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ENVIRONMENT DEPARTMENT

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January 17, 2008

Gayle Dye, Ph.D., POC
U.S. Department of Energy
P.O Box 5400
Albuquerque, New Mexico 87185-5400

RE: 2007 NMED-DOE Oversight Bureau Data Submittal Results from Groundwater Monitoring at the Lovelace Respiratory Research Institute (LRRI)

Dear Dr. Dye

The DOE Oversight Bureau, Sandia Oversight Section (DOE-OB/SOS) of the New Mexico Environment Department has compiled the Bureau's groundwater data from FFY 2007 for Lovelace Respiratory Research Institute (LRRI). On May 15th, 16th and 24th, the DOE-OB/SOS split groundwater samples with LRRI staff at LRRI monitoring wells: ITRI MW-4,-6,-9,-11,-17,-18,-19; Isleta Pueblo wells IP-1,-3,-5; and well NMED-1. The DOE-OB/SOS samples were submitted to Pinnacle Laboratories for organic, radiological, metals and general chemistry analyses.

Data Assessment

The NMED/DOE-OB data results are compared to applicable Maximum Allowable Concentrations (MACs) from the New Mexico Water Quality Control Commission (WQQC) (20.6.2.3103A NMAC Human Health Standards) and Maximum Contaminant Levels (MCLs) from the EPA National Primary Drinking Water Regulations (40 CFR 141).

Table-1 compares the metal results from Pinnacle Laboratories analyses to applicable MCLs. Samples were analyzed for total Target Analyte List (TAL) metals plus total uranium and total isotopic uranium. Uranium-235 and -238 were determined as mass concentrations during metals analysis on the inductively-coupled plasma mass spectrometer (ICP-MS) using EPA method 6020. Uranium was detected above the MCL of 0.03 mg/L at a concentration of 0.0504 mg/L at monitoring well ITRI MW-4.

Table-2 compares the radiological results from Pinnacle Laboratories analyses to applicable MACs and MCLs. Analyses were performed for Gamma Spectroscopy, Gross Alpha/Beta and Isotopic Uranium (U-233/234, U-235/236, and U-238. Gamma spectroscopy analysis was

performed using EPA method 901.1, Gross alpha/beta analysis was performed using EPA method 900.0, and Isotopic Uranium analysis was performed using EPA method 907.0.

Gamma Spectroscopy analysis detected Radium 226 above the established MCL of 5 pCi/L for Radium 226/ 228 combined. Elevated activity ranged from 41.495 ± 69.969 pCi/L at monitoring well ITRI MW-11 to 86.636 ± 61.947 pCi/L at monitoring well IP-1.

Uncorrected gross alpha activity in ITRI MW-4 was 32.084 ± 5.431 pCi/L, which exceeds the MCL of 15 pCi/L. When gross alpha was corrected by subtracting the activity for total uranium, the value dropped, but it still exceeded the MCL. Corrected gross alpha activity at ITRI MW-4 was 26.106 pCi/L.

Table-3 compares the non-metal inorganic compounds results from Pinnacle Laboratories analyses to applicable standards. Inorganic chemical analyses were performed for nitrate plus nitrite (NPN). The NPN concentrations were all below the MCL and MAC of 10 mg/L. The average concentration for nitrates was 4.7 mg/L.

Organic analyses were performed for Diesel Range Organics (DRO), Gasoline Range Organics and Volatile Organic Compounds (VOCs). No organic compounds were detected in any of the wells sampled at LRRI.

Conclusion

Uranium was detected above the MCL at monitoring well ITRI MW-4 for the first time. The DOE-OB/SOS has since re-sampled this well, and it is awaiting analytical results for verification. A written report with the results will be delivered at a later time. The DOE-OB/SOS recommends that LRRI spilt samples if values of uranium continue to be above the MCL.

Although Radium 226 was detected above the MCL at three monitoring wells, the EPA method 901.1 produced large uncertainties. The DOE-OB/SOS has since re-sampled monitoring wells ITRI MW-11 and ITRI MW-17 for analyses using the more sensitive EPA methods 903.1 and 904 to detect the presence of isotopic radium 226 and 228, respectively. The DOE-OB/SOS also plans on re-sampling IP-1 during the next sampling event. A written report with the results will be delivered at a later time.

Corrected Gross alpha was detected at monitoring well ITRI MW-4 at a level of 26.105 pCi/L, which exceeds the MCL of 15 pCi/L. In previous years this well has seen elevated levels of gross alpha. To date, no trending analysis has been conducted by DOE-OB/SOS for gross alpha at ITRI MW-4 to determine if levels are decreasing or increasing. The DOE-OB/SOS has since re-sampled ITRI MW-4 for gross alpha to verify results. A written report with the results will be delivered at a later time. If DOE-OB/SOS continues to see elevated levels of gross alpha, it is recommended that LRRI consider adding gross alpha to its list of analytes to be sampled during routine sampling of ITRI MW-4. The DOE-OB/SOS plans on beginning a trending analysis of gross alpha at ITRI MW-4 during the next quarter.

