40		ppbv	40	8/2/2011 10:23:00 AM
1,2-Dichloropropane	ND	40		ppbv	40	8/2/2011 10:23:00 AM
1,3,5-Trimethylbenzene	ND	40		ppbv	40	8/2/2011 10:23:00 AM
1,3-Butadiene	ND	40		ppbv	40	8/2/2011 10:23:00 AM
1,3-Dichlorobenzene	ND	40		ppbv	40	8/2/2011 10:23:00 AM
1,4-Dichlorobenzene	ND	40		ppbv	40	8/2/2011 10:23:00 AM
1,4-Dioxane	ND	40		ppbv	40	8/2/2011 10:23:00 AM
2-Butanone	ND	40		ppbv	40	8/2/2011 10:23:00 AM
2-Hexanone	ND	40		ppbv	40	8/2/2011 10:23:00 AM
2-Propanol	ND	40		ppbv	40	8/2/2011 10:23:00 AM
4-Methyl-2-pentanone	ND	40		ppbv	40	8/2/2011 10:23:00 AM
Acetone	ND	40		ppbv	40	8/2/2011 10:23:00 AM
Benzene	46	40		ppbv	40	8/2/2011 10:23:00 AM
Benzyl chloride	ND	40		ppbv	40	8/2/2011 10:23:00 AM
Bromodichloromethane	ND	40		ppbv	40	8/2/2011 10:23:00 AM
Bromoform	ND	40		ppbv	40	8/2/2011 10:23:00 AM

Qualifiers:

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

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/6/2011 9:58:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107364-017 **Matrix:** AIR

Client Sample ID VA0539

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	40		ppbv	40	8/2/2011 10:23:00 AM
Carbon disulfide	ND	40		ppbv	40	8/2/2011 10:23:00 AM
Carbon tetrachloride	ND	40		ppbv	40	8/2/2011 10:23:00 AM
Chlorobenzene	ND	40		ppbv	40	8/2/2011 10:23:00 AM
Chlorodibromomethane	ND	40		ppbv	40	8/2/2011 10:23:00 AM
Chloroethane	ND	40		ppbv	40	8/2/2011 10:23:00 AM
Chloroform	ND	40		ppbv	40	8/2/2011 10:23:00 AM
Chloromethane	ND	40		ppbv	40	8/2/2011 10:23:00 AM
cis-1,2-Dichloroethene	ND	40		ppbv	40	8/2/2011 10:23:00 AM
cis-1,3-dichloropropene	ND	40		ppbv	40	8/2/2011 10:23:00 AM
Cyclohexane	150	80		ppbv	40	8/2/2011 10:23:00 AM
Dichlorodifluoromethane	ND	40		ppbv	40	8/2/2011 10:23:00 AM
Ethanol	ND	200		ppbv	40	8/2/2011 10:23:00 AM
Ethyl acetate	ND	40		ppbv	40	8/2/2011 10:23:00 AM
Ethylbenzene	ND	80		ppbv	40	8/2/2011 10:23:00 AM
Heptane	57	40		ppbv	40	8/2/2011 10:23:00 AM
Hexachlorobutadiene	ND	80		ppbv	40	8/2/2011 10:23:00 AM
m,p-Xylene	52	80	J	ppbv	40	8/2/2011 10:23:00 AM
Methylene chloride	ND	200		ppbv	40	8/2/2011 10:23:00 AM
Naphthalene	ND	40		ppbv	40	8/2/2011 10:23:00 AM
n-Hexane	50	80	J	ppbv	40	8/2/2011 10:23:00 AM
o-Xylene	ND	40		ppbv	40	8/2/2011 10:23:00 AM
Propylene	ND	40		ppbv	40	8/2/2011 10:23:00 AM
Styrene	ND	40		ppbv	40	8/2/2011 10:23:00 AM
tert-Butyl Methyl Ether	ND	40		ppbv	40	8/2/2011 10:23:00 AM
Tetrachloroethene	ND	40		ppbv	40	8/2/2011 10:23:00 AM
Tetrahydrofuran	ND	40		ppbv	40	8/2/2011 10:23:00 AM
Toluene	99	40		ppbv	40	8/2/2011 10:23:00 AM
trans-1,2-Dichloroethene	ND	40		ppbv	40	8/2/2011 10:23:00 AM
trans-1,3-dichloropropene	ND	40		ppbv	40	8/2/2011 10:23:00 AM
Trichloroethene	ND	40		ppbv	40	8/2/2011 10:23:00 AM
Trichlorofluoromethane	ND	40		ppbv	40	8/2/2011 10:23:00 AM
Vinyl acetate	ND	40		ppbv	40	8/2/2011 10:23:00 AM
Vinyl chloride	ND	40		ppbv	40	8/2/2011 10:23:00 AM

Qualifiers:

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

Original

RTI LABORATORIES, INC.

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

Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/6/2011 9:58:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107364-017 **Matrix:** AIR

Client Sample ID VA0539

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	52	120	J	ppbv	40	8/2/2011 10:23:00 AM
Surr: 4-Bromofluorobenzene	97.6	70-130		%REC	40	8/2/2011 10:23:00 AM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **MT3**
C5-C8 Aliphatic Hydrocarbons	210,000	4,700		µg/m³	40	8/4/2011 2:28:00 AM
C9-C10 Aromatic Hydrocarbons	9,300	5,300		µg/m³	40	8/4/2011 2:28:00 AM
C9-C12 Aliphatic Hydrocarbons	130,000	7,600		µg/m³	40	8/4/2011 2:28:00 AM
Surr: 4-Bromofluorobenzene	118	70-130		%REC	40	8/4/2011 2:28:00 AM

Qualifiers:

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

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Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/6/2011 10:23:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107364-018 **Matrix:** AIR

Client Sample ID VA0540

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.28	0.10		%	1	7/18/2011 3:44:00 PM
Carbon Monoxide	ND	0.10		%	1	7/18/2011 3:44:00 PM
Methane	ND	0.50		%	1	7/18/2011 3:44:00 PM
Nitrogen	77	0.10		%	1	7/18/2011 3:44:00 PM
Oxygen	21	0.10		%	1	7/18/2011 3:44:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	40		ppbv	40	8/2/2011 11:05:00 AM
1,1,2,2-Tetrachloroethane	ND	40		ppbv	40	8/2/2011 11:05:00 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	40		ppbv	40	8/2/2011 11:05:00 AM
1,1,2-Trichloroethane	ND	40		ppbv	40	8/2/2011 11:05:00 AM
1,1-Dichloroethane	ND	40		ppbv	40	8/2/2011 11:05:00 AM
1,1-Dichloroethene	ND	40		ppbv	40	8/2/2011 11:05:00 AM
1,2,4-Trichlorobenzene	ND	40		ppbv	40	8/2/2011 11:05:00 AM
1,2,4-Trimethylbenzene	ND	40		ppbv	40	8/2/2011 11:05:00 AM
1,2-Dibromoethane	ND	40		ppbv	40	8/2/2011 11:05:00 AM
1,2-Dichlorobenzene	ND	40		ppbv	40	8/2/2011 11:05:00 AM
1,2-Dichloroethane	ND	40		ppbv	40	8/2/2011 11:05:00 AM
1,2-Dichloropropane	ND	40		ppbv	40	8/2/2011 11:05:00 AM
1,3,5-Trimethylbenzene	ND	40		ppbv	40	8/2/2011 11:05:00 AM
1,3-Butadiene	ND	40		ppbv	40	8/2/2011 11:05:00 AM
1,3-Dichlorobenzene	ND	40		ppbv	40	8/2/2011 11:05:00 AM
1,4-Dichlorobenzene	ND	40		ppbv	40	8/2/2011 11:05:00 AM
1,4-Dioxane	ND	40		ppbv	40	8/2/2011 11:05:00 AM
2-Butanone	ND	40		ppbv	40	8/2/2011 11:05:00 AM
2-Hexanone	ND	40		ppbv	40	8/2/2011 11:05:00 AM
2-Propanol	ND	40		ppbv	40	8/2/2011 11:05:00 AM
4-Methyl-2-pentanone	ND	40		ppbv	40	8/2/2011 11:05:00 AM
Acetone	ND	40		ppbv	40	8/2/2011 11:05:00 AM
Benzene	48	40		ppbv	40	8/2/2011 11:05:00 AM
Benzyl chloride	ND	40		ppbv	40	8/2/2011 11:05:00 AM
Bromodichloromethane	ND	40		ppbv	40	8/2/2011 11:05:00 AM
Bromoform	ND	40		ppbv	40	8/2/2011 11:05:00 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

Original

RTI LABORATORIES, INC.

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

Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/6/2011 10:23:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107364-018 **Matrix:** AIR

Client Sample ID VA0540

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	40		ppbv	40	8/2/2011 11:05:00 AM
Carbon disulfide	ND	40		ppbv	40	8/2/2011 11:05:00 AM
Carbon tetrachloride	ND	40		ppbv	40	8/2/2011 11:05:00 AM
Chlorobenzene	ND	40		ppbv	40	8/2/2011 11:05:00 AM
Chlorodibromomethane	ND	40		ppbv	40	8/2/2011 11:05:00 AM
Chloroethane	ND	40		ppbv	40	8/2/2011 11:05:00 AM
Chloroform	ND	40		ppbv	40	8/2/2011 11:05:00 AM
Chloromethane	57	40		ppbv	40	8/2/2011 11:05:00 AM
cis-1,2-Dichloroethene	ND	40		ppbv	40	8/2/2011 11:05:00 AM
cis-1,3-dichloropropene	ND	40		ppbv	40	8/2/2011 11:05:00 AM
Cyclohexane	160	80		ppbv	40	8/2/2011 11:05:00 AM
Dichlorodifluoromethane	ND	40		ppbv	40	8/2/2011 11:05:00 AM
Ethanol	ND	200		ppbv	40	8/2/2011 11:05:00 AM
Ethyl acetate	ND	40		ppbv	40	8/2/2011 11:05:00 AM
Ethylbenzene	ND	80		ppbv	40	8/2/2011 11:05:00 AM
Heptane	59	40		ppbv	40	8/2/2011 11:05:00 AM
Hexachlorobutadiene	ND	80		ppbv	40	8/2/2011 11:05:00 AM
m,p-Xylene	78	80	J	ppbv	40	8/2/2011 11:05:00 AM
Methylene chloride	ND	200		ppbv	40	8/2/2011 11:05:00 AM
Naphthalene	ND	40		ppbv	40	8/2/2011 11:05:00 AM
n-Hexane	52	80	J	ppbv	40	8/2/2011 11:05:00 AM
o-Xylene	ND	40		ppbv	40	8/2/2011 11:05:00 AM
Propylene	ND	40		ppbv	40	8/2/2011 11:05:00 AM
Styrene	ND	40		ppbv	40	8/2/2011 11:05:00 AM
tert-Butyl Methyl Ether	ND	40		ppbv	40	8/2/2011 11:05:00 AM
Tetrachloroethene	ND	40		ppbv	40	8/2/2011 11:05:00 AM
Tetrahydrofuran	ND	40		ppbv	40	8/2/2011 11:05:00 AM
Toluene	130	40		ppbv	40	8/2/2011 11:05:00 AM
trans-1,2-Dichloroethene	ND	40		ppbv	40	8/2/2011 11:05:00 AM
trans-1,3-dichloropropene	ND	40		ppbv	40	8/2/2011 11:05:00 AM
Trichloroethene	ND	40		ppbv	40	8/2/2011 11:05:00 AM
Trichlorofluoromethane	ND	40		ppbv	40	8/2/2011 11:05:00 AM
Vinyl acetate	ND	40		ppbv	40	8/2/2011 11:05:00 AM
Vinyl chloride	ND	40		ppbv	40	8/2/2011 11:05:00 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

Original

RTI LABORATORIES, INC.

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

Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/6/2011 10:23:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107364-018 **Matrix:** AIR

Client Sample ID VA0540

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	78	120	J	ppbv	40	8/2/2011 11:05:00 AM
Surr: 4-Bromofluorobenzene	96.2	70-130		%REC	40	8/2/2011 11:05:00 AM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **MT3**
C5-C8 Aliphatic Hydrocarbons	190,000	4,700		µg/m³	40	8/4/2011 3:13:00 AM
C9-C10 Aromatic Hydrocarbons	10,000	5,300		µg/m³	40	8/4/2011 3:13:00 AM
C9-C12 Aliphatic Hydrocarbons	100,000	7,600		µg/m³	40	8/4/2011 3:13:00 AM
Surr: 4-Bromofluorobenzene	117	70-130		%REC	40	8/4/2011 3:13:00 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#: 1107364

Date Reported: 8/26/2011

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/6/2011 10:56:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107364-019 **Matrix:** AIR

Client Sample ID VA0541

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.30	0.10		%	1	7/18/2011 4:47:00 PM
Carbon Monoxide	ND	0.10		%	1	7/18/2011 4:47:00 PM
Methane	ND	0.50		%	1	7/18/2011 4:47:00 PM
Nitrogen	78	0.10		%	1	7/18/2011 4:47:00 PM
Oxygen	21	0.10		%	1	7/18/2011 4:47:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	40		ppbv	40	8/2/2011 11:48:00 AM
1,1,2,2-Tetrachloroethane	ND	40		ppbv	40	8/2/2011 11:48:00 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	40		ppbv	40	8/2/2011 11:48:00 AM
1,1,2-Trichloroethane	ND	40		ppbv	40	8/2/2011 11:48:00 AM
1,1-Dichloroethane	ND	40		ppbv	40	8/2/2011 11:48:00 AM
1,1-Dichloroethene	ND	40		ppbv	40	8/2/2011 11:48:00 AM
1,2,4-Trichlorobenzene	ND	40		ppbv	40	8/2/2011 11:48:00 AM
1,2,4-Trimethylbenzene	ND	40		ppbv	40	8/2/2011 11:48:00 AM
1,2-Dibromoethane	ND	40		ppbv	40	8/2/2011 11:48:00 AM
1,2-Dichlorobenzene	ND	40		ppbv	40	8/2/2011 11:48:00 AM
1,2-Dichloroethane	ND	40		ppbv	40	8/2/2011 11:48:00 AM
1,2-Dichloropropane	ND	40		ppbv	40	8/2/2011 11:48:00 AM
1,3,5-Trimethylbenzene	ND	40		ppbv	40	8/2/2011 11:48:00 AM
1,3-Butadiene	ND	40		ppbv	40	8/2/2011 11:48:00 AM
1,3-Dichlorobenzene	ND	40		ppbv	40	8/2/2011 11:48:00 AM
1,4-Dichlorobenzene	ND	40		ppbv	40	8/2/2011 11:48:00 AM
1,4-Dioxane	ND	40		ppbv	40	8/2/2011 11:48:00 AM
2-Butanone	ND	40		ppbv	40	8/2/2011 11:48:00 AM
2-Hexanone	ND	40		ppbv	40	8/2/2011 11:48:00 AM
2-Propanol	ND	40		ppbv	40	8/2/2011 11:48:00 AM
4-Methyl-2-pentanone	ND	40		ppbv	40	8/2/2011 11:48:00 AM
Acetone	ND	40		ppbv	40	8/2/2011 11:48:00 AM
Benzene	190	40		ppbv	40	8/2/2011 11:48:00 AM
Benzyl chloride	ND	40		ppbv	40	8/2/2011 11:48:00 AM
Bromodichloromethane	ND	40		ppbv	40	8/2/2011 11:48:00 AM
Bromoform	ND	40		ppbv	40	8/2/2011 11:48:00 AM

Qualifiers:

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

Original

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Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/6/2011 10:56:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107364-019 **Matrix:** AIR

Client Sample ID VA0541

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	40		ppbv	40	8/2/2011 11:48:00 AM
Carbon disulfide	ND	40		ppbv	40	8/2/2011 11:48:00 AM
Carbon tetrachloride	ND	40		ppbv	40	8/2/2011 11:48:00 AM
Chlorobenzene	ND	40		ppbv	40	8/2/2011 11:48:00 AM
Chlorodibromomethane	ND	40		ppbv	40	8/2/2011 11:48:00 AM
Chloroethane	ND	40		ppbv	40	8/2/2011 11:48:00 AM
Chloroform	ND	40		ppbv	40	8/2/2011 11:48:00 AM
Chloromethane	ND	40		ppbv	40	8/2/2011 11:48:00 AM
cis-1,2-Dichloroethene	ND	40		ppbv	40	8/2/2011 11:48:00 AM
cis-1,3-dichloropropene	ND	40		ppbv	40	8/2/2011 11:48:00 AM
Cyclohexane	400	80		ppbv	40	8/2/2011 11:48:00 AM
Dichlorodifluoromethane	ND	40		ppbv	40	8/2/2011 11:48:00 AM
Ethanol	ND	200		ppbv	40	8/2/2011 11:48:00 AM
Ethyl acetate	ND	40		ppbv	40	8/2/2011 11:48:00 AM
Ethylbenzene	ND	80		ppbv	40	8/2/2011 11:48:00 AM
Heptane	99	40		ppbv	40	8/2/2011 11:48:00 AM
Hexachlorobutadiene	ND	80		ppbv	40	8/2/2011 11:48:00 AM
m,p-Xylene	80	80		ppbv	40	8/2/2011 11:48:00 AM
Methylene chloride	ND	200		ppbv	40	8/2/2011 11:48:00 AM
Naphthalene	ND	40		ppbv	40	8/2/2011 11:48:00 AM
n-Hexane	280	80		ppbv	40	8/2/2011 11:48:00 AM
o-Xylene	ND	40		ppbv	40	8/2/2011 11:48:00 AM
Propylene	110	40		ppbv	40	8/2/2011 11:48:00 AM
Styrene	ND	40		ppbv	40	8/2/2011 11:48:00 AM
tert-Butyl Methyl Ether	ND	40		ppbv	40	8/2/2011 11:48:00 AM
Tetrachloroethene	ND	40		ppbv	40	8/2/2011 11:48:00 AM
Tetrahydrofuran	ND	40		ppbv	40	8/2/2011 11:48:00 AM
Toluene	210	40		ppbv	40	8/2/2011 11:48:00 AM
trans-1,2-Dichloroethene	ND	40		ppbv	40	8/2/2011 11:48:00 AM
trans-1,3-dichloropropene	ND	40		ppbv	40	8/2/2011 11:48:00 AM
Trichloroethene	ND	40		ppbv	40	8/2/2011 11:48:00 AM
Trichlorofluoromethane	ND	40		ppbv	40	8/2/2011 11:48:00 AM
Vinyl acetate	ND	40		ppbv	40	8/2/2011 11:48:00 AM
Vinyl chloride	ND	40		ppbv	40	8/2/2011 11:48:00 AM

Qualifiers:

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

Original

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Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/6/2011 10:56:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107364-019 **Matrix:** AIR

Client Sample ID VA0541

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	80	120	J	ppbv	40	8/2/2011 11:48:00 AM
Surr: 4-Bromofluorobenzene	98.6	70-130		%REC	40	8/2/2011 11:48:00 AM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **MT3**
C5-C8 Aliphatic Hydrocarbons	420,000	4,700		µg/m³	40	8/4/2011 3:59:00 AM
C9-C10 Aromatic Hydrocarbons	10,000	5,300		µg/m³	40	8/4/2011 3:59:00 AM
C9-C12 Aliphatic Hydrocarbons	150,000	7,600		µg/m³	40	8/4/2011 3:59:00 AM
Surr: 4-Bromofluorobenzene	113	70-130		%REC	40	8/4/2011 3:59:00 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

Original

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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/6/2011 12:36:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107364-020 **Matrix:** AIR

Client Sample ID VA0542

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.22	0.10		%	1	7/18/2011 5:09:00 PM
Carbon Monoxide	ND	0.10		%	1	7/18/2011 5:09:00 PM
Methane	ND	0.50		%	1	7/18/2011 5:09:00 PM
Nitrogen	79	0.10		%	1	7/18/2011 5:09:00 PM
Oxygen	20	0.10		%	1	7/18/2011 5:09:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	800		ppbv	800	8/2/2011 8:56:00 AM
1,1,2,2-Tetrachloroethane	ND	800		ppbv	800	8/2/2011 8:56:00 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	800		ppbv	800	8/2/2011 8:56:00 AM
1,1,2-Trichloroethane	ND	800		ppbv	800	8/2/2011 8:56:00 AM
1,1-Dichloroethane	ND	800		ppbv	800	8/2/2011 8:56:00 AM
1,1-Dichloroethene	ND	800		ppbv	800	8/2/2011 8:56:00 AM
1,2,4-Trichlorobenzene	ND	800		ppbv	800	8/2/2011 8:56:00 AM
1,2,4-Trimethylbenzene	ND	800		ppbv	800	8/2/2011 8:56:00 AM
1,2-Dibromoethane	ND	800		ppbv	800	8/2/2011 8:56:00 AM
1,2-Dichlorobenzene	ND	800		ppbv	800	8/2/2011 8:56:00 AM
1,2-Dichloroethane	ND	800		ppbv	800	8/2/2011 8:56:00 AM
1,2-Dichloropropane	ND	800		ppbv	800	8/2/2011 8:56:00 AM
1,3,5-Trimethylbenzene	ND	800		ppbv	800	8/2/2011 8:56:00 AM
1,3-Butadiene	ND	800		ppbv	800	8/2/2011 8:56:00 AM
1,3-Dichlorobenzene	ND	800		ppbv	800	8/2/2011 8:56:00 AM
1,4-Dichlorobenzene	ND	800		ppbv	800	8/2/2011 8:56:00 AM
1,4-Dioxane	ND	800		ppbv	800	8/2/2011 8:56:00 AM
2-Butanone	ND	800		ppbv	800	8/2/2011 8:56:00 AM
2-Hexanone	ND	800		ppbv	800	8/2/2011 8:56:00 AM
2-Propanol	ND	800		ppbv	800	8/2/2011 8:56:00 AM
4-Methyl-2-pentanone	ND	800		ppbv	800	8/2/2011 8:56:00 AM
Acetone	860	800		ppbv	800	8/2/2011 8:56:00 AM
Benzene	17,000	800		ppbv	800	8/2/2011 8:56:00 AM
Benzyl chloride	ND	800		ppbv	800	8/2/2011 8:56:00 AM
Bromodichloromethane	ND	800		ppbv	800	8/2/2011 8:56:00 AM
Bromoform	ND	800		ppbv	800	8/2/2011 8:56:00 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

Original

RTI LABORATORIES, INC.

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

Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/6/2011 12:36:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107364-020 **Matrix:** AIR

Client Sample ID VA0542

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	800		ppbv	800	8/2/2011 8:56:00 AM
Carbon disulfide	ND	800		ppbv	800	8/2/2011 8:56:00 AM
Carbon tetrachloride	ND	800		ppbv	800	8/2/2011 8:56:00 AM
Chlorobenzene	ND	800		ppbv	800	8/2/2011 8:56:00 AM
Chlorodibromomethane	ND	800		ppbv	800	8/2/2011 8:56:00 AM
Chloroethane	ND	800		ppbv	800	8/2/2011 8:56:00 AM
Chloroform	ND	800		ppbv	800	8/2/2011 8:56:00 AM
Chloromethane	ND	800		ppbv	800	8/2/2011 8:56:00 AM
cis-1,2-Dichloroethene	ND	800		ppbv	800	8/2/2011 8:56:00 AM
cis-1,3-dichloropropene	ND	800		ppbv	800	8/2/2011 8:56:00 AM
Cyclohexane	26,000	1,600		ppbv	800	8/2/2011 8:56:00 AM
Dichlorodifluoromethane	ND	800		ppbv	800	8/2/2011 8:56:00 AM
Ethanol	ND	4,000		ppbv	800	8/2/2011 8:56:00 AM
Ethyl acetate	ND	800		ppbv	800	8/2/2011 8:56:00 AM
Ethylbenzene	2,100	1,600		ppbv	800	8/2/2011 8:56:00 AM
Heptane	11,000	800		ppbv	800	8/2/2011 8:56:00 AM
Hexachlorobutadiene	ND	1,600		ppbv	800	8/2/2011 8:56:00 AM
m,p-Xylene	3,100	1,600		ppbv	800	8/2/2011 8:56:00 AM
Methylene chloride	2,500	4,000	J	ppbv	800	8/2/2011 8:56:00 AM
Naphthalene	ND	800		ppbv	800	8/2/2011 8:56:00 AM
n-Hexane	28,000	1,600		ppbv	800	8/2/2011 8:56:00 AM
o-Xylene	980	800		ppbv	800	8/2/2011 8:56:00 AM
Propylene	2,700	800		ppbv	800	8/2/2011 8:56:00 AM
Styrene	ND	800		ppbv	800	8/2/2011 8:56:00 AM
tert-Butyl Methyl Ether	ND	800		ppbv	800	8/2/2011 8:56:00 AM
Tetrachloroethene	ND	800		ppbv	800	8/2/2011 8:56:00 AM
Tetrahydrofuran	ND	800		ppbv	800	8/2/2011 8:56:00 AM
Toluene	30,000	800		ppbv	800	8/2/2011 8:56:00 AM
trans-1,2-Dichloroethene	ND	800		ppbv	800	8/2/2011 8:56:00 AM
trans-1,3-dichloropropene	ND	800		ppbv	800	8/2/2011 8:56:00 AM
Trichloroethene	ND	800		ppbv	800	8/2/2011 8:56:00 AM
Trichlorofluoromethane	ND	800		ppbv	800	8/2/2011 8:56:00 AM
Vinyl acetate	ND	800		ppbv	800	8/2/2011 8:56:00 AM
Vinyl chloride	ND	800		ppbv	800	8/2/2011 8:56:00 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

Original

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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/6/2011 12:36:00 PM

Project: Kirtland AFB-140705

Lab ID: 1107364-020 **Matrix:** AIR

Client Sample ID VA0542

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	4,100	2,400		ppbv	800	8/2/2011 8:56:00 AM
Surr: 4-Bromofluorobenzene	101	70-130		%REC	800	8/2/2011 8:56:00 AM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **MT3**
C5-C8 Aliphatic Hydrocarbons	7,300,000	940,000		µg/m³	8000	8/4/2011 5:23:00 AM
C9-C10 Aromatic Hydrocarbons	ND	1,100,000		µg/m³	8000	8/4/2011 5:23:00 AM
C9-C12 Aliphatic Hydrocarbons	ND	1,500,000		µg/m³	8000	8/4/2011 5:23:00 AM
Surr: 4-Bromofluorobenzene	96.5	70-130		%REC	8000	8/4/2011 5:23:00 AM

Qualifiers:

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

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Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/8/2011 8:52:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107364-021 **Matrix:** AIR

Client Sample ID VA0543

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.75	0.10		%	1	7/18/2011 5:29:00 PM
Carbon Monoxide	ND	0.10		%	1	7/18/2011 5:29:00 PM
Methane	ND	0.50		%	1	7/18/2011 5:29:00 PM
Nitrogen	78	0.10		%	1	7/18/2011 5:29:00 PM
Oxygen	21	0.10		%	1	7/18/2011 5:29:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	40		ppbv	40	8/6/2011 10:55:00 AM
1,1,2,2-Tetrachloroethane	ND	40		ppbv	40	8/6/2011 10:55:00 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	40		ppbv	40	8/6/2011 10:55:00 AM
1,1,2-Trichloroethane	ND	40		ppbv	40	8/6/2011 10:55:00 AM
1,1-Dichloroethane	ND	40		ppbv	40	8/6/2011 10:55:00 AM
1,1-Dichloroethene	ND	40		ppbv	40	8/6/2011 10:55:00 AM
1,2,4-Trichlorobenzene	ND	40		ppbv	40	8/6/2011 10:55:00 AM
1,2,4-Trimethylbenzene	ND	40		ppbv	40	8/6/2011 10:55:00 AM
1,2-Dibromoethane	ND	40		ppbv	40	8/6/2011 10:55:00 AM
1,2-Dichlorobenzene	ND	40		ppbv	40	8/6/2011 10:55:00 AM
1,2-Dichloroethane	ND	40		ppbv	40	8/6/2011 10:55:00 AM
1,2-Dichloropropane	ND	40		ppbv	40	8/6/2011 10:55:00 AM
1,3,5-Trimethylbenzene	ND	40		ppbv	40	8/6/2011 10:55:00 AM
1,3-Butadiene	ND	40		ppbv	40	8/6/2011 10:55:00 AM
1,3-Dichlorobenzene	ND	40		ppbv	40	8/6/2011 10:55:00 AM
1,4-Dichlorobenzene	ND	40		ppbv	40	8/6/2011 10:55:00 AM
1,4-Dioxane	ND	40		ppbv	40	8/6/2011 10:55:00 AM
2-Butanone	ND	40		ppbv	40	8/6/2011 10:55:00 AM
2-Hexanone	ND	40		ppbv	40	8/6/2011 10:55:00 AM
2-Propanol	ND	40		ppbv	40	8/6/2011 10:55:00 AM
4-Methyl-2-pentanone	ND	40		ppbv	40	8/6/2011 10:55:00 AM
Acetone	ND	40		ppbv	40	8/6/2011 10:55:00 AM
Benzene	ND	40		ppbv	40	8/6/2011 10:55:00 AM
Benzyl chloride	ND	40		ppbv	40	8/6/2011 10:55:00 AM
Bromodichloromethane	ND	40		ppbv	40	8/6/2011 10:55:00 AM
Bromoform	ND	40		ppbv	40	8/6/2011 10:55:00 AM

Qualifiers:

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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#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/8/2011 8:52:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107364-021 **Matrix:** AIR

Client Sample ID VA0543

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	40		ppbv	40	8/6/2011 10:55:00 AM
Carbon disulfide	ND	40		ppbv	40	8/6/2011 10:55:00 AM
Carbon tetrachloride	ND	40		ppbv	40	8/6/2011 10:55:00 AM
Chlorobenzene	ND	40		ppbv	40	8/6/2011 10:55:00 AM
Chlorodibromomethane	ND	40		ppbv	40	8/6/2011 10:55:00 AM
Chloroethane	ND	40		ppbv	40	8/6/2011 10:55:00 AM
Chloroform	160	40		ppbv	40	8/6/2011 10:55:00 AM
Chloromethane	ND	40		ppbv	40	8/6/2011 10:55:00 AM
cis-1,2-Dichloroethene	ND	40		ppbv	40	8/6/2011 10:55:00 AM
cis-1,3-dichloropropene	ND	40		ppbv	40	8/6/2011 10:55:00 AM
Cyclohexane	ND	80		ppbv	40	8/6/2011 10:55:00 AM
Dichlorodifluoromethane	ND	40		ppbv	40	8/6/2011 10:55:00 AM
Ethanol	330	200		ppbv	40	8/6/2011 10:55:00 AM
Ethyl acetate	ND	40		ppbv	40	8/6/2011 10:55:00 AM
Ethylbenzene	ND	80		ppbv	40	8/6/2011 10:55:00 AM
Heptane	62	40		ppbv	40	8/6/2011 10:55:00 AM
Hexachlorobutadiene	ND	80		ppbv	40	8/6/2011 10:55:00 AM
m,p-Xylene	77	80	J	ppbv	40	8/6/2011 10:55:00 AM
Methylene chloride	ND	200		ppbv	40	8/6/2011 10:55:00 AM
Naphthalene	ND	40		ppbv	40	8/6/2011 10:55:00 AM
n-Hexane	ND	80		ppbv	40	8/6/2011 10:55:00 AM
o-Xylene	ND	40		ppbv	40	8/6/2011 10:55:00 AM
Propylene	ND	40		ppbv	40	8/6/2011 10:55:00 AM
Styrene	ND	40		ppbv	40	8/6/2011 10:55:00 AM
tert-Butyl Methyl Ether	ND	40		ppbv	40	8/6/2011 10:55:00 AM
Tetrachloroethene	ND	40		ppbv	40	8/6/2011 10:55:00 AM
Tetrahydrofuran	ND	40		ppbv	40	8/6/2011 10:55:00 AM
Toluene	220	40		ppbv	40	8/6/2011 10:55:00 AM
trans-1,2-Dichloroethene	ND	40		ppbv	40	8/6/2011 10:55:00 AM
trans-1,3-dichloropropene	ND	40		ppbv	40	8/6/2011 10:55:00 AM
Trichloroethene	ND	40		ppbv	40	8/6/2011 10:55:00 AM
Trichlorofluoromethane	ND	40		ppbv	40	8/6/2011 10:55:00 AM
Vinyl acetate	ND	40		ppbv	40	8/6/2011 10:55:00 AM
Vinyl chloride	ND	40		ppbv	40	8/6/2011 10:55:00 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
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Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/8/2011 8:52:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107364-021 **Matrix:** AIR

Client Sample ID VA0543

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	77	120	J	ppbv	40	8/6/2011 10:55:00 AM
Surr: 4-Bromofluorobenzene	108	70-130		%REC	40	8/6/2011 10:55:00 AM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **MT3**
C5-C8 Aliphatic Hydrocarbons	9,200	940	H	µg/m³	8	8/10/2011 12:03:00 AM
C9-C10 Aromatic Hydrocarbons	380	1,100	JH	µg/m³	8	8/10/2011 12:03:00 AM
C9-C12 Aliphatic Hydrocarbons	8,100	1,500	H	µg/m³	8	8/10/2011 12:03:00 AM
Surr: 4-Bromofluorobenzene	100	70-130	H	%REC	8	8/10/2011 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

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Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/8/2011 9:22:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107364-022 **Matrix:** AIR

