

Former Guterl Specialty Steel Site

2012 Environmental Monitoring Report



U. S. ARMY CORPS OF ENGINEERS
Buffalo District

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Formerly Utilized Sites Remedial Action Program

September 2013

Site Description

The Former Guterl Specialty Steel Corporation Site (Guterl Site) is located 20 miles northeast of Buffalo, New York, in Lockport, Niagara County, New York. The 70-acre site is being investigated by the U.S. Army Corps of Engineers (Corps) under the Formerly Utilized Sites Remedial Action Program (FUSRAP). The site is comprised of a combination of parcels that make up three general areas: the 52-acre Allegheny Ludlum Corporation property [also referred to as the Niagara County Industrial Development Agency (NCIDA) property], the 9-acre Landfill Area, and the 9-acre Excised Area. The FUSRAP investigation also includes areas adjacent to these properties: a privately owned lot to the north of the landfill, a railroad right-of-way to the north of the NCIDA property, and a stretch of the Erie Canal directly southeast of the site. The Allegheny Technologies, Inc., Allvac, operates a specialty steel manufacturing facility in the southwest portion of the property. Land use near the Guterl Site is mixed, consisting of private residences and light industries. To the south-southeast of the Guterl Site, the Erie Canal separates the Guterl Site from private farmlands.



Aerial view of the Guterl Site looking southwest

Purpose

The purpose of groundwater monitoring at the Guterl Site is to determine the potential for movement of FUSRAP-related radiological contaminants (i.e. associated with historic activities at the site in support of the nation's early atomic energy and weapons program). A subset of the on-site groundwater wells is sampled annually to 1) monitor conditions at the site and 2) supplement the Remedial Investigation/ Feasibility Study (RI/FS); to determine the type and extent of radiological contamination and associated risk, and develop and evaluate alternatives to address unacceptable risks.

The Corps posts annual environmental monitoring data reports to the "Environmental Monitoring" section of the Buffalo District webpage for the Guterl Site.

Scope

Select groundwater wells at the Guterl Site, chosen based upon their potential for FUSRAP-related radiological impacts, were sampled quarterly in 2012. Seeps from the northern wall of the Erie Canal were sampled in May and October of 2012. Surface water from the Erie Canal was sampled in January and October; two of which were collected across from the Niagara County Water District emergency drinking water intakes for the City of Lockport, and the third sample was collected near uranium-impacted seeps.

Figure 1 shows the 2012 locations of the 34 shallow and deep groundwater wells, six seeps, and three surface water samples. Samples collected from these locations were analyzed at a laboratory for uranium; the most mobile (i.e. fastest moving) FUSRAP-related radiological contaminant at the Guterl Site.

Results and Interpretation

Table 1 lists the unfiltered (total) and filtered (dissolved phase) analytical results for the 2012 surface water samples collected in the Erie Canal. Surface water location SW-1 was sampled in January and May of 2012 and SW-2 was sampled in May 2012. The results indicate that the surface waters of the Erie Canal do not show elevated concentrations of uranium.

Table 2 presents the unfiltered and filtered analytical results for the 2012 groundwater samples collected at the site. The groundwater sample results indicate that multiple wells show low-level impacts of uranium. The results are consistent with historical (i.e. 2007, and 2009-2011) data as shown in Table 2. Groundwater-monitoring well MW-605D, located at the center of the Guterl Site, has the highest total uranium concentration (251 µg/L) in groundwater.

Table 3 presents the unfiltered and filtered analytical results for the 2012 seep samples collected from the northern wall of the Erie Canal. Seeps 1205-01, 1205-02 and 1205-03 were sampled in May 2012 and Seeps 12010-1, 1210-2 and 1210-3 were sampled in October 2012. The results indicate that Seeps 1205-3, 1210-1 and 1210-3, located at groundwater discharge points downstream from the Guterl Site, show low-level impacts of uranium.

Conclusions

Groundwater at the Guterl Site is impacted with low-levels of uranium. Since groundwater under the Guterl Site is currently not a source of potable (i.e. drinking) water, there is no potential for exposure to the impacted groundwater and, therefore, no risk to human health.

Seeps, located at groundwater discharge points downstream from the Guterl Site, show low-level impacts of uranium. The extent of uranium impacts on the Erie Canal seeps has been determined and will continue to be monitored. The low levels of uranium in the seeps will not have an adverse impact to users of the canal.

Surface water in the Erie Canal continues to show no impacts from uranium.

Groundwater, seep, and surface water monitoring will continue in order to monitor conditions at the site and support the RI/FS for the Guterl Site.

