

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : MJW Corporation
 Address : 15 Hazelwood Drive
 Suite 112
 Buffalo, New York 14228

Report Date: January 15, 2016

Contact: Ms. Laurie Losey
 Project: Soil Radioisotopes

Client Sample ID: 5.2A.R.1.1
 Sample ID: 387769017
 Matrix: Soil
 Collect Date: 14-DEC-15
 Receive Date: 17-DEC-15
 Collector: Client
 Moisture: 24.7%

Project: MJWC00115
 Client ID: MJWC001

Parameter	Qualifier	Result	Uncertainty	MDC	Lc	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids														
<i>ASTM D 2216 % Moisture "As Received"</i>														
Moisture		24.7						percent		LYT1	12/18/15	1142	1532297	1
Rad Gamma Spec Analysis														
<i>GammaSpec, Gamma, Solid "Dry Weight Corrected"</i>														
Actinium-227	U	-0.00231	+/-0.303	0.560	0.257	+/-0.303		pCi/g		RXF2	01/12/16	0908	1532304	2
Antimony-125	U	-0.00995	+/-0.133	0.253	0.115	+/-0.133		pCi/g						
Bismuth-212	U	0.614	+/-0.790	1.69	0.764	+/-0.839		pCi/g						
Bismuth-214		0.852	+/-0.214	0.156	0.0677	+/-0.225		pCi/g						
Cesium-137		0.340	+/-0.0999	0.0911	0.0395	+/-0.104	0.100	pCi/g						
Cobalt-60	UI	0.00	+/-0.0586	0.145	0.0626	+/-0.0672		pCi/g						
Europium-154	U	0.0148	+/-0.166	0.345	0.146	+/-0.166		pCi/g						
Lead-212		0.748	+/-0.132	0.125	0.0579	+/-0.146		pCi/g						
Lead-214		1.12	+/-0.244	0.180	0.0818	+/-0.261		pCi/g						
Potassium-40		9.83	+/-1.90	1.02	0.411	+/-2.08		pCi/g						
Protactinium-231	UI	0.00	+/-0.836	0.926	0.416	+/-0.855		pCi/g						
Radium-226		0.852	+/-0.214	0.156	0.0677	+/-0.225		pCi/g						
Radium-228		0.788	+/-0.297	0.293	0.120	+/-0.312		pCi/g						
Thallium-208		0.224	+/-0.0906	0.0836	0.0365	+/-0.0925		pCi/g						
Tin-126	UI	0.00	+/-0.148	0.141	0.0663	+/-0.150		pCi/g						
Rad Gas Flow Proportional Counting														
<i>GFPC, Gross A-B, solid "Dry Weight Corrected"</i>														
Alpha		10.3	+/-3.89	3.76	1.41	+/-4.34	4.00	pCi/g		JXB7	01/07/16	1515	1534688	3
Beta		1.65	+/-1.92	3.13	1.39	+/-1.94	10.0	pCi/g						

Solid Preparation

Laboratory Composite "As Received"

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GI-RAD-A-021	LYT1	12/18/15	1142	1532297

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE HASL 300, 4.5.2 3/Ga-01-R
3	EPA 900.0/SW846 9310/SM 7110B Modified
4	GEL Prep Method

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
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Project: Soil Radioisotopes

Client Sample ID: 5.2A.R.1.1
Sample ID: 387769017

Project: MJWC00115
Client ID: MJWC001

Parameter	Qualifier	Result	Uncertainty	MDC	Lc	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.	
Surrogate/Tracer Recovery	Test												Batch ID	Recovery%	Acceptable Limits

Notes:

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

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Report Date: January 15, 2016

Contact: Ms. Laurie Losey
 Project: Soil Radioisotopes

Client Sample ID: 5.2A.R.2.1
 Sample ID: 387769018
 Matrix: Soil
 Collect Date: 14-DEC-15
 Receive Date: 17-DEC-15
 Collector: Client
 Moisture: 24.2%

Project: MJWC00115
 Client ID: MJWC001

Parameter	Qualifier	Result	Uncertainty	MDC	Lc	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids														
<i>ASTM D 2216 % Moisture "As Received"</i>														
Moisture		24.2						percent		LYF1	12/18/15	1142	1532297	1
Rad Alpha Spec Analysis														
<i>ASP Plutonium Isotopic, Solid "Dry Weight Corrected"</i>														
Plutonium-238	U	-0.0034	+/-0.0293	0.0679	0.0127	+/-0.0294	1.00	pCi/g		JXR1	01/11/16	1427	1532490	2
Plutonium-239/240	U	0.000566	+/-0.0419	0.0932	0.0254	+/-0.042	1.00	pCi/g						
<i>ASP Uranium Isotopic, Solid "Dry Weight Corrected"</i>														
Uranium-232	U	-0.0272	+/-0.0384	0.126	0.0385	+/-0.0385	1.00	pCi/g		JXR1	01/11/16	1519	1532487	3
Uranium-233/234		0.704	+/-0.218	0.0939	0.0215	+/-0.250	1.00	pCi/g						
Uranium-235/236		0.0598	+/-0.0758	0.0941	0.0216	+/-0.0765	1.00	pCi/g						
Uranium-238		0.466	+/-0.179	0.0939	0.0215	+/-0.197	1.00	pCi/g						
<i>Alphaspec Np237, Solid "Dry Weight Corrected"</i>														
Neptunium-237	U	-0.0386	+/-0.116	0.327	0.0833	+/-0.117	1.00	pCi/g		JXR1	01/11/16	0932	1532489	4
<i>Alphaspec Th229 + 228,230,232 Solid "Dry Weight Corrected"</i>														
Thorium-228		0.790	+/-0.429	0.379	0.113	+/-0.455	1.00	pCi/g		JXR1	01/12/16	1015	1532485	5
Thorium-229	U	-0.0599	+/-0.114	0.350	0.100	+/-0.114	1.00	pCi/g						
Thorium-230		1.12	+/-0.480	0.276	0.0632	+/-0.524	1.00	pCi/g						
Thorium-232		1.14	+/-0.477	0.149	0.00	+/-0.523	1.00	pCi/g						
<i>Am241, Cm Solid "Dry Weight Corrected"</i>														
Americium-241	U	0.0193	+/-0.107	0.205	0.047	+/-0.107	1.00	pCi/g		JXR1	01/11/16	1427	1532488	6
Curium-242		0.00	+/-0.0832	0.124	0.00	+/-0.0836	1.00	pCi/g						
Curium-243/244	U	-0.0264	+/-0.0796	0.224	0.0569	+/-0.080	1.00	pCi/g						
Curium-245/246		0.00	+/-0.0855	0.127	0.00	+/-0.0859	1.00	pCi/g						
<i>Liquid Scint Pu241, Solid "Dry Weight Corrected"</i>														
Plutonium-241		5.34	+/-4.78	7.95	3.81	+/-4.91	15.0	pCi/g		JXR1	01/13/16	1340	1532491	7
Rad Gamma Spec Analysis														
<i>Gamma I129, Solid "Dry Weight Corrected"</i>														
Iodine-129	U	-0.264	+/-0.429	0.632	0.283	+/-0.446	1.00	pCi/g		MJH1	01/12/16	1551	1533089	8
<i>Gammasp. Gamma, Solid "Dry Weight Corrected"</i>														
Actinium-227	U	-0.0259	+/-0.245	0.464	0.216	+/-0.246		pCi/g		RXF2	01/12/16	0908	1532304	9
Antimony-125	UI	0.00	+/-0.0879	0.183	0.084	+/-0.0969		pCi/g						
Bismuth-212	UI	0.00	+/-0.727	1.24	0.573	+/-0.785		pCi/g						
Bismuth-214		0.908	+/-0.148	0.113	0.0501	+/-0.166		pCi/g						
Cesium-137		0.363	+/-0.0832	0.0798	0.0363	+/-0.0884	0.100	pCi/g						
Cobalt-60	U	0.00824	+/-0.0341	0.0726	0.0306	+/-0.0343		pCi/g						
Europium-154	U	0.0562	+/-0.0791	0.190	0.0794	+/-0.0832		pCi/g						
Lead-212		0.819	+/-0.112	0.105	0.0493	+/-0.134		pCi/g						
Lead-214		1.15	+/-0.154	0.333	0.161	+/-0.183		pCi/g						

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 Project: Soil Radioisotopes
 Client Sample ID: 5.2A.R.2.1
 Sample ID: 387769018

