Gulf Coast ACCUTEST LABORATORIES

09/15/14

Technical Report for

Weston Solutions

CES- Chemical Spill/4904 Griggs, Houston, TX

Accutest Job Number: TC53933

Sampling Dates: 08/27/14 - 08/28/14

Report to:

Weston Solutions

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Total number of pages in report: **153**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Richard Rodriguez
Laboratory Director

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9856802

Certifications: TX (T104704220-14-15, 1M104704220-14-1) AR (14-016-0) AZ (AZ0769) FL (E87628) KS (E-10366) LA (85695/04004) NJ (TX010) OK (2014-139) VA (2085)

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Table of Contents

-1-

Section 1: Sample Summary **3**
Section 2: Summary of Hits **4**
Section 3: Sample Results **8**
3.1: TC53933-1: VB-639 9
3.2: TC53933-1A: VB-639 21
3.3: TC53933-2: VB-618 26
3.4: TC53933-2A: VB-618 38
Section 4: Misc. Forms **43**
4.1: Chain of Custody 44
Section 5: GC/MS Volatiles - QC Data Summaries **47**
5.1: Method Blank Summary 48
5.2: Leachate Blank Summary 53
5.3: Blank Spike Summary 55
5.4: Matrix Spike/Matrix Spike Duplicate Summary 61
Section 6: GC/MS Semi-volatiles - QC Data Summaries **67**
6.1: Method Blank Summary 68
6.2: Blank Spike Summary 75
6.3: Blank Spike/Blank Spike Duplicate Summary 79
6.4: Matrix Spike/Matrix Spike Duplicate Summary 82
Section 7: GC Semi-volatiles - QC Data Summaries **86**
7.1: Method Blank Summary 87
7.2: Blank Spike Summary 99
7.3: Blank Spike/Blank Spike Duplicate Summary 107
7.4: Matrix Spike/Matrix Spike Duplicate Summary 110
Section 8: Metals Analysis - QC Data Summaries **119**
8.1: Prep QC MP24117: As,Ba,Cd,Cr,Pb,Se,Ag 120
8.2: Prep QC MP24125: Hg 125
8.3: Prep QC MP24130: Al,Sb,As,Ba,Be,Cd,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl, V,Zn 129
8.4: Prep QC MP24139: Ca 134
8.5: Prep QC MP24145: Hg 139
Section 9: General Chemistry - QC Data Summaries **143**
9.1: Method Blank and Spike Results Summary 144
9.2: Duplicate Results Summary 145
9.3: Matrix Spike Results Summary 146
Section 10: Misc. Forms (Accutest New Jersey) **147**
10.1: Chain of Custody 148
Section 11: General Chemistry - QC Data (Accutest New Jersey) **150**
11.1: Method Blank and Spike Results Summary 151
11.2: Duplicate Results Summary 152
11.3: Matrix Spike Results Summary 153

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Sample Summary

Weston Solutions

CES- Chemical Spill/4904 Griggs, Houston, TX

Job No: TC53933

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
TC53933-1	08/27/14	14:35		08/28/14	SO	Oil	VB-639
TC53933-1A	08/27/14	14:35		08/28/14	SO	Oil	VB-639
TC53933-2	08/28/14	09:30		08/28/14	SO	Sludge	VB-618
TC53933-2A	08/28/14	09:30		08/28/14	SO	Sludge	VB-618

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

Summary of Hits

Job Number: TC53933
Account: Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX
Collected: 08/27/14 thru 08/28/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	MQL	SDL	Units	Method
TC53933-1	**VB-639**					
Benzene		132000	88000	15000	ug/kg	SW846 8260C
sec-Butylbenzene		37300 J	88000	19000	ug/kg	SW846 8260C
Ethylbenzene		260000	88000	21000	ug/kg	SW846 8260C
Isopropylbenzene		53600 J	88000	25000	ug/kg	SW846 8260C
p-Isopropyltoluene		31700 J	88000	29000	ug/kg	SW846 8260C
Naphthalene		621000	88000	44000	ug/kg	SW846 8260C
n-Propylbenzene		122000	88000	23000	ug/kg	SW846 8260C
Styrene		76300 J	88000	20000	ug/kg	SW846 8260C
1,2,4-Trimethylbenzene		758000	88000	8900	ug/kg	SW846 8260C
1,3,5-Trimethylbenzene		237000	88000	21000	ug/kg	SW846 8260C
Toluene		532000	88000	22000	ug/kg	SW846 8260C
Xylene (total)		1460000	260000	61000	ug/kg	SW846 8260C
m,p-Xylene		1080000	180000	39000	ug/kg	SW846 8260C
o-Xylene		376000	88000	22000	ug/kg	SW846 8260C
2,4-Dimethylphenol [a]		69300 J	91000	31000	ug/kg	SW846 8270D
2-Methylphenol [a]		88900 J	91000	40000	ug/kg	SW846 8270D
3&4-Methylphenol [a]		69300 J	91000	39000	ug/kg	SW846 8270D
Phenol [a]		49100 J	91000	42000	ug/kg	SW846 8270D
Acenaphthene [a]		43900 J	91000	26000	ug/kg	SW846 8270D
Fluorene [a]		52900 J	91000	27000	ug/kg	SW846 8270D
1-Methylnaphthalene [a]		371000	91000	34000	ug/kg	SW846 8270D
2-Methylnaphthalene [a]		647000	91000	34000	ug/kg	SW846 8270D
Naphthalene [a]		837000	91000	33000	ug/kg	SW846 8270D
Phenanthrene [a]		96200	91000	26000	ug/kg	SW846 8270D
TPH (C6-C12)		46100	610	330	mg/kg	TNRCC 1005
TPH (> C12-C28)		70200	610	340	mg/kg	TNRCC 1005
TPH (> C28-C35)		617	610	340	mg/kg	TNRCC 1005
TPH (C6-C35)		117000	610	330	mg/kg	TNRCC 1005
Aluminum		224	18	2.2	mg/kg	SW846 6010B
Antimony		0.46	0.46	0.17	mg/kg	SW846 6010B
Arsenic		4.3	2.3	0.80	mg/kg	SW846 6010B
Barium		26.9	18	0.023	mg/kg	SW846 6010B
Cadmium		0.15 J	0.37	0.023	mg/kg	SW846 6010B
Calcium		1040	440	0.69	mg/kg	SW846 6010B
Chromium		60.3	0.92	0.13	mg/kg	SW846 6010B
Cobalt		141	4.6	0.037	mg/kg	SW846 6010B
Copper		131	1.8	0.20	mg/kg	SW846 6010B
Iron		22600	9.2	1.3	mg/kg	SW846 6010B
Lead		193	0.28	0.20	mg/kg	SW846 6010B
Magnesium		903	460	2.5	mg/kg	SW846 6010B
Manganese		208	1.4	0.036	mg/kg	SW846 6010B
Mercury		0.20	0.032	0.013	mg/kg	SW846 7471A
Nickel		57.7	3.7	0.069	mg/kg	SW846 6010B

Summary of Hits

Job Number: TC53933
Account: Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX
Collected: 08/27/14 thru 08/28/14

Lab Sample ID Client Sample ID Analyte	Result/ Qual	MQL	SDL	Units	Method
Potassium	4440	460	3.9	mg/kg	SW846 6010B
Selenium	1.1	0.46	0.17	mg/kg	SW846 6010B
Silver	0.14 J	0.92	0.064	mg/kg	SW846 6010B
Sodium	27700	460	1.4	mg/kg	SW846 6010B
Vanadium	4.0 J	4.6	0.038	mg/kg	SW846 6010B
Zinc	179	1.8	0.52	mg/kg	SW846 6010B
Cyanide	2.5	0.44	0.24	mg/kg	SW846 9012 M
Heat Content, BTU [b]	3740	100		BTU/lb	ASTM D240-92
Ignitability (Flashpoint)	120			Deg. F	SW846 CHAP7
Sulfide, Neutral Extraction [b]	990	3.7	3.6	mg/kg	EPA 376.1M/9034 M
pH [c]	13.06			su	SW846 9045C
TC53933-1A VB-639					
Benzene	6.49	0.10	0.034	mg/l	SW846 8260C
2-Methylphenol [d]	41.5 J	50	9.6	mg/l	SW846 8270D
3&4-Methylphenol [d]	33.6 J	50	11	mg/l	SW846 8270D
Arsenic	0.57 J	2.5	0.25	mg/l	SW846 6010B
Barium	1.2 J	250	0.86	mg/l	SW846 6010B
Chromium	3.2	2.5	0.068	mg/l	SW846 6010B
Lead	11.4	1.3	0.45	mg/l	SW846 6010B
Mercury	0.0052	0.0040	0.0010	mg/l	SW846 7470A
TC53933-2 VB-618					
Acetone	49300 J	89000	22000	ug/kg	SW846 8260C
Benzene	151000	8900	1500	ug/kg	SW846 8260C
sec-Butylbenzene	36200	8900	1900	ug/kg	SW846 8260C
Chloroform	3230 J	8900	960	ug/kg	SW846 8260C
Carbon disulfide	5180 J	8900	1300	ug/kg	SW846 8260C
Ethylbenzene	260000	8900	2200	ug/kg	SW846 8260C
Isopropylbenzene	70800	8900	2500	ug/kg	SW846 8260C
p-Isopropyltoluene	30800	8900	2900	ug/kg	SW846 8260C
Naphthalene	371000	8900	4500	ug/kg	SW846 8260C
n-Propylbenzene	111000	8900	2300	ug/kg	SW846 8260C
1,2,4-Trimethylbenzene [e]	591000	89000	9000	ug/kg	SW846 8260C
1,3,5-Trimethylbenzene	192000	8900	2100	ug/kg	SW846 8260C
Toluene [e]	522000	89000	23000	ug/kg	SW846 8260C
Xylene (total) [e]	1230000	270000	62000	ug/kg	SW846 8260C
m,p-Xylene [e]	899000	180000	40000	ug/kg	SW846 8260C
o-Xylene	354000	8900	2300	ug/kg	SW846 8260C
Benzoic acid [f]	77200 J	160000	52000	ug/kg	SW846 8270D
2,4-Dimethylphenol [f]	121000	33000	11000	ug/kg	SW846 8270D
2-Methylphenol [f]	212000	33000	14000	ug/kg	SW846 8270D
3&4-Methylphenol [f]	196000	33000	14000	ug/kg	SW846 8270D

Summary of Hits

Job Number: TC53933
Account: Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX
Collected: 08/27/14 thru 08/28/14

Lab Sample ID Client Sample ID Analyte	Result/ Qual	MQL	SDL	Units	Method
Phenol [f]	200000	33000	15000	ug/kg	SW846 8270D
Acenaphthene [f]	29700 J	33000	9400	ug/kg	SW846 8270D
Anthracene [f]	11000 J	33000	8300	ug/kg	SW846 8270D
Carbazole [f]	12100 J	33000	10000	ug/kg	SW846 8270D
Dibenzofuran [f]	20500 J	33000	11000	ug/kg	SW846 8270D
Fluorene [f]	51100	33000	9800	ug/kg	SW846 8270D
1-Methylnaphthalene [f]	463000	33000	12000	ug/kg	SW846 8270D
2-Methylnaphthalene [f]	431000	33000	12000	ug/kg	SW846 8270D
Naphthalene [f]	470000	33000	12000	ug/kg	SW846 8270D
Phenanthrene [f]	86600	33000	9300	ug/kg	SW846 8270D
Pyrene [f]	22800 J	33000	15000	ug/kg	SW846 8270D
Endosulfan-II	136	83	34	ug/kg	SW846 8081A
TPH (C6-C12)	36500	610	330	mg/kg	TNRCC 1005
TPH (> C12-C28)	89100	610	340	mg/kg	TNRCC 1005
TPH (> C28-C35)	2380	610	340	mg/kg	TNRCC 1005
TPH (C6-C35)	128000	610	330	mg/kg	TNRCC 1005
Aluminum	1360	17	2.1	mg/kg	SW846 6010B
Antimony	0.58	0.42	0.15	mg/kg	SW846 6010B
Arsenic	4.3	2.1	0.74	mg/kg	SW846 6010B
Barium	71.4	17	0.021	mg/kg	SW846 6010B
Cadmium	0.15 J	0.34	0.021	mg/kg	SW846 6010B
Calcium [g]	7110	1300	2.1	mg/kg	SW846 6010B
Chromium	53.5	0.85	0.12	mg/kg	SW846 6010B
Cobalt	119	4.2	0.034	mg/kg	SW846 6010B
Copper	130	1.7	0.19	mg/kg	SW846 6010B
Iron	18200	8.5	1.2	mg/kg	SW846 6010B
Lead	148	0.25	0.19	mg/kg	SW846 6010B
Magnesium	960	420	2.3	mg/kg	SW846 6010B
Manganese	167	1.3	0.033	mg/kg	SW846 6010B
Mercury	0.59	0.033	0.013	mg/kg	SW846 7471A
Nickel	55.7	3.4	0.064	mg/kg	SW846 6010B
Potassium	1550	420	3.6	mg/kg	SW846 6010B
Selenium	1.1	0.42	0.16	mg/kg	SW846 6010B
Silver	0.22 J	0.85	0.058	mg/kg	SW846 6010B
Sodium	30800	420	1.3	mg/kg	SW846 6010B
Vanadium	3.4 J	4.2	0.035	mg/kg	SW846 6010B
Zinc	199	1.7	0.48	mg/kg	SW846 6010B
Cyanide	0.81	0.46	0.26	mg/kg	SW846 9012 M
Heat Content, BTU [b]	3340	100		BTU/lb	ASTM D240-92
Ignitability (Flashpoint)	> 200			Deg. F	SW846 CHAP7
Sulfide, Neutral Extraction [b]	4970	4.0	3.8	mg/kg	EPA 376.1M/9034 M
pH [h]	11.61			su	SW846 9045C

Summary of Hits

Job Number: TC53933
Account: Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX
Collected: 08/27/14 thru 08/28/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	MQL	SDL	Units	Method
TC53933-2A	**VB-618**					
Benzene		21.5	1.0	0.34	mg/l	SW846 8260C
Tetrachloroethylene		0.128	0.10	0.046	mg/l	SW846 8260C
2-Methylphenol [d]		113	50	9.6	mg/l	SW846 8270D
3&4-Methylphenol [d]		93.5	50	11	mg/l	SW846 8270D
Arsenic		1.8 J	2.5	0.25	mg/l	SW846 6010B
Barium		10.4 J	250	0.86	mg/l	SW846 6010B
Cadmium		0.11 J	1.0	0.023	mg/l	SW846 6010B
Chromium		12.8	2.5	0.068	mg/l	SW846 6010B
Lead		37.8	1.3	0.45	mg/l	SW846 6010B
Mercury		0.020	0.0040	0.0010	mg/l	SW846 7470A

(a) Elevated reporting limits due to matrix interference. Dilution required due to high concentration of non-target compounds.
(b) Analysis performed at Accutest Laboratories, Dayton, NJ.
(c) TEMP 21.4 C
(d) Elevated reporting limits due to waste dilution; final volume 10 ml.
(e) Sample dilution required. Analyzed beyond hold time.
(f) Elevated reporting limits due to matrix interference, final volume 10 ml. Dilution required due to high concentration of non-target compounds.
(g) Elevated reporting limit due to dilution required for high interfering element.
(h) TEMP 21.1 C

Gulf Coast ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	VB-639		
Lab Sample ID:	TC53933-1	**Date Sampled:**	08/27/14
Matrix:	SO - Oil	**Date Received:**	08/28/14
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	CES- Chemical Spill/4904 Griggs, Houston, TX		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Y1070608.D	100	09/04/14	KS	n/a	n/a	VY3741
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	1.14 g	5.0 ml	100 ul
Run #2			

VOA 8260 List

CAS No.	Compound	Result	MQL	SDL	Units	Q
67-64-1	Acetone	220000 U	880000	220000	ug/kg	
71-43-2	Benzene	132000	88000	15000	ug/kg	
108-86-1	Bromobenzene	8800 U	88000	8800	ug/kg	
74-97-5	Bromochloromethane	24000 U	88000	24000	ug/kg	
75-27-4	Bromodichloromethane	9800 U	88000	9800	ug/kg	
75-25-2	Bromoform	17000 U	88000	17000	ug/kg	
104-51-8	n-Butylbenzene	9600 U	88000	9600	ug/kg	
135-98-8	sec-Butylbenzene	37300	88000	19000	ug/kg	J
98-06-6	tert-Butylbenzene	17000 U	88000	17000	ug/kg	
108-90-7	Chlorobenzene	20000 U	88000	20000	ug/kg	
75-00-3	Chloroethane	34000 U	88000	34000	ug/kg	
67-66-3	Chloroform	9400 U	88000	9400	ug/kg	
95-49-8	o-Chlorotoluene	10000 U	88000	10000	ug/kg	
106-43-4	p-Chlorotoluene	9000 U	88000	9000	ug/kg	
75-15-0	Carbon disulfide	13000 U	88000	13000	ug/kg	
56-23-5	Carbon tetrachloride	19000 U	88000	19000	ug/kg	
75-34-3	1,1-Dichloroethane	9000 U	88000	9000	ug/kg	
75-35-4	1,1-Dichloroethylene	9100 U	88000	9100	ug/kg	
563-58-6	1,1-Dichloropropene	9800 U	88000	9800	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	69000 U	88000	69000	ug/kg	
106-93-4	1,2-Dibromoethane	9300 U	88000	9300	ug/kg	
107-06-2	1,2-Dichloroethane	10000 U	88000	10000	ug/kg	
78-87-5	1,2-Dichloropropane	13000 U	88000	13000	ug/kg	
142-28-9	1,3-Dichloropropane	22000 U	88000	22000	ug/kg	
594-20-7	2,2-Dichloropropane	12000 U	88000	12000	ug/kg	
124-48-1	Dibromochloromethane	20000 U	88000	20000	ug/kg	
75-71-8	Dichlorodifluoromethane	24000 U	88000	24000	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	10000 U	88000	10000	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	9900 U	88000	9900	ug/kg	
541-73-1	m-Dichlorobenzene	14000 U	88000	14000	ug/kg	
95-50-1	o-Dichlorobenzene	21000 U	88000	21000	ug/kg	
106-46-7	p-Dichlorobenzene	19000 U	88000	19000	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-639		
Lab Sample ID:	TC53933-1	**Date Sampled:**	08/27/14
Matrix:	SO - Oil	**Date Received:**	08/28/14
Method:	SW846 8260C	**Percent Solids:**	n/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	9600 U	88000	9600	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	11000 U	88000	11000	ug/kg	
100-41-4	Ethylbenzene	260000	88000	21000	ug/kg	
591-78-6	2-Hexanone	160000 U	880000	160000	ug/kg	
87-68-3	Hexachlorobutadiene	15000 U	88000	15000	ug/kg	
98-82-8	Isopropylbenzene	53600	88000	25000	ug/kg	J
99-87-6	p-Isopropyltoluene	31700	88000	29000	ug/kg	J
108-10-1	4-Methyl-2-pentanone	140000 U	880000	140000	ug/kg	
74-83-9	Methyl bromide	41000 U	88000	41000	ug/kg	
74-87-3	Methyl chloride	17000 U	88000	17000	ug/kg	
74-95-3	Methylene bromide	14000 U	88000	14000	ug/kg	
75-09-2	Methylene chloride	55000 U	220000	55000	ug/kg	
78-93-3	Methyl ethyl ketone	110000 U	880000	110000	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	11000 U	88000	11000	ug/kg	
91-20-3	Naphthalene	621000	88000	44000	ug/kg	
103-65-1	n-Propylbenzene	122000	88000	23000	ug/kg	
100-42-5	Styrene	76300	88000	20000	ug/kg	J
630-20-6	1,1,1,2-Tetrachloroethane	11000 U	88000	11000	ug/kg	
71-55-6	1,1,1-Trichloroethane	14000 U	88000	14000	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	15000 U	88000	15000	ug/kg	
79-00-5	1,1,2-Trichloroethane	15000 U	88000	15000	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	11000 U	88000	11000	ug/kg	
96-18-4	1,2,3-Trichloropropane	20000 U	88000	20000	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	11000 U	88000	11000	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	758000	88000	8900	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	237000	88000	21000	ug/kg	
127-18-4	Tetrachloroethylene	22000 U	88000	22000	ug/kg	
108-88-3	Toluene	532000	88000	22000	ug/kg	
79-01-6	Trichloroethylene	10000 U	88000	10000	ug/kg	
75-69-4	Trichlorofluoromethane	14000 U	88000	14000	ug/kg	
75-01-4	Vinyl chloride	13000 U	88000	13000	ug/kg	
1330-20-7	Xylene (total)	1460000	260000	61000	ug/kg	
	m,p-Xylene	1080000	180000	39000	ug/kg	
95-47-6	o-Xylene	376000	88000	22000	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		59-126%
2037-26-5	Toluene-D8	97%		70-139%
460-00-4	4-Bromofluorobenzene	81%		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-639		
Lab Sample ID:	TC53933-1	**Date Sampled:**	08/27/14
Matrix:	SO - Oil	**Date Received:**	08/28/14
Method:	SW846 8260C	**Percent Solids:**	n/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	73%		54-123%