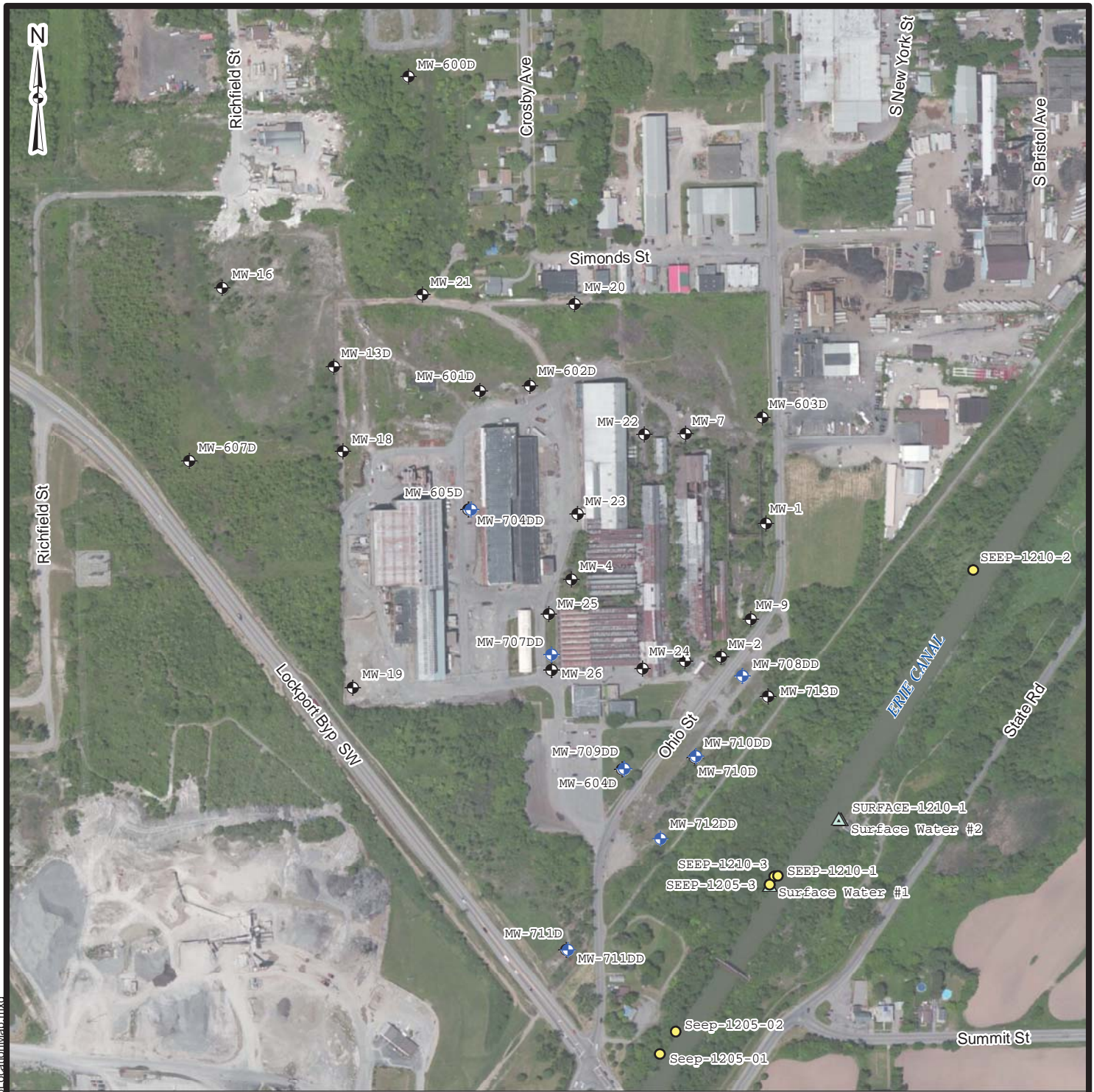
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Legend

-  Deep Monitoring Well
-  Shallow Monitoring Well
-  Seep Sample Location
-  Surface Water Sample Location



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 Buffalo District

2012 SAMPLING LOCATIONS

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**GUTERL SPECIALTY STEEL CORPORATION
 LOCKPORT, NEW YORK**

FIGURE 1

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Table 1
Former Guterl Specialty Steel Corporation
2007 and 2012 Erie Canal Surface Water Sample Results

Remedial Investigation Sampling September 2007			
Sample ID ^a	²³⁴ U	²³⁵ U	²³⁸ U
	pCi/L ^b	pCi/L ^b	pCi/L ^b
A09-SW-001	0.14 ± 0.14	--	0.13 ± 0.14
A09-SW-002	0.22 ± 0.16	-0.01 ± 0.06	0.21 ± 0.14
A09-SW-003	0.02 ± 0.06	-0.01 ± 0.07	0.17 ± 0.13
A09-SW-004	0.24 ± 0.15	-0.01 ± 0.05	0.25 ± 0.15
A09-SW-005	0.16 ± 0.13	-0.01 ± 0.06	0.09 ± 0.09
A09-SW-006	0.24 ± 0.18	0.00 ± 0.08	0.15 ± 0.14
A09-SW-007	0.16 ± 0.14	ND	0.17 ± 0.13
A09-SW-008	0.16 ± 0.09	0.04 ± 0.06	0.14 ± 0.09
A09-SW-009	0.17 ± 0.14	ND	0.13 ± 0.11
A09-SW-010	0.24 ± 0.15	ND	0.09 ± 0.10
A09-SW-011	0.09 ± 0.11	0.02 ± 0.07	0.10 ± 0.11
A09-SW-012	0.18 ± 0.14	0.06 ± 0.10	0.11 ± 0.11

Post Remedial Investigation Sampling					
Sample Date	Sample ID	²³⁴ U	²³⁵ U	²³⁸ U	Total U ^e
		(pCi/L) (c)	(pCi/L) (c)	(pCi/L) (c)	(µg/L) (d)
Jan-12	SW-1	0.174	-0.02 ND	0.234	0.609
Jan-12	SW-1F ^f	0.241	0.034 ND	0.174	0.587
May-12	Surface Water #1	0.310	0.1 ND	0.217	0.520
May-12	Surface Water #1-F	0.184	0.1 ND	0.171	0.510
May-12	Surface Water #2	0.240	0.1 ND	0.221	0.500
May-12	Surface Water #2-F	0.340	0.1 ND	0.150	0.490
Oct-12	Surface 1210-1	0.358 J	0.117 ND	0.316	0.599
Oct-12	Surface 1210-1-F	0.24 J	0 ND	0.088	0.595

Notes:

- (a) Laboratory duplicate and field duplicate results are combined with original sample results using weighted averaging.
 - (b) Uranium isotopes determined by alpha spectroscopy.
 - (c) Analysis for isotopic uranium, Method EML U-02 Modified
 - (d) Analysis for uranium, Method ASTM D5174 Modified
 - (e) The Environmental Protection Agency Maximum Contaminant Level (MCL) for total uranium is 30 g/L.
 - (f) Sample nomenclature "SW-XF" denotes a filtered (dissolved phase) sampling result.
- ND Non-Detect (result is below the Minimum Detectable Activity/ Concentration)
- J Estimated



**TABLE 2
FORMER GUTERL SPECIALTY STEEL CORPORATION FUSRAP SITE
GROUNDWATER RESULTS 2007-2012**

Sample ID	Sample Date	²³⁴ U (pCi/L) (a)	²³⁵ U (pCi/L) (a)	²³⁸ U (pCi/L) (a)	Total U (µg/L) (b)	
On-Site Wells						
MW-01	Aug-07	1.32	-0.005	ND	1.27	--
	Nov-07	1.03	0.046	ND	0.72	--
	Sep-09	2.06	0.0263	ND	1.24	ND 3.21
	Sep-10	1.98	0.126	ND	1.29	3.28
	Aug-11	1.86	0.02	ND	1.22	4.00 J
	Oct-12	1.11	0.1	J	1.05	3.44
MW-01-F ^c	Aug-07	1.46	0.07	ND	1.3	--
	Nov-07	0.83	0.056	ND	0.93	--
	Sep-09	1.7	0.221		1.18	3.1
	Sep-10	2.16	0.245		1.75	2.93
	Aug-11	1.32	0	ND	1.24	3.50 J
	Oct-12	1.15	-0.015	ND	0.799	3.29
MW-02	Aug-07	6.3	0.22		7.2	--
	Nov-07	6	0.4		7.1	--
	Sep-09	12.4	1.02		15.5	35.3
	Sep-10	7.31	0.298		7.7	21.4
	Aug-11	12.0	0.620		12.9	41.3 J
	Oct-12	7.4	0.472		7.97	23.8
MW-02-F	Aug-07	6.1	0.3		6.5	--
	Nov-07	5.85	0.33		7.1	--
	Sep-09	12.5	0.728		12.2	37.1
	Sep-10	6.9	0.9		6.77	21.8
	Aug-11	9.68	0.360		10.4	39.7 J
	Oct-12	7.21	0.279		7.58	24
MW-03	Aug-07	2.38	0.13	ND	1.8	--
	Nov-07	1.89	-0.01	ND	1.56	--
	Sep-09	1.2	0.431		1.04	2.78
	Sep-10	1.44	ND	0.198	1.29	1.95
	Aug-11	0.880	0.040	ND	0.920	2.60
MW-03-F	Aug-07	2.2	0.09		2.31	--
	Nov-07	1.68	0.068	ND	1.62	--
	Sep-09	1.43	0.274	ND	1.64	3.26
	Sep-10	2.02	0.473		1.38	1.86
	Aug-11	1.06	0.010	ND	0.860	2.50
MW-04	Aug-07	17.8	0.72		16.2	--
	Nov-07	17.3	0.66		15.7	--
	Sep-09	15.3	0.92		13.4	30.5
	Sep-10	13.6	1.04		13.7	39.9
	Aug-11	14.9	0.870		14.4	48.0
	Oct-12	15.5	0.748		13.9	39.6
MW-04-F	Aug-07	18.2	0.79		15.9	--
	Nov-07	17.9	0.76		16.8	--
	Sep-09	13.3	0.554		12.8	33.4
	Sep-10	11.7	0.622		11	39.2
	Aug-11	16.1	0.800		16.7	46.0
	Oct-12	14	0.500		13	41.2
MW-05	Aug-07	3.03	0.25		2.61	--
	Nov-07	2.2	0.045	ND	2.09	--
	Sep-09	2.08	0.18		1.56	5.16
	Sep-10	3.62	0.546		2.64	5.95
	Aug-11	2.36	0.090		2.06	6.10



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MW-05-F	Aug-07	3.19	0.25	2.77	--
	Nov-07	2.16	0.15	1.82	--
	Sep-09	2.59	0.193	2	5.91
	Sep-10	2.5	0.143	2.03	5.75
	Aug-11	2.40	0.110	2.21	6.20
MW-06	Aug-07	1.55	0.028	1.29	--
	Nov-07	3.91	0.15	2.94	--
	Sep-09	0.803	0.053	0.474	1.2
	Sep-10	1.92	0.231	1.5	5.07
	Aug-11	1.77	0.03	1.16	3.60
MW-06-F	Aug-07	1.3	0.06	1.06	--
	Nov-07	2.95	0.09	2.62	--
	Sep-09	0.308	ND	0.104	0.819
	Sep-10	2.81	0.38	2.1	4.87
	Aug-11	1.57	0.100	1.04	3.60
MW-07	Sep-09	0.271	ND	0.267	1.27
	Sep-10	13.2	1.09	13.6	75.8
	Aug-11	11.8	0.67	12.1	33.4
	Oct-12	12.9	0.62	12.3	37.4
	Sep-09	0.777	0.187	0.331	1.24
MW-07-F	Sep-10	11.2	0.693	10.9	33.9
	Aug-11	10.5	0.540	10.6	32.4
	Oct-12	12.4	0.612	12.3	36.6
	Aug-07	0.51	0	0.26	--
MW-08	Nov-07	0.41	0	0.26	--
	Sep-09	0.754	0.0376	0.309	0.966
	Sep-10	0.79	0.12	0.48	1
	Aug-11	0.370	0	0.240	1.10
	Aug-07	0.39	-0.005	0.18	--
MW-08-F	Nov-07	0.23	0.045	0.084	--
	Sep-09	0.667	0.0373	0.111	0.809
	Sep-10	1.19	0.348	0.718	1
	Aug-11	0.400	0.020	0.340	1.10
	Aug-07	4.2	0.27	4.99	--
MW-09	Nov-07	4.22	0.23	4.5	--
	Sep-09	6.42	0.436	6.8	18.9
	Sep-10	8.48	1.3	8.66	19.5
	Aug-11	6.07	0.320	6.48	21.8
	Oct-12	11.3	0.427	13.7	41
	Aug-07	4.74	0.16	5.17	--
MW-09-F	Nov-07	4.03	0.22	4.11	--
	Sep-09	6.86	0.677	8.38	18
	Sep-10	7.44	0.617	6.85	20.8
	Aug-11	6.26	0.280	6.70	21.1
	Oct-12	12.5	0.745	13.8	41.1
	Sep-09	0.596	0.0394	0.491	0.965
MW-10	Sep-10	1.25	0.208	0.7	1.21
	Aug-11	0.580	0.020	0.410	1.60
	Sep-09	0.198	0.0889	0.36	1
MW-10-F	Sep-10	1.38	0.29	1.4	1.17
	Aug-11	0.650	0.010	0.530	1.50



