



**US Army Corps
of Engineers®**
Buffalo District
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Luckey FUSRAP Site

Groundwater Monitoring Data Release

US Army Corps of Engineers, Buffalo District • May 2010

The Formerly Utilized Sites Remedial Action Program (FUSRAP) was initiated by the Atomic Energy Commission in 1974 to identify and clean up or control sites that were part of the Nation's early atomic energy and weapons program. This data release has been prepared to address community outreach needs and is consistent with provisions of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

Site Description

The Luckey Site is located at 21200 Luckey Road near the Village of Luckey, Ohio, 22 miles southeast of Toledo. The site is bordered by Luckey Road to the west, Gilbert Road to the south, and abandoned railroad tracks to the east. The site is zoned industrial and is currently vacant.

The Luckey Site covers approximately 40 acres and contains numerous open areas. Several of these open areas were previously used to store byproducts from magnesium and beryllium processing.

Purpose

The purpose of this environmental data release is to provide groundwater monitoring data that is regularly collected at the site. The U.S. Army Corps of Engineers (USACE) Buffalo District is posting this data to the Luckey Site webpage available at: <http://www.lrb.usace.army.mil/fusrap/luckey>. Included are annual groundwater monitoring data and the USACE interpretation of these data.

Results and Interpretations

Groundwater surface elevations and analytical results for the 2008 and 2009 monitoring events are presented in Tables 1 and 2, respectively. The data indicate that groundwater flow within the shallow and intermediate water bearing zones was consistent with the interpretations presented in the ROD and Annual Groundwater Monitoring Fact Sheet. Analytical results above the EPA MCLs include beryllium (MW-01(I), -02(S), -26(S), and PW(W)), lead (MW-21(I) and PW(E)), and total uranium (MW-21(I) and -24(S)), which are consistent with previous results. All of the wells that contain COCs above the EPA MCLs are located onsite. The data indicate that COC concentrations in groundwater do not exhibit long-term increasing trends.



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TABLE 1
Luckey FUSRAP Site
Groundwater Elevations
2008 - 2009

Well ID	Top of Casing Elev (ft AMSL)	Depth to Water (ft TOC)	WL Elev (ft AMSL)	Depth to Water (ft TOC)	WL Elev (ft AMSL)
			2008		2009
MW-01(I)	650.52	6.94	643.58	7.45	643.07
MW-02(S)	650.27	6.73	643.54	7.25	643.02
MW-05(I)	653.26	7.56	645.70	8.33	644.93
MW-07(I)	650.21	5.51	644.70	6.15	644.06
MW-19(I)	651.03	7.53	643.50	8.30	642.73
MW-21(I)	651.45	7.78	643.67	8.40	643.05
MW-22(I)	650.09	6.14	643.95	6.90	643.19
MW-23(S)	652.58	7.40	645.18	7.87	644.71
MW-24(S)	653.26	8.14	645.12	8.76	644.5
MW-25(I)	649.31	5.66	643.65	6.15	643.16
MW-26(S)	650.44	6.82	643.62	7.52	642.92
OMW-27(I)	649.97	6.26	643.71	7.08	642.89
OMW-31(I)	648.68	4.91	643.77	5.60	643.08
OMW-32(B)	648.74	4.98	643.76	5.66	643.08
PW(E)	N/A	N/M	---	N/M	---
PW(W)	N/A	N/M	---	N/M	---

Notes:

AMSL Above Mean Sea Level
ft foot (feet)
N/A Not Available
N/M Not Measured
TOC Top of Casing



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TABLE 2
Luckey FUSRAP Site
Groundwater Analytical Results
2002 - 2009