Report Date: January 15, 2016

Project: MJWC00115
 Client ID: MJWC001

Parameter	Qualifier	Result	Uncertainty	MDC	Lc	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis														
<i>Gammaspac. Gamma. Solid "Dry Weight Corrected"</i>														
Potassium-40		10.5	+/-1.33	0.636	0.261	+/-1.62		pCi/g						
Protactinium-231	U1	0.00	+/-0.729	0.766	0.351	+/-0.757		pCi/g						
Radium-226		0.908	+/-0.148	0.113	0.0501	+/-0.166		pCi/g						
Radium-228		0.901	+/-0.216	0.153	0.061	+/-0.256		pCi/g						
Thallium-208		0.213	+/-0.0826	0.071	0.0323	+/-0.0845		pCi/g						
Tin-126	U1	0.00	+/-0.138	0.151	0.0718	+/-0.139		pCi/g						
Rad Gas Flow Proportional Counting														
<i>GFPC. Gross A.B. solid "Dry Weight Corrected"</i>														
Alpha		6.11	+/-3.12	3.67	1.39	+/-3.33	4.00	pCi/g		JXB7	01/07/16	1515	1534688	10
Beta		2.02	+/-2.05	3.32	1.47	+/-2.07	10.0	pCi/g						
<i>GFPC. Sr90. solid "Dry Weight Corrected"</i>														
Strontium-90	U	-0.20	+/-0.684	1.40	0.604	+/-0.684	2.00	pCi/g		KSD1	01/06/16	1527	1534450	11
Rad Liquid Scintillation Analysis														
<i>LSC. Tritium Dist. Solid "Dry Weight Corrected"</i>														
Tritium	U	0.702	+/-2.50	4.30	2.07	+/-2.50	6.00	pCi/g		TXJ1	01/07/16	0957	1533793	12
<i>Liquid Scint C14. Solid "Dry Weight Corrected"</i>														
Carbon-14	U	-0.518	+/-0.836	1.46	0.713	+/-0.836	2.00	pCi/g		TXJ1	01/14/16	0721	1533786	13
<i>Liquid Scint Tc99. Solid "Dry Weight Corrected"</i>														
Technetium-99	U	1.23	+/-1.61	2.72	1.31	+/-1.62	5.00	pCi/g		MYM	01/11/16	0533	1534429	14

Solid Preparation

Laboratory Composite "As Received"

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	12/18/15	1142	1532297

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	ASTM C 1476-00 Modified
5	DOE EML HASL-300, Th-01-RC Modified
6	DOE EML HASL-300, Am-05-RC Modified
7	DOE EML HASL-300, Pu-11-RC Modified
8	DOE EML HASL-300.I-01 Modified
9	DOE HASL 300, 4.5.2.3/Ga-01-R
10	EPA 900.0/SW846 9310/SM 7110B Modified
11	EPA 905.0 Modified/DOE RPS01 Rev 1 Modified

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Sample ID: 387769018

Project: MJWC00115
Client ID: MJWC001

Parameter	Qualifier	Result	Uncertainty	MDC	Lc	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
12	EPA 906.0 Modified													
13	EPA EERF C-01 Modified													
14	DOE EML HASL-300, Tc-02-RC Modified													
15	GEL Prep Method													

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Plutonium-242 Tracer	ASP Plutonium Isotopic, Solid "Dry Weight Corrected"	1532490	87.7	(15%-125%)
Uranium-232 Tracer	ASP Uranium Isotopic, Solid "Dry Weight Corrected"	1532487	91.7	(15%-125%)
Uranium-235/236 Tracer	ASP Uranium Isotopic, Solid "Dry Weight Corrected"	1532487	89.7	(15%-125%)
Americium-243 Tracer	Alphaspec Np237, Solid "Dry Weight Corrected"	1532489	96.4	(15%-125%)
Actinium-227 Tracer	Alphaspec Th229 + 228.230.232 Solid "Dry Weight Corrected"	1532485	88.7	(15%-125%)
Americium-243 Tracer	Am241, Cm Solid "Dry Weight Corrected"	1532488	30.6	(15%-125%)
Plutonium-242 Tracer	Liquid Scint Pu241, Solid "Dry Weight Corrected"	1532491	87.7	(15%-125%)
Strontium Carrier	GFPC, Sr90, solid "Dry Weight Corrected"	1534450	77.1	(25%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Solid "Dry Weight Corrected"	1534429	92.7	(15%-125%)

Notes:

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

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Report Date: January 15, 2016

Contact: Ms. Laurie Losey
 Project: Soil Radioisotopes

Client Sample ID: 5.2A.R.2.2
 Sample ID: 387769019
 Matrix: Soil
 Collect Date: 14-DEC-15
 Receive Date: 17-DEC-15
 Collector: Client
 Moisture: 19.1%

Project: MJWC00115
 Client ID: MJWC001

Parameter	Qualifier	Result	Uncertainty	MDC	Le	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids														
<i>ASTM D 2216 % Moisture "As Received"</i>														
Moisture		19.1						percent		LYT1	12/18/15	1142	1532297	1
Rad Alpha Spec Analysis														
<i>ASP Plutonium Isotopic, Solid "Dry Weight Corrected"</i>														
Plutonium-238	U	0.0106	+/-0.0398	0.067	0.0125	+/-0.0399	1.00	pCi/g		JXR1	01/11/16	1427	1532490	2
Plutonium-239/240	U	-0.0134	+/-0.0311	0.092	0.0251	+/-0.0311	1.00	pCi/g						
<i>ASP Uranium Isotopic, Solid "Dry Weight Corrected"</i>														
Uranium-232	U	-0.00654	+/-0.0451	0.110	0.0327	+/-0.0452	1.00	pCi/g		JXR1	01/12/16	1531	1532487	3
Uranium-233/234		0.624	+/-0.196	0.111	0.033	+/-0.222	1.00	pCi/g						
Uranium-235/236		0.0415	+/-0.0598	0.0722	0.0135	+/-0.0602	1.00	pCi/g						
Uranium-238		0.807	+/-0.218	0.0719	0.0135	+/-0.256	1.00	pCi/g						
<i>Alphaspec Np237, Solid "Dry Weight Corrected"</i>														
Neptunium-237	U	0.0373	+/-0.140	0.235	0.044	+/-0.140	1.00	pCi/g		JXR1	01/11/16	0932	1532489	4
<i>Alphaspec Th229 + 228,230,232 Solid "Dry Weight Corrected"</i>														
Thorium-228		0.376	+/-0.325	0.365	0.100	+/-0.334	1.00	pCi/g		JXR1	01/12/16	1015	1532485	5
Thorium-229	U	-0.062	+/-0.168	0.448	0.144	+/-0.168	1.00	pCi/g						
Thorium-230		0.949	+/-0.471	0.374	0.107	+/-0.502	1.00	pCi/g						
Thorium-232		0.625	+/-0.377	0.255	0.0477	+/-0.394	1.00	pCi/g						
<i>Am241, Cm Solid "Dry Weight Corrected"</i>														
Americium-241	U	0.0149	+/-0.156	0.326	0.0829	+/-0.156	1.00	pCi/g		JXR1	01/14/16	1154	1536857	6
Curium-242	U	0.0457	+/-0.171	0.288	0.0539	+/-0.171	1.00	pCi/g						
Curium-243/244		0.00	+/-0.106	0.158	0.00	+/-0.106	1.00	pCi/g						
Curium-245/246		0.00	+/-0.123	0.183	0.00	+/-0.123	1.00	pCi/g						
<i>Liquid Scint Pu241, Solid "Dry Weight Corrected"</i>														
Plutonium-241	U	2.73	+/-5.30	9.07	4.35	+/-5.33	15.0	pCi/g		JXR1	01/13/16	1426	1532491	7
Rad Gamma Spec Analysis														
<i>Gamma I129, Solid "Dry Weight Corrected"</i>														
Iodine-129	U	-0.111	+/-0.245	0.427	0.186	+/-0.250	1.00	pCi/g		MJH1	01/12/16	1552	1533089	8
<i>Gammasespec, Gamma, Solid "Dry Weight Corrected"</i>														
Actinium-227	U	0.0697	+/-0.278	0.534	0.251	+/-0.280		pCi/g		RXF2	01/12/16	0909	1532304	9
Antimony-125	U	-0.041	+/-0.094	0.167	0.076	+/-0.0959		pCi/g						
Bismuth-212		1.15	+/-0.665	0.896	0.401	+/-0.677		pCi/g						
Bismuth-214		0.892	+/-0.149	0.117	0.0524	+/-0.170		pCi/g						
Cesium-137		0.120	+/-0.0581	0.0491	0.0212	+/-0.0592	0.100	pCi/g						
Cobalt-60	U	-0.00485	+/-0.0287	0.0577	0.0235	+/-0.0287		pCi/g						
Europium-154	U	0.052	+/-0.117	0.245	0.108	+/-0.119		pCi/g						
Lead-212		0.867	+/-0.127	0.127	0.0601	+/-0.151		pCi/g						
Lead-214		1.12	+/-0.179	0.133	0.061	+/-0.205		pCi/g						

