

March 25, 2015

Mr. Gary Hunt
TRC Companies, Incorporated
21 Griffin Road North
Windsor, Connecticut 06095

Re: Maryland Lab
Work Order: 7304
SDG: 200454.0000.0000_2

Dear Mr. Hunt:

Cape Fear Analytical LLC (CFA) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on March 06, 2015. This original data report has been prepared and reviewed in accordance with CFA's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at 910-795-0421 Ext. 2.

Sincerely,



Cynthia Larkins
Project Manager

Enclosures

Page: _____ of _____
 Project #200454.0000.0000
 CFA Quote #: CFAP13-0020
 COC Number ⁽¹⁾: _____
 PO Number: _____

Cape Fear Analytical, LLC

Chain of Custody and Analytical Request

Cape Fear Analytical, LLC
 3306 Kitty Hawk Rd, Suite 120
 Wilmington, NC 28405
 Phone: (910) 795-0421

CFA Work Order Number: **7304**

Client Name: TRC Environmental
 Project/Site Name: Montgomery County RRF
 Address: 21 Griffin Road North, Windsor, CT

Phone #: _____
 Fax #: _____
 Send Results To: ghunt@ircsolutions.com

Sample ID	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hh:mm)	QC Code (h)	Field Filtered (h)	Sample Matrix (h)	Total number of containers	TO-9A Modified CTDEEP	Sample Analysis Requested ⁽⁵⁾ (Fill in the number of containers for each test)	Preservative Type (6)	Comments
B'ville-Dioxins- PS-4 -Primary (PUF / Filter)	3-04-15	21:40			AIR	2	X			Volume: To be provided
B'ville-Dioxins- PS-1 -Collocate (PUF / Filter)	3-04-15	21:40			AIR	2	X			Volume: To be provided
B'ville-Dioxins- PS-2 -back-up A (PUF / Filter)	3-04-15	21:40			AIR	2	X			HOLD back-up: do not analyze
B'ville-Dioxins- PS-3 -back-up B (PUF / Filter)	3-04-15	21:40			AIR	2	X			HOLD back-up: do not analyze
Lucketts-Dioxins- PS-5 -Primary (PUF / Filter)	3-04-15	20:00			AIR	2	X			Volume: To be provided
Lucketts-Dioxins-PS-6 -back-up (PUF / Filter)	3-04-15	20:00			AIR	2	X			HOLD back-up: do not analyze
B'ville Blank-Dioxins (PUF / Filter)	3-04-15	21:40			AIR	2	X			
Lucketts Blank-Dioxins (PUF / Filter)	3-04-15	20:00			AIR	2	X			

TAT Requested: Normal; Rush: _____; Specify: 15 (Subject to Surcharge); Fax Results: Yes / No
 Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / **Level 4**
 Sample Collection Time Zone: Eastern / Pacific / Other
 Sample Collection Time Zone: Eastern / Pacific / Other / Mountain

Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards
 do not analyze back-up samples unless directed to do so by Gary Hunt or Melita Linzis

Chain of Custody Signatures
 Received by (Signed) _____ Date _____ Time _____
 1. Stephen Boyko 3-5-15 1550
 2. _____ Date _____ Time _____
 3. _____ Date _____ Time _____

Relinquished By (Signed) _____ Date _____ Time _____
 CFA PM: _____
 Method of Shipment: _____
 Date Shipped: _____
 Airbill #: _____
 Airbill #: _____

For Lab Receiving Use Only
 Custody Seal Intact? YES / NO / NA
 Cooler Temp: 31 C

1.) Chain of Custody Number = Client Determined
 2.) QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite
 3.) Field Filtered: For liquid matrices, indicate with a Y - for yes the sample was field filtered or - N - for sample was not field filtered.
 4.) Matrix Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Waste Water, W=Water, ML=Misc Liquid, SO=Soil, SD=Sediment, SL=Sludge, SS=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, N=Nasal
 5.) Sample Analysis Requested: Analytical method requested (i.e. 8290B, 1668B) and number of containers provided for each (i.e. 8290B - 3, 1668B - 1).
 6.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thionifate, if no preservative is added = leave field blank

WHITE = LABORATORY
 YELLOW = FILE
 PINK = CLIENT

SAMPLE RECEIPT CHECKLIST
Cape Fear Analytical

Client: TRCC	Work Order: 7304
Shipping Company: FedEx	Date/Time Received: 06 Mar 15 @ 1150

Suspected Hazard Information	Yes	NA	No	DOE Site Sample Packages	Yes	NA	No*
Shipped as DOT Hazardous?			<input checked="" type="checkbox"/>	Screened <0.5 mR/hr?			<input checked="" type="checkbox"/>
Samples identified as Foreign Soil?			<input checked="" type="checkbox"/>	Samples < 2x background?			<input checked="" type="checkbox"/>

Air Sample Receipt Specifics	Yes	NA	No	* Notify RSO of any responses in this column immediately.
Air sample in shipment?	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	AS 06 Mar 15 Air Witness: N/A Conde Jenkins

#	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: seals broken damaged container leaking container other (describe)
2	Chain of Custody documents included with shipment?	<input checked="" type="checkbox"/>			
3	Samples requiring cold preservation within 0-6°C?	<input checked="" type="checkbox"/>			Preservation Method: <input checked="" type="checkbox"/> ice bags blue ice dry ice none other (describe) 6.9°C - 3.8°C = 3.1°C
4	Aqueous samples found to have visible solids?		<input checked="" type="checkbox"/>		Sample IDs, containers affected:
5	Samples requiring chemical preservation at proper pH?		<input checked="" type="checkbox"/>		Sample IDs, containers affected and pH observed: If preservative added, Lot#:
6	Samples requiring preservation have no residual chlorine?		<input checked="" type="checkbox"/>		Sample IDs, containers affected: If preservative added, Lot#:
7	Samples received within holding time?	<input checked="" type="checkbox"/>			Sample IDs, tests affected:
8	Sample IDs on COC match IDs on containers?	<input checked="" type="checkbox"/>			Sample IDs, containers affected:
9	Date & time of COC match date & time on containers?			<input checked="" type="checkbox"/>	Sample IDs, containers affected: NO times listed on containers
10	Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>			Sample IDs, containers affected: #8 pufs 1/2 #8 filters
11	COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>			

Comments:
NO custody seal, intact.

High Resolution Dioxins and Furans Analysis

Case Narrative

HDOX Case Narrative
TRC Environmental Corporation (TRCC)
SDG 200454.0000.0000_2
Work Order 7304

Method/Analysis Information

Product: Dioxins and Furans by TO9A in air on PUF
Analytical Method: TO9A
Extraction Method: TO9A
Analytical Batch Number: 28368
Clean Up Batch Number: 28367
Extraction Batch Number: 28366

Sample Analysis

The following samples were analyzed using the analytical protocol as established in TO9A:

Sample ID	Client ID
7304001	B'ville-Dioxins-PS-4-Primary
7304002	B'ville-Dioxins-PS-1-Collocate
7304005	Lucketts-Dioxins-PS-5-Primary
7304007	B'ville Blank-Dioxins
7304008	Lucketts Blank-Dioxins
12012783	Method Blank (MB)
12012784	Laboratory Control Sample (LCS)
12012785	Laboratory Control Sample Duplicate (LCSD)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by Cape Fear Analytical LLC (CFA) as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with CF-OA-E-002 REV# 13.

Raw data reports are processed and reviewed by the analyst using the TargetLynx software package.

Calibration Information

Initial Calibration

All initial calibration requirements have been met for this sample delivery group (SDG).

Continuing Calibration Verification (CCV) Requirements

All associated calibration verification standard(s) (CCV) met the acceptance criteria.

Quality Control (QC) Information

Certification Statement

The test results presented in this document are certified to meet all requirements of the 2009 TNI Standard.

Method Blank (MB) Statement

The MB(s) analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries

One sampling standard recovered above the acceptance limit. 7304001 (B'ville-Dioxins-PS-4-Primary), 7304002 (B'ville-Dioxins-PS-1-Collocate), 7304005 (Lucketts-Dioxins-PS-5-Primary) and 7304008 (Lucketts Blank-Dioxins).

Laboratory Control Sample (LCS) Recovery

The LCS spike recoveries met the acceptance limits.

Laboratory Control Sample Duplicate (LCSD) Recovery

The LCSD spike recoveries met the acceptance limits.

LCS/LCSD Relative Percent Difference (RPD) Statement

The RPD(s) between the LCS and LCSD met the acceptance limits.

QC Sample Designation

A matrix spike and matrix spike duplicate analysis was not required for this SDG.

Technical Information

Holding Time Specifications

CFA assigns holding times based on the associated methodology, which assigns the date and time from sample collection. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Preparation/Analytical Method Verification

Sample volumes were provided by the client. 8700 pg/m³ was used as the volume for blanks and batch QC.

Sample Dilutions

The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis

Re-extractions or re-analyses were not required in this SDG.

Miscellaneous Information

Nonconformance (NCR) Documentation

A NCR was not required for this SDG.

Manual Integrations

Certain standards and QC samples required manual integrations to correctly position the baseline as set in the calibration standard injections. Where manual integrations were performed, copies of all manual integration peak profiles are included in the raw data section of this fraction. Manual integrations were required for data files in this SDG.

