Gulf Coast ACCUTEST LABORATORIES

09/11/14

Technical Report for

Weston Solutions

CES- Chemical Spill/4904 Griggs, Houston, TX

Accutest Job Number: TC53867

Sampling Date: 08/27/14

Report to:

Weston Solutions

k.warr@westonsolutions.com
T.A.Walzer@WestonSolutions.com; Derrick.Cobb@WestonSolutions.com
ATTN: Kristie Warr

Total number of pages in report: **80**

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Richard Rodriguez
Laboratory Director

9856597

Client Service contact: Sylvia Garza 713-271-4700

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Accutest Laboratories

Sample Summary

Weston Solutions

CES- Chemical Spill/4904 Griggs, Houston, TX

Job No: TC53867

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
TC53867-1	08/27/14	10:28		08/27/14	LIQ	Liquid, Non-aqueous	VB-607
TC53867-1A	08/27/14	10:28		08/27/14	SO	Sludge	VB-607

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

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Summary of Hits

Job Number: TC53867
Account: Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX
Collected: 08/27/14

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	MQL	SDL	Units	Method
TC53867-1	**VB-607**					
Aluminum		2.03	1.0	0.088	mg/l	SW846 6010B
Antimony		0.0684	0.025	0.0053	mg/l	SW846 6010B
Barium		5.54	1.0	0.0020	mg/l	SW846 6010B
Beryllium		0.0010 J	0.020	0.00090	mg/l	SW846 6010B
Cadmium		0.0035 J	0.020	0.0012	mg/l	SW846 6010B
Calcium		30.7	25	0.17	mg/l	SW846 6010B
Chromium		0.249	0.050	0.0031	mg/l	SW846 6010B
Cobalt		0.0222 J	0.25	0.0012	mg/l	SW846 6010B
Copper		1.92	0.10	0.014	mg/l	SW846 6010B
Iron		70.5	0.50	0.15	mg/l	SW846 6010B
Lead		0.499	0.015	0.0039	mg/l	SW846 6010B
Magnesium		4.91 J	25	0.094	mg/l	SW846 6010B
Manganese		0.812	0.075	0.0013	mg/l	SW846 6010B
Mercury		0.0017 J	0.0040	0.0010	mg/l	SW846 7470A
Nickel		0.147 J	0.20	0.0020	mg/l	SW846 6010B
Potassium		27.4	25	0.26	mg/l	SW846 6010B
Selenium		0.228	0.025	0.012	mg/l	SW846 6010B
Sodium		73.6	25	0.11	mg/l	SW846 6010B
Vanadium		0.0446 J	0.25	0.0026	mg/l	SW846 6010B
Zinc		75.4	0.20	0.015	mg/l	SW846 6010B
Heat Content, BTU [a]		1530	100		BTU/lb	ASTM D240-92
Ignitability (Flashpoint)		> 200			Deg. F	SW846 1010
Sulfide		600	40	0.025	mg/l	SM 4500S+ F
pH [b]		7.02			su	SM 4500H+ B/9040
TC53867-1A	**VB-607**					
Isopropylbenzene		15700	9000	2500	ug/kg	SW846 8260C
Methylene chloride		146000	23000	5600	ug/kg	SW846 8260C
Naphthalene		4580 J	9000	4500	ug/kg	SW846 8260C
1,2,4-Trimethylbenzene		2740 J	9000	910	ug/kg	SW846 8260C
1,3,5-Trimethylbenzene		2930 J	9000	2100	ug/kg	SW846 8260C
Toluene		2560 J	9000	2300	ug/kg	SW846 8260C
Xylene (total)		12400 J	27000	6300	ug/kg	SW846 8260C
m,p-Xylene		8230 J	18000	4000	ug/kg	SW846 8260C
o-Xylene		4210 J	9000	2300	ug/kg	SW846 8260C
Phenol [c]		14900	8300	3800	ug/kg	SW846 8270D
Benzo(g,h,i)perylene [c]		3210 J	8300	2300	ug/kg	SW846 8270D
Di-n-butyl phthalate		153000	33000	10000	ug/kg	SW846 8270D
bis(2-Ethylhexyl)phthalate		236000	33000	27000	ug/kg	SW846 8270D
1-Methylnaphthalene [c]		8290 J	8300	3100	ug/kg	SW846 8270D
2-Methylnaphthalene [c]		11900	8300	3100	ug/kg	SW846 8270D
Naphthalene [c]		5470 J	8300	3000	ug/kg	SW846 8270D

Summary of Hits

Job Number: TC53867
Account: Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX
Collected: 08/27/14

Lab Sample ID Client Sample ID Analyte	Result/ Qual	MQL	SDL	Units	Method
Phenanthrene [c]	3750 J	8300	2400	ug/kg	SW846 8270D
Pyrene [c]	6130 J	8300	3700	ug/kg	SW846 8270D
Endosulfan-I	416	170	36	ug/kg	SW846 8081A
TPH (C6-C12)	703	240	130	mg/kg	TNRCC 1005
TPH (> C12-C28)	9060	240	130	mg/kg	TNRCC 1005
TPH (> C28-C35)	3730	240	130	mg/kg	TNRCC 1005
TPH (C6-C35)	13500	240	130	mg/kg	TNRCC 1005

(a) Analysis performed at Accutest Laboratories, Dayton, NJ.
(b) Sample analyzed beyond hold time per client request. temp. 20.5 c
(c) Elevated reporting limits due to matrix interference, final volume 5 ml.

Gulf Coast ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	VB-607		
Lab Sample ID:	TC53867-1	**Date Sampled:**	08/27/14
Matrix:	LIQ - Liquid, Non-aqueous	**Date Received:**	08/27/14
		Percent Solids:	n/a
Project:	CES- Chemical Spill/4904 Griggs, Houston, TX		

Metals Analysis

Analyte	Result	MQL	SDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	2.03	1.0	0.088	mg/l	5	09/02/14	09/03/14	NS	SW846 6010B [2]	SW846 3010A [3]
Antimony	0.0684	0.025	0.0053	mg/l	5	09/02/14	09/03/14	NS	SW846 6010B [2]	SW846 3010A [3]
Arsenic	0.023 U	0.025	0.023	mg/l	5	09/02/14	09/03/14	NS	SW846 6010B [2]	SW846 3010A [3]
Barium	5.54	1.0	0.0020	mg/l	5	09/02/14	09/03/14	NS	SW846 6010B [2]	SW846 3010A [3]
Beryllium	0.0010 J	0.020	0.00090	mg/l	5	09/02/14	09/03/14	NS	SW846 6010B [2]	SW846 3010A [3]
Cadmium	0.0035 J	0.020	0.0012	mg/l	5	09/02/14	09/03/14	NS	SW846 6010B [2]	SW846 3010A [3]
Calcium	30.7	25	0.17	mg/l	5	09/02/14	09/03/14	NS	SW846 6010B [2]	SW846 3010A [3]
Chromium	0.249	0.050	0.0031	mg/l	5	09/02/14	09/03/14	NS	SW846 6010B [2]	SW846 3010A [3]
Cobalt	0.0222 J	0.25	0.0012	mg/l	5	09/02/14	09/03/14	NS	SW846 6010B [2]	SW846 3010A [3]
Copper	1.92	0.10	0.014	mg/l	5	09/02/14	09/03/14	NS	SW846 6010B [2]	SW846 3010A [3]
Iron	70.5	0.50	0.15	mg/l	5	09/02/14	09/03/14	NS	SW846 6010B [2]	SW846 3010A [3]
Lead	0.499	0.015	0.0039	mg/l	5	09/02/14	09/03/14	NS	SW846 6010B [2]	SW846 3010A [3]
Magnesium	4.91 J	25	0.094	mg/l	5	09/02/14	09/03/14	NS	SW846 6010B [2]	SW846 3010A [3]
Manganese	0.812	0.075	0.0013	mg/l	5	09/02/14	09/03/14	NS	SW846 6010B [2]	SW846 3010A [3]
Mercury	0.0017 J	0.0040	0.0010	mg/l	1	09/02/14	09/02/14	CC	SW846 7470A [1]	SW846 7470A [4]
Nickel	0.147 J	0.20	0.0020	mg/l	5	09/02/14	09/03/14	NS	SW846 6010B [2]	SW846 3010A [3]
Potassium	27.4	25	0.26	mg/l	5	09/02/14	09/03/14	NS	SW846 6010B [2]	SW846 3010A [3]
Selenium	0.228	0.025	0.012	mg/l	5	09/02/14	09/03/14	NS	SW846 6010B [2]	SW846 3010A [3]
Silver	0.0030 U	0.050	0.0030	mg/l	5	09/02/14	09/03/14	NS	SW846 6010B [2]	SW846 3010A [3]
Sodium	73.6	25	0.11	mg/l	5	09/02/14	09/03/14	NS	SW846 6010B [2]	SW846 3010A [3]
Thallium	0.010 U	0.050	0.010	mg/l	5	09/02/14	09/03/14	NS	SW846 6010B [2]	SW846 3010A [3]
Vanadium	0.0446 J	0.25	0.0026	mg/l	5	09/02/14	09/03/14	NS	SW846 6010B [2]	SW846 3010A [3]
Zinc	75.4	0.20	0.015	mg/l	10	09/02/14	09/03/14	NS	SW846 6010B [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA10095
(2) Instrument QC Batch: MA10097
(3) Prep QC Batch: MP24122
(4) Prep QC Batch: MP24126

MQL = Method Quantitation Limit
SDL = Sample Detection Limit

U = Indicates a result < SDL
J = Indicates a result > = SDL but < MQL

Report of Analysis

Client Sample ID:	VB-607		
Lab Sample ID:	TC53867-1	**Date Sampled:**	08/27/14
Matrix:	LIQ - Liquid, Non-aqueous	**Date Received:**	08/27/14
		Percent Solids:	n/a
Project:	CES- Chemical Spill/4904 Griggs, Houston, TX		

General Chemistry

Analyte	Result	MQL	SDL	Units	DF	Analyzed	By	Method
Cyanide	0.0050 U	0.0050	0.0050	mg/l	1	09/03/14 17:54	CV	EPA 335.4/SW 9012
Heat Content, BTU [a]	1530	100		BTU/lb	1	09/09/14	ANJ	ASTM D240-92
Ignitability (Flashpoint)	> 200			Deg. F	1	08/28/14	DP	SW846 1010
Sulfide	600	40	0.025	mg/l	200	08/29/14	DP	SM 4500S+ F
pH [b]	7.02			su	1	08/28/14 19:00	PA	SM 4500H+ B/9040

(a) Analysis performed at Accutest Laboratories, Dayton, NJ.
(b) Sample analyzed beyond hold time per client request. temp. 20.5 c

MQL = Method Quantitation Limit
SDL = Sample Detection Limit

U = Indicates a result < SDL
J = Indicates a result > = SDL but < MQL

Report of Analysis

Client Sample ID:	VB-607		
Lab Sample ID:	TC53867-1A	**Date Sampled:**	08/27/14
Matrix:	SO - Sludge	**Date Received:**	08/27/14
Method:	SW846 8260C	**Percent Solids:**	n/a [a]
Project:	CES- Chemical Spill/4904 Griggs, Houston, TX		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Y1070618.D	10	09/04/14	KS	n/a	n/a	VY3741
Run #2	X0102030.D	100	09/08/14	KS	n/a	n/a	VX2316

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	1.11 g	5.0 ml	100 ul
Run #2	1.11 g	5.0 ml	100 ul

VOA 8260 List

CAS No.	Compound	Result	MQL	SDL	Units	Q
67-64-1	Acetone	23000 U	90000	23000	ug/kg	
71-43-2	Benzene	1500 U	9000	1500	ug/kg	
108-86-1	Bromobenzene	910 U	9000	910	ug/kg	
74-97-5	Bromochloromethane	2500 U	9000	2500	ug/kg	
75-27-4	Bromodichloromethane	1000 U	9000	1000	ug/kg	
75-25-2	Bromoform	1700 U	9000	1700	ug/kg	
104-51-8	n-Butylbenzene	990 U	9000	990	ug/kg	
135-98-8	sec-Butylbenzene	2000 U	9000	2000	ug/kg	
98-06-6	tert-Butylbenzene	1800 U	9000	1800	ug/kg	
108-90-7	Chlorobenzene	2100 U	9000	2100	ug/kg	
75-00-3	Chloroethane	3500 U	9000	3500	ug/kg	
67-66-3	Chloroform	970 U	9000	970	ug/kg	
95-49-8	o-Chlorotoluene	1100 U	9000	1100	ug/kg	
106-43-4	p-Chlorotoluene	930 U	9000	930	ug/kg	
75-15-0	Carbon disulfide	1300 U	9000	1300	ug/kg	
56-23-5	Carbon tetrachloride	1900 U	9000	1900	ug/kg	
75-34-3	1,1-Dichloroethane	920 U	9000	920	ug/kg	
75-35-4	1,1-Dichloroethylene	940 U	9000	940	ug/kg	
563-58-6	1,1-Dichloropropene	1000 U	9000	1000	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	7100 U	9000	7100	ug/kg	
106-93-4	1,2-Dibromoethane	950 U	9000	950	ug/kg	
107-06-2	1,2-Dichloroethane	1100 U	9000	1100	ug/kg	
78-87-5	1,2-Dichloropropane	1300 U	9000	1300	ug/kg	
142-28-9	1,3-Dichloropropane	2300 U	9000	2300	ug/kg	
594-20-7	2,2-Dichloropropane	1200 U	9000	1200	ug/kg	
124-48-1	Dibromochloromethane	2000 U	9000	2000	ug/kg	
75-71-8	Dichlorodifluoromethane	2500 U	9000	2500	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	1000 U	9000	1000	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	1000 U	9000	1000	ug/kg	
541-73-1	m-Dichlorobenzene	1400 U	9000	1400	ug/kg	
95-50-1	o-Dichlorobenzene	2200 U	9000	2200	ug/kg	
106-46-7	p-Dichlorobenzene	1900 U	9000	1900	ug/kg	

U = Not detected SDL = Sample Detection Limit
MQL = Method Quantitation Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VB-607		
Lab Sample ID:	TC53867-1A	**Date Sampled:**	08/27/14
Matrix:	SO - Sludge	**Date Received:**	08/27/14
Method:	SW846 8260C	**Percent Solids:**	n/a [a]
Project:	CES- Chemical Spill/4904 Griggs, Houston, TX		

