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November 11, 2010

Attn: Document Control Desk
Deputy Director
Decommission and Uranium Recovery Licensing Directorate
Division of Waste Management and Environmental Protection
Office of Federal and State Materials and Environmental Management Programs
US Nuclear Regulatory Commission
Washington DC 20555
Mail Stop T8F5

Deputy Director
Decommission and Uranium Recovery Licensing Directorate
Division of Waste Management and Environmental Protection
Office of Federal and State Materials and Environmental Management Programs
US Nuclear Regulatory Commission
11545 Rockville Pike
Mail Stop T8F5
Rockville, Maryland 20852-2738

RE: Source Material License SUA-56; Western Nuclear, Inc., Split Rock Uranium Mill Tailings Facility; Surface Water and Groundwater Monitoring Report

Dear Deputy Director:

Attached please find two (2) replacement sheets containing the "WNI Split Rock Mill Groundwater and Surface Water Quality Semi-Annual Report." After sending you this report, I found that there were a couple of minor corrections that needed to be made to the table.

If you have any questions, please contact me at your convenience.

Sincerely,

K. Hooper

Kate Hooper
Project Assistant

Enclosure

FSME21

WNI Split Rock Mill Groundwater and Surface Water Quality Semi-Annual Report

2nd Half 2010 (Sampled: 9/7/10 to 9/9/10)

Parameter[1]	JJ-1R	SWAB-1R[3]	SWAB-2	SWAB-12R[4]	SWAB-4	SWAB-22	SWAB-29	SWAB-31	SWAB-32	WELL-1	WELL-4R
Aluminum (mg/L)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	5.1	2
Ammonia, Free as N[2] (mg/L)	<0.00049	<0.000403	0.024	<0.00091	0.0116	<0.00029	<0.00021	<0.0015	<0.0015	0.00	0.13
Antimony (mg/L)	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Arsenic (mg/L)	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Beryllium (mg/L)	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	0.005	<0.004
Cadmium (mg/L)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	0.021
Chloride (mg/L)	13	16	39	11	33	14	6	8	12	15	89
Conductivity Field (μS/cm)	554	2170	5110	448	1399	519	404	352	454	2550	703
Fluoride (mg/L)	0.5	0.2	0.4	0.2	0.3	0.3	0.2	0.3	0.4	1.1	5.5
Lead (mg/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Manganese (mg/L)	0.16	<0.05	3.46	<0.05	0.26	0.07	0.18	<0.05	<0.05	4.14	85.8
Molybdenum (mg/L)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel (mg/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.5
Nitrate + Nitrite as N (mg/L)	<0.2	89	284	0.5	28	<0.2	<0.2	1.5	1.8	13	213
pH Field (std units)	7.3	7.21	6.62	7.57	7.09	7.07	6.92	7.78	7.8	4.75	5.96
pH Lab (std units)	7.34	7.3	6.55	7.72	7.39	7.43	7.3	7.93	7.96	5.03	6.21
Radium-226 (pCi/L)	0.03±0.1	-0.05±0.12	0.18±0.13	-0.02±0.13	0.97±0.22	0.09±0.11	0.24±0.13	0.15±0.12	0.06±0.10	0.98±0.24	-0.006±0.12
Radium-228 (pCi/L)	0.9±0.7	0.2±0.8	1.3±0.7	0.08±0.8	2.0±0.7	0.5±0.6	0.1±0.6	0.2±0.6	0.2±0.6	2.0±0.9	0.2±0.7
Selenium (mg/L)	<0.005	<0.005	<0.005	<0.005	0.008	<0.005	<0.005	0.01	0.009	0.014	0.038
Sulfate (mg/L)	45	563	1530	59	480	8	15	27	54	1540	3040
TDS (mg/L)	415	1680	4250	382	1280	303	300	254	332	2270	4750
Tempurature Field (C)	13.4	13.8	16.7	12.5	14.8	14.3	16.2	14.5	16.3	12.7	12.9
Thallium (mg/L)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.004	0.001
Thorium-230 (pCi/L)	-0.03±0.06	-0.009±0.09	0.09±0.1	0.03±0.1	-0.03±0.09	-0.008±0.07	0.06±0.09	0.05±0.08	0.002±0.07	-0.1±0.2	0.09±0.08
Uranium (mg/L)	0.006	0.74	1.52	0.028	0.901	0.006	0.009	0.026	0.12	2.7	0.278
Water Elevation (ft)	N/A	6296.7	6294.4	6299.75	6292.45	6289.05	6278.85	6271.5	6273.35	6296.9	6287.5

