



Austin Master Services

**BENCHMARK TURNKEY**

**Weekly Radiological Screening Report  
For the Hertel Brownfields Remediation Project  
Located at 356 Hertel Ave., Buffalo, NY 14207  
Week Ending - Friday, August 12, 2022**

**INTRODUCTION**

Austin Master Services (AMS) performed radiological screening during the Hertel Brownfields Remediation Project located at 356 Hertel Ave., Buffalo, NY 14207. A Brownfields remediation project has been approved by the New York State Department of Environmental Conservation (NYSDEC) at: two contiguous tax parcels in Buffalo New York. The specific locations are as follows:

- 356 Hertel Avenue: SBL No. 77.74-4-22, 1.94 acres
- 42 Foundry Street: SBL No. 77.74-4-21, 1.05 acres

The site is known to be contaminated with SVOCs, metals, PCBs, and pesticides. As a precautionary measure the remediation contractor has agreed to perform limited surveillance for radioactive materials. After discussions between the remediation contractor (AMS) and NYSDEC a surveillance protocol that allows gamma count rate scanning of excavated materials; this protocol includes collection of background data and establishment of an **Action Level** at 1.5 times the background mean count rate. Radiological screening was conducted in accordance with the Gross Gamma Screening Standard Operating Procedure *AMS-FI-017B Soil Gamma Screening for Hertel and Foundry Brownfields Remediation Project Final Rev 1*, dated July 27, 2022. The purpose of the radiological screening is to verify that radioactive material is not present in the material being disposed off-site.

Excavated soils are being screened using a Ludlum Model 2221 Scaler/Ratemeter coupled to a Ludlum 44-10 2-inch by 2-inch sodium iodide (2x2 NaI) detector or equivalent. Radiological survey instrumentation is calibrated in accordance with the manufacturer's specifications and ANSI Z540-1. Additionally, prior to use, instrumentation is response checked with a known and appropriate source of radioactive material for the measurement of radioactivity that is being performed. For ease of surveys for the HP technician onsite, the most conservative background action level is being used for the screening of soils regardless of the survey geometry. At this point in the screening process based on the data it appears that the daily background action level obtained from an elevated excavator bucket is most conservative, and at no time will a less conservative background be administered without consultation with the AMS Project RSO or Austin Master Services CHP.

**PROJECT ACTIVITIES**

Soil excavation and off-site disposal continued throughout the week ending Friday, August 12, 2022 within the 356 Hertel Ave. project site. Radiological screening was conducted in accordance with the Gross Gamma Screening Standard Operating Procedure *AMS-FI-017B Soil Gamma Screening for Hertel and Foundry Brownfields Remediation Project Final Rev 1*, dated July 27, 2022. AMS established initial backgrounds and action levels on an excavator bucket (1.5 x's the average of 10 one-minute static readings) at the Hertel Ave. project site on 7-18-2022 (BKG-001 - average – 8,440 cpm, with an action level of - 12,659 cpm). AMS will be utilizing the action level of 12,659 cpm that was generated at the Hertel site throughout the soil screening activities.

AMS health physics technician also performed gamma walkover surveys of the excavation and the stockpiled soils periodically during remedial activities. No radioactive materials were detected above the established action of 12,659 cpm during the walkover surveys.

Site- and instrument-specific background was checked daily as described above. All work and radiological screening during this week ending period were performed within the 356 Hertel Ave. project site.

**RADIOLOGICAL SCREENING RESULTS/INSTRUMENTATION/INITIAL BACKGROUNDS**

Radiological Screening Results conducted in week ending Friday, August 12, 2022 are summarized in Attachment 1, Daily QC Instrumentation background and source response checks are listed in Attachment 2, and the Instrumentation Calibration Certificate are listed in Attachment 3.

No radioactive materials were detected above the established action level of 12,659 cpm during this monitoring period.

**Patrick S. Horkman**

*Patrick S Horkman*

**Field Services Manager/Project Manager**

**Austin Master Services, LLC**

Attachment 1 – Radiological Screening Results

Attachment 2 – Daily QA Instrumentation Response Checks

Attachment 3 – Instrumentation Calibration Cert.

