



GROUNDWATER MONITORING DATA RELEASE

2012 SAMPLING EVENT

LUCKEY FUSRAP SITE

U.S. Army Corps of Engineers
Buffalo District

Building Strong®

May 2013

Formerly Utilized Sites Remedial Action Program (FUSRAP)

FUSRAP was initiated in 1974 to identify, investigate and, if necessary, clean up or control sites throughout the United States that were contaminated as the result of activities conducted in support of the Nation's early atomic energy and weapons programs during the 1940s, 1950s, and 1960s.

When implementing FUSRAP, the Corps of Engineers follows the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP).

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, abandoned railroad tracks to the east, and privately-owned farm fields to the north. The site is zoned industrial but is currently not being utilized. The Luckey Site covers approximately 40 acres and includes open areas as well as unused buildings, some of which are partially demolished. Several of these open areas were previously used to store byproducts from magnesium and beryllium processing.

Site History

In 1942 a magnesium processing facility was built at the site and was operated for the Federal Government by National Lead during World War II until 1945. In 1949 Brush Beryllium Company (later Brush Wellman) began production of beryllium oxide, beryllium hydroxide, and beryllium pebbles at the site under contract to the Atomic Energy Commission (AEC). In late 1951 and early 1952, the AEC sent approximately 1,000 tons of radioactively contaminated scrap metal to the site in anticipation of resuming magnesium processing at the facility. The scrap metal, which contained radioactivity within guidelines at the time, was stored at the site and never used for its intended purpose. Records also indicate that beryllium scrap from other AEC operations was sent to the Luckey Site for reprocessing. Some of this scrap metal may have been contaminated with radioactivity.

Brush Beryllium Company operated the facility for the AEC until 1958 when beryllium production ceased. However, sintering and powder blending operations, established at the facility in 1957, continued until 1962. In 1959, AEC contracted with Brush Beryllium Company to close the facility. Closing operations consisted of constructing a two-acre dike enclosed landfill on the northeast corner of the property. Sludge material from three on-site lagoons was moved to the landfill, which was reportedly capped, graded, and seeded. The General Services Administration sold the facility in 1961 and the site has had various owners since then.

Scope

Annual groundwater monitoring is currently being performed to obtain additional information and to establish a baseline of groundwater data prior to implementing monitored natural attenuation of groundwater, as documented in the Groundwater Operable Unit Record of Decision (ROD). During June 25 and 26, 2012, the ten off-site groundwater wells, shown on Figure 1, were sampled for beryllium, lead, isotopic uranium (uranium-234 [U-234], U-235, U-238) and total uranium (presented as elemental mass and the sum of three isotopes). These wells monitor the potential for contaminant migration and include the nearest down-gradient residence (GW0002).

Hydrogeologic conditions and the nature and extent of groundwater contamination associated with the site are presented in the ROD. Groundwater occurs in three primary water-bearing zones: shallow, intermediate, and deep bedrock and is present under unconfined and semi-confined conditions. The horizontal flow of groundwater within these zones in the vicinity of the site is northerly and northwesterly. Constituents of concern (COCs) and associated U.S. Environmental Protection Agency (USEPA) Maximum Contaminant Levels (MCLs) for protection of drinking water include beryllium (4 micrograms per liter [$\mu\text{g/L}$]), lead (15 $\mu\text{g/L}$), and total uranium (30 $\mu\text{g/L}$). A contiguous plume of COC-contaminated groundwater is not present.

Results and Interpretation

Figure 1 shows all groundwater monitoring wells associated with the Luckey Site; the wells that were sampled during the June 25 and 26, 2012 monitoring event are highlighted in yellow. Groundwater surface elevations were measured during this event and are presented in Table 1.

Analytical results for the June 2012 annual monitoring event are presented in Table 2 and are highlighted in gray. The results suggest that COCs are not migrating off-site. No analytical results were above the USEPA MCLs, and the sample from residential well GW-0002 did not contain COCs at concentrations above the MCLs.