Notes:

(1) All metals are dissolved analyte concentrations

(2) Free ammonia concentration calculated from the laboratory reported total ammonia concentration and field measured pH, consistent with the method used to determine the ACL for ammonia

(3) Well SWAB-1R installed as replacement for SWAB-1. Water Elevation taken at SWAB-1

(4) Well SWAB-12R installed as replacement for SWAB-12. Water Elevation taken at SWAB-12

< indicates analyte result less than Laboratory Reporting Limit

WNI Split Rock Mill Groundwater and Surface Water Quality Semi-Annual Report

2nd Half 2010 (Sampled: 9/7/10 to 9/9/10)

Parameter[1]	WELL-5	WN-21	WN-39B	WN-41B	WN-42A	SW-1	SW-2	SW-3	SW-4	SW-5
Aluminum (mg/L)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ammonia, Free as N[2] (mg/L)	0.00064	0.0082	<0.0016	<0.00504	0.0007	<0.0073	<0.00504	<0.00504	<0.0048	<0.0047
Antimony (mg/L)	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Arsenic (mg/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Beryllium (mg/L)	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Cadmium (mg/L)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chloride (mg/L)	100	10	23	414	47	9	11	12	12	12
Conductivity Field (µS/cm)	4050	557	793	2500	4370	334	384	342	307	327
Fluoride (mg/L)	<0.1	0.3	0.2	1.2	<0.1	0.2	0.2	0.2	0.3	0.3
Lead (mg/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Manganese (mg/L)	0.44	0.23	<0.05	<0.05	0.17	<0.05	<0.05	<0.05	<0.05	<0.05
Molybdenum (mg/L)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel (mg/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrate + Nitrite as N (mg/L)	49	4.4	6	<0.2	25	<0.2	<0.2	<0.2	<0.2	<0.2
pH Field (std units)	6.93	7.01	7.82	8.35	7.04	8.53	8.35	8.35	8.33	8.32
pH Lab (std units)	6.84	7.6	7.78	8.1	7	8.31	8.36	8.37	8.14	8.33
Radium-226 (pCi/L)	-0.09±0.06	-0.1±0.11	-0.1±0.11	-0.007±0.13	-0.08±0.10	-0.09±0.06	-0.09±0.07	-0.09±0.07	-0.09±0.07	-0.09±0.07
Radium-228 (pCi/L)	1.3±0.7	0.6±0.8	-0.3±0.7	1.1±0.8	1±0.7	0.7±0.6	0.1±0.6	0.5±0.6	-0.02±0.6	0.6±0.6
Selenium (mg/L)	0.018	<0.005	<0.005	<0.005	0.033	<0.005	<0.005	<0.005	<0.005	<0.005
Sulfate (mg/L)	1750	88	159	381	1920	38	40	42	43	43
TDS (mg/L)	3590	394	511	1460	4230	241	245	251	256	243
Tempurature Field (C)	12.1	12.8	10.7	11.3	11.2	16.5	17.2	20.6	16.8	17.6
Thallium (mg/L)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Thorium-230 (pCi/L)	0.04±0.07	0.02±0.06	-0.03±0.1	0.2±0.1	0.03±0.08	0.06±0.09	-0.03±0.08	0.05±0.1	-0.005±0.07	-0.006±0.07
Uranium (mg/L)	1.65	0.074	0.223	0.008	1.09	0.002	0.003	0.004	0.004	0.004
Water Elevation (ft)	6281.45	6296.7	6272.8	6271.35	6275.75	N/A	N/A	N/A	N/A	N/A

Notes:

(1) All metals are dissolved analyte concentrations

(2) Free ammonia concentration calculated from the laboratory reported total ammonia concentration and field measured pH, consistent with the method used to determine the ACL for ammonia

(3) Well SWAB-1R installed as replacement for SWAB-1. Water Elevation taken at SWAB-1

(4) Well SWAB-12R installed as replacement for SWAB-12. Water Elevation taken at SWAB-12

< indicates analyte result less than Laboratory Reporting Limit