RTI Laboratories, Inc.

Date: *21-Oct.-11*

CLIENT: Shaw Environmental & Infrastructure, Inc.
Project: Kirtland AFB
CO#: 501
Tracking #: 140705-036A
Project No.: 140705
Prime Contract: W912DY-10-D0014
Task Order: 02
Lab Order: 1108344

CASE NARRATIVE

SAMPLE RECEIPT:
Samples were received at the RTI Laboratory, Livonia, MI via commercial delivery on 8/24/2011. Samples were received in good condition with the exception of one bottle vac which was received broken in transit (VA0686) - unable to perform analyses for TO15 and MA-APH. The sample set consisted of 43 air samples.

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

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

1108344-001	VA0647	TO-15
1108344-002	VA0648	TO-15
1108344-003	VA0649	TO-15
1108344-004	VA0650	TO-15
1108344-005	VA0651	TO-15, MA_APH
1108344-006	VA0652	TO-15
1108344-007	VA0653	TO-15
1108344-008	VA0661	TO-15
1108344-009	VA0662	TO-15
1108344-010	VA0663	TO-15
1108344-011	VA0664	TO-15
1108344-012	VA0665	TO-15
1108344-013	VA0666	TO-15
1108344-014	VA0667	TO-15
1108344-015	VA0668	TO-15
1108344-016	VA0669	TO-15
1108344-017	VA0670	TO-15
1108344-018	VA0671	TO-15
1108344-019	VA0672	TO-15
1108344-020	VA0673	TO-15
1108344-021	VA0674	TO-15
1108344-022	VA0681	TO-15
1108344-023	VA0682	TO-15
1108344-024	VA0683	TO-15
1108344-025	VA0684	TO-15
1108344-026	VA0685	TO-15
1108344-028	VA8034-TB-TB	TO-15

Results from ALS have been sent as a separate file.

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QUALITY CONTROL:

Air-Phase Petroleum Hydrocarbons Analyses:

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

Surrogate recoveries were within established control limits.

Fixed Gases (Noncondensable Gases/Light Hydrocarbons) Analyses:

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

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

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

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

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

Date: 10/21/2011

Shaw
Shaw E & I, Inc.

1108344

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

Reference Document No: 140705-SV017
Page 1 of 3

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

Samples Shipment Date: 02 AUG 2011
Lab Destination: RTI Laboratories
Lab Contact: Mike Truchan
Project Contact: Pamela Moss
Carrier/Waybill No.: UPS/2323121080

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 X | Skin Irritant | Poison B | Radiological Unknown

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

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

1. Received By (Signature/Affiliation) Christin Conrady Date: 8/9/11 Time: 3:00 PM
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	VA0646	KAFB-106137-028-GS-VA0646-REG	28 JUL 2011	15:03	1 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		63
	VA0647	KAFB-106137-028-GS-VA0647-REG	28 JUL 2011	15:03	1 L Tedlar Bag	1	None Required	Fixed Gases by ASTM D2504			N		
2	VA0648	KAFB-106137-028-GS-VA0648-REG	28 JUL 2011	15:03	1 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		167
	VA0649	KAFB-106137-028-GS-VA0649-REG	28 JUL 2011	15:03	1 L Tedlar Bag	1	None Required	Fixed Gases by ASTM D2504			N		
3	VA0650	KAFB-106137-150-GS-VA0650-REG	29 JUL 2011	8:50	1 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		583
	VA0651	KAFB-106137-150-GS-VA0651-REG	29 JUL 2011	8:50	1 L Tedlar Bag	1	None Required	Fixed Gases by ASTM D2504			N		
4	VA0652	KAFB-106137-290-GS-VA0652-REG	28 JUL 2011	9:33	1 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by			N		635

1108344

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ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

Reference Document No: 140705-SV017

Page 2 of 3

	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					
	VA0650	KAFB-106137-350-GS-VA0650-REG	29 JUL 2011	9:33	1 L Tedlar Bag	1 None Required	Fixed Gases by ASTM D2504			N		
	VA0651	KAFB-106137-350-GS-VA0651-REG	29 JUL 2011	10:13	1 L BOTTLEVAC	1 None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		114
5	VA0651	KAFB-106137-350-GS-VA0651-REG	29 JUL 2011	10:13	1 L Tedlar Bag	1 None Required	Fixed Gases by ASTM D2504			N		
	VA0652	KAFB-106137-350-GS-VA0652-FD	29 JUL 2011	10:13	1 L BOTTLEVAC	1 None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		103
6	VA0652	KAFB-106137-350-GS-VA0652-FD	29 JUL 2011	10:13	1 L Tedlar Bag	1 None Required	Fixed Gases by ASTM D2504			N		
	VA0653	KAFB-106137-450-GS-VA0653-REG	29 JUL 2011	11:02	1 L BOTTLEVAC	1 None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		610
7	VA0653	KAFB-106137-450-GS-VA0653-REG	29 JUL 2011	11:02	1 L Tedlar Bag	1 None Required	Fixed Gases by ASTM D2504			N		
	VA0661	KAFB-106139-025-GS-VA0661-REG	01 AUG 2011	12:42	1 L BOTTLEVAC	1 None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		591
8	VA0661	KAFB-106139-025-GS-VA0661-REG	01 AUG 2011	12:42	1 L Tedlar Bag	1 None Required	Fixed Gases by ASTM D2504			N		
	VA0662	KAFB-106139-050-GS-VA0662-REG	01 AUG 2011	13:12	1 L BOTTLEVAC	1 None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		605
9	VA0662	KAFB-106139-050-GS-VA0662-REG	01 AUG 2011	13:12	1 L Tedlar Bag	1 None Required	Fixed Gases by ASTM D2504			N		
	VA0663	KAFB-106139-150-GS-VA0663-REG	01 AUG 2011	13:51	1 L BOTTLEVAC	1 None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		614
10	VA0663	KAFB-106139-150-GS-VA0663-REG	01 AUG 2011	13:51	1 L Tedlar Bag	1 None Required	Fixed Gases by ASTM D2504			N		
	VA0664	KAFB-106139-250-GS-VA0664-REG	01 AUG 2011	14:28	1 L BOTTLEVAC	1 None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		580
11	VA0664	KAFB-106139-250-GS-VA0664-REG	01 AUG 2011	14:28	1 L Tedlar Bag	1 None Required	Fixed Gases by ASTM D2504			N		
	VA0665	KAFB-106139-250-GS-VA0665-FD	01 AUG 2011	14:28	1 L BOTTLEVAC	1 None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		606
12	VA0665	KAFB-106139-250-GS-VA0665-FD	01 AUG 2011	14:28	1 L Tedlar Bag	1 None Required	Fixed Gases by ASTM D2504			N		
	VA0666	KAFB-106139-350-GS-VA0666-REG	01 AUG 2011	15:21	1 L BOTTLEVAC	1 None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		576
13	VA0666	KAFB-106139-350-GS-VA0666-REG	01 AUG 2011	15:21	1 L Tedlar Bag	1 None Required	Fixed Gases by ASTM D2504			N		
	VA0667	KAFB-106139-450-GS-VA0667-REG	02 AUG 2011	8:50	1 L BOTTLEVAC	1 None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		578
14	VA0667	KAFB-106139-450-GS-VA0667-REG	02 AUG 2011	8:50	1 L Tedlar Bag	1 None Required	Fixed Gases by ASTM D2504			N		
	VA0668	KAFB-106140-025-GS-VA0668-REG	26 JUL 2011	9:03	1 L BOTTLEVAC	1 None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		89
15	VA0668	KAFB-106140-025-GS-VA0668-REG	26 JUL 2011	9:03	1 L Tedlar Bag	1 None Required	Fixed Gases by ASTM D2504			N		
	VA0669	KAFB-106140-050-GS-VA0669-REG	26 JUL 2011	10:07	1 L BOTTLEVAC	1 None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		603
16	VA0669	KAFB-106140-050-GS-VA0669-REG	26 JUL 2011	10:07	1 L Tedlar Bag	1 None Required	Fixed Gases by ASTM D2504			N		
	VA0670	KAFB-106140-050-GS-VA0670-FD	26 JUL 2011	10:07	1 L BOTTLEVAC	1 None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		82
17	VA0670	KAFB-106140-050-GS-VA0670-FD	26 JUL 2011	10:07	1 L Tedlar Bag	1 None Required	Fixed Gases by ASTM D2504			N		

1108344

Shaw
Shaw E & I, Inc.

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

Reference Document No: 140705-SV017

Page 3 of 3

	Sample No	Sample Name	Sample Date	Sample Time	Container		Preservative	Requested Testing Program	Sample Vol	Units	Fil	CID	Condition On Receipt
	VA0671	KAFB-06140-150-GS-VA0671-REG	20 JUL 2011	11:49	1 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		582
18	VA0671	KAFB-06140-150-GS-VA0671-REG	20 JUL 2011	11:49	1 L Tedlar Bag	1	None Required	Fixed Gases by ASTM D2504			N		
	VA0672	KAFB-06140-250-GS-VA0672-REG	26 JUL 2011	12:27	1 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		615
19	VA0672	KAFB-06140-250-GS-VA0672-REG	26 JUL 2011	12:27	1 L Tedlar Bag	1	None Required	Fixed Gases by ASTM D2504			N		
	VA0673	KAFB-06140-350-GS-VA0673-REG	26 JUL 2011	14:20	1 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		93
20	VA0673	KAFB-06140-350-GS-VA0673-REG	26 JUL 2011	14:20	1 L Tedlar Bag	1	None Required	Fixed Gases by ASTM D2504			N		
	VA0674	KAFB-06140-450-GS-VA0674-REG	26 JUL 2011	15:10	1 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		36
21	VA0674	KAFB-06140-450-GS-VA0674-REG	26 JUL 2011	15:10	1 L Tedlar Bag	1	None Required	Fixed Gases by ASTM D2504			N		
	VA0681	KAFB-06142-030-GS-VA0681-REG	25 JUL 2011	9:28	1 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		84
22	VA0681	KAFB-06142-030-GS-VA0681-REG	25 JUL 2011	9:28	1 L Tedlar Bag	1	None Required	Fixed Gases by ASTM D2504			N		
	VA0682	KAFB-06142-050-GS-VA0682-REG	25 JUL 2011	10:07	1 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		108
23	VA0682	KAFB-06142-050-GS-VA0682-REG	25 JUL 2011	10:07	1 L Tedlar Bag	1	None Required	Fixed Gases by ASTM D2504			N		
	VA0683	KAFB-06142-170-GS-VA0683-REG	25 JUL 2011	12:45	1 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		19
24	VA0683	KAFB-06142-170-GS-VA0683-REG	25 JUL 2011	12:45	1 L Tedlar Bag	1	None Required	Fixed Gases by ASTM D2504			N		
	VA0684	KAFB-06142-250-GS-VA0684-REG	25 JUL 2011	13:34	1 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		846
25	VA0684	KAFB-06142-250-GS-VA0684-REG	25 JUL 2011	13:34	1 L Tedlar Bag	1	None Required	Fixed Gases by ASTM D2504			N		
	VA0685	KAFB-06142-350-GS-VA0685-REG	25 JUL 2011	14:22	1 L Tedlar Bag	1	None Required	Fixed Gases by ASTM D2504			N		
26	VA0685	KAFB-06142-350-GS-VA0685-REG	25 JUL 2011	14:22	1 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		845
	VA0686	KAFB-06142-450-GS-VA0686-REG	25 JUL 2011	15:09	1 L BOTTLEVAC	1	None Required	Air Phase Petroleum Hydrocarbons by MA DEP, VOCs / TPH by TO-15			N		90 breaking transit
27	VA0686	KAFB-06142-450-GS-VA0686-REG	25 JUL 2011	15:09	1 L Tedlar Bag	1	None Required	Fixed Gases by ASTM D2504			N		
28	VA0634-TB	FIELDQC-AQ-VA0634-15-TB	26 JUL 2011	08:00	1 L BOTTLEVAC	1	None Required	VOCs / TPH by TO-15			N		709

...Y SEAL
DATE 8/2/11
SIGNATURE [illegible]

REC
Quality Environm
800-255-3950

RTI LABORATORIES
31628 GLENDALE ST
LIVONIA MI 48150
P: RED2 S: MNITE I: 3
19F – FL2
IZ|0335E034|98 8026

RTI LABORATORIES
31628 GLENDALE ST
LIVONIA MI 48150
P: RED2 S: MNITE I: 3
19F – FL2
IZ|0335E034|64 1819

RTI LABORATORIES, INC.

CHAIN OF CUSTODY RECORD

COC ID:	PAGE: 1	OF: 3

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

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

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

SPECIAL INSTRUCTIONS / COMMENTS:
USACE Samples. Reference RTI WO # 1108344 on report and invoice. Please reference Client Sample ID for report and EDD.

ITEM #	SAMPLE ID	Client Sample ID	Bottle Type	MATRIX	DATE COLLECTED	NUMBER OF CONTAINERS	ANALYTICAL PARAMETERS: TO-15	MA_APH	COMMENTS (Methanol Preserved Weights, HOT Sample Notation, Additional Sample Description, etc.)
1	1108344-001A	VA0647	BOTTLE-VAC	Air	7/28/2011 3:03:00 PM	1	√		83
2	1108344-002A	VA0648	BOTTLE-VAC	Air	7/28/2011 3:03:00 PM	1	√		83
3	1108344-003A	VA0649	BOTTLE-VAC	Air	7/29/2011 8:50:00 AM	1	√		83
4	1108344-004A	VA0650	BOTTLE-VAC	Air	7/29/2011 9:33:00 AM	1	√		83
5	1108344-005A	VA0651	BOTTLE-VAC	Air	7/29/2011 10:13:00 AM	1	√		83
6	1108344-006A	VA0652	BOTTLE-VAC	Air	7/29/2011 10:13:00 AM	1	√	√	83
7	1108344-007A	VA0653	BOTTLE-VAC	Air	7/29/2011 11:02:00 AM	1	√		610
8	1108344-008A	VA0661	BOTTLE-VAC	Air	8/1/2011 12:42:00 PM	1	√		91
9	1108344-009A	VA0662	BOTTLE-VAC	Air	8/1/2011 1:12:00 PM	1	√		614
10	1108344-010A	VA0663	BOTTLE-VAC	Air	8/1/2011 1:51:00 PM	1	√		

Relinquished By:	Date:	Time:	Received By:	Date:	Time:
[signature]	9/20/2011	5:22 PM			
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

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

Note: RUSH requests will incur surcharges!

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

FOR LAB USE ONLY
Temp of samples _____ °C Attempt to Cool ? _____
Comments: _____

RTI LABORATORIES, INC.

CHAIN OF CUSTODY RECORD

COC ID:	PAGE: 2	OF: 3

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

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ITEM #	SAMPLE ID	Client Sample ID	Bottle Type	MATRIX	DATE COLLECTED	NUMBER OF CONTAINERS	ANALYTICAL PARAMETERS: TO-15	MA_APH	COMMENTS (Methanol Preserved Weights, HOT Sample Notation, Additional Sample Description, etc.)
11	1108344-011A	VA0664	BOTTLE-VAC	Air	8/1/2011 2:28:00 PM	1	√		580
12	1108344-012A	VA0665	BOTTLE-VAC	Air	8/1/2011 2:28:00 PM	1	√		606
13	1108344-013A	VA0666	BOTTLE-VAC	Air	8/1/2011 3:21:00 PM	1	√		576
14	1108344-014A	VA0667	BOTTLE-VAC	Air	8/2/2011 8:50:00 AM	1	√		578
15	1108344-015A	VA0668	BOTTLE-VAC	Air	7/26/2011 9:03:00 AM	1	√		89
16	1108344-016A	VA0669	BOTTLE-VAC	Air	7/26/2011 10:07:00 AM	1	√		603
17	1108344-017A	VA0670	BOTTLE-VAC	Air	7/26/2011 10:07:00 AM	1	√		82
18	1108344-018A	VA0671	BOTTLE-VAC	Air	7/26/2011 11:49:00 AM	1	√		582
19	1108344-019A	VA0672	BOTTLE-VAC	Air	7/26/2011 12:27:00 PM	1	√		615
20	1108344-020A	VA0673	BOTTLE-VAC	Air	7/26/2011 2:20:00 PM	1	√		

Relinquished By:	Date:	Time:	Received By:	Date:	Time:
	9/20/2011	5:22 PM			
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

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

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FOR LAB USE ONLY
Temp of samples _____ °C Attempt to Cool ? _____
Comments: _____

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COC ID:	PAGE: 3	OF: 3

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ITEM #	SAMPLE ID	Client Sample ID	Bottle Type	MATRIX	DATE COLLECTED	NUMBER OF CONTAINERS	TO-15	MA_APH	COMMENTS Methanol Preserved Weights HOT Sample Notation Additional Sample Description, etc.
21	1108344-021A	VA0674	BOTTLE-VAC	Air	7/26/2011 3:10:00 PM	1	√		36
22	1108344-022A	VA0681	BOTTLE-VAC	Air	7/25/2011 9:28:00 AM	1	√		84
23	1108344-023A	VA0682	BOTTLE-VAC	Air	7/25/2011 10:07:00 AM	1	√		108
24	1108344-024A	VA0683	BOTTLE-VAC	Air	7/25/2011 12:45:00 PM	1	√		19
25	1108344-025A	VA0684	BOTTLE-VAC	Air	7/25/2011 1:34:00 PM	1	√		846
26	1108344-026A	VA0685	BOTTLE-VAC	Air	7/25/2011 2:22:00 PM	1	√		845
27	1108344-028A	VA8034-TB-TB	SUMMA	Air	7/26/2011 8:00:00 AM	1	√		709
28						0			
29						0			
30						0			

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

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

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Comments: _____

RTI LABORATORIES, INC.

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

Sample Receipt Checklist

Client Name: **SHA04**

Date and Time Received: **8/9/2011 3:00:00 PM**

Work Order Number **1108344** RcptNo: **1**

Received by: **Christine Conradis**

Completed by:

Reviewed by:

Completed Date: 8/9/2011 3:51:05 PM

Reviewed Date: 8/10/2011 8:10:20 AM

Carrier name: FedEx

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:	1Z103350341641819			
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
1108344-001A	Container-01 of 01	Bottle				
1108344-001B	Container-01 of 01	Bottle				
1108344-002A	Container-01 of 01	Bottle				
1108344-002B	Container-01 of 01	Bottle				
1108344-003A	Container-01 of 01	Bottle				
1108344-003B	Container-01 of 01	Bottle				
1108344-004A	Container-01 of 01	Bottle				
1108344-004B	Container-01 of 01	Bottle				
1108344-005A	Container-01 of 01	Bottle				
1108344-005B	Container-01 of 01	Bottle				
1108344-006A	Container-01 of 01	Bottle				
1108344-006B	Container-01 of 01	Bottle				
1108344-007A	Container-01 of 01	Bottle				
1108344-007B	Container-01 of 01	Bottle				
1108344-008A	Container-01 of 01	Bottle				
1108344-008B	Container-01 of 01	Bottle				
1108344-009A	Container-01 of 01	Bottle				
1108344-009B	Container-01 of 01	Bottle				
1108344-010A	Container-01 of 01	Bottle				
1108344-010B	Container-01 of 01	Bottle				
1108344-011A	Container-01 of 01	Bottle				
1108344-011B	Container-01 of 01	Bottle				
1108344-012A	Container-01 of 01	Bottle				
1108344-012B	Container-01 of 01	Bottle				
1108344-013A	Container-01 of 01	Bottle				
1108344-013B	Container-01 of 01	Bottle				
1108344-014A	Container-01 of 01	Bottle				
1108344-014B	Container-01 of 01	Bottle				
1108344-015A	Container-01 of 01	Bottle				
1108344-015B	Container-01 of 01	Bottle				
1108344-016A	Container-01 of 01	Bottle				
1108344-016B	Container-01 of 01	Bottle				
1108344-017A	Container-01 of 01	Bottle				
1108344-017B	Container-01 of 01	Bottle				

SampID	ContainerID	Type	Org pH	Adj pH	Req Min pH	Req Max pH
1108344-018A	Container-01 of 01	Bottle				
1108344-018B	Container-01 of 01	Bottle				
1108344-019A	Container-01 of 01	Bottle				
1108344-019B	Container-01 of 01	Bottle				
1108344-020A	Container-01 of 01	Bottle				
1108344-020B	Container-01 of 01	Bottle				
1108344-021A	Container-01 of 01	Bottle				
1108344-021B	Container-01 of 01	Bottle				
1108344-022A	Container-01 of 01	Bottle				
1108344-022B	Container-01 of 01	Bottle				
1108344-023A	Container-01 of 01	Bottle				
1108344-023B	Container-01 of 01	Bottle				
1108344-024A	Container-01 of 01	Bottle				
1108344-024B	Container-01 of 01	Bottle				
1108344-025A	Container-01 of 01	Bottle				
1108344-025B	Container-01 of 01	Bottle				
1108344-026A	Container-01 of 01	Bottle				
1108344-026B	Container-01 of 01	Bottle				
1108344-027B	Container-01 of 01	Bottle				
1108344-028A	Container-01 of 01	Bottle				

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
Shaw			Yes		8/2/2011	RB

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:

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

Client Instructions:

Date Contacted: Contacted By:

Regarding:

CorrectiveAction:

Comments:
Sample VA0686 bottle vac (90) broken in transit. 8/9/11 CC

RTI LABORATORIES, INC.

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

Workorder Sample Summary

WO#: **1108344**

20-Oct-11

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

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
1108344-001	VA0647		7/28/2011 3:03:00 PM	8/9/2011 3:00:00 PM	Air
1108344-001	VA0647		7/28/2011 3:03:00 PM	8/9/2011 3:00:00 PM	Air
1108344-002	VA0648		7/28/2011 3:03:00 PM	8/9/2011 3:00:00 PM	Air
1108344-002	VA0648		7/28/2011 3:03:00 PM	8/9/2011 3:00:00 PM	Air
1108344-003	VA0649		7/29/2011 8:50:00 AM	8/9/2011 3:00:00 PM	Air
1108344-003	VA0649		7/29/2011 8:50:00 AM	8/9/2011 3:00:00 PM	Air
1108344-004	VA0650		7/29/2011 9:33:00 AM	8/9/2011 3:00:00 PM	Air
1108344-004	VA0650		7/29/2011 9:33:00 AM	8/9/2011 3:00:00 PM	Air
1108344-005	VA0651		7/29/2011 10:13:00 AM	8/9/2011 3:00:00 PM	Air
1108344-005	VA0651		7/29/2011 10:13:00 AM	8/9/2011 3:00:00 PM	Air
1108344-006	VA0652		7/29/2011 10:13:00 AM	8/9/2011 3:00:00 PM	Air
1108344-006	VA0652		7/29/2011 10:13:00 AM	8/9/2011 3:00:00 PM	Air
1108344-007	VA0653		7/29/2011 11:02:00 AM	8/9/2011 3:00:00 PM	Air
1108344-007	VA0653		7/29/2011 11:02:00 AM	8/9/2011 3:00:00 PM	Air
1108344-008	VA0661		8/1/2011 12:42:00 PM	8/9/2011 3:00:00 PM	Air
1108344-008	VA0661		8/1/2011 12:42:00 PM	8/9/2011 3:00:00 PM	Air
1108344-009	VA0662		8/1/2011 1:12:00 PM	8/9/2011 3:00:00 PM	Air
1108344-009	VA0662		8/1/2011 1:12:00 PM	8/9/2011 3:00:00 PM	Air
1108344-010	VA0663		8/1/2011 1:51:00 PM	8/9/2011 3:00:00 PM	Air
1108344-010	VA0663		8/1/2011 1:51:00 PM	8/9/2011 3:00:00 PM	Air
1108344-011	VA0664		8/1/2011 2:28:00 PM	8/9/2011 3:00:00 PM	Air
1108344-011	VA0664		8/1/2011 2:28:00 PM	8/9/2011 3:00:00 PM	Air
1108344-012	VA0665		8/1/2011 2:28:00 PM	8/9/2011 3:00:00 PM	Air
1108344-012	VA0665		8/1/2011 2:28:00 PM	8/9/2011 3:00:00 PM	Air
1108344-013	VA0666		8/1/2011 3:21:00 PM	8/9/2011 3:00:00 PM	Air
1108344-013	VA0666		8/1/2011 3:21:00 PM	8/9/2011 3:00:00 PM	Air
1108344-014	VA0667		8/2/2011 8:50:00 AM	8/9/2011 3:00:00 PM	Air
1108344-014	VA0667		8/2/2011 8:50:00 AM	8/9/2011 3:00:00 PM	Air
1108344-015	VA0668		7/26/2011 9:03:00 AM	8/9/2011 3:00:00 PM	Air
1108344-015	VA0668		7/26/2011 9:03:00 AM	8/9/2011 3:00:00 PM	Air
1108344-016	VA0669		7/26/2011 10:07:00 AM	8/9/2011 3:00:00 PM	Air
1108344-016	VA0669		7/26/2011 10:07:00 AM	8/9/2011 3:00:00 PM	Air
1108344-017	VA0670		7/26/2011 10:07:00 AM	8/9/2011 3:00:00 PM	Air
1108344-017	VA0670		7/26/2011 10:07:00 AM	8/9/2011 3:00:00 PM	Air

RTI LABORATORIES, INC.