Well	Year	Beryllium	Beryllium (Filtered)	Gross Alpha	Gross Beta	Lead	Lead (Filtered)	Uranium, Total	Uranium-234	Uranium-235	Uranium-238
Units		ug/L	ug/L	pCi/L	pCi/L	ug/L	ug/L	ug/L	pCi/L	pCi/L	pCi/L
<i>USEPA MCLs</i>		4	-	-	-	15	-	30	-	-	-
IA09-GW0001	2002	ND	ND	6.3	7.66	ND	ND	0.48	0.31	ND	0.26
	2004	ND	NA	ND	6.88	1.7 J	NA	0.561	ND	ND	ND
IA09-GW0002	2002	ND	ND	3.9	ND	ND	ND	0.18	0.33	ND	ND
	2004	ND	NA	2.39	3.97	ND	NA	0.371	1.35	ND	ND
	2005	ND	ND	ND	ND	0.8 J	1 J	ND	0.229 J	ND	0.079 J
	2006	ND	ND	ND	ND	0.6 J	ND	0.85 J	0.11 J	ND	ND
	2007	ND	ND	2.1	4.1 J	ND	ND	NA	0.147	ND	0.068 J
	2008	ND	ND	NA	NA	ND	3.8 J	ND	0.389	ND	0.2
	2009	0.17 J	0.076 J	NA	NA	0.96	0.14 J	ND	0.286 J	ND	ND
IA09-MW-01(I)	2002	34	11	6.97	8.86	ND	3	0.52	1.57	0.16 J	0.78
	2004	31.1	NA	2.46	7.41	ND	NA	3.16	1.88	ND	1.64
	2005	41.2	33.8	ND	8.1	ND	ND	3.32	1.35	0.056 J	0.96
	2006	31.8	33.2	NU	ND	ND	0.62 J	2.85	1.45 J	ND	0.94 J
	2007	32.5	30.9	2	6.1 J	ND	ND	NA	1.41	0.091 J	0.79
	2008	31.1	31.5	NA	NA	ND	ND	2.63	1.74	ND	0.862
	2009	39	34	NA	NA	0.57	0.46	2.39	1.15	0.341 J	0.982
IA09-MW-02(S)	2002	60	60	7.65	6.55	4	ND	6.46	2.37	ND	1.88
	2004	77.8	NA	5.01	7.64	1.7 J	NA	6.24	2.89	ND	3.14
	2005	44.2	43	ND	ND	1.5 J	2.3 J	5.23	2.33	0.133 J	2
	2006	14.8	13.7	ND	NU	1.8	1.4	4.13	1.69 J	0.16 J	1.58 J
	2007	14.2	13.2	3.9	7.3 J	ND	ND	NA	1.85	0.099 J	1.51
	2008	13.2	12.4	NA	NA	ND	ND	3.93	1.63	0.183 J	1.52
	2009	14	22	NA	NA	1.3	1.3	3.64	2.17	ND	1.48
IA09-MW-05(I)	2002	ND	ND	9.62	19.1	4	4	3.58	1.36	ND	0.96
	2004	ND	NA	1.79	19.9	ND	NA	2.79	1.97	ND	ND
	2005	ND	ND	8.5	15.3	2.6 J	3.4	3.23	1.37	0.07 J	1.06
	2006	ND	ND	NU	5.8	1.5	1.2	3.82	1.54 J	0.18 J	1.02 J
	2007	ND	ND	0.3	8.7 J	ND	ND	NA	1.17	ND	0.89
	2008	ND	ND	NA	NA	3.5 J	3.4 J	2.96	1.77	0.198 J	1.32
	2009	ND	ND	NA	NA	3.3	2.7	2.77	1.67	ND	1.32
IA09-MW-07(I)	2002	ND	ND	7.16	8.96	ND	ND	2.48	1.44	ND	0.68
	2004	ND	NA	6.71	8.41	ND	NA	2.47	1.62	ND	ND
	2005	ND	ND	6.7	8.7	ND	ND	2.53	0.93	0.056 J	0.62
	2006	ND	ND	NU	4.8	ND	ND	2.73	0.87 J	ND	0.75 J
	2007	ND	ND	2.2	7.8 J	ND	ND	NA	1.15	0.083 J	1.07
	2008	ND	ND	NA	NA	ND	ND	2.36	1.4	0.195 J	0.617
	2009	ND	ND	NA	NA	0.067 J	0.21	2.17	1.65 J	ND	0.852 J