Client Sample ID VA0544

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	40		ppbv	40	8/6/2011 11:38:00 AM
1,1,2,2-Tetrachloroethane	ND	40		ppbv	40	8/6/2011 11:38:00 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	40		ppbv	40	8/6/2011 11:38:00 AM
1,1,2-Trichloroethane	ND	40		ppbv	40	8/6/2011 11:38:00 AM
1,1-Dichloroethane	ND	40		ppbv	40	8/6/2011 11:38:00 AM
1,1-Dichloroethene	ND	40		ppbv	40	8/6/2011 11:38:00 AM
1,2,4-Trichlorobenzene	ND	40		ppbv	40	8/6/2011 11:38:00 AM
1,2,4-Trimethylbenzene	ND	40		ppbv	40	8/6/2011 11:38:00 AM
1,2-Dibromoethane	ND	40		ppbv	40	8/6/2011 11:38:00 AM
1,2-Dichlorobenzene	ND	40		ppbv	40	8/6/2011 11:38:00 AM
1,2-Dichloroethane	ND	40		ppbv	40	8/6/2011 11:38:00 AM
1,2-Dichloropropane	ND	40		ppbv	40	8/6/2011 11:38:00 AM
1,3,5-Trimethylbenzene	ND	40		ppbv	40	8/6/2011 11:38:00 AM
1,3-Butadiene	ND	40		ppbv	40	8/6/2011 11:38:00 AM
1,3-Dichlorobenzene	ND	40		ppbv	40	8/6/2011 11:38:00 AM
1,4-Dichlorobenzene	ND	40		ppbv	40	8/6/2011 11:38:00 AM
1,4-Dioxane	ND	40		ppbv	40	8/6/2011 11:38:00 AM
2-Butanone	ND	40		ppbv	40	8/6/2011 11:38:00 AM
2-Hexanone	ND	40		ppbv	40	8/6/2011 11:38:00 AM
2-Propanol	ND	40		ppbv	40	8/6/2011 11:38:00 AM
4-Methyl-2-pentanone	ND	40		ppbv	40	8/6/2011 11:38:00 AM
Acetone	ND	40		ppbv	40	8/6/2011 11:38:00 AM
Benzene	ND	40		ppbv	40	8/6/2011 11:38:00 AM
Benzyl chloride	ND	40		ppbv	40	8/6/2011 11:38:00 AM
Bromodichloromethane	ND	40		ppbv	40	8/6/2011 11:38:00 AM
Bromoform	ND	40		ppbv	40	8/6/2011 11:38:00 AM
Bromomethane	ND	40		ppbv	40	8/6/2011 11:38:00 AM
Carbon disulfide	ND	40		ppbv	40	8/6/2011 11:38:00 AM
Carbon tetrachloride	ND	40		ppbv	40	8/6/2011 11:38:00 AM
Chlorobenzene	ND	40		ppbv	40	8/6/2011 11:38:00 AM
Chlorodibromomethane	ND	40		ppbv	40	8/6/2011 11:38:00 AM
Chloroethane	ND	40		ppbv	40	8/6/2011 11:38:00 AM
Chloroform	170	40		ppbv	40	8/6/2011 11:38:00 AM
Chloromethane	ND	40		ppbv	40	8/6/2011 11:38:00 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#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/8/2011 9:22:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107364-022 **Matrix:** AIR

Client Sample ID VA0544

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
cis-1,2-Dichloroethene	ND	40		ppbv	40	8/6/2011 11:38:00 AM
cis-1,3-dichloropropene	ND	40		ppbv	40	8/6/2011 11:38:00 AM
Cyclohexane	64	80	J	ppbv	40	8/6/2011 11:38:00 AM
Dichlorodifluoromethane	ND	40		ppbv	40	8/6/2011 11:38:00 AM
Ethanol	100	200	J	ppbv	40	8/6/2011 11:38:00 AM
Ethyl acetate	ND	40		ppbv	40	8/6/2011 11:38:00 AM
Ethylbenzene	ND	80		ppbv	40	8/6/2011 11:38:00 AM
Heptane	43	40		ppbv	40	8/6/2011 11:38:00 AM
Hexachlorobutadiene	ND	80		ppbv	40	8/6/2011 11:38:00 AM
m,p-Xylene	70	80	J	ppbv	40	8/6/2011 11:38:00 AM
Methylene chloride	ND	200		ppbv	40	8/6/2011 11:38:00 AM
Naphthalene	ND	40		ppbv	40	8/6/2011 11:38:00 AM
n-Hexane	ND	80		ppbv	40	8/6/2011 11:38:00 AM
o-Xylene	ND	40		ppbv	40	8/6/2011 11:38:00 AM
Propylene	ND	40		ppbv	40	8/6/2011 11:38:00 AM
Styrene	ND	40		ppbv	40	8/6/2011 11:38:00 AM
tert-Butyl Methyl Ether	ND	40		ppbv	40	8/6/2011 11:38:00 AM
Tetrachloroethene	ND	40		ppbv	40	8/6/2011 11:38:00 AM
Tetrahydrofuran	ND	40		ppbv	40	8/6/2011 11:38:00 AM
Toluene	210	40		ppbv	40	8/6/2011 11:38:00 AM
trans-1,2-Dichloroethene	ND	40		ppbv	40	8/6/2011 11:38:00 AM
trans-1,3-dichloropropene	ND	40		ppbv	40	8/6/2011 11:38:00 AM
Trichloroethene	ND	40		ppbv	40	8/6/2011 11:38:00 AM
Trichlorofluoromethane	ND	40		ppbv	40	8/6/2011 11:38:00 AM
Vinyl acetate	ND	40		ppbv	40	8/6/2011 11:38:00 AM
Vinyl chloride	ND	40		ppbv	40	8/6/2011 11:38:00 AM
Xylenes, Total	70	120	J	ppbv	40	8/6/2011 11:38:00 AM
Surr: 4-Bromofluorobenzene	104	70-130		%REC	40	8/6/2011 11:38:00 AM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **MT3**
C5-C8 Aliphatic Hydrocarbons	6,400	940	H	µg/m³	8	8/10/2011 12:48:00 AM
C9-C10 Aromatic Hydrocarbons	ND	1,100	H	µg/m³	8	8/10/2011 12:48:00 AM
C9-C12 Aliphatic Hydrocarbons	4,200	1,500	H	µg/m³	8	8/10/2011 12:48:00 AM

Qualifiers:

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

Original

RTI LABORATORIES, INC.

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

Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/8/2011 9:22:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107364-022 **Matrix:** AIR

Client Sample ID VA0544

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MASS APH AIR				**MA_APH**		Analyst: **MT3**
AIR-PHASE PETROLEUM HYDROCARBONS						
Surr: 4-Bromofluorobenzene	95.4	70-130	H	%REC	8	8/10/2011 12:48:00 AM

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

Original

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Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/8/2011 9:53:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107364-023 **Matrix:** AIR

Client Sample ID VA0545

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.17	0.10		%	1	7/18/2011 5:59:00 PM
Carbon Monoxide	ND	0.10		%	1	7/18/2011 5:59:00 PM
Methane	ND	0.50		%	1	7/18/2011 5:59:00 PM
Nitrogen	79	0.10		%	1	7/18/2011 5:59:00 PM
Oxygen	21	0.10		%	1	7/18/2011 5:59:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	40		ppbv	40	8/6/2011 12:23:00 PM
1,1,2,2-Tetrachloroethane	ND	40		ppbv	40	8/6/2011 12:23:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	40		ppbv	40	8/6/2011 12:23:00 PM
1,1,2-Trichloroethane	ND	40		ppbv	40	8/6/2011 12:23:00 PM
1,1-Dichloroethane	ND	40		ppbv	40	8/6/2011 12:23:00 PM
1,1-Dichloroethene	ND	40		ppbv	40	8/6/2011 12:23:00 PM
1,2,4-Trichlorobenzene	ND	40		ppbv	40	8/6/2011 12:23:00 PM
1,2,4-Trimethylbenzene	ND	40		ppbv	40	8/6/2011 12:23:00 PM
1,2-Dibromoethane	ND	40		ppbv	40	8/6/2011 12:23:00 PM
1,2-Dichlorobenzene	ND	40		ppbv	40	8/6/2011 12:23:00 PM
1,2-Dichloroethane	ND	40		ppbv	40	8/6/2011 12:23:00 PM
1,2-Dichloropropane	ND	40		ppbv	40	8/6/2011 12:23:00 PM
1,3,5-Trimethylbenzene	ND	40		ppbv	40	8/6/2011 12:23:00 PM
1,3-Butadiene	ND	40		ppbv	40	8/6/2011 12:23:00 PM
1,3-Dichlorobenzene	ND	40		ppbv	40	8/6/2011 12:23:00 PM
1,4-Dichlorobenzene	ND	40		ppbv	40	8/6/2011 12:23:00 PM
1,4-Dioxane	ND	40		ppbv	40	8/6/2011 12:23:00 PM
2-Butanone	ND	40		ppbv	40	8/6/2011 12:23:00 PM
2-Hexanone	ND	40		ppbv	40	8/6/2011 12:23:00 PM
2-Propanol	ND	40		ppbv	40	8/6/2011 12:23:00 PM
4-Methyl-2-pentanone	ND	40		ppbv	40	8/6/2011 12:23:00 PM
Acetone	ND	40		ppbv	40	8/6/2011 12:23:00 PM
Benzene	ND	40		ppbv	40	8/6/2011 12:23:00 PM
Benzyl chloride	ND	40		ppbv	40	8/6/2011 12:23:00 PM
Bromodichloromethane	ND	40		ppbv	40	8/6/2011 12:23:00 PM
Bromoform	ND	40		ppbv	40	8/6/2011 12:23:00 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

Original

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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/8/2011 9:53:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107364-023 **Matrix:** AIR

Client Sample ID VA0545

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	40		ppbv	40	8/6/2011 12:23:00 PM
Carbon disulfide	ND	40		ppbv	40	8/6/2011 12:23:00 PM
Carbon tetrachloride	ND	40		ppbv	40	8/6/2011 12:23:00 PM
Chlorobenzene	ND	40		ppbv	40	8/6/2011 12:23:00 PM
Chlorodibromomethane	ND	40		ppbv	40	8/6/2011 12:23:00 PM
Chloroethane	ND	40		ppbv	40	8/6/2011 12:23:00 PM
Chloroform	ND	40		ppbv	40	8/6/2011 12:23:00 PM
Chloromethane	ND	40		ppbv	40	8/6/2011 12:23:00 PM
cis-1,2-Dichloroethene	ND	40		ppbv	40	8/6/2011 12:23:00 PM
cis-1,3-dichloropropene	ND	40		ppbv	40	8/6/2011 12:23:00 PM
Cyclohexane	61	80	J	ppbv	40	8/6/2011 12:23:00 PM
Dichlorodifluoromethane	ND	40		ppbv	40	8/6/2011 12:23:00 PM
Ethanol	160	200	J	ppbv	40	8/6/2011 12:23:00 PM
Ethyl acetate	ND	40		ppbv	40	8/6/2011 12:23:00 PM
Ethylbenzene	ND	80		ppbv	40	8/6/2011 12:23:00 PM
Heptane	47	40		ppbv	40	8/6/2011 12:23:00 PM
Hexachlorobutadiene	ND	80		ppbv	40	8/6/2011 12:23:00 PM
m,p-Xylene	76	80	J	ppbv	40	8/6/2011 12:23:00 PM
Methylene chloride	ND	200		ppbv	40	8/6/2011 12:23:00 PM
Naphthalene	ND	40		ppbv	40	8/6/2011 12:23:00 PM
n-Hexane	ND	80		ppbv	40	8/6/2011 12:23:00 PM
o-Xylene	ND	40		ppbv	40	8/6/2011 12:23:00 PM
Propylene	ND	40		ppbv	40	8/6/2011 12:23:00 PM
Styrene	ND	40		ppbv	40	8/6/2011 12:23:00 PM
tert-Butyl Methyl Ether	ND	40		ppbv	40	8/6/2011 12:23:00 PM
Tetrachloroethene	ND	40		ppbv	40	8/6/2011 12:23:00 PM
Tetrahydrofuran	ND	40		ppbv	40	8/6/2011 12:23:00 PM
Toluene	190	40		ppbv	40	8/6/2011 12:23:00 PM
trans-1,2-Dichloroethene	ND	40		ppbv	40	8/6/2011 12:23:00 PM
trans-1,3-dichloropropene	ND	40		ppbv	40	8/6/2011 12:23:00 PM
Trichloroethene	ND	40		ppbv	40	8/6/2011 12:23:00 PM
Trichlorofluoromethane	ND	40		ppbv	40	8/6/2011 12:23:00 PM
Vinyl acetate	ND	40		ppbv	40	8/6/2011 12:23:00 PM
Vinyl chloride	ND	40		ppbv	40	8/6/2011 12:23:00 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
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Original

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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/8/2011 9:53:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107364-023 **Matrix:** AIR

Client Sample ID VA0545

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	76	120	J	ppbv	40	8/6/2011 12:23:00 PM
Surr: 4-Bromofluorobenzene	108	70-130		%REC	40	8/6/2011 12:23:00 PM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **MT3**
C5-C8 Aliphatic Hydrocarbons	7,500	940	H	µg/m³	8	8/10/2011 1:33:00 AM
C9-C10 Aromatic Hydrocarbons	330	1,100	JH	µg/m³	8	8/10/2011 1:33:00 AM
C9-C12 Aliphatic Hydrocarbons	6,400	1,500	H	µg/m³	8	8/10/2011 1:33:00 AM
Surr: 4-Bromofluorobenzene	99.0	70-130	H	%REC	8	8/10/2011 1:33:00 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#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/8/2011 10:18:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107364-024 **Matrix:** AIR

Client Sample ID VA0546

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.22	0.10		%	1	7/18/2011 6:23:00 PM
Carbon Monoxide	ND	0.10		%	1	7/18/2011 6:23:00 PM
Methane	ND	0.50		%	1	7/18/2011 6:23:00 PM
Nitrogen	78	0.10		%	1	7/18/2011 6:23:00 PM
Oxygen	21	0.10		%	1	7/18/2011 6:23:00 PM
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	40		ppbv	40	8/6/2011 1:09:00 PM
1,1,2,2-Tetrachloroethane	ND	40		ppbv	40	8/6/2011 1:09:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	40		ppbv	40	8/6/2011 1:09:00 PM
1,1,2-Trichloroethane	ND	40		ppbv	40	8/6/2011 1:09:00 PM
1,1-Dichloroethane	ND	40		ppbv	40	8/6/2011 1:09:00 PM
1,1-Dichloroethene	ND	40		ppbv	40	8/6/2011 1:09:00 PM
1,2,4-Trichlorobenzene	ND	40		ppbv	40	8/6/2011 1:09:00 PM
1,2,4-Trimethylbenzene	ND	40		ppbv	40	8/6/2011 1:09:00 PM
1,2-Dibromoethane	ND	40		ppbv	40	8/6/2011 1:09:00 PM
1,2-Dichlorobenzene	ND	40		ppbv	40	8/6/2011 1:09:00 PM
1,2-Dichloroethane	ND	40		ppbv	40	8/6/2011 1:09:00 PM
1,2-Dichloropropane	ND	40		ppbv	40	8/6/2011 1:09:00 PM
1,3,5-Trimethylbenzene	ND	40		ppbv	40	8/6/2011 1:09:00 PM
1,3-Butadiene	ND	40		ppbv	40	8/6/2011 1:09:00 PM
1,3-Dichlorobenzene	ND	40		ppbv	40	8/6/2011 1:09:00 PM
1,4-Dichlorobenzene	ND	40		ppbv	40	8/6/2011 1:09:00 PM
1,4-Dioxane	ND	40		ppbv	40	8/6/2011 1:09:00 PM
2-Butanone	ND	40		ppbv	40	8/6/2011 1:09:00 PM
2-Hexanone	ND	40		ppbv	40	8/6/2011 1:09:00 PM
2-Propanol	ND	40		ppbv	40	8/6/2011 1:09:00 PM
4-Methyl-2-pentanone	ND	40		ppbv	40	8/6/2011 1:09:00 PM
Acetone	ND	40		ppbv	40	8/6/2011 1:09:00 PM
Benzene	ND	40		ppbv	40	8/6/2011 1:09:00 PM
Benzyl chloride	ND	40		ppbv	40	8/6/2011 1:09:00 PM
Bromodichloromethane	ND	40		ppbv	40	8/6/2011 1:09:00 PM
Bromoform	ND	40		ppbv	40	8/6/2011 1:09:00 PM

Qualifiers:

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

Original

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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/8/2011 10:18:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107364-024 **Matrix:** AIR

Client Sample ID VA0546

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Bromomethane	ND	40		ppbv	40	8/6/2011 1:09:00 PM
Carbon disulfide	ND	40		ppbv	40	8/6/2011 1:09:00 PM
Carbon tetrachloride	ND	40		ppbv	40	8/6/2011 1:09:00 PM
Chlorobenzene	ND	40		ppbv	40	8/6/2011 1:09:00 PM
Chlorodibromomethane	ND	40		ppbv	40	8/6/2011 1:09:00 PM
Chloroethane	ND	40		ppbv	40	8/6/2011 1:09:00 PM
Chloroform	ND	40		ppbv	40	8/6/2011 1:09:00 PM
Chloromethane	ND	40		ppbv	40	8/6/2011 1:09:00 PM
cis-1,2-Dichloroethene	ND	40		ppbv	40	8/6/2011 1:09:00 PM
cis-1,3-dichloropropene	ND	40		ppbv	40	8/6/2011 1:09:00 PM
Cyclohexane	50	80	J	ppbv	40	8/6/2011 1:09:00 PM
Dichlorodifluoromethane	ND	40		ppbv	40	8/6/2011 1:09:00 PM
Ethanol	ND	200		ppbv	40	8/6/2011 1:09:00 PM
Ethyl acetate	ND	40		ppbv	40	8/6/2011 1:09:00 PM
Ethylbenzene	ND	80		ppbv	40	8/6/2011 1:09:00 PM
Heptane	42	40		ppbv	40	8/6/2011 1:09:00 PM
Hexachlorobutadiene	ND	80		ppbv	40	8/6/2011 1:09:00 PM
m,p-Xylene	70	80	J	ppbv	40	8/6/2011 1:09:00 PM
Methylene chloride	ND	200		ppbv	40	8/6/2011 1:09:00 PM
Naphthalene	ND	40		ppbv	40	8/6/2011 1:09:00 PM
n-Hexane	ND	80		ppbv	40	8/6/2011 1:09:00 PM
o-Xylene	ND	40		ppbv	40	8/6/2011 1:09:00 PM
Propylene	ND	40		ppbv	40	8/6/2011 1:09:00 PM
Styrene	ND	40		ppbv	40	8/6/2011 1:09:00 PM
tert-Butyl Methyl Ether	ND	40		ppbv	40	8/6/2011 1:09:00 PM
Tetrachloroethene	ND	40		ppbv	40	8/6/2011 1:09:00 PM
Tetrahydrofuran	ND	40		ppbv	40	8/6/2011 1:09:00 PM
Toluene	160	40		ppbv	40	8/6/2011 1:09:00 PM
trans-1,2-Dichloroethene	ND	40		ppbv	40	8/6/2011 1:09:00 PM
trans-1,3-dichloropropene	ND	40		ppbv	40	8/6/2011 1:09:00 PM
Trichloroethene	ND	40		ppbv	40	8/6/2011 1:09:00 PM
Trichlorofluoromethane	ND	40		ppbv	40	8/6/2011 1:09:00 PM
Vinyl acetate	ND	40		ppbv	40	8/6/2011 1:09:00 PM
Vinyl chloride	ND	40		ppbv	40	8/6/2011 1:09:00 PM

Qualifiers:

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

Original

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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/8/2011 10:18:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107364-024 **Matrix:** AIR

Client Sample ID VA0546

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
Xylenes, Total	70	120	J	ppbv	40	8/6/2011 1:09:00 PM
Surr: 4-Bromofluorobenzene	107	70-130		%REC	40	8/6/2011 1:09:00 PM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **MT3**
C5-C8 Aliphatic Hydrocarbons	8,200	940	H	µg/m³	8	8/10/2011 2:18:00 AM
C9-C10 Aromatic Hydrocarbons	360	1,100	JH	µg/m³	8	8/10/2011 2:18:00 AM
C9-C12 Aliphatic Hydrocarbons	6,900	1,500	H	µg/m³	8	8/10/2011 2:18:00 AM
Surr: 4-Bromofluorobenzene	99.2	70-130	H	%REC	8	8/10/2011 2:18:00 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

Original

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Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/6/2011 8:00:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107364-025 **Matrix:** AIR

Client Sample ID VA8031-TB

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
1,1,1-Trichloroethane	ND	40		ppbv	40	8/1/2011 9:33:00 PM
1,1,2,2-Tetrachloroethane	ND	40		ppbv	40	8/1/2011 9:33:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	40		ppbv	40	8/1/2011 9:33:00 PM
1,1,2-Trichloroethane	ND	40		ppbv	40	8/1/2011 9:33:00 PM
1,1-Dichloroethane	ND	40		ppbv	40	8/1/2011 9:33:00 PM
1,1-Dichloroethene	ND	40		ppbv	40	8/1/2011 9:33:00 PM
1,2,4-Trichlorobenzene	ND	40		ppbv	40	8/1/2011 9:33:00 PM
1,2,4-Trimethylbenzene	ND	40		ppbv	40	8/1/2011 9:33:00 PM
1,2-Dibromoethane	ND	40		ppbv	40	8/1/2011 9:33:00 PM
1,2-Dichlorobenzene	ND	40		ppbv	40	8/1/2011 9:33:00 PM
1,2-Dichloroethane	ND	40		ppbv	40	8/1/2011 9:33:00 PM
1,2-Dichloropropane	ND	40		ppbv	40	8/1/2011 9:33:00 PM
1,3,5-Trimethylbenzene	ND	40		ppbv	40	8/1/2011 9:33:00 PM
1,3-Butadiene	ND	40		ppbv	40	8/1/2011 9:33:00 PM
1,3-Dichlorobenzene	ND	40		ppbv	40	8/1/2011 9:33:00 PM
1,4-Dichlorobenzene	ND	40		ppbv	40	8/1/2011 9:33:00 PM
1,4-Dioxane	ND	40		ppbv	40	8/1/2011 9:33:00 PM
2-Butanone	ND	40		ppbv	40	8/1/2011 9:33:00 PM
2-Hexanone	ND	40		ppbv	40	8/1/2011 9:33:00 PM
2-Propanol	60	40		ppbv	40	8/1/2011 9:33:00 PM
4-Methyl-2-pentanone	ND	40		ppbv	40	8/1/2011 9:33:00 PM
Acetone	ND	40		ppbv	40	8/1/2011 9:33:00 PM
Benzene	ND	40		ppbv	40	8/1/2011 9:33:00 PM
Benzyl chloride	ND	40		ppbv	40	8/1/2011 9:33:00 PM
Bromodichloromethane	ND	40		ppbv	40	8/1/2011 9:33:00 PM
Bromoform	ND	40		ppbv	40	8/1/2011 9:33:00 PM
Bromomethane	ND	40		ppbv	40	8/1/2011 9:33:00 PM
Carbon disulfide	ND	40		ppbv	40	8/1/2011 9:33:00 PM
Carbon tetrachloride	ND	40		ppbv	40	8/1/2011 9:33:00 PM
Chlorobenzene	ND	40		ppbv	40	8/1/2011 9:33:00 PM
Chlorodibromomethane	ND	40		ppbv	40	8/1/2011 9:33:00 PM
Chloroethane	ND	40		ppbv	40	8/1/2011 9:33:00 PM
Chloroform	ND	40		ppbv	40	8/1/2011 9:33:00 PM
Chloromethane	ND	40		ppbv	40	8/1/2011 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

Original

RTI LABORATORIES, INC.

RTI
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Analytical Report

(consolidated)

WO#: **1107364**

Date Reported: **8/26/2011**

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/6/2011 8:00:00 AM

Project: Kirtland AFB-140705

Lab ID: 1107364-025 **Matrix:** AIR

Client Sample ID VA8031-TB

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**TO-15**		Analyst: **RH3**
cis-1,2-Dichloroethene	ND	40		ppbv	40	8/1/2011 9:33:00 PM
cis-1,3-dichloropropene	ND	40		ppbv	40	8/1/2011 9:33:00 PM
Cyclohexane	ND	80		ppbv	40	8/1/2011 9:33:00 PM
Dichlorodifluoromethane	ND	40		ppbv	40	8/1/2011 9:33:00 PM
Ethanol	150	200	J	ppbv	40	8/1/2011 9:33:00 PM
Ethyl acetate	ND	40		ppbv	40	8/1/2011 9:33:00 PM
Ethylbenzene	ND	80		ppbv	40	8/1/2011 9:33:00 PM
Heptane	ND	40		ppbv	40	8/1/2011 9:33:00 PM
Hexachlorobutadiene	ND	80		ppbv	40	8/1/2011 9:33:00 PM
m,p-Xylene	ND	80		ppbv	40	8/1/2011 9:33:00 PM
Methylene chloride	ND	200		ppbv	40	8/1/2011 9:33:00 PM
Naphthalene	ND	40		ppbv	40	8/1/2011 9:33:00 PM
n-Hexane	41	80	J	ppbv	40	8/1/2011 9:33:00 PM
o-Xylene	ND	40		ppbv	40	8/1/2011 9:33:00 PM
Propylene	ND	40		ppbv	40	8/1/2011 9:33:00 PM
Styrene	ND	40		ppbv	40	8/1/2011 9:33:00 PM
tert-Butyl Methyl Ether	ND	40		ppbv	40	8/1/2011 9:33:00 PM
Tetrachloroethene	ND	40		ppbv	40	8/1/2011 9:33:00 PM
Tetrahydrofuran	ND	40		ppbv	40	8/1/2011 9:33:00 PM
Toluene	ND	40		ppbv	40	8/1/2011 9:33:00 PM
trans-1,2-Dichloroethene	ND	40		ppbv	40	8/1/2011 9:33:00 PM
trans-1,3-dichloropropene	ND	40		ppbv	40	8/1/2011 9:33:00 PM
Trichloroethene	ND	40		ppbv	40	8/1/2011 9:33:00 PM
Trichlorofluoromethane	ND	40		ppbv	40	8/1/2011 9:33:00 PM
Vinyl acetate	ND	40		ppbv	40	8/1/2011 9:33:00 PM
Vinyl chloride	ND	40		ppbv	40	8/1/2011 9:33:00 PM
Xylenes, Total	ND	120		ppbv	40	8/1/2011 9:33:00 PM
Surr: 4-Bromofluorobenzene	96.1	70-130		%REC	40	8/1/2011 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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QC SUMMARY REPORT

WO#: 1107364
20-Oct-11

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

BatchID: R41794

Sample ID: **mblk** SampType: **MBLK** TestCode: **ASTM-D2504** Units: **%** Prep Date: RunNo: **41794**
Client ID: **PBW** Batch ID: **R41794** TestNo: **ASTM-D2504** Analysis Date: **7/15/2011** SeqNo: **807242**

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: **41794**
Client ID: **LCSW** Batch ID: **R41794** TestNo: **ASTM-D2504** Analysis Date: **7/15/2011** SeqNo: **807244**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon dioxide	2.1	0.10	2.500	0	83.7	70	130	2.412	14.2	0	
Carbon Monoxide	2.2	0.10	2.500	0	88.9	70	130	2.464	10.3	0	
Methane	1.7	0.50	2.000	0	86.3	70	130	1.972	13.3	0	
Nitrogen	2.5	0.10	2.500	0	98.7	70	130	2.795	12.5	0	
Oxygen	2.3	0.10	2.500	0	90.7	70	130	2.599	13.6	0	

Sample ID: **1107364-009bdup** SampType: **DUP** TestCode: **ASTM-D2504** Units: **%** Prep Date: RunNo: **41794**
Client ID: **VA0463** Batch ID: **R41794** TestNo: **ASTM-D2504** Analysis Date: **7/15/2011** SeqNo: **807255**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon dioxide	0.72	0.10						0.6770	5.88	20	
Carbon Monoxide	ND	0.10						0	0	20	
Methane	ND	0.50						0	0	20	
Nitrogen	78	0.10						78.07	0.0410	20	
Oxygen	21	0.10						20.55	0.190	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#: 1107364
20-Oct-11

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

BatchID: R41795

Sample ID: **mblk** SampType: **MBLK** TestCode: **ASTM-D2504** Units: **%** Prep Date: RunNo: **41795**
Client ID: **PBW** Batch ID: **R41795** TestNo: **ASTM-D2504** Analysis Date: **7/18/2011** SeqNo: **807258**

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: **41795**
Client ID: **LCSW** Batch ID: **R41795** TestNo: **ASTM-D2504** Analysis Date: **7/18/2011** SeqNo: **807260**

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	87.0	70	130	2.142	1.48	0	
Carbon Monoxide	2.4	0.10	2.500	0	97.7	70	130	2.557	4.60	0	
Methane	1.9	0.50	2.000	0	96.4	70	130	2.009	4.17	0	
Nitrogen	2.4	0.10	2.500	0	94.8	70	130	2.499	5.26	0	
Oxygen	2.3	0.10	2.500	0	90.2	70	130	2.365	4.72	0	

Sample ID: **1107364-018bdup** SampType: **DUP** TestCode: **ASTM-D2504** Units: **%** Prep Date: RunNo: **41795**
Client ID: **VA0540** Batch ID: **R41795** TestNo: **ASTM-D2504** Analysis Date: **7/18/2011** SeqNo: **807271**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon dioxide	0.27	0.10						0.2750	2.21	20	
Carbon Monoxide	ND	0.10						0	0	20	
Methane	ND	0.50						0	0	20	
Nitrogen	78	0.10						77.46	0.128	20	
Oxygen	21	0.10						21.12	0.00474	20	

Qualifiers:

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

Original

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Livonia, MI 48150
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QC SUMMARY REPORT

WO#: 1107364
20-Oct-11

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

BatchID: R41945

Sample ID: **TO15 Blank 08011** SampType: **MBLK** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **41945**
Client ID: **PBW** Batch ID: **R41945** TestNo: **TO-15** Analysis Date: **8/1/2011** SeqNo: **810782**

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#: 1107364
20-Oct-11

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

BatchID: R41945

Sample ID: **TO15 Blank 08011** SampType: **MBLK** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **41945**
Client ID: **PBW** Batch ID: **R41945** TestNo: **TO-15** Analysis Date: **8/1/2011** SeqNo: **810782**

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#: 1107364
20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB-140705
BatchID: R41945

Sample ID: **TO15 Blank 08011** SampType: **MBLK** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **41945**
Client ID: **PBW** Batch ID: **R41945** TestNo: **TO-15** Analysis Date: **8/1/2011** SeqNo: **810782**

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		95.0	70	130				

Sample ID: **1107364-015ADUP** SampType: **DUP** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **41945**
Client ID: **VA0537** Batch ID: **R41945** TestNo: **TO-15** Analysis Date: **8/1/2011** SeqNo: **810785**

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	ND	40						0	0	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

Original

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Website: www.rtilabs.com

QC SUMMARY REPORT

WO#: 1107364
20-Oct-11

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

BatchID: R41945

Sample ID: **1107364-015ADUP** SampType: **DUP** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **41945**
Client ID: **VA0537** Batch ID: **R41945** TestNo: **TO-15** Analysis Date: **8/1/2011** SeqNo: **810785**

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	ND	40						0	0	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	290	40						324.8	12.7	25	
Benzene	120	40						133.6	12.7	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	63	40						70.40	10.8	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	180	80						201.6	11.8	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#: **1107364**

20-Oct-11

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

BatchID: **R41945**

Sample ID: **1107364-015ADUP** SampType: **DUP** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **41945**
Client ID: **VA0537** Batch ID: **R41945** TestNo: **TO-15** Analysis Date: **8/1/2011** SeqNo: **810785**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane	ND	40						0	0	25	
Ethanol	ND	200						0	0	25	
Ethyl acetate	ND	40						0	0	25	
Ethylbenzene	ND	80						0	0	25	
Heptane	70	40						79.20	11.8	25	
Hexachlorobutadiene	ND	80						0	0	25	
m,p-Xylene	64	80						72.80	12.2	25	J
Methylene chloride	ND	200						0	0	25	
Naphthalene	ND	40						0	0	25	
n-Hexane	ND	80						0	0	25	
o-Xylene	ND	40						0	0	25	
Propylene	ND	40						0	0	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	130	40						158.0	16.7	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	64	120						72.80	12.2	25	J
Surr: 4-Bromofluorobenzene	490		500.0		97.9	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#: **1107364**
20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc
Project: Kirtland AFB-140705
BatchID: **R42009**

Sample ID: **MBLK 080311** SampType: **MBLK** TestCode: **MA_APH** Units: **µg/m³** Prep Date: RunNo: **42009**
Client ID: **PBW** Batch ID: **R42009** TestNo: **MA_APH** Analysis Date: **8/3/2011** SeqNo: **812061**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
C5-C8 Aliphatic Hydrocarbons	93	120									J
C9-C10 Aromatic Hydrocarbons	ND	130									
C9-C12 Aliphatic Hydrocarbons	ND	190									
Surr: 4-Bromofluorobenzene	87		89.50		97.2	70	130				

Sample ID: **1105678-020ADUP** SampType: **DUP** TestCode: **MA_APH** Units: **µg/m³** Prep Date: RunNo: **42009**
Client ID: **ZZZZZZ** Batch ID: **R42009** TestNo: **MA_APH** Analysis Date: **8/3/2011** SeqNo: **812063**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
C5-C8 Aliphatic Hydrocarbons	180,000	94,000						177,400	0.0992	30	H
C9-C10 Aromatic Hydrocarbons	ND	110,000						0	0	30	H
C9-C12 Aliphatic Hydrocarbons	49,000	150,000						37,840	25.4	30	JH
Surr: 4-Bromofluorobenzene	71,000		71,600		98.5	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

Original

RTI LABORATORIES, INC.