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

Workorder Sample Summary

WO#: **1108344**

20-Oct-11

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

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
1108344-018	VA0671		7/26/2011 11:49:00 AM	8/9/2011 3:00:00 PM	Air
1108344-018	VA0671		7/26/2011 11:49:00 AM	8/9/2011 3:00:00 PM	Air
1108344-019	VA0672		7/26/2011 12:27:00 PM	8/9/2011 3:00:00 PM	Air
1108344-019	VA0672		7/26/2011 12:27:00 PM	8/9/2011 3:00:00 PM	Air
1108344-020	VA0673		7/26/2011 2:20:00 PM	8/9/2011 3:00:00 PM	Air
1108344-020	VA0673		7/26/2011 2:20:00 PM	8/9/2011 3:00:00 PM	Air
1108344-021	VA0674		7/26/2011 3:10:00 PM	8/9/2011 3:00:00 PM	Air
1108344-021	VA0674		7/26/2011 3:10:00 PM	8/9/2011 3:00:00 PM	Air
1108344-022	VA0681		7/25/2011 9:28:00 AM	8/9/2011 3:00:00 PM	Air
1108344-022	VA0681		7/25/2011 9:28:00 AM	8/9/2011 3:00:00 PM	Air
1108344-023	VA0682		7/25/2011 10:07:00 AM	8/9/2011 3:00:00 PM	Air
1108344-023	VA0682		7/25/2011 10:07:00 AM	8/9/2011 3:00:00 PM	Air
1108344-024	VA0683		7/25/2011 12:45:00 PM	8/9/2011 3:00:00 PM	Air
1108344-024	VA0683		7/25/2011 12:45:00 PM	8/9/2011 3:00:00 PM	Air
1108344-025	VA0684		7/25/2011 1:34:00 PM	8/9/2011 3:00:00 PM	Air
1108344-025	VA0684		7/25/2011 1:34:00 PM	8/9/2011 3:00:00 PM	Air
1108344-026	VA0685		7/25/2011 2:22:00 PM	8/9/2011 3:00:00 PM	Air
1108344-026	VA0685		7/25/2011 2:22:00 PM	8/9/2011 3:00:00 PM	Air
1108344-027	VA0686		7/28/2011 3:09:00 PM	8/9/2011 3:00:00 PM	Air
1108344-027	VA0686		7/28/2011 3:09:00 PM	8/9/2011 3:00:00 PM	Air
1108344-028	VA8034-TB-TB		7/26/2011 8:00:00 AM	8/9/2011 3:00:00 PM	Air

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DATES REPORT

WO#: **1108344**

20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc

Project: Kirtland AFB

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
1108344-001A	VA0647	7/28/2011 3:03:00 PM	Air	Air-Phase Petroleum Hydrocarbons			8/23/2011 8:05:00 PM
1108344-001B				Noncondensable Gases and Light Hydrocarbons			8/25/2011 2:38:00 PM
1108344-002A	VA0648			Air-Phase Petroleum Hydrocarbons			8/23/2011 8:47:00 PM
1108344-002B				Noncondensable Gases and Light Hydrocarbons			8/25/2011 2:57:00 PM
1108344-003A	VA0649	7/29/2011 8:50:00 AM		Air-Phase Petroleum Hydrocarbons			8/23/2011 9:29:00 PM
1108344-003B				Noncondensable Gases and Light Hydrocarbons			8/25/2011 3:18:00 PM
1108344-004A	VA0650	7/29/2011 9:33:00 AM		Air-Phase Petroleum Hydrocarbons			8/23/2011 10:12:00 PM
1108344-004B				Noncondensable Gases and Light Hydrocarbons			8/25/2011 3:40:00 PM
1108344-005A	VA0651	7/29/2011 10:13:00 AM		Air-Phase Petroleum Hydrocarbons			8/23/2011 11:01:00 PM
1108344-005B				Noncondensable Gases and Light Hydrocarbons			8/26/2011 12:28:00 PM
1108344-006B	VA0652			Noncondensable Gases and Light Hydrocarbons			8/26/2011 1:00:00 PM
1108344-007A	VA0653	7/29/2011 11:02:00 AM		Air-Phase Petroleum Hydrocarbons			8/24/2011 4:57:00 PM
1108344-007B				Noncondensable Gases and Light Hydrocarbons			8/26/2011 1:28:00 PM
1108344-008A	VA0661	8/1/2011 12:42:00 PM		Air-Phase Petroleum Hydrocarbons			8/24/2011 2:23:00 PM
1108344-008B				Noncondensable Gases and Light Hydrocarbons			8/26/2011 1:50:00 PM
1108344-009A	VA0662	8/1/2011 1:12:00 PM		Air-Phase Petroleum Hydrocarbons			8/24/2011 5:40:00 PM
1108344-009B				Noncondensable Gases and Light Hydrocarbons			8/26/2011 2:19:00 PM
1108344-010A	VA0663	8/1/2011 1:51:00 PM		Air-Phase Petroleum Hydrocarbons			8/24/2011 6:24:00 PM
1108344-010B				Noncondensable Gases and Light Hydrocarbons			8/26/2011 2:42:00 PM
1108344-011A	VA0664	8/1/2011 2:28:00 PM		Air-Phase Petroleum Hydrocarbons			8/24/2011 7:07:00 PM

RTI LABORATORIES, INC.

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DATES REPORT

WO#: **1108344**

20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc

Project: Kirtland AFB

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
1108344-011B	VA0664	8/1/2011 2:28:00 PM	Air	Noncondensable Gases and Light Hydrocarbons			8/26/2011 3:06:00 PM
1108344-012A	VA0665			Air-Phase Petroleum Hydrocarbons			8/25/2011 3:34:00 PM
1108344-012B				Noncondensable Gases and Light Hydrocarbons			8/26/2011 3:29:00 PM
1108344-013A	VA0666	8/1/2011 3:21:00 PM		Air-Phase Petroleum Hydrocarbons			8/25/2011 5:09:00 PM
1108344-013B				Noncondensable Gases and Light Hydrocarbons			8/26/2011 4:23:00 PM
1108344-014A	VA0667	8/2/2011 8:50:00 AM		Air-Phase Petroleum Hydrocarbons			8/25/2011 5:52:00 PM
1108344-014B				Noncondensable Gases and Light Hydrocarbons			8/26/2011 4:53:00 PM
1108344-015A	VA0668	7/26/2011 9:03:00 AM		Air-Phase Petroleum Hydrocarbons			8/22/2011 9:18:00 PM
1108344-015B				Noncondensable Gases and Light Hydrocarbons			8/24/2011 4:47:00 PM
1108344-016A	VA0669	7/26/2011 10:07:00 AM		Air-Phase Petroleum Hydrocarbons			8/20/2011 2:48:00 AM
1108344-016B				Noncondensable Gases and Light Hydrocarbons			8/24/2011 5:24:00 PM
1108344-017A	VA0670			Air-Phase Petroleum Hydrocarbons			8/22/2011 10:07:00 PM
1108344-017B				Noncondensable Gases and Light Hydrocarbons			8/24/2011 5:50:00 PM
1108344-018A	VA0671	7/26/2011 11:49:00 AM		Air-Phase Petroleum Hydrocarbons			8/23/2011 5:55:00 PM
1108344-018B				Noncondensable Gases and Light Hydrocarbons			8/25/2011 12:42:00 PM
1108344-019A	VA0672	7/26/2011 12:27:00 PM		Air-Phase Petroleum Hydrocarbons			8/23/2011 4:30:00 PM
1108344-019B				Noncondensable Gases and Light Hydrocarbons			8/25/2011 1:09:00 PM
1108344-020A	VA0673	7/26/2011 2:20:00 PM		Air-Phase Petroleum Hydrocarbons			8/24/2011 3:54:00 PM
1108344-020B				Noncondensable Gases and Light Hydrocarbons			8/25/2011 1:29:00 PM
1108344-021A	VA0674	7/26/2011 3:10:00 PM		Air-Phase Petroleum Hydrocarbons			8/23/2011 7:22:00 PM

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DATES REPORT

WO#: **1108344**

20-Oct-11

Client: Shaw Environmental & Infrastructure, Inc

Project: Kirtland AFB

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
1108344-021B	VA0674	7/26/2011 3:10:00 PM	Air	Noncondensable Gases and Light Hydrocarbons			8/25/2011 1:51:00 PM
1108344-022A	VA0681	7/25/2011 9:28:00 AM		Air-Phase Petroleum Hydrocarbons			8/22/2011 5:48:00 PM
1108344-022B				Noncondensable Gases and Light Hydrocarbons			8/24/2011 2:25:00 PM
1108344-023A	VA0682	7/25/2011 10:07:00 AM		Air-Phase Petroleum Hydrocarbons			8/22/2011 6:31:00 PM
1108344-023B				Noncondensable Gases and Light Hydrocarbons			8/24/2011 2:53:00 PM
1108344-024A	VA0683	7/25/2011 12:45:00 PM		Air-Phase Petroleum Hydrocarbons			8/22/2011 7:12:00 PM
1108344-024B				Noncondensable Gases and Light Hydrocarbons			8/24/2011 3:15:00 PM
1108344-025A	VA0684	7/25/2011 1:34:00 PM		Air-Phase Petroleum Hydrocarbons			8/22/2011 7:54:00 PM
1108344-025B				Noncondensable Gases and Light Hydrocarbons			8/24/2011 3:42:00 PM
1108344-026A	VA0685	7/25/2011 2:22:00 PM		Air-Phase Petroleum Hydrocarbons			8/22/2011 8:37:00 PM
1108344-026B				Noncondensable Gases and Light Hydrocarbons			8/24/2011 4:27:00 PM
1108344-027B	VA0686	7/28/2011 3:09:00 PM		Noncondensable Gases and Light Hydrocarbons			8/25/2011 2:17:00 PM

RTI LABORATORIES, INC.

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

Analytical Report

(consolidated)

WO#: **1108344**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/28/2011 3:03:00 PM

Project: Kirtland AFB

Lab ID: 1108344-001 **Matrix:** AIR

Client Sample ID VA0647

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.17	0.10		%	1	8/25/2011 2:38:00 PM
Carbon Monoxide	ND	0.10		%	1	8/25/2011 2:38:00 PM
Methane	ND	0.50		%	1	8/25/2011 2:38:00 PM
Nitrogen	77	0.10		%	1	8/25/2011 2:38:00 PM
Oxygen	21	0.10		%	1	8/25/2011 2:38:00 PM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **RH3**
C5-C8 Aliphatic Hydrocarbons	30,000	4,700		µg/m³	40	8/23/2011 8:05:00 PM
C9-C10 Aromatic Hydrocarbons	ND	5,300		µg/m³	40	8/23/2011 8:05:00 PM
C9-C12 Aliphatic Hydrocarbons	5,200	7,600	J	µg/m³	40	8/23/2011 8:05:00 PM
Surr: 4-Bromofluorobenzene	98.3	70-130		%REC	40	8/23/2011 8:05:00 PM

Qualifiers:

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

Revision v1

RTI LABORATORIES, INC.

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

Analytical Report

(consolidated)

WO#: **1108344**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/28/2011 3:03:00 PM

Project: Kirtland AFB

Lab ID: 1108344-002 **Matrix:** AIR

Client Sample ID VA0648

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.18	0.10		%	1	8/25/2011 2:57:00 PM
Carbon Monoxide	ND	0.10		%	1	8/25/2011 2:57:00 PM
Methane	ND	0.50		%	1	8/25/2011 2:57:00 PM
Nitrogen	78	0.10		%	1	8/25/2011 2:57:00 PM
Oxygen	21	0.10		%	1	8/25/2011 2:57:00 PM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **RH3**
C5-C8 Aliphatic Hydrocarbons	28,000	4,700		µg/m³	40	8/23/2011 8:47:00 PM
C9-C10 Aromatic Hydrocarbons	ND	5,300		µg/m³	40	8/23/2011 8:47:00 PM
C9-C12 Aliphatic Hydrocarbons	4,700	7,600	J	µg/m³	40	8/23/2011 8:47:00 PM
Surr: 4-Bromofluorobenzene	97.0	70-130		%REC	40	8/23/2011 8:47:00 PM

Qualifiers:

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

Revision v1

RTI LABORATORIES, INC.

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

Analytical Report

(consolidated)

WO#: **1108344**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/29/2011 8:50:00 AM

Project: Kirtland AFB

Lab ID: 1108344-003 **Matrix:** AIR

Client Sample ID VA0649

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.10	0.10		%	1	8/25/2011 3:18:00 PM
Carbon Monoxide	ND	0.10		%	1	8/25/2011 3:18:00 PM
Methane	ND	0.50		%	1	8/25/2011 3:18:00 PM
Nitrogen	78	0.10		%	1	8/25/2011 3:18:00 PM
Oxygen	21	0.10		%	1	8/25/2011 3:18:00 PM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **RH3**
C5-C8 Aliphatic Hydrocarbons	13,000	4,700		µg/m³	40	8/23/2011 9:29:00 PM
C9-C10 Aromatic Hydrocarbons	ND	5,300		µg/m³	40	8/23/2011 9:29:00 PM
C9-C12 Aliphatic Hydrocarbons	1,700	7,600	J	µg/m³	40	8/23/2011 9:29:00 PM
Surr: 4-Bromofluorobenzene	96.5	70-130		%REC	40	8/23/2011 9:29:00 PM

Qualifiers:

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

RTI LABORATORIES, INC.

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Analytical Report

(consolidated)

WO#: 1108344

Date Reported: 10/20/2011

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/29/2011 9:33:00 AM

Project: Kirtland AFB

Lab ID: 1108344-004 **Matrix:** AIR

Client Sample ID VA0650

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.15	0.10		%	1	8/25/2011 3:40:00 PM
Carbon Monoxide	ND	0.10		%	1	8/25/2011 3:40:00 PM
Methane	ND	0.50		%	1	8/25/2011 3:40:00 PM
Nitrogen	78	0.10		%	1	8/25/2011 3:40:00 PM
Oxygen	21	0.10		%	1	8/25/2011 3:40:00 PM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **RH3**
C5-C8 Aliphatic Hydrocarbons	12,000	4,700		µg/m³	40	8/23/2011 10:12:00 PM
C9-C10 Aromatic Hydrocarbons	ND	5,300		µg/m³	40	8/23/2011 10:12:00 PM
C9-C12 Aliphatic Hydrocarbons	2,100	7,600	J	µg/m³	40	8/23/2011 10:12:00 PM
Surr: 4-Bromofluorobenzene	97.4	70-130		%REC	40	8/23/2011 10:12:00 PM

Qualifiers:

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

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Analytical Report

(consolidated)

WO#: **1108344**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/29/2011 10:13:00 AM

Project: Kirtland AFB

Lab ID: 1108344-005 **Matrix:** AIR

Client Sample ID VA0651

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.069	0.10	J	%	1	8/26/2011 12:28:00 PM
Carbon Monoxide	ND	0.10		%	1	8/26/2011 12:28:00 PM
Methane	ND	0.50		%	1	8/26/2011 12:28:00 PM
Nitrogen	78	0.10		%	1	8/26/2011 12:28:00 PM
Oxygen	22	0.10		%	1	8/26/2011 12:28:00 PM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **RH3**
C5-C8 Aliphatic Hydrocarbons	120,000	47,000		µg/m³	400	8/23/2011 11:01:00 PM
C9-C10 Aromatic Hydrocarbons	ND	53,000		µg/m³	400	8/23/2011 11:01:00 PM
C9-C12 Aliphatic Hydrocarbons	ND	76,000		µg/m³	400	8/23/2011 11:01:00 PM
Surr: 4-Bromofluorobenzene	95.9	70-130		%REC	400	8/23/2011 11:01:00 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

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Analytical Report

(consolidated)

WO#: **1108344**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/29/2011 10:13:00 AM

Project: Kirtland AFB

Lab ID: 1108344-006 **Matrix:** AIR

Client Sample ID VA0652

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.078	0.10	J	%	1	8/26/2011 1:00:00 PM
Carbon Monoxide	ND	0.10		%	1	8/26/2011 1:00:00 PM
Methane	ND	0.50		%	1	8/26/2011 1:00:00 PM
Nitrogen	78	0.10		%	1	8/26/2011 1:00:00 PM
Oxygen	22	0.10		%	1	8/26/2011 1:00:00 PM

Qualifiers:

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

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Analytical Report

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WO#: **1108344**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/29/2011 11:02:00 AM

Project: Kirtland AFB

Lab ID: 1108344-007 **Matrix:** AIR

Client Sample ID VA0653

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.13	0.10		%	1	8/26/2011 1:28:00 PM
Carbon Monoxide	ND	0.10		%	1	8/26/2011 1:28:00 PM
Methane	ND	0.50		%	1	8/26/2011 1:28:00 PM
Nitrogen	79	0.10		%	1	8/26/2011 1:28:00 PM
Oxygen	21	0.10		%	1	8/26/2011 1:28:00 PM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **RH3**
C5-C8 Aliphatic Hydrocarbons	1,100,000	94,000		µg/m³	800	8/24/2011 4:57:00 PM
C9-C10 Aromatic Hydrocarbons	ND	110,000		µg/m³	800	8/24/2011 4:57:00 PM
C9-C12 Aliphatic Hydrocarbons	ND	150,000		µg/m³	800	8/24/2011 4:57:00 PM
Surr: 4-Bromofluorobenzene	94.9	70-130		%REC	800	8/24/2011 4:57:00 PM

Qualifiers:

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

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WO#: **1108344**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 8/1/2011 12:42:00 PM

Project: Kirtland AFB

Lab ID: 1108344-008 **Matrix:** AIR

Client Sample ID VA0661

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.31	0.10		%	1	8/26/2011 1:50:00 PM
Carbon Monoxide	ND	0.10		%	1	8/26/2011 1:50:00 PM
Methane	ND	0.50		%	1	8/26/2011 1:50:00 PM
Nitrogen	78	0.10		%	1	8/26/2011 1:50:00 PM
Oxygen	21	0.10		%	1	8/26/2011 1:50:00 PM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **RH3**
C5-C8 Aliphatic Hydrocarbons	10,000	4,700		µg/m³	40	8/24/2011 2:23:00 PM
C9-C10 Aromatic Hydrocarbons	ND	5,300		µg/m³	40	8/24/2011 2:23:00 PM
C9-C12 Aliphatic Hydrocarbons	ND	7,600		µg/m³	40	8/24/2011 2:23:00 PM
Surr: 4-Bromofluorobenzene	99.3	70-130		%REC	40	8/24/2011 2:23:00 PM

Qualifiers:

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

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Analytical Report

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WO#: **1108344**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 8/1/2011 1:12:00 PM

Project: Kirtland AFB

Lab ID: 1108344-009 **Matrix:** AIR

Client Sample ID VA0662

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.40	0.10		%	1	8/26/2011 2:19:00 PM
Carbon Monoxide	ND	0.10		%	1	8/26/2011 2:19:00 PM
Methane	ND	0.50		%	1	8/26/2011 2:19:00 PM
Nitrogen	79	0.10		%	1	8/26/2011 2:19:00 PM
Oxygen	21	0.10		%	1	8/26/2011 2:19:00 PM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **RH3**
C5-C8 Aliphatic Hydrocarbons	14,000	4,700		µg/m³	40	8/24/2011 5:40:00 PM
C9-C10 Aromatic Hydrocarbons	ND	5,300		µg/m³	40	8/24/2011 5:40:00 PM
C9-C12 Aliphatic Hydrocarbons	ND	7,600		µg/m³	40	8/24/2011 5:40:00 PM
Surr: 4-Bromofluorobenzene	95.3	70-130		%REC	40	8/24/2011 5:40:00 PM

Qualifiers:

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

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Analytical Report

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WO#: **1108344**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 8/1/2011 1:51:00 PM

Project: Kirtland AFB

Lab ID: 1108344-010 **Matrix:** AIR

Client Sample ID VA0663

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.30	0.10		%	1	8/26/2011 2:42:00 PM
Carbon Monoxide	ND	0.10		%	1	8/26/2011 2:42:00 PM
Methane	ND	0.50		%	1	8/26/2011 2:42:00 PM
Nitrogen	79	0.10		%	1	8/26/2011 2:42:00 PM
Oxygen	20	0.10		%	1	8/26/2011 2:42:00 PM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **RH3**
C5-C8 Aliphatic Hydrocarbons	9,600	4,700		µg/m³	40	8/24/2011 6:24:00 PM
C9-C10 Aromatic Hydrocarbons	ND	5,300		µg/m³	40	8/24/2011 6:24:00 PM
C9-C12 Aliphatic Hydrocarbons	ND	7,600		µg/m³	40	8/24/2011 6:24:00 PM
Surr: 4-Bromofluorobenzene	95.9	70-130		%REC	40	8/24/2011 6:24:00 PM

Qualifiers:

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

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Analytical Report

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WO#: **1108344**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 8/1/2011 2:28:00 PM

Project: Kirtland AFB

Lab ID: 1108344-011 **Matrix:** AIR

Client Sample ID VA0664

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.32	0.10		%	1	8/26/2011 3:06:00 PM
Carbon Monoxide	ND	0.10		%	1	8/26/2011 3:06:00 PM
Methane	ND	0.50		%	1	8/26/2011 3:06:00 PM
Nitrogen	79	0.10		%	1	8/26/2011 3:06:00 PM
Oxygen	21	0.10		%	1	8/26/2011 3:06:00 PM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **RH3**
C5-C8 Aliphatic Hydrocarbons	8,900	4,700		µg/m³	40	8/24/2011 7:07:00 PM
C9-C10 Aromatic Hydrocarbons	ND	5,300		µg/m³	40	8/24/2011 7:07:00 PM
C9-C12 Aliphatic Hydrocarbons	ND	7,600		µg/m³	40	8/24/2011 7:07:00 PM
Surr: 4-Bromofluorobenzene	94.1	70-130		%REC	40	8/24/2011 7:07:00 PM

Qualifiers:

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

Revision v1

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Analytical Report

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WO#: **1108344**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 8/1/2011 2:28:00 PM

Project: Kirtland AFB

Lab ID: 1108344-012 **Matrix:** AIR

Client Sample ID VA0665

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.32	0.10		%	1	8/26/2011 3:29:00 PM
Carbon Monoxide	ND	0.10		%	1	8/26/2011 3:29:00 PM
Methane	ND	0.50		%	1	8/26/2011 3:29:00 PM
Nitrogen	78	0.10		%	1	8/26/2011 3:29:00 PM
Oxygen	21	0.10		%	1	8/26/2011 3:29:00 PM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **RH3**
C5-C8 Aliphatic Hydrocarbons	5,500	4,700		µg/m³	40	8/25/2011 3:34:00 PM
C9-C10 Aromatic Hydrocarbons	ND	5,300		µg/m³	40	8/25/2011 3:34:00 PM
C9-C12 Aliphatic Hydrocarbons	ND	7,600		µg/m³	40	8/25/2011 3:34:00 PM
Surr: 4-Bromofluorobenzene	103	70-130		%REC	40	8/25/2011 3:34:00 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#: **1108344**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 8/1/2011 3:21:00 PM

