September 01, 2015

Ellis Koch
RXR-Glen Isle Partners, LLC
1750 New Highway
Farmingdale, NY 11735

RE: Recycled Concrete Aggregate Testing – Former Li Tungsten Site - Parcel C

Dear Mr. Koch:

P.W. Grosser Consulting, Inc. (PWGC) has prepared this letter to detail the recent recycled concrete aggregate (RCA) characterization sampling performed at the Former Li Tungsten Site.

Background

There is an approximate 2,500-cubic yard stockpile of RCA located on the former Li Tungsten Parcel Lower C. The stockpile was generated during the demolition of the former Dickson Warehouse building located on the former Li Tungsten's Parcel Upper C. Concrete from the former Dickson Warehouse demolition process was transported to Parcel Lower C, crushed and stockpiled. The demolition was undertaken so that a Final Status Survey (FSS) could be completed at the property in accordance with the multi-agency radiation survey and site investigation manual (MARSSIM). As part of the survey, existing concrete slabs and building foundations were removed to access surface and subsurface soils. During the demolition process, the concrete was scanned for radiation and found to have no exceedances. The radiological monitoring report is included as **Attachment 1.**

Chemical and radiological testing of the stockpile was recently completed for this report, as it was not done during the demolition activities.

Scope of Work

PWGC sampled the stockpile on August 21, 2015 to characterize it for onsite reuse. Twelve test pits were installed by an excavator at the locations shown in **Figure 1**. At each test pit, RCA fines were collected for characterization as described ahead. The sampling frequency was determined utilizing Table 4: Recommended Number of Soil Samples for Soil Imported to or Exported from a Site from New York State Department of Environmental Conservation's (NYSDEC's) *Final Commissioner Policy, CP-51 / Soil Cleanup Guidance*. One discrete sample from eleven of the test pits, and four (three point) composite samples from all of the pits were collected. Discrete samples were analyzed for volatile organic compounds (VOCs) and composite samples were analyzed for semi-volatile organic compounds (SVOCs), metals, pesticides, polychlorinated biphenyls (PCBs), Radium-226, and other gamma emitters.

Analytical Results

Laboratory analytical results were compared to a combination of NYSDEC's 6 New York Codes, Rules, and Regulations (NYCRR) Part 375 Restricted Residential Use Soil Cleanup Objectives (RRUSCOs) and the Site Wide Cleanup Levels (SWCLs) established in the Record of Decision (ROD) and Explanation of Significant Differences (ESD's) for the site. In the absence of a SWCL, the RRUSCOs were utilized as the proposed future use of the subject property is Restricted Residential. Analytical results for VOCs, SVOCs, metals, pesticides, PCBs and radioisotopes were within either SWCLs or RRUSCOs with the exception of arsenic at a concentration of 35.5 mg/kg in the composite sample identified as WC047. It should be noted that the

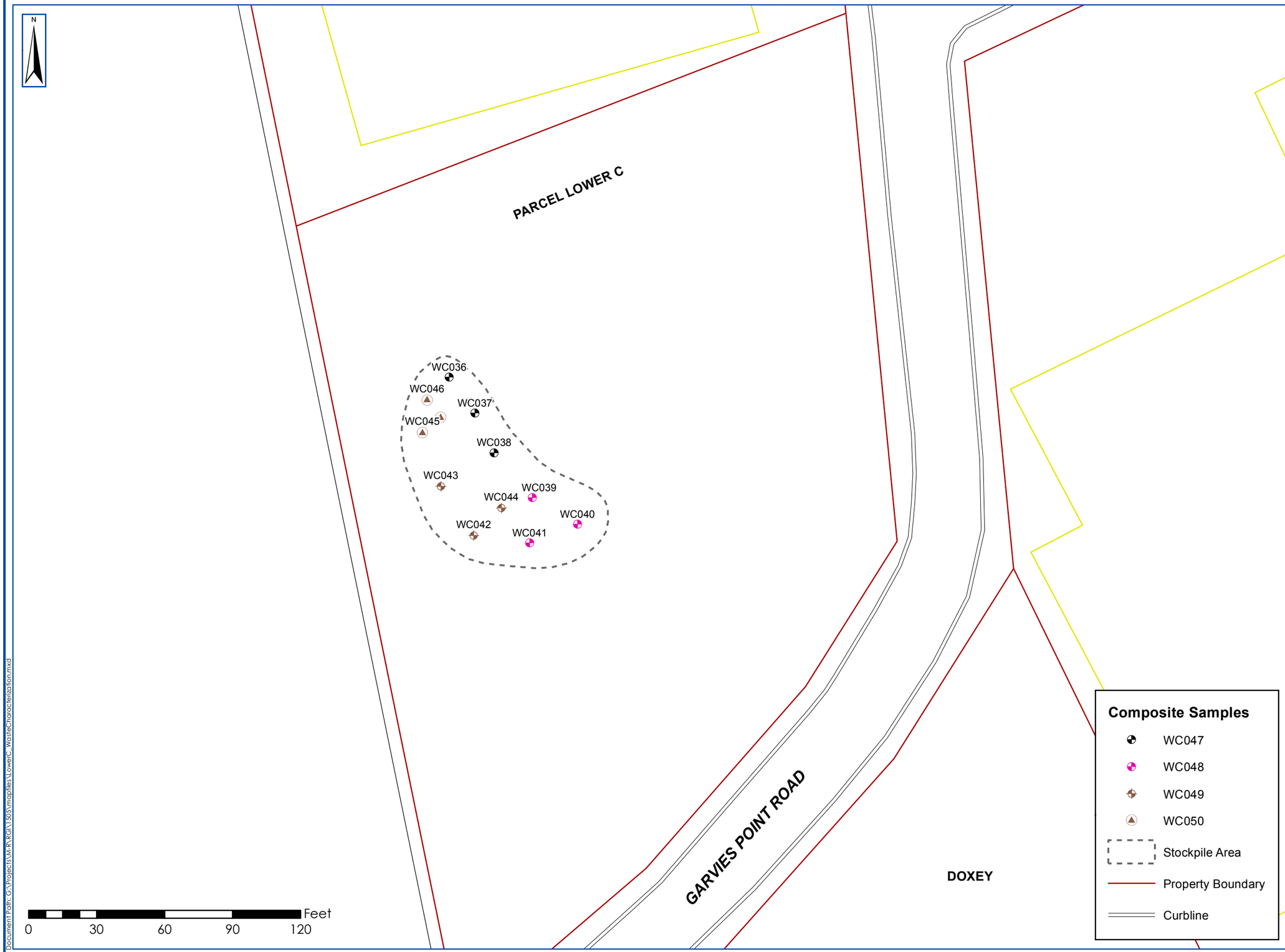
United States Environmental Protection Agency (USEPA) and NYSDEC have agreed to a Soil Management Objective (SMO) for arsenic of 175 mg/kg. Summary tables are included as **Table 1** through **6** and complete laboratory analytical report is included as **Attachment 2**.

Recommendations

PWGC recommends that the RCA is suitable for reuse on Li Tungsten. However, as the stockpile is located on Parcel Lower C and is directly on the ground, no soil from the Lower C surface should be mixed with any RCA moved to another location on Li Tungsten.

Please send this report to the NYSDEC and USEPA for their approval of this use, with the understanding that a two foot clean soil cap or building foundation will still cover any RCA as part of the engineering controls for the site.

FIGURE



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REVISION	DATE	INITIAL	COMMENTS

DRAWING INFORMATION:

Project:	RGI1505	Designed by:	DE
Date:	8/25/2015	Drawn by:	JCG
Scale:	AS SHOWN	Approved by:	DE

PARCEL LOWER C STOCKPILE SAMPLES

GLEN ISLE

FIGURE NO:

SHEET:

TABLES

Table 1
Soil Sample Analytical Data Summary
Volatile Organic Compounds
EPA Method 8260

LiTungsten Site

Client Sample ID:	NYSDEC [1]	WC036		WC037		WC038		WC039		WC040		WC041		WC042		WC043		WC044		WC045		WC046	
Laboratory ID:	RRUSCOs	460-100003-1		460-100003-2		460-100003-3		460-100003-4		460-100003-5		460-100003-6		460-100003-7		460-100003-8		460-100003-9		460-100003-10		460-100003-11	
Sampling Date:		8/21/2015		8/21/2015		8/21/2015		8/21/2015		8/21/2015		8/21/2015		8/21/2015		8/21/2015		8/21/2015		8/21/2015		8/21/2015	
Volatile Organic Compounds (µg/kg)																							
1,1,1-Trichloroethane[f]	100,000[a]	0.67	U	0.60	U	0.57	U	0.56	U	0.69	U	0.74	U	0.75	U	0.51	U	0.52	U	0.42	U	0.57	U
1,1,2,2-Tetrachloroethane	NS	0.30	U	0.27	U	0.25	U	0.25	U	0.31	U	0.33	U	0.34	U	0.23	U	0.23	U	0.19	U	0.25	U
1,1,2-Trichlorotrifluoroethane	NS	0.78	U	0.70	U	0.66	U	0.64	U	0.80	U	0.86	U	0.87	U	0.59	U	0.61	U	0.49	U	0.66	U
1,1,2-Trichloroethane	NS	0.49	U	0.44	U	0.42	U	0.41	U	0.51	U	0.54	U	0.55	U	0.38	U	0.39	U	0.31	U	0.42	U
1,1-Dichloroethane[f]	26,000	0.60	U	0.54	U	0.51	U	0.50	U	0.62	U	0.66	U	0.67	U	0.46	U	0.47	U	0.38	U	0.51	U
1,1-Dichloroethene[f]	100,000[a]	0.72	U *	0.65	U	0.61	U *	0.60	U	0.75	U *	0.80	U	0.81	U	0.55	U	0.57	U	0.45	U	0.61	U
1,2,4-Trichlorobenzene	NS	0.56	U	0.51	U	0.48	U	0.47	U	0.59	U	0.62	U	0.63	U	0.43	U	0.44	U	0.35	U	0.48	U
1,2,4-Trimethylbenzene[f]	52,000	0.60	U	0.54	U	0.51	U	0.50	U	0.62	U	0.66	U	0.67	U	0.46	U	0.47	U	0.38	U	0.51	U
1,2-Dibromo-3-chloropropane	NS	0.83	U	0.75	U	0.70	U	0.69	U	0.86	U	0.91	U	0.93	U	0.63	U	0.65	U	0.52	U	0.70	U
1,2-Dibromoethane	NS	0.21	U	0.19	U	0.18	U	0.18	U	0.22	U	0.23	U	0.24	U	0.16	U	0.17	U	0.13	U	0.18	U
1,2-Dichlorobenzene[f]	100,000[a]	0.25	U	0.22	U	0.21	U	0.20	U	0.26	U	0.27	U	0.28	U	0.19	U	0.19	U	0.16	U	0.21	U
1,2-Dichloroethane	3,100	0.19	U	0.17	U	0.16	U	0.16	U	0.20	U	0.21	U	0.22	U	0.15	U	0.15	U	0.12	U	0.16	U
1,2-Dichloropropane	NS	0.30	U	0.27	U	0.25	U	0.25	U	0.31	U	0.33	U	0.34	U	0.23	U	0.23	U	0.19	U	0.25	U
1,3,5-Trimethylbenzene[f]	52,000	0.23	U	0.21	U	0.19	U	0.19	U	0.24	U	0.25	U	0.26	U	0.17	U	0.18	U	0.14	U	0.19	U
1,3-Dichlorobenzene[f]	49,000	0.21	U	0.19	U	0.18	U	0.18	U	0.22	U	0.23	U	0.24	U	0.16	U	0.17	U	0.13	U	0.18	U
1,4-Dichlorobenzene	13,000	0.23	U	0.21	U	0.19	U	0.19	U	0.24	U	0.25	U	0.26	U	0.17	U	0.18	U	0.14	U	0.19	U
1,4-Dioxane	13,000	11	U	10	U	9.6	U	9.4	U	12	U	12	U	13	U	8.6	U	8.8	U	7.1	U	9.6	U
2-Butanone	100,000[a]	7.6	J	11		10		1.1	U	18		31		46		5.9	J	1.1	U	0.85	U	8.1	
2-Hexanone	NS	1.7	U	1.5	U	1.4	U	1.4	U	1.7	U	1.8	U	1.9	U	1.3	U	1.3	U	1.0	U	1.4	U
4-Methyl-2-pentanone	NS	3.9	U	3.5	U	3.3	U	3.2	U	4.1	U	4.3	U	4.4	U	3.0	U	3.1	U	2.5	U	3.3	U
Acetone	100,000[a]	37		69		55		16		120		180		250		26		1.5	U	1.2	U	46	
Benzene	4,800	0.48	J	.43	J	.3	J	0.55	J	0.57	J	0.79	J	0.64	J	0.41	J	0.43	J	0.28	J	0.33	J
Bromodichloromethane	NS	0.67	U	0.60	U	0.57	U	0.56	U	0.69	U	0.74	U	0.75	U	0.51	U	0.52	U	0.42	U	0.57	U
Bromoform	NS	0.23	U	0.21	U	0.19	U	0.19	U	0.24	U	0.25	U	0.26	U	0.17	U	0.18	U	0.14	U	0.19	U
Bromomethane	NS	0.56	U *	0.51	U	0.48	U *	0.47	U	0.59	U *	0.62	U	0.63	U	0.43	U	0.44	U	0.35	U	0.48	U
Carbon disulfide	NS	0.76	U	0.68	U	0.64	U	0.63	U	0.79	U	0.84	U	0.85	U	0.58	U	0.59	U	0.48	U	0.64	U
Carbon tetrachloride[f]	2,400	0.76	U	0.68	U	0.64	U	0.63	U	0.79	U	0.84	U	0.85	U	0.58	U	0.59	U	0.48	U	0.64	U
Chlorobenzene	100,000[a]	0.25	U	0.22	U	0.21	U	0.20	U	0.26	U	0.27	U	0.28	U	0.19	U	0.19	U	0.16	U	0.21	U
Chloroethane	NS	0.62	U	0.56	U	0.52	U	0.51	U	0.64	U	0.68	U	0.69	U	0.47	U	0.48	U	0.39	U	0.52	U
Chloroform	49,000	0.37	U	0.33	U	0.31	U	0.31	U	0.38	U	0.41	U	0.42	U	0.28	U	0.29	U	0.23	U	0.31	U
Chloromethane	NS	0.67	U *	0.60	U	0.57	U *	0.56	U	0.69	U *	0.74	U	0.75	U	0.51	U	0.52	U	0.42	U	0.57	U
cis-1,2-Dichloroethene[f]	100,000[a]	0.39	U	0.35	U	0.33	U	0.32	U	0.40	U	0.43	U	0.44	U	0.30	U	0.30	U	0.24	U	0.33	U
cis-1,3-Dichloropropene	NS	0.26	U	0.24	U	0.22	U	0.22	U	0.27	U	0.29	U	0.30	U	0.20	U	0.21	U	0.17	U	0.22	U
Cyclohexane	NS	0.81	U	0.73	U	0.69	U	0.67	U	0.84	U	0.90	U	0.91	U	0.62	U	0.63	U	0.51	U	0.69	U
Dibromochloromethane	NS	0.26	U	0.24	U	0.22	U	0.22	U	0.27	U	0.29	U	0.30	U	0.20	U	0.21	U	0.17	U	0.22	U
Dichlorodifluoromethane	NS	0.56	U	0.51	U	0.48	U	0.47	U	0.59	U	0.62	U	0.63	U	0.43	U	0.44	U	0.35	U	0.48	U
Ethylbenzene[f]	41,000	0.32	U	0.29	U	0.27	U	0.38	J	0.34	J	0.35	J	0.41	J	0.26	J	0.30	J	0.20	U	0.27	U
Isopropylbenzene	NS	0.30	U	0.27	U	0.25	U	0.25	U	0.31	U	0.33	U	0.34	U	0.23	U	0.23	U	0.19	U	0.25	U
Methyl acetate	NS	1.6	U	1.4	U	1.3	U	1.3	U	1.6	U	1.8	U	1.8	U	1.2	U	1.2	U	1.0	U	1.3	U
Methyl tert butyl ether[f]	100,000[a]	0.30	U	0.27	U	0.25	U	0.25	U	0.31	U	0.33	U	0.34	U	0.23	U	0.23	U	0.19	U	0.25	U
Methylcyclohexane	NS	0.88	U	0.79	U	0.75	U	0.73	U	0.91	U	0.97	U	0.99	U	0.67	U	0.69	U	0.55	U	0.75	U
Methylene chloride	100,000[a]	1.6	J	2.6		1.6		1.8		0.59	U	0.62	U	0.63	U	2.0		1.6		1.3		1.4	J
n-Butylbenzene[f]	100,000[a]	0.37	U	0.33	U	0.31	U	0.31	U	0.38	U	0.41	U	0.42	U	0.28	U	0.29	U	0.23	U	0.31	U
n-Propylbenzene[f]	100,000[a]	0.32	U	0.29	U	0.27	U	0.26	U	0.33	U	0.35	U	0.36	U	0.24	U	0.25	U	0.20	U	0.27	U
sec-Butylbenzene[f]	100,000[a]	0.30	U	0.27	U	0.25	U	0.25	U	0.31	U	0.33	U	0.34	U	0.23	U	0.23	U	0.19	U	0.25	U
Styrene	NS	0.26	U	0.24	U	0.22	U	0.22	U	0.27	U	0.29	U	0.30	U	0.20	U	0.21	U	0.17	U	0.22	U
tert-Butylbenzene[f]	100,000[a]	0.60	U	0.54	U	0.51	U	0.50	U	0.62	U	0.66	U	0.67	U	0.46	U	0.47	U	0.38	U	0.51	U
Tetrachloroethene	19,000	0.49	U	0.44	U	0.42	U	0.46	J	0.51	U	0.54	U	0.55	U	0.38	U	0.41	J	0.31	U	0.42	U
Toluene	100,000[a]	2.3		1.9		1.5		3.0		2.7		3.5		2.9		1.9		2.3		1.4		1.7	
trans-1,2-Dichloroethene[f]	100,000[a]	0.69	U	0.62	U	0.58	U	0.57	U	0.71	U	0.76	U	0.77	U	0.52	U	0.54	U	0.43	U	0.58	U
trans-1,3-Dichloropropene	NS	0.18	U	0.16	U	0.15	U	0.15	U	0.18	U	0.19	U	0.20	U	0.13	U	0.14	U	0.11	U	0.15	U
Trichloroethene	21,000	0.46	U	0.41	U	0.39	U	0.38	U	0.48	U	0.51	U	0.52	U	0.35	U	0.36	U	0.29	U	0.39	U
Trichlorofluoromethane	NS	0.60	U *	0.54	U	0.51	U *	0.50	U	0.62	U *	0.66	U	0.67	U	0.46	U	0.47	U	0.38	U	0.51	U
Vinyl chloride[f]	900	0.69	U	0.62	U	0.58	U	0.57	U	0.71	U	0.76	U	0.77	U	0.52	U	0.54	U	0.43	U	0.58	U
Xylenes, Total	100,000[a]	1.0	J	0.87	J	0.68	J	1.3	J	1.1	J	1.5	J	1.3	J	.86	J	1.0	J	0.63	J	3.0	J

NOTES:

(1) NYSDEC 6 NYCRR Environmental Remediation Programs Part 375 Restriced Use of Soil Cleanup Objective Table 375-6.8b 12/06

a - The SCOs for residential, restricted-residential and ecological resources use were capped at a maximum value of 100 ppm. See TSD section 9.3.

e - For constituents where the calculated SCO was lower than the contract required quantitation limit (CRQL), the CRQL is used as the SCO value.

f - For constituents where the calculated SCO was lower than the rural soil background concentration, as determined by the department and department of health rural soil survey, the rural soil background concentration is used as the Track 2 SCO value for this use of the site.

NS - No Standard

J - Data are flagged (J) when a QC analysis fails outside the primary acceptance limits. The qualified "J" data are not excluded from further review or consideration. However, only one flag (J) is applied to a sample result, even though several associated QC analyses may fail. The "J" data may be biased high or low or the direction of the bias may be indeterminable.

U - The analyte was analyzed for but not detected.

U* - Tthe analyte was analyzed for but not detected and the LCS or LCSD is outside acceptance limits.

Highlighted text denotes concentrations exceeding NYSDEC Restricted-Residential Use SCO

Table 2
Soil Sample Analytical Data Summary
Semi-Volatile Organic Compounds
EPA Method 8270

LiTungsten Site

Client Sample ID:	NYSDEC [1]	WC047		WC048		WC049		WC050	
Laboratory ID:	RRUSCOs	460-100003-12		460-100003-13		460-100003-14		460-100003-15	
Sampling Date:		8/21/2015		8/21/2015		8/21/2015		8/21/2015	
Semi-Volatile Organic Compounds									
2,4,5-Trichlorophenol	NS	190	U	39	U	190	U	76	U
2,4,6-Trichlorophenol	NS	54	U	11	U	54	U	22	U
2,4-Dichlorophenol	NS	45	U	9	U	44	U	18	U
2,4-Dimethylphenol	NS	420	U	86	U	410	U	170	U
2,4-Dinitrophenol	NS	1,400	U	300	U	1,400	U	580	U
2,4-Dinitrotoluene	NS	75	U	16	U	75	U	30	U
2,6-Dinitrotoluene	NS	100	U	21	U	100	U	41	U
2-Chloronaphthalene	NS	43	U	9	U	43	U	17	U
2-Chlorophenol	NS	48	U	10	U	48	U	19	U
2-Methylnaphthalene	NS	42	U	9	U	42	U	17	U
2-Methylphenol	NS	83	U	17	U	82	U	33	U
2-Nitroaniline	NS	62	U	13	U	62	U	25	U
2-Nitrophenol	NS	64	U	13	U	63	U	26	U
3,3'-Dichlorobenzidine	NS	210	U	44	U	210	U	85	U
3-Nitroaniline	NS	56	U	12	U	56	U	23	U
4,6-Dinitro-o-cresol[f]	100,000[a]	510	U	100	U	500	U	200	U
4-Bromophenyl phenyl ether	NS	60	U	12	U	59	U	24	U
4-Chloro-3-methylphenol	NS	81	U	17	U	81	U	33	U
4-Chloroaniline	NS	49	U	10	U	48	U	20	U
4-Chlorophenyl phenyl ether	NS	57	U	12	U	56	U	23	U
4-Methylphenol	NS	52	U	11	U	51	U	21	U
4-Nitroaniline	NS	72	U	15	U	71	U	29	U
4-Nitrophenol	NS	910	U	190	U	910	U	370	U
Acenaphthene	100,000[a]	46	U	10	U	46	U	18	U
Acenaphthylene[f]	100,000[a]	49	U	10	U	48	U	20	U
Acetophenone	NS	41	U	9	U	41	U	17	U
Anthracene[f]	100,000[a]	180	U	37	U	180	U	73	U
Atrazine	NS	84	U *	17	U *	84	U *	34	U *
Benzaldehyde	NS	140	U	30	U	140	U	58	U
Benzo(a)anthracene[f]	1,000[f]	160	U	33	U	160	U	64	U
Benzo(a)pyrene	1,000[f]	57	U	12	U	57	U	23	U
Benzo(b)fluoranthene[f]	1,000[f]	74	U	15	U	74	U	30	U
Benzo(ghi)perylene[f]	100,000[a]	110	U	22	U	110	U	44	U
Benzo(k)fluoranthene[f]	3,900	83	U	17	U	82	U	33	U
Biphenyl	NS	160	U	33	U	160	U	65	U
Bis(2-chloroethyl)ether	NS	78	U	16	U	78	U	31	U
Bis(2-chloroethoxy)methane	NS	59	U	12	U	59	U	24	U
Bis(2-chloroisopropyl)ether	NS	45	U	9	U	44	U	18	U
Bis(2-Ethylhexyl)phthalate	NS	74	U	15	U	74	U	30	U
Butyl benzyl phthalate	NS	58	U	12	U	58	U	24	U
Caprolactum	NS	140	U	28	U	140	U	55	U
Carbazole	NS	47	U	10	U	47	U	19	U
Chrysene[f]	3,900	52	U	42	J	51	U	21	U
Dibenzo(a,h)anthracene[f]	330[e]	99	U	20	U	98	U	40	U
Dibenzofuran[f]	59,000	57	U	12	U	57	U	23	U
Diethyl phthalate	NS	54	U	11	U	54	U	22	U
Dimethyl phthalate	NS	55	U	11	U	55	U	22	U
Di-n-butylphthalate	NS	57	U	12	U	56	U	23	U
Di-n-octylphthalate	NS	96	U	20	U	96	U	39	U
Fluoranthene[f]	100,000[a]	56	U	76	J	56	U	23	U
Fluorene	100,000[a]	41	U	9	U	41	U	17	U
Hexachlorobenzene	1,200	77	U	16	U	76	U	31	U
Hexachlorobutadiene	NS	53	U	11	U	53	U	21	U
Hexachlorocyclopentadiene	NS	120	U	24	U	120	U	48	U
Hexachloroethane	NS	69	U	14	U	69	U	28	U
Indeno(1,2,3-cd)Pyrene[f]	500[f]	130	U	26	U	130	U	51	U
Isophorone	NS	16,000		9,200		15,000		11,000	
Naphthalene[f]	100,000[a]	48	U	10	U	48	U	19	U
Nitrobenzene	NS	60	U	12	U	59	U	24	U
n-Nitrosodi-n-propylamine	NS	64	U	13	U	63	U	26	U
NitrosoDiPhenylAmine(NDPA)/DPA	NS	170	U	36	U	170	U	69	U
Pentachlorophenol	6,700	230	U	47	U	230	U	92	U
Phenanthrene[f]	100,000[a]	50	U	54	J	50	U	20	U
Phenol	100,000[a]	62	U	13	U	62	U	25	U
Pyrene[f]	100,000[a]	86	U	73	J	86	U	35	U
Total SVOCs		16,000		9,445		15,000		11,000	

Notes:

(1) NYSDEC 6 NYCRR Environmental Remediation Programs Part 375 Restriced Use of Soil Cleanup Objective Table 375-6.8b 12/06

a - The SCOs for residential, restricted-residential and ecological resources use were capped at a maximum value of 100 ppm. See TSD section 9.3.

c - The SCOs for industrial use and protection of groundwater were capped at a maximum value of 1,000 ppm. See TSD section 9.3.

e - For constituents where the calculated SCO was lower than the contract required quantitation limit (CRQL), the CRQL is used as the SCO value.

f - For constituents where the calculated SCO was lower than the rural soil background concentration, as determined by the department and department of health rural soil survey, the rural soil background concentration is used as the Track 2 SCO value for this use of the site.

NS - No Standard

J - Data are flagged (J) when a QC analysis fails outside the primary acceptance limits. The qualified "J" data are not excluded from further review or consideration. However, only one flag (J) is applied to a sample result, even though several associated QC analyses may fail. The "J" data may be biased high or low or the direction of the bias may be indeterminable.

U - The analyte was analyzed for, but due to blank contamination was flagged as non-detect (U). The result is usable as nondetect.

U* - Tthe analyte was analyzed for but not detected and the LCS or LCSD is outside acceptance limits.

Highlighted text denotes concentrations exceeding NYSDEC Restricted-Residential Use SCO

Table 3
Soil Sample Analytical Data Summary
Total Metals
EPA Method 6010

LiTungsten Site

Client Sample ID: Laboratory ID: Sampling Date:	NYSDEC [1] RRUSCOs	WC047 460-100003-12 8/21/2015		WC048 460-100003-13 8/21/2015		WC049 460-100003-14 8/21/2015		WC050 460-100003-15 8/21/2015	
Total Metals (mg/kg)									
Aluminum, Total	NS	7,720		5,370		7,090		6,330	
Antimony, Total	NS	53.7		50.7		11.8		25.9	
Arsenic, Total	24*	35.5		22.8		14.1		13.4	
Barium, Total	400	57.1	J	47.1	J	44.4	J	39.4	J
Beryllium, Total	72	0.88	U	0.90	U	0.94	U	0.91	U
Cadmium, Total	4.3	1.1	U	1.1	U	1.2	U	1.10	U
Calcium, Total	NS	96,000		103,000		102,000		112,000	
Chromium, Total[e]	180	12.1		9.8		10.4		8	
Cobalt, Total	NS	16.6	J	14.3	J	12.0	J	8.1	J
Copper, Total	270	53.2		36.3		38.0		46.7	
Iron, Total	NS	11,100		10,900		8,280		8,290	
Lead, Total	400	127		41.9		19.4		20.3	
Magnesium, Total	NS	21,900		35,100		21,200		32,700	
Manganese, Total	2,000[f]	370		238		237		214	
Nickel, Total	310	22.4		16.2	J	18.4	J	12.1	J
Potassium, Total	NS	584	J	499	J	425	J	388	J
Selenium, Total	180	3.6	U	3.7	U	3.8	U	3.7	U
Silver, Total	180	1.2	J	0.93	U	0.98	U	0.95	U
Sodium, Total	NS	218	J	179	J	188	U	181	U
Thallium, Total	NS	4.6	U	4.7	U	4.9	U	4.7	U
Vanadium, Total	NS	14.7	J	11.4	J	11.1	J	12.1	J
Zinc, Total	10,000[d]	77.4		54.5		69.9		95	
Mercury, Total	0.81[j]	0.20		0.17		0.21		0.17	

Notes:

(1) NYSDEC 6 NYCRR Environmental Remediation Programs Part 375 Restriced Use of Soil Cleanup Objective Table 375-6.8b 12/06

* SWCL

d - The SCOs for metals were capped at a maximum value of 10,000 ppm. See TSD section 9.3.

f - For constituents where the calculated SCO was lower than the rural soil background concentration, as determined by the department and department of health rural soil survey, the rural soil background concentration is used as the Track 2 SCO value for this use of the site.

j - This SCO is the lower of the values for mercury (elemental) or mercury (inorganic salts). See TSD Table 5.6-1.

NS - No Standard

J - Data are flagged (J) when a QC analyte falls outside the primary acceptance limits. The qualified J data are not excluded from further review or consideration. However, only one flag (J) is applied to a sample result, even though several associated QC analyses may fail. The "J" data may be biased high or low or the direction of the bias may be indeterminable.

U - The analyte was analyzed for, but due to blank contamination was flagged as non-detect (U). The result is usable as nondetect.

Highlighted text denotes concentrations exceeding RRUSCO or SWCL

Table 4
Soil Sample Analytical Data Summary
Pesticides
EPA Method 8081

LiTungsten Site

Client Sample ID:	NYSDEC (1)	WC047		WC048		WC049		WC050	
Laboratory ID:	RRUSCOs	460-100003-12		460-100003-13		460-100003-14		460-100003-15	
Sampling Date:		8/21/2015		8/21/2015		8/21/2015		8/21/2015	
Organochlorine Pesticides (µg/kg)									
4,4'-DDD	13,000	1.0	U	1.0	U	1.0	U	1.0	U
4,4'-DDE	8,900	1.1	U	1.1	U	1.1	U	1.1	U
4,4'-DDT	7,900	5.0	J	0.82	U	6.1	J	0.80	U
Aldrin	97	0.93	U	0.96	U	0.92	U	0.94	U
Alpha-BHC	480	0.70	U	0.72	U	0.70	U	0.71	U
Alpha-Chlordane	4,200	1.3	U	1.3	U	1.2	U	1.3	U
Beta-BHC	360	0.75	U	0.77	U	0.74	U	0.75	U
Delta-BHC[g]	100,000[a]	0.84	U	0.87	U	0.83	U	0.84	U
Dieldrin	200	1.0	U	1.0	U	0.99	U	1.0	U
Endosulfan I[g,i]	24,000[i]	1.1	U	1.1	U	1.1	U	1.1	U
Endosulfan II[g,i]	24,000[i]	1.2	U	1.2	U	1.2	U	1.2	U
Endosulfan sulfate[g,i]	24,000[i]	0.89	U	0.92	U	0.89	U	0.90	U
Endrin	11,000	0.97	U	1.0	U	0.97	U	0.98	U
Endrin aldehyde	NS	0.95	U	0.98	U	0.95	U	0.96	U
Endrin ketone	NS	1.1	U	1.1	U	1.1	U	1.1	U
Gamma-BHC (Lindane)	1,300	0.69	U	0.71	U	0.68	U	0.69	U
Gamma-Chlordane	NS	1.7	U	1.7	U	1.7	U	1.7	U
Heptachlor	2,100	0.99	U	1.0	U	0.98	U	1.0	U
Heptachlor epoxide	NS	1.5	U	1.6	U	1.5	U	1.5	U
Methoxychlor	NS	1.6	U	1.7	U	1.6	U	1.6	U
Toxaphene	NS	22	U	23	U	22	U	23	U

Notes:
(1) NYSDEC 6 NYCRR Environmental Remediation Programs Part 375 Restriced Use of Soil Cleanup Objective Table 375-6.8b 12/06
a - The SCOs for residential, restricted-residential and ecological resources use were capped at a maximum value of 100 ppm. See TSD section 9.3.
c - The SCOs for industrial use and protection of groundwater were capped at a maximum value of 1,000 ppm. See TSD section 9.3.
i - This SCO is for the sum of Endosulfan I, endosulfan II, and endosulfan sulfate.
NS - No Standard
However, only one flag (J) is applied to a sample result, even though several associated QC analyses may fail. The "J" data may be biased high or low or the direction of the bias may be indeterminable.
U - The analyte was analyzed for, but due to blank contamination was flagged as non-detect (U). The result is usable as nondetect.
Highlighted text denotes concentrations exceeding NYSDEC Restricted-Residential Use SCO

Table 5
Soil Sample Analytical Data Summary
PCBS
EPA Method 8082

LiTungsten Site

Client Sample ID: Laboratory ID: Sampling Date:	NYSDEC (1) SWCL Use (Below Top 2 Feet)	WC047 460-100003-12 8/21/2015		WC048 460-100003-13 8/21/2015		WC049 460-100003-14 8/21/2015		WC050 460-100003-15 8/21/2015	
Polychlorinated Biphenyls (µg/kg)									
Aroclor 1016	10,000	10	U	11	U	10	U	10	U
Aroclor 1221	10,000	10	U	11	U	10	U	10	U
Aroclor 1232	10,000	10	U	11	U	10	U	10	U
Aroclor 1242	10,000	10	U	11	U	10	U	10	U
Aroclor 1248	10,000	10	U	11	U	10	U	10	U
Aroclor 1254	10,000	11	U	11	U	10	U	11	U
Aroclor 1260	10,000	71	J	11	U	84		11	U

Notes:

(1) NYSDEC 6 NYCRR Environmental Remediation Programs Part 375 Restriced Use of Soil Cleanup Objective Table 375-6.8b 12/06

NS - No Standard

J - Data are flagged (J) when a QC analysis falls outside the primary acceptance limits. The qualified "J" data are not excluded from further review or consideration. However, only one flag (J) is applied to a sample result, even though several associated QC analyses may fail. The "J" data may be biased high or low or the direction of the bias may be indeterminable.

U - The analyte was analyzed for, but due to blank contamination was flagged as non-detect (U). The result is usable as nondetect.

Highlighted text denotes concentrations exceeding NYSDEC Restricted-Residential Use SCO

Table 6
Soil Sample Analytical Data Summary
Radium-226 and Other Gamma Emitters

LiTungsten Site

Client Sample ID: Laboratory ID: Sampling Date:	Site Specific Soil Cleanup Objectives	WC047 160-13509-1 8/21/2015			WC048 160-13509-2 8/21/2015			WC049 160-13509-3 8/21/2015			WC050 160-13509-4 8/21/2015		
		Result		Total Uncertainty (2σ+/-)	Result		Total Uncertainty (2σ+/-)	Result		Total Uncertainty (2σ+/-)	Result		Total Uncertainty (2σ+/-)
Method GA-01-R - Radium-226 & Other Gamma Emitters (GS) - (pCi/g)													
Actinium 228	-	0.305		0.0532	0.283		0.0512	0.327		0.0576	0.312		0.0517
Bismuth-212	-	0.441		0.169	0.302		0.115	0.468		0.164	0.278		0.112
Bismuth-214	-	0.292		0.0463	0.247		0.0382	0.27		0.0439	0.21		0.0363
Lead-210	-	0.418		0.226	0.226	U	0.209	0.499		0.235	0.266	U	0.242
Lead-212	-	0.309		0.0443	0.25		0.0368	0.262		0.0402	0.254		0.0376
Lead-214	-	0.366		0.049	0.268		0.0375	0.275		0.0438	0.276		0.0416
Potassium-40	-	4.99		0.577	4.79		0.579	4.8		0.59	4.7		0.551
Protactinium-231	-	0.128	U	0.0989	0.283		0.142	0.111	U	0.086	0.101	U	0.0771
Protactinum-234m	-	0.451	U	0.978	0.958	U	0.74	-0.685	U	2.35	0.382	U	0.902
Thallium-208	-	0.108		0.0174	0.0732		0.0157	0.088		0.0202	0.0961		0.0165
Thorium-234	-	0.265	U	0.103	0.354		0.206	0.519		0.215	0.434		0.23
Uranium-235	-	0.0377	U	0.0397	0.0424	U	0.034	0.0371	U	0.0664	-0.00694	U	0.0477
Uranium-238	-	0.265	U	0.103	0.354		0.206	0.519		0.215	0.434		0.23
Radium-226	-	0.576		0.239	0.622		0.214	1.54		0.939	0.672		0.248
Radium-228	-	0.305		0.0532	0.283		0.0512	0.327		0.0576	0.312		0.0517
Radium-226 + Radium-228	≤ 5 + Background*	0.881			0.905			1.867			0.984		

Notes:

(1)USEPA Site Specific Soil Cleanup Objectives

* background is approximately 1 pCi/g for each isotope

B - Compound was found in the blank and sample.

J - Data are flagged (J) when a QC analysis fails outside the primary acceptance limits. The qualified "J" data are not excluded from further review or consideration. However, only one flag (J) is applied to a sample result, even though several associated QC analyses may fail. The "J" data may be biased high or low or the direction of the bias may be indeterminable.

JN - The analysis indicated the presence of a compound that has been "tentatively identified" (N) and the associated numerical value represents its approximate (J) concentration.

R - Data rejected ® on the basis of an unacceptable QC analysis should be excluded from further review or consideration. Data are rejected when associated QC analysis results exceed the expanded control limits of the QC criteria. The rejected data are known to contain significant errors based on documented information. The data user must not use the rejected data to make environmental decisions. The presence or absence of the analyte cannot be verified.

U - The analyte was analyzed for, but due to blank contamination was flagged as non-detect (U). The result is usable as nondetect.

UJ - The analyte was not detected above the reported sample quantitation limit. Data are flagged (UJ) when a QC analysis fails outside the primary acceptance limits. The qualified "UJ" data are not excluded from further review or consideration. However, only one flag is applied to a sample result, even though several associated QC analyses may fail. The "UJ" data may be biased low.

Highlighted text denotes concentrations exceeding Site Specific SCO

ATTACHMENT 1

Post Demolition Radiological Survey Report
Dickson Warehouse, Benbow, and Lounge Buildings

1.0 Introduction

The Gramercy Group Inc. (Gramercy) completed the demolition and load-out of Dickson Warehouse, Benbow Building, and the Former Lounge Building at the Li Tungsten Site in accordance with their approved demolition work plans during May and June 2014. Perma-Fix provided radiological support during demolition activities in accordance with the *Radiation Protection Plan-Dickson Warehouse, Benbow, and Lounge Buildings* (Perma-Fix 2014). The information provided herein summarizes the radiological surveillance activities performed in support of the three-building demolition project, and provides copies of all surveillance documents produced in support of this effort.

This Radiation Protection Plan (RPP) (**Attachment A**) elements were implemented under the guidance of Safety and Ecology Corporation Radioactive Material D&D License 201-650-90 (Commonwealth of Kentucky) through reciprocity with NYDEC.

2.0 Basis and Scope

The three structures were demolished in support of planned site redevelopment activities. The Site has a history of radioactive materials usage dating back to the 1940's. The purpose of the RPP was to implement measures to monitor the radiological conditions during demolition to ensure radiation exposures to site workers, the public, and the environment were maintained as low as reasonably achievable (ALARA); and to ensure the radiation levels on the off-site shipments of demolition debris were sufficiently low to meet landfill radiation monitoring requirements. To that end, the following radiation protection requirements and controls were implemented during demolition activities.

- Radiation Awareness Training
- Dust Control
- Air Sampling
- Job Site, Equipment, and Personnel Surveys
- Pre-Transportation Surveys
- Quality Control

3.0 Radiation Awareness Training

On the morning of May 6, 2014 prior to beginning demolition activities a group briefing was provided to the Gramercy work crew. The briefing included discussion on the following topics. The training was documented on the 5/6/2014 Daily Quality Control Report (**Attachment B**):

- definition of radiation (ionizing versus non-ionizing)
- naturally occurring radioactive material (NORM)
- current radiological conditions of the site
- basic ALARA concepts
- general overview of the radiological surveillance activities to be performed by Perma-Fix
- contamination control (frisking)

4.0 Dust Control and Airborne Radioactivity Sampling Results

Gramercy effectively controlled dust throughout the demolition process consistent with their work plan for asbestos abatement by using water hoses and misting equipment.

General area air sampling was generally conducted on a daily basis throughout the demolition process to confirm that the airborne radioactivity levels in the work area were maintained ALARA and consistent with background. Air sampling was not conducted on days when heavy rain occurred due to the low potential for airborne release and safety concerns using electrical equipment in wet conditions.

The air samples were collected with F&J Specialty Products Model LV-1 Low-Volume Air Samplers. The sample media used was standard 47 mm glass fiber filter paper. The air filters were field screened daily using a calibrated Ludlum Model 44-9 “pancake” probe coupled to a Ludlum Model 12 rate-meter and compared against the baseline air sample count rate that was established prior to beginning demolition work. Results of daily air sampling surveys were documented on the Daily Quality Control Reports (DQCR) contained in **Attachment B.**

In instances where the initial count exceeded twice background, the samples were recounted to allow short-lived radon progeny to decay. In no cases were recounted air sampling results significantly distinguishable from background. See **Attachment B** DQCR’s for details on daily air sampling results.

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6.0 Field Survey Results

Radiation and contamination surveys were performed throughout the demolition activities.

6.1 Equipment

All heavy equipment, bobcats, roll-off containers, etc. were surveyed for removable and total contamination upon mobilization and demobilization. No equipment had measurable radioactivity levels distinguishable from background. Copies of the incoming and release surveys are provided in **Attachment C**.

6.2 Pre-Transport Surveys

Prior to exiting the site onto public roadways, each haul truck underwent a radiation and contamination survey. The survey consisted of measuring the external exposure rates on all 4 sides of the vehicle and by taking one large area swipe of the vehicle surfaces and/or tires. All exposure rates and radioactivity levels on the trucks were indistinguishable from background. Results of surveys were recorded on survey forms contained in **Attachment D**.

6.3 Post Demolition Surveys

Radiation and contamination surveys were performed of each building slab and adjacent areas upon completion of the demolition and material load-out. These surveys consisted of radiation exposure rate measurements and smears. All exposure rates and removable radioactivity levels were consistent with background. Results of the post demolition surveys are provided in **Attachment C.**

7.0 Quality Control

All instrumentation used was operated and maintained in accordance with manufacturers specifications and approved procedures. Instruments were calibrated and field tested daily in accordance with American National Standards Institute (ANSI) N323A, 1997. Daily field checks were documented on the DQCR's provided in **Attachment B**.

Instrument set-up sheets and calibrations certificates are provided in **Attachment E**.

# #

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Attachment A

Radiation Protection Plan

Radiation Protection Plan
Dickson Warehouse, Benbow, and Lounge Buildings

1.0 Introduction

This Radiation Protection Plan (RPP) has been developed to support the demolition of structures at the Li Tungsten Superfund Site (Site). The demolition will be performed under the guidance of Safety and Ecology Corporation Radioactive Material D&D License 201-650-90 (Commonwealth of Kentucky) through reciprocity with NYDEC. The Site is located at 63 Herbhill Road in the City of Glen Cove. The property is 26 acres and consists of three separate parcels. The main parcel is bordered by Glen Cove Creek to the south and Herbhill Road to the north and a second parcel to the west of Dickson Lane. The remaining parcel is bordered by Herbhill Road on the south and Dickson Lane on the west. The facility was owned from the 1940's to approximately 1984 by the Wah Chang Smelting and Refining Company and operated by a succession of entities, including Teledyne Inc. and the Li Tungsten Corp.

2.0 Basis and Scope

There are three structures including the Dickson Warehouse, Benbow, and former Lounge Buildings that will be demolished in support of planned site redevelopment activities. The Site has a history of radioactive materials usage dating back to the 1940's. Remedial activities have been performed previously at the Site and historical records indicate that the three structures are free of radioactive contamination; but do contain measurable amounts of naturally occurring radioactive materials (NORM) within the building materials including natural radium and thorium, and radioactive potassium commonly found in concrete and brick. Therefore the purpose of this plan is implement measures to monitor the radiological conditions during demolition to ensure radiation exposures to site workers, the public, and the environment are maintained as low as reasonably achievable (ALARA); and to ensure the radiation levels on off-site shipments of demolition debris containing NORM are sufficiently low to meet landfill radiation monitoring requirements. To that end, the following radiation protection requirements and controls will be implemented during demolition.

- Radiation Awareness Training
- Dust Control
- Air Sampling
- Job Site, Equipment, and Personnel Surveys
- Pre-Transportation Surveys
- Quality Control

3.0 Radiation Awareness Training

Prior to beginning demolition, all Site workers will be provided Radiation Awareness Training. The training will consist of a review of a handout containing information on the following topics as well as a 30-minute briefing to augment the information contained in the handouts and to answer and questions.

- ALARA
- Radiation Defined
- Sources of Radiation
- Radiation Vs. Contamination
- Radiation Dose Comparison Limits
- Radiological Postings

4.0 Dust Control

Although the generation of airborne radioactivity levels above established derived air concentration (DAC) thresholds is not anticipated, dust controls will nonetheless be implemented within the demolition area(s) to prevent fugitive emissions as applicable. Since all three buildings have asbestos containing materials (ACM) and two of them (Benbow and Lounge buildings) will be demolished and disposed of as ACM and the third building (Dickson Warehouse) will undergo conventional demolition after asbestos abatement , the dust controls described in this Demolition Work Plan and Asbestos Abatement Work Plan are considered appropriate and sufficient to control any potential airborne radioactivity.

5.0 Air Sampling

To document the airborne conditions and to confirm compliance with offsite effluent release limits perimeter air monitoring will be conducted daily during any dust generating activities. A maximum of four perimeter air samplers will be located at selected locations around the perimeter of the work area; or based on wind rose predictions. The air samples will be collected with an F&J Specialty Products Model LV-1 Low-Volume Air Sampler. Sample media will be collected on standard 47 mm glass fiber filter paper. Air filters will be field screened using a Ludlum Model 44-9 “pancake” probe coupled to a scaler/rate-meter such as a Ludlum Model 2221 or equivalent. Prior to beginning demolition activities, a baseline air sample will be collected and field counted to establish background conditions. The daily air samples will be compared to the established background value. For the purpose of this plan and due to the low potential for airborne radioactivity, the air filter results will be measured in counts per minute

(cpm) and recorded in field Log Books. If results of air samples exceed two times background, the Site Radiological Engineer will be notified and the filter(s) will be held for 3 days to allow for the short-lived radon daughters to decay; and then recounted in a low background area to determine the presence of any long-lived radioisotopes. Results of this second count will be compared directly to the DAC values established in 10CFR20, Appendix B.

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6.0 Job Site, Equipment, and Personnel Surveys

Radiation and contamination surveys will be performed prior to, during, and at the completion of demolition activities to document the radiological conditions.

Radiation surveys will be conducted using standard instrumentation such as Thermo-Scientific (Bicron) Micro-Rem Meter for exposure rate measurements; and with a Ludlum Model 44-10 sodium iodide (NaI) detector for gross gamma measurements of building debris and soil and slab surfaces.

Contamination surveys using direct and indirect survey techniques will be performed using Ludlum Model 44-9 detectors. Direct surveys will be conducted by directly scanning target surfaces or by performing timed stationary measurements to determine fixed radioactivity levels. Indirect surveys are performed by swiping a target surface with a cloth smear and then field counting the smear for removable radioactivity.

6.1 Job Site Surveys

Radiation and contamination surveys will be performed daily throughout the demolition phase to confirm and document site conditions. Surveys will be conducted in work areas and on debris piles as practical to ensure anticipated conditions have not changed.

6.2 Equipment Surveys

Baseline and final release surveys will be performed on all equipment mobilized to the site and used for demolition purposes including heavy equipment and haul trucks. Baseline surveys will consist of direct and indirect contamination surveys as described in section 6.0**.** Prior to final demobilization from the project, all equipment will undergo a final release survey to verify radiological cleanliness. Results of surveys will be recorded on survey forms or in Log Books.

6.3 Personnel Surveys

Personnel surveys of “frisking” will be performed throughout the demolition phase to confirm the absence of radioactivity on workers skin and clothing. Frisking will be performed by trained radiation safety

technicians as practical. At a minimum, workers hands and feet should be scanned upon exiting the work area for breaks, lunch, and prior to leaving the site at the end of the day.

6.4 Pre-Transport Surveys

Prior to exiting the site onto public roadways, each haul truck will undergo a radiation and contamination survey. The radiation survey will consist of measuring the external exposure rates on all 4 sides of the vehicle and by taking one large area swipe of the vehicle surfaces and/or tires. Results of surveys will be recorded on survey forms or in Log Books.

7.0 Quality Control

All instrumentation used will be operated and maintained in accordance with manufacturers specifications and approved procedures. Instruments will be calibrated and field tested daily in accordance with American National Standards Institute (ANSI) N323A, 1997. Daily field checks will be documented on forms or in Log Books.

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Attachment B

Daily Quality Control Reports

PERMA-FIX
DAILY QUALITY CONTROL REPORT
LI TUNGSTEN

Date: 6/12/14 (Thursday)

On-Site Contractor/Subcontractor Area of Responsibility

Name	Position	Assigned Area	Hours Worked
Peter Freeman	Sr. RPT		8
Frank Quinton	Lead RPT		8
Scott Walnicki	RSO		6
Eric Laning	PM		0
		TOTAL	22

Air Sample Results:

Location	Gross CPM	Bkg CPM	% Bkg	Comments
				No Air Samples Collected due to rain.

Truck Release Survey Results Summary: *See attached Survey sheets for Results*.

Location	TIME	ID (Plate #)	Micro-R reading	Removable Contamination (LAW) Results
See Attached Survey Sheet(s)				

Remarks:

1. Began at 7:00.
2. Provided continuous job coverage.
3. Completed demo and load out of Lounge Building.
4. One roll-off was surveyed for release from site – this completes
5. All release surveys completed on equipment. Gramercy is demobilized from site.
6. Secured storage space for instruments in anticipation of upcoming mobilization to remove building foundations.
7. All Perma-fix employees have demobilized.
8. Note that one area of elevated dose rate was observed during post-demo survey (see Survey LT033) it appears to be from natural brick and concrete in a support post. No removable contamination was detected. During foundation work, care will be taken to load out this elevated material such that dose rates are at or near background.

PERMA-FIX
DAILY QUALITY CONTROL REPORT
LI TUNGSTEN

Date: 6/11/14 (Wednesday)

On-Site Contractor/Subcontractor Area of Responsibility

Name	Position	Assigned Area	Hours Worked
Peter Freeman	Sr. RPT		9
Frank Quinton	Lead RPT		9
Scott Walnicki	RSO		0
Eric Laning	PM		0
		TOTAL	18

Air Sample Results:

Location	Gross CPM	Bkg CPM	% Bkg	Comments
				No Air Samples Collected due to rain.

Truck Release Survey Results Summary: *See attached Survey sheets for Results*.

Location	TIME	ID (Plate #)	Micro-R reading	Removable Contamination (LAW) Results
See Attached Survey Sheet(s)				

Remarks:

1. Began at 6:30 to set up instruments and air samplers.
2. Provided continuous job coverage.
3. Completed demo and load out of Lounge Building.
4. A total of 4 roll-offs were surveyed for release from site.
5. Completed reviewing all surveys performed to date on project.
6. Began to perform outgoing surveys of all equipment and material (see attached Surveys).
7. Performed post-demo survey of Lounge pad and work areas (see attached surveys).

PERMA-FIX
DAILY QUALITY CONTROL REPORT
LI TUNGSTEN

Date: 6/10/14 (Tuesday)

On-Site Contractor/Subcontractor Area of Responsibility

Name	Position	Assigned Area	Hours Worked
Peter Freeman	Sr. RPT		9
Frank Quinton	Lead RPT		9
Scott Walnicki	RSO		0
Eric Laning	PM		0
		TOTAL	18

Air Sample Results:

Location	Gross CPM	Bkg CPM	% Bkg	Comments
				No Air Samples Collected due to rain.

Truck Release Survey Results Summary: *See attached Survey sheets for Results*.

Location	TIME	ID (Plate #)	Micro-R reading	Removable Contamination (LAW) Results
See Attached Survey Sheet(s)				

Remarks:

1. Began at 6:30 to set up instruments and air samplers.
2. Provided continuous job coverage.
3. Continue demo of Lounge Building.
4. A total of 7 roll-offs were surveyed for release from site.
5. Continued reviewing all surveys performed to date on project.

PERMA-FIX
DAILY QUALITY CONTROL REPORT
LI TUNGSTEN

Date: 6/9/14 (Monday)

On-Site Contractor/Subcontractor Area of Responsibility

Name	Position	Assigned Area	Hours Worked
Peter Freeman	Sr. RPT		9
Frank Quinton	Lead RPT		9
Scott Walnicki	RSO		0
Eric Laning	PM		0
		TOTAL	18

Air Sample Results:

Location	Gross CPM	Bkg CPM	% Bkg	Comments
				No Air Samples Collected due to rain.

Truck Release Survey Results Summary: *See attached Survey sheets for Results*.

Location	TIME	ID (Plate #)	Micro-R reading	Removable Contamination (LAW) Results
See Attached Survey Sheet(s)				

Remarks:

1. Began at 6:30 to set up instruments and air samplers.
2. Provided continuous job coverage.
3. Continue demo of Lounge Building.
4. A total of 13 roll-offs were surveyed for release from site.
5. Continued reviewing all surveys taken to date on project.

PERMA-FIX
DAILY QUALITY CONTROL REPORT
LI TUNGSTEN

Date: 6/6/14 (Friday)

On-Site Contractor/Subcontractor Area of Responsibility

Name	Position	Assigned Area	Hours Worked
Peter Freeman	Sr. RPT		9.5
Frank Quinton	Lead RPT		9.5
Scott Walnicki	RSO		0
Eric Laning	PM		0
		TOTAL	19

Air Sample Results:

Location	Gross CPM	Bkg CPM	% Bkg	Comments
Lounge NW	70	65	108	Perimeter / work area
Lounge NE	98	65	151	Perimeter / work area

Truck Release Survey Results Summary: *See attached Survey sheets for Results*.

Location	TIME	ID (Plate #)	Micro-R reading	Removable Contamination (LAW) Results
See Attached Survey Sheet(s)				

Remarks:

1. Began at 6:30 to set up instruments and air samplers.
2. Provided continuous job coverage.
3. Continue demo of Lounge Building.
4. A total of 19 roll-offs were surveyed for release from site.
5. Preformed official recount of air sample filters from 6/3/14 and 6/4/14; all results from both days were less than background, which indicates the elevated activity was due to radon. See each day's report for the recount information.
6. Began reviewing all surveys taken to date on project.

PERMA-FIX
DAILY QUALITY CONTROL REPORT
LI TUNGSTEN

Date: 6/5/14 (Thursday)

On-Site Contractor/Subcontractor Area of Responsibility

Name	Position	Assigned Area	Hours Worked
Peter Freeman	Sr. RPT		9.5
Frank Quinton	Lead RPT		9.5
Scott Walnicki	RSO		0
Eric Laning	PM		0
		TOTAL	19

Air Sample Results:

Location	Gross CPM	Bkg CPM	% Bkg	Comments
				No Air Samples collected today due to rain.

Truck Release Survey Results Summary: *See attached Survey sheets for Results*.

Location	TIME	ID (Plate #)	Micro-R reading	Removable Contamination (LAW) Results
See Attached Survey Sheet(s)				

Remarks:

1. Began at 6:30 to set up instruments and air samplers.
2. Provided continuous job coverage.
3. Continue demo of Lounge Building.
4. A total of 22 roll-offs were surveyed for release from site.
5. Preformed a preliminary recount of elevated air samples from 6/4/14 – results are all less than twice background indicating that radon was probably contributor – the official recount will be on 6/6/14.

PERMA-FIX
DAILY QUALITY CONTROL REPORT
LI TUNGSTEN

Date: 6/4/14 (Wednesday)

On-Site Contractor/Subcontractor Area of Responsibility

Name	Position	Assigned Area	Hours Worked
Peter Freeman	Sr. RPT		9
Frank Quinton	Lead RPT		9
Scott Walnicki	RSO		0
Eric Laning	PM		0
		TOTAL	18

Air Sample Results:

Location	Gross CPM	Bkg CPM	% Bkg	Comments
NW Lounge	152	65	234	Perimeter/work area
NE Lounge	157	65	241	Perimeter/work area
NW Lounge	37	65	57	RECOUNTED on 6/6/14
NE Lounge	33	65	51	RECOUNTED on 6/6/14

Truck Release Survey Results Summary: *See attached Survey sheets for Results*.