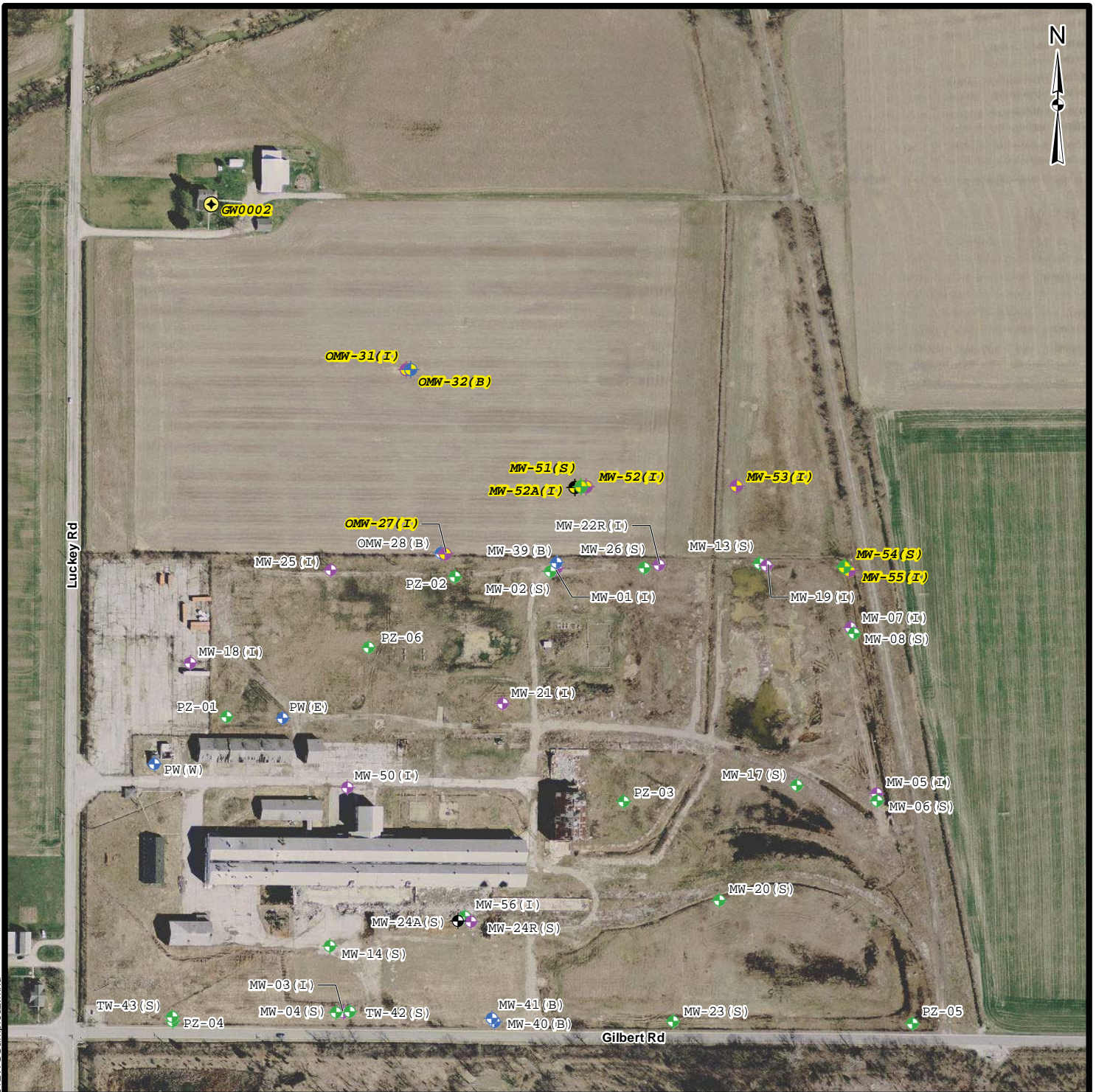
U.S. ARMY CORPS OF ENGINEERS – BUFFALO DISTRICT FUSRAP TEAM

1776 NIAGARA STREET, BUFFALO, N.Y. 14207

Phone: 800-833-6390 (Option 4)

