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August 12, 2008

ATTN: Document Control Desk

Keith I. McConnell, Deputy Director
Decommissioning and Uranium Recovery Licensing Directorate
Division of Waste Management and Environmental Protection
Office of Federal and State Materials and Environmental Management Programs
U.S. Nuclear Regulatory Commission
11545 Rockville Pike
Two White Flint North
Rockville, MD 20852-2738

RE: Smith Ranch-Highland Uranium Project
NRC License SUA-1548, Docket No. 40-8964
Semi-Annual Effluent and Environmental Monitoring Report, January 1 – June 30, 2008

Dear Mr. McConnell:

In accordance with 10 CFR 40.65 and per License Condition No. 12.2 of License SUA-1548, please find enclosed the Semi-Annual Effluent and Environmental Monitoring Report for the Smith Ranch-Highland Uranium Project. This report covers the period January 1 – June 30, 2008. A copy of this report is also being forwarded to Mr. Douglas Mandeville, USNRC Headquarters, and Mr. Leonard

Wert, Director DRSS, Region IV.

If you have any questions regarding the report, please contact me at (307) 358-6541, ext. 46.

Sincerely,

A handwritten signature in black ink, appearing to read "John McCarthy". The signature is fluid and cursive, with the first name "John" and last name "McCarthy" clearly distinguishable.

John McCarthy
Manager-Environment, Health and Safety, RSO

JM/bj

Enclosure

cc: Mr. Douglas Mandeville, USNRC Headquarters
Mr. Leonard Wert, Director DRSS, Region IV, USNRC
Steve Magnuson w/o atta
T. Cannon w/o atta
S. Bakken w/atta
Arlene Crook, Assisting RSO w/atta
File SR 4.6.4.1

POWER RESOURCES, INC.

**SMITH RANCH - HIGHLAND URANIUM
PROJECT**

**SEMI-ANNUAL EFFLUENT AND
ENVIRONMENTAL MONITORING
REPORT**

FOR THE PERIOD

**JANUARY 1 THROUGH
JUNE 30, 2008**

**USNRC SOURCE MATERIAL LICENSE
NO. SUA-1548**

DOCKET NO. 40-8964

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1.0 RESULTS FROM EMPLOYEE URINALYSES IF AN EXPOSURE EXCEEDS ACTION LEVELS DESCRIBED IN THE OPERATIONS PLAN OF THE APPROVED LICENSE APPLICATION

During the period January 1 through June 30, 2008 one contract employee who worked under an RWP for less than two days had a bioassay with a uranium concentration of 44.3 µg/L, which exceeds the action level of 15 µg/L uranium. It was determined the elevated result was due to a failure to follow proper procedure when providing his bioassay sample. The contract employee had received on-site training prior to operations and signed an RWP.

2.0 INJECTION RATES, RECOVERY RATES, AND INJECTION TRUNK-LINE PRESSURES FOR EACH SATELLITE FACILITY

The required information for each Satellite facility for the 1st and 2nd Quarters of 2008 is presented in Tables 1A, 1B, 1C, and 1D included in Attachment A.

2.1 Satellite No. 1

Satellite No. 1 did not operate during the report period since restoration activities in the A and B Wellfield are complete. Therefore, no injection or recovery rates are available for the report period, as shown in Table 1A.

2.2 Satellite No. 2, Satellite No. 3, Satellite SR-1, Central Processing Plant

The injection rates, recovery rates, and injection pressure data for Satellite No. 2, Satellite No. 3, Satellite SR-1, and the Central Processing Plant (CPP) are contained in Tables 1B, 1C, and 1D. The injection rates represent the total recovery rates minus the purge (clean-out circuit) flow. The purge from Satellite No. 2 and No. 3 is treated for uranium and radium removal and pumped to the Satellite No. 2 Purge Storage Reservoir prior to disposal by irrigation at the Satellite No. 2 Land Application Facility. Purge from Satellite SR-1 and the CPP is disposed by deep injection through permitted waste disposal wells.