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

QC SUMMARY REPORT

WO#: 1107364
20-Oct-11

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

BatchID: R42025

Sample ID: **Blank 080411a** SampType: **MBLK** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **42025**
Client ID: **PBW** Batch ID: **R42025** TestNo: **TO-15** Analysis Date: **8/4/2011** SeqNo: **812443**

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#: 1107364
20-Oct-11

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

BatchID: R42025

Sample ID: **Blank 080411a** SampType: **MBLK** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **42025**
Client ID: **PBW** Batch ID: **R42025** TestNo: **TO-15** Analysis Date: **8/4/2011** SeqNo: **812443**

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#: 1107364
20-Oct-11

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

BatchID: R42025

Sample ID: **Blank 080411a** SampType: **MBLK** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **42025**
Client ID: **PBW** Batch ID: **R42025** TestNo: **TO-15** Analysis Date: **8/4/2011** SeqNo: **812443**

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		93.4	70	130				

Sample ID: **1105678-024ADUP** SampType: **DUP** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **42025**
Client ID: **ZZZZZZ** Batch ID: **R42025** TestNo: **TO-15** Analysis Date: **8/4/2011** SeqNo: **812445**

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	H
1,1,2,2-Tetrachloroethane	ND	8,000						0	0	25	H
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	8,000						0	0	25	H
1,1,2-Trichloroethane	ND	8,000						0	0	25	H
1,1-Dichloroethane	ND	8,000						0	0	25	H
1,1-Dichloroethene	ND	8,000						0	0	25	H
1,2,4-Trichlorobenzene	ND	8,000						0	0	25	H
1,2,4-Trimethylbenzene	ND	8,000						0	0	25	H
1,2-Dibromoethane	ND	8,000						0	0	25	H
1,2-Dichlorobenzene	ND	8,000						0	0	25	H
1,2-Dichloroethane	ND	8,000						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 exceede
- ND Not Detected at the Reporting Limit
- S Spike Recovery outside accepted recovery limits

Original

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QC SUMMARY REPORT

WO#: 1107364
20-Oct-11

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

BatchID: R42025

Sample ID: **1105678-024ADUP** SampType: **DUP** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **42025**
Client ID: **ZZZZZZ** Batch ID: **R42025** TestNo: **TO-15** Analysis Date: **8/4/2011** SeqNo: **812445**

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	H
1,3,5-Trimethylbenzene	ND	8,000						0	0	25	H
1,3-Butadiene	ND	8,000						0	0	25	H
1,3-Dichlorobenzene	ND	8,000						0	0	25	H
1,4-Dichlorobenzene	ND	8,000						0	0	25	H
1,4-Dioxane	ND	8,000						0	0	25	H
2-Butanone	47,000	8,000						39,280	17.5	25	H
2-Hexanone	ND	8,000						0	0	25	H
2-Propanol	19,000	8,000						16,800	10.4	25	H
4-Methyl-2-pentanone	ND	8,000						0	0	25	H
Acetone	240,000	8,000						187,800	25.3	25	RH
Benzene	120,000	8,000						95,440	19.8	25	H
Benzyl chloride	ND	8,000						0	0	25	H
Bromodichloromethane	ND	8,000						0	0	25	H
Bromoform	ND	8,000						0	0	25	H
Bromomethane	ND	8,000						0	0	25	H
Carbon disulfide	ND	8,000						0	0	25	H
Carbon tetrachloride	ND	8,000						0	0	25	H
Chlorobenzene	ND	8,000						0	0	25	H
Chlorodibromomethane	ND	8,000						0	0	25	H
Chloroethane	ND	8,000						0	0	25	H
Chloroform	ND	8,000						0	0	25	H
Chloromethane	ND	8,000						0	0	25	H
cis-1,2-Dichloroethene	ND	8,000						0	0	25	H
cis-1,3-dichloropropene	ND	8,000						0	0	25	H
Cyclohexane	280,000	16,000						253,200	11.6	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#: 1107364
20-Oct-11

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

BatchID: R42025

Sample ID: **1105678-024ADUP** SampType: **DUP** TestCode: **EPA_TO15** Units: **ppbv** Prep Date: RunNo: **42025**
Client ID: **ZZZZZZ** Batch ID: **R42025** TestNo: **TO-15** Analysis Date: **8/4/2011** SeqNo: **812445**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane	ND	8,000						0	0	25	H
Ethanol	ND	40,000						0	0	25	H
Ethyl acetate	ND	8,000						0	0	25	H
Ethylbenzene	ND	16,000						0	0	25	H
Heptane	190,000	8,000						173,100	8.66	25	H
Hexachlorobutadiene	ND	16,000						0	0	25	H
m,p-Xylene	12,000	16,000						10,800	13.1	25	JH
Methylene chloride	ND	40,000						0	0	25	H
Naphthalene	ND	8,000						0	0	25	H
n-Hexane	360,000	16,000						321,400	11.6	25	H
o-Xylene	ND	8,000						0	0	25	H
Propylene	18,000	8,000						16,720	6.93	25	H
Styrene	ND	8,000						0	0	25	H
tert-Butyl Methyl Ether	ND	8,000						0	0	25	H
Tetrachloroethene	ND	8,000						0	0	25	H
Tetrahydrofuran	ND	8,000						0	0	25	H
Toluene	110,000	8,000						96,400	14.2	25	H
trans-1,2-Dichloroethene	ND	8,000						0	0	25	H
trans-1,3-dichloropropene	ND	8,000						0	0	25	H
Trichloroethene	ND	8,000						0	0	25	H
Trichlorofluoromethane	ND	8,000						0	0	25	H
Vinyl acetate	ND	8,000						0	0	25	H
Vinyl chloride	ND	8,000						0	0	25	H
Xylenes, Total	12,000	24,000						10,800	13.1	25	JH
Surr: 4-Bromofluorobenzene	99,000		100,000		99.3	70	130		0	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

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QC SUMMARY REPORT

WO#: 1107364
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
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 exceede
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits

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QC SUMMARY REPORT

WO#: 1107364
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#: 1107364
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: **VA0459** 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

Original

RTI LABORATORIES, INC.

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QC SUMMARY REPORT

WO#: 1107364
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: **VA0459** 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

Original

RTI LABORATORIES, INC.

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

QC SUMMARY REPORT

WO#: 1107364
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: **VA0459** 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 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

Original

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QC SUMMARY REPORT

WO#: 1107364
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 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#: **1107364**

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#: 1107364
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: **ZZZZZZ** 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

Original

RTI LABORATORIES, INC.

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QC SUMMARY REPORT

WO#: 1107364
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: **ZZZZZZ** 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

Original

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QC SUMMARY REPORT

WO#: 1107364
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: **ZZZZZZ** 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#: 1107364
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 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#: 1107364
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 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#: **1107364**

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	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

Original

RTI LABORATORIES, INC.

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

QC SUMMARY REPORT

WO#: **1107364**

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 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

Original

RTI LABORATORIES, INC.

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

QC SUMMARY REPORT

WO#: 1107364
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#: 1107364
20-Oct-11

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

BatchID: R42128

Sample ID: **MBLK 080811** SampType: **MBLK** TestCode: **MA_APH** Units: **µg/m³** Prep Date: RunNo: **42128**
Client ID: **PBW** Batch ID: **R42128** TestNo: **MA_APH** Analysis Date: **8/8/2011** SeqNo: **814579**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
C5-C8 Aliphatic Hydrocarbons	56	120									J
C9-C10 Aromatic Hydrocarbons	ND	130									
C9-C12 Aliphatic Hydrocarbons	ND	190									
Surr: 4-Bromofluorobenzene	84		89.50		93.8	70	130				

Sample ID: **1107364-003ADUP** SampType: **DUP** TestCode: **MA_APH** Units: **µg/m³** Prep Date: RunNo: **42128**
Client ID: **VA0457** Batch ID: **R42128** TestNo: **MA_APH** Analysis Date: **8/8/2011** SeqNo: **814583**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
C5-C8 Aliphatic Hydrocarbons	72,000	4,700						67,320	7.34	30	H
C9-C10 Aromatic Hydrocarbons	1,400	5,300						0	200	30	JRH
C9-C12 Aliphatic Hydrocarbons	29,000	7,600						26,280	8.10	30	H
Surr: 4-Bromofluorobenzene	3,600		3,580		99.5	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

Original

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QC SUMMARY REPORT

WO#: 1107364
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: **ZZZZZZ** 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 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

Original

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QC SUMMARY REPORT

WO#: **1107364**

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: **ZZZZZZ** 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 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

Original

RTI LABORATORIES, INC.

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

QC SUMMARY REPORT

WO#: 1107364
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: **ZZZZZZ** 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 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

Original

RTI Laboratories

Run ID: VOA1_110801A **Run No.:** 41945

Analytical Run Date: 8/1/2011 **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 50cc 080111A	BFB_TUNE	TUNE	R41945	8/1/2011 10:13:00 AM	Robert Lynch		
TO15 1ppbv ICAL	EPA_TO15	ICAL	R41945	8/1/2011 12:59:00 PM	Robert Lynch		
TO15 5ppbv ICAL	EPA_TO15	ICAL	R41945	8/1/2011 1:40:00 PM	Robert Lynch		
TO15 10ppbv ICAL	EPA_TO15	ICAL	R41945	8/1/2011 2:22:00 PM	Robert Lynch		
TO15 12ppbv ICAL	EPA_TO15	ICAL	R41945	8/1/2011 3:05:00 PM	Robert Lynch		
TO15 15ppbv ICAL	EPA_TO15	ICAL	R41945	8/1/2011 3:47:00 PM	Robert Lynch		
TO15 20ppbv ICAL	EPA_TO15	ICAL	R41945	8/1/2011 4:28:00 PM	Robert Lynch		
TO15 30ppbv ICAL	EPA_TO15	ICAL	R41945	8/1/2011 5:11:00 PM	Robert Lynch		
TO15 50ppbv ICAL	EPA_TO15	ICAL	R41945	8/1/2011 5:55:00 PM	Robert Lynch		
BFB 50cc 080111b	BFB_TUNE	TUNE	R41945	8/1/2011 6:36:00 PM	Robert Lynch		
TO15 10ppbv ICV	EPA_TO15	ICV	R41945	8/1/2011 7:18:00 PM	Robert Lynch		
TO15 1ppbv RLVS	EPA_TO15	RLVS	R41945	8/1/2011 8:01:00 PM	Robert Lynch		Bad injection caused percent recoveries on several analytes to be elevated.
TO15 Blank 08011	EPA_TO15	MBLK	R41945	8/1/2011 8:50:00 PM	Robert Lynch		
1107364-025A	EPA_TO15	SAMP	R41945	8/1/2011 9:33:00 PM	Robert Lynch		
1107364-015A	EPA_TO15	SAMP	R41945	8/1/2011 10:15:00 PM	Robert Lynch		
1107364-015ADUP	EPA_TO15	DUP	R41945	8/1/2011 10:57:00 PM	Robert Lynch		
1107329-001A	EPA_TO15	SAMP	R41945	8/1/2011 11:46:00 PM	Robert Lynch		Summa received under a vaccuum. Had to pressurize in order for autosampler tree to work properly. This is reason for dilution.
1107329-002A	EPA_TO15	SAMP	R41945	8/2/2011 12:35:00 AM	Robert Lynch		
1105678-001A	EPA_TO15	SAMP	R41945	8/2/2011 1:20:00 AM	Celeste Hoitash	H	
1105678-013A	EPA_TO15	SAMP	R41945	8/2/2011 2:06:00 AM	Celeste Hoitash	H	
1105678-014A	EPA_TO15	SAMP	R41945	8/2/2011 2:51:00 AM	Celeste Hoitash	H	
1105678-015A	EPA_TO15	SAMP	R41945	8/2/2011 3:37:00 AM	Celeste Hoitash	H	
1105678-017A	EPA_TO15	SAMP	R41945	8/2/2011 4:22:00 AM	Celeste Hoitash	H	
1105678-019A	EPA_TO15	SAMP	R41945	8/2/2011 5:08:00 AM	Celeste Hoitash	H	
1107364-016A	EPA_TO15	SAMP	R41945	8/2/2011 5:53:00 AM	Celeste Hoitash		
1107364-020A	EPA_TO15	SAMP	R41945	8/2/2011 8:56:00 AM	Celeste Hoitash		
1107329-002A	EPA_TO15	SAMP	R41945	8/2/2011 9:40:00 AM	Robert Lynch		
1107364-017A	EPA_TO15	SAMP	R41945	8/2/2011 10:23:00 AM	Celeste Hoitash		
1107364-018A	EPA_TO15	SAMP	R41945	8/2/2011 11:05:00 AM	Celeste Hoitash		
1107364-019A	EPA_TO15	SAMP	R41945	8/2/2011 11:48:00 AM	Celeste Hoitash		
1105678-021A	EPA_TO15	SAMP	R41945	8/2/2011 12:34:00 PM	Celeste Hoitash	H	
1105678-022A	EPA_TO15	SAMP	R41945	8/2/2011 1:20:00 PM	Celeste Hoitash	H	
TO15 1ppbv RLVS	EPA_TO15	RLVS	R41945	8/2/2011 2:44:00 PM	Celeste Hoitash		

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
810771	BFB 50cc 080111b	BFB_TUNE	TUNE	\1\DATA\080111	8/1/2011 6:36:00	1	R41945		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
173	M		0.7	0.7		0	0	0	0	0	0	0%	0	2	0%	
174	M		75	75		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		99.4	99.4		0	0	0	0	0	0	0%	93	101	0%	
177	M		8.6	8.6		0	0	0	0	0	0	0%	5	9	0%	
50	M		18.7	18.7		0	0	0	0	0	0	0%	8	40	0%	
75	M		41.6	41.6		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		7.2	7.2		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
810780	TO15 10ppbv ICV	EPA_TO15	ICV	\1\DATA\080111	8/1/2011 7:18:00	1	R41945		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	9.73	9.73		9.6	0	0	0.107	1	0	101%	70	130	0%	
1,1,2,2-Tetrachloroethane	A	ppbv	8.93	8.93		10	0	0	0.211	1	0	89%	70	130	0%	
1,1,2-Trichloro-1,2,2-trifluoroethane	A	ppbv	10.35	10.35		9.8	0	0	0.108	1	0	106%	70	130	0%	
1,1,2-Trichloroethane	A	ppbv	9.7	9.7		9.8	0	0	0.2	1	0	99%	70	130	0%	
1,1-Dichloroethane	A	ppbv	9.87	9.87		9.7	0	0	0.111	1	0	102%	70	130	0%	
1,1-Dichloroethene	A	ppbv	10.21	10.21		9.9	0	0	0.097	1	0	103%	70	130	0%	
1,2,4-Trichlorobenzene	A	ppbv	9.72	9.72		9.1	0	0	0.271	1	0	107%	70	130	0%	
1,2,4-Trimethylbenzene	A	ppbv	9.49	9.49		9.8	0	0	0.245	1	0	97%	70	130	0%	
1,2-Dibromoethane	A	ppbv	9.54	9.54		9.6	0	0	0.186	1	0	99%	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	9.36	9.36		9.7	0	0	0.196	1	0	96%	70	130	0%	
1,2-Dichloropropane	A	ppbv	9.28	9.28		9.8	0	0	0.224	1	0	95%	70	130	0%	
1,3,5-Trimethylbenzene	A	ppbv	10.27	10.27		9.7	0	0	0.24	1	0	106%	70	130	0%	
1,3-Butadiene	A	ppbv	9.92	9.92		9.8	0	0	0.152	1	0	101%	70	130	0%	
1,3-Dichlorobenzene	A	ppbv	9.64	9.64		9.7	0	0	0.202	1	0	99%	70	130	0%	
1,4-Dichlorobenzene	A	ppbv	9.7	9.7		9.6	0	0	0.194	1	0	101%	70	130	0%	
1,4-Dioxane	A	ppbv	9.89	9.89		9.6	0	0	0.128	1	0	103%	70	130	0%	
2-Butanone	A	ppbv	9.4	9.4		9.9	0	0	0.287	1	0	95%	70	130	0%	
2-Hexanone	A	ppbv	9.23	9.23		9.8	0	0	0.135	1	0	94%	70	130	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
810780	TO15 10ppbv ICV	EPA_TO15	ICV	\1\DATA\080111	8/1/2011 7:18:00	1	R41945		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
2-Propanol	A	ppbv	9.37	9.37		10.1	0	0	0.329	1	0	93%	70	130	0%	
4-Methyl-2-pentanone	A	ppbv	9.58	9.58		10	0	0	0.157	1	0	96%	70	130	0%	
Acetone	A	ppbv	9.18	9.18		10	0	0	0.43	1	0	92%	70	130	0%	
Benzene	A	ppbv	9.64	9.64		9.6	0	0	0.126	1	0	100%	70	130	0%	
Benzyl chloride	A	ppbv	10.2	10.2		9.7	0	0	0.155	1	0	105%	70	130	0%	
Bromodichloromethane	A	ppbv	9.51	9.51		9.6	0	0	0.156	1	0	99%	70	130	0%	
Bromoform	A	ppbv	9.72	9.72		9.6	0	0	0.197	1	0	101%	70	130	0%	
Bromomethane	A	ppbv	10.15	10.15		9.3	0	0	0.075	1	0	109%	70	130	0%	
Carbon disulfide	A	ppbv	10.17	10.17		9.7	0	0	0.093	1	0	105%	70	130	0%	
Carbon tetrachloride	A	ppbv	9.72	9.72		9.5	0	0	0.114	1	0	102%	70	130	0%	
Chlorobenzene	A	ppbv	9.8	9.8		9.9	0	0	0.275	1	0	99%	70	130	0%	
Chlorodibromomethane	A	ppbv	9.84	9.84		9.2	0	0	0.165	1	0	107%	70	130	0%	
Chloroethane	A	ppbv	9.5	9.5		9.8	0	0	0.063	1	0	97%	70	130	0%	
Chloroform	A	ppbv	9.82	9.82		9.4	0	0	0.126	1	0	104%	70	130	0%	
Chloromethane	A	ppbv	9.8	9.8		9.8	0	0	0.104	1	0	100%	70	130	0%	
cis-1,2-Dichloroethene	A	ppbv	10.06	10.06		9.8	0	0	0.107	1	0	103%	70	130	0%	
cis-1,3-dichloropropene	A	ppbv	9.33	9.33		9.5	0	0	0.166	1	0	98%	70	130	0%	
Cyclohexane	A	ppbv	10.34	10.34		9.8	0	0	0.684	2	0	106%	70	130	0%	
Dichlorodifluoromethane	A	ppbv	9.32	9.32		9.2	0	0	0.086	1	0	101%	70	130	0%	
Ethanol	A	ppbv	8.81	8.81		9.2	0	0	1.962	5	0	96%	70	130	0%	
Ethyl acetate	A	ppbv	9.48	9.48		9.8	0	0	0.157	1	0	97%	70	130	0%	
Ethylbenzene	A	ppbv	9.21	9.21		9.8	0	0	0.737	2	0	94%	70	130	0%	
Heptane	A	ppbv	9.42	9.42		9.9	0	0	0.249	1	0	95%	70	130	0%	
Hexachlorobutadiene	A	ppbv	10.75	10.75		9.4	0	0	0.374	2	0	114%	70	130	0%	
m,p-Xylene	A	ppbv	17.02	17.02		19.2	0	0	0.524	2	0	89%	70	130	0%	
Methylene chloride	A	ppbv	9.95	9.95		10	0	0	2.077	5	0	100%	70	130	0%	
n-Hexane	A	ppbv	10.43	10.43		10.1	0	0	0.692	2	0	103%	70	130	0%	
Naphthalene	A	ppbv	10.65	10.65		9.2	0	0	0.247	1	0	116%	70	130	0%	
o-Xylene	A	ppbv	9.43	9.43		10	0	0	0.258	1	0	94%	70	130	0%	
Propylene	A	ppbv	10.28	10.28		10.2	0	0	0.075	1	0	101%	70	130	0%	
Styrene	A	ppbv	9.97	9.97		9.8	0	0	0.263	1	0	102%	70	130	0%	
tert-Butyl Methyl Ether	A	ppbv	9.46	9.46		9.9	0	0	0.228	1	0	96%	70	130	0%	
Tetrachloroethene	A	ppbv	9.37	9.37		9.6	0	0	0.148	1	0	98%	70	130	0%	
Tetrahydrofuran	A	ppbv	9.52	9.52		10	0	0	0.201	1	0	95%	70	130	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
810780	TO15 10ppbv ICV	EPA_TO15	ICV	\1\DATA\080111	8/1/2011 7:18:00	1	R41945		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Toluene	A	ppbv	9.31	9.31		9.8	0	0	0.158	1	0	95%	70	130	0%	
trans-1,2-Dichloroethene	A	ppbv	10.06	10.06		9.8	0	0	0.117	1	0	103%	70	130	0%	
trans-1,3-dichloropropene	A	ppbv	8.89	8.89		9.1	0	0	0.171	1	0	98%	70	130	0%	
Trichloroethene	A	ppbv	9.3	9.3		9.6	0	0	0.119	1	0	97%	70	130	0%	
Trichlorofluoromethane	A	ppbv	9.91	9.91		9.6	0	0	0.148	1	0	103%	70	130	0%	
Vinyl acetate	A	ppbv	9.73	9.73		9.9	0	0	0.266	1	0	98%	70	130	0%	
Vinyl chloride	A	ppbv	9.72	9.72		9.4	0	0	0.072	1	0	103%	70	130	0%	
Xylenes, Total	C	ppbv	26.45	26.45		29.2	0	0	0.782	3	0	91%	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	12.5	12.5		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
810781	TO15 1ppbv RLVS	EPA_TO15	RLVS	\1\DATA\080111	8/1/2011 8:01:00	1	R41945		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	1.26	1.26		0.996	0	0	0.107	1	0	127%	70	130	0%	
1,1,2,2-Tetrachloroethane	A	ppbv	1.71	1.71		1	0	0	0.211	1	0	171%	70	130	0%	S
1,1,2-Trichloro-1,2,2-trifluoroethane	A	ppbv	1.23	1.23		0.98	0	0	0.108	1	0	126%	70	130	0%	
1,1,2-Trichloroethane	A	ppbv	1.5	1.5		0.98	0	0	0.2	1	0	153%	70	130	0%	S
1,1-Dichloroethane	A	ppbv	1.27	1.27		0.97	0	0	0.111	1	0	131%	70	130	0%	S
1,1-Dichloroethene	A	ppbv	1.09	1.09		0.99	0	0	0.097	1	0	110%	70	130	0%	
1,2,4-Trichlorobenzene	A	ppbv	2.61	2.61		0.91	0	0	0.271	1	0	287%	70	130	0%	S
1,2,4-Trimethylbenzene	A	ppbv	2.06	2.06		0.98	0	0	0.245	1	0	210%	70	130	0%	S
1,2-Dibromoethane	A	ppbv	1.48	1.48		0.96	0	0	0.186	1	0	154%	70	130	0%	S
1,2-Dichlorobenzene	A	ppbv	2.15	2.15		0.97	0	0	0.208	1	0	222%	70	130	0%	S
1,2-Dichloroethane	A	ppbv	1.34	1.34		0.97	0	0	0.196	1	0	138%	70	130	0%	S
1,2-Dichloropropane	A	ppbv	1.4	1.4		0.98	0	0	0.224	1	0	143%	70	130	0%	S
1,3,5-Trimethylbenzene	A	ppbv	2.46	2.46		0.97	0	0	0.24	1	0	254%	70	130	0%	S
1,3-Butadiene	A	ppbv	1.07	1.07		0.98	0	0	0.152	1	0	109%	70	130	0%	
1,3-Dichlorobenzene	A	ppbv	1.81	1.81		0.97	0	0	0.202	1	0	187%	70	130	0%	S
1,4-Dichlorobenzene	A	ppbv	1.7	1.7		0.96	0	0	0.194	1	0	177%	70	130	0%	S

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\080111\08011112.D Vial: 2
Acq On : 1 Aug 2011 7:18 pm Operator: RACHEL HILL
Sample : TO15 10ppbv ICV 080111a Inst : GC/MS Ins
Misc : ICV EPA_TO15 Multiplr: 1.00
MS Integration Params: CLME.P

Method : C:\HPCHEM\1\METHODS\080111V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Tue Aug 02 08:25:09 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	105	0.00
2	T	Propylene	1.155	1.164	-0.8	108	0.00
3	T	Dichlorodifluoromethane	3.373	3.416	-1.3	111	0.00
4	T	1,2-Dichloro-1,2,2,2-tetraf	2.790	2.953	-5.8	110	0.00
5	T	Chloromethane	1.093	1.128	-3.2	113	0.00
6	T	Vinyl chloride	0.819	0.846	-3.3	114	0.00
7	T	1,3-Butadiene	0.610	0.618	-1.3	111	0.00
8	T	Bromomethane	1.338	1.460	-9.1	108	0.00
9	T	Chloroethane	0.800	0.827	-3.4	108	0.00
10	T	Trichlorofluoromethane	3.202	3.306	-3.2	107	0.00
11	T	Ethanol	0.266	0.255	4.1	102	0.00
12	T	Freon113	2.457	2.595	-5.6	105	0.00
13	T	1,1-Dichloroethene	1.827	1.884	-3.1	106	0.00
14	T	Acetone	1.485	1.364	8.1	96	0.00
15	T	Carbon disulfide	3.492	3.660	-4.8	108	0.00
16	T	2-Propanol	1.437	1.333	7.2	102	0.00
17	T	Methylene chloride	1.429	1.422	0.5	103	0.00
18	T	tert-Butyl Methyl Ether	2.251	2.152	4.4	97	0.00
19	T	trans-1,2-Dichloroethene	1.682	1.727	-2.7	103	0.00
20	T	n-Hexane	1.873	1.935	-3.3	103	0.00
21	T	1,1-Dichloroethane	1.940	1.974	-1.8	101	0.00
22	T	Vinyl acetate	2.146	2.109	1.7	96	0.00
23	T	cis-1,2-Dichloroethene	1.177	1.208	-2.6	102	0.00
24	T	2-Butanone	1.367	1.299	5.0	94	0.00
25	T	Ethyl acetate	1.852	1.791	3.3	98	0.00
26	T	Tetrahydrofuran	0.836	0.796	4.8	98	0.00
27	T	Chloroform	1.869	1.872	-0.2	101	0.00
28	T	1,1,1-Trichloroethane	1.923	1.950	-1.4	102	0.00
29	T	Cyclohexane	1.639	1.729	-5.5	103	0.00
30	T	Carbon tetrachloride	2.139	2.189	-2.3	104	0.00
31	T	Benzene	2.741	2.753	-0.4	99	0.00
32	T	1,2-Dichloroethane	1.025	0.990	3.4	98	0.00
33	I	1,4-Difluorobenzene	1.000	1.000	0.0	108	0.00
34	T	Heptane	0.566	0.539	4.8	100	0.00
35	T	Trichloroethene	0.459	0.445	3.1	103	0.00
36	T	1,2-Dichloropropane	0.294	0.278	5.4	101	0.00
37	T	1,4-Dioxane	0.130	0.134	-3.1	105	0.00
38	T	Bromodichloromethane	0.492	0.487	1.0	101	0.00
39	T	cis-1,3-Dichloropropene	0.420	0.412	1.9	101	0.00
40	T	4-Methyl-2-pentanone	0.193	0.185	4.1	103	0.00
41	T	Toluene	0.813	0.772	5.0	102	0.00
42	T	trans-1,3-Dichloropropene	0.358	0.350	2.2	102	0.00
43	T	1,1,2-Trichloroethane	0.275	0.273	0.7	103	0.00
44	T	Tetrachloroethene	0.504	0.492	2.4	105	0.00
45	T	2-Hexanone	0.388	0.365	5.9	101	0.00
46	T	Chlorodibromomethane	0.459	0.460	-0.2	104	0.00
47	T	1,2-Dibromoethane	0.427	0.425	0.5	104	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\080111\08011112.D Vial: 2
Acq On : 1 Aug 2011 7:18 pm Operator: RACHEL HILL
Sample : TO15 10ppbv ICV 080111a Inst : GC/MS Ins
Misc : ICV EPA_TO15 Multiplr: 1.00
MS Integration Params: CLME.P

Method : C:\HPCHEM\1\METHODS\080111V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Tue Aug 02 08:25:09 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	0.789	0.781	1.0	103	0.00
50	T	Ethylbenzene	1.236	1.162	6.0	104	0.00
51	T	m,p-Xylene	0.946	0.839	11.3	104	0.00
52	T	o-Xylene	0.905	0.854	5.6	105	0.00
53	T	Styrene	0.692	0.704	-1.7	106	0.00
54	T	Bromoform	0.565	0.571	-1.1	105	0.00
55	S	4-Bromofluorobenzene	0.558	0.558	0.0	110	0.00
56	T	1,1,2,2-Tetrachloroethane	0.787	0.703	10.7	105	0.00
57	T	4-Ethyltoluene	1.126	1.189	-5.6	105	0.00
58	T	1,3,5-Trimethylbenzene	0.953	1.009	-5.9	104	0.00
59	T	1,2,4-Trimethylbenzene	0.990	0.959	3.1	107	0.00
60	T	1,3-Dichlorobenzene	0.634	0.630	0.6	108	0.00
61	T	1,4-Dichlorobenzene	0.571	0.577	-1.1	110	0.00
62	T	Benzyl chloride	0.635	0.668	-5.2	109	0.00
63	T	1,2-Dichlorobenzene	0.567	0.618	-9.0	108	0.00
64	T	1,2,4-Trichlorobenzene	0.075	0.080	-6.7	120	0.00
65	T	Hexachlorobutadiene	0.192	0.219	-14.1	116	0.00
66		Naphthalene	0.137	0.159	-16.1	125	0.00

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\080111\08011112.D Vial: 2
Acq On : 1 Aug 2011 7:18 pm Operator: RACHEL HILL
Sample : TO15 10ppbv ICV 080111a Inst : GC/MS Ins
Misc : ICV EPA_TO15 Multiplr: 1.00
MS Integration Params: CLME.P
Quant Time: Aug 2 8:25 2011 Quant Results File: 080111V1.RES

Quant Method : C:\HPCHEM\1\METHODS\080111V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Tue Aug 02 08:25:09 2011
Response via : Initial Calibration
DataAcq Meth : 080111V1

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	10.58	130	2043389	12.50 ppbv	0.00
33) 1,4-Difluorobenzene	11.68	114	7040664	12.50 ppbv	0.00
48) Chlorobenzene-d5	15.53	117	4941333	12.50 ppbv	0.00
System Monitoring Compounds					
55) 4-Bromofluorobenzene	17.18	95	2757042	12.50 ppbv	0.00
Spiked Amount 12.500	Range 70 - 113		Recovery = 100.00%		
Target Compounds					Qvalue
2) Propylene	5.50	41	1941257	10.28 ppbv	98
3) Dichlorodifluoromethane	5.57	85	5137036	9.32 ppbv	99
4) 1,2-Dichloro-1,2,2,2-tetra	5.83	135	4585795	10.05 ppbv	98
5) Chloromethane	5.98	50	1751248	9.80 ppbv	100
6) Vinyl chloride	6.20	62	1300602	9.72 ppbv #	98
7) 1,3-Butadiene	6.25	39	989488	9.92 ppbv	96
8) Bromomethane	6.83	94	2219611	10.15 ppbv	99
9) Chloroethane	6.98	64	1243411	9.50 ppbv	99
10) Trichlorofluoromethane	7.32	101	5188778	9.91 ppbv	99
11) Ethanol	7.56	45	382954	8.81 ppbv	98
12) Freon113	7.98	101	4157830	10.35 ppbv	98
13) 1,1-Dichloroethene	8.08	61	3049801	10.21 ppbv	99
14) Acetone	8.17	43	2230256	9.18 ppbv #	92
15) Carbon disulfide	8.45	76	5804128	10.17 ppbv #	99
16) 2-Propanol	8.23	45	2200282	9.37 ppbv #	1
17) Methylene chloride	8.74	49	2324915	9.95 ppbv	95
18) tert-Butyl Methyl Ether	8.94	73	3481996	9.46 ppbv	97
19) trans-1,2-Dichloroethene	9.03	61	2766991	10.06 ppbv	100
20) n-Hexane	9.21	57	3194029	10.43 ppbv	92
21) 1,1-Dichloroethane	9.59	63	3129866	9.87 ppbv	99
22) Vinyl acetate	9.52	43	3413114	9.73 ppbv	99
23) cis-1,2-Dichloroethene	10.27	96	1935066	10.06 ppbv	100
24) 2-Butanone	10.24	43	2101931	9.40 ppbv	99
25) Ethyl acetate	10.19	43	2869367	9.48 ppbv #	99
26) Tetrahydrofuran	10.57	42	1300671	9.52 ppbv	98
27) Chloroform	10.59	83	2999309	9.82 ppbv	98
28) 1,1,1-Trichloroethane	10.85	97	3059475	9.73 ppbv	99
29) Cyclohexane	10.86	56	2769335	10.34 ppbv	93
30) Carbon tetrachloride	11.01	117	3399356	9.72 ppbv	99
31) Benzene	11.29	78	4321108	9.64 ppbv	99
32) 1,2-Dichloroethane	11.36	62	1569032	9.36 ppbv	98
34) Heptane	11.34	43	3005329	9.42 ppbv	97
35) Trichloroethene	12.02	130	2406718	9.30 ppbv	97
36) 1,2-Dichloropropane	12.38	63	1534832	9.28 ppbv	97
37) 1,4-Dioxane	12.45	88	722771	9.89 ppbv	98
38) Bromodichloromethane	12.66	83	2632491	9.51 ppbv	98
39) cis-1,3-Dichloropropene	13.22	75	2205281	9.33 ppbv	98
40) 4-Methyl-2-pentanone	13.33	58	1044128	9.58 ppbv	96
41) Toluene	13.62	91	4260108	9.31 ppbv	99
42) trans-1,3-Dichloropropene	13.93	75	1794839	8.89 ppbv	97
43) 1,1,2-Trichloroethane	14.20	97	1505007	9.70 ppbv	99

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\080111\08011112.D Vial: 2
Acq On : 1 Aug 2011 7:18 pm Operator: RACHEL HILL
Sample : TO15 10ppbv ICV 080111a Inst : GC/MS Ins
Misc : ICV EPA_TO15 Multiplr: 1.00
MS Integration Params: CLME.P
Quant Time: Aug 2 8:25 2011 Quant Results File: 080111V1.RES

Quant Method : C:\HPCHEM\1\METHODS\080111V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Tue Aug 02 08:25:09 2011
Response via : Initial Calibration
DataAcq Meth : 080111V1

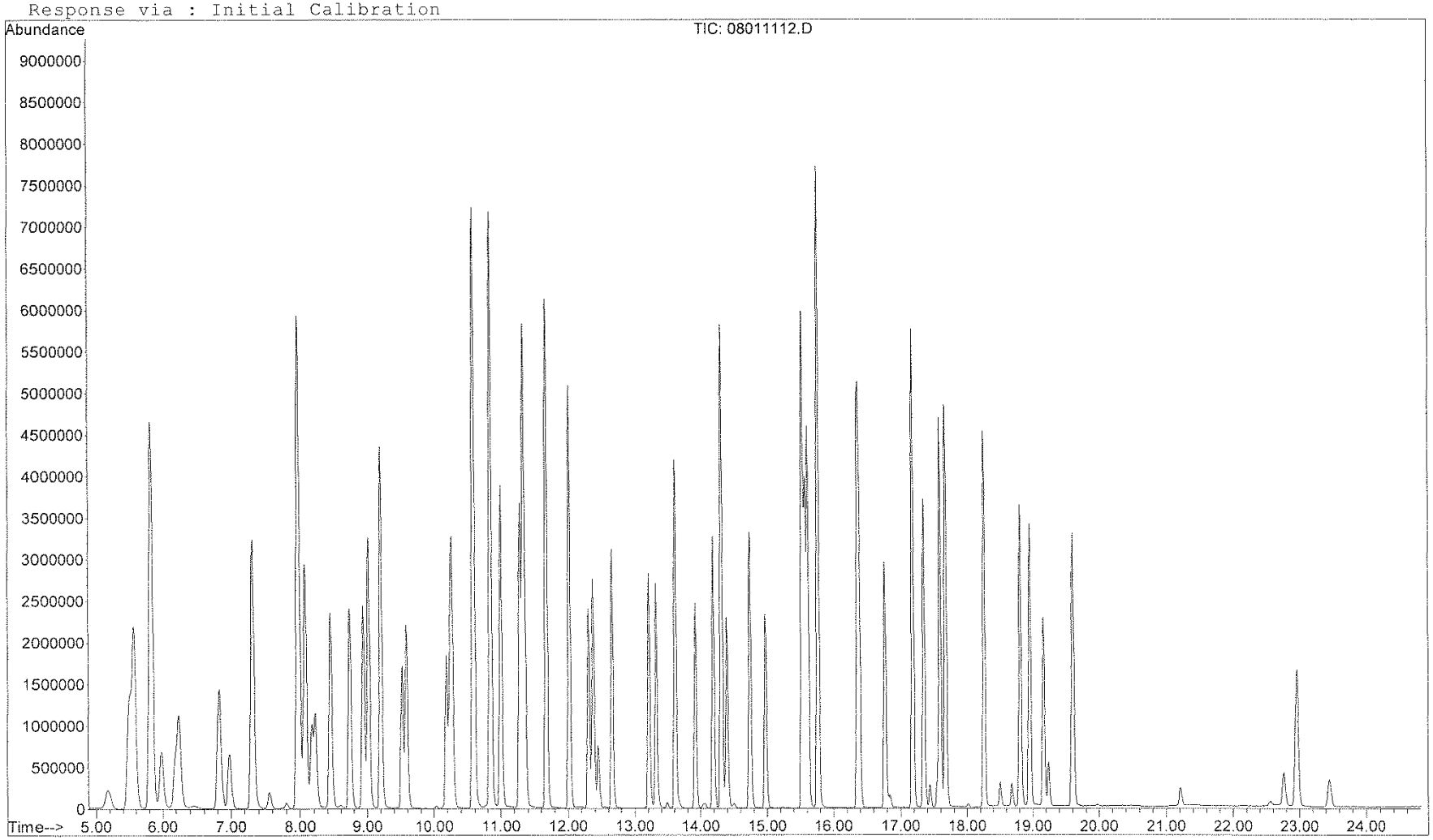
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
44)	Tetrachloroethene	14.32	166	2661795	9.37	ppbv	99
45)	2-Hexanone	14.41	43	2016029	9.23	ppbv	94
46)	Chlorodibromomethane	14.75	129	2540839	9.84	ppbv	99
47)	1,2-Dibromoethane	14.98	107	2296204	9.54	ppbv	98
49)	Chlorobenzene	15.58	112	3058249	9.80	ppbv	98
50)	Ethylbenzene	15.62	91	4501510	9.21	ppbv	99
51)	m,p-Xylene	15.77	91	6366027	17.02	ppbv	98
52)	o-Xylene	16.36	91	3374432	9.43	ppbv	96
53)	Styrene	16.40	104	2725895	9.97	ppbv	97
54)	Bromoform	16.78	173	2168282	9.72	ppbv	99
56)	1,1,2,2-Tetrachloroethane	17.35	83	2779084	8.93	ppbv	100
57)	4-Ethyltoluene	17.60	105	4604309	10.34	ppbv	99
58)	1,3,5-Trimethylbenzene	17.68	105	3869313	10.27	ppbv	98
59)	1,2,4-Trimethylbenzene	18.26	105	3714567	9.49	ppbv	98
60)	1,3-Dichlorobenzene	18.82	146	2417554	9.64	ppbv	97
61)	1,4-Dichlorobenzene	18.96	146	2189415	9.70	ppbv	98
62)	Benzyl chloride	19.17	91	2561667	10.20	ppbv	96
63)	1,2-Dichlorobenzene	19.61	146	2368882	10.58	ppbv	97
64)	1,2,4-Trichlorobenzene	22.77	180	288600	9.72	ppbv	97
65)	Hexachlorobutadiene	22.96	225	815302	10.75	ppbv	100
66)	Naphthalene	23.45	128	578647	10.65	ppbv	100

(#) = qualifier out of range (m) = manual integration
08011112.D 080111V1.M Fri Aug 05 10:50:23 2011

Quantitation Report

Data File : C:\HPCHEM\1\DATA\080111\08011112.D Vial: 2
Acq On : 1 Aug 2011 7:18 pm Operator: RACHEL HILL
Sample : TO15 10ppbv ICV 080111a Inst : GC/MS Ins
Misc : ICV EPA_TO15 Multiplr: 1.00
MS Integration Params: CLME.P
Quant Time: Aug 2 8:25 2011 Quant Results File: 080111V1.RES

Method : C:\HPCHEM\1\METHODS\080111V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Tue Aug 02 08:25:09 2011
Response via : Initial Calibration



RTI Laboratories

Run ID: VOA1_110804A **Run No.:** 42025

Analytical Run Date: 8/4/2011 **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 50cc 080411A	BFB_TUNE	TUNE	R42025	8/4/2011 3:45:00 PM	Charles O`Bryan		
TO15 10ppbv CCV	EPA_TO15	CCV	R42025	8/4/2011 4:32:00 PM	Charles O`Bryan		
TO15 1ppbv RLVS	EPA_TO15	RLVS	R42025	8/4/2011 5:20:00 PM	Charles O`Bryan		
Blank 080411a	EPA_TO15	MBLK	R42025	8/4/2011 6:14:00 PM	Charles O`Bryan		
1105678-024A	EPA_TO15	SAMP	R42025	8/4/2011 7:04:00 PM	Charles O`Bryan	H	
1105678-024ADUP	EPA_TO15	DUP	R42025	8/4/2011 7:53:00 PM	Charles O`Bryan	H	
1105678-022A	EPA_TO15	SAMP	R42025	8/4/2011 8:43:00 PM	Charles O`Bryan	H	
1105678-023A	EPA_TO15	SAMP	R42025	8/4/2011 9:32:00 PM	Charles O`Bryan	H	
1105678-021A	EPA_TO15	SAMP	R42025	8/4/2011 10:23:00 PM	Charles O`Bryan	H	
1106271-030A	EPA_TO15	SAMP	R42025	8/4/2011 11:13:00 PM	Charles O`Bryan	H	
1106271-025A	EPA_TO15	SAMP	R42025	8/5/2011 1:01:00 AM	Charles O`Bryan	H	
1106271-017A	EPA_TO15	SAMP	R42025	8/5/2011 3:40:00 AM	Charles O`Bryan	H	
1106271-018A	EPA_TO15	SAMP	R42025	8/5/2011 4:31:00 AM	Charles O`Bryan	H	
1106271-019A	EPA_TO15	SAMP	R42025	8/5/2011 5:23:00 AM	Charles O`Bryan	H	
1106271-020A	EPA_TO15	SAMP	R42025	8/5/2011 6:18:00 AM	Charles O`Bryan	H	
1106271-021A	EPA_TO15	SAMP	R42025	8/5/2011 7:13:00 AM	Charles O`Bryan	H	
1107364-001A	EPA_TO15	SAMP	R42025	8/5/2011 8:08:00 AM	Charles O`Bryan		
1107364-003A	EPA_TO15	SAMP	R42025	8/5/2011 10:12:00 AM	Celeste Hoitash		
1107364-004A	EPA_TO15	SAMP	R42025	8/5/2011 10:58:00 AM	Celeste Hoitash		
1106271-022A	EPA_TO15	SAMP	R42025	8/5/2011 11:41:00 AM	Celeste Hoitash	H	
1106271-026A	EPA_TO15	SAMP	R42025	8/5/2011 12:24:00 PM	Celeste Hoitash	H	
1106271-013A	EPA_TO15	SAMP	R42025	8/5/2011 1:07:00 PM	Celeste Hoitash	H	
1107364-002A	EPA_TO15	SAMP	R42025	8/5/2011 1:50:00 PM	Celeste Hoitash		
TO15 1ppbv RLVS	EPA_TO15	RLVS	R42025	8/5/2011 2:34:00 PM	Celeste Hoitash		

RTI Laboratories

ANALYTICAL RUN Summary

06-Aug-11

RunNo 42025

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
812403	BFB 50cc 080411A	BFB_TUNE	TUNE	\1\DATA\080411	8/4/2011 3:45:00	1	R42025		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		76.5	76.5		0	0	0	0	0	0	0%	50	120	0%	
175	M		8.3	8.3		0	0	0	0	0	0	0%	4	9	0%	
176	M		96.6	96.6		0	0	0	0	0	0	0%	93	101	0%	
177	M		8.8	8.8		0	0	0	0	0	0	0%	5	9	0%	
50	M		19.9	19.9		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		7.8	7.8		0	0	0	0	0	0	0%	5	9	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
812404	TO15 10ppbv CCV	EPA_TO15	CCV	\1\DATA\080411	8/4/2011 4:32:00	1	R42025		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	9.86	9.86		9.6	0	0	0.107	1	0	103%	70	130	0%	
1,1,2,2-Tetrachloroethane	A	ppbv	9.51	9.51		10	0	0	0.211	1	0	95%	70	130	0%	
1,1,2-Trichloro-1,2,2-trifluoroethane	A	ppbv	10.34	10.34		9.8	0	0	0.108	1	0	106%	70	130	0%	
1,1,2-Trichloroethane	A	ppbv	9.61	9.61		9.8	0	0	0.2	1	0	98%	70	130	0%	
1,1-Dichloroethane	A	ppbv	9.77	9.77		9.7	0	0	0.111	1	0	101%	70	130	0%	
1,1-Dichloroethene	A	ppbv	10.15	10.15		9.9	0	0	0.097	1	0	103%	70	130	0%	
1,2,4-Trichlorobenzene	A	ppbv	7.09	7.09		9.1	0	0	0.271	1	0	78%	70	130	0%	
1,2,4-Trimethylbenzene	A	ppbv	8.63	8.63		9.8	0	0	0.245	1	0	88%	70	130	0%	
1,2-Dibromoethane	A	ppbv	9.36	9.36		9.6	0	0	0.186	1	0	98%	70	130	0%	
1,2-Dichlorobenzene	A	ppbv	9.33	9.33		9.7	0	0	0.208	1	0	96%	70	130	0%	
1,2-Dichloroethane	A	ppbv	9.72	9.72		9.7	0	0	0.196	1	0	100%	70	130	0%	
1,2-Dichloropropane	A	ppbv	9.7	9.7		9.8	0	0	0.224	1	0	99%	70	130	0%	
1,3,5-Trimethylbenzene	A	ppbv	9.76	9.76		9.7	0	0	0.24	1	0	101%	70	130	0%	
1,3-Butadiene	A	ppbv	10.58	10.58		9.8	0	0	0.152	1	0	108%	70	130	0%	
1,3-Dichlorobenzene	A	ppbv	8.9	8.9		9.7	0	0	0.202	1	0	92%	70	130	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
812404	TO15 10ppbv CCV	EPA_TO15	CCV	\1\DATA\080411	8/4/2011 4:32:00	1	R42025		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
1,4-Dichlorobenzene	A	ppbv	8.72	8.72		9.6	0	0	0.194	1	0	91%	70	130	0%	
1,4-Dioxane	A	ppbv	9.56	9.56		9.6	0	0	0.128	1	0	100%	70	130	0%	
2-Butanone	A	ppbv	10.41	10.41		9.9	0	0	0.287	1	0	105%	70	130	0%	
2-Hexanone	A	ppbv	9.72	9.72		9.8	0	0	0.135	1	0	99%	70	130	0%	
2-Propanol	A	ppbv	10.37	10.37		10.1	0	0	0.329	1	0	103%	70	130	0%	
4-Methyl-2-pentanone	A	ppbv	9.9	9.9		10	0	0	0.157	1	0	99%	70	130	0%	
Acetone	A	ppbv	10.25	10.25		10	0	0	0.43	1	0	103%	70	130	0%	
Benzene	A	ppbv	9.84	9.84		9.6	0	0	0.126	1	0	103%	70	130	0%	
Benzyl chloride	A	ppbv	9.24	9.24		9.7	0	0	0.155	1	0	95%	70	130	0%	
Bromodichloromethane	A	ppbv	9.46	9.46		9.6	0	0	0.156	1	0	99%	70	130	0%	
Bromoform	A	ppbv	9.34	9.34		9.6	0	0	0.197	1	0	97%	70	130	0%	
Bromomethane	A	ppbv	10.56	10.56		9.3	0	0	0.075	1	0	114%	70	130	0%	
Carbon disulfide	A	ppbv	10.03	10.03		9.7	0	0	0.093	1	0	103%	70	130	0%	
Carbon tetrachloride	A	ppbv	9.68	9.68		9.5	0	0	0.114	1	0	102%	70	130	0%	
Chlorobenzene	A	ppbv	9.82	9.82		9.9	0	0	0.275	1	0	99%	70	130	0%	
Chlorodibromomethane	A	ppbv	9.61	9.61		9.2	0	0	0.165	1	0	104%	70	130	0%	
Chloroethane	A	ppbv	9.99	9.99		9.8	0	0	0.063	1	0	102%	70	130	0%	
Chloroform	A	ppbv	10.04	10.04		9.4	0	0	0.126	1	0	107%	70	130	0%	
Chloromethane	A	ppbv	9.67	9.67		9.8	0	0	0.104	1	0	99%	70	130	0%	
cis-1,2-Dichloroethene	A	ppbv	9.85	9.85		9.8	0	0	0.107	1	0	101%	70	130	0%	
cis-1,3-dichloropropene	A	ppbv	9.22	9.22		9.5	0	0	0.166	1	0	97%	70	130	0%	
Cyclohexane	A	ppbv	10.15	10.15		9.8	0	0	0.684	2	0	104%	70	130	0%	
Dichlorodifluoromethane	A	ppbv	9.16	9.16		9.2	0	0	0.086	1	0	100%	70	130	0%	
Ethanol	A	ppbv	10.47	10.47		9.2	0	0	1.962	5	0	114%	70	130	0%	
Ethyl acetate	A	ppbv	10.01	10.01		9.8	0	0	0.157	1	0	102%	70	130	0%	
Ethylbenzene	A	ppbv	9.76	9.76		9.8	0	0	0.737	2	0	100%	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	8.7	8.7		9.4	0	0	0.374	2	0	93%	70	130	0%	
m,p-Xylene	A	ppbv	18.21	18.21		19.2	0	0	0.524	2	0	95%	70	130	0%	
Methylene chloride	A	ppbv	9.81	9.81		10	0	0	2.077	5	0	98%	70	130	0%	
n-Hexane	A	ppbv	10.22	10.22		10.1	0	0	0.692	2	0	101%	70	130	0%	
Naphthalene	A	ppbv	7.16	7.16		9.2	0	0	0.247	1	0	78%	70	130	0%	
o-Xylene	A	ppbv	9.8	9.8		10	0	0	0.258	1	0	98%	70	130	0%	
Propylene	A	ppbv	9.97	9.97		10.2	0	0	0.075	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
812404	TO15 10ppbv CCV	EPA_TO15	CCV	\I\DATA\080411	8/4/2011 4:32:00	1	R42025		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Styrene	A	ppbv	9.62	9.62		9.8	0	0	0.263	1	0	98%	70	130	0%	
tert-Butyl Methyl Ether	A	ppbv	10.16	10.16		9.9	0	0	0.228	1	0	103%	70	130	0%	
Tetrachloroethene	A	ppbv	9.29	9.29		9.6	0	0	0.148	1	0	97%	70	130	0%	
Tetrahydrofuran	A	ppbv	10.42	10.42		10	0	0	0.201	1	0	104%	70	130	0%	
Toluene	A	ppbv	9.62	9.62		9.8	0	0	0.158	1	0	98%	70	130	0%	
trans-1,2-Dichloroethene	A	ppbv	9.79	9.79		9.8	0	0	0.117	1	0	100%	70	130	0%	
trans-1,3-dichloropropene	A	ppbv	8.82	8.82		9.1	0	0	0.171	1	0	97%	70	130	0%	
Trichloroethene	A	ppbv	9.34	9.34		9.6	0	0	0.119	1	0	97%	70	130	0%	
Trichlorofluoromethane	A	ppbv	9.58	9.58		9.6	0	0	0.148	1	0	100%	70	130	0%	
Vinyl acetate	A	ppbv	10.27	10.27		9.9	0	0	0.266	1	0	104%	70	130	0%	
Vinyl chloride	A	ppbv	10.41	10.41		9.4	0	0	0.072	1	0	111%	70	130	0%	
Xylenes, Total	C	ppbv	28.01	28.01		29.2	0	0	0.782	3	0	96%	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	12.1	12.1		12.5	0	0	0	0	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
812442	TO15 1ppbv RLVS	EPA_TO15	RLVS	\I\DATA\080411	8/4/2011 5:20:00	1	R42025		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	0.99	0.99		0.996	0	0	0.107	1	0	99%	70	130	0%	
1,1,2,2-Tetrachloroethane	A	ppbv	1.34	1.34		1	0	0	0.211	1	0	134%	70	130	0%	S
1,1,2-Trichloro-1,2,2-trifluoroethane	A	ppbv	0.99	0.99		0.98	0	0	0.108	1	0	101%	70	130	0%	
1,1,2-Trichloroethane	A	ppbv	0.99	0.99		0.98	0	0	0.2	1	0	101%	70	130	0%	
1,1-Dichloroethane	A	ppbv	1.02	1.02		0.97	0	0	0.111	1	0	105%	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	2.34	2.34		0.91	0	0	0.271	1	0	257%	70	130	0%	S
1,2,4-Trimethylbenzene	A	ppbv	1.45	1.45		0.98	0	0	0.245	1	0	148%	70	130	0%	S
1,2-Dibromoethane	A	ppbv	0.96	0.96		0.96	0	0	0.186	1	0	100%	70	130	0%	
1,2-Dichlorobenzene	A	ppbv	1.65	1.65		0.97	0	0	0.208	1	0	170%	70	130	0%	S
1,2-Dichloroethane	A	ppbv	0.97	0.97		0.97	0	0	0.196	1	0	100%	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\080411\08041111.D Vial: 2
Acq On : 4 Aug 2011 4:32 pm Operator: RACHEL HILL
Sample : TO15 10ppbv CCV 080411a Inst : GC/MS Ins
Misc : CCV EPA_TO15 Multiplr: 1.00
MS Integration Params: CLME.P

Method : C:\HPCHEM\1\METHODS\080211V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Thu Aug 04 10:16:34 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	94	0.00
2	T	Propylene	1.287	1.258	2.3	91	0.00
3	T	Dichlorodifluoromethane	3.842	3.828	0.4	92	0.00
4	T	1,2-Dichloro-1,2,2,2-tetraf	3.135	3.181	-1.5	91	0.00
5	T	Chloromethane	1.464	1.491	-1.8	93	0.00
6	T	Vinyl chloride	1.350	1.495	-10.7	101	0.00
7	T	1,3-Butadiene	0.934	1.008	-7.9	100	0.01
8	T	Bromomethane	1.097	1.246	-13.6	105	0.00
9	T	Chloroethane	0.603	0.655	-8.6	105	0.00
10	T	Trichlorofluoromethane	3.489	3.481	0.2	88	0.00
11	T	Ethanol	0.265	0.302	-14.0	100	0.00
12	T	Freon113	2.616	2.759	-5.5	93	0.00
13	T	1,1-Dichloroethene	2.015	2.066	-2.5	93	0.00
14	T	Acetone	1.486	1.523	-2.5	98	0.00
15	T	Carbon disulfide	3.821	3.951	-3.4	92	0.00
16	T	2-Propanol	1.553	1.595	-2.7	97	0.00
17	T	Methylene chloride	1.530	1.501	1.9	94	0.00
18	T	tert-Butyl Methyl Ether	2.319	2.380	-2.6	97	0.00
19	T	trans-1,2-Dichloroethene	1.782	1.780	0.1	93	0.00
20	T	n-Hexane	1.931	1.954	-1.2	94	0.00
21	T	1,1-Dichloroethane	1.851	1.864	-0.7	95	0.00
22	T	Vinyl acetate	2.129	2.209	-3.8	97	0.00
23	T	cis-1,2-Dichloroethene	1.133	1.139	-0.5	93	0.00
24	T	2-Butanone	1.431	1.505	-5.2	98	0.00
25	T	Ethyl acetate	1.975	2.017	-2.1	97	0.00
26	T	Tetrahydrofuran	0.838	0.873	-4.2	97	0.00
27	T	Chloroform	1.793	1.837	-2.5	95	0.00
28	T	1,1,1-Trichloroethane	1.939	1.992	-2.7	95	0.00
29	T	Cyclohexane	1.683	1.744	-3.6	94	0.00
30	T	Carbon tetrachloride	2.263	2.307	-1.9	95	0.00
31	T	Benzene	2.656	2.722	-2.5	95	0.00
32	T	1,2-Dichloroethane	1.049	1.051	-0.2	96	0.00
33	I	1,4-Difluorobenzene	1.000	1.000	0.0	104	0.00
34	T	Heptane	0.559	0.567	-1.4	97	0.00
35	T	Trichloroethene	0.461	0.448	2.8	94	0.00
36	T	1,2-Dichloropropane	0.294	0.291	1.0	96	0.00
37	T	1,4-Dioxane	0.147	0.147	0.0	98	0.00
38	T	Bromodichloromethane	0.531	0.523	1.5	96	0.00
39	T	cis-1,3-Dichloropropene	0.461	0.447	3.0	95	0.00
40	T	4-Methyl-2-pentanone	0.209	0.207	1.0	98	0.00
41	T	Toluene	0.850	0.834	1.9	96	0.00
42	T	trans-1,3-Dichloropropene	0.397	0.385	3.0	95	0.00
43	T	1,1,2-Trichloroethane	0.303	0.297	2.0	97	0.00
44	T	Tetrachloroethene	0.522	0.506	3.1	94	0.00
45	T	2-Hexanone	0.400	0.396	1.0	99	0.00
46	T	Chlorodibromomethane	0.505	0.495	2.0	96	0.00
47	T	1,2-Dibromoethane	0.469	0.458	2.3	95	0.00

(#) = Out of Range
08041111.D 080211V1.M Sat Aug 06 11:41:03 2011 Page 1

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\080411\08041111.D Vial: 2
Acq On : 4 Aug 2011 4:32 pm Operator: RACHEL HILL
Sample : TO15 10ppbv CCV 080411a Inst : GC/MS Ins
Misc : CCV EPA_TO15 Multiplr: 1.00
MS Integration Params: CLME.P

Method : C:\HPCHEM\1\METHODS\080211V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Thu Aug 04 10:16:34 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	0.878	0.870	0.9	95	0.00
50	T	Ethylbenzene	1.296	1.290	0.5	97	0.00
51	T	m,p-Xylene	0.985	0.934	5.2	98	0.00
52	T	o-Xylene	0.955	0.936	2.0	98	0.00
53	T	Styrene	0.769	0.754	2.0	93	0.00
54	T	Bromoform	0.620	0.603	2.7	93	0.00
55	S	4-Bromofluorobenzene	0.571	0.553	3.2	100	0.00
56	T	1,1,2,2-Tetrachloroethane	0.788	0.750	4.8	95	0.00
57	T	4-Ethyltoluene	1.291	1.292	-0.1	91	0.00
58	T	1,3,5-Trimethylbenzene	1.098	1.104	-0.5	93	0.00
59	T	1,2,4-Trimethylbenzene	1.155	1.018	11.9	91	0.00
60	T	1,3-Dichlorobenzene	0.701	0.643	8.3	94	0.00
61	T	1,4-Dichlorobenzene	0.626	0.568	9.3	93	0.00
62	T	Benzyl chloride	0.696	0.663	4.7	94	0.00
63	T	1,2-Dichlorobenzene	0.633	0.609	3.8	93	0.00
64	T	1,2,4-Trichlorobenzene	0.074	0.058	21.6	93	0.00
65	T	Hexachlorobutadiene	0.184	0.170	7.6	93	0.00
66		Naphthalene	0.131	0.102	22.1	91	0.00

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\080411\08041111.D Vial: 2
Acq On : 4 Aug 2011 4:32 pm Operator: RACHEL HILL
Sample : TO15 10ppbv CCV 080411a Inst : GC/MS Ins
Misc : CCV EPA_TO15 Multiplr: 1.00
MS Integration Params: CLME.P
Quant Time: Aug 4 16:57 2011 Quant Results File: 080211V1.RES

Quant Method : C:\HPCHEM\1\METHODS\080211V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Thu Aug 04 10:16:34 2011
Response via : Initial Calibration
DataAcq Meth : 080211V1

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	10.58	130	1508768	12.50 ppbv	0.00
33) 1,4-Difluorobenzene	11.69	114	5326281	12.50 ppbv	0.00
48) Chlorobenzene-d5	15.54	117	3611227	12.50 ppbv	0.00

System Monitoring Compounds

55) 4-Bromofluorobenzene	17.19	95	1998243	12.10 ppbv	0.00

Spiked Amount 12.500 Range 70 - 113 Recovery = 96.80%

Target Compounds					Qvalue
2) Propylene	5.51	41	1549088	9.97 ppbv	98
3) Dichlorodifluoromethane	5.58	85	4250368	9.16 ppbv	99
4) 1,2-Dichloro-1,2,2,2-tetra	5.84	135	3647674	9.64 ppbv	98
5) Chloromethane	6.01	50	1709477	9.67 ppbv	99
6) Vinyl chloride	6.22	62	1695947	10.41 ppbv	98
7) 1,3-Butadiene	6.28	39	1191978	10.58 ppbv	91
8) Bromomethane	6.84	94	1398729	10.56 ppbv #	99
9) Chloroethane	7.00	64	727304	9.99 ppbv	96
10) Trichlorofluoromethane	7.33	101	4033506	9.58 ppbv	99
11) Ethanol	7.57	45	335401	10.47 ppbv	100
12) Freon113	7.99	101	3264083	10.34 ppbv	97
13) 1,1-Dichloroethene	8.09	61	2468456	10.15 ppbv	99
14) Acetone	8.18	43	1838460	10.25 ppbv #	94
15) Carbon disulfide	8.46	76	4625786	10.03 ppbv #	100
16) 2-Propanol	8.24	45	1943872	10.37 ppbv #	1
17) Methylene chloride	8.75	49	1811579	9.81 ppbv	94
18) tert-Butyl Methyl Ether	8.95	73	2843678	10.16 ppbv	97
19) trans-1,2-Dichloroethene	9.03	61	2105933	9.79 ppbv	99
20) n-Hexane	9.22	57	2381862	10.22 ppbv	94
21) 1,1-Dichloroethane	9.60	63	2182401	9.77 ppbv	99
22) Vinyl acetate	9.53	43	2639821	10.27 ppbv	99
23) cis-1,2-Dichloroethene	10.28	96	1347063	9.85 ppbv	99
24) 2-Butanone	10.25	43	1798329	10.41 ppbv	98
25) Ethyl acetate	10.20	43	2385507	10.01 ppbv #	99
26) Tetrahydrofuran	10.58	42	1053671	10.42 ppbv	96
27) Chloroform	10.61	83	2173465	10.04 ppbv	99
28) 1,1,1-Trichloroethane	10.85	97	2308277	9.86 ppbv	99
29) Cyclohexane	10.86	56	2062410	10.15 ppbv	94
30) Carbon tetrachloride	11.01	117	2645036	9.68 ppbv	99
31) Benzene	11.30	78	3154312	9.84 ppbv	99
32) 1,2-Dichloroethane	11.37	62	1230842	9.72 ppbv	98
34) Heptane	11.35	43	2390541	10.03 ppbv	97
35) Trichloroethene	12.03	130	1834212	9.34 ppbv	97
36) 1,2-Dichloropropane	12.38	63	1215043	9.70 ppbv	98
37) 1,4-Dioxane	12.46	88	599443	9.56 ppbv	99
38) Bromodichloromethane	12.67	83	2140540	9.46 ppbv	99
39) cis-1,3-Dichloropropene	13.22	75	1810888	9.22 ppbv	99
40) 4-Methyl-2-pentanone	13.34	58	882521	9.90 ppbv	96
41) Toluene	13.63	91	3483098	9.62 ppbv	100
42) trans-1,3-Dichloropropene	13.93	75	1493013	8.82 ppbv	98
43) 1,1,2-Trichloroethane	14.20	97	1240258	9.61 ppbv	99

(#) = qualifier out of range (m) = manual integration
08041111.D 080211V1.M Sat Aug 06 11:41:09 2011

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\080411\08041111.D
Acq On : 4 Aug 2011 4:32 pm
Sample : TO15 10ppbv CCV 080411a
Misc : CCV EPA_TO15
MS Integration Params: CLME.P
Quant Time: Aug 4 16:57 2011

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

Quant Results File: 080211V1.RES

Quant Method : C:\HPCHEM\1\METHODS\080211V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Thu Aug 04 10:16:34 2011
Response via : Initial Calibration
DataAcq Meth : 080211V1

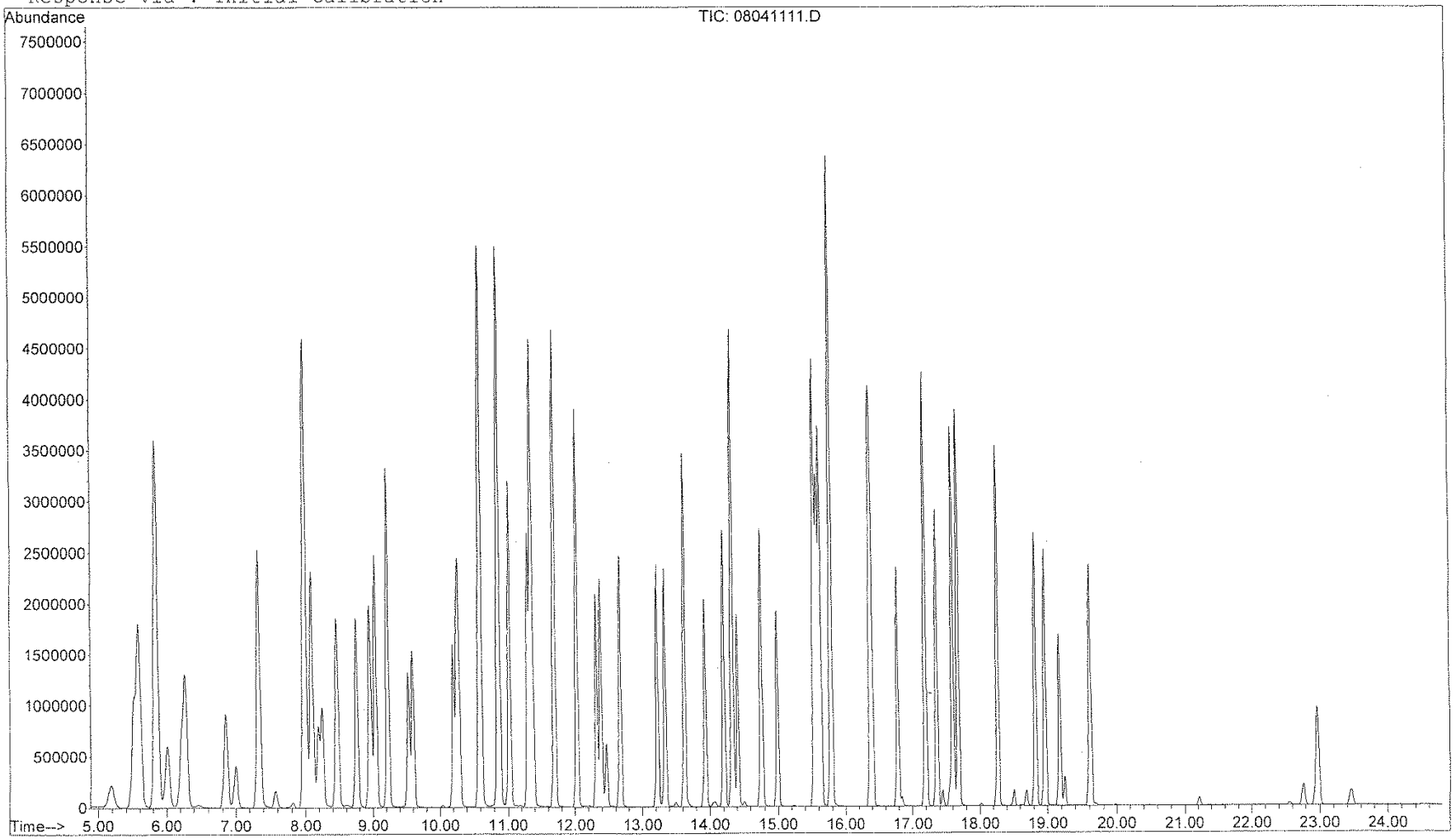
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
44) Tetrachloroethene	14.32	166	2068270	9.29 ppbv	99
45) 2-Hexanone	14.41	43	1654901	9.72 ppbv	96
46) Chlorodibromomethane	14.75	129	2066062	9.61 ppbv	99
47) 1,2-Dibromoethane	14.98	107	1871604	9.36 ppbv	99
49) Chlorobenzene	15.58	112	2488736	9.82 ppbv	98
50) Ethylbenzene	15.62	91	3653574	9.76 ppbv	98
51) m,p-Xylene	15.78	91	5181084	18.21 ppbv	99
52) o-Xylene	16.37	91	2703185	9.80 ppbv	96
53) Styrene	16.40	104	2135644	9.62 ppbv	98
54) Bromoform	16.78	173	1673541	9.34 ppbv	100
56) 1,1,2,2-Tetrachloroethane	17.36	83	2166162	9.51 ppbv	99
57) 4-Ethyltoluene	17.60	105	3657758	9.80 ppbv	100
58) 1,3,5-Trimethylbenzene	17.68	105	3094446	9.76 ppbv	100
59) 1,2,4-Trimethylbenzene	18.26	105	2880978	8.63 ppbv	98
60) 1,3-Dichlorobenzene	18.82	146	1802053	8.90 ppbv	98
61) 1,4-Dichlorobenzene	18.96	146	1575790	8.72 ppbv	97
62) Benzyl chloride	19.17	91	1858922	9.24 ppbv	96
63) 1,2-Dichlorobenzene	19.61	146	1705908	9.33 ppbv	97
64) 1,2,4-Trichlorobenzene	22.77	180	151228	7.09 ppbv	97
65) Hexachlorobutadiene	22.96	225	461296	8.70 ppbv	98
66) Naphthalene	23.46	128	271656	7.16 ppbv #	89

(#) = qualifier out of range (m) = manual integration
08041111.D 080211V1.M Sat Aug 06 11:41:10 2011

Quantitation Report

Data File : C:\HPCHEM\1\DATA\080411\08041111.D Vial: 2
Acq On : 4 Aug 2011 4:32 pm Operator: RACHEL HILL
Sample : TO15 10ppbv CCV 080411a Inst : GC/MS Ins
Misc : CCV EPA_TO15 Multiplr: 1.00
MS Integration Params: CLME.P
Quant Time: Aug 4 16:57 2011 Quant Results File: 080211V1.RES

Method : C:\HPCHEM\1\METHODS\080211V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Thu Aug 04 10:16:34 2011
Response via : Initial Calibration



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	\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
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	\I\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
08051113.D 080511V1.M Tue Sep 13 14:04:27 2011

Quantitation Report (QT Reviewed)

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

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

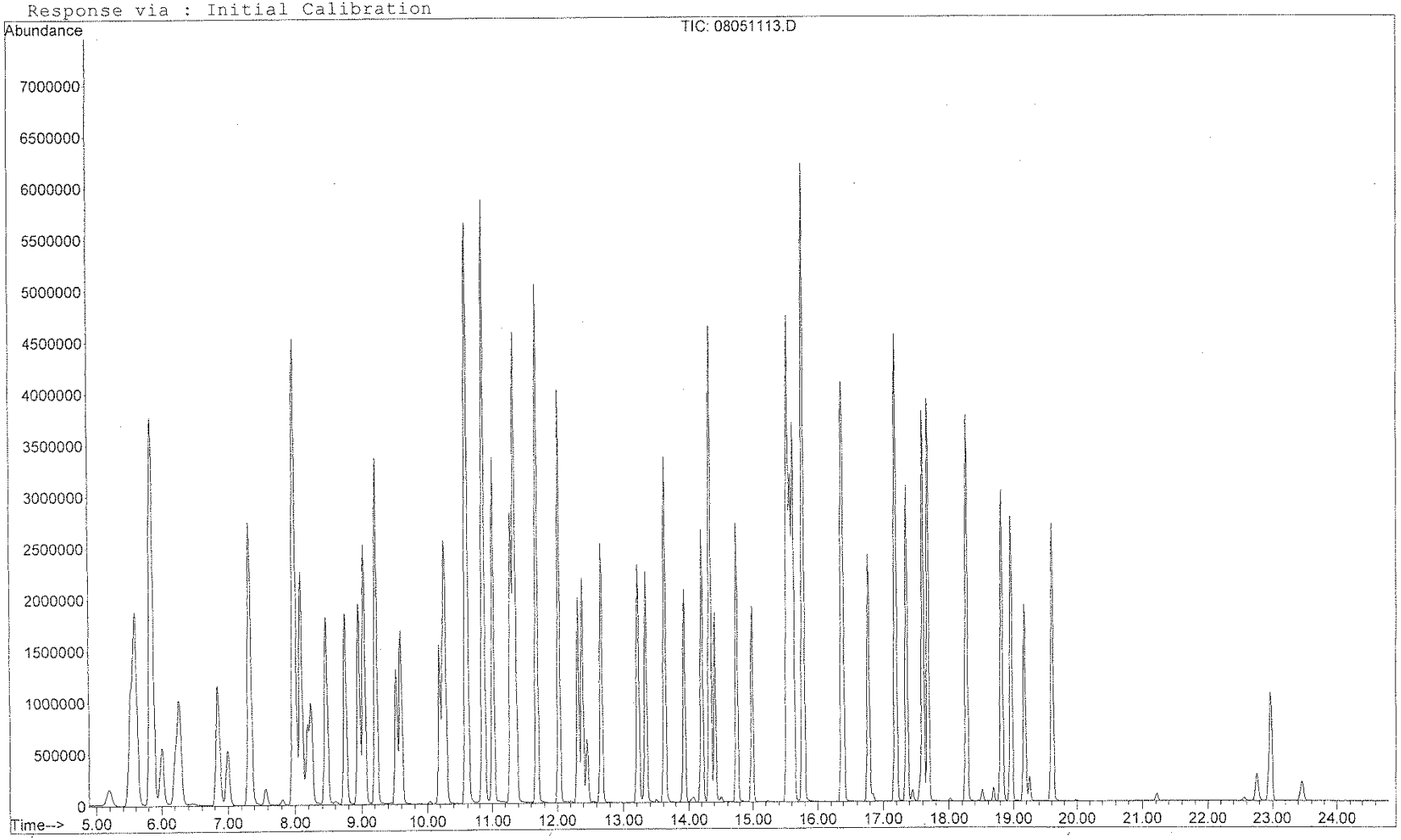
(#) = qualifier out of range (m) = manual integration
08051113.D 080511V1.M Tue Sep 13 14:04:27 2011

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
08071102.D 080511V1.M Wed Aug 10 15:32:05 2011

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
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

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
08071102.D 080511V1.M Wed Aug 10 15:32:12 2011

Quantitation Report (QT Reviewed)

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

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
08071102.D 080511V1.M Wed Aug 10 15:32:13 2011

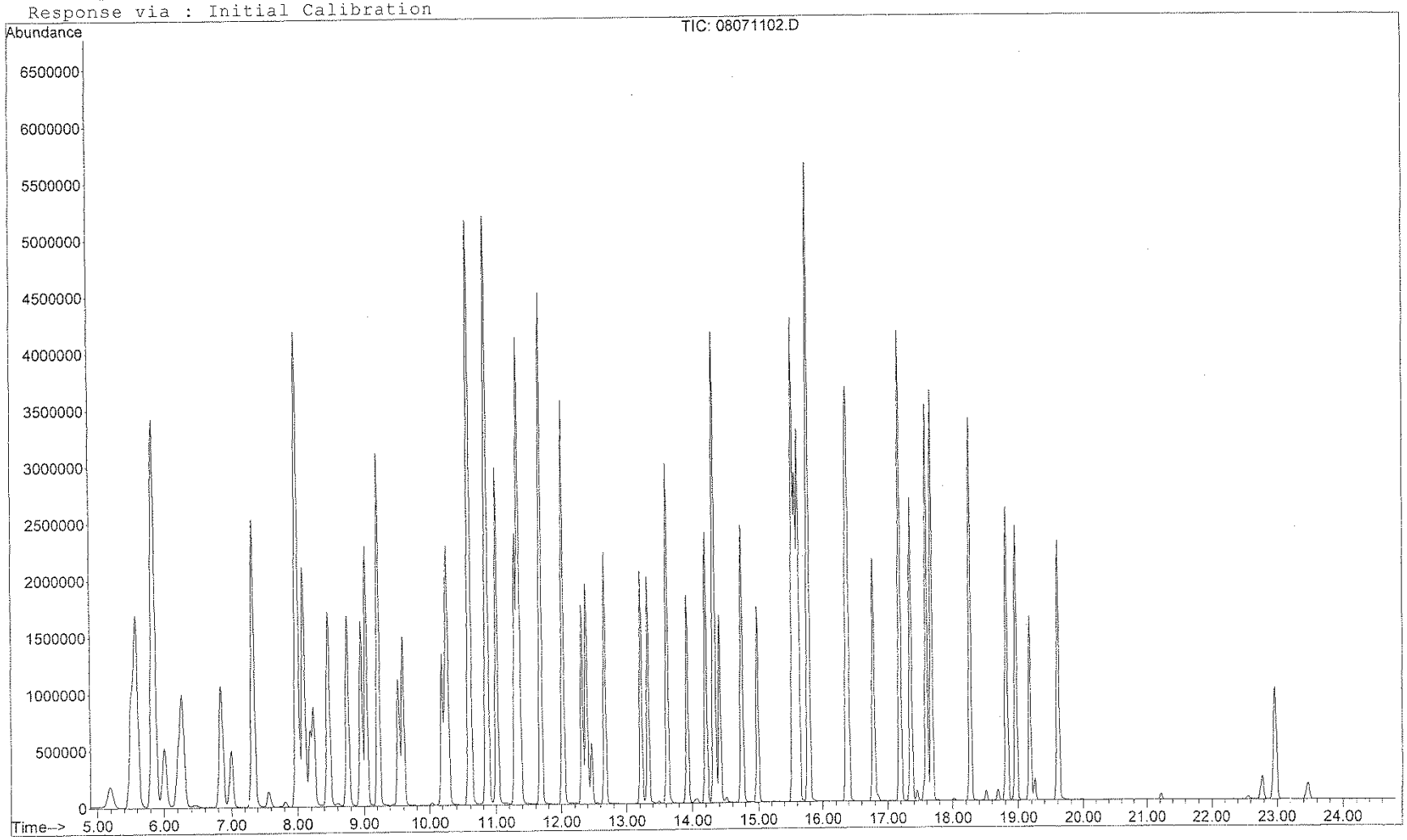
Quantitation Report

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	\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
1,4-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
Acq On : 9 Aug 2011 11:21 am
Sample : TO15 10ppbv CCV 080911a
Misc : CCV EPA_TO15
MS Integration Params: CLME.P

Vial: 3
Operator: RACHEL HILL
Inst : GC/MS Ins
Multiplr: 1.00

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
Acq On : 9 Aug 2011 11:21 am
Sample : TO15 10ppbv CCV 080911a
Misc : CCV EPA_TO15
MS Integration Params: CLME.P

Vial: 3
Operator: RACHEL HILL
Inst : GC/MS Ins
Multiplr: 1.00

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
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

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
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

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

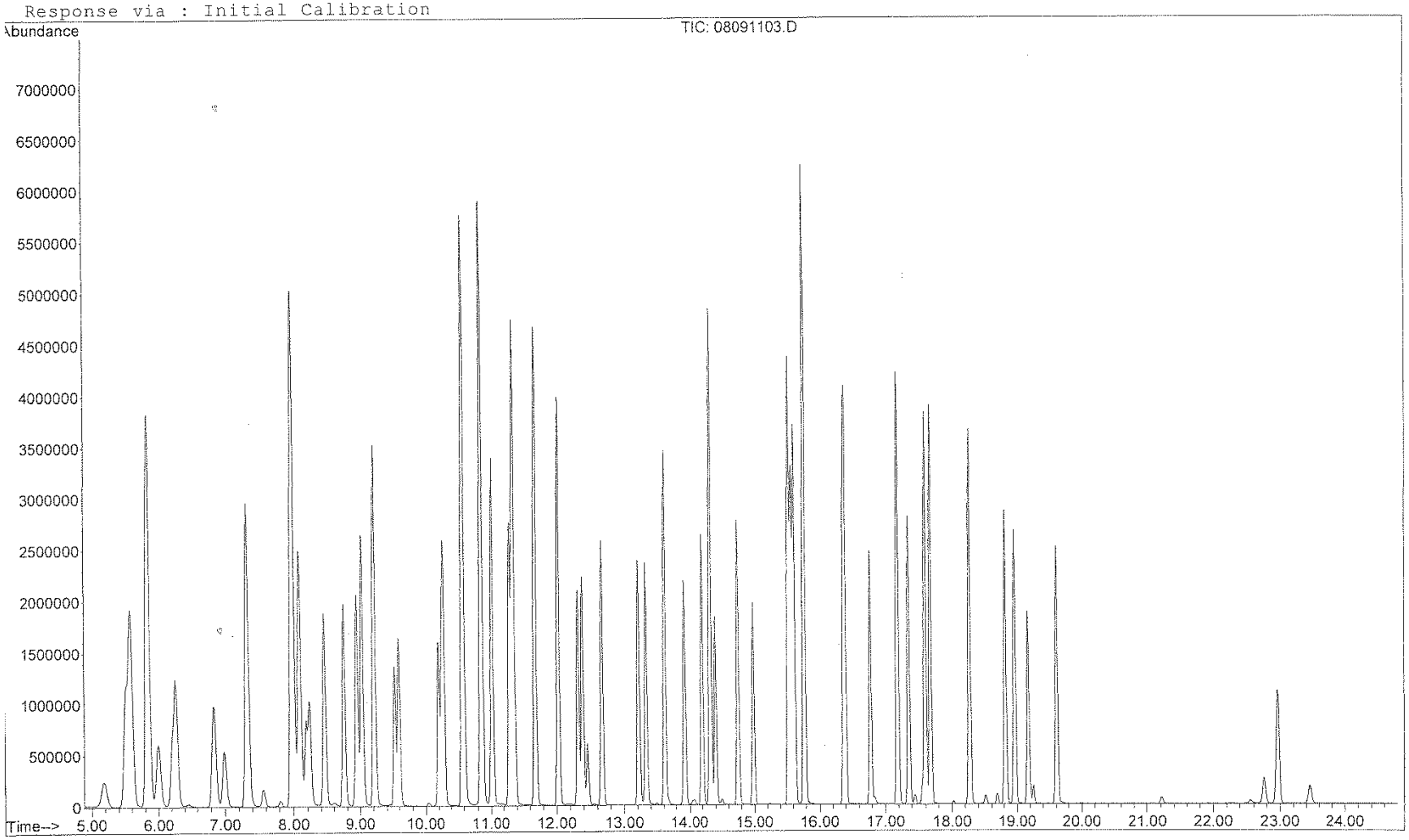
(#) = qualifier out of range (m) = manual integration

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



Response Factor Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\080111V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Tue Aug 02 08:25:09 2011
Response via : Initial Calibration

Calibration Files
2 =08011103.D 3 =08011104.D 4 =08011105.D
5 =08011106.D 6 =08011107.D 7 =08011108.D

		Compound	2	3	4	5	6	7	Avg	%RSD
1)	I	Bromochloromethane	----------ISTD----------							
2)	T	Propylene	1.104	1.416	1.133	1.138	1.093	1.084	1.155	9.60
3)	T	Dichlorodifluoromet	3.345	4.231	3.249	3.326	3.242	3.170	3.373	10.49
4)	T	1,2-Dichloro-1,2,2,	2.655	3.683	2.831	2.804	2.704	2.649	2.790	13.66
5)	T	Chloromethane	0.976	1.358	1.055	1.062	1.046	1.047	1.093	10.89
6)	T	Vinyl chloride	0.734	1.008	0.780	0.788	0.787	0.793	0.819	10.35
7)	T	1,3-Butadiene	0.545	0.767	0.585	0.593	0.583	0.587	0.610	11.14
8)	T	Bromomethane	1.266	1.825	1.429	1.402	1.369	1.357	1.338	21.92
9)	T	Chloroethane	0.728	1.018	0.807	0.802	0.777	0.777	0.800	11.60
10)	T	Trichlorofluorometh	3.014	4.148	3.253	3.202	3.095	3.063	3.202	12.51
11)	T	Ethanol		0.351	0.263	0.245	0.229	0.248	0.266	14.95
12)	T	Freon113	2.585	3.501	2.603	2.500	2.301	2.285	2.457	20.21
13)	T	1,1-Dichloroethene	1.703	2.438	1.876	1.836	1.741	1.766	1.827	14.37
14)	T	Acetone	1.777	2.325	1.499	1.317	1.168	1.304	1.485	26.28
15)	T	Carbon disulfide	3.394	4.647	3.582	3.542	3.364	3.331	3.492	14.61
16)	T	2-Propanol	1.742	1.901	1.378	1.313	1.231	1.301	1.437	17.06
17)	T	Methylene chloride	1.635	1.964	1.452	1.367	1.256	1.326	1.429	18.00
18)	T	tert-Butyl Methyl E	2.446	3.643	2.326	2.025	1.786	1.989	2.251	26.92
19)	T	trans-1,2-Dichloroe	1.744	2.372	1.760	1.640	1.504	1.586	1.682	18.26
20)	T	n-Hexane	1.987	2.697	1.970	1.828	1.677	1.757	1.873	20.05
21)	T	1,1-Dichloroethane	2.003	2.951	2.056	1.872	1.684	1.764	1.940	22.88
22)	T	Vinyl acetate	2.015	3.601	2.304	1.993	1.759	1.905	2.146	28.60
23)	T	cis-1,2-Dichloroeth	1.209	1.727	1.243	1.140	1.058	1.082	1.177	20.63
24)	T	2-Butanone	1.661	2.119	1.460	1.214	1.098	1.181	1.367	26.67
25)	T	Ethyl acetate	2.035	2.840	1.919	1.613	1.536	1.638	1.852	23.54
26)	T	Tetrahydrofuran	1.028	1.328	0.857	0.757	0.672	0.715	0.836	28.12
27)	T	Chloroform	1.943	2.785	1.960	1.807	1.662	1.683	1.869	21.51
28)	T	1,1,1-Trichloroetha	1.988	2.838	2.008	1.858	1.709	1.736	1.923	20.75
29)	T	Cyclohexane	1.922	2.486	1.764	1.610	1.467	1.463	1.639	26.04
30)	T	Carbon tetrachlorid	2.168	3.101	2.224	2.069	1.906	1.966	2.139	19.36
31)	T	Benzene	3.136	4.404	2.936	2.613	2.304	2.364	2.741	28.16
32)	T	1,2-Dichloroethane	1.078	1.576	1.062	0.956	0.853	0.904	1.025	23.24
33)	I	1,4-Difluorobenzene	----------ISTD----------							
34)	T	Heptane	0.667	0.874	0.585	0.534	0.476	0.454	0.566	29.25
35)	T	Trichloroethene	0.526	0.689	0.469	0.437	0.395	0.379	0.459	26.22
36)	T	1,2-Dichloropropane	0.324	0.467	0.298	0.268	0.241	0.245	0.294	28.96
37)	T	1,4-Dioxane		0.188	0.138	0.127	0.118	0.122	0.130	21.70
38)	T	Bromodichloromethan	0.545	0.780	0.521	0.478	0.436	0.440	0.492	27.17
39)	T	cis-1,3-Dichloropro	0.460	0.659	0.440	0.403	0.369	0.378	0.420	25.95
40)	T	4-Methyl-2-pentanon	0.260	0.287	0.195	0.180	0.166	0.169	0.193	27.19
41)	T	Toluene	0.993	1.229	0.822	0.736	0.668	0.666	0.813	28.07
42)	T	trans-1,3-Dichlorop	0.380	0.544	0.373	0.343	0.321	0.325	0.358	22.95
43)	T	1,1,2-Trichloroetha	0.326	0.424	0.287	0.264	0.247	0.247	0.275	26.31
44)	T	Tetrachloroethene	0.630	0.730	0.506	0.475	0.428	0.412	0.504	26.35
45)	T	2-Hexanone	0.539	0.555	0.392	0.364	0.344	0.337	0.388	27.08
46)	T	Chlorodibromomethan	0.527	0.691	0.480	0.447	0.419	0.415	0.459	24.66
47)	T	1,2-Dibromoethane	0.503	0.658	0.444	0.414	0.386	0.379	0.427	26.36
48)	I	Chlorobenzene-d5	----------ISTD----------							
49)	T	Chlorobenzene	1.046	1.183	0.832	0.756	0.692	0.685	0.789	28.47

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

Response Factor Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\080111V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Tue Aug 02 08:25:09 2011
Response via : Initial Calibration

Calibration Files
2 =08011103.D 3 =08011104.D 4 =08011105.D
5 =08011106.D 6 =08011107.D 7 =08011108.D

		Compound	2	3	4	5	6	7	Avg	%RSD
50)	T	Ethylbenzene	1.709	1.763	1.225	1.110	1.013	0.981	1.236	29.20
51)	T	m,p-Xylene	1.299	1.291	0.885	0.805	0.720	0.678	0.946	29.52
52)	T	o-Xylene	1.296	1.256	0.889	0.807	0.741	0.719	0.905	29.41
53)	T	Styrene	0.914	1.033	0.727	0.668	0.622	0.602	0.692	28.36
54)	T	Bromoform	0.696	0.812	0.593	0.549	0.518	0.501	0.565	23.87
55)	S	4-Bromofluorobenzen	0.532	0.554	0.555	0.559	0.562	0.553	0.558	2.43
56)	T	1,1,2,2-Tetrachloro	1.107	1.023	0.729	0.668	0.616	0.580	0.787	28.29
57)	T	4-Ethyltoluene		1.762	1.240	1.147	1.065	1.007	1.126	28.61
58)	T	1,3,5-Trimethylbenz		1.491	1.063	0.973	0.893	0.851	0.953	28.76
59)	T	1,2,4-Trimethylbenz	1.692	1.367	0.979	0.894	0.846	0.792	0.990	36.35
60)	T	1,3-Dichlorobenzene	0.978	0.848	0.637	0.585	0.556	0.523	0.634	29.15
61)	T	1,4-Dichlorobenzene	0.839	0.752	0.573	0.526	0.508	0.481	0.571	25.96
62)	T	Benzyl chloride	0.660	0.851	0.669	0.616	0.597	0.575	0.635	15.51
63)	T	1,2-Dichlorobenzene		0.823	0.623	0.566	0.534	0.507	0.567	22.95
64)	T	1,2,4-Trichlorobenz		0.087	0.073	0.068	0.069	0.069	0.075	10.02
65)	T	Hexachlorobutadiene		0.271	0.206	0.183	0.179	0.171	0.192	19.81
66)		Naphthalene		0.168	0.140	0.125	0.129	0.123	0.137	11.55

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

Compound List Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\080111V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Tue Aug 02 08:25:09 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	5.49	0.519	A	2	A	B
3	T	Dichlorodifluoromethane	85	5.57	0.526	A	3	A	B
4	T	1,2-Dichloro-1,2,2,2-tetrafluo	135	5.82	0.550	A	2	A	B
5	T	Chloromethane	50	5.98	0.566	A	3	A	B
6	T	Vinyl chloride	62	6.19	0.585	A	2	A	B
7	T	1,3-Butadiene	39	6.25	0.591	A	2	A	B
8	T	Bromomethane	94	6.83	0.645	A	3	A	B
9	T	Chloroethane	64	6.98	0.660	A	3	A	B
10	T	Trichlorofluoromethane	101	7.31	0.691	A	3	A	B
11	T	Ethanol	45	7.55	0.714	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	8.17	0.773	A	2	A	B
15	T	Carbon disulfide	76	8.45	0.799	A	3	A	B
16	T	2-Propanol	45	8.22	0.777	A	2	A	B
17	T	Methylene chloride	49	8.73	0.826	A	2	A	B
18	T	tert-Butyl Methyl Ether	73	8.94	0.846	A	2	A	B
19	T	trans-1,2-Dichloroethene	61	9.02	0.853	A	2	A	B
20	T	n-Hexane	57	9.21	0.871	A	3	A	B
21	T	1,1-Dichloroethane	63	9.58	0.906	A	3	A	B
22	T	Vinyl acetate	43	9.52	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	10.19	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	10.84	1.025	A	3	A	B
29	T	Cyclohexane	56	10.85	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	12.02	1.029	A	3	A	B
36	T	1,2-Dichloropropane	63	12.37	1.060	A	3	A	B
37	T	1,4-Dioxane	88	12.45	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	13.92	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	14.40	1.233	A	2	A	B
46	T	Chlorodibromomethane	129	14.74	1.262	A	2	A	B
47	T	1,2-Dibromoethane	107	14.98	1.283	A	2	A	B
48	I	Chlorobenzene-d5	117	15.53	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	15.77	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	16.77	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	17.35	1.117	A	2	A	B
57	T	4-Ethyltoluene	105	17.59	1.133	A	1	A	B
58	T	1,3,5-Trimethylbenzene	105	17.68	1.138	A	2	A	B
59	T	1,2,4-Trimethylbenzene	105	18.26	1.176	A	2	A	B

60	T	1,3-Dichlorobenzene	146	18.82	1.211	A	3	A	B
61	T	1,4-Dichlorobenzene	146	18.96	1.221	A	3	A	B
62	T	Benzyl chloride	91	19.17	1.234	A	2	A	B
63	T	1,2-Dichlorobenzene	146	19.61	1.262	A	3	A	B
64	T	1,2,4-Trichlorobenzene	180	22.77	1.466	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

080111V1.M Fri Aug 05 10:50:12 2011

Response Factor Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\080211V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Thu Aug 04 10:16:34 2011
Response via : Initial Calibration

Calibration Files
2 =08031102.D 3 =08031103.D 4 =08031104.D
5 =08031105.D 6 =08031106.D 7 =08031107.D

		Compound	2	3	4	5	6	7	Avg	%RSD
1)	I	Bromochloromethane	----------ISTD----------							
2)	T	Propylene	1.297	1.558	1.302	1.176	1.160	1.264	1.287	9.52
3)	T	Dichlorodifluoromet	3.892	4.701	3.905	3.541	3.496	3.766	3.842	9.82
4)	T	1,2-Dichloro-1,2,2,	3.134	4.070	3.295	2.968	2.910	3.053	3.135	13.13
5)	T	Chloromethane	1.299	1.804	1.504	1.354	1.338	1.456	1.464	10.85
6)	T	Vinyl chloride	1.179	1.689	1.388	1.256	1.244	1.340	1.350	11.59
7)	T	1,3-Butadiene	0.873	1.157	0.947	0.856	0.856	0.919	0.934	10.53
8)	T	Bromomethane	1.024	1.353	1.118	1.007	1.005	1.080	1.097	10.30
9)	T	Chloroethane	0.529	0.872	0.587	0.536	0.535	0.580	0.603	18.62
10)	T	Trichlorofluorometh	3.453	4.593	3.726	3.387	3.242	3.214	3.489	13.95
11)	T	Ethanol		0.347	0.284	0.263	0.268	0.293	0.265	19.51
12)	T	Freon113	2.946	3.637	2.803	2.536	2.465	2.511	2.616	20.92
13)	T	1,1-Dichloroethene	1.980	2.594	2.092	1.912	1.889	1.994	2.015	12.55
14)	T	Acetone	1.699	1.892	1.464	1.291	1.292	1.432	1.486	13.95
15)	T	Carbon disulfide	3.738	4.956	4.038	3.665	3.559	3.742	3.821	13.10
16)	T	2-Propanol	1.648	1.854	1.551	1.400	1.404	1.532	1.553	9.37
17)	T	Methylene chloride	1.809	1.955	1.502	1.401	1.382	1.447	1.530	14.70
18)	T	tert-Butyl Methyl E	2.563	3.027	2.315	2.037	2.028	2.242	2.319	14.35
19)	T	trans-1,2-Dichloroe	1.921	2.329	1.794	1.654	1.632	1.730	1.782	13.89
20)	T	n-Hexane	2.181	2.536	1.961	1.805	1.764	1.861	1.931	15.42
21)	T	1,1-Dichloroethane	1.989	2.388	1.844	1.684	1.652	1.832	1.851	13.18
22)	T	Vinyl acetate	1.979	2.767	2.148	1.908	1.897	2.151	2.129	13.00
23)	T	cis-1,2-Dichloroeth	1.238	1.471	1.149	1.034	1.020	1.128	1.133	14.12
24)	T	2-Butanone	1.589	1.809	1.439	1.361	1.330	1.372	1.431	13.36
25)	T	Ethyl acetate	2.004	2.504	1.955	1.760	1.778	1.918	1.975	11.68
26)	T	Tetrahydrofuran	0.956	1.113	0.843	0.745	0.736	0.804	0.838	15.91
27)	T	Chloroform	1.835	2.284	1.809	1.619	1.620	1.815	1.793	12.09
28)	T	1,1,1-Trichloroetha	2.018	2.450	1.964	1.773	1.757	1.934	1.939	11.74
29)	T	Cyclohexane	2.144	2.317	1.741	1.565	1.529	1.545	1.683	22.04
30)	T	Carbon tetrachlorid	2.415	2.879	2.279	2.071	2.037	2.214	2.263	12.31
31)	T	Benzene	3.012	3.501	2.690	2.411	2.356	2.579	2.656	15.54
32)	T	1,2-Dichloroethane	1.051	1.298	1.033	0.930	0.927	1.046	1.049	10.94
33)	I	1,4-Difluorobenzene	----------ISTD----------							
34)	T	Heptane	0.733	0.808	0.611	0.543	0.515	0.501	0.559	27.57
35)	T	Trichloroethene	0.577	0.641	0.496	0.449	0.431	0.426	0.461	23.74
36)	T	1,2-Dichloropropane	0.333	0.403	0.314	0.280	0.275	0.282	0.294	19.31
37)	T	1,4-Dioxane		0.192	0.155	0.143	0.142	0.145	0.147	15.45
38)	T	Bromodichloromethan	0.576	0.712	0.565	0.514	0.502	0.516	0.531	17.14
39)	T	cis-1,3-Dichloropro	0.490	0.616	0.489	0.446	0.434	0.451	0.461	16.45
40)	T	4-Methyl-2-pentanon	0.247	0.281	0.219	0.202	0.194	0.197	0.209	18.67
41)	T	Toluene	1.060	1.172	0.903	0.810	0.783	0.789	0.850	22.43
42)	T	trans-1,3-Dichlorop	0.385	0.516	0.423	0.385	0.380	0.393	0.397	13.78
43)	T	1,1,2-Trichloroetha	0.361	0.409	0.320	0.291	0.284	0.286	0.303	19.68
44)	T	Tetrachloroethene	0.717	0.726	0.559	0.508	0.471	0.468	0.522	26.93
45)	T	2-Hexanone	0.493	0.513	0.415	0.381	0.372	0.377	0.400	17.87
46)	T	Chlorodibromomethan	0.557	0.673	0.539	0.493	0.480	0.487	0.505	17.55
47)	T	1,2-Dibromoethane	0.529	0.630	0.502	0.458	0.448	0.450	0.469	18.54
48)	I	Chlorobenzene-d5	----------ISTD----------							
49)	T	Chlorobenzene	1.127	1.179	0.933	0.855	0.830	0.808	0.878	22.69

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

Response Factor Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\080211V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Thu Aug 04 10:16:34 2011
Response via : Initial Calibration