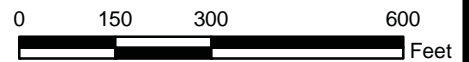
Email: fusrap@usace.army.mil

Website: <http://www.lrb.usace.army.mil/Missions/HTRW/FUSRAP/LuckeySite.aspx>



Legend

-  Multiple Zone Monitoring Well (Installed 2012)
-  Residential Well
-  Shallow Monitoring Well
-  Intermediate Monitoring Well
-  Deep Monitoring Well
-  Monitoring Well Sampled in 2012



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**2012 MONITORING PROGRAM
GROUNDWATER SAMPLE LOCATIONS**

Name: 130219_2012WGSamples2.mxd
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**LUCKEY FUSRAP SITE
LUCKEY, OHIO**

FIGURE 1



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TABLE 1
Lucky FUSRAP Site
Groundwater Elevations
2012

Well ID	Top of Casing Elev (ft AMSL)	Depth to Water (ft TOC)	WL Elev (ft AMSL)
OMW-27(I)	649.97	8.95	641.02
OMW-31(I)	648.68	7.58	641.10
OMW-32(B)	648.74	7.61	641.13
MW-51(S)	650.09	7.86	642.23
MW-52(I)	650.21	9.04	641.17
MW-52A(I)	N/M	8.71	N/A
MW-53(I)	649.69	8.45	641.24
MW-54(S)	650.27	9.49	640.78
MW-55(I)	650.19	8.08	642.11

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 - 2012

Well	Year	Beryllium	Lead	Total Uranium (KPA) ²	Uranium-234	Uranium-235	Uranium-238	Total Uranium (Alpha Spec) ²
Units		ug/L	ug/L	ug/L	pCi/L	pCi/L	pCi/L	pCi/L
<i>USEPA MCL</i>		<i>4</i>	<i>15</i>	<i>30</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>27¹</i>
GW0002	2002	ND	ND	0.18	0.33	ND	ND	0.33
	2004	ND	ND	0.371	1.35	ND	ND	1.35
	2005	ND	0.8 J	ND	0.229 J	ND	0.079 J	0.308 J
	2006	ND	0.6 J	0.85 J	0.11 J	ND	ND	0.11 J
	2007	ND	ND	NA	0.147	ND	0.068 J	0.215 J
	2008	ND	ND	ND	0.389	ND	0.2	0.589
	2009	0.17 J	0.96	ND	0.286 J	ND	ND	0.286 J
	2010	ND	0.58	ND	0.862 J	0.25	0.227	1.34 J
	2011	ND	1.2	0.146 J	0.149	0.064 J	0.11	1.664
	2012	0.25 U	0.38 J	0.191 J	0.085 J	0.003 U	-0.001 U	0.087
GW0002 (Filtered)	2002	ND	ND					
	2004	NA	NA					
	2005	ND	1 J					
	2006	ND	ND					
	2007	ND	ND					
	2008	ND	3.8 J					
	2009	0.076 J	0.14 J					
	2010	ND	0.094 J					
	2011	ND	0.12 J	0.153 J	0.161	0.007 U	0.033 J	0.201
	2012	0.25 U	0.24 U	0.205 J	-0.069 U	0.015 U	-0.001 U	-0.055
MW-01(I)	2002	34	ND	0.52	1.57	0.16 J	0.78	2.51 J
	2004	31.1	ND	3.16	1.88	ND	1.64	3.52
	2005	41.2	ND	3.32	1.35	0.056 J	0.96	2.37
	2006	31.8	ND	2.85	1.45 J	ND	0.94 J	2.39 J
	2007	32.5	ND	NA	1.41	0.091 J	0.79	2.29 J
	2008	31.1	ND	2.63	1.74	ND	0.862	2.60
	2009	39	0.57	2.39	1.15	0.341 J	0.982	2.47 J
	2010	25	0.74	2.91	2.46	0.402	1.08	3.94
	2011	28	0.45	2.99	1.27	0.104	0.951	2.325
MW-01(I) (Filtered)	2002	11	3					
	2004	NA	NA					
	2005	33.8	ND					
	2006	33.2	0.62 J					
	2007	30.9	ND					
	2008	31.5	ND					
	2009	34	0.46					
	2010	20	0.35 J					
2011	28	0.36 J	2.88	1.13	0.114 J	0.738	1.982	