3.0 RESULTS OF EFFLUENT AND ENVIRONMENTAL MONITORING INCLUDING WATER QUALITY ANALYSES AND MONITORING REQUIRED BY THE WDEQ PERMIT FOR THE OPERATING IRRIGATION SYSTEMS

3.1 Stack Emission Surveys

When the Central Processing Facility (CPF) at the Highland Uranium Project is operational, PRI monitors the Yellowcake Dryer and Packaging scrubber exhaust stacks to determine the emission rate of particulates, uranium, radium, and thorium. During the report period, the Highland CPF remained on standby status as all yellowcake

processing activities (elution, precipitation, drying, and packaging) were conducted at the Smith Ranch CPP. The dryers at the Smith Ranch CPP are zero emission vacuum dryers that do not require emission stack testing. Therefore, no stack tests were conducted during the report period.

3.2 Air Particulate, Radon, and Gamma Radiation Monitoring

PRI maintains five Air Monitoring Stations at various locations on and around the licensed area. Two of these stations are used to monitor downwind conditions of the Highland CPF and monitoring is not required unless the CPF is in operation. The Air Monitoring Stations are used to monitor radionuclides, radon, and gamma radiation. The stations are located as follows:

- AS-1 (Dave's Water Well): This station monitors background conditions, upwind of both the Smith Ranch and HUP wellfields and yellowcake processing facilities.
- AS-2 (Smith Ranch Restricted Area): This station monitors conditions downwind of the Smith Ranch CPP Restricted Area Boundary.
- AS-3 (Vollman Ranch): This station monitors the nearest downwind resident to the Smith Ranch CPP Restricted Area.
- AS-4 (HUP Restricted Area): This station monitors conditions downwind of the HUP CPF Restricted Area Boundary (when the HUP CPF is operating).
- AS-5 (Fowler Ranch): This station monitors the nearest downwind resident to the HUP CPF Restricted Area (when the HUP CPF is operating).

Monitoring at AS-4 and AS-5 was not conducted during the reporting period since the Highland CPF remains on standby status.

Table 2 shows the radionuclide and radon data collected at these sites during the report period. All parameters are significantly less than the 10 CFR 20, Appendix B.

Gamma radiation data for the report period are provided in Table 3. 10 CFR 20 Appendix B contains no Effluent Concentration Limit for gamma radiation for comparison. However, gamma results for the report period are within normal background conditions and show no discernable trends with previous data.

3.3 Water Sampling Data

3.3.1 *Groundwater and Surface Water Monitoring Stations*

During the report period, monitoring was completed at nine water wells and eight stock ponds throughout the permit area. Water samples are collected from the water wells and stock ponds on a quarterly basis for analysis of uranium and radium-226. Table 4 provides the analytical data for samples collected during the report period. A review of data collected during the report period shows that nine water wells (GW-3, 5, 6, 8, 9, 10, 11, 12 and 20 did not run during the report period) and 2 stock ponds (SW-2 and 6) were dry for the entire period. A review of data collected from the nine water wells and eight stock ponds show that the concentrations of uranium and radium-226 are within normal background conditions and show no discernible trends with previous data.

3.4 Wastewater Land Application Facilities Monitoring

3.4.1 *Soil and Vegetation Sampling*

In accordance with the approved license application and the WDEQ permits for the Satellite No. 1 and Satellite No. 2 Wastewater Land Application Facilities, soil and vegetation sampling of the irrigation areas is conducted in late summer of each year. The soil and vegetation data are collected to monitor and evaluate any adverse effects to the irrigation areas. The 2008 soil and vegetation sampling at the irrigation areas will be conducted in August 2008 and results included with the July 1-December 31, 2008 semi-annual report.

3.4.2 *Irrigation Fluid*

In accordance with the approved license application and the WDEQ Wastewater Land Application permits, PRI monitors the treated irrigation fluid that is disposed of at both irrigation facilities. Grab samples are collected at the irrigator pivot during each month of operation and analyzed for various parameters. As noted in Table 5, Irrigator No. 1 did not operate for the entire reporting period.