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 Sample ID: 387769019

Report Date: January 15, 2016

Project: MJWC00115
 Client ID: MJWC001

Parameter	Qualifier	Result	Uncertainty	MDC	Lc	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis														
<i>GammaSpec, Gamma, Solid "Dry Weight Corrected"</i>														
Potassium-40		10.3	+/-1.44	0.771	0.332	+/-1.68		pCi/g						
Protactinium-231	U	0.00	+/-0.620	0.886	0.412	+/-0.672		pCi/g						
Radium-226		0.892	+/-0.149	0.117	0.0524	+/-0.170		pCi/g						
Radium-228		0.821	+/-0.244	0.260	0.115	+/-0.276		pCi/g						
Thallium-208		0.272	+/-0.0694	0.00621	0.00	+/-0.0736		pCi/g						
Tin-126	U	0.0218	+/-0.099	0.176	0.084	+/-0.0996		pCi/g						
Rad Gas Flow Proportional Counting														
<i>GFPC, Gross A-B, solid "Dry Weight Corrected"</i>														
Alpha		9.16	+/-3.88	3.77	1.35	+/-4.26	4.00	pCi/g		JXB7	01/07/16	1514	1534688	10
Beta		19.1	+/-3.29	2.69	1.17	+/-4.24	10.0	pCi/g						
<i>GFPC, Sr90, solid "Dry Weight Corrected"</i>														
Strontium-90	U	0.693	+/-1.10	1.88	0.868	+/-1.10	2.00	pCi/g		KSD1	01/06/16	1528	1534450	11
Rad Liquid Scintillation Analysis														
<i>LSC, Tritium Dist, Solid "Dry Weight Corrected"</i>														
Tritium	U	-0.308	+/-2.27	3.98	1.92	+/-2.27	6.00	pCi/g		TXJ1	01/07/16	1109	1533793	12
<i>Liquid Scint C14, Solid "Dry Weight Corrected"</i>														
Carbon-14	U	-0.789	+/-0.769	1.36	0.662	+/-0.769	2.00	pCi/g		TXJ1	01/14/16	0822	1533786	13
<i>Liquid Scint Tc99, Solid "Dry Weight Corrected"</i>														
Technetium-99	U	-0.227	+/-1.04	1.85	0.885	+/-1.04	5.00	pCi/g		MYM	01/11/16	0550	1534429	14

Solid Preparation

Laboratory Composite "As Received"

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	12/18/15	1142	1532297

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	ASTM C 1476-00 Modified
5	DOE EML HASL-300, Th-01-RC Modified
6	DOE EML HASL-300, Am-05-RC Modified
7	DOE EML HASL-300, Pu-11-RC Modified
8	DOE EML HASL-300, I-01 Modified
9	DOE HASL 300, 4.5.2.3/Ga-01-R
10	EPA 900.0/SW846 9310/SM 7110B Modified
11	EPA 905.0 Modified/DOE RP501 Rev 1 Modified

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Project: Soil Radioisotopes

Client Sample ID: 5.2A.R.2.2
Sample ID: 387769019

Project: MJWC00115
Client ID: MJWC001

Parameter	Qualifier	Result	Uncertainty	MDC	Lc	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
12	EPA 906 0 Modified													
13	EPA EERF C-01 Modified													
14	DOE EML HASL-300, Tc-02-RC Modified													
15	GEL Prep Method													

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Plutonium-242 Tracer	ASP Plutonium Isotopic, Solid "Dry Weight Corrected"	1532490	78.5	(15%-125%)
Uranium-232 Tracer	ASP Uranium Isotopic, Solid "Dry Weight Corrected"	1532487	96.7	(15%-125%)
Uranium-235/236 Tracer	ASP Uranium Isotopic, Solid "Dry Weight Corrected"	1532487	100	(15%-125%)
Americium-243 Tracer	Alphaspec Np237, Solid "Dry Weight Corrected"	1532489	97.8	(15%-125%)
Actinium-227 Tracer	Alphaspec Th229 + 228,230,232 Solid "Dry Weight Corrected"	1532485	93.5	(15%-125%)
Americium-243 Tracer	Am241, Cm Solid "Dry Weight Corrected"	1536857	95.9	(15%-125%)
Plutonium-242 Tracer	Liquid Scint Pu241, Solid "Dry Weight Corrected"	1532491	78.5	(15%-125%)
Strontium Carrier	GFPC, Sr90, solid "Dry Weight Corrected"	1534450	79.2	(25%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Solid "Dry Weight Corrected"	1534429	92.2	(15%-125%)

Notes:

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

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Certificate of Analysis

Company : MJW Corporation
 Address : 15 Hazelwood Drive
 Suite 112
 Buffalo, New York 14228

Report Date: January 15, 2016

Contact: Ms. Laurie Losey
 Project: Soil Radioisotopes

Client Sample ID: 5.2A.R.2.5
 Sample ID: 387769020
 Matrix: Soil
 Collect Date: 14-DEC-15
 Receive Date: 17-DEC-15
 Collector: Client
 Moisture: 24.7%

Project: MJWC00115
 Client ID: MJWC001

Parameter	Qualifier	Result	Uncertainty	MDC	Lc	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids														
<i>ASTM D 2216 % Moisture "As Received"</i>														
Moisture		24.7						percent		LYTI	12/18/15	1142	1532297	1
Rad Gamma Spec Analysis														
<i>Gammasp. Gamma, Solid "Dry Weight Corrected"</i>														
Actinium-227	U	0.190	+/-0.271	0.501	0.233	+/-0.286		pCi/g		RXF2	01/12/16	0909	1532304	2
Antimony-125	U	-0.00456	+/-0.109	0.203	0.0934	+/-0.109		pCi/g						
Bismuth-212	UI	0.00	+/-0.738	1.25	0.569	+/-0.881		pCi/g						
Bismuth-214		0.675	+/-0.169	0.142	0.0639	+/-0.179		pCi/g						
Cesium-137		0.323	+/-0.0853	0.0756	0.0339	+/-0.0897	0.100	pCi/g						
Cobalt-60	U	0.00431	+/-0.0351	0.0744	0.031	+/-0.0352		pCi/g						
Europium-154	U	-0.00363	+/-0.102	0.209	0.0874	+/-0.102		pCi/g						
Lead-212		0.745	+/-0.123	0.111	0.052	+/-0.137		pCi/g						
Lead-214		1.09	+/-0.189	0.148	0.0681	+/-0.210		pCi/g						
Potassium-40		9.07	+/-1.26	0.676	0.276	+/-1.47		pCi/g						
Protactinium-231	UI	0.00	+/-0.659	0.986	0.458	+/-0.695		pCi/g						
Radium-226		0.675	+/-0.169	0.142	0.0639	+/-0.179		pCi/g						
Radium-228		0.620	+/-0.269	0.282	0.124	+/-0.284		pCi/g						
Thallium-208		0.230	+/-0.0724	0.0667	0.0298	+/-0.0751		pCi/g						
Tin-126	UI	0.00	+/-0.141	0.184	0.088	+/-0.149		pCi/g						
Rad Gas Flow Proportional Counting														
<i>GFPC, Gross A.B. solid "Dry Weight Corrected"</i>														
Alpha		16.7	+/-5.01	3.83	1.39	+/-5.98	4.00	pCi/g		JXB7	01/07/16	1515	1534688	3
Beta		20.0	+/-3.33	2.44	1.05	+/-4.46	10.0	pCi/g						

Solid Preparation

Laboratory Composite "As Received"

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYTI	12/18/15	1142	1532297

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE HASL 300, 4.5 2.3/Ga-01-R
3	EPA 900.0/SW846 9310/SM 7110B Modified
4	GEL Prep Method