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2002 - 2009

Well	Year	Beryllium	Beryllium (Filtered)	Gross Alpha	Gross Beta	Lead	Lead (Filtered)	Uranium, Total	Uranium-234	Uranium-235	Uranium-238
Units		ug/L	ug/L	pCi/L	pCi/L	ug/L	ug/L	ug/L	pCi/L	pCi/L	pCi/L
<i>USEPA MCLs</i>		<i>4</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>15</i>	<i>-</i>	<i>30</i>	<i>-</i>	<i>-</i>	<i>-</i>
IA09-MW-19(I)	2002	ND	ND	4.51	6.11	ND	ND	0.43	0.43	ND	ND
	2004	2.8 J	NA	2.8	4.47	ND	NA	0.554	1.67	ND	ND
	2005	3.1 J	2.9 J	ND	ND	ND	ND	0.492 J	0.204 J	ND	0.244 J
	2006	2.8	3.5	ND	4.4	ND	ND	ND	0.39 J	ND	0.16 J
	2007	2.2 J	2.1 J	-1.7	4.7	ND	ND	NA	NU	NU	0.68
	2008	2.9 J	2.4 J	NA	NA	ND	ND	ND	0.261 J	ND	ND
	2009	3.9	4.6	NA	NA	0.25 J	0.16 J	ND	0.506 J	ND	ND
IA09-MW-21(I)	2002	ND	ND	35.6	30.2	34	29	27.6	8.64	0.76	7.97
	2004	ND	NA	9.76	13.2	32.5	NA	13.57	4.77	1.13	5.21
	2005	ND	ND	10	10.2	25.5	25.7	14.9	3.89	0.141	3.49
	2006	ND	ND	25	NU	32.7	31.7	35	6.8	0.16 J	6
	2007	ND	ND	14.8 J	26.7 J	27.1	25.7	NA	9.5	0.5	9.1
	2008	ND	ND	NA	NA	39.6	32.9	37.7	15.7	1.03	14.4
	2009	ND	ND	NA	NA	84	58	34.1	16.1	0.92	15.5
IA09-MW-22	2008	ND	ND	NA	NA	ND	3.1 J	1.11	0.292	ND	0.34
	2009	ND	.088 J	NA	NA	1.3	1.7	ND	0.743	ND	0.405
IA09-MW-23	2008	ND	ND	NA	NA	ND	4.8 J	4.44	2.27	ND	1.95
	2009	0.10 J	0.034 J	NA	NA	0.6	1.1	2.64	1.71	0.38 J	1.35
IA09-MW-24(S)	2002	ND	ND	237	55	12	12	333	99.8	11.8 J	99.9
	2004	ND	NA	158	66.7	9.4	NA	273	89	5.19	91.4
	2005	ND	ND	84	34	ND	4.2 J	161	52.7	2.78	54.5
	2006	0.38 J	0.17 J	207	33.4	6.8	6.1	184	59.7	3.29 J	57.6
	2007	ND	ND	87.1 J	66.1 J	6.1 J	7.1 J	NA	63	2.5	71
	2008	ND	ND	NA	NA	4.3 J	ND	163	52.1	4.17	52.5
	2009	0.79	0.61	NA	NA	5.9	6.7	197	57.6	3.55	56.9
IA09-MW-25	2008	ND	ND	NA	NA	ND	5.9 J	1.28	0.725	ND	0.509
	2009	0.20 J	0.21	NA	NA	0.59	0.11 J	ND	0.813	ND	0.331
IA09-MW-26(S)	2002	119	103	19.1	12.5	10	ND	13.8	4.88	ND	3.13
	2008	8.9	9.1	NA	NA	5 J	ND	6.72	2.56	ND	2.23
	2009	15	18	NA	NA	5.3	6.2	9.63	4.14	0.522	3.62
IA09-MW-27	2008	ND	ND	NA	NA	ND	ND	1.89	2.16	0.357	0.852
	2009	ND	ND	NA	NA	0.73	0.54	1.41	1.42	ND	0.763
IA09-MW-40(B)	2002	ND	ND	6.5	8.83	4	3	1.03	0.67	ND	0.33 J
	2004	ND	NA	4.94	9.09	ND	NA	1.1	ND	ND	ND
	2005	ND	ND	ND	ND	ND	ND	0.484 J	0.48 J	0.031 J	0.234 J
	2006	ND	ND	NU	ND	ND	0.49 J	ND	0.4 J	ND	0.18 J
	2007	ND	ND	2	6.2 J	ND	ND	NA	0.46	ND	0.153