Irrigation fluid data collected at Satellite No. 2 is provided in Table 6. A review of the data indicates that the concentration of uranium in the monthly grab samples was below the 10 CFR 20, Appendix B, Effluent Concentration Limit of $3.0 \text{ E-}7 \text{ } \mu\text{Ci/ml}$, and were less than the estimate provided in the original license application for the facility ($1.4\text{E-}6 \text{ } \mu\text{Ci/ml}$) The samples contained radium-226 concentrations slightly above the 10 CFR 20, Appendix B, Effluent Concentration Limit of $6.0\text{E-}08 \text{ } \mu\text{Ci/ml}$ and above the estimate provided in the original license application for the facility ($3.0\text{E-}9 \text{ } \mu\text{Ci/ml}$).

3.4.3 Radium Treatment Systems

PRI collects grab samples each month to ensure that the radium-226 treatment systems are adequately treating wastewater from Satellites No. 2 and No. 3 prior to discharge into the Purge Storage Reservoir. No samples were collected from the Satellite No. 1 radium treatment system since Satellite No. 1 did not operate during the report period. The monthly radium-226 grab samples for Satellite No. 2 and No. 3 are collected at the discharge points of the radium treatment system at each facility. The results of this monitoring are included in Table 7A and 7B. Review of the monitoring data shows that all radium-226 concentrations were below the 10 CFR 20, Appendix B, Effluent Concentration Limit of $6.0E-8$ $\mu\text{Ci/ml}$ at both Satellite No. 2 and Satellite No. 3 during the report period.

3.4.4 Soil Water

In accordance with the approved license application and the WDEQ Wastewater Land Application Facility permits, PRI collects soil water samples at the irrigation areas in June of each year and analyzes them for various parameters, including uranium and radium-226. Due to a scheduling error the 2008 sampling was not attempted until July 24, 2008. The sampling schedule has been updated to reflect the correct sampling date to ensure sampling is attempted on schedule in the following years.

As in previous years, the relatively limited amount of irrigation resulted in insufficient soil water available to produce a sample at any of the sample locations for the Satellite No. 1 and Satellite No. 2 irrigation areas.

3.4.5 Satellite No. 1 Purge Storage Reservoir Monitor Well

A shallow monitor well, located southwest of the Satellite No. 1 Purge Storage Reservoir is monitored at least weekly for potential seepage from the reservoir. There was no evidence of seepage during the report period. PSR-1 was dry for the entire period and it is not anticipated that water will be diverted to PSR-1 in the near future. Therefore, it is unlikely there will be any seepage from PSR-1 in the following report periods.

3.4.6 Satellite No. 2 Purge Storage Reservoir Shallow Wells

In accordance with the approved license application, water levels are measured on a quarterly basis and ground water samples are required on a semi-annual basis from the two shallow monitoring wells located adjacent to the Satellite No. 2 Purge Storage Reservoir (PSR-2). PRI conducts quarterly sampling of these two wells. Shallow Wells No. 1 and No. 2 are located adjacent to the south and east sides of the reservoir, respectively. During the report period, monitoring was conducted on March 19 and June 10, 2008. Table 8 contains the applicable data for samples taken during this period.

Comparison of the uranium and radium-226 data from the Shallow Wells does not indicate any significant trends or changes from previous report periods. Comparison of water level data collected during the report period with previous data continues to show a trend of higher water levels during the spring-summer months and lower water levels during the fall-winter months.

4.0 SAFETY AND ENVIRONMENTAL EVALUATIONS

There were no Safety and Environmental Evaluations completed during the report period.

5.0 RUTH ISL PROJECT

The Ruth Project is licensed for commercial ISL uranium activities, however none has been initiated. The existing buildings and evaporation ponds, along with a few remaining wells, are left from research and development testing conducted by Uranerz, USA, one of the previous licensees. The facilities at the project are non-operational and on stand-by status. Therefore, radiation and effluent monitoring was not conducted and is not required by the NRC or the WDEQ. The quantity of radionuclides released to unrestricted areas in liquid and in gaseous effluents is considered negligible and is not applicable at this time.