Location	TIME	ID (Plate #)	Micro-R reading	Removable Contamination (LAW) Results
See Attached Survey Sheet(s)				

Remarks:

1. Began at 6:30 to set up instruments and air samplers.
2. Provided continuous job coverage.
3. Continue demo of Lounge Building; excavator was repaired, demo and load out continues.
4. A total of 12 roll-offs were surveyed for release from site.
5. Both air samplers had elevated reading and will require a recount after three days for potential radon decay. (Results added to this report after the recount on 6/6/14 – indicate radon was responsible for elevated initial counts).
6. Preformed a preliminary recount of elevated air samples from 6/3/14 – results are all less than twice background indicating that radon was probably contributor – the official recount will be on 6/6/14..

PERMA-FIX
DAILY QUALITY CONTROL REPORT
LI TUNGSTEN

Date: 6/3/14 (Tuesday)

On-Site Contractor/Subcontractor Area of Responsibility

Name	Position	Assigned Area	Hours Worked
Peter Freeman	Sr. RPT		9
Frank Quinton	Lead RPT		9
Scott Walnicki	RSO		0
Eric Laning	PM		0
		TOTAL	18

Air Sample Results:

Location	Gross CPM	Bkg CPM	% Bkg	Comments
NW Lounge	192	65	295	Perimeter/work area
NE Lounge	209	65	321	Perimeter/work area
NW Lounge	25	65	39	RECOUNTED on 6/6/14
NE Lounge	26	65	40	RECOUNTED on 6/6/14

Truck Release Survey Results Summary: *See attached Survey sheets for Results*.

Location	TIME	ID (Plate #)	Micro-R reading	Removable Contamination (LAW) Results
See Attached Survey Sheet(s)				

Remarks:

1. Began at 6:30 to set up instruments and air samplers.
2. Provided continuous job coverage.
3. Continue demo of Lounge Building; excavator was repaired, demo and load out continues.
4. A total of 2 roll-offs were surveyed for release from site.
5. Both air samplers had elevated reading and will require a recount after three days for potential radon decay. (results added to this report after the recount on 6/6/14 – indicate radon was responsible for elevated initial counts).
6. Performed incoming survey on Caterpillar Excavator # 312.

PERMA-FIX
DAILY QUALITY CONTROL REPORT
LI TUNGSTEN

Date: 6/2/14 (Monday)

On-Site Contractor/Subcontractor Area of Responsibility

Name	Position	Assigned Area	Hours Worked
Peter Freeman	Sr. RPT		9
Frank Quinton	Lead RPT		9
Scott Walnicki	RSO		0
Eric Laning	PM		0
		TOTAL	18

Air Sample Results:

Location	Gross CPM	Bkg CPM	% Bkg	Comments
NW Lounge	90	65	138	Perimeter/work area
SW Lounge	110	65	169	Perimeter/work area

Truck Release Survey Results Summary: *No Load-out today*.

Location	TIME	ID (Plate #)	Micro-R reading	Removable Contamination (LAW) Results
See Attached Survey Sheet(s)				

Remarks:

1. Began at 6:30 to set up instruments and air samplers.
2. Provided continuous job coverage.
3. Continue demo of Lounge Building.
4. Excavator was down temporarily for repairs.

PERMA-FIX
DAILY QUALITY CONTROL REPORT
LI TUNGSTEN

Date: 5/30/14 (Friday)

On-Site Contractor/Subcontractor Area of Responsibility

Name	Position	Assigned Area	Hours Worked
Peter Freeman	Sr. RPT		9
Frank Quinton	Lead RPT		9
Scott Walnicki	RSO		0
Eric Laning	PM		0
		TOTAL	18

Air Sample Results:

Location	Gross CPM	Bkg CPM	% Bkg	Comments
Lounge (NE)	115	65	177	Perimeter/work area
Lounge (NW)	112	65	172	Perimeter/work area
Benbow (NE)	34	57	60	RECOUNT of 5/27/14
Benbow (SE)	30	57	53	(Results also on 5/27/14 report)

Truck Release Survey Results Summary: *No Load-out today*.

Location	TIME	ID (Plate #)	Micro-R reading	Removable Contamination (LAW) Results
See Attached Survey Sheet(s)				

Remarks:

1. Began at 6:30 to set up instruments and air samplers.
2. Provided continuous job coverage.
3. Frisked workers out when leaving zone and at end of shift - NDA.
4. Surveyed 2 roll offs that were transported across roadway from the Dickson are to the Lounge area.
5. Demolition of Lounge Building began at 8:30 AM. Dust controls in place.
6. Official recount of 5/27/14 filters show activity less than background, radon accumulation was likely cause of elevated readings.

PERMA-FIX
DAILY QUALITY CONTROL REPORT
LI TUNGSTEN

Date: 5/29/14 (Thursday)

On-Site Contractor/Subcontractor Area of Responsibility

Name	Position	Assigned Area	Hours Worked
Peter Freeman	Sr. RPT		9
Frank Quinton	Lead RPT		9
Scott Walnicki	RSO		0
Eric Laning	PM		0
		TOTAL	18

Air Sample Results:

Location	Gross CPM	Bkg CPM	% Bkg	Comments
North of Lounge	65	65	N/A	New Background for upcoming Lounge Demo

Truck Release Survey Results Summary: *No Load-out today*.

Location	TIME	ID (Plate #)	Micro-R reading	Removable Contamination (LAW) Results
See Attached Survey Sheet(s)				

Remarks:

1. Began at 6:30 to set up instruments and air samplers.
2. Provided continuous job coverage.
3. Benbow demo and load out completed yesterday; no demo work today as they prepare to begin lounge building.
4. Completed a post-demo survey of the benbow pad and work area (see attached survey). In Summary, exposure rates were between 4-6 microR (BKG = 6 microR), and 20 large area wipes were all clean. In the work area (dirt road) exposure rates were 6-8 microR.
5. An 8-hour background air sample was collected from area north of Lounge. 65 cpm is new background for Lounge building work.

PERMA-FIX
DAILY QUALITY CONTROL REPORT
LI TUNGSTEN

Date: 5/28/14 (Wednesday)

On-Site Contractor/Subcontractor Area of Responsibility

Name	Position	Assigned Area	Hours Worked
Peter Freeman	Sr. RPT		9
Frank Quinton	Lead RPT		9
Scott Walnicki	RSO		0
Eric Laning	PM		0
		TOTAL	18

Air Sample Results:

Location	Gross CPM	Bkg CPM	% Bkg	Comments
Benbow NE	93	57	163	At fence line perimeter
Benbow SE	88	57	154	At fence line near load-out work area

Truck Release Survey Results Summary: *See Attached Survey Sheets*.

Location	TIME	ID (Plate #)	Micro-R reading	Removable Contamination (LAW) Results
See Attached Survey Sheet(s)				

Remarks:

1. Began at 6:30 to set up instruments and air samplers.
2. Provided continuous job coverage.
3. Frisked workers out of zone at end of shift.
4. Continued load out from Benbow building.
5. Surveyed out 14 roll-offs with ACM material from Benbow.
6. Yesterdays elevated air samplers were counted again and both filters had activity less than twice background, the official count will take place on 5/30/14 (3 day decay period), but all indications are that the activity was due to radon.
7. All ACM has been removed from the Benbow building area – once the area is down-posted from an ACM area, a post-demo survey of the building pad and work area will be performed.

PERMA-FIX
DAILY QUALITY CONTROL REPORT
LI TUNGSTEN

Date: 5/27/14 (Tuesday)

On-Site Contractor/Subcontractor Area of Responsibility

Name	Position	Assigned Area	Hours Worked
Peter Freeman	Sr. RPT		9
Frank Quinton	Lead RPT		9
Scott Walnicki	RSO		0
Eric Laning	PM		0
		TOTAL	18

Air Sample Results:

Location	Gross CPM	Bkg CPM	% Bkg	Comments
Benbow NE	201	57	352	At fence line perimeter
Benbow SE	218	57	382	At fence line near load-out work area
Benbow NE	34	57	60	RECOUNT results from 5/30/14
Benbow SE	30	57	53	RECOUNT results from 5/30/14

Truck Release Survey Results Summary: *See Attached Survey Sheets*.

Location	TIME	ID (Plate #)	Micro-R reading	Removable Contamination (LAW) Results
See Attached Survey Sheet(s)				

Remarks:

1. Began at 6:30 to set up instruments and air samplers.
2. Provided continuous job coverage.
3. Frisked workers out of zone at end of shift.
4. Continued load out from Benbow building.
5. Surveyed out 15 roll-offs with ACM material from Benbow.
6. Both air samplers show elevated activity, suspected due to radon again, and filters will be recounted on 5/30/14 to verify (This sheet updated with results after the 5/30/14 recount – no activity; conclude radon accumulation on both filters caused high readings.

PERMA-FIX
DAILY QUALITY CONTROL REPORT
LI TUNGSTEN

Date: 5/26/14 (Monday)

On-Site Contractor/Subcontractor Area of Responsibility

Name	Position	Assigned Area	Hours Worked
Peter Freeman	Sr. RPT		0
Frank Quinton	Lead RPT		0
Scott Walnicki	RSO		0
Eric Laning	PM		0
		TOTAL	18

Air Sample Results:

Location	Gross CPM	Bkg CPM	% Bkg	Comments
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A

Truck Release Survey Results Summary:

Location	TIME	ID (Plate #)	Micro-R reading	Removable Contamination (LAW) Results
N/A				

Remarks:

1. No work today due to Memorial Holiday.

PERMA-FIX
DAILY QUALITY CONTROL REPORT
LI TUNGSTEN

Date: 5/23/14 (Friday)

On-Site Contractor/Subcontractor Area of Responsibility

Name	Position	Assigned Area	Hours Worked
Peter Freeman	Sr. RPT		9
Frank Quinton	Lead RPT		9
Scott Walnicki	RSO		0
Eric Laning	PM		0
		TOTAL	18

Air Sample Results:

Location	Gross CPM	Bkg CPM	% Bkg	Comments
N/A	N/A	N/A	N/A	No air sampling due to rain and Showers
N/A	N/A	N/A	N/A	No air sampling due to rain and showers

Truck Release Survey Results Summary: *See Attached Survey Sheets*.

Location	TIME	ID (Plate #)	Micro-R reading	Removable Contamination (LAW) Results
See Attached Survey Sheet(s)				

Remarks:

1. Began at 6:30 to set up instruments and air samplers.
2. Provided continuous job coverage.
3. Frisked workers out of zone at end of shift.
4. Continued load out from Benbow building.
5. Surveyed out 12 roll-offs with ACM material from Benbow.

PERMA-FIX
DAILY QUALITY CONTROL REPORT
LI TUNGSTEN

Date: 5/22/14 (Thursday)

On-Site Contractor/Subcontractor Area of Responsibility

Name	Position	Assigned Area	Hours Worked
Peter Freeman	Sr. RPT		9
Frank Quinton	Lead RPT		9
Scott Walnicki	RSO		0
Eric Laning	PM		0
		TOTAL	18

Air Sample Results:

Location	Gross CPM	Bkg CPM	% Bkg	Comments
N/A	N/A	N/A	N/A	No air sampling due to rain and Showers
N/A	N/A	N/A	N/A	No air sampling due to rain and showers

Truck Release Survey Results Summary: *See Attached Survey Sheets*.

Location	TIME	ID (Plate #)	Micro-R reading	Removable Contamination (LAW) Results
See Attached Survey Sheet(s)				

Remarks:

1. Began at 6:30 to set up instruments and air samplers.
2. Provided continuous job coverage.
3. Frisked workers out of zone at end of shift.
4. Continued load out from Benbow building.
5. Surveyed out 11 roll-offs with ACM material from Benbow.

PERMA-FIX
DAILY QUALITY CONTROL REPORT
LI TUNGSTEN

Date: 5/21/14 (Wednesday)

On-Site Contractor/Subcontractor Area of Responsibility

Name	Position	Assigned Area	Hours Worked
Peter Freeman	Sr. RPT		9
Frank Quinton	Lead RPT		9
Scott Walnicki	RSO		0
Eric Laning	PM		0
		TOTAL	18

Air Sample Results:

Location	Gross CPM	Bkg CPM	% Bkg	Comments
NE Work Area	87	57	152	At fence-line near building.
SE Work Area	103	57	180	Near load out – perimeter

Truck Release Survey Results Summary: *See Attached Survey Sheets*.

Location	TIME	ID (Plate #)	Micro-R reading	Removable Contamination (LAW) Results
See Attached Survey Sheet(s)				

Remarks:

1. Began at 6:30 to set up instruments and air samplers.
2. Provided continuous job coverage.
3. Frisked workers out of zone at end of shift.
4. Continued demo and load out of Benbow building.
5. Surveyed out 11 roll-offs with ACM material from Benbow.

PERMA-FIX
DAILY QUALITY CONTROL REPORT
LI TUNGSTEN

Date: 5/20/14 (Tuesday)

On-Site Contractor/Subcontractor Area of Responsibility

Name	Position	Assigned Area	Hours Worked
Peter Freeman	Sr. RPT		9
Frank Quinton	Lead RPT		9
Scott Walnicki	RSO		0
Eric Laning	PM		0
		TOTAL	18

Air Sample Results:

Location	Gross CPM	Bkg CPM	% Bkg	Comments
NE Work Area	69	57	121	At fence-line near building.
SE Work Area	79	57	139	Near load out – perimeter

Truck Release Survey Results Summary: *See Attached Survey Sheets*.

Location	TIME	ID (Plate #)	Micro-R reading	Removable Contamination (LAW) Results
See Attached Survey Sheet(s)				

Remarks:

1. Began at 6:30 to set up instruments and air samplers.
2. Provided continuous job coverage.
3. Frisked workers out of zone at end of shift.
4. Continued demo and load out of Benbow building.
5. Performed incoming surveys of Komatsu front-end loader WA480 and a Komatsu excavator PC400LC. with attachments and Roll-offs (see survey data sheets).
6. Surveyed out eight roll-offs with ACM material from Benbow.

PERMA-FIX
DAILY QUALITY CONTROL REPORT
LI TUNGSTEN

Date: 5/19/14 (Monday)

On-Site Contractor/Subcontractor Area of Responsibility

Name	Position	Assigned Area	Hours Worked
Peter Freeman	Sr. RPT		9
Frank Quinton	Lead RPT		9.5
Scott Walnicki	RSO		6
Eric Laning	PM		0
		TOTAL	24.5

Air Sample Results:

Location	Gross CPM	Bkg CPM	% Bkg	Comments
NE Work Area	98	57	172	At fence-line near building.
SE Work Area	67	57	117	Near load out – limited access due to ACM

Truck Release Survey Results Summary: *See Attached Survey Sheets*.

Location	TIME	ID (Plate #)	Micro-R reading	Removable Contamination (LAW) Results
See Attached Survey Sheet(s)				

Remarks:

1. Began at 6:30 to set up instruments and air samplers.
2. Provided continuous job coverage.
3. Frisked workers out of zone at end of shift.
4. Continued demo and load out of Benbow building.
5. Performed release surveys of Komatsu PC450C with attachments and Roll-offs (see survey data sheets).
6. One of the Roll-offs was surveyed twice after the shipment was returned to site because it exceeded DOT weight limit.
7. Performed additional post-demo survey of Dickson pad after some minor activity took place on the pad (truck traffic) – see attached survey.

PERMA-FIX
DAILY QUALITY CONTROL REPORT
LI TUNGSTEN

Date: 5/16/14 (Friday)

On-Site Contractor/Subcontractor Area of Responsibility

Name	Position	Assigned Area	Hours Worked
Peter Freeman	Sr. RPT		9
Frank Quinton	Lead RPT		9
Scott Walnicki	RSO		0
Eric Laning	PM		0
		TOTAL	18

Air Sample Results:

Location	Gross CPM	Bkg CPM	% Bkg	Comments
General Area				No samples collected due to forecast of all-day rain event.
Work Area				All samples collected to date have indicated no elevated activity.

Truck Release Survey Results:
Refer to attached survey No. LTDemo-005 for complete information.

Location	TIME	ID (Plate #)	Micro-R Reading	Removable Contamination LAW Results (DPM)
Benbow	09:35	NY # 93612PA	5	94
Benbow	12:20	NY # 93612PA	5	111
Benbow	13:05	NY # 93612PA	4	136
Benbow	13:15	NY # 93613PA	4	68

Note: R = roentgen; LAW = Large Area Wipe; DPM = disintegrations per minute.

Remarks:

1. No air samples collected today due to rain. Advised Gramercy that they may work without air samplers being set up in wet and/or rainy conditions. Dust was monitored by PW Grosser; no elevated dust results observed. Results of air samples in more unfavorable conditions (dry, dusty) have not indicated airborn activity.
2. Performed instrument source checks – all instruments acceptable (a model 19 is in need of batteries.)
3. Provided continuous job coverage during load out of asbestos-containing materials.

4. Performed outgoing survey on out-of-service bobcat – all fixed and removable results were at background levels.
5. Performed incoming survey on new Bobcat – documented in field logbooks.
6. Perform transportation surveys on two 20-yd roll-off containers and truck.
7. Performed post-demolition dose-rate of Dickson Pad (all readings 4-5 micro-R per hour) using Model 19 serial # 148206.
8. Released four roll-offs from Benbow building.
9. Workers were frisked out at end of shift, no detectable activity identified.

PERMA-FIX
DAILY QUALITY CONTROL REPORT
LI TUNGSTEN

Date: 5/15/14 (Thursday)

On-Site Contractor/Subcontractor Area of Responsibility

Name	Position	Assigned Area	Hours Worked
Peter Freeman	Sr. RPT		9
Frank Quinton	Lead RPT		9
Scott Walnicki	RSO		0
Eric Laning	PM		0
		TOTAL	18

Air Sample Results:

Location	Gross CPM	Bkg CPM	% Bkg	Comments
NE Work Area	79	60	131	Near load out – limited access due to ACM
SE Work Area	73	60	121	At fence-line near building.

Truck Release Survey Results Summary: *No Load out Today*.

Location	TIME	ID (Plate #)	Micro-R reading	Removable Contamination (LAW) Results
N/A	N/A	N/A	N/A	N/A

Remarks:

1. Began at 6:30 to set up instruments and air samplers.
2. Provided continuous job coverage.
3. Frisked workers out of zone at end of shift.
4. No Load out today (Dickson load out completed yesterday, Benbow load out anticipated to start next week).
5. Air samples that were elevated (collected on 5/12/14) were recounted – the General Area Filter counted at 30 cpm (versus 131 cpm on 5/12/14) and the work area recounted at 34 cpm (versus 122 cpm on 5/12/14). Conclusion is that the elevated activity was due to radon, not dust.
6. Performed routine surveys of equipment and tools, hoses, etc., - NDA.

PERMA-FIX
DAILY QUALITY CONTROL REPORT
LI TUNGSTEN

Date: 5/14/14 (Wednesday)

On-Site Contractor/Subcontractor Area of Responsibility

Name	Position	Assigned Area	Hours Worked
Peter Freeman	Sr. RPT		9
Frank Quinton	Lead RPT		9
Scott Walnicki	RSO		0
Eric Laning	PM		0
		TOTAL	18

Air Sample Results:

Location	Gross CPM	Bkg CPM	% Bkg	Comments
SE Work Area	76	60	126	Near load out – limited access due to ACM
NE Work Area	80	60	133	At fence-line near building.

Truck Release Survey Results Summary: *See attached survey data sheet for Results*.

Location	TIME	ID (Plate #)	Micro-R reading	Removable Contamination (LAW) Results
Dickson	10:25 - 15:00	See Attached	4	Approximately BKG

Remarks:

1. Began at 6:30 to set up instruments and air samplers.
2. Provided continuous job coverage.
3. Frisked workers out of zone at end of shift.
4. Supported load out and release of 2 roll-offs from Dickson.
5. Note that air sample filter media has changed from Glass-Fiber filter to Borosilicate Microfiber. New Background established yesterday under direction of RSO.

PERMA-FIX
DAILY QUALITY CONTROL REPORT
LI TUNGSTEN

Date: 5/13/14 (Tuesday)

On-Site Contractor/Subcontractor Area of Responsibility

Name	Position	Assigned Area	Hours Worked
Peter Freeman	Sr. RPT		9
Frank Quinton	Lead RPT		9
Scott Walnicki	RSO		6
Eric Laning	PM		0
		TOTAL	24

Air Sample Results:

Location	Gross CPM	Bkg CPM	% Bkg	Comments
Work Area	61	60	101	Near load out – limited access due to ACM
General Area	60	60	100	Upwind – will be used as new BKG for Benbow Building Demo

Truck Release Survey Results Summary: *See attached survey data sheet for Results*.

Location	TIME	ID (Plate #)	Micro-R reading	Removable Contamination (LAW) Results
Dickson	08:05 - 13:35	See Attached	4	Approximately BKG

Remarks:

1. Began at 6:30 to set up instruments and air samplers.
2. Provided continuous job coverage.
3. Frisked workers out of zone at end of shift.
4. Supported load out and release of 2 roll-offs from Dickson.
5. Amanda R of PW Grosser communicated that they will need all air sampling data at end of demo project for their final report.
6. Began demolition of Benbow Building at 08:45.
7. RSO Inspected dust control measures – found to more than adequate. No visible dust observed.

PERMA-FIX
DAILY QUALITY CONTROL REPORT
LI TUNGSTEN

Date: 5/12/14 (Monday)

On-Site Contractor/Subcontractor Area of Responsibility

Name	Position	Assigned Area	Hours Worked
Peter Freeman	Sr. RPT		9
Frank Quinton	Lead RPT		9
Scott Walnicki	RSO		0
Eric Laning	PM		0
		TOTAL	18

Air Sample Results:

Location	Gross CPM	Bkg CPM	% Bkg	Comments
General Area	131	57	229	High Pressure System, Still and Calm, 810 F
Work Area	122	57	214	High Pressure System, Still and Calm, 810 F
General Area	30	57	53	RECOUNTED on 5/15/14
Work Area	34	57	60	RECOUNTED on 5/15/14

Truck Release Survey Results Summary: *See attached survey data sheet for Results*.

Location	TIME	ID (Plate #)	Micro-R reading	Removable Contamination (LAW) Results
Dickson	08:15 - 14:30	See Attached	4- 5	Approximately BKG

Remarks:

1. Began at 6:30 to set up instruments and air samplers.
2. Provided continuous job coverage.
3. Frisked workers out of zone at end of shift.
4. Supported load out and release of 15 roll-offs.
5. Performed routine survey of Bobcat and Shear attachment – NDA.
6. RSO evaluated elevated air sample counts and suspects that atmospheric inversion due to high pressure system and calm day contributed to higher radon concentrations at ground surface, Since both work area and up-wind general area readings are similar. Samples will be recounted in three days to verify radon assumption (see 5/15/14 report). Advised Gramercy to keep up good dust control practices and even apply more water as needed.

PERMA-FIX
DAILY QUALITY CONTROL REPORT
LI TUNGSTEN

Date: 5/9/14 (Friday)

On-Site Contractor/Subcontractor Area of Responsibility

Name	Position	Assigned Area	Hours Worked
Peter Freeman	Sr. RPT		8.5
Frank Quinton	Lead RPT		8.5
Scott Walnicki	RSO		6
Eric Laning	PM		0
		TOTAL	23

Air Sample Results:

Location	Gross CPM	Bkg CPM	% Bkg	Comments
General Area				No samples collected due to rain
Work Area				

Truck Release Survey Results: See attached survey data sheet.

Location	TIME	ID (Plate #)	Micro-R reading	Removable Contamination (LAW) Results
Dickson	09:00	NY 17236-PC	3 (BKG)	< BKG
Dickson	11:00	NY 17236-PC	3 (BKG)	< BKG

Remarks:

1. No air samples collected today due to rain. Advised Gramercy that they may work without our air samplers being set up only in rainy conditions.
2. Provided continuous job coverage.
3. Frisked workers out of zone at end of shift.
4. Performed instrument source checks – all instruments acceptable.
5. Perform transportation surveys on two 20-yd roll-off containers and truck.
6. Note that roll-off containers directly returned to the site after unloading will not be subject to another incoming survey. Coordination with truck drivers will ensure that all new containers are subject to incoming surveys.
7. Consuming ~10 gallons of gas per day for generators.

PERMA-FIX
DAILY QUALITY CONTROL REPORT
LI TUNGSTEN

Date: 5/8/14 (Thursday)

On-Site Contractor/Subcontractor Area of Responsibility

Name	Position	Assigned Area	Hours Worked
Peter Freeman	Sr. RPT		8.5
Frank Quinton	Lead RPT		8.5
Scott Walnicki	RSO		8
Eric Laning	PM		0
		TOTAL	25

Air Sample Results:

Location	Gross CPM	Bkg CPM	% Bkg	Comments
General Area				No samples collected due to rain
Work Area				

Truck Release Survey Results: (No Trucks loaded or shipped today)

Location	TIME	ID (Plate #)	Micro-R reading	Removable Contamination (LAW) Results
Dickson	N/A	N/A	N/A	N/A

Remarks:

1. No air samples collected today due to rain. Advised Gramercy that they may work without our air samplers being set up only in rainy conditions.
2. Provided continuous job coverage.
3. Frisked workers out of zone at end of shift.
4. Completed review of instrument set up paperwork and transfer of data into electronic format.
5. Performed instrument source checks – all instruments acceptable.
6. Reviewed and transferred all survey documentation to electronic format.

PERMA-FIX
DAILY QUALITY CONTROL REPORT
LI TUNGSTEN

Date: 5/7/14

On-Site Contractor/Subcontractor Area of Responsibility

Name	Position	Assigned Area	Hours Worked
Peter Freeman	Sr. RPT		8.5
Frank Quinton	Lead RPT		8.5
Scott Walnicki	RSO		8
Eric Laning	PM		0
		TOTAL	25

Air Sample Results:

Location	Gross CPM	Bkg CPM	% Bkg	Comments
General Area	57	57	100%	Located in field south of warehouse (LV-1 003793)
Work Area	54	57	86 %	Located at fence line west of warehouse (LV-1 003873)

Truck Release Survey Results: (No trucks loaded or sent off-site today)

Location	TIME	ID (Plate #)	Micro-R reading	Removable Contamination (LAW) Results
Dickson	N/A	N/A	N/A	N/A

Remarks:

1. Set up both LV-1 air samplers; started collection at 6:30 AM; Note, a fuse on the LV-1 General Area air sampler was blown, and repaired – down time approximately one hour.
2. Source checked all instruments; noted batteries dead on one Model 19.
3. Demolition of Dickson warehouse began at 7:30 AM.
4. Performed fixed and removable contamination surveys on four piles of scrap metal/demolition debris – No detectable activity (NDA) all reading at background levels and well below the 1000 dpm removable and 5000 dpm fixed limits; background = 43 cpm.
5. Performed incoming surveys on Shear attachments and roll-offs.
6. New background for air samplers established from General Area and set to 57 cpm.
7. Provided continuous job coverage, frisked workers at end of shift - NDA.

PERMA-FIX
DAILY QUALITY CONTROL REPORT
LI TUNGSTEN

Date: 5/6/14

On-Site Contractor/Subcontractor Area of Responsibility

Name	Position	Assigned Area	Hours Worked
Peter Freeman	Sr. RPT		8.5
Frank Quinton	Lead RPT		8.5
Scott Walnicki	RSO		10
Eric Laning	PM		0
		TOTAL	27

Air Sample Results:

Location	Gross CPM	Bkg CPM	% Bkg	Comments
General Area	47	57	82 %	Located in field south of warehouse
Work Area	49	57	86 %	Located at fence line west of warehouse

Truck Release Survey Results: (No trucks loaded or sent off-site today)

Location	TIME	ID (Plate #)	Micro-R reading	Removable Contamination (LAW) Results
Dickson	N/A	N/A	N/A	N/A

Remarks:

1. Set up both LV-1 air samplers; started collection at 6:30 AM; stopped at 2:30 PM.
2. Source checked all instruments; noted batteries dead on one Model 19.
3. Special Note: In the event of rain, all air samplers will be shut down.
4. Performed incoming surveys on excavator, bucket, shear, Bobcat, hoses, and roll-offs.
5. Gave radiation safety briefing to Gramercy personnel at 8:00.
6. Work began at 8:15 with Bobcat working inside warehouse; demo began at 9:55. Provided continuous job coverage.
7. Performed dose rate survey around warehouse – reading between 3 and 8 micro-R.
8. Air samples were counted with Model 12 # 145985/PR1503835. Note that actual counting of samples was not performed until Wednesday morning; the counts reflected in this report have been back calculated to account for radon decay. Due to this delay in counting, we will recollect a background sample on Wednesday 5/7/14.

PERMA-FIX
DAILY QUALITY CONTROL REPORT
LI TUNGSTEN

Date: 5/5/14

On-Site Contractor/Subcontractor Area of Responsibility

Name	Position	Assigned Area	Hours Worked
Peter Freeman	Sr. RPT		8
Frank Quinton	Lead RPT		8
Scott Walnicki	RSO		8
Eric Laning	PM		0
		TOTAL	24

Air Sample Results:

Location	Gross CPM	Bkg CPM	% Bkg	Comments
N/A	N/A	N/A	N/A	No Work Performed

Truck Release Survey Results: (No Trucks Shipped today).

Location	TIME	ID (Plate #)	Micro-R reading	Removable Contamination (LAW) Results
Dickson	N/A	N/A	N/A	N/A

Remarks:

1. Arrived to site at 6:30 AM, met with Gramercy for pre-job walk down.
2. Received two 2221's w/ NaI, two 12's w/44-9, two LV-1's, and two 19's from Perma-Fix.
3. Received two generators from United Rental at 11:00 AM – this was too late in day to collect 8-hr background. Background will be established during demo at an upwind location far removed from the demo site on 5/6/14 (Tuesday).
4. Secured office space for instruments and workstations.
5. Secured sealand storage for generators during off-work hours.
6. Set up all instruments, reviewed calibration data, set up daily source check logs.
7. Acquired gas cans for feeding generators.
8. Identified locations for air samples in work area and in general area.
9. Acquired access to office building, sealand, and Dickson Warehouse (keys, combo's).

#

Attachment C

Miscellaneous Surveys

Survey Data Sheet - Li Tungsten

Reviewed By:_____

Survey No.:	LT033	**Item(s) Surveyed:**	Lounge Pad — **Project: 144036**
Date:	6/11/2014	**Contaminant/Limits:**	GM Limit = 1000 dpm (removable), 5000 dpm (fixed). Dose rate Limit = 2X BKG
Survey Tech.:	F. Quinton / P. Freeman	**Comments:**	
Count Rm. Tech.:	N/A - Counted in field by P. Freeman		
Date Counted:	6/11/2014		
Survey Type:	Post Demo Survey		
Level of Posting:	Controlled Area		

Parameters		***Dose Rate***	***Gamma***	***Corr uRem***	***Total*** Alpha	***Total*** Beta-Gamma	***Removable*** Alpha	***Removable*** Beta-Gamma
Instrument Model:		19						12/44-9
Instrument SN:		221547						186766/PR193567
Cal. Due Date:		3/17/2015						4/17/2015
x, y int.:	*Efficiency:*	**N/A**						0.1171
BKG:	*Bcpm**:*	6						50
ACF:								**1**
tB:								1
tS:								1
Lc:								140.48
MDC:								306.58

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

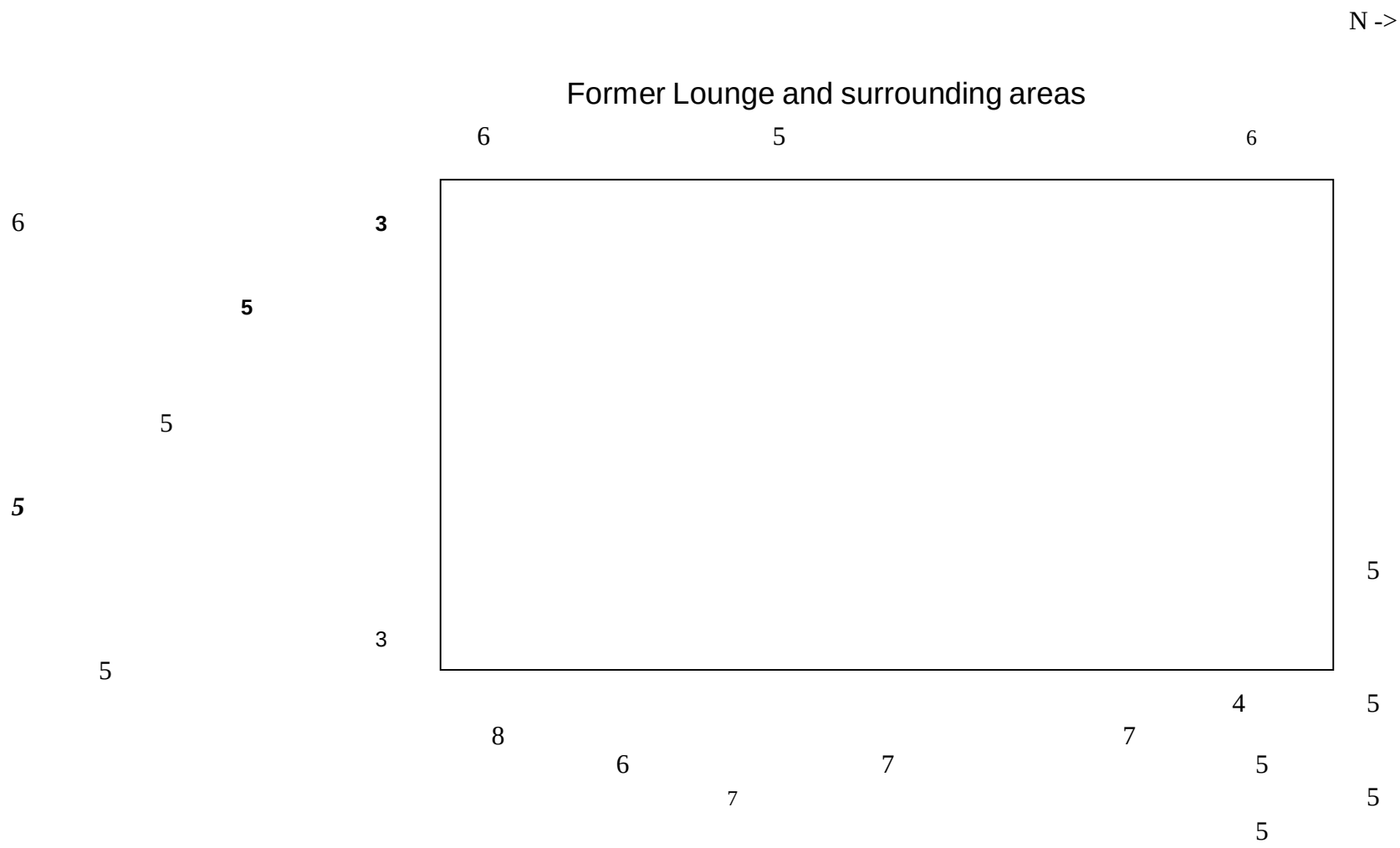
(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

No.	*Descriptions*	*Time*	*x*	*y*	*uRem/hr*	*cptm*	*uRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
	Lounge Pad and work area - Post Demo Survey														
1	Work Area (See Info Sheet for Location)				5									27	-196
2	Work Area (See Info Sheet for Location)				6									48	-17
3	Concrete Pad (See Info Sheet for Location)				5									30	-171
4	Wall (See Info Sheet for Location)				6									29	-179
5	Concrete Pad (See Info Sheet for Location)				6									30	-171
6	Concrete Pad (See Info Sheet for Location)				5									41	-77
7	Concrete Pad (See Info Sheet for Location)				5									43	-60
8	Concrete Pad (See Info Sheet for Location)				6									37	-111
9	Concrete Pad (See Info Sheet for Location)				7									29	-179
10	Concrete Pad (See Info Sheet for Location)				8									43	-60
11	Concrete Pad (See Info Sheet for Location)				5									41	-77
12	Concrete Pad (See Info Sheet for Location)				6									54	34
13	Concrete Pad (See Info Sheet for Location)				6									46	-34
14	Work Area (See Info Sheet for Location)				6									43	-60
15	Work Area (See Info Sheet for Location)				5									34	-137
16	Work Area (See Info Sheet for Location)				6									40	-85
17	Work Area (See Info Sheet for Location)				5									36	-120

FUSRAP Survey Information Sheet

Survey Drawing/ Description/ Comments



General Information

Survey #: LT002

Site: Li Tungsten

Tech(s): S. Walnicki

Page: 2 of 2

Comments:

Survey Data Sheet - Li Tungsten

Reviewed By:_____

Survey No.:	LT022	**Item(s) Surveyed:**	Benbow Pad — **Project: 144036**
Date:	5/29/2014	**Contaminant/Limits:**	GM Limit = 1000 dpm (removable), 5000 dpm (fixed). Dose rate Limit = 2X BKG
Survey Tech.:	F. Quinton	**Comments:**	
Count Rm. Tech.:	N/A - Counted in field by P. Freeman		
Date Counted:	5/29/2014		
Survey Type:	Post Demo Survey		
Level of Posting:	Controlled Area		

Parameters	***Dose Rate***	***Gamma***	***Corr uRem***	***Total*** Alpha	***Total*** Beta-Gamma	***Removable*** Alpha	***Removable*** Beta-Gamma
Instrument Model:	19						12/44-9
Instrument SN:	148206						186766/PR193567
Cal. Due Date:	4/15/2015						4/17/2015
x, y int.: Efficiency:	**N/A**						0.1171
*BKG: Bcpm**:*	6						39
ACF:							**1**
tB:							1
tS:							1
Lc:							124.07
MDC:							273.75

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

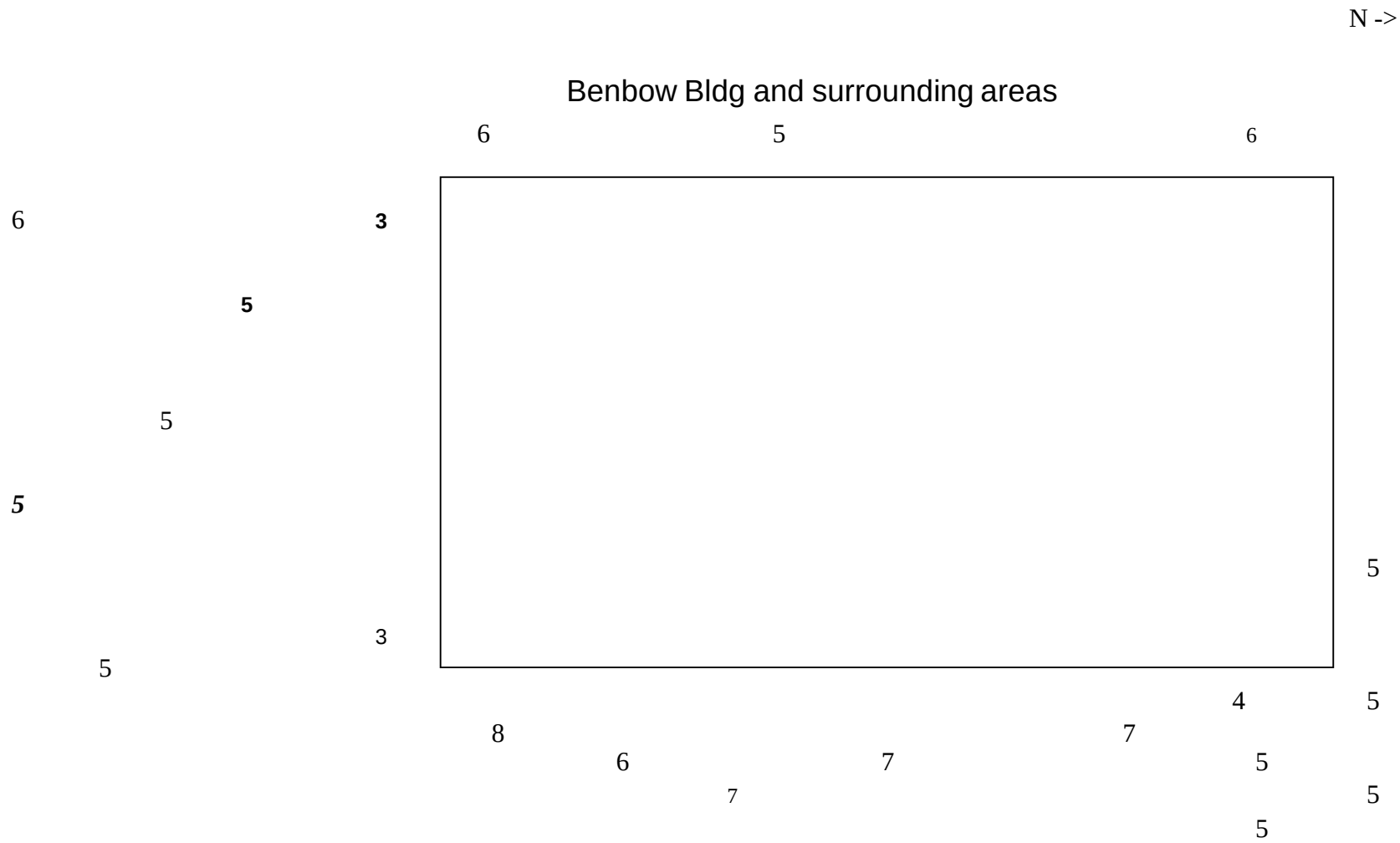
(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

No.	*Descriptions*	*Time*	*x*	*y*	*uRem/hr*	*cptm*	*uRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
	Benbow Pad and work area - Post Demo Survey														
1	Concrete Pad (See Info Sheet for Location)				5									38	-9
2	Concrete Pad (See Info Sheet for Location)				5									35	-34
3	Concrete Pad (See Info Sheet for Location)				5									25	-120
4	Concrete Pad (See Info Sheet for Location)				5									28	-94
5	Concrete Pad (See Info Sheet for Location)				5									43	34
6	Concrete Pad (See Info Sheet for Location)				5									38	-9
7	Concrete Pad (See Info Sheet for Location)				5									38	-9
8	Concrete Pad (See Info Sheet for Location)				5									29	-85
9	Concrete Pad (See Info Sheet for Location)				4									37	-17
10	Concrete Pad (See Info Sheet for Location)				4									30	-77
11	Concrete Pad (See Info Sheet for Location)				5									26	-111
12	Concrete Pad (See Info Sheet for Location)				5									33	-51
13	Concrete Pad (See Info Sheet for Location)				5									41	17
14	Concrete Pad (See Info Sheet for Location)				6									31	-68
15	Concrete Pad (See Info Sheet for Location)				6									32	-60
16	Work Area/Load Out Area (See Info sheet for Location)				6									43	34
17	Work Area/Load Out Area (See Info sheet for Location)				6									45	51

FUSRAP Survey Information Sheet

Survey Drawing/ Description/ Comments



General Information

Survey #: LT002

Site: Li Tungsten

Tech(s): S. Walnicki

Page: 2 of 2

Comments:

Survey Data Sheet - Li Tungsten

Reviewed By:_____

Survey No.:	LT012	**Item(s) Surveyed:**	Dickson Pad — **Project: 144036**
Date:	5/19/2014	**Contaminant/Limits:**	GM Limit = 1000 dpm (removable), 5000 dpm (fixed). Dose rate Limit = 2X BKG
Survey Tech.:	F. Quinton	**Comments:**	Resurvey of Dickson pad after limited work activity (see LT008 for initial survey)
Count Rm. Tech.:	N/A - Counted in field by P. Freeman		
Date Counted:	5/19/2014		
Survey Type:	Post Demo Survey		
Level of Posting:	Controlled Area		

Parameters		***Dose Rate***	***Gamma***	***Corr uRem***	***Total*** Alpha	***Total*** Beta-Gamma	***Removable*** Alpha	***Removable*** Beta-Gamma
Instrument Model:		19						12/44-9
Instrument SN:		148206						186766/PR193567
Cal. Due Date:		4/15/2015						4/17/2015
x, y int.:	*Efficiency:*	**N/A**						0.1171
BKG:	*Bcpm**:*	5						39
ACF:								**1**
tB:								1
tS:								1
Lc:								124.07
MDC:								273.75

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

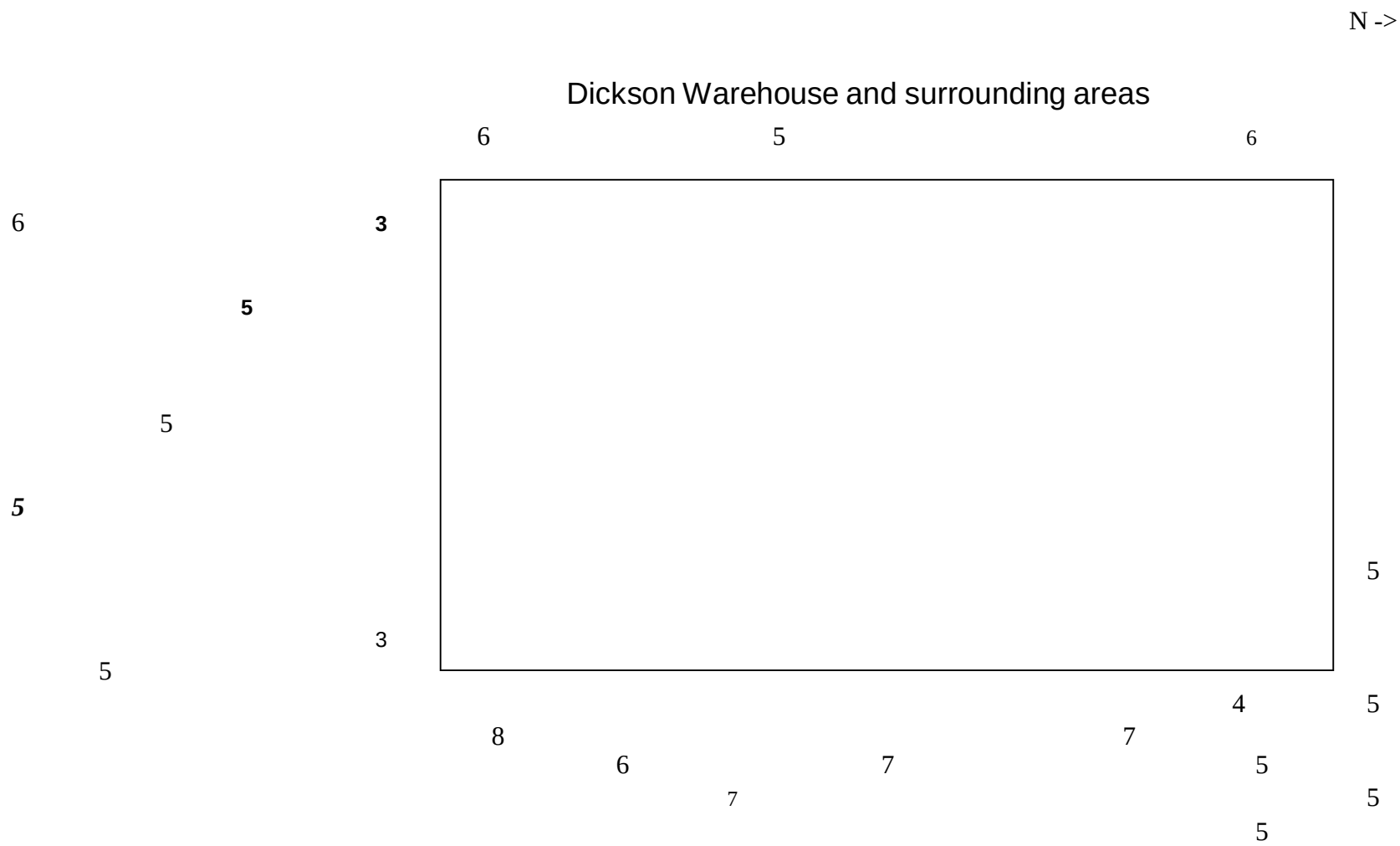
(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

No.	*Descriptions*	*Time*	*x*	*y*	*uRem/hr*	*cptm*	*uRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
	Dickson Pad - Post Demo Survey														
1	Concrete Pad (See Info Sheet for Location)				5									42	26
2	Concrete Pad (See Info Sheet for Location)				5									38	-9
3	Concrete Pad (See Info Sheet for Location)				5									33	-51
4	Concrete Pad (See Info Sheet for Location)				4									30	-77
5	Concrete Pad (See Info Sheet for Location)				5									31	-68
6	Concrete Pad (See Info Sheet for Location)				5									25	-120
7	Concrete Pad (See Info Sheet for Location)				4									35	-34
8	Concrete Pad (See Info Sheet for Location)				4									30	-77
9	Concrete Pad (See Info Sheet for Location)				5									38	-9
10	Concrete Pad (See Info Sheet for Location)				4									31	-68
11	Concrete Pad (See Info Sheet for Location)				4									35	-34
12	Concrete Pad (See Info Sheet for Location)				5									28	-94
13	Work Area/Load Out Area (See Info sheet for Location)				5									42	26
14	Work Area/Load Out Area (See Info sheet for Location)				5									33	-51
15															
16															
17															

FUSRAP Survey Information Sheet

Survey Drawing/ Description/ Comments



General Information

Survey #: LT002

Site: Li Tungsten

Tech(s): S. Walnicki

Page: 2 of 2

Comments:

#

Attachment D

Pre-Transport Surveys

Survey Data Sheet - Li Tungsten

Reviewed By:_____

Survey No.:	LT036	**Item(s) Surveyed:**	Rolloff and trucks leaving site
Date:	6/12/2014	**Contaminant/Limits:**	GM Limit = 1000 dpm (removable), 5000 dpm (fixed). Dose rate Limit = 2X BKG
Survey Tech.:	P. Freeman	**Comments:**	
Count Rm. Tech.:	N/A - Counted in field by P. Freeman		
Date Counted:	6/12/2014		
Survey Type:	DOT Conveyance		
Level of Posting:	Controlled Area		

Project: 144036

Parameters		***Dose Rate***	***Gamma***	***Corr uRem***	***Total*** Alpha	***Total*** Beta-Gamma	***Removable*** Alpha	***Removable*** Beta-Gamma
Instrument Model:		19						12/44-9
Instrument SN:		148206						145985/PR150385
Cal. Due Date:		4/15/2015						4/17/2015
x, y int.:	*Efficiency:*	**N/A**						0.1173
BKG:	*Bcpm**:*	6						46
	ACF:							**1**
	tB:							1
	tS:							1
	Lc:							134.51
	MDC:							294.60

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

No.	*Descriptions*	*Time*	*x*	*y*	*uRem/hr*	*cptm*	*uRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
	Roll-offs leaving site														
1	20 yard Roll-off NY Plate # 17236PC	7:20			5									35	-94

Survey Data Sheet - Li Tungsten

Reviewed By:_____

Survey No.:	LT032	**Item(s) Surveyed:**	Rolloff and trucks leaving site
Date:	6/11/2014	**Contaminant/Limits:**	GM Limit = 1000 dpm (removable), 5000 dpm (fixed). Dose rate Limit = 2X BKG
Survey Tech.:	P. Freeman	**Comments:**	
Count Rm. Tech.:	N/A - Counted in field by P. Freeman		
Date Counted:	6/11/2014		
Survey Type:	DOT Conveyance		
Level of Posting:	Controlled Area		

Project: 144036

Parameters		***Dose Rate***	***Gamma***	***Corr uRem***	***Total*** Alpha	***Total*** Beta-Gamma	***Removable*** Alpha	***Removable*** Beta-Gamma
Instrument Model:		19						12/44-9
Instrument SN:		148206						145985/PR150385
Cal. Due Date:		4/15/2015						4/17/2015
x, y int.:	*Efficiency:*	**N/A**						0.1173
BKG:	*Bcpm**:*	6						50
ACF:								**1**
tB:								1
tS:								1
Lc:								140.24
MDC:								306.05

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

No.	*Descriptions*	*Time*	*x*	*y*	*uRem/hr*	*cptm*	*uRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
	Roll-offs leaving site														
1	40 yard Roll-off NY Plate # 93613PA	7:00			7									43	-60
2	35 yard Roll-off NY Plate # AV60898	9:50			8									47	-26
3	35 yard Roll-off NY Plate # AV60898	13:55			6									43	-60
4	40 yard Roll-off NY Plate # 93613PA	13:40			5									53	26

Survey Data Sheet - Li Tungsten

Reviewed By:_____

Survey No.:	LT031	**Item(s) Surveyed:**	Rolloff and trucks leaving site
Date:	6/10/2014	**Contaminant/Limits:**	GM Limit = 1000 dpm (removable), 5000 dpm (fixed). Dose rate Limit = 2X BKG
Survey Tech.:	P. Freeman	**Comments:**	
Count Rm. Tech.:	N/A - Counted in field by P. Freeman		
Date Counted:	6/10/2014		
Survey Type:	DOT Conveyance		
Level of Posting:	Controlled Area		

Project: 144036

Parameters		***Dose Rate***	***Gamma***	***Corr uRem***	***Total*** Alpha	***Total*** Beta-Gamma	***Removable*** Alpha	***Removable*** Beta-Gamma
Instrument Model:		19						12/44-9
Instrument SN:		148206						145985/PR150385
Cal. Due Date:		4/15/2015						4/17/2015
x, y int.:	*Efficiency:*	**N/A**						0.1173
BKG:	*Bcpm**:*	6						46
ACF:								**1**
tB:								1
tS:								1
Lc:								134.51
MDC:								294.60

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

No.	*Descriptions*	*Time*	*x*	*y*	*uRem/hr*	*cptm*	*uRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
	Roll-offs leaving site														
1	70 yard Roll-off NY Plate # AV60898	7:45			6									47	9
2	40 yard Roll-off NY Plate # 93612PA	8:15			6									46	0
3	40 yard Roll-off NY Plate # 93612PA	10:25			6									39	-60
4	70 yard Roll-off NY Plate # AV60898	11:15			6									41	-43
5	40 yard Roll-off NY Plate # 93612PA	12:20			6									32	-119
6	70 yard Roll-off NY Plate # AV60898	15:15			7									34	-102
7	40 yard Roll-off NY Plate # 93612PA	14:35			7									39	-60

Survey Data Sheet - Li Tungsten

Reviewed By:_____

Survey No.:	LT030	**Item(s) Surveyed:**	Rolloff and trucks leaving site
Date:	6/9/2014	**Contaminant/Limits:**	GM Limit = 1000 dpm (removable), 5000 dpm (fixed). Dose rate Limit = 2X BKG
Survey Tech.:	P. Freeman	**Comments:**	
Count Rm. Tech.:	N/A - Counted in field by P. Freeman		
Date Counted:	6/9/2014		
Survey Type:	DOT Conveyance		
Level of Posting:	Controlled Area		

Project: 144036

Parameters		***Dose Rate***	***Gamma***	***Corr uRem***	***Total*** Alpha	***Total*** Beta-Gamma	***Removable*** Alpha	***Removable*** Beta-Gamma
Instrument Model:		19						12/44-9
Instrument SN:		221547						145985/PR150385
Cal. Due Date:		3/17/2015						4/17/2015
x, y int.:	*Efficiency:*	**N/A**						0.1173
BKG:	*Bcpm**:*	6						63
ACF:								**1**
tB:								1
tS:								1
Lc:								157.42
MDC:								340.41

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

No.	*Descriptions*	*Time*	*x*	*y*	*uRem/hr*	*cptm*	*uRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
	Roll-offs leaving site														
1	15 yard Roll-off NY Plate # 16544PB	6:40			6									80	145
2	40 yard Roll-off NY Plate # 17236PC	7:00			8									91	239
3	40 yard Roll-off NY Plate # 93613PA	7:10			8									93	256
4	35 yard Roll-off NY Plate # AR57169	7:30			8									85	188
5	15 yard Roll-off NY Plate # 16544PB	9:00			7									66	26
6	40 yard Roll-off NY Plate # 17236PC	9:10			7									79	136
7	40 yard Roll-off NY Plate # 93613PA	9:20			7									67	34
8	35 yard Roll-off NY Plate # AR57169	10:05			8									61	-17
9	15 yard Roll-off NY Plate # 16544PB	11:00			7									57	-51
10	40 yard Roll-off NY Plate # 17236PC	11:15			7									64	9
11	35 yard Roll-off NY Plate # AR57169	11:55			6									62	-9
12	40 yard Roll-off NY Plate # 17236PC	13:30			6									48	-128
13	35 yard Roll-off NY Plate # AR57169	14:00			6									43	-171

Survey Data Sheet - Li Tungsten

Reviewed By:_____

Survey No.:	LT029	**Item(s) Surveyed:**	Rolloff and trucks leaving site
Date:	6/6/2014	**Contaminant/Limits:**	GM Limit = 1000 dpm (removable), 5000 dpm (fixed). Dose rate Limit = 2X BKG
Survey Tech.:	P. Freeman	**Comments:**	Rain all day - suspect higher counts detected due to radon/wet large area wipes
Count Rm. Tech.:	N/A - Counted in field by P. Freeman		
Date Counted:	6/6/2014		
Survey Type:	DOT Conveyance		
Level of Posting:	Controlled Area		