The monitoring results will be provided to DOE for review and comment prior to their release as final to other State of New Mexico and federal agencies, the Pueblos, our website and interested members of the public. If you have any questions, or if you would like copies of the complete data set, please contact Chris Armijo at (505)845-5824 or contact me at (505)845-5933.

Sincerely,

Barry S. Birch
Program Manager
Sandia Oversight Section

BSB:ca

Enclosure: (1) Table-1 Target Analyte List (TAL) Metals Results
(2)Table-2 Radionuclide Results
(3) Table-3 Nitrate plus Nitrite (NPN) Results

cc: Karen Agogino, DOE-AL, MS 0184
Scott Weiner, LRRI/ES&H
w/o encl: Thomas Skibitski, Bureau Chief, DOE Oversight Bureau

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FFY 2007 LRRI Groundwater Monitoring
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Sample ID	Date	Aluminum					Antimony					Arsenic				
		Results (mg/L)	MDL	Lab Flag	EPA Drinking Water Standard	NM Human Health Standard	Results (mg/L)	MDL	Lab Flag	EPA Drinking Water Standard	NM Human Health Standard	Results (mg/L)	MDL	Lab Flag	EPA Drinking Water Standard	NM Human Health Standard
IP-1-05.15.07	5/15/2007											0.00293	0.0015	J	0.01	0.1
IP-3-05.15.07	5/15/2007											0.00302	0.0015	J	0.01	0.1
IP-5-05.15.07	5/15/2007											0.00409	0.0015	J	0.01	0.1
ITRI-MW4-05.24.07	5/24/2007	0.005	0.005	U	-	5	0.0005	0.0005	U	0.006	-	0.00394	0.0015	J	0.01	0.1
ITRI-MW6-05.16.07	5/16/2007															
ITRI-MW9-05.16.07	5/16/2007															
ITRI-MW11-05.24.07	5/24/2007	0.00529	0.005	J	-	5	0.0005	0.0005	U	0.006	-	0.0015	0.0015	U	0.01	0.1
ITRI-MW17-05.24.07	5/24/2007	0.0116	0.005	J	-	5	0.0005	0.0005	U	0.006	-	0.00222	0.0015	J	0.01	0.1
ITRI-MW18-05.16.07	5/16/2007															
ITRI-MW19-05.16.07	5/16/2007															
NMED-1-05.24.07	5/24/2007	0.005	0.005	U	-	5	0.0005	0.0005	U	0.006	-	0.00516	0.0015		0.01	0.1
NMED-1-05.24.07 (DUP)	5/24/2007	0.00596	0.005	J	-	5	0.0005	0.0005	U	0.006	-	0.00395	0.0015	J	0.01	0.1

Sample ID	Date	Barium					Beryllium					Cadmium				
		Results (mg/L)	MDL	Lab Flag	EPA Drinking Water Standard	NM Human Health Standard	Results (mg/L)	MDL	Lab Flag	EPA Drinking Water Standard	NM Human Health Standard	Results (mg/L)	MDL	Lab Flag	EPA Drinking Water Standard	NM Human Health Standard
IP-1-05.15.07	5/15/2007															
IP-3-05.15.07	5/15/2007															
IP-5-05.15.07	5/15/2007															
ITRI-MW4-05.24.07	5/24/2007	0.0155	0.0005		2	1	0.0001	0.0001	U	0.004	-	0.0001	0.0001	U	0.005	0.01
ITRI-MW6-05.16.07	5/16/2007															
ITRI-MW9-05.16.07	5/16/2007															
ITRI-MW11-05.24.07	5/24/2007	0.0259	0.0005		2	1	0.0001	0.0001	U	0.004	-	0.0001	0.0001	U	0.005	0.01
ITRI-MW17-05.24.07	5/24/2007	0.0393	0.0005		2	1	0.0001	0.0001	U	0.004	-	0.0001	0.0001	U	0.005	0.01
ITRI-MW18-05.16.07	5/16/2007															
ITRI-MW19-05.16.07	5/16/2007															
NMED-1-05.24.07	5/24/2007	0.0323	0.0005		2	1	0.0001	0.0001	U	0.004	-	0.0001	0.0001	U	0.005	0.01
NMED-1-05.24.07 (DUP)	5/24/2007	0.033	0.0005		2	1	0.0001	0.0001	U	0.004	-	0.0001	0.0001	U	0.005	0.01