System Configuration

This analysis was performed on the following instrument configuration:

Instrument ID	Instrument	System Configuration	Column ID	Column Description
HRP750_2	High-Resolution GC/MS System	Dioxin Analysis	DB-5MS	60m x 0.25mm, 0.25um
HRP763_2	High-Resolution GC/MS System	TCDF Confirmation	DB-225	30m x 0.25mm, 0.25um

Electronic Packaging Comment

This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted: Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. An electronic signature page inserted after the case narrative will include the data validator's signature and title. The signature page also includes the data qualifiers used in the fractional package. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Sample Data Summary

Cape Fear Analytical, LLC

3306 Kitty Hawk Road Suite 120, Wilmington, NC 28405 - (910) 795-0421 - www.capefearanalytical.com

Qualifier Definition Report for

TRCC001 TRC Environmental Corporation

Client SDG: 200454.0000.0000_2 CFA Work Order: 7304

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a surrogate compound
- J Value is estimated
- K Estimated Maximum Possible Concentration
- U Analyte was analyzed for, but not detected above the specified detection limit.
- DL Indicates that sample is diluted.
- RA Indicates that sample is re-analyzed without re-extraction.
- RE Indicates that sample is re-extracted.

Review/Validation

Cape Fear Analytical requires all analytical data to be verified by a qualified data reviewer.

The following data validator verified the information presented in this case narrative:

Signature: 

Name: Heather Patterson

Date: 25 MAR 2015

Title: Data Validator

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

Page 1 of 2

SDG Number: 200454.0000.0000_2

Lab Sample ID: 7304001

Client Sample: TO-9A Air

Client ID: B'ville-Dioxins-PS-4-Primary

Batch ID: 28368

Run Date: 03/16/2015 23:59

Data File: A16MAR15F-10

Prep Batch: 28366

Prep Date: 10-MAR-15

Client: TRCC001

Date Collected: 03/04/2015 21:40

Date Received: 03/06/2015 11:50

Method: TO9A

Analyst: JTF

Prep Method: TO9A

Prep Aliquot: 8844.603 m3

Project: TRCC00214

Matrix: AIR

Prep Basis: As Received

Instrument: HRP750

Dilution: 1

CAS No.	Parmname	Qual	Result	EMPC	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	.00114		pg/m3	0.00114	0.00226
40321-76-4	1,2,3,7,8-PeCDD	J	0.00391		pg/m3	0.000923	0.0113
39227-28-6	1,2,3,4,7,8-HxCDD	J	0.00636		pg/m3	0.00131	0.0113
57653-85-7	1,2,3,6,7,8-HxCDD	J	0.0095		pg/m3	0.00128	0.0113
19408-74-3	1,2,3,7,8,9-HxCDD	J	0.0109		pg/m3	0.00142	0.0113
35822-46-9	1,2,3,4,6,7,8-HpCDD		0.122		pg/m3	0.0016	0.0113
3268-87-9	1,2,3,4,6,7,8,9-OCDD		0.416		pg/m3	0.00244	0.0226
51207-31-9	2,3,7,8-TCDF	J	0.00168		pg/m3	0.00113	0.00226
57117-41-6	1,2,3,7,8-PeCDF	J	0.00172		pg/m3	0.000782	0.0113
57117-31-4	2,3,4,7,8-PeCDF	J	0.00299		pg/m3	0.00076	0.0113
70648-26-9	1,2,3,4,7,8-HxCDF	J	0.00403		pg/m3	0.00085	0.0113
57117-44-9	1,2,3,6,7,8-HxCDF	J	0.00373		pg/m3	0.000755	0.0113
60851-34-5	2,3,4,6,7,8-HxCDF	J	0.00467		pg/m3	0.000837	0.0113
72918-21-9	1,2,3,7,8,9-HxCDF	J	0.00265		pg/m3	0.00112	0.0113
67562-39-4	1,2,3,4,6,7,8-HpCDF		0.018		pg/m3	0.000592	0.0113
55673-89-7	1,2,3,4,7,8,9-HpCDF	J	0.0031		pg/m3	0.000891	0.0113
39001-02-0	1,2,3,4,6,7,8,9-OCDF	J	0.0197		pg/m3	0.00299	0.0226
41903-57-5	Total Tetrachlorodibenzo-p-dioxin		0.0142		pg/m3	0.00114	0.00226
36088-22-9	Total Pentachlorodibenzo-p-dioxin		0.0441		pg/m3	0.000923	0.0113
34465-46-8	Total Hexachlorodibenzo-p-dioxin		0.127		pg/m3	0.00128	0.0113
37871-00-4	Total Heptachlorodibenzo-p-dioxin		0.269		pg/m3	0.0016	0.0113
30402-14-3	Total Tetrachlorodibenzofuran		0.0622	0.0674	pg/m3	0.00113	0.00226
30402-15-4	Total Pentachlorodibenzofuran		0.0462	0.0478	pg/m3	0.000194	0.0113
55684-94-1	Total Hexachlorodibenzofuran		0.0485		pg/m3	0.000755	0.0113
38998-75-3	Total Heptachlorodibenzofuran		0.0353		pg/m3	0.000592	0.0113
	TEQ ITEF ND=0		0.00975	0.00975	pg/m3		
	TEQ ITEF ND=0.5		0.0103	0.0103	pg/m3		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		0.371	0.452	pg/m3	81.9	(50%-120%)
13C-1,2,3,7,8-PeCDD		0.323	0.452	pg/m3	71.3	(50%-120%)
13C-1,2,3,6,7,8-HxCDD		0.326	0.452	pg/m3	72.1	(50%-120%)
13C-1,2,3,4,6,7,8-HpCDD		0.335	0.452	pg/m3	74.0	(40%-120%)
13C-OCDD		0.600	0.905	pg/m3	66.3	(40%-120%)
13C-2,3,7,8-TCDF		0.347	0.452	pg/m3	76.7	(50%-120%)
13C-1,2,3,7,8-PeCDF		0.350	0.452	pg/m3	77.3	(50%-120%)
13C-1,2,3,6,7,8-HxCDF		0.337	0.452	pg/m3	74.4	(50%-120%)
13C-1,2,3,4,6,7,8-HpCDF		0.300	0.452	pg/m3	66.3	(40%-120%)
37Cl-2,3,7,8-TCDD (SS)		0.511	0.452	pg/m3	113	(50%-120%)
13C-2,3,4,7,8-PeCDF (SS)		0.471	0.452	pg/m3	104	(50%-120%)
13C-1,2,3,4,7,8-HxCDD (SS)		0.496	0.452	pg/m3	110	(50%-120%)
13C-1,2,3,4,7,8-HxCDF (SS)		0.522	0.452	pg/m3	116	(50%-120%)

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 200454.0000.0000_2	Client: TRCC001	Project: TRCC00214
Lab Sample ID: 7304001	Date Collected: 03/04/2015 21:40	Matrix: AIR
Client Sample: TO-9A Air	Date Received: 03/06/2015 11:50	
Client ID: B'ville-Dioxins-PS-4-Primary		Prep Basis: As Received
Batch ID: 28368	Method: TO9A	
Run Date: 03/16/2015 23:59	Analyst: JTF	Instrument: HRP750
Data File: A16MAR15F-10		Dilution: 1
Prep Batch: 28366	Prep Method: TO9A	
Prep Date: 10-MAR-15	Prep Aliquot: 8844.603 m3	

CAS No.	Parmname	Qual	Result	EMPC	Units	EDL	PQL
Surrogate/Tracer recovery							
		Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1,2,3,4,7,8,9-HpCDF (SS)			0.572	0.452	pg/m3	127 *	(50%-120%)

Comments:
J Value is estimated
K Estimated Maximum Possible Concentration
U Analyte was analyzed for, but not detected above the specified detection limit.