**ATTACHMENT 1**  
**Radiological Screening Results**  
**Week Ending - Friday, August 12, 2022**



**Excavator Bucket Radiological Screening Log**

**Benchmark/Turnkey**

For the Hertel Brownfields Remediation Project  
 Located at 356 Hertel Ave., Buffalo, NY 14207

Date: August 8th, 2022

Instr: L-2221, # 115157

Detector: 44-10, # PR090262

Cal. Due: 4-Oct-2022

Ave. Bkg: 8,439.5 cpm

1.5 x's Ave. Bkg: 12,659 cpm

Action Level: 12,659 cpm

Scanning Results				
GAMMA Scan #	Time	2x2 Bucket Readings (CPM)	Was Slag Material Visually Identified (Yes/No)	Comments
1	6:23 AM	8619	n	95% dirt 5% debris
2	6:26 AM	9154	n	90% dirt 10% debris
3	6:29 AM	9078	n	95% dirt 10% debris
4	6:35 AM	9071	n	95% dirt 5% debris
5	6:42 AM	9470	n	95% dirt 5% debris
6	6:47 AM	9503	n	100% dirt
7	6:53 AM	8691	n	90% dirt 10% debris
8	6:57 AM	9093	n	100% dirt
9	7:02 AM	10693	n	90% dirt 10% debris
10	7:07 AM	9201	n	85% dirt 15% debris
11	7:12 AM	9259	n	90% dirt 10% debris
12	7:31 AM	8797	n	85% dirt 15% debris
13	7:38 AM	8880	n	95% dirt 5% debris
14	7:42 AM	8936	n	85% dirt 15% debris
15	7:48 AM	9821	n	100% dirt
16	7:53 AM	9063	n	95% dirt 5% debris
17	7:58 AM	9466	n	95% dirt 5% debris
18	8:03 AM	9692	n	100% dirt
19	8:07 AM	9647	n	100% dirt
20	8:24 AM	9018	n	100% dirt

**NOTE:** GAMMA # scan represents 1 out of every 5 bucket loads at a minimum

Print Name: Andrew Chawluk

Signature: Andrew Chawluk

Date: 8/8/22

## CONTINUATION SHEET

### Excavator Bucket Radiological Screening Log Benchmark/Turnkey

For the Hertel Brownfields Remediation Project  
Located at 356 Hertel Ave., Buffalo, NY 14207

Scanning Results				
GAMMA Scan #	Time	2x2 Bucket Readings (CPM)	Was Slag Material Visually Identified (Yes/No)	Comments
21	8:29 AM	10158	n	100% dirt
22	8:36 AM	8393	n	95% dirt 5% debris
23	8:54 AM	9402	n	100% dirt
24	9:01 AM	8924	n	100% dirt
25	9:06 AM	9384	n	85% dirt 15% debris
26	9:11 AM	9887	n	100% dirt
27	9:15 AM	9807	n	90% dirt 10% debris
28	9:22 AM	9426	n	95% dirt 5% debris
29	9:27 AM	9091	n	100% dirt
30	9:33 AM	9412	n	100% dirt
31	10:01 AM	9175	n	100% dirt
32	10:08 AM	9055	y	95% dirt 5% debris
33	10:16 AM	9641	n	100% dirt
34	10:25 AM	7729	n	75% dirt 25% debris
35	10:29 AM	10269	n	90% dirt 10% debris
36	10:36 AM	9289	n	70% dirt 30% debris
37	10:40 AM	9625	n	50% dirt 50% debris
38	10:55 AM	9508	n	95% dirt 5% debris
39	11:00 AM	9822	n	85% dirt 15% debris
40	11:05 AM	9512	n	80% dirt 20% debris
41	11:27 AM	9232	n	90% dirt 10% debris
42	11:32 AM	8713	n	85% dirt 15% debris
43	11:37 AM	9566	n	100% dirt
44	11:43 AM	10018	n	80% dirt 20% debris
45	11:48 AM	8903	n	70% dirt 30% debris
46	11:53 AM	9841	n	80% dirt 20% debris
47	12:04 PM	9459	y	80% dirt 20% debris
48	12:08 PM	9915	n	90% dirt 10% debris
49	12:13 PM	8972	n	95% dirt 5% debris
50	12:28 PM	10413	n	100% dirt
51	12:38 PM	10304	n	90% dirt 10% debris
52	12:42 PM	10423	n	90% dirt 10% debris
53	12:54 PM	9937	n	95% dirt 5% debris
54	1:01 PM	10445	n	100% dirt

**NOTE:** GAMMA # scan represents 1 out of every 5 bucket loads at a minimum

# CONTINUATION SHEET

## Excavator Bucket Radiological Screening Log Benchmark/Turnkey

For the Hertel Brownfields Remediation Project  
Located at 356 Hertel Ave., Buffalo, NY 14207