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Sample ID	Date	Calcium					Chromium					Cobalt				
		Results (mg/L)	MDL	Lab Flag	EPA Drinking Water Standard	NM Human Health Standard	Results (mg/L)	MDL	Lab Flag	EPA Drinking Water Standard	NM Human Health Standard	Results (mg/L)	MDL	Lab Flag	EPA Drinking Water Standard	NM Human Health Standard
IP-1-05.15.07	5/15/2007															
IP-3-05.15.07	5/15/2007															
IP-5-05.15.07	5/15/2007															
ITRI-MW4-05.24.07	5/24/2007	117	0.1		-	-	0.00184	0.001	J	0.1	0.05	0.0174	0.0001		-	0.05
ITRI-MW6-05.16.07	5/16/2007															
ITRI-MW9-05.16.07	5/16/2007															
ITRI-MW11-05.24.07	5/24/2007	97.6	0.1		-	-	0.0127	0.001		0.1	0.05	0.000952	0.0001	J	-	0.05
ITRI-MW17-05.24.07	5/24/2007	183	0.1		-	-	0.00171	0.001	J	0.1	0.05	0.00146	0.0001		-	0.05
ITRI-MW18-05.16.07	5/16/2007															
ITRI-MW19-05.16.07	5/16/2007															
NMED-1-05.24.07	5/24/2007	72.7	0.1		-	-	0.00325	0.001		0.1	0.05	0.000476	0.0001	J	-	0.05
NMED-1-05.24.07 (DUP)	5/24/2007	66.1	0.1		-	-	0.00216	0.001	J	0.1	0.05	0.000429	0.0001	J	-	0.05

Sample ID	Date	Copper					Iron					Lead				
		Results (mg/L)	MDL	Lab Flag	EPA Drinking Water Standard	NM Human Health Standard	Results (mg/L)	MDL	Lab Flag	EPA Drinking Water Standard	NM Human Health Standard	Results (mg/L)	MDL	Lab Flag	EPA Drinking Water Standard	NM Human Health Standard
IP-1-05.15.07	5/15/2007															
IP-3-05.15.07	5/15/2007															
IP-5-05.15.07	5/15/2007															
ITRI-MW4-05.24.07	5/24/2007	0.00526	0.0002		1.3	1	0.653	0.01		-	1	0.0005	0.0005	U	0.015	0.05
ITRI-MW6-05.16.07	5/16/2007															
ITRI-MW9-05.16.07	5/16/2007															
ITRI-MW11-05.24.07	5/24/2007	0.00178	0.0002		1.3	1	0.726	0.01		-	1	0.0005	0.0005	U	0.015	0.05
ITRI-MW17-05.24.07	5/24/2007	0.00351	0.0002		1.3	1	1.1	0.01		-	1	0.0005	0.0005	U	0.015	0.05
ITRI-MW18-05.16.07	5/16/2007															
ITRI-MW19-05.16.07	5/16/2007															
NMED-1-05.24.07	5/24/2007	0.00146	0.0002		1.3	1	0.415	0.01		-	1	0.0005	0.0005	U	0.015	0.05
NMED-1-05.24.07 (DUP)	5/24/2007	0.00143	0.0002		1.3	1	0.43	0.01		-	1	0.0005	0.0005	U	0.015	0.05

Table 1

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Sample ID	Date	Magnesium					Manganese					Mercury				
		Results (mg/L)	MDL	Lab Flag	EPA Drinking Water Standard	NM Human Health Standard	Results (mg/L)	MDL	Lab Flag	EPA Drinking Water Standard	NM Human Health Standard	Results (mg/L)	MDL	Lab Flag	EPA Drinking Water Standard	NM Human Health Standard
IP-1-05.15.07	5/15/2007															
IP-3-05.15.07	5/15/2007															
IP-5-05.15.07	5/15/2007															
ITRI-MW4-05.24.07	5/24/2007	51.7	0.025		-	-	0.0013	0.001	J	0.05	0.2	0.000279	6E-05		0.002	0.002
ITRI-MW6-05.16.07	5/16/2007															
ITRI-MW9-05.16.07	5/16/2007															
ITRI-MW11-05.24.07	5/24/2007	36.3	0.025		-	-	0.00302	0.001	J	0.05	0.2	0.00006	6E-05	U	0.002	0.002
ITRI-MW17-05.24.07	5/24/2007	69.6	0.025		-	-	0.00345	0.001	J	0.05	0.2	0.00006	6E-05	U	0.002	0.002
ITRI-MW18-05.16.07	5/16/2007															
ITRI-MW19-05.16.07	5/16/2007															
NMED-1-05.24.07	5/24/2007	26.5	0.025		-	-	0.001	0.001	U	0.05	0.2	0.00006	6E-05	U	0.002	0.002
NMED-1-05.24.07 (DUP)	5/24/2007	24.4	0.025		-	-	0.001	0.001	U	0.05	0.2	0.00006	6E-05	U	0.002	0.002