Project: 144036

Parameters		***Dose Rate***	***Gamma***	***Corr uRem***	***Total*** Alpha	***Total*** Beta-Gamma	***Removable*** Alpha	***Removable*** Beta-Gamma
Instrument Model:		19						12/44-9
Instrument SN:		221547						145985/PR150385
Cal. Due Date:		3/17/2015						4/17/2015
x, y int.:	*Efficiency:*	**N/A**						0.1173
BKG:	*Bcpm**:*	6						42
ACF:								**1**
tB:								1
tS:								1
Lc:								128.53
MDC:								282.64

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

No.	*Descriptions*	*Time*	*x*	*y*	*uRem/hr*	*cptm*	*uRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
	Roll-offs leaving site														
1	40 yard Roll-off NY Plate # 93612PA	5:55			6									44	17
2	40 yard Roll-off NY Plate # 17236PC	6:05			6									29	-111
3	15 yard Roll-off NY Plate # 16544PB	6:15			6									41	-9
4	35 yard Roll-off NY Plate # AR57169	7:10			6									47	43
5	15 yard Roll-off NY Plate # 16544PB	8:05			7									46	34
6	40 yard Roll-off NY Plate # 93612PA	7:50			6									37	-43
7	40 yard Roll-off NY Plate # 17236PC	8:00			7									39	-26
8	35 yard Roll-off NY Plate # AR57169	9:30			6									49	60
9	15 yard Roll-off NY Plate # 16544PB	10:10			8									39	-26
10	40 yard Roll-off NY Plate # 93612PA	10:05			7									43	9
11	40 yard Roll-off NY Plate # 17236PC	10:15			8									45	26
12	35 yard Roll-off NY Plate # AR57169	11:20			6									35	-60
13	40 yard Roll-off NY Plate # 93612PA	12:15			7									48	51
14	15 yard Roll-off NY Plate # 16544PB	12:30			6									39	-26
15	40 yard Roll-off NY Plate # 17236PC	12:20			7									36	-51
16	35 yard Roll-off NY Plate # AR57169	14::50			7									38	-34
17	40 yard Roll-off NY Plate # 93612PA	15:10			7									34	-68
18	15 yard Roll-off NY Plate # 16544PB	15:15			8									37	-43
19	40 yard Roll-off NY Plate # 17236PC	15:05			6									40	-17

Survey Data Sheet - Li Tungsten

Reviewed By:_____

Survey No.:	LT028	**Item(s) Surveyed:**	Rolloff and trucks leaving site — **Project: 144036**
Date:	6/5/2014	**Contaminant/Limits:**	GM Limit = 1000 dpm (removable), 5000 dpm (fixed). Dose rate Limit = 2X BKG
Survey Tech.:	P. Freeman	**Comments:**	Rain all day - suspect higher counts detected due to radon/wet large area wipes
Count Rm. Tech.:	N/A - Counted in field by P. Freeman		
Date Counted:	6/5/2014		
Survey Type:	DOT Conveyance		
Level of Posting:	Controlled Area		

Parameters		***Dose Rate***	***Gamma***	***Corr uRem***	***Total*** Alpha	***Total*** Beta-Gamma	***Removable*** Alpha	***Removable*** Beta-Gamma
Instrument Model:		19						12/44-9
Instrument SN:		148206						145985/PR150385
Cal. Due Date:		4/15/2015						4/17/2015
x, y int.:	*Efficiency:*	**N/A**						0.1173
BKG:	*Bcpm**:*	6						39
ACF:								**1**
tB:								1
tS:								1
Lc:								123.86
MDC:								273.29

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

No.	*Descriptions*	*Time*	*x*	*y*	*uRem/hr*	*cptm*	*uRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
	Roll-offs leaving site														
1	15 yard Roll-off NY Plate # 16544PB	6:50			7									90	435
2	15 yard Roll-off NY Plate # 16546PB	6:55			8									82	367
3	40 yard Roll-off NY Plate # 93613PA	7:00			6									87	409
4	40 yard Roll-off NY Plate # 93614PA	7:20			7									80	350
5	15 yard Roll-off NY Plate # 16543PB	7:35			6									63	205
6	40 yard Roll-off NY Plate # 93613PA	8:40			8									70	264
7	15 yard Roll-off NY Plate # 16544PB	8:55			7									68	247
8	15 yard Roll-off NY Plate # 16546PB	9:05			8									77	324
9	40 yard Roll-off NY Plate # 93612PA	9:35			8									72	281
10	15 yard Roll-off NY Plate # 16543PB	10:05			7									70	264
11	40 yard Roll-off NY Plate # 93613PA	10:25			8									90	435
12	15 yard Roll-off NY Plate # 16544PB	10:40			7									89	426
13	15 yard Roll-off NY Plate # 16546PB	11:00			6									71	273
14	40 yard Roll-off NY Plate # 93612PA	11:45			7									68	247
15	15 yard Roll-off NY Plate # 16543PB	12:00			7									91	443
16	40 yard Roll-off NY Plate # 93613PA	12:20			7									62	196
17	15 yard Roll-off NY Plate # 16544PB	12:45			6									59	171
18	15 yard Roll-off NY Plate # 16546PB	13:00			6									47	68
19	15 yard Roll-off NY Plate # 16543PB	14:05			6									28	-94
20	40 yard Roll-off NY Plate # 93613PA	14:25			6									40	9
21	15 yard Roll-off NY Plate # 16544PB	14:45			6									33	-51
22	15 yard Roll-off NY Plate # 16546PB	14:55			6									32	-60

Survey Data Sheet - Li Tungsten

Reviewed By:_____

Survey No.:	LT027	**Item(s) Surveyed:**	Rolloff and trucks leaving site
Date:	6/4/2014	**Contaminant/Limits:**	GM Limit = 1000 dpm (removable), 5000 dpm (fixed). Dose rate Limit = 2X BKG
Survey Tech.:	P. Freeman	**Comments:**	
Count Rm. Tech.:	N/A - Counted in field by P. Freeman		
Date Counted:	6/4/2014		
Survey Type:	DOT Conveyance		
Level of Posting:	Controlled Area		

Project: 144036

Parameters		***Dose Rate***	***Gamma***	***Corr uRem***	***Total*** Alpha	***Total*** Beta-Gamma	***Removable*** Alpha	***Removable*** Beta-Gamma
Instrument Model:		19						12/44-9
Instrument SN:		148206						145985/PR150385
Cal. Due Date:		4/15/2015						4/17/2015
x, y int.:	*Efficiency:*	**N/A**						0.1173
BKG:	*Bcpm**:*	6						46
ACF:								**1**
tB:								1
tS:								1
Lc:								134.51
MDC:								294.60

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

No.	*Descriptions*	*Time*	*x*	*y*	*uRem/hr*	*cptm*	*uRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
	Roll-offs leaving site														
1	40 yard Roll-off NY Plate # 93613PA	7:10			6									48	17
2	15 yard Roll-off NY Plate # 16544PB	7:15			6									30	-136
3	15 yard Roll-off NY Plate # 16545PB	7:35			6									37	-77
4	40 yard Roll-off NY Plate # 93613PA	9:05			6									36	-85
5	15 yard Roll-off NY Plate # 16544PB	9:20			6									47	9
6	15 yard Roll-off NY Plate # 16545PB	9:40			6									34	-102
7	40 yard Roll-off NY Plate # 93613PA	11:05			6									42	-34
8	15 yard Roll-off NY Plate # 16544PB	11:30			6									40	-51
9	15 yard Roll-off NY Plate # 16545PB	11:45			6									38	-68
10	15 yard Roll-off NY Plate # 16545PB	13:30			6									37	-77
11	15 yard Roll-off NY Plate # 16545PB	13:50			6									55	77
12	40 yard Roll-off NY Plate # 93613PA	13:55			6									40	-51
13															
14															
15															

Survey Data Sheet - Li Tungsten

Reviewed By:_____

Survey No.:	LT025	**Item(s) Surveyed:**	Rolloff and trucks leaving site
Date:	6/3/2014	**Contaminant/Limits:**	GM Limit = 1000 dpm (removable), 5000 dpm (fixed). Dose rate Limit = 2X BKG
Survey Tech.:	P. Freeman	**Comments:**	
Count Rm. Tech.:	N/A - Counted in field by P. Freeman		
Date Counted:	6/3/2014		
Survey Type:	DOT Conveyance		
Level of Posting:	Controlled Area		

Project: 144036

Parameters		***Dose Rate***	***Gamma***	***Corr uRem***	***Total*** Alpha	***Total*** Beta-Gamma	***Removable*** Alpha	***Removable*** Beta-Gamma
Instrument Model:		19						12/44-9
Instrument SN:		148206						145985/PR150385
Cal. Due Date:		4/15/2015						4/17/2015
x, y int.:	*Efficiency:*	**N/A**						0.1173
BKG:	*Bcpm**:*	6						43
ACF:								**1**
tB:								1
tS:								1
Lc:								130.05
MDC:								285.68

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

No.	*Descriptions*	*Time*	*x*	*y*	*uRem/hr*	*cptm*	*uRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
	Roll-offs leaving site														
1	40 Yard Roll-off NY Plate # 93613PA	10:45			7									41	-17
2	40 Yard Roll-off NY Plate # 93613PA	13:40			6									37	-51

Survey Data Sheet - Li Tungsten

Reviewed By:_____

Survey No.:	LT021	**Item(s) Surveyed:**	Rolloff and trucks leaving site
Date:	5/28/2014	**Contaminant/Limits:**	GM Limit = 1000 dpm (removable), 5000 dpm (fixed). Dose rate Limit = 2X BKG
Survey Tech.:	P. Freeman	**Comments:**	
Count Rm. Tech.:	N/A - Counted in field by P. Freeman		
Date Counted:	5/28/2014		
Survey Type:	DOT Conveyance		
Level of Posting:	Controlled Area		

Project: 144036

Parameters		***Dose Rate***	***Gamma***	***Corr uRem***	***Total*** Alpha	***Total*** Beta-Gamma	***Removable*** Alpha	***Removable*** Beta-Gamma
Instrument Model:		19						12/44-9
Instrument SN:		148206						145985/PR150385
Cal. Due Date:		4/15/2015						4/17/2015
x, y int.:	*Efficiency:*	**N/A**						0.1173
BKG:	*Bcpm**:*	6						43
ACF:								**1**
tB:								1
tS:								1
Lc:								130.05
MDC:								285.68

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

No.	*Descriptions*	*Time*	*x*	*y*	*uRem/hr*	*cptm*	*uRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
	Roll-offs leaving site														
1	40 Yard Roll-off NY Plate # 17236PC	6:55			6									32	-94
2	40 yard Roll-off NY Plate # 93610PA	7:00			6									42	-9
3	15 yard Roll-off NY Plate # 16544PB	7:05			6									49	51
4	15 yard Roll-off NY Plate # 16543PB	7:20			6									47	34
5	15 yard Roll-off NY Plate # 16544PB	9:15			6									41	-17
6	40 Yard Roll-off NY Plate # 17236PC	9:25			6									43	0
7	15 yard Roll-off NY Plate # 16543PB	9:40			6									53	85
8	40 yard Roll-off NY Plate # 93610PA	9:20			6									31	-102
9	15 yard Roll-off NY Plate # 16544PB	11:00			6									35	-68
10	40 Yard Roll-off NY Plate # 17236PC	11:25			6									43	0
11	15 yard Roll-off NY Plate # 16543PB	11:45			6									49	51
12	40 yard Roll-off NY Plate # 93610PA	11:50			6									51	68
13	40 yard Roll-off NY Plate # 93610PA	13:45			6									31	-102
14	40 Yard Roll-off NY Plate # 17236PC	14:00			6									47	34

Survey Data Sheet - Li Tungsten

Reviewed By:_____

Survey No.:	LT020	**Item(s) Surveyed:**	Rolloff and trucks leaving site
Date:	5/27/2014	**Contaminant/Limits:**	GM Limit = 1000 dpm (removable), 5000 dpm (fixed). Dose rate Limit = 2X BKG
Survey Tech.:	P. Freeman	**Comments:**	
Count Rm. Tech.:	N/A - Counted in field by P. Freeman		
Date Counted:	5/27/2014		
Survey Type:	DOT Conveyance		
Level of Posting:	Controlled Area		

Project: 144036

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate*	*Gamma*	*Corr uRem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		19						12/44-9
Instrument SN:		148206						145985/PR150385
Cal. Due Date:		4/15/2015						4/17/2015
x, y int.:	*Efficiency:*	**N/A**						0.1173
BKG:	*Bcpm**:*	6						39
ACF:								**1**
tB:								1
tS:								1
Lc:								123.86
MDC:								273.29

No.	*Descriptions*	*Time*	*x*	*y*	*uRem/hr*	*cptm*	*uRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
	Roll-offs leaving site														
1	40 Yard Roll-off NY Plate # 17236PC	7:10			6									40	9
2	15 yard Roll-off NY Plate # 16545PB	7:25			6									39	0
3	15 yard Roll-off NY Plate # 16546PB	7:30			6									41	17
4	40 yard Roll-off NY Plate # 93610PA	8:05			6									33	-51
5	15 yard Roll-off NY Plate # 16545PB	10:10			6									50	94
6	15 yard Roll-off NY Plate # 16546PB	10:05			6									41	17
7	40 Yard Roll-off NY Plate # 17236PC	10:00			6									44	43
8	40 yard Roll-off NY Plate # 93610PA	10:15			6									41	17
9	40 Yard Roll-off NY Plate # 17236PC	11:45			6									48	77
10	15 yard Roll-off NY Plate # 16545PB	12:20			6									44	43
11	15 yard Roll-off NY Plate # 16546PB	12:10			6									33	-51
12	40 yard Roll-off NY Plate # 93610PA	12:25			6									45	51
13	15 yard Roll-off NY Plate # 16545PB	13:50			6									47	68
14	15 yard Roll-off NY Plate # 16546PB	13:55			6									42	26
15	40 yard Roll-off NY Plate # 93610PA	14:05			6									38	-9

Survey Data Sheet - Li Tungsten

Reviewed By:_____

Survey No.:	LT019	**Item(s) Surveyed:**	Rolloff and trucks leaving site
Date:	5/23/2014	**Contaminant/Limits:**	GM Limit = 1000 dpm (removable), 5000 dpm (fixed). Dose rate Limit = 2X BKG
Survey Tech.:	P. Freeman	**Comments:**	
Count Rm. Tech.:	N/A - Counted in field by P. Freeman		
Date Counted:	5/23/2014		
Survey Type:	DOT Conveyance		
Level of Posting:	Controlled Area		

Project: 144036

Parameters		***Dose Rate***	***Gamma***	***Corr uRem***	***Total*** Alpha	***Total*** Beta-Gamma	***Removable*** Alpha	***Removable*** Beta-Gamma
Instrument Model:		19						12/44-9
Instrument SN:		221547						145985/PR150385
Cal. Due Date:		3/17/2015						4/17/2015
x, y int.:	*Efficiency:*	**N/A**						0.1173
BKG:	*Bcpm**:*	6						48
ACF:								**1**
tB:								1
tS:								1
Lc:								137.41
MDC:								300.39

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

No.	*Descriptions*	*Time*	*x*	*y*	*uRem/hr*	*cptm*	*uRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
	Roll-offs leaving site														
1	40 Yard Roll-off NY Plate # 17236PC	7:10			7									53	43
2	15 yard Roll-off NY Plate # 16544PB	7:30			6									36	-102
3	40 yard Roll-off NY Plate # 93613PA	7:00			7									45	-26
4	40 yard Roll-off NY Plate # 93613PA	8:45			6									53	43
5	15 yard Roll-off NY Plate # 16544PB	9:40			6									37	-94
6	40 Yard Roll-off NY Plate # 17236PC	9:20			7									51	26
7	40 yard Roll-off NY Plate # 93613PA	10:40			7									45	-26
8	15 yard Roll-off NY Plate # 16544PB	11:30			6									34	-119
9	40 Yard Roll-off NY Plate # 17236PC	11:45			6									43	-43
10	40 yard Roll-off NY Plate # 93613PA	12:55			7									42	-51
11	15 yard Roll-off NY Plate # 16544PB	13:15			6									39	-77
12	40 Yard Roll-off NY Plate # 17236PC	13:40			7									49	9
13															
14															
15															

Survey Data Sheet - Li Tungsten

Reviewed By:_____

Survey No.:	LT018	**Item(s) Surveyed:**	Rolloff and trucks leaving site
Date:	5/22/2014	**Contaminant/Limits:**	GM Limit = 1000 dpm (removable), 5000 dpm (fixed). Dose rate Limit = 2X BKG
Survey Tech.:	P. Freeman	**Comments:**	
Count Rm. Tech.:	N/A - Counted in field by P. Freeman		
Date Counted:	5/22/2014		
Survey Type:	DOT Conveyance		
Level of Posting:	Controlled Area		

Project: 144036

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		***Dose Rate***	***Gamma***	***Corr uRem***	***Total*** Alpha	***Total*** Beta-Gamma	***Removable*** Alpha	***Removable*** Beta-Gamma
Instrument Model:		19						12/44-9
Instrument SN:		221547						145985/PR150385
Cal. Due Date:		3/17/2015						4/17/2015
x, y int.:	*Efficiency:*	**N/A**						0.1173
BKG:	*Bcpm**:*	6						48
ACF:								**1**
tB:								1
tS:								1
Lc:								137.41
MDC:								300.39

No.	*Descriptions*	*Time*	*x*	*y*	*uRem/hr*	*cptm*	*uRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
	Roll-offs leaving site														
1	90 yard Roll-off NY Plate # 31525PC	7:30			5									43	-43
2	40 Yard Roll-off NY Plate # 17236PC	7:20			5									38	-85
3	40 yard Roll-off NY Plate # 93613PA	7:10			6									40	-68
4	90 Yard Roll-off NY Plate # 31299PC	9:05			6									39	-77
5	40 yard Roll-off NY Plate # 93613PA	9:20			6									34	-119
6	40 Yard Roll-off NY Plate # 17236PC	10:00			6									52	34
7	40 yard Roll-off NY Plate # 93613PA	11:40			6									54	51
8	90 Yard Roll-off NY Plate # 31299PC	13:10			7									37	-94
9	40 Yard Roll-off NY Plate # 17236PC	12:15			6									47	-9
10	40 yard Roll-off NY Plate # 93613PA	13:35			6									49	9
11	40 Yard Roll-off NY Plate # 17236PC	15:10			6									49	9
12															
13															
14															
15															

Survey Data Sheet - Li Tungsten

Reviewed By:_____

Survey No.:	LT017	**Item(s) Surveyed:**	Rolloff and trucks leaving site
Date:	5/21/2014	**Contaminant/Limits:**	GM Limit = 1000 dpm (removable), 5000 dpm (fixed). Dose rate Limit = 2X BKG
Survey Tech.:	P. Freeman	**Comments:**	
Count Rm. Tech.:	N/A - Counted in field by P. Freeman		
Date Counted:	5/21/2014		
Survey Type:	DOT Conveyance		
Level of Posting:	Controlled Area		

Project: 144036

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate*	*Gamma*	*Corr uRem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		19						12/44-9
Instrument SN:		221547						145985/PR150385
Cal. Due Date:		3/17/2015						4/17/2015
x, y int.:	*Efficiency:*	**N/A**						0.1173
BKG:	*Bcpm**:*	6						49
ACF:								**1**
tB:								1
tS:								1
Lc:								138.83
MDC:								303.23

No.	*Descriptions*	*Time*	*x*	*y*	*uRem/hr*	*cptm*	*uRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
	Roll-offs leaving site														
1	40 Yard Roll-off NY Plate # 17236PC	7:10			6									51	17
2	90 yard Roll-off NY Plate # 31525PC	7:45			6									44	-43
3	90 Yard Roll-off NY Plate # 31299PC	8:35			6									46	-26
4	40 Yard Roll-off NY Plate # 17236PC	9:35			6									53	34
5	40 yard Roll-off NY Plate # 93613PA	10:40			6									39	-85
6	90 yard Roll-off NY Plate # 31525PC	11:20			7									44	-43
7	90 Yard Roll-off NY Plate # 31299PC	12:00			7									47	-17
8	40 Yard Roll-off NY Plate # 17236PC	12:20			6									41	-68
9	40 yard Roll-off NY Plate # 93613PA	12:40			6									43	-51
10	90 yard Roll-off NY Plate # 31525PC	14:40			6									49	0
11	90 Yard Roll-off NY Plate # 31299PC	15:15			6									52	26
12															
13															
14															
15															

Survey Data Sheet - Li Tungsten

Reviewed By: _____

Survey No.:	LT016	**Item(s) Surveyed:**	Rolloff and trucks leaving site (Dickson) — **Project: 144036**
Date:	5/20/2014	**Contaminant/Limits:**	GM Limit = 1000 dpm (removable), 5000 dpm (fixed). Dose rate Limit = 2X BKG
Survey Tech.:	P. Freeman	**Comments:**	
Count Rm. Tech.:	N/A - Counted in field by P. Freeman		
Date Counted:	5/20/2014		
Survey Type:	DOT Conveyance		
Level of Posting:	Controlled Area		

Parameters		***Dose Rate***	***Gamma***	***Corr uRem***	***Total*** Alpha	***Total*** Beta-Gamma	***Removable*** Alpha	***Removable*** Beta-Gamma
Instrument Model:		19						12/44-9
Instrument SN:		221547						145985/PR150385
Cal. Due Date:		3/17/2015						4/17/2015
x, y int.:	*Efficiency:*	**N/A**						0.1173
BKG:	*Bcpm**:*	6						33
ACF:								**1**
tB:								1
tS:								1
Lc:								113.93
MDC:								253.44

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

No.	*Descriptions*	*Time*	*x*	*y*	*uRem/hr*	*cptm*	*uRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
	Roll-offs leaving site														
1	40 yard Roll-off NY Plate # 93612PA	7:00			6									38	43
2	40 Yard Roll-off NY Plate # 93613PA	8:20			5									44	94
3	40 yard Roll-off NY Plate # 93612PA	9:10			6									41	68
4	40 Yard Roll-off NY Plate # 93613PA	10:35			6									43	85
5	40 yard Roll-off NY Plate # 93612PA	11:35			6									42	77
6	40 Yard Roll-off NY Plate # 93613PA	12:40			6									47	119
7	40 yard Roll-off NY Plate # 93612PA	13:45			6									51	153
8	40 Yard Roll-off NY Plate # 93613PA	14:35			6									48	128
9															
10															
11															
12															
13															
14															
15															

Survey Data Sheet - Li Tungsten

Reviewed By:_____

Survey No.:	LT013	**Item(s) Surveyed:**	Rolloff and trucks leaving site (Dickson) — **Project: 144036**
Date:	5/19/2014	**Contaminant/Limits:**	GM Limit = 1000 dpm (removable), 5000 dpm (fixed). Dose rate Limit = 2X BKG
Survey Tech.:	P. Freeman	**Comments:**	
Count Rm. Tech.:	N/A - Counted in field by P. Freeman		
Date Counted:	5/19/2014		
Survey Type:	DOT Conveyance		
Level of Posting:	Controlled Area		

Parameters		***Dose Rate***	***Gamma***	***Corr uRem***	***Total*** Alpha	***Total*** Beta-Gamma	***Removable*** Alpha	***Removable*** Beta-Gamma
Instrument Model:		19						12/44-9
Instrument SN:		221547						145985/PR150385
Cal. Due Date:		3/17/2015						4/17/2015
x, y int.:	*Efficiency:*	**N/A**						0.1173
BKG:	*Bcpm**:*	6						36
ACF:								**1**
tB:								1
tS:								1
Lc:								119.00
MDC:								263.57

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per $100cm^2$

No.	*Descriptions*	*Time*	*x*	*y*	*uRem/hr*	*cptm*	*uRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
	Roll-offs leaving site														
1	40 yard Roll-off Ny Plate # 17236PC	8:15			6									40	34
2	40 yard Roll-off Ny Plate # 17236PC	13:35			6									47	94
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															

Survey Data Sheet - Li Tungsten

Reviewed By:_____

Survey No.:	LT009	**Item(s) Surveyed:**	Roll-off containers for shipping demolition debris	**Project: 144036**
Date:	5/16/2014	**Contaminant/Limits:**	GM Limit = 1000 dpm (removable), 5000 dpm (fixed). Dose rate Limit = 2X BKG	
Survey Tech.:	P. Freeman	**Comments:**	Dose rate relfects maximum dose rate observered from entire container unless otherwise noted. Removable reflects LAW of tires/ta	
Count Rm. Tech.:	N/A - Counted in field by P. Freeman			
Date Counted:	5/16/2014			
Survey Type:	DOT Conveyance Survey			
Level of Posting:	Controlled Area			

Parameters		***Dose Rate***	***Gamma***	***Corr uRem***	***Removeable***		***Total***	
					Alpha	Beta-Gamma	Alpha	Beta-Gamma
Instrument Model:		19				12/44-9		
Instrument SN:		221547				145885/PR150885		
Cal. Due Date:		3/17/2015				4/17/2015		
x, y int.:	*Efficiency:*	**N/A**				0.1173		
BKG:	*Bcpm**:*	4		**N/A**		35		
ACF:						1		
tB:						1		
tS:						1		
Lc:						117.33		
MDC:						260.24		

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

No.	*Descriptions*	*x*	*y*	*z*	*uRem/hr*	*cptm*	*uRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	**40 Yd Roll-off, NY Plate # 93612PA @ 09:35**				5					46	94				
2	**40 Yd Roll-off, NY Plate # 93612PA @ 12:20**				5					48	111				
3	**40 Yd Roll-off, NY Plate # 93612PA @ 13:05**				4					51	136				
4	**40 Yd Roll-off, NY Plate # 93613PA @ 13:15**				4					43	68				

Survey Data Sheet - Li Tungsten

Reviewed By:_____

Survey No.:	LT007	**Item(s) Surveyed:**	Rolloff and trucks leaving site (Dickson) — **Project: 144036**
Date:	5/14/2014	**Contaminant/Limits:**	GM Limit = 1000 dpm (removable), 5000 dpm (fixed). Dose rate Limit = 2X BKG
Survey Tech.:	P. Freeman	**Comments:**	
Count Rm. Tech.:	N/A - Counted in field by P. Freeman		
Date Counted:	5/14/2014		
Survey Type:	DOT Conveyance		
Level of Posting:	Controlled Area		

Parameters		*Dose Rate*	*Gamma*	*Corr uRem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		19						12/44-9
Instrument SN:		221547						145985/PR150385
Cal. Due Date:		3/17/2015						4/17/2015
x, y int.:	*Efficiency:*	**N/A**						0.1173
BKG:	*Bcpm**:*	4						36
ACF:								**1**
tB:								1
tS:								1
Lc:								119.00
MDC:								263.57

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

No.	*Descriptions*	*Time*	*x*	*y*	*uRem/hr*	*cptm*	*uRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
	Roll-offs leaving site														
1	20 Yd Roll-off NY License Plate # 93613PA	10:25			4									42	51
2	20 Yd Roll-off NY License Plate # 93613PA	15:00			4									32	-34
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															

Survey Data Sheet - Li Tungsten

Reviewed By:_____

Survey No.:	LT006	**Item(s) Surveyed:**	Rolloff and trucks leaving site (Dickson) — **Project: 144036**
Date:	5/13/2014	**Contaminant/Limits:**	GM Limit = 1000 dpm (removable), 5000 dpm (fixed). Dose rate Limit = 2X BKG
Survey Tech.:	P. Freeman	**Comments:**	
Count Rm. Tech.:	N/A - Counted in field by P. Freeman		
Date Counted:	5/13/2014		
Survey Type:	DOT Conveyance		
Level of Posting:	Controlled Area		

Parameters		***Dose Rate***	***Gamma***	***Corr uRem***	***Total*** Alpha	***Total*** Beta-Gamma	***Removable*** Alpha	***Removable*** Beta-Gamma
Instrument Model:		19						12/44-9
Instrument SN:		221547						145985/PR150385
Cal. Due Date:		3/17/2015						4/17/2015
x, y int.:	*Efficiency:*	**N/A**						0.1173
BKG:	*Bcpm**:*	4						35
ACF:								**1**
tB:								1
tS:								1
Lc:								117.33
MDC:								260.24

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per $100cm^2$

No.	*Descriptions*	*Time*	*x*	*y*	*uRem/hr*	*cptm*	*uRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
	Roll-offs leaving site														
1	90 Yd Roll-off NY License Plate # AV60898	8:05			4									31	-34
2	90 Yd Roll-off NY License Plate # AV60898	13:15			4									33	-17
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															

Survey Data Sheet - Li Tungsten

Reviewed By:_____

Survey No.:	LT005	**Item(s) Surveyed:**	Rolloff and trucks leaving site (Dickson) — **Project: 144036**
Date:	5/12/2014	**Contaminant/Limits:**	GM Limit = 1000 dpm (removable), 5000 dpm (fixed). Dose rate Limit = 2X BKG
Survey Tech.:	P. Freeman / F. Quinton	**Comments:**	
Count Rm. Tech.:	N/A - Counted in field by P. Freeman		
Date Counted:	5/12/2014		
Survey Type:	DOT Conveyance		
Level of Posting:	Controlled Area		

Parameters		*Dose Rate*	*Gamma*	*Corr uRem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		19						12/44-9
Instrument SN:		221547						145985/PR150385
Cal. Due Date:		3/17/2015						4/17/2015
x, y int.:	*Efficiency:*	**N/A**						0.1173
BKG:	*Bcpm**:*	3						40
	ACF:							**1**
	tB:							1
	tS:							1
	Lc:							125.43
	MDC:							276.44

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

No.	*Descriptions*	*Time*	*x*	*y*	*uRem/hr*	*cptm*	*uRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
	Roll-offs leaving site														
1	20 Yd Roll-Off NY License Plate # 93613PA	8:15			4									41	9
2	20 Yd Roll-Off NY License Plate # 93613PA	8:30			5									45	43
3	90 Yd Roll-off NY Plate # BE52232	9:00			5									39	-9
4	70 Yd Roll off NY Plate # AV60898	9:15			4									40	0
5	90 Yd Roll off NY Plate # 31525PC	9:50			5									46	51
6	20 Yd Roll-Off NY License Plate # 93613PA	9:55			5									48	68
7	70 Yd Roll-off NY Plate # 93611PA	10:25			5									35	-43
8	90 Yd Roll-off NY Plate # 31299PC	11:15			5									37	-26
9	40 Yard Roll-off NY Plate # 93613PA	10:45			5									41	9
10	70 Yd Roll off NY Plate # AV60898	11:50			5									40	0
11	90 Yd Roll off NY Plate # 31525PC	12:40			4									44	34
12	20 Yd Roll-Off NY License Plate # 93613PA	13:05			4									39	-9
13	70 Yd Roll off NY Plate # AV60898	13:45			4									42	17
14	40 Yard Roll-off NY Plate # 93613PA	13:55			5									43	26
15	90 Yd Roll off NY Plate # AV60898	14:30			4									38	-17

Survey Data Sheet - Li Tungsten

Reviewed By:_____

Survey No.:	LT004	**Item(s) Surveyed:**	**Project: 144036**
Date:	5/9/2014	**Contaminant/Limits:**	GM Limit = 1000 dpm (removable), 5000 dpm (fixed). Dose rate Limit = 2X BKG
Survey Tech.:	P. Freeman	**Comments:**	
Count Rm. Tech.:	N/A - Counted in field by P. Freeman		
Date Counted:	5/9/2014		
Survey Type:	DOT Conveyance		
Level of Posting:	Controlled Area		

Parameters		***Dose Rate***	***Gamma***	***Corr uRem***	***Total*** Alpha	***Total*** Beta-Gamma	***Removable*** Alpha	***Removable*** Beta-Gamma
Instrument Model:		19						12/44-9
Instrument SN:		221547						145985/PR150385
Cal. Due Date:		3/17/2015						4/17/2015
x, y int.:	*Efficiency:*	**N/A**						0.1173
BKG:	*Bcpm**:*	3		**N/A**				40
ACF:								**1**
tB:								1
tS:								1
Lc:								125.43
MDC:								276.44

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per $100cm^2$

No.	*Descriptions*	*x*	*y*	*z*	*uRem/hr*	*cptm*	*uRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
	Shear (Excavator Attachmet)														
1	20 Yd Roll-Off NY License Plate # 17236-PC @ 0900				3									35	-43
2	20 Yd Roll-Off NY License Plate # 17236-PC @ 1100				3									35	-43

#

Attachment E

Instrument Calibrations

Safety and Ecology Corporation
2800 Solway Rd.
Knoxville, TN 37931

Form HPM-2-1-1
Performance Check Values

Project Number:	144036	Project Name:	Li Tungsten
Instrument Model:	2221	Technician:	F. Quinton
Instrument S/N:	187741	Date:	5/6/2014
Calibration Due:	4/17/2015	Detector Model:	44-10
Radiation Detected:	Gamma	Detector S/N:	PR150870
Source Isotope & S/N:	Cs-137/3685-10	Detector Type:	NaI / Scintillation
Bkg Count Rate:	3989		

Data Point	Gross Count	Net Count	Data Point	Gross Count	Net Count
1	212001	208012	11	211125	207136
2	210964	206975	12	210984	206995
3	211058	207069	13	211214	207225
4	210864	206875	14	211856	207867
5	211476	207487	15	210639	206650
6	211116	207127	16	210598	206609
7	211739	207750	17	211014	207025
8	210713	206724	18	211212	207223
9	210169	206180	19	210935	206946
10	211731	207742	20	211744	5135

Average Net Count:		197038
Standard Deviation of Net Count (Scalers):		45171
20% of Net Count (Ratemeters):		39408
Average minus 2 X standard deviation (Scalers):		106695
Average plus 2 X standard deviation (Scalers):		287381
Average minus 20% (Ratemeters):		157630
Average plus 20% (Ratemeters):		236445

Formulas

Where: n = number of counts (20)

$\bar{x}$ = average of counts

x_i = each count result

$$StdDev = \sqrt{\frac{\sum_{i=1}^{n}(x_i - \bar{x})^2}{n-1}}$$

Comments:

source jig: Source in plastic container placed source up in center of box with probe plaed on box.

Prepared By:	F. Quinton	Date:	5/6/2014
Reviewed By:	S. Walnicki	Date:	5/6/2014

forms.xls

Safety and Ecology Corporation
2800 Solway Rd.
Knoxville, TN 37931

Form HPM-2-1-1
Performance Check Values

Project Number:	144036	Project Name:	Li Tungsten
Instrument Model:	2221	Technician:	F. Quinton
Instrument S/N:	152194	Date:	5/6/2014
Calibration Due:	4/17/2015	Detector Model:	44-10
Radiation Detected:	Gamma	Detector S/N:	PR199130
Source Isotope & S/N:	Cs-137/3685-10	Detector Type:	NaI / Scintillation
Bkg Count Rate:	3575		

Data Point	Gross Count	Net Count	Data Point	Gross Count	Net Count
1	207960	204385	11	209514	205939
2	208620	205045	12	208199	204624
3	209265	205690	13	209444	205869
4	209826	206251	14	208965	205390
5	208087	204512	15	209018	205443
6	209083	205508	16	208723	205148
7	208963	205388	17	209281	205706
8	208920	205345	18	209414	205839
9	209166	205591	19	209095	205520
10	208625	205050	20	208702	3554

Average Net Count:		195290
Standard Deviation of Net Count (Scalers):		45133
20% of Net Count (Ratemeters):		39058
Average minus 2 X standard deviation (Scalers):		105025
Average plus 2 X standard deviation (Scalers):		285555
Average minus 20% (Ratemeters):		156232
Average plus 20% (Ratemeters):		234348

Formulas

Where: n = number of counts (20)

$\bar{x}$ = average of counts

x_i = each count result

$$StdDev = \sqrt{\frac{\sum_{i=1}^{n}(x_i - \bar{x})^2}{n-1}}$$

Comments:

source jig: Source in plastic container placed source up in center of box with probe plaed on box.

Prepared By:	F. Quinton	Date:	5/6/2014
Reviewed By:	S. Walnicki	Date:	5/6/2014

forms.xls

Safety and Ecology Corporation
2800 Solway Rd.
Knoxville, TN 37931

Form HPM-2-1-1
Performance Check Values

Project Number:	144036	Project Name:	Li Tungsten
Instrument Model:	12	Technician:	S. Walnicki
Instrument S/N:	186766	Date:	5/6/2014
Calibration Due:	4/17/2015	Detector Model:	44-9
Radiation Detected:	beta	Detector S/N:	PR193567
Source Isotope & S/N:	**99Tc**/95TC470-0081	Detector Type:	GM Pancake
Bkg Count Rate:	30		

Data Point	Gross Count	Net Count	Data Point	Gross Count	Net Count
1	1631	1601	11	1550	1520
2	1669	1639	12	1671	1641
3	1604	1574	13	1539	1509
4	1588	1558	14	1601	1571
5	1535	1505	15	1593	1563
6	1689	1659	16	1628	1598
7	1617	1587	17	1610	1580
8	1658	1628	18	1561	1531
9	1576	1546	19	1587	1557
10	1636	1606	20	1642	44

Average Net Count:		1501
Standard Deviation of Net Count (Scalers):		346
20% of Net Count (Ratemeters):		300
Average minus 2 X standard deviation (Scalers):		809
Average plus 2 X standard deviation (Scalers):		2192
Average minus 20% (Ratemeters):		1201
Average plus 20% (Ratemeters):		1801

Formulas

Where: n = number of counts (20)

$\bar{x}$ = average of counts

x_i = each count result

$$StdDev = \sqrt{\frac{\sum_{i=1}^{n}(x_i - \bar{x})^2}{n-1}}$$

Comments:

source jig: Source in plastic container placed source up in center of box with probe plaed on box.

Prepared By:	F. Quinton	Date:	5/6/2014
Reviewed By:	S. Walnicki	Date:	5/6/2014

forms.xls

Safety and Ecology Corporation
2800 Solway Rd.
Knoxville, TN 37931

Form HPM-2-1-1
Performance Check Values

Project Number:	144036	Project Name:	Li Tungsten
Instrument Model:	12	Technician:	S. Walnicki
Instrument S/N:	145985	Date:	5/6/2014
Calibration Due:	4/17/2015	Detector Model:	44-9
Radiation Detected:	beta	Detector S/N:	PR150385
Source Isotope & S/N:	**99Tc**/95TC470-0081	Detector Type:	GM Pancake
Bkg Count Rate:	32		

Data Point	Gross Count	Net Count	Data Point	Gross Count	Net Count
1	1631	1599	11	1694	1662
2	1670	1638	12	1709	1677
3	1724	1692	13	1615	1583
4	1579	1547	14	1739	1707
5	1660	1628	15	1707	1675
6	1576	1544	16	1652	1620
7	1724	1692	17	1598	1566
8	1630	1598	18	1666	1634
9	1619	1587	19	1709	1677
10	1713	1681	20	1628	8

Average Net Count:		1551
Standard Deviation of Net Count (Scalers):		367
20% of Net Count (Ratemeters):		310
Average minus 2 X standard deviation (Scalers):		818
Average plus 2 X standard deviation (Scalers):		2284
Average minus 20% (Ratemeters):		1241
Average plus 20% (Ratemeters):		1861

Formulas

Where: n = number of counts (20)

$\bar{x}$ = average of counts

x_i = each count result

$$StdDev = \sqrt{\frac{\sum_{i=1}^{n}(x_i - \bar{x})^2}{n-1}}$$

Comments:

source jig: Source in plastic container placed source up in center of box with probe plaed on box.

Prepared By:	F. Quinton	Date:	5/6/2014
Reviewed By:	S. Walnicki	Date:	5/6/2014

forms.xls

Safety and Ecology Corporation SEC PROCEDURE # SEC-IS-403 Rev 3

2800 Solway Road, Knoxville, TN 37931

Calibration Certificate

4/17/2014

Calibration Certificate for 2221,Serial # 152194, Bar Code # ,Property # SEC-5316

Date: 04/17/14 Date Last Cal. Expires: 04/02/15 Technician: Thomas Thompson

Location: 9999, Reason For Calibration: Short Cycled

EQUIPMENT USED DURING CALIBRATION

MODEL: 500-2 SERIAL #: 190580 CAL DUE: 07/23/14

MODEL: SERIAL #: CAL DUE:

AS FOUND DATA Geotropism: SAT AS FOUND Instrument Condition: SAT AS LEFT Instrument Condition: SAT

HIGH VOLTAGE (+/- 10% tolerance)	AS FOUND HV	AS LEFT HV
500 V:	492 V	500 V
1000 V:	988 V	1000 V
1500 V:	1482 V	1501 V

☐ New Batteries?

Threshold ratio: 100=10mV

AF THRESHOLD: 9.5 mV

AL THRESHOLD: 10 mV

AF Mechanical Zero: 0

AL Mechanical Zero: 0

AF HV Reading: 1079 V

AL HV Reading: 1100 V

RATE METER

SCALE	RATE CPM	AS FOUND	% ERROR	AS LEFT	% ERROR
x.1 or x1	100	95	5.00%	AF	5.00%
	250	240	4.00%	AF	4.00%
	400	380	5.00%	AF	5.00%
x1 or x10	1000	950	5.00%	AF	5.00%
	2500	2400	4.00%	AF	4.00%
	4000	3800	5.00%	AF	5.00%
x10 or x100	10K	9.5	5.00%	AF	5.00%
	25K	24	4.00%	AF	4.00%
	40K	38	5.00%	AF	5.00%
x100 or x1000	100K	95	5.00%	AF	5.00%
	250K	240	4.00%	AF	4.00%
	400K	380	5.00%	AF	5.00%

☑ Is the As Found Data Within 20% of the Set Point?

DIGITAL SCALER

AF 250:	250	% ERR:	0.00%	AL 250:	AF	% ERR:	0.00%
AF 2500:	2500	% ERR:	0.00%	AL 2500:	AF	% ERR:	0.00%
AF 25K:	25.00 K	% ERR:	0.00%	AL 25K:	AF K	% ERR:	0.00%
AF 250K:	250.0 K	% ERR:	0.00%	AL 250K:	AF K	% ERR:	0.00%

☑ Is the As Found Data Within 20% of the Set Point?

LOG SCALE

AF 200:	190	% ERR:	5.00%	AL 200:	20	% ERR:	90.00%
AF 2000:	1750	% ERR:	12.50%	AL 2000:	2000	% ERR:	0.00%
AF 20K:	15 K	% ERR:	25.00%	AL 20K:	20 K	% ERR:	0.00%
AF 200K:	140 K	% ERR:	30.00%	AL 200K:	200 K	% ERR:	0.00%

☑ Is the As Found Data Within 20% of the Set Point?

REPRODUCIBILITY

x.1 or x1 Scale:	250	250	250
x1 or x10 Scale:	2500	2500	2500
x10 or x100 Scale:	25 K	25 K	25 K
x100 or x1000 Scale:	250 K	250 K	250 K

☑ Are the Individual Counts Within 10% of the Average?

Audio Response: SAT

Audio Divide: SAT

Push Buttons: SAT

Lamp: SAT

Scaler/Digital: SAT

☑ Fast / Slow Response Function Properly?

Comments: Married as a set with: Model: 44-10 Serial #: PR199130 Bar Code #:

☑ Does Instrument Meet Final Acceptance Criteria? ☑ Calibration Sticker Attached?

Date Instrument is Due For Next Calibration: 04/17/15

Performed by: _____ Reviewed by: _____ Date: 5/1/14

Printed Name: Thomas Thompson

Safety and Ecology Corporation SEC PROCEDURE # SEC-IS-415 Rev 3

2800 Solway Road, Knoxville, TN 37931

Calibration Certificate

4/17/2014

Calibration Certificate for 44-10,Serial # PR199130, Bar Code # ,Property # SEC-6031

Date: 04/17/14 Date Last Cal. Expires: 04/02/15 Technician: Thomas Thompson

Location: 9999, Reason For Calibration: Short Cycled

EQUIPMENT USED DURING CALIBRATION

MODEL: 17 SERIAL #: 190039 CAL DUE: 06/21/09

MODEL: SERIAL #: CAL DUE:

NIST TRACEABLE SOURCES USED

SOURCE	ISOTOPE	ACTIVITY	2π	ASSAY DATE
99CS250-0288	Cs-137	6.655 uCi		12/26/2012

Efficiency from Last Calibration: 0.65 % HV From Last Calibration: 1100 V Calibration Threshold: 10 mV

1 MINUTE COUNTS (CPM)

AS FOUND DATA

AS FOUND Instrument Condition: SAT

HV: 1100 V

Center: 97774

Background: 3949

4 π Probe Efficiency: Cs-137 0.64%

AS LEFT DATA after repair of HV adjust

AS LEFT Instrument Condition: SAT

HV: 1100 V

Center: 98152

Background: 3851

4 π Probe Efficiency: Cs-137 0.64%

"AF" in the AL Efficiency fields means to refer to the AF Efficiencies in the AS FOUND DATA Section

☑ Is the As Found Efficiency Within 20% of the efficiency from the last cal.?

Reproducibility: Isotope: Cs-137 97931 97637 98052 Average: 97873 ☑ Are the individual counts within 10% of the average?

* If As Found Efficiency (even after repair) is within 10% of the last calibration and uniformity is <10%, the technician may N/A the Plateau Data and proceed to Comments. Geometry = NaI probes are 4 1/2" from source. All other probes are in contact with surface unless otherwise specified.

PLATEAU AND SET POINT DATA (CPM)

High Voltage	Source Response	Background	HV	CENTER	Background	4 π Efficiency
N/A			V			Cs-137

Comments: Married as a set with: Model: 2221 Serial #: 152194 Bar Code #:

☑ Does Instrument Meet Final Acceptance Criteria? ☑ Calibration Sticker Attached?

Date Instrument is Due For Next Calibration: 04/17/15

Performed by: Reviewed by: Date: 5/1/14

Printed Name: Thomas Thompson

Safety and Ecology Corporation SEC PROCEDURE # SEC-IS-403 Rev 3

2800 Solway Road, Knoxville, TN 37931

Calibration Certificate

4/17/2014

Calibration Certificate for 2221,Serial # 187741, Bar Code # ,Property # SEC-5082

Date: 04/17/14 Date Last Cal. Expires: 02/12/14 Technician: Thomas Thompson

Location: 9999, Reason For Calibration: Due for Calibration

EQUIPMENT USED DURING CALIBRATION

MODEL: 500-2 SERIAL #: 190580 CAL DUE: 07/23/14

MODEL: SERIAL #: CAL DUE:

AS FOUND DATA Geotropism: SAT AS FOUND Instrument Condition: SAT AS LEFT Instrument Condition: SAT

HIGH VOLTAGE (+/- 10% tolerance)	AS FOUND HV	AS LEFT HV
500 V:	498 V	AF V
1000 V:	997 V	AF V
1500 V:	1489 V	AF V

☐ New Batteries?

Threshold ratio: 100=10mV

AF THRESHOLD: 10 mV

AL THRESHOLD: 10 mV

AF Mechanical Zero: <0

AL Mechanical Zero: 0

AF HV Reading: 1040 V

AL HV Reading: 800 V

RATE METER

SCALE	RATE CPM	AS FOUND	% ERROR	AS LEFT	% ERROR
x.1 or x1	100	100	0.00%	AF	0.00%
	250	250	0.00%	AF	0.00%
	400	400	0.00%	AF	0.00%
x1 or x10	1000	1000	0.00%	AF	0.00%
	2500	2500	0.00%	AF	0.00%
	4000	4000	0.00%	AF	0.00%
x10 or x100	10K	10	0.00%	AF	0.00%
	25K	25	0.00%	AF	0.00%
	40K	40	0.00%	AF	0.00%
x100 or x1000	100K	100	0.00%	AF	0.00%
	250K	250	0.00%	AF	0.00%
	400K	400	0.00%	AF	0.00%

☑ Is the As Found Data Within 20% of the Set Point?

DIGITAL SCALER

AF 250:	250	% ERR:	0.00%	AL 250:	AF	% ERR:	0.00%
AF 2500:	2500	% ERR:	0.00%	AL 2500:	AF	% ERR:	0.00%
AF 25K:	25.00 K	% ERR:	0.00%	AL 25K:	AF K	% ERR:	0.00%
AF 250K:	250.0 K	% ERR:	0.00%	AL 250K:	AF K	% ERR:	0.00%

☑ Is the As Found Data Within 20% of the Set Point?

LOG SCALE

AF 200:	200	% ERR:	0.00%	AL 200:	AF	% ERR:	0.00%
AF 2000:	2000	% ERR:	0.00%	AL 2000:	AF	% ERR:	0.00%
AF 20K:	20 K	% ERR:	0.00%	AL 20K:	AF K	% ERR:	0.00%
AF 200K:	200 K	% ERR:	0.00%	AL 200K:	AF K	% ERR:	0.00%

☑ Is the As Found Data Within 20% of the Set Point?

REPRODUCIBILITY

x.1 or x1 Scale:	250	250	250
x1 or x10 Scale:	2500	2500	2500
x10 or x100 Scale:	25 K	25 K	25 K
x100 or x1000 Scale:	250 K	250 K	250 K

☑ Are the Individual Counts Within 10% of the Average?

Audio Response: SAT

Audio Divide: SAT

Push Buttons: SAT

Lamp: SAT

Scaler/Digital: SAT

☑ Fast / Slow Response Function Properly?

Comments: Married as a set with: Model: 44-10 Serial #: PR150870 Bar Code #:

☑ Does Instrument Meet Final Acceptance Criteria? ☑ Calibration Sticker Attached?

Date Instrument is Due For Next Calibration: 04/17/15

Performed by: _____ Reviewed by: _____ Date: 5/1/14

Printed Name: Thomas Thompson

Safety and Ecology Corporation SEC PROCEDURE # SEC-IS-415 Rev 3

2800 Solway Road, Knoxville, TN 37931

Calibration Certificate

4/17/2014

Calibration Certificate for 44-10,Serial # PR150870, Bar Code # ,Property # SEC-6516

Date: 04/17/14 Date Last Cal. Expires: 03/03/10 Technician: Thomas Thompson

Location: 9999, Reason For Calibration: Due and Repair

EQUIPMENT USED DURING CALIBRATION

MODEL: 2221 SERIAL #: 187741 CAL DUE: 04/17/15

MODEL: SERIAL #: CAL DUE:

NIST TRACEABLE SOURCES USED

SOURCE	ISOTOPE	ACTIVITY	2π	ASSAY DATE
99CS250-0288	Cs-137	6.655 uCi		12/26/2012

Efficiency from Last Calibration: 0.60 % HV From Last Calibration: 1200 V Calibration Threshold: 10 mV

1 MINUTE COUNTS (CPM)

AS FOUND DATA

AS FOUND Instrument Condition: UNSAT

HV: 1200 V

Center: 0

Background: 0

4 π Probe Efficiency: Cs-137 0.00%

AS LEFT DATA after repair of HV adjust

AS LEFT Instrument Condition: SAT

HV: 800 V

Center: 98975

Background: 4068

4 π Probe Efficiency: Cs-137 0.64%

"AF" in the AL Efficiency fields means to refer to the AF Efficiencies in the AS FOUND DATA Section

☐ Is the As Found Efficiency Within 20% of the efficiency from the last cal.?

Reproducibility: Isotope: Cs-137 100067 99377 99811 Average: 99752 ☑ Are the individual counts within 10% of the average?

* If As Found Efficiency (even after repair) is within 10% of the last calibration and uniformity is <10%, the technician may N/A the Plateau Data and proceed to Comments. Geometry = Nal probes are ≈ 1/2" from source. All other probes are in contact with surface unless otherwise specified.

PLATEAU AND SET POINT DATA (CPM)

High Voltage	Source Response	Background
700	93274	3843
750	95648	3985
800	100447	4117
850	101139	4106
900	100501	4224
950	101353	4156

HV	CENTER	Background	4 π Efficiency
800 V	98975	4068	Cs-137 0.64%

Comments: Married as a set with: Model: 2221 Serial #: 187741 Bar Code #:

Replaced PMT.

☑ Does Instrument Meet Final Acceptance Criteria? ☑ Calibration Sticker Attached?

Date Instrument is Due For Next Calibration: 04/17/15

Performed by: Reviewed by: Date: 5/1/14

Printed Name: Thomas Thompson

Safety and Ecology Corporation SEC PROCEDURE # SEC-IS-404 Rev 2

2800 Solway Road, Knoxville, TN 37931

Calibration Certificate

4/17/2014

Calibration Certificate for 12,Serial # 186766, Bar Code # ,Property # SEC-5154

Date: 04/17/14 Date Last Cal. Expires: 04/11/14 Technician: Thomas Thompson

Location: 9999, Reason For Calibration: Due for Calibration

EQUIPMENT USED DURING CALIBRATION

MODEL: 500-2 SERIAL #: 190580 CAL DUE: 07/23/14

MODEL: SERIAL #: CAL DUE:

AS FOUND DATA Geotropism: SAT AS FOUND Instrument Condition: SAT AS LEFT Instrument Condition: SAT

HIGH VOLTAGE (+/- 10% tolerance)	AS FOUND HV	AS LEFT HV
500 V:	510	AF
1000 V:	1000	AF
1500 V:	1492	AF

HV Range 400-1500V: N/A

☐ New Batteries? Battery Check: SAT Alarm: N/A

AS FOUND Mechanical Zero: 0 AS LEFT Mechanical Zero: 0

AS FOUND THRESHOLD: 35 mV AS LEFT THRESHOLD: 35 mV

AS FOUND HV Reading: 900 V AS LEFT HV Reading: 900 V

RATE METER

SCALE	RATE CPM	AS FOUND	% ERROR	AS LEFT	% ERROR
x.1 or x1	100	100	0.00%	AF	0.00%
	250	250	0.00%	AF	0.00%
	400	400	0.00%	AF	0.00%
x1 or x10	1000	1000	0.00%	AF	0.00%
	2500	2500	0.00%	AF	0.00%
	4000	4000	0.00%	AF	0.00%
x10 or x100	10K	10	0.00%	AF	0.00%
	25K	25	0.00%	AF	0.00%
	40K	40	0.00%	AF	0.00%
x100 or x1000	100K	100	0.00%	AF	0.00%
	250K	250	0.00%	AF	0.00%
	400K	400	0.00%	AF	0.00%

☑ Is the As Found Data Within 20% of the Set Point?

DIGITAL SCALER

AF 250:	250	% ERR: 0.00%	AL 250:	AF	% ERR: 0.00%
AF 2500:	2500	% ERR: 0.00%	AL 2500:	AF	% ERR: 0.00%
AF 25K:	25.00 K	% ERR: 0.00%	AL 25K:	AF K	% ERR: 0.00%
AF 100K:	100.3 K	% ERR: 0.30%	AL 100K:	AF K	% ERR: 0.30%

☑ Is the As Found Data Within 20% of the Set Point?

REPRODUCIBILITY

x.1 or x1 Scale:	250	250	250
x1 or x10 Scale:	2500	2500	2500
x10 or x100 Scale:	25 K	25 K	25 K
x100 or x1000 Scale:	250 K	250 K	250 K

☑ Are the Individual Counts Within 10% of the Average?

☑ Fast / Slow Response Switch Functions Properly?

Audio Response: SAT Audio Divide: N/A

Push Buttons: SAT Lamp: N/A

Scaler/Digital: SAT

Comments: Married as a set with: Model: 44-9 Serial #: PR193567 Bar Code #:

☑ Does Instrument Meet Final Acceptance Criteria? ☑ Calibration Sticker Attached?

Date Instrument is Due For Next Calibration: 04/17/15

Performed by: Reviewed by: Date: 5/1/14

Printed Name: Thomas Thompson

Safety and Ecology Corporation SEC PROCEDURE # SEC-IS-407 Rev 2

2800 Solway Road, Knoxville, TN 37931

Calibration Certificate

4/17/2014

Calibration Certificate for 44-9,Serial # PR193567, Bar Code # ,Property # SEC-5813

Date: 04/17/14 Date Last Cal. Expires: 04/11/14 Technician: Thomas Thompson

Location: 9999, Reason For Calibration: Due for Calibration

EQUIPMENT USED DURING CALIBRATION

MODEL: 12 SERIAL # 186766 CAL DUE: 04/17/15

MODEL: SERIAL # CAL DUE:

NIST TRACEABLE SOURCES USED

SOURCE	ISOTOPE	ACTIVITY	2π	ASSAY DATE
4072-02	Tc-99	28300 dpm	17,700 cpm	3/8/2011
4076-02	Sr-90	12100 dpm	8,490 cpm	3/8/2011

Geometry = in contact with surface unless otherwise specified.