Scanning Results				
GAMMA Scan #	Time	2x2 Bucket Readings (CPM)	Was Slag Material Visually Identified (Yes/No)	Comments
55	1:18 PM	9954	n	90% dirt 10% debris
56	1:22 PM	10749	n	100% dirt
57	1:27 PM	9952	n	100% dirt
58	1:39 PM	10925	n	95% dirt 5% debris
59	1:45 PM	9855	n	100% dirt
60	1:55 PM	9307	n	100% dirt
61	1:59 PM	10222	n	100% dirt
62	2:04 PM	9727	n	70% dirt 30% debris
63	2:09 PM	9490	n	70% dirt 30% debris
64	2:25 PM	9841	n	85% dirt 15% debris
65	2:29 PM	10068	n	90% dirt 10% debris
66	2:34 PM	9362	n	90% dirt 10% debris
67	2:41 PM	9670	n	95% dirt 5% debris
68	2:54 PM	10117	n	80% dirt 20% debris
69	2:59 PM	10273	n	90% dirt 10% debris
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**NOTE:** GAMMA # scan represents 1 out of every 5 bucket loads at a minimum



**Excavator Bucket Radiological Screening Log**

**Benchmark/Turnkey**

For the Hertel Brownfields Remediation Project  
 Located at 356 Hertel Ave., Buffalo, NY 14207

Date: August 9th, 2022

Instr: L-2221, # 115157

Detector: 44-10, # PR090262

Cal. Due: 4-Oct-2022

Ave. Bkg: 8,439.5 cpm  
 1.5 x's Ave. Bkg: 12,659 cpm  
 Action Level: 12,659 cpm

Scanning Results				
GAMMA Scan #	Time	2x2 Bucket Readings (CPM)	Was Slag Material Visually Identified (Yes/No)	Comments
1	6:35 AM	8880	n	90% soil 10% debris
2	6:42 AM	9132	n	100% soil
3	7:13 AM	8714	n	95% soil 5% debris
4	7:31 AM	9344	n	100% soil
5	7:37 AM	9096	n	85% soil 15% debris
6	7:45 AM	10123	n	90% soil 10% debris
7	7:54 AM	8954	n	100% soil
8	7:59 AM	9055	n	100% soil
9	8:06 AM	9009	n	70% soil 30% debris
10	8:14 AM	8347	n	90% soil 10% debris
11	8:19 AM	9453	n	85% soil 15% debris
12	8:24 AM	9211	n	95% soil 5% debris
13	8:37 AM	8115	n	90% soil 10% debris
14	8:41 AM	9089	n	95% soil 5% debris
15	8:58 AM	9155	n	85% soil 15% debris
16	9:06 AM	8793	n	95% soil 5% debris
17	9:11 AM	9323	n	100% soil
18	9:16 AM	9251	n	75% soil 25% debris
19	9:23 AM	8543	n	85% soil 15% debris
20	9:33 AM	8201	n	90% soil 10% debris

**NOTE:** GAMMA # scan represents 1 out of every 5 bucket loads at a minimum

Print Name: Andrew Chawluk

Signature: *Andrew Chawluk*

Date: 8/09/22

## CONTINUATION SHEET

### Excavator Bucket Radiological Screening Log Benchmark/Turnkey

For the Hertel Brownfields Remediation Project  
Located at 356 Hertel Ave., Buffalo, NY 14207

Scanning Results				
GAMMA Scan #	Time	2x2 Bucket Readings (CPM)	Was Slag Material Visually Identified (Yes/No)	Comments
21	9:39 AM	7642	n	95% soil 5% debris
22	9:44 AM	8496	n	90% soil 10% debris
23	10:05 AM	8307	n	100% soil
24	10:10 AM	8149	n	100% soil
25	10:14 AM	9784	n	90% soil 10% debris
26	10:24 AM	10118	n	90% soil 10% debris
27	10:28 AM	9484	n	100% soil
28	10:44 AM	8860	n	90% soil 10% debris
29	10:48 AM	10311	n	100% soil
30	11:03 AM	9811	n	100% soil
31	11:18 AM	8795	n	100% soil
32	11:24 AM	9274	n	90% soil 10% debris
33	11:39 AM	8882	n	100% soil
34	11:44 AM	9346	n	85% soil 15% debris
35	11:59 AM	9872	n	70% soil 30% debris
36	12:04 PM	9463	n	100% soil
37	12:18 PM	9030	n	95% soil 5% debris
38	12:26 PM	10895	n	100% soil
39	12:46 PM	9226	n	100% soil
40	12:50 PM	10774	n	95% soil 5% debris
41	12:54 PM	10030	n	100% soil
42	12:59 PM	8939	n	100% soil
43	1:07 PM	9132	n	100% soil
44	1:22 PM	9269	n	90% soil 10% debris
45	1:25 PM	8057	n	100% soil
46	1:34 PM	8808	n	80% soil 20% debris
47	1:39 PM	8866	n	100% soil
48	1:52 PM	9304	n	95% soil 5% debris
49	2:02 PM	8757	n	100% soil
50	2:06 PM	8751	n	95% soil 5% debris
51	2:11 PM	8651	n	90% soil 10% debris
52	2:32 PM	8504	n	85% soil 15% debris
53	2:36 PM	8304	n	90% soil 10% debris
54	2:44 PM	10380	n	100% soil