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 200454.0000.0000_2

Lab Sample ID: 7304002

Client Sample: TO-9A Air

Client ID: B'ville-Dioxins-PS-1-Collocate

Batch ID: 28368

Run Date: 03/17/2015 00:46

Data File: A16MAR15F-11

Prep Batch: 28366

Prep Date: 10-MAR-15

Client: TRCC001

Date Collected: 03/04/2015 21:40

Date Received: 03/06/2015 11:50

Method: TO9A

Analyst: JTF

Prep Method: TO9A

Prep Aliquot: 8628.563 m3

Project: TRCC00214

Matrix: AIR

Prep Basis: As Received

Instrument: HRP750

Dilution: 1

CAS No.	Parname	Qual	Result	EMPC	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	JK		0.00114	pg/m3	0.00096	0.00232
40321-76-4	1,2,3,7,8-PeCDD	J	0.00332		pg/m3	0.00112	0.0116
39227-28-6	1,2,3,4,7,8-HxCDD	J	0.00511		pg/m3	0.00185	0.0116
57653-85-7	1,2,3,6,7,8-HxCDD	J	0.00915		pg/m3	0.00181	0.0116
19408-74-3	1,2,3,7,8,9-HxCDD		0.0123		pg/m3	0.002	0.0116
35822-46-9	1,2,3,4,6,7,8-HpCDD		0.112		pg/m3	0.0021	0.0116
3268-87-9	1,2,3,4,6,7,8,9-OCDD		0.344		pg/m3	0.00326	0.0232
51207-31-9	2,3,7,8-TCDF	U	.00173		pg/m3	0.00173	0.00232
57117-41-6	1,2,3,7,8-PeCDF	J	0.00204		pg/m3	0.000793	0.0116
57117-31-4	2,3,4,7,8-PeCDF	J	0.00373		pg/m3	0.000774	0.0116
70648-26-9	1,2,3,4,7,8-HxCDF	J	0.00403		pg/m3	0.000598	0.0116
57117-44-9	1,2,3,6,7,8-HxCDF	J	0.0038		pg/m3	0.000533	0.0116
60851-34-5	2,3,4,6,7,8-HxCDF	J	0.00399		pg/m3	0.000589	0.0116
72918-21-9	1,2,3,7,8,9-HxCDF	J	0.00204		pg/m3	0.000788	0.0116
67562-39-4	1,2,3,4,6,7,8-HpCDF		0.018		pg/m3	0.00115	0.0116
55673-89-7	1,2,3,4,7,8,9-HpCDF	J	0.00306		pg/m3	0.00173	0.0116
39001-02-0	1,2,3,4,6,7,8,9-OCDF	J	0.0159		pg/m3	0.00313	0.0232
41903-57-5	Total Tetrachlorodibenzo-p-dioxin		0.014	0.0192	pg/m3	0.00096	0.00232
36088-22-9	Total Pentachlorodibenzo-p-dioxin		0.0463		pg/m3	0.00112	0.0116
34465-46-8	Total Hexachlorodibenzo-p-dioxin		0.135		pg/m3	0.00181	0.0116
37871-00-4	Total Heptachlorodibenzo-p-dioxin		0.254		pg/m3	0.0021	0.0116
30402-14-3	Total Tetrachlorodibenzofuran		0.0676	0.0715	pg/m3	0.00173	0.00232
30402-15-4	Total Pentachlorodibenzofuran		0.0521		pg/m3	0.000199	0.0116
55684-94-1	Total Hexachlorodibenzofuran		0.0418		pg/m3	0.000533	0.0116
38998-75-3	Total Heptachlorodibenzofuran		0.0352		pg/m3	0.00115	0.0116
	TEQ ITEF ND=0		0.00936	0.0105	pg/m3		
	TEQ ITEF ND=0.5		0.00992	0.0106	pg/m3		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		0.376	0.464	pg/m3	81.1	(50%-120%)
13C-1,2,3,7,8-PeCDD		0.355	0.464	pg/m3	76.6	(50%-120%)
13C-1,2,3,6,7,8-HxCDD		0.347	0.464	pg/m3	74.8	(50%-120%)
13C-1,2,3,4,6,7,8-HpCDD		0.338	0.464	pg/m3	72.8	(40%-120%)
13C-OCDD		0.594	0.927	pg/m3	64.1	(40%-120%)
13C-2,3,7,8-TCDF		0.363	0.464	pg/m3	78.2	(50%-120%)
13C-1,2,3,7,8-PeCDF		0.373	0.464	pg/m3	80.6	(50%-120%)
13C-1,2,3,6,7,8-HxCDF		0.437	0.464	pg/m3	94.4	(50%-120%)
13C-1,2,3,4,6,7,8-HpCDF		0.300	0.464	pg/m3	64.6	(40%-120%)
37Cl-2,3,7,8-TCDD (SS)		0.527	0.464	pg/m3	114	(50%-120%)
13C-2,3,4,7,8-PeCDF (SS)		0.497	0.464	pg/m3	107	(50%-120%)
13C-1,2,3,4,7,8-HxCDD (SS)		0.484	0.464	pg/m3	104	(50%-120%)
13C-1,2,3,4,7,8-HxCDF (SS)		0.482	0.464	pg/m3	104	(50%-120%)

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 200454.0000.0000_2	Client: TRCC001	Project: TRCC00214
Lab Sample ID: 7304002	Date Collected: 03/04/2015 21:40	Matrix: AIR
Client Sample: TO-9A Air	Date Received: 03/06/2015 11:50	
Client ID: B'ville-Dioxins-PS-1-Collocate		Prep Basis: As Received
Batch ID: 28368	Method: TO9A	
Run Date: 03/17/2015 00:46	Analyst: JTF	Instrument: HRP750
Data File: A16MAR15F-11		Dilution: 1
Prep Batch: 28366	Prep Method: TO9A	
Prep Date: 10-MAR-15	Prep Aliquot: 8628.563 m3	

CAS No.	Parmname	Qual	Result	EMPC	Units	EDL	PQL
Surrogate/Tracer recovery							
		Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1,2,3,4,7,8,9-HpCDF (SS)			0.577	0.464	pg/m3	125 *	(50%-120%)

Comments:

- J** Value is estimated
- K** Estimated Maximum Possible Concentration
- U** Analyte was analyzed for, but not detected above the specified detection limit.

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

Page 1 of 2

SDG Number: 200454.0000.0000_2

Lab Sample ID: 7304005

Client Sample: TO-9A Air

Client ID: Lucketts-Dioxins-PS-5-Primary

Batch ID: 28368

Run Date: 03/17/2015 01:34

Data File: A16MAR15F-12

Prep Batch: 28366

Prep Date: 10-MAR-15

Client: TRCC001

Date Collected: 03/04/2015 20:00

Date Received: 03/06/2015 11:50

Method: TO9A

Analyst: JTF

Prep Method: TO9A

Prep Aliquot: 8707.283 m3

Project: TRCC00214

Matrix: AIR

Prep Basis: As Received

Instrument: HRP750

Dilution: 1

CAS No.	Parmname	Qual	Result	EMPC	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD		0.003		pg/m3	0.00149	0.0023
40321-76-4	1,2,3,7,8-PeCDD		0.0173		pg/m3	0.00188	0.0115
39227-28-6	1,2,3,4,7,8-HxCDD		0.0199		pg/m3	0.00136	0.0115
57653-85-7	1,2,3,6,7,8-HxCDD		0.0338		pg/m3	0.00133	0.0115
19408-74-3	1,2,3,7,8,9-HxCDD		0.0393		pg/m3	0.00147	0.0115
35822-46-9	1,2,3,4,6,7,8-HpCDD		0.455		pg/m3	0.00272	0.0115
3268-87-9	1,2,3,4,6,7,8,9-OCDD		1.48		pg/m3	0.00391	0.023
51207-31-9	2,3,7,8-TCDF		0.00285		pg/m3	0.00144	0.0023
57117-41-6	1,2,3,7,8-PeCDF	J	0.00312		pg/m3	0.00177	0.0115
57117-31-4	2,3,4,7,8-PeCDF	J	0.00511		pg/m3	0.00172	0.0115
70648-26-9	1,2,3,4,7,8-HxCDF	J	0.00675		pg/m3	0.00068	0.0115
57117-44-9	1,2,3,6,7,8-HxCDF	J	0.00572		pg/m3	0.000606	0.0115
60851-34-5	2,3,4,6,7,8-HxCDF	J	0.00745		pg/m3	0.000671	0.0115
72918-21-9	1,2,3,7,8,9-HxCDF	J	0.00475		pg/m3	0.000896	0.0115
67562-39-4	1,2,3,4,6,7,8-HpCDF		0.0278		pg/m3	0.000763	0.0115
55673-89-7	1,2,3,4,7,8,9-HpCDF	J	0.00474		pg/m3	0.00114	0.0115
39001-02-0	1,2,3,4,6,7,8,9-OCDF		0.0362		pg/m3	0.00209	0.023
41903-57-5	Total Tetrachlorodibenzo-p-dioxin		0.076		pg/m3	0.00149	0.0023
36088-22-9	Total Pentachlorodibenzo-p-dioxin		0.181	0.196	pg/m3	0.00188	0.0115
34465-46-8	Total Hexachlorodibenzo-p-dioxin		0.491		pg/m3	0.00133	0.0115
37871-00-4	Total Heptachlorodibenzo-p-dioxin		1.08		pg/m3	0.00272	0.0115
30402-14-3	Total Tetrachlorodibenzofuran		0.112	0.117	pg/m3	0.00144	0.0023
30402-15-4	Total Pentachlorodibenzofuran		0.073		pg/m3	0.000202	0.0115
55684-94-1	Total Hexachlorodibenzofuran		0.079	0.0819	pg/m3	0.000606	0.0115
38998-75-3	Total Heptachlorodibenzofuran		0.065		pg/m3	0.000763	0.0115
	TEQ ITEF ND=0		0.0328	0.0328	pg/m3		
	TEQ ITEF ND=0.5		0.0328	0.0328	pg/m3		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		0.386	0.459	pg/m3	84.1	(50%-120%)
13C-1,2,3,7,8-PeCDD		0.370	0.459	pg/m3	80.6	(50%-120%)
13C-1,2,3,6,7,8-HxCDD		0.345	0.459	pg/m3	75.0	(50%-120%)
13C-1,2,3,4,6,7,8-HpCDD		0.351	0.459	pg/m3	76.3	(40%-120%)
13C-OCDD		0.615	0.919	pg/m3	67.0	(40%-120%)
13C-2,3,7,8-TCDF		0.362	0.459	pg/m3	78.8	(50%-120%)
13C-1,2,3,7,8-PeCDF		0.385	0.459	pg/m3	83.9	(50%-120%)
13C-1,2,3,6,7,8-HxCDF		0.351	0.459	pg/m3	76.4	(50%-120%)
13C-1,2,3,4,6,7,8-HpCDF		0.305	0.459	pg/m3	66.4	(40%-120%)
37Cl-2,3,7,8-TCDD (SS)		0.515	0.459	pg/m3	112	(50%-120%)
13C-2,3,4,7,8-PeCDF (SS)		0.508	0.459	pg/m3	111	(50%-120%)
13C-1,2,3,4,7,8-HxCDD (SS)		0.470	0.459	pg/m3	102	(50%-120%)
13C-1,2,3,4,7,8-HxCDF (SS)		0.532	0.459	pg/m3	116	(50%-120%)