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits

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Certificate of Analysis

Company : MJW Corporation
Address : 15 Hazelwood Drive
Suite 112
Buffalo, New York 14228

Report Date: January 15, 2016

Contact: Ms. Laurie Losey
Project: Soil Radioisotopes

Client Sample ID: 5.2A.R.2.5
Sample ID: 387769020

Project: MJWC00115
Client ID: MJWC001

Parameter	Qualifier	Result	Uncertainty	MBC	Lc	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.	
Surrogate/Tracer Recovery	Test												Batch ID	Recovery%	Acceptable Limits

Notes:

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

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Certificate of Analysis

Company : MJW Corporation
 Address : 15 Hazelwood Drive
 Suite 112
 Buffalo, New York 14228

Report Date: January 15, 2016

Contact: Ms. Laurie Losey
 Project: Soil Radioisotopes

Client Sample ID: 5.2A.R.2.6
 Sample ID: 387769021
 Matrix: Soil
 Collect Date: 14-DEC-15
 Receive Date: 17-DEC-15
 Collector: Client
 Moisture: 18.5%

Project: MJWC00115
 Client ID: MJWC001

Parameter	Qualifier	Result	Uncertainty	MDC	Lc	TPU	RI	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids														
<i>ASTM D 2216 % Moisture "As Received"</i>														
Moisture		18.5						percent		LYT1	12/18/15	1147	1532298	1
Rad Alpha Spec Analysis														
<i>ASP Plutonium Isotopic, Solid "Dry Weight Corrected"</i>														
Plutonium-238	U	-0.0167	+/-0.0453	0.121	0.0387	+/-0.0453	1.00	pCi/g		JXR1	01/11/16	1427	1532490	2
Plutonium-239/240	U	-0.0104	+/-0.0313	0.0878	0.0223	+/-0.0313	1.00	pCi/g						
<i>ASP Uranium Isotopic, Solid "Dry Weight Corrected"</i>														
Uranium-232		0.00	+/-0.0313	0.0466	0.00	+/-0.0314	1.00	pCi/g		JXR1	01/11/16	1519	1532487	3
Uranium-233/234		0.957	+/-0.247	0.0891	0.0204	+/-0.295	1.00	pCi/g						
Uranium-235/236		0.0768	+/-0.0782	0.0773	0.0145	+/-0.0792	1.00	pCi/g						
Uranium-238		0.820	+/-0.227	0.0482	0.00	+/-0.266	1.00	pCi/g						
<i>Alphaspec Np237, Solid "Dry Weight Corrected"</i>														
Neptunium-237	U	0.0151	+/-0.158	0.330	0.0839	+/-0.158	1.00	pCi/g		JXR1	01/11/16	0932	1532489	4
<i>Alphaspec Th229 + 228,230,232 Solid "Dry Weight Corrected"</i>														
Thorium-228		0.831	+/-0.496	0.507	0.163	+/-0.522	1.00	pCi/g		JXR1	01/12/16	1015	1532485	5
Thorium-229		0.135	+/-0.238	0.361	0.0918	+/-0.240	1.00	pCi/g						
Thorium-230		0.342	+/-0.334	0.413	0.118	+/-0.340	1.00	pCi/g						
Thorium-232		0.867	+/-0.462	0.282	0.0527	+/-0.491	1.00	pCi/g						
<i>Am241, Cm Solid "Dry Weight Corrected"</i>														
Americium-241	U	-0.0426	+/-0.193	0.486	0.149	+/-0.193	1.00	pCi/g		JXR1	01/14/16	1154	1536857	6
Curium-242	U	0.0537	+/-0.201	0.339	0.0634	+/-0.201	1.00	pCi/g						
Curium-243/244	U	0.0471	+/-0.177	0.297	0.0556	+/-0.177	1.00	pCi/g						
Curium-245/246		0.0717	+/-0.202	0.215	0.00	+/-0.202	1.00	pCi/g						
<i>Liquid Scint Pu241, Solid "Dry Weight Corrected"</i>														
Plutonium-241		4.46	+/-5.07	8.53	4.09	+/-5.16	15.0	pCi/g		JXR1	01/13/16	1513	1532491	7
Rad Gamma Spec Analysis														
<i>Gamma I129, Solid "Dry Weight Corrected"</i>														
Iodine-129	U	-0.0174	+/-0.323	0.592	0.262	+/-0.323	1.00	pCi/g		MJH1	01/12/16	1552	1533089	8
<i>Gammiaspec, Gamma, Solid "Dry Weight Corrected"</i>														
Actinium-227	U	-0.0505	+/-0.282	0.467	0.217	+/-0.283		pCi/g		RXF2	01/12/16	0651	1532305	9
Antimony-125	U	0.0642	+/-0.101	0.203	0.094	+/-0.105		pCi/g						
Bismuth-212	U	0.366	+/-0.673	1.31	0.604	+/-0.694		pCi/g						
Bismuth-214		0.783	+/-0.198	0.149	0.068	+/-0.209		pCi/g						
Cesium-137	U	0.042	+/-0.057	0.101	0.0469	+/-0.0602	0.100	pCi/g						
Cobalt-60	U	0.00104	+/-0.0388	0.0772	0.0331	+/-0.0388		pCi/g						
Europium-154	U	0.0198	+/-0.109	0.222	0.096	+/-0.109		pCi/g						
Lead-212		0.875	+/-0.131	0.116	0.0546	+/-0.148		pCi/g						
Lead-214		0.948	+/-0.197	0.163	0.0761	+/-0.211		pCi/g						

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Certificate of Analysis

Company : MJW Corporation
 Address : 15 Hazelwood Drive
 Suite 112
 Buffalo, New York 14228
 Contact: Ms. Laurie Losey
 Project: Soil Radioisotopes
 Client Sample ID: 5.2A.R.2.6
 Sample ID: 387769021

Report Date: January 15, 2016

Project: MJWC00115
 Client ID: MJWC001

Parameter	Qualifier	Result	Uncertainty	MDC	Lc	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis														
<i>GammaSpec, Gamma, Solid "Dry Weight Corrected"</i>														
Potassium-40		11.0	+/-1.41	0.715	0.302	+/-1.72		pCi/g						
Protactinium-231	U	0.00	+/-0.655	0.982	0.459	+/-0.686		pCi/g						
Radium-226		0.783	+/-0.198	0.149	0.068	+/-0.209		pCi/g						
Radium-228		0.800	+/-0.225	0.209	0.0891	+/-0.248		pCi/g						
Thallium-208		0.254	+/-0.0768	0.067	0.0302	+/-0.0797		pCi/g						
Tin-126	U	0.0558	+/-0.133	0.224	0.108	+/-0.136		pCi/g						
Rad Gas Flow Proportional Counting														
<i>GFPC, Gross A, B, solid "Dry Weight Corrected"</i>														
Alpha		10.8	+/-3.65	3.75	1.54	+/-4.25	4.00	pCi/g		KXB2	01/07/16	1209	1534691	10
Beta		19.3	+/-3.22	3.58	1.66	+/-4.16	10.0	pCi/g						
<i>GFPC, Sr90, solid "Dry Weight Corrected"</i>														
Strontium-90	U	-0.50	+/-0.700	1.52	0.659	+/-0.701	2.00	pCi/g		KSD1	01/06/16	1528	1534450	11
Rad Liquid Scintillation Analysis														
<i>LSC, Tritium Dist. Solid "Dry Weight Corrected"</i>														
Tritium	U	0.377	+/-2.39	4.14	1.99	+/-2.39	6.00	pCi/g		TXJ1	01/07/16	1222	1533793	12
<i>Liquid Scint C14, Solid "Dry Weight Corrected"</i>														
Carbon-14	U	-0.386	+/-0.774	1.35	0.658	+/-0.774	2.00	pCi/g		TXJ1	01/14/16	0923	1533786	13
<i>Liquid Scint Tc99, Solid "Dry Weight Corrected"</i>														
Technetium-99	U	0.721	+/-1.27	2.17	1.04	+/-1.27	5.00	pCi/g		MYM	01/11/16	0606	1534429	14

Solid Preparation

Laboratory Composite "As Received"

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GI-RAD-A-021	LYT1	12/18/15	1147	1532298

