TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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Tel: (330)497-9396

TestAmerica Job ID: 240-17088-1
Client Project/Site: Canton Drop Forge

For:
TRC Environmental Corp-Payne Firm
1382 West Ninth Street
Cleveland, Ohio 44113

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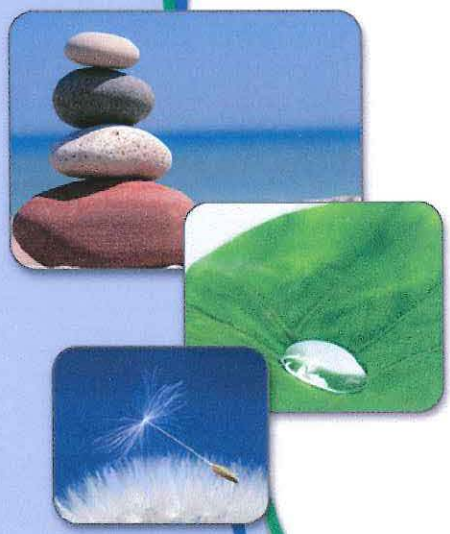

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Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: TRC Environmental Corp-Payne Firm
Project/Site: Canton Drop Forge

TestAmerica Job ID: 240-17088-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
MDA	Minimum detectable activity
MDC	Minimum detectable concentration
RER	Relative error ratio
DER	Duplicate error ratio (normalized absolute difference)
DLC	Decision level concentration
RL	Reporting Limit or Requested Limit (Radiochemistry only)

Job ID: 240-17088-1

Laboratory: TestAmerica Canton

Narrative

CASE NARRATIVE

Client: TRC Environmental Corp-Payne Firm

Project: Canton Drop Forge

Report Number: 240-17088-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

TestAmerica utilizes USEPA approved methods, where applicable, in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated and were analyzed in accordance with Ohio Voluntary Action Program protocols, where applicable.

A summary of QC data for these analyses is included at the back of the report.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 11/03/2012; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 2.6 C.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples RRMW-02 (240-17088-2) and TB-01/110112 (240-17088-4) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 11/05/2012.

No other difficulties were encountered during the VOCs analyses. All other quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICP)

Samples IA08-MW02 (240-17088-1) and IA08-MW06 (240-17088-3) were analyzed for total recoverable metals (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared on 11/05/2012 and analyzed on 11/06/2012.

Barium was detected in method blank MB 240-63755/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the metals analyses. All other quality control parameters were within the acceptance limits.

Job ID: 240-17088-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

TOTAL MERCURY

Samples IA08-MW02 (240-17088-1) and IA08-MW06 (240-17088-3) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 11/05/2012 and analyzed on 11/07/2012.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

Method Summary

Client: TRC Environmental Corp-Payne Firm
Project/Site: Canton Drop Forge

TestAmerica Job ID: 240-17088-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL NC
6010B	Metals (ICP)	SW846	TAL NC
7470A	Mercury (CVAA)	SW846	TAL NC

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL NC = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Sample Summary

Client: TRC Environmental Corp-Payne Firm
Project/Site: Canton Drop Forge

TestAmerica Job ID: 240-17088-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-17088-1	IA08-MW02	Water	11/01/12 11:25	11/03/12 09:30
240-17088-2	RRMW-02	Water	11/01/12 12:35	11/03/12 09:30
240-17088-3	IA08-MW06	Water	11/01/12 15:20	11/03/12 09:30
240-17088-4	TB-01/110112	Water	11/01/12 00:00	11/03/12 09:30

Detection Summary

Client: TRC Environmental Corp-Payne Firm
Project/Site: Canton Drop Forge

TestAmerica Job ID: 240-17088-1

Client Sample ID: IA08-MW02 — Lab Sample ID: 240-17088-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	170	J B	200	0.67	ug/L	1		6010B	Total Recoverable
Chromium	15		5.0	2.2	ug/L	1		6010B	Total Recoverable
Arsenic	10		10	3.2	ug/L	1		6010B	Total Recoverable
Lead	1.9	J	3.0	1.9	ug/L	1		6010B	Total Recoverable