VOA 8260 List

CAS No.	Compound	Result	MQL	SDL	Units	Q
156-60-5	trans-1,2-Dichloroethylene	980 U	9000	980	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	1200 U	9000	1200	ug/kg	
100-41-4	Ethylbenzene	2200 U	9000	2200	ug/kg	
591-78-6	2-Hexanone	17000 U	90000	17000	ug/kg	
87-68-3	Hexachlorobutadiene	16000 U [b]	90000	16000	ug/kg	
98-82-8	Isopropylbenzene	15700	9000	2500	ug/kg	
99-87-6	p-Isopropyltoluene	2900 U	9000	2900	ug/kg	
108-10-1	4-Methyl-2-pentanone	14000 U	90000	14000	ug/kg	
74-83-9	Methyl bromide	4200 U	9000	4200	ug/kg	
74-87-3	Methyl chloride	1700 U	9000	1700	ug/kg	
74-95-3	Methylene bromide	1500 U	9000	1500	ug/kg	
75-09-2	Methylene chloride	146000	23000	5600	ug/kg	
78-93-3	Methyl ethyl ketone	11000 U	90000	11000	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	1100 U	9000	1100	ug/kg	
91-20-3	Naphthalene	4580	9000	4500	ug/kg	J
103-65-1	n-Propylbenzene	2300 U	9000	2300	ug/kg	
100-42-5	Styrene	2100 U	9000	2100	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	1100 U	9000	1100	ug/kg	
71-55-6	1,1,1-Trichloroethane	1400 U	9000	1400	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	1500 U	9000	1500	ug/kg	
79-00-5	1,1,2-Trichloroethane	1500 U	9000	1500	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	1200 U	9000	1200	ug/kg	
96-18-4	1,2,3-Trichloropropane	2000 U	9000	2000	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	1100 U	9000	1100	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	2740	9000	910	ug/kg	J
108-67-8	1,3,5-Trimethylbenzene	2930	9000	2100	ug/kg	J
127-18-4	Tetrachloroethylene	2300 U	9000	2300	ug/kg	
108-88-3	Toluene	2560	9000	2300	ug/kg	J
79-01-6	Trichloroethylene	1000 U	9000	1000	ug/kg	
75-69-4	Trichlorofluoromethane	1400 U	9000	1400	ug/kg	
75-01-4	Vinyl chloride	1300 U	9000	1300	ug/kg	
1330-20-7	Xylene (total)	12400	27000	6300	ug/kg	J
	m,p-Xylene	8230	18000	4000	ug/kg	J
95-47-6	o-Xylene	4210	9000	2300	ug/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%	63%	59-126%
2037-26-5	Toluene-D8	98%	64% [c]	70-139%
460-00-4	4-Bromofluorobenzene	0% [c]	78%	63-138%

U = Not detected SDL = Sample Detection Limit
MQL = Method Quantitation Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VB-607		
Lab Sample ID:	TC53867-1A	**Date Sampled:**	08/27/14
Matrix:	SO - Sludge	**Date Received:**	08/27/14
Method:	SW846 8260C	**Percent Solids:**	n/a [a]
Project:	CES- Chemical Spill/4904 Griggs, Houston, TX		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	76% [c]	62%	54-123%

(a) All results reported on a wet weight basis.
(b) Result is from Run# 2
(c) Outside control limits due to matrix interference. Confirmed by reanalysis.

U = Not detected SDL = Sample Detection Limit
MQL = Method Quantitation Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VB-607		
Lab Sample ID:	TC53867-1A	**Date Sampled:**	08/27/14
Matrix:	SO - Sludge	**Date Received:**	08/27/14
Method:	SW846 8270D SW846 3550B	**Percent Solids:**	n/a [a]
Project:	CES- Chemical Spill/4904 Griggs, Houston, TX		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [b]	P35345.D	10	09/04/14	SC	09/04/14	OP33787	EP1703
Run #2	P35347.D	40	09/04/14	SC	09/04/14	OP33787	EP1703

	Initial Weight	Final Volume
Run #1	30.2 g	5.0 ml
Run #2	30.2 g	5.0 ml

ABN Full List

CAS No.	Compound	Result	MQL	SDL	Units	Q
65-85-0	Benzoic acid	13000 U	41000	13000	ug/kg	
95-57-8	2-Chlorophenol	3600 U	8300	3600	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	2900 U	8300	2900	ug/kg	
120-83-2	2,4-Dichlorophenol	2700 U	8300	2700	ug/kg	
105-67-9	2,4-Dimethylphenol	2800 U	8300	2800	ug/kg	
51-28-5	2,4-Dinitrophenol	13000 U	41000	13000	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	2000 U	17000	2000	ug/kg	
95-48-7	2-Methylphenol	3600 U	8300	3600	ug/kg	
	3&4-Methylphenol	3600 U	8300	3600	ug/kg	
88-75-5	2-Nitrophenol	2800 U	8300	2800	ug/kg	
100-02-7	4-Nitrophenol	2400 U	41000	2400	ug/kg	
87-86-5	Pentachlorophenol	6200 U	41000	6200	ug/kg	
108-95-2	Phenol	14900	8300	3800	ug/kg	
95-95-4	2,4,5-Trichlorophenol	2600 U	8300	2600	ug/kg	
88-06-2	2,4,6-Trichlorophenol	2200 U	8300	2200	ug/kg	
83-32-9	Acenaphthene	2400 U	8300	2400	ug/kg	
208-96-8	Acenaphthylene	2200 U	8300	2200	ug/kg	
62-53-3	Aniline	3400 U	41000	3400	ug/kg	
120-12-7	Anthracene	2100 U	8300	2100	ug/kg	
92-87-5	Benzidine	160000 U	330000	160000	ug/kg	
56-55-3	Benzo(a)anthracene	3300 U	8300	3300	ug/kg	
50-32-8	Benzo(a)pyrene	2600 U	8300	2600	ug/kg	
205-99-2	Benzo(b)fluoranthene	2100 U	8300	2100	ug/kg	
191-24-2	Benzo(g,h,i)perylene	3210	8300	2300	ug/kg	J
207-08-9	Benzo(k)fluoranthene	3700 U	8300	3700	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	2500 U	8300	2500	ug/kg	
85-68-7	Butyl benzyl phthalate	2700 U	8300	2700	ug/kg	
100-51-6	Benzyl Alcohol	3300 U	8300	3300	ug/kg	
91-58-7	2-Chloronaphthalene	2400 U	8300	2400	ug/kg	
106-47-8	4-Chloroaniline	3100 U	8300	3100	ug/kg	
86-74-8	Carbazole	2700 U	8300	2700	ug/kg	
218-01-9	Chrysene	3500 U	8300	3500	ug/kg	

U = Not detected SDL = Sample Detection Limit
MQL = Method Quantitation Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VB-607		
Lab Sample ID:	TC53867-1A	**Date Sampled:**	08/27/14
Matrix:	SO - Sludge	**Date Received:**	08/27/14
Method:	SW846 8270D SW846 3550B	**Percent Solids:**	n/a [a]
Project:	CES- Chemical Spill/4904 Griggs, Houston, TX		

ABN Full List

CAS No.	Compound	Result	MQL	SDL	Units	Q
111-91-1	bis(2-Chloroethoxy)methane	2600 U	8300	2600	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	3700 U	8300	3700	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	3200 U	8300	3200	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	3200 U	8300	3200	ug/kg	
95-50-1	1,2-Dichlorobenzene	3300 U	8300	3300	ug/kg	
122-66-7	1,2-Diphenylhydrazine	2100 U	8300	2100	ug/kg	
541-73-1	1,3-Dichlorobenzene	2900 U	8300	2900	ug/kg	
106-46-7	1,4-Dichlorobenzene	3100 U	8300	3100	ug/kg	
121-14-2	2,4-Dinitrotoluene	2600 U	8300	2600	ug/kg	
606-20-2	2,6-Dinitrotoluene	2300 U	8300	2300	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	3100 U	17000	3100	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	2900 U	8300	2900	ug/kg	
132-64-9	Dibenzofuran	2700 U	8300	2700	ug/kg	
84-74-2	Di-n-butyl phthalate	153000 [c]	33000	10000	ug/kg	
117-84-0	Di-n-octyl phthalate	2200 U	8300	2200	ug/kg	
84-66-2	Diethyl phthalate	2400 U	8300	2400	ug/kg	
131-11-3	Dimethyl phthalate	2400 U	8300	2400	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	236000 [c]	33000	27000	ug/kg	
206-44-0	Fluoranthene	2800 U	8300	2800	ug/kg	
86-73-7	Fluorene	2500 U	8300	2500	ug/kg	
118-74-1	Hexachlorobenzene	2700 U	8300	2700	ug/kg	
87-68-3	Hexachlorobutadiene	3000 U	8300	3000	ug/kg	
77-47-4	Hexachlorocyclopentadiene	3900 U	41000	3900	ug/kg	
67-72-1	Hexachloroethane	3000 U	8300	3000	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	3000 U	8300	3000	ug/kg	
78-59-1	Isophorone	2600 U	8300	2600	ug/kg	
90-12-0	1-Methylnaphthalene	8290	8300	3100	ug/kg	J
91-57-6	2-Methylnaphthalene	11900	8300	3100	ug/kg	
88-74-4	2-Nitroaniline	2600 U	8300	2600	ug/kg	
99-09-2	3-Nitroaniline	2400 U	8300	2400	ug/kg	
100-01-6	4-Nitroaniline	2800 U	17000	2800	ug/kg	
91-20-3	Naphthalene	5470	8300	3000	ug/kg	J
98-95-3	Nitrobenzene	2400 U	8300	2400	ug/kg	
62-75-9	n-Nitrosodimethylamine	2600 U	8300	2600	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	3400 U	8300	3400	ug/kg	
86-30-6	N-Nitrosodiphenylamine	2400 U	8300	2400	ug/kg	
85-01-8	Phenanthrene	3750	8300	2400	ug/kg	J
129-00-0	Pyrene	6130	8300	3700	ug/kg	J
110-86-1	Pyridine	2200 U	8300	2200	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	3000 U	8300	3000	ug/kg	

U = Not detected SDL = Sample Detection Limit
MQL = Method Quantitation Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VB-607		
Lab Sample ID:	TC53867-1A	**Date Sampled:**	08/27/14
Matrix:	SO - Sludge	**Date Received:**	08/27/14
Method:	SW846 8270D SW846 3550B	**Percent Solids:**	n/a [a]
Project:	CES- Chemical Spill/4904 Griggs, Houston, TX		

ABN Full List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	46%	0% [d]	26-124%
4165-62-2	Phenol-d5	53%	0% [d]	19-106%
118-79-6	2,4,6-Tribromophenol	51%	0% [d]	18-129%
4165-60-0	Nitrobenzene-d5	80%	0% [d]	18-104%
321-60-8	2-Fluorobiphenyl	67%	0% [d]	21-114%
1718-51-0	Terphenyl-d14	79%	0% [d]	24-149%

(a) All results reported on a wet weight basis.
(b) Elevated reporting limits due to matrix interference, final volume 5 ml.
(c) Result is from Run# 2
(d) Outside control limits due to dilution.

U = Not detected SDL = Sample Detection Limit
MQL = Method Quantitation Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VB-607		
Lab Sample ID:	TC53867-1A	**Date Sampled:**	08/27/14
Matrix:	SO - Sludge	**Date Received:**	08/27/14
Method:	SW846 8151 SW846 3550B	**Percent Solids:**	n/a [a]
Project:	CES- Chemical Spill/4904 Griggs, Houston, TX		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [b]	DD773085.D	1	09/08/14	FO	09/03/14	OP33773	GDD2393
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	10.0 ml
Run #2		

Herbicide List

CAS No.	Compound	Result	MQL	SDL	Units	Q
94-75-7	2,4-D	16 U	33	16	ug/kg	
93-72-1	2,4,5-TP (Silvex)	3.5 U	6.6	3.5	ug/kg	
93-76-5	2,4,5-T	2.3 U	6.6	2.3	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	626% [c]		30-154%

(a) All results reported on a wet weight basis.
(b) Outside control limits due to matrix interference. Confirmed by MS/MSD.
(c) Outside control limits biased high due to matrix interference. Analyte not detected in associated sample.

U = Not detected SDL = Sample Detection Limit J = Indicates an estimated value
MQL = Method Quantitation Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VB-607		
Lab Sample ID:	TC53867-1A	**Date Sampled:**	08/27/14
Matrix:	SO - Sludge	**Date Received:**	08/27/14
Method:	SW846 8081A SW846 3550B	**Percent Solids:**	n/a [a]
Project:	CES- Chemical Spill/4904 Griggs, Houston, TX		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	NN176341.D	5	09/05/14	SC	09/03/14	OP33770	GNN1476
Run #2 [b]	NN176449.D	5	09/08/14	SC	09/03/14	OP33770	GNN1479
Run #3	NN176625.D	50	09/10/14	SC	09/03/14	OP33770	GNN1481

	Initial Weight	Final Volume
Run #1	30.0 g	10.0 ml
Run #2	30.0 g	10.0 ml
Run #3	30.0 g	10.0 ml

Pesticide TCL List

CAS No.	Compound	Result	MQL	SDL	Units	Q
309-00-2	Aldrin	2.9 U	8.3	2.9	ug/kg	
319-84-6	alpha-BHC	3.6 U	8.3	3.6	ug/kg	
319-85-7	beta-BHC	2.5 U	8.3	2.5	ug/kg	
319-86-8	delta-BHC	3.1 U	8.3	3.1	ug/kg	
58-89-9	gamma-BHC (Lindane)	3.1 U	8.3	3.1	ug/kg	
5103-71-9	alpha-Chlordane	1.8 U	8.3	1.8	ug/kg	
5103-74-2	gamma-Chlordane	1.9 U	8.3	1.9	ug/kg	
60-57-1	Dieldrin	6.5 U	17	6.5	ug/kg	
72-54-8	4,4'-DDD	5.9 U	17	5.9	ug/kg	
72-55-9	4,4'-DDE	6.3 U	17	6.3	ug/kg	
50-29-3	4,4'-DDT	7.0 U [c]	17	7.0	ug/kg	
72-20-8	Endrin	6.3 U	17	6.3	ug/kg	
1031-07-8	Endosulfan sulfate	7.1 U	17	7.1	ug/kg	
7421-93-4	Endrin aldehyde	7.1 U	17	7.1	ug/kg	
53494-70-5	Endrin ketone	6.5 U	17	6.5	ug/kg	
959-98-8	Endosulfan-I	416 [d]	170	36	ug/kg	
33213-65-9	Endosulfan-II	6.7 U	17	6.7	ug/kg	
76-44-8	Heptachlor	2.5 U	8.3	2.5	ug/kg	
1024-57-3	Heptachlor epoxide	3.5 U	8.3	3.5	ug/kg	
72-43-5	Methoxychlor	33 U [c]	83	33	ug/kg	
8001-35-2	Toxaphene	42 U	83	42	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Run# 3	Limits
877-09-8	Tetrachloro-m-xylene	90%	54%	59%	27-125%
2051-24-3	Decachlorobiphenyl	73%	404% [e]	80%	21-130%

(a) All results reported on a wet weight basis.
(b) TBA clean-up performed by method 3660B.
(c) Result is from Run# 2

U = Not detected SDL = Sample Detection Limit
MQL = Method Quantitation Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VB-607		
Lab Sample ID:	TC53867-1A	**Date Sampled:**	08/27/14
Matrix:	SO - Sludge	**Date Received:**	08/27/14
Method:	SW846 8081A SW846 3550B	**Percent Solids:**	n/a [a]
Project:	CES- Chemical Spill/4904 Griggs, Houston, TX		

Pesticide TCL List

CAS No.	Compound	Result	MQL	SDL	Units	Q

(d) Result is from Run# 3
(e) Outside control limits biased high due to matrix interference. Confirmed by second column.