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MW-11	Aug-07	1.82	0.13	1.9	--
	Nov-07	6.8	0.38	5.91	--
	Sep-09	1.36	0.27	1.27	2.61
	Sep-10	4.5	0.359	4.8	20.9
	Aug-11	4.13	0.260	4.56	17.7 J
	Oct-12	10.1	0.521	10.6	32.1
MW-11-F	Aug-07	1.65	0.1	1.41	--
	Nov-07	5.32	0.33	5.28	--
	Sep-09	2.22	0.184 ND	2.34	6.39
	Sep-10	8.62	1.19	7.77	22.1
	Aug-11	4.75	0.220	4.65	14.5 J
	Oct-12	10.8	0.741	12	33
MW-12	Sep-09	0.7	0.0682 ND	0.422	1.31
	Sep-10	1.35	0.098	1.02	1.68
	Aug-11	1.49	0.130	1.43	3.90
MW-12-F	Sep-09	0.614	0.0123 ND	0.482	0.73 ND
	Sep-10	0.99	0.261 J	0.782	1.91
	Aug-11	1.06	0.140	1.36	3.80
MW-13D	Aug-07	19.6	0.82	21	--
	Nov-07	20.3	1	22.4	--
	Sep-09	30.5	1.83	32.4	102
	Sep-10	27.2	0.546	29	72.6
	Aug-11	23.9	1.13	24.6	79.8
	Oct-12	35.2	1.86	35.5	109
MW-13D-F	Aug-07	21.4	0.98	20.9	--
	Nov-07	20.4	1.05	22.3	--
	Sep-09	34.3	1.91	35.6	106
	Sep-10	19.6	0.328 J	20.9	69.1
	Aug-11	22.6	1.13	23.6	80.2
	Oct-12	35.2	1.47	36.1	107
MW-14	Aug-07	0.92	0.1	0.9	--
	Nov-07	1.52	0.021 ND	1.08	--
	Sep-09	2.47	0.229	2.94	6.39
	Sep-10	2.02	0.157 ND	1.73	7.01
	Aug-11	2.49	0.17	2.08	8.00
MW-14-F	Aug-07	0.87	0.036 ND	0.8	--
	Nov-07	0.93	0.048 ND	1.17	--
	Sep-09	2.44	0.251	2.83	7
	Sep-10	2.36	0.226 J	2.2	7.29
	Aug-11	2.49	0 ND	2.09	8.00
MW-15	Aug-07	0.17	0.06 ND	0.11 ND	--
	Nov-07	4.13	0.34	4.58	--
	Sep-09	1.03	0.14 ND	0.387	0.842 ND
	Sep-10	0.688 J	0.174 J	0.459	1 ND
	Aug-11	0.370	0.020 ND	0.610	2.00
MW-15-F	Aug-07	0.12	-0.005 ND	0.082 ND	--
	Nov-07	5.7	0.33	7.2	--
	Sep-09	0.4	0.0872 ND	0.633	1.09
	Sep-10	0.812	0.036 ND	0.643	1.39
	Aug-11	0.480	0 ND	0.580	1.50