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 200454.0000.0000_2	Client: TRCC001	Project: TRCC00214
Lab Sample ID: 7304005	Date Collected: 03/04/2015 20:00	Matrix: AIR
Client Sample: TO-9A Air	Date Received: 03/06/2015 11:50	
Client ID: Lucketts-Dioxins-PS-5-Primary		Prep Basis: As Received
Batch ID: 28368	Method: TO9A	
Run Date: 03/17/2015 01:34	Analyst: JTF	Instrument: HRP750
Data File: A16MAR15F-12		Dilution: 1
Prep Batch: 28366	Prep Method: TO9A	
Prep Date: 10-MAR-15	Prep Aliquot: 8707.283 m3	

CAS No.	Parmname	Qual	Result	EMPC	Units	EDL	PQL
Surrogate/Tracer recovery							
		Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1,2,3,4,7,8,9-HpCDF (SS)			0.569	0.459	pg/m3	124 *	(50%-120%)

Comments:
J Value is estimated
K Estimated Maximum Possible Concentration
U Analyte was analyzed for, but not detected above the specified detection limit.

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 200454.0000.0000_2	Client: TRCC001	Project: TRCC00214
Lab Sample ID: 7304005	Date Collected: 03/04/2015 20:00	Matrix: AIR
Client Sample: TO-9A Air	Date Received: 03/06/2015 11:50	
Client ID: Lucketts-Dioxins-PS-5-Primary		Prep Basis: As Received
Batch ID: 28368	Method: TO9A	
Run Date: 03/24/2015 05:57	Analyst: CLP	Instrument: HRP763
Data File: b23mar15a_2-21		Dilution: 1
Prep Batch: 28366	Prep Method: TO9A	
Prep Date: 10-MAR-15	Prep Aliquot: 8707.283 m3	

CAS No.	Parmname	Qual	Result	EMPC	Units	EDL	PQL
51207-31-9	2,3,7,8-TCDF		0.00259		pg/m3	0.000376	0.0023

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
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Comments:

- J** Value is estimated
- K** Estimated Maximum Possible Concentration
- U** Analyte was analyzed for, but not detected above the specified detection limit.

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

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SDG Number: 200454.0000.0000_2
Lab Sample ID: 7304007
Client Sample: TO-9A Air
Client ID: B'ville Blank-Dioxins
Batch ID: 28368
Run Date: 03/17/2015 02:22
Data File: A16MAR15F-13
Prep Batch: 28366
Prep Date: 10-MAR-15

Client: TRCC001
Date Collected: 03/04/2015 21:40
Date Received: 03/06/2015 11:50
Method: TO9A
Analyst: JTF
Prep Method: TO9A
Prep Aliquot: 8700 m3

Project: TRCC00214
Matrix: AIR
Prep Basis: As Received
Instrument: HRP750
Dilution: 1

CAS No.	Parmname	Qual	Result	EMPC	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	.000731		pg/m3	0.000731	0.0023
40321-76-4	1,2,3,7,8-PeCDD	U	.000492		pg/m3	0.000492	0.0115
39227-28-6	1,2,3,4,7,8-HxCDD	U	.000731		pg/m3	0.000731	0.0115
57653-85-7	1,2,3,6,7,8-HxCDD	U	.000717		pg/m3	0.000717	0.0115
19408-74-3	1,2,3,7,8,9-HxCDD	U	.000795		pg/m3	0.000795	0.0115
35822-46-9	1,2,3,4,6,7,8-HpCDD	U	.00138		pg/m3	0.00138	0.0115
3268-87-9	1,2,3,4,6,7,8,9-OCDD	J	0.00449		pg/m3	0.00292	0.023
51207-31-9	2,3,7,8-TCDF	U	.000547		pg/m3	0.000547	0.0023
57117-41-6	1,2,3,7,8-PeCDF	U	.000283		pg/m3	0.000283	0.0115
57117-31-4	2,3,4,7,8-PeCDF	U	.000275		pg/m3	0.000275	0.0115
70648-26-9	1,2,3,4,7,8-HxCDF	U	.000327		pg/m3	0.000327	0.0115
57117-44-9	1,2,3,6,7,8-HxCDF	U	.00029		pg/m3	0.00029	0.0115
60851-34-5	2,3,4,6,7,8-HxCDF	U	.000321		pg/m3	0.000321	0.0115
72918-21-9	1,2,3,7,8,9-HxCDF	U	.000429		pg/m3	0.000429	0.0115
67562-39-4	1,2,3,4,6,7,8-HpCDF	U	.000386		pg/m3	0.000386	0.0115
55673-89-7	1,2,3,4,7,8,9-HpCDF	U	.000579		pg/m3	0.000579	0.0115
39001-02-0	1,2,3,4,6,7,8,9-OCDF	U	.00252		pg/m3	0.00252	0.023
41903-57-5	Total Tetrachlorodibenzo-p-dioxin	U	.000731		pg/m3	0.000731	0.0023
36088-22-9	Total Pentachlorodibenzo-p-dioxin	U	.000492		pg/m3	0.000492	0.0115
34465-46-8	Total Hexachlorodibenzo-p-dioxin	U	.000717		pg/m3	0.000717	0.0115
37871-00-4	Total Heptachlorodibenzo-p-dioxin	U	.00138		pg/m3	0.00138	0.0115
30402-14-3	Total Tetrachlorodibenzofuran	U	.000547		pg/m3	0.000547	0.0023
30402-15-4	Total Pentachlorodibenzofuran	U	.000224		pg/m3	0.000224	0.0115
55684-94-1	Total Hexachlorodibenzofuran	U	.00029		pg/m3	0.00029	0.0115
38998-75-3	Total Heptachlorodibenzofuran	U	.000386		pg/m3	0.000386	0.0115
	TEQ ITEF ND=0		4.49E-06	4.49E-06	pg/m3		
	TEQ ITEF ND=0.5		0.00079	0.00079	pg/m3		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		0.372	0.460	pg/m3	80.9	(50%-120%)
13C-1,2,3,7,8-PeCDD		0.368	0.460	pg/m3	80.1	(50%-120%)
13C-1,2,3,6,7,8-HxCDD		0.350	0.460	pg/m3	76.2	(50%-120%)
13C-1,2,3,4,6,7,8-HpCDD		0.367	0.460	pg/m3	79.9	(40%-120%)
13C-OCDD		0.643	0.920	pg/m3	70.0	(40%-120%)
13C-2,3,7,8-TCDF		0.383	0.460	pg/m3	83.3	(50%-120%)
13C-1,2,3,7,8-PeCDF		0.372	0.460	pg/m3	80.9	(50%-120%)
13C-1,2,3,6,7,8-HxCDF		0.392	0.460	pg/m3	85.3	(50%-120%)
13C-1,2,3,4,6,7,8-HpCDF		0.333	0.460	pg/m3	72.4	(40%-120%)
37Cl-2,3,7,8-TCDD (SS)		0.523	0.460	pg/m3	114	(50%-120%)
13C-2,3,4,7,8-PeCDF (SS)		0.512	0.460	pg/m3	111	(50%-120%)
13C-1,2,3,4,7,8-HxCDD (SS)		0.512	0.460	pg/m3	111	(50%-120%)
13C-1,2,3,4,7,8-HxCDF (SS)		0.474	0.460	pg/m3	103	(50%-120%)

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

SDG Number: 200454.0000.0000_2	Client: TRCC001	Project: TRCC00214
Lab Sample ID: 7304007	Date Collected: 03/04/2015 21:40	Matrix: AIR
Client Sample: TO-9A Air	Date Received: 03/06/2015 11:50	
Client ID: B'ville Blank-Dioxins		Prep Basis: As Received
Batch ID: 28368	Method: TO9A	
Run Date: 03/17/2015 02:22	Analyst: JTF	Instrument: HRP750
Data File: A16MAR15F-13		Dilution: 1
Prep Batch: 28366	Prep Method: TO9A	
Prep Date: 10-MAR-15	Prep Aliquot: 8700 m3	

CAS No.	Parmname	Qual	Result	EMPC	Units	EDL	PQL
Surrogate/Tracer recovery							
		Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1,2,3,4,7,8,9-HpCDF (SS)			0.550	0.460	pg/m3	120	(50%-120%)

Comments:

- J** Value is estimated
- U** Analyte was analyzed for, but not detected above the specified detection limit.