U = Not detected SDL = Sample Detection Limit
MQL = Method Quantitation Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VB-607		
Lab Sample ID:	TC53867-1A	**Date Sampled:**	08/27/14
Matrix:	SO - Sludge	**Date Received:**	08/27/14
Method:	SW846 8082 SW846 3550B	**Percent Solids:**	n/a [a]
Project:	CES- Chemical Spill/4904 Griggs, Houston, TX		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [b]	MM071507.D	5	09/05/14	SC	09/03/14	OP33769	GMM474
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	MQL	SDL	Units	Q
12674-11-2	Aroclor 1016	17 U	83	17	ug/kg	
11104-28-2	Aroclor 1221	33 U	83	33	ug/kg	
11141-16-5	Aroclor 1232	33 U	83	33	ug/kg	
53469-21-9	Aroclor 1242	17 U	83	17	ug/kg	
12672-29-6	Aroclor 1248	20 U	83	20	ug/kg	
11097-69-1	Aroclor 1254	19 U	83	19	ug/kg	
11096-82-5	Aroclor 1260	43 U	83	43	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	51%		30-118%
2051-24-3	Decachlorobiphenyl	67%		29-122%

(a) All results reported on a wet weight basis.
(b) Dilution required due to matrix interference.

U = Not detected SDL = Sample Detection Limit J = Indicates an estimated value
MQL = Method Quantitation Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VB-607		
Lab Sample ID:	TC53867-1A	**Date Sampled:**	08/27/14
Matrix:	SO - Sludge	**Date Received:**	08/27/14
Method:	TNRCC 1005 TX1005	**Percent Solids:**	n/a [a]
Project:	CES- Chemical Spill/4904 Griggs, Houston, TX		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JB59197.D	10	09/04/14	ZL	09/03/14	OP33778	GJB947
Run #2							

	Initial Weight	Final Volume
Run #1	10.2 g	10.0 ml
Run #2		

CAS No.	Compound	Result	MQL	SDL	Units	Q
	TPH (C6-C12)	703	240	130	mg/kg	
	TPH (> C12-C28)	9060	240	130	mg/kg	
	TPH (> C28-C35)	3730	240	130	mg/kg	
	TPH (C6-C35)	13500	240	130	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	94%		70-130%
98-08-8	aaa-Trifluorotoluene	102%		70-130%

(a) All results reported on a wet weight basis.

U = Not detected SDL = Sample Detection Limit J = Indicates an estimated value
MQL = Method Quantitation Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Gulf Coast ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

ACCUTEST LABORATORIES

CHAIN OF CUSTODY

PAGE 1 OF 1

10165 Harwin Dr, Ste 150 Houston, TX 77036
TEL: 713-271-9700 FAX: 713-271-4770
www.accutest.com

FED-EX Tracking #:
Bottle Order Control #:
Accutest Quote #:
Accutest Job #: TC53867

Client / Reporting Information

Company Name: Weston Solutions
Street Address: 5599 San Felipe
City State Zip: Houston Tx 77056
Project Contact: Tom Walzer/Kristi Warr
E-mail:
Phone #:
Fax #:
Sampler(s) Name(s):
Phone #:

Project Information

Project Name: CES
Street: 4904 Griggs
City State: Houston Tx
Project #:
Client Purchase Order #:
Project Manager:

Billing Information (If different from Report to)
Company Name: Weston Solutions
Street Address:
City State Zip:
Attention: Kristi Warr

Requested Analyses

Accutest Sample #	Field ID / Point of Collection	Collection Date	Time	Sampled By	Matrix	# of bottles	HCl	NaOH	ZA/NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	TSP	NaHSO4	ENCORE	OTHER	Total VOCs	Total SVOCs	Total Metals & Hg	Total Pesticides	Total Herbicides	PCBs	TPH	Total Cyanides	Total Sulfides	Flashpoint/Ignitability	pH and BTU	LAB USE ONLY
1	VB-1007	8/27/14	1028	DC	LIQ	13													X	X	X	X	X	X	X	X	X	X	X	
	VB-1010	8/27/14	1238	DC	LIQ	13													X	X	X	X	X	X	X	X	X	X	X	

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB-Equipment Blank; RB- Rinse Blank; TB-Trip Blank

Turnaround Time (Business days)

- ☐ Standard
- ☐ 5 Day *RUSH*
- ☐ 4 Day *RUSH*
- ☐ 3 Day *RUSH*
- ☐ 2 Day *RUSH*
- ☐ 1 Day *EMERGENCY*

Approved By (Accutest PM): / Date:

Emergency & Rush T/A data available VIA Lablink

Data Deliverable Information

- ☐ Commercial "A" (Level 1)
- ☐ Commercial "B" (Level 2)
- ☐ FULT1 (Level 3+4)
- ☐ REDT1 (Level 3+4)
- ☐ Commercial "C"
- ☐ TRRP
- ☐ EDD Format
- ☐ Other _____

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC & Surrogate Summary

Comments / Special Instructions

Please Shake before testing.

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 [signature]	8/27/14 1430	1 ACCUTEST DRIVER	2 ACCUTEST DRIVER	8/27/14 1600	2 [signature]
3		3	4		4
5		5			

Custody Seal #: ☐ Intact ☐ Not intact
Preserved where applicable ☐
On Ice ☐
Cooler Temp.

TC53867: Chain of Custody
Page 1 of 3

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: TC53867 **Client:** WESTON SOLUTION **Project:** CES

Date / Time Received: 8/27/2014 **Delivery Method:** **Airbill #'s:**

No. Coolers: 1 **Therm ID:** IR-5; **Temp Adjustment Factor:** 0;

Cooler Temps (Initial/Adjusted): #1: (2.1/2.1);

Cooler Security	Y	N		Y	N
1. Custody Seals Present:	☑	☐	3. COC Present:	☑	☐
2. Custody Seals Intact:	☑	☐	4. Smpl Dates/Time OK	☑	☐

Cooler Temperature	Y	N
1. Temp criteria achieved:	☑	☐
2. Cooler temp verification:		
3. Cooler media:	Ice (Bag)	

Quality Control Preservation	Y	N	N/A	WTB	STB
1. Trip Blank present / cooler:	☐	☐	☑	☐	☐
2. Trip Blank listed on COC:	☐	☐	☑		
3. Samples preserved properly:	☑	☐			
4. VOCs headspace free:	☐	☑	☐		

Sample Integrity - Documentation	Y	N
1. Sample labels present on bottles:	☑	☐
2. Container labeling complete:	☑	☐
3. Sample container label / COC agree:	☑	☐

Sample Integrity - Condition	Y	N
1. Sample recvd within HT:	☑	☐
2. All containers accounted for:	☑	☐
3. Condition of sample:	Intact	

Sample Integrity - Instructions	Y	N	N/A
1. Analysis requested is clear:	☑	☐	
2. Bottles received for unspecified tests	☐	☑	
3. Sufficient volume recvd for analysis:	☑	☐	
4. Compositing instructions clear:	☐	☐	☑
5. Filtering instructions clear:	☐	☐	☑

Comments -Received headspace greater than 6mm for 3-40ml vials.

Accutest Laboratories
V:713.271.4700
10165 Harwin Drive
F: 713.271.4770
Houston, TX 77036
www/accutest.com

TC53867: Chain of Custody
Page 2 of 3

Sample Receipt Log

Job #: TC53867 **Date / Time Received:** 8/27/2014 4:00:00 PM **Initials:** RE

Client: WESTON SOLUTION

Cooler #	Sample ID:	Vol	Bot #	Location	Pres	pH	Therm ID	Initial Temp	Therm CF	Corrected Temp
1	TC53867-1	LAG	1	4SS	N/P	Note #2 - Preservative check not applicable.	IR-5	2.1	0	2.1
1	TC53867-1	LAG	2	4SS	N/P	Note #2 - Preservative check not applicable.	IR-5	2.1	0	2.1
1	TC53867-1	LAG	3	4SS	N/P	Note #2 - Preservative check not applicable.	IR-5	2.1	0	2.1
1	TC53867-1	LAG	4	4SS	N/P	Note #2 - Preservative check not applicable.	IR-5	2.1	0	2.1
1	TC53867-1	LAG	5	4SS	N/P	Note #2 - Preservative check not applicable.	IR-5	2.1	0	2.1
1	TC53867-1	LAG	6	4SS	N/P	Note #2 - Preservative check not applicable.	IR-5	2.1	0	2.1
1	TC53867-1	LAG	7	4SS	N/P	Note #2 - Preservative check not applicable.	IR-5	2.1	0	2.1
1	TC53867-1	40ml	8	4SS	N/P	Note #2 - Preservative check not applicable.	IR-5	2.1	0	2.1
1	TC53867-1	40ml	9	4SS	N/P	Note #2 - Preservative check not applicable.	IR-5	2.1	0	2.1
1	TC53867-1	40ml	10	4SS	N/P	Note #2 - Preservative check not applicable.	IR-5	2.1	0	2.1
1	TC53867-1	40ml	11	VR	N/P	Note #2 - Preservative check not applicable.	IR-5	2.1	0	2.1
1	TC53867-1	40ml	12	VR	N/P	Note #2 - Preservative check not applicable.	IR-5	2.1	0	2.1
1	TC53867-1	40ml	13	VR	N/P	Note #2 - Preservative check not applicable.	IR-5	2.1	0	2.1

TC53867: Chain of Custody
Page 3 of 3

Gulf Coast ACCUTEST LABORATORIES

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: TC53867
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY3741-MB	Y1070600.D	1	09/04/14	KS	n/a	n/a	VY3741

The QC reported here applies to the following samples: **Method:** SW846 8260C

TC53867-1A

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	40	9.9	ug/kg	
71-43-2	Benzene	ND	4.0	0.67	ug/kg	
108-86-1	Bromobenzene	ND	4.0	0.40	ug/kg	
74-97-5	Bromochloromethane	ND	4.0	1.1	ug/kg	
75-27-4	Bromodichloromethane	ND	4.0	0.44	ug/kg	
75-25-2	Bromoform	ND	4.0	0.75	ug/kg	
104-51-8	n-Butylbenzene	ND	4.0	0.43	ug/kg	
135-98-8	sec-Butylbenzene	ND	4.0	0.86	ug/kg	
98-06-6	tert-Butylbenzene	ND	4.0	0.77	ug/kg	
108-90-7	Chlorobenzene	ND	4.0	0.92	ug/kg	
75-00-3	Chloroethane	ND	4.0	1.6	ug/kg	
67-66-3	Chloroform	ND	4.0	0.43	ug/kg	
95-49-8	o-Chlorotoluene	ND	4.0	0.47	ug/kg	
106-43-4	p-Chlorotoluene	ND	4.0	0.41	ug/kg	
75-15-0	Carbon disulfide	ND	4.0	0.58	ug/kg	
56-23-5	Carbon tetrachloride	ND	4.0	0.85	ug/kg	
75-34-3	1,1-Dichloroethane	ND	4.0	0.40	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	4.0	0.41	ug/kg	
563-58-6	1,1-Dichloropropene	ND	4.0	0.44	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	4.0	3.1	ug/kg	
106-93-4	1,2-Dibromoethane	ND	4.0	0.42	ug/kg	
107-06-2	1,2-Dichloroethane	ND	4.0	0.47	ug/kg	
78-87-5	1,2-Dichloropropane	ND	4.0	0.57	ug/kg	
142-28-9	1,3-Dichloropropane	ND	4.0	1.0	ug/kg	
594-20-7	2,2-Dichloropropane	ND	4.0	0.53	ug/kg	
124-48-1	Dibromochloromethane	ND	4.0	0.90	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	4.0	1.1	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	4.0	0.45	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	4.0	0.45	ug/kg	
541-73-1	m-Dichlorobenzene	ND	4.0	0.62	ug/kg	
95-50-1	o-Dichlorobenzene	ND	4.0	0.96	ug/kg	
106-46-7	p-Dichlorobenzene	ND	4.0	0.85	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	4.0	0.43	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	4.0	0.51	ug/kg	
100-41-4	Ethylbenzene	ND	4.0	0.96	ug/kg	
591-78-6	2-Hexanone	ND	40	7.3	ug/kg	

Method Blank Summary

Job Number: TC53867
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY3741-MB	Y1070600.D	1	09/04/14	KS	n/a	n/a	VY3741