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-639		
Lab Sample ID:	TC53933-1	**Date Sampled:**	08/27/14
Matrix:	SO - Oil	**Date Received:**	08/28/14
Method:	SW846 8270D SW846 3580A	**Percent Solids:**	n/a
Project:	CES- Chemical Spill/4904 Griggs, Houston, TX		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	P35354.D	2	09/04/14	SC	09/04/14	OP33797	EP1703
Run #2							

	Initial Weight	Final Volume
Run #1	1.10 g	10.0 ml
Run #2		

ABN Full List

CAS No.	Compound	Result	MQL	SDL	Units	Q
65-85-0	Benzoic acid	150000 U	450000	150000	ug/kg	
95-57-8	2-Chlorophenol	39000 U	91000	39000	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	31000 U	91000	31000	ug/kg	
120-83-2	2,4-Dichlorophenol	29000 U	91000	29000	ug/kg	
105-67-9	2,4-Dimethylphenol	69300	91000	31000	ug/kg	J
51-28-5	2,4-Dinitrophenol	150000 U	450000	150000	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	22000 U	180000	22000	ug/kg	
95-48-7	2-Methylphenol	88900	91000	40000	ug/kg	J
	3&4-Methylphenol	69300	91000	39000	ug/kg	J
88-75-5	2-Nitrophenol	31000 U	91000	31000	ug/kg	
100-02-7	4-Nitrophenol	26000 U	450000	26000	ug/kg	
87-86-5	Pentachlorophenol	68000 U	450000	68000	ug/kg	
108-95-2	Phenol	49100	91000	42000	ug/kg	J
95-95-4	2,4,5-Trichlorophenol	28000 U	91000	28000	ug/kg	
88-06-2	2,4,6-Trichlorophenol	24000 U	91000	24000	ug/kg	
83-32-9	Acenaphthene	43900	91000	26000	ug/kg	J
208-96-8	Acenaphthylene	25000 U	91000	25000	ug/kg	
62-53-3	Aniline	37000 U	450000	37000	ug/kg	
120-12-7	Anthracene	23000 U	91000	23000	ug/kg	
92-87-5	Benzidine	1800000 U	3600000	1800000	ug/kg	
56-55-3	Benzo(a)anthracene	36000 U	91000	36000	ug/kg	
50-32-8	Benzo(a)pyrene	28000 U	91000	28000	ug/kg	
205-99-2	Benzo(b)fluoranthene	23000 U	91000	23000	ug/kg	
191-24-2	Benzo(g,h,i)perylene	25000 U	91000	25000	ug/kg	
207-08-9	Benzo(k)fluoranthene	40000 U	91000	40000	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	28000 U	91000	28000	ug/kg	
85-68-7	Butyl benzyl phthalate	29000 U	91000	29000	ug/kg	
100-51-6	Benzyl Alcohol	36000 U	91000	36000	ug/kg	
91-58-7	2-Chloronaphthalene	27000 U	91000	27000	ug/kg	
106-47-8	4-Chloroaniline	34000 U	91000	34000	ug/kg	
86-74-8	Carbazole	29000 U	91000	29000	ug/kg	
218-01-9	Chrysene	39000 U	91000	39000	ug/kg	

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-639		
Lab Sample ID:	TC53933-1	**Date Sampled:**	08/27/14
Matrix:	SO - Oil	**Date Received:**	08/28/14
Method:	SW846 8270D SW846 3580A	**Percent Solids:**	n/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	29000 U	91000	29000	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	40000 U	91000	40000	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	35000 U	91000	35000	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	35000 U	91000	35000	ug/kg	
95-50-1	1,2-Dichlorobenzene	37000 U	91000	37000	ug/kg	
122-66-7	1,2-Diphenylhydrazine	23000 U	91000	23000	ug/kg	
541-73-1	1,3-Dichlorobenzene	32000 U	91000	32000	ug/kg	
106-46-7	1,4-Dichlorobenzene	34000 U	91000	34000	ug/kg	
121-14-2	2,4-Dinitrotoluene	29000 U	91000	29000	ug/kg	
606-20-2	2,6-Dinitrotoluene	25000 U	91000	25000	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	34000 U	180000	34000	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	32000 U	91000	32000	ug/kg	
132-64-9	Dibenzofuran	30000 U	91000	30000	ug/kg	
84-74-2	Di-n-butyl phthalate	29000 U	91000	29000	ug/kg	
117-84-0	Di-n-octyl phthalate	24000 U	91000	24000	ug/kg	
84-66-2	Diethyl phthalate	27000 U	91000	27000	ug/kg	
131-11-3	Dimethyl phthalate	26000 U	91000	26000	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	73000 U	91000	73000	ug/kg	
206-44-0	Fluoranthene	30000 U	91000	30000	ug/kg	
86-73-7	Fluorene	52900	91000	27000	ug/kg	J
118-74-1	Hexachlorobenzene	29000 U	91000	29000	ug/kg	
87-68-3	Hexachlorobutadiene	33000 U	91000	33000	ug/kg	
77-47-4	Hexachlorocyclopentadiene	43000 U	450000	43000	ug/kg	
67-72-1	Hexachloroethane	33000 U	91000	33000	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	33000 U	91000	33000	ug/kg	
78-59-1	Isophorone	28000 U	91000	28000	ug/kg	
90-12-0	1-Methylnaphthalene	371000	91000	34000	ug/kg	
91-57-6	2-Methylnaphthalene	647000	91000	34000	ug/kg	
88-74-4	2-Nitroaniline	29000 U	91000	29000	ug/kg	
99-09-2	3-Nitroaniline	27000 U	91000	27000	ug/kg	
100-01-6	4-Nitroaniline	30000 U	180000	30000	ug/kg	
91-20-3	Naphthalene	837000	91000	33000	ug/kg	
98-95-3	Nitrobenzene	26000 U	91000	26000	ug/kg	
62-75-9	n-Nitrosodimethylamine	28000 U	91000	28000	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	37000 U	91000	37000	ug/kg	
86-30-6	N-Nitrosodiphenylamine	26000 U	91000	26000	ug/kg	
85-01-8	Phenanthrene	96200	91000	26000	ug/kg	
129-00-0	Pyrene	41000 U	91000	41000	ug/kg	
110-86-1	Pyridine	24000 U	91000	24000	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	33000 U	91000	33000	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-639		
Lab Sample ID:	TC53933-1	**Date Sampled:**	08/27/14
Matrix:	SO - Oil	**Date Received:**	08/28/14
Method:	SW846 8270D SW846 3580A	**Percent Solids:**	n/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	0% [b]		26-124%
4165-62-2	Phenol-d5	0% [b]		19-106%
118-79-6	2,4,6-Tribromophenol	0% [b]		18-129%
4165-60-0	Nitrobenzene-d5	95%		18-104%
321-60-8	2-Fluorobiphenyl	120% [b]		21-114%
1718-51-0	Terphenyl-d14	129%		24-149%

(a) Elevated reporting limits due to matrix interference. Dilution required due to high concentration of non-target compounds.
(b) 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-639		
Lab Sample ID:	TC53933-1	**Date Sampled:**	08/27/14
Matrix:	SO - Oil	**Date Received:**	08/28/14
Method:	SW846 8151 SW846 3580A	**Percent Solids:**	n/a
Project:	CES- Chemical Spill/4904 Griggs, Houston, TX		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DD773031.D	1	09/06/14	FO	09/04/14	OP33826	GDD2393
Run #2							

	Initial Weight	Final Volume
Run #1	1.05 g	10.0 ml
Run #2		

Herbicide List

CAS No.	Compound	Result	MQL	SDL	Units	Q
94-75-7	2,4-D	450 U	950	450	ug/kg	
93-72-1	2,4,5-TP (Silvex)	99 U	190	99	ug/kg	
93-76-5	2,4,5-T	65 U	190	65	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	195% [a]		30-154%

(a) Outside control limits biased high due to matrix interference. Analyte not detected in associated sample.

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-639		
Lab Sample ID:	TC53933-1	**Date Sampled:**	08/27/14
Matrix:	SO - Oil	**Date Received:**	08/28/14
Method:	SW846 8081A SW846 3580A	**Percent Solids:**	n/a
Project:	CES- Chemical Spill/4904 Griggs, Houston, TX		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	NN176451.D	5	09/08/14	SC	09/04/14	OP33792	GNN1479
Run #2	NN176497.D	5	09/08/14	SC	09/04/14	OP33792	GNN1479

	Initial Weight	Final Volume
Run #1	1.07 g	10.0 ml
Run #2	1.07 g	10.0 ml

Pesticide TCL List

CAS No.	Compound	Result	MQL	SDL	Units	Q
309-00-2	Aldrin	81 U	230	81	ug/kg	
319-84-6	alpha-BHC	100 U	230	100	ug/kg	
319-85-7	beta-BHC	70 U	230	70	ug/kg	
319-86-8	delta-BHC	87 U	230	87	ug/kg	
58-89-9	gamma-BHC (Lindane)	86 U	230	86	ug/kg	
5103-71-9	alpha-Chlordane	51 U	230	51	ug/kg	
5103-74-2	gamma-Chlordane	54 U	230	54	ug/kg	
60-57-1	Dieldrin	180 U	470	180	ug/kg	
72-54-8	4,4'-DDD	170 U	470	170	ug/kg	
72-55-9	4,4'-DDE	180 U	470	180	ug/kg	
50-29-3	4,4'-DDT	200 U	470	200	ug/kg	
72-20-8	Endrin	180 U	470	180	ug/kg	
1031-07-8	Endosulfan sulfate	200 U	470	200	ug/kg	
7421-93-4	Endrin aldehyde	200 U [a]	470	200	ug/kg	
53494-70-5	Endrin ketone	180 U	470	180	ug/kg	
959-98-8	Endosulfan-I	100 U	470	100	ug/kg	
33213-65-9	Endosulfan-II	190 U	470	190	ug/kg	
76-44-8	Heptachlor	69 U	230	69	ug/kg	
1024-57-3	Heptachlor epoxide	98 U	230	98	ug/kg	
72-43-5	Methoxychlor	930 U	2300	930	ug/kg	
8001-35-2	Toxaphene	1200 U	2300	1200	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	118%	142%	27-125%
2051-24-3	Decachlorobiphenyl	91%	112%	21-130%

(a) Result is from Run# 2

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-639		
Lab Sample ID:	TC53933-1	**Date Sampled:**	08/27/14
Matrix:	SO - Oil	**Date Received:**	08/28/14
Method:	SW846 8082 SW846 3580A	**Percent Solids:**	n/a
Project:	CES- Chemical Spill/4904 Griggs, Houston, TX		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	MM071483.D	10	09/04/14	SC	09/04/14	OP33788	GMM473
Run #2							

	Initial Weight	Final Volume
Run #1	1.14 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	MQL	SDL	Units	Q
12674-11-2	Aroclor 1016	880 U	4400	880	ug/kg	
11104-28-2	Aroclor 1221	1800 U	4400	1800	ug/kg	
11141-16-5	Aroclor 1232	1800 U	4400	1800	ug/kg	
53469-21-9	Aroclor 1242	900 U	4400	900	ug/kg	
12672-29-6	Aroclor 1248	1000 U	4400	1000	ug/kg	
11097-69-1	Aroclor 1254	1000 U	4400	1000	ug/kg	
11096-82-5	Aroclor 1260	2300 U	4400	2300	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	266% [b]		30-118%
2051-24-3	Decachlorobiphenyl	98%		29-122%

(a) Acid clean-up performed by method 3665A. TBA cleanup performed by method 3660. Dilution required due to matrix interference.
(b) Outside control limits due to dilution.

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-639		
Lab Sample ID:	TC53933-1	**Date Sampled:**	08/27/14
Matrix:	SO - Oil	**Date Received:**	08/28/14
Method:	TNRCC 1005 TX1005	**Percent Solids:**	n/a
Project:	CES- Chemical Spill/4904 Griggs, Houston, TX		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LF104310.D	25	09/04/14	ZL	09/03/14	OP33778	GLF1542
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)	46100	610	330	mg/kg	
	TPH (> C12-C28)	70200	610	340	mg/kg	
	TPH (> C28-C35)	617	610	340	mg/kg	
	TPH (C6-C35)	117000	610	330	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	0% [a]		70-130%
98-08-8	aaa-Trifluorotoluene	0% [a]		70-130%

(a) Outside control limits due to dilution.

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-639		
Lab Sample ID:	TC53933-1	**Date Sampled:**	08/27/14
Matrix:	SO - Oil	**Date Received:**	08/28/14
		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	224	18	2.2	mg/kg	1	09/03/14	09/03/14	NS	SW846 6010B [1]	SW846 3050B [4]
Antimony	0.46	0.46	0.17	mg/kg	1	09/03/14	09/03/14	NS	SW846 6010B [1]	SW846 3050B [4]
Arsenic	4.3	2.3	0.80	mg/kg	5	09/03/14	09/03/14	NS	SW846 6010B [1]	SW846 3050B [4]
Barium	26.9	18	0.023	mg/kg	1	09/03/14	09/03/14	NS	SW846 6010B [1]	SW846 3050B [4]
Beryllium	0.063 U	0.37	0.063	mg/kg	1	09/03/14	09/03/14	NS	SW846 6010B [1]	SW846 3050B [4]
Cadmium	0.15 J	0.37	0.023	mg/kg	1	09/03/14	09/03/14	NS	SW846 6010B [1]	SW846 3050B [4]
Calcium	1040	440	0.69	mg/kg	1	09/04/14	09/05/14	NS	SW846 6010B [3]	SW846 3050B [5]
Chromium	60.3	0.92	0.13	mg/kg	1	09/03/14	09/03/14	NS	SW846 6010B [1]	SW846 3050B [4]
Cobalt	141	4.6	0.037	mg/kg	1	09/03/14	09/03/14	NS	SW846 6010B [1]	SW846 3050B [4]
Copper	131	1.8	0.20	mg/kg	1	09/03/14	09/03/14	NS	SW846 6010B [1]	SW846 3050B [4]
Iron	22600	9.2	1.3	mg/kg	1	09/03/14	09/03/14	NS	SW846 6010B [1]	SW846 3050B [4]
Lead	193	0.28	0.20	mg/kg	1	09/03/14	09/03/14	NS	SW846 6010B [1]	SW846 3050B [4]
Magnesium	903	460	2.5	mg/kg	1	09/03/14	09/03/14	NS	SW846 6010B [1]	SW846 3050B [4]
Manganese	208	1.4	0.036	mg/kg	1	09/03/14	09/03/14	NS	SW846 6010B [1]	SW846 3050B [4]
Mercury	0.20	0.032	0.013	mg/kg	1	09/05/14	09/05/14	CC	SW846 7471A [2]	SW846 7471A [6]
Nickel	57.7	3.7	0.069	mg/kg	1	09/03/14	09/03/14	NS	SW846 6010B [1]	SW846 3050B [4]
Potassium	4440	460	3.9	mg/kg	1	09/03/14	09/03/14	NS	SW846 6010B [1]	SW846 3050B [4]
Selenium	1.1	0.46	0.17	mg/kg	1	09/03/14	09/03/14	NS	SW846 6010B [1]	SW846 3050B [4]
Silver	0.14 J	0.92	0.064	mg/kg	1	09/03/14	09/03/14	NS	SW846 6010B [1]	SW846 3050B [4]
Sodium	27700	460	1.4	mg/kg	1	09/03/14	09/03/14	NS	SW846 6010B [1]	SW846 3050B [4]
Thallium	0.22 U	0.92	0.22	mg/kg	1	09/03/14	09/03/14	NS	SW846 6010B [1]	SW846 3050B [4]
Vanadium	4.0 J	4.6	0.038	mg/kg	1	09/03/14	09/03/14	NS	SW846 6010B [1]	SW846 3050B [4]
Zinc	179	1.8	0.52	mg/kg	1	09/03/14	09/03/14	NS	SW846 6010B [1]	SW846 3050B [4]

(1) Instrument QC Batch: MA10104
(2) Instrument QC Batch: MA10112
(3) Instrument QC Batch: MA10115
(4) Prep QC Batch: MP24130
(5) Prep QC Batch: MP24139
(6) Prep QC Batch: MP24145

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-639		
Lab Sample ID:	TC53933-1	**Date Sampled:**	08/27/14
Matrix:	SO - Oil	**Date Received:**	08/28/14
		Percent Solids:	n/a
Project:	CES- Chemical Spill/4904 Griggs, Houston, TX		

General Chemistry

Analyte	Result	MQL	SDL	Units	DF	Analyzed	By	Method
Cyanide	2.5	0.44	0.24	mg/kg	1	09/03/14 18:19	CV	SW846 9012 M
Heat Content, BTU [a]	3740	100		BTU/lb	1	09/05/14	ANJ	ASTM D240-92
Ignitability (Flashpoint)	120			Deg. F	1	08/28/14	DP	SW846 CHAP7
Sulfide, Neutral Extraction [a]	990	3.7	3.6	mg/kg	1	09/02/14	ANJ	EPA 376.1M/9034 M
pH [b]	13.06			su	1	09/03/14	JG	SW846 9045C