Sample ID	Date	Nickel					Potassium					Selenium				
		Results (mg/L)	MDL	Lab Flag	EPA Drinking Water Standard	NM Human Health Standard	Results (mg/L)	MDL	Lab Flag	EPA Drinking Water Standard	NM Human Health Standard	Results (mg/L)	MDL	Lab Flag	EPA Drinking Water Standard	NM Human Health Standard
IP-1-05.15.07	5/15/2007															
IP-3-05.15.07	5/15/2007															
IP-5-05.15.07	5/15/2007															
ITRI-MW4-05.24.07	5/24/2007	0.0652	0.0005		-	0.2	2.5	0.08		-	-	0.00462	0.0025	J	0.05	0.05
ITRI-MW6-05.16.07	5/16/2007															
ITRI-MW9-05.16.07	5/16/2007															
ITRI-MW11-05.24.07	5/24/2007	0.113	0.0005		-	0.2	1.84	0.08		-	-	0.00434	0.0025	J	0.05	0.05
ITRI-MW17-05.24.07	5/24/2007	0.0145	0.0005		-	0.2	2.29	0.08		-	-	0.004	0.0025	J	0.05	0.05
ITRI-MW18-05.16.07	5/16/2007															
ITRI-MW19-05.16.07	5/16/2007															
NMED-1-05.24.07	5/24/2007	0.0028	0.0005		-	0.2	1.73	0.08		-	-	0.00482	0.0025	J	0.05	0.05
NMED-1-05.24.07 (DUP)	5/24/2007	0.00245	0.0005		-	0.2	1.82	0.08		-	-	0.00452	0.0025	J	0.05	0.05

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Sample ID	Date	Silver					Sodium					Thallium				
		Results (mg/L)	MDL	Lab Flag	EPA Drinking Water Standard	NM Human Health Standard	Results (mg/L)	MDL	Lab Flag	EPA Drinking Water Standard	NM Human Health Standard	Results (mg/L)	MDL	Lab Flag	EPA Drinking Water Standard	NM Human Health Standard
IP-1-05.15.07	5/15/2007															
IP-3-05.15.07	5/15/2007															
IP-5-05.15.07	5/15/2007															
ITRI-MW4-05.24.07	5/24/2007	0.0002	0.0002	U	-	0.05	337	2		-	-	0.0004	0.0004	U	0.002	-
ITRI-MW6-05.16.07	5/16/2007															
ITRI-MW9-05.16.07	5/16/2007															
ITRI-MW11-05.24.07	5/24/2007	0.0002	0.0002	U	-	0.05	58.5	0.4		-	-	0.0004	0.0004	U	0.002	-
ITRI-MW17-05.24.07	5/24/2007	0.0002	0.0002	U	-	0.05	93.5	0.4		-	-	0.0004	0.0004	U	0.002	-
ITRI-MW18-05.16.07	5/16/2007															
ITRI-MW19-05.16.07	5/16/2007															
NMED-1-05.24.07	5/24/2007	0.0002	0.0002	U	-	0.05	60.9	0.4		-	-	0.0004	0.0004	U	0.002	-
NMED-1-05.24.07 (DUP)	5/24/2007	0.0002	0.0002	U	-	0.05	50	0.4		-	-	0.000409	0.0004	J	0.002	-

Sample ID	Date	Uranium					Vanadium					Zinc				
		Results (mg/L)	MDL	Lab Flag	EPA Drinking Water Standard	NM Human Health Standard	Results (mg/L)	MDL	Lab Flag	EPA Drinking Water Standard	NM Human Health Standard	Results (mg/L)	MDL	Lab Flag	EPA Drinking Water Standard	NM Human Health Standard
IP-1-05.15.07	5/15/2007															
IP-3-05.15.07	5/15/2007															
IP-5-05.15.07	5/15/2007															
ITRI-MW4-05.24.07	5/24/2007	**0.0504**	0.00005		**0.03**	0.03	0.01	0.01	U	-	-	0.00897	0.002	J	-	10
ITRI-MW6-05.16.07	5/16/2007															
ITRI-MW9-05.16.07	5/16/2007															
ITRI-MW11-05.24.07	5/24/2007	0.00675	0.00005		0.03	0.03	0.01	0.01	U	-	-	0.0063	0.002	J	-	10
ITRI-MW17-05.24.07	5/24/2007	0.0135	0.00005		0.03	0.03	0.01	0.01	U	-	-	0.0109	0.002		-	10
ITRI-MW18-05.16.07	5/16/2007															
ITRI-MW19-05.16.07	5/16/2007															
NMED-1-05.24.07	5/24/2007	0.00615	0.00005		0.03	0.03	0.01	0.01	U	-	-	0.00627	0.002	J	-	10
NMED-1-05.24.07 (DUP)	5/24/2007	0.00607	0.00005		0.03	0.03	0.01	0.01	U	-	-	0.00679	0.002	J	-	10