PREVIOUS Tc-99 EFFICIENCY: 11.38 % Calibration Voltage: 900 V Calibration Threshold: 35 mV

AS FOUND Instrument Condition: SAT

AS FOUND DATA

1 MINUTE COUNTS (CPM)

AF Background: 30

				AVERAGE
Tc-99 Count:	3323	3339	3433	3365.0
Sr-90 Count:	2552			

4 π Efficiencies

Tc-99 EFF: 11.78% Sr-90 EFF: 20.84%

AS LEFT Instrument Condition: SAT

AS LEFT DATA

1 MINUTE COUNTS (CPM)

AL Background: 31

				AVERAGE
Tc-99 Count:	3399	3293	3347	3346.3
Sr-90 Count:	2674			

4 π Efficiencies

Tc-99 EFF: 11.71% Sr-90 EFF: 21.84%

"AF" in the AL Efficiency fields means to refer to the AF Efficiencies in the AS FOUND DATA Section

- ☑ Is the AS FOUND efficiency within 20% of efficiency from last calibration?
- ☑ Reproducibility: Are the individual counts within 10% of the average?
- ☑ Does the probe meet final acceptance criteria?
- ☑ Calibration sticker attached?

Comments: Married as a set with: Model: 12 Serial #: 186766 Bar Code #:

Date Instrument is Due For Next Calibration: 04/17/15

Performed by: Reviewed by: Date: 5/1/14

Printed Name: Thomas Thompson

Safety and Ecology Corporation SEC PROCEDURE # SEC-IS-404 Rev 2

2800 Solway Road, Knoxville, TN 37931

Calibration Certificate

4/17/2014

Calibration Certificate for 12,Serial # 145985, Bar Code # ,Property # SEC-5446

Date: 04/17/14 Date Last Cal. Expires: 02/25/14 Technician: Thomas Thompson

Location: 9999, Reason For Calibration: Due for Calibration

EQUIPMENT USED DURING CALIBRATION

MODEL: 500-2	SERIAL #: 190560	CAL DUE: 07/23/14
MODEL:	SERIAL #:	CAL DUE:

AS FOUND DATA Geotropism: SAT AS FOUND Instrument Condition: SAT AS LEFT Instrument Condition: SAT

HIGH VOLTAGE (+/- 10% tolerance)

	AS FOUND HV	AS LEFT HV
500 V:	510	AF
1000 V:	1000	AF
1500 V:	1500	AF

HV Range 400-1500V: N/A

☐ New Batteries? Battery Check: SAT Alarm: N/A

AS FOUND Mechanical Zero: >0 AS LEFT Mechanical Zero: 0

AS FOUND THRESHOLD: 34.6 mV AS LEFT THRESHOLD: 35 mV

AS FOUND HV Reading: 901 V AS LEFT HV Reading: 900 V

RATE METER

SCALE	RATE CPM	AS FOUND	% ERROR	AS LEFT	% ERROR
x.1 or x1	100	100	0.00%	AF	0.00%
	250	250	0.00%	AF	0.00%
	400	400	0.00%	AF	0.00%
x1 or x10	1000	1000	0.00%	AF	0.00%
	2500	2500	0.00%	AF	0.00%
	4000	4000	0.00%	AF	0.00%
x10 or x100	10K	10	0.00%	AF	0.00%
	25K	25	0.00%	AF	0.00%
	40K	40	0.00%	AF	0.00%
x100 or x1000	100K	100	0.00%	AF	0.00%
	250K	250	0.00%	AF	0.00%
	400K	400	0.00%	AF	0.00%

☑ Is the As Found Data Within 20% of the Set Point?

DIGITAL SCALER

AF 250:	250	% ERR: 0.00%	AL 250:	AF	% ERR: 0.00%
AF 2500:	2500	% ERR: 0.00%	AL 2500:	AF	% ERR: 0.00%
AF 25K:	25.00 K	% ERR: 0.00%	AL 25K:	AF K	% ERR: 0.00%
AF 100K:	100.3 K	% ERR: 0.30%	AL 100K:	AF K	% ERR: 0.30%

☑ Is the As Found Data Within 20% of the Set Point?

REPRODUCIBILITY

x.1 or x1 Scale:	250	250	250
x1 or x10 Scale:	2500	2500	2500
x10 or x100 Scale:	25 K	25 K	25 K
x100 or x1000 Scale:	250 K	250 K	250 K

☑ Are the Individual Counts Within 10% of the Average?

☑ Fast / Slow Response Switch Functions Properly?

Audio Response: SAT Audio Divide: N/A

Push Buttons: SAT Lamp: N/A

Scaler/Digital: SAT

Comments: Married as a set with: Model: 44-9 Serial #: PR150385 Bar Code #:

☑ Does Instrument Meet Final Acceptance Criteria? ☑ Calibration Sticker Attached?

Date Instrument is Due For Next Calibration: 04/17/15

Performed by: _____ Reviewed by: _____ Date: 5/1/14

Printed Name: Thomas Thompson

Safety and Ecology Corporation SEC PROCEDURE # SEC-IS-407 Rev 3

2800 Solway Road, Knoxville, TN 37931

Calibration Certificate

4/17/2014

Calibration Certificate for 44-9,Serial # PR150385, Bar Code # ,Property # SEC-5121

Date: 04/17/14 Date Last Cal. Expires: 02/25/14 Technician: Thomas Thompson

Location: 9999, Reason For Calibration: Due for Calibration

EQUIPMENT USED DURING CALIBRATION

MODEL: 12 SERIAL # 145985 CAL DUE: 04/17/15

MODEL: SERIAL # CAL DUE:

NIST TRACEABLE SOURCES USED

SOURCE	ISOTOPE	ACTIVITY	2π	ASSAY DATE
4072-02	Tc-99	28300 dpm	17,700 cpm	3/8/2011
4076-02	Sr-90	12100 dpm	8,490 cpm	3/8/2011

Geometry = in contact with surface unless otherwise specified.

PREVIOUS Tc-99 EFFICIENCY: 11.61 % Calibration Voltage: 900 V Calibration Threshold: 35 mV

AS FOUND Instrument Condition: SAT

AS FOUND DATA

1 MINUTE COUNTS (CPM)

AF Background: 38

				AVERAGE
Tc-99 Count:	3398	3434	3301	3377.7
Sr-90 Count:	2781			

4 π Efficiencies

Tc-99 EFF: 11.80% Sr-90 EFF: 22.67%

AS LEFT Instrument Condition: SAT

AS LEFT DATA

1 MINUTE COUNTS (CPM)

AL Background: 32

				AVERAGE
Tc-99 Count:	3355	3368	3329	3350.7
Sr-90 Count:	2867			

4 π Efficiencies

Tc-99 EFF: 11.73% Sr-90 EFF: 23.43%

"AF" in the AL Efficiency fields means to refer to the AF Efficiencies in the AS FOUND DATA Section

- ☑ Is the AS FOUND efficiency within 20% of efficiency from last calibration?
- ☑ Reproducibility: Are the individual counts within 10% of the average?
- ☑ Does the probe meet final acceptance criteria?
- ☑ Calibration sticker attached?

Comments: Married as a set with: Model: 12 Serial #: 145985 Bar Code #:

Date Instrument is Due For Next Calibration: 04/17/15

Performed by: Reviewed by: Date: 5/1/14

Printed Name: Thomas Thompson

Safety and Ecology Corporation SEC PROCEDURE # ICAL Rev 0

2800 Solway Road Knoxville, TN 37931

Calibration Certificate

4/15/2014

Calibration Certificate for 19,Serial # 148206, Bar Code # ,Property # SEC-5200

Date: 04/15/14 Date Last Cal. Expires: 10/19/12 Technician: Thomas Thompson

Location: 9999, Reason For Calibration: Due for Calibration

EQUIPMENT USED DURING CALIBRATION

MODEL 500-2	SERIAL #: 209797	CAL DUE: 07/23/14
MODEL	SERIAL #:	CAL DUE:
MODEL	SERIAL #:	CAL DUE:

NIST TRACEABLE SOURCES USED	SOURCE	ISOTOPE	ACTIVITY	ASSAY DATE
	KR-4097	Cs-137	78.67 mCi	6/5/2013
	0300-GY	Cs-137	242.063 Ci	6/5/2013

AS FOUND DATA

Physical Condition SAT Geotropism: SAT Battery Check SAT Speaker Check SAT

HV AF 595 HV AL 595 Input Sensitivity AF 37.5 Input Sensitivity AL 37.5

Meter Zero AF 0 Meter Zero AL 0

CALIBRATION DATA

Scale	Exposure Rate uR/HR	(mR/HR)	Instrument Reading As Found	As Left	Percent Error As Found	As Left
25	5	(Pulsed = TO)	5	5	0.00	0.00
	12	(Pulsed = TO)	12	12	0.00	0.00
	20	(Pulsed = TO)	20	20	0.00	0.00
50	10	(Pulsed = TO)	10	10	0.00	0.00
	25	(Pulsed = TO)	25	25	0.00	0.00
	40	(Pulsed = TO)	40	40	0.00	0.00
250	50	(Pulsed = TO)	50	50	0.00	0.00
	120	(Pulsed = TO)	120	120	0.00	0.00
	200	(Pulsed = TO)	200	200	0.00	0.00
500	100	(0.1)	130	100	30.00	0.00
	250	(0.25)	290	250	16.00	0.00
	400	(0.4)	470	390	17.50	-2.50
5000	1000	(1.0)	1000	1000	0.00	0.00
	2500	(2.5)	2500	2500	0.00	0.00
	4000	(4.0)	3700	3700	-7.50	-7.50

Precision

Scale	Exposure Rate		As Found	Mean Value	% Dev
0 - 5000	2500	(2.5)	2500.00		0.00
			2500.00	2500.00	0.00
			2500.00		0.00

Comments:

☑ Does Instrument Meet Final Acceptance Criteria? ☑ Calibration Sticker Attached? Next Calibration Due Date: 04/15/15

Performed by: Reviewed by: Date: 5/1/14

Printed Name: Thomas Thompson

Safety and Ecology Corporation SEC PROCEDURE # ICAL Rev 0
2800 Solway Road Knoxville, TN 37931 Page 1 of 1
Calibration Certificate 3/17/2014

Calibration Certificate for 19,Serial # 221547, Bar Code # ,Property # SEC-6377

Date: 03/17/14 Date Last Cal. Expires: 01/15/14 Technician: Thomas Thompson
Location: 9999, Reason For Calibration: Due for Calibration

EQUIPMENT USED DURING CALIBRATION

MODEL 500-2	SERIAL #: 209797	CAL DUE: 07/23/14
MODEL	SERIAL #:	CAL DUE:
MODEL	SERIAL #:	CAL DUE:

NIST TRACEABLE SOURCES USED	SOURCE	ISOTOPE	ACTIVITY	ASSAY DATE
	0300-GY	Cs-137	242.063 Ci	6/5/2013
	KR-4097	Cs-137	78.67 mCi	6/5/2013

AS FOUND DATA

Physical Condition SAT Geotropism: SAT Battery Check SAT Speaker Check N/A

HV AF 656 HV AL 656 Input Sensitivity AF 30.3 Input Sensitivity AL 30.3
Meter Zero AF 0 Meter Zero AL 0

CALIBRATION DATA

Scale	Exposure Rate uR/HR	(mR/HR)	Instrument Reading As Found	As Left	Percent Error As Found	As Left
25	5	(Pulsed = TO)	5	5	0.00	0.00
	12	(Pulsed = TO)	12	12	0.00	0.00
	20	(Pulsed = TO)	20	20	0.00	0.00
50	10	(Pulsed = TO)	10	10	0.00	0.00
	25	(Pulsed = TO)	25	25	0.00	0.00
	40	(Pulsed = TO)	40	40	0.00	0.00
250	50	(Pulsed = TO)	50	50	0.00	0.00
	120	(Pulsed = TO)	120	120	0.00	0.00
	200	(Pulsed = TO)	200	200	0.00	0.00
500	100	(0.1)	100	100	0.00	0.00
	250	(0.25)	250	250	0.00	0.00
	400	(0.4)	390	390	-2.50	-2.50
5000	1000	(1.0)	950	1000	-5.00	0.00
	2500	(2.5)	2400	2600	-4.00	4.00
	4000	(4.0)	3600	3900	-10.00	-2.50

Precision

Scale	Exposure Rate		As Found	Mean Value	% Dev
0 - 5000	2500	(2.5)	2400.00		0.00
			2400.00	2400.00	0.00
			2400.00		0.00

Comments:

☑ Does Instrument Meet Final Acceptance Criteria? ☑ Calibration Sticker Attached? Next Calibration Due Date: 03/17/15

Performed by: Reviewed by: Date: 3/17/14

Printed Name: Thomas Thompson

Safety and Ecology Corporation SEC PROCEDURE SEC-IS-409 Rev 3

2800 Solway Road

Knoxville, TN 37931

Calibration Certificate

Calibration Certificate for LV-1,Serial # 003873, Bar Code # ,Property # SEC-7375

Date: 05/01/14 Date Last Cal. Expires: 09/09/14 Technician: Jeffrey Knight

Location: 9999, Reason For Calibration: Other (See Comments)

EQUIPMENT USED DURING CALIBRATION

MODEL: D-812 V.2 SERIAL #: 3531 CAL. DUE: 11/26/14

MODEL: SERIAL #: CAL DUE:

AS FOUND DATA AF Physical Condition UNSAT **AS LEFT DATA**

As Found Instrument Flow Indication: 80 LPM As Left Instrument Flow Indication: 60 LPM

As Found Calibrator Flow Indication: 81 LPM As Left Calibrator Flow Indication: 60 LPM

Unit of Measure: (•) LPM ( ) CFM

Reproducibility 60 LPM 60 LPM 60 LPM Average: 60.00 LPM

☑ Are the Individual Counts Within 10% of the Average?

CALIBRATION DATA

TARGET VALUE	AIR SAMPLER READING	CALIBRATOR READING	ERROR %
30.00 LPM	30.00 LPM	31.00 LPM	3.33% LPM
50.00 LPM	50.00 LPM	50.40 LPM	0.80% LPM
80.00 LPM	80.00 LPM	81.00 LPM	1.25% LPM

Air Sampler Setting 60.00 ☑ Is Error Within 10%?

Reproducibility 60 LPM 60 LPM 60 LPM Average: 60.00 LPM

☑ Are the Individual Counts Within 10% of the Average?

Air Sampler rotometer reading: ( ) Use Manufacturers Indication (•) Use Corrected Marking ( ) N/A

Comments: Married as a set with: Model Bar Code #:

Calibrated for new customer. Replaced broken regulator valve knob.

☑ Does Instrument Meet Final Acceptance Criteria? ☑ Calibration Sticker Attached?

Date Instrument is Due For Next Calibration: 05/01/15

Performed by: Reviewed by: Date: 5/1/14

Printed Name: Jeffrey Knight

Safety and Ecology Corporation SEC PROCEDURE SEC-IS-409 Rev 3

2800 Solway Road
Knoxville, TN 37931

Calibration Certificate

Calibration Certificate for LV-1,Serial # 003793, Bar Code # ,Property # SEC-7264

Date: 05/01/14 **Date Last Cal. Expires:** 09/09/14 **Technician:** Jeffrey Knight

Location: 9999, **Reason For Calibration:** Other (See Comments)

EQUIPMENT USED DURING CALIBRATION

MODEL: D-812 V.2 **SERIAL #:** 3531 **CAL. DUE:** 11/26/14

MODEL: **SERIAL #:** **CAL DUE:**

AS FOUND DATA **AF Physical Condition** UNSAT **AS LEFT DATA**

As Found Instrument Flow Indication: 0 **LPM** **As Left Instrument Flow Indication:** 60 **LPM**

As Found Calibrator Flow Indication: 0 **LPM** **As Left Calibrator Flow Indication:** 60 **LPM**

Unit of Measure: (•) **LPM** ( ) **CFM**

Reproducibility 60 **LPM** 60 **LPM** 60 **LPM** **Average:** 60.00 **LPM**

☑ **Are the Individual Counts Within 10% of the Average?**

CALIBRATION DATA	**TARGET VALUE**	**AIR SAMPLER READING**	**CALIBRATOR READING**	**ERROR %**
	30.00 **LPM**	30.00 **LPM**	30.00 **LPM**	0.00% **LPM**
	50.00 **LPM**	50.00 **LPM**	50.00 **LPM**	0.00% **LPM**
	80.00 **LPM**	80.00 **LPM**	80.00 **LPM**	0.00% **LPM**

Air Sampler Setting 60.00 ☑ **Is Error Within 10%?**

Reproducibility 60 **LPM** 60 **LPM** 60 **LPM** **Average:** 60.00 **LPM**

☑ **Are the Individual Counts Within 10% of the Average?**

Air Sampler rotometer reading: ( ) Use Manufacturers Indication (•) Use Corrected Marking ( ) N/A

Comments: **Married as a set with:** **Model** **Bar Code #:**

Calibrated for new customer. AF: no flow, and damaged vacuum gauge - replaced vacuum gauge, and rebuild regulator.

☑ **Does Instrument Meet Final Acceptance Criteria?** ☑ **Calibration Sticker Attached?**

Date Instrument is Due For Next Calibration: 05/01/15

Performed by: _____ **Reviewed by:** _____ **Date:** 5/1/14

Printed Name: Jeffrey Knight

ATTACHMENT 2

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Edison
777 New Durham Road
Edison, NJ 08817
Tel: (732)549-3900

TestAmerica Job ID: 460-100003-1
Client Project/Site: Glen Isle Waterfront Redevelopment
Revision: 1

For:
Posillico Consulting
1750 New Highway
Farmingdale, New York 11735

Attn: Ellis Koch

Authorized for release by:
8/27/2015 2:15:29 PM
Rebecca Jones, Project Management Assistant I
rebecca.jones@testamericainc.com

Designee for

John Schove, Project Manager II
(716)504-9838
john.schove@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
*	LCS or LCSD is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
*	LCS or LCSD is outside acceptance limits.
X	Surrogate is outside control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
E	Result exceeded calibration range.

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 460-100003-1

Laboratory: TestAmerica Edison

Narrative

Job Narrative
460-100003-1

Comments
No additional comments.

Receipt
The samples were received on 8/21/2015 2:50 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.5º C.

GC/MS VOA
Method(s) 8260C: The continuing calibration verification (CCV) analyzed in batch 318272 was outside the method criteria for the following analyte: Bromoform. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte is considered estimated.

Method(s) 8260C: The continuing calibration verification (CCV) analyzed in batch 318348 was outside the method criteria for the following analyte: Bromoform. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte is considered estimated.

Method(s) 8260C: The continuing calibration verification (CCV) analyzed in batch 318612 was outside the method criteria for the following analytes: Chloromethane, Trichlorofluoromethane (biased high) and Bromoform (biased low). A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analytes is considered estimated.

Method(s) 8260C: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for 318612 recovered outside control limits for the following analytes: Chloromethane, Bromomethane, Trichlorofluoromethane and 1,1-Dichloroethene. These analytes were biased high in the LCS/LCSD and were not detected in the associated samples; therefore, the data have been reported.

Method(s) 8260C: Surrogate recovery (Dibromofluoromethane) for the following samples was outside control limits: WC038 (460-100003-3) and WC040 (460-100003-5). Surrogate recovery for the other three system monitoring compounds were within control limits, therefore re-analysis was not performed.

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 318390 % D for surrogate compounds 1,2-Dichloroethane-d4 was outside control limits. Surrogate recoveries for all associated samples were within limits.

Method(s) 8260C: Surrogate recovery (Dibromofluoromethane) for the following samples was outside control limits: WC037 (460-100003-2), WC042 (460-100003-7), WC043 (460-100003-8) and WC044 (460-100003-9). Surrogate recovery for the other three system monitoring compounds were within control limits, therefore re-analysis was not performed.

Method(s) 8260C: Surrogate recovery (Dibromofluoromethane) for the following sample was outside control limits: WC046 (460-100003-11). Surrogate recovery for the other three system monitoring compounds were within control limits, therefore re-analysis was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method(s) 8270D: The continuing calibration verification (CCV) analyzed in batch 460-318279 was outside the method criteria for the following analyte(s): 2,4,6-Tribromophenol, Di-n-octyl phthalate and Dibenz(a,h)anthracene. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Method(s) 8270D: The laboratory control sample (LCS) for preparation batch 460-318267 and analytical batch 460-318279 recovered outside control limits for the following analytes: Atrazine. This analyte was biased high in the LCS and was not detected in the associated

Job ID: 460-100003-1 (Continued)

Laboratory: TestAmerica Edison (Continued)

samples; therefore, the data have been reported.

Method(s) 8270D: Surrogate recovery for the following sample was outside the upper control limit: (LCS 460-318267/2-A).

Method(s) 8270D: Six surrogates are used for this analysis. The laboratory's SOP allows one acid and one base of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following samples contained an allowable number of surrogate compounds outside limits: WC048 (460-100003-13), (460-99996-A-1-C), (460-99996-A-1-A MS) and (460-99996-A-1-B MSD). These results have been reported and qualified.

Method(s) 8270D: The continuing calibration verification (CCV) analyzed in batch 460-318351 was outside the method criteria for the following analyte(s): Dibenz(a,h)anthracene and bis (2-chloroisopropyl) ether. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

Client Sample ID: WC036 — Lab Sample ID: 460-100003-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	7.6	J	8.8	1.4	ug/Kg	1	☼	8260C	Total/NA
Acetone	37		8.8	1.9	ug/Kg	1	☼	8260C	Total/NA
Benzene	0.48	J	1.8	0.35	ug/Kg	1	☼	8260C	Total/NA
Methylene Chloride	1.6	J	1.8	0.56	ug/Kg	1	☼	8260C	Total/NA
Toluene	2.3		1.8	0.34	ug/Kg	1	☼	8260C	Total/NA
Xylenes, Total	1.0	J	3.5	0.19	ug/Kg	1	☼	8260C	Total/NA

Client Sample ID: WC037 — Lab Sample ID: 460-100003-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	11		7.9	1.2	ug/Kg	1	☼	8260C	Total/NA
Acetone	69		7.9	1.7	ug/Kg	1	☼	8260C	Total/NA
Benzene	0.43	J	1.6	0.32	ug/Kg	1	☼	8260C	Total/NA
Methylene Chloride	2.6		1.6	0.51	ug/Kg	1	☼	8260C	Total/NA
Toluene	1.9		1.6	0.30	ug/Kg	1	☼	8260C	Total/NA
Xylenes, Total	0.87	J	3.2	0.17	ug/Kg	1	☼	8260C	Total/NA

Client Sample ID: WC038 — Lab Sample ID: 460-100003-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	10		7.5	1.2	ug/Kg	1	☼	8260C	Total/NA
Acetone	55		7.5	1.6	ug/Kg	1	☼	8260C	Total/NA
Benzene	0.30	J	1.5	0.30	ug/Kg	1	☼	8260C	Total/NA
Methylene Chloride	1.6		1.5	0.48	ug/Kg	1	☼	8260C	Total/NA
Toluene	1.5		1.5	0.28	ug/Kg	1	☼	8260C	Total/NA
Xylenes, Total	0.68	J	3.0	0.16	ug/Kg	1	☼	8260C	Total/NA

Client Sample ID: WC039 — Lab Sample ID: 460-100003-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	16		7.3	1.6	ug/Kg	1	☼	8260C	Total/NA
Benzene	0.55	J	1.5	0.29	ug/Kg	1	☼	8260C	Total/NA
Ethylbenzene	0.38	J	1.5	0.26	ug/Kg	1	☼	8260C	Total/NA
Methylene Chloride	1.8		1.5	0.47	ug/Kg	1	☼	8260C	Total/NA
Tetrachloroethene	0.46	J	1.5	0.41	ug/Kg	1	☼	8260C	Total/NA
Toluene	3.0		1.5	0.28	ug/Kg	1	☼	8260C	Total/NA
Xylenes, Total	1.3	J	2.9	0.16	ug/Kg	1	☼	8260C	Total/NA

Client Sample ID: WC040 — Lab Sample ID: 460-100003-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	18		9.1	1.4	ug/Kg	1	☼	8260C	Total/NA
Acetone	120		9.1	1.9	ug/Kg	1	☼	8260C	Total/NA
Benzene	0.57	J	1.8	0.37	ug/Kg	1	☼	8260C	Total/NA
Ethylbenzene	0.34	J	1.8	0.33	ug/Kg	1	☼	8260C	Total/NA
Toluene	2.7		1.8	0.35	ug/Kg	1	☼	8260C	Total/NA
Xylenes, Total	1.1	J	3.7	0.20	ug/Kg	1	☼	8260C	Total/NA

Client Sample ID: WC041 — Lab Sample ID: 460-100003-6

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

Client Sample ID: WC041 (Continued) — Lab Sample ID: 460-100003-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	31		9.7	1.5	ug/Kg	1	☼	8260C	Total/NA
Acetone	180		9.7	2.1	ug/Kg	1	☼	8260C	Total/NA
Benzene	0.79	J	1.9	0.39	ug/Kg	1	☼	8260C	Total/NA
Ethylbenzene	0.35	J	1.9	0.35	ug/Kg	1	☼	8260C	Total/NA
Toluene	3.5		1.9	0.37	ug/Kg	1	☼	8260C	Total/NA
Xylenes, Total	1.5	J	3.9	0.21	ug/Kg	1	☼	8260C	Total/NA

Client Sample ID: WC042 — Lab Sample ID: 460-100003-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	46		9.9	1.5	ug/Kg	1	☼	8260C	Total/NA
Acetone	250		9.9	2.1	ug/Kg	1	☼	8260C	Total/NA
Benzene	0.64	J	2.0	0.40	ug/Kg	1	☼	8260C	Total/NA
Ethylbenzene	0.41	J	2.0	0.36	ug/Kg	1	☼	8260C	Total/NA
Toluene	2.9		2.0	0.38	ug/Kg	1	☼	8260C	Total/NA
Xylenes, Total	1.3	J	4.0	0.22	ug/Kg	1	☼	8260C	Total/NA

Client Sample ID: WC043 — Lab Sample ID: 460-100003-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	5.9	J	6.7	1.0	ug/Kg	1	☼	8260C	Total/NA
Acetone	26		6.7	1.4	ug/Kg	1	☼	8260C	Total/NA
Benzene	0.41	J	1.3	0.27	ug/Kg	1	☼	8260C	Total/NA
Ethylbenzene	0.26	J	1.3	0.24	ug/Kg	1	☼	8260C	Total/NA
Methylene Chloride	2.0		1.3	0.43	ug/Kg	1	☼	8260C	Total/NA
Toluene	1.9		1.3	0.26	ug/Kg	1	☼	8260C	Total/NA
Xylenes, Total	0.86	J	2.7	0.15	ug/Kg	1	☼	8260C	Total/NA

Client Sample ID: WC044 — Lab Sample ID: 460-100003-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.43	J	1.4	0.28	ug/Kg	1	☼	8260C	Total/NA
Ethylbenzene	0.30	J	1.4	0.25	ug/Kg	1	☼	8260C	Total/NA
Methylene Chloride	1.6		1.4	0.44	ug/Kg	1	☼	8260C	Total/NA
Tetrachloroethene	0.41	J	1.4	0.39	ug/Kg	1	☼	8260C	Total/NA
Toluene	2.3		1.4	0.26	ug/Kg	1	☼	8260C	Total/NA
Xylenes, Total	1.0	J	2.8	0.15	ug/Kg	1	☼	8260C	Total/NA

Client Sample ID: WC045 — Lab Sample ID: 460-100003-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.28	J	1.1	0.22	ug/Kg	1	☼	8260C	Total/NA
Methylene Chloride	1.3		1.1	0.35	ug/Kg	1	☼	8260C	Total/NA
Toluene	1.4		1.1	0.21	ug/Kg	1	☼	8260C	Total/NA
Xylenes, Total	0.63	J	2.2	0.12	ug/Kg	1	☼	8260C	Total/NA

Client Sample ID: WC046 — Lab Sample ID: 460-100003-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	8.1		7.5	1.2	ug/Kg	1	☼	8260C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Edison

Detection Summary

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

Client Sample ID: WC046 (Continued) — Lab Sample ID: 460-100003-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	46		7.5	1.6	ug/Kg	1	☼	8260C	Total/NA
Benzene	0.33	J	1.5	0.30	ug/Kg	1	☼	8260C	Total/NA
Methylene Chloride	1.4	J	1.5	0.48	ug/Kg	1	☼	8260C	Total/NA
Toluene	1.7		1.5	0.28	ug/Kg	1	☼	8260C	Total/NA

Client Sample ID: WC047 — Lab Sample ID: 460-100003-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Isophorone	16000		760	41	ug/Kg	5	☼	8270D	Total/NA
4,4'-DDT	5.0	J	7.7	0.79	ug/Kg	1	☼	8081B	Total/NA
PCB-1260	71	J	77	11	ug/Kg	1	☼	8082A	Total/NA
Aluminum	7720		104	53.7	mg/Kg	10	☼	6010C	Total/NA
Antimony	53.7		10.4	4.1	mg/Kg	10	☼	6010C	Total/NA
Arsenic	35.5		7.8	2.6	mg/Kg	10	☼	6010C	Total/NA
Barium	57.1	J	104	3.7	mg/Kg	10	☼	6010C	Total/NA
Calcium	96000		2610	154	mg/Kg	10	☼	6010C	Total/NA
Chromium	12.1		5.2	2.5	mg/Kg	10	☼	6010C	Total/NA
Cobalt	16.6	J	26.1	3.0	mg/Kg	10	☼	6010C	Total/NA
Copper	53.2		13.0	3.4	mg/Kg	10	☼	6010C	Total/NA
Iron	11100		78.2	58.9	mg/Kg	10	☼	6010C	Total/NA
Lead	127		5.2	2.0	mg/Kg	10	☼	6010C	Total/NA
Magnesium	21900		2610	130	mg/Kg	10	☼	6010C	Total/NA
Manganese	370		7.8	2.7	mg/Kg	10	☼	6010C	Total/NA
Nickel	22.4		20.9	3.8	mg/Kg	10	☼	6010C	Total/NA
Potassium	584	J	2610	79.0	mg/Kg	10	☼	6010C	Total/NA
Silver	1.2	J	5.2	0.92	mg/Kg	10	☼	6010C	Total/NA
Sodium	218	J	2610	177	mg/Kg	10	☼	6010C	Total/NA
Vanadium	14.7	J	26.1	2.6	mg/Kg	10	☼	6010C	Total/NA
Zinc	77.4		15.6	3.8	mg/Kg	10	☼	6010C	Total/NA
Mercury	0.20		0.019	0.013	mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: WC048 — Lab Sample ID: 460-100003-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chrysene	42	J	390	11	ug/Kg	1	☼	8270D	Total/NA
Fluoranthene	76	J	390	12	ug/Kg	1	☼	8270D	Total/NA
Isophorone	9200		160	8.4	ug/Kg	1	☼	8270D	Total/NA
Phenanthrene	54	J	390	10	ug/Kg	1	☼	8270D	Total/NA
Pyrene	73	J	390	18	ug/Kg	1	☼	8270D	Total/NA
Aluminum	5370		106	54.5	mg/Kg	10	☼	6010C	Total/NA
Antimony	50.7		10.6	4.2	mg/Kg	10	☼	6010C	Total/NA
Arsenic	22.8		7.9	2.6	mg/Kg	10	☼	6010C	Total/NA
Barium	47.1	J	106	3.8	mg/Kg	10	☼	6010C	Total/NA
Calcium	103000		2650	157	mg/Kg	10	☼	6010C	Total/NA
Chromium	9.8		5.3	2.6	mg/Kg	10	☼	6010C	Total/NA
Cobalt	14.3	J	26.5	3.0	mg/Kg	10	☼	6010C	Total/NA
Copper	36.3		13.2	3.4	mg/Kg	10	☼	6010C	Total/NA
Iron	10900		79.4	59.8	mg/Kg	10	☼	6010C	Total/NA
Lead	41.9		5.3	2.1	mg/Kg	10	☼	6010C	Total/NA
Magnesium	35100		2650	132	mg/Kg	10	☼	6010C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Edison

Detection Summary

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

Client Sample ID: WC048 (Continued) — Lab Sample ID: 460-100003-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Manganese	238		7.9	2.8	mg/Kg	10	☼	6010C	Total/NA
Nickel	16.2	J	21.2	3.9	mg/Kg	10	☼	6010C	Total/NA
Potassium	499	J	2650	80.2	mg/Kg	10	☼	6010C	Total/NA
Sodium	179	J	2650	179	mg/Kg	10	☼	6010C	Total/NA
Vanadium	11.4	J	26.5	2.6	mg/Kg	10	☼	6010C	Total/NA
Zinc	54.5		15.9	3.9	mg/Kg	10	☼	6010C	Total/NA
Mercury	0.17		0.020	0.014	mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: WC049 — Lab Sample ID: 460-100003-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Isophorone	15000		760	40	ug/Kg	5	☼	8270D	Total/NA
4,4'-DDT	6.1	J	7.6	0.79	ug/Kg	1	☼	8081B	Total/NA
PCB-1260	84		76	10	ug/Kg	1	☼	8082A	Total/NA
Aluminum	7090		111	57.1	mg/Kg	10	☼	6010C	Total/NA
Antimony	11.8		11.1	4.4	mg/Kg	10	☼	6010C	Total/NA
Arsenic	14.1		8.3	2.7	mg/Kg	10	☼	6010C	Total/NA
Barium	44.4	J	111	4.0	mg/Kg	10	☼	6010C	Total/NA
Calcium	102000		2770	164	mg/Kg	10	☼	6010C	Total/NA
Chromium	10.4		5.5	2.7	mg/Kg	10	☼	6010C	Total/NA
Cobalt	12.0	J	27.7	3.2	mg/Kg	10	☼	6010C	Total/NA
Copper	38.0		13.9	3.6	mg/Kg	10	☼	6010C	Total/NA
Iron	8280		83.1	62.6	mg/Kg	10	☼	6010C	Total/NA
Lead	19.4		5.5	2.2	mg/Kg	10	☼	6010C	Total/NA
Magnesium	21200		2770	138	mg/Kg	10	☼	6010C	Total/NA
Manganese	237		8.3	2.9	mg/Kg	10	☼	6010C	Total/NA
Nickel	18.4	J	22.2	4.0	mg/Kg	10	☼	6010C	Total/NA
Potassium	425	J	2770	84.0	mg/Kg	10	☼	6010C	Total/NA
Vanadium	11.1	J	27.7	2.8	mg/Kg	10	☼	6010C	Total/NA
Zinc	69.9		16.6	4.0	mg/Kg	10	☼	6010C	Total/NA
Mercury	0.21		0.018	0.012	mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: WC050 — Lab Sample ID: 460-100003-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Isophorone	11000		310	16	ug/Kg	2	☼	8270D	Total/NA
Aluminum	6330		107	55.2	mg/Kg	10	☼	6010C	Total/NA
Antimony	25.9		10.7	4.2	mg/Kg	10	☼	6010C	Total/NA
Arsenic	13.4		8.0	2.6	mg/Kg	10	☼	6010C	Total/NA
Barium	39.4	J	107	3.8	mg/Kg	10	☼	6010C	Total/NA
Calcium	112000		2680	159	mg/Kg	10	☼	6010C	Total/NA
Chromium	8.0		5.4	2.6	mg/Kg	10	☼	6010C	Total/NA
Cobalt	8.1	J	26.8	3.1	mg/Kg	10	☼	6010C	Total/NA
Copper	46.7		13.4	3.5	mg/Kg	10	☼	6010C	Total/NA
Iron	8290		80.4	60.6	mg/Kg	10	☼	6010C	Total/NA
Lead	20.3		5.4	2.1	mg/Kg	10	☼	6010C	Total/NA
Magnesium	32700		2680	134	mg/Kg	10	☼	6010C	Total/NA
Manganese	214		8.0	2.8	mg/Kg	10	☼	6010C	Total/NA
Nickel	12.1	J	21.4	3.9	mg/Kg	10	☼	6010C	Total/NA
Potassium	388	J	2680	81.2	mg/Kg	10	☼	6010C	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

Client Sample ID: WC050 (Continued) — Lab Sample ID: 460-100003-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vanadium	12.1	J	26.8	2.7	mg/Kg	10	☼	6010C	Total/NA
Zinc	95.0		16.1	3.9	mg/Kg	10	☼	6010C	Total/NA
Mercury	0.17		0.020	0.014	mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: TB — Lab Sample ID: 460-100003-16

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

Client Sample ID: WC036

Date Collected: 08/21/15 08:45
Date Received: 08/21/15 14:50

Lab Sample ID: 460-100003-1

Matrix: Solid
Percent Solids: 87.4

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.8	U	1.8	0.67	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1
1,1,2,2-Tetrachloroethane	1.8	U	1.8	0.30	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.8	U	1.8	0.78	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1
1,1,2-Trichloroethane	1.8	U	1.8	0.49	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1
1,1-Dichloroethane	1.8	U	1.8	0.60	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1
1,1-Dichloroethene	1.8	U *	1.8	0.72	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1
1,2,4-Trichlorobenzene	1.8	U	1.8	0.56	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1
1,2,4-Trimethylbenzene	1.8	U	1.8	0.60	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1
1,2-Dibromo-3-Chloropropane	1.8	U	1.8	0.83	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1
1,2-Dibromoethane	1.8	U	1.8	0.21	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1
1,2-Dichlorobenzene	1.8	U	1.8	0.25	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1
1,2-Dichloroethane	1.8	U	1.8	0.19	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1
1,2-Dichloropropane	1.8	U	1.8	0.30	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1
1,3,5-Trimethylbenzene	1.8	U	1.8	0.23	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1
1,3-Dichlorobenzene	1.8	U	1.8	0.21	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1
1,4-Dichlorobenzene	1.8	U	1.8	0.23	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1
1,4-Dioxane	35	U	35	11	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1
2-Butanone (MEK)	**7.6**	**J**	8.8	1.4	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1
2-Hexanone	8.8	U	8.8	1.7	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1
4-Methyl-2-pentanone (MIBK)	8.8	U	8.8	3.9	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1
Acetone	**37**		8.8	1.9	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1
Benzene	**0.48**	**J**	1.8	0.35	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1
Bromodichloromethane	1.8	U	1.8	0.67	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1
Bromoform	1.8	U	1.8	0.23	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1
Bromomethane	1.8	U *	1.8	0.56	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1
Carbon disulfide	1.8	U	1.8	0.76	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1
Carbon tetrachloride	1.8	U	1.8	0.76	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1
Chlorobenzene	1.8	U	1.8	0.25	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1
Chloroethane	1.8	U	1.8	0.62	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1
Chloroform	1.8	U	1.8	0.37	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1
Chloromethane	1.8	U *	1.8	0.67	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1
cis-1,2-Dichloroethene	1.8	U	1.8	0.39	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1
cis-1,3-Dichloropropene	1.8	U	1.8	0.26	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1
Cyclohexane	1.8	U	1.8	0.81	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1
Dibromochloromethane	1.8	U	1.8	0.26	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1
Dichlorodifluoromethane	1.8	U	1.8	0.56	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1
Ethylbenzene	1.8	U	1.8	0.32	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1
Isopropylbenzene	1.8	U	1.8	0.30	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1
Methyl acetate	8.8	U	8.8	1.6	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1
Methyl tert-butyl ether	1.8	U	1.8	0.30	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1
Methylcyclohexane	1.8	U	1.8	0.88	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1
Methylene Chloride	**1.6**	**J**	1.8	0.56	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1
n-Butylbenzene	1.8	U	1.8	0.37	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1
N-Propylbenzene	1.8	U	1.8	0.32	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1
sec-Butylbenzene	1.8	U	1.8	0.30	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1
Styrene	1.8	U	1.8	0.26	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1
tert-Butylbenzene	1.8	U	1.8	0.60	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1
Tetrachloroethene	1.8	U	1.8	0.49	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1
Toluene	**2.3**		1.8	0.34	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1

Client Sample Results

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

Client Sample ID: WC036

Date Collected: 08/21/15 08:45
Date Received: 08/21/15 14:50

Lab Sample ID: 460-100003-1

Matrix: Solid
Percent Solids: 87.4

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	1.8	U	1.8	0.69	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1
trans-1,3-Dichloropropene	1.8	U	1.8	0.18	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1
Trichloroethene	1.8	U	1.8	0.46	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1
Trichlorofluoromethane	1.8	U *	1.8	0.60	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1
Vinyl chloride	1.8	U	1.8	0.69	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1
Xylenes, Total	**1.0**	**J**	3.5	0.19	ug/Kg	☼	08/21/15 22:30	08/25/15 11:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*78 - 135*	*08/21/15 22:30*	*08/25/15 11:19*	*1*
4-Bromofluorobenzene	*98*		*67 - 126*	*08/21/15 22:30*	*08/25/15 11:19*	*1*
Dibromofluoromethane (Surr)	*99*		*61 - 149*	*08/21/15 22:30*	*08/25/15 11:19*	*1*
Toluene-d8 (Surr)	*99*		*73 - 121*	*08/21/15 22:30*	*08/25/15 11:19*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**13**		1.0	1.0	%			08/22/15 13:01	1
Percent Solids	**87**		1.0	1.0	%			08/22/15 13:01	1

Client Sample Results

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

Client Sample ID: WC037

Date Collected: 08/21/15 08:50
Date Received: 08/21/15 14:50

Lab Sample ID: 460-100003-2

Matrix: Solid
Percent Solids: 89.7

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.6	U	1.6	0.60	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1
1,1,2,2-Tetrachloroethane	1.6	U	1.6	0.27	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.6	U	1.6	0.70	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1
1,1,2-Trichloroethane	1.6	U	1.6	0.44	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1
1,1-Dichloroethane	1.6	U	1.6	0.54	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1
1,1-Dichloroethene	1.6	U	1.6	0.65	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1
1,2,4-Trichlorobenzene	1.6	U	1.6	0.51	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1
1,2,4-Trimethylbenzene	1.6	U	1.6	0.54	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1
1,2-Dibromo-3-Chloropropane	1.6	U	1.6	0.75	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1
1,2-Dibromoethane	1.6	U	1.6	0.19	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1
1,2-Dichlorobenzene	1.6	U	1.6	0.22	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1
1,2-Dichloroethane	1.6	U	1.6	0.17	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1
1,2-Dichloropropane	1.6	U	1.6	0.27	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1
1,3,5-Trimethylbenzene	1.6	U	1.6	0.21	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1
1,3-Dichlorobenzene	1.6	U	1.6	0.19	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1
1,4-Dichlorobenzene	1.6	U	1.6	0.21	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1
1,4-Dioxane	32	U	32	10	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1
2-Butanone (MEK)	**11**		7.9	1.2	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1
2-Hexanone	7.9	U	7.9	1.5	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1
4-Methyl-2-pentanone (MIBK)	7.9	U	7.9	3.5	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1
Acetone	**69**		7.9	1.7	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1
Benzene	**0.43**	**J**	1.6	0.32	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1
Bromodichloromethane	1.6	U	1.6	0.60	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1
Bromoform	1.6	U	1.6	0.21	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1
Bromomethane	1.6	U	1.6	0.51	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1
Carbon disulfide	1.6	U	1.6	0.68	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1
Carbon tetrachloride	1.6	U	1.6	0.68	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1
Chlorobenzene	1.6	U	1.6	0.22	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1
Chloroethane	1.6	U	1.6	0.56	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1
Chloroform	1.6	U	1.6	0.33	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1
Chloromethane	1.6	U	1.6	0.60	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1
cis-1,2-Dichloroethene	1.6	U	1.6	0.35	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1
cis-1,3-Dichloropropene	1.6	U	1.6	0.24	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1
Cyclohexane	1.6	U	1.6	0.73	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1
Dibromochloromethane	1.6	U	1.6	0.24	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1
Dichlorodifluoromethane	1.6	U	1.6	0.51	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1
Ethylbenzene	1.6	U	1.6	0.29	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1
Isopropylbenzene	1.6	U	1.6	0.27	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1
Methyl acetate	7.9	U	7.9	1.4	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1
Methyl tert-butyl ether	1.6	U	1.6	0.27	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1
Methylcyclohexane	1.6	U	1.6	0.79	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1
Methylene Chloride	**2.6**		1.6	0.51	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1
n-Butylbenzene	1.6	U	1.6	0.33	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1
N-Propylbenzene	1.6	U	1.6	0.29	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1
sec-Butylbenzene	1.6	U	1.6	0.27	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1
Styrene	1.6	U	1.6	0.24	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1
tert-Butylbenzene	1.6	U	1.6	0.54	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1
Tetrachloroethene	1.6	U	1.6	0.44	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1
Toluene	**1.9**		1.6	0.30	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1

Client Sample Results

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

Client Sample ID: WC037

Date Collected: 08/21/15 08:50
Date Received: 08/21/15 14:50

Lab Sample ID: 460-100003-2

Matrix: Solid
Percent Solids: 89.7

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	1.6	U	1.6	0.62	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1
trans-1,3-Dichloropropene	1.6	U	1.6	0.16	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1
Trichloroethene	1.6	U	1.6	0.41	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1
Trichlorofluoromethane	1.6	U	1.6	0.54	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1
Vinyl chloride	1.6	U	1.6	0.62	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1
Xylenes, Total	**0.87**	**J**	3.2	0.17	ug/Kg	☼	08/21/15 22:30	08/23/15 10:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*78 - 135*	*08/21/15 22:30*	*08/23/15 10:38*	*1*
4-Bromofluorobenzene	*98*		*67 - 126*	*08/21/15 22:30*	*08/23/15 10:38*	*1*
Dibromofluoromethane (Surr)	*54*	*X*	*61 - 149*	*08/21/15 22:30*	*08/23/15 10:38*	*1*
Toluene-d8 (Surr)	*100*		*73 - 121*	*08/21/15 22:30*	*08/23/15 10:38*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**10**		1.0	1.0	%			08/22/15 13:01	1
Percent Solids	**90**		1.0	1.0	%			08/22/15 13:01	1

Client Sample Results

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

Client Sample ID: WC038

Date Collected: 08/21/15 08:55
Date Received: 08/21/15 14:50

Lab Sample ID: 460-100003-3

Matrix: Solid
Percent Solids: 89.9

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.5	U	1.5	0.57	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1
1,1,2,2-Tetrachloroethane	1.5	U	1.5	0.25	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.5	U	1.5	0.66	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1
1,1,2-Trichloroethane	1.5	U	1.5	0.42	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1
1,1-Dichloroethane	1.5	U	1.5	0.51	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1
1,1-Dichloroethene	1.5	U *	1.5	0.61	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1
1,2,4-Trichlorobenzene	1.5	U	1.5	0.48	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1
1,2,4-Trimethylbenzene	1.5	U	1.5	0.51	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1
1,2-Dibromo-3-Chloropropane	1.5	U	1.5	0.70	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1
1,2-Dibromoethane	1.5	U	1.5	0.18	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1
1,2-Dichlorobenzene	1.5	U	1.5	0.21	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1
1,2-Dichloroethane	1.5	U	1.5	0.16	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1
1,2-Dichloropropane	1.5	U	1.5	0.25	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1
1,3,5-Trimethylbenzene	1.5	U	1.5	0.19	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1
1,3-Dichlorobenzene	1.5	U	1.5	0.18	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1
1,4-Dichlorobenzene	1.5	U	1.5	0.19	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1
1,4-Dioxane	30	U	30	9.6	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1
2-Butanone (MEK)	**10**		7.5	1.2	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1
2-Hexanone	7.5	U	7.5	1.4	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1
4-Methyl-2-pentanone (MIBK)	7.5	U	7.5	3.3	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1
Acetone	**55**		7.5	1.6	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1
Benzene	**0.30**	**J**	1.5	0.30	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1
Bromodichloromethane	1.5	U	1.5	0.57	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1
Bromoform	1.5	U	1.5	0.19	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1
Bromomethane	1.5	U *	1.5	0.48	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1
Carbon disulfide	1.5	U	1.5	0.64	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1
Carbon tetrachloride	1.5	U	1.5	0.64	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1
Chlorobenzene	1.5	U	1.5	0.21	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1
Chloroethane	1.5	U	1.5	0.52	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1
Chloroform	1.5	U	1.5	0.31	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1
Chloromethane	1.5	U *	1.5	0.57	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1
cis-1,2-Dichloroethene	1.5	U	1.5	0.33	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1
cis-1,3-Dichloropropene	1.5	U	1.5	0.22	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1
Cyclohexane	1.5	U	1.5	0.69	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1
Dibromochloromethane	1.5	U	1.5	0.22	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1
Dichlorodifluoromethane	1.5	U	1.5	0.48	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1
Ethylbenzene	1.5	U	1.5	0.27	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1
Isopropylbenzene	1.5	U	1.5	0.25	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1
Methyl acetate	7.5	U	7.5	1.3	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1
Methyl tert-butyl ether	1.5	U	1.5	0.25	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1
Methylcyclohexane	1.5	U	1.5	0.75	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1
Methylene Chloride	**1.6**		1.5	0.48	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1
n-Butylbenzene	1.5	U	1.5	0.31	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1
N-Propylbenzene	1.5	U	1.5	0.27	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1
sec-Butylbenzene	1.5	U	1.5	0.25	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1
Styrene	1.5	U	1.5	0.22	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1
tert-Butylbenzene	1.5	U	1.5	0.51	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1
Tetrachloroethene	1.5	U	1.5	0.42	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1
Toluene	**1.5**		1.5	0.28	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1

Client Sample Results

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

Client Sample ID: WC038

Date Collected: 08/21/15 08:55
Date Received: 08/21/15 14:50

Lab Sample ID: 460-100003-3

Matrix: Solid
Percent Solids: 89.9

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	1.5	U	1.5	0.58	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1
trans-1,3-Dichloropropene	1.5	U	1.5	0.15	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1
Trichloroethene	1.5	U	1.5	0.39	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1
Trichlorofluoromethane	1.5	U *	1.5	0.51	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1
Vinyl chloride	1.5	U	1.5	0.58	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1
Xylenes, Total	**0.68**	**J**	3.0	0.16	ug/Kg	☼	08/21/15 22:31	08/25/15 11:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*112*		*78 - 135*	*08/21/15 22:31*	*08/25/15 11:43*	*1*
4-Bromofluorobenzene	*98*		*67 - 126*	*08/21/15 22:31*	*08/25/15 11:43*	*1*
Dibromofluoromethane (Surr)	*42*	*X*	*61 - 149*	*08/21/15 22:31*	*08/25/15 11:43*	*1*
Toluene-d8 (Surr)	*99*		*73 - 121*	*08/21/15 22:31*	*08/25/15 11:43*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**10**		1.0	1.0	%			08/22/15 13:01	1
Percent Solids	**90**		1.0	1.0	%			08/22/15 13:01	1

Client Sample Results

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

Client Sample ID: WC039

Date Collected: 08/21/15 09:00
Date Received: 08/21/15 14:50

Lab Sample ID: 460-100003-4

Matrix: Solid
Percent Solids: 85.8

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.5	U	1.5	0.56	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1
1,1,2,2-Tetrachloroethane	1.5	U	1.5	0.25	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.5	U	1.5	0.64	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1
1,1,2-Trichloroethane	1.5	U	1.5	0.41	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1
1,1-Dichloroethane	1.5	U	1.5	0.50	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1
1,1-Dichloroethene	1.5	U	1.5	0.60	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1
1,2,4-Trichlorobenzene	1.5	U	1.5	0.47	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1
1,2,4-Trimethylbenzene	1.5	U	1.5	0.50	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1
1,2-Dibromo-3-Chloropropane	1.5	U	1.5	0.69	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1
1,2-Dibromoethane	1.5	U	1.5	0.18	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1
1,2-Dichlorobenzene	1.5	U	1.5	0.20	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1
1,2-Dichloroethane	1.5	U	1.5	0.16	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1
1,2-Dichloropropane	1.5	U	1.5	0.25	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1
1,3,5-Trimethylbenzene	1.5	U	1.5	0.19	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1
1,3-Dichlorobenzene	1.5	U	1.5	0.18	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1
1,4-Dichlorobenzene	1.5	U	1.5	0.19	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1
1,4-Dioxane	29	U	29	9.4	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1
2-Butanone (MEK)	7.3	U	7.3	1.1	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1
2-Hexanone	7.3	U	7.3	1.4	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1
4-Methyl-2-pentanone (MIBK)	7.3	U	7.3	3.2	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1
Acetone	**16**		7.3	1.6	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1
Benzene	**0.55**	**J**	1.5	0.29	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1
Bromodichloromethane	1.5	U	1.5	0.56	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1
Bromoform	1.5	U	1.5	0.19	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1
Bromomethane	1.5	U	1.5	0.47	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1
Carbon disulfide	1.5	U	1.5	0.63	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1
Carbon tetrachloride	1.5	U	1.5	0.63	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1
Chlorobenzene	1.5	U	1.5	0.20	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1
Chloroethane	1.5	U	1.5	0.51	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1
Chloroform	1.5	U	1.5	0.31	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1
Chloromethane	1.5	U	1.5	0.56	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1
cis-1,2-Dichloroethene	1.5	U	1.5	0.32	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1
cis-1,3-Dichloropropene	1.5	U	1.5	0.22	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1
Cyclohexane	1.5	U	1.5	0.67	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1
Dibromochloromethane	1.5	U	1.5	0.22	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1
Dichlorodifluoromethane	1.5	U	1.5	0.47	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1
Ethylbenzene	**0.38**	**J**	1.5	0.26	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1
Isopropylbenzene	1.5	U	1.5	0.25	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1
Methyl acetate	7.3	U	7.3	1.3	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1
Methyl tert-butyl ether	1.5	U	1.5	0.25	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1
Methylcyclohexane	1.5	U	1.5	0.73	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1
Methylene Chloride	**1.8**		1.5	0.47	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1
n-Butylbenzene	1.5	U	1.5	0.31	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1
N-Propylbenzene	1.5	U	1.5	0.26	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1
sec-Butylbenzene	1.5	U	1.5	0.25	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1
Styrene	1.5	U	1.5	0.22	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1
tert-Butylbenzene	1.5	U	1.5	0.50	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1
Tetrachloroethene	**0.46**	**J**	1.5	0.41	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1
Toluene	**3.0**		1.5	0.28	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1

Client Sample Results

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

Client Sample ID: WC039

Date Collected: 08/21/15 09:00
Date Received: 08/21/15 14:50

Lab Sample ID: 460-100003-4

Matrix: Solid
Percent Solids: 85.8

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	1.5	U	1.5	0.57	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1
trans-1,3-Dichloropropene	1.5	U	1.5	0.15	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1
Trichloroethene	1.5	U	1.5	0.38	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1
Trichlorofluoromethane	1.5	U	1.5	0.50	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1
Vinyl chloride	1.5	U	1.5	0.57	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1
Xylenes, Total	**1.3**	**J**	2.9	0.16	ug/Kg	☼	08/21/15 22:32	08/23/15 11:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*78 - 135*	*08/21/15 22:32*	*08/23/15 11:02*	*1*
4-Bromofluorobenzene	*98*		*67 - 126*	*08/21/15 22:32*	*08/23/15 11:02*	*1*
Dibromofluoromethane (Surr)	*80*		*61 - 149*	*08/21/15 22:32*	*08/23/15 11:02*	*1*
Toluene-d8 (Surr)	*101*		*73 - 121*	*08/21/15 22:32*	*08/23/15 11:02*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**14**		1.0	1.0	%			08/22/15 13:01	1
Percent Solids	**86**		1.0	1.0	%			08/22/15 13:01	1

Client Sample Results

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

Client Sample ID: WC040

Date Collected: 08/21/15 09:05
Date Received: 08/21/15 14:50

Lab Sample ID: 460-100003-5

Matrix: Solid
Percent Solids: 84.7

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.8	U	1.8	0.69	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1
1,1,2,2-Tetrachloroethane	1.8	U	1.8	0.31	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.8	U	1.8	0.80	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1
1,1,2-Trichloroethane	1.8	U	1.8	0.51	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1
1,1-Dichloroethane	1.8	U	1.8	0.62	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1
1,1-Dichloroethene	1.8	U *	1.8	0.75	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1
1,2,4-Trichlorobenzene	1.8	U	1.8	0.59	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1
1,2,4-Trimethylbenzene	1.8	U	1.8	0.62	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1
1,2-Dibromo-3-Chloropropane	1.8	U	1.8	0.86	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1
1,2-Dibromoethane	1.8	U	1.8	0.22	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1
1,2-Dichlorobenzene	1.8	U	1.8	0.26	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1
1,2-Dichloroethane	1.8	U	1.8	0.20	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1
1,2-Dichloropropane	1.8	U	1.8	0.31	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1
1,3,5-Trimethylbenzene	1.8	U	1.8	0.24	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1
1,3-Dichlorobenzene	1.8	U	1.8	0.22	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1
1,4-Dichlorobenzene	1.8	U	1.8	0.24	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1
1,4-Dioxane	37	U	37	12	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1
2-Butanone (MEK)	**18**		9.1	1.4	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1
2-Hexanone	9.1	U	9.1	1.7	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1
4-Methyl-2-pentanone (MIBK)	9.1	U	9.1	4.1	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1
Acetone	**120**		9.1	1.9	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1
Benzene	**0.57**	**J**	1.8	0.37	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1
Bromodichloromethane	1.8	U	1.8	0.69	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1
Bromoform	1.8	U	1.8	0.24	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1
Bromomethane	1.8	U *	1.8	0.59	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1
Carbon disulfide	1.8	U	1.8	0.79	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1
Carbon tetrachloride	1.8	U	1.8	0.79	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1
Chlorobenzene	1.8	U	1.8	0.26	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1
Chloroethane	1.8	U	1.8	0.64	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1
Chloroform	1.8	U	1.8	0.38	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1
Chloromethane	1.8	U *	1.8	0.69	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1
cis-1,2-Dichloroethene	1.8	U	1.8	0.40	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1
cis-1,3-Dichloropropene	1.8	U	1.8	0.27	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1
Cyclohexane	1.8	U	1.8	0.84	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1
Dibromochloromethane	1.8	U	1.8	0.27	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1
Dichlorodifluoromethane	1.8	U	1.8	0.59	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1
Ethylbenzene	**0.34**	**J**	1.8	0.33	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1
Isopropylbenzene	1.8	U	1.8	0.31	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1
Methyl acetate	9.1	U	9.1	1.6	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1
Methyl tert-butyl ether	1.8	U	1.8	0.31	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1
Methylcyclohexane	1.8	U	1.8	0.91	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1
Methylene Chloride	1.8	U	1.8	0.59	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1
n-Butylbenzene	1.8	U	1.8	0.38	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1
N-Propylbenzene	1.8	U	1.8	0.33	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1
sec-Butylbenzene	1.8	U	1.8	0.31	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1
Styrene	1.8	U	1.8	0.27	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1
tert-Butylbenzene	1.8	U	1.8	0.62	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1
Tetrachloroethene	1.8	U	1.8	0.51	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1
Toluene	**2.7**		1.8	0.35	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1