The QC reported here applies to the following samples: **Method:** SW846 8260C

TC53867-1A

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	4.0	1.1	ug/kg	
99-87-6	p-Isopropyltoluene	ND	4.0	1.3	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	40	6.2	ug/kg	
74-83-9	Methyl bromide	ND	4.0	1.8	ug/kg	
74-87-3	Methyl chloride	ND	4.0	0.76	ug/kg	
74-95-3	Methylene bromide	ND	4.0	0.64	ug/kg	
75-09-2	Methylene chloride	ND	9.9	2.5	ug/kg	
78-93-3	Methyl ethyl ketone	ND	40	5.0	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	4.0	0.50	ug/kg	
91-20-3	Naphthalene	ND	4.0	2.0	ug/kg	
103-65-1	n-Propylbenzene	ND	4.0	1.0	ug/kg	
100-42-5	Styrene	ND	4.0	0.91	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	4.0	0.50	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	4.0	0.62	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	4.0	0.67	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	4.0	0.66	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	4.0	0.52	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	4.0	0.90	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	4.0	0.49	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	4.0	0.40	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	4.0	0.93	ug/kg	
127-18-4	Tetrachloroethylene	ND	4.0	1.0	ug/kg	
108-88-3	Toluene	ND	4.0	1.0	ug/kg	
79-01-6	Trichloroethylene	ND	4.0	0.46	ug/kg	
75-69-4	Trichlorofluoromethane	ND	4.0	0.62	ug/kg	
75-01-4	Vinyl chloride	ND	4.0	0.57	ug/kg	
1330-20-7	Xylene (total)	ND	12	2.8	ug/kg	
	m,p-Xylene	ND	7.9	1.8	ug/kg	
95-47-6	o-Xylene	ND	4.0	1.0	ug/kg	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	95%	59-126%
2037-26-5	Toluene-D8	99%	70-139%
460-00-4	4-Bromofluorobenzene	79%	63-138%

Method Blank Summary

Job Number: TC53867
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY3741-MB	Y1070600.D	1	09/04/14	KS	n/a	n/a	VY3741

The QC reported here applies to the following samples: **Method:** SW846 8260C

TC53867-1A

CAS No.	Surrogate Recoveries		Limits
17060-07-0	1,2-Dichloroethane-D4	72%	54-123%

Method Blank Summary

Job Number: TC53867
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VX2316-MB	X0102029.D	1	09/08/14	KS	n/a	n/a	VX2316

The QC reported here applies to the following samples: **Method:** SW846 8260C

TC53867-1A

CAS No.	Compound	Result	RL	MDL	Units	Q
87-68-3	Hexachlorobutadiene	ND	3.9	0.67	ug/kg	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	63%	59-126%
2037-26-5	Toluene-D8	64%*	70-139%
460-00-4	4-Bromofluorobenzene	77%	63-138%
17060-07-0	1,2-Dichloroethane-D4	63%	54-123%

Blank Spike Summary

Job Number: TC53867
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY3741-BS	Y1070598.D	1	09/04/14	KS	n/a	n/a	VY3741

The QC reported here applies to the following samples: **Method:** SW846 8260C

TC53867-1A

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	249	195	78	43-141
71-43-2	Benzene	49.8	44.0	88	58-124
108-86-1	Bromobenzene	49.8	45.9	92	72-110
74-97-5	Bromochloromethane	49.8	53.3	107	71-122
75-27-4	Bromodichloromethane	49.8	44.2	89	72-119
75-25-2	Bromoform	49.8	48.1	97	61-120
104-51-8	n-Butylbenzene	49.8	44.2	89	58-118
135-98-8	sec-Butylbenzene	49.8	43.9	88	63-119
98-06-6	tert-Butylbenzene	49.8	41.1	83	67-121
108-90-7	Chlorobenzene	49.8	44.3	89	74-116
75-00-3	Chloroethane	49.8	50.7	102	48-133
67-66-3	Chloroform	49.8	46.6	94	72-119
95-49-8	o-Chlorotoluene	49.8	41.4	83	65-121
106-43-4	p-Chlorotoluene	49.8	42.3	85	67-118
75-15-0	Carbon disulfide	49.8	46.8	94	45-133
56-23-5	Carbon tetrachloride	49.8	44.5	89	58-128
75-34-3	1,1-Dichloroethane	49.8	45.0	90	69-122
75-35-4	1,1-Dichloroethylene	49.8	44.5	89	60-131
563-58-6	1,1-Dichloropropene	49.8	47.6	96	66-123
96-12-8	1,2-Dibromo-3-chloropropane	49.8	44.9	90	55-125
106-93-4	1,2-Dibromoethane	49.8	46.7	94	73-120
107-06-2	1,2-Dichloroethane	49.8	42.7	86	69-121
78-87-5	1,2-Dichloropropane	49.8	42.1	85	71-121
142-28-9	1,3-Dichloropropane	49.8	43.4	87	72-117
594-20-7	2,2-Dichloropropane	49.8	47.0	94	57-129
124-48-1	Dibromochloromethane	49.8	45.6	92	71-121
75-71-8	Dichlorodifluoromethane	49.8	47.2	95	22-158
156-59-2	cis-1,2-Dichloroethylene	49.8	48.2	97	70-119
10061-01-5	cis-1,3-Dichloropropene	49.8	42.3	85	75-117
541-73-1	m-Dichlorobenzene	49.8	45.2	91	70-119
95-50-1	o-Dichlorobenzene	49.8	44.8	90	73-116
106-46-7	p-Dichlorobenzene	49.8	47.3	95	70-119
156-60-5	trans-1,2-Dichloroethylene	49.8	45.1	91	62-119
10061-02-6	trans-1,3-Dichloropropene	49.8	43.8	88	78-125
100-41-4	Ethylbenzene	49.8	43.9	88	57-124
591-78-6	2-Hexanone	249	202	81	58-124

* = Outside of Control Limits.

Blank Spike Summary

Job Number: TC53867
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY3741-BS	Y1070598.D	1	09/04/14	KS	n/a	n/a	VY3741

The QC reported here applies to the following samples: **Method:** SW846 8260C

TC53867-1A

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
98-82-8	Isopropylbenzene	49.8	42.5	85	77-135
99-87-6	p-Isopropyltoluene	49.8	46.6	94	66-120
108-10-1	4-Methyl-2-pentanone	249	206	83	60-127
74-83-9	Methyl bromide	49.8	46.5	93	47-137
74-87-3	Methyl chloride	49.8	40.8	82	46-139
74-95-3	Methylene bromide	49.8	46.0	92	72-118
75-09-2	Methylene chloride	49.8	39.8	80	50-134
78-93-3	Methyl ethyl ketone	249	218	88	60-131
1634-04-4	Methyl Tert Butyl Ether	49.8	50.3	101	65-119
91-20-3	Naphthalene	49.8	51.5	103	56-122
103-65-1	n-Propylbenzene	49.8	42.9	86	65-119
100-42-5	Styrene	49.8	46.7	94	74-117
630-20-6	1,1,1,2-Tetrachloroethane	49.8	46.6	94	74-119
71-55-6	1,1,1-Trichloroethane	49.8	46.6	94	63-126
79-34-5	1,1,2,2-Tetrachloroethane	49.8	61.8	124*	65-120
79-00-5	1,1,2-Trichloroethane	49.8	44.2	89	72-119
87-61-6	1,2,3-Trichlorobenzene	49.8	49.6	100	62-116
96-18-4	1,2,3-Trichloropropane	49.8	45.0	90	68-118
120-82-1	1,2,4-Trichlorobenzene	49.8	50.3	101	58-122
95-63-6	1,2,4-Trimethylbenzene	49.8	44.7	90	61-119
108-67-8	1,3,5-Trimethylbenzene	49.8	43.9	88	53-123
127-18-4	Tetrachloroethylene	49.8	41.2	83	64-130
108-88-3	Toluene	49.8	43.4	87	67-119
79-01-6	Trichloroethylene	49.8	38.9	78	70-122
75-69-4	Trichlorofluoromethane	49.8	47.2	95	41-137
75-01-4	Vinyl chloride	49.8	43.7	88	43-120
1330-20-7	Xylene (total)	149	130	87	62-120
	m,p-Xylene	99.6	87.1	87	62-120
95-47-6	o-Xylene	49.8	42.8	86	62-121

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	99%	59-126%
2037-26-5	Toluene-D8	93%	70-139%
460-00-4	4-Bromofluorobenzene	83%	63-138%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: TC53867
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY3741-BS	Y1070598.D	1	09/04/14	KS	n/a	n/a	VY3741

The QC reported here applies to the following samples: **Method:** SW846 8260C

TC53867-1A

CAS No.	Surrogate Recoveries	BSP	Limits
17060-07-0	1,2-Dichloroethane-D4	77%	54-123%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: TC53867
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VX2316-BS	X0102027.D	1	09/08/14	KS	n/a	n/a	VX2316

The QC reported here applies to the following samples: **Method:** SW846 8260C

TC53867-1A

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
87-68-3	Hexachlorobutadiene	48.6	48.8	100	57-127

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	64%	59-126%
2037-26-5	Toluene-D8	65%*	70-139%
460-00-4	4-Bromofluorobenzene	79%	63-138%
17060-07-0	1,2-Dichloroethane-D4	66%	54-123%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: TC53867
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
TC53933-1MS	Y1070609.D	100	09/04/14	KS	n/a	n/a	VY3741
TC53933-1MSD	Y1070610.D	100	09/04/14	KS	n/a	n/a	VY3741
TC53933-1	Y1070608.D	100	09/04/14	KS	n/a	n/a	VY3741

The QC reported here applies to the following samples: **Method:** SW846 8260C

TC53867-1A

CAS No.	Compound	TC53933-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	880000	U	5480000	3900000	71	5480000	4030000	74	3	43-141/33
71-43-2	Benzene	132000		1100000	1080000	86	1100000	1030000	82	5	58-124/26
108-86-1	Bromobenzene	88000	U	1100000	1070000	98	1100000	955000	87	11	72-110/28
74-97-5	Bromochloromethane	88000	U	1100000	1090000	99	1100000	1030000	94	6	71-122/25
75-27-4	Bromodichloromethane	88000	U	1100000	957000	87	1100000	906000	83	5	72-119/25
75-25-2	Bromoform	88000	U	1100000	988000	90	1100000	1040000	95	5	61-120/27
104-51-8	n-Butylbenzene	88000	U	1100000	1170000	107	1100000	1020000	93	14	58-118/32
135-98-8	sec-Butylbenzene	37300	J	1100000	1100000	97	1100000	997000	88	10	63-119/31
98-06-6	tert-Butylbenzene	88000	U	1100000	1020000	93	1100000	902000	82	12	67-121/30
108-90-7	Chlorobenzene	88000	U	1100000	1000000	91	1100000	953000	87	5	74-116/26
75-00-3	Chloroethane	88000	U	1100000	1100000	100	1100000	967000	88	13	48-133/38
67-66-3	Chloroform	88000	U	1100000	1000000	91	1100000	918000	84	9	72-119/25
95-49-8	o-Chlorotoluene	88000	U	1100000	1060000	97	1100000	965000	88	9	65-121/30
106-43-4	p-Chlorotoluene	88000	U	1100000	974000	89	1100000	874000	80	11	67-118/29
75-15-0	Carbon disulfide	88000	U	1100000	1040000	95	1100000	910000	83	13	45-133/34
56-23-5	Carbon tetrachloride	88000	U	1100000	1050000	96	1100000	924000	84	13	58-128/28
75-34-3	1,1-Dichloroethane	88000	U	1100000	974000	89	1100000	893000	81	9	69-122/25
75-35-4	1,1-Dichloroethylene	88000	U	1100000	1010000	92	1100000	876000	80	14	60-131/31
563-58-6	1,1-Dichloropropene	88000	U	1100000	1090000	99	1100000	965000	88	12	66-123/27
96-12-8	1,2-Dibromo-3-chloropropane	88000	U	1100000	923000	84	1100000	979000	89	6	55-125/33
106-93-4	1,2-Dibromoethane	88000	U	1100000	963000	88	1100000	1010000	92	5	73-120/26
107-06-2	1,2-Dichloroethane	88000	U	1100000	889000	81	1100000	888000	81	0	69-121/24
78-87-5	1,2-Dichloropropane	88000	U	1100000	937000	85	1100000	869000	79	8	71-121/26
142-28-9	1,3-Dichloropropane	88000	U	1100000	946000	86	1100000	946000	86	0	72-117/25
594-20-7	2,2-Dichloropropane	88000	U	1100000	1080000	98	1100000	951000	87	13	57-129/29
124-48-1	Dibromochloromethane	88000	U	1100000	998000	91	1100000	988000	90	1	71-121/26
75-71-8	Dichlorodifluoromethane	88000	U	1100000	1020000	93	1100000	852000	78	18	22-158/38
156-59-2	cis-1,2-Dichloroethylene	88000	U	1100000	1030000	94	1100000	972000	89	6	70-119/25
10061-01-5	cis-1,3-Dichloropropene	88000	U	1100000	890000	81	1100000	850000	78	5	75-117/27
541-73-1	m-Dichlorobenzene	88000	U	1100000	1050000	96	1100000	923000	84	13	70-119/30
95-50-1	o-Dichlorobenzene	88000	U	1100000	977000	89	1100000	932000	85	5	73-116/30
106-46-7	p-Dichlorobenzene	88000	U	1100000	1100000	100	1100000	985000	90	11	70-119/30
156-60-5	trans-1,2-Dichloroethylene	88000	U	1100000	991000	90	1100000	874000	80	13	62-119/29
10061-02-6	trans-1,3-Dichloropropene	88000	U	1100000	979000	89	1100000	919000	84	6	78-125/27
100-41-4	Ethylbenzene	260000		1100000	1280000	93	1100000	1220000	88	5	57-124/29
591-78-6	2-Hexanone	880000	U	5480000	3810000	69	5480000	4070000	74	7	58-124/32

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: TC53867
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
TC53933-1MS	Y1070609.D	100	09/04/14	KS	n/a	n/a	VY3741
TC53933-1MSD	Y1070610.D	100	09/04/14	KS	n/a	n/a	VY3741
TC53933-1	Y1070608.D	100	09/04/14	KS	n/a	n/a	VY3741