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MW-16	Aug-07	5.55	0.31	6.3	--
	Nov-07	8.6	0.43	9.6	--
	Sep-09	11.4	0.701	10.3	29.8
	Sep-10	3.04	0.198	3.57	21.9
	Aug-11	8.80	0.440	9.70	29.3
	Oct-12	8.54	0.382	9.42	27.1
MW-16-F	Aug-07	5.59	0.39	6.4	--
	Nov-07	9	0.33	9.7	--
	Sep-09	11	0.905	11.6	32
	Sep-10	7.03	0.586	8.18	26.7
	Aug-11	8.90	0.450	10.2	27.7
	Oct-12	9.19	0.318	9.86	28.1
MW-17	Aug-07	0.66	0.071	0.64	--
	Nov-07	0.61	0.016 ND	0.57	--
	Sep-09	2.55	0.319	2.43	6.21
	Sep-10	2.65	0.3	2.48	7.7
	Aug-11	2.27	0.180	1.82	8.50
MW-17-F	Aug-07	0.78	0.1 ND	0.93	--
	Nov-07	0.48	0.049 ND	0.54	--
	Sep-09	2.09	0.136 ND	2.06	6.86
	Sep-10	2.43	0.257 J	2.31	7.16
	Aug-11	2.39	0.160	2.30	8.30
MW-18	Aug-07	42	2.2	43.2	--
	Nov-07	40.4	1.61	39.2	--
	Sep-09	54.2	5.11	51.4	150
	Sep-10	35.3	0.373	45	126
	Aug-11	38.8	1.72	39.6	123 J
	Oct-12	48	2.56	49	146
MW-18-F	Aug-07	42.6	1.66	41.4	--
	Nov-07	41.4	2.08	44.3	--
	Sep-09	51.9	3.07	50.4	140
	Sep-10	37	0.973	40.9	125
	Aug-11	37.7	1.79	36.6	125 J
	Oct-12	47.3	2.87	46.8	149
MW-19	Aug-07	2.22	0.1 ND	2.18	--
	Nov-07	2.34	0.12	2.31	--
	Sep-09	5.88	0.149 ND	5.04	11.9
	Sep-10	6.33	0.241 ND	6.01	19.9
	Aug-11	4.52	0.270	4.77	16.4 J
	Oct-12	6.3	0.270	6.36	18.9
MW-19-F	Aug-07	2.45	0.061 ND	1.9	--
	Nov-07	2.19	0.09 ND	2.27	--
	Sep-09	5.09	0.266 ND	4.37	12.3
	Sep-10	5.41	0.163 ND	5.4	19.8
	Aug-11	4.34	0.190	4.27	12.9 J
	Oct-12	6.03	0.377	6.03	18.8



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Sample ID	Sample Date	²³⁴ U (pCi/L) (a)	²³⁵ U (pCi/L) (a)	²³⁸ U (pCi/L) (a)	Total U (µg/L) (b)
MW-20	Aug-07	3.36	0.22	3.67	--
	Nov-07	3.84	0.17	3.86	--
	Sep-09	4.84	0.24	4.64	13.1
	Sep-10	4.36	0.373	3.99	12.2
	Aug-11	4.50	0.230	4.27	13.5
	Oct-12	3.57	0.222	2.99	9.57
MW-20-F	Aug-07	3.64	0.14	3.78	--
	Nov-07	3.59	0.19	3.5	--
	Sep-09	5.04	0.205 ND	4.82	12.2
	Sep-10	4.08	0.16	3.96	13.7
	Aug-11	3.89	0.240	3.82	13.3
	Oct-12	3.13	0.176	3.67	9.98
MW-21	Aug-07	1.91	0.07 ND	1.65	--
	Nov-07	2	0.02 ND	2.34	--
	Sep-09	1.45	0.0804 ND	1.05	2.52
	Sep-10	1.73	0.694	1.51	4.46
	Aug-11	0.730	0.050	0.79	3.1
	Oct-12	1.8	0.092	1.93	5.4
MW-21-F	Aug-07	1.69	0.046 ND	1.32	--
	Nov-07	1.97	0.12	1.75	--
	Sep-09	1.2	0.256	1.22	3.52
	Sep-10	2.02	0.269	1.49	3.57
	Aug-11	1.03	0.03 ND	0.093	3.20
	Oct-12	1.65	0.139	1.91	5.20
MW-22	Aug-07	23.3	1.24	22.7	--
	Nov-07	4.85	0.26	4.98	--
	Sep-09	31.7	2.43 ND	29.2	76.3
	Sep-10	3.19	2.9	2.47	9.09
	Aug-11	24.3	1.03	24.8	73.6 J
	Oct-12	4.31	0.294	3.99	12.9
MW-22-F	Aug-07	21.5	1	21.8	--
	Nov-07	4.49	0.19	4.1	--
	Sep-09	28.4	2.04	21.8	82
	Sep-10	2.69	0.218 J	0.218	8.72
	Aug-11	21.6	1.05	21.2	65.1 J
	Oct-12	4.38	0.251	4.45	12.30
MW-23	Aug-07	2.06	0.044 ND	1.97	--
	Nov-07	3.18	0.09 ND	3.5	--
	Sep-09	3.26	0.212 ND	2.41	6.91
	Sep-10	3.89	0.316 J	4.84	7.29
	Aug-11	1.79	0.110	1.73	6.70 J
	Oct-12	2.88	0.108	3.07	8.72
MW-23-F	Aug-07	2.71	0.16 ND	2.34	--
	Nov-07	3.79	0.076	3.36	--
	Sep-09	2.71	0.412	3.3	5.85
	Sep-10	2.63	0.198 J	2.63	8.51
	Aug-11	1.74	0.130	1.64	6.30 J
	Oct-12	2.46	0.162	2.64	8.46



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TABLE 2
FORMER GUTERL SPECIALTY STEEL CORPORATION FUSRAP SITE
GROUNDWATER RESULTS 2007-2012