Client Sample Results

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

Client Sample ID: WC040

Date Collected: 08/21/15 09:05
Date Received: 08/21/15 14:50

Lab Sample ID: 460-100003-5

Matrix: Solid
Percent Solids: 84.7

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	1.8	U	1.8	0.71	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1
trans-1,3-Dichloropropene	1.8	U	1.8	0.18	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1
Trichloroethene	1.8	U	1.8	0.48	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1
Trichlorofluoromethane	1.8	U *	1.8	0.62	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1
Vinyl chloride	1.8	U	1.8	0.71	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1
Xylenes, Total	**1.1**	**J**	3.7	0.20	ug/Kg	☼	08/21/15 22:33	08/25/15 12:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*111*		*78 - 135*	*08/21/15 22:33*	*08/25/15 12:08*	*1*
4-Bromofluorobenzene	*97*		*67 - 126*	*08/21/15 22:33*	*08/25/15 12:08*	*1*
Dibromofluoromethane (Surr)	*48*	*X*	*61 - 149*	*08/21/15 22:33*	*08/25/15 12:08*	*1*
Toluene-d8 (Surr)	*99*		*73 - 121*	*08/21/15 22:33*	*08/25/15 12:08*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**15**		1.0	1.0	%			08/22/15 13:01	1
Percent Solids	**85**		1.0	1.0	%			08/22/15 13:01	1

Client Sample Results

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

Client Sample ID: WC041

Date Collected: 08/21/15 09:10
Date Received: 08/21/15 14:50

Lab Sample ID: 460-100003-6

Matrix: Solid
Percent Solids: 87.1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.9	U	1.9	0.74	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1
1,1,2,2-Tetrachloroethane	1.9	U	1.9	0.33	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.9	U	1.9	0.86	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1
1,1,2-Trichloroethane	1.9	U	1.9	0.54	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1
1,1-Dichloroethane	1.9	U	1.9	0.66	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1
1,1-Dichloroethene	1.9	U	1.9	0.80	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1
1,2,4-Trichlorobenzene	1.9	U	1.9	0.62	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1
1,2,4-Trimethylbenzene	1.9	U	1.9	0.66	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1
1,2-Dibromo-3-Chloropropane	1.9	U	1.9	0.91	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1
1,2-Dibromoethane	1.9	U	1.9	0.23	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1
1,2-Dichlorobenzene	1.9	U	1.9	0.27	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1
1,2-Dichloroethane	1.9	U	1.9	0.21	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1
1,2-Dichloropropane	1.9	U	1.9	0.33	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1
1,3,5-Trimethylbenzene	1.9	U	1.9	0.25	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1
1,3-Dichlorobenzene	1.9	U	1.9	0.23	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1
1,4-Dichlorobenzene	1.9	U	1.9	0.25	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1
1,4-Dioxane	39	U	39	12	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1
2-Butanone (MEK)	**31**		9.7	1.5	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1
2-Hexanone	9.7	U	9.7	1.8	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1
4-Methyl-2-pentanone (MIBK)	9.7	U	9.7	4.3	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1
Acetone	**180**		9.7	2.1	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1
Benzene	**0.79**	**J**	1.9	0.39	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1
Bromodichloromethane	1.9	U	1.9	0.74	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1
Bromoform	1.9	U	1.9	0.25	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1
Bromomethane	1.9	U	1.9	0.62	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1
Carbon disulfide	1.9	U	1.9	0.84	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1
Carbon tetrachloride	1.9	U	1.9	0.84	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1
Chlorobenzene	1.9	U	1.9	0.27	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1
Chloroethane	1.9	U	1.9	0.68	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1
Chloroform	1.9	U	1.9	0.41	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1
Chloromethane	1.9	U	1.9	0.74	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1
cis-1,2-Dichloroethene	1.9	U	1.9	0.43	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1
cis-1,3-Dichloropropene	1.9	U	1.9	0.29	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1
Cyclohexane	1.9	U	1.9	0.90	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1
Dibromochloromethane	1.9	U	1.9	0.29	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1
Dichlorodifluoromethane	1.9	U	1.9	0.62	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1
Ethylbenzene	**0.35**	**J**	1.9	0.35	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1
Isopropylbenzene	1.9	U	1.9	0.33	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1
Methyl acetate	9.7	U	9.7	1.8	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1
Methyl tert-butyl ether	1.9	U	1.9	0.33	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1
Methylcyclohexane	1.9	U	1.9	0.97	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1
Methylene Chloride	1.9	U	1.9	0.62	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1
n-Butylbenzene	1.9	U	1.9	0.41	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1
N-Propylbenzene	1.9	U	1.9	0.35	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1
sec-Butylbenzene	1.9	U	1.9	0.33	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1
Styrene	1.9	U	1.9	0.29	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1
tert-Butylbenzene	1.9	U	1.9	0.66	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1
Tetrachloroethene	1.9	U	1.9	0.54	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1
Toluene	**3.5**		1.9	0.37	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1

Client Sample Results

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

Client Sample ID: WC041

Date Collected: 08/21/15 09:10
Date Received: 08/21/15 14:50

Lab Sample ID: 460-100003-6

Matrix: Solid
Percent Solids: 87.1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	1.9	U	1.9	0.76	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1
trans-1,3-Dichloropropene	1.9	U	1.9	0.19	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1
Trichloroethene	1.9	U	1.9	0.51	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1
Trichlorofluoromethane	1.9	U	1.9	0.66	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1
Vinyl chloride	1.9	U	1.9	0.76	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1
Xylenes, Total	**1.5**	**J**	3.9	0.21	ug/Kg	☼	08/21/15 22:33	08/23/15 11:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*78 - 135*	*08/21/15 22:33*	*08/23/15 11:26*	*1*
4-Bromofluorobenzene	*99*		*67 - 126*	*08/21/15 22:33*	*08/23/15 11:26*	*1*
Dibromofluoromethane (Surr)	*103*		*61 - 149*	*08/21/15 22:33*	*08/23/15 11:26*	*1*
Toluene-d8 (Surr)	*101*		*73 - 121*	*08/21/15 22:33*	*08/23/15 11:26*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**13**		1.0	1.0	%			08/22/15 13:01	1
Percent Solids	**87**		1.0	1.0	%			08/22/15 13:01	1

Client Sample Results

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

Client Sample ID: WC042

Date Collected: 08/21/15 09:15
Date Received: 08/21/15 14:50

Lab Sample ID: 460-100003-7

Matrix: Solid
Percent Solids: 88.8

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	2.0	U	2.0	0.75	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1
1,1,2,2-Tetrachloroethane	2.0	U	2.0	0.34	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1
1,1,2-Trichloro-1,2,2-trifluoroethane	2.0	U	2.0	0.87	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1
1,1,2-Trichloroethane	2.0	U	2.0	0.55	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1
1,1-Dichloroethane	2.0	U	2.0	0.67	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1
1,1-Dichloroethene	2.0	U	2.0	0.81	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1
1,2,4-Trichlorobenzene	2.0	U	2.0	0.63	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1
1,2,4-Trimethylbenzene	2.0	U	2.0	0.67	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.93	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1
1,2-Dibromoethane	2.0	U	2.0	0.24	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1
1,2-Dichlorobenzene	2.0	U	2.0	0.28	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1
1,2-Dichloroethane	2.0	U	2.0	0.22	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1
1,2-Dichloropropane	2.0	U	2.0	0.34	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1
1,3,5-Trimethylbenzene	2.0	U	2.0	0.26	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1
1,3-Dichlorobenzene	2.0	U	2.0	0.24	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1
1,4-Dichlorobenzene	2.0	U	2.0	0.26	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1
1,4-Dioxane	40	U	40	13	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1
2-Butanone (MEK)	**46**		9.9	1.5	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1
2-Hexanone	9.9	U	9.9	1.9	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1
4-Methyl-2-pentanone (MIBK)	9.9	U	9.9	4.4	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1
Acetone	**250**		9.9	2.1	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1
Benzene	**0.64**	**J**	2.0	0.40	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1
Bromodichloromethane	2.0	U	2.0	0.75	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1
Bromoform	2.0	U	2.0	0.26	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1
Bromomethane	2.0	U	2.0	0.63	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1
Carbon disulfide	2.0	U	2.0	0.85	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1
Carbon tetrachloride	2.0	U	2.0	0.85	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1
Chlorobenzene	2.0	U	2.0	0.28	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1
Chloroethane	2.0	U	2.0	0.69	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1
Chloroform	2.0	U	2.0	0.42	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1
Chloromethane	2.0	U	2.0	0.75	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1
cis-1,2-Dichloroethene	2.0	U	2.0	0.44	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1
cis-1,3-Dichloropropene	2.0	U	2.0	0.30	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1
Cyclohexane	2.0	U	2.0	0.91	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1
Dibromochloromethane	2.0	U	2.0	0.30	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1
Dichlorodifluoromethane	2.0	U	2.0	0.63	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1
Ethylbenzene	**0.41**	**J**	2.0	0.36	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1
Isopropylbenzene	2.0	U	2.0	0.34	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1
Methyl acetate	9.9	U	9.9	1.8	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1
Methyl tert-butyl ether	2.0	U	2.0	0.34	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1
Methylcyclohexane	2.0	U	2.0	0.99	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1
Methylene Chloride	2.0	U	2.0	0.63	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1
n-Butylbenzene	2.0	U	2.0	0.42	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1
N-Propylbenzene	2.0	U	2.0	0.36	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1
sec-Butylbenzene	2.0	U	2.0	0.34	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1
Styrene	2.0	U	2.0	0.30	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1
tert-Butylbenzene	2.0	U	2.0	0.67	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1
Tetrachloroethene	2.0	U	2.0	0.55	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1
Toluene	**2.9**		2.0	0.38	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1

Client Sample Results

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

Client Sample ID: WC042

Date Collected: 08/21/15 09:15
Date Received: 08/21/15 14:50

Lab Sample ID: 460-100003-7

Matrix: Solid
Percent Solids: 88.8

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	2.0	U	2.0	0.77	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1
trans-1,3-Dichloropropene	2.0	U	2.0	0.20	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1
Trichloroethene	2.0	U	2.0	0.52	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1
Trichlorofluoromethane	2.0	U	2.0	0.67	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1
Vinyl chloride	2.0	U	2.0	0.77	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1
Xylenes, Total	**1.3**	**J**	4.0	0.22	ug/Kg	☼	08/21/15 22:34	08/23/15 11:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*78 - 135*	*08/21/15 22:34*	*08/23/15 11:50*	*1*
4-Bromofluorobenzene	*94*		*67 - 126*	*08/21/15 22:34*	*08/23/15 11:50*	*1*
Dibromofluoromethane (Surr)	*30*	*X*	*61 - 149*	*08/21/15 22:34*	*08/23/15 11:50*	*1*
Toluene-d8 (Surr)	*97*		*73 - 121*	*08/21/15 22:34*	*08/23/15 11:50*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**11**		1.0	1.0	%			08/22/15 13:01	1
Percent Solids	**89**		1.0	1.0	%			08/22/15 13:01	1

Client Sample Results

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

Client Sample ID: WC043

Date Collected: 08/21/15 09:20
Date Received: 08/21/15 14:50

Lab Sample ID: 460-100003-8

Matrix: Solid
Percent Solids: 88.7

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.3	U	1.3	0.51	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1
1,1,2,2-Tetrachloroethane	1.3	U	1.3	0.23	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.3	U	1.3	0.59	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1
1,1,2-Trichloroethane	1.3	U	1.3	0.38	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1
1,1-Dichloroethane	1.3	U	1.3	0.46	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1
1,1-Dichloroethene	1.3	U	1.3	0.55	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1
1,2,4-Trichlorobenzene	1.3	U	1.3	0.43	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1
1,2,4-Trimethylbenzene	1.3	U	1.3	0.46	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1
1,2-Dibromo-3-Chloropropane	1.3	U	1.3	0.63	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1
1,2-Dibromoethane	1.3	U	1.3	0.16	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1
1,2-Dichlorobenzene	1.3	U	1.3	0.19	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1
1,2-Dichloroethane	1.3	U	1.3	0.15	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1
1,2-Dichloropropane	1.3	U	1.3	0.23	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1
1,3,5-Trimethylbenzene	1.3	U	1.3	0.17	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1
1,3-Dichlorobenzene	1.3	U	1.3	0.16	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1
1,4-Dichlorobenzene	1.3	U	1.3	0.17	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1
1,4-Dioxane	27	U	27	8.6	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1
2-Butanone (MEK)	**5.9**	**J**	6.7	1.0	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1
2-Hexanone	6.7	U	6.7	1.3	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1
4-Methyl-2-pentanone (MIBK)	6.7	U	6.7	3.0	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1
Acetone	**26**		6.7	1.4	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1
Benzene	**0.41**	**J**	1.3	0.27	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1
Bromodichloromethane	1.3	U	1.3	0.51	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1
Bromoform	1.3	U	1.3	0.17	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1
Bromomethane	1.3	U	1.3	0.43	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1
Carbon disulfide	1.3	U	1.3	0.58	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1
Carbon tetrachloride	1.3	U	1.3	0.58	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1
Chlorobenzene	1.3	U	1.3	0.19	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1
Chloroethane	1.3	U	1.3	0.47	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1
Chloroform	1.3	U	1.3	0.28	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1
Chloromethane	1.3	U	1.3	0.51	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1
cis-1,2-Dichloroethene	1.3	U	1.3	0.30	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1
cis-1,3-Dichloropropene	1.3	U	1.3	0.20	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1
Cyclohexane	1.3	U	1.3	0.62	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1
Dibromochloromethane	1.3	U	1.3	0.20	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1
Dichlorodifluoromethane	1.3	U	1.3	0.43	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1
Ethylbenzene	**0.26**	**J**	1.3	0.24	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1
Isopropylbenzene	1.3	U	1.3	0.23	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1
Methyl acetate	6.7	U	6.7	1.2	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1
Methyl tert-butyl ether	1.3	U	1.3	0.23	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1
Methylcyclohexane	1.3	U	1.3	0.67	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1
Methylene Chloride	**2.0**		1.3	0.43	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1
n-Butylbenzene	1.3	U	1.3	0.28	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1
N-Propylbenzene	1.3	U	1.3	0.24	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1
sec-Butylbenzene	1.3	U	1.3	0.23	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1
Styrene	1.3	U	1.3	0.20	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1
tert-Butylbenzene	1.3	U	1.3	0.46	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1
Tetrachloroethene	1.3	U	1.3	0.38	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1
Toluene	**1.9**		1.3	0.26	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1

Client Sample Results

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

Client Sample ID: WC043

Date Collected: 08/21/15 09:20
Date Received: 08/21/15 14:50

Lab Sample ID: 460-100003-8

Matrix: Solid
Percent Solids: 88.7

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	1.3	U	1.3	0.52	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1
trans-1,3-Dichloropropene	1.3	U	1.3	0.13	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1
Trichloroethene	1.3	U	1.3	0.35	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1
Trichlorofluoromethane	1.3	U	1.3	0.46	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1
Vinyl chloride	1.3	U	1.3	0.52	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1
Xylenes, Total	**0.86**	**J**	2.7	0.15	ug/Kg	☼	08/21/15 22:35	08/23/15 12:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*78 - 135*	*08/21/15 22:35*	*08/23/15 12:14*	*1*
4-Bromofluorobenzene	*97*		*67 - 126*	*08/21/15 22:35*	*08/23/15 12:14*	*1*
Dibromofluoromethane (Surr)	*36*	*X*	*61 - 149*	*08/21/15 22:35*	*08/23/15 12:14*	*1*
Toluene-d8 (Surr)	*100*		*73 - 121*	*08/21/15 22:35*	*08/23/15 12:14*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**11**		1.0	1.0	%			08/22/15 14:09	1
Percent Solids	**89**		1.0	1.0	%			08/22/15 14:09	1

Client Sample Results

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

Client Sample ID: WC044

Date Collected: 08/21/15 09:25
Date Received: 08/21/15 14:50

Lab Sample ID: 460-100003-9

Matrix: Solid
Percent Solids: 92.0

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.4	U	1.4	0.52	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1
1,1,2,2-Tetrachloroethane	1.4	U	1.4	0.23	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.4	U	1.4	0.61	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1
1,1,2-Trichloroethane	1.4	U	1.4	0.39	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1
1,1-Dichloroethane	1.4	U	1.4	0.47	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1
1,1-Dichloroethene	1.4	U	1.4	0.57	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1
1,2,4-Trichlorobenzene	1.4	U	1.4	0.44	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1
1,2,4-Trimethylbenzene	1.4	U	1.4	0.47	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1
1,2-Dibromo-3-Chloropropane	1.4	U	1.4	0.65	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1
1,2-Dibromoethane	1.4	U	1.4	0.17	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1
1,2-Dichlorobenzene	1.4	U	1.4	0.19	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1
1,2-Dichloroethane	1.4	U	1.4	0.15	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1
1,2-Dichloropropane	1.4	U	1.4	0.23	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1
1,3,5-Trimethylbenzene	1.4	U	1.4	0.18	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1
1,3-Dichlorobenzene	1.4	U	1.4	0.17	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1
1,4-Dichlorobenzene	1.4	U	1.4	0.18	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1
1,4-Dioxane	28	U	28	8.8	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1
2-Butanone (MEK)	6.9	U	6.9	1.1	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1
2-Hexanone	6.9	U	6.9	1.3	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1
4-Methyl-2-pentanone (MIBK)	6.9	U	6.9	3.1	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1
Acetone	6.9	U	6.9	1.5	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1
Benzene	**0.43**	**J**	1.4	0.28	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1
Bromodichloromethane	1.4	U	1.4	0.52	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1
Bromoform	1.4	U	1.4	0.18	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1
Bromomethane	1.4	U	1.4	0.44	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1
Carbon disulfide	1.4	U	1.4	0.59	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1
Carbon tetrachloride	1.4	U	1.4	0.59	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1
Chlorobenzene	1.4	U	1.4	0.19	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1
Chloroethane	1.4	U	1.4	0.48	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1
Chloroform	1.4	U	1.4	0.29	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1
Chloromethane	1.4	U	1.4	0.52	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1
cis-1,2-Dichloroethene	1.4	U	1.4	0.30	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1
cis-1,3-Dichloropropene	1.4	U	1.4	0.21	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1
Cyclohexane	1.4	U	1.4	0.63	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1
Dibromochloromethane	1.4	U	1.4	0.21	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1
Dichlorodifluoromethane	1.4	U	1.4	0.44	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1
Ethylbenzene	**0.30**	**J**	1.4	0.25	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1
Isopropylbenzene	1.4	U	1.4	0.23	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1
Methyl acetate	6.9	U	6.9	1.2	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1
Methyl tert-butyl ether	1.4	U	1.4	0.23	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1
Methylcyclohexane	1.4	U	1.4	0.69	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1
Methylene Chloride	**1.6**		1.4	0.44	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1
n-Butylbenzene	1.4	U	1.4	0.29	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1
N-Propylbenzene	1.4	U	1.4	0.25	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1
sec-Butylbenzene	1.4	U	1.4	0.23	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1
Styrene	1.4	U	1.4	0.21	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1
tert-Butylbenzene	1.4	U	1.4	0.47	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1
Tetrachloroethene	**0.41**	**J**	1.4	0.39	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1
Toluene	**2.3**		1.4	0.26	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1

Client Sample Results

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

Client Sample ID: WC044

Date Collected: 08/21/15 09:25
Date Received: 08/21/15 14:50

Lab Sample ID: 460-100003-9

Matrix: Solid
Percent Solids: 92.0

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	1.4	U	1.4	0.54	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1
trans-1,3-Dichloropropene	1.4	U	1.4	0.14	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1
Trichloroethene	1.4	U	1.4	0.36	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1
Trichlorofluoromethane	1.4	U	1.4	0.47	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1
Vinyl chloride	1.4	U	1.4	0.54	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1
Xylenes, Total	**1.0**	**J**	2.8	0.15	ug/Kg	☼	08/21/15 22:35	08/23/15 12:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*78 - 135*	*08/21/15 22:35*	*08/23/15 12:39*	*1*
4-Bromofluorobenzene	*98*		*67 - 126*	*08/21/15 22:35*	*08/23/15 12:39*	*1*
Dibromofluoromethane (Surr)	*28*	*X*	*61 - 149*	*08/21/15 22:35*	*08/23/15 12:39*	*1*
Toluene-d8 (Surr)	*100*		*73 - 121*	*08/21/15 22:35*	*08/23/15 12:39*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**8.0**		1.0	1.0	%			08/22/15 14:09	1
Percent Solids	**92**		1.0	1.0	%			08/22/15 14:09	1

Client Sample Results

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

Client Sample ID: WC045

Date Collected: 08/21/15 09:30
Date Received: 08/21/15 14:50

Lab Sample ID: 460-100003-10

Matrix: Solid
Percent Solids: 86.5

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.1	U	1.1	0.42	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1
1,1,2,2-Tetrachloroethane	1.1	U	1.1	0.19	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.1	U	1.1	0.49	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1
1,1,2-Trichloroethane	1.1	U	1.1	0.31	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1
1,1-Dichloroethane	1.1	U	1.1	0.38	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1
1,1-Dichloroethene	1.1	U	1.1	0.45	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1
1,2,4-Trichlorobenzene	1.1	U	1.1	0.35	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1
1,2,4-Trimethylbenzene	1.1	U	1.1	0.38	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1
1,2-Dibromo-3-Chloropropane	1.1	U	1.1	0.52	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1
1,2-Dibromoethane	1.1	U	1.1	0.13	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1
1,2-Dichlorobenzene	1.1	U	1.1	0.16	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1
1,2-Dichloroethane	1.1	U	1.1	0.12	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1
1,2-Dichloropropane	1.1	U	1.1	0.19	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1
1,3,5-Trimethylbenzene	1.1	U	1.1	0.14	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1
1,3-Dichlorobenzene	1.1	U	1.1	0.13	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1
1,4-Dichlorobenzene	1.1	U	1.1	0.14	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1
1,4-Dioxane	22	U	22	7.1	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1
2-Butanone (MEK)	5.5	U	5.5	0.85	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1
2-Hexanone	5.5	U	5.5	1.0	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1
4-Methyl-2-pentanone (MIBK)	5.5	U	5.5	2.5	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1
Acetone	5.5	U	5.5	1.2	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1
Benzene	**0.28**	**J**	1.1	0.22	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1
Bromodichloromethane	1.1	U	1.1	0.42	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1
Bromoform	1.1	U	1.1	0.14	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1
Bromomethane	1.1	U	1.1	0.35	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1
Carbon disulfide	1.1	U	1.1	0.48	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1
Carbon tetrachloride	1.1	U	1.1	0.48	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1
Chlorobenzene	1.1	U	1.1	0.16	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1
Chloroethane	1.1	U	1.1	0.39	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1
Chloroform	1.1	U	1.1	0.23	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1
Chloromethane	1.1	U	1.1	0.42	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1
cis-1,2-Dichloroethene	1.1	U	1.1	0.24	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1
cis-1,3-Dichloropropene	1.1	U	1.1	0.17	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1
Cyclohexane	1.1	U	1.1	0.51	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1
Dibromochloromethane	1.1	U	1.1	0.17	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1
Dichlorodifluoromethane	1.1	U	1.1	0.35	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1
Ethylbenzene	1.1	U	1.1	0.20	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1
Isopropylbenzene	1.1	U	1.1	0.19	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1
Methyl acetate	5.5	U	5.5	1.0	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1
Methyl tert-butyl ether	1.1	U	1.1	0.19	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1
Methylcyclohexane	1.1	U	1.1	0.55	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1
Methylene Chloride	**1.3**		1.1	0.35	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1
n-Butylbenzene	1.1	U	1.1	0.23	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1
N-Propylbenzene	1.1	U	1.1	0.20	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1
sec-Butylbenzene	1.1	U	1.1	0.19	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1
Styrene	1.1	U	1.1	0.17	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1
tert-Butylbenzene	1.1	U	1.1	0.38	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1
Tetrachloroethene	1.1	U	1.1	0.31	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1
Toluene	**1.4**		1.1	0.21	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1

Client Sample Results

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

Client Sample ID: WC045

Date Collected: 08/21/15 09:30
Date Received: 08/21/15 14:50

Lab Sample ID: 460-100003-10

Matrix: Solid
Percent Solids: 86.5

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	1.1	U	1.1	0.43	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1
trans-1,3-Dichloropropene	1.1	U	1.1	0.11	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1
Trichloroethene	1.1	U	1.1	0.29	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1
Trichlorofluoromethane	1.1	U	1.1	0.38	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1
Vinyl chloride	1.1	U	1.1	0.43	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1
Xylenes, Total	**0.63**	**J**	2.2	0.12	ug/Kg	☼	08/21/15 22:36	08/23/15 13:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*78 - 135*	*08/21/15 22:36*	*08/23/15 13:03*	*1*
4-Bromofluorobenzene	*98*		*67 - 126*	*08/21/15 22:36*	*08/23/15 13:03*	*1*
Dibromofluoromethane (Surr)	*72*		*61 - 149*	*08/21/15 22:36*	*08/23/15 13:03*	*1*
Toluene-d8 (Surr)	*101*		*73 - 121*	*08/21/15 22:36*	*08/23/15 13:03*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**13**		1.0	1.0	%			08/22/15 14:09	1
Percent Solids	**87**		1.0	1.0	%			08/22/15 14:09	1

Client Sample Results

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

Client Sample ID: WC046

Date Collected: 08/21/15 09:35
Date Received: 08/21/15 14:50

Lab Sample ID: 460-100003-11

Matrix: Solid
Percent Solids: 89.4

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.5	U	1.5	0.57	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1
1,1,2,2-Tetrachloroethane	1.5	U	1.5	0.25	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.5	U	1.5	0.66	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1
1,1,2-Trichloroethane	1.5	U	1.5	0.42	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1
1,1-Dichloroethane	1.5	U	1.5	0.51	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1
1,1-Dichloroethene	1.5	U	1.5	0.61	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1
1,2,4-Trichlorobenzene	1.5	U	1.5	0.48	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1
1,2,4-Trimethylbenzene	1.5	U	1.5	0.51	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1
1,2-Dibromo-3-Chloropropane	1.5	U	1.5	0.70	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1
1,2-Dibromoethane	1.5	U	1.5	0.18	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1
1,2-Dichlorobenzene	1.5	U	1.5	0.21	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1
1,2-Dichloroethane	1.5	U	1.5	0.16	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1
1,2-Dichloropropane	1.5	U	1.5	0.25	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1
1,3,5-Trimethylbenzene	1.5	U	1.5	0.19	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1
1,3-Dichlorobenzene	1.5	U	1.5	0.18	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1
1,4-Dichlorobenzene	1.5	U	1.5	0.19	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1
1,4-Dioxane	30	U	30	9.6	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1
2-Butanone (MEK)	**8.1**		7.5	1.2	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1
2-Hexanone	7.5	U	7.5	1.4	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1
4-Methyl-2-pentanone (MIBK)	7.5	U	7.5	3.3	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1
Acetone	**46**		7.5	1.6	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1
Benzene	**0.33**	**J**	1.5	0.30	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1
Bromodichloromethane	1.5	U	1.5	0.57	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1
Bromoform	1.5	U	1.5	0.19	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1
Bromomethane	1.5	U	1.5	0.48	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1
Carbon disulfide	1.5	U	1.5	0.64	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1
Carbon tetrachloride	1.5	U	1.5	0.64	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1
Chlorobenzene	1.5	U	1.5	0.21	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1
Chloroethane	1.5	U	1.5	0.52	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1
Chloroform	1.5	U	1.5	0.31	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1
Chloromethane	1.5	U	1.5	0.57	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1
cis-1,2-Dichloroethene	1.5	U	1.5	0.33	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1
cis-1,3-Dichloropropene	1.5	U	1.5	0.22	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1
Cyclohexane	1.5	U	1.5	0.69	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1
Dibromochloromethane	1.5	U	1.5	0.22	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1
Dichlorodifluoromethane	1.5	U	1.5	0.48	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1
Ethylbenzene	1.5	U	1.5	0.27	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1
Isopropylbenzene	1.5	U	1.5	0.25	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1
Methyl acetate	7.5	U	7.5	1.3	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1
Methyl tert-butyl ether	1.5	U	1.5	0.25	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1
Methylcyclohexane	1.5	U	1.5	0.75	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1
Methylene Chloride	**1.4**	**J**	1.5	0.48	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1
n-Butylbenzene	1.5	U	1.5	0.31	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1
N-Propylbenzene	1.5	U	1.5	0.27	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1
sec-Butylbenzene	1.5	U	1.5	0.25	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1
Styrene	1.5	U	1.5	0.22	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1
tert-Butylbenzene	1.5	U	1.5	0.51	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1
Tetrachloroethene	1.5	U	1.5	0.42	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1
Toluene	**1.7**		1.5	0.28	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1

Client Sample Results

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

Client Sample ID: WC046

Date Collected: 08/21/15 09:35
Date Received: 08/21/15 14:50

Lab Sample ID: 460-100003-11

Matrix: Solid
Percent Solids: 89.4

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	1.5	U	1.5	0.58	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1
trans-1,3-Dichloropropene	1.5	U	1.5	0.15	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1
Trichloroethene	1.5	U	1.5	0.39	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1
Trichlorofluoromethane	1.5	U	1.5	0.51	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1
Vinyl chloride	1.5	U	1.5	0.58	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1
Xylenes, Total	3.0	U	3.0	0.16	ug/Kg	☼	08/21/15 22:37	08/24/15 15:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*78 - 135*	*08/21/15 22:37*	*08/24/15 15:23*	*1*
4-Bromofluorobenzene	*97*		*67 - 126*	*08/21/15 22:37*	*08/24/15 15:23*	*1*
Dibromofluoromethane (Surr)	*30*	*X*	*61 - 149*	*08/21/15 22:37*	*08/24/15 15:23*	*1*
Toluene-d8 (Surr)	*99*		*73 - 121*	*08/21/15 22:37*	*08/24/15 15:23*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**11**		1.0	1.0	%			08/22/15 14:09	1
Percent Solids	**89**		1.0	1.0	%			08/22/15 14:09	1

Client Sample Results

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

Client Sample ID: WC047

Date Collected: 08/21/15 09:45
Date Received: 08/21/15 14:50

Lab Sample ID: 460-100003-12

Matrix: Solid
Percent Solids: 87.2

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	1900	U	1900	190	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
2,4,6-Trichlorophenol	760	U	760	54	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
2,4-Dichlorophenol	760	U	760	45	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
2,4-Dimethylphenol	1900	U	1900	420	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
2,4-Dinitrophenol	1500	U	1500	1400	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
2,4-Dinitrotoluene	380	U	380	75	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
2,6-Dinitrotoluene	380	U	380	100	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
2-Chloronaphthalene	1900	U	1900	43	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
2-Chlorophenol	1900	U	1900	48	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
2-Methylnaphthalene	1900	U	1900	42	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
2-Methylphenol	1900	U	1900	83	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
2-Nitroaniline	1900	U	1900	62	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
2-Nitrophenol	1900	U	1900	64	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
3,3'-Dichlorobenzidine	760	U	760	210	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
3-Nitroaniline	1900	U	1900	56	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
4,6-Dinitro-2-methylphenol	1500	U	1500	510	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
4-Bromophenyl phenyl ether	1900	U	1900	60	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
4-Chloro-3-methylphenol	1900	U	1900	81	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
4-Chloroaniline	1900	U	1900	49	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
4-Chlorophenyl phenyl ether	1900	U	1900	57	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
4-Methylphenol	1900	U	1900	52	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
4-Nitroaniline	1900	U	1900	72	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
4-Nitrophenol	3800	U	3800	910	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
Acenaphthene	1900	U	1900	46	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
Acenaphthylene	1900	U	1900	49	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
Acetophenone	1900	U	1900	41	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
Anthracene	1900	U	1900	180	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
Atrazine	760	U *	760	84	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
Benzaldehyde	1900	U	1900	140	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
Benzo[a]anthracene	190	U	190	160	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
Benzo[a]pyrene	190	U	190	57	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
Benzo[b]fluoranthene	190	U	190	74	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
Benzo[g,h,i]perylene	1900	U	1900	110	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
Benzo[k]fluoranthene	190	U	190	83	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
Biphenyl	1900	U	1900	160	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
bis (2-chloroisopropyl) ether	1900	U	1900	78	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
Bis(2-chloroethoxy)methane	1900	U	1900	59	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
Bis(2-chloroethyl)ether	190	U	190	45	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
Bis(2-ethylhexyl) phthalate	1900	U	1900	74	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
Butyl benzyl phthalate	1900	U	1900	58	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
Caprolactam	1900	U	1900	140	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
Carbazole	1900	U	1900	47	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
Chrysene	1900	U	1900	52	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
Dibenz(a,h)anthracene	190	U	190	99	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
Dibenzofuran	1900	U	1900	57	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
Diethyl phthalate	1900	U	1900	54	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
Dimethyl phthalate	1900	U	1900	55	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
Di-n-butyl phthalate	1900	U	1900	57	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
Di-n-octyl phthalate	1900	U	1900	96	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5

Client Sample ID: WC047
Date Collected: 08/21/15 09:45
Date Received: 08/21/15 14:50

Lab Sample ID: 460-100003-12
Matrix: Solid
Percent Solids: 87.2

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	1900	U	1900	56	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
Fluorene	1900	U	1900	41	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
Hexachlorobenzene	190	U	190	77	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
Hexachlorobutadiene	380	U	380	53	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
Hexachlorocyclopentadiene	1900	U	1900	120	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
Hexachloroethane	190	U	190	69	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
Indeno[1,2,3-cd]pyrene	190	U	190	130	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
Isophorone	**16000**		760	41	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
Naphthalene	1900	U	1900	48	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
Nitrobenzene	190	U	190	60	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
N-Nitrosodi-n-propylamine	190	U	190	64	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
N-Nitrosodiphenylamine	1900	U	1900	170	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
Pentachlorophenol	1500	U	1500	230	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
Phenanthrene	1900	U	1900	50	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
Phenol	1900	U	1900	62	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5
Pyrene	1900	U	1900	86	ug/Kg	☼	08/22/15 19:51	08/24/15 10:56	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*72*		*10 - 95*	*08/22/15 19:51*	*08/24/15 10:56*	*5*
2-Fluorobiphenyl	*73*		*27 - 84*	*08/22/15 19:51*	*08/24/15 10:56*	*5*
2-Fluorophenol (Surr)	*71*		*21 - 84*	*08/22/15 19:51*	*08/24/15 10:56*	*5*
Nitrobenzene-d5 (Surr)	*70*		*28 - 92*	*08/22/15 19:51*	*08/24/15 10:56*	*5*
Phenol-d5 (Surr)	*65*		*22 - 88*	*08/22/15 19:51*	*08/24/15 10:56*	*5*
Terphenyl-d14 (Surr)	*106*		*16 - 114*	*08/22/15 19:51*	*08/24/15 10:56*	*5*

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	7.7	U	7.7	1.0	ug/Kg	☼	08/23/15 14:15	08/24/15 11:05	1
4,4'-DDE	7.7	U	7.7	1.1	ug/Kg	☼	08/23/15 14:15	08/24/15 11:05	1
4,4'-DDT	**5.0**	**J**	7.7	0.79	ug/Kg	☼	08/23/15 14:15	08/24/15 11:05	1
Aldrin	7.7	U	7.7	0.93	ug/Kg	☼	08/23/15 14:15	08/24/15 11:05	1
alpha-BHC	2.3	U	2.3	0.70	ug/Kg	☼	08/23/15 14:15	08/24/15 11:05	1
alpha-Chlordane	7.7	U	7.7	1.3	ug/Kg	☼	08/23/15 14:15	08/24/15 11:05	1
beta-BHC	2.3	U	2.3	0.75	ug/Kg	☼	08/23/15 14:15	08/24/15 11:05	1
delta-BHC	2.3	U	2.3	0.84	ug/Kg	☼	08/23/15 14:15	08/24/15 11:05	1
Dieldrin	2.3	U	2.3	1.0	ug/Kg	☼	08/23/15 14:15	08/24/15 11:05	1
Endosulfan I	7.7	U	7.7	1.1	ug/Kg	☼	08/23/15 14:15	08/24/15 11:05	1
Endosulfan II	7.7	U	7.7	1.2	ug/Kg	☼	08/23/15 14:15	08/24/15 11:05	1
Endosulfan sulfate	7.7	U	7.7	0.89	ug/Kg	☼	08/23/15 14:15	08/24/15 11:05	1
Endrin	7.7	U	7.7	0.97	ug/Kg	☼	08/23/15 14:15	08/24/15 11:05	1
Endrin aldehyde	7.7	U	7.7	0.95	ug/Kg	☼	08/23/15 14:15	08/24/15 11:05	1
Endrin ketone	7.7	U	7.7	1.1	ug/Kg	☼	08/23/15 14:15	08/24/15 11:05	1
gamma-BHC (Lindane)	2.3	U	2.3	0.69	ug/Kg	☼	08/23/15 14:15	08/24/15 11:05	1
gamma-Chlordane	7.7	U	7.7	1.7	ug/Kg	☼	08/23/15 14:15	08/24/15 11:05	1
Heptachlor	7.7	U	7.7	0.99	ug/Kg	☼	08/23/15 14:15	08/24/15 11:05	1
Heptachlor epoxide	7.7	U	7.7	1.5	ug/Kg	☼	08/23/15 14:15	08/24/15 11:05	1
Methoxychlor	7.7	U	7.7	1.6	ug/Kg	☼	08/23/15 14:15	08/24/15 11:05	1
Toxaphene	77	U	77	22	ug/Kg	☼	08/23/15 14:15	08/24/15 11:05	1

Client Sample Results

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

Client Sample ID: WC047

Date Collected: 08/21/15 09:45
Date Received: 08/21/15 14:50

Lab Sample ID: 460-100003-12

Matrix: Solid
Percent Solids: 87.2

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	91		55 - 148	08/23/15 14:15	08/24/15 11:05	1
DCB Decachlorobiphenyl	94		55 - 148	08/23/15 14:15	08/24/15 11:05	1
Tetrachloro-m-xylene	103		55 - 139	08/23/15 14:15	08/24/15 11:05	1
Tetrachloro-m-xylene	97		55 - 139	08/23/15 14:15	08/24/15 11:05	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	77	U	77	10	ug/Kg	☼	08/23/15 14:45	08/24/15 12:38	1
PCB-1221	77	U	77	10	ug/Kg	☼	08/23/15 14:45	08/24/15 12:38	1
PCB-1232	77	U	77	10	ug/Kg	☼	08/23/15 14:45	08/24/15 12:38	1
PCB-1242	77	U	77	10	ug/Kg	☼	08/23/15 14:45	08/24/15 12:38	1
PCB-1248	77	U	77	10	ug/Kg	☼	08/23/15 14:45	08/24/15 12:38	1
PCB-1254	77	U	77	11	ug/Kg	☼	08/23/15 14:45	08/24/15 12:38	1
PCB-1260	**71**	**J**	77	11	ug/Kg	☼	08/23/15 14:45	08/24/15 12:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	92		47 - 150	08/23/15 14:45	08/24/15 12:38	1
DCB Decachlorobiphenyl	98		47 - 150	08/23/15 14:45	08/24/15 12:38	1
Tetrachloro-m-xylene	103			08/23/15 14:45	08/24/15 12:38	1
Tetrachloro-m-xylene	86			08/23/15 14:45	08/24/15 12:38	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**7720**		104	53.7	mg/Kg	☼	08/24/15 07:30	08/26/15 11:39	10
Antimony	**53.7**		10.4	4.1	mg/Kg	☼	08/24/15 07:30	08/26/15 11:39	10
Arsenic	**35.5**		7.8	2.6	mg/Kg	☼	08/24/15 07:30	08/26/15 11:39	10
Barium	**57.1**	**J**	104	3.7	mg/Kg	☼	08/24/15 07:30	08/26/15 11:39	10
Beryllium	1.0	U	1.0	0.88	mg/Kg	☼	08/24/15 07:30	08/26/15 11:39	10
Cadmium	2.1	U	2.1	1.1	mg/Kg	☼	08/24/15 07:30	08/26/15 11:39	10
Calcium	**96000**		2610	154	mg/Kg	☼	08/24/15 07:30	08/26/15 11:39	10
Chromium	**12.1**		5.2	2.5	mg/Kg	☼	08/24/15 07:30	08/26/15 11:39	10
Cobalt	**16.6**	**J**	26.1	3.0	mg/Kg	☼	08/24/15 07:30	08/26/15 11:39	10
Copper	**53.2**		13.0	3.4	mg/Kg	☼	08/24/15 07:30	08/26/15 11:39	10
Iron	**11100**		78.2	58.9	mg/Kg	☼	08/24/15 07:30	08/26/15 11:39	10
Lead	**127**		5.2	2.0	mg/Kg	☼	08/24/15 07:30	08/26/15 11:39	10
Magnesium	**21900**		2610	130	mg/Kg	☼	08/24/15 07:30	08/26/15 11:39	10
Manganese	**370**		7.8	2.7	mg/Kg	☼	08/24/15 07:30	08/26/15 11:39	10
Nickel	**22.4**		20.9	3.8	mg/Kg	☼	08/24/15 07:30	08/26/15 11:39	10
Potassium	**584**	**J**	2610	79.0	mg/Kg	☼	08/24/15 07:30	08/26/15 11:39	10
Selenium	10.4	U	10.4	3.6	mg/Kg	☼	08/24/15 07:30	08/26/15 11:39	10
Silver	**1.2**	**J**	5.2	0.92	mg/Kg	☼	08/24/15 07:30	08/26/15 11:39	10
Sodium	**218**	**J**	2610	177	mg/Kg	☼	08/24/15 07:30	08/26/15 11:39	10
Thallium	10.4	U	10.4	4.6	mg/Kg	☼	08/24/15 07:30	08/26/15 11:39	10
Vanadium	**14.7**	**J**	26.1	2.6	mg/Kg	☼	08/24/15 07:30	08/26/15 11:39	10
Zinc	**77.4**		15.6	3.8	mg/Kg	☼	08/24/15 07:30	08/26/15 11:39	10

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.20**		0.019	0.013	mg/Kg	☼	08/25/15 05:18	08/25/15 10:38	1

Client Sample Results

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

Client Sample ID: WC047

Date Collected: 08/21/15 09:45
Date Received: 08/21/15 14:50

Lab Sample ID: 460-100003-12

Matrix: Solid
Percent Solids: 87.2

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	13		1.0	1.0	%			08/22/15 14:09	1
Percent Solids	87		1.0	1.0	%			08/22/15 14:09	1

Client Sample Results

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

Client Sample ID: WC048

Date Collected: 08/21/15 09:55
Date Received: 08/21/15 14:50

Lab Sample ID: 460-100003-13

Matrix: Solid
Percent Solids: 84.3

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	390	U	390	39	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
2,4,6-Trichlorophenol	160	U	160	11	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
2,4-Dichlorophenol	160	U	160	9.2	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
2,4-Dimethylphenol	390	U	390	86	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
2,4-Dinitrophenol	310	U	310	300	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
2,4-Dinitrotoluene	79	U	79	16	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
2,6-Dinitrotoluene	79	U	79	21	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
2-Chloronaphthalene	390	U	390	8.9	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
2-Chlorophenol	390	U	390	9.9	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
2-Methylnaphthalene	390	U	390	8.6	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
2-Methylphenol	390	U	390	17	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
2-Nitroaniline	390	U	390	13	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
2-Nitrophenol	390	U	390	13	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
3,3'-Dichlorobenzidine	160	U	160	44	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
3-Nitroaniline	390	U	390	12	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
4,6-Dinitro-2-methylphenol	310	U	310	100	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
4-Bromophenyl phenyl ether	390	U	390	12	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
4-Chloro-3-methylphenol	390	U	390	17	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
4-Chloroaniline	390	U	390	10	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
4-Chlorophenyl phenyl ether	390	U	390	12	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
4-Methylphenol	390	U	390	11	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
4-Nitroaniline	390	U	390	15	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
4-Nitrophenol	790	U	790	190	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
Acenaphthene	390	U	390	9.5	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
Acenaphthylene	390	U	390	10	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
Acetophenone	390	U	390	8.5	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
Anthracene	390	U	390	37	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
Atrazine	160	U *	160	17	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
Benzaldehyde	390	U	390	30	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
Benzo[a]anthracene	39	U	39	33	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
Benzo[a]pyrene	39	U	39	12	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
Benzo[b]fluoranthene	39	U	39	15	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
Benzo[g,h,i]perylene	390	U	390	22	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
Benzo[k]fluoranthene	39	U	39	17	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
Biphenyl	390	U	390	33	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
bis (2-chloroisopropyl) ether	390	U	390	16	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
Bis(2-chloroethoxy)methane	390	U	390	12	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
Bis(2-chloroethyl)ether	39	U	39	9.2	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
Bis(2-ethylhexyl) phthalate	390	U	390	15	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
Butyl benzyl phthalate	390	U	390	12	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
Caprolactam	390	U	390	28	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
Carbazole	390	U	390	9.7	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
Chrysene	**42**	**J**	390	11	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
Dibenz(a,h)anthracene	39	U	39	20	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
Dibenzofuran	390	U	390	12	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
Diethyl phthalate	390	U	390	11	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
Dimethyl phthalate	390	U	390	11	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
Di-n-butyl phthalate	390	U	390	12	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
Di-n-octyl phthalate	390	U	390	20	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1

Client Sample ID: WC048

Date Collected: 08/21/15 09:55
Date Received: 08/21/15 14:50

Lab Sample ID: 460-100003-13

Matrix: Solid
Percent Solids: 84.3

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	**76**	**J**	390	12	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
Fluorene	390	U	390	8.5	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
Hexachlorobenzene	39	U	39	16	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
Hexachlorobutadiene	79	U	79	11	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
Hexachlorocyclopentadiene	390	U	390	24	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
Hexachloroethane	39	U	39	14	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
Indeno[1,2,3-cd]pyrene	39	U	39	26	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
Isophorone	**9200**		160	8.4	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
Naphthalene	390	U	390	9.9	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
Nitrobenzene	39	U	39	12	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
N-Nitrosodi-n-propylamine	39	U	39	13	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
N-Nitrosodiphenylamine	390	U	390	36	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
Pentachlorophenol	310	U	310	47	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
Phenanthrene	**54**	**J**	390	10	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
Phenol	390	U	390	13	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1
Pyrene	**73**	**J**	390	18	ug/Kg	☼	08/22/15 19:51	08/23/15 15:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*104*	*X*	*10 - 95*	*08/22/15 19:51*	*08/23/15 15:28*	*1*
2-Fluorobiphenyl	*82*		*27 - 84*	*08/22/15 19:51*	*08/23/15 15:28*	*1*
2-Fluorophenol (Surr)	*75*		*21 - 84*	*08/22/15 19:51*	*08/23/15 15:28*	*1*
Nitrobenzene-d5 (Surr)	*76*		*28 - 92*	*08/22/15 19:51*	*08/23/15 15:28*	*1*
Phenol-d5 (Surr)	*71*		*22 - 88*	*08/22/15 19:51*	*08/23/15 15:28*	*1*
Terphenyl-d14 (Surr)	*109*		*16 - 114*	*08/22/15 19:51*	*08/23/15 15:28*	*1*

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	7.9	U	7.9	1.0	ug/Kg	☼	08/23/15 14:15	08/24/15 11:18	1
4,4'-DDE	7.9	U	7.9	1.1	ug/Kg	☼	08/23/15 14:15	08/24/15 11:18	1
4,4'-DDT	7.9	U	7.9	0.82	ug/Kg	☼	08/23/15 14:15	08/24/15 11:18	1
Aldrin	7.9	U	7.9	0.96	ug/Kg	☼	08/23/15 14:15	08/24/15 11:18	1
alpha-BHC	2.4	U	2.4	0.72	ug/Kg	☼	08/23/15 14:15	08/24/15 11:18	1
alpha-Chlordane	7.9	U	7.9	1.3	ug/Kg	☼	08/23/15 14:15	08/24/15 11:18	1
beta-BHC	2.4	U	2.4	0.77	ug/Kg	☼	08/23/15 14:15	08/24/15 11:18	1
delta-BHC	2.4	U	2.4	0.87	ug/Kg	☼	08/23/15 14:15	08/24/15 11:18	1
Dieldrin	2.4	U	2.4	1.0	ug/Kg	☼	08/23/15 14:15	08/24/15 11:18	1
Endosulfan I	7.9	U	7.9	1.1	ug/Kg	☼	08/23/15 14:15	08/24/15 11:18	1
Endosulfan II	7.9	U	7.9	1.2	ug/Kg	☼	08/23/15 14:15	08/24/15 11:18	1
Endosulfan sulfate	7.9	U	7.9	0.92	ug/Kg	☼	08/23/15 14:15	08/24/15 11:18	1
Endrin	7.9	U	7.9	1.0	ug/Kg	☼	08/23/15 14:15	08/24/15 11:18	1
Endrin aldehyde	7.9	U	7.9	0.98	ug/Kg	☼	08/23/15 14:15	08/24/15 11:18	1
Endrin ketone	7.9	U	7.9	1.1	ug/Kg	☼	08/23/15 14:15	08/24/15 11:18	1
gamma-BHC (Lindane)	2.4	U	2.4	0.71	ug/Kg	☼	08/23/15 14:15	08/24/15 11:18	1
gamma-Chlordane	7.9	U	7.9	1.7	ug/Kg	☼	08/23/15 14:15	08/24/15 11:18	1
Heptachlor	7.9	U	7.9	1.0	ug/Kg	☼	08/23/15 14:15	08/24/15 11:18	1
Heptachlor epoxide	7.9	U	7.9	1.6	ug/Kg	☼	08/23/15 14:15	08/24/15 11:18	1
Methoxychlor	7.9	U	7.9	1.7	ug/Kg	☼	08/23/15 14:15	08/24/15 11:18	1
Toxaphene	79	U	79	23	ug/Kg	☼	08/23/15 14:15	08/24/15 11:18	1

Client Sample Results

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

Client Sample ID: WC048

Date Collected: 08/21/15 09:55
Date Received: 08/21/15 14:50

Lab Sample ID: 460-100003-13

Matrix: Solid
Percent Solids: 84.3

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*88*		*55 - 148*	*08/23/15 14:15*	*08/24/15 11:18*	*1*
DCB Decachlorobiphenyl	*90*		*55 - 148*	*08/23/15 14:15*	*08/24/15 11:18*	*1*
Tetrachloro-m-xylene	*99*		*55 - 139*	*08/23/15 14:15*	*08/24/15 11:18*	*1*
Tetrachloro-m-xylene	*90*		*55 - 139*	*08/23/15 14:15*	*08/24/15 11:18*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	79	U	79	11	ug/Kg	☼	08/23/15 14:45	08/24/15 12:22	1
PCB-1221	79	U	79	11	ug/Kg	☼	08/23/15 14:45	08/24/15 12:22	1
PCB-1232	79	U	79	11	ug/Kg	☼	08/23/15 14:45	08/24/15 12:22	1
PCB-1242	79	U	79	11	ug/Kg	☼	08/23/15 14:45	08/24/15 12:22	1
PCB-1248	79	U	79	11	ug/Kg	☼	08/23/15 14:45	08/24/15 12:22	1
PCB-1254	79	U	79	11	ug/Kg	☼	08/23/15 14:45	08/24/15 12:22	1
PCB-1260	79	U	79	11	ug/Kg	☼	08/23/15 14:45	08/24/15 12:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*107*		*47 - 150*	*08/23/15 14:45*	*08/24/15 12:22*	*1*
DCB Decachlorobiphenyl	*113*		*47 - 150*	*08/23/15 14:45*	*08/24/15 12:22*	*1*
Tetrachloro-m-xylene	*112*			*08/23/15 14:45*	*08/24/15 12:22*	*1*
Tetrachloro-m-xylene	*101*			*08/23/15 14:45*	*08/24/15 12:22*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**5370**		106	54.5	mg/Kg	☼	08/24/15 07:30	08/26/15 11:43	10
Antimony	**50.7**		10.6	4.2	mg/Kg	☼	08/24/15 07:30	08/26/15 11:43	10
Arsenic	**22.8**		7.9	2.6	mg/Kg	☼	08/24/15 07:30	08/26/15 11:43	10
Barium	**47.1**	**J**	106	3.8	mg/Kg	☼	08/24/15 07:30	08/26/15 11:43	10
Beryllium	1.1	U	1.1	0.90	mg/Kg	☼	08/24/15 07:30	08/26/15 11:43	10
Cadmium	2.1	U	2.1	1.1	mg/Kg	☼	08/24/15 07:30	08/26/15 11:43	10
Calcium	**103000**		2650	157	mg/Kg	☼	08/24/15 07:30	08/26/15 11:43	10
Chromium	**9.8**		5.3	2.6	mg/Kg	☼	08/24/15 07:30	08/26/15 11:43	10
Cobalt	**14.3**	**J**	26.5	3.0	mg/Kg	☼	08/24/15 07:30	08/26/15 11:43	10
Copper	**36.3**		13.2	3.4	mg/Kg	☼	08/24/15 07:30	08/26/15 11:43	10
Iron	**10900**		79.4	59.8	mg/Kg	☼	08/24/15 07:30	08/26/15 11:43	10
Lead	**41.9**		5.3	2.1	mg/Kg	☼	08/24/15 07:30	08/26/15 11:43	10
Magnesium	**35100**		2650	132	mg/Kg	☼	08/24/15 07:30	08/26/15 11:43	10
Manganese	**238**		7.9	2.8	mg/Kg	☼	08/24/15 07:30	08/26/15 11:43	10
Nickel	**16.2**	**J**	21.2	3.9	mg/Kg	☼	08/24/15 07:30	08/26/15 11:43	10
Potassium	**499**	**J**	2650	80.2	mg/Kg	☼	08/24/15 07:30	08/26/15 11:43	10
Selenium	10.6	U	10.6	3.7	mg/Kg	☼	08/24/15 07:30	08/26/15 11:43	10
Silver	5.3	U	5.3	0.93	mg/Kg	☼	08/24/15 07:30	08/26/15 11:43	10
Sodium	**179**	**J**	2650	179	mg/Kg	☼	08/24/15 07:30	08/26/15 11:43	10
Thallium	10.6	U	10.6	4.7	mg/Kg	☼	08/24/15 07:30	08/26/15 11:43	10
Vanadium	**11.4**	**J**	26.5	2.6	mg/Kg	☼	08/24/15 07:30	08/26/15 11:43	10
Zinc	**54.5**		15.9	3.9	mg/Kg	☼	08/24/15 07:30	08/26/15 11:43	10

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.17**		0.020	0.014	mg/Kg	☼	08/25/15 05:18	08/25/15 10:39	1

Client Sample Results

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

Client Sample ID: WC048

Date Collected: 08/21/15 09:55
Date Received: 08/21/15 14:50

Lab Sample ID: 460-100003-13

Matrix: Solid
Percent Solids: 84.3

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	16		1.0	1.0	%			08/22/15 14:09	1
Percent Solids	84		1.0	1.0	%			08/22/15 14:09	1