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	ASTM C 1476-00 Modified
5	DOE EML HASL-300, Th-01-RC Modified
6	DOE EML HASL-300, Am-05-RC Modified
7	DOE EML HASL-300, Pu-11-RC Modified
8	DOE EML HASL-300, I-01 Modified
9	DOE HASL 300, 4.5.2.3/Ga-01-R
10	EPA 900.0/SW846 9310/SM 7110B Modified
11	EPA 905.0 Modified/DOE RP501 Rev. 1 Modified

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Certificate of Analysis

Company : MJW Corporation
Address : 15 Hazelwood Drive
Suite 112
Buffalo, New York 14228

Report Date: January 15, 2016

Contact: Ms. Laurie Losey
Project: Soil Radioisotopes

Client Sample ID: 5.2A.R.2.6
Sample ID: 387769021

Project: MJWC00115
Client ID: MJWC001

Parameter	Qualifier	Result	Uncertainty	MDC	Lc	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
12	EPA 906.0 Modified													
13	EPA EERF C-01 Modified													
14	DOE EML HASL-300, Te-02-RC Modified													
15	GEL Prep Method													

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Plutonium-242 Tracer	ASP Plutonium Isotopic, Solid "Dry Weight Corrected"	1532490	83.4	(15%-125%)
Uranium-232 Tracer	ASP Uranium Isotopic, Solid "Dry Weight Corrected"	1532487	88.7	(15%-125%)
Uranium-235/236 Tracer	ASP Uranium Isotopic, Solid "Dry Weight Corrected"	1532487	95.3	(15%-125%)
Americium-243 Tracer	Alphaspec Np237, Solid "Dry Weight Corrected"	1532489	93.3	(15%-125%)
Actinium-227 Tracer	Alphaspec Th229 + 228.230,232 Solid "Dry Weight Corrected"	1532485	85	(15%-125%)
Americium-243 Tracer	Am241, Cm Solid "Dry Weight Corrected"	1536857	82.9	(15%-125%)
Plutonium-242 Tracer	Liquid Scint Pu241, Solid "Dry Weight Corrected"	1532491	83.4	(15%-125%)
Strontium Carrier	GFPC, Sr90, solid "Dry Weight Corrected"	1534450	78.2	(25%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Solid "Dry Weight Corrected"	1534429	94.3	(15%-125%)

Notes:

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

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Certificate of Analysis

Company : MJW Corporation
 Address : 15 Hazelwood Drive
 Suite 112
 Buffalo, New York 14228

Report Date: January 14, 2016

Contact: Ms. Laurie Losey
 Project: Soil Radioisotopes

Client Sample ID: 5.2.A.R.2.7
 Sample ID: 387686006
 Matrix: Water
 Collect Date: 14-DEC-15
 Receive Date: 17-DEC-15
 Collector: Client

Project: MJWC00115
 Client ID: MJWC001

Parameter	Qualifier	Result	Uncertainty	MDC	Lc	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
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Rad Gamma Spec Analysis

GammaSpec, Gamma, Liquid (Standard List) "As Received"

Actinium-227	U	-9.35	+/-40.7	68.4	32.2	+/-40.9		pCi/L		MJH1	01/08/16	1530	1532831	1
Antimony-125	U	-11.3	+/-16.6	24.2	11.1	+/-17.4		pCi/L						
Bismuth-212	U	72.3	+/-84.7	172	78.9	+/-91.0		pCi/L						
Bismuth-214	U	8.15	+/-21.9	20.0	9.17	+/-21.9		pCi/L						
Cesium-137	U	-1.7	+/-5.55	9.62	4.32	+/-5.60	10.0	pCi/L						
Cobalt-60	U	1.77	+/-5.82	12.1	5.23	+/-5.87		pCi/L						
Europium-154	U	-1.5	+/-15.0	29.6	12.6	+/-15.1		pCi/L						
Lead-212	U	-8.15	+/-10.8	17.0	8.11	+/-11.5		pCi/L						
Lead-214	U	-12	+/-15.4	23.3	11.0	+/-16.4		pCi/L						
Potassium-40	U	15.8	+/-83.7	154	69.0	+/-84.1		pCi/L						
Protactinium-231	U	-16	+/-79.5	126	59.0	+/-79.9		pCi/L						
Radium-228	U	18.4	+/-23.9	46.6	21.1	+/-25.4		pCi/L						
Thallium-208	U	-1.93	+/-7.28	12.3	5.70	+/-7.33		pCi/L						
Tin-126	U	-8.7	+/-12.6	17.7	8.41	+/-13.2		pCi/L						

Rad Gas Flow Proportional Counting

GFPC, Gross A/B, liquid "As Received"

Alpha	U	0.522	+/-1.14	2.25	0.741	+/-1.14	5.00	pCi/L		JXB7	01/05/16	1143	1533798	2
Beta	U	-0.337	+/-2.24	4.33	1.92	+/-2.24	5.00	pCi/L						

The following Analytical Methods were performed

Method	Description
1	EPA 901.1
2	EPA 900.0/SW846 9310

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
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Notes:

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : MJW Corporation
 Address : 15-Hazelwood Drive
 Suite 112
 Buffalo, New York 14228

Report Date: January 15, 2016

Contact: Ms. Laurie Losey
 Project: Soil Radioisotopes

Client Sample ID: 5.2A.R.3.1
 Sample ID: 387769022
 Matrix: Soil
 Collect Date: 11-DEC-15
 Receive Date: 17-DEC-15
 Collector: Client
 Moisture: 22.8%

Project: MJWC00115
 Client ID: MJWC001

Parameter	Qualifier	Result	Uncertainty	MDC	Lc	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids														
<i>ASTM D 2216 % Moisture "As Received"</i>														
Moisture		22.8						percent		LYT1	12/18/15	1147	1532298	1
Rad Gamma Spec Analysis														
<i>Gammascpec, Gamma, Solid "Dry Weight Corrected"</i>														
Actinium-227	U	0.105	+/-0.243	0.462	0.220	+/-0.248		pCi/g		RXF2	01/12/16	0635	1532305	2
Antimony-125	UI	0.00	+/-0.246	0.168	0.079	+/-0.254		pCi/g						
Bismuth-212	UI	0.00	+/-0.472	0.924	0.431	+/-0.673		pCi/g						
Bismuth-214		0.967	+/-0.150	0.116	0.0542	+/-0.171		pCi/g						
Cesium-137		0.614	+/-0.0805	0.0631	0.0292	+/-0.0964	0.100	pCi/g						
Cobalt-60	U	0.0144	+/-0.0304	0.0626	0.0279	+/-0.0311		pCi/g						
Europium-154	U	-0.0419	+/-0.127	0.186	0.0835	+/-0.128		pCi/g						
Lead-212		0.667	+/-0.114	0.0994	0.0473	+/-0.125		pCi/g						
Lead-214		1.03	+/-0.203	0.129	0.0607	+/-0.218		pCi/g						
Potassium-40		9.49	+/-1.20	0.628	0.280	+/-1.44		pCi/g						
Protactinium-231	U	0.235	+/-0.521	0.865	0.411	+/-0.534		pCi/g						
Radium-226		0.967	+/-0.150	0.116	0.0542	+/-0.171		pCi/g						
Radium-228		0.608	+/-0.218	0.234	0.107	+/-0.227		pCi/g						
Thallium-208		0.200	+/-0.0689	0.0565	0.0262	+/-0.0709		pCi/g						
Tin-126	UI	0.00	+/-0.112	0.133	0.0638	+/-0.114		pCi/g						
Rad Gas Flow Proportional Counting														
<i>GFPC, Gross A B, solid "Dry Weight Corrected"</i>														
Alpha		7.94	+/-3.33	3.93	1.60	+/-3.65	4.00	pCi/g		KXB2	01/07/16	1211	1534691	3
Beta		21.3	+/-3.26	2.95	1.33	+/-4.39	10.0	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	12/18/15	1147	1532298

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE HASL 300, 4.5 2 3/Ga-01-R
3	EPA 900.0/SW846 9310/SM 7110B Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
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Certificate of Analysis

Company : MJW Corporation
Address : 15 Hazelwood Drive
Suite 112
Buffalo, New York 14228

Report Date: January 15, 2016

Contact: Ms. Laurie Losey
Project: Soil Radioisotopes

Client Sample ID: 5.2A.R.3.1
Sample ID: 387769022

Project: MJWC00115
Client ID: MJWC001

Parameter	Qualifier	Result	Uncertainty	MDC	Lc	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.	
Surrogate/Tracer Recovery	Test												Batch ID	Recovery%	Acceptable Limits