(a) Analysis performed at Accutest Laboratories, Dayton, NJ.
(b) TEMP 21.4 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-639		
Lab Sample ID:	TC53933-1A	**Date Sampled:**	08/27/14
Matrix:	SO - Oil	**Date Received:**	08/28/14
Method:	SW846 8260C SW846 1311	**Percent Solids:**	n/a
Project:	CES- Chemical Spill/4904 Griggs, Houston, TX		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	E0035028.D	100	09/04/14	CF	08/29/14	OP33725	VE1582
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	MQL	SDL	Units	Q
71-43-2	Benzene	6.49	D018	0.50	0.10	0.034	mg/l	
108-90-7	Chlorobenzene	0.027 U	D021	100	0.10	0.027	mg/l	
67-66-3	Chloroform	0.035 U	D022	6.0	0.10	0.035	mg/l	
56-23-5	Carbon tetrachloride	0.043 U	D019	0.50	0.10	0.043	mg/l	
75-35-4	1,1-Dichloroethylene	0.045 U	D029	0.70	0.10	0.045	mg/l	
107-06-2	1,2-Dichloroethane	0.035 U	D028	0.50	0.10	0.035	mg/l	
78-93-3	Methyl ethyl ketone	0.27 U	D035	200	1.0	0.27	mg/l	
127-18-4	Tetrachloroethylene	0.046 U	D039	0.70	0.10	0.046	mg/l	
79-01-6	Trichloroethylene	0.049 U	D040	0.50	0.10	0.049	mg/l	
75-01-4	Vinyl chloride	0.079 U	D043	0.20	0.10	0.079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		72-122%
17060-07-0	1,2-Dichloroethane-D4	85%		68-124%
2037-26-5	Toluene-D8	94%		80-119%
460-00-4	4-Bromofluorobenzene	97%		72-126%

U = Not detected SDL = Sample Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 6/96) 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-639		
Lab Sample ID:	TC53933-1A	**Date Sampled:**	08/27/14
Matrix:	SO - Oil	**Date Received:**	08/28/14
Method:	SW846 8270D SW846 3580A	**Percent Solids:**	n/a
Project:	CES- Chemical Spill/4904 Griggs, Houston, TX		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	O12003.D	1	09/04/14	GJ	09/04/14	OP33794	EO665
Run #2							

	Initial Volume	Final Volume
Run #1	1.0 ml	10.0 ml
Run #2		

ABN TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	MQL	SDL	Units	Q
95-48-7	2-Methylphenol	41.5	D023	200	50	9.6	mg/l	J
	3&4-Methylphenol	33.6	D024	200	50	11	mg/l	J
87-86-5	Pentachlorophenol	100 U	D037	100	250	100	mg/l	
95-95-4	2,4,5-Trichlorophenol	9.8 U	D041	400	50	9.8	mg/l	
88-06-2	2,4,6-Trichlorophenol	11 U	D042	2.0	50	11	mg/l	
106-46-7	1,4-Dichlorobenzene	11 U	D027	7.5	50	11	mg/l	
121-14-2	2,4-Dinitrotoluene	13 U	D030	0.13	50	13	mg/l	
118-74-1	Hexachlorobenzene	16 U	D032	0.13	50	16	mg/l	
87-68-3	Hexachlorobutadiene	12 U	D033	0.50	50	12	mg/l	
67-72-1	Hexachloroethane	13 U	D034	3.0	50	13	mg/l	
98-95-3	Nitrobenzene	12 U	D036	2.0	50	12	mg/l	
110-86-1	Pyridine	13 U	D038	5.0	50	13	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	0% [b]		10-86%
4165-62-2	Phenol-d5	0% [b]		10-83%
118-79-6	2,4,6-Tribromophenol	0% [b]		32-128%
4165-60-0	Nitrobenzene-d5	106%		29-115%
321-60-8	2-Fluorobiphenyl	100%		34-113%
1718-51-0	Terphenyl-d14	106%		23-138%

(a) Elevated reporting limits due to waste dilution; final volume 10 ml.
(b) Outside control limits due to waste dilution.

U = Not detected SDL = Sample Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 6/96) 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-639		
Lab Sample ID:	TC53933-1A	**Date Sampled:**	08/27/14
Matrix:	SO - Oil	**Date Received:**	08/28/14
Method:	SW846 8151 SW846 3580A	**Percent Solids:**	n/a
Project:	CES- Chemical Spill/4904 Griggs, Houston, TX		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DD773019.D	1	09/06/14	FO	09/05/14	OP33827	GDD2393
Run #2							

	Initial Volume	Final Volume
Run #1	1.0 ml	10.0 ml
Run #2		

Herbicide TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	MQL	SDL	Units	Q
94-75-7	2,4-D	0.14 U	D016	10	1.0	0.14	mg/l	
93-72-1	2,4,5-TP (Silvex)	0.040 U	D017	1.0	0.20	0.040	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	70%		40-168%

U = Not detected SDL = Sample Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 6/96) 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-639		
Lab Sample ID:	TC53933-1A	**Date Sampled:**	08/27/14
Matrix:	SO - Oil	**Date Received:**	08/28/14
Method:	SW846 8081A SW846 3580A	**Percent Solids:**	n/a
Project:	CES- Chemical Spill/4904 Griggs, Houston, TX		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	NN176485.D	5	09/08/14	SC	09/05/14	OP33829	GNN1479
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	10.0 ml
Run #2		

Pesticide TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	MQL	SDL	Units	Q
58-89-9	gamma-BHC (Lindane)	0.00086 U	D013	0.40	0.0025	0.00086	mg/l	
12789-03-6	Chlordane	0.0073 U	D020	0.030	0.025	0.0073	mg/l	
72-20-8	Endrin	0.00089 U	D012	0.020	0.0050	0.00089	mg/l	
76-44-8	Heptachlor	0.00042 U	D031	0.0080	0.0025	0.00042	mg/l	
1024-57-3	Heptachlor epoxide	0.00057 U	D031	0.0080	0.0025	0.00057	mg/l	
72-43-5	Methoxychlor	0.0064 U	D014	10	0.025	0.0064	mg/l	
8001-35-2	Toxaphene	0.0062 U	D015	0.50	0.025	0.0062	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	73%		39-122%
2051-24-3	Decachlorobiphenyl	69%		28-123%

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

U = Not detected SDL = Sample Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 6/96) 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-639		
Lab Sample ID:	TC53933-1A	**Date Sampled:**	08/27/14
Matrix:	SO - Oil	**Date Received:**	08/28/14
		Percent Solids:	n/a
Project:	CES- Chemical Spill/4904 Griggs, Houston, TX		

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	MQL	SDL	Units	DF	Prep	Analyzed	By	Method
Arsenic	0.57 J	D004	5.0	2.5	0.25	mg/l	5	08/29/14	09/02/14	NS	SW846 6010B [2]
Barium	1.2 J	D005	100	250	0.86	mg/l	5	08/29/14	09/02/14	NS	SW846 6010B [2]
Cadmium	0.023 U	D006	1.0	1.0	0.023	mg/l	5	08/29/14	09/02/14	NS	SW846 6010B [2]
Chromium	3.2	D007	5.0	2.5	0.068	mg/l	5	08/29/14	09/02/14	NS	SW846 6010B [2]
Lead	11.4	D008	5.0	1.3	0.45	mg/l	5	08/29/14	09/02/14	NS	SW846 6010B [2]
Mercury	0.0052	D009	0.20	0.0040	0.0010	mg/l	1	09/02/14	09/02/14	CC	SW846 7470A [1]
Selenium	0.25 U	D010	1.0	13	0.25	mg/l	5	08/29/14	09/02/14	NS	SW846 6010B [2]
Silver	0.060 U	D011	5.0	2.5	0.060	mg/l	5	08/29/14	09/02/14	NS	SW846 6010B [2]

(1) Instrument QC Batch: MA10095
(2) Instrument QC Batch: MA10096
(3) Prep QC Batch: MP24117
(4) Prep QC Batch: MP24125

MQL = Method Quantitation Limit SDL = Sample Detection Limit U = Indicates a result < SDL
MCL = Maximum Contamination Level (40 CFR 261 6/96) J = Indicates a result > = SDL but < MQL

Report of Analysis

Client Sample ID:	VB-618		
Lab Sample ID:	TC53933-2	**Date Sampled:**	08/28/14
Matrix:	SO - Sludge	**Date Received:**	08/28/14
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	CES- Chemical Spill/4904 Griggs, Houston, TX		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Y1070603.D	10	09/04/14	KS	n/a	n/a	VY3741
Run #2 [a]	X0102184.D	100	09/12/14	KS	n/a	n/a	VX2322

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	1.12 g	5.0 ml	100 ul
Run #2	1.12 g	5.0 ml	100 ul

VOA 8260 List

CAS No.	Compound	Result	MQL	SDL	Units	Q
67-64-1	Acetone	49300	89000	22000	ug/kg	J
71-43-2	Benzene	151000	8900	1500	ug/kg	
108-86-1	Bromobenzene	900 U	8900	900	ug/kg	
74-97-5	Bromochloromethane	2400 U	8900	2400	ug/kg	
75-27-4	Bromodichloromethane	1000 U	8900	1000	ug/kg	
75-25-2	Bromoform	1700 U	8900	1700	ug/kg	
104-51-8	n-Butylbenzene	980 U	8900	980	ug/kg	
135-98-8	sec-Butylbenzene	36200	8900	1900	ug/kg	
98-06-6	tert-Butylbenzene	1700 U	8900	1700	ug/kg	
108-90-7	Chlorobenzene	2100 U	8900	2100	ug/kg	
75-00-3	Chloroethane	3500 U	8900	3500	ug/kg	
67-66-3	Chloroform	3230	8900	960	ug/kg	J
95-49-8	o-Chlorotoluene	1100 U	8900	1100	ug/kg	
106-43-4	p-Chlorotoluene	920 U	8900	920	ug/kg	
75-15-0	Carbon disulfide	5180	8900	1300	ug/kg	J
56-23-5	Carbon tetrachloride	1900 U	8900	1900	ug/kg	
75-34-3	1,1-Dichloroethane	910 U	8900	910	ug/kg	
75-35-4	1,1-Dichloroethylene	930 U	8900	930	ug/kg	
563-58-6	1,1-Dichloropropene	1000 U	8900	1000	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	7100 U	8900	7100	ug/kg	
106-93-4	1,2-Dibromoethane	940 U	8900	940	ug/kg	
107-06-2	1,2-Dichloroethane	1100 U	8900	1100	ug/kg	
78-87-5	1,2-Dichloropropane	1300 U	8900	1300	ug/kg	
142-28-9	1,3-Dichloropropane	2300 U	8900	2300	ug/kg	
594-20-7	2,2-Dichloropropane	1200 U	8900	1200	ug/kg	
124-48-1	Dibromochloromethane	2000 U	8900	2000	ug/kg	
75-71-8	Dichlorodifluoromethane	2500 U	8900	2500	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	1000 U	8900	1000	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	1000 U	8900	1000	ug/kg	
541-73-1	m-Dichlorobenzene	1400 U	8900	1400	ug/kg	
95-50-1	o-Dichlorobenzene	2200 U	8900	2200	ug/kg	
106-46-7	p-Dichlorobenzene	1900 U	8900	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-618		
Lab Sample ID:	TC53933-2	**Date Sampled:**	08/28/14
Matrix:	SO - Sludge	**Date Received:**	08/28/14
Method:	SW846 8260C	**Percent Solids:**	n/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	8900	980	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	1100 U	8900	1100	ug/kg	
100-41-4	Ethylbenzene	260000	8900	2200	ug/kg	
591-78-6	2-Hexanone	17000 U	89000	17000	ug/kg	
87-68-3	Hexachlorobutadiene	1500 U	8900	1500	ug/kg	
98-82-8	Isopropylbenzene	70800	8900	2500	ug/kg	
99-87-6	p-Isopropyltoluene	30800	8900	2900	ug/kg	
108-10-1	4-Methyl-2-pentanone	14000 U	89000	14000	ug/kg	
74-83-9	Methyl bromide	4100 U	8900	4100	ug/kg	
74-87-3	Methyl chloride	1700 U	8900	1700	ug/kg	
74-95-3	Methylene bromide	1400 U	8900	1400	ug/kg	
75-09-2	Methylene chloride	5600 U	22000	5600	ug/kg	
78-93-3	Methyl ethyl ketone	11000 U	89000	11000	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	1100 U	8900	1100	ug/kg	
91-20-3	Naphthalene	371000	8900	4500	ug/kg	
103-65-1	n-Propylbenzene	111000	8900	2300	ug/kg	
100-42-5	Styrene	2100 U	8900	2100	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	1100 U	8900	1100	ug/kg	
71-55-6	1,1,1-Trichloroethane	1400 U	8900	1400	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	1500 U	8900	1500	ug/kg	
79-00-5	1,1,2-Trichloroethane	1500 U	8900	1500	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	1200 U	8900	1200	ug/kg	
96-18-4	1,2,3-Trichloropropane	2000 U	8900	2000	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	1100 U	8900	1100	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	591000 [b]	89000	9000	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	192000	8900	2100	ug/kg	
127-18-4	Tetrachloroethylene	2300 U	8900	2300	ug/kg	
108-88-3	Toluene	522000 [b]	89000	23000	ug/kg	
79-01-6	Trichloroethylene	1000 U	8900	1000	ug/kg	
75-69-4	Trichlorofluoromethane	1400 U	8900	1400	ug/kg	
75-01-4	Vinyl chloride	1300 U	8900	1300	ug/kg	
1330-20-7	Xylene (total)	1230000 [b]	270000	62000	ug/kg	
	m,p-Xylene	899000 [b]	180000	40000	ug/kg	
95-47-6	o-Xylene	354000	8900	2300	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%	108%	59-126%
2037-26-5	Toluene-D8	102%	111%	70-139%
460-00-4	4-Bromofluorobenzene	74%	108%	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-618		
Lab Sample ID:	TC53933-2	**Date Sampled:**	08/28/14
Matrix:	SO - Sludge	**Date Received:**	08/28/14
Method:	SW846 8260C	**Percent Solids:**	n/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	75%	102%	54-123%

(a) Sample dilution required. Analyzed beyond hold time.
(b) 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-618		
Lab Sample ID:	TC53933-2	**Date Sampled:**	08/28/14
Matrix:	SO - Sludge	**Date Received:**	08/28/14
Method:	SW846 8270D SW846 3550B	**Percent Solids:**	n/a
Project:	CES- Chemical Spill/4904 Griggs, Houston, TX		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	P35353.D	2	09/04/14	SC	09/04/14	OP33787	EP1703
Run #2							

	Initial Weight	Final Volume
Run #1	3.05 g	10.0 ml
Run #2		

ABN Full List

CAS No.	Compound	Result	MQL	SDL	Units	Q
65-85-0	Benzoic acid	77200	160000	52000	ug/kg	J
95-57-8	2-Chlorophenol	14000 U	33000	14000	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	11000 U	33000	11000	ug/kg	
120-83-2	2,4-Dichlorophenol	10000 U	33000	10000	ug/kg	
105-67-9	2,4-Dimethylphenol	121000	33000	11000	ug/kg	
51-28-5	2,4-Dinitrophenol	52000 U	160000	52000	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	7800 U	66000	7800	ug/kg	
95-48-7	2-Methylphenol	212000	33000	14000	ug/kg	
	3&4-Methylphenol	196000	33000	14000	ug/kg	
88-75-5	2-Nitrophenol	11000 U	33000	11000	ug/kg	
100-02-7	4-Nitrophenol	9300 U	160000	9300	ug/kg	
87-86-5	Pentachlorophenol	24000 U	160000	24000	ug/kg	
108-95-2	Phenol	200000	33000	15000	ug/kg	
95-95-4	2,4,5-Trichlorophenol	10000 U	33000	10000	ug/kg	
88-06-2	2,4,6-Trichlorophenol	8600 U	33000	8600	ug/kg	
83-32-9	Acenaphthene	29700	33000	9400	ug/kg	J
208-96-8	Acenaphthylene	8900 U	33000	8900	ug/kg	
62-53-3	Aniline	13000 U	160000	13000	ug/kg	
120-12-7	Anthracene	11000	33000	8300	ug/kg	J
92-87-5	Benzidine	640000 U	1300000	640000	ug/kg	
56-55-3	Benzo(a)anthracene	13000 U	33000	13000	ug/kg	
50-32-8	Benzo(a)pyrene	10000 U	33000	10000	ug/kg	
205-99-2	Benzo(b)fluoranthene	8300 U	33000	8300	ug/kg	
191-24-2	Benzo(g,h,i)perylene	8900 U	33000	8900	ug/kg	
207-08-9	Benzo(k)fluoranthene	14000 U	33000	14000	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	10000 U	33000	10000	ug/kg	
85-68-7	Butyl benzyl phthalate	11000 U	33000	11000	ug/kg	
100-51-6	Benzyl Alcohol	13000 U	33000	13000	ug/kg	
91-58-7	2-Chloronaphthalene	9600 U	33000	9600	ug/kg	
106-47-8	4-Chloroaniline	12000 U	33000	12000	ug/kg	
86-74-8	Carbazole	12100	33000	10000	ug/kg	J
218-01-9	Chrysene	14000 U	33000	14000	ug/kg	

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-618		
Lab Sample ID:	TC53933-2	**Date Sampled:**	08/28/14
Matrix:	SO - Sludge	**Date Received:**	08/28/14
Method:	SW846 8270D SW846 3550B	**Percent Solids:**	n/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	10000 U	33000	10000	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	14000 U	33000	14000	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	13000 U	33000	13000	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	13000 U	33000	13000	ug/kg	
95-50-1	1,2-Dichlorobenzene	13000 U	33000	13000	ug/kg	
122-66-7	1,2-Diphenylhydrazine	8300 U	33000	8300	ug/kg	
541-73-1	1,3-Dichlorobenzene	12000 U	33000	12000	ug/kg	
106-46-7	1,4-Dichlorobenzene	12000 U	33000	12000	ug/kg	
121-14-2	2,4-Dinitrotoluene	10000 U	33000	10000	ug/kg	
606-20-2	2,6-Dinitrotoluene	9000 U	33000	9000	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	12000 U	66000	12000	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	11000 U	33000	11000	ug/kg	
132-64-9	Dibenzofuran	20500	33000	11000	ug/kg	J
84-74-2	Di-n-butyl phthalate	10000 U	33000	10000	ug/kg	
117-84-0	Di-n-octyl phthalate	8700 U	33000	8700	ug/kg	
84-66-2	Diethyl phthalate	9600 U	33000	9600	ug/kg	
131-11-3	Dimethyl phthalate	9400 U	33000	9400	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	26000 U	33000	26000	ug/kg	
206-44-0	Fluoranthene	11000 U	33000	11000	ug/kg	
86-73-7	Fluorene	51100	33000	9800	ug/kg	
118-74-1	Hexachlorobenzene	11000 U	33000	11000	ug/kg	
87-68-3	Hexachlorobutadiene	12000 U	33000	12000	ug/kg	
77-47-4	Hexachlorocyclopentadiene	16000 U	160000	16000	ug/kg	
67-72-1	Hexachloroethane	12000 U	33000	12000	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	12000 U	33000	12000	ug/kg	
78-59-1	Isophorone	10000 U	33000	10000	ug/kg	
90-12-0	1-Methylnaphthalene	463000	33000	12000	ug/kg	
91-57-6	2-Methylnaphthalene	431000	33000	12000	ug/kg	
88-74-4	2-Nitroaniline	10000 U	33000	10000	ug/kg	
99-09-2	3-Nitroaniline	9600 U	33000	9600	ug/kg	
100-01-6	4-Nitroaniline	11000 U	66000	11000	ug/kg	
91-20-3	Naphthalene	470000	33000	12000	ug/kg	
98-95-3	Nitrobenzene	9400 U	33000	9400	ug/kg	
62-75-9	n-Nitrosodimethylamine	10000 U	33000	10000	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	13000 U	33000	13000	ug/kg	
86-30-6	N-Nitrosodiphenylamine	9300 U	33000	9300	ug/kg	
85-01-8	Phenanthrene	86600	33000	9300	ug/kg	
129-00-0	Pyrene	22800	33000	15000	ug/kg	J
110-86-1	Pyridine	8700 U	33000	8700	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	12000 U	33000	12000	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-618		
Lab Sample ID:	TC53933-2	**Date Sampled:**	08/28/14
Matrix:	SO - Sludge	**Date Received:**	08/28/14
Method:	SW846 8270D SW846 3550B	**Percent Solids:**	n/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	25% [b]		26-124%
4165-62-2	Phenol-d5	58%		19-106%
118-79-6	2,4,6-Tribromophenol	22%		18-129%
4165-60-0	Nitrobenzene-d5	59%		18-104%
321-60-8	2-Fluorobiphenyl	94%		21-114%
1718-51-0	Terphenyl-d14	107%		24-149%

(a) Elevated reporting limits due to matrix interference, final volume 10 ml. Dilution required due to high concentration of non-target compounds.
(b) 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-618		
Lab Sample ID:	TC53933-2	**Date Sampled:**	08/28/14
Matrix:	SO - Sludge	**Date Received:**	08/28/14
Method:	SW846 8151 SW846 3550B	**Percent Solids:**	n/a
Project:	CES- Chemical Spill/4904 Griggs, Houston, TX		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DD773082.D	25	09/08/14	FO	09/03/14	OP33773	GDD2393
Run #2							

	Initial Weight	Final Volume
Run #1	3.01 g	10.0 ml
Run #2		

Herbicide List

CAS No.	Compound	Result	MQL	SDL	Units	Q
94-75-7	2,4-D	3900 U	8300	3900	ug/kg	
93-72-1	2,4,5-TP (Silvex)	860 U	1700	860	ug/kg	
93-76-5	2,4,5-T	560 U	1700	560	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	642% [a]		30-154%

(a) Outside control limits biased high due to matrix interference. Analyte not detected in associated sample.