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

Page 1 of 2

SDG Number: 200454.0000.0000_2

Lab Sample ID: 7304008

Client Sample: TO-9A Air

Client ID: Lucketts Blank-Dioxins

Batch ID: 28368

Run Date: 03/17/2015 19:49

Data File: A17MAR15B-10

Prep Batch: 28366

Prep Date: 10-MAR-15

Client: TRCC001

Date Collected: 03/04/2015 20:00

Date Received: 03/06/2015 11:50

Method: TO9A

Analyst: JTF

Prep Method: TO9A

Prep Aliquot: 8700 m3

Project: TRCC00214

Matrix: AIR

Prep Basis: As Received

Instrument: HRP750

Dilution: 1

CAS No.	Parmname	Qual	Result	EMPC	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	.000369		pg/m3	0.000369	0.0023
40321-76-4	1,2,3,7,8-PeCDD	U	.000726		pg/m3	0.000726	0.0115
39227-28-6	1,2,3,4,7,8-HxCDD	U	.000989		pg/m3	0.000989	0.0115
57653-85-7	1,2,3,6,7,8-HxCDD	U	.000966		pg/m3	0.000966	0.0115
19408-74-3	1,2,3,7,8,9-HxCDD	U	.00107		pg/m3	0.00107	0.0115
35822-46-9	1,2,3,4,6,7,8-HpCDD	U	.000754		pg/m3	0.000754	0.0115
3268-87-9	1,2,3,4,6,7,8,9-OCDD	J	0.00246		pg/m3	0.00105	0.023
51207-31-9	2,3,7,8-TCDF	U	.000533		pg/m3	0.000533	0.0023
57117-41-6	1,2,3,7,8-PeCDF	U	.000575		pg/m3	0.000575	0.0115
57117-31-4	2,3,4,7,8-PeCDF	U	.000556		pg/m3	0.000556	0.0115
70648-26-9	1,2,3,4,7,8-HxCDF	U	.000506		pg/m3	0.000506	0.0115
57117-44-9	1,2,3,6,7,8-HxCDF	U	.000448		pg/m3	0.000448	0.0115
60851-34-5	2,3,4,6,7,8-HxCDF	U	.000497		pg/m3	0.000497	0.0115
72918-21-9	1,2,3,7,8,9-HxCDF	U	.000662		pg/m3	0.000662	0.0115
67562-39-4	1,2,3,4,6,7,8-HpCDF	J	0.000818		pg/m3	0.000406	0.0115
55673-89-7	1,2,3,4,7,8,9-HpCDF	U	.000611		pg/m3	0.000611	0.0115
39001-02-0	1,2,3,4,6,7,8,9-OCDF	U	.000924		pg/m3	0.000924	0.023
41903-57-5	Total Tetrachlorodibenzo-p-dioxin	U	.000369		pg/m3	0.000369	0.0023
36088-22-9	Total Pentachlorodibenzo-p-dioxin	U	.000726		pg/m3	0.000726	0.0115
34465-46-8	Total Hexachlorodibenzo-p-dioxin	U	.000966		pg/m3	0.000966	0.0115
37871-00-4	Total Heptachlorodibenzo-p-dioxin	U	.000754		pg/m3	0.000754	0.0115
30402-14-3	Total Tetrachlorodibenzofuran	U	.000533		pg/m3	0.000533	0.0023
30402-15-4	Total Pentachlorodibenzofuran	U	.000237	0.00034	pg/m3	0.000237	0.0115
55684-94-1	Total Hexachlorodibenzofuran	U	.000448		pg/m3	0.000448	0.0115
38998-75-3	Total Heptachlorodibenzofuran	J	0.000818		pg/m3	0.000406	0.0115
	TEQ ITEF ND=0		0.000011	0.000011	pg/m3		
	TEQ ITEF ND=0.5		0.000821	0.000821	pg/m3		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		0.401	0.460	pg/m3	87.2	(50%-120%)
13C-1,2,3,7,8-PeCDD		0.420	0.460	pg/m3	91.3	(50%-120%)
13C-1,2,3,6,7,8-HxCDD		0.342	0.460	pg/m3	74.4	(50%-120%)
13C-1,2,3,4,6,7,8-HpCDD		0.389	0.460	pg/m3	84.5	(40%-120%)
13C-OCDD		0.701	0.920	pg/m3	76.2	(40%-120%)
13C-2,3,7,8-TCDF		0.390	0.460	pg/m3	84.9	(50%-120%)
13C-1,2,3,7,8-PeCDF		0.457	0.460	pg/m3	99.4	(50%-120%)
13C-1,2,3,6,7,8-HxCDF		0.337	0.460	pg/m3	73.3	(50%-120%)
13C-1,2,3,4,6,7,8-HpCDF		0.334	0.460	pg/m3	72.7	(40%-120%)
37Cl-2,3,7,8-TCDD (SS)		0.517	0.460	pg/m3	112	(50%-120%)
13C-2,3,4,7,8-PeCDF (SS)		0.463	0.460	pg/m3	101	(50%-120%)
13C-1,2,3,4,7,8-HxCDD (SS)		0.468	0.460	pg/m3	102	(50%-120%)
13C-1,2,3,4,7,8-HxCDF (SS)		0.530	0.460	pg/m3	115	(50%-120%)

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

Page 2 of 2

SDG Number: 200454.0000.0000_2	Client: TRCC001	Project: TRCC00214
Lab Sample ID: 7304008	Date Collected: 03/04/2015 20:00	Matrix: AIR
Client Sample: TO-9A Air	Date Received: 03/06/2015 11:50	
Client ID: Lucketts Blank-Dioxins		Prep Basis: As Received
Batch ID: 28368	Method: TO9A	
Run Date: 03/17/2015 19:49	Analyst: JTF	Instrument: HRP750
Data File: A17MAR15B-10		Dilution: 1
Prep Batch: 28366	Prep Method: TO9A	
Prep Date: 10-MAR-15	Prep Aliquot: 8700 m3	

CAS No.	Parmname	Qual	Result	EMPC	Units	EDL	PQL
Surrogate/Tracer recovery							
		Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1,2,3,4,7,8,9-HpCDF (SS)			0.596	0.460	pg/m3	130 *	(50%-120%)

Comments:

- J** Value is estimated
- K** Estimated Maximum Possible Concentration
- U** Analyte was analyzed for, but not detected above the specified detection limit.

Quality Control Summary

**Hi-Res Dioxins/Furans
Surrogate Recovery Report**

SDG Number: 200454.0000.0000_2

Matrix Type: AIR

Sample ID	Client ID	Surrogate	QUAL	Recovery (%)	Acceptance Limits
12012784	LCS for batch 28366	13C-2,3,7,8-TCDD		81.5	(50%-120%)
		13C-1,2,3,7,8-PeCDD		70.1	(50%-120%)
		13C-1,2,3,6,7,8-HxCDD		75.2	(50%-120%)
		13C-1,2,3,4,6,7,8-HpCDD		69.8	(40%-120%)
		13C-OCDD		57.8	(40%-120%)
		13C-2,3,7,8-TCDF		81.6	(50%-120%)
		13C-1,2,3,7,8-PeCDF		71.4	(50%-120%)
		13C-1,2,3,6,7,8-HxCDF		75.9	(50%-120%)
		13C-1,2,3,4,6,7,8-HpCDF		64.0	(40%-120%)
		37Cl-2,3,7,8-TCDD (SS)		113	(50%-120%)
		13C-2,3,4,7,8-PeCDF (SS)		110	(50%-120%)
		13C-1,2,3,4,7,8-HxCDD (SS)		102	(50%-120%)
		13C-1,2,3,4,7,8-HxCDF (SS)		103	(50%-120%)
		13C-1,2,3,4,7,8,9-HpCDF (SS)		116	(50%-120%)
		12012785	LCSD for batch 28366	13C-2,3,7,8-TCDD	
13C-1,2,3,7,8-PeCDD				72.0	(50%-120%)
13C-1,2,3,6,7,8-HxCDD				76.2	(50%-120%)
13C-1,2,3,4,6,7,8-HpCDD				71.1	(40%-120%)
13C-OCDD				58.7	(40%-120%)
13C-2,3,7,8-TCDF				79.2	(50%-120%)
13C-1,2,3,7,8-PeCDF				74.0	(50%-120%)
13C-1,2,3,6,7,8-HxCDF				73.9	(50%-120%)
13C-1,2,3,4,6,7,8-HpCDF				65.7	(40%-120%)
37Cl-2,3,7,8-TCDD (SS)				113	(50%-120%)
13C-2,3,4,7,8-PeCDF (SS)				109	(50%-120%)
13C-1,2,3,4,7,8-HxCDD (SS)				103	(50%-120%)
13C-1,2,3,4,7,8-HxCDF (SS)				116	(50%-120%)
13C-1,2,3,4,7,8,9-HpCDF (SS)				119	(50%-120%)
12012783	MB for batch 28366			13C-2,3,7,8-TCDD	
		13C-1,2,3,7,8-PeCDD		73.1	(50%-120%)
		13C-1,2,3,6,7,8-HxCDD		81.8	(50%-120%)
		13C-1,2,3,4,6,7,8-HpCDD		72.5	(40%-120%)
		13C-OCDD		56.8	(40%-120%)
		13C-2,3,7,8-TCDF		80.7	(50%-120%)
		13C-1,2,3,7,8-PeCDF		75.8	(50%-120%)
		13C-1,2,3,6,7,8-HxCDF		78.3	(50%-120%)
		13C-1,2,3,4,6,7,8-HpCDF		67.2	(40%-120%)
		37Cl-2,3,7,8-TCDD (SS)		113	(50%-120%)
		13C-2,3,4,7,8-PeCDF (SS)		108	(50%-120%)
		13C-1,2,3,4,7,8-HxCDD (SS)		92.7	(50%-120%)
		13C-1,2,3,4,7,8-HxCDF (SS)		109	(50%-120%)
		13C-1,2,3,4,7,8,9-HpCDF (SS)		115	(50%-120%)
		7304001	B'ville-Dioxins-PS-4-Primary	13C-2,3,7,8-TCDD	
13C-1,2,3,7,8-PeCDD				71.3	(50%-120%)
13C-1,2,3,6,7,8-HxCDD				72.1	(50%-120%)
13C-1,2,3,4,6,7,8-HpCDD				74.0	(40%-120%)
13C-OCDD				66.3	(40%-120%)
13C-2,3,7,8-TCDF				76.7	(50%-120%)
13C-1,2,3,7,8-PeCDF				77.3	(50%-120%)