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<i>USEPA MCLs</i>		<i>4</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>15</i>	<i>-</i>	<i>30</i>	<i>-</i>	<i>-</i>	<i>-</i>
IA09-OMW-29(I)	2002	ND	ND	3.68 J	ND	ND	ND	0.21	ND	ND	ND
	2004	ND	NA	2.72	3.17	ND	NA	0.299	ND	ND	ND
	2005	ND	ND	8.1	7.8	ND	ND	4.45	2.11	0.063 J	1.5
	2006	ND	ND	5.6	ND	ND	0.89 J	2.5	1.35 J	ND	0.72 J
	2007	ND	ND	2.8	4.3 J	ND	ND	NA	1.01	ND	0.57
IA09-OMW-31(I)	2002	ND	ND	ND	ND	ND	ND	0.67	0.3 J	ND	0.27 J
	2004	ND	NA	2.44	3.57	ND	NA	0.982	ND	ND	ND
	2005	ND	ND	ND	ND	ND	ND	1.42	0.66	ND	0.55
	2006	ND	ND	NU	6.2	ND	ND	1.81 J	0.99 J	ND	0.56 J
	2007	ND	ND	1.6	4.6	ND	ND	NA	0.36	ND	0.211
	2008	ND	ND	NA	NA	ND	ND	ND	0.564	ND	0.615
	2009	ND	0.035 J	NA	NA	0.27 J	0.35	ND	0.36	ND	ND
IA09-OMW-32	2008	ND	ND	NA	NA	ND	ND	ND	0.498	ND	ND
	2009	ND	ND	NA	NA	0.13 J	0.28	ND	ND	ND	ND
IA09-OMW-35(I)	2002	ND	ND	4.14	5.16	ND	ND	0.72	0.35 J	ND	0.3 J
	2004	ND	NA	2.68	2.76	ND	NA	0.763	ND	ND	ND
	2005	ND	ND	ND	5.2	ND	ND	0.528 J	0.4 J	ND	0.194 J
	2006	ND	ND	ND	ND	1.6	1.5	1.91 J	0.96 J	ND	0.64 J
	2007	ND	ND	3	6.9 J	ND	ND	NA	1.17	0.099 J	1.05
IA09-PW(E)	2002	ND	ND	3.9	ND	ND	ND	0.18	ND	ND	ND
	2004	ND	NA	1.59	5.35	ND	NA	0.502	ND	ND	ND
	2008	ND	ND	NA	NA	26.2	4.0 J	ND	ND	ND	0.414
	2009	0.17 J	0.028 J	NA	NA	26	0.56	ND	ND	ND	ND
IA09-PW(W)	2004	4.1 J	NA	4.31	11.9	ND	NA	8.04	ND	ND	1.96
	2008	11.3	11	NA	NA	ND	ND	4.14	2.14	ND	2.09
	2009	13	18	NA	NA	2.2	1.6	3.74	2.03	0.33 J	1.85

Notes:

- NA Not Analyzed
- ND Not Detected
- NU Result was not used because of quality issues
- J Estimated
- µg/L micrograms per liter
- pCi/L pico Curies per liter