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-618		
Lab Sample ID:	TC53933-2	**Date Sampled:**	08/28/14
Matrix:	SO - Sludge	**Date Received:**	08/28/14
Method:	SW846 8081A SW846 3550B	**Percent Solids:**	n/a
Project:	CES- Chemical Spill/4904 Griggs, Houston, TX		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	NN176342.D	25	09/05/14	SC	09/03/14	OP33770	GNN1476
Run #2 [a]	NN176450.D	25	09/08/14	SC	09/03/14	OP33770	GNN1479

	Initial Weight	Final Volume
Run #1	30.0 g	10.0 ml
Run #2	3.34 g	10.0 ml

Pesticide TCL List

CAS No.	Compound	Result	MQL	SDL	Units	Q
309-00-2	Aldrin	14 U	42	14	ug/kg	
319-84-6	alpha-BHC	18 U	42	18	ug/kg	
319-85-7	beta-BHC	12 U	42	12	ug/kg	
319-86-8	delta-BHC	15 U	42	15	ug/kg	
58-89-9	gamma-BHC (Lindane)	15 U	42	15	ug/kg	
5103-71-9	alpha-Chlordane	9.1 U	42	9.1	ug/kg	
5103-74-2	gamma-Chlordane	9.7 U	42	9.7	ug/kg	
60-57-1	Dieldrin	33 U	83	33	ug/kg	
72-54-8	4,4'-DDD	30 U	83	30	ug/kg	
72-55-9	4,4'-DDE	31 U	83	31	ug/kg	
50-29-3	4,4'-DDT	320 U [b]	750	320	ug/kg	
72-20-8	Endrin	32 U	83	32	ug/kg	
1031-07-8	Endosulfan sulfate	36 U	83	36	ug/kg	
7421-93-4	Endrin aldehyde	35 U	83	35	ug/kg	
53494-70-5	Endrin ketone	33 U	83	33	ug/kg	
959-98-8	Endosulfan-I	18 U	83	18	ug/kg	
33213-65-9	Endosulfan-II	136	83	34	ug/kg	
76-44-8	Heptachlor	12 U	42	12	ug/kg	
1024-57-3	Heptachlor epoxide	17 U	42	17	ug/kg	
72-43-5	Methoxychlor	1500 U [b]	3700	1500	ug/kg	
8001-35-2	Toxaphene	210 U	420	210	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	0% [c]	931% [c]	27-125%
2051-24-3	Decachlorobiphenyl	0% [c]	48%	21-130%

(a) TBA clean-up performed by method 3660B.
(b) Result is from Run# 2
(c) Outside control limits due to dilution.

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-618		
Lab Sample ID:	TC53933-2	**Date Sampled:**	08/28/14
Matrix:	SO - Sludge	**Date Received:**	08/28/14
Method:	SW846 8082 SW846 3550B	**Percent Solids:**	n/a
Project:	CES- Chemical Spill/4904 Griggs, Houston, TX		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	MM071508.D	25	09/05/14	SC	09/03/14	OP33769	GMM474
Run #2							

	Initial Weight	Final Volume
Run #1	3.34 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	MQL	SDL	Units	Q
12674-11-2	Aroclor 1016	750 U	3700	750	ug/kg	
11104-28-2	Aroclor 1221	1500 U	3700	1500	ug/kg	
11141-16-5	Aroclor 1232	1500 U	3700	1500	ug/kg	
53469-21-9	Aroclor 1242	770 U	3700	770	ug/kg	
12672-29-6	Aroclor 1248	890 U	3700	890	ug/kg	
11097-69-1	Aroclor 1254	870 U	3700	870	ug/kg	
11096-82-5	Aroclor 1260	1900 U	3700	1900	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	0% [b]		30-118%
2051-24-3	Decachlorobiphenyl	79%		29-122%

(a) Dilution required due to matrix interference.
(b) 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-618		
Lab Sample ID:	TC53933-2	**Date Sampled:**	08/28/14
Matrix:	SO - Sludge	**Date Received:**	08/28/14
Method:	TNRCC 1005 TX1005	**Percent Solids:**	n/a
Project:	CES- Chemical Spill/4904 Griggs, Houston, TX		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	VB14707.D	25	09/03/14	ZL	09/02/14	OP33760	GVB343
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)	36500	610	330	mg/kg	
	TPH (> C12-C28)	89100	610	340	mg/kg	
	TPH (> C28-C35)	2380	610	340	mg/kg	
	TPH (C6-C35)	128000	610	330	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	126%		70-130%
98-08-8	aaa-Trifluorotoluene	130%		70-130%

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-618		
Lab Sample ID:	TC53933-2	**Date Sampled:**	08/28/14
Matrix:	SO - Sludge	**Date Received:**	08/28/14
		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	1360	17	2.1	mg/kg	1	09/03/14	09/03/14	NS	SW846 6010B [1]	SW846 3050B [4]
Antimony	0.58	0.42	0.15	mg/kg	1	09/03/14	09/03/14	NS	SW846 6010B [1]	SW846 3050B [4]
Arsenic	4.3	2.1	0.74	mg/kg	5	09/03/14	09/03/14	NS	SW846 6010B [1]	SW846 3050B [4]
Barium	71.4	17	0.021	mg/kg	1	09/03/14	09/03/14	NS	SW846 6010B [1]	SW846 3050B [4]
Beryllium	0.058 U	0.34	0.058	mg/kg	1	09/03/14	09/03/14	NS	SW846 6010B [1]	SW846 3050B [4]
Cadmium	0.15 J	0.34	0.021	mg/kg	1	09/03/14	09/03/14	NS	SW846 6010B [1]	SW846 3050B [4]
Calcium [a]	7110	1300	2.1	mg/kg	5	09/04/14	09/05/14	NS	SW846 6010B [3]	SW846 3050B [5]
Chromium	53.5	0.85	0.12	mg/kg	1	09/03/14	09/03/14	NS	SW846 6010B [1]	SW846 3050B [4]
Cobalt	119	4.2	0.034	mg/kg	1	09/03/14	09/03/14	NS	SW846 6010B [1]	SW846 3050B [4]
Copper	130	1.7	0.19	mg/kg	1	09/03/14	09/03/14	NS	SW846 6010B [1]	SW846 3050B [4]
Iron	18200	8.5	1.2	mg/kg	1	09/03/14	09/03/14	NS	SW846 6010B [1]	SW846 3050B [4]
Lead	148	0.25	0.19	mg/kg	1	09/03/14	09/03/14	NS	SW846 6010B [1]	SW846 3050B [4]
Magnesium	960	420	2.3	mg/kg	1	09/03/14	09/03/14	NS	SW846 6010B [1]	SW846 3050B [4]
Manganese	167	1.3	0.033	mg/kg	1	09/03/14	09/03/14	NS	SW846 6010B [1]	SW846 3050B [4]
Mercury	0.59	0.033	0.013	mg/kg	1	09/05/14	09/05/14	CC	SW846 7471A [2]	SW846 7471A [6]
Nickel	55.7	3.4	0.064	mg/kg	1	09/03/14	09/03/14	NS	SW846 6010B [1]	SW846 3050B [4]
Potassium	1550	420	3.6	mg/kg	1	09/03/14	09/03/14	NS	SW846 6010B [1]	SW846 3050B [4]
Selenium	1.1	0.42	0.16	mg/kg	1	09/03/14	09/03/14	NS	SW846 6010B [1]	SW846 3050B [4]
Silver	0.22 J	0.85	0.058	mg/kg	1	09/03/14	09/03/14	NS	SW846 6010B [1]	SW846 3050B [4]
Sodium	30800	420	1.3	mg/kg	1	09/03/14	09/03/14	NS	SW846 6010B [1]	SW846 3050B [4]
Thallium [b]	0.99 U	4.2	0.99	mg/kg	5	09/03/14	09/03/14	NS	SW846 6010B [1]	SW846 3050B [4]
Vanadium	3.4 J	4.2	0.035	mg/kg	1	09/03/14	09/03/14	NS	SW846 6010B [1]	SW846 3050B [4]
Zinc	199	1.7	0.48	mg/kg	1	09/03/14	09/03/14	NS	SW846 6010B [1]	SW846 3050B [4]

(1) Instrument QC Batch: MA10104
(2) Instrument QC Batch: MA10112
(3) Instrument QC Batch: MA10115
(4) Prep QC Batch: MP24130
(5) Prep QC Batch: MP24139
(6) Prep QC Batch: MP24145

(a) Elevated reporting limit due to dilution required for high interfering element.
(b) Elevated reporting limit due to dilution required for matrix interference.

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-618		
Lab Sample ID:	TC53933-2	**Date Sampled:**	08/28/14
Matrix:	SO - Sludge	**Date Received:**	08/28/14
		Percent Solids:	n/a
Project:	CES- Chemical Spill/4904 Griggs, Houston, TX		

General Chemistry

Analyte	Result	MQL	SDL	Units	DF	Analyzed	By	Method
Cyanide	0.81	0.46	0.26	mg/kg	1	09/03/14 18:21	CV	SW846 9012 M
Heat Content, BTU [a]	3340	100		BTU/lb	1	09/05/14	ANJ	ASTM D240-92
Ignitability (Flashpoint)	> 200			Deg. F	1	08/28/14	DP	SW846 CHAP7
Sulfide, Neutral Extraction [a]	4970	4.0	3.8	mg/kg	1	09/02/14	ANJ	EPA 376.1M/9034 M
pH [b]	11.61			su	1	09/03/14	JG	SW846 9045C

(a) Analysis performed at Accutest Laboratories, Dayton, NJ.
(b) TEMP 21.1 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-618		
Lab Sample ID:	TC53933-2A	**Date Sampled:**	08/28/14
Matrix:	SO - Sludge	**Date Received:**	08/28/14
Method:	SW846 8260C SW846 1311	**Percent Solids:**	n/a
Project:	CES- Chemical Spill/4904 Griggs, Houston, TX		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	E0035067.D	100	09/05/14	CF	08/29/14	OP33725	VE1585
Run #2	E0035068.D	1000	09/05/14	CF	08/29/14	OP33725	VE1585

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	MQL	SDL	Units	Q
71-43-2	Benzene	21.5 [a]	D018	0.50	1.0	0.34	mg/l	
108-90-7	Chlorobenzene	0.027 U	D021	100	0.10	0.027	mg/l	
67-66-3	Chloroform	0.035 U	D022	6.0	0.10	0.035	mg/l	
56-23-5	Carbon tetrachloride	0.043 U	D019	0.50	0.10	0.043	mg/l	
75-35-4	1,1-Dichloroethylene	0.045 U	D029	0.70	0.10	0.045	mg/l	
107-06-2	1,2-Dichloroethane	0.035 U	D028	0.50	0.10	0.035	mg/l	
78-93-3	Methyl ethyl ketone	0.27 U	D035	200	1.0	0.27	mg/l	
127-18-4	Tetrachloroethylene	0.128	D039	0.70	0.10	0.046	mg/l	
79-01-6	Trichloroethylene	0.049 U	D040	0.50	0.10	0.049	mg/l	
75-01-4	Vinyl chloride	0.079 U	D043	0.20	0.10	0.079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	91%	91%	72-122%
17060-07-0	1,2-Dichloroethane-D4	78%	85%	68-124%
2037-26-5	Toluene-D8	96%	92%	80-119%
460-00-4	4-Bromofluorobenzene	103%	98%	72-126%

(a) Result is from Run# 2

U = Not detected SDL = Sample Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 6/96) 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-618		
Lab Sample ID:	TC53933-2A	**Date Sampled:**	08/28/14
Matrix:	SO - Sludge	**Date Received:**	08/28/14
Method:	SW846 8270D SW846 3580A	**Percent Solids:**	n/a
Project:	CES- Chemical Spill/4904 Griggs, Houston, TX		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	O12002.D	1	09/04/14	GJ	09/04/14	OP33794	EO665
Run #2							

	Initial Volume	Final Volume
Run #1	1.0 ml	10.0 ml
Run #2		

ABN TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	MQL	SDL	Units	Q
95-48-7	2-Methylphenol	113	D023	200	50	9.6	mg/l	
	3&4-Methylphenol	93.5	D024	200	50	11	mg/l	
87-86-5	Pentachlorophenol	100 U	D037	100	250	100	mg/l	
95-95-4	2,4,5-Trichlorophenol	9.8 U	D041	400	50	9.8	mg/l	
88-06-2	2,4,6-Trichlorophenol	11 U	D042	2.0	50	11	mg/l	
106-46-7	1,4-Dichlorobenzene	11 U	D027	7.5	50	11	mg/l	
121-14-2	2,4-Dinitrotoluene	13 U	D030	0.13	50	13	mg/l	
118-74-1	Hexachlorobenzene	16 U	D032	0.13	50	16	mg/l	
87-68-3	Hexachlorobutadiene	12 U	D033	0.50	50	12	mg/l	
67-72-1	Hexachloroethane	13 U	D034	3.0	50	13	mg/l	
98-95-3	Nitrobenzene	12 U	D036	2.0	50	12	mg/l	
110-86-1	Pyridine	13 U	D038	5.0	50	13	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	0% [b]		10-86%
4165-62-2	Phenol-d5	17%		10-83%
118-79-6	2,4,6-Tribromophenol	0% [b]		32-128%
4165-60-0	Nitrobenzene-d5	192% [b]		29-115%
321-60-8	2-Fluorobiphenyl	157% [b]		34-113%
1718-51-0	Terphenyl-d14	186% [b]		23-138%

(a) Elevated reporting limits due to waste dilution; final volume 10 ml.
(b) Outside control limits due to waste dilution.

U = Not detected SDL = Sample Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 6/96) 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-618		
Lab Sample ID:	TC53933-2A	**Date Sampled:**	08/28/14
Matrix:	SO - Sludge	**Date Received:**	08/28/14
Method:	SW846 8151 SW846 3580A	**Percent Solids:**	n/a
Project:	CES- Chemical Spill/4904 Griggs, Houston, TX		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DD773021.D	1	09/06/14	FO	09/05/14	OP33827	GDD2393
Run #2							

	Initial Volume	Final Volume
Run #1	1.0 ml	10.0 ml
Run #2		

Herbicide TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	MQL	SDL	Units	Q
94-75-7	2,4-D	0.14 U	D016	10	1.0	0.14	mg/l	
93-72-1	2,4,5-TP (Silvex)	0.040 U	D017	1.0	0.20	0.040	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	63%		40-168%

U = Not detected SDL = Sample Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 6/96) 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-618		
Lab Sample ID:	TC53933-2A	**Date Sampled:**	08/28/14
Matrix:	SO - Sludge	**Date Received:**	08/28/14
Method:	SW846 8081A SW846 3580A	**Percent Solids:**	n/a
Project:	CES- Chemical Spill/4904 Griggs, Houston, TX		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	NN176488.D	25	09/08/14	SC	09/05/14	OP33829	GNN1479
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	10.0 ml
Run #2		

Pesticide TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	MQL	SDL	Units	Q
58-89-9	gamma-BHC (Lindane)	0.0043 U	D013	0.40	0.013	0.0043	mg/l	
12789-03-6	Chlordane	0.037 U	D020	0.030	0.13	0.037	mg/l	
72-20-8	Endrin	0.0045 U	D012	0.020	0.025	0.0045	mg/l	
76-44-8	Heptachlor	0.0021 U	D031	0.0080	0.013	0.0021	mg/l	
1024-57-3	Heptachlor epoxide	0.0028 U	D031	0.0080	0.013	0.0028	mg/l	
72-43-5	Methoxychlor	0.032 U	D014	10	0.13	0.032	mg/l	
8001-35-2	Toxaphene	0.031 U	D015	0.50	0.13	0.031	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	1149% [b]		39-122%
2051-24-3	Decachlorobiphenyl	82%		28-123%

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

U = Not detected SDL = Sample Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 6/96) 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-618		
Lab Sample ID:	TC53933-2A	**Date Sampled:**	08/28/14
Matrix:	SO - Sludge	**Date Received:**	08/28/14
		Percent Solids:	n/a
Project:	CES- Chemical Spill/4904 Griggs, Houston, TX		

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	MQL	SDL	Units	DF	Prep	Analyzed	By	Method
Arsenic	1.8 J	D004	5.0	2.5	0.25	mg/l	5	08/29/14	09/02/14	NS	SW846 6010B [2]
Barium	10.4 J	D005	100	250	0.86	mg/l	5	08/29/14	09/02/14	NS	SW846 6010B [2]
Cadmium	0.11 J	D006	1.0	1.0	0.023	mg/l	5	08/29/14	09/02/14	NS	SW846 6010B [2]
Chromium	12.8	D007	5.0	2.5	0.068	mg/l	5	08/29/14	09/02/14	NS	SW846 6010B [2]
Lead	37.8	D008	5.0	1.3	0.45	mg/l	5	08/29/14	09/02/14	NS	SW846 6010B [2]
Mercury	0.020	D009	0.20	0.0040	0.0010	mg/l	1	09/02/14	09/02/14	CC	SW846 7470A [1]
Selenium	0.25 U	D010	1.0	13	0.25	mg/l	5	08/29/14	09/02/14	NS	SW846 6010B [2]
Silver	0.060 U	D011	5.0	2.5	0.060	mg/l	5	08/29/14	09/02/14	NS	SW846 6010B [2]

(1) Instrument QC Batch: MA10095
(2) Instrument QC Batch: MA10096
(3) Prep QC Batch: MP24117
(4) Prep QC Batch: MP24125

MQL = Method Quantitation Limit SDL = Sample Detection Limit U = Indicates a result < SDL
MCL = Maximum Contamination Level (40 CFR 261 6/96) J = Indicates a result > = SDL but < MQL

Gulf Coast ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY

ACCUTEST Laboratories

10165 Harwin Dr, Ste 150 Houston, TX 77036
TEL 713-271-4700 FAX 713-271-4770
www.accutest.com

PAGE 1 OF 1

FED-EX Tracking #:
Bottle Order Control #:
Accutest Quote #:
Accutest Job #: TC53933

Client / Reporting Information

Company Name: Weston Solutions, Inc.
Street Address: 5599 San Felipe, Suite 700
City / State / Zip: Houston, TX 77056
Project Contact / E-mail: Tom Walzer/Kristi Warr
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: Derrick Cobb

Billing Information (if different from Report to)

Company Name: Weston Solutions
Street Address: 5599 San Felipe Suite 700
City / State / Zip: Houston, TX 77056
Attention: Kristi Warr

Requested Analyses

Accutest Sample #	Field ID / Point of Collection	Collection Date	Time	Sampled By	Matrix	# of bottles	HCl	NaOH	ZnAcNaOH	HNO3	H2SO4	NONE	DI Water	MEOH	TSP	NaHSO4	EnCORE	OTHER	Total/TCLP VOCs	Total/TCLP SVOCs	Total/TCLP Metal & Hg	Total/TCLP Pesticides	Total/TCLP Herbicides	PCBs	TPHs	Total Cyanides	Total Sulfides	Flash Point/Ignitability	PH and BTU
1	VB-639	8/27/14	1435	DC	OI	2													X	X	X	X	X	X	X	X	X	X	X
2	VB-618	8/28/14	0930	DC	OI	2													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

LAB USE ONLY

Turnaround Time (Business days)

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

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

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

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	8/28/14 1405	1	2 1408	8/28/14 1438	2
Relinquished by Sampler: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	☐ Intact ☐ Not intact	Preserved where applicable ☐ On Ice ☐ Cooler Temp.