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Units		ug/L	ug/L	ug/L	pCi/L	pCi/L	pCi/L	pCi/L
<i>USEPA MCL</i>		<i>4</i>	<i>15</i>	<i>30</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>27¹</i>
MW-02(S)	2002	60	4	6.46	2.37	ND	1.88	4.25
	2004	77.8	1.7 J	6.24	2.89	ND	3.14	6.03
	2005	44.2	1.5 J	5.23	2.33	0.133 J	2	4.46 J
	2006	14.8	1.8	4.13	1.69 J	0.16 J	1.58 J	3.43 J
	2007	14.2	ND	NA	1.85	0.099 J	1.51	3.46 J
	2008	13.2	ND	3.93	1.63	0.183 J	1.52	3.15
	2009	14	1.3	3.64	2.17	ND	1.48	3.65
	2010	11	1.3	4.17	2.35	0.482	1.72	4.55
	2011	13	1.1	4.36	1.38	0.095	1.23	2.705
MW-02(S) (Filtered)	2002	60	ND					
	2004	NA	NA					
	2005	43	2.3 J					
	2006	13.7	1.4					
	2007	13.2	ND					
	2008	12.4	ND					
	2009	22	1.3					
	2010	3.1	0.72					
	2011	14	0.87	4.2	1.82	0.017 U	1.34	3.177
MW-05(I)	2002	ND	4	3.58	1.36	ND	0.96	2.32
	2004	ND	ND	2.79	1.97	ND	ND	1.97
	2005	ND	2.6 J	3.23	1.37	0.07 J	1.06	2.50 J
	2006	ND	1.5	3.82	1.54 J	0.18 J	1.02 J	2.74 J
	2007	ND	ND	NA	1.17	ND	0.89	2.06
	2008	ND	3.5 J	2.96	1.77	0.198 J	1.32	3.29 J
	2009	ND	3.3	2.77	1.67	ND	1.32	2.99
	2010	0.52	3.3	3.36	1.44 J	ND	1.02	2.46 J
	2011	0.21 J	3.4	3.16	1.36	0.067	0.963	2.39
MW-05(I) (Filtered)	2002	ND	4					
	2004	NA	NA					
	2005	ND	3.4					
	2006	ND	1.2					
	2007	ND	ND					
	2008	ND	3.4 J					
	2009	ND	2.7					
	2010	0.084 J	2.6					
	2011	0.16	1.9	3	1.16	0.053 J	1.08	2.293
MW-07(I)	2002	ND	ND	2.48	1.44	ND	0.68	2.12
	2004	ND	ND	2.47	1.62	ND	ND	1.62
	2005	ND	ND	2.53	0.93	0.056 J	0.62	1.61 J
	2006	ND	ND	2.73	0.87 J	ND	0.75 J	1.62 J
	2007	ND	ND	NA	1.15	0.083 J	1.07	2.30 J
	2008	ND	ND	2.36	1.4	0.195 J	0.617	2.21 J
	2009	ND	0.067 J	2.17	1.65 J	ND	0.852 J	2.50 J
MW-07(I) (Filtered)	2002	ND	ND					
	2004	NA	NA					
	2005	ND	ND					
	2006	ND	ND					
	2007	ND	ND					
	2009	ND	0.21					