Table 1

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Sample ID	Date	Uranium-235 [c]		
		Results (ug/L)	MDL	Lab Flag
IP-1-05.15.07	5/15/2007	0.044	0.010	J
IP-3-05.15.07	5/15/2007	0.042	0.010	J
IP-5-05.15.07	5/15/2007	0.044	0.010	J
ITRI-MW4-05.24.07	5/24/2007	0.346	0.010	
ITRI-MW6-05.16.07	5/16/2007			
ITRI-MW9-05.16.07	5/16/2007			
ITRI-MW11-05.24.07	5/24/2007	0.047	0.010	J
ITRI-MW17-05.24.07	5/24/2007	0.096	0.010	
ITRI-MW18-05.16.07	5/16/2007			
ITRI-MW19-05.16.07	5/16/2007			
NMED-1-05.24.07	5/24/2007	0.042	0.010	J
NMED-1-05.24.07 (DUP)	5/24/2007	0.042	0.010	J

Sample ID	Date	Uranium-238 [c]		
		Results (ug/L)	MDL	Lab Flag
IP-1-05.15.07	5/15/2007	6.22	0.050	
IP-3-05.15.07	5/15/2007	5.95	0.050	
IP-5-05.15.07	5/15/2007	6.65	0.050	
ITRI-MW4-05.24.07	5/24/2007	54.1	0.050	
ITRI-MW6-05.16.07	5/16/2007			
ITRI-MW9-05.16.07	5/16/2007			
ITRI-MW11-05.24.07	5/24/2007	7.65	0.050	
ITRI-MW17-05.24.07	5/24/2007	15.8	0.050	
ITRI-MW18-05.16.07	5/16/2007			
ITRI-MW19-05.16.07	5/16/2007			
NMED-1-05.24.07	5/24/2007	6.88	0.050	
NMED-1-05.24.07 (DUP)	5/24/2007	6.98	0.050	

U=Analyte wa analzed for, but not detected above the MDL.

J=Value is estimated.

[c]= Method SW846-6020 Isotopic Uranium by ICP-MS

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Sample ID	Date	Americium 241				Antimony 125				Bismuth 211				Bismuth 212			
		Result (piC/L)	UNC +/-	MDA	Lab Flag	Result (piC/L)	UNC +/-	MDA	Lab Flag	Result (piC/L)	UNC +/-	MDA	Lab Flag	Result (piC/L)	UNC +/-	MDA	Lab Flag
IP-1-05.15.07	5/15/2007	2.529	3.184	1.654						17.982	36.881	19.040	U				
IP-3-05.15.07	5/15/2007	-1.885	3.743	1.857	U					44.138	49.694	26.014	SI				
IP-5-05.15.07	5/15/2007	6.040	2.877	1.575						-5.856	32.477	16.097	U				
ITRI-MW4-05.24.07	5/24/2007	1.140	3.774	1.923	U	3.321	6.476	3.341	U					5.868	36.296	19.081	U
ITRI-MW11-05.24.07	5/24/2007	4.729	3.042	1.619		-6.061	5.308	2.445	U					-2.709	27.656	13.582	U
ITRI-MW17-05.24.07	5/24/2007	2.441	2.748	1.444		-0.773	4.647	2.299	U					15.562	27.464	13.630	
NMED-1-05.24.07	5/24/2007	-0.839	3.841	1.931	U	-2.594	6.672	3.259	U					21.884	34.329	18.598	
NMED-1-05.24.07 (DUP)	5/24/2007	3.318	3.723	1.941		2.683	6.801	3.485	U					6.997	35.940	18.950	U

Sample ID	Date	Bismuth 214				Cadmium 109				Cerium 139				Cesium 134			
		Result (piC/L)	UNC +/-	MDA	Lab Flag	Result (piC/L)	UNC +/-	MDA	Lab Flag	Result (piC/L)	UNC +/-	MDA	Lab Flag	Result (piC/L)	UNC +/-	MDA	Lab Flag
IP-1-05.15.07	5/15/2007	53.307	6.946	3.793		90.176	39.841	25.789	SI	0.742	1.617	0.774	U	0.203	1.910	0.959	U
IP-3-05.15.07	5/15/2007	25.224	14.298	11.176		19.448	42.191	19.905	U	0.565	1.940	1.013	U	-0.813	2.408	1.228	U
IP-5-05.15.07	5/15/2007	12.754	2.893	2.023		-12.389	23.737	11.668	U	-0.600	1.390	0.629	U	-0.338	1.787	0.884	U
ITRI-MW4-05.24.07	5/24/2007	30.233	14.474	10.558		-15.295	43.162	19.777	U	0.233	2.147	1.006	U	0.193	2.396	1.253	U
ITRI-MW11-05.24.07	5/24/2007	10.840	5.577	3.732		15.499	36.580	25.191	U	-1.211	1.603	0.712	U	-0.243	1.759	0.871	U
ITRI-MW17-05.24.07	5/24/2007	21.975	3.548	2.043		-8.211	24.638	12.153	U	-0.210	1.397	0.647	U	0.047	1.680	0.842	U
NMED-1-05.24.07	5/24/2007	37.312	14.468	10.332		39.387	42.431	20.353	SI	-1.767	2.206	0.993	U	0.568	2.409	1.270	U
NMED-1-05.24.07 (DUP)	5/24/2007	52.951	16.220	10.581		21.520	42.004	19.923	SI	-0.967	2.111	0.965	U	-0.398	2.412	1.242	U