The QC reported here applies to the following samples: **Method:** SW846 8260C

TC53867-1A

CAS No.	Compound	TC53933-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
98-82-8	Isopropylbenzene	53600	J	1100000	1090000	95	1100000	933000	80	16	77-135/29
99-87-6	p-Isopropyltoluene	31700	J	1100000	1100000	97	1100000	1020000	90	8	66-120/30
108-10-1	4-Methyl-2-pentanone	880000	U	5480000	4180000	76	5480000	4430000	81	6	60-127/30
74-83-9	Methyl bromide	88000	U	1100000	976000	89	1100000	857000	78	13	47-137/37
74-87-3	Methyl chloride	88000	U	1100000	892000	81	1100000	775000	71	14	46-139/36
74-95-3	Methylene bromide	88000	U	1100000	936000	85	1100000	945000	86	1	72-118/25
75-09-2	Methylene chloride	220000	U	1100000	844000	77	1100000	770000	70	9	50-134/35
78-93-3	Methyl ethyl ketone	880000	U	5480000	4290000	78	5480000	4510000	82	5	60-131/31
1634-04-4	Methyl Tert Butyl Ether	88000	U	1100000	1000000	91	1100000	990000	90	1	65-119/29
91-20-3	Naphthalene	621000		1100000	1620000	91	1100000	1600000	89	1	56-122/36
103-65-1	n-Propylbenzene	122000		1100000	1130000	92	1100000	1040000	84	8	65-119/31
100-42-5	Styrene	76300	J	1100000	1110000	94	1100000	1050000	89	6	74-117/28
630-20-6	1,1,1,2-Tetrachloroethane	88000	U	1100000	1060000	97	1100000	1020000	93	4	74-119/27
71-55-6	1,1,1-Trichloroethane	88000	U	1100000	1060000	97	1100000	960000	88	10	63-126/27
79-34-5	1,1,2,2-Tetrachloroethane	88000	U	1100000	1290000	118	1100000	1360000	124*	5	65-120/31
79-00-5	1,1,2-Trichloroethane	88000	U	1100000	1010000	92	1100000	1030000	94	2	72-119/27
87-61-6	1,2,3-Trichlorobenzene	88000	U	1100000	1140000	104	1100000	1090000	99	4	62-116/33
96-18-4	1,2,3-Trichloropropane	88000	U	1100000	1010000	92	1100000	957000	87	5	68-118/31
120-82-1	1,2,4-Trichlorobenzene	88000	U	1100000	1230000	112	1100000	1100000	100	11	58-122/34
95-63-6	1,2,4-Trimethylbenzene	758000		1100000	1670000	83	1100000	1590000	76	5	61-119/30
108-67-8	1,3,5-Trimethylbenzene	237000		1100000	1210000	89	1100000	1100000	79	10	53-123/30
127-18-4	Tetrachloroethylene	88000	U	1100000	981000	89	1100000	920000	84	6	64-130/28
108-88-3	Toluene	532000		1100000	1480000	86	1100000	1460000	85	1	67-119/28
79-01-6	Trichloroethylene	88000	U	1100000	884000	81	1100000	813000	74	8	70-122/27
75-69-4	Trichlorofluoromethane	88000	U	1100000	1080000	98	1100000	932000	85	15	41-137/39
75-01-4	Vinyl chloride	88000	U	1100000	973000	89	1100000	827000	75	16	43-120/38
1330-20-7	Xylene (total)	1460000		3290000	4210000	84	3290000	4080000	80	3	62-120/27
	m,p-Xylene	1080000		2190000	2930000	84	2190000	2780000	78	5	62-120/28
95-47-6	o-Xylene	376000		1100000	1280000	82	1100000	1290000	83	1	62-121/28

CAS No.	Surrogate Recoveries	MS	MSD	TC53933-1	Limits
1868-53-7	Dibromofluoromethane	93%	92%	96%	59-126%
2037-26-5	Toluene-D8	97%	97%	97%	70-139%
460-00-4	4-Bromofluorobenzene	83%	80%	81%	63-138%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: TC53867
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
TC53933-1MS	Y1070609.D	100	09/04/14	KS	n/a	n/a	VY3741
TC53933-1MSD	Y1070610.D	100	09/04/14	KS	n/a	n/a	VY3741
TC53933-1	Y1070608.D	100	09/04/14	KS	n/a	n/a	VY3741

The QC reported here applies to the following samples: **Method:** SW846 8260C

TC53867-1A

CAS No.	Surrogate Recoveries	MS	MSD	TC53933-1	Limits
17060-07-0	1,2-Dichloroethane-D4	71%	74%	73%	54-123%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: TC53867
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
TC54154-1MS	X0102032.D	1	09/08/14	KS	n/a	n/a	VX2316
TC54154-1MSD	X0102033.D	1	09/08/14	KS	n/a	n/a	VX2316
TC54154-1	X0102031.D	1	09/08/14	KS	n/a	n/a	VX2316

The QC reported here applies to the following samples: **Method:** SW846 8260C

TC53867-1A

CAS No.	Compound	TC54154-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
87-68-3	Hexachlorobutadiene	5.5	U	69	49.8	72	69	36.4	53*	31	57-127/33

CAS No.	Surrogate Recoveries	MS	MSD	TC54154-1	Limits
1868-53-7	Dibromofluoromethane	58%* [a]	57%* [a]	62%	59-126%
2037-26-5	Toluene-D8	64%* [a]	63%* [a]	63%* [a]	70-139%
460-00-4	4-Bromofluorobenzene	80%	76%	81%	63-138%
17060-07-0	1,2-Dichloroethane-D4	59%	58%	61%	54-123%

(a) Outside control limits due to matrix interference. Confirmed by MS/MSD.

* = Outside of Control Limits.

Gulf Coast ACCUTEST LABORATORIES

GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: TC53867
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP33787-MB	P35337.D	1	09/04/14	SC	09/04/14	OP33787	EP1703

The QC reported here applies to the following samples: **Method:** SW846 8270D

TC53867-1A

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic acid	ND	830	270	ug/kg	
95-57-8	2-Chlorophenol	ND	170	72	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	170	57	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	170	53	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	170	57	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	830	270	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	330	40	ug/kg	
95-48-7	2-Methylphenol	ND	170	73	ug/kg	
	3&4-Methylphenol	ND	170	72	ug/kg	
88-75-5	2-Nitrophenol	ND	170	57	ug/kg	
100-02-7	4-Nitrophenol	ND	830	47	ug/kg	
87-86-5	Pentachlorophenol	ND	830	120	ug/kg	
108-95-2	Phenol	ND	170	76	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	170	52	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	170	44	ug/kg	
83-32-9	Acenaphthene	ND	170	48	ug/kg	
208-96-8	Acenaphthylene	ND	170	45	ug/kg	
62-53-3	Aniline	ND	830	68	ug/kg	
120-12-7	Anthracene	ND	170	42	ug/kg	
92-87-5	Benzidine	ND	6700	3200	ug/kg	
56-55-3	Benzo(a)anthracene	ND	170	66	ug/kg	
50-32-8	Benzo(a)pyrene	ND	170	52	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	170	42	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	170	45	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	170	74	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	170	51	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	170	54	ug/kg	
100-51-6	Benzyl Alcohol	ND	170	66	ug/kg	
91-58-7	2-Chloronaphthalene	ND	170	49	ug/kg	
106-47-8	4-Chloroaniline	ND	170	62	ug/kg	
86-74-8	Carbazole	ND	170	53	ug/kg	
218-01-9	Chrysene	ND	170	71	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	170	52	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	170	74	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	170	64	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	170	64	ug/kg	

Method Blank Summary

Job Number: TC53867
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP33787-MB	P35337.D	1	09/04/14	SC	09/04/14	OP33787	EP1703

The QC reported here applies to the following samples: **Method:** SW846 8270D

TC53867-1A

CAS No.	Compound	Result	RL	MDL	Units	Q
95-50-1	1,2-Dichlorobenzene	ND	170	67	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND	170	42	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	170	59	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	170	63	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	170	52	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	170	46	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	330	63	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	170	58	ug/kg	
132-64-9	Dibenzofuran	ND	170	55	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	170	53	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	170	44	ug/kg	
84-66-2	Diethyl phthalate	ND	170	49	ug/kg	
131-11-3	Dimethyl phthalate	ND	170	48	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	170	130	ug/kg	
206-44-0	Fluoranthene	ND	170	55	ug/kg	
86-73-7	Fluorene	ND	170	50	ug/kg	
118-74-1	Hexachlorobenzene	ND	170	54	ug/kg	
87-68-3	Hexachlorobutadiene	ND	170	61	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	830	79	ug/kg	
67-72-1	Hexachloroethane	ND	170	61	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	170	61	ug/kg	
78-59-1	Isophorone	ND	170	51	ug/kg	
90-12-0	1-Methylnaphthalene	ND	170	63	ug/kg	
91-57-6	2-Methylnaphthalene	ND	170	63	ug/kg	
88-74-4	2-Nitroaniline	ND	170	52	ug/kg	
99-09-2	3-Nitroaniline	ND	170	49	ug/kg	
100-01-6	4-Nitroaniline	ND	330	55	ug/kg	
91-20-3	Naphthalene	ND	170	60	ug/kg	
98-95-3	Nitrobenzene	ND	170	48	ug/kg	
62-75-9	n-Nitrosodimethylamine	ND	170	52	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	170	68	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	170	47	ug/kg	
85-01-8	Phenanthrene	ND	170	47	ug/kg	
129-00-0	Pyrene	ND	170	75	ug/kg	
110-86-1	Pyridine	ND	170	44	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	170	60	ug/kg	

Method Blank Summary

Job Number: TC53867
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP33787-MB	P35337.D	1	09/04/14	SC	09/04/14	OP33787	EP1703

The QC reported here applies to the following samples: **Method:** SW846 8270D

TC53867-1A

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	61%	26-124%
4165-62-2	Phenol-d5	63%	19-106%
118-79-6	2,4,6-Tribromophenol	55%	18-129%
4165-60-0	Nitrobenzene-d5	61%	18-104%
321-60-8	2-Fluorobiphenyl	64%	21-114%
1718-51-0	Terphenyl-d14	77%	24-149%

Blank Spike Summary

Job Number: TC53867
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP33787-BS	P35338.D	1	09/04/14	SC	09/04/14	OP33787	EP1703

The QC reported here applies to the following samples: **Method:** SW846 8270D

TC53867-1A

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
65-85-0	Benzoic acid	1670	882	53	10-122
95-57-8	2-Chlorophenol	1670	1320	79	49-106
59-50-7	4-Chloro-3-methyl phenol	1670	1330	80	35-116
120-83-2	2,4-Dichlorophenol	1670	1320	79	53-107
105-67-9	2,4-Dimethylphenol	1670	1350	81	51-109
51-28-5	2,4-Dinitrophenol	1670	1180	71	30-125
534-52-1	4,6-Dinitro-o-cresol	1670	1370	82	41-125
95-48-7	2-Methylphenol	1670	1280	77	46-105
	3&4-Methylphenol	1670	1300	78	43-120
88-75-5	2-Nitrophenol	1670	1260	76	49-104
100-02-7	4-Nitrophenol	1670	1320	79	29-129
87-86-5	Pentachlorophenol	1670	1100	66	36-122
108-95-2	Phenol	1670	1370	82	48-117
95-95-4	2,4,5-Trichlorophenol	1670	1340	80	57-116
88-06-2	2,4,6-Trichlorophenol	1670	1310	79	54-112
83-32-9	Acenaphthene	1670	1340	80	52-109
208-96-8	Acenaphthylene	1670	1400	84	54-115
62-53-3	Aniline	1670	1370	82	28-116
120-12-7	Anthracene	1670	1340	80	57-114
92-87-5	Benzidine	3330	1500	46	15-156
56-55-3	Benzo(a)anthracene	1670	1340	80	59-114
50-32-8	Benzo(a)pyrene	1670	1340	80	53-106
205-99-2	Benzo(b)fluoranthene	1670	1380	83	54-115
191-24-2	Benzo(g,h,i)perylene	1670	1460	88	44-127
207-08-9	Benzo(k)fluoranthene	1670	1450	87	52-124
101-55-3	4-Bromophenyl phenyl ether	1670	1320	79	51-116
85-68-7	Butyl benzyl phthalate	1670	1490	89	52-117
100-51-6	Benzyl Alcohol	1670	1370	82	52-104
91-58-7	2-Chloronaphthalene	1670	1530	92	47-125
106-47-8	4-Chloroaniline	1670	1340	80	38-113
86-74-8	Carbazole	1670	1460	88	53-113
218-01-9	Chrysene	1670	1380	83	62-117
111-91-1	bis(2-Chloroethoxy)methane	1670	1330	80	41-106
111-44-4	bis(2-Chloroethyl)ether	1670	1240	74	36-108
108-60-1	bis(2-Chloroisopropyl)ether	1670	1270	76	33-111
7005-72-3	4-Chlorophenyl phenyl ether	1670	1320	79	52-113

* = Outside of Control Limits.

Blank Spike Summary

Job Number: TC53867
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP33787-BS	P35338.D	1	09/04/14	SC	09/04/14	OP33787	EP1703

The QC reported here applies to the following samples: **Method:** SW846 8270D

TC53867-1A

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
95-50-1	1,2-Dichlorobenzene	1670	1210	73	41-106
122-66-7	1,2-Diphenylhydrazine	1670	1430	86	51-113
541-73-1	1,3-Dichlorobenzene	1670	1200	72	39-104
106-46-7	1,4-Dichlorobenzene	1670	1240	74	40-105
121-14-2	2,4-Dinitrotoluene	1670	1340	80	55-117
606-20-2	2,6-Dinitrotoluene	1670	1340	80	56-112
91-94-1	3,3'-Dichlorobenzidine	1670	1320	79	33-129
53-70-3	Dibenzo(a,h)anthracene	1670	1420	85	47-126
132-64-9	Dibenzofuran	1670	1380	83	51-112
84-74-2	Di-n-butyl phthalate	1670	1480	89	54-117
117-84-0	Di-n-octyl phthalate	1670	1550	93	47-119
84-66-2	Diethyl phthalate	1670	1460	88	53-114
131-11-3	Dimethyl phthalate	1670	1480	89	55-111
117-81-7	bis(2-Ethylhexyl)phthalate	1670	1510	91	51-123
206-44-0	Fluoranthene	1670	1350	81	54-118
86-73-7	Fluorene	1670	1340	80	55-114
118-74-1	Hexachlorobenzene	1670	1280	77	51-117
87-68-3	Hexachlorobutadiene	1670	1240	74	37-111
77-47-4	Hexachlorocyclopentadiene	1670	911	55	10-121
67-72-1	Hexachloroethane	1670	1380	83	42-100
193-39-5	Indeno(1,2,3-cd)pyrene	1670	1410	85	45-129
78-59-1	Isophorone	1670	1390	83	47-102
90-12-0	1-Methylnaphthalene	1670	1320	79	50-106
91-57-6	2-Methylnaphthalene	1670	1280	77	45-104
88-74-4	2-Nitroaniline	1670	1460	88	46-121
99-09-2	3-Nitroaniline	1670	1250	75	33-107
100-01-6	4-Nitroaniline	1670	1260	76	52-110
91-20-3	Naphthalene	1670	1300	78	47-108
98-95-3	Nitrobenzene	1670	1320	79	45-105
62-75-9	n-Nitrosodimethylamine	1670	1340	80	33-103
621-64-7	N-Nitroso-di-n-propylamine	1670	1280	77	42-110
86-30-6	N-Nitrosodiphenylamine	3330	2570	77	37-114
85-01-8	Phenanthrene	1670	1350	81	57-116
129-00-0	Pyrene	1670	1340	80	52-120
110-86-1	Pyridine	1670	1260	76	17-105
120-82-1	1,2,4-Trichlorobenzene	1670	1260	76	40-101

* = Outside of Control Limits.