Project: Kirtland AFB

Lab ID: 1108344-013 **Matrix:** AIR

Client Sample ID VA0666

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.12	0.10		%	1	8/26/2011 4:23:00 PM
Carbon Monoxide	ND	0.10		%	1	8/26/2011 4:23:00 PM
Methane	ND	0.50		%	1	8/26/2011 4:23:00 PM
Nitrogen	78	0.10		%	1	8/26/2011 4:23:00 PM
Oxygen	22	0.10		%	1	8/26/2011 4:23:00 PM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **RH3**
C5-C8 Aliphatic Hydrocarbons	9,700	1,200		µg/m³	10	8/25/2011 5:09:00 PM
C9-C10 Aromatic Hydrocarbons	ND	1,300		µg/m³	10	8/25/2011 5:09:00 PM
C9-C12 Aliphatic Hydrocarbons	2,100	1,900		µg/m³	10	8/25/2011 5:09:00 PM
Surr: 4-Bromofluorobenzene	98.4	70-130		%REC	10	8/25/2011 5:09:00 PM

Qualifiers:

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

Revision v1

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Analytical Report

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WO#: **1108344**

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

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

Project: Kirtland AFB

Lab ID: 1108344-014 **Matrix:** AIR

Client Sample ID VA0667

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.48	0.10		%	1	8/26/2011 4:53:00 PM
Carbon Monoxide	ND	0.10		%	1	8/26/2011 4:53:00 PM
Methane	ND	0.50		%	1	8/26/2011 4:53:00 PM
Nitrogen	79	0.10		%	1	8/26/2011 4:53:00 PM
Oxygen	20	0.10		%	1	8/26/2011 4:53:00 PM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **RH3**
C5-C8 Aliphatic Hydrocarbons	3,400	1,200		µg/m³	10	8/25/2011 5:52:00 PM
C9-C10 Aromatic Hydrocarbons	ND	1,300		µg/m³	10	8/25/2011 5:52:00 PM
C9-C12 Aliphatic Hydrocarbons	1,400	1,900	J	µg/m³	10	8/25/2011 5:52:00 PM
Surr: 4-Bromofluorobenzene	98.8	70-130		%REC	10	8/25/2011 5:52:00 PM

Qualifiers:

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

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Analytical Report

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WO#: **1108344**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/26/2011 9:03:00 AM

Project: Kirtland AFB

Lab ID: 1108344-015 **Matrix:** AIR

Client Sample ID VA0668

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.11	0.10		%	1	8/24/2011 4:47:00 PM
Carbon Monoxide	ND	0.10		%	1	8/24/2011 4:47:00 PM
Methane	ND	0.50		%	1	8/24/2011 4:47:00 PM
Nitrogen	76	0.10		%	1	8/24/2011 4:47:00 PM
Oxygen	21	0.10		%	1	8/24/2011 4:47:00 PM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **RH3**
C5-C8 Aliphatic Hydrocarbons	45,000	4,700		µg/m³	40	8/22/2011 9:18:00 PM
C9-C10 Aromatic Hydrocarbons	ND	5,300		µg/m³	40	8/22/2011 9:18:00 PM
C9-C12 Aliphatic Hydrocarbons	4,900	7,600	J	µg/m³	40	8/22/2011 9:18:00 PM
Surr: 4-Bromofluorobenzene	98.2	70-130		%REC	40	8/22/2011 9:18:00 PM

Qualifiers:

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

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

Analytical Report

(consolidated)

WO#: **1108344**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/26/2011 10:07:00 AM

Project: Kirtland AFB

Lab ID: 1108344-016 **Matrix:** AIR

Client Sample ID VA0669

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.12	0.10		%	1	8/24/2011 5:24:00 PM
Carbon Monoxide	ND	0.10		%	1	8/24/2011 5:24:00 PM
Methane	ND	0.50		%	1	8/24/2011 5:24:00 PM
Nitrogen	77	0.10		%	1	8/24/2011 5:24:00 PM
Oxygen	21	0.10		%	1	8/24/2011 5:24:00 PM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **RH3**
C5-C8 Aliphatic Hydrocarbons	200,000	94,000		µg/m³	800	8/20/2011 2:48:00 AM
C9-C10 Aromatic Hydrocarbons	ND	110,000		µg/m³	800	8/20/2011 2:48:00 AM
C9-C12 Aliphatic Hydrocarbons	ND	150,000		µg/m³	800	8/20/2011 2:48:00 AM
Surr: 4-Bromofluorobenzene	97.6	70-130		%REC	800	8/20/2011 2:48:00 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

RTI LABORATORIES, INC.

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Analytical Report

(consolidated)

WO#: **1108344**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/26/2011 10:07:00 AM

Project: Kirtland AFB

Lab ID: 1108344-017 **Matrix:** AIR

Client Sample ID VA0670

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.11	0.10		%	1	8/24/2011 5:50:00 PM
Carbon Monoxide	ND	0.10		%	1	8/24/2011 5:50:00 PM
Methane	ND	0.50		%	1	8/24/2011 5:50:00 PM
Nitrogen	77	0.10		%	1	8/24/2011 5:50:00 PM
Oxygen	21	0.10		%	1	8/24/2011 5:50:00 PM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **RH3**
C5-C8 Aliphatic Hydrocarbons	240,000	47,000		µg/m³	400	8/22/2011 10:07:00 PM
C9-C10 Aromatic Hydrocarbons	ND	53,000		µg/m³	400	8/22/2011 10:07:00 PM
C9-C12 Aliphatic Hydrocarbons	19,000	76,000	J	µg/m³	400	8/22/2011 10:07:00 PM
Surr: 4-Bromofluorobenzene	95.6	70-130		%REC	400	8/22/2011 10:07:00 PM

Qualifiers:

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

Revision v1

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Analytical Report

(consolidated)

WO#: **1108344**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/26/2011 11:49:00 AM

Project: Kirtland AFB

Lab ID: 1108344-018 **Matrix:** AIR

Client Sample ID VA0671

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.098	0.10	J	%	1	8/25/2011 12:42:00 PM
Carbon Monoxide	ND	0.10		%	1	8/25/2011 12:42:00 PM
Methane	ND	0.50		%	1	8/25/2011 12:42:00 PM
Nitrogen	78	0.10		%	1	8/25/2011 12:42:00 PM
Oxygen	21	0.10		%	1	8/25/2011 12:42:00 PM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **RH3**
C5-C8 Aliphatic Hydrocarbons	14,000	4,700		µg/m³	40	8/23/2011 5:55:00 PM
C9-C10 Aromatic Hydrocarbons	ND	5,300		µg/m³	40	8/23/2011 5:55:00 PM
C9-C12 Aliphatic Hydrocarbons	4,500	7,600	J	µg/m³	40	8/23/2011 5:55:00 PM
Surr: 4-Bromofluorobenzene	99.9	70-130		%REC	40	8/23/2011 5:55:00 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#: 1108344

Date Reported: 10/20/2011

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/26/2011 12:27:00 PM

Project: Kirtland AFB

Lab ID: 1108344-019 **Matrix:** AIR

Client Sample ID VA0672

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.11	0.10		%	1	8/25/2011 1:09:00 PM
Carbon Monoxide	ND	0.10		%	1	8/25/2011 1:09:00 PM
Methane	ND	0.50		%	1	8/25/2011 1:09:00 PM
Nitrogen	78	0.10		%	1	8/25/2011 1:09:00 PM
Oxygen	21	0.10		%	1	8/25/2011 1:09:00 PM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **RH3**
C5-C8 Aliphatic Hydrocarbons	15,000	2,300		µg/m³	20	8/23/2011 4:30:00 PM
C9-C10 Aromatic Hydrocarbons	ND	2,700		µg/m³	20	8/23/2011 4:30:00 PM
C9-C12 Aliphatic Hydrocarbons	3,700	3,800	J	µg/m³	20	8/23/2011 4:30:00 PM
Surr: 4-Bromofluorobenzene	98.2	70-130		%REC	20	8/23/2011 4:30:00 PM

Qualifiers:

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

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Analytical Report

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WO#: **1108344**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/26/2011 2:20:00 PM

Project: Kirtland AFB

Lab ID: 1108344-020 **Matrix:** AIR

Client Sample ID VA0673

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.15	0.10		%	1	8/25/2011 1:29:00 PM
Carbon Monoxide	ND	0.10		%	1	8/25/2011 1:29:00 PM
Methane	ND	0.50		%	1	8/25/2011 1:29:00 PM
Nitrogen	78	0.10		%	1	8/25/2011 1:29:00 PM
Oxygen	20	0.10		%	1	8/25/2011 1:29:00 PM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **RH3**
C5-C8 Aliphatic Hydrocarbons	4,600,000	940,000		µg/m³	8000	8/24/2011 3:54:00 PM
C9-C10 Aromatic Hydrocarbons	ND	1,100,000		µg/m³	8000	8/24/2011 3:54:00 PM
C9-C12 Aliphatic Hydrocarbons	ND	1,500,000		µg/m³	8000	8/24/2011 3:54:00 PM
Surr: 4-Bromofluorobenzene	94.9	70-130		%REC	8000	8/24/2011 3:54:00 PM

Qualifiers:

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

Revision v1

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Analytical Report

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WO#: 1108344

Date Reported: 10/20/2011

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/26/2011 3:10:00 PM

Project: Kirtland AFB

Lab ID: 1108344-021 **Matrix:** AIR

Client Sample ID VA0674

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.66	0.10		%	1	8/25/2011 1:51:00 PM
Carbon Monoxide	ND	0.10		%	1	8/25/2011 1:51:00 PM
Methane	ND	0.50		%	1	8/25/2011 1:51:00 PM
Nitrogen	80	0.10		%	1	8/25/2011 1:51:00 PM
Oxygen	18	0.10		%	1	8/25/2011 1:51:00 PM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **RH3**
C5-C8 Aliphatic Hydrocarbons	16,000,000	940,000		µg/m³	8000	8/23/2011 7:22:00 PM
C9-C10 Aromatic Hydrocarbons	ND	1,100,000		µg/m³	8000	8/23/2011 7:22:00 PM
C9-C12 Aliphatic Hydrocarbons	ND	1,500,000		µg/m³	8000	8/23/2011 7:22:00 PM
Surr: 4-Bromofluorobenzene	98.9	70-130		%REC	8000	8/23/2011 7:22:00 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

Revision v1

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Analytical Report

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WO#: **1108344**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/25/2011 9:28:00 AM

Project: Kirtland AFB

Lab ID: 1108344-022 **Matrix:** AIR

Client Sample ID VA0681

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.14	0.10		%	1	8/24/2011 2:25:00 PM
Carbon Monoxide	ND	0.10		%	1	8/24/2011 2:25:00 PM
Methane	ND	0.50		%	1	8/24/2011 2:25:00 PM
Nitrogen	77	0.10		%	1	8/24/2011 2:25:00 PM
Oxygen	21	0.10		%	1	8/24/2011 2:25:00 PM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **RH3**
C5-C8 Aliphatic Hydrocarbons	28,000	4,700		µg/m³	40	8/22/2011 5:48:00 PM
C9-C10 Aromatic Hydrocarbons	ND	5,300		µg/m³	40	8/22/2011 5:48:00 PM
C9-C12 Aliphatic Hydrocarbons	7,100	7,600	J	µg/m³	40	8/22/2011 5:48:00 PM
Surr: 4-Bromofluorobenzene	102	70-130		%REC	40	8/22/2011 5:48:00 PM

Qualifiers:

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

Revision v1

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Analytical Report

(consolidated)

WO#: **1108344**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/25/2011 10:07:00 AM

Project: Kirtland AFB

Lab ID: 1108344-023 **Matrix:** AIR

Client Sample ID VA0682

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.15	0.10		%	1	8/24/2011 2:53:00 PM
Carbon Monoxide	ND	0.10		%	1	8/24/2011 2:53:00 PM
Methane	ND	0.50		%	1	8/24/2011 2:53:00 PM
Nitrogen	77	0.10		%	1	8/24/2011 2:53:00 PM
Oxygen	21	0.10		%	1	8/24/2011 2:53:00 PM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **RH3**
C5-C8 Aliphatic Hydrocarbons	26,000	4,700		µg/m³	40	8/22/2011 6:31:00 PM
C9-C10 Aromatic Hydrocarbons	ND	5,300		µg/m³	40	8/22/2011 6:31:00 PM
C9-C12 Aliphatic Hydrocarbons	7,000	7,600	J	µg/m³	40	8/22/2011 6:31:00 PM
Surr: 4-Bromofluorobenzene	99.8	70-130		%REC	40	8/22/2011 6:31:00 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

Revision v1

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Analytical Report

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WO#: **1108344**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/25/2011 12:45:00 PM

Project: Kirtland AFB

Lab ID: 1108344-024 **Matrix:** AIR

Client Sample ID VA0683

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.075	0.10	J	%	1	8/24/2011 3:15:00 PM
Carbon Monoxide	ND	0.10		%	1	8/24/2011 3:15:00 PM
Methane	ND	0.50		%	1	8/24/2011 3:15:00 PM
Nitrogen	77	0.10		%	1	8/24/2011 3:15:00 PM
Oxygen	21	0.10		%	1	8/24/2011 3:15:00 PM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **RH3**
C5-C8 Aliphatic Hydrocarbons	19,000	4,700		µg/m³	40	8/22/2011 7:12:00 PM
C9-C10 Aromatic Hydrocarbons	ND	5,300		µg/m³	40	8/22/2011 7:12:00 PM
C9-C12 Aliphatic Hydrocarbons	5,400	7,600	J	µg/m³	40	8/22/2011 7:12:00 PM
Surr: 4-Bromofluorobenzene	98.0	70-130		%REC	40	8/22/2011 7:12:00 PM

Qualifiers:

*IX	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#: **1108344**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/25/2011 1:34:00 PM

Project: Kirtland AFB

Lab ID: 1108344-025 **Matrix:** AIR

Client Sample ID VA0684

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.087	0.10	J	%	1	8/24/2011 3:42:00 PM
Carbon Monoxide	ND	0.10		%	1	8/24/2011 3:42:00 PM
Methane	ND	0.50		%	1	8/24/2011 3:42:00 PM
Nitrogen	77	0.10		%	1	8/24/2011 3:42:00 PM
Oxygen	21	0.10		%	1	8/24/2011 3:42:00 PM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **RH3**
C5-C8 Aliphatic Hydrocarbons	15,000	4,700		µg/m³	40	8/22/2011 7:54:00 PM
C9-C10 Aromatic Hydrocarbons	ND	5,300		µg/m³	40	8/22/2011 7:54:00 PM
C9-C12 Aliphatic Hydrocarbons	3,600	7,600	J	µg/m³	40	8/22/2011 7:54:00 PM
Surr: 4-Bromofluorobenzene	98.0	70-130		%REC	40	8/22/2011 7:54:00 PM

Qualifiers:

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

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Analytical Report

(consolidated)

WO#: **1108344**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/25/2011 2:22:00 PM

Project: Kirtland AFB

Lab ID: 1108344-026 **Matrix:** AIR

Client Sample ID VA0685

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.080	0.10	J	%	1	8/24/2011 4:27:00 PM
Carbon Monoxide	ND	0.10		%	1	8/24/2011 4:27:00 PM
Methane	ND	0.50		%	1	8/24/2011 4:27:00 PM
Nitrogen	77	0.10		%	1	8/24/2011 4:27:00 PM
Oxygen	21	0.10		%	1	8/24/2011 4:27:00 PM
MASS APH AIR AIR-PHASE PETROLEUM HYDROCARBONS				**MA_APH**		Analyst: **RH3**
C5-C8 Aliphatic Hydrocarbons	17,000	4,700		µg/m³	40	8/22/2011 8:37:00 PM
C9-C10 Aromatic Hydrocarbons	ND	5,300		µg/m³	40	8/22/2011 8:37:00 PM
C9-C12 Aliphatic Hydrocarbons	3,600	7,600	J	µg/m³	40	8/22/2011 8:37:00 PM
Surr: 4-Bromofluorobenzene	96.2	70-130		%REC	40	8/22/2011 8:37:00 PM

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

Revision v1

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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1108344**

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

CLIENT: Shaw Environmental & Infrastructure, Inc **Collection Date:** 7/28/2011 3:09:00 PM

Project: Kirtland AFB

Lab ID: 1108344-027 **Matrix:** AIR

Client Sample ID VA0686

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NONCONDENSABLE GASES AND LIGHT HYDROCARBONS				**ASTM-D2504**		Analyst: **MB**
Carbon dioxide	0.11	0.10		%	1	8/25/2011 2:17:00 PM
Carbon Monoxide	ND	0.10		%	1	8/25/2011 2:17:00 PM
Methane	ND	0.50		%	1	8/25/2011 2:17:00 PM
Nitrogen	78	0.10		%	1	8/25/2011 2:17:00 PM
Oxygen	21	0.10		%	1	8/25/2011 2:17:00 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

Revision v1

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Website: www.rtilabs.com

QC SUMMARY REPORT

WO#: **1108344**

20-Oct-11

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

BatchID: **R42327**

Sample ID: **MBLK 081911A VOA** SampType: **MBLK** TestCode: **MA_APH** Units: **µg/m³** Prep Date: RunNo: **42327**
Client ID: **PBW** Batch ID: **R42327** TestNo: **MA_APH** Analysis Date: **8/19/2011** SeqNo: **819013**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
C5-C8 Aliphatic Hydrocarbons	100	120									J
C9-C10 Aromatic Hydrocarbons	ND	130									
C9-C12 Aliphatic Hydrocarbons	ND	190									
Surr: 4-Bromofluorobenzene	86		89.50		96.5	70	130				

Sample ID: **1107914-015BDUP** SampType: **DUP** TestCode: **MA_APH** Units: **µg/m³** Prep Date: RunNo: **42327**
Client ID: **ZZZZZZ** Batch ID: **R42327** TestNo: **MA_APH** Analysis Date: **8/19/2011** SeqNo: **819015**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
C5-C8 Aliphatic Hydrocarbons	20,000	4,700						16,450	18.3	30	H
C9-C10 Aromatic Hydrocarbons	ND	5,300						0	0	30	H
C9-C12 Aliphatic Hydrocarbons	13,000	7,600						11,550	10.8	30	H
Surr: 4-Bromofluorobenzene	3,700		3,580		104	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

RTI LABORATORIES, INC.

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

QC SUMMARY REPORT

WO#: 1108344
20-Oct-11

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

BatchID: R42374

Sample ID: **MBLK 082211A VOA** SampType: **MBLK** TestCode: **MA_APH** Units: **µg/m³** Prep Date: RunNo: **42374**
Client ID: **PBW** Batch ID: **R42374** TestNo: **MA_APH** Analysis Date: **8/22/2011** SeqNo: **820145**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
C5-C8 Aliphatic Hydrocarbons	47	120									J
C9-C10 Aromatic Hydrocarbons	ND	130									
C9-C12 Aliphatic Hydrocarbons	ND	190									
Surr: 4-Bromofluorobenzene	85		89.50		95.3	70	130				

Sample ID: **1107914-020BDUP** SampType: **DUP** TestCode: **MA_APH** Units: **µg/m³** Prep Date: RunNo: **42374**
Client ID: **ZZZZZZ** Batch ID: **R42374** TestNo: **MA_APH** Analysis Date: **8/22/2011** SeqNo: **820147**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
C5-C8 Aliphatic Hydrocarbons	14,000	4,700						13,430	4.74	30	H
C9-C10 Aromatic Hydrocarbons	ND	5,300						0	0	30	H
C9-C12 Aliphatic Hydrocarbons	8,400	7,600						9,010	7.10	30	H
Surr: 4-Bromofluorobenzene	3,700		3,580		102	70	130		0	30	H

Qualifiers:

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

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QC SUMMARY REPORT

WO#: **1108344**
20-Oct-11

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

BatchID: **R42403**

Sample ID: **MBLK 082311A VOA** SampType: **MBLK** TestCode: **MA_APH** Units: **µg/m³** Prep Date: RunNo: **42403**
Client ID: **PBW** Batch ID: **R42403** TestNo: **MA_APH** Analysis Date: **8/23/2011** SeqNo: **820796**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
C5-C8 Aliphatic Hydrocarbons	44	120									J
C9-C10 Aromatic Hydrocarbons	ND	130									
C9-C12 Aliphatic Hydrocarbons	ND	190									
Surr: 4-Bromofluorobenzene	86		89.50		96.6	70	130				

Sample ID: **1108344-019ADUP** SampType: **DUP** TestCode: **MA_APH** Units: **µg/m³** Prep Date: RunNo: **42403**
Client ID: **VA0672** Batch ID: **R42403** TestNo: **MA_APH** Analysis Date: **8/23/2011** SeqNo: **820798**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
C5-C8 Aliphatic Hydrocarbons	16,000	2,300						15,200	4.61	30	
C9-C10 Aromatic Hydrocarbons	ND	2,700						0	0	30	
C9-C12 Aliphatic Hydrocarbons	4,000	3,800						3,718	8.50	30	
Surr: 4-Bromofluorobenzene	1,800		1,790		102	70	130		0	30	

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#: **1108344**
20-Oct-11

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

BatchID: **R42429**

Sample ID: **MBLK 082411A VOA** SampType: **MBLK** TestCode: **MA_APH** Units: **µg/m³** Prep Date: RunNo: **42429**
Client ID: **PBW** Batch ID: **R42429** TestNo: **MA_APH** Analysis Date: **8/24/2011** SeqNo: **821549**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
C5-C8 Aliphatic Hydrocarbons	47	120									J
C9-C10 Aromatic Hydrocarbons	ND	130									
C9-C12 Aliphatic Hydrocarbons	ND	190									
Surr: 4-Bromofluorobenzene	86		89.50		95.7	70	130				

Sample ID: **1108344-008ADUP** SampType: **DUP** TestCode: **MA_APH** Units: **µg/m³** Prep Date: RunNo: **42429**
Client ID: **VA0661** Batch ID: **R42429** TestNo: **MA_APH** Analysis Date: **8/24/2011** SeqNo: **821551**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
C5-C8 Aliphatic Hydrocarbons	11,000	4,700						10,290	6.75	30	
C9-C10 Aromatic Hydrocarbons	ND	5,300						0	0	30	
C9-C12 Aliphatic Hydrocarbons	ND	7,600						0	0	30	
Surr: 4-Bromofluorobenzene	3,600		3,580		99.2	70	130		0	30	

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#: **1108344**

20-Oct-11

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

BatchID: **R42461**

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

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

Sample ID: **1108344-012ADUP** SampType: **DUP** TestCode: **MA_APH** Units: **µg/m³** Prep Date: RunNo: **42461**
Client ID: **VA0665** Batch ID: **R42461** TestNo: **MA_APH** Analysis Date: **8/25/2011** SeqNo: **822177**

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

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	E	Value above quantitation range	H	Holding times for preparation or analysis 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#: **1108344**
20-Oct-11

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

BatchID: **R42681**

Sample ID: **mblk** SampType: **MBLK** TestCode: **ASTM-D2504** Units: **%** Prep Date: RunNo: **42681**
Client ID: **PBW** Batch ID: **R42681** TestNo: **ASTM-D2504** Analysis Date: **8/24/2011** SeqNo: **827913**

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: **42681**
Client ID: **LCSW** Batch ID: **R42681** TestNo: **ASTM-D2504** Analysis Date: **8/24/2011** SeqNo: **827915**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon dioxide	2.6	0.10	2.500	0	105	70	130	2.722	3.67	0	
Carbon Monoxide	2.4	0.10	2.500	0	97.6	70	130	2.564	4.92	0	
Methane	2.0	0.50	2.000	0	101	70	130	2.108	4.76	0	
Nitrogen	2.5	0.10	2.500	0	99.8	70	130	2.614	4.66	0	
Oxygen	2.2	0.10	2.500	0	87.6	70	130	2.314	5.51	0	

Sample ID: **1108344-017bdup** SampType: **DUP** TestCode: **ASTM-D2504** Units: **%** Prep Date: RunNo: **42681**
Client ID: **VA0670** Batch ID: **R42681** TestNo: **ASTM-D2504** Analysis Date: **8/24/2011** SeqNo: **827925**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon dioxide	0.11	0.10						0.1090	1.82	20	
Carbon Monoxide	ND	0.10						0	0	20	
Methane	ND	0.50						0	0	20	
Nitrogen	77	0.10						76.96	0.560	20	
Oxygen	21	0.10						20.96	0.656	20	