Client Sample Results

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

Client Sample ID: WC049

Date Collected: 08/21/15 10:05
Date Received: 08/21/15 14:50

Lab Sample ID: 460-100003-14

Matrix: Solid
Percent Solids: 87.6

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	1900	U	1900	190	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
2,4,6-Trichlorophenol	760	U	760	54	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
2,4-Dichlorophenol	760	U	760	44	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
2,4-Dimethylphenol	1900	U	1900	410	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
2,4-Dinitrophenol	1500	U	1500	1400	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
2,4-Dinitrotoluene	380	U	380	75	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
2,6-Dinitrotoluene	380	U	380	100	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
2-Chloronaphthalene	1900	U	1900	43	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
2-Chlorophenol	1900	U	1900	48	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
2-Methylnaphthalene	1900	U	1900	42	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
2-Methylphenol	1900	U	1900	82	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
2-Nitroaniline	1900	U	1900	62	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
2-Nitrophenol	1900	U	1900	63	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
3,3'-Dichlorobenzidine	760	U	760	210	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
3-Nitroaniline	1900	U	1900	56	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
4,6-Dinitro-2-methylphenol	1500	U	1500	500	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
4-Bromophenyl phenyl ether	1900	U	1900	59	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
4-Chloro-3-methylphenol	1900	U	1900	81	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
4-Chloroaniline	1900	U	1900	48	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
4-Chlorophenyl phenyl ether	1900	U	1900	56	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
4-Methylphenol	1900	U	1900	51	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
4-Nitroaniline	1900	U	1900	71	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
4-Nitrophenol	3800	U	3800	910	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
Acenaphthene	1900	U	1900	46	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
Acenaphthylene	1900	U	1900	48	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
Acetophenone	1900	U	1900	41	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
Anthracene	1900	U	1900	180	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
Atrazine	760	U *	760	84	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
Benzaldehyde	1900	U	1900	140	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
Benzo[a]anthracene	190	U	190	160	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
Benzo[a]pyrene	190	U	190	57	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
Benzo[b]fluoranthene	190	U	190	74	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
Benzo[g,h,i]perylene	1900	U	1900	110	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
Benzo[k]fluoranthene	190	U	190	82	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
Biphenyl	1900	U	1900	160	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
bis (2-chloroisopropyl) ether	1900	U	1900	78	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
Bis(2-chloroethoxy)methane	1900	U	1900	59	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
Bis(2-chloroethyl)ether	190	U	190	44	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
Bis(2-ethylhexyl) phthalate	1900	U	1900	74	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
Butyl benzyl phthalate	1900	U	1900	58	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
Caprolactam	1900	U	1900	140	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
Carbazole	1900	U	1900	47	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
Chrysene	1900	U	1900	51	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
Dibenz(a,h)anthracene	190	U	190	98	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
Dibenzofuran	1900	U	1900	57	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
Diethyl phthalate	1900	U	1900	54	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
Dimethyl phthalate	1900	U	1900	55	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
Di-n-butyl phthalate	1900	U	1900	56	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
Di-n-octyl phthalate	1900	U	1900	96	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5

Client Sample Results

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

Client Sample ID: WC049

Date Collected: 08/21/15 10:05
Date Received: 08/21/15 14:50

Lab Sample ID: 460-100003-14

Matrix: Solid
Percent Solids: 87.6

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	1900	U	1900	56	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
Fluorene	1900	U	1900	41	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
Hexachlorobenzene	190	U	190	76	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
Hexachlorobutadiene	380	U	380	53	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
Hexachlorocyclopentadiene	1900	U	1900	120	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
Hexachloroethane	190	U	190	69	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
Indeno[1,2,3-cd]pyrene	190	U	190	130	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
Isophorone	**15000**		760	40	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
Naphthalene	1900	U	1900	48	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
Nitrobenzene	190	U	190	59	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
N-Nitrosodi-n-propylamine	190	U	190	63	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
N-Nitrosodiphenylamine	1900	U	1900	170	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
Pentachlorophenol	1500	U	1500	230	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
Phenanthrene	1900	U	1900	50	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
Phenol	1900	U	1900	62	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5
Pyrene	1900	U	1900	86	ug/Kg	☼	08/22/15 19:51	08/24/15 11:22	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*71*		*10 - 95*	*08/22/15 19:51*	*08/24/15 11:22*	*5*
2-Fluorobiphenyl	*71*		*27 - 84*	*08/22/15 19:51*	*08/24/15 11:22*	*5*
2-Fluorophenol (Surr)	*70*		*21 - 84*	*08/22/15 19:51*	*08/24/15 11:22*	*5*
Nitrobenzene-d5 (Surr)	*69*		*28 - 92*	*08/22/15 19:51*	*08/24/15 11:22*	*5*
Phenol-d5 (Surr)	*63*		*22 - 88*	*08/22/15 19:51*	*08/24/15 11:22*	*5*
Terphenyl-d14 (Surr)	*97*		*16 - 114*	*08/22/15 19:51*	*08/24/15 11:22*	*5*

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	7.6	U	7.6	1.0	ug/Kg	☼	08/23/15 14:15	08/24/15 11:31	1
4,4'-DDE	7.6	U	7.6	1.1	ug/Kg	☼	08/23/15 14:15	08/24/15 11:31	1
4,4'-DDT	**6.1**	**J**	7.6	0.79	ug/Kg	☼	08/23/15 14:15	08/24/15 11:31	1
Aldrin	7.6	U	7.6	0.92	ug/Kg	☼	08/23/15 14:15	08/24/15 11:31	1
alpha-BHC	2.3	U	2.3	0.70	ug/Kg	☼	08/23/15 14:15	08/24/15 11:31	1
alpha-Chlordane	7.6	U	7.6	1.2	ug/Kg	☼	08/23/15 14:15	08/24/15 11:31	1
beta-BHC	2.3	U	2.3	0.74	ug/Kg	☼	08/23/15 14:15	08/24/15 11:31	1
delta-BHC	2.3	U	2.3	0.83	ug/Kg	☼	08/23/15 14:15	08/24/15 11:31	1
Dieldrin	2.3	U	2.3	0.99	ug/Kg	☼	08/23/15 14:15	08/24/15 11:31	1
Endosulfan I	7.6	U	7.6	1.1	ug/Kg	☼	08/23/15 14:15	08/24/15 11:31	1
Endosulfan II	7.6	U	7.6	1.2	ug/Kg	☼	08/23/15 14:15	08/24/15 11:31	1
Endosulfan sulfate	7.6	U	7.6	0.89	ug/Kg	☼	08/23/15 14:15	08/24/15 11:31	1
Endrin	7.6	U	7.6	0.97	ug/Kg	☼	08/23/15 14:15	08/24/15 11:31	1
Endrin aldehyde	7.6	U	7.6	0.95	ug/Kg	☼	08/23/15 14:15	08/24/15 11:31	1
Endrin ketone	7.6	U	7.6	1.1	ug/Kg	☼	08/23/15 14:15	08/24/15 11:31	1
gamma-BHC (Lindane)	2.3	U	2.3	0.68	ug/Kg	☼	08/23/15 14:15	08/24/15 11:31	1
gamma-Chlordane	7.6	U	7.6	1.7	ug/Kg	☼	08/23/15 14:15	08/24/15 11:31	1
Heptachlor	7.6	U	7.6	0.98	ug/Kg	☼	08/23/15 14:15	08/24/15 11:31	1
Heptachlor epoxide	7.6	U	7.6	1.5	ug/Kg	☼	08/23/15 14:15	08/24/15 11:31	1
Methoxychlor	7.6	U	7.6	1.6	ug/Kg	☼	08/23/15 14:15	08/24/15 11:31	1
Toxaphene	76	U	76	22	ug/Kg	☼	08/23/15 14:15	08/24/15 11:31	1

Client Sample Results

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

Client Sample ID: WC049

Date Collected: 08/21/15 10:05
Date Received: 08/21/15 14:50

Lab Sample ID: 460-100003-14

Matrix: Solid
Percent Solids: 87.6

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*93*		*55 - 148*	*08/23/15 14:15*	*08/24/15 11:31*	*1*
DCB Decachlorobiphenyl	*95*		*55 - 148*	*08/23/15 14:15*	*08/24/15 11:31*	*1*
Tetrachloro-m-xylene	*106*		*55 - 139*	*08/23/15 14:15*	*08/24/15 11:31*	*1*
Tetrachloro-m-xylene	*98*		*55 - 139*	*08/23/15 14:15*	*08/24/15 11:31*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	76	U	76	10	ug/Kg	☼	08/23/15 14:45	08/24/15 12:04	1
PCB-1221	76	U	76	10	ug/Kg	☼	08/23/15 14:45	08/24/15 12:04	1
PCB-1232	76	U	76	10	ug/Kg	☼	08/23/15 14:45	08/24/15 12:04	1
PCB-1242	76	U	76	10	ug/Kg	☼	08/23/15 14:45	08/24/15 12:04	1
PCB-1248	76	U	76	10	ug/Kg	☼	08/23/15 14:45	08/24/15 12:04	1
PCB-1254	76	U	76	10	ug/Kg	☼	08/23/15 14:45	08/24/15 12:04	1
PCB-1260	**84**		76	10	ug/Kg	☼	08/23/15 14:45	08/24/15 12:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*93*		*47 - 150*	*08/23/15 14:45*	*08/24/15 12:04*	*1*
DCB Decachlorobiphenyl	*103*		*47 - 150*	*08/23/15 14:45*	*08/24/15 12:04*	*1*
Tetrachloro-m-xylene	*99*			*08/23/15 14:45*	*08/24/15 12:04*	*1*
Tetrachloro-m-xylene	*91*			*08/23/15 14:45*	*08/24/15 12:04*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**7090**		111	57.1	mg/Kg	☼	08/24/15 07:30	08/26/15 11:46	10
Antimony	**11.8**		11.1	4.4	mg/Kg	☼	08/24/15 07:30	08/26/15 11:46	10
Arsenic	**14.1**		8.3	2.7	mg/Kg	☼	08/24/15 07:30	08/26/15 11:46	10
Barium	**44.4**	**J**	111	4.0	mg/Kg	☼	08/24/15 07:30	08/26/15 11:46	10
Beryllium	1.1	U	1.1	0.94	mg/Kg	☼	08/24/15 07:30	08/26/15 11:46	10
Cadmium	2.2	U	2.2	1.2	mg/Kg	☼	08/24/15 07:30	08/26/15 11:46	10
Calcium	**102000**		2770	164	mg/Kg	☼	08/24/15 07:30	08/26/15 11:46	10
Chromium	**10.4**		5.5	2.7	mg/Kg	☼	08/24/15 07:30	08/26/15 11:46	10
Cobalt	**12.0**	**J**	27.7	3.2	mg/Kg	☼	08/24/15 07:30	08/26/15 11:46	10
Copper	**38.0**		13.9	3.6	mg/Kg	☼	08/24/15 07:30	08/26/15 11:46	10
Iron	**8280**		83.1	62.6	mg/Kg	☼	08/24/15 07:30	08/26/15 11:46	10
Lead	**19.4**		5.5	2.2	mg/Kg	☼	08/24/15 07:30	08/26/15 11:46	10
Magnesium	**21200**		2770	138	mg/Kg	☼	08/24/15 07:30	08/26/15 11:46	10
Manganese	**237**		8.3	2.9	mg/Kg	☼	08/24/15 07:30	08/26/15 11:46	10
Nickel	**18.4**	**J**	22.2	4.0	mg/Kg	☼	08/24/15 07:30	08/26/15 11:46	10
Potassium	**425**	**J**	2770	84.0	mg/Kg	☼	08/24/15 07:30	08/26/15 11:46	10
Selenium	11.1	U	11.1	3.8	mg/Kg	☼	08/24/15 07:30	08/26/15 11:46	10
Silver	5.5	U	5.5	0.98	mg/Kg	☼	08/24/15 07:30	08/26/15 11:46	10
Sodium	2770	U	2770	188	mg/Kg	☼	08/24/15 07:30	08/26/15 11:46	10
Thallium	11.1	U	11.1	4.9	mg/Kg	☼	08/24/15 07:30	08/26/15 11:46	10
Vanadium	**11.1**	**J**	27.7	2.8	mg/Kg	☼	08/24/15 07:30	08/26/15 11:46	10
Zinc	**69.9**		16.6	4.0	mg/Kg	☼	08/24/15 07:30	08/26/15 11:46	10

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.21**		0.018	0.012	mg/Kg	☼	08/25/15 05:18	08/25/15 10:42	1

Client Sample Results

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

Client Sample ID: WC049

Date Collected: 08/21/15 10:05
Date Received: 08/21/15 14:50

Lab Sample ID: 460-100003-14

Matrix: Solid
Percent Solids: 87.6

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	12		1.0	1.0	%			08/22/15 14:09	1
Percent Solids	88		1.0	1.0	%			08/22/15 14:09	1

Client Sample Results

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

Client Sample ID: WC050

Date Collected: 08/21/15 10:15
Date Received: 08/21/15 14:50

Lab Sample ID: 460-100003-15

Matrix: Solid
Percent Solids: 86.4

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	760	U	760	76	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
2,4,6-Trichlorophenol	310	U	310	22	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
2,4-Dichlorophenol	310	U	310	18	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
2,4-Dimethylphenol	760	U	760	170	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
2,4-Dinitrophenol	610	U	610	580	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
2,4-Dinitrotoluene	150	U	150	30	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
2,6-Dinitrotoluene	150	U	150	41	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
2-Chloronaphthalene	760	U	760	17	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
2-Chlorophenol	760	U	760	19	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
2-Methylnaphthalene	760	U	760	17	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
2-Methylphenol	760	U	760	33	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
2-Nitroaniline	760	U	760	25	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
2-Nitrophenol	760	U	760	26	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
3,3'-Dichlorobenzidine	310	U	310	85	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
3-Nitroaniline	760	U	760	23	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
4,6-Dinitro-2-methylphenol	610	U	610	200	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
4-Bromophenyl phenyl ether	760	U	760	24	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
4-Chloro-3-methylphenol	760	U	760	33	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
4-Chloroaniline	760	U	760	20	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
4-Chlorophenyl phenyl ether	760	U	760	23	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
4-Methylphenol	760	U	760	21	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
4-Nitroaniline	760	U	760	29	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
4-Nitrophenol	1500	U	1500	370	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
Acenaphthene	760	U	760	18	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
Acenaphthylene	760	U	760	20	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
Acetophenone	760	U	760	17	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
Anthracene	760	U	760	73	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
Atrazine	310	U *	310	34	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
Benzaldehyde	760	U	760	58	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
Benzo[a]anthracene	76	U	76	64	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
Benzo[a]pyrene	76	U	76	23	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
Benzo[b]fluoranthene	76	U	76	30	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
Benzo[g,h,i]perylene	760	U	760	44	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
Benzo[k]fluoranthene	76	U	76	33	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
Biphenyl	760	U	760	65	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
bis (2-chloroisopropyl) ether	760	U	760	31	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
Bis(2-chloroethoxy)methane	760	U	760	24	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
Bis(2-chloroethyl)ether	76	U	76	18	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
Bis(2-ethylhexyl) phthalate	760	U	760	30	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
Butyl benzyl phthalate	760	U	760	24	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
Caprolactam	760	U	760	55	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
Carbazole	760	U	760	19	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
Chrysene	760	U	760	21	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
Dibenz(a,h)anthracene	76	U	76	40	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
Dibenzofuran	760	U	760	23	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
Diethyl phthalate	760	U	760	22	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
Dimethyl phthalate	760	U	760	22	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
Di-n-butyl phthalate	760	U	760	23	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
Di-n-octyl phthalate	760	U	760	39	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2

Client Sample ID: WC050

Date Collected: 08/21/15 10:15
Date Received: 08/21/15 14:50

Lab Sample ID: 460-100003-15

Matrix: Solid
Percent Solids: 86.4

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	760	U	760	23	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
Fluorene	760	U	760	17	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
Hexachlorobenzene	76	U	76	31	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
Hexachlorobutadiene	150	U	150	21	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
Hexachlorocyclopentadiene	760	U	760	48	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
Hexachloroethane	76	U	76	28	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
Indeno[1,2,3-cd]pyrene	76	U	76	51	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
Isophorone	**11000**		310	16	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
Naphthalene	760	U	760	19	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
Nitrobenzene	76	U	76	24	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
N-Nitrosodi-n-propylamine	76	U	76	26	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
N-Nitrosodiphenylamine	760	U	760	69	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
Pentachlorophenol	610	U	610	92	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
Phenanthrene	760	U	760	20	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
Phenol	760	U	760	25	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2
Pyrene	760	U	760	35	ug/Kg	☼	08/22/15 19:51	08/24/15 11:47	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*86*		*10 - 95*	*08/22/15 19:51*	*08/24/15 11:47*	*2*
2-Fluorobiphenyl	*79*		*27 - 84*	*08/22/15 19:51*	*08/24/15 11:47*	*2*
2-Fluorophenol (Surr)	*76*		*21 - 84*	*08/22/15 19:51*	*08/24/15 11:47*	*2*
Nitrobenzene-d5 (Surr)	*74*		*28 - 92*	*08/22/15 19:51*	*08/24/15 11:47*	*2*
Phenol-d5 (Surr)	*69*		*22 - 88*	*08/22/15 19:51*	*08/24/15 11:47*	*2*
Terphenyl-d14 (Surr)	*110*		*16 - 114*	*08/22/15 19:51*	*08/24/15 11:47*	*2*

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	7.8	U	7.8	1.0	ug/Kg	☼	08/23/15 14:15	08/24/15 11:45	1
4,4'-DDE	7.8	U	7.8	1.1	ug/Kg	☼	08/23/15 14:15	08/24/15 11:45	1
4,4'-DDT	7.8	U	7.8	0.80	ug/Kg	☼	08/23/15 14:15	08/24/15 11:45	1
Aldrin	7.8	U	7.8	0.94	ug/Kg	☼	08/23/15 14:15	08/24/15 11:45	1
alpha-BHC	2.3	U	2.3	0.71	ug/Kg	☼	08/23/15 14:15	08/24/15 11:45	1
alpha-Chlordane	7.8	U	7.8	1.3	ug/Kg	☼	08/23/15 14:15	08/24/15 11:45	1
beta-BHC	2.3	U	2.3	0.75	ug/Kg	☼	08/23/15 14:15	08/24/15 11:45	1
delta-BHC	2.3	U	2.3	0.84	ug/Kg	☼	08/23/15 14:15	08/24/15 11:45	1
Dieldrin	2.3	U	2.3	1.0	ug/Kg	☼	08/23/15 14:15	08/24/15 11:45	1
Endosulfan I	7.8	U	7.8	1.1	ug/Kg	☼	08/23/15 14:15	08/24/15 11:45	1
Endosulfan II	7.8	U	7.8	1.2	ug/Kg	☼	08/23/15 14:15	08/24/15 11:45	1
Endosulfan sulfate	7.8	U	7.8	0.90	ug/Kg	☼	08/23/15 14:15	08/24/15 11:45	1
Endrin	7.8	U	7.8	0.98	ug/Kg	☼	08/23/15 14:15	08/24/15 11:45	1
Endrin aldehyde	7.8	U	7.8	0.96	ug/Kg	☼	08/23/15 14:15	08/24/15 11:45	1
Endrin ketone	7.8	U	7.8	1.1	ug/Kg	☼	08/23/15 14:15	08/24/15 11:45	1
gamma-BHC (Lindane)	2.3	U	2.3	0.69	ug/Kg	☼	08/23/15 14:15	08/24/15 11:45	1
gamma-Chlordane	7.8	U	7.8	1.7	ug/Kg	☼	08/23/15 14:15	08/24/15 11:45	1
Heptachlor	7.8	U	7.8	1.0	ug/Kg	☼	08/23/15 14:15	08/24/15 11:45	1
Heptachlor epoxide	7.8	U	7.8	1.5	ug/Kg	☼	08/23/15 14:15	08/24/15 11:45	1
Methoxychlor	7.8	U	7.8	1.6	ug/Kg	☼	08/23/15 14:15	08/24/15 11:45	1
Toxaphene	78	U	78	23	ug/Kg	☼	08/23/15 14:15	08/24/15 11:45	1

Client Sample Results

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

Client Sample ID: WC050

Date Collected: 08/21/15 10:15
Date Received: 08/21/15 14:50

Lab Sample ID: 460-100003-15

Matrix: Solid
Percent Solids: 86.4

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	91		55 - 148	08/23/15 14:15	08/24/15 11:45	1
DCB Decachlorobiphenyl	91		55 - 148	08/23/15 14:15	08/24/15 11:45	1
Tetrachloro-m-xylene	102		55 - 139	08/23/15 14:15	08/24/15 11:45	1
Tetrachloro-m-xylene	93		55 - 139	08/23/15 14:15	08/24/15 11:45	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	78	U	78	10	ug/Kg	☼	08/23/15 14:45	08/24/15 11:47	1
PCB-1221	78	U	78	10	ug/Kg	☼	08/23/15 14:45	08/24/15 11:47	1
PCB-1232	78	U	78	10	ug/Kg	☼	08/23/15 14:45	08/24/15 11:47	1
PCB-1242	78	U	78	10	ug/Kg	☼	08/23/15 14:45	08/24/15 11:47	1
PCB-1248	78	U	78	10	ug/Kg	☼	08/23/15 14:45	08/24/15 11:47	1
PCB-1254	78	U	78	11	ug/Kg	☼	08/23/15 14:45	08/24/15 11:47	1
PCB-1260	78	U	78	11	ug/Kg	☼	08/23/15 14:45	08/24/15 11:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	93		47 - 150	08/23/15 14:45	08/24/15 11:47	1
DCB Decachlorobiphenyl	103		47 - 150	08/23/15 14:45	08/24/15 11:47	1
Tetrachloro-m-xylene	99			08/23/15 14:45	08/24/15 11:47	1
Tetrachloro-m-xylene	92			08/23/15 14:45	08/24/15 11:47	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**6330**		107	55.2	mg/Kg	☼	08/24/15 07:30	08/26/15 11:50	10
Antimony	**25.9**		10.7	4.2	mg/Kg	☼	08/24/15 07:30	08/26/15 11:50	10
Arsenic	**13.4**		8.0	2.6	mg/Kg	☼	08/24/15 07:30	08/26/15 11:50	10
Barium	**39.4**	**J**	107	3.8	mg/Kg	☼	08/24/15 07:30	08/26/15 11:50	10
Beryllium	1.1	U	1.1	0.91	mg/Kg	☼	08/24/15 07:30	08/26/15 11:50	10
Cadmium	2.1	U	2.1	1.1	mg/Kg	☼	08/24/15 07:30	08/26/15 11:50	10
Calcium	**112000**		2680	159	mg/Kg	☼	08/24/15 07:30	08/26/15 11:50	10
Chromium	**8.0**		5.4	2.6	mg/Kg	☼	08/24/15 07:30	08/26/15 11:50	10
Cobalt	**8.1**	**J**	26.8	3.1	mg/Kg	☼	08/24/15 07:30	08/26/15 11:50	10
Copper	**46.7**		13.4	3.5	mg/Kg	☼	08/24/15 07:30	08/26/15 11:50	10
Iron	**8290**		80.4	60.6	mg/Kg	☼	08/24/15 07:30	08/26/15 11:50	10
Lead	**20.3**		5.4	2.1	mg/Kg	☼	08/24/15 07:30	08/26/15 11:50	10
Magnesium	**32700**		2680	134	mg/Kg	☼	08/24/15 07:30	08/26/15 11:50	10
Manganese	**214**		8.0	2.8	mg/Kg	☼	08/24/15 07:30	08/26/15 11:50	10
Nickel	**12.1**	**J**	21.4	3.9	mg/Kg	☼	08/24/15 07:30	08/26/15 11:50	10
Potassium	**388**	**J**	2680	81.2	mg/Kg	☼	08/24/15 07:30	08/26/15 11:50	10
Selenium	10.7	U	10.7	3.7	mg/Kg	☼	08/24/15 07:30	08/26/15 11:50	10
Silver	5.4	U	5.4	0.95	mg/Kg	☼	08/24/15 07:30	08/26/15 11:50	10
Sodium	2680	U	2680	181	mg/Kg	☼	08/24/15 07:30	08/26/15 11:50	10
Thallium	10.7	U	10.7	4.7	mg/Kg	☼	08/24/15 07:30	08/26/15 11:50	10
Vanadium	**12.1**	**J**	26.8	2.7	mg/Kg	☼	08/24/15 07:30	08/26/15 11:50	10
Zinc	**95.0**		16.1	3.9	mg/Kg	☼	08/24/15 07:30	08/26/15 11:50	10

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.17**		0.020	0.014	mg/Kg	☼	08/25/15 05:18	08/25/15 10:48	1

Client Sample Results

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

Client Sample ID: WC050

Date Collected: 08/21/15 10:15
Date Received: 08/21/15 14:50

Lab Sample ID: 460-100003-15

Matrix: Solid
Percent Solids: 86.4

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	14		1.0	1.0	%			08/22/15 14:09	1
Percent Solids	86		1.0	1.0	%			08/22/15 14:09	1

Client Sample Results

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

Client Sample ID: TB

Date Collected: 08/21/15 00:00
Date Received: 08/21/15 14:50

Lab Sample ID: 460-100003-16

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.28	ug/L			08/24/15 13:11	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.19	ug/L			08/24/15 13:11	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.34	ug/L			08/24/15 13:11	1
1,1,2-Trichloroethane	1.0	U	1.0	0.080	ug/L			08/24/15 13:11	1
1,1-Dichloroethane	1.0	U	1.0	0.24	ug/L			08/24/15 13:11	1
1,1-Dichloroethene	1.0	U	1.0	0.34	ug/L			08/24/15 13:11	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			08/24/15 13:11	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.23	ug/L			08/24/15 13:11	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.23	ug/L			08/24/15 13:11	1
1,2-Dibromoethane	1.0	U	1.0	0.19	ug/L			08/24/15 13:11	1
1,2-Dichlorobenzene	1.0	U	1.0	0.22	ug/L			08/24/15 13:11	1
1,2-Dichloroethane	1.0	U	1.0	0.25	ug/L			08/24/15 13:11	1
1,2-Dichloropropane	1.0	U	1.0	0.18	ug/L			08/24/15 13:11	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.25	ug/L			08/24/15 13:11	1
1,3-Dichlorobenzene	1.0	U	1.0	0.33	ug/L			08/24/15 13:11	1
1,4-Dichlorobenzene	1.0	U	1.0	0.33	ug/L			08/24/15 13:11	1
1,4-Dioxane	50	U	50	8.7	ug/L			08/24/15 13:11	1
2-Butanone (MEK)	5.0	U	5.0	2.2	ug/L			08/24/15 13:11	1
2-Hexanone	5.0	U	5.0	0.72	ug/L			08/24/15 13:11	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.63	ug/L			08/24/15 13:11	1
Acetone	5.0	U	5.0	1.1	ug/L			08/24/15 13:11	1
Benzene	1.0	U	1.0	0.090	ug/L			08/24/15 13:11	1
Bromodichloromethane	1.0	U	1.0	0.15	ug/L			08/24/15 13:11	1
Bromoform	1.0	U	1.0	0.18	ug/L			08/24/15 13:11	1
Bromomethane	1.0	U	1.0	0.18	ug/L			08/24/15 13:11	1
Carbon disulfide	1.0	U	1.0	0.22	ug/L			08/24/15 13:11	1
Carbon tetrachloride	1.0	U	1.0	0.33	ug/L			08/24/15 13:11	1
Chlorobenzene	1.0	U	1.0	0.24	ug/L			08/24/15 13:11	1
Chloroethane	1.0	U	1.0	0.37	ug/L			08/24/15 13:11	1
Chloroform	1.0	U	1.0	0.22	ug/L			08/24/15 13:11	1
Chloromethane	1.0	U	1.0	0.22	ug/L			08/24/15 13:11	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.26	ug/L			08/24/15 13:11	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.16	ug/L			08/24/15 13:11	1
Cyclohexane	1.0	U	1.0	0.26	ug/L			08/24/15 13:11	1
Dibromochloromethane	1.0	U	1.0	0.22	ug/L			08/24/15 13:11	1
Dichlorodifluoromethane	1.0	U	1.0	0.14	ug/L			08/24/15 13:11	1
Ethylbenzene	1.0	U	1.0	0.30	ug/L			08/24/15 13:11	1
Isopropylbenzene	1.0	U	1.0	0.32	ug/L			08/24/15 13:11	1
Methyl acetate	5.0	U	5.0	0.58	ug/L			08/24/15 13:11	1
Methyl tert-butyl ether	1.0	U	1.0	0.13	ug/L			08/24/15 13:11	1
Methylcyclohexane	1.0	U	1.0	0.22	ug/L			08/24/15 13:11	1
Methylene Chloride	1.0	U	1.0	0.21	ug/L			08/24/15 13:11	1
n-Butylbenzene	1.0	U	1.0	0.27	ug/L			08/24/15 13:11	1
N-Propylbenzene	1.0	U	1.0	0.29	ug/L			08/24/15 13:11	1
sec-Butylbenzene	1.0	U	1.0	0.31	ug/L			08/24/15 13:11	1
Styrene	1.0	U	1.0	0.17	ug/L			08/24/15 13:11	1
tert-Butylbenzene	1.0	U	1.0	0.28	ug/L			08/24/15 13:11	1
Tetrachloroethene	1.0	U	1.0	0.12	ug/L			08/24/15 13:11	1
Toluene	1.0	U	1.0	0.25	ug/L			08/24/15 13:11	1

Client Sample Results

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

Client Sample ID: TB

Date Collected: 08/21/15 00:00
Date Received: 08/21/15 14:50

Lab Sample ID: 460-100003-16

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	1.0	U	1.0	0.18	ug/L			08/24/15 13:11	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.19	ug/L			08/24/15 13:11	1
Trichloroethene	1.0	U	1.0	0.22	ug/L			08/24/15 13:11	1
Trichlorofluoromethane	1.0	U	1.0	0.15	ug/L			08/24/15 13:11	1
Vinyl chloride	1.0	U	1.0	0.060	ug/L			08/24/15 13:11	1
Xylenes, Total	2.0	U	2.0	0.28	ug/L			08/24/15 13:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*82*		*70 - 137*		*08/24/15 13:11*	*1*
4-Bromofluorobenzene	*89*		*70 - 131*		*08/24/15 13:11*	*1*
Dibromofluoromethane (Surr)	*90*		*72 - 136*		*08/24/15 13:11*	*1*
Toluene-d8 (Surr)	*84*		*74 - 120*		*08/24/15 13:11*	*1*

Surrogate Summary

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		12DCE	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(78-135)	(67-126)	(61-149)	(73-121)
460-100003-1	WC036	109	98	99	99
460-100003-2	WC037	107	98	54 X	100
460-100003-3	WC038	112	98	42 X	99
460-100003-4	WC039	106	98	80	101
460-100003-5	WC040	111	97	48 X	99
460-100003-6	WC041	106	99	103	101
460-100003-7	WC042	103	94	30 X	97
460-100003-8	WC043	107	97	36 X	100
460-100003-9	WC044	105	98	28 X	100
460-100003-10	WC045	108	98	72	101
460-100003-11	WC046	109	97	30 X	99
LCS 460-318272/3	Lab Control Sample	105	97	108	102
LCS 460-318348/3	Lab Control Sample	102	96	107	101
LCS 460-318612/3	Lab Control Sample	107	96	112	100
LCSD 460-318272/4	Lab Control Sample Dup	103	95	109	101
LCSD 460-318348/4	Lab Control Sample Dup	104	96	110	100
LCSD 460-318612/4	Lab Control Sample Dup	104	96	111	101
MB 460-318272/7	Method Blank	107	97	109	100
MB 460-318348/7	Method Blank	105	96	111	100
MB 460-318612/7	Method Blank	106	95	114	98

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		12DCE	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(70-137)	(70-131)	(72-136)	(74-120)
460-100003-16	TB	82	89	90	84
LCS 460-318390/3	Lab Control Sample	78	90	90	85
LCSD 460-318390/4	Lab Control Sample Dup	78	89	90	85
MB 460-318390/7	Method Blank	78	90	89	85

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Surrogate Summary

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		TBP	FBP	2FP	NBZ	PHL	TPH
Lab Sample ID	Client Sample ID	(10-95)	(27-84)	(21-84)	(28-92)	(22-88)	(16-114)
460-100003-12	WC047	72	73	71	70	65	106
460-100003-13	WC048	104 X	82	75	76	71	109
460-100003-14	WC049	71	71	70	69	63	97
460-100003-15	WC050	86	79	76	74	69	110
LCS 460-318267/24-A	Lab Control Sample	118 X	98 X	90 X	94 X	82	119 X
LCS 460-318267/2-A	Lab Control Sample	115 X	95 X	87 X	85	78	108
MB 460-318267/1-A	Method Blank	88	74	68	69	64	86

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPH = Terphenyl-d14 (Surr)

Method: 8081B - Organochlorine Pesticides (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCB1	DCB2	TCX1	TCX2
Lab Sample ID	Client Sample ID	(55-148)	(55-148)	(55-139)	(55-139)
460-100003-12	WC047	91	94	103	97
460-100003-13	WC048	88	90	99	90
460-100003-14	WC049	93	95	106	98
460-100003-15	WC050	91	91	102	93
LCS 460-318313/2-A	Lab Control Sample	92	93	104	99
MB 460-318313/1-A	Method Blank	95	96	110	102

Surrogate Legend

DCB = DCB Decachlorobiphenyl
TCX = Tetrachloro-m-xylene

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCB1	DCB2	TCX1	TCX2
Lab Sample ID	Client Sample ID	(47-150)	(47-150)		
460-100003-12	WC047	92	98	103	86
460-100003-13	WC048	107	113	112	101
460-100003-14	WC049	93	103	99	91
460-100003-15	WC050	93	103	99	92
LCS 460-318321/2-A	Lab Control Sample	111	121	118	113
MB 460-318321/1-A	Method Blank	99	110	112	106

Surrogate Legend

DCB = DCB Decachlorobiphenyl
TCX = Tetrachloro-m-xylene

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 460-318272/7
Matrix: Solid
Analysis Batch: 318272

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.38	ug/Kg			08/23/15 08:56	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.17	ug/Kg			08/23/15 08:56	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.44	ug/Kg			08/23/15 08:56	1
1,1,2-Trichloroethane	1.0	U	1.0	0.28	ug/Kg			08/23/15 08:56	1
1,1-Dichloroethane	1.0	U	1.0	0.34	ug/Kg			08/23/15 08:56	1
1,1-Dichloroethene	1.0	U	1.0	0.41	ug/Kg			08/23/15 08:56	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.32	ug/Kg			08/23/15 08:56	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.34	ug/Kg			08/23/15 08:56	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.47	ug/Kg			08/23/15 08:56	1
1,2-Dibromoethane	1.0	U	1.0	0.12	ug/Kg			08/23/15 08:56	1
1,2-Dichlorobenzene	1.0	U	1.0	0.14	ug/Kg			08/23/15 08:56	1
1,2-Dichloroethane	1.0	U	1.0	0.11	ug/Kg			08/23/15 08:56	1
1,2-Dichloropropane	1.0	U	1.0	0.17	ug/Kg			08/23/15 08:56	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.13	ug/Kg			08/23/15 08:56	1
1,3-Dichlorobenzene	1.0	U	1.0	0.12	ug/Kg			08/23/15 08:56	1
1,4-Dichlorobenzene	1.0	U	1.0	0.13	ug/Kg			08/23/15 08:56	1
1,4-Dioxane	20	U	20	6.4	ug/Kg			08/23/15 08:56	1
2-Butanone (MEK)	5.0	U	5.0	0.77	ug/Kg			08/23/15 08:56	1
2-Hexanone	5.0	U	5.0	0.94	ug/Kg			08/23/15 08:56	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	2.2	ug/Kg			08/23/15 08:56	1
Acetone	5.0	U	5.0	1.1	ug/Kg			08/23/15 08:56	1
Benzene	1.0	U	1.0	0.20	ug/Kg			08/23/15 08:56	1
Bromodichloromethane	1.0	U	1.0	0.38	ug/Kg			08/23/15 08:56	1
Bromoform	1.0	U	1.0	0.13	ug/Kg			08/23/15 08:56	1
Bromomethane	1.0	U	1.0	0.32	ug/Kg			08/23/15 08:56	1
Carbon disulfide	1.0	U	1.0	0.43	ug/Kg			08/23/15 08:56	1
Carbon tetrachloride	1.0	U	1.0	0.43	ug/Kg			08/23/15 08:56	1
Chlorobenzene	1.0	U	1.0	0.14	ug/Kg			08/23/15 08:56	1
Chloroethane	1.0	U	1.0	0.35	ug/Kg			08/23/15 08:56	1
Chloroform	1.0	U	1.0	0.21	ug/Kg			08/23/15 08:56	1
Chloromethane	1.0	U	1.0	0.38	ug/Kg			08/23/15 08:56	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.22	ug/Kg			08/23/15 08:56	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.15	ug/Kg			08/23/15 08:56	1
Cyclohexane	1.0	U	1.0	0.46	ug/Kg			08/23/15 08:56	1
Dibromochloromethane	1.0	U	1.0	0.15	ug/Kg			08/23/15 08:56	1
Dichlorodifluoromethane	1.0	U	1.0	0.32	ug/Kg			08/23/15 08:56	1
Ethylbenzene	1.0	U	1.0	0.18	ug/Kg			08/23/15 08:56	1
Isopropylbenzene	1.0	U	1.0	0.17	ug/Kg			08/23/15 08:56	1
Methyl acetate	5.0	U	5.0	0.90	ug/Kg			08/23/15 08:56	1
Methyl tert-butyl ether	1.0	U	1.0	0.17	ug/Kg			08/23/15 08:56	1
Methylcyclohexane	1.0	U	1.0	0.50	ug/Kg			08/23/15 08:56	1
Methylene Chloride	1.0	U	1.0	0.32	ug/Kg			08/23/15 08:56	1
n-Butylbenzene	1.0	U	1.0	0.21	ug/Kg			08/23/15 08:56	1
N-Propylbenzene	1.0	U	1.0	0.18	ug/Kg			08/23/15 08:56	1
sec-Butylbenzene	1.0	U	1.0	0.17	ug/Kg			08/23/15 08:56	1
Styrene	1.0	U	1.0	0.15	ug/Kg			08/23/15 08:56	1
tert-Butylbenzene	1.0	U	1.0	0.34	ug/Kg			08/23/15 08:56	1
Tetrachloroethene	1.0	U	1.0	0.28	ug/Kg			08/23/15 08:56	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 460-318272/7
Matrix: Solid
Analysis Batch: 318272

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	1.0	U	1.0	0.19	ug/Kg			08/23/15 08:56	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.39	ug/Kg			08/23/15 08:56	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.10	ug/Kg			08/23/15 08:56	1
Trichloroethene	1.0	U	1.0	0.26	ug/Kg			08/23/15 08:56	1
Trichlorofluoromethane	1.0	U	1.0	0.34	ug/Kg			08/23/15 08:56	1
Vinyl chloride	1.0	U	1.0	0.39	ug/Kg			08/23/15 08:56	1
Xylenes, Total	2.0	U	2.0	0.11	ug/Kg			08/23/15 08:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*78 - 135*		*08/23/15 08:56*	*1*
4-Bromofluorobenzene	*97*		*67 - 126*		*08/23/15 08:56*	*1*
Dibromofluoromethane (Surr)	*109*		*61 - 149*		*08/23/15 08:56*	*1*
Toluene-d8 (Surr)	*100*		*73 - 121*		*08/23/15 08:56*	*1*

Lab Sample ID: LCS 460-318272/3
Matrix: Solid
Analysis Batch: 318272

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	20.0	20.8		ug/Kg		104	78 - 139
1,1,2,2-Tetrachloroethane	20.0	18.8		ug/Kg		94	64 - 128
1,1,2-Trichloro-1,2,2-trifluoroetha ne	20.0	23.1		ug/Kg		116	83 - 136
1,1,2-Trichloroethane	20.0	20.3		ug/Kg		102	76 - 118
1,1-Dichloroethane	20.0	23.0		ug/Kg		115	83 - 131
1,1-Dichloroethene	20.0	22.7		ug/Kg		113	80 - 120
1,2,4-Trichlorobenzene	20.0	18.9		ug/Kg		95	77 - 116
1,2,4-Trimethylbenzene	20.0	18.5		ug/Kg		93	75 - 119
1,2-Dibromo-3-Chloropropane	20.0	16.9		ug/Kg		85	63 - 131
1,2-Dibromoethane	20.0	18.6		ug/Kg		93	80 - 120
1,2-Dichlorobenzene	20.0	19.3		ug/Kg		97	80 - 120
1,2-Dichloroethane	20.0	21.0		ug/Kg		105	75 - 132
1,2-Dichloropropane	20.0	21.7		ug/Kg		109	77 - 124
1,3,5-Trimethylbenzene	20.0	18.2		ug/Kg		91	76 - 119
1,3-Dichlorobenzene	20.0	19.7		ug/Kg		99	80 - 120
1,4-Dichlorobenzene	20.0	20.0		ug/Kg		100	80 - 120
1,4-Dioxane	400	382		ug/Kg		95	80 - 128
2-Butanone (MEK)	100	97.1		ug/Kg		97	58 - 150
2-Hexanone	100	98.3		ug/Kg		98	75 - 137
4-Methyl-2-pentanone (MIBK)	100	97.0		ug/Kg		97	81 - 121
Acetone	100	114		ug/Kg		114	66 - 150
Benzene	20.0	21.8		ug/Kg		109	78 - 122
Bromodichloromethane	20.0	19.2		ug/Kg		96	76 - 130
Bromoform	20.0	15.1		ug/Kg		75	47 - 150
Bromomethane	20.0	21.6		ug/Kg		108	74 - 125
Carbon disulfide	20.0	21.9		ug/Kg		110	82 - 127
Carbon tetrachloride	20.0	19.8		ug/Kg		99	62 - 150
Chlorobenzene	20.0	19.6		ug/Kg		98	80 - 120

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 460-318272/3
Matrix: Solid
Analysis Batch: 318272

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloroethane	20.0	21.7		ug/Kg		108	63 - 143
Chloroform	20.0	22.2		ug/Kg		111	80 - 120
Chloromethane	20.0	23.0		ug/Kg		115	73 - 130
cis-1,2-Dichloroethene	20.0	21.4		ug/Kg		107	80 - 120
cis-1,3-Dichloropropene	20.0	19.7		ug/Kg		98	75 - 118
Cyclohexane	20.0	21.4		ug/Kg		107	77 - 137
Dibromochloromethane	20.0	16.6		ug/Kg		83	68 - 132
Dichlorodifluoromethane	20.0	20.0		ug/Kg		100	73 - 122
Ethylbenzene	20.0	18.3		ug/Kg		92	80 - 120
Isopropylbenzene	20.0	19.4		ug/Kg		97	80 - 120
Methyl acetate	100	112		ug/Kg		112	66 - 150
Methyl tert-butyl ether	20.0	20.7		ug/Kg		104	80 - 120
Methylcyclohexane	20.0	20.7		ug/Kg		104	84 - 127
Methylene Chloride	20.0	22.4		ug/Kg		112	80 - 120
n-Butylbenzene	20.0	20.1		ug/Kg		101	69 - 131
N-Propylbenzene	20.0	19.6		ug/Kg		98	71 - 126
sec-Butylbenzene	20.0	19.4		ug/Kg		97	73 - 123
Styrene	20.0	18.5		ug/Kg		93	80 - 120
tert-Butylbenzene	20.0	18.9		ug/Kg		95	80 - 120
Tetrachloroethene	20.0	19.1		ug/Kg		96	68 - 130
Toluene	20.0	19.5		ug/Kg		97	80 - 120
trans-1,2-Dichloroethene	20.0	21.8		ug/Kg		109	86 - 126
trans-1,3-Dichloropropene	20.0	18.1		ug/Kg		90	73 - 118
Trichloroethene	20.0	21.3		ug/Kg		107	80 - 120
Trichlorofluoromethane	20.0	23.1		ug/Kg		116	73 - 134
Vinyl chloride	20.0	22.3		ug/Kg		112	77 - 130
Xylenes, Total	40.0	37.0		ug/Kg		92	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*105*		*78 - 135*
4-Bromofluorobenzene	*97*		*67 - 126*
Dibromofluoromethane (Surr)	*108*		*61 - 149*
Toluene-d8 (Surr)	*102*		*73 - 121*

Lab Sample ID: LCSD 460-318272/4
Matrix: Solid
Analysis Batch: 318272

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	20.0	20.7		ug/Kg		103	78 - 139	1	30
1,1,2,2-Tetrachloroethane	20.0	16.9		ug/Kg		84	64 - 128	11	30
1,1,2-Trichloro-1,2,2-trifluoroetha ne	20.0	22.5		ug/Kg		112	83 - 136	3	30
1,1,2-Trichloroethane	20.0	19.0		ug/Kg		95	76 - 118	7	30
1,1-Dichloroethane	20.0	23.0		ug/Kg		115	83 - 131	0	30
1,1-Dichloroethene	20.0	22.5		ug/Kg		112	80 - 120	1	30
1,2,4-Trichlorobenzene	20.0	18.1		ug/Kg		90	77 - 116	5	30
1,2,4-Trimethylbenzene	20.0	17.5		ug/Kg		87	75 - 119	6	30

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 460-318272/4
Matrix: Solid
Analysis Batch: 318272

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dibromo-3-Chloropropane	20.0	14.2		ug/Kg		71	63 - 131	17	30
1,2-Dibromoethane	20.0	17.1		ug/Kg		86	80 - 120	8	30
1,2-Dichlorobenzene	20.0	18.1		ug/Kg		91	80 - 120	6	30
1,2-Dichloroethane	20.0	19.6		ug/Kg		98	75 - 132	7	30
1,2-Dichloropropane	20.0	20.6		ug/Kg		103	77 - 124	5	30
1,3,5-Trimethylbenzene	20.0	17.5		ug/Kg		87	76 - 119	4	30
1,3-Dichlorobenzene	20.0	18.7		ug/Kg		94	80 - 120	5	30
1,4-Dichlorobenzene	20.0	18.7		ug/Kg		93	80 - 120	7	30
1,4-Dioxane	400	355		ug/Kg		89	80 - 128	7	30
2-Butanone (MEK)	100	92.7		ug/Kg		93	58 - 150	5	30
2-Hexanone	100	92.3		ug/Kg		92	75 - 137	6	30
4-Methyl-2-pentanone (MIBK)	100	92.7		ug/Kg		93	81 - 121	5	30
Acetone	100	113		ug/Kg		113	66 - 150	1	30
Benzene	20.0	21.6		ug/Kg		108	78 - 122	1	30
Bromodichloromethane	20.0	18.3		ug/Kg		92	76 - 130	4	30
Bromoform	20.0	13.7		ug/Kg		69	47 - 150	9	30
Bromomethane	20.0	22.4		ug/Kg		112	74 - 125	3	30
Carbon disulfide	20.0	22.2		ug/Kg		111	82 - 127	1	30
Carbon tetrachloride	20.0	19.7		ug/Kg		98	62 - 150	1	30
Chlorobenzene	20.0	18.9		ug/Kg		95	80 - 120	4	30
Chloroethane	20.0	22.1		ug/Kg		110	63 - 143	2	30
Chloroform	20.0	22.0		ug/Kg		110	80 - 120	1	30
Chloromethane	20.0	22.9		ug/Kg		115	73 - 130	0	30
cis-1,2-Dichloroethene	20.0	21.5		ug/Kg		107	80 - 120	0	30
cis-1,3-Dichloropropene	20.0	18.4		ug/Kg		92	75 - 118	7	30
Cyclohexane	20.0	21.4		ug/Kg		107	77 - 137	0	30
Dibromochloromethane	20.0	15.8		ug/Kg		79	68 - 132	5	30
Dichlorodifluoromethane	20.0	21.4		ug/Kg		107	73 - 122	6	30
Ethylbenzene	20.0	17.9		ug/Kg		90	80 - 120	2	30
Isopropylbenzene	20.0	19.1		ug/Kg		95	80 - 120	2	30
Methyl acetate	100	101		ug/Kg		101	66 - 150	10	30
Methyl tert-butyl ether	20.0	20.1		ug/Kg		101	80 - 120	3	30
Methylcyclohexane	20.0	20.8		ug/Kg		104	84 - 127	1	30
Methylene Chloride	20.0	22.3		ug/Kg		111	80 - 120	1	30
n-Butylbenzene	20.0	19.2		ug/Kg		96	69 - 131	5	30
N-Propylbenzene	20.0	18.7		ug/Kg		93	71 - 126	5	30
sec-Butylbenzene	20.0	18.3		ug/Kg		92	73 - 123	5	30
Styrene	20.0	17.6		ug/Kg		88	80 - 120	5	30
tert-Butylbenzene	20.0	18.2		ug/Kg		91	80 - 120	4	30
Tetrachloroethene	20.0	18.6		ug/Kg		93	68 - 130	3	30
Toluene	20.0	18.8		ug/Kg		94	80 - 120	3	30
trans-1,2-Dichloroethene	20.0	22.0		ug/Kg		110	86 - 126	1	30
trans-1,3-Dichloropropene	20.0	16.8		ug/Kg		84	73 - 118	8	30
Trichloroethene	20.0	21.1		ug/Kg		105	80 - 120	1	30
Trichlorofluoromethane	20.0	23.3		ug/Kg		117	73 - 134	1	30
Vinyl chloride	20.0	22.3		ug/Kg		112	77 - 130	0	30
Xylenes, Total	40.0	35.6		ug/Kg		89	80 - 120	4	30

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 460-318272/4
Matrix: Solid
Analysis Batch: 318272

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*103*		*78 - 135*
4-Bromofluorobenzene	*95*		*67 - 126*
Dibromofluoromethane (Surr)	*109*		*61 - 149*
Toluene-d8 (Surr)	*101*		*73 - 121*

Lab Sample ID: MB 460-318348/7
Matrix: Solid
Analysis Batch: 318348

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.38	ug/Kg			08/24/15 07:45	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.17	ug/Kg			08/24/15 07:45	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.44	ug/Kg			08/24/15 07:45	1
1,1,2-Trichloroethane	1.0	U	1.0	0.28	ug/Kg			08/24/15 07:45	1
1,1-Dichloroethane	1.0	U	1.0	0.34	ug/Kg			08/24/15 07:45	1
1,1-Dichloroethene	1.0	U	1.0	0.41	ug/Kg			08/24/15 07:45	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.32	ug/Kg			08/24/15 07:45	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.34	ug/Kg			08/24/15 07:45	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.47	ug/Kg			08/24/15 07:45	1
1,2-Dibromoethane	1.0	U	1.0	0.12	ug/Kg			08/24/15 07:45	1
1,2-Dichlorobenzene	1.0	U	1.0	0.14	ug/Kg			08/24/15 07:45	1
1,2-Dichloroethane	1.0	U	1.0	0.11	ug/Kg			08/24/15 07:45	1
1,2-Dichloropropane	1.0	U	1.0	0.17	ug/Kg			08/24/15 07:45	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.13	ug/Kg			08/24/15 07:45	1
1,3-Dichlorobenzene	1.0	U	1.0	0.12	ug/Kg			08/24/15 07:45	1
1,4-Dichlorobenzene	1.0	U	1.0	0.13	ug/Kg			08/24/15 07:45	1
1,4-Dioxane	20	U	20	6.4	ug/Kg			08/24/15 07:45	1
2-Butanone (MEK)	5.0	U	5.0	0.77	ug/Kg			08/24/15 07:45	1
2-Hexanone	5.0	U	5.0	0.94	ug/Kg			08/24/15 07:45	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	2.2	ug/Kg			08/24/15 07:45	1
Acetone	5.0	U	5.0	1.1	ug/Kg			08/24/15 07:45	1
Benzene	1.0	U	1.0	0.20	ug/Kg			08/24/15 07:45	1
Bromodichloromethane	1.0	U	1.0	0.38	ug/Kg			08/24/15 07:45	1
Bromoform	1.0	U	1.0	0.13	ug/Kg			08/24/15 07:45	1
Bromomethane	1.0	U	1.0	0.32	ug/Kg			08/24/15 07:45	1
Carbon disulfide	1.0	U	1.0	0.43	ug/Kg			08/24/15 07:45	1
Carbon tetrachloride	1.0	U	1.0	0.43	ug/Kg			08/24/15 07:45	1
Chlorobenzene	1.0	U	1.0	0.14	ug/Kg			08/24/15 07:45	1
Chloroethane	1.0	U	1.0	0.35	ug/Kg			08/24/15 07:45	1
Chloroform	1.0	U	1.0	0.21	ug/Kg			08/24/15 07:45	1
Chloromethane	1.0	U	1.0	0.38	ug/Kg			08/24/15 07:45	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.22	ug/Kg			08/24/15 07:45	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.15	ug/Kg			08/24/15 07:45	1
Cyclohexane	1.0	U	1.0	0.46	ug/Kg			08/24/15 07:45	1
Dibromochloromethane	1.0	U	1.0	0.15	ug/Kg			08/24/15 07:45	1
Dichlorodifluoromethane	1.0	U	1.0	0.32	ug/Kg			08/24/15 07:45	1
Ethylbenzene	1.0	U	1.0	0.18	ug/Kg			08/24/15 07:45	1
Isopropylbenzene	1.0	U	1.0	0.17	ug/Kg			08/24/15 07:45	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 460-318348/7
Matrix: Solid
Analysis Batch: 318348

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl acetate	5.0	U	5.0	0.90	ug/Kg			08/24/15 07:45	1
Methyl tert-butyl ether	1.0	U	1.0	0.17	ug/Kg			08/24/15 07:45	1
Methylcyclohexane	1.0	U	1.0	0.50	ug/Kg			08/24/15 07:45	1
Methylene Chloride	1.0	U	1.0	0.32	ug/Kg			08/24/15 07:45	1
n-Butylbenzene	1.0	U	1.0	0.21	ug/Kg			08/24/15 07:45	1
N-Propylbenzene	1.0	U	1.0	0.18	ug/Kg			08/24/15 07:45	1
sec-Butylbenzene	1.0	U	1.0	0.17	ug/Kg			08/24/15 07:45	1
Styrene	1.0	U	1.0	0.15	ug/Kg			08/24/15 07:45	1
tert-Butylbenzene	1.0	U	1.0	0.34	ug/Kg			08/24/15 07:45	1
Tetrachloroethene	1.0	U	1.0	0.28	ug/Kg			08/24/15 07:45	1
Toluene	1.0	U	1.0	0.19	ug/Kg			08/24/15 07:45	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.39	ug/Kg			08/24/15 07:45	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.10	ug/Kg			08/24/15 07:45	1
Trichloroethene	1.0	U	1.0	0.26	ug/Kg			08/24/15 07:45	1
Trichlorofluoromethane	1.0	U	1.0	0.34	ug/Kg			08/24/15 07:45	1
Vinyl chloride	1.0	U	1.0	0.39	ug/Kg			08/24/15 07:45	1
Xylenes, Total	2.0	U	2.0	0.11	ug/Kg			08/24/15 07:45	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*78 - 135*		*08/24/15 07:45*	*1*
4-Bromofluorobenzene	*96*		*67 - 126*		*08/24/15 07:45*	*1*
Dibromofluoromethane (Surr)	*111*		*61 - 149*		*08/24/15 07:45*	*1*
Toluene-d8 (Surr)	*100*		*73 - 121*		*08/24/15 07:45*	*1*

Lab Sample ID: LCS 460-318348/3
Matrix: Solid
Analysis Batch: 318348

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	20.0	20.4		ug/Kg		102	78 - 139
1,1,2,2-Tetrachloroethane	20.0	17.7		ug/Kg		89	64 - 128
1,1,2-Trichloro-1,2,2-trifluoroetha ne	20.0	22.5		ug/Kg		112	83 - 136
1,1,2-Trichloroethane	20.0	19.0		ug/Kg		95	76 - 118
1,1-Dichloroethane	20.0	22.4		ug/Kg		112	83 - 131
1,1-Dichloroethene	20.0	22.2		ug/Kg		111	80 - 120
1,2,4-Trichlorobenzene	20.0	18.0		ug/Kg		90	77 - 116
1,2,4-Trimethylbenzene	20.0	18.0		ug/Kg		90	75 - 119
1,2-Dibromo-3-Chloropropane	20.0	14.6		ug/Kg		73	63 - 131
1,2-Dibromoethane	20.0	17.7		ug/Kg		89	80 - 120
1,2-Dichlorobenzene	20.0	18.3		ug/Kg		91	80 - 120
1,2-Dichloroethane	20.0	19.9		ug/Kg		100	75 - 132
1,2-Dichloropropane	20.0	20.9		ug/Kg		104	77 - 124
1,3,5-Trimethylbenzene	20.0	17.7		ug/Kg		89	76 - 119
1,3-Dichlorobenzene	20.0	19.0		ug/Kg		95	80 - 120
1,4-Dichlorobenzene	20.0	18.9		ug/Kg		95	80 - 120
1,4-Dioxane	400	364		ug/Kg		91	80 - 128
2-Butanone (MEK)	100	94.5		ug/Kg		95	58 - 150

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 460-318348/3
Matrix: Solid
Analysis Batch: 318348