Hi-Res Dioxins/Furans
Surrogate Recovery Report

SDG Number: 200454.0000.0000_2

Matrix Type: AIR

Sample ID	Client ID	Surrogate	QUAL	Recovery (%)	Acceptance Limits
7304001	B'ville-Dioxins-PS-4-Primary	13C-1,2,3,6,7,8-HxCDF		74.4	(50%-120%)
		13C-1,2,3,4,6,7,8-HpCDF		66.3	(40%-120%)
		37Cl-2,3,7,8-TCDD (SS)		113	(50%-120%)
		13C-2,3,4,7,8-PeCDF (SS)		104	(50%-120%)
		13C-1,2,3,4,7,8-HxCDD (SS)		110	(50%-120%)
		13C-1,2,3,4,7,8-HxCDF (SS)		116	(50%-120%)
		13C-1,2,3,4,7,8,9-HpCDF (SS)		127 *	(50%-120%)
7304002	B'ville-Dioxins-PS-1-Collocate	13C-2,3,7,8-TCDD		81.1	(50%-120%)
		13C-1,2,3,7,8-PeCDD		76.6	(50%-120%)
		13C-1,2,3,6,7,8-HxCDD		74.8	(50%-120%)
		13C-1,2,3,4,6,7,8-HpCDD		72.8	(40%-120%)
		13C-OCDD		64.1	(40%-120%)
		13C-2,3,7,8-TCDF		78.2	(50%-120%)
		13C-1,2,3,7,8-PeCDF		80.6	(50%-120%)
		13C-1,2,3,6,7,8-HxCDF		94.4	(50%-120%)
		13C-1,2,3,4,6,7,8-HpCDF		64.6	(40%-120%)
		37Cl-2,3,7,8-TCDD (SS)		114	(50%-120%)
		13C-2,3,4,7,8-PeCDF (SS)		107	(50%-120%)
		13C-1,2,3,4,7,8-HxCDD (SS)		104	(50%-120%)
		13C-1,2,3,4,7,8-HxCDF (SS)		104	(50%-120%)
		13C-1,2,3,4,7,8,9-HpCDF (SS)		125 *	(50%-120%)
7304005	Lucketts-Dioxins-PS-5-Primary	13C-2,3,7,8-TCDD		84.1	(50%-120%)
		13C-1,2,3,7,8-PeCDD		80.6	(50%-120%)
		13C-1,2,3,6,7,8-HxCDD		75.0	(50%-120%)
		13C-1,2,3,4,6,7,8-HpCDD		76.3	(40%-120%)
		13C-OCDD		67.0	(40%-120%)
		13C-2,3,7,8-TCDF		78.8	(50%-120%)
		13C-1,2,3,7,8-PeCDF		83.9	(50%-120%)
		13C-1,2,3,6,7,8-HxCDF		76.4	(50%-120%)
		13C-1,2,3,4,6,7,8-HpCDF		66.4	(40%-120%)
		37Cl-2,3,7,8-TCDD (SS)		112	(50%-120%)
		13C-2,3,4,7,8-PeCDF (SS)		111	(50%-120%)
		13C-1,2,3,4,7,8-HxCDD (SS)		102	(50%-120%)
		13C-1,2,3,4,7,8-HxCDF (SS)		116	(50%-120%)
13C-1,2,3,4,7,8,9-HpCDF (SS)		124 *	(50%-120%)		
7304007	B'ville Blank-Dioxins	13C-2,3,7,8-TCDD		80.9	(50%-120%)
		13C-1,2,3,7,8-PeCDD		80.1	(50%-120%)
		13C-1,2,3,6,7,8-HxCDD		76.2	(50%-120%)
		13C-1,2,3,4,6,7,8-HpCDD		79.9	(40%-120%)
		13C-OCDD		70.0	(40%-120%)
		13C-2,3,7,8-TCDF		83.3	(50%-120%)
		13C-1,2,3,7,8-PeCDF		80.9	(50%-120%)
		13C-1,2,3,6,7,8-HxCDF		85.3	(50%-120%)
		13C-1,2,3,4,6,7,8-HpCDF		72.4	(40%-120%)
		37Cl-2,3,7,8-TCDD (SS)		114	(50%-120%)
		13C-2,3,4,7,8-PeCDF (SS)		111	(50%-120%)
		13C-1,2,3,4,7,8-HxCDD (SS)		111	(50%-120%)
		13C-1,2,3,4,7,8-HxCDF (SS)		103	(50%-120%)
		13C-1,2,3,4,7,8,9-HpCDF (SS)		120	(50%-120%)

**Hi-Res Dioxins/Furans
Surrogate Recovery Report**

SDG Number: 200454.0000.0000_2

Matrix Type: AIR

Sample ID	Client ID	Surrogate	QUAL	Recovery (%)	Acceptance Limits
7304008	Lucketts Blank-Dioxins	13C-2,3,7,8-TCDD		87.2	(50%-120%)
		13C-1,2,3,7,8-PeCDD		91.3	(50%-120%)
		13C-1,2,3,6,7,8-HxCDD		74.4	(50%-120%)
		13C-1,2,3,4,6,7,8-HpCDD		84.5	(40%-120%)
		13C-OCDD		76.2	(40%-120%)
		13C-2,3,7,8-TCDF		84.9	(50%-120%)
		13C-1,2,3,7,8-PeCDF		99.4	(50%-120%)
		13C-1,2,3,6,7,8-HxCDF		73.3	(50%-120%)
		13C-1,2,3,4,6,7,8-HpCDF		72.7	(40%-120%)
		37Cl-2,3,7,8-TCDD (SS)		112	(50%-120%)
		13C-2,3,4,7,8-PeCDF (SS)		101	(50%-120%)
		13C-1,2,3,4,7,8-HxCDD (SS)		102	(50%-120%)
		13C-1,2,3,4,7,8-HxCDF (SS)		115	(50%-120%)
		13C-1,2,3,4,7,8,9-HpCDF (SS)		130 *	(50%-120%)

* Recovery outside Acceptance Limits

Column to be used to flag recovery values

D Sample Diluted

Hi-Res Dioxins/Furans
Quality Control Summary
Spike Recovery Report

SDG Number: 200454.0000.0000_2
Client ID: LCS for batch 28366
Lab Sample ID: 12012784
Instrument: HRP750
Analyst: JTF

Sample Type: Laboratory Control Sample
Matrix: AIR
Analysis Date: 03/16/2015 17:35
Prep Batch ID: 28366
Batch ID: 28368

Dilution: 1

CAS No.	Parmname	Amount Added pg/m3	Spike Conc. pg/m3	Recovery %	Acceptance Limits
1746-01-6	LCS 2,3,7,8-TCDD	0.046	0.0455	99	70-130
40321-76-4	LCS 1,2,3,7,8-PeCDD	0.230	0.236	103	70-130
39227-28-6	LCS 1,2,3,4,7,8-HxCDD	0.230	0.207	90.2	70-130
57653-85-7	LCS 1,2,3,6,7,8-HxCDD	0.230	0.242	105	70-130
19408-74-3	LCS 1,2,3,7,8,9-HxCDD	0.230	0.246	107	70-130
35822-46-9	LCS 1,2,3,4,6,7,8-HpCDD	0.230	0.217	94.2	70-130
3268-87-9	LCS 1,2,3,4,6,7,8,9-OCDD	0.460	0.410	89.3	70-130
51207-31-9	LCS 2,3,7,8-TCDF	0.046	0.0457	99.4	70-130
57117-41-6	LCS 1,2,3,7,8-PeCDF	0.230	0.241	105	70-130
57117-31-4	LCS 2,3,4,7,8-PeCDF	0.230	0.236	103	70-130
70648-26-9	LCS 1,2,3,4,7,8-HxCDF	0.230	0.227	98.5	70-130
57117-44-9	LCS 1,2,3,6,7,8-HxCDF	0.230	0.228	99.1	70-130
60851-34-5	LCS 2,3,4,6,7,8-HxCDF	0.230	0.221	96.2	70-130
72918-21-9	LCS 1,2,3,7,8,9-HxCDF	0.230	0.242	105	70-130
67562-39-4	LCS 1,2,3,4,6,7,8-HpCDF	0.230	0.225	98	70-130
55673-89-7	LCS 1,2,3,4,7,8,9-HpCDF	0.230	0.234	102	70-130
39001-02-0	LCS 1,2,3,4,6,7,8,9-OCDF	0.460	0.481	105	70-130