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
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QC SUMMARY REPORT

WO#: 1108344
20-Oct-11

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

BatchID: R42682

Sample ID: **mblk** SampType: **MBLK** TestCode: **ASTM-D2504** Units: **%** Prep Date: RunNo: **42682**
Client ID: **PBW** Batch ID: **R42682** TestNo: **ASTM-D2504** Analysis Date: **8/25/2011** SeqNo: **827928**

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: **42682**
Client ID: **LCSW** Batch ID: **R42682** TestNo: **ASTM-D2504** Analysis Date: **8/25/2011** SeqNo: **827930**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon dioxide	2.8	0.10	2.500	0	110	70	130	2.808	1.83	0	
Carbon Monoxide	2.7	0.10	2.500	0	107	70	130	2.647	1.35	0	
Methane	2.1	0.50	2.000	0	106	70	130	2.067	2.20	0	
Nitrogen	2.6	0.10	2.500	0	104	70	130	2.619	1.11	0	
Oxygen	2.6	0.10	2.500	0	104	70	130	2.620	0.613	0	

Sample ID: **1108344-004bdup** SampType: **DUP** TestCode: **ASTM-D2504** Units: **%** Prep Date: RunNo: **42682**
Client ID: **VA0650** Batch ID: **R42682** TestNo: **ASTM-D2504** Analysis Date: **8/25/2011** SeqNo: **827941**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon dioxide	0.15	0.10						0.1450	5.37	20	
Carbon Monoxide	ND	0.10						0	0	20	
Methane	ND	0.50						0	0	20	
Nitrogen	78	0.10						77.89	0.0257	20	
Oxygen	21	0.10						20.93	0.00478	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#: **1108344**
20-Oct-11

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

BatchID: **R42683**

Sample ID: **mblk** SampType: **MBLK** TestCode: **ASTM-D2504** Units: **%** Prep Date: RunNo: **42683**
Client ID: **PBW** Batch ID: **R42683** TestNo: **ASTM-D2504** Analysis Date: **8/26/2011** SeqNo: **827944**

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: **42683**
Client ID: **LCSW** Batch ID: **R42683** TestNo: **ASTM-D2504** Analysis Date: **8/26/2011** SeqNo: **827946**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon dioxide	2.8	0.10	2.500	0	111	70	130	2.778	0.505	0	
Carbon Monoxide	2.7	0.10	2.500	0	108	70	130	2.715	0.665	0	
Methane	2.2	0.50	2.000	0	108	70	130	2.103	2.77	0	
Nitrogen	2.6	0.10	2.500	0	106	70	130	2.704	2.09	0	
Oxygen	2.6	0.10	2.500	0	106	70	130	2.662	0.830	0	

Sample ID: **1108344-014bdup** SampType: **DUP** TestCode: **ASTM-D2504** Units: **%** Prep Date: RunNo: **42683**
Client ID: **VA0667** Batch ID: **R42683** TestNo: **ASTM-D2504** Analysis Date: **8/26/2011** SeqNo: **827958**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon dioxide	0.49	0.10						0.4800	2.87	20	
Carbon Monoxide	ND	0.10						0	0	20	
Methane	ND	0.50						0	0	20	
Nitrogen	78	0.10						78.54	0.585	20	
Oxygen	20	0.10						20.37	0.556	20	

Qualifiers:

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

RTI Laboratories

Run ID: VOA9_110819A **Run No.:** 42327

Analytical Run Date: 8/19/2011 **InstrumentID:** VOA9

Analyst: Rachel Hill **Column:**

Calibration ID: 42263 **Column ID:**

Column Length:

SampID	TestCode	SampType	Batch ID	Analysis Date/Time	QA By	Q	Comments
BFB 081911A VOA9	BFB_TUNE	TUNE	R42327	8/19/2011 9:37:00 AM	Fred J Hoitash		
CCV 081911A VOA9	MA_APH	CCV	R42327	8/19/2011 10:21:00 AM	Fred J Hoitash		
RLVS 081911A VOA	MA_APH	RLVS	R42327	8/19/2011 11:03:00 AM	Fred J Hoitash		
MBLK 081911A VOA	MA_APH	MBLK	R42327	8/19/2011 11:55:00 AM	Fred J Hoitash		
1107914-015B	MA_APH	SAMP	R42327	8/19/2011 12:37:00 PM	Fred J Hoitash	H	
1107914-015BDUP	MA_APH	DUP	R42327	8/19/2011 1:19:00 PM	Fred J Hoitash	H	
1107914-016B	MA_APH	SAMP	R42327	8/19/2011 2:01:00 PM	Fred J Hoitash	H	
1107914-017B	MA_APH	SAMP	R42327	8/19/2011 2:43:00 PM	Fred J Hoitash	H	
1107914-005B	MA_APH	SAMP	R42327	8/19/2011 3:25:00 PM	Fred J Hoitash		
1107914-006B	MA_APH	SAMP	R42327	8/19/2011 4:07:00 PM	Fred J Hoitash		
1107914-007B	MA_APH	SAMP	R42327	8/19/2011 4:49:00 PM	Fred J Hoitash		
1107914-018B	MA_APH	SAMP	R42327	8/19/2011 5:31:00 PM	Fred J Hoitash		
1107914-019B	MA_APH	SAMP	R42327	8/19/2011 6:19:00 PM	Fred J Hoitash		
1108344-016A	MA_APH	SAMP	R42327	8/20/2011 2:48:00 AM	Fred J Hoitash		
RLVS 081911B VOA	MA_APH	RLVS	R42327	8/20/2011 3:29:00 AM	Fred J Hoitash		

RTI Laboratories

ANALYTICAL RUN Summary

21-Oct-11

RunNo 42327

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
819427	BFB 081911A VOA9	BFB_TUNE	TUNE	\I\DATA\081911	8/19/2011 9:37:0	1	R42327		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		7.7	7.7		0	0	0	0	0	0	0%	4	9	0%	
176	M		96	96		0	0	0	0	0	0	0%	93	101	0%	
177	M		6.4	6.4		0	0	0	0	0	0	0%	5	9	0%	
50	M		23.9	23.9		0	0	0	0	0	0	0%	8	40	0%	
75	M		46.5	46.5		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		6.6	6.6		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
819011	CCV 081911A VOA9	MA_APH	CCV	\I\DATA\081911	8/19/2011 10:21:	1	R42327		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	224.24	224.24		222	0	0	0	0	0	101%	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	218.09	218.09		185	0	0	0	0	0	118%	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	261.91	261.91		221	0	0	0	0	0	119%	70	130	0%	
C9-C12 Aliphatic Hydrocarbons	A	µg/m³		0		0	0	0	25.766	189	0	0%	0	0	0%	
C9-C12 Aliphatic-Aromatic Hydrocarbons	A	µg/m³		0		0	0	0	0	0	0	0%	0	0	0%	
non C5-C8 - TOTAL	A	µg/m³		0		0	0	0	0	0	0	0%	0	0	0%	
non C9-C12 - TOTAL	A	µg/m³		0		0	0	0	0	0	0	0%	0	0	0%	
Chlorobenzene-d5	I	ppbv	12.5	12.5		12.5	0	0	0	0	0	100%	80	120	0%	
4-Bromofluorobenzene	S	µg/m³	93.16	93.16		89.5	0	0	0	0	0	104%	70	130	0%	

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\081911\08191102.D Vial: 2
Acq On : 19 Aug 2011 10:21 am Operator: RACHEL HILL
Sample : CCV 081911A VOA9 Inst : GC/MS Ins
Misc : CCV MA_APH Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 19 14:04 2011 Quant Results File: 081611V9.RES

Quant Method : C:\HPCHEM\1\METHODS\081611V9.M (RTE Integrator)
Title : MASS APH
Last Update : Wed Aug 17 10:38:55 2011
Response via : Initial Calibration
DataAcq Meth : 081611V9

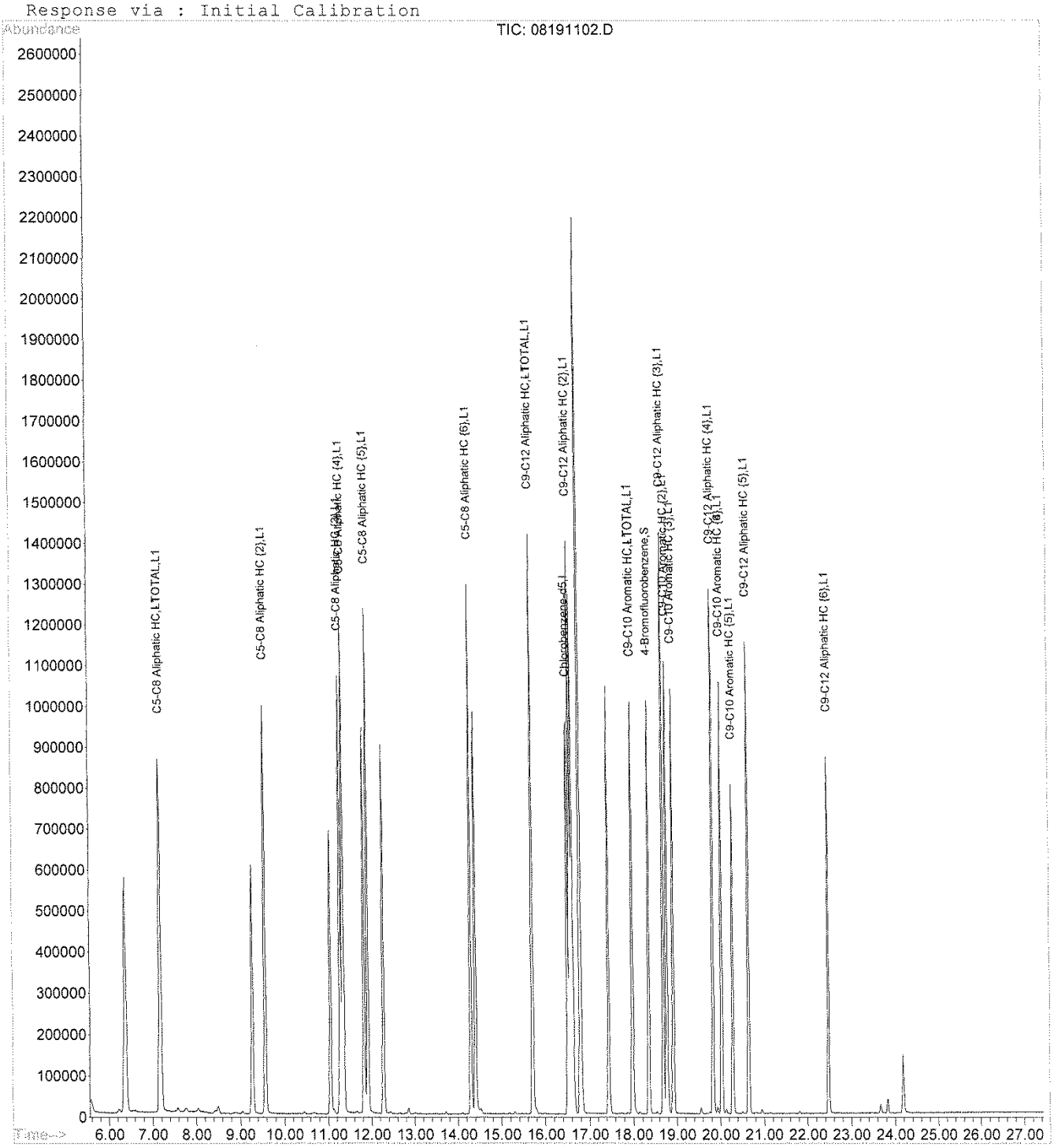
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
40) Chlorobenzene-d5	16.51	117	685741	12.50	ug/m3	0.00
System Monitoring Compounds						
41) 4-Bromofluorobenzene	18.35	95	486038	93.16	ug/m3	0.00
Spiked Amount 89.500	Range 70 - 130		Recovery = 104.09%			
Target Compounds						Qvalue
1) C5-C8 Aliphatic HC	7.18	TIC	2923456	32.82	ug/m3	100
2) C5-C8 Aliphatic HC {2}	9.57	TIC	2506538	36.10	ug/m3	100
3) C5-C8 Aliphatic HC {3}	11.28	TIC	2730417	36.03	ug/m3	100
4) C5-C8 Aliphatic HC {4}	11.35	TIC	3074498	43.92	ug/m3	100
5) C5-C8 Aliphatic HC {5}	11.92	TIC	2737548	37.52	ug/m3	100
6) C5-C8 Aliphatic HC {6}	14.30	TIC	2739864	37.46	ug/m3	100
7) C5-C8 Aliphatic HC - TOTAL	7.18	TIC	16712321m	224.24	ug/m3	
8) C9-C12 Aliphatic HC	15.70	TIC	3376997	42.90	ug/m3	100
9) C9-C12 Aliphatic HC {2}	16.57	TIC	3214933	42.53	ug/m3	100
10) C9-C12 Aliphatic HC {3}	18.69	TIC	2951982	44.60	ug/m3	100
11) C9-C12 Aliphatic HC {4}	19.83	TIC	2835867	43.77	ug/m3	100
12) C9-C12 Aliphatic HC {5}	20.65	TIC	2390252	42.22	ug/m3	100
13) C9-C12 Aliphatic HC {6}	22.47	TIC	1725141	38.69	ug/m3	100
14) C9-C12 Aliphatic HC - TOTA	15.70	TIC	16495172m	261.91	ug/m3	
15) C9-C10 Aromatic HC	17.98	120	226280	40.08	ug/m3	100
16) C9-C10 Aromatic HC {2}	18.77	120	277356	46.58	ug/m3	100
17) C9-C10 Aromatic HC {3}	18.91	120	376093	44.17	ug/m3	100
18) C9-C10 Aromatic HC {4}	20.03	120	81236	46.85	ug/m3	100
19) C9-C10 Aromatic HC {5}	20.29	120	253218	39.52	ug/m3	100
20) C9-C10 Aromatic HC {6}	20.03	134	214057	47.32	ug/m3	100
21) C9-C10 Aromatic HC - TOTAL	17.98	TIC	1428240m	218.09	ug/m3	

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

Quantitation Report

Data File : C:\HPCHEM\1\DATA\081911\08191102.D Vial: 2
Acq On : 19 Aug 2011 10:21 am Operator: RACHEL HILL
Sample : CCV 081911A VOA9 Inst : GC/MS Ins
Misc : CCV MA_APH Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 19 14:04 2011 Quant Results File: 081611V9.RES

Method : C:\HPCHEM\1\METHODS\081611V9.M (RTE Integrator)
Title : MASS APH
Last Update : Wed Aug 17 10:38:55 2011
Response via : Initial Calibration



RTI Laboratories

Run ID: VOA9_110822A **Run No.:** 42374

Analytical Run Date: 8/22/2011 **InstrumentID:** VOA9

Analyst: Rachel Hill **Column:**

Calibration ID: 42263 **Column ID:**

Column Length:

SampID	TestCode	SampType	Batch ID	Analysis Date/Time	QA By	Q	Comments
BFB 082211A VOA9	BFB_TUNE	TUNE	R42374	8/22/2011 10:29:00 AM	Fred J Hoitash		
CCV 082211A VOA9	MA_APH	CCV	R42374	8/22/2011 11:13:00 AM	Fred J Hoitash		
RLVS 082211A VOA	MA_APH	RLVS	R42374	8/22/2011 11:59:00 AM	Fred J Hoitash		
MBLK 082211A VOA	MA_APH	MBLK	R42374	8/22/2011 1:38:00 PM	Fred J Hoitash		
1107914-020B	MA_APH	SAMP	R42374	8/22/2011 2:20:00 PM	Fred J Hoitash	H	
1107914-020BDUP	MA_APH	DUP	R42374	8/22/2011 3:02:00 PM	Fred J Hoitash	H	
1107914-021B	MA_APH	SAMP	R42374	8/22/2011 3:44:00 PM	Fred J Hoitash	H	
1107914-022B	MA_APH	SAMP	R42374	8/22/2011 4:24:00 PM	Fred J Hoitash	H	
1107914-023B	MA_APH	SAMP	R42374	8/22/2011 5:06:00 PM	Fred J Hoitash	H	
1108344-022A	MA_APH	SAMP	R42374	8/22/2011 5:48:00 PM	Fred J Hoitash		
1108344-023A	MA_APH	SAMP	R42374	8/22/2011 6:31:00 PM	Fred J Hoitash		
1108344-024A	MA_APH	SAMP	R42374	8/22/2011 7:12:00 PM	Fred J Hoitash		
1108344-025A	MA_APH	SAMP	R42374	8/22/2011 7:54:00 PM	Fred J Hoitash		
1108344-026A	MA_APH	SAMP	R42374	8/22/2011 8:37:00 PM	Fred J Hoitash		
1108344-015A	MA_APH	SAMP	R42374	8/22/2011 9:18:00 PM	Fred J Hoitash		
1108344-017A	MA_APH	SAMP	R42374	8/22/2011 10:07:00 PM	Fred J Hoitash		
RLVS 082211B VOA	MA_APH	RLVS	R42374	8/23/2011 3:41:00 AM	Fred J Hoitash		

RTI Laboratories

ANALYTICAL RUN Summary

20-Oct-11

RunNo 42374

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
851845	BFB 082211A VOA9	BFB_TUNE	TUNE	\\1\DATA\082211	8/22/2011 10:29:	1	R42374		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		77	77		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		96.1	96.1		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		23.1	23.1		0	0	0	0	0	0	0%	8	40	0%	
75	M		44.6	44.6		0	0	0	0	0	0	0%	30	66	0%	
95	M		100	100		0	0	0	0	0	0	0%	100	100	0%	
96	M		6.5	6.5		0	0	0	0	0	0	0%	5	9	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
820143	CCV 082211A VOA9	MA_APH	CCV	\\1\DATA\082211	8/22/2011 11:13:	1	R42374		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	241.24	241.24		222	0	0	0	0	0	109%	70	130	0%	M
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	232.48	232.48		185	0	0	0	0	0	126%	70	130	0%	M
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	269.99	269.99		221	0	0	0	0	0	122%	70	130	0%	M
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	91.97	91.97		89.5	0	0	0	0	0	103%	70	130	0%	

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\082211\08221102.D Vial: 2
Acq On : 22 Aug 2011 11:13 am Operator: RACHEL HILL
Sample : CCV 082211A VOA9 Inst : GC/MS Ins
Misc : CCV MA_APH Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 22 15:51 2011 Quant Results File: 081611V9.RES

Quant Method : C:\HPCHEM\1\METHODS\081611V9.M (RTE Integrator)
Title : MASS APH
Last Update : Wed Aug 17 10:38:55 2011
Response via : Initial Calibration
DataAcq Meth : 081611V9

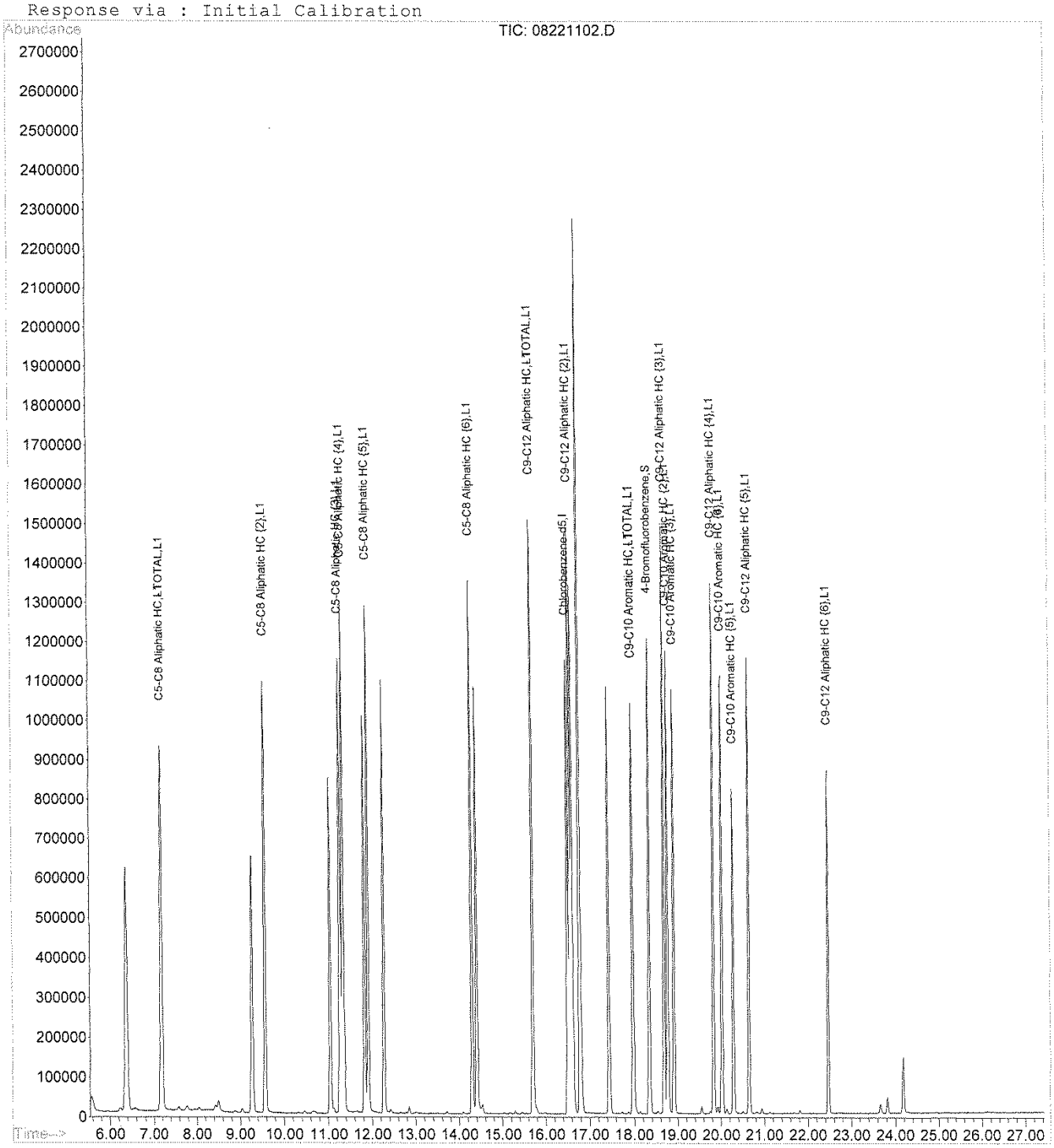
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
40) Chlorobenzene-d5	16.51	117	846124	12.50	ug/m3	0.00
System Monitoring Compounds						
41) 4-Bromofluorobenzene	18.34	95	592016	91.97	ug/m3	0.00
Spiked Amount 89.500	Range 70 - 130		Recovery = 102.76%			
Target Compounds						Qvalue
1) C5-C8 Aliphatic HC	7.18	TIC	3167841	35.56	ug/m3	100
2) C5-C8 Aliphatic HC {2}	9.57	TIC	2734051	39.38	ug/m3	100
3) C5-C8 Aliphatic HC {3}	11.28	TIC	2937784	38.77	ug/m3	100
4) C5-C8 Aliphatic HC {4}	11.35	TIC	3318124	47.40	ug/m3	100
5) C5-C8 Aliphatic HC {5}	11.91	TIC	2905760	39.82	ug/m3	100
6) C5-C8 Aliphatic HC {6}	14.30	TIC	2916432	39.87	ug/m3	100
7) C5-C8 Aliphatic HC - TOTAL	7.18	TIC	17979992m	241.24	ug/m3	
8) C9-C12 Aliphatic HC	15.70	TIC	3583872	45.53	ug/m3	100
9) C9-C12 Aliphatic HC {2}	16.57	TIC	3191503	42.22	ug/m3	100
10) C9-C12 Aliphatic HC {3}	18.68	TIC	3067546	46.35	ug/m3	100
11) C9-C12 Aliphatic HC {4}	19.83	TIC	2950191	45.53	ug/m3	100
12) C9-C12 Aliphatic HC {5}	20.65	TIC	2458602	43.43	ug/m3	100
13) C9-C12 Aliphatic HC {6}	22.47	TIC	1752280	39.30	ug/m3	100
14) C9-C12 Aliphatic HC - TOTA	15.70	TIC	17003994m	269.99	ug/m3	
15) C9-C10 Aromatic HC	17.98	120	239482	42.42	ug/m3	100
16) C9-C10 Aromatic HC {2}	18.77	120	297816	50.01	ug/m3	100
17) C9-C10 Aromatic HC {3}	18.91	120	400003	46.97	ug/m3	100
18) C9-C10 Aromatic HC {4}	20.03	120	86727	50.02	ug/m3	100
19) C9-C10 Aromatic HC {5}	20.29	120	268608	41.92	ug/m3	100
20) C9-C10 Aromatic HC {6}	20.03	134	229863	50.82	ug/m3	100
21) C9-C10 Aromatic HC - TOTAL	17.98	TIC	1522499m	232.48	ug/m3	