**NOTE:** GAMMA # scan represents 1 out of every 5 bucket loads at a minimum



**Excavator Bucket Radiological Screening Log**

**Benchmark/Turnkey**

For the Hertel Brownfields Remediation Project  
 Located at 356 Hertel Ave., Buffalo, NY 14207

Date: August 10th, 2022

Instr: L-2221, # 115157

Detector: 44-10, # PR090262

Cal. Due: 4-Oct-2022

Ave. Bkg: 8,439.5 cpm  
 1.5 x's Ave. Bkg: 12,659 cpm  
 Action Level: 12,659 cpm

Scanning Results				
GAMMA Scan #	Time	2x2 Bucket Readings (CPM)	Was Slag Material Visually Identified (Yes/No)	Comments
1	6:33 AM	9030	n	90% soil 10% debris
2	6:38 AM	8819	n	80% soil 20% debris
3	6:43 AM	8956	n	90% soil 10% debris
4	6:48 AM	9054	n	85% soil 15% debris
5	6:53 AM	9264	n	95% soil 5% debris
6	6:58 AM	10753	n	100% soil
7	7:01 AM	10545	n	100% soil
8	7:06 AM	8557	n	95% soil 5% debris
9	7:38 AM	9516	n	90% soil 10% debris
10	7:43 AM	10614	n	95% soil 5% debris
11	7:49 AM	8894	n	90% soil 10% debris
12	7:54 AM	10388	n	100% soil
13	7:59 AM	8959	n	95% soil 5% debris
14	8:03 AM	9920	n	85% soil 15% debris
15	8:09 AM	8847	n	90% soil 10% debris
16	8:15 AM	9088	n	100% soil
17	8:23 AM	8493	n	95% soil 5% debris
18	8:28 AM	8341	n	95% soil 5% debris
19	8:41 AM	9266	n	100% soil
20	8:52 AM	8883	n	100% soil

**NOTE:** GAMMA # scan represents 1 out of every 5 bucket loads at a minimum

Print Name: Andrew Chawluk

Signature: *Andrew Chawluk*

Date: 8/10/22

## CONTINUATION SHEET

### Excavator Bucket Radiological Screening Log Benchmark/Turnkey

For the Hertel Brownfields Remediation Project  
Located at 356 Hertel Ave., Buffalo, NY 14207

Scanning Results				
GAMMA Scan #	Time	2x2 Bucket Readings (CPM)	Was Slag Material Visually Identified (Yes/No)	Comments
21	9:00 AM	9255	n	90% soil 10% debris
22	9:04 AM	9138	n	90% soil 10% debris
23	9:09 AM	8350	n	100% soil
24	9:13 AM	8504	n	85% soil 15% debris
25	9:25 AM	8490	n	95% soil 5% debris
26	9:34 AM	9305	n	90% soil 10% debris
27	9:43 AM	7420	n	75% soil 25% debris
28	9:55 AM	8146	n	80% soil 20% debris
29	10:00 AM	7287	n	90% soil 10% debris
30	10:05 AM	9077	n	100% soil
31	10:10 AM	7901	n	95% soil 5% debris
32	10:17 AM	8295	n	100% soil
33	10:22 AM	7675	n	100% soil
34	10:53 AM	7903	n	85% soil 15% debris
35	11:01 AM	10539	n	95% soil 5% debris
36	11:06 AM	7918	n	70% soil 30% debris
37	11:10 AM	8274	n	100% soil
38	11:14 AM	7865	n	85% soil 15% debris
39	11:19 AM	9906	n	95% soil 5% debris
40	11:28 AM	9480	n	85% soil 15% debris
41	11:32 AM	9061	n	100% soil
42	11:55 AM	8466	n	95% soil 5% debris
43	11:59 AM	8245	n	100% soil
44	12:05 PM	9836	n	100% soil
45	12:26 PM	10098	n	100% soil
46	12:29 PM	10064	n	70% soil 30% debris
47	12:33 PM	10639	n	80% soil 20% debris
48	12:47 PM	10630	n	85% soil 15% debris
49	12:52 PM	7577	n	95% soil 5% debris
50	12:57 PM	8208	n	100% soil
51	1:00 PM	8152	n	95% soil 5% debris
52	1:29 PM	7882	n	80% soil 20% debris
53	1:34 PM	8100	n	95% soil 5% debris
54	1:39 PM	8427	n	95% soil 5% debris