Blank Spike Summary

Job Number: TC53867
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP33787-BS	P35338.D	1	09/04/14	SC	09/04/14	OP33787	EP1703

The QC reported here applies to the following samples: **Method:** SW846 8270D

TC53867-1A

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	89%	26-124%
4165-62-2	Phenol-d5	91%	19-106%
118-79-6	2,4,6-Tribromophenol	83%	18-129%
4165-60-0	Nitrobenzene-d5	85%	18-104%
321-60-8	2-Fluorobiphenyl	89%	21-114%
1718-51-0	Terphenyl-d14	97%	24-149%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: TC53867
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP33787-MS	P35343.D	1	09/04/14	SC	09/04/14	OP33787	EP1703
OP33787-MSD	P35344.D	1	09/04/14	SC	09/04/14	OP33787	EP1703
TC53857-1	P35342.D	1	09/04/14	SC	09/04/14	OP33787	EP1703

The QC reported here applies to the following samples: **Method:** SW846 8270D

TC53867-1A

CAS No.	Compound	TC53857-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic acid	ND		1740	674	39	1730	574	33	16	10-122/40
95-57-8	2-Chlorophenol	ND		1740	1030	59	1730	1110	64	7	49-106/36
59-50-7	4-Chloro-3-methyl phenol	ND		1740	1340	77	1730	1500	87	11	35-116/37
120-83-2	2,4-Dichlorophenol	ND		1740	1050	60	1730	1170	68	11	53-107/37
105-67-9	2,4-Dimethylphenol	ND		1740	1140	65	1730	1250	72	9	51-109/35
51-28-5	2,4-Dinitrophenol	ND		1740	ND	0*	1730	ND	0*	nc	30-125/43
534-52-1	4,6-Dinitro-o-cresol	ND		1740	274	16*	1730	221	13*	21	41-125/39
95-48-7	2-Methylphenol	ND		1740	1060	61	1730	1150	66	8	46-105/36
	3&4-Methylphenol	ND		1740	1090	63	1730	1200	69	10	43-120/34
88-75-5	2-Nitrophenol	ND		1740	1010	58	1730	1090	63	8	49-104/40
100-02-7	4-Nitrophenol	ND		1740	1450	83	1730	1640	95	12	29-129/41
87-86-5	Pentachlorophenol	ND		1740	877	50	1730	910	53	4	36-122/39
108-95-2	Phenol	223		1740	1350	65	1730	1430	70	6	48-117/36
95-95-4	2,4,5-Trichlorophenol	ND		1740	1290	74	1730	1440	83	11	57-116/37
88-06-2	2,4,6-Trichlorophenol	ND		1740	1250	72	1730	1360	79	8	54-112/36
83-32-9	Acenaphthene	ND		1740	1200	69	1730	1310	76	9	52-109/35
208-96-8	Acenaphthylene	ND		1740	1230	71	1730	1330	77	8	54-115/33
62-53-3	Aniline	ND		1740	1090	63	1730	1180	68	8	28-116/39
120-12-7	Anthracene	ND		1740	1290	74	1730	1400	81	8	57-114/35
92-87-5	Benzidine	ND		3490	450	13*	3460	590	17	28	15-156/40
56-55-3	Benzo(a)anthracene	ND		1740	1330	76	1730	1430	83	7	59-114/38
50-32-8	Benzo(a)pyrene	ND		1740	1310	75	1730	1400	81	7	53-106/37
205-99-2	Benzo(b)fluoranthene	ND		1740	1360	78	1730	1520	88	11	54-115/40
191-24-2	Benzo(g,h,i)perylene	ND		1740	884	51	1730	902	52	2	44-127/39
207-08-9	Benzo(k)fluoranthene	ND		1740	1410	81	1730	1500	87	6	52-124/38
101-55-3	4-Bromophenyl phenyl ether	ND		1740	1250	72	1730	1350	78	8	51-116/35
85-68-7	Butyl benzyl phthalate	ND		1740	1500	86	1730	1630	94	8	52-117/36
100-51-6	Benzyl Alcohol	163	J	1740	1280	64	1730	1390	71	8	52-104/37
91-58-7	2-Chloronaphthalene	ND		1740	1230	71	1730	1410	81	14	47-125/36
106-47-8	4-Chloroaniline	ND		1740	1140	65	1730	1240	72	8	38-113/36
86-74-8	Carbazole	ND		1740	1410	81	1730	1510	87	7	53-113/36
218-01-9	Chrysene	ND		1740	1340	77	1730	1440	83	7	62-117/38
111-91-1	bis(2-Chloroethoxy)methane	ND		1740	1060	61	1730	1140	66	7	41-106/35
111-44-4	bis(2-Chloroethyl)ether	ND		1740	956	55	1730	1020	59	6	36-108/37
108-60-1	bis(2-Chloroisopropyl)ether	ND		1740	956	55	1730	1050	61	9	33-111/39
7005-72-3	4-Chlorophenyl phenyl ether	ND		1740	1210	69	1730	1330	77	9	52-113/34

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: TC53867
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP33787-MS	P35343.D	1	09/04/14	SC	09/04/14	OP33787	EP1703
OP33787-MSD	P35344.D	1	09/04/14	SC	09/04/14	OP33787	EP1703
TC53857-1	P35342.D	1	09/04/14	SC	09/04/14	OP33787	EP1703

The QC reported here applies to the following samples: **Method:** SW846 8270D

TC53867-1A

CAS No.	Compound	TC53857-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
95-50-1	1,2-Dichlorobenzene	ND		1740	906	52	1730	973	56	7	41-106/38
122-66-7	1,2-Diphenylhydrazine	ND		1740	1320	76	1730	1420	82	7	51-113/34
541-73-1	1,3-Dichlorobenzene	ND		1740	871	50	1730	928	54	6	39-104/39
106-46-7	1,4-Dichlorobenzene	ND		1740	905	52	1730	962	56	6	40-105/39
121-14-2	2,4-Dinitrotoluene	ND		1740	1210	69	1730	1320	76	9	55-117/37
606-20-2	2,6-Dinitrotoluene	ND		1740	1230	71	1730	1340	77	9	56-112/36
91-94-1	3,3'-Dichlorobenzidine	ND		1740	942	54	1730	1070	62	13	33-129/39
53-70-3	Dibenzo(a,h)anthracene	ND		1740	1080	62	1730	1090	63	1	47-126/38
132-64-9	Dibenzofuran	ND		1740	1250	72	1730	1360	79	8	51-112/34
84-74-2	Di-n-butyl phthalate	ND		1740	1470	84	1730	1590	92	8	54-117/36
117-84-0	Di-n-octyl phthalate	833		1740	2500	96	1730	2710	108	8	47-119/40
84-66-2	Diethyl phthalate	ND		1740	1350	77	1730	1490	86	10	53-114/36
131-11-3	Dimethyl phthalate	551		1740	1970	81	1730	2130	91	8	55-111/34
117-81-7	bis(2-Ethylhexyl)phthalate	1410		1740	2960	89	1730	3050	95	3	51-123/40
206-44-0	Fluoranthene	ND		1740	1330	76	1730	1430	83	7	54-118/39
86-73-7	Fluorene	ND		1740	1230	71	1730	1340	77	9	55-114/37
118-74-1	Hexachlorobenzene	ND		1740	1220	70	1730	1320	76	8	51-117/37
87-68-3	Hexachlorobutadiene	ND		1740	979	56	1730	1060	61	8	37-111/38
77-47-4	Hexachlorocyclopentadiene	ND		1740	247	14	1730	219	13	12	10-121/45
67-72-1	Hexachloroethane	ND		1740	1440	83	1730	1530	88	6	42-100/41
193-39-5	Indeno(1,2,3-cd)pyrene	ND		1740	1110	64	1730	1120	65	1	45-129/38
78-59-1	Isophorone	ND		1740	1120	64	1730	1210	70	8	47-102/35
90-12-0	1-Methylnaphthalene	ND		1740	1100	63	1730	1200	69	9	50-106/38
91-57-6	2-Methylnaphthalene	ND		1740	1060	61	1730	1160	67	9	45-104/37
88-74-4	2-Nitroaniline	ND		1740	1350	77	1730	1480	85	9	46-121/40
99-09-2	3-Nitroaniline	ND		1740	1250	72	1730	1380	80	10	33-107/37
100-01-6	4-Nitroaniline	ND		1740	1270	73	1730	1400	81	10	52-110/36
91-20-3	Naphthalene	82.9	J	1740	1110	59	1730	1200	65	8	47-108/34
98-95-3	Nitrobenzene	ND		1740	1040	60	1730	1130	65	8	45-105/36
62-75-9	n-Nitrosodimethylamine	ND		1740	957	55	1730	1020	59	6	33-103/39
621-64-7	N-Nitroso-di-n-propylamine	ND		1740	1020	59	1730	1110	64	8	42-110/36
86-30-6	N-Nitrosodiphenylamine	ND		3490	2440	70	3460	2650	77	8	37-114/35
85-01-8	Phenanthrene	ND		1740	1310	75	1730	1420	82	8	57-116/42
129-00-0	Pyrene	ND		1740	1380	79	1730	1490	86	8	52-120/40
110-86-1	Pyridine	ND		1740	839	48	1730	885	51	5	17-105/43
120-82-1	1,2,4-Trichlorobenzene	ND		1740	1000	57	1730	1090	63	9	40-101/36

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: TC53867
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP33787-MS	P35343.D	1	09/04/14	SC	09/04/14	OP33787	EP1703
OP33787-MSD	P35344.D	1	09/04/14	SC	09/04/14	OP33787	EP1703
TC53857-1	P35342.D	1	09/04/14	SC	09/04/14	OP33787	EP1703

The QC reported here applies to the following samples: **Method:** SW846 8270D

TC53867-1A

CAS No.	Surrogate Recoveries	MS	MSD	TC53857-1	Limits
367-12-4	2-Fluorophenol	65%	68%	51%	26-124%
4165-62-2	Phenol-d5	71%	74%	63%	19-106%
118-79-6	2,4,6-Tribromophenol	76%	78%	71%	18-129%
4165-60-0	Nitrobenzene-d5	64%	67%	58%	18-104%
321-60-8	2-Fluorobiphenyl	73%	75%	66%	21-114%
1718-51-0	Terphenyl-d14	95%	97%	95%	24-149%

* = Outside of Control Limits.

Gulf Coast ACCUTEST LABORATORIES

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: TC53867
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP33778-MB	LF104270.D	1	09/03/14	ZL	09/03/14	OP33778	GLF1542

The QC reported here applies to the following samples: **Method:** TNRCC 1005

TC53867-1A

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C6-C12)	ND	25	14	mg/kg	
	TPH (> C12-C28)	ND	25	14	mg/kg	
	TPH (> C28-C35)	ND	25	14	mg/kg	
	TPH (C6-C35)	ND	25	14	mg/kg	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	106%	70-130%
98-08-8	aaa-Trifluorotoluene	94%	70-130%

Method Blank Summary

Job Number: TC53867
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP33773-MB	DD773076.D	1	09/08/14	FO	09/03/14	OP33773	GDD2393

The QC reported here applies to the following samples: **Method:** SW846 8151

TC53867-1A

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	33	16	ug/kg	
93-72-1	2,4,5-TP (Silvex)	ND	6.7	3.5	ug/kg	
93-76-5	2,4,5-T	ND	6.7	2.3	ug/kg	

CAS No.	Surrogate Recoveries		Limits
19719-28-9	2,4-DCAA	113%	30-154%

Method Blank Summary

Job Number: TC53867
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP33770-MB	NN176276.D	1	09/04/14	SC	09/03/14	OP33770	GNN1475

The QC reported here applies to the following samples: **Method:** SW846 8081A

TC53867-1A

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	1.7	0.57	ug/kg	
319-84-6	alpha-BHC	ND	1.7	0.72	ug/kg	
319-85-7	beta-BHC	ND	1.7	0.49	ug/kg	
319-86-8	delta-BHC	ND	1.7	0.62	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	1.7	0.61	ug/kg	
5103-71-9	alpha-Chlordane	ND	1.7	0.36	ug/kg	
5103-74-2	gamma-Chlordane	ND	1.7	0.38	ug/kg	
60-57-1	Dieldrin	ND	3.3	1.3	ug/kg	
72-54-8	4,4'-DDD	ND	3.3	1.2	ug/kg	
72-55-9	4,4'-DDE	ND	3.3	1.3	ug/kg	
50-29-3	4,4'-DDT	ND	3.3	1.4	ug/kg	
72-20-8	Endrin	ND	3.3	1.3	ug/kg	
1031-07-8	Endosulfan sulfate	ND	3.3	1.4	ug/kg	
7421-93-4	Endrin aldehyde	ND	3.3	1.4	ug/kg	
53494-70-5	Endrin ketone	ND	3.3	1.3	ug/kg	
959-98-8	Endosulfan-I	ND	3.3	0.73	ug/kg	
33213-65-9	Endosulfan-II	ND	3.3	1.3	ug/kg	
76-44-8	Heptachlor	ND	1.7	0.49	ug/kg	
1024-57-3	Heptachlor epoxide	ND	1.7	0.70	ug/kg	
72-43-5	Methoxychlor	ND	17	6.6	ug/kg	
8001-35-2	Toxaphene	ND	17	8.3	ug/kg	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	71%	27-125%
2051-24-3	Decachlorobiphenyl	73%	21-130%

Method Blank Summary

Job Number: TC53867
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP33770-MB	NN176329.D	1	09/05/14	SC	09/03/14	OP33770	GNN1476

The QC reported here applies to the following samples: **Method:** SW846 8081A

TC53867-1A

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	1.7	0.57	ug/kg	
319-84-6	alpha-BHC	ND	1.7	0.72	ug/kg	
319-85-7	beta-BHC	ND	1.7	0.49	ug/kg	
319-86-8	delta-BHC	ND	1.7	0.62	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	1.7	0.61	ug/kg	
5103-71-9	alpha-Chlordane	ND	1.7	0.36	ug/kg	
5103-74-2	gamma-Chlordane	ND	1.7	0.38	ug/kg	
60-57-1	Dieldrin	ND	3.3	1.3	ug/kg	
72-54-8	4,4'-DDD	ND	3.3	1.2	ug/kg	
72-55-9	4,4'-DDE	ND	3.3	1.3	ug/kg	
72-20-8	Endrin	ND	3.3	1.3	ug/kg	
1031-07-8	Endosulfan sulfate	ND	3.3	1.4	ug/kg	
7421-93-4	Endrin aldehyde	ND	3.3	1.4	ug/kg	
53494-70-5	Endrin ketone	ND	3.3	1.3	ug/kg	
959-98-8	Endosulfan-I	ND	3.3	0.73	ug/kg	
33213-65-9	Endosulfan-II	ND	3.3	1.3	ug/kg	
76-44-8	Heptachlor	ND	1.7	0.49	ug/kg	
1024-57-3	Heptachlor epoxide	ND	1.7	0.70	ug/kg	
8001-35-2	Toxaphene	ND	17	8.3	ug/kg	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	75%	27-125%
2051-24-3	Decachlorobiphenyl	80%	21-130%

Method Blank Summary

Job Number: TC53867
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP33770-MB [a]	NN176452.D	1	09/08/14	SC	09/03/14	OP33770	GNN1479

The QC reported here applies to the following samples: **Method:** SW846 8081A

TC53867-1A

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	47	16	ug/kg	
319-84-6	alpha-BHC	ND	47	20	ug/kg	
319-85-7	beta-BHC	ND	47	14	ug/kg	
319-86-8	delta-BHC	ND	47	17	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	47	17	ug/kg	
5103-71-9	alpha-Chlordane	ND	47	10	ug/kg	
5103-74-2	gamma-Chlordane	ND	47	11	ug/kg	
60-57-1	Dieldrin	ND	93	37	ug/kg	
72-54-8	4,4'-DDD	ND	93	33	ug/kg	
72-55-9	4,4'-DDE	ND	93	35	ug/kg	
50-29-3	4,4'-DDT	ND	93	39	ug/kg	
72-20-8	Endrin	ND	93	35	ug/kg	
1031-07-8	Endosulfan sulfate	ND	93	40	ug/kg	
7421-93-4	Endrin aldehyde	ND	93	40	ug/kg	
53494-70-5	Endrin ketone	ND	93	37	ug/kg	
959-98-8	Endosulfan-I	ND	93	20	ug/kg	
33213-65-9	Endosulfan-II	ND	93	38	ug/kg	
76-44-8	Heptachlor	ND	47	14	ug/kg	
1024-57-3	Heptachlor epoxide	ND	47	20	ug/kg	
72-43-5	Methoxychlor	ND	470	190	ug/kg	
8001-35-2	Toxaphene	ND	470	230	ug/kg	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	59%	27-125%
2051-24-3	Decachlorobiphenyl	65%	21-130%

(a) TBA clean-up performed by method 3660B.

Method Blank Summary

Job Number: TC53867
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP33769-MB	MM071423.D	1	09/03/14	SC	09/03/14	OP33769	GMM472

The QC reported here applies to the following samples: **Method:** SW846 8082

TC53867-1A

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	17	3.3	ug/kg	
11104-28-2	Aroclor 1221	ND	17	6.6	ug/kg	
11141-16-5	Aroclor 1232	ND	17	6.6	ug/kg	
53469-21-9	Aroclor 1242	ND	17	3.4	ug/kg	
12672-29-6	Aroclor 1248	ND	17	3.9	ug/kg	
11097-69-1	Aroclor 1254	ND	17	3.8	ug/kg	
11096-82-5	Aroclor 1260	ND	17	8.5	ug/kg	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	82%	30-118%
2051-24-3	Decachlorobiphenyl	79%	29-122%

Blank Spike Summary

Job Number: TC53867
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP33773-BS	DD773075.D	1	09/08/14	FO	09/03/14	OP33773	GDD2393

The QC reported here applies to the following samples: **Method:** SW846 8151

TC53867-1A

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
94-75-7	2,4-D	66.1	62.5	94	42-148
93-72-1	2,4,5-TP (Silvex)	13.2	17.3	131	48-134
93-76-5	2,4,5-T	13.2	11.0	83	27-124

CAS No.	Surrogate Recoveries	BSP	Limits
19719-28-9	2,4-DCAA	116%	30-154%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: TC53867
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP33770-BS	NN176345.D	1	09/05/14	SC	09/03/14	OP33770	GNN1476

The QC reported here applies to the following samples: **Method:** SW846 8081A

TC53867-1A

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
309-00-2	Aldrin	8.29	5.5	66	51-119
319-84-6	alpha-BHC	8.29	6.0	72	51-144
319-85-7	beta-BHC	8.29	7.0	84	45-144
319-86-8	delta-BHC	8.29	6.4	77	53-142
58-89-9	gamma-BHC (Lindane)	8.29	5.8	70	54-132
5103-71-9	alpha-Chlordane	8.29	6.9	83	53-135
5103-74-2	gamma-Chlordane	8.29	8.2	99	51-133
60-57-1	Dieldrin	16.6	13.1	79	61-135
72-54-8	4,4'-DDD	16.6	15.2	92	62-151
72-55-9	4,4'-DDE	16.6	13.5	81	56-142
72-20-8	Endrin	16.6	14.0	84	63-153
1031-07-8	Endosulfan sulfate	16.6	13.4	81	55-139
7421-93-4	Endrin aldehyde	16.6	12.3	74	37-119
53494-70-5	Endrin ketone	16.6	13.2	80	56-136
959-98-8	Endosulfan-I	8.29	6.7	81	59-136
33213-65-9	Endosulfan-II	16.6	14.3	86	62-140
76-44-8	Heptachlor	8.29	5.7	69	53-130
1024-57-3	Heptachlor epoxide	8.29	6.2	75	53-131

CAS No.	Surrogate Recoveries	BSP	Limits
877-09-8	Tetrachloro-m-xylene	68%	27-125%
2051-24-3	Decachlorobiphenyl	76%	21-130%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: TC53867
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP33770-BS [a]	NN176457.D	1	09/08/14	SC	09/03/14	OP33770	GNN1479

The QC reported here applies to the following samples: **Method:** SW846 8081A

TC53867-1A

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
50-29-3	4,4'-DDT	16.6	11.0	66	62-146
72-43-5	Methoxychlor	82.8	56.8	69	59-142

CAS No.	Surrogate Recoveries	BSP	Limits
877-09-8	Tetrachloro-m-xylene	53%	27-125%
2051-24-3	Decachlorobiphenyl	68%	21-130%

(a) TBA clean-up performed by method 3660B.

* = Outside of Control Limits.

Blank Spike Summary

Job Number: TC53867
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP33769-BS	MM071433.D	1	09/03/14	SC	09/03/14	OP33769	GMM472

The QC reported here applies to the following samples: **Method:** SW846 8082

TC53867-1A

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
12674-11-2	Aroclor 1016	66.3	63.9	96	73-123
11096-82-5	Aroclor 1260	66.3	54.1	82	73-124

CAS No.	Surrogate Recoveries	BSP	Limits
877-09-8	Tetrachloro-m-xylene	82%	30-118%
2051-24-3	Decachlorobiphenyl	58%	29-122%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: TC53867
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP33778-BS	LB104263.D	1	09/03/14	ZL	09/03/14	OP33778	GLB1542
OP33778-BSD	LF104264.D	1	09/03/14	ZL	09/03/14	OP33778	GLF1542

The QC reported here applies to the following samples: **Method:** TNRCC 1005

TC53867-1A

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	BSD mg/kg	BSD %	RPD	Limits Rec/RPD
	TPH (C6-C12)	250	246	98	236	94	4	75-125/20
	TPH (> C12-C28)	250	225	90	251	100	11	75-125/20
	TPH (C6-C35)	500	472	94	487	97	3	75-125/20

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
84-15-1	o-Terphenyl	94%	105%	70-130%
98-08-8	aaa-Trifluorotoluene	109%	99%	70-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: TC53867
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP33778-MS	LF104274.D	1	09/03/14	ZL	09/03/14	OP33778	GLF1542
OP33778-MSD	LF104276.D	1	09/03/14	ZL	09/03/14	OP33778	GLF1542
TC54044-2	LF104272.D	1	09/03/14	ZL	09/03/14	OP33778	GLF1542

The QC reported here applies to the following samples: **Method:** TNRCC 1005

TC53867-1A

CAS No.	Compound	TC54044-2 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	Spike mg/kg	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH (C6-C12)	101		367	425	88	373	518	112	20	75-125/20
	TPH (> C12-C28)	530		367	622	25*	373	868	91	33*	75-125/20
	TPH (C6-C35)	977		734	1360	52*	746	1890	122	33*	75-125/20

CAS No.	Surrogate Recoveries	MS	MSD	TC54044-2	Limits
84-15-1	o-Terphenyl	90%	94%	96%	70-130%
98-08-8	aaa-Trifluorotoluene	98%	97%	94%	70-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: TC53867
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP33773-MS [a]	DD773083.D	10	09/08/14	FO	09/03/14	OP33773	GDD2393
OP33773-MSD	DD773084.D	10	09/08/14	FO	09/03/14	OP33773	GDD2393
TC53875-1 [b]	DD773071.D	1	09/08/14	FO	09/03/14	OP33773	GDD2393
TC53875-1	DD773072.D	25	09/08/14	FO	09/03/14	OP33773	GDD2393

The QC reported here applies to the following samples: **Method:** SW846 8151

TC53867-1A

CAS No.	Compound	TC53875-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
94-75-7	2,4-D	7300 U [c]		664	ND	0*	662	ND	0*	nc	42-148/36
93-72-1	2,4,5-TP (Silvex)	1500 U [c]		133	ND	0*	132	ND	0*	nc	48-134/35
93-76-5	2,4,5-T	1500 U [c]		133	ND	0*	132	ND	0*	nc	27-124/35

CAS No.	Surrogate Recoveries	MS	MSD	TC53875-1	TC53875-1	Limits
19719-28-9	2,4-DCAA	40744%* [f]	41964%* [e]		44144%* [d]	30-154%

(a) Outside control limits due to dilution.
(b) Sample used for QC purposes only.
(c) Result is from Run #2.
(d) Outside control limits biased high due to matrix interference. Analyte not detected in associated sample.
(e) Outside control limits due to dilution matrix interference.
(f) Outside control limits due to matrix interference.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: TC53867
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP33770-MS	NN176338.D	50	09/05/14	SC	09/03/14	OP33770	GNN1476
OP33770-MSD	NN176339.D	50	09/05/14	SC	09/03/14	OP33770	GNN1476
TC54040-1 [a]	NN176337.D	50	09/05/14	SC	09/03/14	OP33770	GNN1476
TC54040-1	NN176445.D	50	09/08/14	SC	09/03/14	OP33770	GNN1479

The QC reported here applies to the following samples: **Method:** SW846 8081A

TC53867-1A

CAS No.	Compound	TC54040-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
309-00-2	Aldrin	760	U	76.2	ND	0*	73.7	ND	0*	nc	51-119/36
319-84-6	alpha-BHC	760	U	76.2	ND	0*	73.7	ND	0*	nc	51-144/31
319-85-7	beta-BHC	760	U	76.2	ND	0*	73.7	ND	0*	nc	45-144/34
319-86-8	delta-BHC	760	U	76.2	ND	0*	73.7	ND	0*	nc	53-142/29
58-89-9	gamma-BHC (Lindane)	760	U	76.2	ND	0*	73.7	ND	0*	nc	54-132/28
5103-71-9	alpha-Chlordane	760	U	76.2	ND	0*	73.7	ND	0*	nc	53-135/32
5103-74-2	gamma-Chlordane	760	U	76.2	ND	0*	73.7	ND	0*	nc	51-133/37
60-57-1	Dieldrin	1500	U	152	ND	0*	147	ND	0*	nc	61-135/32
72-54-8	4,4'-DDD	1500	U	152	ND	0*	147	ND	0*	nc	62-151/31
72-55-9	4,4'-DDE	1500	U	152	ND	0*	147	ND	0*	nc	56-142/29
50-29-3	4,4'-DDT	1500	U [b]	152	ND	0*	147	ND	0*	nc	62-146/27
72-20-8	Endrin	1500	U	152	ND	0*	147	ND	0*	nc	63-153/28
1031-07-8	Endosulfan sulfate	1500	U	152	ND	0*	147	ND	0*	nc	55-139/33
7421-93-4	Endrin aldehyde	1500	U	152	ND	0*	147	ND	0*	nc	37-119/27
53494-70-5	Endrin ketone	1500	U	152	ND	0*	147	ND	0*	nc	56-136/28
959-98-8	Endosulfan-I	1500	U	76.2	ND	0*	73.7	ND	0*	nc	59-136/29
33213-65-9	Endosulfan-II	1500	U	152	ND	0*	147	ND	0*	nc	62-140/33
76-44-8	Heptachlor	760	U	76.2	ND	0*	73.7	ND	0*	nc	53-130/32
1024-57-3	Heptachlor epoxide	760	U	76.2	ND	0*	73.7	ND	0*	nc	53-131/32
72-43-5	Methoxychlor	7600	U [b]	762	ND	0*	737	ND	0*	nc	59-142/27

CAS No.	Surrogate Recoveries	MS	MSD	TC54040-1	TC54040-1	Limits
877-09-8	Tetrachloro-m-xylene	0%* [c]	0%* [c]	0%* [c]	0%* [c]	27-125%
2051-24-3	Decachlorobiphenyl	0%* [c]	0%* [c]	0%* [c]	0%* [c]	21-130%

(a) Elevated reporting limits due to high levels of non-target analytes.
(b) Result is from Run #2.
(c) Outside control limits due to dilution.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: TC53867
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP33769-MS	MM071428.D	25	09/03/14	SC	09/03/14	OP33769	GMM472
OP33769-MSD	MM071429.D	25	09/03/14	SC	09/03/14	OP33769	GMM472
TC54040-1 [a]	MM071427.D	25	09/03/14	SC	09/03/14	OP33769	GMM472

The QC reported here applies to the following samples: **Method:** SW846 8082

TC53867-1A

CAS No.	Compound	TC54040-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
12674-11-2	Aroclor 1016	3800	U	633	ND	0*	604	ND	0*	nc	73-123/33
11096-82-5	Aroclor 1260	3800	U	633	ND	0*	604	ND	0*	nc	73-124/30

CAS No.	Surrogate Recoveries	MS	MSD	TC54040-1	Limits
877-09-8	Tetrachloro-m-xylene	0%* [b]	0%* [b]	0%* [b]	30-118%
2051-24-3	Decachlorobiphenyl	58%	67%	50%	29-122%

(a) Elevated reporting limits due to high levels of non-target analytes.
(b) Outside control limits due to dilution.