TC53933: Chain of Custody
Page 1 of 3

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: TC53933 **Client:** WESTON SOLUTIONS **Project:** CES

Date / Time Received: 8/28/2014 **Delivery Method:** **Airbill #'s:**

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

Cooler Temps (Initial/Adjusted): #1: (1.8/1.8);

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:		
3. Cooler media:	Ice (Bag)	

Quality Control Preservation	Y	or 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	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:713.271.4700
10165 Harwin Drive
F: 713.271.4770
Houston, TX 77036
www/accutest.com

TC53933: Chain of Custody
Page 2 of 3

Sample Receipt Log

Job #: TC53933 **Date / Time Received:** 8/28/2014 2:38:00 PM **Initials:** RE

Client: WESTON SOLUTIONS

Cooler #	Sample ID:	Vol	Bot #	Location	Pres	pH	Therm ID	Initial Temp	Therm CF	Corrected Temp
1	TC53933-1	32oz	1	2-98	N/P	Note #2 - Preservative check not applicable.	IR-5	1.8	0	1.8
1	TC53933-1	32oz	2	2-98	N/P	Note #2 - Preservative check not applicable.	IR-5	1.8	0	1.8
1	TC53933-2	32oz	1	2-98	N/P	Note #2 - Preservative check not applicable.	IR-5	1.8	0	1.8
1	TC53933-2	32oz	2	2-98	N/P	Note #2 - Preservative check not applicable.	IR-5	1.8	0	1.8

TC53933: 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: TC53933
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP33725-LB [a]	E0035066.D	10	09/05/14	CF	08/29/14	OP33725	VE1585

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

TC53933-2A

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	10	3.4	ug/l	
108-90-7	Chlorobenzene	ND	10	2.7	ug/l	
67-66-3	Chloroform	ND	10	3.5	ug/l	
56-23-5	Carbon tetrachloride	ND	10	4.3	ug/l	
75-35-4	1,1-Dichloroethylene	ND	10	4.5	ug/l	
107-06-2	1,2-Dichloroethane	ND	10	3.5	ug/l	
78-93-3	Methyl ethyl ketone	ND	100	27	ug/l	
127-18-4	Tetrachloroethylene	ND	10	4.6	ug/l	
79-01-6	Trichloroethylene	ND	10	4.9	ug/l	
75-01-4	Vinyl chloride	ND	10	7.9	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	95%	72-122%
17060-07-0	1,2-Dichloroethane-D4	87%	68-124%
2037-26-5	Toluene-D8	92%	80-119%
460-00-4	4-Bromofluorobenzene	100%	72-126%

(a) TCLP Method Blank.

Method Blank Summary

Job Number: TC53933
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

TC53933-1, TC53933-2

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: TC53933
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

TC53933-1, TC53933-2

CAS No.	Compound	Result	RL	MDL	Units	Q
87-68-3	Hexachlorobutadiene	ND	4.0	0.68	ug/kg	
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%

Method Blank Summary

Job Number: TC53933
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

TC53933-1, TC53933-2

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	79%	63-138%
17060-07-0	1,2-Dichloroethane-D4	72%	54-123%

Method Blank Summary

Job Number: TC53933
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VX2322-MB	X0102173.D	1	09/12/14	KS	n/a	n/a	VX2322

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

TC53933-2

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	3.9	0.39	ug/kg	
108-88-3	Toluene	ND	3.9	0.99	ug/kg	
1330-20-7	Xylene (total)	ND	12	2.7	ug/kg	
	m,p-Xylene	ND	7.7	1.7	ug/kg	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	107%	59-126%
2037-26-5	Toluene-D8	109%	70-139%
460-00-4	4-Bromofluorobenzene	101%	63-138%
17060-07-0	1,2-Dichloroethane-D4	99%	54-123%

Leachate Blank Summary

Job Number: TC53933
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP33782-LB [a]	E0035010.D	10	09/04/14	CF	09/03/14	OP33782	VE1582

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

VE1582-BS

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	10	3.4	ug/l	
108-90-7	Chlorobenzene	ND	10	2.7	ug/l	
67-66-3	Chloroform	ND	10	3.5	ug/l	
56-23-5	Carbon tetrachloride	ND	10	4.3	ug/l	
75-35-4	1,1-Dichloroethylene	ND	10	4.5	ug/l	
107-06-2	1,2-Dichloroethane	ND	10	3.5	ug/l	
78-93-3	Methyl ethyl ketone	ND	100	27	ug/l	
127-18-4	Tetrachloroethylene	ND	10	4.6	ug/l	
79-01-6	Trichloroethylene	ND	10	4.9	ug/l	
75-01-4	Vinyl chloride	ND	10	7.9	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	99%	72-122%
17060-07-0	1,2-Dichloroethane-D4	91%	68-124%
2037-26-5	Toluene-D8	94%	80-119%
460-00-4	4-Bromofluorobenzene	96%	72-126%

(a) TCLP Method Blank.

Leachate Blank Summary

Job Number: TC53933
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP33782-LB	E0035065.D	10	09/05/14	CF	09/03/14	OP33782	VE1585

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

VE1582-BS, VE1585-BS, TC53874-2AMS, TC53874-2AMSD

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	10	3.4	ug/l	
108-90-7	Chlorobenzene	ND	10	2.7	ug/l	
67-66-3	Chloroform	ND	10	3.5	ug/l	
56-23-5	Carbon tetrachloride	ND	10	4.3	ug/l	
75-35-4	1,1-Dichloroethylene	ND	10	4.5	ug/l	
107-06-2	1,2-Dichloroethane	ND	10	3.5	ug/l	
78-93-3	Methyl ethyl ketone	ND	100	27	ug/l	
127-18-4	Tetrachloroethylene	ND	10	4.6	ug/l	
79-01-6	Trichloroethylene	ND	10	4.9	ug/l	
75-01-4	Vinyl chloride	ND	10	7.9	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	92%	72-122%
17060-07-0	1,2-Dichloroethane-D4	87%	68-124%
2037-26-5	Toluene-D8	92%	80-119%
460-00-4	4-Bromofluorobenzene	100%	72-126%

Blank Spike Summary

Job Number: TC53933
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VE1582-BS	E0035008.D	10	09/04/14	CF	n/a	n/a	VE1582

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

TC53933-1A

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	250	229	92	68-119
108-90-7	Chlorobenzene	250	225	90	74-120
67-66-3	Chloroform	250	224	90	73-122
56-23-5	Carbon tetrachloride	250	254	102	68-133
75-35-4	1,1-Dichloroethylene	250	270	108	67-140
107-06-2	1,2-Dichloroethane	250	226	90	68-121
78-93-3	Methyl ethyl ketone	1250	1100	88	51-129
127-18-4	Tetrachloroethylene	250	257	103	72-132
79-01-6	Trichloroethylene	250	227	91	73-121
75-01-4	Vinyl chloride	250	265	106	54-126

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	92%	72-122%
17060-07-0	1,2-Dichloroethane-D4	90%	68-124%
2037-26-5	Toluene-D8	95%	80-119%
460-00-4	4-Bromofluorobenzene	89%	72-126%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: TC53933
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

TC53933-1, TC53933-2

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: TC53933
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

TC53933-1, TC53933-2

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
87-68-3	Hexachlorobutadiene	49.8	52.3	105	57-127
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%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: TC53933
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

TC53933-1, TC53933-2

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	83%	63-138%
17060-07-0	1,2-Dichloroethane-D4	77%	54-123%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: TC53933
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VE1585-BS	E0035063.D	10	09/05/14	CF	n/a	n/a	VE1585

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

TC53933-2A

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	250	210	84	68-119
108-90-7	Chlorobenzene	250	206	82	74-120
67-66-3	Chloroform	250	202	81	73-122
56-23-5	Carbon tetrachloride	250	234	94	68-133
75-35-4	1,1-Dichloroethylene	250	216	86	67-140
107-06-2	1,2-Dichloroethane	250	206	82	68-121
78-93-3	Methyl ethyl ketone	1250	879	70	51-129
127-18-4	Tetrachloroethylene	250	277	111	72-132
79-01-6	Trichloroethylene	250	222	89	73-121
75-01-4	Vinyl chloride	250	217	87	54-126

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	90%	72-122%
17060-07-0	1,2-Dichloroethane-D4	87%	68-124%
2037-26-5	Toluene-D8	93%	80-119%
460-00-4	4-Bromofluorobenzene	98%	72-126%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: TC53933
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VX2322-BS	X0102171.D	1	09/12/14	KS	n/a	n/a	VX2322

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

TC53933-2

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
95-63-6	1,2,4-Trimethylbenzene	48.9	48.6	99	61-119
108-88-3	Toluene	48.9	48.5	99	67-119
1330-20-7	Xylene (total)	147	142	97	62-120
	m,p-Xylene	97.8	95.0	97	62-120

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	102%	59-126%
2037-26-5	Toluene-D8	110%	70-139%
460-00-4	4-Bromofluorobenzene	102%	63-138%
17060-07-0	1,2-Dichloroethane-D4	98%	54-123%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: TC53933
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
TC53874-2AMS	E0035016.D	10	09/04/14	CF	n/a	n/a	VE1582
TC53874-2AMSD	E0035017.D	10	09/04/14	CF	n/a	n/a	VE1582
TC53874-2A	E0035014.D	10	09/04/14	CF	09/03/14	OP33782	VE1582

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

TC53933-1A

CAS No.	Compound	TC53874-2A ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	10 U		250	240	96	250	235	94	2	68-119/12
108-90-7	Chlorobenzene	10 U		250	228	91	250	223	89	2	74-120/12
67-66-3	Chloroform	10 U		250	229	92	250	224	90	2	73-122/13
56-23-5	Carbon tetrachloride	10 U		250	258	103	250	253	101	2	68-133/20
75-35-4	1,1-Dichloroethylene	10 U		250	228	91	250	230	92	1	67-140/18
107-06-2	1,2-Dichloroethane	10 U		250	228	91	250	224	90	2	68-121/12
78-93-3	Methyl ethyl ketone	100 U		1250	1180	94	1250	1130	90	4	51-129/22
127-18-4	Tetrachloroethylene	10 U		250	266	106	250	262	105	2	72-132/14
79-01-6	Trichloroethylene	10 U		250	237	95	250	233	93	2	73-121/13
75-01-4	Vinyl chloride	10 U		250	243	97	250	232	93	5	54-126/17

CAS No.	Surrogate Recoveries	MS	MSD	TC53874-2A	Limits
1868-53-7	Dibromofluoromethane	93%	92%	100%	72-122%
17060-07-0	1,2-Dichloroethane-D4	90%	90%	91%	68-124%
2037-26-5	Toluene-D8	96%	95%	94%	80-119%
460-00-4	4-Bromofluorobenzene	99%	97%	95%	72-126%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: TC53933
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

TC53933-1, TC53933-2

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: TC53933
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

TC53933-1, TC53933-2

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
87-68-3	Hexachlorobutadiene	88000	U	1100000	1250000	114	1100000	1090000	99	14	57-127/33
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%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: TC53933
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

TC53933-1, TC53933-2

CAS No.	Surrogate Recoveries	MS	MSD	TC53933-1	Limits
460-00-4	4-Bromofluorobenzene	83%	80%	81%	63-138%
17060-07-0	1,2-Dichloroethane-D4	71%	74%	73%	54-123%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: TC53933
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
TC53875-1AMS	E0035070.D	50	09/05/14	CF	n/a	n/a	VE1585
TC53875-1AMSD	E0035071.D	50	09/05/14	CF	n/a	n/a	VE1585
TC53875-1A	E0035069.D	50	09/05/14	CF	09/03/14	OP33782	VE1585

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

TC53933-2A

CAS No.	Compound	TC53875-1A ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	245		1250	1290	84	1250	1310	85	2	68-119/12
108-90-7	Chlorobenzene	50 U		1250	1040	83	1250	1060	85	2	74-120/12
67-66-3	Chloroform	2710		1250	3730	82	1250	3820	89	2	73-122/13
56-23-5	Carbon tetrachloride	50 U		1250	1190	95	1250	1210	97	2	68-133/20
75-35-4	1,1-Dichloroethylene	50 U		1250	1140	91	1250	1120	90	2	67-140/18
107-06-2	1,2-Dichloroethane	50 U		1250	1010	81	1250	1030	82	2	68-121/12
78-93-3	Methyl ethyl ketone	1420		6250	5580	67	6250	5680	68	2	51-129/22
127-18-4	Tetrachloroethylene	50 U		1250	1390	111	1250	1420	114	2	72-132/14
79-01-6	Trichloroethylene	50 U		1250	1110	89	1250	1130	90	2	73-121/13
75-01-4	Vinyl chloride	50 U		1250	1200	96	1250	1170	94	3	54-126/17

CAS No.	Surrogate Recoveries	MS	MSD	TC53875-1A	Limits
1868-53-7	Dibromofluoromethane	90%	91%	93%	72-122%
17060-07-0	1,2-Dichloroethane-D4	85%	86%	72%	68-124%
2037-26-5	Toluene-D8	92%	93%	92%	80-119%
460-00-4	4-Bromofluorobenzene	97%	100%	98%	72-126%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: TC53933
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
TC54044-2MS	X0102176.D	1	09/12/14	KS	n/a	n/a	VX2322
TC54044-2MSD	X0102177.D	1	09/12/14	KS	n/a	n/a	VX2322
TC54044-2	X0102175.D	1	09/12/14	KS	n/a	n/a	VX2322

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

TC53933-2

CAS No.	Compound	TC54044-2 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
95-63-6	1,2,4-Trimethylbenzene	5510		4940	10400	99	4940	10700	105	3	61-119/30
108-88-3	Toluene	ND		4940	4550	92	4940	4950	100	8	67-119/28
1330-20-7	Xylene (total)	353	J	14800	13800	91	14800	14900	98	8	62-120/27
	m,p-Xylene	ND		9890	9060	92	9890	9790	99	8	62-120/28

CAS No.	Surrogate Recoveries	MS	MSD	TC54044-2	Limits
1868-53-7	Dibromofluoromethane	105%	102%	105%	59-126%
2037-26-5	Toluene-D8	114%	113%	109%	70-139%
460-00-4	4-Bromofluorobenzene	106%	107%	97%	63-138%
17060-07-0	1,2-Dichloroethane-D4	96%	95%	95%	54-123%

* = 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: TC53933
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

TC53933-2

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: TC53933
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

TC53933-2

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: TC53933
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

TC53933-2

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%

Method Blank Summary

Job Number: TC53933
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP33794-MB	J174778.D	1	09/04/14	SC	09/04/14	OP33794	EJ1930

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

TC53933-1A, TC53933-2A

CAS No.	Compound	Result	RL	MDL	Units	Q
95-48-7	2-Methylphenol	ND	5000	960	ug/l	
	3&4-Methylphenol	ND	5000	1100	ug/l	
87-86-5	Pentachlorophenol	ND	25000	10000	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	5000	980	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5000	1100	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	5000	1100	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	5000	1300	ug/l	
118-74-1	Hexachlorobenzene	ND	5000	1600	ug/l	
87-68-3	Hexachlorobutadiene	ND	5000	1200	ug/l	
67-72-1	Hexachloroethane	ND	5000	1300	ug/l	
98-95-3	Nitrobenzene	ND	5000	1200	ug/l	
110-86-1	Pyridine	ND	5000	1300	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	77%	10-86%
4165-62-2	Phenol-d5	64%	10-83%
118-79-6	2,4,6-Tribromophenol	75%	32-128%
4165-60-0	Nitrobenzene-d5	86%	29-115%
321-60-8	2-Fluorobiphenyl	84%	34-113%
1718-51-0	Terphenyl-d14	96%	23-138%

Method Blank Summary

Job Number: TC53933
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP33797-MB	J174787.D	1	09/04/14	SC	09/04/14	OP33797	EJ1930

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

TC53933-1

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic acid	ND	25000	8000	ug/kg	
95-57-8	2-Chlorophenol	ND	5000	2200	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	5000	1700	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	5000	1600	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	5000	1700	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	25000	8000	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	10000	1200	ug/kg	
95-48-7	2-Methylphenol	ND	5000	2200	ug/kg	
	3&4-Methylphenol	ND	5000	2200	ug/kg	
88-75-5	2-Nitrophenol	ND	5000	1700	ug/kg	
100-02-7	4-Nitrophenol	ND	25000	1400	ug/kg	
87-86-5	Pentachlorophenol	ND	25000	3700	ug/kg	
108-95-2	Phenol	ND	5000	2300	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	5000	1600	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	5000	1300	ug/kg	
83-32-9	Acenaphthene	ND	5000	1400	ug/kg	
208-96-8	Acenaphthylene	ND	5000	1400	ug/kg	
62-53-3	Aniline	ND	25000	2000	ug/kg	
120-12-7	Anthracene	ND	5000	1300	ug/kg	
92-87-5	Benzidine	ND	200000	97000	ug/kg	
56-55-3	Benzo(a)anthracene	ND	5000	2000	ug/kg	
50-32-8	Benzo(a)pyrene	ND	5000	1600	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	5000	1300	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	5000	1400	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	5000	2200	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	5000	1500	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	5000	1600	ug/kg	
100-51-6	Benzyl Alcohol	ND	5000	2000	ug/kg	
91-58-7	2-Chloronaphthalene	ND	5000	1500	ug/kg	
106-47-8	4-Chloroaniline	ND	5000	1900	ug/kg	
86-74-8	Carbazole	ND	5000	1600	ug/kg	
218-01-9	Chrysene	ND	5000	2100	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	5000	1600	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	5000	2200	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5000	1900	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5000	1900	ug/kg	