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		ug/L	ug/L	ug/L	pCi/L	pCi/L	pCi/L	pCi/L
<i>USEPA MCL</i>		<i>4</i>	<i>15</i>	<i>30</i>	-	-	-	<i>27¹</i>
MW-19(I)	2002	ND	ND	0.43	0.43	ND	ND	0.43
	2004	2.8 J	ND	0.554	1.67	ND	ND	1.67
	2005	3.1 J	ND	0.492 J	0.204 J	ND	0.244 J	0.448 J
	2006	2.8	ND	ND	0.39 J	ND	0.16 J	0.55 J
	2007	2.2 J	ND	NA	NU	NU	0.68	NU
	2008	2.9 J	ND	ND	0.261 J	ND	ND	0.261 J
	2009	3.9	0.25 J	ND	0.506 J	ND	ND	0.506 J
	2010	3	0.55	ND	ND	ND	0.288	0.288
	2011	3.2	0.54	0.559	0.308	0.026 U	0.158	0.492
MW-19(I) (Filtered)	2002	ND	ND					
	2004	NA	NA					
	2005	2.9 J	ND					
	2006	3.5	ND					
	2007	2.1 J	ND					
	2008	2.4 J	ND					
	2009	4.6	0.16 J					
	2010	2.2	0.25 J					
	2011	4.3	0.34 J	0.813	0.367	0.117	0.376	0.86
MW-21(I)	2002	ND	34	27.6	8.64	0.76	7.97	17.4
	2004	ND	32.5	13.57	4.77	1.13	5.21	11.1
	2005	ND	25.5	14.9	3.89	0.141	3.49	7.5
	2006	ND	32.7	35	6.8	0.16 J	6	12.8
	2007	ND	27.1	NA	9.5	0.5	9.1	19.1
	2008	ND	39.6	37.7	15.7	1.03	14.4	31.1
	2009	ND	84	34.1	16.1	0.92	15.5	32.5
	2010	2.6	62	44.4	15.8	1.04	16	32.8
		2011	ND	38	37.7	16.4	0.78	16.3
MW-21(I) (Filtered)	2002	ND	29					
	2004	NA	NA					
	2005	ND	25.7					
	2006	ND	31.7					
	2007	ND	25.7					
	2008	ND	32.9					
	2009	ND	58					
	2010	ND	53					
		2011	ND	36	37.2	16.9	1.12	16.4
MW-22(I)	2008	ND	ND	1.11	0.292	ND	0.34	0.632
	2009	ND	1.3	ND	0.743	ND	0.405	1.15
MW-22(I) (Filtered)	2008	ND	3.1 J					
	2009	0.088 J	1.7					
MW-23(S)	2008	ND	ND	4.44	2.27	ND	1.95	4.22
	2009	0.10 J	0.6	2.64	1.71	0.38 J	1.35	3.44 J
MW-23(S) (Filtered)	2008	ND	4.8 J					
	2009	0.034 J	1.1					