* = Outside of Control Limits.

Gulf Coast ACCUTEST LABORATORIES

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: TC53867
Account: RFWTXHO - Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

QC Batch ID: MP24122
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 09/02/14

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	6.9	18	18.5	<200
Antimony	5.0	.56	1.1	0.88	<5.0
Arsenic	5.0	1	4.7	0.43	<5.0
Barium	200	.16	.39	-0.13	<200
Beryllium	4.0	.1	.18	0.010	<4.0
Boron	100	.39	5.9		
Cadmium	4.0	.15	.23	0.21	<4.0
Calcium	5000	4	34	13.6	<5000
Chromium	10	.22	.62	0.13	<10
Cobalt	50	.25	.23	0.11	<50
Copper	20	.24	2.9	-0.090	<20
Iron	100	4.6	30	3.1	<100
Lead	3.0	.65	.77	-0.58	<3.0
Lithium	300	.65	2.2		
Magnesium	5000	7.7	19	-15	<5000
Manganese	15	.09	.25	-0.080	<15
Molybdenum	10	.62	.41		
Nickel	40	.22	.4	-0.030	<40
Potassium	5000	7.6	52	-3.6	<5000
Selenium	5.0	1.2	2.4	-0.53	<5.0
Silver	10	.2	.59	-0.080	<10
Sodium	5000	5.7	23	20.5	<5000
Strontium	10	.07	.21		
Thallium	10	.83	2.1	-0.17	<10
Tin	50	.67	1		
Titanium	20	.19	.4		
Vanadium	50	.18	.51	-0.13	<50
Zinc	20	.13	1.5	-0.46	<20
Sulfur	50		5.8		

Associated samples MP24122: TC53867-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: TC53867
Account: RFWTXHO - Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

QC Batch ID: MP24122
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date:			09/02/14					09/02/14	
Metal	BSP Result	Spikelot MPTW11	% Rec	QC Limits	BSD Result	Spikelot MPTW11	% Rec	BSD RPD	QC Limit
Aluminum	50700	50000	101.4	80-120	51500	50000	103.0	1.6	
Antimony	421	400	105.3	80-120	424	400	106.0	0.7	
Arsenic	412	400	103.0	80-120	414	400	103.5	0.5	
Barium	412	400	103.0	80-120	420	400	105.0	1.9	
Beryllium	408	400	102.0	80-120	414	400	103.5	1.5	
Boron									
Cadmium	412	400	103.0	80-120	416	400	104.0	1.0	
Calcium	51900	50000	103.8	80-120	52700	50000	105.4	1.5	
Chromium	398	400	99.5	80-120	404	400	101.0	1.5	
Cobalt	416	400	104.0	80-120	418	400	104.5	0.5	
Copper	413	400	103.3	80-120	419	400	104.8	1.4	
Iron	51000	50000	102.0	80-120	51700	50000	103.4	1.4	
Lead	392	400	98.0	80-120	393	400	98.3	0.3	
Lithium									
Magnesium	51800	50000	103.6	80-120	52500	50000	105.0	1.3	
Manganese	401	400	100.3	80-120	406	400	101.5	1.2	
Molybdenum									
Nickel	395	400	98.8	80-120	396	400	99.0	0.3	
Potassium	49400	50000	98.8	80-120	50200	50000	100.4	1.6	
Selenium	427	400	106.8	80-120	425	400	106.3	0.5	
Silver	389	400	97.3	80-120	395	400	98.8	1.5	
Sodium	51900	50000	103.8	80-120	52700	50000	105.4	1.5	
Strontium									
Thallium	405	400	101.3	80-120	408	400	102.0	0.7	
Tin									
Titanium									
Vanadium	392	400	98.0	80-120	396	400	99.0	1.0	
Zinc	454	400	113.5	80-120	459	400	114.8	1.1	
Sulfur									

Associated samples MP24122: TC53867-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: TC53867
Account: RFWTXHO - Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

QC Batch ID: MP24122
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 09/02/14

Metal	TC53867-1 Original	SDL 5:25	%DIF	QC Limits
Aluminum	2030	2190	7.6	0-10
Antimony	68.4	74.2	8.5	0-10
Arsenic	15.3	0.00	100.0(a)	0-10
Barium	5540	5460	1.6	0-10
Beryllium	1.00	0.00	100.0(a)	0-10
Boron				
Cadmium	3.53	5.32	50.7 (a)	0-10
Calcium	30700	30600	0.3	0-10
Chromium	249	239	4.2	0-10
Cobalt	22.2	24.3	9.6	0-10
Copper	1920	1890	1.8	0-10
Iron	70500	69700	1.2	0-10
Lead	499	488	2.1	0-10
Lithium				
Magnesium	4910	5690	16.1*(b)	0-10
Manganese	812	817	0.6	0-10
Molybdenum				
Nickel	147	145	1.3	0-10
Potassium	27400	27000	1.4	0-10
Selenium	228	233	2.0	0-10
Silver	0.00	0.00	NC	0-10
Sodium	73600	72500	1.5	0-10
Strontium				
Thallium	0.00	0.00	NC	0-10
Tin				
Titanium				
Vanadium	44.6	41.4	7.1	0-10
Zinc	75400	77800	3.2	0-10
Sulfur				

Associated samples MP24122: TC53867-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
(b) High RPD due to possible sample nonhomogeneity or matrix interference.

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: TC53867
Account: RFWTXHO - Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

QC Batch ID: MP24126
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 09/02/14

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.20	.05	.05	0.017	<0.20

Associated samples MP24126: TC53867-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

8.2.1
8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: TC53867
Account: RFWTXHO - Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

QC Batch ID: MP24126 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/02/14

Metal	TC53867-1 Original	MSD	Spikelot HGTXAQ40	% Rec	MSD RPD	QC Limit
Mercury	1.7	17.7	60	26.7N(a)	7.1	20

Associated samples MP24126: TC53867-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike recovery indicates possible matrix interference or sample non-homogeneity.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: TC53867
Account: RFWTXHO - Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

QC Batch ID: MP24126 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/02/14

Metal	TC53867-1 Original	MS	Spikelot HGTXAQ40	% Rec	QC Limits
Mercury	1.7	19.0	60	28.8N(a)	75-125

Associated samples MP24126: TC53867-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike recovery indicates possible matrix interference or sample non-homogeneity.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: TC53867
Account: RFWTXHO - Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

QC Batch ID: MP24126
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 09/02/14

Metal	BSP Result	Spikelot HGTXAQ40	% Rec	QC Limits
Mercury	3.1	3	103.3	81-122

Associated samples MP24126: TC53867-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

8.2.3

8

Gulf Coast ACCUTEST LABORATORIES

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: TC53867
Account: RFWTXHO - Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Cyanide	GP29314/GN60790	0.0050	0.0	mg/l	0.1	0.100	100.0	91-108%
Sulfide	GN60719	0.20	0.0	mg/l	xxxxxxxx	1600	100.0	90-105%

Associated Samples:
Batch GN60719: TC53867-1
Batch GP29314: TC53867-1
(*) Outside of QC limits

BLANK SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: TC53867
Account: RFWTXHO - Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Analyte	Batch ID	Units	Spike Amount	BSD Result	RPD	QC Limit
Sulfide	GN60719	mg/l	xxxxxxxx	1600	0.0	

Associated Samples:
Batch GN60719: TC53867-1
(*) Outside of QC limits

9.2
9

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: TC53867
Account: RFWTXHO - Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Cyanide	GP29314/GN60790	TC53867-1	mg/l	0.0050 U	0.0	0.0	0-20%
Ignitability (Flashpoint)	GN60699	TC53867-1	Deg. F	>200	>200	0.0	0-10%
pH	GN60707	TC53841-1	su	7.62	7.62(a)	0.0	0-10%

Associated Samples:
Batch GN60699: TC53867-1
Batch GN60707: TC53867-1
Batch GP29314: TC53867-1
(*) Outside of QC limits
(a) temp. 20.0 c

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: TC53867
Account: RFWTXHO - Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Cyanide	GP29314/GN60790	TC53867-1	mg/l	0.0050 U	0.2	0.20	100.0	90-110%

Associated Samples:
Batch GP29314: TC53867-1
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

Gulf Coast ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

(Accutest New Jersey)

Includes the following where applicable:

- Chain of Custody

SUBCONTRACT COC

ACCUTEST Laboratories

10165 Harwin, Suite 150 - Houston, TX 77036 - 713-271-4700 fax: 713-271-4770

FED-EX Tracking # 5642 4618 2998
Bottle Order Control #
Accutest Quote #
Accutest Job # TC53867

Client Information

Company Name: Accutest Gulf Coast
Project Contact: Sylvia Garza
Email:
Address: 10165 Harwin Dr, Suite 150
City: Houston State: TX Zip: 77036
Phone No.: 713-271-4700

Subcontract Information

Subcontract Laboratory: ACCUTEST **NEW JERSEY**
Laboratory Contact: Sample Receiving
Email:
Address:
City: State: Zip:
Phone No.:

Requested Analyses

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Wastewater
SW - Surface Water
SO - Soil
SL - Sludge
OI - Oil
LIQ - Liquid
SOL - Other Solid

Accutest Sample Number	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	DI/MeOH	TSP	NONE	OTHER	BTU	LAB USE ONLY
TC53867-1	8/27/2014	10:28	LIQ	1									X	53A5

Number of preserved bottles

Turnaround Time (Business days)

- STANDARD
- 7 Day
- 4 Day RUSH
- 3 Day EMERGENCY
- 2 Day EMERGENCY
- 1 Day EMERGENCY
- Other

Approved By:/ Date:

Real time analytical data available via Lablink

Data Deliverable Information

- Commercial "A"
- Commercial "B"
- Reduced Tier 1
- Full Data Package
- TRRP-13
- EDD Format
- Other NAKR+

Commercial "A" = Results Only
Commercial "B" = Results & Standard QC

Comments / Remarks

4
455
* 402

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

Relinquished By Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	9/3/14 1700	1 Fedexp	2 Fedexp	9/4/14 1010	2
Relinquished by: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal # N/A	Preserved where applicable ☐	On Ice ☑ Cooler Temp. 4.0°C

Hold 1m
2R.1m (5) 9/4/14

MP

10.1 10

TC53867: Chain of Custody
Page 1 of 2
Accutest New Jersey

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: TC53867 **Client:** _____ **Project:** _____

Date / Time Received: 9/4/2014 **Delivery Method:** _____ **Airbill #'s:** _____

Cooler Temps (Initial/Adjusted): #1: (4/4); 0

Cooler Security	Y	or N		Y	or N
1. Custody Seals Present:	☑	☐	3. COC Present:	☑	☐
2. Custody Seals Intact:	☑	☐	4. Smpl Dates/Time OK	☑	☐

Cooler Temperature	Y	or N
1. Temp criteria achieved:	☑	☐
2. Cooler temp verification:	IR Gun	
3. Cooler media:	Ice (Bag)	
4. No. Coolers:	1	

Quality Control Preservatio	Y	or N	N/A
1. Trip Blank present / cooler:	☐	☐	☑
2. Trip Blank listed on COC:	☐	☐	☑
3. Samples preserved properly:	☑	☐	
4. VOCs headspace free:	☐	☐	☑

Sample Integrity - Documentation	Y	or N
1. Sample labels present on bottles:	☑	☐
2. Container labeling complete:	☑	☐
3. Sample container label / COC agree:	☑	☐

Sample Integrity - Condition	Y	or N
1. Sample recvd within HT:	☑	☐
2. All containers accounted for:	☑	☐
3. Condition of sample:	Intact	

Sample Integrity - Instructions	Y	or N	N/A
1. Analysis requested is clear:	☑	☐	
2. Bottles received for unspecified tests	☐	☑	
3. Sufficient volume recvd for analysis:	☑	☐	
4. Compositing instructions clear:	☐	☐	☑
5. Filtering instructions clear:	☐	☐	☑

Comments

Accutest Laboratories
V:732.329.0200
2235 US Highway 130
F: 732.329.3499
Dayton, New Jersey
www/accutest.com

TC53867: Chain of Custody
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Gulf Coast ACCUTEST LABORATORIES

General Chemistry

QC Data Summaries

(Accutest New Jersey)

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: TC53867
Account: ALGC - Accutest Laboratories Gulf Coast, Inc.
Project: RFWTXHO: CES- Chemical Spill/4904 Griggs, Houston, TX

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Heat Content, BTU	GP82817/GN11249	TC53874-2	BTU/lb	14600	15700	7.5	0-41%

Associated Samples:
Batch GP82817: TC53867-1
(*) Outside of QC limits

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