Method Blank Summary

Job Number: TC53933
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP33797-MB	J174787.D	1	09/04/14	SC	09/04/14	OP33797	EJ1930

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

TC53933-1

CAS No.	Compound	Result	RL	MDL	Units	Q
95-50-1	1,2-Dichlorobenzene	ND	5000	2000	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND	5000	1300	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	5000	1800	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	5000	1900	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	5000	1600	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	5000	1400	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	10000	1900	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	5000	1800	ug/kg	
132-64-9	Dibenzofuran	ND	5000	1600	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	5000	1600	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	5000	1300	ug/kg	
84-66-2	Diethyl phthalate	ND	5000	1500	ug/kg	
131-11-3	Dimethyl phthalate	ND	5000	1400	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	5000	4000	ug/kg	
206-44-0	Fluoranthene	ND	5000	1700	ug/kg	
86-73-7	Fluorene	ND	5000	1500	ug/kg	
118-74-1	Hexachlorobenzene	ND	5000	1600	ug/kg	
87-68-3	Hexachlorobutadiene	ND	5000	1800	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	25000	2400	ug/kg	
67-72-1	Hexachloroethane	ND	5000	1800	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5000	1800	ug/kg	
78-59-1	Isophorone	ND	5000	1500	ug/kg	
90-12-0	1-Methylnaphthalene	ND	5000	1900	ug/kg	
91-57-6	2-Methylnaphthalene	ND	5000	1900	ug/kg	
88-74-4	2-Nitroaniline	ND	5000	1600	ug/kg	
99-09-2	3-Nitroaniline	ND	5000	1500	ug/kg	
100-01-6	4-Nitroaniline	ND	10000	1700	ug/kg	
91-20-3	Naphthalene	ND	5000	1800	ug/kg	
98-95-3	Nitrobenzene	ND	5000	1400	ug/kg	
62-75-9	n-Nitrosodimethylamine	ND	5000	1600	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	5000	2000	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	5000	1400	ug/kg	
85-01-8	Phenanthrene	ND	5000	1400	ug/kg	
129-00-0	Pyrene	ND	5000	2200	ug/kg	
110-86-1	Pyridine	ND	5000	1300	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5000	1800	ug/kg	

Method Blank Summary

Job Number: TC53933
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP33797-MB	J174787.D	1	09/04/14	SC	09/04/14	OP33797	EJ1930

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

TC53933-1

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	82%	26-124%
4165-62-2	Phenol-d5	83%	19-106%
118-79-6	2,4,6-Tribromophenol	62%	18-129%
4165-60-0	Nitrobenzene-d5	70%	18-104%
321-60-8	2-Fluorobiphenyl	71%	21-114%
1718-51-0	Terphenyl-d14	92%	24-149%

Blank Spike Summary

Job Number: TC53933
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

TC53933-2

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: TC53933
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

TC53933-2

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: TC53933
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

TC53933-2

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.

Blank Spike Summary

Job Number: TC53933
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP33794-BS	J174779.D	1	09/04/14	SC	09/04/14	OP33794	EJ1930

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

TC53933-1A, TC53933-2A

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
95-48-7	2-Methylphenol	50000	35800	72	33-113
	3&4-Methylphenol	100000	69700	70	28-119
87-86-5	Pentachlorophenol	50000	37200	74	28-136
95-95-4	2,4,5-Trichlorophenol	50000	38100	76	47-116
88-06-2	2,4,6-Trichlorophenol	50000	37300	75	44-112
106-46-7	1,4-Dichlorobenzene	50000	36800	74	36-99
121-14-2	2,4-Dinitrotoluene	50000	37000	74	52-115
118-74-1	Hexachlorobenzene	50000	36700	73	49-114
87-68-3	Hexachlorobutadiene	50000	35200	70	30-104
67-72-1	Hexachloroethane	50000	36800	74	30-100
98-95-3	Nitrobenzene	50000	37400	75	40-103
110-86-1	Pyridine	50000	20500	41	10-77

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	73%	10-86%
4165-62-2	Phenol-d5	65%	10-83%
118-79-6	2,4,6-Tribromophenol	77%	32-128%
4165-60-0	Nitrobenzene-d5	82%	29-115%
321-60-8	2-Fluorobiphenyl	84%	34-113%
1718-51-0	Terphenyl-d14	88%	23-138%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: TC53933
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP33797-BS	O12021.D	1	09/05/14	GJ	09/04/14	OP33797	EO666
OP33797-BSD	O12022.D	1	09/05/14	GJ	09/04/14	OP33797	EO666

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

TC53933-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic acid	50000	5900	12	6600	13	11	10-122/30
95-57-8	2-Chlorophenol	50000	38400	77	39300	79	2	49-106/30
59-50-7	4-Chloro-3-methyl phenol	50000	36400	73	37600	75	3	35-116/30
120-83-2	2,4-Dichlorophenol	50000	33700	67	34700	69	3	53-107/30
105-67-9	2,4-Dimethylphenol	50000	38900	78	39700	79	2	51-109/30
51-28-5	2,4-Dinitrophenol	50000	30000	60	33400	67	11	30-125/30
534-52-1	4,6-Dinitro-o-cresol	50000	35200	70	36200	72	3	41-125/30
95-48-7	2-Methylphenol	50000	36600	73	38800	78	6	46-105/30
	3&4-Methylphenol	50000	36700	73	37500	75	2	43-120/30
88-75-5	2-Nitrophenol	50000	37200	74	38500	77	3	49-104/30
100-02-7	4-Nitrophenol	50000	32800	66	33300	67	2	29-129/30
87-86-5	Pentachlorophenol	50000	37200	74	37600	75	1	36-122/30
108-95-2	Phenol	50000	37300	75	38700	77	4	48-117/30
95-95-4	2,4,5-Trichlorophenol	50000	40100	80	41400	83	3	57-116/30
88-06-2	2,4,6-Trichlorophenol	50000	40800	82	41800	84	2	54-112/30
83-32-9	Acenaphthene	50000	39900	80	40900	82	2	52-109/30
208-96-8	Acenaphthylene	50000	41200	82	41800	84	1	54-115/30
62-53-3	Aniline	50000	38600	77	39200	78	2	28-116/30
120-12-7	Anthracene	50000	40300	81	40900	82	1	57-114/30
92-87-5	Benzidine	100000	49000	49	50000	50	1	15-156/30
56-55-3	Benzo(a)anthracene	50000	42800	86	43700	87	2	59-114/30
50-32-8	Benzo(a)pyrene	50000	40500	81	41100	82	1	53-106/30
205-99-2	Benzo(b)fluoranthene	50000	42600	85	42300	85	1	54-115/30
191-24-2	Benzo(g,h,i)perylene	50000	46200	92	46800	94	1	44-127/30
207-08-9	Benzo(k)fluoranthene	50000	42600	85	43300	87	2	52-124/30
101-55-3	4-Bromophenyl phenyl ether	50000	43200	86	42700	85	1	51-116/30
85-68-7	Butyl benzyl phthalate	50000	46400	93	47400	95	2	52-117/30
100-51-6	Benzyl Alcohol	50000	36400	73	38000	76	4	52-104/30
91-58-7	2-Chloronaphthalene	50000	46300	93	46800	94	1	47-125/30
106-47-8	4-Chloroaniline	50000	38500	77	39400	79	2	38-113/30
86-74-8	Carbazole	50000	41500	83	41800	84	1	53-113/30
218-01-9	Chrysene	50000	42900	86	43300	87	1	62-117/30
111-91-1	bis(2-Chloroethoxy)methane	50000	38700	77	38800	78	0	41-106/30
111-44-4	bis(2-Chloroethyl)ether	50000	37900	76	38300	77	1	36-108/30
108-60-1	bis(2-Chloroisopropyl)ether	50000	37100	74	37200	74	0	33-111/30
7005-72-3	4-Chlorophenyl phenyl ether	50000	38700	77	39600	79	2	52-113/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: TC53933
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP33797-BS	O12021.D	1	09/05/14	GJ	09/04/14	OP33797	EO666
OP33797-BSD	O12022.D	1	09/05/14	GJ	09/04/14	OP33797	EO666

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

TC53933-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
95-50-1	1,2-Dichlorobenzene	50000	36900	74	37400	75	1	41-106/30
122-66-7	1,2-Diphenylhydrazine	50000	45900	92	45600	91	1	51-113/30
541-73-1	1,3-Dichlorobenzene	50000	36800	74	38100	76	3	39-104/30
106-46-7	1,4-Dichlorobenzene	50000	37800	76	39100	78	3	40-105/30
121-14-2	2,4-Dinitrotoluene	50000	38200	76	39600	79	4	55-117/30
606-20-2	2,6-Dinitrotoluene	50000	39900	80	39900	80	0	56-112/30
91-94-1	3,3'-Dichlorobenzidine	50000	38300	77	39900	80	4	33-129/30
53-70-3	Dibenzo(a,h)anthracene	50000	45600	91	45900	92	1	47-126/30
132-64-9	Dibenzofuran	50000	41100	82	41900	84	2	51-112/30
84-74-2	Di-n-butyl phthalate	50000	43500	87	44000	88	1	54-117/30
117-84-0	Di-n-octyl phthalate	50000	44200	88	44900	90	2	47-119/30
84-66-2	Diethyl phthalate	50000	42700	85	43700	87	2	53-114/30
131-11-3	Dimethyl phthalate	50000	43100	86	44600	89	3	55-111/30
117-81-7	bis(2-Ethylhexyl)phthalate	50000	46200	92	47500	95	3	51-123/30
206-44-0	Fluoranthene	50000	37500	75	38000	76	1	54-118/30
86-73-7	Fluorene	50000	39300	79	39500	79	1	55-114/30
118-74-1	Hexachlorobenzene	50000	42200	84	42600	85	1	51-117/30
87-68-3	Hexachlorobutadiene	50000	40700	81	41400	83	2	37-111/30
77-47-4	Hexachlorocyclopentadiene	50000	29000	58	29100	58	0	10-121/30
67-72-1	Hexachloroethane	50000	44600	89	44500	89	0	42-100/30
193-39-5	Indeno(1,2,3-cd)pyrene	50000	46900	94	45800	92	2	45-129/30
78-59-1	Isophorone	50000	40400	81	40900	82	1	47-102/30
90-12-0	1-Methylnaphthalene	50000	38500	77	39400	79	2	50-106/30
91-57-6	2-Methylnaphthalene	50000	37500	75	38600	77	3	45-104/30
88-74-4	2-Nitroaniline	50000	43700	87	44700	89	2	46-121/30
99-09-2	3-Nitroaniline	50000	34000	68	34800	70	2	33-107/30
100-01-6	4-Nitroaniline	50000	32000	64	32500	65	2	52-110/30
91-20-3	Naphthalene	50000	39400	79	39600	79	1	47-108/30
98-95-3	Nitrobenzene	50000	40300	81	41500	83	3	45-105/30
62-75-9	n-Nitrosodimethylamine	50000	41800	84	42800	86	2	33-103/30
621-64-7	N-Nitroso-di-n-propylamine	50000	36700	73	36700	73	0	42-110/30
86-30-6	N-Nitrosodiphenylamine	100000	84000	84	85000	85	1	37-114/30
85-01-8	Phenanthrene	50000	40700	81	41500	83	2	57-116/30
129-00-0	Pyrene	50000	44400	89	45700	91	3	52-120/30
110-86-1	Pyridine	50000	36900	74	38700	77	5	17-105/30
120-82-1	1,2,4-Trichlorobenzene	50000	38800	78	40700	81	5	40-101/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: TC53933
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP33797-BS	O12021.D	1	09/05/14	GJ	09/04/14	OP33797	EO666
OP33797-BSD	O12022.D	1	09/05/14	GJ	09/04/14	OP33797	EO666

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

TC53933-1

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
367-12-4	2-Fluorophenol	87%	87%	26-124%
4165-62-2	Phenol-d5	82%	82%	19-106%
118-79-6	2,4,6-Tribromophenol	90%	89%	18-129%
4165-60-0	Nitrobenzene-d5	84%	83%	18-104%
321-60-8	2-Fluorobiphenyl	87%	84%	21-114%
1718-51-0	Terphenyl-d14	102%	103%	24-149%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: TC53933
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

TC53933-2

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: TC53933
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

TC53933-2

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: TC53933
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

TC53933-2

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.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: TC53933
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP33794-MS	O12004.D	1	09/04/14	GJ	09/04/14	OP33794	EO665
OP33794-MSD	O12005.D	1	09/04/14	GJ	09/04/14	OP33794	EO665
TC53933-1A [a]	O12003.D	1	09/04/14	GJ	09/04/14	OP33794	EO665

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

TC53933-1A, TC53933-2A

CAS No.	Compound	TC53933-1A ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
95-48-7	2-Methylphenol	41500	J	50000	76200	69	50000	68100	53	11	33-113/35
	3&4-Methylphenol	33600	J	50000	81000	95	50000	76600	86	6	28-119/36
87-86-5	Pentachlorophenol	250000	U	50000	ND	0*	50000	ND	0*	nc	28-136/29
95-95-4	2,4,5-Trichlorophenol	50000	U	50000	ND	0*	50000	ND	0*	nc	47-116/27
88-06-2	2,4,6-Trichlorophenol	50000	U	50000	ND	0*	50000	ND	0*	nc	44-112/26
106-46-7	1,4-Dichlorobenzene	50000	U	50000	53300	107*	50000	49300	99	8	36-99/31
121-14-2	2,4-Dinitrotoluene	50000	U	50000	35800	72	50000	35400	71	1	52-115/30
118-74-1	Hexachlorobenzene	50000	U	50000	49400	99	50000	46000	92	7	49-114/25
87-68-3	Hexachlorobutadiene	50000	U	50000	49500	99	50000	48500	97	2	30-104/31
67-72-1	Hexachloroethane	50000	U	50000	91800	184*	50000	84000	168*	9	30-100/34
98-95-3	Nitrobenzene	50000	U	50000	57000	114*	50000	50900	102	11	40-103/31
110-86-1	Pyridine	50000	U	50000	68100	136*	50000	66300	133*	3	10-77/41

CAS No.	Surrogate Recoveries	MS	MSD	TC53933-1A	Limits
367-12-4	2-Fluorophenol	0%* [c]	0%* [c]	0%* [b]	10-86%
4165-62-2	Phenol-d5	10%	10%	0%* [b]	10-83%
118-79-6	2,4,6-Tribromophenol	0%* [c]	0%* [c]	0%* [b]	32-128%
4165-60-0	Nitrobenzene-d5	108%	98%	106%	29-115%
321-60-8	2-Fluorobiphenyl	102%	97%	100%	34-113%
1718-51-0	Terphenyl-d14	108%	100%	106%	23-138%

(a) Elevated reporting limits due to waste dilution; final volume 10 ml.
(b) Outside control limits due to waste dilution.
(c) Outside control limits due to dilution.

* = 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: TC53933
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP33760-MB	VB14701.D	1	09/02/14	ZL	09/02/14	OP33760	GVB343

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

TC53933-2

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	107%	70-130%
98-08-8	aaa-Trifluorotoluene	112%	70-130%

Method Blank Summary

Job Number: TC53933
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

TC53933-1

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: TC53933
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

TC53933-2

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: TC53933
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP33826-MB	DD773035.D	1	09/07/14	FO	09/04/14	OP33826	GDD2393

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

TC53933-1

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	1000	470	ug/kg	
93-72-1	2,4,5-TP (Silvex)	ND	200	100	ug/kg	
93-76-5	2,4,5-T	ND	200	68	ug/kg	

CAS No.	Surrogate Recoveries		Limits
19719-28-9	2,4-DCAA	122%	30-154%

Method Blank Summary

Job Number: TC53933
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP33827-MB	DD773027.D	1	09/06/14	FO	09/05/14	OP33827	GDD2393

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

TC53933-1A, TC53933-2A

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	1000	140	ug/l	
93-72-1	2,4,5-TP (Silvex)	ND	200	40	ug/l	

CAS No.	Surrogate Recoveries		Limits
19719-28-9	2,4-DCAA	108%	40-168%

Method Blank Summary

Job Number: TC53933
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

TC53933-2

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: TC53933
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

TC53933-2

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: TC53933
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

TC53933-2

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: TC53933
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP33792-MB	NN176277.D	1	09/04/14	SC	09/04/14	OP33792	GNN1475

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

TC53933-1

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	1.7	0.58	ug/kg	
319-84-6	alpha-BHC	ND	1.7	0.72	ug/kg	
319-85-7	beta-BHC	ND	1.7	0.50	ug/kg	
319-86-8	delta-BHC	ND	1.7	0.62	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	1.7	0.62	ug/kg	
5103-71-9	alpha-Chlordane	ND	1.7	0.36	ug/kg	
5103-74-2	gamma-Chlordane	ND	1.7	0.39	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	6.7	ug/kg	
8001-35-2	Toxaphene	ND	17	8.3	ug/kg	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	89%	27-125%
2051-24-3	Decachlorobiphenyl	83%	21-130%

Method Blank Summary

Job Number: TC53933
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP33829-MB	NN176489.D	1	09/08/14	SC	09/05/14	OP33829	GNN1479

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

TC53933-1A, TC53933-2A

CAS No.	Compound	Result	RL	MDL	Units	Q
58-89-9	gamma-BHC (Lindane)	ND	0.50	0.17	ug/l	
12789-03-6	Chlordane	ND	5.0	1.5	ug/l	
72-20-8	Endrin	ND	1.0	0.18	ug/l	
76-44-8	Heptachlor	ND	0.50	0.084	ug/l	
1024-57-3	Heptachlor epoxide	ND	0.50	0.11	ug/l	
72-43-5	Methoxychlor	ND	5.0	1.3	ug/l	
8001-35-2	Toxaphene	ND	5.0	1.2	ug/l	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	95%	39-122%
2051-24-3	Decachlorobiphenyl	91%	28-123%

Method Blank Summary

Job Number: TC53933
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

TC53933-2

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%

Method Blank Summary

Job Number: TC53933
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP33788-MB	MM071487.D	1	09/04/14	SC	09/04/14	OP33788	GMM473

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

TC53933-1

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	6.7	ug/kg	
11141-16-5	Aroclor 1232	ND	17	6.7	ug/kg	
53469-21-9	Aroclor 1242	ND	17	3.4	ug/kg	
12672-29-6	Aroclor 1248	ND	17	4.0	ug/kg	
11097-69-1	Aroclor 1254	ND	17	3.9	ug/kg	
11096-82-5	Aroclor 1260	ND	17	8.6	ug/kg	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	98%	30-118%
2051-24-3	Decachlorobiphenyl	66%	29-122%