Client Sample ID: RRMW-02 — Lab Sample ID: 240-17088-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	1.1		1.0	0.17	ug/L	1		8260B	Total/NA
1,1,1-Trichloroethane	0.29	J	1.0	0.22	ug/L	1		8260B	Total/NA
Trichloroethene	7.9		1.0	0.17	ug/L	1		8260B	Total/NA

Client Sample ID: IA08-MW06 — Lab Sample ID: 240-17088-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	420	B	200	0.67	ug/L	1		6010B	Total Recoverable
Arsenic	4.3	J	10	3.2	ug/L	1		6010B	Total Recoverable

Client Sample ID: TB-01/110112 — Lab Sample ID: 240-17088-4

No Detections

Client Sample Results

Client: TRC Environmental Corp-Payne Firm
Project/Site: Canton Drop Forge

TestAmerica Job ID: 240-17088-1

Client Sample ID: IA08-MW02

Lab Sample ID: 240-17088-1

Date Collected: 11/01/12 11:25
Date Received: 11/03/12 09:30

Matrix: Water

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	**170**	**J B**	200	0.67	ug/L		11/05/12 08:45	11/06/12 05:02	1
Cadmium	ND		2.0	0.66	ug/L		11/05/12 08:45	11/06/12 05:02	1
Chromium	**15**		5.0	2.2	ug/L		11/05/12 08:45	11/06/12 05:02	1
Silver	ND		5.0	2.2	ug/L		11/05/12 08:45	11/06/12 05:02	1
Arsenic	**10**		10	3.2	ug/L		11/05/12 08:45	11/06/12 05:02	1
Lead	**1.9**	**J**	3.0	1.9	ug/L		11/05/12 08:45	11/06/12 05:02	1
Selenium	ND		5.0	4.1	ug/L		11/05/12 08:45	11/06/12 05:02	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.12	ug/L		11/05/12 15:40	11/07/12 14:18	1

Client Sample Results

Client: TRC Environmental Corp-Payne Firm
Project/Site: Canton Drop Forge

TestAmerica Job ID: 240-17088-1

Client Sample ID: RRMW-02

Lab Sample ID: 240-17088-2

Date Collected: 11/01/12 12:35
Date Received: 11/03/12 09:30

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		10	1.1	ug/L			11/05/12 19:45	1
Benzene	ND		1.0	0.13	ug/L			11/05/12 19:45	1
Bromodichloromethane	ND		1.0	0.15	ug/L			11/05/12 19:45	1
Bromoform	ND		1.0	0.64	ug/L			11/05/12 19:45	1
Bromomethane	ND		1.0	0.41	ug/L			11/05/12 19:45	1
2-Butanone (MEK)	ND		10	0.57	ug/L			11/05/12 19:45	1
Carbon disulfide	ND		1.0	0.13	ug/L			11/05/12 19:45	1
Carbon tetrachloride	ND		1.0	0.13	ug/L			11/05/12 19:45	1
Chlorobenzene	ND		1.0	0.15	ug/L			11/05/12 19:45	1
Chloroethane	ND		1.0	0.29	ug/L			11/05/12 19:45	1
Chloroform	ND		1.0	0.16	ug/L			11/05/12 19:45	1
Chloromethane	ND		1.0	0.30	ug/L			11/05/12 19:45	1
cis-1,2-Dichloroethene	**1.1**		1.0	0.17	ug/L			11/05/12 19:45	1
cis-1,3-Dichloropropene	ND		1.0	0.14	ug/L			11/05/12 19:45	1
Dibromochloromethane	ND		1.0	0.18	ug/L			11/05/12 19:45	1
1,1-Dichloroethane	ND		1.0	0.15	ug/L			11/05/12 19:45	1
1,2-Dichloroethane	ND		1.0	0.22	ug/L			11/05/12 19:45	1
1,1-Dichloroethene	ND		1.0	0.19	ug/L			11/05/12 19:45	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			11/05/12 19:45	1
Ethylbenzene	ND		1.0	0.17	ug/L			11/05/12 19:45	1
2-Hexanone	ND		10	0.41	ug/L			11/05/12 19:45	1
Methylene Chloride	ND		1.0	0.33	ug/L			11/05/12 19:45	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.32	ug/L			11/05/12 19:45	1
Styrene	ND		1.0	0.11	ug/L			11/05/12 19:45	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.18	ug/L			11/05/12 19:45	1
Tetrachloroethene	ND		1.0	0.29	ug/L			11/05/12 19:45	1
Toluene	ND		1.0	0.13	ug/L			11/05/12 19:45	1
trans-1,2-Dichloroethene	ND		1.0	0.19	ug/L			11/05/12 19:45	1
trans-1,3-Dichloropropene	ND		1.0	0.19	ug/L			11/05/12 19:45	1
1,1,1-Trichloroethane	**0.29**	**J**	1.0	0.22	ug/L			11/05/12 19:45	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			11/05/12 19:45	1
Trichloroethene	**7.9**		1.0	0.17	ug/L			11/05/12 19:45	1
Vinyl chloride	ND		1.0	0.22	ug/L			11/05/12 19:45	1
Xylenes, Total	ND		2.0	0.28	ug/L			11/05/12 19:45	1
Methyl tert-butyl ether	ND		5.0	0.17	ug/L			11/05/12 19:45	1
n-Hexane	ND		1.0	0.26	ug/L			11/05/12 19:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*66 - 117*		*11/05/12 19:45*	*1*
Dibromofluoromethane (Surr)	*97*		*75 - 121*		*11/05/12 19:45*	*1*
1,2-Dichloroethane-d4 (Surr)	*97*		*63 - 129*		*11/05/12 19:45*	*1*
Toluene-d8 (Surr)	*93*		*74 - 115*		*11/05/12 19:45*	*1*

Client Sample Results

Client: TRC Environmental Corp-Payne Firm
Project/Site: Canton Drop Forge

TestAmerica Job ID: 240-17088-1

Client Sample ID: IA08-MW06

Lab Sample ID: 240-17088-3

Date Collected: 11/01/12 15:20
Date Received: 11/03/12 09:30

Matrix: Water

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	**420**	**B**	200	0.67	ug/L		11/05/12 08:45	11/06/12 05:08	1
Cadmium	ND		2.0	0.66	ug/L		11/05/12 08:45	11/06/12 05:08	1
Chromium	ND		5.0	2.2	ug/L		11/05/12 08:45	11/06/12 05:08	1
Silver	ND		5.0	2.2	ug/L		11/05/12 08:45	11/06/12 05:08	1
Arsenic	**4.3**	**J**	10	3.2	ug/L		11/05/12 08:45	11/06/12 05:08	1
Lead	ND		3.0	1.9	ug/L		11/05/12 08:45	11/06/12 05:08	1
Selenium	ND		5.0	4.1	ug/L		11/05/12 08:45	11/06/12 05:08	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.12	ug/L		11/05/12 15:40	11/07/12 14:20	1

Client Sample Results

Client: TRC Environmental Corp-Payne Firm
Project/Site: Canton Drop Forge

TestAmerica Job ID: 240-17088-1

Client Sample ID: TB-01/110112
Date Collected: 11/01/12 00:00
Date Received: 11/03/12 09:30

Lab Sample ID: 240-17088-4
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		10	1.1	ug/L			11/05/12 19:23	1
Benzene	ND		1.0	0.13	ug/L			11/05/12 19:23	1
Bromodichloromethane	ND		1.0	0.15	ug/L			11/05/12 19:23	1
Bromoform	ND		1.0	0.64	ug/L			11/05/12 19:23	1
Bromomethane	ND		1.0	0.41	ug/L			11/05/12 19:23	1
2-Butanone (MEK)	ND		10	0.57	ug/L			11/05/12 19:23	1
Carbon disulfide	ND		1.0	0.13	ug/L			11/05/12 19:23	1
Carbon tetrachloride	ND		1.0	0.13	ug/L			11/05/12 19:23	1
Chlorobenzene	ND		1.0	0.15	ug/L			11/05/12 19:23	1
Chloroethane	ND		1.0	0.29	ug/L			11/05/12 19:23	1
Chloroform	ND		1.0	0.16	ug/L			11/05/12 19:23	1
Chloromethane	ND		1.0	0.30	ug/L			11/05/12 19:23	1
cis-1,2-Dichloroethene	ND		1.0	0.17	ug/L			11/05/12 19:23	1
cis-1,3-Dichloropropene	ND		1.0	0.14	ug/L			11/05/12 19:23	1
Dibromochloromethane	ND		1.0	0.18	ug/L			11/05/12 19:23	1
1,1-Dichloroethane	ND		1.0	0.15	ug/L			11/05/12 19:23	1
1,2-Dichloroethane	ND		1.0	0.22	ug/L			11/05/12 19:23	1
1,1-Dichloroethene	ND		1.0	0.19	ug/L			11/05/12 19:23	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			11/05/12 19:23	1
Ethylbenzene	ND		1.0	0.17	ug/L			11/05/12 19:23	1
2-Hexanone	ND		10	0.41	ug/L			11/05/12 19:23	1
Methylene Chloride	ND		1.0	0.33	ug/L			11/05/12 19:23	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.32	ug/L			11/05/12 19:23	1
Styrene	ND		1.0	0.11	ug/L			11/05/12 19:23	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.18	ug/L			11/05/12 19:23	1
Tetrachloroethene	ND		1.0	0.29	ug/L			11/05/12 19:23	1
Toluene	ND		1.0	0.13	ug/L			11/05/12 19:23	1
trans-1,2-Dichloroethene	ND		1.0	0.19	ug/L			11/05/12 19:23	1
trans-1,3-Dichloropropene	ND		1.0	0.19	ug/L			11/05/12 19:23	1
1,1,1-Trichloroethane	ND		1.0	0.22	ug/L			11/05/12 19:23	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			11/05/12 19:23	1
Trichloroethene	ND		1.0	0.17	ug/L			11/05/12 19:23	1
Vinyl chloride	ND		1.0	0.22	ug/L			11/05/12 19:23	1
Xylenes, Total	ND		2.0	0.28	ug/L			11/05/12 19:23	1
Methyl tert-butyl ether	ND		5.0	0.17	ug/L			11/05/12 19:23	1
n-Hexane	ND		1.0	0.26	ug/L			11/05/12 19:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*66 - 117*		*11/05/12 19:23*	*1*
Dibromofluoromethane (Surr)	*102*		*75 - 121*		*11/05/12 19:23*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*63 - 129*		*11/05/12 19:23*	*1*
Toluene-d8 (Surr)	*97*		*74 - 115*		*11/05/12 19:23*	*1*

Surrogate Summary

Client: TRC Environmental Corp-Payne Firm
Project/Site: Canton Drop Forge

TestAmerica Job ID: 240-17088-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		BFB	DBFM	12DCE	TOL
Lab Sample ID	**Client Sample ID**	**(66-117)**	**(75-121)**	**(63-129)**	**(74-115)**
240-17088-2	RRMW-02	85	97	97	93
240-17088-4	TB-01/110112	91	102	103	97
LCS 240-63803/15	Lab Control Sample	99	97	97	97
MB 240-63803/16	Method Blank	98	105	108	103

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
12DCE = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)

QC Sample Results

Client: TRC Environmental Corp-Payne Firm
Project/Site: Canton Drop Forge

TestAmerica Job ID: 240-17088-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 240-63803/16
Matrix: Water
Analysis Batch: 63803

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		10	1.1	ug/L			11/05/12 17:08	1
Benzene	ND		1.0	0.13	ug/L			11/05/12 17:08	1
Bromodichloromethane	ND		1.0	0.15	ug/L			11/05/12 17:08	1
Bromoform	ND		1.0	0.64	ug/L			11/05/12 17:08	1
Bromomethane	ND		1.0	0.41	ug/L			11/05/12 17:08	1
2-Butanone (MEK)	ND		10	0.57	ug/L			11/05/12 17:08	1
Carbon disulfide	ND		1.0	0.13	ug/L			11/05/12 17:08	1
Carbon tetrachloride	ND		1.0	0.13	ug/L			11/05/12 17:08	1
Chlorobenzene	ND		1.0	0.15	ug/L			11/05/12 17:08	1
Chloroethane	ND		1.0	0.29	ug/L			11/05/12 17:08	1
Chloroform	ND		1.0	0.16	ug/L			11/05/12 17:08	1
Chloromethane	ND		1.0	0.30	ug/L			11/05/12 17:08	1
cis-1,2-Dichloroethene	ND		1.0	0.17	ug/L			11/05/12 17:08	1
cis-1,3-Dichloropropene	ND		1.0	0.14	ug/L			11/05/12 17:08	1
Dibromochloromethane	ND		1.0	0.18	ug/L			11/05/12 17:08	1
1,1-Dichloroethane	ND		1.0	0.15	ug/L			11/05/12 17:08	1
1,2-Dichloroethane	ND		1.0	0.22	ug/L			11/05/12 17:08	1
1,1-Dichloroethene	ND		1.0	0.19	ug/L			11/05/12 17:08	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			11/05/12 17:08	1
Ethylbenzene	ND		1.0	0.17	ug/L			11/05/12 17:08	1
2-Hexanone	ND		10	0.41	ug/L			11/05/12 17:08	1
Methylene Chloride	ND		1.0	0.33	ug/L			11/05/12 17:08	1
4-Methyl-2-pentanone (MIBK)	ND		10	0.32	ug/L			11/05/12 17:08	1
Styrene	ND		1.0	0.11	ug/L			11/05/12 17:08	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.18	ug/L			11/05/12 17:08	1
Tetrachloroethene	ND		1.0	0.29	ug/L			11/05/12 17:08	1
Toluene	ND		1.0	0.13	ug/L			11/05/12 17:08	1
trans-1,2-Dichloroethene	ND		1.0	0.19	ug/L			11/05/12 17:08	1
trans-1,3-Dichloropropene	ND		1.0	0.19	ug/L			11/05/12 17:08	1
1,1,1-Trichloroethane	ND		1.0	0.22	ug/L			11/05/12 17:08	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			11/05/12 17:08	1
Trichloroethene	ND		1.0	0.17	ug/L			11/05/12 17:08	1
Vinyl chloride	ND		1.0	0.22	ug/L			11/05/12 17:08	1
Xylenes, Total	ND		2.0	0.28	ug/L			11/05/12 17:08	1
Methyl tert-butyl ether	ND		5.0	0.17	ug/L			11/05/12 17:08	1
n-Hexane	ND		1.0	0.26	ug/L			11/05/12 17:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*66 - 117*		*11/05/12 17:08*	*1*
Dibromofluoromethane (Surr)	*105*		*75 - 121*		*11/05/12 17:08*	*1*
1,2-Dichloroethane-d4 (Surr)	*108*		*63 - 129*		*11/05/12 17:08*	*1*
Toluene-d8 (Surr)	*103*		*74 - 115*		*11/05/12 17:08*	*1*

Lab Sample ID: LCS 240-63803/15
Matrix: Water
Analysis Batch: 63803

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	20.0	22.2		ug/L		111	43 - 136

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-63803/15
Matrix: Water
Analysis Batch: 63803

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	10.0	10.1		ug/L		101	83 - 112
Bromodichloromethane	10.0	10.5		ug/L		105	72 - 121
Bromoform	10.0	10.2		ug/L		102	40 - 131
Bromomethane	10.0	7.56		ug/L		76	11 - 185
2-Butanone (MEK)	20.0	20.6		ug/L		103	60 - 126
Carbon disulfide	10.0	9.34		ug/L		93	62 - 142
Carbon tetrachloride	10.0	10.4		ug/L		104	66 - 128
Chlorobenzene	10.0	10.3		ug/L		103	85 - 110
Chloroethane	10.0	8.62		ug/L		86	25 - 153
Chloroform	10.0	10.0		ug/L		100	79 - 117
Chloromethane	10.0	8.13		ug/L		81	44 - 126
cis-1,2-Dichloroethene	10.0	10.3		ug/L		103	80 - 113
cis-1,3-Dichloropropene	10.0	10.5		ug/L		105	61 - 115
Dibromochloromethane	10.0	10.2		ug/L		102	64 - 119
1,1-Dichloroethane	10.0	10.3		ug/L		103	82 - 115
1,2-Dichloroethane	10.0	10.5		ug/L		105	71 - 127
1,1-Dichloroethene	10.0	10.4		ug/L		104	78 - 131
1,2-Dichloropropane	10.0	10.3		ug/L		103	81 - 115
Ethylbenzene	10.0	10.5		ug/L		105	83 - 112
2-Hexanone	20.0	21.3		ug/L		106	55 - 133
Methylene Chloride	10.0	9.68		ug/L		97	66 - 131
4-Methyl-2-pentanone (MIBK)	20.0	21.6		ug/L		108	63 - 128
Styrene	10.0	9.76		ug/L		98	79 - 114
1,1,2,2-Tetrachloroethane	10.0	10.2		ug/L		102	68 - 118
Tetrachloroethene	10.0	10.2		ug/L		102	79 - 114
Toluene	10.0	10.2		ug/L		102	84 - 111
trans-1,2-Dichloroethene	10.0	10.3		ug/L		103	83 - 117
trans-1,3-Dichloropropene	10.0	9.30		ug/L		93	58 - 117
1,1,1-Trichloroethane	10.0	10.2		ug/L		102	74 - 118
1,1,2-Trichloroethane	10.0	10.5		ug/L		105	80 - 112
Trichloroethene	10.0	10.7		ug/L		107	76 - 117
Vinyl chloride	10.0	8.51		ug/L		85	53 - 127
Xylenes, Total	30.0	31.8		ug/L		106	83 - 112
Methyl tert-butyl ether	10.0	10.4		ug/L		104	52 - 144
n-Hexane	10.0	10.5		ug/L		105	66 - 137

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*66 - 117*
Dibromofluoromethane (Surr)	*97*		*75 - 121*
1,2-Dichloroethane-d4 (Surr)	*97*		*63 - 129*
Toluene-d8 (Surr)	*97*		*74 - 115*

QC Sample Results

Client: TRC Environmental Corp-Payne Firm
Project/Site: Canton Drop Forge

TestAmerica Job ID: 240-17088-1

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 240-63755/1-A
Matrix: Water
Analysis Batch: 63906

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 63755

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.993	J	200	0.67	ug/L		11/05/12 08:45	11/06/12 04:49	1
Cadmium	ND		2.0	0.66	ug/L		11/05/12 08:45	11/06/12 04:49	1
Chromium	ND		5.0	2.2	ug/L		11/05/12 08:45	11/06/12 04:49	1
Silver	ND		5.0	2.2	ug/L		11/05/12 08:45	11/06/12 04:49	1
Arsenic	ND		10	3.2	ug/L		11/05/12 08:45	11/06/12 04:49	1
Lead	ND		3.0	1.9	ug/L		11/05/12 08:45	11/06/12 04:49	1
Selenium	ND		5.0	4.1	ug/L		11/05/12 08:45	11/06/12 04:49	1

Lab Sample ID: LCS 240-63755/2-A
Matrix: Water
Analysis Batch: 63906

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 63755

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Barium	2000	1940		ug/L		97	80 - 120
Cadmium	50.0	47.8		ug/L		96	80 - 120
Chromium	200	195		ug/L		97	80 - 120
Silver	50.0	49.6		ug/L		99	80 - 120
Arsenic	2000	1850		ug/L		92	80 - 120
Lead	500	461		ug/L		92	80 - 120
Selenium	2000	1900		ug/L		95	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-63748/1-A
Matrix: Water
Analysis Batch: 64157

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 63748

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.12	ug/L		11/05/12 15:40	11/07/12 13:42	1

Lab Sample ID: LCS 240-63748/2-A
Matrix: Water
Analysis Batch: 64157

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 63748

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	5.00	4.20		ug/L		84	81 - 123

QC Association Summary

Client: TRC Environmental Corp-Payne Firm
Project/Site: Canton Drop Forge

TestAmerica Job ID: 240-17088-1

GC/MS VOA

Analysis Batch: 63803

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-17088-2	RRMW-02	Total/NA	Water	8260B	
240-17088-4	TB-01/110112	Total/NA	Water	8260B	
LCS 240-63803/15	Lab Control Sample	Total/NA	Water	8260B	
MB 240-63803/16	Method Blank	Total/NA	Water	8260B	

Metals

Prep Batch: 63748

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-17088-1	IA08-MW02	Total/NA	Water	7470A	
240-17088-3	IA08-MW06	Total/NA	Water	7470A	
LCS 240-63748/2-A	Lab Control Sample	Total/NA	Water	7470A	
MB 240-63748/1-A	Method Blank	Total/NA	Water	7470A	

Prep Batch: 63755

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-17088-1	IA08-MW02	Total Recoverable	Water	3005A	
240-17088-3	IA08-MW06	Total Recoverable	Water	3005A	
LCS 240-63755/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 240-63755/1-A	Method Blank	Total Recoverable	Water	3005A	

Analysis Batch: 63906

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-17088-1	IA08-MW02	Total Recoverable	Water	6010B	63755
240-17088-3	IA08-MW06	Total Recoverable	Water	6010B	63755
LCS 240-63755/2-A	Lab Control Sample	Total Recoverable	Water	6010B	63755
MB 240-63755/1-A	Method Blank	Total Recoverable	Water	6010B	63755

Analysis Batch: 64157

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-17088-1	IA08-MW02	Total/NA	Water	7470A	63748
240-17088-3	IA08-MW06	Total/NA	Water	7470A	63748
LCS 240-63748/2-A	Lab Control Sample	Total/NA	Water	7470A	63748
MB 240-63748/1-A	Method Blank	Total/NA	Water	7470A	63748

Lab Chronicle

Client: TRC Environmental Corp-Payne Firm
Project/Site: Canton Drop Forge

TestAmerica Job ID: 240-17088-1

Client Sample ID: IA08-MW02

Lab Sample ID: 240-17088-1
Matrix: Water

Date Collected: 11/01/12 11:25
Date Received: 11/03/12 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			63755	11/05/12 08:45	SG	TAL NC
Total Recoverable	Analysis	6010B		1	63906	11/06/12 05:02	KC	TAL NC
Total/NA	Prep	7470A			63748	11/05/12 15:40	SG	TAL NC
Total/NA	Analysis	7470A		1	64157	11/07/12 14:18	DH	TAL NC

Client Sample ID: RRMW-02

Lab Sample ID: 240-17088-2
Matrix: Water

Date Collected: 11/01/12 12:35
Date Received: 11/03/12 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	63803	11/05/12 19:45	RQ	TAL NC

Client Sample ID: IA08-MW06

Lab Sample ID: 240-17088-3
Matrix: Water

Date Collected: 11/01/12 15:20
Date Received: 11/03/12 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			63755	11/05/12 08:45	SG	TAL NC
Total Recoverable	Analysis	6010B		1	63906	11/06/12 05:08	KC	TAL NC
Total/NA	Prep	7470A			63748	11/05/12 15:40	SG	TAL NC
Total/NA	Analysis	7470A		1	64157	11/07/12 14:20	DH	TAL NC

Client Sample ID: TB-01/110112

Lab Sample ID: 240-17088-4
Matrix: Water

Date Collected: 11/01/12 00:00
Date Received: 11/03/12 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	63803	11/05/12 19:23	RQ	TAL NC

Laboratory References:

TAL NC = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Certification Summary

Client: TRC Environmental Corp-Payne Firm
Project/Site: Canton Drop Forge

TestAmerica Job ID: 240-17088-1

Laboratory: TestAmerica Canton

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	NELAC	9	01144CA	06-30-13
Connecticut	State Program	1	PH-0590	12-31-13
Florida	NELAC	4	E87225	06-30-13
Georgia	State Program	4	N/A	06-30-13
Illinois	NELAC	5	200004	07-31-13
Kansas	NELAC	7	E-10336	01-31-13
Kentucky	State Program	4	58	11-16-12
L-A-B	DoD ELAP		L2315	02-28-13
Minnesota	NELAC	5	039-999-348	12-31-12
Nevada	State Program	9	OH-000482008A	07-31-13
New Jersey	NELAC	2	OH001	06-30-13
New York	NELAC	2	10975	04-01-13
Ohio VAP	State Program	5	CL0024	01-19-14
Pennsylvania	NELAC	3	68-00340	08-31-13
Texas	NELAC	6		08-03-13
USDA	Federal		P330-11-00328	08-26-14
Virginia	NELAC	3	460175	09-14-13
Washington	State Program	10	C971	01-12-13
West Virginia DEP	State Program	3	210	12-31-12
Wisconsin	State Program	5	999518190	08-31-13

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Chain of Custody Record

TestAmerica Laboratory location: North Canton, OH

Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☒ Other Ohio VAP

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact			
Company Name: TRC	Client Project Manager: Kathie Teuscher	Site Contact: Mike Bitto	Lab Contact: Jeff Smith	COC No: 050960
Address: 1382 W. 9th St, Suite 200	Telephone: 216-344-3072	Telephone: 216-344-3072	Telephone: 330-497-9396	1 of 1 COCs
City/State/Zip: Cleveland, OH 44113	Email: kteuscher@trcsolutions.com	Analysis Turnaround Time (calendar days)	Analyses	For lab use only
Phone: 216-344-3072		TAT if different from below 3 Day		Walk-in client: ☐
Project Name: Canton Drop Forge	Method of Shipment/Carrier: Drop-off	☐ 3 weeks		Lab sampling: ☐
Project Number: 196663	Shipping/Tracking No:	☐ 2 weeks		Job/SDG No.:
PO#		☐ 1 week		
		☐ 2 days		
		☐ 1 day		

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Filtered Sample (Y/N)	MS/MSD (Y/N)	Perform MS/MSD (Y/N)	VOC	Total RCRA Metals	Sample Specific Notes / Special Instructions:
IA08-MW02	11/1/12	1125		X					1										X	
RBMW-02		1235		X						3								X		
IA08-MW06		1520		X					1										X	
TB-01/10/12				X						1								X		

11/1/12

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return to Client ☒ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

Ohio VAP

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	TRC	11/2/12 1200	[signature]	TA	11-3-12 930
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

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TAL 0018- 1 (04/10)

TestAmerica Canton Sample Receipt Form/Narrative **Login # :** 117088

Client TRC Site Name _____ By: [illegible]

Cooler Received on 11-3-12 Opened on 11-3-12 (Signature)

FedEx: 1st Grd Exp UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

TestAmerica Cooler # _____ Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

IR GUN# 1	(CF −2 °C) Observed Sample Temp. ____ °C	Corrected Sample Temp. ____ °C	
IR GUN# 4G	(CF 0 °C) Observed Sample Temp. ____ °C	Corrected Sample Temp. ____ °C	☐ Multiple on Back
IR GUN# 5G	(CF −2 °C) Observed Sample Temp. ____ °C	Corrected Sample Temp. ____ °C	
IR GUN# 8	(CF 0 °C) Observed Sample Temp. 2.6 °C	Corrected Sample Temp. 2.6 °C	

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No
   - -Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA
   - -Were custody seals on the bottle(s)? Yes No
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Did all bottles arrive in good condition (Unbroken)? Yes No
7. Could all bottle labels be reconciled with the COC? Yes No
8. Were correct bottle(s) used for the test(s) indicated? Yes No
9. Sufficient quantity received to perform indicated analyses? Yes No
10. Were sample(s) at the correct pH upon receipt? Yes No NA
11. Were VOAs on the COC? Yes No
12. Were air bubbles >6 mm in any VOA vials? Yes No NA
13. Was a trip blank present in the cooler(s)? Yes No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in Sample Receiving to meet recommended pH level(s). Nitric Acid Lot# 031512-HNO3; Sulfuric Acid Lot# 041911-H2SO4; Sodium Hydroxide Lot# 121809 - NaOH; Hydrochloric Acid Lot# 041911-HCl; Sodium Hydroxide and Zinc Acetate Lot# 100108-(CH3COO)2ZN/NaOH. What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials
2	<2	11-3-12	[illegible]
6	<2	↓	↓

Cooler #	Observed Sample Temp. °C	Corrected Sample Temp. °C	IR #	Coolant

Login Sample Receipt Checklist

Client: TRC Environmental Corp-Payne Firm

Job Number: 240-17088-1

Login Number: 17088
List Number: 1
Creator: Maddux, Ann

List Source: TestAmerica Canton

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	REFER TO COOLER RECEIPT FORM
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	N/A	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	N/A	
Cooler Temperature is recorded.	N/A	
COC is present.	N/A	
COC is filled out in ink and legible.	N/A	
COC is filled out with all pertinent information.	N/A	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	N/A	
Samples are received within Holding Time.	N/A	
Sample containers have legible labels.	N/A	
Containers are not broken or leaking.	N/A	
Sample collection date/times are provided.	N/A	
Appropriate sample containers are used.	N/A	
Sample bottles are completely filled.	N/A	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	N/A	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	