**NOTE:** GAMMA # scan represents 1 out of every 5 bucket loads at a minimum

# CONTINUATION SHEET

## Excavator Bucket Radiological Screening Log Benchmark/Turnkey

For the Hertel Brownfields Remediation Project  
Located at 356 Hertel Ave., Buffalo, NY 14207

Scanning Results				
GAMMA Scan #	Time	2x2 Bucket Readings (CPM)	Was Slag Material Visually Identified (Yes/No)	Comments
55	1:44 PM	8026	n	90% soil 10% debris
56	1:49 PM	8232	n	100% soil
57	1:54 PM	7869	n	100% soil
58	2:00 PM	8166	n	95% soil 5% debris
59	2:04 PM	7591	n	95% soil 5% debris
60	2:08 PM	8008	n	100% soil
61	2:30 PM	9781	n	85% soil 15% debris
62	2:42 PM	9188	n	95% soil 5% debris
63	2:52 PM	8156	n	100% soil
64	2:58 PM	9471	n	90% soil 10% debris
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**NOTE:** GAMMA # scan represents 1 out of every 5 bucket loads at a minimum



**Excavator Bucket Radiological Screening Log**

**Benchmark/Turnkey**

For the Hertel Brownfields Remediation Project  
 Located at 356 Hertel Ave., Buffalo, NY 14207

Date: August 11, 2022

Instr: L-2221, # 115157

Detector: 44-10, # PR090262

Cal. Due: 4-Oct-2022

Ave. Bkg: 8,439.5 cpm  
 1.5 x's Ave. Bkg: 12,659 cpm  
 Action Level: 12,659 cpm

Scanning Results				
GAMMA Scan #	Time	2x2 Bucket Readings (CPM)	Was Slag Material Visually Identified (Yes/No)	Comments
1	6:31 AM	8054	n	100% soil
2	6:36 AM	8793	n	100% soil
3	6:41 AM	9242	n	95% soil 5% debris
4	6:48 AM	9038	n	100% soil
5	6:51 AM	9540	n	90% soil 10% debris
6	6:58 AM	9212	n	100% soil
7	7:01 AM	8775	n	95% soil 5% debris
8	7:06 AM	8935	n	95% soil 5% debris
9	7:33 AM	8204	n	100% soil
10	7:38 AM	9850	n	100% soil
11	7:43 AM	9025	n	100% soil
12	7:47 AM	8571	n	100% soil
13	7:58 AM	9532	n	95% soil 5% debris
14	8:02 AM	10132	n	90% soil 10% debris
15	8:07 AM	9965	n	100% soil
16	8:11 AM	8214	n	100% soil
17	8:28 AM	8763	n	100% soil
18	8:33 AM	8622	n	100% soil
19	8:44 AM	7911	n	100% soil
20	8:48 AM	8509	n	100% soil

**NOTE:** GAMMA # scan represents 1 out of every 5 bucket loads at a minimum

Print Name: Andrew Chawluk

Signature: Andrew Chawluk

Date: 8/11/22

## CONTINUATION SHEET

### Excavator Bucket Radiological Screening Log Benchmark/Turnkey

For the Hertel Brownfields Remediation Project  
Located at 356 Hertel Ave., Buffalo, NY 14207