Hi-Res Dioxins/Furans
Quality Control Summary
Spike Recovery Report

SDG Number: 200454.0000.0000_2
Client ID: LCSD for batch 28366
Lab Sample ID: 12012785
Instrument: HRP750
Analyst: JTF

Sample Type: Laboratory Control Sample Duplicate
Matrix: AIR
Analysis Date: 03/16/2015 18:23
Prep Batch ID: 28366
Batch ID: 28368
Dilution: 1

CAS No.	Parmname	Amount Added pg/m3	Spike Conc. pg/m3	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
1746-01-6	LCSD 2,3,7,8-TCDD	0.046	0.0459	99.7	70-130	0.765	0-30
40321-76-4	LCSD 1,2,3,7,8-PeCDD	0.230	0.233	101	70-130	1.13	0-30
39227-28-6	LCSD 1,2,3,4,7,8-HxCDD	0.230	0.220	95.9	70-130	6.07	0-30
57653-85-7	LCSD 1,2,3,6,7,8-HxCDD	0.230	0.236	103	70-130	2.63	0-30
19408-74-3	LCSD 1,2,3,7,8,9-HxCDD	0.230	0.250	109	70-130	1.34	0-30
35822-46-9	LCSD 1,2,3,4,6,7,8-HpCDD	0.230	0.217	94.4	70-130	0.187	0-30
3268-87-9	LCSD 1,2,3,4,6,7,8,9-OCDD	0.460	0.413	89.9	70-130	0.671	0-30
51207-31-9	LCSD 2,3,7,8-TCDF	0.046	0.0455	98.9	70-130	0.434	0-30
57117-41-6	LCSD 1,2,3,7,8-PeCDF	0.230	0.245	107	70-130	1.81	0-30
57117-31-4	LCSD 2,3,4,7,8-PeCDF	0.230	0.236	103	70-130	0.0622	0-30
70648-26-9	LCSD 1,2,3,4,7,8-HxCDF	0.230	0.235	102	70-130	3.73	0-30
57117-44-9	LCSD 1,2,3,6,7,8-HxCDF	0.230	0.236	103	70-130	3.66	0-30
60851-34-5	LCSD 2,3,4,6,7,8-HxCDF	0.230	0.233	101	70-130	5.16	0-30
72918-21-9	LCSD 1,2,3,7,8,9-HxCDF	0.230	0.253	110	70-130	4.30	0-30
67562-39-4	LCSD 1,2,3,4,6,7,8-HpCDF	0.230	0.228	99.1	70-130	1.20	0-30
55673-89-7	LCSD 1,2,3,4,7,8,9-HpCDF	0.230	0.232	101	70-130	0.934	0-30
39001-02-0	LCSD 1,2,3,4,6,7,8,9-OCDF	0.460	0.456	99.2	70-130	5.32	0-30

Method Blank Summary

Page 1 of 1

SDG Number: 200454.0000.0000_2
Client ID: MB for batch 28366
Lab Sample ID: 12012783
Column:

Client: TRCC001
Instrument ID: HRP750
Prep Date: 10-MAR-15

Matrix: AIR
Data File: A16MAR15F-4
Analyzed: 03/16/15 19:11

This method blank applies to the following samples and quality control samples:

Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01 LCS for batch 28366	12012784	A16MAR15F-2	03/16/15	1735
02 LCSD for batch 28366	12012785	A16MAR15F-3	03/16/15	1823
03 B'ville-Dioxins-PS-4-Primary	7304001	A16MAR15F-10	03/16/15	2359
04 B'ville-Dioxins-PS-1-Collocate	7304002	A16MAR15F-11	03/17/15	0046
05 Lucketts-Dioxins-PS-5-Primary	7304005	A16MAR15F-12	03/17/15	0134
06 B'ville Blank-Dioxins	7304007	A16MAR15F-13	03/17/15	0222
07 Lucketts Blank-Dioxins	7304008	A17MAR15B-10	03/17/15	1949
08 Lucketts-Dioxins-PS-5-Primary	7304005	b23mar15a_2-21	03/24/15	0557

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

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SDG Number: 200454.0000.0000_2
Lab Sample ID: 12012783
Client Sample: QC for batch 28366
Client ID: MB for batch 28366
Batch ID: 28368
Run Date: 03/16/2015 19:11
Data File: A16MAR15F-4
Prep Batch: 28366
Prep Date: 10-MAR-15

Client: TRCC001
Method: TO9A
Analyst: JTF
Prep Method: TO9A
Prep Aliquot: 8700 m3

Project: TRCC00214
Matrix: AIR
Prep Basis: As Received
Instrument: HRP750
Dilution: 1

CAS No.	Parmname	Qual	Result	EMPC	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD	U	.000483		pg/m3	0.000483	0.0023
40321-76-4	1,2,3,7,8-PeCDD	JK		0.000446	pg/m3	0.000418	0.0115
39227-28-6	1,2,3,4,7,8-HxCDD	U	.000464		pg/m3	0.000464	0.0115
57653-85-7	1,2,3,6,7,8-HxCDD	U	.000453		pg/m3	0.000453	0.0115
19408-74-3	1,2,3,7,8,9-HxCDD	U	.000501		pg/m3	0.000501	0.0115
35822-46-9	1,2,3,4,6,7,8-HpCDD	U	.000708		pg/m3	0.000708	0.0115
3268-87-9	1,2,3,4,6,7,8,9-OCDD	U	.0022		pg/m3	0.0022	0.023
51207-31-9	2,3,7,8-TCDF	U	.000443		pg/m3	0.000443	0.0023
57117-41-6	1,2,3,7,8-PeCDF	J	0.000359		pg/m3	0.000227	0.0115
57117-31-4	2,3,4,7,8-PeCDF	J	0.00029		pg/m3	0.000221	0.0115
70648-26-9	1,2,3,4,7,8-HxCDF	U	.000387		pg/m3	0.000387	0.0115
57117-44-9	1,2,3,6,7,8-HxCDF	U	.000343		pg/m3	0.000343	0.0115
60851-34-5	2,3,4,6,7,8-HxCDF	U	.00038		pg/m3	0.00038	0.0115
72918-21-9	1,2,3,7,8,9-HxCDF	U	.000506		pg/m3	0.000506	0.0115
67562-39-4	1,2,3,4,6,7,8-HpCDF	U	.000383		pg/m3	0.000383	0.0115
55673-89-7	1,2,3,4,7,8,9-HpCDF	U	.000575		pg/m3	0.000575	0.0115
39001-02-0	1,2,3,4,6,7,8,9-OCDF	U	.00184		pg/m3	0.00184	0.023
41903-57-5	Total Tetrachlorodibenzo-p-dioxin	U	.000483		pg/m3	0.000483	0.0023
36088-22-9	Total Pentachlorodibenzo-p-dioxin	U	.000418	0.000446	pg/m3	0.000418	0.0115
34465-46-8	Total Hexachlorodibenzo-p-dioxin	U	.000453		pg/m3	0.000453	0.0115
37871-00-4	Total Heptachlorodibenzo-p-dioxin	U	.000708		pg/m3	0.000708	0.0115
30402-14-3	Total Tetrachlorodibenzofuran	U	.000443		pg/m3	0.000443	0.0023
30402-15-4	Total Pentachlorodibenzofuran	J	0.000648	0.000841	pg/m3	0.00016	0.0115
55684-94-1	Total Hexachlorodibenzofuran	U	.000343		pg/m3	0.000343	0.0115
38998-75-3	Total Heptachlorodibenzofuran	U	.000383		pg/m3	0.000383	0.0115
	TEQ ITEF ND=0		0.000163	0.000386	pg/m3		
	TEQ ITEF ND=0.5		0.000693	0.000811	pg/m3		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		0.375	0.460	pg/m3	81.6	(50%-120%)
13C-1,2,3,7,8-PeCDD		0.336	0.460	pg/m3	73.1	(50%-120%)
13C-1,2,3,6,7,8-HxCDD		0.376	0.460	pg/m3	81.8	(50%-120%)
13C-1,2,3,4,6,7,8-HpCDD		0.333	0.460	pg/m3	72.5	(40%-120%)
13C-OCDD		0.522	0.920	pg/m3	56.8	(40%-120%)
13C-2,3,7,8-TCDF		0.371	0.460	pg/m3	80.7	(50%-120%)
13C-1,2,3,7,8-PeCDF		0.349	0.460	pg/m3	75.8	(50%-120%)
13C-1,2,3,6,7,8-HxCDF		0.360	0.460	pg/m3	78.3	(50%-120%)
13C-1,2,3,4,6,7,8-HpCDF		0.309	0.460	pg/m3	67.2	(40%-120%)
37Cl-2,3,7,8-TCDD (SS)		0.519	0.460	pg/m3	113	(50%-120%)
13C-2,3,4,7,8-PeCDF (SS)		0.496	0.460	pg/m3	108	(50%-120%)
13C-1,2,3,4,7,8-HxCDD (SS)		0.426	0.460	pg/m3	92.7	(50%-120%)
13C-1,2,3,4,7,8-HxCDF (SS)		0.500	0.460	pg/m3	109	(50%-120%)

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

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SDG Number: 200454.0000.0000_2	Client: TRCC001	Project: TRCC00214
Lab Sample ID: 12012783		Matrix: AIR
Client Sample: QC for batch 28366		
Client ID: MB for batch 28366		Prep Basis: As Received
Batch ID: 28368	Method: TO9A	
Run Date: 03/16/2015 19:11	Analyst: JTF	Instrument: HRP750
Data File: A16MAR15F-4		Dilution: 1
Prep Batch: 28366	Prep Method: TO9A	
Prep Date: 10-MAR-15	Prep Aliquot: 8700 m3	

CAS No.	Parmname	Qual	Result	EMPC	Units	EDL	PQL
Surrogate/Tracer recovery							
		Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1,2,3,4,7,8,9-HpCDF (SS)			0.531	0.460	pg/m3	115	(50%-120%)

Comments:

- J** Value is estimated
- K** Estimated Maximum Possible Concentration
- U** Analyte was analyzed for, but not detected above the specified detection limit.