Sample ID	Sample Date	²³⁴ U (pCi/L) (a)	²³⁵ U (pCi/L) (a)	²³⁸ U (pCi/L) (a)	Total U (µg/L) (b)
MW-24	Aug-07	0.28	0.025	ND	0.26
	Nov-07	2.18	0.13		1.83
	Sep-09	9.53	6		4.22
	Sep-10	8.75	0.895		10.2
	Aug-11	13.1	0.430		12.6
	Oct-12	2.78	0.107		2.75
MW-24-F	Aug-07	0.37	0	ND	0.26
	Nov-07	3.45	0.16		3.37
	Sep-09	3.76	0.182	ND	3.73
	Sep-10	10.2	0.793		10.8
	Aug-11	12.5	0.510		11.6
	Oct-12	4.12	0.178		4.39
MW-25	Sep-09	65.7	5.18		69.7
	Sep-10	52.1	2.88		55
	Aug-11	55.7 J	3.22 J		56.4 J
	Oct-12	68.8	3.21		63.4
MW-25-F	Sep-09	64.5	3.65		62.2
	Sep-10	53.5	3.97		55.9
	Aug-11	58.5 J	3.28 J		60.5 J
	Oct-12	53	2.25		60.9
MW-26	Aug-07	65.8	2.65		65.6
	Nov-07	80	5.3		77.9
	Sep-09	61.9	4.04		62
	Sep-10	46.6	2.08		49.3
	Aug-11	34.7	1.97		35.0
	Feb-12	39.7 J	1.62		38.3 J
	May-12	52.7	2.36		54.4
	Aug-12	49	2.48		47.6
MW-26-F	Aug-07	60	2.79		58.7
	Nov-07	82	4.17		78
	Sep-09	66.4	2.94		65.3
	Sep-10	43.7	2.22		44.3
	Aug-11	32.1	1.62		32.7
	Feb-12	48.4 J	2.1		48.4 J
	May-12	54.5	2.62		55.7
	Aug-12	46.6	1.87		46.3
MW-600D	Aug-07	1.17	0.08	ND	0.69
	Nov-07	0.66	0		0.66
	Sep-09	0.908	0.171	ND	0.711
	Sep-10	1.13	0.548		0.817
	Aug-11	0.920	0.030	ND	0.780
	Oct-12	0.715	0.040		0.616
MW-600D-F	Aug-07	3.78	0.17	ND	3.3
	Nov-07	0.86	0.043	ND	0.86
	Sep-09	1.28	0.0349	ND	0.543
	Sep-10	1.55	0.103	ND	0.801
	Aug-11	1.28	0.050	ND	0.930
	Oct-12	0.761	0.006		0.635
MW-600S	Sep-09	1.37	0	ND	1.4
MW-600S-F	Sep-09	0.913	0.075	ND	0.727



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GROUNDWATER RESULTS 2007-2012

Sample ID	Sample Date	²³⁴ U (pCi/L) (a)	²³⁵ U (pCi/L) (a)	²³⁸ U (pCi/L) (a)	Total U (µg/L) (b)	
MW-601D	Aug-07	5.83	0.4	5.23	--	
	Nov-07	7.1	0.45	7	--	
	Sep-09	0.916	0.173	ND	0.84	2.17
	Sep-10	5.52	0.486	3.1	7.81	
	Aug-11	2.54	0.100	2.66	9.60	
	Oct-12	2.66	0.077	2.36	7.30	
MW-601D-F	Aug-07	6.3	0.24	6.5	--	
	Nov-07	8	0.48	8.4	--	
	Sep-09	1.53	0.121	ND	1.17	3.43
	Sep-10	3.94	0.677	2.79	9.78	
	Aug-11	2.56	0.130	2.61	10.6	
	Oct-12	2.82	0.244	2.83	8.17	
MW-602D	Aug-07	36	1.77	37.5	--	
	Nov-07	25.6	1.39	26	--	
	Sep-09	53.7	3.49	47.4	150	
	Sep-10	37.3	0.828	37.3	109	
	Aug-11	36.5	1.84	36.0	113	
	Oct-12	37.2	1.95	35.7	110	
MW-602D-F	Aug-07	39.1	2.15	39	--	
	Nov-07	27.6	1.77	29.8	--	
	Sep-09	47.7	3.85	47	133	
	Sep-10	34.3	0.849	37.7	117	
	Aug-11	36.9	2.08	36.8	112	
	Oct-12	36.3	1.7	36.5	110	
MW-603D	Aug-07	4.06	0.2	3.84	--	
	Nov-07	5.06	0.1	ND	4.28	--
	Sep-09	2.65	0.492	2.12	4.84	
	Sep-10	2.89	0.199	2.11	4.86	
	Aug-11	2.86	0.100	2.76	11.1 J	
	Oct-12	2.51	0.115	2.23	6.58	
MW-603D-F	Aug-07	1.15	0.02	ND	0.86	--
	Nov-07	3.92	0.066	ND	3.42	--
	Sep-09	2.47	0.29	2.33	4.88	
	Sep-10	2.79	0.261	2.74	6.4	
	Aug-11	3.01	0.190	2.97	8.2 J	
	Oct-12	2.51	0.115	2.23	6.58	
MW-604D	Aug-07	23.5	0.96	23.7	--	
	Nov-07	39	1.92	38.2	--	
	Sep-09	39.3	3.1	39.3	117	
	Sep-10	44	0.778	41.2	140	
	Aug-11	37.1	1.79	37.0	103	
	Feb-12	23.1	1.05	21.9		
	May-12	29.2	1.28	28.8	86.5	
	Aug-12	35.1	1.5	35.2	108	
MW-604D-F	Aug-07	22.8	1.55	24.7	--	
	Nov-07	43.2	1.81	42.3	--	
	Sep-09	43.5	3.06	43.4	104	
	Sep-10	36.2	0.617	37.2	121	
	Aug-11	31.4	1.52	30.4	101	
	Feb-12	22	1.28	23.1		
	May-12	31	1.52	29.9	76.4	
	Aug-12	34.5	1.57	33.5	105	



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FORMER GUTERL SPECIALTY STEEL CORPORATION FUSRAP SITE
GROUNDWATER RESULTS 2007-2012**