Scanning Results				
GAMMA Scan #	Time	2x2 Bucket Readings (CPM)	Was Slag Material Visually Identified (Yes/No)	Comments
21	8:52 AM	9277	n	100% soil
22	9:00 AM	8534	n	100% soil
23	9:10 AM	9472	n	100% soil
24	9:17 AM	9689	n	95% soil 5% debris
25	9:22 AM	8042	n	100% soil
26	9:27 AM	8427	n	80% soil 20% debris
27	9:32 AM	9362	n	90% soil 10% debris
28	9:44 AM	9640	n	85% soil 15% debris
29	9:49 AM	9043	n	95% soil 5% debris
30	10:03 AM	8263	n	100% soil
31	10:16 AM	9543	n	100% soil
32	10:21 AM	8896	n	95% soil 5% debris
33	10:25 AM	7913	n	85% soil 15% debris
34	10:30 AM	8132	n	90% soil 10% debris
35	10:33 AM	8439	n	95% soil 5% debris
36	10:44 AM	8822	n	100% soil
37	11:00 AM	8897	n	95% soil 5% debris
38	11:15 AM	9224	n	100% soil
39	11:26 AM	9831	n	100% soil
40	11:29 AM	10789	n	85% soil 15% debris
41	11:33 AM	9092	n	90% soil 10% debris
42	11:36 AM	9116	n	95% soil 5% debris
43	11:40 AM	9366	n	100% soil
44	11:45 AM	8073	n	100% soil
45	11:49 AM	10522	n	80% soil 20% debris
46	11:54 AM	9541	n	100% soil
47	12 :05PM	8835	n	85% soil 15% debris
48	12:39 PM	8786	n	95% soil 15% debris
49	12:45 PM	9245	n	85% soil 15% debris
50	12:49 PM	9219	n	100% soil
51	12:54 PM	8922	n	90% soil 10% debris
52	12:59 PM	9682	n	100% soil
53	1:03 PM	8403	n	100% soil
54	1:07 PM	8147	n	100% soil

**NOTE:** GAMMA # scan represents 1 out of every 5 bucket loads at a minimum

## CONTINUATION SHEET

### Excavator Bucket Radiological Screening Log Benchmark/Turnkey

For the Hertel Brownfields Remediation Project  
Located at 356 Hertel Ave., Buffalo, NY 14207

Scanning Results				
GAMMA Scan #	Time	2x2 Bucket Readings (CPM)	Was Slag Material Visually Identified (Yes/No)	Comments
55	1:29 PM	9108	n	90% soil 10% debris
56	1:34 PM	10295	n	100% soil
57	1:40 PM	9149	n	85% soil 15% debris
58	2:01 PM	10635	n	100% soil
59	2:06 PM	10515	n	90% soil 10% debris
60	2:11 PM	9146	n	75% soil 25% debris
61	2:16 PM	8311	n	100% soil
62	2:24 PM	9884	n	100% soil
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**NOTE:** GAMMA # scan represents 1 out of every 5 bucket loads at a minimum



**Excavator Bucket Radiological Screening Log**

**Benchmark/Turnkey**

For the Hertel Brownfields Remediation Project  
 Located at 356 Hertel Ave., Buffalo, NY 14207

Date: August 12th, 2022

Instr: L-2221, # 115157

Detector: 44-10, # PR090262

Cal. Due: 4-Oct-2022

Ave. Bkg: 8,439.5 cpm  
 1.5 x's Ave. Bkg: 12,659 cpm  
 Action Level: 12,659 cpm

Scanning Results				
GAMMA Scan #	Time	2x2 Bucket Readings (CPM)	Was Slag Material Visually Identified (Yes/No)	Comments
1	6:35 AM	8863	n	90% soil 10 % debris
2	6:42 AM	10461	n	90% soil 10% debris
3	6:48 AM	8308	n	100% soil
4	6:53 AM	9777	n	85% soil 15% debris
5	7:00 AM	8907	n	100% soil
6	7:24 AM	8241	n	100% soil
7	7:29 AM	9146	n	100% soil
8	7:41 AM	8683	n	95% soil 5% debris
9	7:50 AM	9034	n	100% soil
10	8:01 AM	9598	n	80% soil 20% debris
11	8:04 AM	10184	n	90% soil 10% debris
12	8:15 AM	8204	n	100% soil
13	8:21 AM	8614	n	100% soil
14	8:25 AM	8302	n	95% soil 5% debris
15	8:31 AM	9097	n	100% soil
16	8:55 AM	7992	n	80% soil 20% debris
17	9:15 AM	8054	n	90% soil 10% debris
18	9:21 AM	8235	m	95% soil 5% debris
19	9:25 AM	8254	n	90% soil 5% debris
20	9:30 AM	9556	n	100% soil