Notes:

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : MJW Technical Services
 Address : 15 Hazelwood Drive
 Suite 112
 Buffalo, New York 14228

Report Date: March 8, 2016

Contact: Ms. Laurie Losey
 Project: Soil Radioisotopes

Client Sample ID: 5.2.A.R.3.2
 Sample ID: 392062022
 Matrix: Soil
 Collect Date: 11-DEC-15
 Receive Date: 25-FEB-16
 Collector: Client
 Moisture: 17.6%

Project: MJWC00115
 Client ID: MJWC001

Parameter	Qualifier	Result	Uncertainty	MDC	Lc	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis														
<i>Gamma with Ingrowth "Dry Weight Corrected"</i>														
Actinium-227	U	0.0627	+/-0.273	0.529	0.246	+/-0.275		pCi/g		MXR1	03/07/16	1040	1547792	1
Antimony-125	U	-0.0168	+/-0.104	0.176	0.0778	+/-0.105		pCi/g						
Bismuth-212	UI	0.00	+/-0.798	1.25	0.551	+/-0.799		pCi/g						
Bismuth-214		0.968	+/-0.196	0.188	0.0849	+/-0.212		pCi/g						
Cesium-137		0.110	+/-0.0569	0.0992	0.0443	+/-0.0576	0.100	pCi/g						
Cobalt-60	U	-0.0449	+/-0.0511	0.0879	0.0349	+/-0.0551		pCi/g						
Europium-154	U	0.153	+/-0.222	0.463	0.207	+/-0.233		pCi/g						
Lead-212		0.769	+/-0.124	0.143	0.0677	+/-0.151		pCi/g						
Lead-214		1.08	+/-0.190	0.369	0.178	+/-0.213		pCi/g						
Potassium-40		9.73	+/-1.65	1.01	0.417	+/-1.87		pCi/g						
Protactinium-231	U	0.0122	+/-0.615	1.02	0.470	+/-0.615		pCi/g						
Radium-226		0.968	+/-0.196	0.188	0.0849	+/-0.212		pCi/g						
Radium-228		0.853	+/-0.377	0.418	0.185	+/-0.392		pCi/g						
Thallium-208		0.230	+/-0.0756	0.0957	0.0432	+/-0.0781		pCi/g						
Tin-126	UI	0.00	+/-0.0819	0.076	0.0355	+/-0.0841		pCi/g						

Rad Gas Flow Proportional Counting
GFPC, Gross A/B, solid "Dry Weight Corrected"

Alpha		11.1	+/-3.56	3.85	1.61	+/-4.17	4.00	pCi/g		JXB7	03/03/16	1507	1548366	2
Beta		21.6	+/-3.41	3.87	1.81	+/-4.57	10.0	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	02/25/16	1513	1547785

The following Analytical Methods were performed

Method	Description
1	DOE HASL 300, 4 5 2 3/Ga-01-R
2	EPA 900 0/SW846 9310/SM 7110B Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
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GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : MJW Technical Services
Address : 15 Hazelwood Drive
Suite 112
Buffalo, New York 14228

Report Date: March 8, 2016

Contact: Ms. Laurie Losey
Project: Soil Radioisotopes

Client Sample ID: 5.2.A.R.3.2
Sample ID: 392062022

Project: MJWC00115
Client ID: MJWC001

Parameter	Qualifier	Result	Uncertainty	MDC	Lc	TPU	RI	Units	DF	Analyst	Date	Time	Batch	Mtd.
Surrogate/Tracer	Recovery	Test						Batch ID	Recovery%	Acceptable	Limits			

Notes:

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

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Certificate of Analysis

Company : MJW Corporation
 Address : 15 Hazelwood Drive
 Suite 112
 Buffalo, New York 14228
 Contact: Ms. Laurie Losey
 Project: Soil Radioisotopes

Report Date: January 18, 2016

Client Sample ID: 5.2A.R.4.1
 Sample ID: 387853001
 Matrix: Soil
 Collect Date: 11-DEC-15
 Receive Date: 18-DEC-15
 Collector: Client
 Moisture: 21%

Project: MJWC00115
 Client ID: MJWC001

Parameter	Qualifier	Result	Uncertainty	MDC	Lc	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
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Gravimetric Solids

ASTM D 2216 % Moisture "As Received"

Moisture		21.0						percent		CXC1	12/21/15	1516	1532672	1
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Rad Gamma Spec Analysis

Gammascpec, Gamma, Solid "Dry Weight Corrected"

Actinium-227	U	-0.00885	+/-0.234	0.451	0.210	+/-0.234		pCi/g		RXF2	01/13/16	0629	1532995	2
Antimony-125	U	-0.0376	+/-0.0997	0.181	0.0835	+/-0.101		pCi/g						
Bismuth-212		0.951	+/-0.687	0.933	0.422	+/-0.694		pCi/g						
Bismuth-214		0.825	+/-0.155	0.100	0.0445	+/-0.171		pCi/g						
Cesium-137		0.264	+/-0.0736	0.0618	0.0277	+/-0.077	0.100	pCi/g						
Cobalt-60	UI	0.00	+/-0.0251	0.0566	0.0233	+/-0.0252		pCi/g						
Europium-154	U	-0.0666	+/-0.107	0.184	0.0781	+/-0.111		pCi/g						
Lead-212		0.766	+/-0.114	0.104	0.0487	+/-0.136		pCi/g						
Lead-214		0.999	+/-0.174	0.317	0.154	+/-0.195		pCi/g						
Potassium-40		9.90	+/-1.28	0.537	0.219	+/-1.54		pCi/g						
Protactinium-231	UI	0.00	+/-0.541	0.819	0.380	+/-0.565		pCi/g						
Radium-226		0.825	+/-0.155	0.100	0.0445	+/-0.171		pCi/g						
Radium-228		0.666	+/-0.239	0.254	0.113	+/-0.260		pCi/g						
Thallium-208		0.182	+/-0.0769	0.0705	0.0323	+/-0.0785		pCi/g						
Tin-126	U	0.0585	+/-0.113	0.146	0.0698	+/-0.116		pCi/g						

Rad Gas Flow Proportional Counting

GFPC, Gross A/B, solid "Dry Weight Corrected"

Alpha		7.80	+/-3.22	3.96	1.66	+/-3.57	4.00	pCi/g		JXB7	01/11/16	1305	1534754	3
Beta		16.0	+/-3.23	3.91	1.82	+/-4.01	10.0	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/21/15	1516	1532672

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE HASL 300, 4.5 2 3/Ga-01-R
3	EPA 900.0/SW846 9310/SM 7110B Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
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Certificate of Analysis

Company : MJW Corporation
Address : 15 Hazelwood Drive
Suite 112
Buffalo, New York 14228

Report Date: January 18, 2016

Contact: Ms. Laurie Losey
Project: Soil Radioisotopes

Client Sample ID: 5.2A.R.4.1
Sample ID: 387853001

Project: MJWC00115
Client ID: MJWC001

Parameter	Qualifier	Result	Uncertainty	MDC	Lc	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.	
Surrogate/Tracer Recovery	Test												Batch ID	Recovery%	Acceptable Limits

Notes:

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

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Certificate of Analysis

Company : MJW Corporation
 Address : 15 Hazelwood Drive
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Report Date: January 18, 2016

Contact: Ms. Laurie Losey
 Project: Soil Radioisotopes

Client Sample ID: 5,2A.R.5.1
 Sample ID: 387853002
 Matrix: Soil
 Collect Date: 11-DEC-15
 Receive Date: 18-DEC-15
 Collector: Client
 Moisture: 21.1%

Project: MJWC00115
 Client ID: MJWC001

Parameter	Qualifier	Result	Uncertainty	MDC	Lc	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
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Gravimetric Solids

ASTM D 2216 % Moisture "As Received"

Moisture		21.1						percent		CXC1	12/21/15	1516	1532672	1
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Rad Gamma Spec Analysis

Gammascpec, Gamma, Solid "Dry Weight Corrected"