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Hexanone	100	93.9		ug/Kg		94	75 - 137
4-Methyl-2-pentanone (MIBK)	100	93.9		ug/Kg		94	81 - 121
Acetone	100	107		ug/Kg		107	66 - 150
Benzene	20.0	21.1		ug/Kg		106	78 - 122
Bromodichloromethane	20.0	18.3		ug/Kg		92	76 - 130
Bromoform	20.0	14.0		ug/Kg		70	47 - 150
Bromomethane	20.0	22.4		ug/Kg		112	74 - 125
Carbon disulfide	20.0	21.3		ug/Kg		106	82 - 127
Carbon tetrachloride	20.0	19.5		ug/Kg		97	62 - 150
Chlorobenzene	20.0	19.3		ug/Kg		96	80 - 120
Chloroethane	20.0	21.4		ug/Kg		107	63 - 143
Chloroform	20.0	21.3		ug/Kg		107	80 - 120
Chloromethane	20.0	22.9		ug/Kg		114	73 - 130
cis-1,2-Dichloroethene	20.0	20.9		ug/Kg		105	80 - 120
cis-1,3-Dichloropropene	20.0	18.3		ug/Kg		92	75 - 118
Cyclohexane	20.0	20.8		ug/Kg		104	77 - 137
Dibromochloromethane	20.0	15.8		ug/Kg		79	68 - 132
Dichlorodifluoromethane	20.0	20.3		ug/Kg		102	73 - 122
Ethylbenzene	20.0	18.0		ug/Kg		90	80 - 120
Isopropylbenzene	20.0	19.1		ug/Kg		95	80 - 120
Methyl acetate	100	103		ug/Kg		103	66 - 150
Methyl tert-butyl ether	20.0	19.4		ug/Kg		97	80 - 120
Methylcyclohexane	20.0	20.5		ug/Kg		102	84 - 127
Methylene Chloride	20.0	20.9		ug/Kg		105	80 - 120
n-Butylbenzene	20.0	19.4		ug/Kg		97	69 - 131
N-Propylbenzene	20.0	19.2		ug/Kg		96	71 - 126
sec-Butylbenzene	20.0	18.7		ug/Kg		94	73 - 123
Styrene	20.0	17.7		ug/Kg		89	80 - 120
tert-Butylbenzene	20.0	18.5		ug/Kg		92	80 - 120
Tetrachloroethene	20.0	19.0		ug/Kg		95	68 - 130
Toluene	20.0	19.1		ug/Kg		96	80 - 120
trans-1,2-Dichloroethene	20.0	21.9		ug/Kg		109	86 - 126
trans-1,3-Dichloropropene	20.0	16.6		ug/Kg		83	73 - 118
Trichloroethene	20.0	21.0		ug/Kg		105	80 - 120
Trichlorofluoromethane	20.0	23.7		ug/Kg		118	73 - 134
Vinyl chloride	20.0	22.8		ug/Kg		114	77 - 130
Xylenes, Total	40.0	35.9		ug/Kg		90	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*102*		*78 - 135*
4-Bromofluorobenzene	*96*		*67 - 126*
Dibromofluoromethane (Surr)	*107*		*61 - 149*
Toluene-d8 (Surr)	*101*		*73 - 121*

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 460-318348/4
Matrix: Solid
Analysis Batch: 318348

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	20.0	21.0		ug/Kg		105	78 - 139	3	30
1,1,2,2-Tetrachloroethane	20.0	17.4		ug/Kg		87	64 - 128	2	30
1,1,2-Trichloro-1,2,2-trifluoroethane	20.0	23.3		ug/Kg		117	83 - 136	4	30
1,1,2-Trichloroethane	20.0	19.3		ug/Kg		96	76 - 118	1	30
1,1-Dichloroethane	20.0	23.0		ug/Kg		115	83 - 131	3	30
1,1-Dichloroethene	20.0	23.4		ug/Kg		117	80 - 120	5	30
1,2,4-Trichlorobenzene	20.0	17.7		ug/Kg		89	77 - 116	1	30
1,2,4-Trimethylbenzene	20.0	17.6		ug/Kg		88	75 - 119	2	30
1,2-Dibromo-3-Chloropropane	20.0	15.1		ug/Kg		75	63 - 131	3	30
1,2-Dibromoethane	20.0	17.6		ug/Kg		88	80 - 120	0	30
1,2-Dichlorobenzene	20.0	18.2		ug/Kg		91	80 - 120	1	30
1,2-Dichloroethane	20.0	20.6		ug/Kg		103	75 - 132	3	30
1,2-Dichloropropane	20.0	21.1		ug/Kg		106	77 - 124	1	30
1,3,5-Trimethylbenzene	20.0	17.5		ug/Kg		87	76 - 119	2	30
1,3-Dichlorobenzene	20.0	18.9		ug/Kg		94	80 - 120	1	30
1,4-Dichlorobenzene	20.0	19.2		ug/Kg		96	80 - 120	1	30
1,4-Dioxane	400	365		ug/Kg		91	80 - 128	0	30
2-Butanone (MEK)	100	95.5		ug/Kg		95	58 - 150	1	30
2-Hexanone	100	95.3		ug/Kg		95	75 - 137	1	30
4-Methyl-2-pentanone (MIBK)	100	93.6		ug/Kg		94	81 - 121	0	30
Acetone	100	112		ug/Kg		112	66 - 150	5	30
Benzene	20.0	21.4		ug/Kg		107	78 - 122	1	30
Bromodichloromethane	20.0	18.5		ug/Kg		92	76 - 130	1	30
Bromoform	20.0	14.0		ug/Kg		70	47 - 150	0	30
Bromomethane	20.0	22.1		ug/Kg		110	74 - 125	1	30
Carbon disulfide	20.0	22.3		ug/Kg		111	82 - 127	5	30
Carbon tetrachloride	20.0	20.0		ug/Kg		100	62 - 150	3	30
Chlorobenzene	20.0	19.1		ug/Kg		95	80 - 120	1	30
Chloroethane	20.0	21.8		ug/Kg		109	63 - 143	2	30
Chloroform	20.0	22.1		ug/Kg		110	80 - 120	3	30
Chloromethane	20.0	23.0		ug/Kg		115	73 - 130	0	30
cis-1,2-Dichloroethene	20.0	21.7		ug/Kg		109	80 - 120	4	30
cis-1,3-Dichloropropene	20.0	18.3		ug/Kg		92	75 - 118	0	30
Cyclohexane	20.0	21.3		ug/Kg		107	77 - 137	2	30
Dibromochloromethane	20.0	16.0		ug/Kg		80	68 - 132	1	30
Dichlorodifluoromethane	20.0	20.8		ug/Kg		104	73 - 122	2	30
Ethylbenzene	20.0	17.8		ug/Kg		89	80 - 120	1	30
Isopropylbenzene	20.0	18.4		ug/Kg		92	80 - 120	3	30
Methyl acetate	100	105		ug/Kg		105	66 - 150	2	30
Methyl tert-butyl ether	20.0	20.9		ug/Kg		104	80 - 120	7	30
Methylcyclohexane	20.0	21.1		ug/Kg		106	84 - 127	3	30
Methylene Chloride	20.0	22.9		ug/Kg		115	80 - 120	9	30
n-Butylbenzene	20.0	19.0		ug/Kg		95	69 - 131	2	30
N-Propylbenzene	20.0	18.7		ug/Kg		93	71 - 126	2	30
sec-Butylbenzene	20.0	18.4		ug/Kg		92	73 - 123	2	30
Styrene	20.0	17.7		ug/Kg		88	80 - 120	0	30
tert-Butylbenzene	20.0	18.2		ug/Kg		91	80 - 120	1	30

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 460-318348/4
Matrix: Solid
Analysis Batch: 318348

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Tetrachloroethene			20.0	18.6		ug/Kg		93	68 - 130	2	30
Toluene			20.0	18.6		ug/Kg		93	80 - 120	3	30
trans-1,2-Dichloroethene			20.0	22.0		ug/Kg		110	86 - 126	0	30
trans-1,3-Dichloropropene			20.0	17.4		ug/Kg		87	73 - 118	4	30
Trichloroethene			20.0	21.1		ug/Kg		105	80 - 120	1	30
Trichlorofluoromethane			20.0	24.1		ug/Kg		120	73 - 134	2	30
Vinyl chloride			20.0	22.5		ug/Kg		112	77 - 130	1	30
Xylenes, Total			40.0	35.1		ug/Kg		88	80 - 120	2	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*104*		*78 - 135*
4-Bromofluorobenzene	*96*		*67 - 126*
Dibromofluoromethane (Surr)	*110*		*61 - 149*
Toluene-d8 (Surr)	*100*		*73 - 121*

Lab Sample ID: MB 460-318390/7
Matrix: Water
Analysis Batch: 318390

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.28	ug/L			08/24/15 09:41	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.19	ug/L			08/24/15 09:41	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.34	ug/L			08/24/15 09:41	1
1,1,2-Trichloroethane	1.0	U	1.0	0.080	ug/L			08/24/15 09:41	1
1,1-Dichloroethane	1.0	U	1.0	0.24	ug/L			08/24/15 09:41	1
1,1-Dichloroethene	1.0	U	1.0	0.34	ug/L			08/24/15 09:41	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			08/24/15 09:41	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.23	ug/L			08/24/15 09:41	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.23	ug/L			08/24/15 09:41	1
1,2-Dibromoethane	1.0	U	1.0	0.19	ug/L			08/24/15 09:41	1
1,2-Dichlorobenzene	1.0	U	1.0	0.22	ug/L			08/24/15 09:41	1
1,2-Dichloroethane	1.0	U	1.0	0.25	ug/L			08/24/15 09:41	1
1,2-Dichloropropane	1.0	U	1.0	0.18	ug/L			08/24/15 09:41	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.25	ug/L			08/24/15 09:41	1
1,3-Dichlorobenzene	1.0	U	1.0	0.33	ug/L			08/24/15 09:41	1
1,4-Dichlorobenzene	1.0	U	1.0	0.33	ug/L			08/24/15 09:41	1
1,4-Dioxane	50	U	50	8.7	ug/L			08/24/15 09:41	1
2-Butanone (MEK)	5.0	U	5.0	2.2	ug/L			08/24/15 09:41	1
2-Hexanone	5.0	U	5.0	0.72	ug/L			08/24/15 09:41	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.63	ug/L			08/24/15 09:41	1
Acetone	5.0	U	5.0	1.1	ug/L			08/24/15 09:41	1
Benzene	1.0	U	1.0	0.090	ug/L			08/24/15 09:41	1
Bromodichloromethane	1.0	U	1.0	0.15	ug/L			08/24/15 09:41	1
Bromoform	1.0	U	1.0	0.18	ug/L			08/24/15 09:41	1
Bromomethane	1.0	U	1.0	0.18	ug/L			08/24/15 09:41	1
Carbon disulfide	1.0	U	1.0	0.22	ug/L			08/24/15 09:41	1
Carbon tetrachloride	1.0	U	1.0	0.33	ug/L			08/24/15 09:41	1
Chlorobenzene	1.0	U	1.0	0.24	ug/L			08/24/15 09:41	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 460-318390/7
Matrix: Water
Analysis Batch: 318390

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	1.0	U	1.0	0.37	ug/L			08/24/15 09:41	1
Chloroform	1.0	U	1.0	0.22	ug/L			08/24/15 09:41	1
Chloromethane	1.0	U	1.0	0.22	ug/L			08/24/15 09:41	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.26	ug/L			08/24/15 09:41	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.16	ug/L			08/24/15 09:41	1
Cyclohexane	1.0	U	1.0	0.26	ug/L			08/24/15 09:41	1
Dibromochloromethane	1.0	U	1.0	0.22	ug/L			08/24/15 09:41	1
Dichlorodifluoromethane	1.0	U	1.0	0.14	ug/L			08/24/15 09:41	1
Ethylbenzene	1.0	U	1.0	0.30	ug/L			08/24/15 09:41	1
Isopropylbenzene	1.0	U	1.0	0.32	ug/L			08/24/15 09:41	1
Methyl acetate	5.0	U	5.0	0.58	ug/L			08/24/15 09:41	1
Methyl tert-butyl ether	1.0	U	1.0	0.13	ug/L			08/24/15 09:41	1
Methylcyclohexane	1.0	U	1.0	0.22	ug/L			08/24/15 09:41	1
Methylene Chloride	1.0	U	1.0	0.21	ug/L			08/24/15 09:41	1
n-Butylbenzene	1.0	U	1.0	0.27	ug/L			08/24/15 09:41	1
N-Propylbenzene	1.0	U	1.0	0.29	ug/L			08/24/15 09:41	1
sec-Butylbenzene	1.0	U	1.0	0.31	ug/L			08/24/15 09:41	1
Styrene	1.0	U	1.0	0.17	ug/L			08/24/15 09:41	1
tert-Butylbenzene	1.0	U	1.0	0.28	ug/L			08/24/15 09:41	1
Tetrachloroethene	1.0	U	1.0	0.12	ug/L			08/24/15 09:41	1
Toluene	1.0	U	1.0	0.25	ug/L			08/24/15 09:41	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.18	ug/L			08/24/15 09:41	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.19	ug/L			08/24/15 09:41	1
Trichloroethene	1.0	U	1.0	0.22	ug/L			08/24/15 09:41	1
Trichlorofluoromethane	1.0	U	1.0	0.15	ug/L			08/24/15 09:41	1
Vinyl chloride	1.0	U	1.0	0.060	ug/L			08/24/15 09:41	1
Xylenes, Total	2.0	U	2.0	0.28	ug/L			08/24/15 09:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*78*		*70 - 137*		*08/24/15 09:41*	*1*
4-Bromofluorobenzene	*90*		*70 - 131*		*08/24/15 09:41*	*1*
Dibromofluoromethane (Surr)	*89*		*72 - 136*		*08/24/15 09:41*	*1*
Toluene-d8 (Surr)	*85*		*74 - 120*		*08/24/15 09:41*	*1*

Lab Sample ID: LCS 460-318390/3
Matrix: Water
Analysis Batch: 318390

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	20.0	19.5		ug/L		97	76 - 131
1,1,2,2-Tetrachloroethane	20.0	19.7		ug/L		99	65 - 128
1,1,2-Trichloro-1,2,2-trifluoroetha ne	20.0	18.0		ug/L		90	53 - 149
1,1,2-Trichloroethane	20.0	20.0		ug/L		100	77 - 122
1,1-Dichloroethane	20.0	18.7		ug/L		94	77 - 129
1,1-Dichloroethene	20.0	19.2		ug/L		96	67 - 133
1,2,4-Trichlorobenzene	20.0	22.8		ug/L		114	66 - 137
1,2,4-Trimethylbenzene	20.0	19.5		ug/L		98	74 - 127

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 460-318390/3
Matrix: Water
Analysis Batch: 318390

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromo-3-Chloropropane	20.0	21.0		ug/L		105	55 - 133
1,2-Dibromoethane	20.0	21.5		ug/L		107	80 - 120
1,2-Dichlorobenzene	20.0	20.8		ug/L		104	80 - 121
1,2-Dichloroethane	20.0	19.8		ug/L		99	73 - 131
1,2-Dichloropropane	20.0	20.6		ug/L		103	75 - 129
1,3,5-Trimethylbenzene	20.0	19.0		ug/L		95	68 - 130
1,3-Dichlorobenzene	20.0	20.6		ug/L		103	80 - 120
1,4-Dichlorobenzene	20.0	20.4		ug/L		102	79 - 120
1,4-Dioxane	400	434		ug/L		109	65 - 150
2-Butanone (MEK)	100	108		ug/L		108	56 - 150
2-Hexanone	100	115		ug/L		115	64 - 150
4-Methyl-2-pentanone (MIBK)	100	124		ug/L		124	77 - 130
Acetone	100	93.3		ug/L		93	19 - 150
Benzene	20.0	19.3		ug/L		96	76 - 125
Bromodichloromethane	20.0	21.3		ug/L		106	78 - 127
Bromoform	20.0	24.2		ug/L		121	65 - 124
Bromomethane	20.0	20.7		ug/L		103	10 - 150
Carbon disulfide	20.0	19.4		ug/L		97	69 - 131
Carbon tetrachloride	20.0	20.4		ug/L		102	71 - 138
Chlorobenzene	20.0	20.5		ug/L		102	80 - 120
Chloroethane	20.0	20.9		ug/L		105	40 - 150
Chloroform	20.0	20.9		ug/L		104	81 - 127
Chloromethane	20.0	21.4		ug/L		107	45 - 150
cis-1,2-Dichloroethene	20.0	21.9		ug/L		109	82 - 127
cis-1,3-Dichloropropene	20.0	21.6		ug/L		108	72 - 125
Cyclohexane	20.0	17.0		ug/L		85	51 - 147
Dibromochloromethane	20.0	22.8		ug/L		114	78 - 120
Dichlorodifluoromethane	20.0	18.1		ug/L		91	32 - 150
Ethylbenzene	20.0	20.1		ug/L		100	80 - 120
Isopropylbenzene	20.0	21.2		ug/L		106	80 - 127
Methyl acetate	100	98.3		ug/L		98	63 - 150
Methyl tert-butyl ether	20.0	21.5		ug/L		108	78 - 129
Methylcyclohexane	20.0	18.7		ug/L		94	52 - 142
Methylene Chloride	20.0	20.8		ug/L		104	80 - 126
n-Butylbenzene	20.0	18.3		ug/L		92	66 - 139
N-Propylbenzene	20.0	18.9		ug/L		95	70 - 133
sec-Butylbenzene	20.0	18.8		ug/L		94	70 - 132
Styrene	20.0	20.6		ug/L		103	75 - 124
tert-Butylbenzene	20.0	19.1		ug/L		95	70 - 127
Tetrachloroethene	20.0	21.3		ug/L		107	71 - 132
Toluene	20.0	20.2		ug/L		101	80 - 120
trans-1,2-Dichloroethene	20.0	21.3		ug/L		107	78 - 127
trans-1,3-Dichloropropene	20.0	23.1		ug/L		116	69 - 125
Trichloroethene	20.0	20.0		ug/L		100	77 - 127
Trichlorofluoromethane	20.0	20.7		ug/L		103	50 - 150
Vinyl chloride	20.0	21.2		ug/L		106	53 - 142
Xylenes, Total	40.0	41.5		ug/L		104	80 - 120

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 460-318390/3
Matrix: Water
Analysis Batch: 318390

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*78*		*70 - 137*
4-Bromofluorobenzene	*90*		*70 - 131*
Dibromofluoromethane (Surr)	*90*		*72 - 136*
Toluene-d8 (Surr)	*85*		*74 - 120*

Lab Sample ID: LCSD 460-318390/4
Matrix: Water
Analysis Batch: 318390

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	20.0	18.4		ug/L		92	76 - 131	5	30
1,1,2,2-Tetrachloroethane	20.0	17.4		ug/L		87	65 - 128	13	30
1,1,2-Trichloro-1,2,2-trifluoroethane	20.0	17.2		ug/L		86	53 - 149	5	30
1,1,2-Trichloroethane	20.0	17.9		ug/L		90	77 - 122	11	30
1,1-Dichloroethane	20.0	17.6		ug/L		88	77 - 129	6	30
1,1-Dichloroethene	20.0	17.4		ug/L		87	67 - 133	10	30
1,2,4-Trichlorobenzene	20.0	20.9		ug/L		105	66 - 137	8	30
1,2,4-Trimethylbenzene	20.0	17.6		ug/L		88	74 - 127	10	30
1,2-Dibromo-3-Chloropropane	20.0	19.9		ug/L		99	55 - 133	6	30
1,2-Dibromoethane	20.0	19.2		ug/L		96	80 - 120	11	30
1,2-Dichlorobenzene	20.0	18.7		ug/L		94	80 - 121	11	30
1,2-Dichloroethane	20.0	17.4		ug/L		87	73 - 131	13	30
1,2-Dichloropropane	20.0	19.2		ug/L		96	75 - 129	7	30
1,3,5-Trimethylbenzene	20.0	17.7		ug/L		89	68 - 130	7	30
1,3-Dichlorobenzene	20.0	18.5		ug/L		93	80 - 120	11	30
1,4-Dichlorobenzene	20.0	18.6		ug/L		93	79 - 120	10	30
1,4-Dioxane	400	406		ug/L		102	65 - 150	7	30
2-Butanone (MEK)	100	100		ug/L		100	56 - 150	7	30
2-Hexanone	100	103		ug/L		103	64 - 150	11	30
4-Methyl-2-pentanone (MIBK)	100	114		ug/L		114	77 - 130	8	30
Acetone	100	83.8		ug/L		84	19 - 150	11	30
Benzene	20.0	17.5		ug/L		88	76 - 125	9	30
Bromodichloromethane	20.0	19.2		ug/L		96	78 - 127	10	30
Bromoform	20.0	21.3		ug/L		107	65 - 124	13	30
Bromomethane	20.0	17.4		ug/L		87	10 - 150	17	30
Carbon disulfide	20.0	18.4		ug/L		92	69 - 131	5	30
Carbon tetrachloride	20.0	19.2		ug/L		96	71 - 138	6	30
Chlorobenzene	20.0	18.5		ug/L		92	80 - 120	10	30
Chloroethane	20.0	18.1		ug/L		90	40 - 150	15	30
Chloroform	20.0	18.7		ug/L		93	81 - 127	11	30
Chloromethane	20.0	19.9		ug/L		99	45 - 150	7	30
cis-1,2-Dichloroethene	20.0	19.6		ug/L		98	82 - 127	11	30
cis-1,3-Dichloropropene	20.0	19.2		ug/L		96	72 - 125	12	30
Cyclohexane	20.0	16.4		ug/L		82	51 - 147	4	30
Dibromochloromethane	20.0	20.3		ug/L		101	78 - 120	12	30
Dichlorodifluoromethane	20.0	16.2		ug/L		81	32 - 150	11	30
Ethylbenzene	20.0	18.3		ug/L		92	80 - 120	9	30

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 460-318390/4
Matrix: Water
Analysis Batch: 318390

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Isopropylbenzene			20.0	19.6		ug/L		98	80 - 127	7	30
Methyl acetate			100	87.2		ug/L		87	63 - 150	12	30
Methyl tert-butyl ether			20.0	19.3		ug/L		97	78 - 129	11	30
Methylcyclohexane			20.0	17.7		ug/L		88	52 - 142	6	30
Methylene Chloride			20.0	19.2		ug/L		96	80 - 126	8	30
n-Butylbenzene			20.0	17.0		ug/L		85	66 - 139	8	30
N-Propylbenzene			20.0	17.7		ug/L		89	70 - 133	7	30
sec-Butylbenzene			20.0	17.8		ug/L		89	70 - 132	5	30
Styrene			20.0	18.5		ug/L		93	75 - 124	11	30
tert-Butylbenzene			20.0	17.7		ug/L		89	70 - 127	7	30
Tetrachloroethene			20.0	19.7		ug/L		98	71 - 132	8	30
Toluene			20.0	18.4		ug/L		92	80 - 120	9	30
trans-1,2-Dichloroethene			20.0	19.8		ug/L		99	78 - 127	8	30
trans-1,3-Dichloropropene			20.0	20.6		ug/L		103	69 - 125	11	30
Trichloroethene			20.0	19.3		ug/L		97	77 - 127	3	30
Trichlorofluoromethane			20.0	19.0		ug/L		95	50 - 150	8	30
Vinyl chloride			20.0	19.3		ug/L		96	53 - 142	10	30
Xylenes, Total			40.0	37.7		ug/L		94	80 - 120	10	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*78*		*70 - 137*
4-Bromofluorobenzene	*89*		*70 - 131*
Dibromofluoromethane (Surr)	*90*		*72 - 136*
Toluene-d8 (Surr)	*85*		*74 - 120*

Lab Sample ID: MB 460-318612/7
Matrix: Solid
Analysis Batch: 318612

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.38	ug/Kg			08/25/15 10:04	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.17	ug/Kg			08/25/15 10:04	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.44	ug/Kg			08/25/15 10:04	1
1,1,2-Trichloroethane	1.0	U	1.0	0.28	ug/Kg			08/25/15 10:04	1
1,1-Dichloroethane	1.0	U	1.0	0.34	ug/Kg			08/25/15 10:04	1
1,1-Dichloroethene	1.0	U	1.0	0.41	ug/Kg			08/25/15 10:04	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.32	ug/Kg			08/25/15 10:04	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.34	ug/Kg			08/25/15 10:04	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.47	ug/Kg			08/25/15 10:04	1
1,2-Dibromoethane	1.0	U	1.0	0.12	ug/Kg			08/25/15 10:04	1
1,2-Dichlorobenzene	1.0	U	1.0	0.14	ug/Kg			08/25/15 10:04	1
1,2-Dichloroethane	1.0	U	1.0	0.11	ug/Kg			08/25/15 10:04	1
1,2-Dichloropropane	1.0	U	1.0	0.17	ug/Kg			08/25/15 10:04	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.13	ug/Kg			08/25/15 10:04	1
1,3-Dichlorobenzene	1.0	U	1.0	0.12	ug/Kg			08/25/15 10:04	1
1,4-Dichlorobenzene	1.0	U	1.0	0.13	ug/Kg			08/25/15 10:04	1
1,4-Dioxane	20	U	20	6.4	ug/Kg			08/25/15 10:04	1
2-Butanone (MEK)	5.0	U	5.0	0.77	ug/Kg			08/25/15 10:04	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 460-318612/7
Matrix: Solid
Analysis Batch: 318612

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Hexanone	5.0	U	5.0	0.94	ug/Kg			08/25/15 10:04	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	2.2	ug/Kg			08/25/15 10:04	1
Acetone	5.0	U	5.0	1.1	ug/Kg			08/25/15 10:04	1
Benzene	1.0	U	1.0	0.20	ug/Kg			08/25/15 10:04	1
Bromodichloromethane	1.0	U	1.0	0.38	ug/Kg			08/25/15 10:04	1
Bromoform	1.0	U	1.0	0.13	ug/Kg			08/25/15 10:04	1
Bromomethane	1.0	U	1.0	0.32	ug/Kg			08/25/15 10:04	1
Carbon disulfide	1.0	U	1.0	0.43	ug/Kg			08/25/15 10:04	1
Carbon tetrachloride	1.0	U	1.0	0.43	ug/Kg			08/25/15 10:04	1
Chlorobenzene	1.0	U	1.0	0.14	ug/Kg			08/25/15 10:04	1
Chloroethane	1.0	U	1.0	0.35	ug/Kg			08/25/15 10:04	1
Chloroform	1.0	U	1.0	0.21	ug/Kg			08/25/15 10:04	1
Chloromethane	1.0	U	1.0	0.38	ug/Kg			08/25/15 10:04	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.22	ug/Kg			08/25/15 10:04	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.15	ug/Kg			08/25/15 10:04	1
Cyclohexane	1.0	U	1.0	0.46	ug/Kg			08/25/15 10:04	1
Dibromochloromethane	1.0	U	1.0	0.15	ug/Kg			08/25/15 10:04	1
Dichlorodifluoromethane	1.0	U	1.0	0.32	ug/Kg			08/25/15 10:04	1
Ethylbenzene	1.0	U	1.0	0.18	ug/Kg			08/25/15 10:04	1
Isopropylbenzene	1.0	U	1.0	0.17	ug/Kg			08/25/15 10:04	1
Methyl acetate	5.0	U	5.0	0.90	ug/Kg			08/25/15 10:04	1
Methyl tert-butyl ether	1.0	U	1.0	0.17	ug/Kg			08/25/15 10:04	1
Methylcyclohexane	1.0	U	1.0	0.50	ug/Kg			08/25/15 10:04	1
Methylene Chloride	1.0	U	1.0	0.32	ug/Kg			08/25/15 10:04	1
n-Butylbenzene	1.0	U	1.0	0.21	ug/Kg			08/25/15 10:04	1
N-Propylbenzene	1.0	U	1.0	0.18	ug/Kg			08/25/15 10:04	1
sec-Butylbenzene	1.0	U	1.0	0.17	ug/Kg			08/25/15 10:04	1
Styrene	1.0	U	1.0	0.15	ug/Kg			08/25/15 10:04	1
tert-Butylbenzene	1.0	U	1.0	0.34	ug/Kg			08/25/15 10:04	1
Tetrachloroethene	1.0	U	1.0	0.28	ug/Kg			08/25/15 10:04	1
Toluene	1.0	U	1.0	0.19	ug/Kg			08/25/15 10:04	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.39	ug/Kg			08/25/15 10:04	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.10	ug/Kg			08/25/15 10:04	1
Trichloroethene	1.0	U	1.0	0.26	ug/Kg			08/25/15 10:04	1
Trichlorofluoromethane	1.0	U	1.0	0.34	ug/Kg			08/25/15 10:04	1
Vinyl chloride	1.0	U	1.0	0.39	ug/Kg			08/25/15 10:04	1
Xylenes, Total	2.0	U	2.0	0.11	ug/Kg			08/25/15 10:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*78 - 135*		*08/25/15 10:04*	*1*
4-Bromofluorobenzene	*95*		*67 - 126*		*08/25/15 10:04*	*1*
Dibromofluoromethane (Surr)	*114*		*61 - 149*		*08/25/15 10:04*	*1*
Toluene-d8 (Surr)	*98*		*73 - 121*		*08/25/15 10:04*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 460-318612/3
Matrix: Solid
Analysis Batch: 318612

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	20.0	21.4		ug/Kg		107	78 - 139
1,1,2,2-Tetrachloroethane	20.0	18.5		ug/Kg		93	64 - 128
1,1,2-Trichloro-1,2,2-trifluoroethane	20.0	24.1		ug/Kg		121	83 - 136
1,1,2-Trichloroethane	20.0	20.1		ug/Kg		100	76 - 118
1,1-Dichloroethane	20.0	23.9		ug/Kg		120	83 - 131
1,1-Dichloroethene	20.0	24.0		ug/Kg		120	80 - 120
1,2,4-Trichlorobenzene	20.0	18.4		ug/Kg		92	77 - 116
1,2,4-Trimethylbenzene	20.0	17.7		ug/Kg		89	75 - 119
1,2-Dibromo-3-Chloropropane	20.0	15.9		ug/Kg		80	63 - 131
1,2-Dibromoethane	20.0	18.3		ug/Kg		92	80 - 120
1,2-Dichlorobenzene	20.0	18.9		ug/Kg		95	80 - 120
1,2-Dichloroethane	20.0	21.6		ug/Kg		108	75 - 132
1,2-Dichloropropane	20.0	21.5		ug/Kg		107	77 - 124
1,3,5-Trimethylbenzene	20.0	17.4		ug/Kg		87	76 - 119
1,3-Dichlorobenzene	20.0	19.2		ug/Kg		96	80 - 120
1,4-Dichlorobenzene	20.0	19.5		ug/Kg		98	80 - 120
1,4-Dioxane	400	377		ug/Kg		94	80 - 128
2-Butanone (MEK)	100	97.6		ug/Kg		98	58 - 150
2-Hexanone	100	95.8		ug/Kg		96	75 - 137
4-Methyl-2-pentanone (MIBK)	100	95.8		ug/Kg		96	81 - 121
Acetone	100	107		ug/Kg		107	66 - 150
Benzene	20.0	22.0		ug/Kg		110	78 - 122
Bromodichloromethane	20.0	19.4		ug/Kg		97	76 - 130
Bromoform	20.0	15.3		ug/Kg		76	47 - 150
Bromomethane	20.0	26.7	*	ug/Kg		133	74 - 125
Carbon disulfide	20.0	23.4		ug/Kg		117	82 - 127
Carbon tetrachloride	20.0	20.5		ug/Kg		103	62 - 150
Chlorobenzene	20.0	19.4		ug/Kg		97	80 - 120
Chloroethane	20.0	25.7		ug/Kg		129	63 - 143
Chloroform	20.0	23.2		ug/Kg		116	80 - 120
Chloromethane	20.0	25.8		ug/Kg		129	73 - 130
cis-1,2-Dichloroethene	20.0	22.9		ug/Kg		114	80 - 120
cis-1,3-Dichloropropene	20.0	19.0		ug/Kg		95	75 - 118
Cyclohexane	20.0	22.0		ug/Kg		110	77 - 137
Dibromochloromethane	20.0	17.0		ug/Kg		85	68 - 132
Dichlorodifluoromethane	20.0	23.4		ug/Kg		117	73 - 122
Ethylbenzene	20.0	18.2		ug/Kg		91	80 - 120
Isopropylbenzene	20.0	18.8		ug/Kg		94	80 - 120
Methyl acetate	100	117		ug/Kg		117	66 - 150
Methyl tert-butyl ether	20.0	21.2		ug/Kg		106	80 - 120
Methylcyclohexane	20.0	21.4		ug/Kg		107	84 - 127
Methylene Chloride	20.0	23.9		ug/Kg		120	80 - 120
n-Butylbenzene	20.0	19.3		ug/Kg		96	69 - 131
N-Propylbenzene	20.0	18.6		ug/Kg		93	71 - 126
sec-Butylbenzene	20.0	18.2		ug/Kg		91	73 - 123
Styrene	20.0	18.1		ug/Kg		90	80 - 120
tert-Butylbenzene	20.0	17.9		ug/Kg		89	80 - 120

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 460-318612/3
Matrix: Solid
Analysis Batch: 318612

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Tetrachloroethene	20.0	18.9		ug/Kg		95	68 - 130
Toluene	20.0	19.0		ug/Kg		95	80 - 120
trans-1,2-Dichloroethene	20.0	23.5		ug/Kg		118	86 - 126
trans-1,3-Dichloropropene	20.0	17.4		ug/Kg		87	73 - 118
Trichloroethene	20.0	21.7		ug/Kg		109	80 - 120
Trichlorofluoromethane	20.0	26.9		ug/Kg		134	73 - 134
Vinyl chloride	20.0	25.2		ug/Kg		126	77 - 130
Xylenes, Total	40.0	35.4		ug/Kg		89	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*107*		*78 - 135*
4-Bromofluorobenzene	*96*		*67 - 126*
Dibromofluoromethane (Surr)	*112*		*61 - 149*
Toluene-d8 (Surr)	*100*		*73 - 121*

Lab Sample ID: LCSD 460-318612/4
Matrix: Solid
Analysis Batch: 318612

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	20.0	21.9		ug/Kg		110	78 - 139	2	30
1,1,2,2-Tetrachloroethane	20.0	18.6		ug/Kg		93	64 - 128	1	30
1,1,2-Trichloro-1,2,2-trifluoroetha ne	20.0	24.6		ug/Kg		123	83 - 136	2	30
1,1,2-Trichloroethane	20.0	19.9		ug/Kg		100	76 - 118	1	30
1,1-Dichloroethane	20.0	24.1		ug/Kg		120	83 - 131	1	30
1,1-Dichloroethene	20.0	24.4	*	ug/Kg		122	80 - 120	2	30
1,2,4-Trichlorobenzene	20.0	18.4		ug/Kg		92	77 - 116	0	30
1,2,4-Trimethylbenzene	20.0	17.9		ug/Kg		90	75 - 119	1	30
1,2-Dibromo-3-Chloropropane	20.0	16.7		ug/Kg		84	63 - 131	5	30
1,2-Dibromoethane	20.0	18.6		ug/Kg		93	80 - 120	1	30
1,2-Dichlorobenzene	20.0	19.3		ug/Kg		96	80 - 120	2	30
1,2-Dichloroethane	20.0	21.2		ug/Kg		106	75 - 132	2	30
1,2-Dichloropropane	20.0	21.6		ug/Kg		108	77 - 124	1	30
1,3,5-Trimethylbenzene	20.0	17.7		ug/Kg		88	76 - 119	1	30
1,3-Dichlorobenzene	20.0	19.2		ug/Kg		96	80 - 120	0	30
1,4-Dichlorobenzene	20.0	19.6		ug/Kg		98	80 - 120	1	30
1,4-Dioxane	400	382		ug/Kg		95	80 - 128	1	30
2-Butanone (MEK)	100	98.3		ug/Kg		98	58 - 150	1	30
2-Hexanone	100	100		ug/Kg		100	75 - 137	4	30
4-Methyl-2-pentanone (MIBK)	100	99.3		ug/Kg		99	81 - 121	4	30
Acetone	100	122		ug/Kg		122	66 - 150	13	30
Benzene	20.0	22.2		ug/Kg		111	78 - 122	1	30
Bromodichloromethane	20.0	19.4		ug/Kg		97	76 - 130	0	30
Bromoform	20.0	15.4		ug/Kg		77	47 - 150	1	30
Bromomethane	20.0	27.2	*	ug/Kg		136	74 - 125	2	30
Carbon disulfide	20.0	23.5		ug/Kg		118	82 - 127	1	30
Carbon tetrachloride	20.0	20.7		ug/Kg		103	62 - 150	1	30

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 460-318612/4
Matrix: Solid
Analysis Batch: 318612

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chlorobenzene	20.0	19.6		ug/Kg		98	80 - 120	1	30
Chloroethane	20.0	26.2		ug/Kg		131	63 - 143	2	30
Chloroform	20.0	23.6		ug/Kg		118	80 - 120	2	30
Chloromethane	20.0	26.5	*	ug/Kg		132	73 - 130	2	30
cis-1,2-Dichloroethene	20.0	22.7		ug/Kg		114	80 - 120	1	30
cis-1,3-Dichloropropene	20.0	19.1		ug/Kg		95	75 - 118	0	30
Cyclohexane	20.0	22.3		ug/Kg		112	77 - 137	1	30
Dibromochloromethane	20.0	16.9		ug/Kg		85	68 - 132	1	30
Dichlorodifluoromethane	20.0	23.8		ug/Kg		119	73 - 122	2	30
Ethylbenzene	20.0	18.2		ug/Kg		91	80 - 120	0	30
Isopropylbenzene	20.0	19.2		ug/Kg		96	80 - 120	2	30
Methyl acetate	100	112		ug/Kg		112	66 - 150	4	30
Methyl tert-butyl ether	20.0	21.8		ug/Kg		109	80 - 120	3	30
Methylcyclohexane	20.0	22.0		ug/Kg		110	84 - 127	3	30
Methylene Chloride	20.0	23.5		ug/Kg		118	80 - 120	2	30
n-Butylbenzene	20.0	19.5		ug/Kg		97	69 - 131	1	30
N-Propylbenzene	20.0	18.9		ug/Kg		94	71 - 126	2	30
sec-Butylbenzene	20.0	18.7		ug/Kg		94	73 - 123	3	30
Styrene	20.0	18.2		ug/Kg		91	80 - 120	1	30
tert-Butylbenzene	20.0	18.4		ug/Kg		92	80 - 120	3	30
Tetrachloroethene	20.0	19.2		ug/Kg		96	68 - 130	1	30
Toluene	20.0	19.2		ug/Kg		96	80 - 120	1	30
trans-1,2-Dichloroethene	20.0	23.4		ug/Kg		117	86 - 126	0	30
trans-1,3-Dichloropropene	20.0	17.5		ug/Kg		87	73 - 118	0	30
Trichloroethene	20.0	21.8		ug/Kg		109	80 - 120	1	30
Trichlorofluoromethane	20.0	27.8	*	ug/Kg		139	73 - 134	3	30
Vinyl chloride	20.0	26.1		ug/Kg		130	77 - 130	3	30
Xylenes, Total	40.0	36.3		ug/Kg		91	80 - 120	2	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*104*		*78 - 135*
4-Bromofluorobenzene	*96*		*67 - 126*
Dibromofluoromethane (Surr)	*111*		*61 - 149*
Toluene-d8 (Surr)	*101*		*73 - 121*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 460-318267/1-A
Matrix: Solid
Analysis Batch: 318279

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 318267

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	330	U	330	33	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
2,4,6-Trichlorophenol	130	U	130	9.4	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
2,4-Dichlorophenol	130	U	130	7.8	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
2,4-Dimethylphenol	330	U	330	73	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
2,4-Dinitrophenol	270	U	270	250	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
2,4-Dinitrotoluene	67	U	67	13	ug/Kg		08/22/15 19:51	08/23/15 11:38	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 460-318267/1-A
Matrix: Solid
Analysis Batch: 318279

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 318267

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,6-Dinitrotoluene	67	U	67	18	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
2-Chloronaphthalene	330	U	330	7.5	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
2-Chlorophenol	330	U	330	8.4	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
2-Methylnaphthalene	330	U	330	7.3	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
2-Methylphenol	330	U	330	14	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
2-Nitroaniline	330	U	330	11	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
2-Nitrophenol	330	U	330	11	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
3,3'-Dichlorobenzidine	130	U	130	37	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
3-Nitroaniline	330	U	330	9.8	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
4,6-Dinitro-2-methylphenol	270	U	270	88	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
4-Bromophenyl phenyl ether	330	U	330	10	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
4-Chloro-3-methylphenol	330	U	330	14	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
4-Chloroaniline	330	U	330	8.5	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
4-Chlorophenyl phenyl ether	330	U	330	9.9	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
4-Methylphenol	330	U	330	9.0	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
4-Nitroaniline	330	U	330	13	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
4-Nitrophenol	670	U	670	160	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
Acenaphthene	330	U	330	8.0	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
Acenaphthylene	330	U	330	8.5	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
Acetophenone	330	U	330	7.2	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
Anthracene	330	U	330	31	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
Atrazine	130	U	130	15	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
Benzaldehyde	330	U	330	25	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
Benzo[a]anthracene	33	U	33	28	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
Benzo[a]pyrene	33	U	33	10	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
Benzo[b]fluoranthene	33	U	33	13	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
Benzo[g,h,i]perylene	330	U	330	19	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
Benzo[k]fluoranthene	33	U	33	14	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
Biphenyl	330	U	330	28	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
bis (2-chloroisopropyl) ether	330	U	330	14	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
Bis(2-chloroethoxy)methane	330	U	330	10	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
Bis(2-chloroethyl)ether	33	U	33	7.8	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
Bis(2-ethylhexyl) phthalate	330	U	330	13	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
Butyl benzyl phthalate	330	U	330	10	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
Caprolactam	330	U	330	24	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
Carbazole	330	U	330	8.2	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
Chrysene	330	U	330	9.0	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
Dibenz(a,h)anthracene	33	U	33	17	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
Dibenzofuran	330	U	330	10	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
Diethyl phthalate	330	U	330	9.4	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
Dimethyl phthalate	330	U	330	9.6	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
Di-n-butyl phthalate	330	U	330	9.9	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
Di-n-octyl phthalate	330	U	330	17	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
Fluoranthene	330	U	330	9.8	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
Fluorene	330	U	330	7.2	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
Hexachlorobenzene	33	U	33	13	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
Hexachlorobutadiene	67	U	67	9.3	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
Hexachlorocyclopentadiene	330	U	330	21	ug/Kg		08/22/15 19:51	08/23/15 11:38	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 460-318267/1-A
Matrix: Solid
Analysis Batch: 318279

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 318267

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachloroethane	33	U	33	12	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
Indeno[1,2,3-cd]pyrene	33	U	33	22	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
Isophorone	130	U	130	7.1	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
Naphthalene	330	U	330	8.4	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
Nitrobenzene	33	U	33	10	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
N-Nitrosodi-n-propylamine	33	U	33	11	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
N-Nitrosodiphenylamine	330	U	330	30	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
Pentachlorophenol	270	U	270	40	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
Phenanthrene	330	U	330	8.8	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
Phenol	330	U	330	11	ug/Kg		08/22/15 19:51	08/23/15 11:38	1
Pyrene	330	U	330	15	ug/Kg		08/22/15 19:51	08/23/15 11:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*88*		*10 - 95*	*08/22/15 19:51*	*08/23/15 11:38*	*1*
2-Fluorobiphenyl	*74*		*27 - 84*	*08/22/15 19:51*	*08/23/15 11:38*	*1*
2-Fluorophenol (Surr)	*68*		*21 - 84*	*08/22/15 19:51*	*08/23/15 11:38*	*1*
Nitrobenzene-d5 (Surr)	*69*		*28 - 92*	*08/22/15 19:51*	*08/23/15 11:38*	*1*
Phenol-d5 (Surr)	*64*		*22 - 88*	*08/22/15 19:51*	*08/23/15 11:38*	*1*
Terphenyl-d14 (Surr)	*86*		*16 - 114*	*08/22/15 19:51*	*08/23/15 11:38*	*1*

Lab Sample ID: LCS 460-318267/24-A
Matrix: Solid
Analysis Batch: 318279

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 318267

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Atrazine	6670	7880	*	ug/Kg		118	41 - 116
Benzaldehyde	6670	4910		ug/Kg		74	55 - 116
Caprolactam	6670	8030	E	ug/Kg		120	44 - 129

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*118*	*X*	*10 - 95*
2-Fluorobiphenyl	*98*	*X*	*27 - 84*
2-Fluorophenol (Surr)	*90*	*X*	*21 - 84*
Nitrobenzene-d5 (Surr)	*94*	*X*	*28 - 92*
Phenol-d5 (Surr)	*82*		*22 - 88*
Terphenyl-d14 (Surr)	*119*	*X*	*16 - 114*

Lab Sample ID: LCS 460-318267/2-A
Matrix: Solid
Analysis Batch: 318279

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 318267

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-Trichlorophenol	3330	3170		ug/Kg		95	59 - 105
2,4,6-Trichlorophenol	3330	3260		ug/Kg		98	61 - 107
2,4-Dichlorophenol	3330	2980		ug/Kg		89	59 - 99
2,4-Dimethylphenol	3330	2850		ug/Kg		86	60 - 98
2,4-Dinitrophenol	6670	6370		ug/Kg		96	26 - 137
2,4-Dinitrotoluene	3330	3180		ug/Kg		95	61 - 118

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 460-318267/2-A
Matrix: Solid
Analysis Batch: 318279

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 318267

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,6-Dinitrotoluene	3330	3080		ug/Kg		92	63 - 112
2-Chloronaphthalene	3330	3030		ug/Kg		91	63 - 102
2-Chlorophenol	3330	2640		ug/Kg		79	58 - 95
2-Methylnaphthalene	3330	3020		ug/Kg		91	64 - 102
2-Methylphenol	3330	2610		ug/Kg		78	56 - 99
2-Nitroaniline	3330	3090		ug/Kg		93	46 - 113
2-Nitrophenol	3330	3040		ug/Kg		91	63 - 103
3,3'-Dichlorobenzidine	3330	1930		ug/Kg		58	18 - 92
3-Nitroaniline	3330	2490		ug/Kg		75	23 - 89
4,6-Dinitro-2-methylphenol	6670	6440		ug/Kg		97	51 - 124
4-Bromophenyl phenyl ether	3330	3460		ug/Kg		104	65 - 114
4-Chloro-3-methylphenol	3330	2930		ug/Kg		88	58 - 108
4-Chloroaniline	3330	2080		ug/Kg		62	10 - 82
4-Chlorophenyl phenyl ether	3330	3240		ug/Kg		97	63 - 107
4-Methylphenol	3330	2650		ug/Kg		79	53 - 103
4-Nitroaniline	3330	3170		ug/Kg		95	44 - 109
4-Nitrophenol	6670	6240		ug/Kg		94	45 - 125
Acenaphthene	3330	2940		ug/Kg		88	59 - 102
Acenaphthylene	3330	3060		ug/Kg		92	63 - 102
Acetophenone	3330	2620		ug/Kg		79	56 - 107
Anthracene	3330	3170		ug/Kg		95	66 - 105
Benzo[a]anthracene	3330	3150		ug/Kg		94	65 - 106
Benzo[a]pyrene	3330	3350		ug/Kg		101	68 - 111
Benzo[b]fluoranthene	3330	3270		ug/Kg		98	67 - 116
Benzo[g,h,i]perylene	3330	3470		ug/Kg		104	49 - 124
Benzo[k]fluoranthene	3330	3140		ug/Kg		94	65 - 114
Biphenyl	3330	2970		ug/Kg		89	64 - 103
bis (2-chloroisopropyl) ether	3330	2200		ug/Kg		66	42 - 119
Bis(2-chloroethoxy)methane	3330	2690		ug/Kg		81	61 - 102
Bis(2-chloroethyl)ether	3330	2670		ug/Kg		80	58 - 102
Bis(2-ethylhexyl) phthalate	3330	2690		ug/Kg		81	60 - 125
Butyl benzyl phthalate	3330	2870		ug/Kg		86	62 - 123
Carbazole	3330	3180		ug/Kg		95	62 - 107
Chrysene	3330	3180		ug/Kg		95	64 - 105
Dibenz(a,h)anthracene	3330	3960		ug/Kg		119	54 - 126
Dibenzofuran	3330	3170		ug/Kg		95	62 - 102
Diethyl phthalate	3330	3080		ug/Kg		92	61 - 110
Dimethyl phthalate	3330	3170		ug/Kg		95	64 - 108
Di-n-butyl phthalate	3330	2950		ug/Kg		89	62 - 114
Di-n-octyl phthalate	3330	2680		ug/Kg		80	52 - 137
Fluoranthene	3330	3120		ug/Kg		94	59 - 109
Fluorene	3330	3120		ug/Kg		94	65 - 108
Hexachlorobenzene	3330	3590		ug/Kg		108	65 - 117
Hexachlorobutadiene	3330	3190		ug/Kg		96	60 - 105
Hexachlorocyclopentadiene	3330	3210		ug/Kg		96	37 - 119
Hexachloroethane	3330	2670		ug/Kg		80	60 - 94
Indeno[1,2,3-cd]pyrene	3330	3630		ug/Kg		109	50 - 134
Isophorone	3330	2860		ug/Kg		86	60 - 102

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 460-318267/2-A
Matrix: Solid
Analysis Batch: 318279

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 318267

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Naphthalene	3330	2860		ug/Kg		86	64 - 99
Nitrobenzene	3330	2890		ug/Kg		87	59 - 102
N-Nitrosodi-n-propylamine	3330	2800		ug/Kg		84	56 - 112
Pentachlorophenol	6670	6410		ug/Kg		96	47 - 115
Phenanthrene	3330	3140		ug/Kg		94	66 - 105
Phenol	3330	2540		ug/Kg		76	55 - 99
Pyrene	3330	3220		ug/Kg		97	55 - 126

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*115*	*X*	*10 - 95*
2-Fluorobiphenyl	*95*	*X*	*27 - 84*
2-Fluorophenol (Surr)	*87*	*X*	*21 - 84*
Nitrobenzene-d5 (Surr)	*85*		*28 - 92*
Phenol-d5 (Surr)	*78*		*22 - 88*
Terphenyl-d14 (Surr)	*108*		*16 - 114*

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 460-318313/1-A
Matrix: Solid
Analysis Batch: 318400

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 318313

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	6.7	U	6.7	0.88	ug/Kg		08/23/15 14:15	08/24/15 08:12	1
4,4'-DDE	6.7	U	6.7	0.97	ug/Kg		08/23/15 14:15	08/24/15 08:12	1
4,4'-DDT	6.7	U	6.7	0.69	ug/Kg		08/23/15 14:15	08/24/15 08:12	1
Aldrin	6.7	U	6.7	0.81	ug/Kg		08/23/15 14:15	08/24/15 08:12	1
alpha-BHC	2.0	U	2.0	0.61	ug/Kg		08/23/15 14:15	08/24/15 08:12	1
alpha-Chlordane	6.7	U	6.7	1.1	ug/Kg		08/23/15 14:15	08/24/15 08:12	1
beta-BHC	2.0	U	2.0	0.65	ug/Kg		08/23/15 14:15	08/24/15 08:12	1
delta-BHC	2.0	U	2.0	0.73	ug/Kg		08/23/15 14:15	08/24/15 08:12	1
Dieldrin	2.0	U	2.0	0.87	ug/Kg		08/23/15 14:15	08/24/15 08:12	1
Endosulfan I	6.7	U	6.7	0.93	ug/Kg		08/23/15 14:15	08/24/15 08:12	1
Endosulfan II	6.7	U	6.7	1.1	ug/Kg		08/23/15 14:15	08/24/15 08:12	1
Endosulfan sulfate	6.7	U	6.7	0.78	ug/Kg		08/23/15 14:15	08/24/15 08:12	1
Endrin	6.7	U	6.7	0.85	ug/Kg		08/23/15 14:15	08/24/15 08:12	1
Endrin aldehyde	6.7	U	6.7	0.83	ug/Kg		08/23/15 14:15	08/24/15 08:12	1
Endrin ketone	6.7	U	6.7	0.93	ug/Kg		08/23/15 14:15	08/24/15 08:12	1
gamma-BHC (Lindane)	2.0	U	2.0	0.60	ug/Kg		08/23/15 14:15	08/24/15 08:12	1
gamma-Chlordane	6.7	U	6.7	1.5	ug/Kg		08/23/15 14:15	08/24/15 08:12	1
Heptachlor	6.7	U	6.7	0.86	ug/Kg		08/23/15 14:15	08/24/15 08:12	1
Heptachlor epoxide	6.7	U	6.7	1.3	ug/Kg		08/23/15 14:15	08/24/15 08:12	1
Methoxychlor	6.7	U	6.7	1.4	ug/Kg		08/23/15 14:15	08/24/15 08:12	1
Toxaphene	67	U	67	20	ug/Kg		08/23/15 14:15	08/24/15 08:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*95*		*55 - 148*	*08/23/15 14:15*	*08/24/15 08:12*	*1*

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: MB 460-318313/1-A
Matrix: Solid
Analysis Batch: 318400

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 318313

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*96*		*55 - 148*	*08/23/15 14:15*	*08/24/15 08:12*	*1*
Tetrachloro-m-xylene	*110*		*55 - 139*	*08/23/15 14:15*	*08/24/15 08:12*	*1*
Tetrachloro-m-xylene	*102*		*55 - 139*	*08/23/15 14:15*	*08/24/15 08:12*	*1*

Lab Sample ID: LCS 460-318313/2-A
Matrix: Solid
Analysis Batch: 318400

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 318313

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	133	133		ug/Kg		100	61 - 140
4,4'-DDD	133	135		ug/Kg		101	61 - 140
4,4'-DDE	133	123		ug/Kg		92	61 - 135
4,4'-DDE	133	120		ug/Kg		90	61 - 135
4,4'-DDT	133	99.9		ug/Kg		75	59 - 133
4,4'-DDT	133	103		ug/Kg		77	59 - 133
Aldrin	133	123		ug/Kg		92	61 - 133
Aldrin	133	126		ug/Kg		94	61 - 133
alpha-BHC	133	130		ug/Kg		98	61 - 137
alpha-BHC	133	129		ug/Kg		96	61 - 137
alpha-Chlordane	133	126		ug/Kg		94	57 - 136
alpha-Chlordane	133	121		ug/Kg		90	57 - 136
beta-BHC	133	122		ug/Kg		91	59 - 136
beta-BHC	133	119		ug/Kg		89	59 - 136
delta-BHC	133	129		ug/Kg		97	60 - 139
delta-BHC	133	128		ug/Kg		96	60 - 139
Dieldrin	133	127		ug/Kg		95	61 - 137
Dieldrin	133	125		ug/Kg		94	61 - 137
Endosulfan I	133	124		ug/Kg		93	60 - 135
Endosulfan I	133	120		ug/Kg		90	60 - 135
Endosulfan II	133	121		ug/Kg		91	61 - 130
Endosulfan II	133	119		ug/Kg		90	61 - 130
Endosulfan sulfate	133	122		ug/Kg		91	60 - 129
Endosulfan sulfate	133	119		ug/Kg		89	60 - 129
Endrin	133	120		ug/Kg		90	59 - 133
Endrin	133	122		ug/Kg		92	59 - 133
Endrin aldehyde	133	122		ug/Kg		92	57 - 131
Endrin aldehyde	133	122		ug/Kg		92	57 - 131
Endrin ketone	133	133		ug/Kg		100	57 - 138
Endrin ketone	133	133		ug/Kg		100	57 - 138
gamma-BHC (Lindane)	133	131		ug/Kg		98	61 - 138
gamma-BHC (Lindane)	133	131		ug/Kg		98	61 - 138
gamma-Chlordane	133	126		ug/Kg		95	60 - 131
gamma-Chlordane	133	122		ug/Kg		92	60 - 131
Heptachlor	133	125		ug/Kg		94	61 - 135
Heptachlor	133	124		ug/Kg		93	61 - 135
Heptachlor epoxide	133	126		ug/Kg		94	61 - 129
Heptachlor epoxide	133	122		ug/Kg		92	61 - 129
Methoxychlor	133	102		ug/Kg		77	60 - 129

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 460-318313/2-A
Matrix: Solid
Analysis Batch: 318400

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 318313

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methoxychlor	133	99.8		ug/Kg		75	60 - 129

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*92*		*55 - 148*
DCB Decachlorobiphenyl	*93*		*55 - 148*
Tetrachloro-m-xylene	*104*		*55 - 139*
Tetrachloro-m-xylene	*99*		*55 - 139*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 460-318321/1-A
Matrix: Solid
Analysis Batch: 318402

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 318321

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	67	U	67	8.9	ug/Kg		08/23/15 14:45	08/24/15 10:21	1
PCB-1221	67	U	67	8.9	ug/Kg		08/23/15 14:45	08/24/15 10:21	1
PCB-1232	67	U	67	8.9	ug/Kg		08/23/15 14:45	08/24/15 10:21	1
PCB-1242	67	U	67	8.9	ug/Kg		08/23/15 14:45	08/24/15 10:21	1
PCB-1248	67	U	67	8.9	ug/Kg		08/23/15 14:45	08/24/15 10:21	1
PCB-1254	67	U	67	9.2	ug/Kg		08/23/15 14:45	08/24/15 10:21	1
PCB-1260	67	U	67	9.2	ug/Kg		08/23/15 14:45	08/24/15 10:21	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*99*		*47 - 150*	*08/23/15 14:45*	*08/24/15 10:21*	*1*
DCB Decachlorobiphenyl	*110*		*47 - 150*	*08/23/15 14:45*	*08/24/15 10:21*	*1*
Tetrachloro-m-xylene	*112*			*08/23/15 14:45*	*08/24/15 10:21*	*1*
Tetrachloro-m-xylene	*106*			*08/23/15 14:45*	*08/24/15 10:21*	*1*