Calibration Files
2 =08031102.D 3 =08031103.D 4 =08031104.D
5 =08031105.D 6 =08031106.D 7 =08031107.D

		Compound	2	3	4	5	6	7	Avg	%RSD
50)	T	Ethylbenzene	1.840	1.762	1.356	1.250	1.195	1.150	1.296	27.12
51)	T	m,p-Xylene	1.441	1.299	0.976	0.887	0.840	0.790	0.985	28.77
52)	T	o-Xylene	1.445	1.283	0.976	0.906	0.864	0.826	0.955	29.15
53)	T	Styrene	0.985	1.049	0.824	0.749	0.730	0.698	0.769	23.49
54)	T	Bromoform	0.702	0.817	0.661	0.616	0.610	0.585	0.620	17.95
55)	S	4-Bromofluorobenzen	0.540	0.561	0.565	0.563	0.577	0.573	0.571	3.39
56)	T	1,1,2,2-Tetrachloro	1.200	1.062	0.807	0.746	0.732	0.678	0.788	29.92
57)	T	4-Ethyltoluene		1.866	1.444	1.309	1.274	1.191	1.291	23.92
58)	T	1,3,5-Trimethylbenz		1.617	1.215	1.122	1.082	1.006	1.098	25.05
59)	T	1,2,4-Trimethylbenz	1.971	1.500	1.142	1.046	1.034	0.954	1.155	34.50
60)	T	1,3-Dichlorobenzene	0.989	0.854	0.698	0.671	0.668	0.630	0.701	21.62
61)	T	1,4-Dichlorobenzene	0.825	0.735	0.625	0.606	0.605	0.585	0.626	17.14
62)	T	Benzyl chloride	0.584	0.810	0.719	0.704	0.724	0.712	0.696	9.42
63)	T	1,2-Dichlorobenzene		0.819	0.664	0.638	0.640	0.614	0.633	15.62
64)	T	1,2,4-Trichlorobenz		0.067	0.063	0.071	0.076	0.076	0.074	10.62
65)	T	Hexachlorobutadiene		0.216	0.186	0.188	0.191	0.182	0.184	10.24
66)		Naphthalene		0.121	0.114	0.130	0.140	0.132	0.131	8.60

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

Compound List Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\080211V1.M (RTE Integrator)
Title : TO15 ppbv
Last Update : Thu Aug 04 10:16:34 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	0.527	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	6.27	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	0.715	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	8.24	0.779	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	0.907	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	10.19	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	11.69	1.000	A	2	A	B
34	T	Heptane	43	11.35	0.971	A	3	A	B
35	T	Trichloroethene	130	12.03	1.029	A	3	A	B
36	T	1,2-Dichloropropane	63	12.38	1.060	A	3	A	B
37	T	1,4-Dioxane	88	12.46	1.066	A	2	A	B
38	T	Bromodichloromethane	83	12.67	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	15.53	1.000	A	2	A	B
49	T	Chlorobenzene	112	15.58	1.003	A	3	A	B
50	T	Ethylbenzene	91	15.62	1.006	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	17.19	1.106	A	2	A	B
56	T	1,1,2,2-Tetrachloroethane	83	17.35	1.117	A	2	A	B
57	T	4-Ethyltoluene	105	17.60	1.133	A	1	A	B
58	T	1,3,5-Trimethylbenzene	105	17.68	1.138	A	2	A	B
59	T	1,2,4-Trimethylbenzene	105	18.26	1.176	A	2	A	B

60	T	1,3-Dichlorobenzene	146	18.82	1.211	A	3	A	B
61	T	1,4-Dichlorobenzene	146	18.97	1.221	A	3	A	B
62	T	Benzyl chloride	91	19.17	1.234	A	2	A	B
63	T	1,2-Dichlorobenzene	146	19.61	1.262	A	3	A	B
64	T	1,2,4-Trichlorobenzene	180	22.76	1.465	A	3	A	B
65	T	Hexachlorobutadiene	225	22.97	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

080211V1.M Sat Aug 06 11:40:53 2011

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 Thu Sep 15 17:42:54 2011

RTI Laboratories

Run ID: VOA9_110803A **Run No.:** 42009

Analytical Run Date: 8/3/2011 **InstrumentID:** VOA9

Analyst: Michael Truchan **Column:**

Calibration ID: **Column ID:**

Column Length:

SampID	TestCode	SampType	Batch ID	Analysis Date/Time	QA By	Q	Comments
MASS APH CCV	MA_APH	CCV	R42009	8/3/2011 1:41:00 PM	Charles O`Bryan		
MASS APH RLVS A	MA_APH	rlvs	R42009	8/3/2011 2:23:00 PM	Charles O`Bryan		
MBLK 080311	MA_APH	MBLK	R42009	8/3/2011 3:11:00 PM	Charles O`Bryan		
1105678-020A	MA_APH	SAMP	R42009	8/3/2011 4:05:00 PM	Charles O`Bryan	H	
1105678-020ADUP	MA_APH	DUP	R42009	8/3/2011 4:50:00 PM	Charles O`Bryan	H	
1105678-021A	MA_APH	SAMP	R42009	8/3/2011 5:32:00 PM	Charles O`Bryan	H	
1105678-024A	MA_APH	SAMP	R42009	8/3/2011 6:14:00 PM	Charles O`Bryan	H	
1105749-005A	MA_APH	SAMP	R42009	8/3/2011 6:59:00 PM	Charles O`Bryan	H	
1105749-007A	MA_APH	SAMP	R42009	8/3/2011 7:45:00 PM	Charles O`Bryan	H	
1105749-008A	MA_APH	SAMP	R42009	8/3/2011 8:30:00 PM	Charles O`Bryan	H	
1105749-009A	MA_APH	SAMP	R42009	8/3/2011 9:15:00 PM	Charles O`Bryan	H	
1105749-010A	MA_APH	SAMP	R42009	8/3/2011 10:00:00 PM	Charles O`Bryan	H	
1105749-018A	MA_APH	SAMP	R42009	8/3/2011 10:42:00 PM	Charles O`Bryan	H	
1106479-021A	MA_APH	SAMP	R42009	8/3/2011 11:27:00 PM	Charles O`Bryan	H	
1106479-023A	MA_APH	SAMP	R42009	8/4/2011 12:12:00 AM	Charles O`Bryan	H	
1107364-015A	MA_APH	SAMP	R42009	8/4/2011 12:58:00 AM	Charles O`Bryan		
1107364-016A	MA_APH	SAMP	R42009	8/4/2011 1:43:00 AM	Charles O`Bryan		
1107364-017A	MA_APH	SAMP	R42009	8/4/2011 2:28:00 AM	Charles O`Bryan		
1107364-018A	MA_APH	SAMP	R42009	8/4/2011 3:13:00 AM	Charles O`Bryan		
1107364-019A	MA_APH	SAMP	R42009	8/4/2011 3:59:00 AM	Charles O`Bryan		
1107364-020A	MA_APH	SAMP	R42009	8/4/2011 5:23:00 AM	Charles O`Bryan		
1107364-025A	MA_APH	SAMP	R42009	8/4/2011 6:12:00 AM	Charles O`Bryan		
MASS APH RLVS	MA_APH	RLVS	R42009	8/4/2011 12:36:00 PM	Charles O`Bryan		

RTI Laboratories

ANALYTICAL RUN Summary

05-Aug-11

RunNo 42009

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
812059	MASS APH CCV	MA_APH	CCV	\1\DATA\080311	8/3/2011 1:41:00	1	R42009		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	229.15	229.15		222	0	0	0	0	0	103%	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	200.64	200.64		185	0	0	0	0	0	108%	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	253.29	253.29		221	0	0	0	0	0	115%	70	130	0%	
C9-C12 Aliphatic Hydrocarbons	A	µg/m³		0		0	0	0	25.766	189	0	0%	0	0	0%	
C9-C12 Aliphatic-Aromatic Hydrocarbons	A	µg/m³		0		0	0	0	0	0	0	0%	0	0	0%	
non C5-C8 - TOTAL	A	µg/m³		0		0	0	0	0	0	0	0%	0	0	0%	
non C9-C12 - TOTAL	A	µg/m³		0		0	0	0	0	0	0	0%	0	0	0%	
Chlorobenzene-d5	I	ppbv	12.5	12.5		12.5	0	0	0	0	0	100%	80	120	0%	
4-Bromofluorobenzene	S	µg/m³	92.1	92.1		89.5	0	0	0	0	0	103%	70	130	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
812082	MASS APH RLVS A	MA_APH	rlvs	\1\DATA\080311	8/3/2011 2:23:00	1	R42009		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	122.17	122.17		117	0	0	0	0	0	104%	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	140.8	140.8		133	0	0	0	0	0	106%	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	212	212		249	0	0	0	0	0	85%	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%	

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\080311\08031102.D
Acq On : 3 Aug 2011 1:41 pm
Sample : MASS APH CCV
Misc : CCV MA_APH
MS Integration Params: rteint.p
Quant Time: Aug 4 11:28 2011

Vial: 2
Operator: MICHAEL TRUCHAN
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: 080111V9.RES

Quant Method : C:\HPCHEM\1\METHODS\080111V9.M (RTE Integrator)
Title : MASS APH
Last Update : Tue Aug 02 15:54:47 2011
Response via : Initial Calibration
DataAcq Meth : 080111V9

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
40) Chlorobenzene-d5	16.52	117	435596	12.50	ug/m3	0.00
System Monitoring Compounds						
41) 4-Bromofluorobenzene	18.35	95	321158	92.10	ug/m3	0.00
Target Compounds						Qvalue
1) C5-C8 Aliphatic HC	7.18	TIC	2346471	33.54	ug/m3	100
2) C5-C8 Aliphatic HC {2}	9.58	TIC	2010994	37.61	ug/m3	100
3) C5-C8 Aliphatic HC {3}	11.28	TIC	2172665	36.65	ug/m3	100
4) C5-C8 Aliphatic HC {4}	11.36	TIC	2457822	45.72	ug/m3	100
5) C5-C8 Aliphatic HC {5}	11.92	TIC	2101245	37.54	ug/m3	100
6) C5-C8 Aliphatic HC {6}	14.31	TIC	2115251	37.68	ug/m3	100
7) C5-C8 Aliphatic HC - TOTAL	7.18	TIC	13204448m	229.15	ug/m3	
8) C9-C12 Aliphatic HC	15.71	TIC	2589227	42.61	ug/m3	100
9) C9-C12 Aliphatic HC {2}	16.57	TIC	2261563	38.48	ug/m3	100
10) C9-C12 Aliphatic HC {3}	18.69	TIC	2189930	42.72	ug/m3	100
11) C9-C12 Aliphatic HC {4}	19.84	TIC	2100790	42.03	ug/m3	100
12) C9-C12 Aliphatic HC {5}	20.66	TIC	1801769	41.35	ug/m3	100
13) C9-C12 Aliphatic HC {6}	22.48	TIC	1382527	40.25	ug/m3	100
14) C9-C12 Aliphatic HC - TOTA	15.71	TIC	12325806m	253.29	ug/m3	
15) C9-C10 Aromatic HC	17.99	120	165324	37.00	ug/m3	100
16) C9-C10 Aromatic HC {2}	18.77	120	202033	42.68	ug/m3	100
17) C9-C10 Aromatic HC {3}	18.92	120	274372	40.18	ug/m3	100
18) C9-C10 Aromatic HC {4}	20.04	120	59914	43.56	ug/m3	100
19) C9-C10 Aromatic HC {5}	20.30	120	185522	36.49	ug/m3	100
20) C9-C10 Aromatic HC {6}	20.04	134	156219	44.04	ug/m3	100
21) C9-C10 Aromatic HC - TOTAL	17.99	TIC	1043384m	200.64	ug/m3	

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

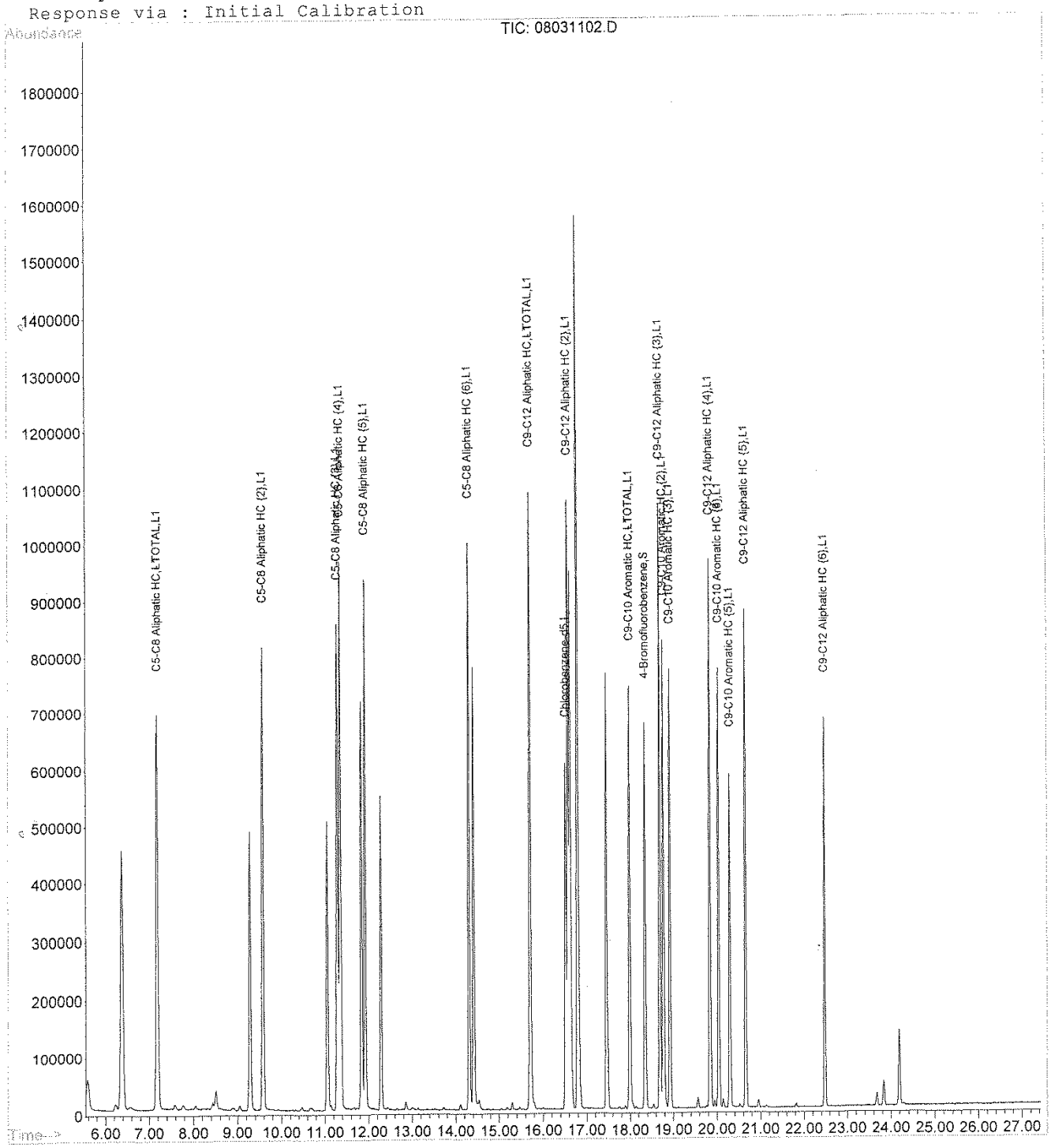
Quantitation Report

Data File : C:\HPCHEM\1\DATA\080311\08031102.D
Acq On : 3 Aug 2011 1:41 pm
Sample : MASS APH CCV
Misc : CCV MA_APH
MS Integration Params: rteint.p
Quant Time: Aug 4 11:28 2011

Vial: 2
Operator: MICHAEL TRUCHAN
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: 080111V9.RES

Method : C:\HPCHEM\1\METHODS\080111V9.M (RTE Integrator)
Title : MASS APH
Last Update : Tue Aug 02 15:54:47 2011
Response via : Initial Calibration



RTI Laboratories

Run ID: VOA9_110807A **Run No.:** 42128

Analytical Run Date: 8/7/2011 **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	R42128	8/7/2011 12:27:00 PM	Charles O`Bryan		
MASS APH ICAL L1	MA_APH	ICAL	R42128	8/7/2011 1:51:00 PM	Charles O`Bryan		
MASS APH ICAL L2	MA_APH	ICAL	R42128	8/7/2011 2:33:00 PM	Charles O`Bryan		
MASS APH ICAL L3	MA_APH	ICAL	R42128	8/7/2011 3:16:00 PM	Charles O`Bryan		
MASS APH ICAL L4	MA_APH	ICAL	R42128	8/7/2011 3:59:00 PM	Charles O`Bryan		
MASS APH ICAL L5	MA_APH	ICAL	R42128	8/7/2011 4:41:00 PM	Charles O`Bryan		
MASS APH ICAL L6	MA_APH	ICAL	R42128	8/7/2011 5:25:00 PM	Charles O`Bryan		
MASS APH ICAL L7	MA_APH	ICAL	R42128	8/7/2011 6:10:00 PM	Charles O`Bryan		
BFB	BFB_TUNE	TUNE	R42128	8/8/2011 11:09:00 AM	Charles O`Bryan		
MASS APH CCV	MA_APH	CCV	R42128	8/8/2011 12:41:00 PM	Charles O`Bryan		
MASS APH RLVS 0807	MA_APH	RLVS	R42128	8/8/2011 1:23:00 PM	Charles O`Bryan		
MBLK 080811	MA_APH	MBLK	R42128	8/8/2011 3:27:00 PM	Charles O`Bryan		
1107364-001A	MA_APH	SAMP	R42128	8/8/2011 4:22:00 PM	Charles O`Bryan	H	
1107364-002A	MA_APH	SAMP	R42128	8/8/2011 5:04:00 PM	Charles O`Bryan	H	
1107364-003A	MA_APH	SAMP	R42128	8/8/2011 5:46:00 PM	Charles O`Bryan	H	
1107364-003ADUP	MA_APH	DUP	R42128	8/8/2011 6:28:00 PM	Charles O`Bryan	H	
1107364-009A	MA_APH	SAMP	R42128	8/8/2011 7:10:00 PM	Charles O`Bryan	H	
1107364-010A	MA_APH	SAMP	R42128	8/8/2011 7:52:00 PM	Charles O`Bryan	H	
1107364-011A	MA_APH	SAMP	R42128	8/8/2011 8:35:00 PM	Charles O`Bryan	H	
1107364-012A	MA_APH	SAMP	R42128	8/8/2011 9:17:00 PM	Charles O`Bryan	H	
MASS APH RLVS 0807	MA_APH	RLVS	R42128	8/9/2011 11:50:00 AM	Charles O`Bryan		

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
814590	BFB	BFB_TUNE	TUNE	\1\DATA\080711	8/8/2011 11:09:0	1	R42128		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		75.3	75.3		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		97.4	97.4		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		23.4	23.4		0	0	0	0	0	0	0%	8	40	0%	
75	M		44.5	44.5		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		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
814577	MASS APH CCV	MA_APH	CCV	\1\DATA\080711	8/8/2011 12:41:0	1	R42128		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	239.79	239.79		222	0	0	0	0	0	108%	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	204.29	204.29		185	0	0	0	0	0	110%	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	246.59	246.59		221	0	0	0	0	0	112%	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	90.51	90.51		89.5	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
814606	MASS APH RLVS 080711A	MA_APH	RLVS	\1\DATA\080711	8/8/2011 1:23:00	1	R42128		0	0	

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\080711\08071113.D Vial: 12
Acq On : 8 Aug 2011 12:41 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 9:03 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	524190	12.50	ug/m3	0.00
System Monitoring Compounds						
41) 4-Bromofluorobenzene	18.35	95	378928	90.51	ug/m3	0.00
Spiked Amount 89.500	Range 70 - 130		Recovery = 101.13%			
Target Compounds						Qvalue
1) C5-C8 Aliphatic HC	7.18	TIC	2745677	35.35	ug/m3	100
2) C5-C8 Aliphatic HC {2}	9.58	TIC	2345829	39.73	ug/m3	100
3) C5-C8 Aliphatic HC {3}	11.29	TIC	2478104	38.29	ug/m3	100
4) C5-C8 Aliphatic HC {4}	11.35	TIC	2867861	48.46	ug/m3	100
5) C5-C8 Aliphatic HC {5}	11.93	TIC	2427785	38.84	ug/m3	100
6) C5-C8 Aliphatic HC {6}	14.31	TIC	2442753	38.84	ug/m3	100
7) C5-C8 Aliphatic HC - TOTAL	7.18	TIC	15308009m	239.79	ug/m3	
8) C9-C12 Aliphatic HC	15.71	TIC	2980633	43.96	ug/m3	100
9) C9-C12 Aliphatic HC {2}	16.57	TIC	2579579	38.75	ug/m3	100
10) C9-C12 Aliphatic HC {3}	18.69	TIC	2443363	41.67	ug/m3	100
11) C9-C12 Aliphatic HC {4}	19.84	TIC	2344831	40.89	ug/m3	100
12) C9-C12 Aliphatic HC {5}	20.65	TIC	1946910	38.57	ug/m3	100
13) C9-C12 Aliphatic HC {6}	22.48	TIC	1411995	35.41	ug/m3	100
14) C9-C12 Aliphatic HC - TOTA	15.71	TIC	13707311m	246.59	ug/m3	
15) C9-C10 Aromatic HC	17.99	120	187480	38.33	ug/m3	100
16) C9-C10 Aromatic HC {2}	18.77	120	228912	43.95	ug/m3	100
17) C9-C10 Aromatic HC {3}	18.92	120	311275	41.46	ug/m3	100
18) C9-C10 Aromatic HC {4}	20.04	120	66630	43.72	ug/m3	100
19) C9-C10 Aromatic HC {5}	20.30	120	205649	36.44	ug/m3	100
20) C9-C10 Aromatic HC {6}	20.04	134	173473	43.67	ug/m3	100
21) C9-C10 Aromatic HC - TOTAL	17.98	TIC	1173419m	204.29	ug/m3	

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

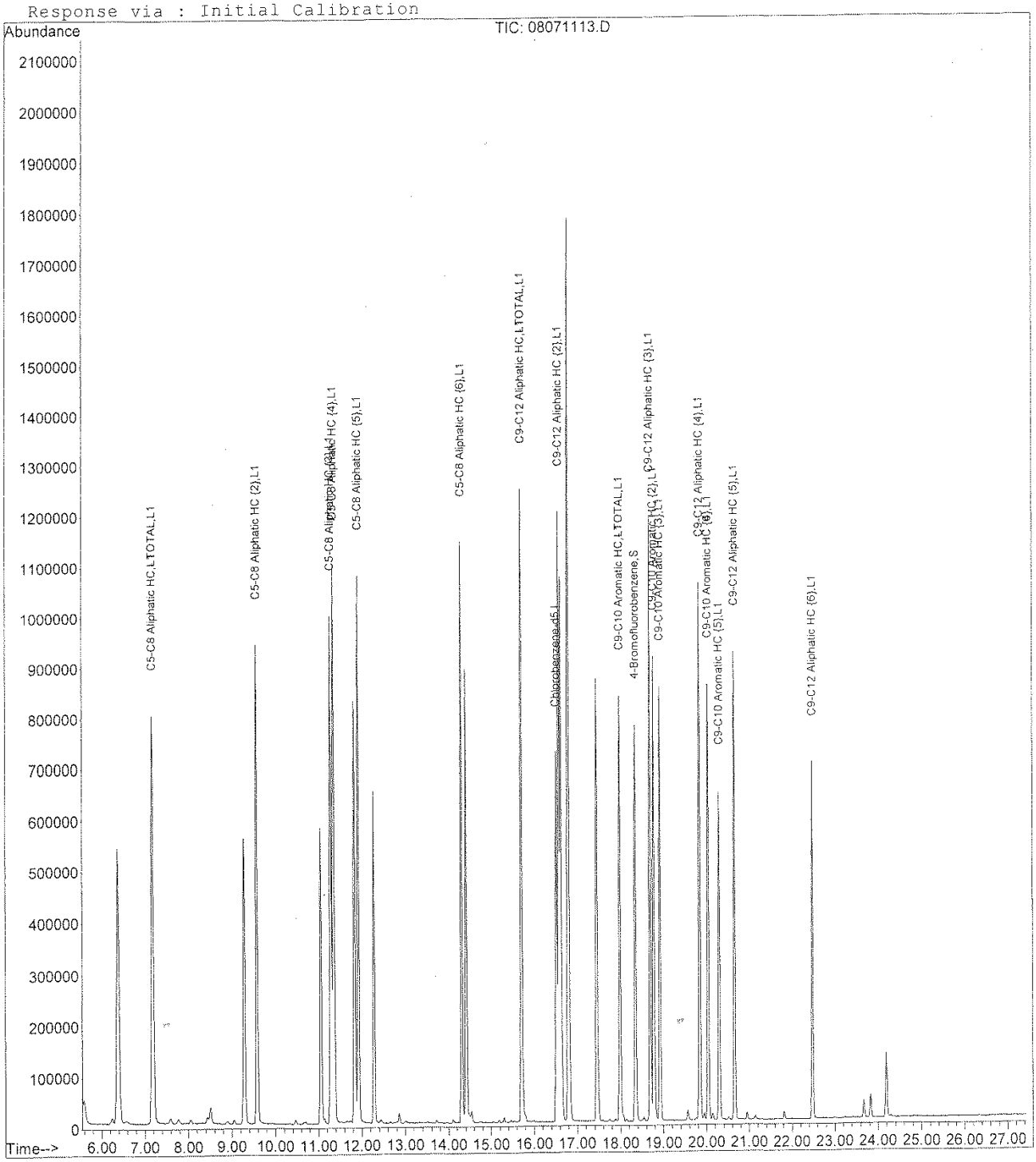
Quantitation Report

Data File : C:\HPCHEM\1\DATA\080711\08071113.D
Acq On : 8 Aug 2011 12:41 pm
Sample : MASS APH CCV
Misc : CCV MA_APH
MS Integration Params: rteint.p
Quant Time: Aug 10 9:03 2011

Vial: 12
Operator: MICHAEL TRUCHAN
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: 080711V9.RES

Method : C:\HPCHEM\1\METHODS\072211V9.M (RTE Integrator)
Title : MASS APH
Last Update : Sat Jul 30 08:24:50 2011
Response via : Initial Calibration



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	\I\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	\I\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
Acq On : 9 Aug 2011 2:14 pm
Sample : MASS APH CCV
Misc : CCV MA_APH
MS Integration Params: rteint.p
Quant Time: Aug 10 9:17 2011

Vial: 2
Operator: MICHAEL TRUCHAN
Inst : GC/MS Ins
Multiplr: 1.00
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
08091102.D 080711V9.M Thu Sep 08 13:00:44 2011

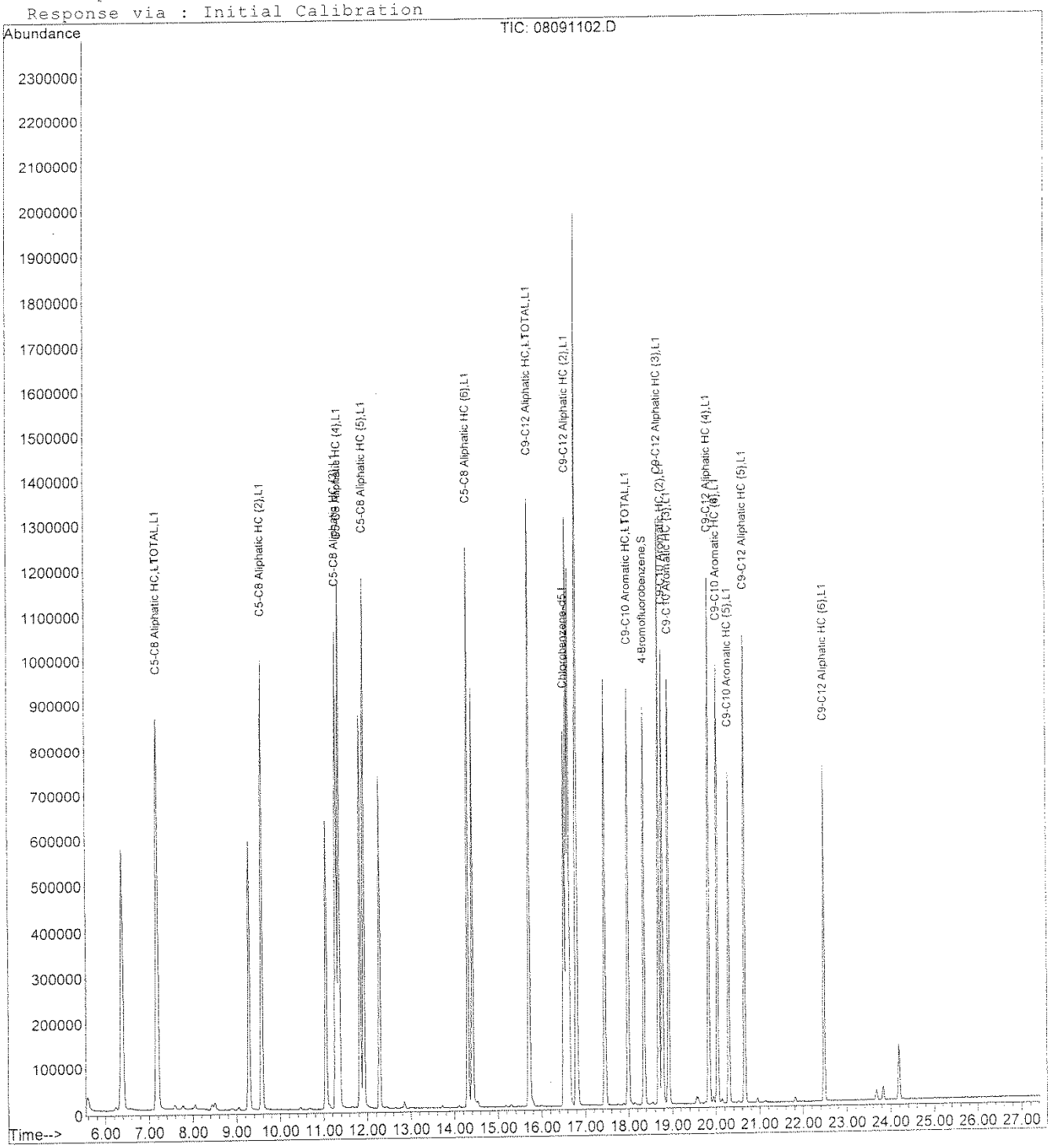
Quantitation Report

Data File : C:\HPCHEM\1\DATA\080911\08091102.D
Acq On : 9 Aug 2011 2:14 pm
Sample : MASS APH CCV
Misc : CCV MA_APH
MS Integration Params: rteint.p
Quant Time: Aug 10 9:17 2011

Vial: 2
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_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	\1\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	\1\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

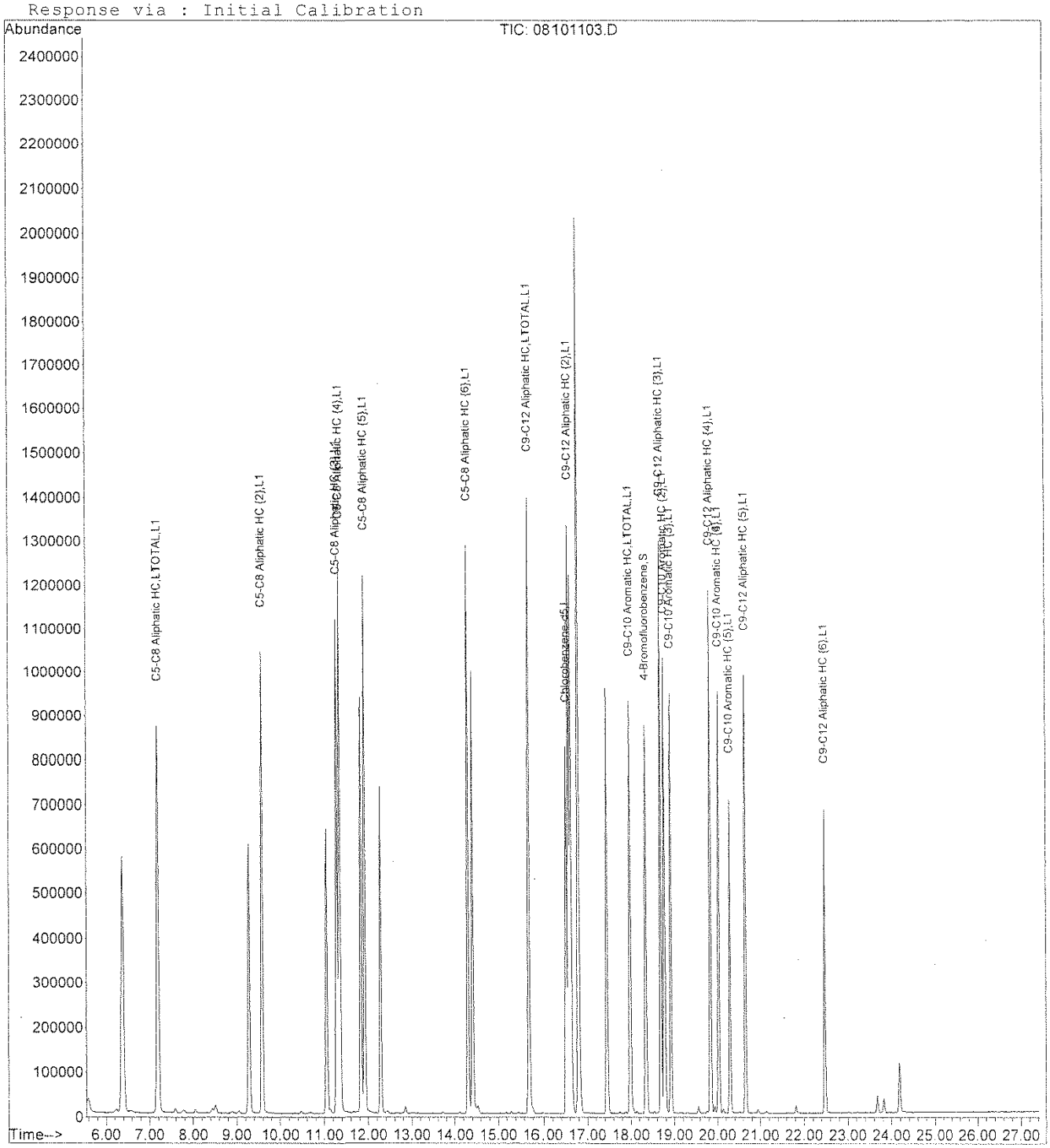
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
40) Chlorobenzene-d5	16.51	117	584813	12.50	ug/m3	0.00
System Monitoring Compounds						
41) 4-Bromofluorobenzene	18.35	95	416226	89.12	ug/m3	0.00
Spiked Amount 89.500	Range 70 - 130		Recovery = 99.58%			
Target Compounds						Qvalue
1) C5-C8 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

