

ANALYTICAL REPORT

January 28, 2019

Work Order: 1A91703

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Report To
Jeff Jones Decker Construction 710 North Street Lathrop, MO 64465

Work Order Information
Date Received: 01/24/2019 10:31AM Collector: Long, Mark Phone: (816) 740-7000 PO Number: Routine Analysis

Project : Routine Analysis

Project Number: Clay Co. PWSD#3

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
1A91703-01	Clay #3 Control Valve Old BB			Matrix:Drink Wtr		Collected: 01/23/19 15:00	
Chloroform	24.4 ug/L	0.50	1CA1000	524.2	BDF	01/25/19 15:06	
Bromodichloromethane	5.26 ug/L	0.50	1CA1000	524.2	BDF	01/25/19 15:06	
Chlorodibromomethane	3.47 ug/L	0.50	1CA1000	524.2	BDF	01/25/19 15:06	
Bromoform	<0.50 ug/L	0.50	1CA1000	524.2	BDF	01/25/19 15:06	
Total Trihalomethanes (TTHM)	33.1 ug/L	2.00	1CA1000	524.2	BDF	01/25/19 15:06	
<i>Surrogate: Dibromofluoromethane</i>	<i>91.6 %</i>			<i>84-125</i>	BDF	01/25/19 15:06	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>104 %</i>			<i>71-134</i>	BDF	01/25/19 15:06	
<i>Surrogate: Toluene-d8</i>	<i>94.7 %</i>			<i>90-112</i>	BDF	01/25/19 15:06	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>98.7 %</i>			<i>74-118</i>	BDF	01/25/19 15:06	
1A91703-02	Clay #3 Water Treatment Plant Ept			Matrix:Drink Wtr		Collected: 01/23/19 15:45	
Chloroform	6.73 ug/L	0.50	1CA1000	524.2	BDF	01/25/19 15:52	
Bromodichloromethane	4.61 ug/L	0.50	1CA1000	524.2	BDF	01/25/19 15:52	
Chlorodibromomethane	4.55 ug/L	0.50	1CA1000	524.2	BDF	01/25/19 15:52	
Bromoform	2.89 ug/L	0.50	1CA1000	524.2	BDF	01/25/19 15:52	
Total Trihalomethanes (TTHM)	18.8 ug/L	2.00	1CA1000	524.2	BDF	01/25/19 15:52	
<i>Surrogate: Dibromofluoromethane</i>	<i>100 %</i>			<i>84-125</i>	BDF	01/25/19 15:52	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>106 %</i>			<i>71-134</i>	BDF	01/25/19 15:52	
<i>Surrogate: Toluene-d8</i>	<i>92.8 %</i>			<i>90-112</i>	BDF	01/25/19 15:52	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>94.5 %</i>			<i>74-118</i>	BDF	01/25/19 15:52	
1A91703-03	Clay #3 Entry Vault Ex. Sprg. BPS			Matrix:Drink Wtr		Collected: 01/23/19 15:20	
Chloroform	11.1 ug/L	0.50	1CA1000	524.2	BDF	01/25/19 16:39	
Bromodichloromethane	7.79 ug/L	0.50	1CA1000	524.2	BDF	01/25/19 16:39	
Chlorodibromomethane	7.03 ug/L	0.50	1CA1000	524.2	BDF	01/25/19 16:39	
Bromoform	3.11 ug/L	0.50	1CA1000	524.2	BDF	01/25/19 16:39	
Total Trihalomethanes (TTHM)	29.1 ug/L	2.00	1CA1000	524.2	BDF	01/25/19 16:39	
<i>Surrogate: Dibromofluoromethane</i>	<i>92.7 %</i>			<i>84-125</i>	BDF	01/25/19 16:39	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>101 %</i>			<i>71-134</i>	BDF	01/25/19 16:39	

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Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
1A91703-03	Clay #3 Entry Vault Ex. Sprg. BPS			Matrix: Drink Wtr	Collected: 01/23/19 15:20		
Surrogate: Toluene-d8	98.9 %			90-112	BDF	01/25/19 16:39	
Surrogate: 4-Bromofluorobenzene	103 %			74-118	BDF	01/25/19 16:39	
1A91703-04	14401 NE 188th St			Matrix: Water	Collected: 01/23/19 17:20		
Chloroform	12.8 ug/L	0.50	1CA1000	524.2	BDF	01/25/19 17:25	
Bromodichloromethane	4.00 ug/L	0.50	1CA1000	524.2	BDF	01/25/19 17:25	
Chlorodibromomethane	3.01 ug/L	0.50	1CA1000	524.2	BDF	01/25/19 17:25	
Bromoform	<0.50 ug/L	0.50	1CA1000	524.2	BDF	01/25/19 17:25	
Total Trihalomethanes (TTHM)	19.8 ug/L	2.00	1CA1000	524.2	BDF	01/25/19 17:25	
Surrogate: Dibromofluoromethane	96.8 %			84-125	BDF	01/25/19 17:25	
Surrogate: 1,2-Dichloroethane-d4	102 %			71-134	BDF	01/25/19 17:25	
Surrogate: Toluene-d8	92.6 %			90-112	BDF	01/25/19 17:25	
Surrogate: 4-Bromofluorobenzene	97.0 %			74-118	BDF	01/25/19 17:25	
1A91703-05	3351 SE Freeway Farm Dr			Matrix: Water	Collected: 01/23/19 17:45		
Chloroform	15.0 ug/L	0.50	1CA1000	524.2	BDF	01/25/19 18:12	
Bromodichloromethane	7.80 ug/L	0.50	1CA1000	524.2	BDF	01/25/19 18:12	
Chlorodibromomethane	6.07 ug/L	0.50	1CA1000	524.2	BDF	01/25/19 18:12	
Bromoform	2.95 ug/L	0.50	1CA1000	524.2	BDF	01/25/19 18:12	
Total Trihalomethanes (TTHM)	31.8 ug/L	2.00	1CA1000	524.2	BDF	01/25/19 18:12	
Surrogate: Dibromofluoromethane	102 %			84-125	BDF	01/25/19 18:12	
Surrogate: 1,2-Dichloroethane-d4	106 %			71-134	BDF	01/25/19 18:12	
Surrogate: Toluene-d8	93.0 %			90-112	BDF	01/25/19 18:12	
Surrogate: 4-Bromofluorobenzene	95.8 %			74-118	BDF	01/25/19 18:12	

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Determination of Total Trihalomethanes - Quality Control

Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1CA1000 - EPA 5030B										
Blank (1CA1000-BLK1)										
Prepared & Analyzed: 01/25/19										
Surrogate: Dibromofluoromethane	46.3		ug/L	50.0000		92.6	84-125			
Surrogate: 1,2-Dichloroethane-d4	46.4		"	50.0000		92.8	71-134			
Surrogate: Toluene-d8	48.5		"	50.0000		96.9	90-112			
Surrogate: 4-Bromofluorobenzene	52.2		"	50.0000		104	74-118			
Chloroform	ND	0.50	"							
Bromodichloromethane	ND	0.50	"							
Chlorodibromomethane	ND	0.50	"							
Bromoform	ND	0.50	"							
Total Trihalomethanes (TTHM)	ND	2.00	"							
LCS (1CA1000-BS1)										
Prepared & Analyzed: 01/25/19										
Surrogate: Dibromofluoromethane	43.4		ug/L	50.0000		86.7	84-125			
Surrogate: 1,2-Dichloroethane-d4	43.2		"	50.0000		86.3	71-134			
Surrogate: Toluene-d8	52.8		"	50.0000		106	90-112			
Surrogate: 4-Bromofluorobenzene	58.7		"	50.0000		117	74-118			
Chloroform	40.63	0.50	"	50.0000		81.3	76-132			
Bromodichloromethane	41.27	0.50	"	50.0000		82.5	76-115			
Chlorodibromomethane	45.04	0.50	"	50.0000		90.1	79-117			
Bromoform	40.26	0.50	"	50.0000		80.5	70-126			
Total Trihalomethanes (TTHM)	167.2	2.00	"	200.000		83.6	83-116			
LCS Dup (1CA1000-BSD1)										
Prepared & Analyzed: 01/25/19										
Surrogate: Dibromofluoromethane	42.7		ug/L	50.0000		85.3	84-125			
Surrogate: 1,2-Dichloroethane-d4	44.0		"	50.0000		88.1	71-134			
Surrogate: Toluene-d8	53.2		"	50.0000		106	90-112			
Surrogate: 4-Bromofluorobenzene	56.1		"	50.0000		112	74-118			
Chloroform	46.32	0.50	"	50.0000		92.6	76-132	13.1	17	
Bromodichloromethane	43.07	0.50	"	50.0000		86.1	76-115	4.27	16	
Chlorodibromomethane	44.65	0.50	"	50.0000		89.3	79-117	0.870	15	
Bromoform	43.47	0.50	"	50.0000		86.9	70-126	7.67	15	
Total Trihalomethanes (TTHM)	177.5	2.00	"	200.000		88.8	83-116	5.98	14	

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Determination of Total Trihalomethanes - Quality Control

Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1CA1000 - EPA 5030B										
Matrix Spike (1CA1000-MS1)										
Source: 1A91702-01										
Prepared & Analyzed: 01/25/19										
Surrogate: Dibromofluoromethane	470		ug/L	500.000		94.0	84-125			
Surrogate: 1,2-Dichloroethane-d4	504		"	500.000		101	71-134			
Surrogate: Toluene-d8	480		"	500.000		95.9	90-112			
Surrogate: 4-Bromofluorobenzene	539		"	500.000		108	74-118			
Chloroform	562.4	5.00	"	500.000	35.33	105	70-141			
Bromodichloromethane	481.1	5.00	"	500.000	11.24	94.0	43-141			
Chlorodibromomethane	508.7	5.00	"	500.000	5.42	101	44-143			
Bromoform	482.0	5.00	"	500.000	ND	96.4	50-135			
Total Trihalomethanes (TTHM)	2034	20.0	"	2000.00	51.99	99.1	56-137			
Matrix Spike Dup (1CA1000-MSD1)										
Source: 1A91702-01										
Prepared & Analyzed: 01/25/19										
Surrogate: Dibromofluoromethane	449		ug/L	500.000		89.9	84-125			
Surrogate: 1,2-Dichloroethane-d4	492		"	500.000		98.4	71-134			
Surrogate: Toluene-d8	499		"	500.000		99.7	90-112			
Surrogate: 4-Bromofluorobenzene	514		"	500.000		103	74-118			
Chloroform	520.6	5.00	"	500.000	35.33	97.1	70-141	7.72	16	
Bromodichloromethane	447.8	5.00	"	500.000	11.24	87.3	43-141	7.17	14	
Chlorodibromomethane	499.1	5.00	"	500.000	5.42	98.7	44-143	1.91	12	
Bromoform	430.1	5.00	"	500.000	ND	86.0	50-135	11.4	17	
Total Trihalomethanes (TTHM)	1898	20.0	"	2000.00	51.99	92.3	56-137	6.95	12	

ND = Non Detect; REC= Recovery; RPD= Relative Percent Difference

Certified Analyses included in this Report

Method/Matrix	Analyte	Certifications
524.2 in Water	Chloroform	SIA1X
	Bromodichloromethane	SIA1X
	Chlorodibromomethane	SIA1X
	Bromoform	SIA1X
	Total Trihalomethanes (TTHM)	SIA1X

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Code	Description	Number	Expires
KS-KC	Kansas Department of Health and Environment-KC	E-10110	04/30/2019
KS-NT	Kansas Department of Health and Environment (NELAP)	E-10287	10/31/2019
MO-KC	Missouri Department of Natural Resources	140	04/30/2019
SIA1X	Iowa Department of Natural Resources	95	02/01/2019

End of Report



Keystone Laboratories, Inc.

Carolyn Jackson
Project Manager

CHAIN OF CUSTODY RECORD



LABORATORIES, INC.

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Fax: 913-831-6778

23698 21st Ave
Centerville, IA 52544
Phone: 641-437-7023
Fax: 641-437-7040

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PRINT OR TYPE INFORMATION BELOW
 SAMPLER: Mark Long
 SITE NAME: Clay Co PUSD #3 TWM Sample Sites
 ADDRESS: 710 North St.
 CITY/ST/ZIP: Lathrop MO 64465
 PHONE: 816-740-7000

REPORT TO:
 NAME: JEFF JONES
 COMPANY NAME: Decker Const.
 ADDRESS: 710 North St.
 CITY/ST/ZIP: Lathrop MO 64465
 PHONE: 816-740-7000
 FAX: 816-740-7005

BILL TO:
 NAME: JEFF JONES
 COMPANY NAME: Decker Const.
 ADDRESS: SAME
 CITY/ST/ZIP: SAME
 PHONE: SAME
 Keystone Quote No.: _____
 (If Applicable)

CLIENT SAMPLE NUMBER	DATE	TIME	SAMPLE LOCATION	NO. OF CONTAINERS	MATRIX	GRAB COMPOSITE	ANALYSES REQUIRED							
CV	1-23-19	3:00pm	Clay #3 Central Value Old BR	3	DW	G	X							
WTP	1-23-19	3:45pm	Clay #3 Water Treatment Plat E Pt	3	DW	G	X							
EV	1-23-19	3:20pm	Clay #3 Embry Vault-EOSP BOS	3	DW	G	X							
188th	1-23-19	5:20pm	14401 NE 188th St.	3	DW	G	X							
FUF	1-23-19	5:45pm	3351 JE Freeway Farm Dr	3	DW	G	X							

Relinquished by: (Signature) Mark Long Date 1-24-19 Time 9:45

Received by: (Signature) Jeff Jones Date 1-24-19 Time 9:45

Relinquished by: (Signature) Jeff Jones Date 1-24-19 Time 10:31

Received for Lab by: (Signature) Decker Const Date 1-24-19 Time 10:31

Turn-Around: Standard Rush

Remarks: _____

Contact Lab Prior to Submission

LAB USE ONLY
 LABORATORY WORK ORDER NO. 1A91703
 SAMPLE TEMPERATURE UPON RECEIPT: 20 °C
 SAMPLE CONDITION/COMMENTS: _____

LABORATORY SAMPLE NUMBER 1A91703-01