**NOTE:** GAMMA # scan represents 1 out of every 5 bucket loads at a minimum

Print Name: Andrew Chawluk

Signature: Andrew Chawluk

Date: 8/12/22

## CONTINUATION SHEET

### Excavator Bucket Radiological Screening Log Benchmark/Turnkey

For the Hertel Brownfields Remediation Project  
Located at 356 Hertel Ave., Buffalo, NY 14207

Scanning Results				
GAMMA Scan #	Time	2x2 Bucket Readings (CPM)	Was Slag Material Visually Identified (Yes/No)	Comments
21	9:33 AM	8252	n	100% soil
22	9:37 AM	8817	n	95% soil 5% debris
23	9:42 AM	8281	n	95% soil 5% debris
24	9:46 AM	9102	n	100% soil
25	9:57 AM	8240	n	90% soil 10% debris
26	10:17 AM	8342	n	100% soil
27	10:35 AM	8324	n	95% soil 5% debris
28	10:41 AM	9348	n	95% soil 5% debris
29	10:46 AM	9519	n	85% soil 15% debris
30	10:51 AM	7790	n	90% soil 10% debris
31	11:15 AM	8284	n	95% soil 5% debris
32	11:36 AM	8530	n	80% soil 20% debris
33	11:59 AM	8102	n	80% soil 20% debris
34	12:04 PM	8303	n	95% soil 5% debris
35	12:08 PM	8863	n	95% soil 5% debris
36	12:12 PM	8657	n	75% soil 25% debris
37	12:19 PM	7802	n	90% soil 10% debris
38	1:00 PM	7737	n	90% soil 10% debris
39	1:04 PM	7307	n	95% soil 5% debris
40	1:14 PM	8114	n	100% soil
41	1:17 PM	8881	n	100% soil
42	1:25 PM	8355	n	95% soil 5% debris
43	1:30 PM	8571	n	100% soil
44	2:07 PM	8761	n	95% soil 5% debris
45	2:21 PM	9446	n	90% soil 10% debris
46	2:32 PM	8282	n	100% soil
47	2:37 PM	7434	n	100% soil
48				
49				
50				
51				
52				
53				
54				

**NOTE:** GAMMA # scan represents 1 out of every 5 bucket loads at a minimum

**ATTACHMENT 2**  
**Daily QA Instrumentation Response Checks**  
**August 8, 2022 – August 12, 2022**

Inst.# 115157/PR090262		
QC Daily Source		
Date	Result (cpm)	P/F
7/18/2022	7432	Pass
8/4/2022	7429	Pass
8/5/2022	7518	Pass
8/8/2022	7513	Pass
8/9/2022	7089	Pass
8/10/2022	7156	Pass
8/11/2022	7622	Pass
8/12/2022	7570	Pass

Inst.# 115157/PR090262		Source Ser. #	BKG
Initial Source Readings		Nuclide	N/A
Date	Result (cpm)		
7/18/2022	6551		
7/18/2022	7087		
7/18/2022	6488		
7/18/2022	7233		
7/18/2022	7011		
7/18/2022	7020		
7/18/2022	8196		
7/18/2022	6862		
7/18/2022	7250		
7/18/2022	7000		
	Average		
	7070		

Inst.# 115157/PR090262		
QC Daily Source		
Date	Result (cpm)	P/F
7/18/2022	116535	Pass
8/4/2022	112503	Pass
8/5/2022	115852	Pass
8/8/2022	115217	Pass
8/9/2022	114989	Pass
8/10/2022	115039	Pass
8/11/2022	115989	Pass
8/12/2022	115379	Pass

Inst.# 115157/PR090262		Source Ser. #	Jul-11
Initial Source Readings		Nuclide	Co-60
Date	Result (cpm)		
7/18/2022	116789		
7/18/2022	116028		
7/18/2022	115987		
7/18/2022	116520		
7/18/2022	117003		
7/18/2022	116703		
7/18/2022	116559		
7/18/2022	117131		
7/18/2022	116418		
7/18/2022	116540		
	Average		
	116568		

**ATTACHMENT 3**  
**Instrumentation Calibration Certificate**



# GRIFFIN INSTRUMENTS



## CALIBRATION CERTIFICATE FOR

2221

SERIAL#

115157

Owner: AUSTIN MASTER SERVICES

DATE: 10/04/21

LOCATION: Griffin Inst

TECH: Joanne Glenn

DATE LAST CAL EXPIRES: 12/30/21

Reason For Calibration:

Due For Calibration

Repair (See Remarks)

Other (See Remarks)

Due and Repair (See Remarks)

### NIST TRACEABLE EQUIPMENT USED DURING CALIBRATION

MODEL: 500-2

SERIAL #: 284951

CAL. DUE: 10/30/21

MODEL:

SERIAL #:

CAL DUE:

Fast/Slow Switch working properly  Audio Response  Geotropism CABLE LENGTH 39"

CONDITION: Worn AF MECHANICAL ZERO: 0 AL MECHANICAL ZERO: 0

NEW BATTERIES:  Yes  No BATT. CHECK >4.8V: 5.5 V

#### HV (+/-10%)

#### AS FOUND HV

#### AS LEFT HV

600 V:

602

A.F.