Quantitation Report

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

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



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\080711\08071113.D
Acq On : 8 Aug 2011 12:41 pm
Sample : MASS APH CCV
Misc : CCV MA_APH
MS Integration Params: rteint.p
Quant Time: Aug 10 9:03 2011

Vial: 12
Operator: MICHAEL TRUCHAN
Inst : GC/MS Ins
Multiplr: 1.00

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	524190	12.50 ug/m3	0.00
System Monitoring Compounds					
41) 4-Bromofluorobenzene	18.35	95	378928	90.51 ug/m3	0.00
Spiked Amount 89.500	Range 70 - 130		Recovery	= 101.13%	

Target Compounds					Qvalue
1) C5-C8 Aliphatic HC	7.18	TIC	2745677	35.35 ug/m3	100
2) C5-C8 Aliphatic HC {2}	9.58	TIC	2345829	39.73 ug/m3	100
3) C5-C8 Aliphatic HC {3}	11.29	TIC	2478104	38.29 ug/m3	100
4) C5-C8 Aliphatic HC {4}	11.35	TIC	2867861	48.46 ug/m3	100
5) C5-C8 Aliphatic HC {5}	11.93	TIC	2427785	38.84 ug/m3	100
6) C5-C8 Aliphatic HC {6}	14.31	TIC	2442753	38.84 ug/m3	100
7) C5-C8 Aliphatic HC - TOTAL	7.18	TIC	15308009m	239.79 ug/m3	
8) C9-C12 Aliphatic HC	15.71	TIC	2980633	43.96 ug/m3	100
9) C9-C12 Aliphatic HC {2}	16.57	TIC	2579579	38.75 ug/m3	100
10) C9-C12 Aliphatic HC {3}	18.69	TIC	2443363	41.67 ug/m3	100
11) C9-C12 Aliphatic HC {4}	19.84	TIC	2344831	40.89 ug/m3	100
12) C9-C12 Aliphatic HC {5}	20.65	TIC	1946910	38.57 ug/m3	100
13) C9-C12 Aliphatic HC {6}	22.48	TIC	1411995	35.41 ug/m3	100
14) C9-C12 Aliphatic HC - TOTA	15.71	TIC	13707311m	246.59 ug/m3	
15) C9-C10 Aromatic HC	17.99	120	187480	38.33 ug/m3	100
16) C9-C10 Aromatic HC {2}	18.77	120	228912	43.95 ug/m3	100
17) C9-C10 Aromatic HC {3}	18.92	120	311275	41.46 ug/m3	100
18) C9-C10 Aromatic HC {4}	20.04	120	66630	43.72 ug/m3	100
19) C9-C10 Aromatic HC {5}	20.30	120	205649	36.44 ug/m3	100
20) C9-C10 Aromatic HC {6}	20.04	134	173473	43.67 ug/m3	100
21) C9-C10 Aromatic HC - TOTAL	17.98	TIC	1173419m	204.29 ug/m3	

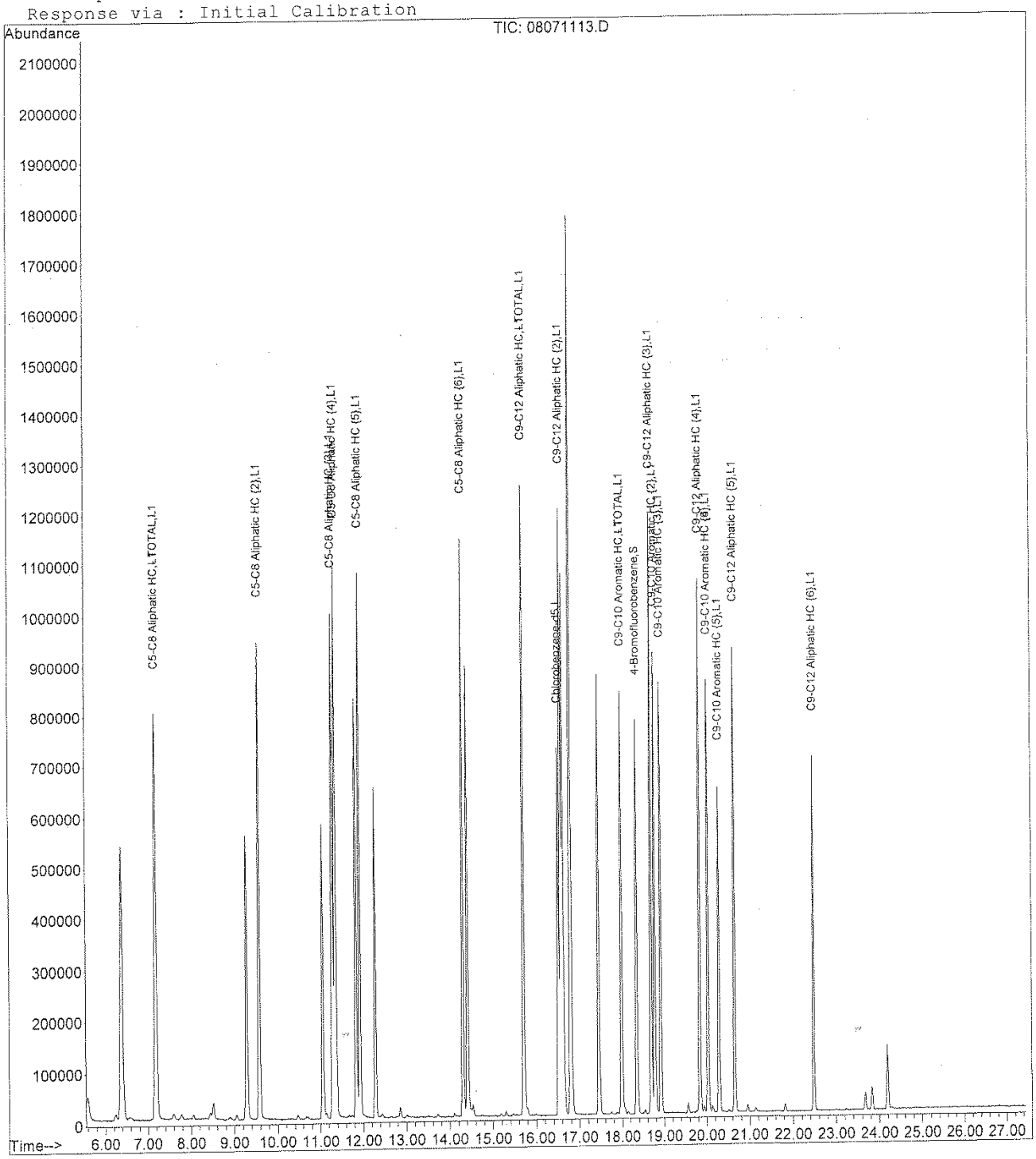
(#) = qualifier out of range (m) = manual integration
08071113.D 080711V9.M Thu Sep 22 15:05:35 2011

Data File : C:\HPCHEM\1\DATA\080711\08071113.D
Acq On : 8 Aug 2011 12:41 pm
Sample : MASS APH CCV
Misc : CCV MA_APH
MS Integration Params: rteint.p
Quant Time: Aug 10 9:03 2011

Vial: 12
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	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	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

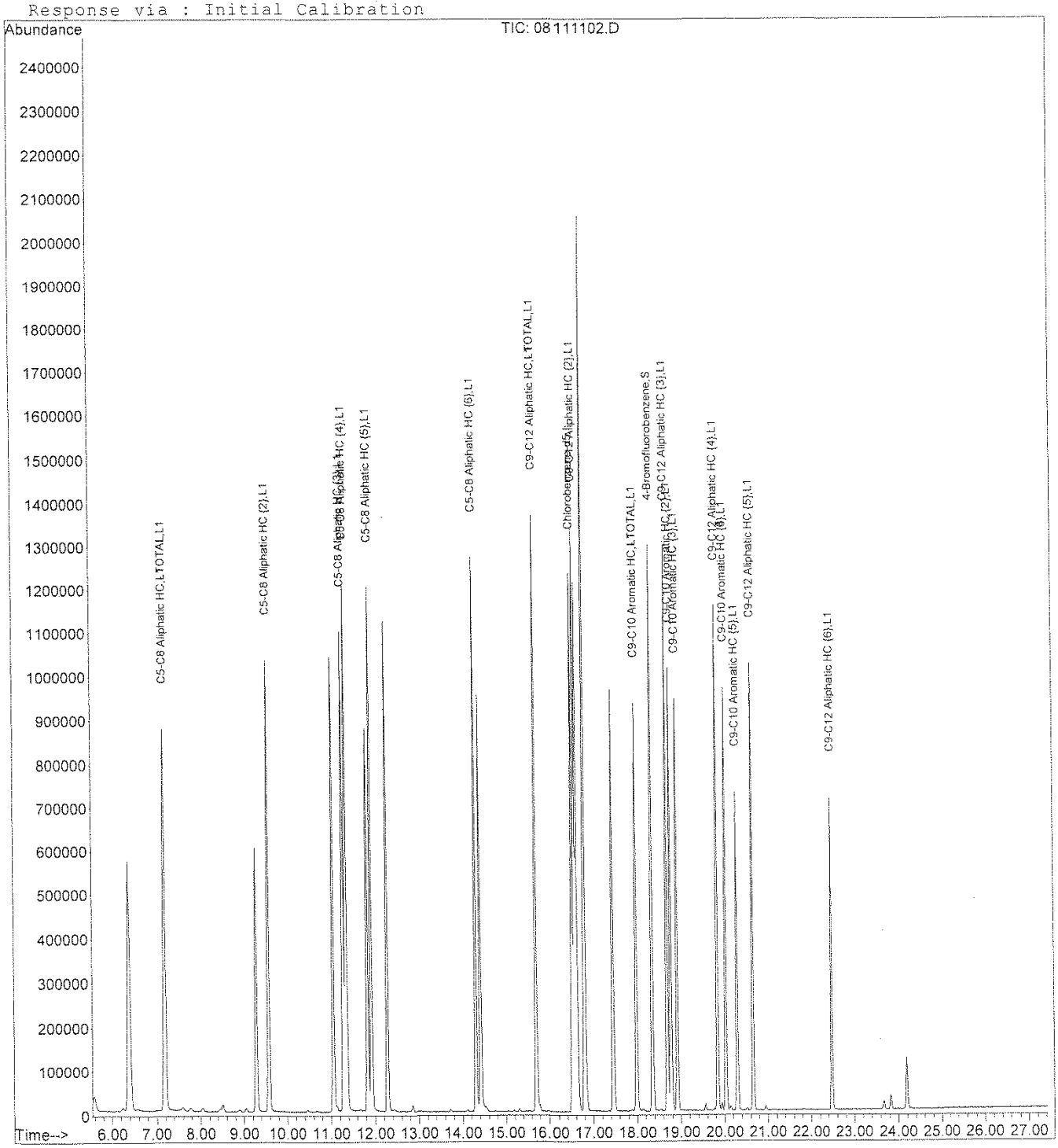
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
40) Chlorobenzene-d5	16.52	117	883225	12.50	ug/m3	0.00
System Monitoring Compounds						
41) 4-Bromofluorobenzene	18.35	95	622787	88.29	ug/m3	0.00
Spiked Amount 89.500	Range 70 - 130		Recovery = 98.65%			
Target Compounds						Qvalue
1) C5-C8 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

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



Response Factor Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\080111V9.M (RTE Integrator)
Title : MASS APH
Last Update : Tue Aug 02 15:54:47 2011
Response via : Initial Calibration

Calibration Files
1 =08011104.D 2 =08011105.D 3 =08011106.D
4 =08011107.D 5 =08011108.D 6 =08011109.D

		Compound	1	2	3	4	5	6	Avg		%RSD
1)	L1	C5-C8 Aliphatic HC	8.084	7.174	7.074	6.966	6.808	6.510	6.996	E4	8.06
2)	L1	C5-C8 Aliphatic HC	5.995	5.715	5.194	5.433	5.022	5.077	5.347	E4	7.21
3)	L1	C5-C8 Aliphatic HC	6.744	6.227	5.713	6.032	5.563	5.691	5.927	E4	7.44
4)	L1	C5-C8 Aliphatic HC	5.975	5.893	5.192	5.405	5.117	5.045	5.375	E4	7.51
5)	L1	C5-C8 Aliphatic HC	6.391	5.915	5.425	5.695	5.349	5.294	5.597	E4	7.85
6)	L1	C5-C8 Aliphatic HC	6.479	5.964	5.586	5.648	5.428	5.289	5.613	E4	8.98
7)	L1	C5-C8 Aliphatic HC	6.559	6.104	5.641	5.826	5.504	5.441	5.762	E4	7.73
8)	L1	C9-C12 Aliphatic HC	7.085	6.471	6.052	6.141	5.912	5.656	6.076	E4	9.78
9)	L1	C9-C12 Aliphatic HC	6.655	6.296	5.717	5.916	5.826	5.457	5.877	E4	8.07
10)	L1	C9-C12 Aliphatic HC	5.904	5.411	5.185	5.272	4.988	4.783	5.127	E4	9.63
11)	L1	C9-C12 Aliphatic HC	5.729	5.247	5.028	5.132	4.865	4.671	4.999	E4	8.96
12)	L1	C9-C12 Aliphatic HC	4.959	4.570	4.387	4.504	4.233	4.096	4.357	E4	8.78
13)	L1	C9-C12 Aliphatic HC	3.767	3.494	3.409	3.584	3.368	3.336	3.435	E4	6.19
14)	L1	C9-C12 Aliphatic HC	5.546	5.122	4.856	4.983	4.753	4.567	4.866	E4	8.56
15)	L1	C9-C10 Aromatic HC	4.994	4.656	4.339	4.567	4.332	4.270	4.469	E3	6.56
16)	L1	C9-C10 Aromatic HC	5.245	4.885	4.610	4.812	4.631	4.532	4.734	E3	5.82
17)	L1	C9-C10 Aromatic HC	7.634	7.094	6.657	6.960	6.646	6.525	6.828	E3	6.53
18)	L1	C9-C10 Aromatic HC	1.505	1.426	1.360	1.408	1.330	1.322	1.375	E3	5.59
19)	L1	C9-C10 Aromatic HC	5.599	5.220	4.993	5.138	4.921	4.903	5.084	E3	5.26
20)	L1	C9-C10 Aromatic HC	3.944	3.664	3.553	3.625	3.462	3.370	3.547	E3	6.59
21)	L1	C9-C10 Aromatic HC	5.788	5.393	5.094	5.285	5.041	4.982	5.200	E3	6.18
22)		C5-C8 Aliphatic	6.559	6.104	5.641	5.826	5.504	5.441	5.762	E4	7.73
23)	L1	non C5-C8	6.006	5.344	5.318	5.189	5.115	5.062	5.287	E4	6.50
24)	L1	non C5-C8 {2}	4.452	4.061	3.578	3.841	3.506	3.488	3.765	E4	10.04
25)	L1	non C5-C8 {3}	2.096	2.121	2.104	2.076	1.915	2.160	2.094	E4	4.17
26)	L1	non C5-C8 {4}	4.986	4.786	4.101	4.475	4.101	4.134	4.392	E4	8.34
27)	L1	non C5-C8 {5}	2.211	2.334	2.303	2.276	2.031	2.387	2.273	E4	5.38
28)	L1	non C5-C8 {6}	5.376	4.874	4.356	4.891	4.561	4.351	4.700	E4	7.89
29)	L1	non C5-C8 - TOTAL	3.183	3.494	3.339	3.630	3.513	3.733	3.540	E4	6.71
30)		C9-C12 Aliphatic	5.546	5.122	4.856	4.983	4.753	4.567	4.866	E4	8.56
31)	L1	non C9-C12	2.626	2.703	2.576	2.633	2.400	2.643	2.605	E4	3.75
32)	L1	non C9-C12 {2}	5.192	4.581	4.082	4.640	4.154	3.821	4.318	E4	11.89
33)	L1	non C9-C12 {3}	5.185	4.845	4.468	4.711	4.460	4.395	4.624	E4	6.70
34)	L1	non C9-C12 {4}	5.058	4.691	4.346	4.517	4.324	4.253	4.479	E4	6.91
35)	L1	non C9-C12 {5}	1.829	1.912	1.908	1.935	1.779	2.033	1.925	E4	5.52
36)	L1	non C9-C12 - TOTAL	2.745	2.868	2.713	2.927	2.784	2.832	2.814	E4	2.60
37)	L1	C9-C10 Aromatic	5.788	5.393	5.094	5.285	5.041	4.982	5.200	E3	6.18
38)	L1	C9-C10 Aromatic {2}	5.788	5.393	5.094	5.285	5.041	4.982	5.200	E3	6.18
39)	L1	C9-C10 Aromatic - T	5.788	5.393	5.094	5.285	5.041	4.982	5.200	E3	6.18
40)	I	Chlorobenzene-d5	----------ISTD----------								
41)	S	4-Bromofluorobenzen	0.098	0.099	0.099	0.101	0.100	0.101	0.100		1.59

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

Compound List Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\080111V9.M (RTE Integrator)
Title : MASS APH
Last Update : Tue Aug 02 15:54:47 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

080111V9.M Fri Aug 05 11:14:33 2011

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	5.556	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 Fri Sep 23 09:19:39 2011

RTI Laboratories

Run ID: GC-TCD 1_110715A **Run No.:** 41794

Analytical Run Date: 7/15/2011 **InstrumentID:** GC-TCD 1

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

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

Column Length: 2m

Run Comments: ch rev 7/26/11

SampID	TestCode	SampType	Batch ID	Analysis Date/Time	QA By	Q	Comments
mblk	ASTM-D2504	MBLK	R41794	7/15/2011 10:31:00 AM	Celeste Hoitash		
ccv std 1-2 a	ASTM-D2504	CCV	R41794	7/15/2011 10:54:00 AM	Celeste Hoitash		
lcs	ASTM-D2504	LCS	R41794	7/15/2011 11:50:00 AM	Celeste Hoitash		
crql std 2% a	ASTM-D2504	CRQL	R41794	7/15/2011 12:12:00 PM	Celeste Hoitash		
1107364-001b	ASTM-D2504	SAMP	R41794	7/15/2011 12:34:00 PM	Celeste Hoitash		
1107364-002b	ASTM-D2504	SAMP	R41794	7/15/2011 12:56:00 PM	Celeste Hoitash		
1107364-003b	ASTM-D2504	SAMP	R41794	7/15/2011 1:16:00 PM	Celeste Hoitash		
1107364-004b	ASTM-D2504	SAMP	R41794	7/15/2011 1:36:00 PM	Celeste Hoitash		
1107364-005b	ASTM-D2504	SAMP	R41794	7/15/2011 2:04:00 PM	Celeste Hoitash		
1107364-006b	ASTM-D2504	SAMP	R41794	7/15/2011 2:57:00 PM	Celeste Hoitash		
1107364-007b	ASTM-D2504	SAMP	R41794	7/15/2011 3:23:00 PM	Celeste Hoitash		
1107364-008b	ASTM-D2504	SAMP	R41794	7/15/2011 3:42:00 PM	Celeste Hoitash		
1107364-009b	ASTM-D2504	SAMP	R41794	7/15/2011 4:01:00 PM	Celeste Hoitash		
1107364-009bdup	ASTM-D2504	DUP	R41794	7/15/2011 4:20:00 PM	Celeste Hoitash		
ccv std 1-2 b	ASTM-D2504	CCV	R41794	7/15/2011 4:46:00 PM	Celeste Hoitash		
crql std 2% b	ASTM-D2504	CRQL	R41794	7/15/2011 5:10:00 PM	Celeste Hoitash		

RTI Laboratories

ANALYTICAL RUN Summary

07-Aug-11

RunNo 41794

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
807242	mblk	ASTM-D2504	MBLK	.TA\071511\0715	7/15/2011 10:31:	1	R41794		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
807243	ccv std 1-2 a	ASTM-D2504	CCV	.TA\071511\0715	7/15/2011 10:54:	1	R41794		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	2.412	2.412		2.5	0	0	0.025	0.1	0	96%	85	115	0%	
Carbon Monoxide	A	%	2.464	2.464		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	%	1.972	1.972		2	0	0	0.025	0.5	0	99%	85	115	0%	
Nitrogen	A	%	2.795	2.795		2.5	0	0	0.025	0.1	0	112%	85	115	0%	
Oxygen	A	%	2.599	2.599		2.5	0	0	0.025	0.1	0	104%	85	115	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
807244	lcs	ASTM-D2504	LCS	.TA\071511\0715	7/15/2011 11:50:	1	R41794		0	807243	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	2.093	2.093		2.5	0	2.412	0.025	0.1	0	84%	70	130	14%	
Carbon Monoxide	A	%	2.222	2.222		2.5	0	2.464	0.025	0.1	0	89%	70	130	10%	
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	%	1.726	1.726		2	0	1.972	0.025	0.5	0	86%	70	130	13%	
Nitrogen	A	%	2.467	2.467		2.5	0	2.795	0.025	0.1	0	99%	70	130	12%	
Oxygen	A	%	2.268	2.268		2.5	0	2.599	0.025	0.1	0	91%	70	130	14%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
807255	1107364-009bdup	ASTM-D2504	DUP	.TA\071511\0715	7/15/2011 4:20:0	1	R41794		0	807254	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Oxygen	A	%	20.507	20.507		0	0	20.546	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
807256	ccv std 1-2 b	ASTM-D2504	CCV	.TA\071511\0715	7/15/2011 4:46:0	1	R41794		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	2.271	2.271		2.5	0	0	0.025	0.1	0	91%	85	115	0%	
Carbon Monoxide	A	%	2.308	2.308		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	%	1.895	1.895		2	0	0	0.025	0.5	0	95%	85	115	0%	
Nitrogen	A	%	2.609	2.609		2.5	0	0	0.025	0.1	0	104%	85	115	0%	
Oxygen	A	%	2.427	2.427		2.5	0	0	0.025	0.1	0	97%	85	115	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
807257	crql std 2% b	ASTM-D2504	CRQL	.TA\071511\0715	7/15/2011 5:10:0	1	R41794		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	0.305	0.305		0.3	0	0	0.025	0.1	0	102%	80	120	0%	
Carbon Monoxide	A	%	0.127	0.127		0.14	0	0	0.025	0.1	0	91%	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	%	0.091	0.091		0.09	0	0	0.025	0.5	0	101%	80	120	0%	
Nitrogen	A	%	1.195	1.195		1.39	0	0	0.025	0.1	0	86%	80	120	0%	
Oxygen	A	%	0.079	0.079		0.08	0	0	0.025	0.1	0	99%	80	120	0%	

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\2\DATA\071511\07151102.D
Acq On : 15 Jul 2011 10:54 am
Sample : ccv std 1-2 a
Misc : CCV ASTM-D2504
IntFile : EVENTS.E

Vial: 1
Operator:
Inst : GC/TCD
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
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	2.599	-4.0	0	0.02
2	Nitrogen	2.500	2.795	-11.8	0	0.00
3	Carbon Monoxide	2.500	2.464	1.4	0	-0.03
4	Methane	2.000	1.972	1.4	0	-0.05
5	Carbon dioxide	2.500	2.412	3.5	0	-0.08

Evaluate Continuing Calibration Report - Not Founds

Data File : C:\HPCHEM\2\DATA\071511\07151102.D
Acq On : 15 Jul 2011 10:54 am
Sample : ccv std 1-2 a
Misc : CCV ASTM-D2504
IntFile : EVENTS.E

Vial: 1
Operator:
Inst : GC/TCD
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
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 Wed Jul 27 11:47:08 2011

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\071511\07151102.D
Acq On : 15 Jul 2011 10:54 am
Sample : ccv std 1-2 a
Misc : CCV ASTM-D2504
IntFile : events.e
Quant Time: Jul 25 11:29 2011 Quant Results File: 030511.RES

Vial: 1
Operator:
Inst : GC/TCD
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
Last Update : Thu Jul 14 18:43:06 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	372679	2.599 %
2) Nitrogen	2.31	481505	2.795 %
3) Carbon Monoxide	2.99	388079	2.464 %
4) Methane	6.20	253846	1.972 %
5) Carbon dioxide	11.10f	436604	2.412 %

(f)=RT Delta > 1/2 Window (m)=manual int.

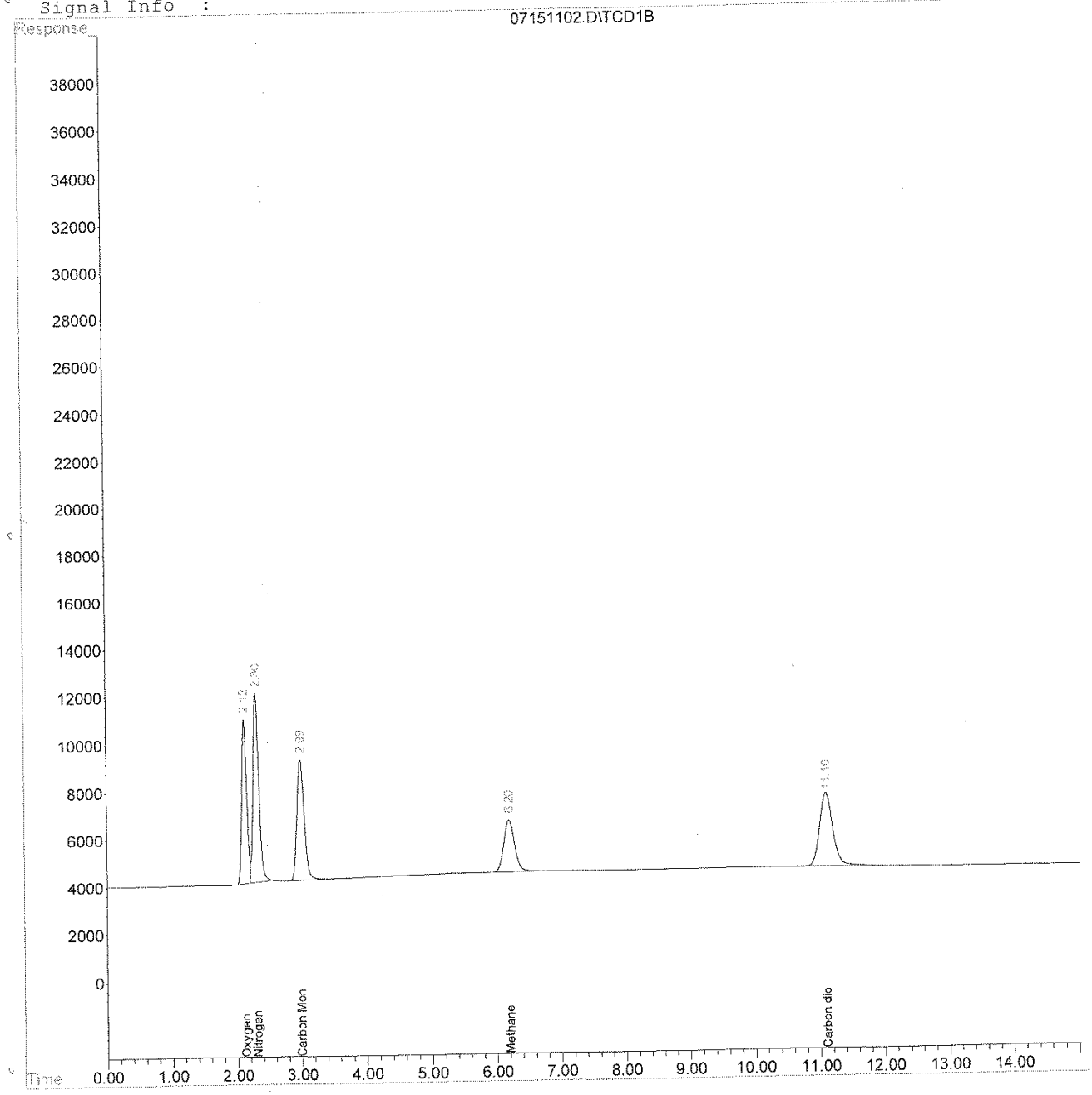
Quantitation Report

Data File : C:\HPCHEM\2\DATA\071511\07151102.D
Acq On : 15 Jul 2011 10:54 am
Sample : ccv std 1-2 a
Misc : CCV ASTM-D2504
IntFile : EVENTS.E
Quant Time: Jul 25 11:29 2011 Quant Results File: 030511.RES

Vial: 1
Operator:
Inst : GC/TCD
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
Last Update : Thu Jul 14 18:43:06 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\071511\07151115.D
Acq On : 15 Jul 2011 4:46 pm
Sample : ccv std 1-2 b
Misc : CCV ASTM-D2504
IntFile : EVENTS.E

Vial: 1
Operator:
Inst : GC/TCD
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
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	2.427	2.9	0	0.03
2	Nitrogen	2.500	2.609	-4.4	0	0.02
3	Carbon Monoxide	2.500	2.308	7.7	0	-0.02
4	Methane	2.000	1.895	5.2	0	-0.03
5	Carbon dioxide	2.500	2.271	9.2	0	-0.06

Evaluate Continuing Calibration Report - Not Founds

Data File : C:\HPCHEM\2\DATA\071511\07151115.D
Acq On : 15 Jul 2011 4:46 pm
Sample : ccv std 1-2 b
Misc : CCV ASTM-D2504
IntFile : EVENTS.E

Vial: 1
Operator:
Inst : GC/TCD
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
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 Wed Jul 27 11:47:16 2011

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\071511\07151115.D
Acq On : 15 Jul 2011 4:46 pm
Sample : ccv std 1-2 b
Misc : CCV ASTM-D2504
IntFile : events.e
Quant Time: Jul 25 11:29 2011 Quant Results File: 030511.RES

Vial: 1
Operator:
Inst : GC/TCD
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
Last Update : Thu Jul 14 18:43:06 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	347792	2.427 %
2)	Nitrogen	2.32	449460	2.609 %
3)	Carbon Monoxide	3.00	363560	2.308 %
4)	Methane	6.21	243053	1.895 %
5)	Carbon dioxide	11.12f	410348	2.271 %

(f)=RT Delta > 1/2 Window (m)=manual int.