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		ug/L	ug/L	ug/L	pCi/L	pCi/L	pCi/L	pCi/L
<i>USEPA MCL</i>		<i>4</i>	<i>15</i>	<i>30</i>	-	-	-	<i>27¹</i>
MW-24(S) ³	2002	ND	12	333	99.8	11.8 J	99.9	211 J
	2004	ND	9.4	273	89	5.19	91.4	186
	2005	ND	ND	161	52.7	2.78	54.5	110
	2006	0.38 J	6.8	184	59.7	3.29 J	57.6	121 J
	2007	ND	6.1 J	NA	63	2.5	71	136.5
	2008	ND	4.3 J	163	52.1	4.17	52.5	109
	2009	0.79	5.9	197	57.6	3.55	56.9	118
MW-24(S) ³ (Filtered)	2002	ND	12					
	2004	NA	NA					
	2005	ND	4.2 J					
	2006	0.17 J	6.1					
	2007	ND	7.1 J					
	2008	ND	ND					
	2009	0.61	6.7					
MW-24R(S)	2010	0.88 J	2.4	21.3	10.4	0.515	7.47	18
	2011	ND	2.3	0.987	8.21	0.549	6.99	15.749
MW-24R(S) (Filtered)	2010	ND	3					
	2011	ND	1.1	6.83	7.54	0.401	6.61	15
MW-25(I)	2008	ND	ND	1.28	0.725	ND	0.509	1.23
	2009	0.20 J	0.59	ND	0.813	ND	0.331	1.14
	2010	0.056 J	0.42	3.3	2.72	0.301	1.24	4.26
	2011	ND	0.53	2.68	0.971	0.040 J	0.878	1.889
MW-25(I) (Filtered)	2008	ND	5.9 J					
	2009	0.21	0.11 J					
	2010	ND	0.072 J					
	2011	ND	0.32 J	2.64	1.1	0.134	0.828	2.062
MW-26(S)	2002	119	10	13.8	4.88	ND	3.13	8.01
	2008	8.9	5 J	6.72	2.56	ND	2.23	4.79
	2009	15	5.3	9.63	4.14	0.522	3.62	8.28
	2010	9.2	2.1	8.18	3.27	0.351	2.73	6.35
	2011	20	1.8	7.77	2.99	0.199	2.73	5.919
MW-26(S) (Filtered)	2002	103	ND					
	2008	9.1	ND					
	2009	18	6.2					
	2010	8.4	1.2					
	2011	22	1.9	8.55	3.31	0.232	2.67	6.212
OMW-27(I)	2008	ND	ND	1.89	2.16	0.357	0.852	3.37
	2009	ND	0.73	1.41	1.42	ND	0.763	2.18
	2010	ND	1.2	2.09	2	0.426	1.02	3.45
	2011	ND	1.2	1.88	1.19	0.060 J	0.45	1.7
	2012	0.25 U	0.32 J	2.02	0.791	0.065 J	0.643	1.499
OMW-27(I) (Filtered)	2008	ND	ND					
	2009	ND	0.54					
	2010	ND	0.55					
	2011	ND	0.49	1.73	1.18	0.085 J	0.67	1.935
	2012	0.25 U	0.24 U	1.98	1.52	-0.003 U	0.463	1.98



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Units		ug/L	ug/L	ug/L	pCi/L	pCi/L	pCi/L	pCi/L
<i>USEPA MCL</i>		<i>4</i>	<i>15</i>	<i>30</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>27¹</i>
MW-40(B)	2002	ND	4	1.03	0.67	ND	0.33 J	1 J
	2004	ND	ND	1.1	ND	ND	ND	ND
	2005	ND	ND	0.484 J	0.48 J	0.031 J	0.234 J	0.745 J
	2006	ND	ND	ND	0.4 J	ND	0.18 J	0.58 J
	2007	ND	ND	NA	0.46	ND	0.153	0.613
MW-40(B) (Filtered)	2002	ND	3					
	2004	NA	NA					
	2005	ND	ND					
	2006	ND	0.49 J					
	2007	ND	ND					
OMW-29(I)	2002	ND	ND	0.21	ND	ND	ND	ND
	2004	ND	ND	0.299	ND	ND	ND	ND
	2005	ND	ND	4.45	2.11	0.063 J	1.5	3.67 J
	2006	ND	ND	2.5	1.35 J	ND	0.72 J	2.07 J
	2007	ND	ND	NA	1.01	ND	0.57	1.58
OMW-29(I) (Filtered)	2002	ND	ND					
	2004	NA	NA					
	2005	ND	ND					
	2006	ND	0.89 J					
	2007	ND	ND					
OMW-31(I)	2002	ND	ND	0.67	0.3 J	ND	0.27 J	0.57 J
	2004	ND	ND	0.982	ND	ND	ND	ND
	2005	ND	ND	1.42	0.66	ND	0.55	1.21
	2006	ND	ND	1.81 J	0.99 J	ND	0.56 J	1.55 J
	2007	ND	ND	NA	0.36	ND	0.211	0.571
	2008	ND	ND	ND	0.564	ND	0.615	1.18
	2009	ND	0.27 J	ND	0.36	ND	ND	0.36
	2010	ND	0.66	ND	0.839 J	ND	ND	0.839 J
	2011	ND	1.2	1.25	0.359	0.019 U	0.205	0.583
	2012	0.25 U	0.3 J	0.423	0.301	0.016 U	0.077	0.394
	OMW-31(I) (Filtered)	2002	ND	ND				
2004		NA	NA					
2005		ND	ND					
2006		ND	ND					
2007		ND	ND					
2008		ND	ND					
2009		0.035 J	0.35					
2010		ND	0.22 J					
2011		ND	0.25 J	0.59	0.344	0.022 J	0.164	0.53
2012		0.25 U	0.24 U	0.517	0.306	0.025 J	0.21	0.541
OMW-32(B)	2008	ND	ND	ND	0.498	ND	ND	0.498
	2009	ND	0.13 J	ND	ND	ND	ND	ND
	2010	ND	0.18 J	ND	0.346 J	ND	ND	0.346 J
	2011	0.36 J	0.57	0.178 J	0.228	0.041 J	0.122	0.391
	2012	0.25 U	0.48 J	0.145 J	0.094 J	0.023 J	0.023 U	0.14
OMW-32(B) (Filtered)	2008	ND	ND					
	2009	ND	0.28					
	2010	ND	0.18 J					
	2011	ND	0.18 J	0.085 J	0.1 J	-0.017 U	0.065	0.148
	2012	0.25 U	0.24 U	0.146 J	0.075 J	0 U	-0.022 U	0.053