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

Quantitation Report

Data File : C:\HPCHEM\1\DATA\082211\08221102.D Vial: 2
Acq On : 22 Aug 2011 11:13 am Operator: RACHEL HILL
Sample : CCV 082211A VOA9 Inst : GC/MS Ins
Misc : CCV MA_APH Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 22 15:51 2011 Quant Results File: 081611V9.RES

Method : C:\HPCHEM\1\METHODS\081611V9.M (RTE Integrator)
Title : MASS APH
Last Update : Wed Aug 17 10:38:55 2011
Response via : Initial Calibration



RTI Laboratories

Run ID: VOA9_110823A **Run No.:** 42403

Analytical Run Date: 8/23/2011 **InstrumentID:** VOA9

Analyst: Rachel Hill **Column:**

Calibration ID: 42263 **Column ID:**

Column Length:

SampID	TestCode	SampType	Batch ID	Analysis Date/Time	QA By	Q	Comments
BFB 082311A VOA9	BFB_TUNE	TUNE	R42403	8/23/2011 9:49:00 AM	Fred J Hoitash		
CCV 082311A VOA9	MA_APH	CCV	R42403	8/23/2011 10:33:00 AM	Fred J Hoitash		
RLVS 082311A VOA	MA_APH	RLVS	R42403	8/23/2011 11:15:00 AM	Fred J Hoitash		
MBLK 082311A VOA	MA_APH	MBLK	R42403	8/23/2011 12:04:00 PM	Fred J Hoitash		
1108344-019A	MA_APH	SAMP	R42403	8/23/2011 4:30:00 PM	Fred J Hoitash		
1108344-019ADUP	MA_APH	DUP	R42403	8/23/2011 5:13:00 PM	Fred J Hoitash		
1108344-018A	MA_APH	SAMP	R42403	8/23/2011 5:55:00 PM	Fred J Hoitash		
1108344-021A	MA_APH	SAMP	R42403	8/23/2011 7:22:00 PM	Fred J Hoitash		
1108344-001A	MA_APH	SAMP	R42403	8/23/2011 8:05:00 PM	Fred J Hoitash		
1108344-002A	MA_APH	SAMP	R42403	8/23/2011 8:47:00 PM	Fred J Hoitash		
1108344-003A	MA_APH	SAMP	R42403	8/23/2011 9:29:00 PM	Fred J Hoitash		
1108344-004A	MA_APH	SAMP	R42403	8/23/2011 10:12:00 PM	Fred J Hoitash		
1108344-005A	MA_APH	SAMP	R42403	8/23/2011 11:01:00 PM	Fred J Hoitash		
RLVS 082311B VOA	MA_APH	RLVS	R42403	8/24/2011 3:49:00 AM	Fred J Hoitash		

RTI Laboratories

ANALYTICAL RUN Summary

20-Oct-11

RunNo 42403

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
820793	BFB 082311A VOA9	BFB_TUNE	TUNE	\1\DATA\082311	8/23/2011 9:49:0	1	R42403		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		77.6	77.6		0	0	0	0	0	0	0%	50	120	0%	
175	M		8	8		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		6.6	6.6		0	0	0	0	0	0	0%	5	9	0%	
50	M		22.9	22.9		0	0	0	0	0	0	0%	8	40	0%	
75	M		43.2	43.2		0	0	0	0	0	0	0%	30	66	0%	
95	M		100	100		0	0	0	0	0	0	0%	100	100	0%	
96	M		6.7	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
820794	CCV 082311A VOA9	MA_APH	CCV	\1\DATA\082311	8/23/2011 10:33:	1	R42403		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	244.77	244.77		222	0	0	0	0	0	110%	70	130	0%	
C5-C8 Aliphatic Hydrocarbons	A	µg/m³		0		0	0	0	29.876	117	0	0%	0	0	0%	
C9-C10 Aromatic HC - TOTAL	A	µg/m³	235.88	235.88		185	0	0	0	0	0	128%	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	268.62	268.62		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	91.36	91.36		89.5	0	0	0	0	0	102%	70	130	0%	

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\082311\08231102.D Vial: 2
Acq On : 23 Aug 2011 10:33 am Operator: RACHEL HILL
Sample : CCV 082311A VOA9 Inst : GC/MS Ins
Misc : CCV MA_APH Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 24 9:19 2011 Quant Results File: 081611V9.RES

Quant Method : C:\HPCHEM\1\METHODS\081611V9.M (RTE Integrator)
Title : MASS APH
Last Update : Wed Aug 17 10:38:55 2011
Response via : Initial Calibration
DataAcq Meth : 081611V9

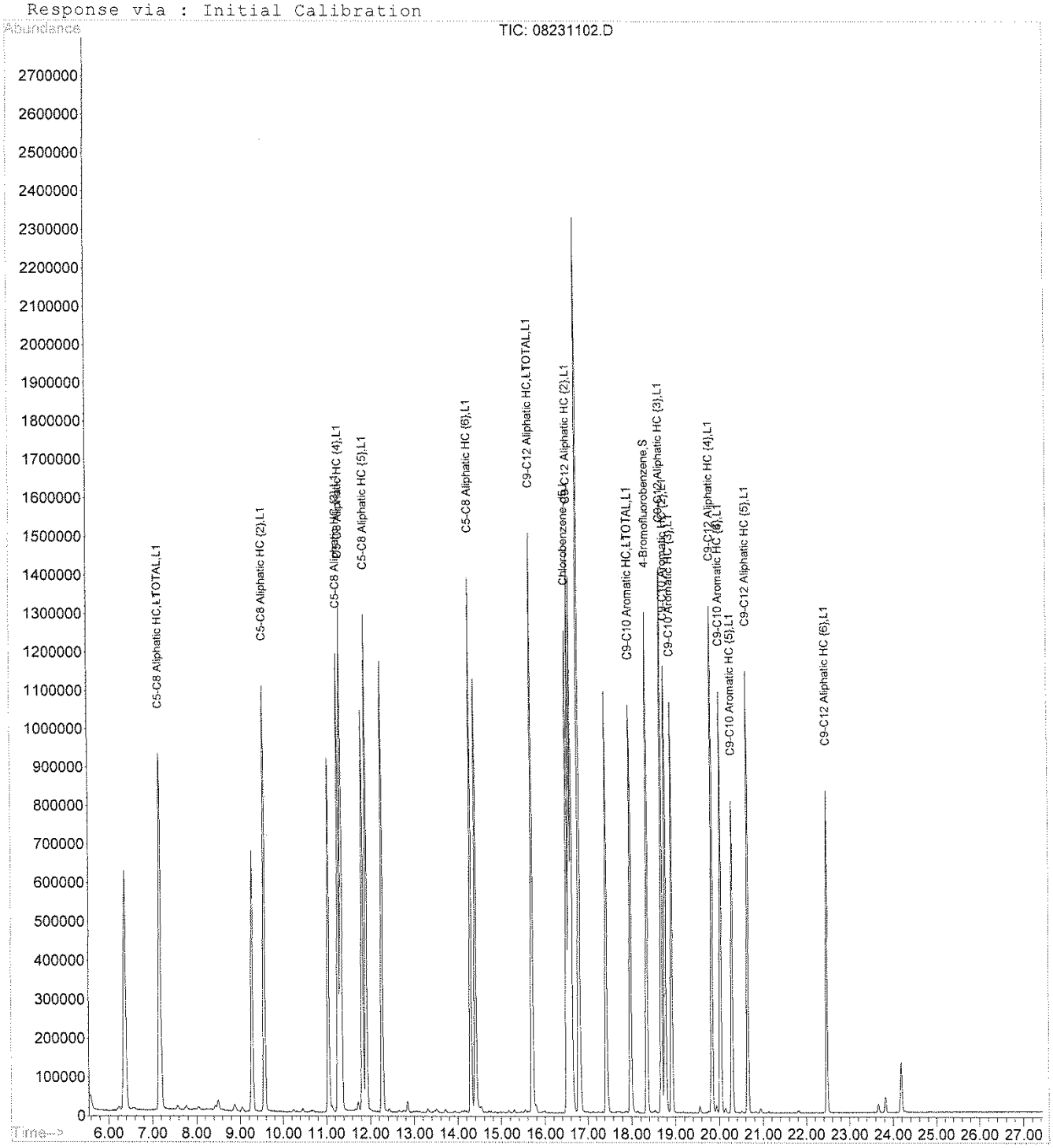
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
40) Chlorobenzene-d5	16.51	117	928444	12.50	ug/m3	0.00
System Monitoring Compounds						
41) 4-Bromofluorobenzene	18.35	95	645312	91.36	ug/m3	0.00
Spiked Amount 89.500	Range 70 - 130		Recovery = 102.08%			
Target Compounds						Qvalue
1) C5-C8 Aliphatic HC	7.17	TIC	3132469	35.16	ug/m3	100
2) C5-C8 Aliphatic HC {2}	9.57	TIC	2766659	39.85	ug/m3	100
3) C5-C8 Aliphatic HC {3}	11.28	TIC	2994326	39.52	ug/m3	100
4) C5-C8 Aliphatic HC {4}	11.35	TIC	3431884	49.02	ug/m3	100
5) C5-C8 Aliphatic HC {5}	11.92	TIC	2934213	40.21	ug/m3	100
6) C5-C8 Aliphatic HC {6}	14.30	TIC	2983131	40.78	ug/m3	100
7) C5-C8 Aliphatic HC - TOTAL	7.17	TIC	18242682m	244.77	ug/m3	
8) C9-C12 Aliphatic HC	15.71	TIC	3581321	45.49	ug/m3	100
9) C9-C12 Aliphatic HC {2}	16.57	TIC	3274005	43.32	ug/m3	100
10) C9-C12 Aliphatic HC {3}	18.69	TIC	3032372	45.82	ug/m3	100
11) C9-C12 Aliphatic HC {4}	19.83	TIC	2908712	44.89	ug/m3	100
12) C9-C12 Aliphatic HC {5}	20.65	TIC	2398970	42.38	ug/m3	100
13) C9-C12 Aliphatic HC {6}	22.48	TIC	1722297	38.62	ug/m3	100
14) C9-C12 Aliphatic HC - TOTA	15.71	TIC	16917677m	268.62	ug/m3	
15) C9-C10 Aromatic HC	17.98	120	247257	43.79	ug/m3	100
16) C9-C10 Aromatic HC {2}	18.77	120	302535	50.80	ug/m3	100
17) C9-C10 Aromatic HC {3}	18.91	120	404187	47.46	ug/m3	100
18) C9-C10 Aromatic HC {4}	20.03	120	85607	49.37	ug/m3	100
19) C9-C10 Aromatic HC {5}	20.29	120	273974	42.76	ug/m3	100
20) C9-C10 Aromatic HC {6}	20.03	134	231185	51.11	ug/m3	100
21) C9-C10 Aromatic HC - TOTAL	17.98	TIC	1544745m	235.88	ug/m3	

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

Quantitation Report

Data File : C:\HPCHEM\1\DATA\082311\08231102.D Vial: 2
Acq On : 23 Aug 2011 10:33 am Operator: RACHEL HILL
Sample : CCV 082311A VOA9 Inst : GC/MS Ins
Misc : CCV MA_APH Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 24 9:19 2011 Quant Results File: 081611V9.RES

Method : C:\HPCHEM\1\METHODS\081611V9.M (RTE Integrator)
Title : MASS APH
Last Update : Wed Aug 17 10:38:55 2011
Response via : Initial Calibration



RTI Laboratories

Run ID: VOA9_110824A **Run No.:** 42429

Analytical Run Date: 8/24/2011 **InstrumentID:** VOA9

Analyst: Rachel Hill **Column:**

Calibration ID: 42263 **Column ID:**

Column Length:

SampID	TestCode	SampType	Batch ID	Analysis Date/Time	QA By	Q	Comments
BFB 082411A VOA9	BFB_TUNE	TUNE	R42429	8/24/2011 9:41:00 AM	Fred J Hoitash		
CCV 082411A VOA9	MA_APH	CCV	R42429	8/24/2011 10:26:00 AM	Fred J Hoitash		
RLVS 082411A VOA	MA_APH	RLVS	R42429	8/24/2011 11:59:00 AM	Fred J Hoitash		
MBLK 082411A VOA	MA_APH	MBLK	R42429	8/24/2011 1:41:00 PM	Fred J Hoitash		
1108344-008A	MA_APH	SAMP	R42429	8/24/2011 2:23:00 PM	Fred J Hoitash		
1108344-008ADUP	MA_APH	DUP	R42429	8/24/2011 3:06:00 PM	Fred J Hoitash		
1108344-020A	MA_APH	SAMP	R42429	8/24/2011 3:54:00 PM	Fred J Hoitash		
1108344-007A	MA_APH	SAMP	R42429	8/24/2011 4:57:00 PM	Fred J Hoitash		
1108344-009A	MA_APH	SAMP	R42429	8/24/2011 5:40:00 PM	Fred J Hoitash		
1108344-010A	MA_APH	SAMP	R42429	8/24/2011 6:24:00 PM	Fred J Hoitash		
1108344-011A	MA_APH	SAMP	R42429	8/24/2011 7:07:00 PM	Fred J Hoitash		
RLVS2 082411A VO	MA_APH	RLVS	R42429	8/25/2011 4:50:00 AM	Fred J Hoitash		

RTI Laboratories

ANALYTICAL RUN Summary

20-Oct-11

RunNo 42429

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
821545	BFB 082411A VOA9	BFB_TUNE	TUNE	\1\DATA\082411	8/24/2011 9:41:0	1	R42429		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		73.9	73.9		0	0	0	0	0	0	0%	50	120	0%	
175	M		8.1	8.1		0	0	0	0	0	0	0%	4	9	0%	
176	M		97.5	97.5		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		23.2	23.2		0	0	0	0	0	0	0%	8	40	0%	
75	M		44.9	44.9		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		6.9	6.9		0	0	0	0	0	0	0%	5	9	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
821547	CCV 082411A VOA9	MA_APH	CCV	\1\DATA\082411	8/24/2011 10:26:	1	R42429		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	212.09	212.09		222	0	0	0	0	0	96%	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	209.03	209.03		185	0	0	0	0	0	113%	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	237.42	237.42		221	0	0	0	0	0	107%	70	130	0%	
C9-C12 Aliphatic Hydrocarbons	A	µg/m³		0		0	0	0	25.766	189	0	0%	0	0	0%	
C9-C12 Aliphatic-Aromatic Hydrocarbons	A	µg/m³		0		0	0	0	0	0	0	0%	0	0	0%	
non C5-C8 - TOTAL	A	µg/m³		0		0	0	0	0	0	0	0%	0	0	0%	
non C9-C12 - TOTAL	A	µg/m³		0		0	0	0	0	0	0	0%	0	0	0%	
Chlorobenzene-d5	I	ppbv	12.5	12.5		12.5	0	0	0	0	0	100%	80	120	0%	
4-Bromofluorobenzene	S	µg/m³	93.33	93.33		89.5	0	0	0	0	0	104%	70	130	0%	

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\082411\08241102.D Vial: 2
Acq On : 24 Aug 2011 10:26 am Operator: RACHEL HILL
Sample : CCV 082411A VOA9 Inst : GC/MS Ins
Misc : CCV MA_APH Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 25 9:17 2011 Quant Results File: 081611V9.RES

Quant Method : C:\HPCHEM\1\METHODS\081611V9.M (RTE Integrator)
Title : MASS APH
Last Update : Wed Aug 17 10:38:55 2011
Response via : Initial Calibration
DataAcq Meth : 081611V9

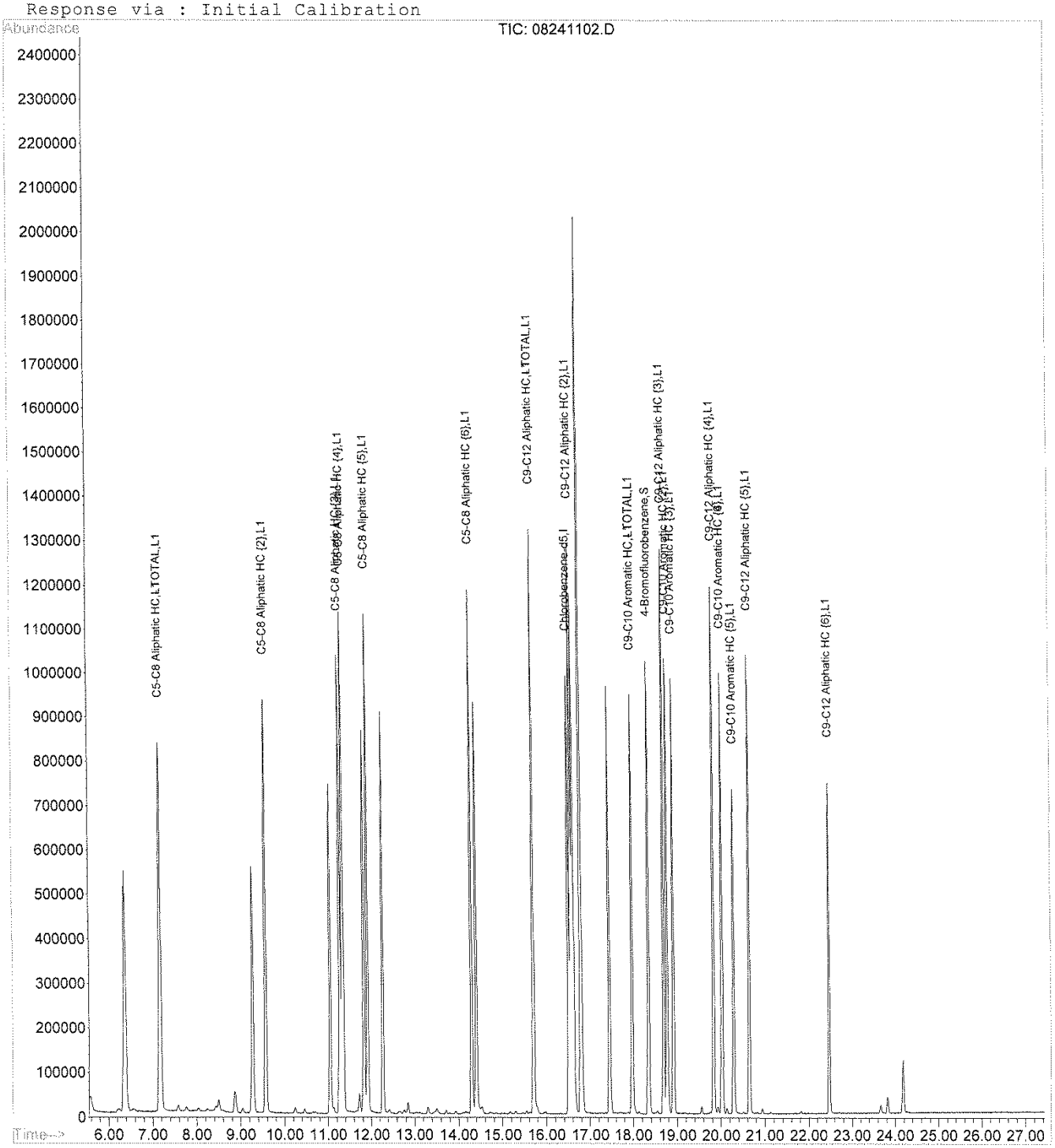
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
40) Chlorobenzene-d5	16.51	117	719288	12.50	ug/m3	0.00
System Monitoring Compounds						
41) 4-Bromofluorobenzene	18.34	95	510736	93.33	ug/m3	0.00
Spiked Amount 89.500	Range 70 - 130		Recovery = 104.28%			
Target Compounds						Qvalue
1) C5-C8 Aliphatic HC	7.17	TIC	2881360	32.34	ug/m3	100
2) C5-C8 Aliphatic HC {2}	9.57	TIC	2366908	34.09	ug/m3	100
3) C5-C8 Aliphatic HC {3}	11.28	TIC	2608431	34.42	ug/m3	100
4) C5-C8 Aliphatic HC {4}	11.35	TIC	2903896	41.48	ug/m3	100
5) C5-C8 Aliphatic HC {5}	11.91	TIC	2501138	34.28	ug/m3	100
6) C5-C8 Aliphatic HC {6}	14.30	TIC	2545117	34.79	ug/m3	100
7) C5-C8 Aliphatic HC - TOTAL	7.17	TIC	15806850m	212.09	ug/m3	
8) C9-C12 Aliphatic HC	15.70	TIC	3168689	40.25	ug/m3	100
9) C9-C12 Aliphatic HC {2}	16.57	TIC	2785442	36.85	ug/m3	100
10) C9-C12 Aliphatic HC {3}	18.68	TIC	2697820	40.76	ug/m3	100
11) C9-C12 Aliphatic HC {4}	19.83	TIC	2626219	40.53	ug/m3	100
12) C9-C12 Aliphatic HC {5}	20.65	TIC	2162186	38.19	ug/m3	100
13) C9-C12 Aliphatic HC {6}	22.47	TIC	1512580	33.92	ug/m3	100
14) C9-C12 Aliphatic HC - TOTA	15.70	TIC	14952936m	237.42	ug/m3	
15) C9-C10 Aromatic HC	17.98	120	214177	37.93	ug/m3	100
16) C9-C10 Aromatic HC {2}	18.77	120	266135	44.69	ug/m3	100
17) C9-C10 Aromatic HC {3}	18.91	120	359765	42.25	ug/m3	100
18) C9-C10 Aromatic HC {4}	20.03	120	77359	44.61	ug/m3	100
19) C9-C10 Aromatic HC {5}	20.29	120	243826	38.06	ug/m3	100
20) C9-C10 Aromatic HC {6}	20.03	134	207685	45.91	ug/m3	100
21) C9-C10 Aromatic HC - TOTAL	17.98	TIC	1368947m	209.03	ug/m3	

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

Quantitation Report

Data File : C:\HPCHEM\1\DATA\082411\08241102.D Vial: 2
Acq On : 24 Aug 2011 10:26 am Operator: RACHEL HILL
Sample : CCV 082411A VOA9 Inst : GC/MS Ins
Misc : CCV MA_APH Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 25 9:17 2011 Quant Results File: 081611V9.RES

Method : C:\HPCHEM\1\METHODS\081611V9.M (RTE Integrator)
Title : MASS APH
Last Update : Wed Aug 17 10:38:55 2011
Response via : Initial Calibration



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Run ID: VOA9_110825A **Run No.:** 42461

Analytical Run Date: 8/25/2011 **InstrumentID:** VOA9

Analyst: Rachel Hill **Column:**

Calibration ID: 42263 **Column ID:**

Column Length:

SampID	TestCode	SampType	Batch ID	Analysis Date/Time	QA By	Q	Comments
BFB 082511A VOA9	BFB_TUNE	TUNE	R42461	8/25/2011 9:30:00 AM	Fred J Hoitash		
CCV 082511A VOA9	MA_APH	CCV	R42461	8/25/2011 11:01:00 AM	Fred J Hoitash		
RLVS 082511A VOA	MA_APH	RLVS	R42461	8/25/2011 12:27:00 PM	Fred J Hoitash		
MBLK 082511A VOA	MA_APH	MBLK	R42461	8/25/2011 2:52:00 PM	Fred J Hoitash		
1108344-012A	MA_APH	SAMP	R42461	8/25/2011 3:34:00 PM	Fred J Hoitash		
1108344-012ADUP	MA_APH	DUP	R42461	8/25/2011 4:26:00 PM	Fred J Hoitash		
1108344-013A	MA_APH	SAMP	R42461	8/25/2011 5:09:00 PM	Fred J Hoitash		
1108344-014A	MA_APH	SAMP	R42461	8/25/2011 5:52:00 PM	Fred J Hoitash		
1108688-020A	MA_APH	SAMP	R42461	8/25/2011 6:35:00 PM	Fred J Hoitash		
1108688-021A	MA_APH	SAMP	R42461	8/25/2011 7:18:00 PM	Fred J Hoitash		
1108688-022A	MA_APH	SAMP	R42461	8/25/2011 8:01:00 PM	Fred J Hoitash		
1108688-023A	MA_APH	SAMP	R42461	8/25/2011 8:45:00 PM	Fred J Hoitash		
1108688-013A	MA_APH	SAMP	R42461	8/25/2011 9:28:00 PM	Fred J Hoitash		
1108688-014A	MA_APH	SAMP	R42461	8/25/2011 10:11:00 PM	Fred J Hoitash		
1108688-015A	MA_APH	SAMP	R42461	8/25/2011 10:54:00 PM	Fred J Hoitash		
1108688-016A	MA_APH	SAMP	R42461	8/25/2011 11:37:00 PM	Fred J Hoitash		
1107640-049A	MA_APH	SAMP	R42461	8/26/2011 1:01:00 AM	Fred J Hoitash	H	
1107640-024A	MA_APH	SAMP	R42461	8/26/2011 2:26:00 AM	Fred J Hoitash	H	
RLVS2 082511 VOA	MA_APH	RLVS	R42461	8/26/2011 3:50:00 AM	Fred J Hoitash		

RTI Laboratories

ANALYTICAL RUN Summary

20-Oct-11

RunNo 42461

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
822172	BFB 082511A VOA9	BFB_TUNE	TUNE	\I\DATA\082511	8/25/2011 9:30:0	1	R42461		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
173	M		0	0		0	0	0	0	0	0	0%	0	2	0%	
174	M		71.4	71.4		0	0	0	0	0	0	0%	50	120	0%	
175	M		7.6	7.6		0	0	0	0	0	0	0%	4	9	0%	
176	M		96.9	96.9		0	0	0	0	0	0	0%	93	101	0%	
177	M		6.8	6.8		0	0	0	0	0	0	0%	5	9	0%	
50	M		23.4	23.4		0	0	0	0	0	0	0%	8	40	0%	
75	M		44.6	44.6		0	0	0	0	0	0	0%	30	66	0%	
95	M		100	100		0	0	0	0	0	0	0%	100	100	0%	
96	M		6.5	6.5		0	0	0	0	0	0	0%	5	9	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
822173	CCV 082511A VOA9	MA_APH	CCV	\I\DATA\082511	8/25/2011 11:01:	1	R42461		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
C5-C8 Aliphatic	A	µg/m³		0		0	0	0	0	0	0	0%	0	0	0%	
C5-C8 Aliphatic HC - TOTAL	A	µg/m³	218.86	218.86		222	0	0	0	0	0	99%	70	130	0%	
C5-C8 Aliphatic Hydrocarbons	A	µg/m³		0		0	0	0	29.876	117	0	0%	0	0	0%	
C9-C10 Aromatic HC - TOTAL	A	µg/m³	220.71	220.71		185	0	0	0	0	0	119%	70	130	0%	
C9-C10 Aromatic Hydrocarbons	A	µg/m³		0		0	0	0	35.658	133	0	0%	0	0	0%	
C9-C12 Aliphatic	A	µg/m³		0		0	0	0	0	0	0	0%	0	0	0%	
C9-C12 Aliphatic HC - TOTAL	A	µg/m³	248.71	248.71		221	0	0	0	0	0	113%	70	130	0%	
C9-C12 Aliphatic Hydrocarbons	A	µg/m³		0		0	0	0	25.766	189	0	0%	0	0	0%	
C9-C12 Aliphatic-Aromatic Hydrocarbons	A	µg/m³		0		0	0	0	0	0	0	0%	0	0	0%	
non C5-C8 - TOTAL	A	µg/m³		0		0	0	0	0	0	0	0%	0	0	0%	
non C9-C12 - TOTAL	A	µg/m³		0		0	0	0	0	0	0	0%	0	0	0%	
Chlorobenzene-d5	I	ppbv	12.5	12.5		12.5	0	0	0	0	0	100%	80	120	0%	
4-Bromofluorobenzene	S	µg/m³	93.19	93.19		89.5	0	0	0	0	0	104%	70	130	0%	

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\082511\08251102.D Vial: 2
Acq On : 25 Aug 2011 11:01 am Operator: RACHEL HILL
Sample : CCV 082511A VOA9 Inst : GC/MS Ins
Misc : CCV MA_APH Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 26 9:12 2011 Quant Results File: 081611V9.RES

Quant Method : C:\HPCHEM\1\METHODS\081611V9.M (RTE Integrator)
Title : MASS APH
Last Update : Wed Aug 17 10:38:55 2011
Response via : Initial Calibration
DataAcq Meth : 081611V9

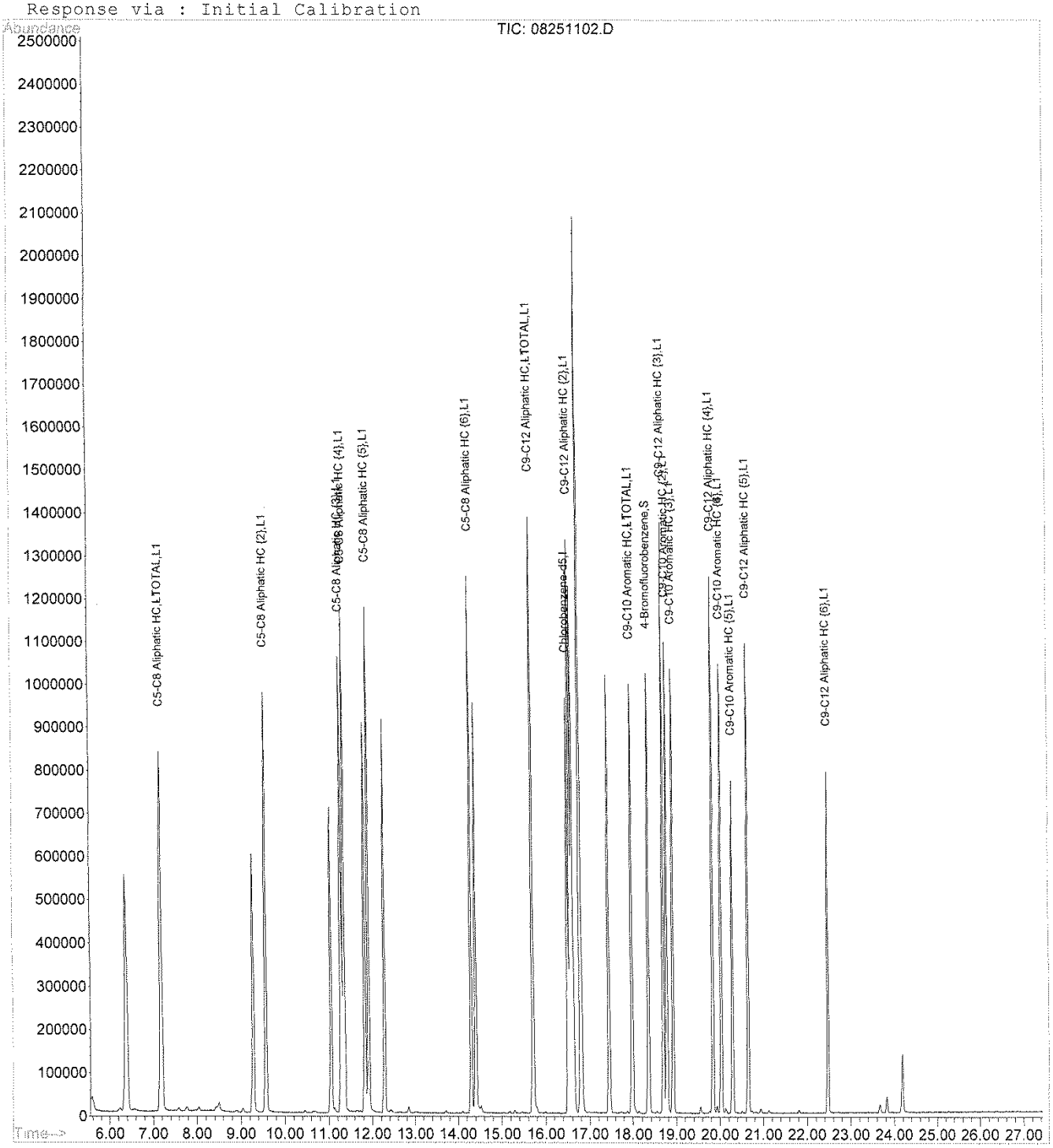
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
40) Chlorobenzene-d5	16.51	117	706066	12.50	ug/m3	0.00
System Monitoring Compounds						
41) 4-Bromofluorobenzene	18.34	95	500609	93.19	ug/m3	0.00
Spiked Amount 89.500	Range 70 - 130		Recovery = 104.12%			
Target Compounds						Qvalue
1) C5-C8 Aliphatic HC	7.18	TIC	2870735	32.22	ug/m3	100
2) C5-C8 Aliphatic HC {2}	9.57	TIC	2434564	35.07	ug/m3	100
3) C5-C8 Aliphatic HC {3}	11.28	TIC	2671555	35.26	ug/m3	100
4) C5-C8 Aliphatic HC {4}	11.35	TIC	3028415	43.26	ug/m3	100
5) C5-C8 Aliphatic HC {5}	11.91	TIC	2644891	36.25	ug/m3	100
6) C5-C8 Aliphatic HC {6}	14.30	TIC	2661400	36.38	ug/m3	100
7) C5-C8 Aliphatic HC - TOTAL	7.18	TIC	16311560m	218.86	ug/m3	
8) C9-C12 Aliphatic HC	15.70	TIC	3305090	41.99	ug/m3	100
9) C9-C12 Aliphatic HC {2}	16.57	TIC	2898649	38.35	ug/m3	100
10) C9-C12 Aliphatic HC {3}	18.68	TIC	2828641	42.74	ug/m3	100
11) C9-C12 Aliphatic HC {4}	19.83	TIC	2766354	42.69	ug/m3	100
12) C9-C12 Aliphatic HC {5}	20.65	TIC	2291717	40.48	ug/m3	100
13) C9-C12 Aliphatic HC {6}	22.47	TIC	1573054	35.28	ug/m3	100
14) C9-C12 Aliphatic HC - TOTA	15.70	TIC	15663505m	248.71	ug/m3	
15) C9-C10 Aromatic HC	17.98	120	229150	40.59	ug/m3	100
16) C9-C10 Aromatic HC {2}	18.77	120	279914	47.00	ug/m3	100
17) C9-C10 Aromatic HC {3}	18.91	120	382124	44.87	ug/m3	100
18) C9-C10 Aromatic HC {4}	20.03	120	81657	47.09	ug/m3	100
19) C9-C10 Aromatic HC {5}	20.29	120	255002	39.80	ug/m3	100
20) C9-C10 Aromatic HC {6}	20.03	134	217571	48.10	ug/m3	100
21) C9-C10 Aromatic HC - TOTAL	17.98	TIC	1445418m	220.71	ug/m3	

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

Quantitation Report

Data File : C:\HPCHEM\1\DATA\082511\08251102.D Vial: 2
Acq On : 25 Aug 2011 11:01 am Operator: RACHEL HILL
Sample : CCV 082511A VOA9 Inst : GC/MS Ins
Misc : CCV MA_APH Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 26 9:12 2011 Quant Results File: 081611V9.RES

Method : C:\HPCHEM\1\METHODS\081611V9.M (RTE Integrator)
Title : MASS APH
Last Update : Wed Aug 17 10:38:55 2011
Response via : Initial Calibration



Response Factor Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\081611V9.M (RTE Integrator)
Title : MASS APH
Last Update : Wed Aug 17 10:38:55 2011
Response via : Initial Calibration

Calibration Files
1 =08161105.D 2 =08161106.D 3 =08161107.D
4 =08161108.D 5 =08161109.D 6 =08161110.D

		Compound	1	2	3	4	5	6	Avg		%RSD
1)	L1	C5-C8 Aliphatic HC	9.819	9.091	8.932	8.680	8.763	8.725	8.909	E4	5.19
2)	L1	C5-C8 Aliphatic HC	8.117	7.136	7.040	6.542	6.567	6.719	6.942	E4	8.30
3)	L1	C5-C8 Aliphatic HC	8.923	7.767	7.617	7.238	7.278	7.273	7.578	E4	8.59
4)	L1	C5-C8 Aliphatic HC	7.905	7.052	7.185	6.596	6.571	6.934	7.001	E4	6.55
5)	L1	C5-C8 Aliphatic HC	8.403	7.440	7.432	7.002	7.033	7.078	7.297	E4	7.57
6)	L1	C5-C8 Aliphatic HC	8.351	7.452	7.529	7.126	7.110	7.076	7.315	E4	7.57
7)	L1	C5-C8 Aliphatic HC	8.542	7.601	7.569	7.155	7.172	7.236	7.453	E4	7.23
8)	L1	C9-C12 Aliphatic HC	9.103	8.077	8.074	7.734	7.681	7.516	7.872	E4	8.51
9)	L1	C9-C12 Aliphatic HC	8.763	7.528	7.897	7.424	7.358	7.348	7.558	E4	8.72
10)	L1	C9-C12 Aliphatic HC	7.593	6.794	6.896	6.507	6.536	6.289	6.619	E4	8.73
11)	L1	C9-C12 Aliphatic HC	7.358	6.622	6.697	6.363	6.356	6.239	6.480	E4	7.71
12)	L1	C9-C12 Aliphatic HC	6.393	5.843	5.848	5.629	5.569	5.405	5.661	E4	7.90
13)	L1	C9-C12 Aliphatic HC	4.745	4.487	4.533	4.413	4.532	4.410	4.459	E4	4.40
14)	L1	C9-C12 Aliphatic HC	7.142	6.415	6.508	6.206	6.204	6.065	6.298	E4	7.70
15)	L1	C9-C10 Aromatic HC	6.298	5.586	5.706	5.410	5.472	5.608	5.646	E3	5.41
16)	L1	C9-C10 Aromatic HC	6.517	5.918	6.008	5.679	5.773	5.924	5.955	E3	4.54
17)	L1	C9-C10 Aromatic HC	9.376	8.453	8.598	8.172	8.336	8.421	8.515	E3	4.74
18)	L1	C9-C10 Aromatic HC	1.920	1.716	1.755	1.667	1.697	1.724	1.734	E3	5.11
19)	L1	C9-C10 Aromatic HC	7.038	6.311	6.455	6.152	6.240	6.358	6.407	E3	4.59
20)	L1	C9-C10 Aromatic HC	4.927	4.476	4.586	4.411	4.450	4.513	4.523	E3	4.39
21)	L1	C9-C10 Aromatic HC	7.221	6.498	6.609	6.280	6.367	6.509	6.549	E3	4.84
22)		C5-C8 Aliphatic	8.542	7.601	7.569	7.155	7.172	7.236	7.453	E4	7.23
23)	L1	non C5-C8	6.927	6.469	6.553	6.443	6.396	6.454	6.517	E4	2.91
24)	L1	non C5-C8 {2}	5.846	5.052	4.954	4.429	4.413	4.581	4.810	E4	11.01
25)	L1	non C5-C8 {3}	3.629	3.375	3.542	3.745	3.605	3.865	3.632	E4	4.25
26)	L1	non C5-C8 {4}	6.915	5.929	5.921	5.290	5.308	5.566	5.766	E4	9.91
27)	L1	non C5-C8 {5}	4.665	4.235	4.548	5.016	4.637	5.181	4.694	E4	6.69
28)	L1	non C5-C8 {6}	6.985	6.362	6.068	5.604	5.883	6.110	6.133	E4	7.20
29)	L1	non C5-C8 - TOTAL	4.992	4.867	5.013	4.961	4.988	5.344	5.057	E4	3.33
30)		C9-C12 Aliphatic	7.142	6.415	6.508	6.206	6.204	6.065	6.298	E4	7.70
31)	L1	non C9-C12	5.017	4.705	4.895	5.120	4.992	5.243	4.971	E4	3.65
32)	L1	non C9-C12 {2}	6.664	6.084	5.810	5.719	5.502	5.600	5.736	E4	10.03
33)	L1	non C9-C12 {3}	6.743	5.980	6.047	5.656	5.673	5.837	5.947	E4	6.45
34)	L1	non C9-C12 {4}	6.557	5.818	5.833	5.442	5.498	5.629	5.750	E4	6.78
35)	L1	non C9-C12 {5}	3.303	3.137	3.349	3.535	3.400	3.749	3.414	E4	5.62
36)	L1	non C9-C12 - TOTAL	4.290	4.047	4.110	4.058	3.988	4.122	4.063	E4	3.49
37)	L1	C9-C10 Aromatic	7.221	6.498	6.609	6.280	6.367	6.509	6.549	E3	4.84
38)	L1	C9-C10 Aromatic {2}	7.221	6.498	6.609	6.280	6.367	6.509	6.549	E3	4.84
39)	L1	C9-C10 Aromatic - T	7.221	6.498	6.609	6.280	6.367	6.509	6.549	E3	4.84
40)	I	Chlorobenzene-d5	----------ISTD----------								
41)	S	4-Bromofluorobenzen	0.094	0.096	0.096	0.094	0.096	0.095	0.095		0.84

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

Compound List Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\081611V9.M (RTE Integrator)
Title : MASS APH
Last Update : Wed Aug 17 10:38:55 2011
Response via : Initial Calibration
Total Cpnds : 41

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

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

081611V9.M Thu Oct 20 10:48:13 2011

RTI Laboratories

Run ID: GC-TCD 1_110824A **Run No.:** 42681

Analytical Run Date: 8/24/2011 **InstrumentID:** GC-TCD 1

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

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

Column Length: 2m

SampID	TestCode	SampType	Batch ID	Analysis Date/Time	QA By	Q	Comments
mblk	ASTM-D2504	MBLK	R42681	8/24/2011 10:50:00 AM	Robert Lynch		
ccv std 1-2 a	ASTM-D2504	CCV	R42681	8/24/2011 12:34:00 PM	Robert Lynch		
lcs	ASTM-D2504	LCS	R42681	8/24/2011 12:56:00 PM	Robert Lynch		
crql std 2% a	ASTM-D2504	CRQL	R42681	8/24/2011 1:19:00 PM	Robert Lynch		
1108344-022b	ASTM-D2504	SAMP	R42681	8/24/2011 2:25:00 PM	Robert Lynch		
1108344-023b	ASTM-D2504	SAMP	R42681	8/24/2011 2:53:00 PM	Robert Lynch		
1108344-024b	ASTM-D2504	SAMP	R42681	8/24/2011 3:15:00 PM	Robert Lynch		
1108344-025b	ASTM-D2504	SAMP	R42681	8/24/2011 3:42:00 PM	Robert Lynch		
1108344-026b	ASTM-D2504	SAMP	R42681	8/24/2011 4:27:00 PM	Robert Lynch		
1108344-015b	ASTM-D2504	SAMP	R42681	8/24/2011 4:47:00 PM	Robert Lynch		
1108344-016b	ASTM-D2504	SAMP	R42681	8/24/2011 5:24:00 PM	Robert Lynch		
1108344-017b	ASTM-D2504	SAMP	R42681	8/24/2011 5:50:00 PM	Robert Lynch		
1108344-017bdup	ASTM-D2504	DUP	R42681	8/24/2011 6:09:00 PM	Robert Lynch		
ccv std 1-2 b	ASTM-D2504	CCV	R42681	8/24/2011 6:31:00 PM	Robert Lynch		
crql std 2% b	ASTM-D2504	CRQL	R42681	8/24/2011 7:25:00 PM	Robert Lynch		

RTI Laboratories

ANALYTICAL RUN Summary

20-Oct-11

RunNo 42681

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
827913	mblk	ASTM-D2504	MBLK	\TA\082411\0824	8/24/2011 10:50:	1	R42681		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
827914	ccv std 1-2 a	ASTM-D2504	CCV	\TA\082411\0824	8/24/2011 12:34:	1	R42681		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	2.722	2.722		2.5	0	0	0.025	0.1	0	109%	85	115	0%	
Carbon Monoxide	A	%	2.564	2.564		2.5	0	0	0.025	0.1	0	103%	85	115	0%	
Ethane	A	%		0		0	0	0	0.025	0.5	0	0%	85	115	0%	
Hydrogen	A	%		0		0	0	0	0.025	0.5	0	0%	85	115	0%	
Methane	A	%	2.108	2.108		2	0	0	0.025	0.5	0	105%	85	115	0%	
Nitrogen	A	%	2.614	2.614		2.5	0	0	0.025	0.1	0	105%	85	115	0%	
Oxygen	A	%	2.314	2.314		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
827915	lcs	ASTM-D2504	LCS	\TA\082411\0824	8/24/2011 12:56:	1	R42681		0	827914	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	2.624	2.624		2.5	0	2.722	0.025	0.1	0	105%	70	130	4%	
Carbon Monoxide	A	%	2.441	2.441		2.5	0	2.564	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	%	2.01	2.01		2	0	2.108	0.025	0.5	0	101%	70	130	5%	
Nitrogen	A	%	2.495	2.495		2.5	0	2.614	0.025	0.1	0	100%	70	130	5%	
Oxygen	A	%	2.19	2.19		2.5	0	2.314	0.025	0.1	0	88%	70	130	6%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
827924	1108344-017b (Container-01 of 01)	ASTM-D2504	SAMP	ıTA\082411\0824	8/24/2011 5:50:0	1	R42681		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	0.109	0.109		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	%	76.96	76.96		0	0	0	0.025	0.1	0	0%	0	0	0%	
Oxygen	A	%	20.957	20.957		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
827925	1108344-017bdup	ASTM-D2504	DUP	ıTA\082411\0824	8/24/2011 6:09:0	1	R42681		0	827924	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	0.111	0.111		0	0	0.109	0.025	0.1	0	0%	0	0	2%	
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	%	76.53	76.53		0	0	76.96	0.025	0.1	0	0%	0	0	1%	
Oxygen	A	%	20.82	20.82		0	0	20.957	0.025	0.1	0	0%	0	0	1%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
827926	ccv std 1-2 b	ASTM-D2504	CCV	ıTA\082411\0824	8/24/2011 6:31:0	1	R42681		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	2.507	2.507		2.5	0	0	0.025	0.1	0	100%	85	115	0%	
Carbon Monoxide	A	%	2.46	2.46		2.5	0	0	0.025	0.1	0	98%	85	115	0%	
Ethane	A	%		0		0	0	0	0.025	0.5	0	0%	85	115	0%	
Hydrogen	A	%		0		0	0	0	0.025	0.5	0	0%	85	115	0%	
Methane	A	%	1.991	1.991		2	0	0	0.025	0.5	0	100%	85	115	0%	
Nitrogen	A	%	2.634	2.634		2.5	0	0	0.025	0.1	0	105%	85	115	0%	
Oxygen	A	%	2.268	2.268		2.5	0	0	0.025	0.1	0	91%	85	115	0%	

Evaluate Continuing Calibration Report

```
Data File : C:\HPCHEM\2\DATA\082411\08241102.D          Vial: 1
Acq On    : 24 Aug 2011  12:34 pm                    Operator:
Sample    : ccv std 1-2 a                            Inst     : GC/TCD
Misc      : CCV  ASTM-D2504                          Multiplr: 1.00
IntFile   : EVENTS.E

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

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

	Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
1	Oxygen	2.500	2.314	7.4	0	0.02
2	Nitrogen	2.500	2.614	-4.6	0	0.00
3	Carbon Monoxide	2.500	2.564	-2.6	0	-0.04
4	Methane	2.000	2.108	-5.4	0	-0.06
5	Carbon dioxide	2.500	2.722	-8.9	0	-0.09

Evaluate Continuing Calibration Report - Not Founds

```
Data File : C:\HPCHEM\2\DATA\082411\08241102.D          Vial: 1
Acq On    : 24 Aug 2011  12:34 pm                    Operator:
Sample    : ccv std 1-2 a                            Inst     : GC/TCD
Misc      : CCV  ASTM-D2504                          Multiplr: 1.00
IntFile   : EVENTS.E