Sample ID	Sample Date	²³⁴ U (pCi/L) (a)	²³⁵ U (pCi/L) (a)	²³⁸ U (pCi/L) (a)	Total U (µg/L) (b)
MW-605D	Aug-07	67	4.9	63	--
	Nov-07	66.9	3.23	68.2	--
	Sep-09	101	5.45	101	274
	Sep-10	74.1	3.09	74.8	248
	Aug-11	67.9	3.43	65.8	214
	Feb-12	87.3	3.59	91	--
	May-12	86.2	4.09	87.8	265
	Aug-12	85.8	3.75	82.6	259
MW-605D-F	Aug-07	68	3.6	64	--
	Nov-07	70	3.4	64.2	--
	Sep-09	97.3	12.1	88.8	238
	Sep-10	81.8	8.28	84	254
	Aug-11	68.6 J	3.38 J	67.1 J	209
	Feb-12	92.9	3.99	91.2	--
	May-12	90.2	4.37	89.6	256
	Aug-12	78.7	3.67	77.5	251
MW-606D	Sep-09	2.86	0.268	3.03	7.24
	Sep-10	1.76	0.18 ND	1.92	6.91
	Aug-11	2.60 J	0.190 J	2.91 J	7.50
MW-606D-F	Sep-09	2.62	0.213	3.1	5.67
	Sep-10	1.58	0.118 ND	1.69	6.09
	Aug-11	2.88 J	0.060 J	2.37 J	7.40
MW-606DR	Nov-07	2.66	0.16	2.9	--
	Sep-09	5.27	0.438	4.43	13.2
	Sep-10	5.77	0.824	4.56	12.8
	Aug-11	3.37	0.230	3.73	12.8
MW-606DR-F	Nov-07	2.51	0.2	2.4	--
	Sep-09	5.78	0.555	6.42	15
	Sep-10	4.95	0.396	4.76	14.7
	Aug-11	4.20 J	0.170 J	4.54 J	12.4
MW-607D	Aug-07	0.033 ND	-0.008 ND	-0.01 ND	--
	Nov-07	0.023 ND	-0.005 ND	0.064 ND	--
	Sep-09	5.5	0.269	4.92	14.9
	Sep-10	3.36	0.178 ND	3.71	10
	Aug-11	5.35	0.240	4.99	19.5
	Oct-12	4.86	0.133	5.05	13.9
MW-607D-F	Aug-07	0.064 ND	0.019 ND	0.027 ND	--
	Nov-07	0.15	-0.009 ND	0.009 ND	--
	Sep-09	6.07	0.456	6.52	17.7
	Sep-10	4.95	0 ND	3.01	10.9
	Aug-11	3.88	0.110	4.04	12.3
	Oct-12	3.62	0.316	4.74	12.2
MW-701DD	Aug-11	0.89	0.04	0.39	1.4
MW-701DD-F	Aug-11	0.77	0.03	0.46	1.5
MW-702DD	Aug-11	6.65	0.1	1.84	4.5
MW-702DD-F	Aug-11	4.94	0.120	1.47	5.80
MW-703DD	Aug-11	0.090	0.010 U	0.070	0.280
MW-703DD-F	Aug-11	0.020 ND	0 ND	0.020 ND	1.00 ND
MW-704DD	Aug-11	9.35	0.38	7.31	23.5
	Feb-12	29.8	1.2	23.8	--
	May-12	25.3	0.99	20.4	67
	Aug-12	32.7	0.96	26.1	102
MW-704DD-F	Aug-11	10.8	0.46	8.36	26.3
	Feb-12	26.3	1.15	22.6	--
	May-12	27.8	1.15	21.1	65.8
	Aug-12	27.6	0.81	22.3	68.1



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FORMER GUTERL SPECIALTY STEEL CORPORATION FUSRAP SITE
GROUNDWATER RESULTS 2007-2012**

Sample ID	Sample Date	²³⁴ U (pCi/L) (a)	²³⁵ U (pCi/L) (a)	²³⁸ U (pCi/L) (a)	Total U (µg/L) (b)
MW-706DD	Aug-11	0.980	0.020	ND	1.80
MW-706DD-F	Aug-11	0.950	0.01	ND	1.70
MW-707DD	Aug-11	--	--	--	34.5
	Feb-12	7.76 J	0.14	5.14	--
	May-12	12.8	0.28	3.54	10.8
	Aug-12	14.8	0.108	3.55	11.2
MW-707DD-F	Aug-11	--	--	--	33.9
	Feb-12	14.5 J	0.23	4.32	--
	May-12	12.3	0.18	3.51	10.6
	Aug-12	9	0.129	2.73	8.3
MW-708DD	Aug-11	7.18	0.31	7.03	22.4
	Feb-12	7.1	0.2	7.2	--
	May-12	6.97	0.4	6.72	18
	Aug-12	7.04	0.49	7.12	20.2
MW-708DD-F	Aug-11	7.19	0.30	6.90	23.0
	Feb-12	7.99	0.49	7.76	--
	May-12	7.37	0.26	7.35	18.3
	Aug-12	7.26	0.27	6.68	19.3
MW-709DD	Aug-11	16.8	0.71	16.0	52.8
	Feb-12	25.5	1.48	26.3	--
	May-12	27.7	1.05	28.7	80
	Aug-12	28.4	1.83	28.6	82.7
MW-709DD-F	Aug-11	18.5	0.70	17.4	55.4
	Feb-12	27.5	1.01	25.5	--
	May-12	27.2	1.23	25.9	80.4
	Aug-12	28.7	1.66	29.4	84.3
MW-710D	Aug-11	19.1 J	1.02	19.9	67.5
	Feb-12	16.6	0.81	16.8	--
	May-12	18.3	0.99	17.6	52.5
	Aug-12	18.8	1.12	18.2	53.8
MW-710D-F	Aug-11	24.0 J	1.20	23.8	66.1
	Feb-12	17.3	0.90	17.5	--
	May-12	18.7	0.91	19.4	49.5
	Aug-12	19.9	1.08	20	52.3
MW-710DD	Aug-11	18.6	1.02	19.1	60.8
	Feb-12	19.6	0.93	21.3	--
	May-12	21.7	0.96	22.1	59.1
	Aug-12	8.79	0.59	9.6	29.6
MW-710DD-F	Aug-11	21	1.38	21.3	67.0
	Feb-12	20	1.17	20.4	--
	May-12	19	1	19.1	56.6
	Aug-12	9.28	0.43	9.5	28.9
MW-712DD	Aug-11	13.2	0.590	12.7	38.7
	Oct-12	9.92	0.590	10.3	28.3
MW-712DD-F	Aug-11	14.0	12.4	12.4	38.8
	Oct-12	9.97	0.577	10.2	30.8
MW-713D	Aug-11	2.62	0.06	1.26	5.10 J
	Feb-12	0.32	0.1	0.23	--
	May-12	0.081	0.1	0.122	0.33 J
	Aug-12	0.127	0.1	0.093	1 ND
	Oct-12	--	--	--	1 ND