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<i>USEPA MCL</i>		<i>4</i>	<i>15</i>	<i>30</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>27¹</i>
OMW-35(I)	2002	ND	ND	0.72	0.35 J	ND	0.3 J	0.65 J
	2004	ND	ND	0.763	ND	ND	ND	ND
	2005	ND	ND	0.528 J	0.4 J	ND	0.194 J	0.594 J
	2006	ND	1.6	1.91 J	0.96 J	ND	0.64 J	1.6 J
	2007	ND	ND	NA	1.17	0.099 J	1.05	2.32 J
OMW-35(I) (Filtered)	2002	ND	ND					
	2004	NA	NA					
	2005	ND	ND					
	2006	ND	1.5					
	2007	ND	ND					
PW(E)	2002	ND	ND	0.18	ND	ND	ND	ND
	2004	ND	ND	0.502	ND	ND	ND	ND
	2008	ND	26.2	ND	ND	ND	0.414	0.414
	2009	0.17 J	26	ND	ND	ND	ND	ND
	2010	0.098 J	16	ND	0.637 J	ND	0.356	0.993 J
	2011	ND	0.54	0.157 J	0.094 J	0.067	0.041 J	0.202
PW(E) (Filtered)	2002	ND	ND					
	2004	NA	NA					
	2008	ND	4.0 J					
	2009	0.028 J	0.56					
	2010	ND	0.18					
	2011	ND	0.12 J	0.332	0.088 J	0.036	0.005 U	0.129
PW(W)	2004	4.1 J	ND	8.04	ND	ND	1.96	1.96
	2008	11.3	ND	4.14	2.14	ND	2.09	4.23
	2009	13	2.2	3.74	2.03	0.33 J	1.85	4.21 J
	2010	7.5	1.3	3.73	3.15	0.735	1.69	5.58
	2011	6.8	0.91	3.64	1.38	0.193	1.16	2.733
PW(W) (Filtered)	2004	NA	NA					
	2008	11	ND					
	2009	18	1.6					
	2010	8.7	0.85					
	2011	6.6	0.71	3.58	1.4	0.112	1.25	2.762
MW-50(I)	2010	0.082 J	0.72	2.17	1.05 J	0.331	0.705 J	2.09 J
	2011	ND	1.6	1.16	0.687	0.045 J	0.417	1.149
MW-50(I) (Filtered)	2010	0.06 J	0.15 J					
	2011	ND	0.62	1.16	0.509	0.016 U	0.461	0.986
MW-51 (S)	2010	0.5 U	1.4 J		0.7	0.03 U	0.52	
	2011	ND	0.13 J	4.73	2.33	0.031 J	1.79	4.151
	2012	0.25 U	0.24 U	9.36	4.04	0.152	2.53	6.722
MW-51 (S) (Filtered)	2010	0.5 U	3 U		0.45	0.009 U	0.218	0.677
	2011	ND	0.15 J	0.94	0.511	0.067 J	0.315	0.893
	2012	0.25 U	0.24 U	7.53	3.51	0.073 J	2.98	6.563
MW-52A(I)	2012	0.64 J	11	15.2	5.05	0.431	4.5	9.981
MW-52A(I) (Filtered)	2012	0.67 J	10	15.4	5.81	0.327	5.04	11.177
MW-52 (I)	2010	0.5 U	6.8		2.48	0.125 J	1.86	
	2011	0.37 J	0.74	2.76	1.61	0.026	0.972	2.608
	2012	0.25 U	0.5 J	2.76	1.28	0.008 U	0.87	2.158
MW-52 (I) (Filtered)	2010	0.5 U	7.3		3.16	0.233	3.59	6.983
	2011	ND	0.4	2.68	1.65	0.111 J	1.1	2.861
	2012	0.25 U	0.35 J	2.69	1.37	0.124 J	1.07	2.564