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

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

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

(#) = Out of Range SPCC's out = 0 CCC's out = 0
03051113.D 030511.M Thu Oct 20 12:53:57 2011 TESTCAL

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\082411\08241102.D Vial: 1
Acq On : 24 Aug 2011 12:34 pm Operator:
Sample : ccv std 1-2 a Inst : GC/TCD
Misc : CCV ASTM-D2504 Multiplr: 1.00
IntFile : events.e
Quant Time: Aug 24 11:51 2011 Quant Results File: 030511.RES

Quant Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
Last Update : Wed Aug 17 19:07:55 2011
Response via : Initial Calibration
DataAcq Meth : TCD.M

Volume Inj. :
Signal Phase :
Signal Info :

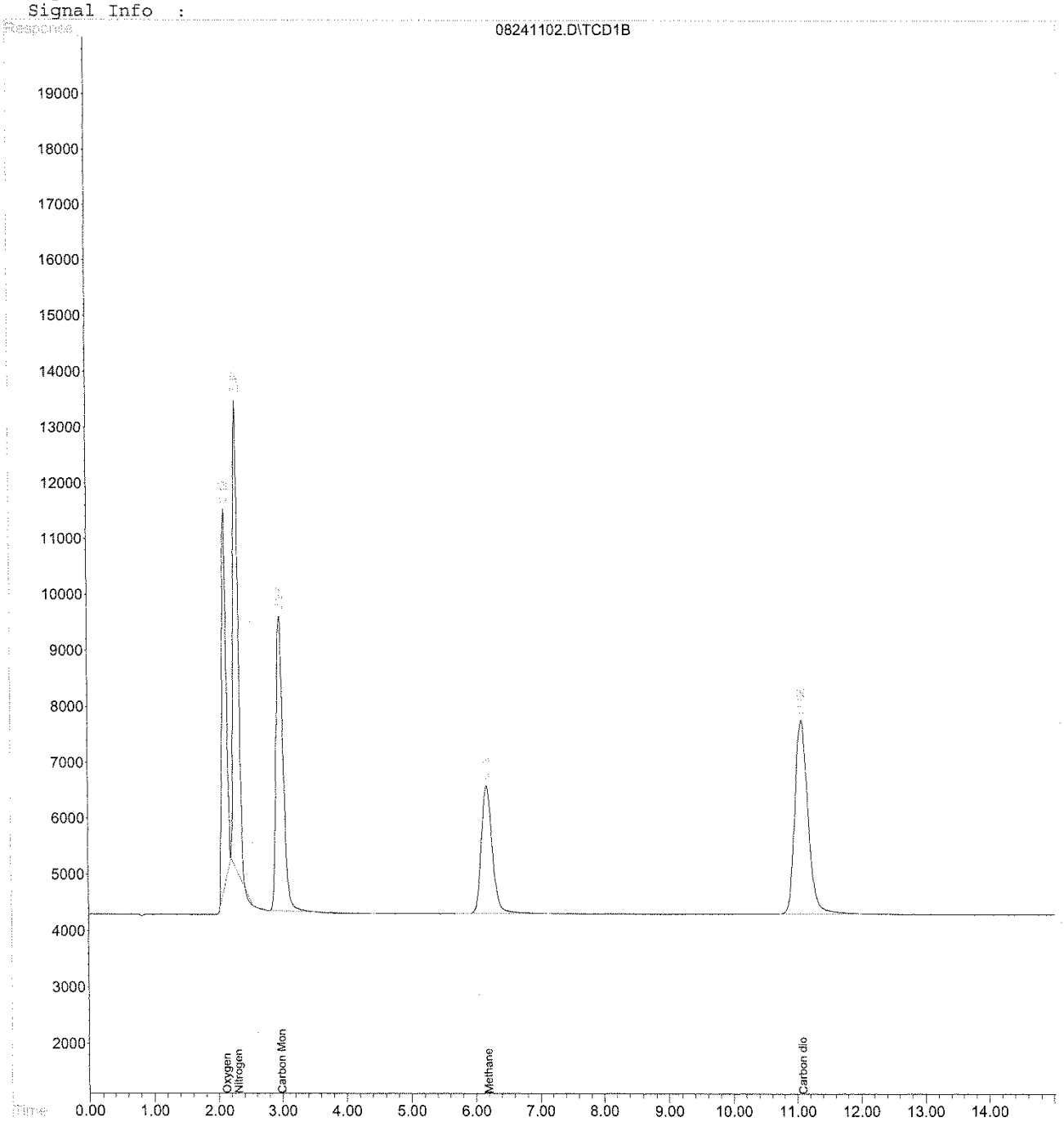
	Compound	R.T.	Response	Conc Units
	Target Compounds			
1)	Oxygen	2.12	331507	2.314 %
2)	Nitrogen	2.31	450376	2.614 %
3)	Carbon Monoxide	2.99	403866	2.564 %
4)	Methane	6.19f	272864	2.108 %
5)	Carbon dioxide	11.09f	494571	2.722 %

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\082411\08241102.D Vial: 1
Acq On : 24 Aug 2011 12:34 pm Operator:
Sample : ccv std 1-2 a Inst : GC/TCD
Misc : CCV ASTM-D2504 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 24 11:51 2011 Quant Results File: 030511.RES

Quant Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
Last Update : Wed Aug 17 19:07:55 2011
Response via : Multiple Level Calibration
DataAcq Meth : TCD.M

Volume Inj. :
Signal Phase :
Signal Info :



Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\2\DATA\082411\08241114.D Vial: 1
Acq On : 24 Aug 2011 6:31 pm Operator:
Sample : ccv std 1-2 b Inst : GC/TCD
Misc : CCV ASTM-D2504 Multiplr: 1.00
IntFile : EVENTS.E

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

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

	Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
1	Oxygen	2.500	2.268	9.3	0	0.02
2	Nitrogen	2.500	2.634	-5.4	0	0.01
3	Carbon Monoxide	2.500	2.460	1.6	0	-0.03
4	Methane	2.000	1.991	0.4	0	-0.05
5	Carbon dioxide	2.500	2.507	-0.3	0	-0.08

Evaluate Continuing Calibration Report - Not Founds

Data File : C:\HPCHEM\2\DATA\082411\08241114.D Vial: 1
Acq On : 24 Aug 2011 6:31 pm Operator:
Sample : ccv std 1-2 b Inst : GC/TCD
Misc : CCV ASTM-D2504 Multiplr: 1.00
IntFile : EVENTS.E

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

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

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

(#) = Out of Range SPCC's out = 0 CCC's out = 0
03051113.D 030511.M Thu Oct 20 12:54:17 2011 TESTCAL

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\082411\08241114.D Vial: 1
Acq On : 24 Aug 2011 6:31 pm Operator:
Sample : ccv std 1-2 b Inst : GC/TCD
Misc : CCV ASTM-D2504 Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 1 17:36 2011 Quant Results File: 030511.RES

Quant Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
Last Update : Wed Aug 17 19:07:55 2011
Response via : Initial Calibration
DataAcq Meth : TCD.M

Volume Inj. :
Signal Phase :
Signal Info :

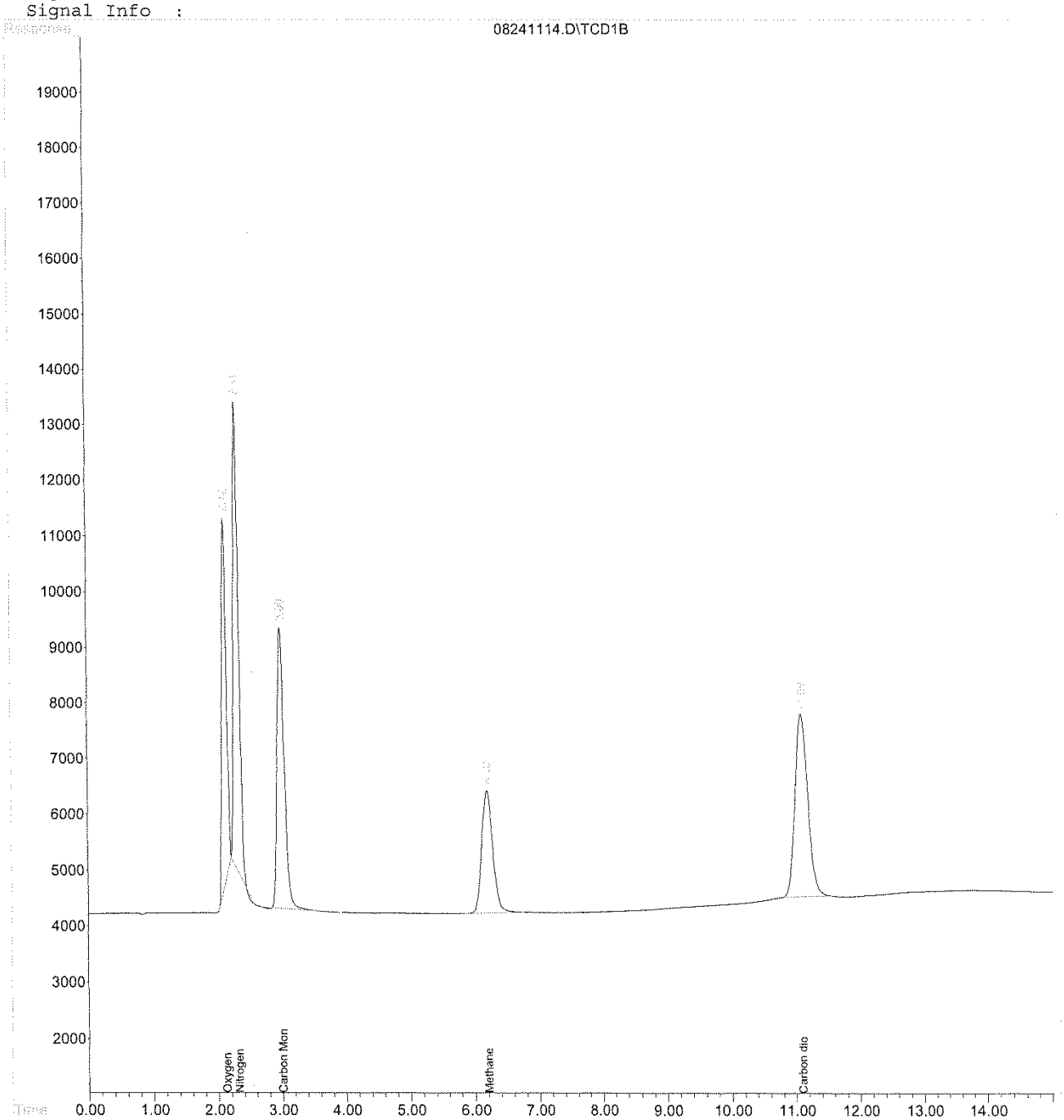
	Compound	R.T.	Response	Conc Units
	Target Compounds			
1)	Oxygen	2.12	324791	2.268 %
2)	Nitrogen	2.31	453672	2.634 %
3)	Carbon Monoxide	3.00	387495	2.460 %
4)	Methane	6.20	256372	1.991 %
5)	Carbon dioxide	11.09f	454273	2.507 %

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\082411\08241114.D Vial: 1
Acq On : 24 Aug 2011 6:31 pm Operator:
Sample : ccv std 1-2 b Inst : GC/TCD
Misc : CCV ASTM-D2504 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Sep 1 17:36 2011 Quant Results File: 030511.RES

Quant Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
Last Update : Wed Aug 17 19:07:55 2011
Response via : Multiple Level Calibration
DataAcq Meth : TCD.M

Volume Inj. :
Signal Phase :
Signal Info :



RTI Laboratories

Run ID: GC-TCD 1_110825A **Run No.:** 42682

Analytical Run Date: 8/25/2011 **InstrumentID:** GC-TCD 1

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

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

Column Length: 2m

SamplID	TestCode	SampType	Batch ID	Analysis Date/Time	QA By	Q	Comments
mblk	ASTM-D2504	MBLK	R42682	8/25/2011 10:29:00 AM	Robert Lynch		
ccv std 1-2 a	ASTM-D2504	CCV	R42682	8/25/2011 10:54:00 AM	Robert Lynch		
lcs	ASTM-D2504	LCS	R42682	8/25/2011 11:36:00 AM	Robert Lynch		
crql std 2% a	ASTM-D2504	CRQL	R42682	8/25/2011 12:13:00 PM	Robert Lynch		
1108344-018b	ASTM-D2504	SAMP	R42682	8/25/2011 12:42:00 PM	Robert Lynch		
1108344-019b	ASTM-D2504	SAMP	R42682	8/25/2011 1:09:00 PM	Robert Lynch		
1108344-020b	ASTM-D2504	SAMP	R42682	8/25/2011 1:29:00 PM	Robert Lynch		
1108344-021b	ASTM-D2504	SAMP	R42682	8/25/2011 1:51:00 PM	Robert Lynch		
1108344-027b	ASTM-D2504	SAMP	R42682	8/25/2011 2:17:00 PM	Robert Lynch		
1108344-001b	ASTM-D2504	SAMP	R42682	8/25/2011 2:38:00 PM	Robert Lynch		
1108344-002b	ASTM-D2504	SAMP	R42682	8/25/2011 2:57:00 PM	Robert Lynch		
1108344-003b	ASTM-D2504	SAMP	R42682	8/25/2011 3:18:00 PM	Robert Lynch		
1108344-004b	ASTM-D2504	SAMP	R42682	8/25/2011 3:40:00 PM	Robert Lynch		
1108344-004bdup	ASTM-D2504	DUP	R42682	8/25/2011 4:02:00 PM	Robert Lynch		
ccv std 1-2 b	ASTM-D2504	CCV	R42682	8/25/2011 4:23:00 PM	Robert Lynch		
crql std 2% b	ASTM-D2504	CRQL	R42682	8/25/2011 4:47:00 PM	Robert Lynch		

RTI Laboratories

ANALYTICAL RUN Summary

20-Oct-11

RunNo 42682

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
827928	mblk	ASTM-D2504	MBLK	.TA\082511\0825	8/25/2011 10:29:	1	R42682		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
827929	ccv std 1-2 a	ASTM-D2504	CCV	.TA\082511\0825	8/25/2011 10:54:	1	R42682		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	2.808	2.808		2.5	0	0	0.025	0.1	0	112%	85	115	0%	
Carbon Monoxide	A	%	2.647	2.647		2.5	0	0	0.025	0.1	0	106%	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	%	2.067	2.067		2	0	0	0.025	0.5	0	103%	85	115	0%	
Nitrogen	A	%	2.619	2.619		2.5	0	0	0.025	0.1	0	105%	85	115	0%	
Oxygen	A	%	2.62	2.62		2.5	0	0	0.025	0.1	0	105%	85	115	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
827930	lcs	ASTM-D2504	LCS	.TA\082511\0825	8/25/2011 11:36:	1	R42682		0	827929	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	2.757	2.757		2.5	0	2.808	0.025	0.1	0	110%	70	130	2%	
Carbon Monoxide	A	%	2.683	2.683		2.5	0	2.647	0.025	0.1	0	107%	70	130	1%	
Ethane	A	%		0		0	0	0	0.025	0.5	0	0%	70	130	0%	
Hydrogen	A	%		0		0	0	0	0.025	0.5	0	0%	70	130	0%	
Methane	A	%	2.113	2.113		2	0	2.067	0.025	0.5	0	106%	70	130	2%	
Nitrogen	A	%	2.59	2.59		2.5	0	2.619	0.025	0.1	0	104%	70	130	1%	
Oxygen	A	%	2.604	2.604		2.5	0	2.62	0.025	0.1	0	104%	70	130	1%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
827941	1108344-004bdup	ASTM-D2504	DUP	.TA\082511\0825	8/25/2011 4:02:0	1	R42682		0	827940	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Oxygen	A	%	20.933	20.933		0	0	20.934	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
827942	ccv std 1-2 b	ASTM-D2504	CCV	.TA\082511\0825	8/25/2011 4:23:0	1	R42682		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	2.77	2.77		2.5	0	0	0.025	0.1	0	111%	85	115	0%	
Carbon Monoxide	A	%	2.683	2.683		2.5	0	0	0.025	0.1	0	107%	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	%	2.096	2.096		2	0	0	0.025	0.5	0	105%	85	115	0%	
Nitrogen	A	%	2.658	2.658		2.5	0	0	0.025	0.1	0	106%	85	115	0%	
Oxygen	A	%	2.631	2.631		2.5	0	0	0.025	0.1	0	105%	85	115	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
827943	crql std 2% b	ASTM-D2504	CRQL	.TA\082511\0825	8/25/2011 4:47:0	1	R42682		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	0.354	0.354		0.3	0	0	0.025	0.1	0	118%	80	120	0%	
Carbon Monoxide	A	%	0.123	0.123		0.14	0	0	0.025	0.1	0	88%	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	%	0.103	0.103		0.09	0	0	0.025	0.5	0	114%	80	120	0%	
Nitrogen	A	%	1.501	1.501		1.39	0	0	0.025	0.1	0	108%	80	120	0%	
Oxygen	A	%	0.094	0.094		0.08	0	0	0.025	0.1	0	118%	80	120	0%	

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\2\DATA\082511\08251102.D Vial: 1
Acq On : 25 Aug 2011 10:54 am Operator:
Sample : ccv std 1-2 a Inst : GC/TCD
Misc : CCV ASTM-D2504 Multiplr: 1.00
IntFile : EVENTS.E

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

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

	Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
1	Oxygen	2.500	2.620	-4.8	0	0.02
2	Nitrogen	2.500	2.619	-4.8	0	0.00
3	Carbon Monoxide	2.500	2.647	-5.9	0	-0.03
4	Methane	2.000	2.067	-3.4	0	-0.04
5	Carbon dioxide	2.500	2.808	-12.3	0	-0.08

Evaluate Continuing Calibration Report - Not Founds

Data File : C:\HPCHEM\2\DATA\082511\08251102.D Vial: 1
Acq On : 25 Aug 2011 10:54 am Operator:
Sample : ccv std 1-2 a Inst : GC/TCD
Misc : CCV ASTM-D2504 Multiplr: 1.00
IntFile : EVENTS.E

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

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

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

(#) = Out of Range SPCC's out = 0 CCC's out = 0
03051113.D 030511.M Thu Oct 20 12:57:58 2011 TESTCAL

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\082511\08251102.D Vial: 1
Acq On : 25 Aug 2011 10:54 am Operator:
Sample : ccv std 1-2 a Inst : GC/TCD
Misc : CCV ASTM-D2504 Multiplr: 1.00
IntFile : events.e
Quant Time: Aug 25 10:41 2011 Quant Results File: 030511.RES

Quant Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
Last Update : Wed Aug 17 19:07:55 2011
Response via : Initial Calibration
DataAcq Meth : TCD.M

Volume Inj. :
Signal Phase :
Signal Info :

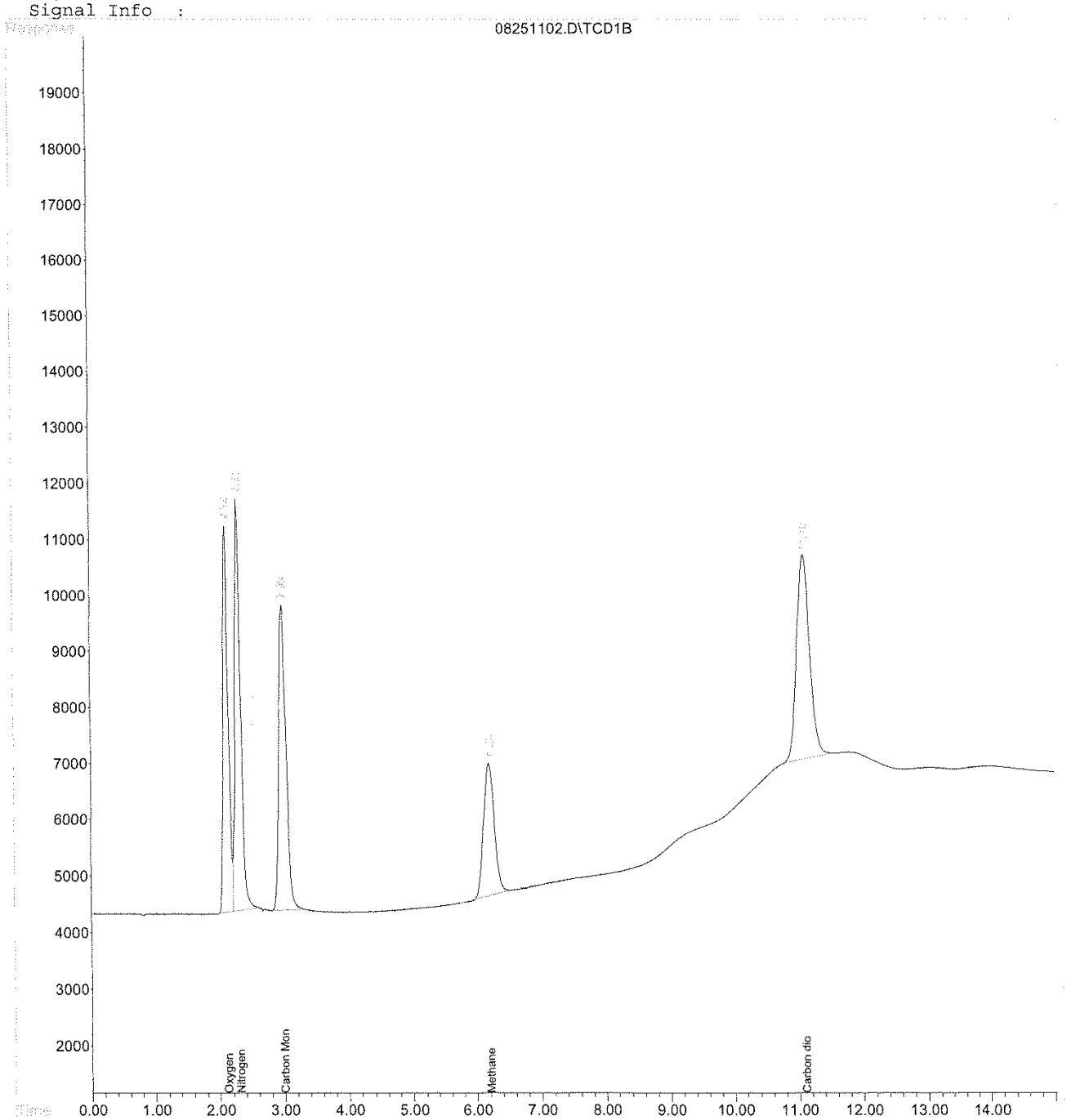
	Compound	R.T.	Response	Conc Units
	Target Compounds			
1)	Oxygen	2.12	375650	2.620 %
2)	Nitrogen	2.31	451201	2.619 %
3)	Carbon Monoxide	2.99	416966	2.647 %
4)	Methane	6.21	267032	2.067 %
5)	Carbon dioxide	11.10	510889	2.808 %

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\082511\08251102.D Vial: 1
Acq On : 25 Aug 2011 10:54 am Operator:
Sample : ccv std 1-2 a Inst : GC/TCD
Misc : CCV ASTM-D2504 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Aug 25 10:41 2011 Quant Results File: 030511.RES

Quant Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
Last Update : Wed Aug 17 19:07:55 2011
Response via : Multiple Level Calibration
DataAcq Meth : TCD.M

Volume Inj. :
Signal Phase :
Signal Info :



Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\2\DATA\082511\08251115.D Vial: 1
Acq On : 25 Aug 2011 4:23 pm Operator:
Sample : ccv std 1-2 b Inst : GC/TCD
Misc : CCV ASTM-D2504 Multiplr: 1.00
IntFile : EVENTS.E

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

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

	Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
1	Oxygen	2.500	2.631	-5.2	0	0.03
2	Nitrogen	2.500	2.658	-6.3	0	0.02
3	Carbon Monoxide	2.500	2.683	-7.3	0	-0.02
4	Methane	2.000	2.096	-4.8	0	-0.03
5	Carbon dioxide	2.500	2.770	-10.8	0	-0.07

Evaluate Continuing Calibration Report - Not Founds

Data File : C:\HPCHEM\2\DATA\082511\08251115.D Vial: 1
Acq On : 25 Aug 2011 4:23 pm Operator:
Sample : ccv std 1-2 b Inst : GC/TCD
Misc : CCV ASTM-D2504 Multiplr: 1.00
IntFile : EVENTS.E