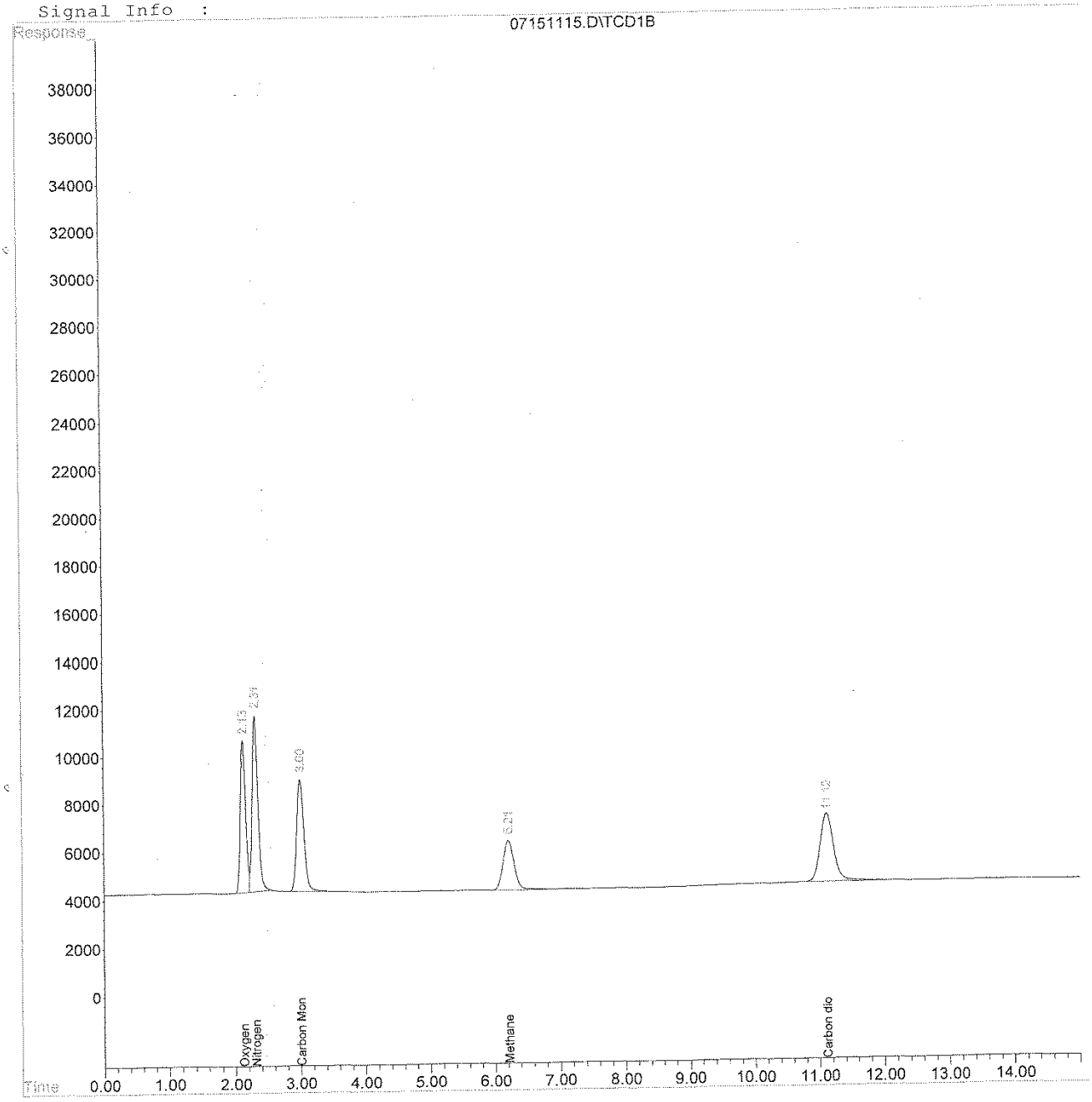
Quantitation Report

Data File : C:\HPCHEM\2\DATA\071511\07151115.D
Acq On : 15 Jul 2011 4:46 pm
Sample : ccv std 1-2 b
Misc : CCV ASTM-D2504
IntFile : EVENTS.E
Quant Time: Jul 25 11:29 2011 Quant Results File: 030511.RES

Vial: 1
Operator:
Inst : GC/TCD
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
Last Update : Thu Jul 14 18:43:06 2011
Response via : Multiple Level Calibration
DataAcq Meth : TCD.M

Volume Inj. :
Signal Phase :
Signal Info :



RTI Laboratories

Run ID: GC-TCD 1_110718A **Run No.:** 41795

Analytical Run Date: 7/18/2011 **InstrumentID:** GC-TCD 1

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

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

Column Length: 2m

Run Comments: ch rev 7/26/11

SampID	TestCode	SampType	Batch ID	Analysis Date/Time	QA By	Q	Comments
mblk	ASTM-D2504	MBLK	R41795	7/18/2011 11:12:00 AM	Celeste Hoitash		
ccv std 1-2 a	ASTM-D2504	CCV	R41795	7/18/2011 11:40:00 AM	Celeste Hoitash		
lcs	ASTM-D2504	LCS	R41795	7/18/2011 11:59:00 AM	Celeste Hoitash		
crql std 2% a	ASTM-D2504	CRQL	R41795	7/18/2011 12:21:00 PM	Celeste Hoitash		
1107364-010b	ASTM-D2504	SAMP	R41795	7/18/2011 12:41:00 PM	Celeste Hoitash		
1107364-011b	ASTM-D2504	SAMP	R41795	7/18/2011 1:01:00 PM	Celeste Hoitash		
1107364-012b	ASTM-D2504	SAMP	R41795	7/18/2011 1:22:00 PM	Celeste Hoitash		
1107364-013b	ASTM-D2504	SAMP	R41795	7/18/2011 1:42:00 PM	Celeste Hoitash		
1107364-014b	ASTM-D2504	SAMP	R41795	7/18/2011 2:08:00 PM	Celeste Hoitash		
1107364-015b	ASTM-D2504	SAMP	R41795	7/18/2011 2:33:00 PM	Celeste Hoitash		
1107364-016b	ASTM-D2504	SAMP	R41795	7/18/2011 3:04:00 PM	Celeste Hoitash		
1107364-017b	ASTM-D2504	SAMP	R41795	7/18/2011 3:24:00 PM	Celeste Hoitash		
1107364-018b	ASTM-D2504	SAMP	R41795	7/18/2011 3:44:00 PM	Celeste Hoitash		
1107364-018bdup	ASTM-D2504	DUP	R41795	7/18/2011 4:04:00 PM	Celeste Hoitash		
ccv std 1-2 b	ASTM-D2504	CCV	R41795	7/18/2011 4:25:00 PM	Celeste Hoitash		
1107364-019b	ASTM-D2504	SAMP	R41795	7/18/2011 4:47:00 PM	Celeste Hoitash		
1107364-020b	ASTM-D2504	SAMP	R41795	7/18/2011 5:09:00 PM	Celeste Hoitash		
1107364-021b	ASTM-D2504	SAMP	R41795	7/18/2011 5:29:00 PM	Celeste Hoitash		
1107364-023b	ASTM-D2504	SAMP	R41795	7/18/2011 5:59:00 PM	Celeste Hoitash		
1107364-024b	ASTM-D2504	SAMP	R41795	7/18/2011 6:23:00 PM	Celeste Hoitash		
ccv std 1-2 c	ASTM-D2504	CCV	R41795	7/18/2011 6:49:00 PM	Celeste Hoitash		
crql std 2% c	ASTM-D2504	CRQL	R41795	7/18/2011 7:45:00 PM	Celeste Hoitash		

RTI Laboratories

ANALYTICAL RUN Summary

07-Aug-11

RunNo 41795

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
807258	mblk	ASTM-D2504	MBLK	.TA\071811\0718	7/18/2011 11:12:	1	R41795		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
807259	ccv std 1-2 a	ASTM-D2504	CCV	.TA\071811\0718	7/18/2011 11:40:	1	R41795		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	2.142	2.142		2.5	0	0	0.025	0.1	0	86%	85	115	0%	
Carbon Monoxide	A	%	2.557	2.557		2.5	0	0	0.025	0.1	0	102%	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	%	2.009	2.009		2	0	0	0.025	0.5	0	100%	85	115	0%	
Nitrogen	A	%	2.499	2.499		2.5	0	0	0.025	0.1	0	100%	85	115	0%	
Oxygen	A	%	2.365	2.365		2.5	0	0	0.025	0.1	0	95%	85	115	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
807260	lcs	ASTM-D2504	LCS	.TA\071811\0718	7/18/2011 11:59:	1	R41795		0	807259	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	2.174	2.174		2.5	0	2.142	0.025	0.1	0	87%	70	130	1%	
Carbon Monoxide	A	%	2.442	2.442		2.5	0	2.557	0.025	0.1	0	98%	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	%	1.927	1.927		2	0	2.009	0.025	0.5	0	96%	70	130	4%	
Nitrogen	A	%	2.371	2.371		2.5	0	2.499	0.025	0.1	0	95%	70	130	5%	
Oxygen	A	%	2.256	2.256		2.5	0	2.365	0.025	0.1	0	90%	70	130	5%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
807271	1107364-018bdup	ASTM-D2504	DUP	.TA\071811\0718	7/18/2011 4:04:0	1	R41795		0	807270	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Oxygen	A	%	21.114	21.114		0	0	21.115	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
807272	ccv std 1-2 b	ASTM-D2504	CCV	.TA\071811\0718	7/18/2011 4:25:0	1	R41795		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	2.145	2.145		2.5	0	0	0.025	0.1	0	86%	85	115	0%	
Carbon Monoxide	A	%	2.294	2.294		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	%	1.814	1.814		2	0	0	0.025	0.5	0	91%	85	115	0%	
Nitrogen	A	%	2.231	2.231		2.5	0	0	0.025	0.1	0	89%	85	115	0%	
Oxygen	A	%	2.132	2.132		2.5	0	0	0.025	0.1	0	85%	85	115	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
807273	1107364-019b (Container-01 of 01)	ASTM-D2504	SAMP	.TA\071811\0718	7/18/2011 4:47:0	1	R41795		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	0.295	0.295		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	%	78.022	78.022		0	0	0	0.025	0.1	0	0%	0	0	0%	
Oxygen	A	%	20.965	20.965		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
807274	1107364-020b (Container-01 of 01)	ASTM-D2504	SAMP	.TA\071811\0718	7/18/2011 5:09:0	1	R41795		0	0	

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

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
807276	1107364-023b (Container-01 of 01)	ASTM-D2504	SAMP	.TA\071811\0718	7/18/2011 5:59:0	1	R41795		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Nitrogen	A	%	78.928	78.928		0	0	0	0.025	0.1	0	0%	0	0	0%	
Oxygen	A	%	20.556	20.556		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
807277	1107364-024b (Container-01 of 01)	ASTM-D2504	SAMP	.TA\071811\0718	7/18/2011 6:23:0	1	R41795		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	0.223	0.223		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	%	78.399	78.399		0	0	0	0.025	0.1	0	0%	0	0	0%	
Oxygen	A	%	20.876	20.876		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
807278	ccv std 1-2 c	ASTM-D2504	CCV	.TA\071811\0718	7/18/2011 6:49:0	1	R41795		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	2.346	2.346		2.5	0	0	0.025	0.1	0	94%	85	115	0%	
Carbon Monoxide	A	%	2.516	2.516		2.5	0	0	0.025	0.1	0	101%	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	%	1.983	1.983		2	0	0	0.025	0.5	0	99%	85	115	0%	
Nitrogen	A	%	2.459	2.459		2.5	0	0	0.025	0.1	0	98%	85	115	0%	
Oxygen	A	%	2.328	2.328		2.5	0	0	0.025	0.1	0	93%	85	115	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
807279	crql std 2% c	ASTM-D2504	CRQL	.TA\071811\0718	7/18/2011 7:45:0	1	R41795		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\071811\07181102.D
Acq On : 18 Jul 2011 11:40 am
Sample : ccv std 1-2 a
Misc : CCV ASTM-D2504
IntFile : EVENTS.E

Vial: 1
Operator:
Inst : GC/TCD
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
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	2.365	5.4	0	0.03
2	Nitrogen	2.500	2.499	0.0	0	0.02
3	Carbon Monoxide	2.500	2.557	-2.3	0	-0.02
4	Methane	2.000	2.009	-0.4	0	-0.03
5	Carbon dioxide	2.500	2.142	14.3	0	-0.06

Evaluate Continuing Calibration Report - Not Founds

Data File : C:\HPCHEM\2\DATA\071811\07181102.D
Acq On : 18 Jul 2011 11:40 am
Sample : ccv std 1-2 a
Misc : CCV ASTM-D2504
IntFile : EVENTS.E

Vial: 1
Operator:
Inst : GC/TCD
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
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 Wed Jul 27 11:47:28 2011

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\071811\07181102.D
Acq On : 18 Jul 2011 11:40 am
Sample : ccv std 1-2 a
Misc : CCV ASTM-D2504
IntFile : events.e
Quant Time: Jul 18 10:56 2011 Quant Results File: 030511.RES

Vial: 1
Operator:
Inst : GC/TCD
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
Last Update : Thu Jul 14 18:43:06 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	338780	2.365 %
2) Nitrogen	2.32	430522	2.499 %
3) Carbon Monoxide	3.01	402783	2.557 %
4) Methane	6.21	258947	2.009 %
5) Carbon dioxide	11.11f	386314	2.142 %

(f)=RT Delta > 1/2 Window (m)=manual int.

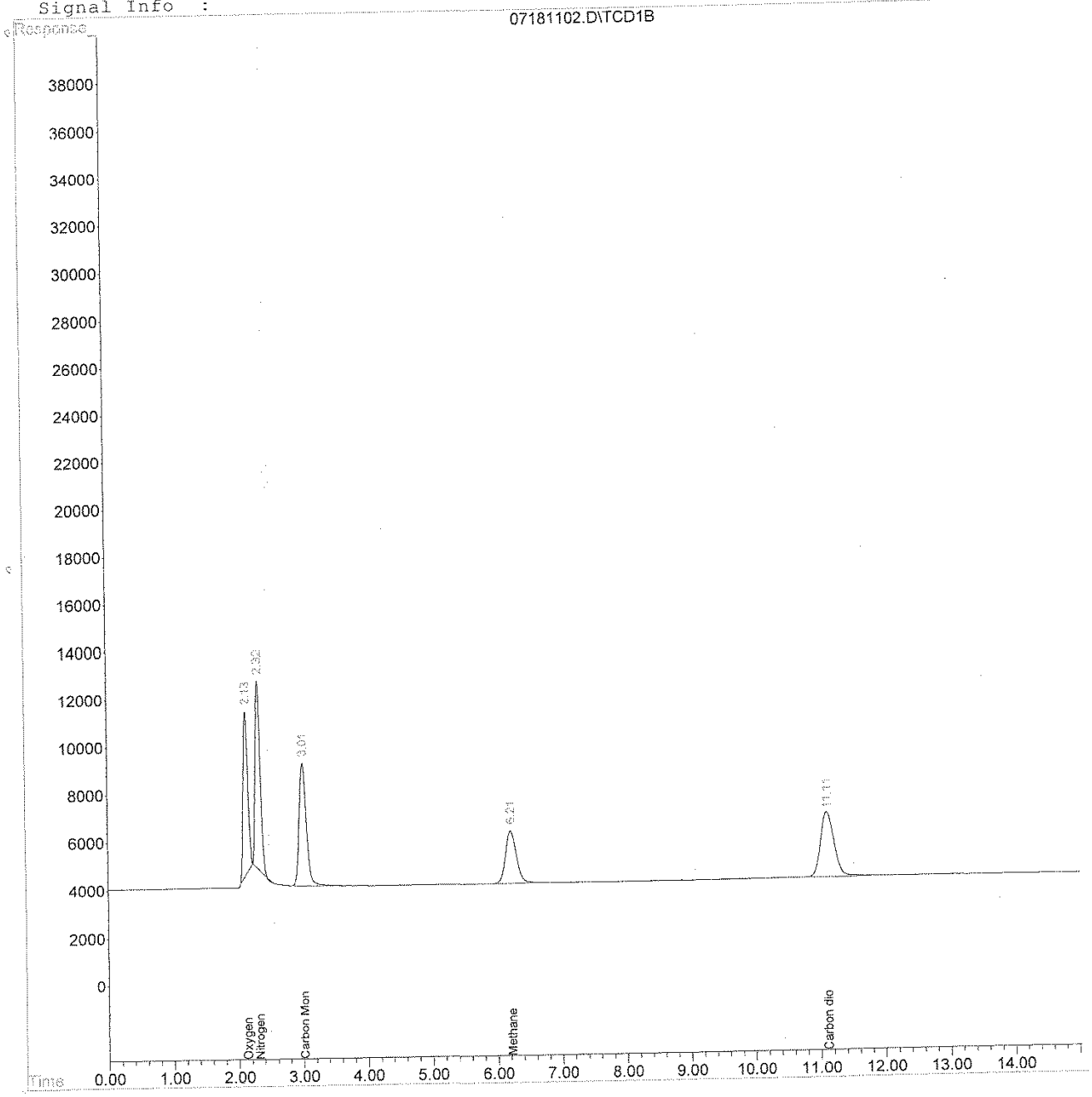
Quantitation Report

Data File : C:\HPCHEM\2\DATA\071811\07181102.D
Acq On : 18 Jul 2011 11:40 am
Sample : ccv std 1-2 a
Misc : CCV ASTM-D2504
IntFile : EVENTS.E
Quant Time: Jul 18 10:56 2011 Quant Results File: 030511.RES

Vial: 1
Operator:
Inst : GC/TCD
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
Last Update : Thu Jul 14 18:43:06 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\071811\07181115.D
Acq On : 18 Jul 2011 4:25 pm
Sample : ccv std 1-2 b
Misc : CCV ASTM-D2504
IntFile : EVENTS.E

Vial: 1
Operator:
Inst : GC/TCD
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
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	2.132	14.7	0	0.04
2	Nitrogen	2.500	2.231	10.8	0	0.02
3	Carbon Monoxide	2.500	2.294	8.2	0	-0.01
4	Methane	2.000	1.814	9.3	0	-0.03
5	Carbon dioxide	2.500	2.145	14.2	0	-0.06

Evaluate Continuing Calibration Report - Not Founds

Data File : C:\HPCHEM\2\DATA\071811\07181115.D
Acq On : 18 Jul 2011 4:25 pm
Sample : ccv std 1-2 b
Misc : CCV ASTM-D2504
IntFile : EVENTS.E

Vial: 1
Operator:
Inst : GC/TCD
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
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 Wed Jul 27 11:47:38 2011

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\071811\07181115.D
Vial: 1
Acq On : 18 Jul 2011 4:25 pm
Operator:
Sample : ccv std 1-2 b
Inst : GC/TCD
Misc : CCV ASTM-D2504
Multiplr: 1.00
IntFile : events.e
Quant Time: Jul 25 11:41 2011 Quant Results File: 030511.RES

Quant Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
Last Update : Thu Jul 14 18:43:06 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	305252	2.132	%
2)	Nitrogen	2.32	384372	2.231	%
3)	Carbon Monoxide	3.01	361321	2.294	%
4)	Methane	6.22	231914	1.814	%
5)	Carbon dioxide	11.12f	386952	2.145	%

(f)=RT Delta > 1/2 Window
(m)=manual int.

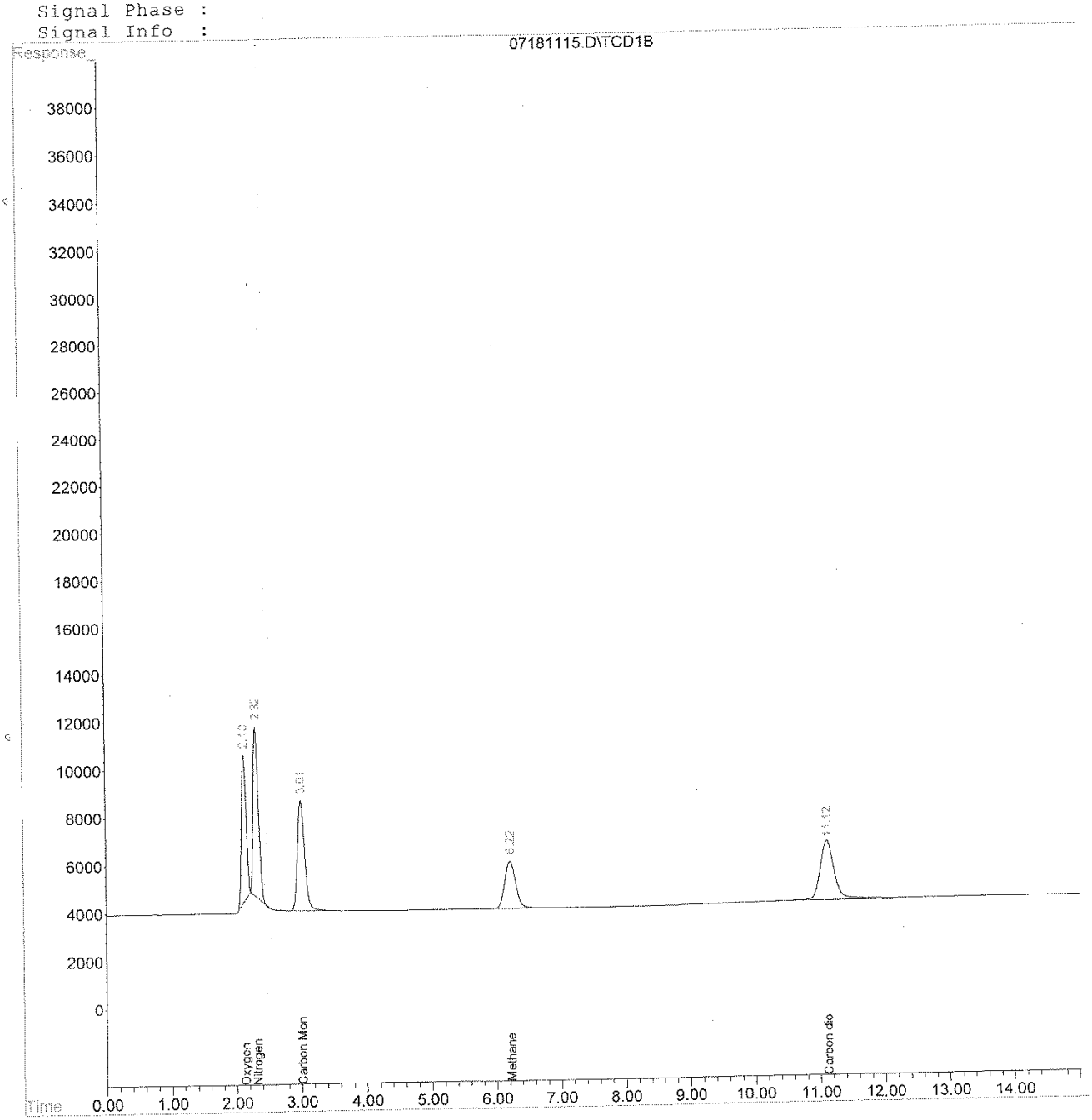
Quantitation Report

Data File : C:\HPCHEM\2\DATA\071811\07181115.D
Acq On : 18 Jul 2011 4:25 pm
Sample : ccv std 1-2 b
Misc : CCV ASTM-D2504
IntFile : EVENTS.E
Quant Time: Jul 25 11:41 2011 Quant Results File: 030511.RES

Vial: 1
Operator:
Inst : GC/TCD
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
Last Update : Thu Jul 14 18:43:06 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\071811\07181121.D
Acq On : 18 Jul 2011 6:49 pm
Sample : ccv std 1-2 c
Misc : CCV ASTM-D2504
IntFile : EVENTS.E

Vial: 1
Operator:
Inst : GC/TCD
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
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	2.328	6.9	0	0.04
2	Nitrogen	2.500	2.459	1.6	0	0.03
3	Carbon Monoxide	2.500	2.516	-0.6	0	0.00
4	Methane	2.000	1.983	0.8	0	-0.01
5	Carbon dioxide	2.500	2.346	6.2	0	-0.04

Evaluate Continuing Calibration Report - Not Founds

Data File : C:\HPCHEM\2\DATA\071811\07181121.D
Acq On : 18 Jul 2011 6:49 pm
Sample : ccv std 1-2 c
Misc : CCV ASTM-D2504
IntFile : EVENTS.E

Vial: 1
Operator:
Inst : GC/TCD
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
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 Wed Jul 27 11:47:44 2011

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\071811\07181121.D
Acq On : 18 Jul 2011 6:49 pm
Sample : ccv std 1-2 c
Misc : CCV ASTM-D2504
IntFile : events.e
Quant Time: Jul 25 11:41 2011 Quant Results File: 030511.RES

Vial: 1
Operator:
Inst : GC/TCD
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
Last Update : Thu Jul 14 18:43:06 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	333501	2.328 %
2)	Nitrogen	2.33	423682	2.459 %
3)	Carbon Monoxide	3.02	396290	2.516 %
4)	Methane	6.23	255285	1.983 %
5)	Carbon dioxide	11.14	424213	2.346 %

(f)=RT Delta > 1/2 Window (m)=manual int.

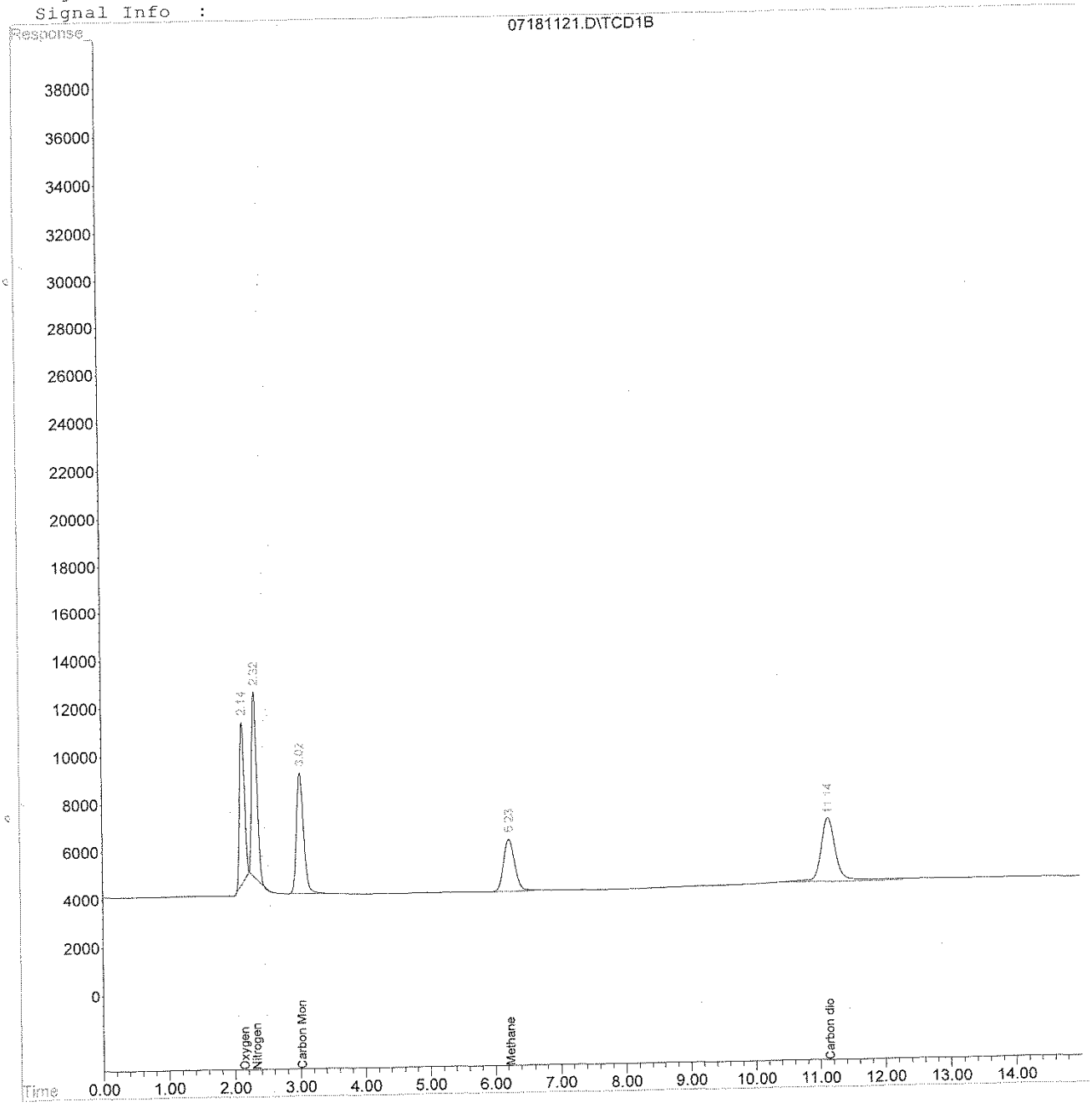
Quantitation Report

Data File : C:\HPCHEM\2\DATA\071811\07181121.D
Acq On : 18 Jul 2011 6:49 pm
Sample : ccv std 1-2 c
Misc : CCV ASTM-D2504
IntFile : EVENTS.E
Quant Time: Jul 25 11:41 2011 Quant Results File: 030511.RES

Vial: 1
Operator:
Inst : GC/TCD
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
Last Update : Thu Jul 14 18:43:06 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 :
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 Wed Aug 17 09:41:22 2011

Compound List Report GC/TCD

Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
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 Wed Aug 17 09:41:15 2011

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\2\DATA\030511\03051110.D Vial: 1
Acq On : 5 Mar 2011 8:05 am Operator:
Sample : ICV STD 1-2 Inst : GC/TCD
Misc : ICAL ASTM-D2504 Multiplr: 1.00
IntFile : EVENTS.E

Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
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	2.652	-6.1	0	0.04
2	Nitrogen	2.500	2.834	-13.4	0	0.03
3	Carbon Monoxide	2.500	2.540	-1.6	0	0.00
4	Methane	2.000	1.986	0.7	0	0.00
5	Carbon dioxide	2.500	2.596	-3.8	0	0.00

Evaluate Continuing Calibration Report - Not Founds

Data File : C:\HPCHEM\2\DATA\030511\03051110.D Vial: 1
Acq On : 5 Mar 2011 8:05 am Operator:
Sample : ICV STD 1-2 Inst : GC/TCD
Misc : ICAL ASTM-D2504 Multiplr: 1.00
IntFile : EVENTS.E

Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
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 Wed Aug 17 09:40:58 2011

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\030511\03051110.D Vial: 1
Acq On : 5 Mar 2011 8:05 am Operator:
Sample : ICV STD 1-2 Inst : GC/TCD
Misc : ICAL ASTM-D2504 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Jun 16 9:53 2011 Quant Results File: 030511.RES

Quant Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
Last Update : Thu May 12 16:13:25 2011
Response via : Initial Calibration
DataAcq Meth : TCD.M

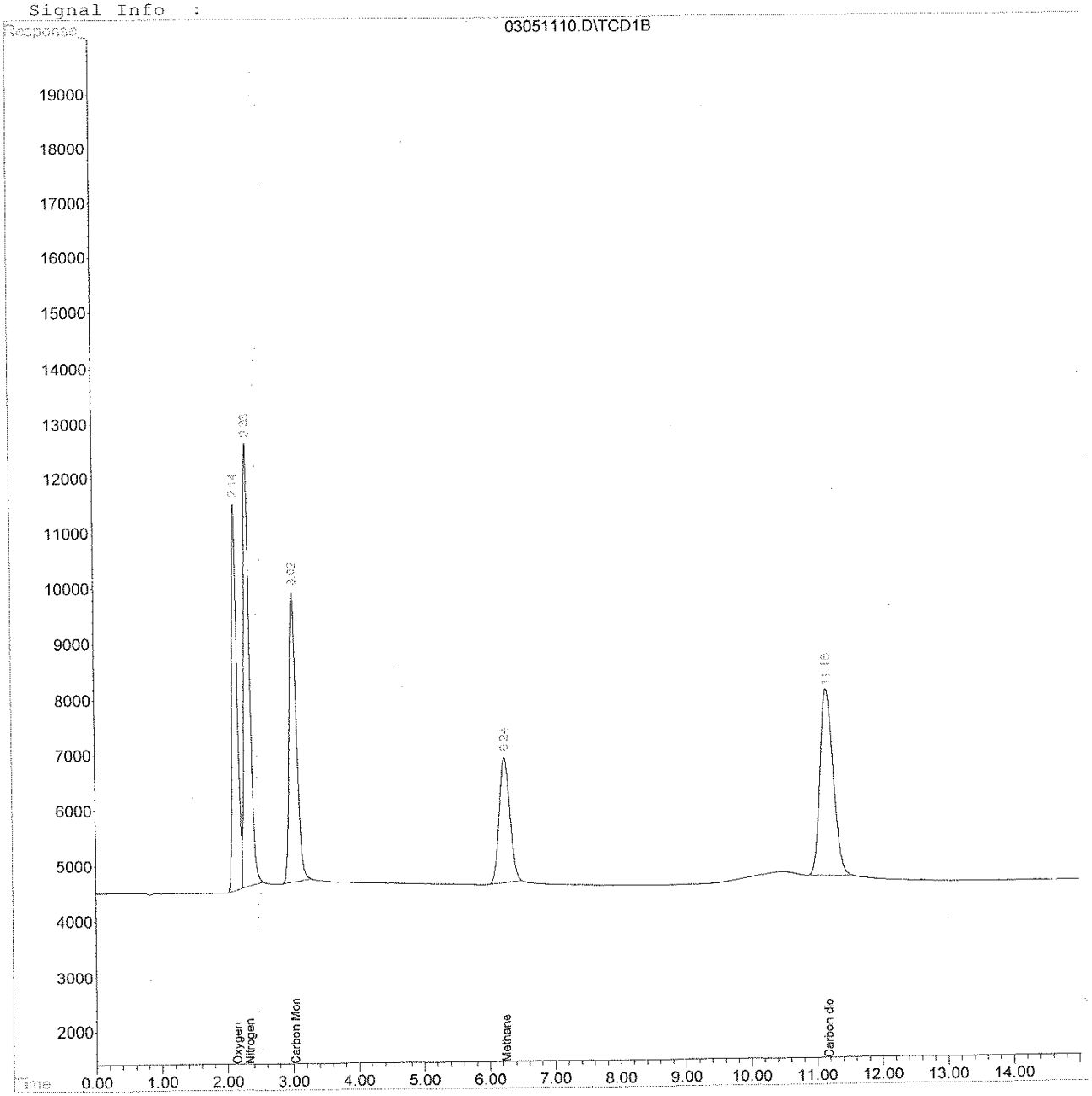
Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	Target Compounds			
1)	Oxygen	2.14	380291	2.652 %
2)	Nitrogen	2.33	488166	2.834 %
3)	Carbon Monoxide	3.02	400088	2.540 %
4)	Methane	6.25	255799	1.986 %
5)	Carbon dioxide	11.18	470903	2.596 %

(f)=RT Delta > 1/2 Window (m)=manual int.
03051110.D 030511.M Wed Aug 17 09:40:36 2011

Quantitation Report

Data File : C:\HPCHEM\2\DATA\030511\03051110.D Vial: 1
Acq On : 5 Mar 2011 8:05 am Operator:
Sample : ICV STD 1-2 Inst : GC/TCD
Misc : ICAL ASTM-D2504 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Jun 16 9:53 2011 Quant Results File: 030511.RES

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

Volume Inj. :
Signal Phase :
Signal Info :