Actinium-227	U	0.00685	+/-0.237	0.454	0.212	+/-0.237		pCi/g		RXF2	01/13/16	0641	1532995	2
Antimony-125	U	0.00782	+/-0.0867	0.165	0.0754	+/-0.0867		pCi/g						
Bismuth-212	UI	0.00	+/-0.560	1.15	0.527	+/-0.808		pCi/g						
Bismuth-214		0.852	+/-0.167	0.125	0.0566	+/-0.181		pCi/g						
Cesium-137		0.575	+/-0.0912	0.0581	0.0257	+/-0.102	0.100	pCi/g						
Cobalt-60	U	0.00622	+/-0.0293	0.0615	0.0255	+/-0.0295		pCi/g						
Europium-154	U	0.0309	+/-0.0985	0.203	0.0871	+/-0.0996		pCi/g						
Lead-212		0.797	+/-0.112	0.0974	0.0456	+/-0.130		pCi/g						
Lead-214		1.06	+/-0.186	0.136	0.0631	+/-0.204		pCi/g						
Potassium-40		10.4	+/-1.27	0.527	0.212	+/-1.58		pCi/g						
Protactinium-231	UI	0.00	+/-0.641	0.861	0.400	+/-0.664		pCi/g						
Radium-226		0.852	+/-0.167	0.125	0.0566	+/-0.181		pCi/g						
Radium-228		0.678	+/-0.201	0.233	0.102	+/-0.221		pCi/g						
Thallium-208		0.204	+/-0.0629	0.0591	0.0265	+/-0.0651		pCi/g						
Tin-126	UI	0.00	+/-0.110	0.120	0.0569	+/-0.111		pCi/g						

Rad Gas Flow Proportional Counting

GFPC, Gross A/B, solid "Dry Weight Corrected"

Alpha		9.21	+/-3.60	3.98	1.59	+/-4.02	4.00	pCi/g		JXB7	01/11/16	1302	1534754	3
Beta		18.2	+/-3.18	3.21	1.46	+/-4.15	10.0	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/21/15	1516	1532672

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE HASL 300, 4 5 2.3/Ga-01-R
3	EPA 900.0/SW846 9310/SM 7110B Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
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Certificate of Analysis

Company : MJW Corporation
Address : 15 Hazelwood Drive
Suite 112
Buffalo, New York 14228

Report Date: January 18, 2016

Contact: Ms. Laurie Losey
Project: Soil Radioisotopes

Client Sample ID: 5.2A.R.5.1
Sample ID: 387853002

Project: MJWC00115
Client ID: MJWC001

Parameter	Qualifier	Result	Uncertainty	MDC	Lc	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Surrogate/Tracer Recovery	Test													
								Batch ID	Recovery%	Acceptable Limits				

Notes:

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

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Certificate of Analysis

Company : MJW Technical Services
 Address : 15 Hazelwood Drive
 Suite 112
 Buffalo, New York 14228

Report Date: March 8, 2016

Contact: Ms. Laurie Loscy
 Project: Soil Radioisotopes

Client Sample ID: 5.2.A.R.5.2
 Sample ID: 392043002
 Matrix: Soil
 Collect Date: 11-DEC-15
 Receive Date: 25-FEB-16
 Collector: Client
 Moisture: 18%

Project: MJWC00115
 Client ID: MJWC001

Parameter	Qualifier	Result	Uncertainty	MDC	Lc	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
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Rad Gamma Spec Analysis

Gamma with Ingrowth "Dry Weight Corrected"

Actinium-227	U	0.140	+/-0.258	0.520	0.244	+/-0.266		pCi/g		MXR1	03/07/16	0806	1547791	1
Antimony-125	U	-0.0712	+/-0.104	0.181	0.0827	+/-0.109		pCi/g						
Bismuth-212	UI	0.00	+/-0.743	1.22	0.562	+/-0.886		pCi/g						
Bismuth-214		0.733	+/-0.222	0.124	0.0557	+/-0.231		pCi/g						
Cesium-137		0.0561	+/-0.0468	0.079	0.0359	+/-0.0471	0.100	pCi/g						
Cobalt-60	U	0.0118	+/-0.0362	0.0772	0.0329	+/-0.0366		pCi/g						
Europium-154	U	0.0103	+/-0.140	0.272	0.120	+/-0.140		pCi/g						
Lead-212		0.787	+/-0.126	0.105	0.0492	+/-0.143		pCi/g						
Lead-214		1.15	+/-0.206	0.337	0.163	+/-0.230		pCi/g						
Potassium-40		11.7	+/-1.41	0.642	0.264	+/-1.73		pCi/g						
Protactinium-231	UI	0.00	+/-0.808	0.843	0.389	+/-0.847		pCi/g						
Radium-226		0.733	+/-0.222	0.124	0.0557	+/-0.231		pCi/g						
Radium-228		0.735	+/-0.318	0.246	0.107	+/-0.337		pCi/g						
Thallium-208		0.253	+/-0.076	0.0654	0.0294	+/-0.0794		pCi/g						
Tin-126	U	0.0354	+/-0.158	0.189	0.0906	+/-0.159		pCi/g						

Rad Gas Flow Proportional Counting

GFPC, Gross A/B, solid "Dry Weight Corrected"

Alpha		8.25	+/-2.55	3.00	1.31	+/-3.04	4.00	pCi/g		BXF1	03/04/16	0743	1547857	2
Beta		15.7	+/-2.62	3.35	1.60	+/-3.47	10.0	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	02/25/16	1523	1547783

The following Analytical Methods were performed

Method	Description
1	DOE HASL 300, 4.5.2.3/Ga-01-R
2	EPA 900.0/SW846.9310/SM 7110B Modified

Surrogate/Tracer Recovery Test **Batch ID Recovery% Acceptable Limits**

Surrogate/Tracer	Recovery	Batch ID	Recovery%	Acceptable Limits

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Certificate of Analysis

Company : MJW Technical Services
Address : 15 Hazelwood Drive
Suite 112
Buffalo, New York 14228

Report Date: March 8, 2016

Contact: Ms. Laurie Losey
Project: Soil Radioisotopes

Client Sample ID: 5.2.A.R.5.2
Sample ID: 392043002

Project: MJWC00115
Client ID: MJWC001

Parameter	Qualifier	Result	Uncertainty	MDC	Lc	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Surrogate/Tracer	Recovery	Test						Batch ID	Recovery%	Acceptable Limits				

Notes:

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

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Certificate of Analysis

Company : MJW Corporation
 Address : 15 Hazelwood Drive
 Suite 112
 Buffalo, New York 14228

Report Date: January 18, 2016

Contact: Ms. Laurie Losey
 Project: Soil Radioisotopes

Client Sample ID: 5.2A.R.6.1
 Sample ID: 387853003
 Matrix: Soil
 Collect Date: 11-DEC-15
 Receive Date: 18-DEC-15
 Collector: Client
 Moisture: 14.5%

Project: MJWC00115
 Client ID: MJWC001

Parameter	Qualifier	Result	Uncertainty	MDC	Lc	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
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Gravimetric Solids

ASTM D 2216 % Moisture "As Received"

Moisture		14.5						percent		CXC1	12/21/15	1516	1532672	1
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Rad Gamma Spec Analysis

Gammascpec, Gamma, Solid "Dry Weight Corrected"

Actinium-227	U	-0.0553	+/-0.264	0.501	0.233	+/-0.265		pCi/g		RXF2	01/13/16	0641	1532995	2
Antimony-125	U	-0.0536	+/-0.097	0.172	0.078	+/-0.100		pCi/g						
Bismuth-212	UL	0.00	+/-0.702	1.23	0.563	+/-0.800		pCi/g						
Bismuth-214		0.852	+/-0.165	0.117	0.0517	+/-0.181		pCi/g						
Cesium-137		0.326	+/-0.0771	0.0737	0.033	+/-0.0822	0.100	pCi/g						
Cobalt-60	U	-0.00251	+/-0.0325	0.0669	0.0274	+/-0.0325		pCi/g						
Europium-154	U	0.0864	+/-0.119	0.263	0.115	+/-0.125		pCi/g						
Lead-212		0.866	+/-0.122	0.105	0.0491	+/-0.141		pCi/g						
Lead-214		1.09	+/-0.166	0.341	0.165	+/-0.190		pCi/g						
Potassium-40		11.4	+/-1.43	0.736	0.308	+/-1.73		pCi/g						
Protactinium-231	UL	0.00	+/-0.711	0.832	0.382	+/-0.723		pCi/g						
Radium-226		0.852	+/-0.165	0.117	0.0517	+/-0.181		pCi/g						
Radium-228		0.610	+/-0.270	0.274	0.121	+/-0.284		pCi/g						
Thallium-208		0.251	+/-0.0805	0.0664	0.0297	+/-0.0835		pCi/g						
Tin-126	U	0.0698	+/-0.0915	0.180	0.0859	+/-0.097		pCi/g						