Table 2

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FFY 2007 LRRI Groundwater Monitoring
Radionuclide Results

Sample ID	Date	Cesium 137				Cobalt 60				Europium 152				Europium 154			
		Result (piC/L)	UNC +/-	MDA	Lab Flag	Result (piC/L)	UNC +/-	MDA	Lab Flag	Result (piC/L)	UNC +/-	MDA	Lab Flag	Result (piC/L)	UNC +/	MDA	Lab Flag
IP-1-05.15.07	5/15/2007	-2.639	3.335	2.229	U	-0.538	2.044	0.970	U	-9.541	26.793	12.130	U				
IP-3-05.15.07	5/15/2007	-0.192	2.761	1.411	U	2.251	2.968	1.502		4.339	30.631	15.367	U				
IP-5-05.15.07	5/15/2007	-0.807	2.247	1.034	U	-0.694	2.054	0.980	U	12.449	22.624	12.014	SI				
ITRI-MW4-05.24.07	5/24/2007	-0.386	2.716	1.393	U	1.804	2.750	1.496		-19.810	31.997	14.757	U	-0.140	3.931	1.833	U
ITRI-MW11-05.24.07	5/24/2007	-2.619	3.301	2.208	U	-0.314	2.238	1.064	U	-15.086	24.856	10.673	U	-2.073	2.344	1.128	U
ITRI-MW17-05.24.07	5/24/2007	-0.101	2.094	0.988	U	-0.444	2.049	0.970	U	-2.477	20.634	10.625	U	-1.209	2.053	1.007	U
NMED-1-05.24.07	5/24/2007	-0.575	2.510	1.284	U	0.422	2.790	1.453	U	35.793	34.524	17.672	SI	1.960	3.893	1.838	
NMED-1-05.24.07 (DUP)	5/24/2007	1.557	2.614	1.414		0.830	2.868	1.457	U	-4.446	29.931	14.667	U	0.385	3.781	1.773	U

Sample ID	Date	Europium 155				Lead 210				Lead 212				Lead 214			
		Result (piC/L)	UNC +/-	MDA	Lab Flag	Result (piC/L)	UNC +/-	MDA	Lab Flag	Result (piC/L)	UNC +/-	MDA	Lab Flag	Result (piC/L)	UNC +/	MDA	Lab Flag
IP-1-05.15.07	5/15/2007									19.343	5.848	3.216		62.093	6.485	3.773	
IP-3-05.15.07	5/15/2007									6.705	5.670	3.764		14.834	5.399	5.599	
IP-5-05.15.07	5/15/2007									2.685	3.586	2.357		11.969	3.327	3.112	
ITRI-MW4-05.24.07	5/24/2007	1.098	4.232	2.187	U	-218.970	88.707	54.992	U					13.907	5.414	5.591	
ITRI-MW11-05.24.07	5/24/2007	1.706	4.026	2.170	U	44.265	53.102	33.849						16.095	5.288	3.641	
ITRI-MW17-05.24.07	5/24/2007	-0.073	2.807	1.423	U	27.885	68.992	42.936	U					23.962	3.810	3.158	
NMED-1-05.24.07	5/24/2007	5.494	4.160	2.215		-221.185	86.328	55.021	U					16.117	5.436	5.625	
NMED-1-05.24.07 (DUP)	5/24/2007	3.994	4.152	2.170		-194.198	86.171	54.640	U					26.068	5.858	5.567	

Table 2

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FFY 2007 LRRI Groundwater Monitoring
Radionuclide Results

Sample ID	Date	Mercury 203				Potassium 40				Protactinium 234				Radium 223			
		Result (piC/L)	UNC +/-	MDA	Lab Flag	Result (piC/L)	UNC +/-	MDA	Lab Flag	Result (piC/L)	UNC +/-	MDA	Lab Flag	Result (piC/L)	UNC +/-	MDA	Lab Flag
IP-1-05.15.07	5/15/2007	0.233	1.841	0.868	U	-0.737	35.070	22.065	U					7.176	2.657	2.486	
IP-3-05.15.07	5/15/2007	0.292	2.318	1.167	U	-12.711	50.230	31.861	U					6.761	6.314	3.051	
IP-5-05.15.07	5/15/2007	-0.905	1.316	0.675	U	34.573	15.671	9.404						-2.181	4.920	2.877	U
ITRI-MW4-05.24.07	5/24/2007	1.128	2.426	1.232	U	-33.179	49.554	32.058	U	-0.319	5.912	2.747	U	3.060	6.434	3.050	
ITRI-MW11-05.24.07	5/24/2007	-1.302	1.792	0.797	U	8.971	35.426	21.974	U	1.695	3.756	1.934	U	1.261	4.141	2.130	U
ITRI-MW17-05.24.07	5/24/2007	-0.517	1.289	0.670	U	52.197	17.054	9.917		2.696	3.200	1.652		-1.205	5.199	2.911	U
NMED-1-05.24.07	5/24/2007	0.524	2.387	1.205	U	-28.234	49.550	31.420	U	6.177	5.996	2.828		2.064	6.343	2.992	U
NMED-1-05.24.07 (DUP)	5/24/2007	1.334	2.390	1.218	SI	-26.057	49.799	32.046	U	5.691	5.863	2.765		3.570	6.071	2.897	

