



Certifications

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Analytical and Quality Control Report

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Report Date: July 3, 2014

Work Order: 14070220



Project Name: DOS Hermanos Fed Evap Ponds
Project Number: DOS Hermanos Fed Evap Ponds

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
367291	HCP-Comp-Dry	soil	2014-06-24	10:30	2014-07-02
367292	HCP-Comp-Moist	soil	2014-06-24	10:45	2014-07-02

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 19 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

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Case Narrative

Samples for project DOS Hermanos Fed Evap Ponds were received by TraceAnalysis, Inc. on 2014-07-02 and assigned to work order 14070220. Samples for work order 14070220 were received intact at a temperature of 21.5 C.

Samples were analyzed for the following tests using their respective methods.

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	95851	2014-07-02 at 15:38	113336	2014-07-02 at 15:38
Chloride (Titration)	SM 4500-Cl B	95875	2014-07-03 at 13:20	113367	2014-07-03 at 13:21
TPH DRO - NEW	S 8015 D	95861	2014-07-02 at 16:00	113348	2014-07-03 at 11:47
TPH GRO	S 8015 D	95851	2014-07-02 at 15:38	113337	2014-07-02 at 15:38

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 14070220 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Analytical Report

Sample: 367291 - HCP-Comp-Dry

Laboratory: Lubbock
Analysis: BTEX
QC Batch: 113336
Prep Batch: 95851

Analytical Method: S 8021B
Date Analyzed: 2014-07-02
Sample Preparation: 2014-07-02

Prep Method: S 5035
Analyzed By: MT
Prepared By: MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	Qs,U	1,2,3,4,5	<0.400	mg/Kg	20	0.0200
Toluene	Jb	1,2,3,4,5	<0.400	mg/Kg	20	0.0200
Ethylbenzene	Qs,U	1,2,3,4,5	<0.400	mg/Kg	20	0.0200
Xylene	B,Qs	1,2,3,4,5	0.919	mg/Kg	20	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	2.11	mg/Kg	20	2.00	106	66.2 - 120
4-Bromofluorobenzene (4-BFB)		5	1.80	mg/Kg	20	2.00	90	59.5 - 120

Sample: 367291 - HCP-Comp-Dry

Laboratory: Lubbock
Analysis: Chloride (Titration)
QC Batch: 113367
Prep Batch: 95875

Analytical Method: SM 4500-Cl B
Date Analyzed: 2014-07-03
Sample Preparation: 2014-07-03

Prep Method: N/A
Analyzed By: AT
Prepared By: AT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	Qs	1	695	mg/Kg	5	5.00

Sample: 367291 - HCP-Comp-Dry

Laboratory: Lubbock
Analysis: TPH DRO - NEW
QC Batch: 113348
Prep Batch: 95861

Analytical Method: S 8015 D
Date Analyzed: 2014-07-03
Sample Preparation: 2014-07-02

Prep Method: N/A
Analyzed By: CM
Prepared By: CM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1,2,3,4	3270	mg/Kg	20	50.0

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Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Q _{sr}	Q _{sr}	3	393	mg/Kg	20	100	393	70 - 130

Sample: 367291 - HCP-Comp-Dry

Laboratory: Lubbock
Analysis: TPH GRO
QC Batch: 113337
Prep Batch: 95851

Analytical Method: S 8015 D
Date Analyzed: 2014-07-02
Sample Preparation: 2014-07-02

Prep Method: S 5035
Analyzed By: MT
Prepared By: MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1,2,3,4	101	mg/Kg	20	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3	1.82	mg/Kg	20	2.00	91	73 - 122
4-Bromofluorobenzene (4-BFB)	Q _{sr}	Q _{sr}	3	4.78	mg/Kg	20	2.00	239
								74.6 - 120

Sample: 367292 - HCP-Comp-Moist

Laboratory: Lubbock
Analysis: BTEX
QC Batch: 113336
Prep Batch: 95851

Analytical Method: S 8021B
Date Analyzed: 2014-07-02
Sample Preparation: 2014-07-02

Prep Method: S 5035
Analyzed By: MT
Prepared By: MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	² Q _s ,U	1,2,3,4,5	<1.00	mg/Kg	50	0.0200
Toluene	U	1,2,3,4,5	<1.00	mg/Kg	50	0.0200
Ethylbenzene	Q _s ,U	1,2,3,4,5	<1.00	mg/Kg	50	0.0200
Xylene	B,Q _s	1,2,3,4,5	1.07	mg/Kg	50	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits	
Trifluorotoluene (TFT)	Q _{sr}	Q _{sr}	5	2.44	mg/Kg	50	2.00	122	66.2 - 120
4-Bromofluorobenzene (4-BFB)		5	1.78	mg/Kg	50	2.00	89	59.5 - 120	

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Sample: 367292 - HCP-Comp-Moist

Laboratory:	Lubbock		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	113367	Date Analyzed:	2014-07-03
Prep Batch:	95875	Sample Preparation:	2014-07-03
		Prep Method:	N/A
		Analyzed By:	AT
		Prepared By:	AT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	Qs	1	775	mg/Kg	5	5.00

Sample: 367292 - HCP-Comp-Moist

Laboratory:	Lubbock		
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D
QC Batch:	113348	Date Analyzed:	2014-07-03
Prep Batch:	95861	Sample Preparation:	2014-07-02
		Prep Method:	N/A
		Analyzed By:	CM
		Prepared By:	CM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1,2,3,4	4810	mg/Kg	50	50.0

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Q _{sr}	Q _{sr}	3	496	mg/Kg	50	100	496	70 - 130

Sample: 367292 - HCP-Comp-Moist

Laboratory:	Lubbock		
Analysis:	TPH GRO	Analytical Method:	S 8015 D
QC Batch:	113337	Date Analyzed:	2014-07-02
Prep Batch:	95851	Sample Preparation:	2014-07-02
		Prep Method:	S 5035
		Analyzed By:	MT
		Prepared By:	MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	3	1,2,3,4	<200	mg/Kg	50	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3	1.98	mg/Kg	50	2.00	99	73 - 122
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	3	4.65	mg/Kg	50	232	74.6 - 120

Method Blanks

Method Blank (1) QC Batch: 113336

QC Batch: 113336 Date Analyzed: 2014-07-02 Analyzed By: MT
Prep Batch: 95851 QC Preparation: 2014-07-02 Prepared By: MT

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1,2,3,4,5	<0.00487	mg/Kg	0.02
Toluene		1,2,3,4,5	0.00620	mg/Kg	0.02
Ethylbenzene		1,2,3,4,5	<0.00283	mg/Kg	0.02
Xylene		1,2,3,4,5	0.00520	mg/Kg	0.02

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	2.09	mg/Kg	1	2.00	104	66.2 - 120
4-Bromofluorobenzene (4-BFB)		5	1.93	mg/Kg	1	2.00	96	59.5 - 120

Method Blank (1) QC Batch: 113337

QC Batch: 113337 Date Analyzed: 2014-07-02 Analyzed By: MT
Prep Batch: 95851 QC Preparation: 2014-07-02 Prepared By: MT

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		1,2,3,4	<0.217	mg/Kg	4

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3	2.18	mg/Kg	1	2.00	109	73 - 122
4-Bromofluorobenzene (4-BFB)		3	1.92	mg/Kg	1	2.00	96	74.6 - 120

Method Blank (1) QC Batch: 113348

QC Batch: 113348 Date Analyzed: 2014-07-03 Analyzed By: CM
Prep Batch: 95861 QC Preparation: 2014-07-02 Prepared By: CM

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Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1,2,3,4	6.26	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	94.5	mg/Kg	1	100	94	70 - 130

Method Blank (1) QC Batch: 113367

QC Batch: 113367
Prep Batch: 95875

Date Analyzed: 2014-07-03
QC Preparation: 2014-07-03

Analyzed By: AT
Prepared By: AT

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride		1	<3.05	mg/Kg	5

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 113336
Prep Batch: 95851

Date Analyzed: 2014-07-02
QC Preparation: 2014-07-02

Analyzed By: MT
Prepared By: MT

Param			F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	4	Qs	Qs	1,2,3,4,5	0.431	mg/Kg	1	2.00	<0.00487	22	69.3 - 120
Toluene				1,2,3,4,5	2.36	mg/Kg	1	2.00	0.0062	118	70.5 - 120
Ethylbenzene				1,2,3,4,5	0.519	mg/Kg	1	2.00	<0.00283	26	70.6 - 120
Xylene				1,2,3,4,5	2.67	mg/Kg	1	6.00	0.0052	44	70.7 - 120

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param			F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	Qs	Qs	Qs	1,2,3,4,5	0.459	mg/Kg	1	2.00	<0.00487	23	69.3 - 120	6	20
Toluene				1,2,3,4,5	2.36	mg/Kg	1	2.00	0.0062	118	70.5 - 120	0	20
Ethylbenzene				1,2,3,4,5	0.520	mg/Kg	1	2.00	<0.00283	26	70.6 - 120	0	20
Xylene				1,2,3,4,5	2.66	mg/Kg	1	6.00	0.0052	44	70.7 - 120	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate				LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)			5	2.13	2.22	mg/Kg	1	2.00	106	111	66.2 - 120
4-Bromofluorobenzene (4-BFB)			5	2.00	1.96	mg/Kg	1	2.00	100	98	59.5 - 120

Laboratory Control Spike (LCS-1)

QC Batch: 113337
Prep Batch: 95851

Date Analyzed: 2014-07-02
QC Preparation: 2014-07-02

Analyzed By: MT
Prepared By: MT

Param			F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO				1,2,3,4	19.4	mg/Kg	1	20.0	<0.217	97	60.1 - 120

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

continued ...

control spikes continued ...

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1,2,3,4	19.5	mg/Kg	1	20.0	<0.217	98	60.1 - 120	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate		LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	3	2.05	2.09	mg/Kg	1	2.00	102	104	73 - 122
4-Bromofluorobenzene (4-BFB)	3	2.08	2.09	mg/Kg	1	2.00	104	104	74.6 - 120

Laboratory Control Spike (LCS-1)

QC Batch: 113348
Prep Batch: 95861

Date Analyzed: 2014-07-03
QC Preparation: 2014-07-02

Analyzed By: CM
Prepared By: CM

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1,2,3,4	228	mg/Kg	1	250	6.26	89	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		1,2,3,4	236	mg/Kg	1	250	6.26	92	70 - 130	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate		LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	3	88.5	91.2	mg/Kg	1	100	88	91	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 113367
Prep Batch: 95875

Date Analyzed: 2014-07-03
QC Preparation: 2014-07-03

Analyzed By: AT
Prepared By: AT

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		1	524	mg/Kg	1	500	<3.05	105	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		1	540	mg/Kg	1	500	<3.05	108	85 - 115	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spikes

Matrix Spike (MS-1) Spiked Sample: 367010

QC Batch: 113336
Prep Batch: 95851

Date Analyzed: 2014-07-02
QC Preparation: 2014-07-02

Analyzed By: MT
Prepared By: MT

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1,2,3,4,5	1.96	mg/Kg	1	2.00	<0.00487	98	63.6 - 120
Toluene		1,2,3,4,5	2.10	mg/Kg	1	2.00	0.0047	105	67.8 - 128
Ethylbenzene		1,2,3,4,5	2.26	mg/Kg	1	2.00	<0.00283	113	69.5 - 136
Xylene		1,2,3,4,5	6.52	mg/Kg	1	6.00	0.0047	108	69.3 - 139

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1,2,3,4,5	1.97	mg/Kg	1	2.00	<0.00487	98	63.6 - 120	0	20
Toluene		1,2,3,4,5	2.10	mg/Kg	1	2.00	0.0047	105	67.8 - 128	0	20
Ethylbenzene		1,2,3,4,5	2.25	mg/Kg	1	2.00	<0.00283	112	69.5 - 136	0	20
Xylene		1,2,3,4,5	6.59	mg/Kg	1	6.00	0.0047	110	69.3 - 139	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate		MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	5	2.16	2.13	mg/Kg	1	2	108	106	66.2 - 120
4-Bromofluorobenzene (4-BFB)	5	1.92	1.98	mg/Kg	1	2	96	99	59.5 - 120

Matrix Spike (MS-1) Spiked Sample: 367010

QC Batch: 113337
Prep Batch: 95851

Date Analyzed: 2014-07-02
QC Preparation: 2014-07-02

Analyzed By: MT
Prepared By: MT

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1,2,3,4	17.4	mg/Kg	1	20.0	<0.217	87	40.3 - 120

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

continued ...

matrix spikes continued ...

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1,2,3,4	19.7	mg/Kg	1	20.0	<0.217	98	40.3 - 120	12	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate		MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	3	2.02	2.16	mg/Kg	1	2	101	108	73 - 122
4-Bromofluorobenzene (4-BFB)	3	2.02	2.10	mg/Kg	1	2	101	105	74.6 - 120

Matrix Spike (MS-1) Spiked Sample: 367298

QC Batch: 113348
Prep Batch: 95861

Date Analyzed: 2014-07-03
QC Preparation: 2014-07-02

Analyzed By: CM
Prepared By: CM

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1,2,3,4	233	mg/Kg	1	250	6.55	90	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		1,2,3,4	242	mg/Kg	1	250	6.55	94	70 - 130	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate		MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	3	91.7	91.3	mg/Kg	1	100	92	91	70 - 130

Matrix Spike (MS-1) Spiked Sample: 367297

QC Batch: 113367
Prep Batch: 95875

Date Analyzed: 2014-07-03
QC Preparation: 2014-07-03

Analyzed By: AT
Prepared By: AT

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	
Chloride	Q _s	Q _s	1	1790	mg/Kg	5	500	1100	138	75.2 - 127

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param				MSD			Spike	Matrix		Rec.		RPD
		F	C	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride	Qs	Qs	1	1820	mg/Kg	5	500	1100	144	75.2 - 127	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Calibration Standards

Standard (CCV-1)

QC Batch: 113336

Date Analyzed: 2014-07-02

Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1,2,3,4,5	mg/kg	0.100	0.0890	89	80 - 120	2014-07-02
Toluene		1,2,3,4,5	mg/kg	0.100	0.0849	85	80 - 120	2014-07-02
Ethylbenzene		1,2,3,4,5	mg/kg	0.100	0.0895	90	80 - 120	2014-07-02
Xylene		1,2,3,4,5	mg/kg	0.300	0.266	89	80 - 120	2014-07-02

Standard (CCV-2)

QC Batch: 113336

Date Analyzed: 2014-07-02

Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1,2,3,4,5	mg/kg	0.100	0.0873	87	80 - 120	2014-07-02
Toluene		1,2,3,4,5	mg/kg	0.100	0.0869	87	80 - 120	2014-07-02
Ethylbenzene		1,2,3,4,5	mg/kg	0.100	0.0894	89	80 - 120	2014-07-02
Xylene		1,2,3,4,5	mg/kg	0.300	0.266	89	80 - 120	2014-07-02

Standard (CCV-1)

QC Batch: 113337

Date Analyzed: 2014-07-02

Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1,2,3,4	mg/Kg	1.00	1.03	103	80 - 120	2014-07-02

Standard (CCV-2)

QC Batch: 113337

Date Analyzed: 2014-07-02

Analyzed By: MT

Report Date: July 3, 2014
DOS Hermanos Fed Evap Ponds

Work Order: 14070220
DOS Hermanos Fed Evap Ponds

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Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1,2,3,4	mg/Kg	1.00	0.960	96	80 - 120	2014-07-02

Standard (CCV-1)

QC Batch: 113348

Date Analyzed: 2014-07-03

Analyzed By: CM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1,2,3,4	mg/Kg	250	239	96	80 - 120	2014-07-03

Standard (CCV-2)

QC Batch: 113348

Date Analyzed: 2014-07-03

Analyzed By: CM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1,2,3,4	mg/Kg	250	218	87	80 - 120	2014-07-03

Standard (ICV-1)

QC Batch: 113367

Date Analyzed: 2014-07-03

Analyzed By: AT

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		1	mg/Kg	100	97.0	97	85 - 115	2014-07-03

Standard (CCV-1)

QC Batch: 113367

Date Analyzed: 2014-07-03

Analyzed By: AT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		1	mg/Kg	100	103	103	85 - 115	2014-07-03

Appendix

Report Definitions

Name	Definition
MDL	Method Detection Limit
MQL	Minimum Quantitation Limit
SDL	Sample Detection Limit

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	PJLA	L14-93	Lubbock
2	Kansas	Kansas E-10317	Lubbock
3	LELAP	LELAP-02003	Lubbock
4	NELAP	T104704219-14-10	Lubbock
5		2013-083	Lubbock

Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
MI1	Split peak or shoulder peak
MI2	Instrument software did not integrate
MI3	Instrument software misidentified the peak
MI4	Instrument software integrated improperly
MI5	Baseline correction
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.
Qsr	Surrogate recovery outside of laboratory limits.

F	Description
U	The analyte is not detected above the SDL

Result Comments

- 1 Sample dilution due to hydrocarbons.
- 2 Sample dilution due to hydrocarbons.
- 3 Sample dilution due to turbidity.
- 4 Incorrect spike in LCS/LCSD due to prep error. MS/MSD shows the process is in control.

Attachments

The scanned attachments will follow this page.
Please note, each attachment may consist of more than one page.