Rad Gas Flow Proportional Counting

GFPC, Gross A/B, solid "Dry Weight Corrected"

Alpha		14.1	+/-4.30	3.86	1.54	+/-5.18	4.00	pCi/g		JXB7	01/12/16	0814	1534754	3
Beta		22.9	+/-4.05	4.78	2.23	+/-5.22	10.0	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/21/15	1516	1532672

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE HASL 300, 4.5.2.3/Ga-01-R
3	EPA 900.0/SW846 9310/SM 7110B Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
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Certificate of Analysis

Company : MJW Corporation
Address : 15 Hazelwood Drive
Suite 112
Buffalo, New York 14228

Report Date: January 18, 2016

Contact: Ms. Laurie Losey
Project: Soil Radioisotopes

Client Sample ID: 5.2A.R.6.1
Sample ID: 387853003

Project: MJWC00115
Client ID: MJWC001

Parameter	Qualifier	Result	Uncertainty	MDC	Lc	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.	
Surrogate/Tracer	Recovery	Test											Batch ID	Recovery%	Acceptable Limits

Notes:

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

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Certificate of Analysis

Company : MJW Corporation
 Address : 15 Hazelwood Drive
 Suite 112
 Buffalo, New York 14228

Report Date: January 18, 2016

Contact: Ms. Laurie Losey
 Project: Soil Radioisotopes

Client Sample ID: 5.2A.R.7.1
 Sample ID: 387853004
 Matrix: Soil
 Collect Date: 11-DEC-15
 Receive Date: 18-DEC-15
 Collector: Client
 Moisture: 28.6%

Project: MJWC00115
 Client ID: MJWC001

Parameter	Qualifier	Result	Uncertainty	MDC	Lc	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids														
<i>ASTM D 2216 % Moisture "As Received"</i>														
Moisture		28.6						percent		CXC1	12/21/15	1516	1532672	1
Rad Gamma Spec Analysis														
<i>Gammascpec, Gamma, Solid "Dry Weight Corrected"</i>														
Actinium-227	U	0.233	+/-0.323	0.636	0.299	+/-0.341		pCi/g		RXF2	01/13/16	0642	1532995	2
Antimony-125	U	-0.0347	+/-0.124	0.225	0.103	+/-0.125		pCi/g						
Bismuth-212		1.01	+/-0.634	0.120	0.00	+/-0.641		pCi/g						
Bismuth-214		0.929	+/-0.220	0.163	0.0737	+/-0.234		pCi/g						
Cesium-137		0.758	+/-0.115	0.0979	0.0446	+/-0.131	0.100	pCi/g						
Cobalt-60	U	-0.0231	+/-0.044	0.0784	0.0326	+/-0.0452		pCi/g						
Europium-154	U	-0.0224	+/-0.169	0.315	0.140	+/-0.169		pCi/g						
Lead-212		0.605	+/-0.139	0.141	0.0667	+/-0.147		pCi/g						
Lead-214		1.07	+/-0.236	0.165	0.0762	+/-0.250		pCi/g						
Potassium-40		9.84	+/-1.38	0.867	0.368	+/-1.63		pCi/g						
Protactinium-231	UI	0.00	+/-0.680	1.21	0.568	+/-0.741		pCi/g						
Radium-226		0.929	+/-0.220	0.163	0.0737	+/-0.234		pCi/g						
Radium-228	UI	0.00	+/-0.244	0.521	0.242	+/-0.368		pCi/g						
Thallium-208		0.199	+/-0.0978	0.0773	0.0347	+/-0.0993		pCi/g						
Tin-126	U	0.0227	+/-0.188	0.193	0.0918	+/-0.189		pCi/g						
Rad Gas Flow Proportional Counting														
<i>GFPC, Gross A/B, solid "Dry Weight Corrected"</i>														
Alpha		9.87	+/-3.32	3.88	1.66	+/-3.83	4.00	pCi/g		JXB7	01/11/16	1306	1534754	3
Beta		13.1	+/-2.31	2.16	0.968	+/-2.98	10.0	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/21/15	1516	1532672

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE HASL 300, 4.5.2.3/Ga-01-R
3	EPA 900.0/SW846 9310/SM 7110B Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
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GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : MJW Corporation
Address : 15 Hazelwood Drive
Suite 112
Buffalo, New York 14228

Report Date: January 18, 2016

Contact: Ms. Laurie Losey
Project: Soil Radioisotopes

Client Sample ID: 5.2A.R.7.1
Sample ID: 387853004

Project: MJWC00115
Client ID: MJWC001

Parameter	Qualifier	Result	Uncertainty	MDC	Lc	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Surrogate/Tracer Recovery	Test													
								Batch ID	Recovery%	Acceptable Limits				

Notes:

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : MJW Technical Services
 Address : 15 Hazelwood Drive
 Suite 112
 Buffalo, New York 14228

Report Date: March 8, 2016

Contact: Ms. Laurie Losey
 Project: Soil Radioisotopes

Client Sample ID: 5.2.A.R.7.2
 Sample ID: 392043003
 Matrix: Soil
 Collect Date: 11-DEC-15
 Receive Date: 25-FEB-16
 Collector: Client
 Moisture: 16%

Project: MJWC00115
 Client ID: MJWC001

Parameter	Qualifier	Result	Uncertainty	MDC	Lc	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis														
<i>Gamma with Ingrowth "Dry Weight Corrected"</i>														
Actinium-227	U	0.076	+/-0.197	0.398	0.185	+/-0.200		pCi/g		MXR1	03/07/16	0848	1547791	1
Antimony-125	U	-0.0202	+/-0.0884	0.163	0.0746	+/-0.0889		pCi/g						
Bismuth-212		1.50	+/-0.799	0.890	0.402	+/-0.813		pCi/g						
Bismuth-214		0.770	+/-0.152	0.106	0.0476	+/-0.164		pCi/g						
Cesium-137		0.0887	+/-0.0522	0.0517	0.0227	+/-0.0526	0.100	pCi/g						
Cobalt-60	U	0.015	+/-0.0327	0.0707	0.0305	+/-0.0334		pCi/g						
Europium-154	U	-0.0209	+/-0.108	0.206	0.0896	+/-0.108		pCi/g						
Lead-212		0.903	+/-0.114	0.100	0.0471	+/-0.137		pCi/g						
Lead-214		1.05	+/-0.177	0.299	0.145	+/-0.197		pCi/g						
Potassium-40		11.2	+/-1.28	0.648	0.276	+/-1.60		pCi/g						
Protactinium-231	U	0.420	+/-0.477	0.942	0.443	+/-0.522		pCi/g						
Radium-226		0.770	+/-0.152	0.106	0.0476	+/-0.164		pCi/g						
Radium-228		0.712	+/-0.260	0.242	0.108	+/-0.280		pCi/g						
Thallium-208		0.218	+/-0.0765	0.0599	0.0271	+/-0.0785		pCi/g						
Tin-126	UI	0.00	+/-0.101	0.101	0.0478	+/-0.102		pCi/g						

Rad Gas Flow Proportional Counting

GFPFC, Gross A-B, solid "Dry Weight Corrected"

Alpha	7.04	+/-2.46	3.05	1.33	+/-2.83	4.00	pCi/g	BXF1	03/04/16	0743	1547857	2
Beta	20.3	+/-2.69	3.20	1.52	+/-3.92	10.0	pCi/g					

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	02/25/16	1523	1547783

The following Analytical Methods were performed

Method	Description
1	DOE HASL 300, 4 5 2.3/Ga-01-R
2	EPA 900 0/SW846 9310/SM 7110B Modified

Surrogate/Tracer Recovery Test

Batch ID Recovery% Acceptable Limits

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Certificate of Analysis

Company : MJW Technical Services
Address : 15 Hazelwood Drive
Suite 112
Buffalo, New York 14228

Report Date: March 8, 2016

Contact: Ms. Laurie Losey
Project: Soil Radioisotopes

Client Sample ID: 5.2.A.R.7.2
Sample ID: 392043003

Project: MJWC00115
Client ID: MJWC001

Parameter	Qualifier	Result	Uncertainty	MDC	Lc	TPU	RL	Units	DF	Analyst	Date Time	Batch	Mtd.	
Surrogate/Tracer Recovery	Test											Batch ID	Recovery%	Acceptable Limits

Notes:

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).