Blank Spike Summary

Job Number: TC53933
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

TC53933-2

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: TC53933
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP33827-BS	DD773028.D	1	09/06/14	FO	09/05/14	OP33827	GDD2393

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

TC53933-1A, TC53933-2A

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
94-75-7	2,4-D	2000	1950	98	64-130
93-72-1	2,4,5-TP (Silvex)	400	401	100	58-136

CAS No.	Surrogate Recoveries	BSP	Limits
19719-28-9	2,4-DCAA	108%	40-168%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: TC53933
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

TC53933-2

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: TC53933
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

TC53933-2

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: TC53933
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP33792-BS	NN176278.D	1	09/04/14	SC	09/04/14	OP33792	GNN1475

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

TC53933-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
309-00-2	Aldrin	8.33	7.3	88	51-119
319-84-6	alpha-BHC	8.33	7.4	89	51-144
319-85-7	beta-BHC	8.33	7.3	88	45-144
319-86-8	delta-BHC	8.33	7.2	86	53-142
58-89-9	gamma-BHC (Lindane)	8.33	7.1	85	54-132
5103-71-9	alpha-Chlordane	8.33	8.3	100	53-135
5103-74-2	gamma-Chlordane	8.33	8.5	102	51-133
60-57-1	Dieldrin	16.7	15.5	93	61-135
72-54-8	4,4'-DDD	16.7	16.6	100	62-151
72-55-9	4,4'-DDE	16.7	15.5	93	56-142
50-29-3	4,4'-DDT	16.7	12.6	76	62-146
72-20-8	Endrin	16.7	14.1	85	63-153
1031-07-8	Endosulfan sulfate	16.7	14.4	86	55-139
7421-93-4	Endrin aldehyde	16.7	16.4	98	37-119
53494-70-5	Endrin ketone	16.7	16.8	101	56-136
959-98-8	Endosulfan-I	8.33	8.1	97	59-136
33213-65-9	Endosulfan-II	16.7	16.2	97	62-140
76-44-8	Heptachlor	8.33	7.1	85	53-130
1024-57-3	Heptachlor epoxide	8.33	7.5	90	53-131
72-43-5	Methoxychlor	83.3	65.2	78	59-142

CAS No.	Surrogate Recoveries	BSP	Limits
877-09-8	Tetrachloro-m-xylene	87%	27-125%
2051-24-3	Decachlorobiphenyl	82%	21-130%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: TC53933
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP33829-BS	NN176490.D	1	09/08/14	SC	09/05/14	OP33829	GNN1479

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

TC53933-1A, TC53933-2A

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
58-89-9	gamma-BHC (Lindane)	2.5	2.4	96	62-131
72-20-8	Endrin	5	5.6	112	74-154
76-44-8	Heptachlor	2.5	2.6	104	51-131
1024-57-3	Heptachlor epoxide	2.5	2.5	100	66-129
72-43-5	Methoxychlor	25	24.8	99	64-140

CAS No.	Surrogate Recoveries	BSP	Limits
877-09-8	Tetrachloro-m-xylene	94%	39-122%
2051-24-3	Decachlorobiphenyl	91%	28-123%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: TC53933
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

TC53933-2

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 Summary

Job Number: TC53933
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP33788-BS	MM071488.D	1	09/04/14	SC	09/04/14	OP33788	GMM473

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

TC53933-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
12674-11-2	Aroclor 1016	66.7	88.6	133*	73-123
11096-82-5	Aroclor 1260	66.7	79.7	120	73-124

CAS No.	Surrogate Recoveries	BSP	Limits
877-09-8	Tetrachloro-m-xylene	122%*	30-118%
2051-24-3	Decachlorobiphenyl	85%	29-122%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: TC53933
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP33760-BS	VB14697.D	1	09/02/14	ZL	09/02/14	OP33760	GVB343
OP33760-BSD	VB14699.D	1	09/02/14	ZL	09/02/14	OP33760	GVB343

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

TC53933-2

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	BSD mg/kg	BSD %	RPD	Limits Rec/RPD
	TPH (C6-C12)	250	247	99	224	90	10	75-125/20
	TPH (> C12-C28)	250	232	93	211	84	9	75-125/20
	TPH (C6-C35)	500	478	96	435	87	9	75-125/20

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
84-15-1	o-Terphenyl	110%	104%	70-130%
98-08-8	aaa-Trifluorotoluene	109%	99%	70-130%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: TC53933
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

TC53933-1

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.

Blank Spike/Blank Spike Duplicate Summary

Job Number: TC53933
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP33826-BS	DD773033.D	1	09/07/14	FO	09/04/14	OP33826	GDD2393
OP33826-BSD	DD773034.D	1	09/07/14	FO	09/04/14	OP33826	GDD2393

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

TC53933-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
94-75-7	2,4-D	2000	2010	101	1850	93	8	42-148/30
93-72-1	2,4,5-TP (Silvex)	400	449	112	352	88	24	48-134/30
93-76-5	2,4,5-T	400	372	93	336	84	10	27-124/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
19719-28-9	2,4-DCAA	100%	99%	30-154%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: TC53933
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP33760-MS	VF14700.D	1	09/02/14	ZL	09/02/14	OP33760	GVF343
OP33760-MSD	VF14702.D	1	09/02/14	ZL	09/02/14	OP33760	GVF343
TC54014-6	LB104241.D	1	09/03/14	ZL	09/02/14	OP33760	GLB1542

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

TC53933-2

CAS No.	Compound	TC54014-6 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	Spike mg/kg	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH (C6-C12)	82.4		309	422	110	310	462	123	9	75-125/20
	TPH (> C12-C28)	ND		309	250	81	310	276	89	10	75-125/20
	TPH (C6-C35)	82.4		619	672	93	620	737	104	9	75-125/20

CAS No.	Surrogate Recoveries	MS	MSD	TC54014-6	Limits
84-15-1	o-Terphenyl	101%	110%	96%	70-130%
98-08-8	aaa-Trifluorotoluene	91%	88%	89%	70-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: TC53933
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

TC53933-1

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: TC53933
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

TC53933-2

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: TC53933
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP33827-MS [a]	DD773023.D	1	09/06/14	FO	09/05/14	OP33827	GDD2393
OP33827-MSD [a]	DD773025.D	1	09/06/14	FO	09/05/14	OP33827	GDD2393
TC53933-1A	DD773019.D	1	09/06/14	FO	09/05/14	OP33827	GDD2393

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

TC53933-1A, TC53933-2A

CAS No.	Compound	TC53933-1A ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
94-75-7	2,4-D	1000 U		2000	1510	76	2000	1190	60*	24*	64-130/20
93-72-1	2,4,5-TP (Silvex)	200 U		400	171	43*	400	117	29*	38*	58-136/22

CAS No.	Surrogate Recoveries	MS	MSD	TC53933-1A	Limits
19719-28-9	2,4-DCAA	51%	263%* [a]	70%	40-168%

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

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: TC53933
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

TC53933-2

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: TC53933
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP33792-MS	NN176623.D	5	09/10/14	SC	09/04/14	OP33792	GNN1481
OP33792-MSD	NN176624.D	5	09/10/14	SC	09/04/14	OP33792	GNN1481
TC53933-1	NN176451.D	5	09/08/14	SC	09/04/14	OP33792	GNN1479
TC53933-1	NN176497.D	5	09/08/14	SC	09/04/14	OP33792	GNN1479

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

TC53933-1

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
309-00-2	Aldrin	230	U	203	ND	0*	240	147	61	200*	51-119/36
319-84-6	alpha-BHC	230	U	203	ND	0*	240	ND	0*	nc	51-144/31
319-85-7	beta-BHC	230	U	203	1010	497*	240	1840	765*	58*	45-144/34
319-86-8	delta-BHC	230	U	203	609	300*	240	642	267*	5	53-142/29
58-89-9	gamma-BHC (Lindane)	230	U	203	1270	625*	240	1290	537*	2	54-132/28
5103-71-9	alpha-Chlordane	230	U	203	377	185*	240	489	203*	26	53-135/32
5103-74-2	gamma-Chlordane	230	U	203	302	149*	240	2520	1048*	157*	51-133/37
60-57-1	Dieldrin	470	U	407	512	126	481	610	127	17	61-135/32
72-54-8	4,4'-DDD	470	U	407	761	187*	481	749	156*	2	62-151/31
72-55-9	4,4'-DDE	470	U	407	874	215*	481	993	207*	13	56-142/29
50-29-3	4,4'-DDT	470	U	407	ND	0*	481	ND	0*	nc	62-146/27
72-20-8	Endrin	470	U	407	582	143	481	680	141	16	63-153/28
1031-07-8	Endosulfan sulfate	470	U	407	ND	0*	481	ND	0*	nc	55-139/33
7421-93-4	Endrin aldehyde	470	U [a]	407	ND	0*	481	ND	0*	nc	37-119/27
53494-70-5	Endrin ketone	470	U	407	ND	0*	481	ND	0*	nc	56-136/28
959-98-8	Endosulfan-I	470	U	203	ND	0*	240	ND	0*	nc	59-136/29
33213-65-9	Endosulfan-II	470	U	407	ND	0*	481	ND	0*	nc	62-140/33
76-44-8	Heptachlor	230	U	203	328	161*	240	357	149*	8	53-130/32
1024-57-3	Heptachlor epoxide	230	U	203	589	290*	240	678	282*	14	53-131/32
72-43-5	Methoxychlor	2300	U	2030	ND	0*	2400	ND	0*	nc	59-142/27

CAS No.	Surrogate Recoveries	MS	MSD	TC53933-1	TC53933-1	Limits
877-09-8	Tetrachloro-m-xylene	200%*	182%*	118%	142%*	27-125%
2051-24-3	Decachlorobiphenyl	102%	103%	91%	112%	21-130%

(a) Result is from Run #2.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: TC53933
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP33829-MS	NN176486.D	5	09/08/14	SC	09/05/14	OP33829	GNN1479
OP33829-MSD	NN176487.D	5	09/08/14	SC	09/05/14	OP33829	GNN1479
TC53933-1A [a]	NN176485.D	5	09/08/14	SC	09/05/14	OP33829	GNN1479

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

TC53933-1A, TC53933-2A

CAS No.	Compound	TC53933-1A ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
58-89-9	gamma-BHC (Lindane)	2.5	U	2.5	7.7	308*	2.5	8.0	320*	4	62-131/23
72-20-8	Endrin	5.0	U	5	10.6	212*	5	11.2	224*	6	74-154/22
76-44-8	Heptachlor	2.5	U	2.5	5.7	228*	2.5	6.0	240*	5	51-131/31
1024-57-3	Heptachlor epoxide	2.5	U	2.5	8.3	332*	2.5	9.0	360*	8	66-129/21
72-43-5	Methoxychlor	25	U	25	24.9	100	25	26.9	108	8	64-140/20

CAS No.	Surrogate Recoveries	MS	MSD	TC53933-1A	Limits
877-09-8	Tetrachloro-m-xylene	150%*	153%*	73%	39-122%
2051-24-3	Decachlorobiphenyl	89%	88%	69%	28-123%

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

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: TC53933
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

TC53933-2

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.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: TC53933
Account: RFWTXHO Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP33788-MS	MM071491.D	1	09/04/14	SC	09/04/14	OP33788	GMM473
OP33788-MSD	MM071492.D	1	09/04/14	SC	09/04/14	OP33788	GMM473
TC53944-1 [a]	MM071486.D	1	09/04/14	SC	09/04/14	OP33788	GMM473

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

TC53933-1

CAS No.	Compound	TC53944-1 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	ND		1750	1570	89	1890	2160	114	32	73-123/33
11096-82-5	Aroclor 1260	ND		1750	1500	85	1890	1520	81	1	73-124/30

CAS No.	Surrogate Recoveries	MS	MSD	TC53944-1	Limits
877-09-8	Tetrachloro-m-xylene	95%	106%	93%	30-118%
2051-24-3	Decachlorobiphenyl	75%	82%	67%	29-122%

(a) Acid clean-up performed by method 3665A.

* = 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: TC53933
Account: RFWTXHO - Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

QC Batch ID: MP24117
Matrix Type: LEACHATE

Methods: SW846 6010B
Units: mg/l

Prep Date:					08/29/14		08/29/14
Metal	RL	IDL	MDL	MB raw	final	MB raw	final
Aluminum	1.0	.041	.061				
Antimony	0.025	.005	.0051				
Arsenic	0.050	.0085	.005	-0.00063	<0.050	-0.012	<0.050
Barium	5.0	.0049	.017	0.00094	<5.0	0.00026	<5.0
Beryllium	0.025	.00028	.0008				
Boron	0.50	.007	.039				
Cadmium	0.020	.00055	.00045	-0.00057	<0.020	-0.00078	<0.020
Calcium	25	.037	.12				
Chromium	0.050	.0012	.0014	0.00034	<0.050	0.00027	<0.050
Cobalt	0.25	.00075	.0011				
Copper	0.13	.0056	.03				
Iron	0.50	.0057	.12				
Lead	0.025	.005	.0089	0.0020	<0.025	0.0025	<0.025
Lithium	1.5	.01	.01				
Magnesium	25	.038	.04				
Manganese	0.075	.00027	.0093				
Molybdenum	0.050	.002	.001				
Nickel	0.20	.0035	.007				
Potassium	25	.2	.22				
Selenium	0.25	.0077	.0049	-0.0018	<0.25	-0.0043	<0.25
Silver	0.050	.0058	.0012	-0.00020	<0.050	0.00062	<0.050
Sodium	25	.046	.52				
Strontium	0.050	.00031	.002				
Thallium	0.050	.0034	.0058				
Tin	0.10	.0035	.014				
Titanium	0.10	.0015	.0015				
Vanadium	0.25	.0015	.0015				
Zinc	0.50	.0026	.017				

Associated samples MP24117: TC53933-1A, TC53933-2A

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

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: TC53933
Account: RFWTXHO - Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

QC Batch ID: MP24117
Matrix Type: LEACHATE

Methods: SW846 6010B
Units: mg/l

Prep Date: 08/29/14

Metal	TC53911-1 Original	MS	Spikelot MPTW11	% Rec	QC Limits
Aluminum					
Antimony	anr				
Arsenic	0.0	0.43	0.40	107.5	75-125
Barium	0.63	0.95	0.40	80.0	75-125
Beryllium	anr				
Boron					
Cadmium	0.016	0.44	0.40	106.0	75-125
Calcium					
Chromium	0.13	0.54	0.40	102.5	75-125
Cobalt					
Copper					
Iron					
Lead	0.28	0.67	0.40	97.5	75-125
Lithium					
Magnesium					
Manganese					
Molybdenum					
Nickel	anr				
Potassium					
Selenium	0.0	0.45	0.40	112.5	75-125
Silver	0.0	0.43	0.40	107.5	75-125
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Vanadium					
Zinc					

Associated samples MP24117: TC53933-1A, TC53933-2A

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

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: TC53933
Account: RFWTXHO - Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

QC Batch ID: MP24117
Matrix Type: LEACHATE

Methods: SW846 6010B
Units: mg/l

Prep Date: 08/29/14

Metal	TC53911-1 Original	MSD	Spikelot MPTW11	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony	anr					
Arsenic	0.0	0.44	0.40	110.0	2.3	20
Barium	0.63	0.96	0.40	82.5	1.0	20
Beryllium	anr					
Boron						
Cadmium	0.016	0.44	0.40	106.0	0.0	20
Calcium						
Chromium	0.13	0.54	0.40	102.5	0.0	20
Cobalt						
Copper						
Iron						
Lead	0.28	0.66	0.40	95.0	1.5	20
Lithium						
Magnesium						
Manganese						
Molybdenum						
Nickel	anr					
Potassium						
Selenium	0.0	0.44	0.40	110.0	2.2	20
Silver	0.0	0.43	0.40	107.5	0.0	20
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Vanadium						
Zinc						

Associated samples MP24117: TC53933-1A, TC53933-2A

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

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: TC53933
Account: RFWTXHO - Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

QC Batch ID: MP24117
Matrix Type: LEACHATE

Methods: SW846 6010B
Units: mg/l

Prep Date: 08/29/14

Metal	BSP Result	Spikelot MPTW11	% Rec	QC Limits
Aluminum				
Antimony	anr			
Arsenic	0.41	0.40	102.5	80-120
Barium	0.41	0.40	102.5	80-120
Beryllium	anr			
Boron				
Cadmium	0.41	0.40	102.5	80-120
Calcium				
Chromium	0.42	0.40	105.0	80-120
Cobalt				
Copper				
Iron				
Lead	0.39	0.40	97.5	80-120
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel	anr			
Potassium				
Selenium	0.43	0.40	107.5	80-120
Silver	0.39	0.40	97.5	80-120
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP24117: TC53933-1A, TC53933-2A

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

SERIAL DILUTION RESULTS SUMMARY

Login Number: TC53933
Account: RFWTXHO - Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

QC Batch ID: MP24117
Matrix Type: LEACHATE

Methods: SW846 6010B
Units: ug/l

Prep Date: 08/29/14

Metal	TC53911-1 Original	SDL 5:25	%DIF	QC Limits
Aluminum				
Antimony	anr			
Arsenic	0.00	0.00	NC	0-10
Barium	635	630	0.8	0-10
Beryllium	anr			
Boron				
Cadmium	15.6	8.29	46.8 (a)	0-10
Calcium				
Chromium	132	125	4.7	0-10
Cobalt				
Copper				
Iron				
Lead	283	296	4.7	0-10
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel	anr			
Potassium				
Selenium	0.00	0.00	NC	0-10
Silver	0.00	0.00	NC	0-10
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP24117: TC53933-1A, TC53933-2A

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).