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

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SDG Number: 200454.0000.0000_2	Client: TRCC001	Project: TRCC00214
Lab Sample ID: 12012784		Matrix: AIR
Client Sample: QC for batch 28366		
Client ID: LCS for batch 28366		Prep Basis: As Received
Batch ID: 28368	Method: TO9A	
Run Date: 03/16/2015 17:35	Analyst: JTF	Instrument: HRP750
Data File: A16MAR15F-2		Dilution: 1
Prep Batch: 28366	Prep Method: TO9A	
Prep Date: 10-MAR-15	Prep Aliquot: 8700 m3	

CAS No.	Parmname	Qual	Result	EMPC	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD		0.0455		pg/m3	0.0016	0.0023
40321-76-4	1,2,3,7,8-PeCDD		0.236		pg/m3	0.00114	0.0115
39227-28-6	1,2,3,4,7,8-HxCDD		0.207		pg/m3	0.00199	0.0115
57653-85-7	1,2,3,6,7,8-HxCDD		0.242		pg/m3	0.00194	0.0115
19408-74-3	1,2,3,7,8,9-HxCDD		0.246		pg/m3	0.00216	0.0115
35822-46-9	1,2,3,4,6,7,8-HpCDD		0.217		pg/m3	0.00281	0.0115
3268-87-9	1,2,3,4,6,7,8,9-OCDD		0.410		pg/m3	0.00515	0.023
51207-31-9	2,3,7,8-TCDF		0.0457		pg/m3	0.000818	0.0023
57117-41-6	1,2,3,7,8-PeCDF		0.241		pg/m3	0.00107	0.0115
57117-31-4	2,3,4,7,8-PeCDF		0.236		pg/m3	0.00104	0.0115
70648-26-9	1,2,3,4,7,8-HxCDF		0.227		pg/m3	0.00209	0.0115
57117-44-9	1,2,3,6,7,8-HxCDF		0.228		pg/m3	0.00186	0.0115
60851-34-5	2,3,4,6,7,8-HxCDF		0.221		pg/m3	0.00206	0.0115
72918-21-9	1,2,3,7,8,9-HxCDF		0.242		pg/m3	0.00274	0.0115
67562-39-4	1,2,3,4,6,7,8-HpCDF		0.225		pg/m3	0.0019	0.0115
55673-89-7	1,2,3,4,7,8,9-HpCDF		0.234		pg/m3	0.00287	0.0115
39001-02-0	1,2,3,4,6,7,8,9-OCDF		0.481		pg/m3	0.00533	0.023

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		0.375	0.460	pg/m3	81.5	(50%-120%)
13C-1,2,3,7,8-PeCDD		0.322	0.460	pg/m3	70.1	(50%-120%)
13C-1,2,3,6,7,8-HxCDD		0.346	0.460	pg/m3	75.2	(50%-120%)
13C-1,2,3,4,6,7,8-HpCDD		0.321	0.460	pg/m3	69.8	(40%-120%)
13C-OCDD		0.532	0.920	pg/m3	57.8	(40%-120%)
13C-2,3,7,8-TCDF		0.375	0.460	pg/m3	81.6	(50%-120%)
13C-1,2,3,7,8-PeCDF		0.328	0.460	pg/m3	71.4	(50%-120%)
13C-1,2,3,6,7,8-HxCDF		0.349	0.460	pg/m3	75.9	(50%-120%)
13C-1,2,3,4,6,7,8-HpCDF		0.294	0.460	pg/m3	64.0	(40%-120%)
37Cl-2,3,7,8-TCDD (SS)		0.520	0.460	pg/m3	113	(50%-120%)
13C-2,3,4,7,8-PeCDF (SS)		0.506	0.460	pg/m3	110	(50%-120%)
13C-1,2,3,4,7,8-HxCDD (SS)		0.469	0.460	pg/m3	102	(50%-120%)
13C-1,2,3,4,7,8-HxCDF (SS)		0.472	0.460	pg/m3	103	(50%-120%)
13C-1,2,3,4,7,8,9-HpCDF (SS)		0.532	0.460	pg/m3	116	(50%-120%)

Comments:

U Analyte was analyzed for, but not detected above the specified detection limit.

**Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary**

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SDG Number: 200454.0000.0000_2	Client: TRCC001	Project: TRCC00214
Lab Sample ID: 12012785		Matrix: AIR
Client Sample: QC for batch 28366		
Client ID: LCSD for batch 28366		Prep Basis: As Received
Batch ID: 28368	Method: TO9A	
Run Date: 03/16/2015 18:23	Analyst: JTF	Instrument: HRP750
Data File: A16MAR15F-3		Dilution: 1
Prep Batch: 28366	Prep Method: TO9A	
Prep Date: 10-MAR-15	Prep Aliquot: 8700 m3	

CAS No.	Parmname	Qual	Result	EMPC	Units	EDL	PQL
1746-01-6	2,3,7,8-TCDD		0.0459		pg/m3	0.000589	0.0023
40321-76-4	1,2,3,7,8-PeCDD		0.233		pg/m3	0.000823	0.0115
39227-28-6	1,2,3,4,7,8-HxCDD		0.220		pg/m3	0.0016	0.0115
57653-85-7	1,2,3,6,7,8-HxCDD		0.236		pg/m3	0.00156	0.0115
19408-74-3	1,2,3,7,8,9-HxCDD		0.250		pg/m3	0.00173	0.0115
35822-46-9	1,2,3,4,6,7,8-HpCDD		0.217		pg/m3	0.00338	0.0115
3268-87-9	1,2,3,4,6,7,8,9-OCDD		0.413		pg/m3	0.00685	0.023
51207-31-9	2,3,7,8-TCDF		0.0455		pg/m3	0.000506	0.0023
57117-41-6	1,2,3,7,8-PeCDF		0.245		pg/m3	0.000772	0.0115
57117-31-4	2,3,4,7,8-PeCDF		0.236		pg/m3	0.000754	0.0115
70648-26-9	1,2,3,4,7,8-HxCDF		0.235		pg/m3	0.00131	0.0115
57117-44-9	1,2,3,6,7,8-HxCDF		0.236		pg/m3	0.00116	0.0115
60851-34-5	2,3,4,6,7,8-HxCDF		0.233		pg/m3	0.00129	0.0115
72918-21-9	1,2,3,7,8,9-HxCDF		0.253		pg/m3	0.00172	0.0115
67562-39-4	1,2,3,4,6,7,8-HpCDF		0.228		pg/m3	0.00172	0.0115
55673-89-7	1,2,3,4,7,8,9-HpCDF		0.232		pg/m3	0.00259	0.0115
39001-02-0	1,2,3,4,6,7,8,9-OCDF		0.456		pg/m3	0.00389	0.023

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		0.368	0.460	pg/m3	80.0	(50%-120%)
13C-1,2,3,7,8-PeCDD		0.331	0.460	pg/m3	72.0	(50%-120%)
13C-1,2,3,6,7,8-HxCDD		0.350	0.460	pg/m3	76.2	(50%-120%)
13C-1,2,3,4,6,7,8-HpCDD		0.327	0.460	pg/m3	71.1	(40%-120%)
13C-OCDD		0.540	0.920	pg/m3	58.7	(40%-120%)
13C-2,3,7,8-TCDF		0.364	0.460	pg/m3	79.2	(50%-120%)
13C-1,2,3,7,8-PeCDF		0.340	0.460	pg/m3	74.0	(50%-120%)
13C-1,2,3,6,7,8-HxCDF		0.340	0.460	pg/m3	73.9	(50%-120%)
13C-1,2,3,4,6,7,8-HpCDF		0.302	0.460	pg/m3	65.7	(40%-120%)
37Cl-2,3,7,8-TCDD (SS)		0.518	0.460	pg/m3	113	(50%-120%)
13C-2,3,4,7,8-PeCDF (SS)		0.501	0.460	pg/m3	109	(50%-120%)
13C-1,2,3,4,7,8-HxCDD (SS)		0.473	0.460	pg/m3	103	(50%-120%)
13C-1,2,3,4,7,8-HxCDF (SS)		0.533	0.460	pg/m3	116	(50%-120%)
13C-1,2,3,4,7,8,9-HpCDF (SS)		0.547	0.460	pg/m3	119	(50%-120%)

Comments:

U Analyte was analyzed for, but not detected above the specified detection limit.