Lab Sample ID: LCS 460-318321/2-A
Matrix: Solid
Analysis Batch: 318402

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 318321

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	333	395		ug/Kg		118	70 - 149
PCB-1016	333	405		ug/Kg		121	70 - 149
PCB-1260	333	413		ug/Kg		124	71 - 150
PCB-1260	333	424		ug/Kg		127	71 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*111*		*47 - 150*
DCB Decachlorobiphenyl	*121*		*47 - 150*
Tetrachloro-m-xylene	*118*		
Tetrachloro-m-xylene	*113*		

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 460-318396/1-A ^2
Matrix: Solid
Analysis Batch: 318990

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 318396

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	20.0	U	20.0	10.3	mg/Kg		08/24/15 07:30	08/26/15 11:32	2
Antimony	2.0	U	2.0	0.79	mg/Kg		08/24/15 07:30	08/26/15 11:32	2
Arsenic	1.5	U	1.5	0.49	mg/Kg		08/24/15 07:30	08/26/15 11:32	2
Barium	20.0	U	20.0	0.72	mg/Kg		08/24/15 07:30	08/26/15 11:32	2
Beryllium	0.20	U	0.20	0.17	mg/Kg		08/24/15 07:30	08/26/15 11:32	2
Cadmium	0.40	U	0.40	0.21	mg/Kg		08/24/15 07:30	08/26/15 11:32	2
Calcium	500	U	500	29.6	mg/Kg		08/24/15 07:30	08/26/15 11:32	2
Chromium	1.0	U	1.0	0.48	mg/Kg		08/24/15 07:30	08/26/15 11:32	2
Cobalt	5.0	U	5.0	0.58	mg/Kg		08/24/15 07:30	08/26/15 11:32	2
Copper	2.5	U	2.5	0.65	mg/Kg		08/24/15 07:30	08/26/15 11:32	2
Iron	15.0	U	15.0	11.3	mg/Kg		08/24/15 07:30	08/26/15 11:32	2
Lead	1.0	U	1.0	0.39	mg/Kg		08/24/15 07:30	08/26/15 11:32	2
Magnesium	500	U	500	25.0	mg/Kg		08/24/15 07:30	08/26/15 11:32	2
Manganese	1.5	U	1.5	0.53	mg/Kg		08/24/15 07:30	08/26/15 11:32	2
Nickel	4.0	U	4.0	0.73	mg/Kg		08/24/15 07:30	08/26/15 11:32	2
Potassium	500	U	500	15.2	mg/Kg		08/24/15 07:30	08/26/15 11:32	2
Selenium	2.0	U	2.0	0.69	mg/Kg		08/24/15 07:30	08/26/15 11:32	2
Silver	1.0	U	1.0	0.18	mg/Kg		08/24/15 07:30	08/26/15 11:32	2
Sodium	500	U	500	33.9	mg/Kg		08/24/15 07:30	08/26/15 11:32	2
Thallium	2.0	U	2.0	0.89	mg/Kg		08/24/15 07:30	08/26/15 11:32	2
Vanadium	5.0	U	5.0	0.50	mg/Kg		08/24/15 07:30	08/26/15 11:32	2
Zinc	3.0	U	3.0	0.73	mg/Kg		08/24/15 07:30	08/26/15 11:32	2

Lab Sample ID: LCSSRM 460-318396/2-A ^4
Matrix: Solid
Analysis Batch: 318743

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 318396

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	7930	7039		mg/Kg		88.8	50.2 - 150.1
Antimony	105	58.61		mg/Kg		55.8	0.1 - 201.0
Arsenic	98.5	90.37		mg/Kg		91.7	77.8 - 122.8
Barium	308	295.9		mg/Kg		96.1	82.5 - 117.5
Beryllium	66.0	63.84		mg/Kg		96.7	83.0 - 116.8
Cadmium	146	140.6		mg/Kg		96.3	82.9 - 117.8
Calcium	6610	6155		mg/Kg		93.1	83.7 - 116.2
Chromium	182	177.2		mg/Kg		97.3	79.7 - 120.3
Cobalt	162	164.8		mg/Kg		101.7	83.3 - 116.0
Copper	106	100.8		mg/Kg		95.1	81.5 - 118.9
Iron	14400	13180		mg/Kg		91.6	44.1 - 155.6

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LCSSRM 460-318396/2-A ^4
Matrix: Solid
Analysis Batch: 318743

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 318396

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	130	129.1		mg/Kg		99.3	82.3 - 117.7
Magnesium	2640	2459		mg/Kg		93.1	75.8 - 124.6
Manganese	410	410.0		mg/Kg		100.0	81.2 - 119.0
Nickel	149	150.2		mg/Kg		100.8	82.6 - 117.4
Potassium	2550	2345		mg/Kg		92.0	69.0 - 130.6
Selenium	154	143.7		mg/Kg		93.3	77.9 - 122.1
Silver	40.9	36.86		mg/Kg		90.1	75.1 - 124.7
Sodium	2480	2498		mg/Kg		100.7	70.6 - 129.0
Thallium	175	184.2		mg/Kg		105.2	78.3 - 121.1
Vanadium	96.7	93.29		mg/Kg		96.5	77.2 - 123.1
Zinc	191	183.0		mg/Kg		95.8	83.2 - 116.8

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 460-318599/10-A
Matrix: Solid
Analysis Batch: 318693

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 318599

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.017	U	0.017	0.012	mg/Kg		08/25/15 05:18	08/25/15 09:55	1

Lab Sample ID: LCSSRM 460-318599/11-A ^20
Matrix: Solid
Analysis Batch: 318693

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 318599

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	7.10	6.43		mg/Kg		90.6	73.7 - 126.3

Method: Moisture - Percent Moisture

Lab Sample ID: 460-100003-7 DU
Matrix: Solid
Analysis Batch: 318227

Client Sample ID: WC042
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	11		13		%		16	20
Percent Solids	89		87		%		2	20

QC Association Summary

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

GC/MS VOA

Prep Batch: 318169

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-100003-1	WC036	Total/NA	Solid	5035	
460-100003-2	WC037	Total/NA	Solid	5035	
460-100003-3	WC038	Total/NA	Solid	5035	
460-100003-4	WC039	Total/NA	Solid	5035	
460-100003-5	WC040	Total/NA	Solid	5035	
460-100003-6	WC041	Total/NA	Solid	5035	
460-100003-7	WC042	Total/NA	Solid	5035	
460-100003-8	WC043	Total/NA	Solid	5035	
460-100003-9	WC044	Total/NA	Solid	5035	
460-100003-10	WC045	Total/NA	Solid	5035	
460-100003-11	WC046	Total/NA	Solid	5035	

Analysis Batch: 318272

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-100003-2	WC037	Total/NA	Solid	8260C	318169
460-100003-4	WC039	Total/NA	Solid	8260C	318169
460-100003-6	WC041	Total/NA	Solid	8260C	318169
460-100003-7	WC042	Total/NA	Solid	8260C	318169
460-100003-8	WC043	Total/NA	Solid	8260C	318169
460-100003-9	WC044	Total/NA	Solid	8260C	318169
460-100003-10	WC045	Total/NA	Solid	8260C	318169
LCS 460-318272/3	Lab Control Sample	Total/NA	Solid	8260C	
LCSD 460-318272/4	Lab Control Sample Dup	Total/NA	Solid	8260C	
MB 460-318272/7	Method Blank	Total/NA	Solid	8260C	

Analysis Batch: 318348

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-100003-11	WC046	Total/NA	Solid	8260C	318169
LCS 460-318348/3	Lab Control Sample	Total/NA	Solid	8260C	
LCSD 460-318348/4	Lab Control Sample Dup	Total/NA	Solid	8260C	
MB 460-318348/7	Method Blank	Total/NA	Solid	8260C	

Analysis Batch: 318390

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-100003-16	TB	Total/NA	Water	8260C	
LCS 460-318390/3	Lab Control Sample	Total/NA	Water	8260C	
LCSD 460-318390/4	Lab Control Sample Dup	Total/NA	Water	8260C	
MB 460-318390/7	Method Blank	Total/NA	Water	8260C	

Analysis Batch: 318612

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-100003-1	WC036	Total/NA	Solid	8260C	318169
460-100003-3	WC038	Total/NA	Solid	8260C	318169
460-100003-5	WC040	Total/NA	Solid	8260C	318169
LCS 460-318612/3	Lab Control Sample	Total/NA	Solid	8260C	
LCSD 460-318612/4	Lab Control Sample Dup	Total/NA	Solid	8260C	
MB 460-318612/7	Method Blank	Total/NA	Solid	8260C	

QC Association Summary

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

GC/MS Semi VOA

Prep Batch: 318267

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-100003-12	WC047	Total/NA	Solid	3546	
460-100003-13	WC048	Total/NA	Solid	3546	
460-100003-14	WC049	Total/NA	Solid	3546	
460-100003-15	WC050	Total/NA	Solid	3546	
LCS 460-318267/24-A	Lab Control Sample	Total/NA	Solid	3546	
LCS 460-318267/2-A	Lab Control Sample	Total/NA	Solid	3546	
MB 460-318267/1-A	Method Blank	Total/NA	Solid	3546	

Analysis Batch: 318279

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-100003-13	WC048	Total/NA	Solid	8270D	318267
LCS 460-318267/24-A	Lab Control Sample	Total/NA	Solid	8270D	318267
LCS 460-318267/2-A	Lab Control Sample	Total/NA	Solid	8270D	318267
MB 460-318267/1-A	Method Blank	Total/NA	Solid	8270D	318267

Analysis Batch: 318351

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-100003-12	WC047	Total/NA	Solid	8270D	318267
460-100003-14	WC049	Total/NA	Solid	8270D	318267
460-100003-15	WC050	Total/NA	Solid	8270D	318267

GC Semi VOA

Prep Batch: 318313

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-100003-12	WC047	Total/NA	Solid	3546	
460-100003-13	WC048	Total/NA	Solid	3546	
460-100003-14	WC049	Total/NA	Solid	3546	
460-100003-15	WC050	Total/NA	Solid	3546	
LCS 460-318313/2-A	Lab Control Sample	Total/NA	Solid	3546	
MB 460-318313/1-A	Method Blank	Total/NA	Solid	3546	

Prep Batch: 318321

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-100003-12	WC047	Total/NA	Solid	3546	
460-100003-13	WC048	Total/NA	Solid	3546	
460-100003-14	WC049	Total/NA	Solid	3546	
460-100003-15	WC050	Total/NA	Solid	3546	
LCS 460-318321/2-A	Lab Control Sample	Total/NA	Solid	3546	
MB 460-318321/1-A	Method Blank	Total/NA	Solid	3546	

Analysis Batch: 318400

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-100003-12	WC047	Total/NA	Solid	8081B	318313
460-100003-13	WC048	Total/NA	Solid	8081B	318313
460-100003-14	WC049	Total/NA	Solid	8081B	318313
460-100003-15	WC050	Total/NA	Solid	8081B	318313
LCS 460-318313/2-A	Lab Control Sample	Total/NA	Solid	8081B	318313
MB 460-318313/1-A	Method Blank	Total/NA	Solid	8081B	318313

GC Semi VOA (Continued)

Analysis Batch: 318402

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-100003-12	WC047	Total/NA	Solid	8082A	318321
460-100003-13	WC048	Total/NA	Solid	8082A	318321
460-100003-14	WC049	Total/NA	Solid	8082A	318321
460-100003-15	WC050	Total/NA	Solid	8082A	318321
LCS 460-318321/2-A	Lab Control Sample	Total/NA	Solid	8082A	318321
MB 460-318321/1-A	Method Blank	Total/NA	Solid	8082A	318321

Metals

Prep Batch: 318396

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-100003-12	WC047	Total/NA	Solid	3050B	
460-100003-13	WC048	Total/NA	Solid	3050B	
460-100003-14	WC049	Total/NA	Solid	3050B	
460-100003-15	WC050	Total/NA	Solid	3050B	
LCSSRM 460-318396/2-A ^4	Lab Control Sample	Total/NA	Solid	3050B	
MB 460-318396/1-A ^2	Method Blank	Total/NA	Solid	3050B	

Prep Batch: 318599

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-100003-12	WC047	Total/NA	Solid	7471B	
460-100003-13	WC048	Total/NA	Solid	7471B	
460-100003-14	WC049	Total/NA	Solid	7471B	
460-100003-15	WC050	Total/NA	Solid	7471B	
LCSSRM 460-318599/11-A ^	Lab Control Sample	Total/NA	Solid	7471B	
MB 460-318599/10-A	Method Blank	Total/NA	Solid	7471B	

Analysis Batch: 318693

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-100003-12	WC047	Total/NA	Solid	7471B	318599
460-100003-13	WC048	Total/NA	Solid	7471B	318599
460-100003-14	WC049	Total/NA	Solid	7471B	318599
460-100003-15	WC050	Total/NA	Solid	7471B	318599
LCSSRM 460-318599/11-A ^	Lab Control Sample	Total/NA	Solid	7471B	318599
MB 460-318599/10-A	Method Blank	Total/NA	Solid	7471B	318599

Analysis Batch: 318743

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSSRM 460-318396/2-A ^4	Lab Control Sample	Total/NA	Solid	6010C	318396

Analysis Batch: 318990

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-100003-12	WC047	Total/NA	Solid	6010C	318396
460-100003-13	WC048	Total/NA	Solid	6010C	318396
460-100003-14	WC049	Total/NA	Solid	6010C	318396
460-100003-15	WC050	Total/NA	Solid	6010C	318396
MB 460-318396/1-A ^2	Method Blank	Total/NA	Solid	6010C	318396

QC Association Summary

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

General Chemistry

Analysis Batch: 318227

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-100003-1	WC036	Total/NA	Solid	Moisture	
460-100003-2	WC037	Total/NA	Solid	Moisture	
460-100003-3	WC038	Total/NA	Solid	Moisture	
460-100003-4	WC039	Total/NA	Solid	Moisture	
460-100003-5	WC040	Total/NA	Solid	Moisture	
460-100003-6	WC041	Total/NA	Solid	Moisture	
460-100003-7	WC042	Total/NA	Solid	Moisture	
460-100003-7 DU	WC042	Total/NA	Solid	Moisture	

Analysis Batch: 318233

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-100003-8	WC043	Total/NA	Solid	Moisture	
460-100003-9	WC044	Total/NA	Solid	Moisture	
460-100003-10	WC045	Total/NA	Solid	Moisture	
460-100003-11	WC046	Total/NA	Solid	Moisture	
460-100003-12	WC047	Total/NA	Solid	Moisture	
460-100003-13	WC048	Total/NA	Solid	Moisture	
460-100003-14	WC049	Total/NA	Solid	Moisture	
460-100003-15	WC050	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

Client Sample ID: WC036 — Lab Sample ID: 460-100003-1

Date Collected: 08/21/15 08:45
Date Received: 08/21/15 14:50
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	318227	08/22/15 13:01	VMM	TAL EDI

Client Sample ID: WC036 — Lab Sample ID: 460-100003-1

Date Collected: 08/21/15 08:45
Date Received: 08/21/15 14:50
Matrix: Solid
Percent Solids: 87.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			318169	08/21/15 22:30	AVM	TAL EDI
Total/NA	Analysis	8260C		1	318612	08/25/15 11:19	SZD	TAL EDI

Client Sample ID: WC037 — Lab Sample ID: 460-100003-2

Date Collected: 08/21/15 08:50
Date Received: 08/21/15 14:50
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	318227	08/22/15 13:01	VMM	TAL EDI

Client Sample ID: WC037 — Lab Sample ID: 460-100003-2

Date Collected: 08/21/15 08:50
Date Received: 08/21/15 14:50
Matrix: Solid
Percent Solids: 89.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			318169	08/21/15 22:30	AVM	TAL EDI
Total/NA	Analysis	8260C		1	318272	08/23/15 10:38	AAT	TAL EDI

Client Sample ID: WC038 — Lab Sample ID: 460-100003-3

Date Collected: 08/21/15 08:55
Date Received: 08/21/15 14:50
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	318227	08/22/15 13:01	VMM	TAL EDI

Client Sample ID: WC038 — Lab Sample ID: 460-100003-3

Date Collected: 08/21/15 08:55
Date Received: 08/21/15 14:50
Matrix: Solid
Percent Solids: 89.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			318169	08/21/15 22:31	AVM	TAL EDI
Total/NA	Analysis	8260C		1	318612	08/25/15 11:43	SZD	TAL EDI

Lab Chronicle

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

Client Sample ID: WC039 — Lab Sample ID: 460-100003-4

Date Collected: 08/21/15 09:00
Date Received: 08/21/15 14:50
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	318227	08/22/15 13:01	VMM	TAL EDI

Client Sample ID: WC039 — Lab Sample ID: 460-100003-4

Date Collected: 08/21/15 09:00
Date Received: 08/21/15 14:50
Matrix: Solid
Percent Solids: 85.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			318169	08/21/15 22:32	AVM	TAL EDI
Total/NA	Analysis	8260C		1	318272	08/23/15 11:02	AAT	TAL EDI

Client Sample ID: WC040 — Lab Sample ID: 460-100003-5

Date Collected: 08/21/15 09:05
Date Received: 08/21/15 14:50
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	318227	08/22/15 13:01	VMM	TAL EDI

Client Sample ID: WC040 — Lab Sample ID: 460-100003-5

Date Collected: 08/21/15 09:05
Date Received: 08/21/15 14:50
Matrix: Solid
Percent Solids: 84.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			318169	08/21/15 22:33	AVM	TAL EDI
Total/NA	Analysis	8260C		1	318612	08/25/15 12:08	SZD	TAL EDI

Client Sample ID: WC041 — Lab Sample ID: 460-100003-6

Date Collected: 08/21/15 09:10
Date Received: 08/21/15 14:50
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	318227	08/22/15 13:01	VMM	TAL EDI

Client Sample ID: WC041 — Lab Sample ID: 460-100003-6

Date Collected: 08/21/15 09:10
Date Received: 08/21/15 14:50
Matrix: Solid
Percent Solids: 87.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			318169	08/21/15 22:33	AVM	TAL EDI
Total/NA	Analysis	8260C		1	318272	08/23/15 11:26	AAT	TAL EDI

Lab Chronicle

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

Client Sample ID: WC042 — Lab Sample ID: 460-100003-7

Date Collected: 08/21/15 09:15 — **Matrix: Solid**
Date Received: 08/21/15 14:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	318227	08/22/15 13:01	VMM	TAL EDI

Client Sample ID: WC042 — Lab Sample ID: 460-100003-7

Date Collected: 08/21/15 09:15 — **Matrix: Solid**
Date Received: 08/21/15 14:50 — **Percent Solids: 88.8**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			318169	08/21/15 22:34	AVM	TAL EDI
Total/NA	Analysis	8260C		1	318272	08/23/15 11:50	AAT	TAL EDI

Client Sample ID: WC043 — Lab Sample ID: 460-100003-8

Date Collected: 08/21/15 09:20 — **Matrix: Solid**
Date Received: 08/21/15 14:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	318233	08/22/15 14:09	VMM	TAL EDI

Client Sample ID: WC043 — Lab Sample ID: 460-100003-8

Date Collected: 08/21/15 09:20 — **Matrix: Solid**
Date Received: 08/21/15 14:50 — **Percent Solids: 88.7**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			318169	08/21/15 22:35	AVM	TAL EDI
Total/NA	Analysis	8260C		1	318272	08/23/15 12:14	AAT	TAL EDI

Client Sample ID: WC044 — Lab Sample ID: 460-100003-9

Date Collected: 08/21/15 09:25 — **Matrix: Solid**
Date Received: 08/21/15 14:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	318233	08/22/15 14:09	VMM	TAL EDI

Client Sample ID: WC044 — Lab Sample ID: 460-100003-9

Date Collected: 08/21/15 09:25 — **Matrix: Solid**
Date Received: 08/21/15 14:50 — **Percent Solids: 92.0**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			318169	08/21/15 22:35	AVM	TAL EDI
Total/NA	Analysis	8260C		1	318272	08/23/15 12:39	AAT	TAL EDI

Lab Chronicle

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

Client Sample ID: WC045 — Lab Sample ID: 460-100003-10

Date Collected: 08/21/15 09:30 — **Matrix: Solid**
Date Received: 08/21/15 14:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	318233	08/22/15 14:09	VMM	TAL EDI

Client Sample ID: WC045 — Lab Sample ID: 460-100003-10

Date Collected: 08/21/15 09:30 — **Matrix: Solid**
Date Received: 08/21/15 14:50 — **Percent Solids: 86.5**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			318169	08/21/15 22:36	AVM	TAL EDI
Total/NA	Analysis	8260C		1	318272	08/23/15 13:03	AAT	TAL EDI

Client Sample ID: WC046 — Lab Sample ID: 460-100003-11

Date Collected: 08/21/15 09:35 — **Matrix: Solid**
Date Received: 08/21/15 14:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	318233	08/22/15 14:09	VMM	TAL EDI

Client Sample ID: WC046 — Lab Sample ID: 460-100003-11

Date Collected: 08/21/15 09:35 — **Matrix: Solid**
Date Received: 08/21/15 14:50 — **Percent Solids: 89.4**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			318169	08/21/15 22:37	AVM	TAL EDI
Total/NA	Analysis	8260C		1	318348	08/24/15 15:23	AAT	TAL EDI

Client Sample ID: WC047 — Lab Sample ID: 460-100003-12

Date Collected: 08/21/15 09:45 — **Matrix: Solid**
Date Received: 08/21/15 14:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	318233	08/22/15 14:09	VMM	TAL EDI

Client Sample ID: WC047 — Lab Sample ID: 460-100003-12

Date Collected: 08/21/15 09:45 — **Matrix: Solid**
Date Received: 08/21/15 14:50 — **Percent Solids: 87.2**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			318267	08/22/15 19:51	JMS	TAL EDI
Total/NA	Analysis	8270D		5	318351	08/24/15 10:56	AAS	TAL EDI
Total/NA	Prep	3546			318313	08/23/15 14:15	ARA	TAL EDI
Total/NA	Analysis	8081B		1	318400	08/24/15 11:05	SAK	TAL EDI
Total/NA	Prep	3546			318321	08/23/15 14:45	ARA	TAL EDI

Lab Chronicle

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

Client Sample ID: WC047 — Lab Sample ID: 460-100003-12

Date Collected: 08/21/15 09:45 — **Matrix: Solid**
Date Received: 08/21/15 14:50 — **Percent Solids: 87.2**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8082A		1	318402	08/24/15 12:38	JHP	TAL EDI
Total/NA	Prep	3050B			318396	08/24/15 07:30	MDC	TAL EDI
Total/NA	Analysis	6010C		10	318990	08/26/15 11:39	CDC	TAL EDI
Total/NA	Prep	7471B			318599	08/25/15 05:18	TJS	TAL EDI
Total/NA	Analysis	7471B		1	318693	08/25/15 10:38	TJS	TAL EDI

Client Sample ID: WC048 — Lab Sample ID: 460-100003-13

Date Collected: 08/21/15 09:55 — **Matrix: Solid**
Date Received: 08/21/15 14:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	318233	08/22/15 14:09	VMM	TAL EDI

Client Sample ID: WC048 — Lab Sample ID: 460-100003-13

Date Collected: 08/21/15 09:55 — **Matrix: Solid**
Date Received: 08/21/15 14:50 — **Percent Solids: 84.3**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			318267	08/22/15 19:51	JMS	TAL EDI
Total/NA	Analysis	8270D		1	318279	08/23/15 15:28	BAW	TAL EDI
Total/NA	Prep	3546			318313	08/23/15 14:15	ARA	TAL EDI
Total/NA	Analysis	8081B		1	318400	08/24/15 11:18	SAK	TAL EDI
Total/NA	Prep	3546			318321	08/23/15 14:45	ARA	TAL EDI
Total/NA	Analysis	8082A		1	318402	08/24/15 12:22	JHP	TAL EDI
Total/NA	Prep	3050B			318396	08/24/15 07:30	MDC	TAL EDI
Total/NA	Analysis	6010C		10	318990	08/26/15 11:43	CDC	TAL EDI
Total/NA	Prep	7471B			318599	08/25/15 05:18	TJS	TAL EDI
Total/NA	Analysis	7471B		1	318693	08/25/15 10:39	TJS	TAL EDI

Client Sample ID: WC049 — Lab Sample ID: 460-100003-14

Date Collected: 08/21/15 10:05 — **Matrix: Solid**
Date Received: 08/21/15 14:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	318233	08/22/15 14:09	VMM	TAL EDI

Client Sample ID: WC049 — Lab Sample ID: 460-100003-14

Date Collected: 08/21/15 10:05 — **Matrix: Solid**
Date Received: 08/21/15 14:50 — **Percent Solids: 87.6**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			318267	08/22/15 19:51	JMS	TAL EDI
Total/NA	Analysis	8270D		5	318351	08/24/15 11:22	AAS	TAL EDI

Lab Chronicle

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			318313	08/23/15 14:15	ARA	TAL EDI
Total/NA	Analysis	8081B		1	318400	08/24/15 11:31	SAK	TAL EDI
Total/NA	Prep	3546			318321	08/23/15 14:45	ARA	TAL EDI
Total/NA	Analysis	8082A		1	318402	08/24/15 12:04	JHP	TAL EDI
Total/NA	Prep	3050B			318396	08/24/15 07:30	MDC	TAL EDI
Total/NA	Analysis	6010C		10	318990	08/26/15 11:46	CDC	TAL EDI
Total/NA	Prep	7471B			318599	08/25/15 05:18	TJS	TAL EDI
Total/NA	Analysis	7471B		1	318693	08/25/15 10:42	TJS	TAL EDI

Client Sample ID: WC050 — Lab Sample ID: 460-100003-15

Date Collected: 08/21/15 10:15 — **Matrix: Solid**
Date Received: 08/21/15 14:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	318233	08/22/15 14:09	VMM	TAL EDI

Client Sample ID: WC050 — Lab Sample ID: 460-100003-15

Date Collected: 08/21/15 10:15 — **Matrix: Solid**
Date Received: 08/21/15 14:50 — **Percent Solids: 86.4**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			318267	08/22/15 19:51	JMS	TAL EDI
Total/NA	Analysis	8270D		2	318351	08/24/15 11:47	AAS	TAL EDI
Total/NA	Prep	3546			318313	08/23/15 14:15	ARA	TAL EDI
Total/NA	Analysis	8081B		1	318400	08/24/15 11:45	SAK	TAL EDI
Total/NA	Prep	3546			318321	08/23/15 14:45	ARA	TAL EDI
Total/NA	Analysis	8082A		1	318402	08/24/15 11:47	JHP	TAL EDI
Total/NA	Prep	3050B			318396	08/24/15 07:30	MDC	TAL EDI
Total/NA	Analysis	6010C		10	318990	08/26/15 11:50	CDC	TAL EDI
Total/NA	Prep	7471B			318599	08/25/15 05:18	TJS	TAL EDI
Total/NA	Analysis	7471B		1	318693	08/25/15 10:48	TJS	TAL EDI

Client Sample ID: TB — Lab Sample ID: 460-100003-16

Date Collected: 08/21/15 00:00 — **Matrix: Water**
Date Received: 08/21/15 14:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	318390	08/24/15 13:11	SZD	TAL EDI

Laboratory References:

TAL EDI = TestAmerica Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

Certification Summary

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

Laboratory: TestAmerica Edison

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
New York	NELAP	2	11452	03-31-16

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Laboratory: TestAmerica Buffalo

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
New York	NELAP	2	10026	03-31-16

Method Summary

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL EDI
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL EDI
8081B	Organochlorine Pesticides (GC)	SW846	TAL EDI
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL EDI
6010C	Metals (ICP)	SW846	TAL EDI
7471B	Mercury (CVAA)	SW846	TAL EDI
Moisture	Percent Moisture	EPA	TAL EDI

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL EDI = TestAmerica Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

Sample Summary

Client: Posillico Consulting
Project/Site: Glen Isle Waterfront Redevelopment

TestAmerica Job ID: 460-100003-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
460-100003-1	WC036	Solid	08/21/15 08:45	08/21/15 14:50
460-100003-2	WC037	Solid	08/21/15 08:50	08/21/15 14:50
460-100003-3	WC038	Solid	08/21/15 08:55	08/21/15 14:50
460-100003-4	WC039	Solid	08/21/15 09:00	08/21/15 14:50
460-100003-5	WC040	Solid	08/21/15 09:05	08/21/15 14:50
460-100003-6	WC041	Solid	08/21/15 09:10	08/21/15 14:50
460-100003-7	WC042	Solid	08/21/15 09:15	08/21/15 14:50
460-100003-8	WC043	Solid	08/21/15 09:20	08/21/15 14:50
460-100003-9	WC044	Solid	08/21/15 09:25	08/21/15 14:50
460-100003-10	WC045	Solid	08/21/15 09:30	08/21/15 14:50
460-100003-11	WC046	Solid	08/21/15 09:35	08/21/15 14:50
460-100003-12	WC047	Solid	08/21/15 09:45	08/21/15 14:50
460-100003-13	WC048	Solid	08/21/15 09:55	08/21/15 14:50
460-100003-14	WC049	Solid	08/21/15 10:05	08/21/15 14:50
460-100003-15	WC050	Solid	08/21/15 10:15	08/21/15 14:50
460-100003-16	TB	Water	08/21/15 00:00	08/21/15 14:50

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

CHAIN OF CUSTODY / ANA

460-100003 Chain of Custody

urham Road
w Jersey 08817
2) 549-3900 Fax: (732) 549-3679

Page 1 of 3

8/27/2015

Name (for report and invoice): Ellis Koch
Company: RXR-Glen Isle Partners, LLC.
Address: 625 RXR Plaza
City: Uniondale, State: N.Y.
Phone: Fax:

Samplers Name (Printed): Amanda J. Raccariello
P. O. #:

Site/Project Identification: Glen Isle Waterfront Redevelopment
State (Location of site): NJ: ☐ NY: ☒ Other:
Regulatory Program:

Analysis Turnaround Time
Standard ☐
Rush Charges Authorized For: ☒
2 Week ☐ End of Day
1 Week ☐
Other ☒ 8/25/15

LAB USE ONLY
Project No:
Job No: 100003

Sample Identification	Date	Time	Matrix	No. of Cont.	8260	8270	TAL Metals	Pesticides	PCBs							Sample Numbers
WC036	8/21/15	0845	S	4	X											1
WC037	↓	0850	↓	↓	↓											2
WC038		0855														3
WC039		0900														4
WC040		0905														5
WC041		0910														6
WC042		0915														7
WC043		0920														8
WC044		0925														9
WC045	↓	0930	↓	↓	↓											10

Preservation Used: 1 = ICE, 2 = HCl, 3 = H_2SO_4, 4 = HNO_3, 5 = NaOH
6 = Other _____, 7 = Other _____
Soil: X
Water:

Special Instructions _____ Water Metals Filtered (Yes/No)? _____

Relinquished by	Company	Date / Time	Received by	Company
1) Amd J Raccariello	PIRGC.	8/21/15 11:38	1)	TA
Relinquished by 2)	Company T. A	Date / Time 8/21/15 14:50	Received by 2)	Company TA 8/21/15 1450
Relinquished by 3)	Company	Date / Time	Received by 3)	Company
Relinquished by 4)	Company	Date / Time	Received by 4)	Company

SHORT HOLD

Laboratory Certifications: New Jersey (12028), New York (11452), Pennsylvania (68-522), Connecticut (PH-0200), Rhode Island (132).
Massachusetts (M-NJ312), North Carolina (No. 578) 1.5 (3.5 IKG & No c.)

TAL - 0016 (081

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

777 New Durham Road
Edison, New Jersey 08817
Phone: (732) 549-3900 Fax: (732) 549-3679

CHAIN OF CUSTODY / ANALYSIS REQUEST

Name (for report and invoice): Ellis Koch
Company: RXR-Glen Isle Partners, LLC.
Address: 625 RXR Plaza
City: Uniondale, State: N.Y.
Phone: Fax:

Samplers Name (Printed): Amanda J. Racaniello
P. O. #:

Site/Project Identification: Glen Isle Waterfront Redevelopment.
State (Location of site): NJ: ☐ NY: ☒ Other:
Regulatory Program:

Analysis Turnaround Time
Standard ☐
Rush Charges Authorized For:
2 Week ☐ End of Day
1 Week ☐
Other ☒ 8/25/15

LAB USE ONLY
Project No:
Job No: 100003

ANALYSIS REQUESTED (ENTER "X" BELOW TO INDICATE REQUEST)

Sample Identification	Date	Time	Matrix	No. of Cont.	8260	8270	TAL Metals	Pesticides	PCBs							Sample Numbers
WC046	8/21/15	0935	S	4	X											11
WC047	↓	0945	↓	1		X	X	X	X							12
WC048	↓	0955	↓	↓		↓	↓	↓	↓							13
WC049	↓	1005	↓	↓		↓	↓	↓	↓							14
WC050	↓	1015	↓	↓		↓	↓	↓	↓							15
TB	—	—	—	1	X											16

Preservation Used: 1 = ICE, 2 = HCl, 3 = H_2SO_4, 4 = HNO_3, 5 = NaOH
6 = Other _____, 7 = Other _____

	8260	8270	TAL Metals	Pesticides	PCBs
Soil:	X	X	X	X	X
Water:	X				

Special Instructions _____ Water Metals Filtered (Yes/No)? _____

Relinquished by	Company	Date / Time	Received by	Company
1) Amanda J. Racaniello	PWG.C	8/21/15 11:38	1) [signature]	[signature]
2) [signature]	T. A	8/21/15 14:50	2) [signature]	TA 8/21/15 1450
3)			3)	
4)			4)	

Laboratory Certifications: New Jersey (12028), New York (11452), Pennsylvania (68-522), Connecticut (PH-0200), Rhode Island (132). Massachusetts (M-NJ312), North Carolina (No. 578)

TAL - 0016 (0814)

TestAmerica Edison
Receipt Temperature and pH Log

Job Number: 100003

Number of Coolers: 1 IR Gun # 5

Cooler Temperatures

	RAW	CORRECTED		RAW	CORRECTED		RAW	CORRECTED
Cooler #1:	1.6 °C	3.6 °C	Cooler #4:	°C	°C	Cooler #7:	°C	°C
Cooler #2:	°C	°C	Cooler #5:	°C	°C	Cooler #8:	°C	°C
Cooler #3:	°C	°C	Cooler #6:	°C	°C	Cooler #9:	°C	°C

TALS Sample Number	Ammonia (pH<2)	COD (pH<2)	Nitrate Nitrite (pH<2)	Metals* (pH<2)	Hardness (pH<2)	Pest (pH 5-9)	EPH or QAM (pH<2)	Phenols (pH<2)	Sulfide (pH>9)	TKN (pH<2)	TOC (pH<2)	Total Cyanide (pH>12)	Total Phos (pH<2)	Other	Other

If pH adjustments are required record the information below:

Sample No(s). adjusted: _____

Preservative Name/Conc.: _____ Volume of Preservative used (ml): _____

Lot # of Preservative(s): _____ Expiration Date: _____

The appropriate Project Manager and Department Manager should be notified about the samples which were pH adjusted.

**Samples for Metal analysis which are out of compliance must be acidified at least 24 hours prior to analysis.*

Initials: [illegible] Date: 8/21/15

EDS-WI-038, Rev 4, 06/09/2014

Login Sample Receipt Checklist

Client: Posillico Consulting

Job Number: 460-100003-1

Login Number: 100003
List Number: 1
Creator: Hall, Alonzo

List Source: TestAmerica Edison

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.5°C IR #5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	No analysis requiring residual chlorine check assigned.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
Tel: (314)298-8566

TestAmerica Job ID: 160-13509-1
Client Project/Site: Glen Isle: Data Gap Field Program

For:
Posillico Consulting
1750 New Highway
Farmingdale, New York 11735

Attn: Ellis Koch

Authorized for release by:
9/1/2015 7:47:13 AM

John Schove, Project Manager II
(716)504-9838
john.schove@testamericainc.com

LINKS

Review your project results through TotalAccess

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Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Detection Summary 9
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QC Sample Results 12
QC Association Summary 13

Job ID: 160-13509-1

Laboratory: TestAmerica St. Louis

Narrative

Job Narrative
160-13509-1

Comments
No additional comments.

Receipt
The samples were received on 8/22/2015 8:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.4º C.

RAD
Method(s) Fill_Geo-0: Batch: 207931 Gamma Spec

Insufficient sample was available to fill client requested marn. A tuna can was used instead.: WC047 (160-13509-1), WC048 (160-13509-2), WC049 (160-13509-3), WC050 (160-13509-4) and (160-13509-A-1-A DU).

Method(s) GA-01-R: Gamma Prep Batch 207931: The bismuth-212 and lead-210 detection goals were not met for the following samples due to insufficient sample available for analysis (a marn soil was requested but only enough sample for tuna can was received - see prep NCM 66537): WC047 (160-13509-1), WC048 (160-13509-2), WC049 (160-13509-3), WC050 (160-13509-4), (MB 160-207931/1-A) and (160-13509-A-1-C DU). Analytical results are reported with the detection limit achieved.

Method(s) GA-01-R: Gamma Prep Batch 207931: Ra-226 by gamma spectroscopy is typically determined by inference from daughters (e.g. Bi-214) after sealing the sample in an appropriate counting geometry/container and waiting 21 days to allow the Ra-226 decay chain through Rn-222 to reach secular equilibrium. Such an approach is considered to be the most reliable and representative means for establishing the true Ra-226 concentration in the sample. The method requested by the client to report Ra-226, using its own 186 keV gamma-ray emission, is subject to interference and potential bias due to the 185.7 keV U-235 gamma ray. Experience also indicates gamma spectroscopy software does not consistently assign accurate peak areas to Ra-226 (186 keV), with the problem compounded by slight drift of the instrumentation. The laboratory considers Ra-226 reported based upon the 186 keV gamma-ray emission to be best used by the client in a qualitative fashion.
The MDC was greater than the requested limit of 1 pCi/g for Radium-226. Radium-226 was requested to be reported with no ingrowth for this batch; therefore, samples were reported from the only usable gamma energy line, 185.99 KeV. This energy line has a low efficiency which causes an elevated MDC. The following samples were affected: WC047 (160-13509-1), WC048 (160-13509-2), WC049 (160-13509-3), WC050 (160-13509-4), (LCS 160-207931/2-A), (MB 160-207931/1-A) and (160-13509-A-1-C DU).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

St. Louis

CHAIN OF CUSTODY / ANALYSIS REQUEST

777 New Durham Road
Edison, New Jersey 08817
Phone: (732) 549-3900 Fax: (732) 549-3679

Name (for report and invoice): Ellis Koch
Company: RXR-Glen Isle Partners, LLC.
Address: 625 RXR Plaza
City: Uniondale State: N.Y.
Phone: Fax:

Samplers Name (Printed): Amanda J. Raccaniello
P. O. #:

Site/Project Identification: Glen Isle Waterfront Redevelopment
State (Location of site): NJ: ☐ NY: ☒ Other:
Regulatory Program:

Analysis Turnaround Time
Standard ☐
Rush Charges Authorized For: *
2 Week ☐ End of
1 Week ☐ Day
Other ☒ 8/21/15

ANALYSIS REQUESTED (ENTER "X" BELOW TO INDICATE REQUEST)

LAB USE ONLY
Project No:
Job No:

Sample Identification	Date	Time	Matrix	No. of. Cont.	Gamma Spec										Sample Numbers
WC047	8/21/15	0945	S	1											
WC048	↓	0955	↓	↓											
WC049		1005													
WC050		1015													

Preservation Used: 1 = ICE, 2 = HCl, 3 = H_2SO_4, 4 = HNO_3, 5 = NaOH
6 = Other _____, 7 = Other _____

Soil: X
Water:

Special Instructions

Water Metals Filtered (Yes/No)?

Relinquished by	Company	Date / Time	Received by	Company
Amd J. Raccaniello	R.W.G.C.	8/21/15 11:58	1)	T.A.
2)	T.A.	08-21-15 17:00	2) Jim Clarke 8:22.15 0820	TA STL
3)			3)	
4)			4)	

Laboratory Certifications: New Jersey (12028), New York (11452), Pennsylvania (68-522), Connecticut (PH-0200), Rhode Island (132). Massachusetts (M-NJ312), North Carolina (No. 578)

TAL - 0016 (0814)

160-13509 Chain of Custody

Login Sample Receipt Checklist

Client: Posillico Consulting

Job Number: 160-13509-1

Login Number: 13509
List Number: 1
Creator: Clarke, Jill C

List Source: TestAmerica St. Louis

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Definitions/Glossary

Client: Posillico Consulting
Project/Site: Glen Isle: Data Gap Field Program

TestAmerica Job ID: 160-13509-1

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Method Summary

Client: Posillico Consulting
Project/Site: Glen Isle: Data Gap Field Program

TestAmerica Job ID: 160-13509-1

Method	Method Description	Protocol	Laboratory
GA-01-R	Radium-226 & Other Gamma Emitters (GS)	DOE	TAL SL

Protocol References:

DOE = U.S. Department of Energy

Laboratory References:

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: Posillico Consulting
Project/Site: Glen Isle: Data Gap Field Program

TestAmerica Job ID: 160-13509-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
160-13509-1	WC047	Solid	08/21/15 09:45	08/22/15 08:20
160-13509-2	WC048	Solid	08/21/15 09:55	08/22/15 08:20
160-13509-3	WC049	Solid	08/21/15 10:05	08/22/15 08:20
160-13509-4	WC050	Solid	08/21/15 10:15	08/22/15 08:20

Detection Summary

Client: Posillico Consulting
Project/Site: Glen Isle: Data Gap Field Program

TestAmerica Job ID: 160-13509-1

Client Sample ID: WC047 — Lab Sample ID: 160-13509-1

No Detections.

Client Sample ID: WC048 — Lab Sample ID: 160-13509-2

No Detections.

Client Sample ID: WC049 — Lab Sample ID: 160-13509-3

No Detections.

Client Sample ID: WC050 — Lab Sample ID: 160-13509-4

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Posillico Consulting
Project/Site: Glen Isle: Data Gap Field Program

TestAmerica Job ID: 160-13509-1

Client Sample ID: WC047

Lab Sample ID: 160-13509-1
Date Collected: 08/21/15 09:45
Matrix: Solid
Date Received: 08/22/15 08:20

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	0.305		0.0432	0.0532	0.100	0.0345	pCi/g	08/26/15 08:58	08/31/15 01:23	1
Bismuth-212	0.441		0.163	0.169	0.100	0.149	pCi/g	08/26/15 08:58	08/31/15 01:23	1
Bismuth-214	0.292		0.0350	0.0463	0.100	0.0317	pCi/g	08/26/15 08:58	08/31/15 01:23	1
Lead-210	0.418		0.221	0.226	0.100	0.283	pCi/g	08/26/15 08:58	08/31/15 01:23	1
Lead-212	0.309		0.0189	0.0443	0.100	0.0195	pCi/g	08/26/15 08:58	08/31/15 01:23	1
Lead-214	0.366		0.0308	0.0490	0.100	0.0250	pCi/g	08/26/15 08:58	08/31/15 01:23	1
Potassium-40	4.99		0.269	0.577	2.50	0.161	pCi/g	08/26/15 08:58	08/31/15 01:23	1
Protactinium-231	0.128	U	0.0979	0.0989	1.00	0.378	pCi/g	08/26/15 08:58	08/31/15 01:23	1
Radium-226	0.576		0.217	0.239	1.00	0.256	pCi/g	08/26/15 08:58	08/31/15 01:23	1
Radium-228	0.305		0.0432	0.0532	1.00	0.0345	pCi/g	08/26/15 08:58	08/31/15 01:23	1
Thorium-234	0.265	U	0.0994	0.103	1.00	0.345	pCi/g	08/26/15 08:58	08/31/15 01:23	1
Thallium-208	0.108		0.0133	0.0174	0.100	0.0109	pCi/g	08/26/15 08:58	08/31/15 01:23	1
Uranium-235	0.0377	U	0.0395	0.0397	1.00	0.0635	pCi/g	08/26/15 08:58	08/31/15 01:23	1
Uranium-238	0.265	U	0.0994	0.103	1.00	0.345	pCi/g	08/26/15 08:58	08/31/15 01:23	1
Protactinium-234m	0.451	U	0.977	0.978	10.0	1.43	pCi/g	08/26/15 08:58	08/31/15 01:23	1

Client Sample ID: WC048

Lab Sample ID: 160-13509-2
Date Collected: 08/21/15 09:55
Matrix: Solid
Date Received: 08/22/15 08:20

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	0.283		0.0423	0.0512	0.100	0.0411	pCi/g	08/26/15 08:58	08/28/15 17:13	1
Bismuth-212	0.302		0.110	0.115	0.100	0.161	pCi/g	08/26/15 08:58	08/28/15 17:13	1
Bismuth-214	0.247		0.0284	0.0382	0.100	0.0231	pCi/g	08/26/15 08:58	08/28/15 17:13	1
Lead-210	0.226	U	0.208	0.209	0.100	0.319	pCi/g	08/26/15 08:58	08/28/15 17:13	1
Lead-212	0.250		0.0175	0.0368	0.100	0.0193	pCi/g	08/26/15 08:58	08/28/15 17:13	1
Lead-214	0.268		0.0251	0.0375	0.100	0.0213	pCi/g	08/26/15 08:58	08/28/15 17:13	1
Potassium-40	4.79		0.308	0.579	2.50	0.128	pCi/g	08/26/15 08:58	08/28/15 17:13	1
Protactinium-231	0.283		0.139	0.142	1.00	0.266	pCi/g	08/26/15 08:58	08/28/15 17:13	1
Radium-226	0.622		0.185	0.214	1.00	0.233	pCi/g	08/26/15 08:58	08/28/15 17:13	1
Radium-228	0.283		0.0423	0.0512	1.00	0.0411	pCi/g	08/26/15 08:58	08/28/15 17:13	1
Thorium-234	0.354		0.203	0.206	1.00	0.281	pCi/g	08/26/15 08:58	08/28/15 17:13	1
Thallium-208	0.0732		0.0137	0.0157	0.100	0.0142	pCi/g	08/26/15 08:58	08/28/15 17:13	1
Uranium-235	0.0424	U	0.0337	0.0340	1.00	0.0479	pCi/g	08/26/15 08:58	08/28/15 17:13	1
Uranium-238	0.354		0.203	0.206	1.00	0.281	pCi/g	08/26/15 08:58	08/28/15 17:13	1
Protactinium-234m	0.958	U	0.734	0.740	10.0	1.61	pCi/g	08/26/15 08:58	08/28/15 17:13	1

Client Sample Results

Client: Posillico Consulting
Project/Site: Glen Isle: Data Gap Field Program

TestAmerica Job ID: 160-13509-1

Client Sample ID: WC049

Lab Sample ID: 160-13509-3
Date Collected: 08/21/15 10:05
Matrix: Solid
Date Received: 08/22/15 08:20

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	0.327		0.0469	0.0576	0.100	0.0528	pCi/g	08/26/15 08:58	08/28/15 17:14	1
Bismuth-212	0.468		0.157	0.164	0.100	0.157	pCi/g	08/26/15 08:58	08/28/15 17:14	1
Bismuth-214	0.270		0.0338	0.0439	0.100	0.0309	pCi/g	08/26/15 08:58	08/28/15 17:14	1
Lead-210	0.499		0.228	0.235	0.100	0.311	pCi/g	08/26/15 08:58	08/28/15 17:14	1
Lead-212	0.262		0.0216	0.0402	0.100	0.0251	pCi/g	08/26/15 08:58	08/28/15 17:14	1
Lead-214	0.275		0.0331	0.0438	0.100	0.0296	pCi/g	08/26/15 08:58	08/28/15 17:14	1
Potassium-40	4.80		0.326	0.590	2.50	0.187	pCi/g	08/26/15 08:58	08/28/15 17:14	1
Protactinium-231	0.111	U	0.0852	0.0860	1.00	0.465	pCi/g	08/26/15 08:58	08/28/15 17:14	1
Radium-226	1.54		0.286	0.393	1.00	0.297	pCi/g	08/26/15 08:58	08/28/15 17:14	1
Radium-228	0.327		0.0469	0.0576	1.00	0.0528	pCi/g	08/26/15 08:58	08/28/15 17:14	1
Thorium-234	0.519		0.208	0.215	1.00	0.360	pCi/g	08/26/15 08:58	08/28/15 17:14	1
Thallium-208	0.0880		0.0180	0.0202	0.100	0.0183	pCi/g	08/26/15 08:58	08/28/15 17:14	1
Uranium-235	0.0371	U	0.0663	0.0664	1.00	0.0861	pCi/g	08/26/15 08:58	08/28/15 17:14	1
Uranium-238	0.519		0.208	0.215	1.00	0.360	pCi/g	08/26/15 08:58	08/28/15 17:14	1
Protactinium-234m	-0.685	U	2.35	2.35	10.0	2.45	pCi/g	08/26/15 08:58	08/28/15 17:14	1

Client Sample ID: WC050

Lab Sample ID: 160-13509-4
Date Collected: 08/21/15 10:15
Matrix: Solid
Date Received: 08/22/15 08:20

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	0.312		0.0407	0.0517	0.100	0.0294	pCi/g	08/26/15 08:58	08/28/15 17:15	1
Bismuth-212	0.278		0.108	0.112	0.100	0.117	pCi/g	08/26/15 08:58	08/28/15 17:15	1
Bismuth-214	0.210		0.0290	0.0363	0.100	0.0297	pCi/g	08/26/15 08:58	08/28/15 17:15	1
Lead-210	0.266	U	0.240	0.242	0.100	0.298	pCi/g	08/26/15 08:58	08/28/15 17:15	1
Lead-212	0.254		0.0181	0.0376	0.100	0.0196	pCi/g	08/26/15 08:58	08/28/15 17:15	1
Lead-214	0.276		0.0302	0.0416	0.100	0.0246	pCi/g	08/26/15 08:58	08/28/15 17:15	1
Potassium-40	4.70		0.268	0.551	2.50	0.169	pCi/g	08/26/15 08:58	08/28/15 17:15	1
Protactinium-231	0.101	U	0.0763	0.0771	1.00	0.377	pCi/g	08/26/15 08:58	08/28/15 17:15	1
Radium-226	0.672		0.218	0.248	1.00	0.239	pCi/g	08/26/15 08:58	08/28/15 17:15	1
Radium-228	0.312		0.0407	0.0517	1.00	0.0294	pCi/g	08/26/15 08:58	08/28/15 17:15	1
Thorium-234	0.434		0.226	0.230	1.00	0.270	pCi/g	08/26/15 08:58	08/28/15 17:15	1
Thallium-208	0.0961		0.0131	0.0165	0.100	0.0108	pCi/g	08/26/15 08:58	08/28/15 17:15	1
Uranium-235	-0.00694	U	0.0477	0.0477	1.00	0.0799	pCi/g	08/26/15 08:58	08/28/15 17:15	1
Uranium-238	0.434		0.226	0.230	1.00	0.270	pCi/g	08/26/15 08:58	08/28/15 17:15	1
Protactinium-234m	0.382	U	0.901	0.902	10.0	1.52	pCi/g	08/26/15 08:58	08/28/15 17:15	1

QC Sample Results

Client: Posillico Consulting
Project/Site: Glen Isle: Data Gap Field Program

TestAmerica Job ID: 160-13509-1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Lab Sample ID: MB 160-207931/1-A
Matrix: Solid
Analysis Batch: 208491

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 207931

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	0.03169	U	0.0301	0.0303	0.100	0.0527	pCi/g	08/26/15 08:58	08/30/15 17:20	1
Bismuth-212	0.06814	U	0.110	0.110	0.100	0.184	pCi/g	08/26/15 08:58	08/30/15 17:20	1
Bismuth-214	0.03057	U	0.0259	0.0261	0.100	0.0398	pCi/g	08/26/15 08:58	08/30/15 17:20	1
Lead-210	0.04890	U	0.270	0.271	0.100	0.464	pCi/g	08/26/15 08:58	08/30/15 17:20	1
Lead-212	0.03314		0.0161	0.0166	0.100	0.0250	pCi/g	08/26/15 08:58	08/30/15 17:20	1
Lead-214	-0.02796	U	0.0564	0.0565	0.100	0.0425	pCi/g	08/26/15 08:58	08/30/15 17:20	1
Potassium-40	0.1337	U	0.106	0.107	2.50	0.226	pCi/g	08/26/15 08:58	08/30/15 17:20	1
Protactinium-231	-0.04812	U	0.248	0.248	1.00	0.422	pCi/g	08/26/15 08:58	08/30/15 17:20	1
Radium-226	-0.4309	U	1.44	1.45	1.00	0.357	pCi/g	08/26/15 08:58	08/30/15 17:20	1
Radium-228	0.03169	U	0.0301	0.0303	1.00	0.0527	pCi/g	08/26/15 08:58	08/30/15 17:20	1
Thorium-234	0.1173	U	0.127	0.127	1.00	0.348	pCi/g	08/26/15 08:58	08/30/15 17:20	1
Thallium-208	0.005361	U	0.0106	0.0106	0.100	0.0157	pCi/g	08/26/15 08:58	08/30/15 17:20	1
Uranium-235	0.04843	U	0.0408	0.0411	1.00	0.0570	pCi/g	08/26/15 08:58	08/30/15 17:20	1
Uranium-238	0.1173	U	0.127	0.127	1.00	0.348	pCi/g	08/26/15 08:58	08/30/15 17:20	1
Protactinium-234m	0.3240	U	1.05	1.05	10.0	1.82	pCi/g	08/26/15 08:58	08/30/15 17:20	1

Lab Sample ID: LCS 160-207931/2-A
Matrix: Solid
Analysis Batch: 208456

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 207931

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Americium-241	97.3	99.21		10.3		0.391	pCi/g	102	87 - 116
Cesium-137	30.2	30.30		3.16	0.100	0.0942	pCi/g	100	87 - 120
Cobalt-60	19.0	18.75		1.89		0.0569	pCi/g	99	87 - 115

Lab Sample ID: 160-13509-1 DU
Matrix: Solid
Analysis Batch: 208454

Client Sample ID: WC047
Prep Type: Total/NA
Prep Batch: 207931

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Actinium 228	0.305		0.2969		0.0466	0.100	0.0490	pCi/g	0.08	1
Bismuth-212	0.441		0.4787		0.165	0.100	0.145	pCi/g	0.11	1
Bismuth-214	0.292		0.2781		0.0397	0.100	0.0317	pCi/g	0.16	1
Lead-210	0.418		0.3192	U	0.353	0.100	0.515	pCi/g	0.17	1
Lead-212	0.309		0.2985		0.0441	0.100	0.0241	pCi/g	0.12	1
Lead-214	0.366		0.2972		0.0441	0.100	0.0330	pCi/g	0.74	1
Potassium-40	4.99		5.220		0.612	2.50	0.166	pCi/g	0.19	1
Protactinium-231	0.128	U	0.1581	U	0.0980	1.00	0.445	pCi/g	0.15	1
Radium-226	0.576		0.7060		0.294	1.00	0.350	pCi/g	0.24	1
Radium-228	0.305		0.2969		0.0466	1.00	0.0490	pCi/g	0.08	1
Thorium-234	0.265	U	0.4084		0.251	1.00	0.380	pCi/g	0.41	1
Thallium-208	0.108		0.1005		0.0187	0.100	0.0159	pCi/g	0.20	1
Uranium-235	0.0377	U	0.09312		0.0510	1.00	0.0650	pCi/g	0.61	1
Uranium-238	0.265	U	0.4084		0.251	1.00	0.380	pCi/g	0.41	1
Protactinium-234m	0.451	U	0.6044	U	1.08	10.0	1.81	pCi/g	0.07	1

QC Association Summary

Client: Posillico Consulting
Project/Site: Glen Isle: Data Gap Field Program

TestAmerica Job ID: 160-13509-1

Rad

Leach Batch: 207339

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13509-1	WC047	Total/NA	Solid	Dry and Grind	
160-13509-1 DU	WC047	Total/NA	Solid	Dry and Grind	
160-13509-2	WC048	Total/NA	Solid	Dry and Grind	
160-13509-3	WC049	Total/NA	Solid	Dry and Grind	
160-13509-4	WC050	Total/NA	Solid	Dry and Grind	

Prep Batch: 207931

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-13509-1	WC047	Total/NA	Solid	Fill_Geo-0	207339
160-13509-1 DU	WC047	Total/NA	Solid	Fill_Geo-0	207339
160-13509-2	WC048	Total/NA	Solid	Fill_Geo-0	207339
160-13509-3	WC049	Total/NA	Solid	Fill_Geo-0	207339
160-13509-4	WC050	Total/NA	Solid	Fill_Geo-0	207339
LCS 160-207931/2-A	Lab Control Sample	Total/NA	Solid	Fill_Geo-0	
MB 160-207931/1-A	Method Blank	Total/NA	Solid	Fill_Geo-0	