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: TC53933
Account: RFWTXHO - Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

QC Batch ID: MP24125 Methods: SW846 7470A
Matrix Type: LEACHATE Units: mg/l

Prep Date: 09/02/14

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.00020	.00005	.00005	0.000019	<0.00020

Associated samples MP24125: TC53933-1A, TC53933-2A

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: TC53933
Account: RFWTXHO - Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

QC Batch ID: MP24125 Methods: SW846 7470A
Matrix Type: LEACHATE Units: mg/l

Prep Date: 09/02/14

Metal	TC53911-1 Original MS		Spikelot HGTXAQ40	% Rec	QC Limits
Mercury	0.00016	0.0035	0.0030	111.3	75-125

Associated samples MP24125: TC53933-1A, TC53933-2A

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

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: TC53933
Account: RFWTXHO - Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

QC Batch ID: MP24125 Methods: SW846 7470A
Matrix Type: LEACHATE Units: mg/l

Prep Date: 09/02/14

Metal	TC53911-1 Original	MSD	Spikelot HGTXAQ40	% Rec	MSD RPD	QC Limit
Mercury	0.00016	0.0033	0.0030	104.7	5.9	20

Associated samples MP24125: TC53933-1A, TC53933-2A

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

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: TC53933
Account: RFWTXHO - Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

QC Batch ID: MP24125
Matrix Type: LEACHATE

Methods: SW846 7470A
Units: mg/l

Prep Date: 09/02/14

Metal	BSP Result	Spikelot HGTXAQ40	% Rec	QC Limits
Mercury	0.0031	0.0030	103.3	80-120

Associated samples MP24125: TC53933-1A, TC53933-2A

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

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: TC53933
Account: RFWTXHO - Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

QC Batch ID: MP24130
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date: 09/03/14

Metal	RL	IDL	MDL	MB raw	final
Aluminum	10	.35	1.2	0.66	<10
Antimony	0.25	.028	.09	0.024	<0.25
Arsenic	0.25	.05	.087	-0.12	<0.25
Barium	10	.008	.013	0.0085	<10
Beryllium	0.20	.005	.034	0.0	<0.20
Boron	5.0	.02	.29		
Cadmium	0.20	.0075	.013	0.0035	<0.20
Chromium	0.50	.011	.07	0.030	<0.50
Cobalt	2.5	.013	.02	-0.0045	<2.5
Copper	1.0	.012	.11	0.011	<1.0
Iron	5.0	.23	.72	0.59	<5.0
Lead	0.15	.033	.11	0.076	<0.15
Lithium	15	.033	.074		
Magnesium	250	.38	1.4	-0.89	<250
Manganese	0.75	.0045	.02	0.017	<0.75
Molybdenum	0.50	.031	.026		
Nickel	2.0	.011	.038	0.0075	<2.0
Potassium	250	.38	2.1	2.6	<250
Selenium	0.25	.06	.094	0.020	<0.25
Silver	0.50	.01	.035	-0.0050	<0.50
Sodium	250	.29	.77	4.5	<250
Sulfur	2.5		.41		
Strontium	0.50	.0035	.006		
Thallium	0.50	.042	.12	0.034	<0.50
Tin	2.5	.034	.38		
Titanium	1.0	.0095	.034		
Vanadium	2.5	.009	.021	0.0030	<2.5
Zinc	1.0	.0065	.28	0.079	<1.0

Associated samples MP24130: TC53933-1, TC53933-2

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

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: TC53933
Account: RFWTXHO - Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

QC Batch ID: MP24130
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date: 09/03/14

Metal	TC53985-1 Original	MS	Spikelot MPTW11	% Rec	QC Limits
Aluminum	12900	16100	3110	103.0	75-125
Antimony	0.40	6.8	24.9	25.7N(a)	75-125
Arsenic	8.0	26.9	24.9	76.0	75-125
Barium	150	176	24.9	104.6	75-125
Beryllium	0.080	19.5	24.9	78.1	75-125
Boron					
Cadmium	0.23	20.6	24.9	81.9	75-125
Chromium	16.1	35.0	24.9	76.0	75-125
Cobalt	7.3	26.2	24.9	76.0	75-125
Copper	20.4	43.6	24.9	93.3	75-125
Iron	14800	16700	3110	61.1 (b)	75-125
Lead	77.2	98.9	24.9	87.3	75-125
Lithium					
Magnesium	2680	5000	3110	74.7N(a)	75-125
Manganese	535	468	24.9	-269.5(b	75-125
Molybdenum					
Nickel	17.9	41.3	24.9	94.1	75-125
Potassium	1390	3890	3110	80.4	75-125
Selenium	0.14	19.3	24.9	77.1	75-125
Silver	0.053	20.0	24.9	80.2	75-125
Sodium	179	2680	3110	80.5	75-125
Sulfur					
Strontium					
Thallium	0.0	23.0	24.9	92.5	75-125
Tin					
Titanium					
Vanadium	31.7	51.1	24.9	78.0	75-125
Zinc	70.9	97.8	24.9	108.2	75-125

Associated samples MP24130: TC53933-1, TC53933-2

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.
(b) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: TC53933
Account: RFWTXHO - Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

QC Batch ID: MP24130 Methods: SW846 6010B
Matrix Type: SOLID Units: mg/kg

Prep Date: 09/03/14

Metal	TC53985-1 Original	MSD	Spikelot MPTW11	% Rec	MSD RPD	QC Limit
Aluminum	12900	16000	3080	100.7	0.6	20
Antimony	0.40	6.8	24.6	26.0N(a)	0.0	20
Arsenic	8.0	26.3	24.6	74.3N(a)	2.3	20
Barium	150	181	24.6	125.9(b)	2.8	20
Beryllium	0.080	18.9	24.6	76.4	3.1	20
Boron						
Cadmium	0.23	20.0	24.6	80.3	3.0	20
Chromium	16.1	34.1	24.6	73.1N(a)	2.6	20
Cobalt	7.3	26.1	24.6	76.3	0.4	20
Copper	20.4	42.2	24.6	88.5	3.3	20
Iron	14800	17000	3080	71.5 (b)	1.8	20
Lead	77.2	87.2	24.6	40.6N(a)	12.6	20
Lithium						
Magnesium	2680	4850	3080	70.5N(a)	3.0	20
Manganese	535	558	24.6	93.4	17.5	20
Molybdenum						
Nickel	17.9	40.8	24.6	93.0	1.2	20
Potassium	1390	3750	3080	76.7	3.7	20
Selenium	0.14	18.8	24.6	75.8	2.6	20
Silver	0.053	19.4	24.6	78.6	3.0	20
Sodium	179	2610	3080	79.0	2.6	20
Sulfur						
Strontium						
Thallium	0.0	21.7	24.6	88.1	5.8	20
Tin						
Titanium						
Vanadium	31.7	49.9	24.6	73.9N(a)	2.4	20
Zinc	70.9	97.1	24.6	106.4	0.7	20

Associated samples MP24130: TC53933-1, TC53933-2

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.
(b) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: TC53933
Account: RFWTXHO - Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

QC Batch ID: MP24130
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date: 09/03/14

Metal	LCS Result	Spikelot MPLCD064	% Rec	QC Limits
Aluminum	8230	8100	101.6	51-148
Antimony	76.9	45.9	167.5	0-532
Arsenic	105	122	86.1	78-122
Barium	142	167	85.0	82-117
Beryllium	46.3	54.3	85.3	82-118
Boron				
Cadmium	76.2	88	86.6	82-118
Chromium	87.0	102	85.3	79-121
Cobalt	88.3	99.4	88.8	83-117
Copper	70.5	78	90.4	80-120
Iron	11900	15100	78.8	47-153
Lead	88.3	94.5	93.4	81-119
Lithium				
Magnesium	2620	3020	86.8	75-124
Manganese	347	401	86.5	81-119
Molybdenum				
Nickel	53.1	56.3	94.3	82-118
Potassium	2250	2490	90.4	70-130
Selenium	136	157	86.6	77-122
Silver	28.8	34.2	84.2	74-125
Sodium	236	246	95.9	70-130
Sulfur				
Strontium				
Thallium	108	116	93.1	78-122
Tin				
Titanium				
Vanadium	59.4	67.1	88.5	65-135
Zinc	179	207	86.5	80-121

Associated samples MP24130: TC53933-1, TC53933-2

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

SERIAL DILUTION RESULTS SUMMARY

Login Number: TC53933
Account: RFWTXHO - Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

QC Batch ID: MP24130
Matrix Type: SOLID

Methods: SW846 6010B
Units: ug/l

Prep Date: 09/03/14

Metal	TC53985-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum	208000	236000	13.1*(a)	0-10
Antimony	6.42	8.30	29.3 (b)	0-10
Arsenic	129	136	5.5	0-10
Barium	2410	2770	14.7*(a)	0-10
Beryllium	1.29	1.99	54.3 (b)	0-10
Boron				
Cadmium	3.68	3.72	1.1	0-10
Chromium	259	312	20.5*(a)	0-10
Cobalt	118	143	21.7*(a)	0-10
Copper	328	365	11.4*(a)	0-10
Iron	238000	303000	27.0*(a)	0-10
Lead	1240	1340	7.8	0-10
Lithium				
Magnesium	43100	50100	16.3*(a)	0-10
Manganese	8610	10800	25.5*(a)	0-10
Molybdenum				
Nickel	288	303	5.0	0-10
Potassium	22400	24400	9.0	0-10
Selenium	2.22	12.9	480.6(b)	0-10
Silver	0.860	1.57	82.6 (b)	0-10
Sodium	2880	3470	20.5*(a)	0-10
Sulfur				
Strontium				
Thallium	0.00	35.4	NC	0-10
Tin				
Titanium				
Vanadium	511	613	20.0*(a)	0-10
Zinc	1140	1340	17.4*(a)	0-10

Associated samples MP24130: TC53933-1, TC53933-2

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

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: TC53933
Account: RFWTXHO - Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

QC Batch ID: MP24139
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date: 09/04/14

Metal	RL	IDL	MDL	MB raw	final
Aluminum	10	.41	1.2		
Antimony	0.25	.05	.09		
Arsenic	0.25	.085	.087		
Barium	10	.049	.013		
Beryllium	0.20	.0028	.034		
Boron	5.0	.07	.29		
Cadmium	0.20	.0055	.013		
Calcium	250	.37	.39	2.0	<250
Chromium	0.50	.012	.07		
Cobalt	2.5	.0075	.02		
Copper	1.0	.056	.11		
Iron	5.0	.057	.72		
Lead	0.15	.05	.11		
Lithium	15	.1	.074		
Magnesium	250	.38	1.4		
Manganese	0.75	.0027	.02		
Molybdenum	0.50	.02	.026		
Nickel	2.0	.035	.038		
Potassium	250	2	2.1		
Selenium	0.25	.077	.094		
Silver	0.50	.058	.035		
Sodium	250	.46	.77		
Sulfur	2.5		.41		
Strontium	0.50	.0031	.006		
Thallium	0.50	.034	.12		
Tin	2.5	.035	.38		
Titanium	1.0	.015	.034		
Vanadium	2.5	.015	.021		
Zinc	1.0	.026	.28		

Associated samples MP24139: TC53933-1, TC53933-2

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

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: TC53933
Account: RFWTXHO - Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

QC Batch ID: MP24139 Methods: SW846 6010B
Matrix Type: SOLID Units: mg/kg

Prep Date: 09/04/14

Metal	TC54188-1 Original MS		Spikelot MPTW11	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic	anr				
Barium	anr				
Beryllium					
Boron					
Cadmium	anr				
Calcium	5630	10700	3300	153.7N(a	75-125
Chromium	anr				
Cobalt					
Copper	anr				
Iron	anr				
Lead	anr				
Lithium					
Magnesium	anr				
Manganese	anr				
Molybdenum					
Nickel	anr				
Potassium					
Selenium	anr				
Silver	anr				
Sodium	anr				
Sulfur					
Strontium					
Thallium					
Tin					
Titanium					
Vanadium					
Zinc	anr				

Associated samples MP24139: TC53933-1, TC53933-2

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: TC53933
Account: RFWTXHO - Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

QC Batch ID: MP24139 Methods: SW846 6010B
Matrix Type: SOLID Units: mg/kg

Prep Date: 09/04/14

Metal	TC54188-1 Original	MSD	Spikelot MPTW11	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic	anr					
Barium	anr					
Beryllium						
Boron						
Cadmium	anr					
Calcium	5630	8420	3290	84.7	23.8 (a)	20
Chromium	anr					
Cobalt						
Copper	anr					
Iron	anr					
Lead	anr					
Lithium						
Magnesium	anr					
Manganese	anr					
Molybdenum						
Nickel	anr					
Potassium						
Selenium	anr					
Silver	anr					
Sodium	anr					
Sulfur						
Strontium						
Thallium						
Tin						
Titanium						
Vanadium						
Zinc	anr					

Associated samples MP24139: TC53933-1, TC53933-2

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) High RPD due to possible sample nonhomogeneity or matrix interference.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: TC53933
Account: RFWTXHO - Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

QC Batch ID: MP24139
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date: 09/04/14

Metal	LCS Result	Spikelot MPLCD065	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	anr			
Barium	anr			
Beryllium				
Boron				
Cadmium	anr			
Calcium	5310	5330	99.6	80-120
Chromium	anr			
Cobalt				
Copper	anr			
Iron	anr			
Lead	anr			
Lithium				
Magnesium	anr			
Manganese	anr			
Molybdenum				
Nickel	anr			
Potassium				
Selenium	anr			
Silver	anr			
Sodium	anr			
Sulfur				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc	anr			

Associated samples MP24139: TC53933-1, TC53933-2

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

SERIAL DILUTION RESULTS SUMMARY

Login Number: TC53933
Account: RFWTXHO - Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

QC Batch ID: MP24139
Matrix Type: SOLID

Methods: SW846 6010B
Units: ug/l

Prep Date: 09/04/14

Metal	TC54188-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic	anr			
Barium	anr			
Beryllium				
Boron				
Cadmium	anr			
Calcium	85800	101000	17.9*(a)	0-10
Chromium	anr			
Cobalt				
Copper	anr			
Iron	anr			
Lead	anr			
Lithium				
Magnesium	anr			
Manganese	anr			
Molybdenum				
Nickel	anr			
Potassium				
Selenium	anr			
Silver	anr			
Sodium	anr			
Sulfur				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc	anr			

Associated samples MP24139: TC53933-1, TC53933-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Serial dilution indicates possible matrix interference.

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: TC53933
Account: RFWTXHO - Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

QC Batch ID: MP24145 Methods: SW846 7471A
Matrix Type: SOLID Units: mg/kg

Prep Date: 09/05/14

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.032	.0077	.013	0.0090	<0.032

Associated samples MP24145: TC53933-1, TC53933-2

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

8.5.1
8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: TC53933
Account: RFWTXHO - Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

QC Batch ID: MP24145 Methods: SW846 7471A
Matrix Type: SOLID Units: mg/kg

Prep Date: 09/05/14

Metal	TC53805-1 Original	MS	Spikelot HGTXWS1	% Rec	QC Limits
Mercury	0.10	0.47	0.521	71.0N(a)	75-125

Associated samples MP24145: TC53933-1, TC53933-2

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.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: TC53933
Account: RFWTXHO - Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

QC Batch ID: MP24145 Methods: SW846 7471A
Matrix Type: SOLID Units: mg/kg

Prep Date: 09/05/14

Metal	TC53805-1 Original	MSD	Spikelot HGTXWS1	% Rec	MSD RPD	QC Limit
Mercury	0.10	0.47	0.521	71.1N(a)	0.0	20

Associated samples MP24145: TC53933-1, TC53933-2

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.

8.5.2

8

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: TC53933
Account: RFWTXHO - Weston Solutions
Project: CES- Chemical Spill/4904 Griggs, Houston, TX

QC Batch ID: MP24145
Matrix Type: SOLID

Methods: SW846 7471A
Units: mg/kg

Prep Date: 09/05/14

Metal	LCS Result	Spikelot HGLCD065	% Rec	QC Limits
Mercury	10	10.4	96.2	71-130

Associated samples MP24145: TC53933-1, TC53933-2

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

8.5.3

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: TC53933
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	GP29315/GN60790	0.060	0.0	mg/kg	1.2	1.17	97.5	90-110%
Cyanide	GP29316/GN60790	0.060	0.0	mg/kg	1.2	1.18	98.3	90-110%

Associated Samples:
Batch GP29315: TC53933-2
Batch GP29316: TC53933-1
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: TC53933
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	GP29315/GN60790	TC53874-1	mg/kg	0.15 U	0.0	0.0	0-20%
Cyanide	GP29316/GN60790	TC53933-1	mg/kg	2.5	2.5	0.0	0-20%
Ignitability (Flashpoint)	GN60700	TC53874-3	Deg. F	>200	>200	0.0	0-10%
pH	GN60786	TC53933-1	su	13.06	13.06(a)	0.0	0-20%

Associated Samples:
Batch GN60700: TC53933-1, TC53933-2
Batch GN60786: TC53933-1, TC53933-2
Batch GP29315: TC53933-2
Batch GP29316: TC53933-1
(*) Outside of QC limits
(a) TEMP 21.5 C

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: TC53933
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	GP29315/GN60790	TC53874-1	mg/kg	0.15 U	10.7	0.0	0.0N(a)	90-110%
Cyanide	GP29316/GN60790	TC53933-1	mg/kg	2.5	17.4	15.1	72.2N(a)	90-110%

Associated Samples:
Batch GP29315: TC53933-2
Batch GP29316: TC53933-1
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(a) Outside control limits due to matrix interference.

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

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

FED-EX Tracking # 7667 4618 2935

Bottle Order Control #

Accutest Quote #

Accutest Job #

Client Information	Subcontract Information
Company Name: Accutest Gulf Coast	Subcontract Laboratory: ACCUTEST NEW JERSEY
Project Contact: Sylvia Garza — Email:	Laboratory Contact: Sample Receiving — Email:
Address: 10165 Harwin Dr. Suite 150	Address:
City: Houston — State: TX — Zip: 77036	City: — State: — Zip:
Phone No.: 713-271-4700	Phone No.:

Requested Analyses: Total Sulfide, BTU

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Wastewater; SW - Surface Water; SO - Soil; SL - Sludge; OIL - Oil; LIQ - Liquid; SOL - Other Solid

Accutest Sample Number	Collection Date	Collection Time	Matrix	# of bottles	Number of preserved bottles	Total Sulfide	BTU	LAB USE ONLY
TC53933-1	8/27/2014	14:35	OI	1		X	X	
TC53933-2	8/28/2014	9:30	OI	1		X	X	

526

Turnaround Time (Business days)

- STANDARD — Approved By / Date
- 7 Day
- 4 Day RUSH
- 3 Day EMERGENCY
- 2 Day EMERGENCY
- 1 Day EMERGENCY
- Other

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

Commercial "A" = Results Only

Commercial "B" = Results & Standard QC

Comments / Remarks

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 Bellwe Henry	8/29/14	1 Red Ox	2 Red Ox	8/30/14 9:15	2
3		3	4		4
5		5	Custody Seal #	Preserved where applicable	On Ice / Cooler Temp 15

3PM14

2.6

10.1 10

TC53933: Chain of Custody
Page 1 of 2
Accutest New Jersey

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: TC53933 **Client:** _____ **Project:** _____

Date / Time Received: 8/30/2014 **Delivery Method:** _____ **Airbill #'s:** _____

Cooler Temps (Initial/Adjusted): #1: (1.5/1.5); 0

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)	
4. No. Coolers:	1	

Quality Control Preservatio	Y	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	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

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

TC53933: Chain of Custody
Page 2 of 2

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

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: TC53933
Account: ALGC - Accutest Laboratories Gulf Coast, Inc.
Project: RFWTXHO: CES- Chemical Spill/4904 Griggs, Houston, TX

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Sulfide, Neutral Extraction	GP82632/GN11108	4.0	0.0	mg/kg	36	36.0	100.0	80-120%

Associated Samples:
Batch GP82632: TC53933-1, TC53933-2
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: TC53933
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%
Sulfide, Neutral Extraction	GP82632/GN10773	JB74978-1	mg/kg	0.0	0.0	0.0	0-30%

Associated Samples:
Batch GP82632: TC53933-1, TC53933-2
Batch GP82817: TC53933-1, TC53933-2
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: TC53933
Account: ALGC - Accutest Laboratories Gulf Coast, Inc.
Project: RFWTXHO: CES- Chemical Spill/4904 Griggs, Houston, TX

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Sulfide, Neutral Extraction	GP82632/GN10773	JB74978-1	mg/kg	0.0	38	33.8	88.9	25-119%

Associated Samples:
Batch GP82632: TC53933-1, TC53933-2
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits