



October 27, 2017

LT Environmental, Inc.

Rob Rebel

4600 West 60th Avenue

Arvada CO 80003

Project Name - Federal Reservoir #1

Project Number - 027317021

Attached are your analytical results for Federal Reservoir #1 received by Origins Laboratory, Inc. October 26, 2017. This project is associated with Origins project number Y710400-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods. These methods are identified as follows; "SW" are defined in SW-846, "EPA" are defined in 40CFR part 136 and "SM" are defined in the most current revision of Standard Methods For the Examination of Water and Wastewater.

The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody. As such, this report shall not be reproduced except in full, without the written approval of Origin's laboratory.

Unless otherwise noted, the analytical results for all soil samples are reported on a wet weight basis. All analytical analyses were performed under NELAP guidelines unless noted by a data qualifier.

Any holding time exceedances, deviations from the method specifications or deviations from Origins Laboratory's Standard Operating Procedures are outlined in the case narrative.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.
303.433.1322
o-squad@oelabinc.com



1725 Elk Place, Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Rob Rebel
Project Number: 027317021
Project: Federal Reservoir #1

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WS01	Y710400-01	Water	October 26, 2017 12:35	10/26/2017 16:08

Per the email from Rob on 10/27/17, only BTEX will be reported for this sample.

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LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

Rob Rebel
 Project Number: 027317021
 Project: Federal Reservoir #1

Origins Laboratory F-012207-01-R1
Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order: 1710400 Client: LTE
 Client Project ID: Federal Reservoir #1
 Checklist Completed by: Dan Shipped Via: LTD
 (UPS, FedEx, Hand Delivered, Pick-up, etc.)
 Date/time completed: 10-26-17 1719 Airbill #: ND
 Matrix(s) Received: (Check all that apply): Soil/Solid Water Other: _____
 Cooler Number/Temperature: / 12.0 °C / _____ °C / _____ °C (Describe) _____ °C
 Thermometer ID: 603

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?		<input checked="" type="checkbox"/>		Sampled since 12:00
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?		<input checked="" type="checkbox"/>		
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.		<input checked="" type="checkbox"/>		
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH < 2 for samples preserved with HNO3, HCL, H2SO4) / (pH > 10 for samples preserved with NaAsO2+NaOH, ZnAc+NaOH)		<input checked="" type="checkbox"/>		
Additional Comments (if any):				

⁽¹⁾If NO, then contact the client before proceeding with analysis and note date/time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Reviewed by (Project Manager) [Signature] Date/Time Reviewed 10-26-17 1719

Origins Laboratory, Inc.

Jefe Pellegrini

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 Arvada CO 80003

Rob Rebel
 Project Number: 027317021
 Project: Federal Reservoir #1

WS01
10/26/2017 12:35:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y710400-01 (Water)

BTEX by EPA 8260C

Benzene	7000	500	ug/L	500	B7J2604	10/26/2017	10/26/2017	
Toluene	ND	500	"	"	"	"	"	U
Ethylbenzene	1440	500	"	"	"	"	"	
Xylenes, total	11000	500	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	101 %	84-121			"	"	"	
Surrogate: Toluene-d8	101 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	100 %	84-114			"	"	"	

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Rob Rebel
 Project Number: 027317021
 Project: Federal Reservoir #1

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B7J2604 - EPA 5030B (Water)

Blank (B7J2604-BLK1)

Prepared: 10/26/2017 Analyzed: 10/26/2017

Benzene	ND	1.00	ug/L							U
Toluene	ND	1.00	"							U
Ethylbenzene	ND	1.00	"							U
Xylenes, total	ND	1.00	"							U
Surrogate: 1,2-Dichloroethane-d4	64		"	62.5	102		84-121			
Surrogate: Toluene-d8	62		"	62.5	99.3		85-115			
Surrogate: 4-Bromofluorobenzene	62		"	62.5	99.1		84-114			

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Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B7J2604 - EPA 5030B (Water)

Blank (B7J2604-BLK2)

Prepared: 10/26/2017 Analyzed: 10/27/2017

Benzene	ND	1.00	ug/L							U
Toluene	ND	1.00	"							U
Ethylbenzene	ND	1.00	"							U
Xylenes, total	ND	1.00	"							U
Surrogate: 1,2-Dichloroethane-d4	62		"	62.5		99.9	84-121			
Surrogate: Toluene-d8	62		"	62.5		100	85-115			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		97.4	84-114			

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Rob Rebel
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Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B7J2604 - EPA 5030B (Water)

Blank (B7J2604-BLK3)

Prepared: 10/26/2017 Analyzed: 10/27/2017

Benzene	ND	1.00	ug/L							U
Toluene	ND	1.00	"							U
Ethylbenzene	ND	1.00	"							U
Xylenes, total	ND	1.00	"							U
Surrogate: 1,2-Dichloroethane-d4	61		"	62.5		98.4	84-121			
Surrogate: Toluene-d8	63		"	62.5		100	85-115			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.1	84-114			

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B7J2604 - EPA 5030B (Water)

LCS (B7J2604-BS1)

Prepared: 10/26/2017 Analyzed: 10/26/2017

Benzene	48.5	1.00	ug/L	50.0		97.0	73.3-129			
Toluene	52.4	1.00	"	50.0		105	76.2-123			
Ethylbenzene	49.7	1.00	"	50.0		99.4	73.6-130			
m,p-Xylene	98.7	2.00	"	100		98.7	76.1-126			
o-Xylene	51.6	1.00	"	50.0		103	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	64		"	62.5		103	84-121			
Surrogate: Toluene-d8	63		"	62.5		100	85-115			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.0	84-114			

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Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B7J2604 - EPA 5030B (Water)

LCS (B7J2604-BS2)

Prepared: 10/26/2017 Analyzed: 10/27/2017

Benzene	45.3	1.00	ug/L	50.0		90.7	73.3-129			
Toluene	48.2	1.00	"	50.0		96.4	76.2-123			
Ethylbenzene	46.2	1.00	"	50.0		92.5	73.6-130			
m,p-Xylene	91.4	2.00	"	100		91.4	76.1-126			
o-Xylene	47.8	1.00	"	50.0		95.6	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	66		"	62.5		105	84-121			
Surrogate: Toluene-d8	62		"	62.5		99.4	85-115			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		100	84-114			

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Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B7J2604 - EPA 5030B (Water)

LCS (B7J2604-BS3)

Prepared: 10/26/2017 Analyzed: 10/27/2017

Benzene	44.4	1.00	ug/L	50.0		88.8	73.3-129			
Toluene	47.3	1.00	"	50.0		94.6	76.2-123			
Ethylbenzene	44.9	1.00	"	50.0		89.8	73.6-130			
m,p-Xylene	88.3	2.00	"	100		88.3	76.1-126			
o-Xylene	46.5	1.00	"	50.0		93.0	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	57		"	62.5		91.8	84-121			
Surrogate: Toluene-d8	63		"	62.5		100	85-115			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.8	84-114			

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Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B7J2604 - EPA 5030B (Water)

Matrix Spike (B7J2604-MS1)	Source: Y710316-01			Prepared: 10/26/2017 Analyzed: 10/26/2017						
Benzene	50.9	1.00	ug/L	50.0	0.750	100	74-130			
Toluene	53.8	1.00	"	50.0	ND	108	73-131			
Ethylbenzene	52.6	1.00	"	50.0	ND	105	76-132			
m,p-Xylene	102	2.00	"	100	0.390	102	69-139			
o-Xylene	53.0	1.00	"	50.0	0.350	105	74-131			
Surrogate: 1,2-Dichloroethane-d4	57		"	62.5		90.9	84-121			
Surrogate: Toluene-d8	63		"	62.5		100	85-115			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.7	84-114			

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B7J2604 - EPA 5030B (Water)

Matrix Spike (B7J2604-MS2)	Source: Y710316-02			Prepared: 10/26/2017 Analyzed: 10/27/2017						
Benzene	48.1	1.00	ug/L	50.0	ND	96.2	74-130			
Toluene	51.7	1.00	"	50.0	ND	103	73-131			
Ethylbenzene	49.7	1.00	"	50.0	ND	99.5	76-132			
m,p-Xylene	96.8	2.00	"	100	ND	96.8	69-139			
o-Xylene	50.2	1.00	"	50.0	ND	100	74-131			
Surrogate: 1,2-Dichloroethane-d4	59		"	62.5		94.1	84-121			
Surrogate: Toluene-d8	62		"	62.5		99.9	85-115			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	84-114			

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B7J2604 - EPA 5030B (Water)

Matrix Spike (B7J2604-MS3)	Source: Y710316-03			Prepared: 10/26/2017 Analyzed: 10/27/2017						
Benzene	48.5	1.00	ug/L	50.0	ND	97.1	74-130			
Toluene	52.0	1.00	"	50.0	ND	104	73-131			
Ethylbenzene	50.1	1.00	"	50.0	ND	100	76-132			
m,p-Xylene	97.6	2.00	"	100	ND	97.6	69-139			
o-Xylene	49.6	1.00	"	50.0	ND	99.2	74-131			
Surrogate: 1,2-Dichloroethane-d4	58		"	62.5		92.7	84-121			
Surrogate: Toluene-d8	62		"	62.5		99.8	85-115			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.0	84-114			

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 Project Number: 027317021
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Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B7J2604 - EPA 5030B (Water)

Matrix Spike Dup (B7J2604-MSD1)	Source: Y710316-01			Prepared: 10/26/2017 Analyzed: 10/26/2017						
Benzene	51.3	1.00	ug/L	50.0	0.750	101	74-130	0.920	20	
Toluene	55.0	1.00	"	50.0	ND	110	73-131	2.15	20	
Ethylbenzene	52.6	1.00	"	50.0	ND	105	76-132	0.0951	20	
m,p-Xylene	103	2.00	"	100	0.390	103	69-139	0.945	20	
o-Xylene	53.3	1.00	"	50.0	0.350	106	74-131	0.527	20	
Surrogate: 1,2-Dichloroethane-d4	66		"	62.5		106	84-121			
Surrogate: Toluene-d8	62		"	62.5		98.5	85-115			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		100	84-114			

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B7J2604 - EPA 5030B (Water)

Matrix Spike Dup (B7J2604-MSD2)	Source: Y710316-02			Prepared: 10/26/2017 Analyzed: 10/27/2017						
Benzene	50.3	1.00	ug/L	50.0	ND	101	74-130	4.51	20	
Toluene	54.6	1.00	"	50.0	ND	109	73-131	5.40	20	
Ethylbenzene	52.8	1.00	"	50.0	ND	106	76-132	5.91	20	
m,p-Xylene	102	2.00	"	100	ND	102	69-139	4.96	20	
o-Xylene	51.5	1.00	"	50.0	ND	103	74-131	2.50	20	
Surrogate: 1,2-Dichloroethane-d4	58		"	62.5		92.4	84-121			
Surrogate: Toluene-d8	62		"	62.5		99.7	85-115			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		98.6	84-114			

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B7J2604 - EPA 5030B (Water)

Matrix Spike Dup (B7J2604-MSD3)	Source: Y710316-03			Prepared: 10/26/2017 Analyzed: 10/27/2017						
Benzene	46.7	1.00	ug/L	50.0	ND	93.4	74-130	3.89	20	
Toluene	49.6	1.00	"	50.0	ND	99.2	73-131	4.73	20	
Ethylbenzene	49.0	1.00	"	50.0	ND	98.0	76-132	2.18	20	
m,p-Xylene	95.0	2.00	"	100	ND	95.0	69-139	2.76	20	
o-Xylene	48.2	1.00	"	50.0	ND	96.5	74-131	2.82	20	
Surrogate: 1,2-Dichloroethane-d4	66		"	62.5		105	84-121			
Surrogate: Toluene-d8	62		"	62.5		99.6	85-115			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	84-114			

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Project Number: 027317021
Project: Federal Reservoir #1

Notes and Definitions

U Sample is Non-Detect.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

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Jen Pellegrini For Noelle Doyle Mathis, President