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

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

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

(#) = Out of Range SPCC's out = 0 CCC's out = 0
03051113.D 030511.M Thu Oct 20 12:58:13 2011 TESTCAL

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\082511\08251115.D Vial: 1
Acq On : 25 Aug 2011 4:23 pm Operator:
Sample : ccv std 1-2 b Inst : GC/TCD
Misc : CCV ASTM-D2504 Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 1 17:09 2011 Quant Results File: 030511.RES

Quant Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
Last Update : Wed Aug 17 19:07:55 2011
Response via : Initial Calibration
DataAcq Meth : TCD.M

Volume Inj. :
Signal Phase :
Signal Info :

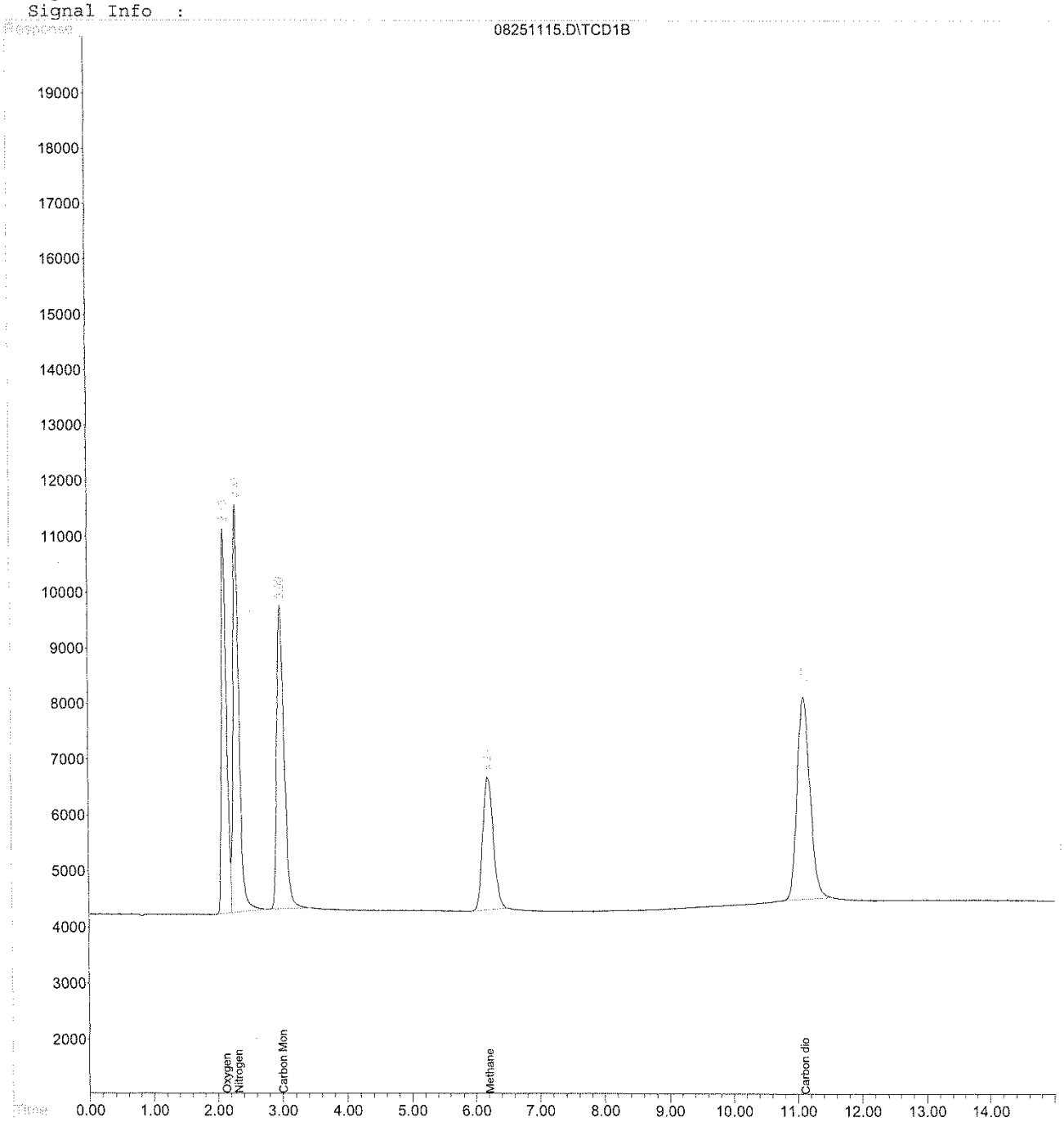
	Compound	R.T.	Response	Conc Units
	Target Compounds			
1)	Oxygen	2.13	377336	2.631 %
2)	Nitrogen	2.32	457859	2.658 %
3)	Carbon Monoxide	3.00	422529	2.683 %
4)	Methane	6.21	271088	2.096 %
5)	Carbon dioxide	11.11	503580	2.770 %

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\082511\08251115.D Vial: 1
Acq On : 25 Aug 2011 4:23 pm Operator:
Sample : ccv std 1-2 b Inst : GC/TCD
Misc : CCV ASTM-D2504 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Sep 1 17:09 2011 Quant Results File: 030511.RES

Quant Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
Last Update : Wed Aug 17 19:07:55 2011
Response via : Multiple Level Calibration
DataAcq Meth : TCD.M

Volume Inj. :
Signal Phase :
Signal Info :



RTI Laboratories

Run ID: GC-TCD 1_110826A **Run No.:** 42683

Analytical Run Date: 8/26/2011 **InstrumentID:** GC-TCD 1

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

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

Column Length: 2m

SampID	TestCode	SampType	Batch ID	Analysis Date/Time	QA By	Q	Comments
mblk	ASTM-D2504	MBLK	R42683	8/26/2011 10:00:00 AM	Robert Lynch		
ccv std 1-2 a	ASTM-D2504	CCV	R42683	8/26/2011 10:32:00 AM	Robert Lynch		
lcs	ASTM-D2504	LCS	R42683	8/26/2011 11:19:00 AM	Robert Lynch		
crql std 2% a	ASTM-D2504	CRQL	R42683	8/26/2011 11:45:00 AM	Robert Lynch		
1108344-005b	ASTM-D2504	SAMP	R42683	8/26/2011 12:28:00 PM	Robert Lynch		
1108344-006b	ASTM-D2504	SAMP	R42683	8/26/2011 1:00:00 PM	Robert Lynch		
1108344-007b	ASTM-D2504	SAMP	R42683	8/26/2011 1:28:00 PM	Robert Lynch		
1108344-008b	ASTM-D2504	SAMP	R42683	8/26/2011 1:50:00 PM	Robert Lynch		
1108344-009b	ASTM-D2504	SAMP	R42683	8/26/2011 2:19:00 PM	Robert Lynch		
1108344-010b	ASTM-D2504	SAMP	R42683	8/26/2011 2:42:00 PM	Robert Lynch		
1108344-011b	ASTM-D2504	SAMP	R42683	8/26/2011 3:06:00 PM	Robert Lynch		
1108344-012b	ASTM-D2504	SAMP	R42683	8/26/2011 3:29:00 PM	Robert Lynch		
1108344-013b	ASTM-D2504	SAMP	R42683	8/26/2011 4:23:00 PM	Robert Lynch		
1108344-014b	ASTM-D2504	SAMP	R42683	8/26/2011 4:53:00 PM	Robert Lynch		
1108344-014bdup	ASTM-D2504	DUP	R42683	8/26/2011 5:15:00 PM	Robert Lynch		
ccv std 1-2 b	ASTM-D2504	CCV	R42683	8/26/2011 5:35:00 PM	Robert Lynch		
crql std 2% b	ASTM-D2504	CRQL	R42683	8/26/2011 7:02:00 PM	Robert Lynch		

RTI Laboratories

ANALYTICAL RUN Summary

20-Oct-11

RunNo 42683

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
827944	mblk	ASTM-D2504	MBLK	\TA\082611\0826	8/26/2011 10:00:	1	R42683		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
827945	ccv std 1-2 a	ASTM-D2504	CCV	\TA\082611\0826	8/26/2011 10:32:	1	R42683		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	2.778	2.778		2.5	0	0	0.025	0.1	0	111%	85	115	0%	
Carbon Monoxide	A	%	2.715	2.715		2.5	0	0	0.025	0.1	0	109%	85	115	0%	
Ethane	A	%		0		0	0	0	0.025	0.5	0	0%	85	115	0%	
Hydrogen	A	%		0		0	0	0	0.025	0.5	0	0%	85	115	0%	
Methane	A	%	2.103	2.103		2	0	0	0.025	0.5	0	105%	85	115	0%	
Nitrogen	A	%	2.704	2.704		2.5	0	0	0.025	0.1	0	108%	85	115	0%	
Oxygen	A	%	2.662	2.662		2.5	0	0	0.025	0.1	0	106%	85	115	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
827946	lcs	ASTM-D2504	LCS	\TA\082611\0826	8/26/2011 11:19:	1	R42683		0	827945	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	2.764	2.764		2.5	0	2.778	0.025	0.1	0	111%	70	130	1%	
Carbon Monoxide	A	%	2.697	2.697		2.5	0	2.715	0.025	0.1	0	108%	70	130	1%	
Ethane	A	%		0		0	0	0	0.025	0.5	0	0%	70	130	0%	
Hydrogen	A	%		0		0	0	0	0.025	0.5	0	0%	70	130	0%	
Methane	A	%	2.162	2.162		2	0	2.103	0.025	0.5	0	108%	70	130	3%	
Nitrogen	A	%	2.648	2.648		2.5	0	2.704	0.025	0.1	0	106%	70	130	2%	
Oxygen	A	%	2.64	2.64		2.5	0	2.662	0.025	0.1	0	106%	70	130	1%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
827957	1108344-014b (Container-01 of 01)	ASTM-D2504	SAMP	\TA\082611\0826	8/26/2011 4:53:0	1	R42683		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Oxygen	A	%	20.372	20.372		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
827958	1108344-014bdup	ASTM-D2504	DUP	\TA\082611\0826	8/26/2011 5:15:0	1	R42683		0	827957	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	0.494	0.494		0	0	0.48	0.025	0.1	0	0%	0	0	3%	
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	%	78.078	78.078		0	0	78.536	0.025	0.1	0	0%	0	0	1%	
Oxygen	A	%	20.259	20.259		0	0	20.372	0.025	0.1	0	0%	0	0	1%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
827959	ccv std 1-2 b	ASTM-D2504	CCV	\TA\082611\0826	8/26/2011 5:35:0	1	R42683		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	2.74	2.74		2.5	0	0	0.025	0.1	0	110%	85	115	0%	
Carbon Monoxide	A	%	2.696	2.696		2.5	0	0	0.025	0.1	0	108%	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	%	2.073	2.073		2	0	0	0.025	0.5	0	104%	85	115	0%	
Nitrogen	A	%	2.664	2.664		2.5	0	0	0.025	0.1	0	107%	85	115	0%	
Oxygen	A	%	2.633	2.633		2.5	0	0	0.025	0.1	0	105%	85	115	0%	

Seq No	Sample ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
827960	crql std 2% b	ASTM-D2504	CRQL	\TA\082611\0826	8/26/2011 7:02:0	1	R42683		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Carbon dioxide	A	%	0.35	0.35		0.3	0	0	0.025	0.1	0	117%	80	120	0%	
Carbon Monoxide	A	%	0.126	0.126		0.14	0	0	0.025	0.1	0	90%	80	120	0%	

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\2\DATA\082611\08261102.D Vial: 1
Acq On : 26 Aug 2011 10:32 am Operator:
Sample : ccv std 1-2 a Inst : GC/TCD
Misc : CCV ASTM-D2504 Multiplr: 1.00
IntFile : EVENTS.E

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

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

	Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
1	Oxygen	2.500	2.662	-6.5	0	0.03
2	Nitrogen	2.500	2.704	-8.2	0	0.02
3	Carbon Monoxide	2.500	2.715	-8.6	0	-0.02
4	Methane	2.000	2.103	-5.2	0	-0.03
5	Carbon dioxide	2.500	2.778	-11.1	0	-0.06

Evaluate Continuing Calibration Report - Not Founds

Data File : C:\HPCHEM\2\DATA\082611\08261102.D Vial: 1
Acq On : 26 Aug 2011 10:32 am Operator:
Sample : ccv std 1-2 a Inst : GC/TCD
Misc : CCV ASTM-D2504 Multiplr: 1.00
IntFile : EVENTS.E

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

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

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

(#) = Out of Range SPCC's out = 0 CCC's out = 0
03051113.D 030511.M Thu Oct 20 13:02:40 2011 TESTCAL

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\082611\08261102.D Vial: 1
Acq On : 26 Aug 2011 10:32 am Operator:
Sample : ccv std 1-2 a Inst : GC/TCD
Misc : CCV ASTM-D2504 Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 1 17:15 2011 Quant Results File: 030511.RES

Quant Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
Last Update : Wed Aug 17 19:07:55 2011
Response via : Initial Calibration
DataAcq Meth : TCD.M

Volume Inj. :
Signal Phase :
Signal Info :

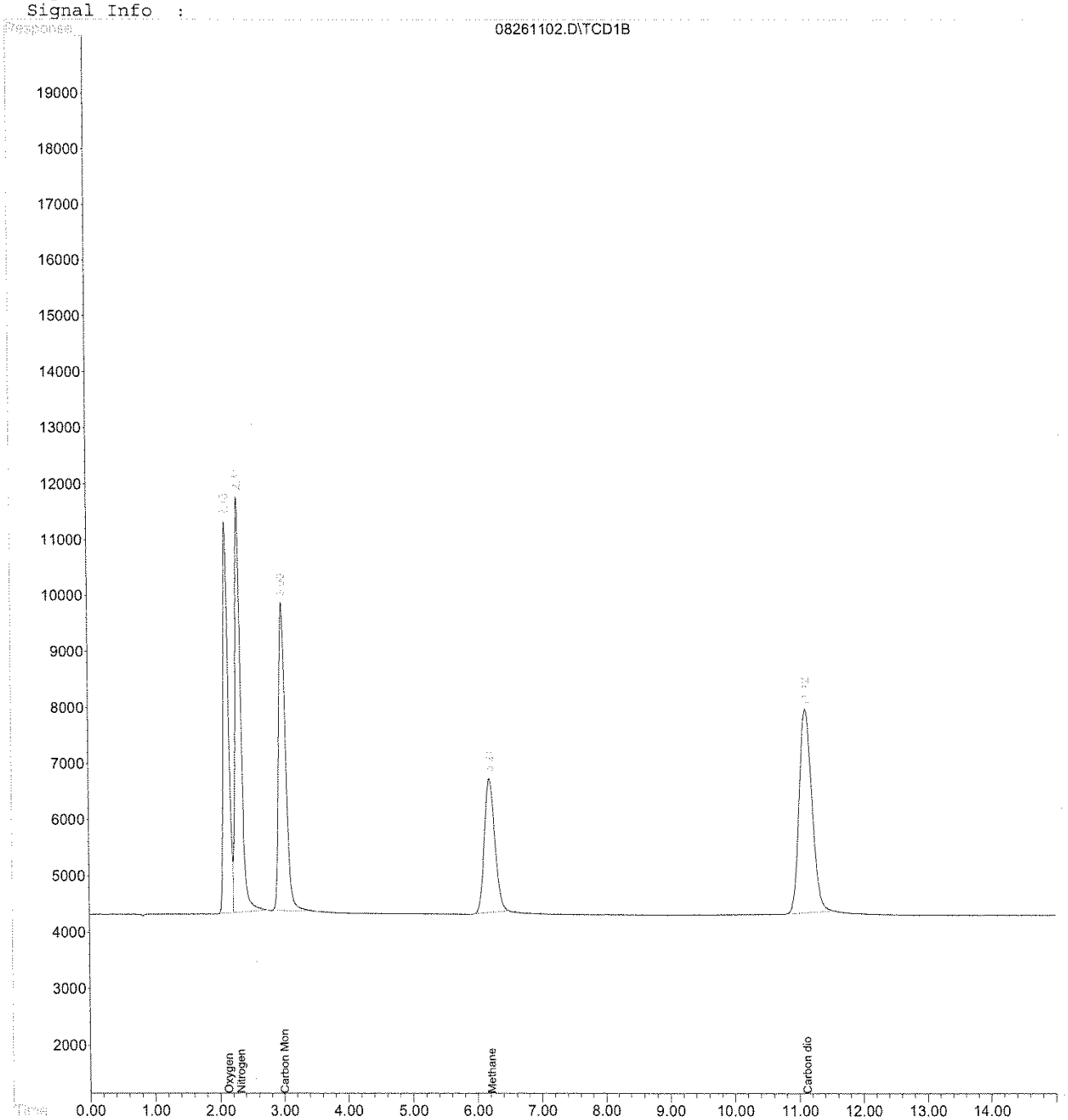
	Compound	R.T.	Response	Conc Units
	Target Compounds			
1)	Oxygen	2.13	381800	2.662 %
2)	Nitrogen	2.32	465861	2.704 %
3)	Carbon Monoxide	3.00	427590	2.715 %
4)	Methane	6.22	272107	2.103 %
5)	Carbon dioxide	11.12	505127	2.778 %

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\082611\08261102.D Vial: 1
Acq On : 26 Aug 2011 10:32 am Operator:
Sample : ccv std 1-2 a Inst : GC/TCD
Misc : CCV ASTM-D2504 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Sep 1 17:15 2011 Quant Results File: 030511.RES

Quant Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
Last Update : Wed Aug 17 19:07:55 2011
Response via : Multiple Level Calibration
DataAcq Meth : TCD.M

Volume Inj. :
Signal Phase :
Signal Info :



Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\2\DATA\082611\08261116.D Vial: 1
Acq On : 26 Aug 2011 5:35 pm Operator:
Sample : ccv std 1-2 b Inst : GC/TCD
Misc : CCV ASTM-D2504 Multiplr: 1.00
IntFile : EVENTS.E

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

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

	Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
1	Oxygen	2.500	2.633	-5.3	0	0.03
2	Nitrogen	2.500	2.664	-6.6	0	0.02
3	Carbon Monoxide	2.500	2.696	-7.8	0	-0.02
4	Methane	2.000	2.073	-3.6	0	-0.03
5	Carbon dioxide	2.500	2.740	-9.6	0	-0.06

Evaluate Continuing Calibration Report - Not Founds

Data File : C:\HPCHEM\2\DATA\082611\08261116.D Vial: 1
Acq On : 26 Aug 2011 5:35 pm Operator:
Sample : ccv std 1-2 b Inst : GC/TCD
Misc : CCV ASTM-D2504 Multiplr: 1.00
IntFile : EVENTS.E

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

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

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

(#) = Out of Range SPCC's out = 0 CCC's out = 0
03051113.D 030511.M Thu Oct 20 13:02:56 2011 TESTCAL

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\082611\08261116.D Vial: 1
Acq On : 26 Aug 2011 5:35 pm Operator:
Sample : ccv std 1-2 b Inst : GC/TCD
Misc : CCV ASTM-D2504 Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 1 17:15 2011 Quant Results File: 030511.RES

Quant Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
Last Update : Wed Aug 17 19:07:55 2011
Response via : Initial Calibration
DataAcq Meth : TCD.M

Volume Inj. :
Signal Phase :
Signal Info :

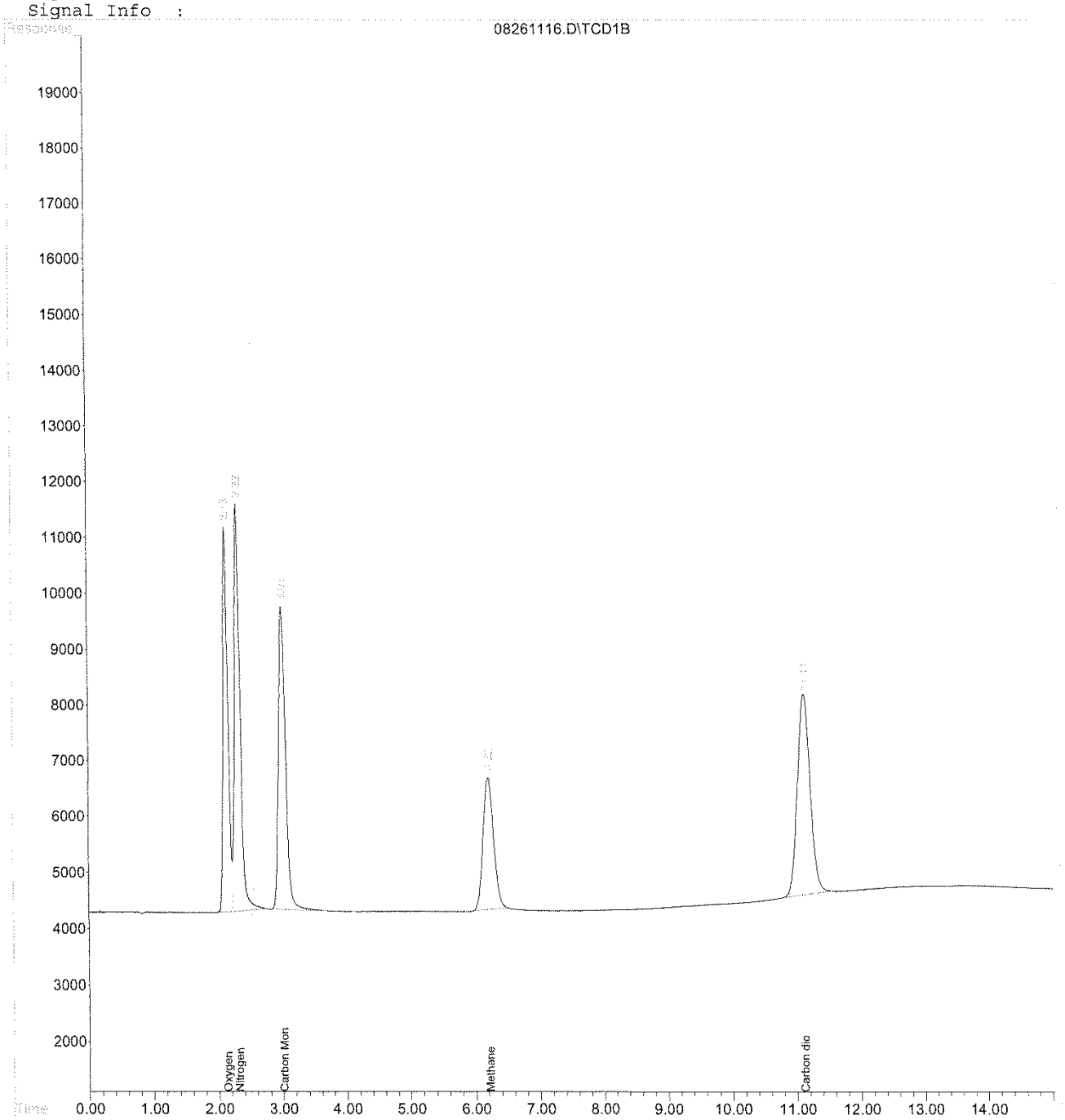
	Compound	R.T.	Response	Conc Units
	Target Compounds			
1)	Oxygen	2.13	377547	2.633 %
2)	Nitrogen	2.32	458874	2.664 %
3)	Carbon Monoxide	3.01	424649	2.696 %
4)	Methane	6.22	267859	2.073 %
5)	Carbon dioxide	11.12	497989	2.740 %

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\2\DATA\082611\08261116.D Vial: 1
Acq On : 26 Aug 2011 5:35 pm Operator:
Sample : ccv std 1-2 b Inst : GC/TCD
Misc : CCV ASTM-D2504 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Sep 1 17:15 2011 Quant Results File: 030511.RES

Quant Method : C:\HPCHEM\2\METHODS\030511.M (Chemstation Integrator)
Title :
Last Update : Wed Aug 17 19:07:55 2011
Response via : Multiple Level Calibration
DataAcq Meth : TCD.M

Volume Inj. :
Signal Phase :
Signal Info :



Response Factor Report GC/TCD

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

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

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

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

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

Compound List Report GC/TCD

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

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

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

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