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TABLE 2
Luckey FUSRAP Site
Groundwater Analytical Results
2002 - 2012

Well	Year	Beryllium	Lead	Total Uranium (KPA) ²	Uranium-234	Uranium-235	Uranium-238	Total Uranium (Alpha Spec) ²
Units		ug/L	ug/L	ug/L	pCi/L	pCi/L	pCi/L	pCi/L
<i>USEPA MCL</i>		<i>4</i>	<i>15</i>	<i>30</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>27¹</i>
MW-53(I)	2010	ND	0.17 J	ND	0.764 J	ND	0.323	1.087 J
	2011	ND	0.87	0.408	0.291	-0.008 U	0.138	0.421
	2012	0.25 U	0.66 J	0.432	0.23	0.017 U	0.115	0.362
MW-53(I) (Filtered)	2010	ND	0.07 J					
	2011	ND	ND	0.404	0.307	0.046 J	0.102	0.455
	2012	0.25 U	0.24 U	0.398	0.225	0.026 J	0.132	0.383
MW-54(S)	2010	0.11 J	0.21 J	4.98	2.42	ND	1.6	4.02
	2011	ND	ND	7	4.73	0.150 J	3.02	7.9
	2012	0.25 U	0.24 U	4.39	2.19	0.024 J	1.63	3.844
MW-54(S) (Filtered)	2010	ND	0.072 J					
	2011	ND	ND	8.14	4.16	0.198	3.14	7.498
	2012	0.25 U	0.24 U	4.57	2.39	0.143	1.91	4.443
MW-55(I)	2010	ND	0.06 J	ND	0.508 J	ND	0.275	0.783 J
	2011	ND	ND	0.684	0.205 J	0.005 U	0.160 J	0.37
	2012	0.25 U	0.24 U	0.437	0.12 J	-0.015 U	0.11	0.215
MW-55(I) (Filtered)	2010	ND	0.064 J					
	2011	ND	ND	0.391	0.243 J	0.107 J	0.139	0.489
	2012	0.25 U	0.24 U	0.436	0.167 J	0 U	0.138	0.305
MW-56(I)	2010	0.25 J	0.48	3.45	1.29 J	ND	1.51	3.45 J
	2011	0.62	0.12 J	1.35	0.682	0.067	0.439	1.188
MW-56(I) (Filtered)	2010	0.08 J	0.3 J					
	2011	ND	0.16 J	1.54	0.531	0.074 J	0.358	0.963

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
- 1 This MCL refers to the sum of Uranium Isotopes (MCL=27pCi/L or 30 µg/L)
- 2 Kinetic Phosphorescence Analysis (KPA) and Alpha Spec are the analytical methods used to measure Total Uranium and Uranium Isotopes, respectively.
- 3 MW-24(S) has been abandoned and a replacement well, MW-24R(S), was installed 25 feet to the east.