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FORMER GUTERL SPECIALTY STEEL CORPORATION FUSRAP SITE
GROUNDWATER RESULTS 2007-2012

Sample ID	Sample Date	²³⁴ U (pCi/L) (a)	²³⁵ U (pCi/L) (a)	²³⁸ U (pCi/L) (a)	Total U (µg/L) (b)
MW-713D-F	Aug-11	2.67	0.070	1.40	4.70 J
	Feb-12	0.19	0.1 ND	0.071	--
	May-12	0.103	0.1 ND	0.075	1 ND
	Aug-12	0.133	0.1 ND	0.1 ND	1 ND
	Oct-12	--	--	--	1 ND
Off-Site Wells					
MW-705D	Aug-11	0.210	0.010 ND	0.180	0.890 J
MW-705D-F	Aug-11	0.500	0.020 ND	0.470	2.80 J
MW-705DD	Aug-11	0.510	0.020	0.290	0.890 J
MW-705DD-F	Aug-11	0.250	0 ND	0.180	0.370
MW-711D	Aug-11	2.78	0.090	2.68	9.00
	Oct-12	1.54	0.125	1.36	4.02
MW-711D-F	Aug-11	2.70	0.160	2.30	2.90 J
	Oct-12	0.984	0.079	1.05	4.09
MW-711DD	Aug-11	0.800 ND	0 ND, J	0.710 J	1.70 J
	Oct-12	1.02	0.039	1.03	1.49
MW-711DD-F	Aug-11	1.29	0.110 ND	0.55	2.90 J
	Oct-12	1.41	-0.02 ND	0.83	1.63

- (a) Analysis for isotopic uranium, Method EML U-02 Modified
- (b) Analysis for uranium, Method ASTM D5174 Modified
- (c) Sample nomenclature "SW-XF" denotes a filtered (dissolved phase) sampling result.
- F Filtered sample
- pCi/L Picocuries per liter
- µg/L Micrograms per liter
- Sample not analyzed for this parameter
- ND Non-Detect (result is below the Minimum Detectable Activity/Minimum Detectable Concentration)
- J Estimated



TABLE 3
FORMER GUTERL SPECIALTY STEEL CORPORATION FUSRAP SITE
ERIE CANAL SEEP SAMPLE RESULTS 2011-2012

Sample ID	Sample Date	²³⁴ U (pCi/L) (a)	²³⁵ U (pCi/L) (a)	²³⁸ U (pCi/L) (a)	Total U (µg/L) (b)
Seep-001	Aug-11	13.2	0.072	13.2	44.9
Seep-001-F ^c	Aug-11	15.4	0.670	15.3	44.3
Seep-002	Aug-11	2.09	0.020	1.59	6.30
Seep-002-F	Aug-11	1.89	0.080	2.13	6.20
Seep-003	Dec-11	--	--	--	5.85
Seep-004	Dec-11	--	--	--	3.47
Seep-005	Dec-11	--	--	--	24.8
Seep-006	Dec-11	--	--	--	25.9
Seep-007	Dec-11	--	--	--	24.9
Seep-008	Dec-11	--	--	--	23.2
Seep-1205-01	May-12	1.88	0.084	1.99	5.3
Seep-1205-01-F	May-12	1.9	0.171	2.04	5.3
Seep-1205-02	May-12	2.34	0.048	2	5.8
Seep-1205-02-F	May-12	2.56	0.22	2.28	5.9
Seep-1205-03	May-12	7.3	0.36	7.25	20.7
Seep-1205-03-F	May-12	6.88	0.37	7.44	20.8
Seep-1210-1	Oct-12	10.6	0.547	10.7	35.4
Seep-1210-1-F	Oct-12	11.1	0.66	12.5	33
Seep-1210-2	Oct-12	0.272	0.027	0.198	0.895
Seep-1210-2-F	Oct-12	0.161	-0.046	0.38	0.913
Seep-1210-3	Oct-12	12.3	0.571	12.3	36.2
Seep-1210-3-F	Oct-12	11.7	0.75	13	36.8

- (a) Analysis for isotopic uranium, Method EML U-02 Modified
- (b) Analysis for uranium, Method ASTM D5174 Modified
- (c) Sample nomenclature "SW-XF" denotes a filtered (dissolved phase) sampling result.
- F Filtered sample
- pCi/L Picocuries per liter
- µg/L Micrograms per liter
- Sample not analyzed for this parameter
- ND Non-Detect (result is below the Minimum Detectable Activity/Minimum Detectable Concentration)
- J Estimated