Sample ID	Date	Radium 226						Ruthenium 106				Sodium 22			
		Result (piC/L)	UNC +/-	MDA	Lab Flag	EPA MCL (pCi/L)	NM MAC (pCi/L)	Result (piC/L)	UNC +/-	MDA	Lab Flag	Result (piC/L)	UNC +/-	MDA	Lab Flag
IP-1-05.15.07	5/15/2007	**86.636**	**61.947**	**40.423**		**5**	**15**	-11.853	42.054	21.046	U	0.193	1.990	1.040	U
IP-3-05.15.07	5/15/2007	-13.942	80.063	54.319	U	5	15	-11.286	44.106	18.347	U	0.366	2.428	1.267	U
IP-5-05.15.07	5/15/2007	21.712	64.456	40.862	U	5	15	17.694	30.574	12.572	SI	0.549	1.970	1.012	U
ITRI-MW4-05.24.07	5/24/2007	-0.146	81.841	54.538	U	5	15	-0.835	44.612	18.309	U	-0.047	2.838	1.454	U
ITRI-MW11-05.24.07	5/24/2007	**41.495**	**60.969**	**39.664**		**5**	**15**	-2.852	28.620	11.407	U	-0.403	1.985	0.985	U
ITRI-MW17-05.24.07	5/24/2007	**50.079**	**65.146**	**41.109**		**5**	**15**	-14.509	31.799	12.507	U	-1.102	1.951	0.905	U
NMED-1-05.24.07	5/24/2007	13.449	82.052	54.074	U	5	15	-37.110	60.603	27.019	U	0.618	2.759	1.448	U
NMED-1-05.24.07 (DUP)	5/24/2007	-1.955	81.620	54.074	U	5	15	22.734	39.911	19.487	SI	0.687	2.756	1.447	U

Table 2

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FFY 2007 LRRI Groundwater Monitoring
Radionuclide Results

Sample ID	Date	Strontium 85				Thallium 208				Thorium 227				Thorium 228			
		Result (piC/L)	UNC +/-	MDA	Lab Flag	Result (piC/L)	UNC +/-	MDA	Lab Flag	Result (piC/L)	UNC +/-	MDA	Lab Flag	Result (piC/L)	UNC +/-	MDA	Lab Flag
IP-1-05.15.07	5/15/2007	12.102	31.084	14.549	U	4.378	3.525	2.209		-1.044	11.266	6.421	U				
IP-3-05.15.07	5/15/2007	-0.616	19.060	9.499	U	-1.101	4.366	2.885	U	4.920	13.590	8.771	U				
IP-5-05.15.07	5/15/2007	2.810	11.969	5.661	U	1.437	3.230	2.074	U	5.430	8.782	4.986					
ITRI-MW4-05.24.07	5/24/2007					-2.586	4.327	2.885	U					8.824	5.712	3.804	
ITRI-MW11-05.24.07	5/24/2007					-0.457	3.358	2.167	U					3.835	4.905	3.152	
ITRI-MW17-05.24.07	5/24/2007					2.441	3.280	2.094						6.670	3.721	2.401	
NMED-1-05.24.07	5/24/2007					99.885	71.679	2.886						9.251	5.738	3.797	
NMED-1-05.24.07 (DUP)	5/24/2007					-1.418	4.348	2.881	U					13.046	6.120	3.739	

Sample ID	Date	Thorium 231				Thorium 234				Tin 113				Uranium 234[a]			
		Result (piC/L)	UNC +/-	MDA	Lab Flag	Result (piC/L)	UNC +/-	MDA	Lab Flag	Result (piC/L)	UNC +/-	MDA	Lab Flag	Result (piC/L)	UNC +/-	MDA	Lab Flag
IP-1-05.15.07	5/15/2007	34.592	14.833	11.600	SI	13.429	48.910	23.137	U	-0.799	2.422	1.182	U	4.932	0.335	0.067	
IP-3-05.15.07	5/15/2007	37.199	16.896	14.443	SI	-18.944	63.672	38.727	U	1.023	3.129	1.593	U	5.396	0.393	0.092	
IP-5-05.15.07	5/15/2007	-9.844	22.247	15.126	U	-18.508	58.134	24.972	U	0.148	2.009	1.008	U	6.325	0.362	0.069	
ITRI-MW4-05.24.07	5/24/2007									1.698	3.148	1.618	SI	4.163	0.305	0.063	
ITRI-MW11-05.24.07	5/24/2007									-0.456	2.283	1.130	U	5.467	0.328	0.057	
ITRI-MW17-05.24.07	5/24/2007									-1.182	2.032	0.978	U	8.969	0.438	0.069	
NMED-1-05.24.07	5/24/2007									0.290	3.107	1.564	U	26.164	0.799	0.051	
NMED-1-05.24.07 (DUP)	5/24/2007									-1.757	3.133	1.515	U	4.606	0.305	0.067	