1200 V:

1204

A.F.

1800 V:

1808

A.F.

AF INPUT SENSITIVITY (mV): 2 AL INPUT SENSITIVITY (mV): 10

### RATE METER

### SCALER

SCALE RATE CPM AS FOUND % ERROR AS LEFT % ERROR AS FOUND % ERROR AS LEFT % ERROR

SCALE	RATE CPM	AS FOUND	% ERROR	AS LEFT	% ERROR	AS FOUND	% ERROR	AS LEFT	% ERROR
x.1 or x1	100	100	0.0%	A.F.		249	0.4%	A.F.	
	250	250	0.0%	A.F.					
	400	400	0.0%	A.F.					
x1 or x10	1000	1000	0.0%	A.F.					
	2500	2500	0.0%	A.F.					
	4000	4000	0.0%	A.F.					
x10 or x100	10K	10	K	0.0%	A.F.				
	25K	25	K	0.0%	A.F.				
	40K	40	K	0.0%	A.F.				
x100 or x1000	100K	100	K	0.0%	A.F.				
	250K	250	K	0.0%	A.F.				
	400K	400	K	0.0%	A.F.				

Is the As Found Data Within 20% of the Set Point?:  Yes  No

### LOG SCALE

SCALE RATE CPM AS FOUND % ERROR AS LEFT % ERROR

SCALE	RATE CPM	AS FOUND	% ERROR	AS LEFT	% ERROR
Log	200	200	0.0%	A.F.	
	2000	2000	0.0%	A.F.	
	20K	20	K	0.0%	A.F.
	200K	200	K	0.0%	A.F.

Is the As Found Data Within 20% of the Set Point?:  Yes  No





# GRIFFIN INSTRUMENTS



## CALIBRATION CERTIFICATE FOR 44-10 PROBE # PR090262

Owner: AUSTIN MASTER SERVICES

DATE: 10/4/21

TECH: Joanne Glenn

LOCATION: Griffin Inst

DATE LAST CAL EXPIRES: 12/30/21

- Due For Calibration
- Repair (See Remarks)
- Other (See Remarks)
- Due and Repair

Cable Length: 39"  
I.S.: 10 mV

### NIST TRACEABLE EQUIPMENT AND STANDARDS USED DURING CALIBRATION

MODEL: 2221 SERIAL #: 115157 CAL. DUE: 10/4/22  
 SOURCE #: 99-1816 ISOTOPE: Cs137 ACTIVITY: 1.23 uCi ASSAY DATE: 08/12/99

GEOMETRY: Jig upside down with source underneath, activity side up, unless noted otherwise.

Physical Condition:  Sat  Unsat

Efficiency From Last Calibration:  Previous HV Set Point: 800 V

Counts (CPM) Background (CPM) Net CPM: AF Efficiency: 5.60%

100723 6890 93833

Is the AF efficiency within 20% of the efficiency from the last calibration?  Yes  No

Reproducibility: 100170 102030 99970 Average: 100723.33

Are the individual counts within 10% of the average?  Yes  No

High Voltage:	Source Response (CPM):	Background (CPM):	Net CPM:
800	75070	3960	71110
850	83160	5640	77520
900	86710	6440	80270
950	91740	7030	84710
1000	95010	7390	87620
1050	100620	7660	92960
1100	100730	7420	93310
1150	103190	7970	95220

HV RESPONSE BACKGROUND NET CPM Efficiency: 5.52%

1100 V 100350 7830 92520

REMARKS: Previously calibrated by different company. Re-plateaued.

Does Instrument Meet Final Acceptance Criteria?:  Yes  No

Calibration Sticker Attached?:  Yes  No

Date Instrument is Due For Next Calibration: 10/04/21

INSTRUMENT MARRIED WITH 2221 # 115157

Performed/Reviewed by: *Joanne Glenn*

Date: 10/4/2021

Entered by: *JG* Initials