Table 2

NMED/DOE-Oversight Bureau
FFY 2007 LRRI Groundwater Monitoring
Radionuclide Results

Sample ID	Date	Uranium 235[a]				Uranium 238[a]				Uranium 235[b]				Yttrium 88			
		Result (piC/L)	UNC +/-	MDA	Lab Flag	Result (piC/L)	UNC +/-	MDA	Lab Flag	Result (piC/L)	UNC +/-	MDA	Lab Flag	Result (piC/L)	UNC +/-	MDA	Lab Flag
IP-1-05.15.07	5/15/2007	0.093	0.051	0.035		1.919	0.209	0.047		10.349	12.562	6.017		-2.534	2.147	0.802	U
IP-3-05.15.07	5/15/2007	0.076	0.055	0.058		1.952	0.243	0.126		14.431	13.587	11.911		-0.512	2.588	1.235	U
IP-5-05.15.07	5/15/2007	0.13	0.058	0.017		2.132	0.210	0.048		25.644	14.210	10.707		-0.172	1.936	0.980	U
ITRI-MW4-05.24.07	5/24/2007	0.044	0.035	0.034		1.771	0.198	0.039									
ITRI-MW11-05.24.07	5/24/2007	0.063	0.039	0.030		1.806	0.188	0.041									
ITRI-MW17-05.24.07	5/24/2007	0.166	0.066	0.044		3.785	0.287	0.095									
NMED-1-05.24.07	5/24/2007	0.704	0.165	0.038		13.057	0.565	0.083									
NMED-1-05.24.07 (DUP)	5/24/2007	0.127	0.054	0.016		1.565	0.178	0.047									

Sample ID	Date	GROSS ALPHA					GROSS BETA			
		Result (piC/L)	UNC +/-	MDA	Lab Flag	Adjusted	Result (piC/L)	UNC +/-	MDA	Lab Flag
IP-1-05.15.07	5/15/2007	6.536	1.045	0.977		-0.408	3.564	0.678	0.983	
IP-3-05.15.07	5/15/2007	5.028	1.310	1.838		-2.396	3.398	0.638	0.928	
IP-5-05.15.07	5/15/2007	7.143	1.166	1.306		-1.444	2.499	0.597	0.886	
ITRI-MW4-05.24.07	5/24/2007	**32.084**	**5.431**	**6.186**		**26.106**	8.997	3.003	4.590	
ITRI-MW11-05.24.07	5/24/2007	7.358	2.586	3.836		0.022	3.495	1.344	2.114	
ITRI-MW17-05.24.07	5/24/2007	11.157	3.841	5.529		-1.763	3.590	2.387	3.872	U
NMED-1-05.24.07	5/24/2007	5.621	1.632	2.253		-34.304	0.863	1.068	1.761	U
NMED-1-05.24.07 (DUP)	5/24/2007	7.393	2.139	3.018		-13.691	2.900	1.503	2.411	

U=Analyte wa analzed for, but not detected above the MDA.

SI= Spectral Interferance

[a] = Iso U 234, 235, and 238 analyzed using EPA method 907.0

[b] = U 235 Analyzed using Gamma Spectroscopy EPA Method 901.1

Table 2

NMED/DOE Oversight Bureau
FFY 2007 LRRI Groundwater Monitoring
Nirate plus Nitrite (NPN) Results

Sample ID	Date	NPN (AS Nitrogen)				
		Results (mg/L)	MDL	Lab Flag	EPA Drinking Water Standard	NM Human Health Standard
IP-1-05.15.07	5/15/2007	1.56	0.100		10	10
IP-3-05.15.07	5/15/2007	4.78	0.101		10	10
IP-5-05.15.07	5/15/2007	5.4	0.102		10	10
ITRI-MW4-05.24.07	5/24/2007	6.68	0.100		10	10
ITRI-MW6-05.16.07	5/16/2007	6.33	0.100		10	10
ITRI-MW9-05.16.07	5/16/2007	1.6	0.100		10	10
ITRI-MW11-05.24.07	5/24/2007	6.96	0.100		10	10
ITRI-MW17-05.24.07	5/24/2007	7.02	0.100		10	10
ITRI-MW18-05.16.07	5/16/2007	2.03	0.100		10	10
ITRI-MW19-05.16.07	5/16/2007	3.5	0.100		10	10
NMED-1-05.24.07	5/24/2007	5.52	0.100		10	10
NMED-1-05.24.07 (DUP)	5/24/2007					

Table 3