Activities conducted during the report period consisted of quarterly inspections of the existing facilities. Inspection of the perimeter fence, pond embankments, and pond liners yielded no deficiencies during the report period.

6.0 NORTH BUTTE ISL PROJECT

The North Butte Project is also licensed for commercial ISL uranium operations; however, construction of facilities has not commenced and is currently on hold. Since there are no radioactive materials present on site, no radionuclides were released to unrestricted areas in liquid or in gaseous effluents.

License Condition 9.5 requires PRI to submit, for the NRC and WDEQ-LQD approval, an itemized cost estimate for implementation of the NRC-approved decommissioning/restoration plan prior to commencement of construction of a commercial facility at the North Butte/Ruth sites. Currently, PRI is in the process of updating the Operations and Reclamation Plan for the North Butte ISL Project in pursuit of approval to commence construction activities at the North Butte site.

On August 28, 2007, pressure transducers were placed in three Monitor Wells to continuously record water levels and monitor any potential changes which may result from Coal Bed Methane development on the property. To date, only minor fluctuations of approximately one foot have been noted. Monitoring of water levels in these wells will continue for a period of one year.

7.0 ANNUAL INSPECTION

The Annual Inspection was conducted March 24 through March 27, 2008. The issues which arose as a result of this inspection are currently being addressed.

ATTACHMENT A
DATA TABLES 1-8

**TABLE 1A
SATELLITE NO. 1 INJECTION RATES, RECOVERY RATES, INJECTION PRESSURES**

MONTH	Injection Pressure (PSI)			Groundwater Sweep GPM	Radium Ponds GPM	RO Feed GPM	Injection GPM	RO Concentrate GPM	Purge Flow GPM
	RO #1	RO #2	RO #3						
Jan-08	0	0	0	0	0	0	0	0	0
Feb-08	0	0	0	0	0	0	0	0	0
Mar-08	0	0	0	0	0	0	0	0	0
Apr-08	0	0	0	0	0	0	0	0	0
May-08	0	0	0	0	0	0	0	0	0
Jun-08	0	0	0	0	0	0	0	0	0

**TABLE 1B
AVERAGE INJECTION RATES (GPM)**

MONTH	Satellite No. 2	Satellite No. 3	Satellite SR-1	Central Processing Plant
Jan-08	2,034	3,113	3,698	3,165
Feb-08	2,088	3,049	3,722	3,192
Mar-08	2,087	3,079	3,634	3,152
Apr-08	2,124	2,992	3,644	3,136
May-08	2,077	2,668	3,333	2,902
Jun-08	2,075	2,654	3,575	2,913

**TABLE 1C
AVERAGE RECOVERY RATES (GPM)**

MONTH	Satellite No. 2	Satellite No. 3	Satellite SR-1	Central Processing Plant
Jan-08	2,054	3,180	3,698	3,211
Feb-08	2,108	3,100	3,723	3,237
Mar-08	2,107	3,129	3,644	3,188
Apr-08	2,143	3,043	3,669	3,157
May-08	2,096	2,716	3,355	2,921
Jun-08	2,095	2,710	3,609	2,941

**TABLE 1D
INJECTION TRUNK LINE PRESSURES (PSI)**

MONTH	Satellite No. 2	Satellite No. 3	Satellite SR-1	Central Processing Plant
Jan-08	87	136	80	149
Feb-08	88	138	85	158
Mar-08	92	146	81	155
Apr-08	93	146	79	150
May-08	87	132	86	151
Jun-08	84	138	85	163

TABLE 2
AIR SAMPLING DATA - 2008
ENVIRONMENTAL MONITORING SITES
1st and 2nd Quarters 2008

SAMPLE LOCATION	SAMPLE PERIOD	RADIONUCLIDE ($\mu\text{Ci}/\text{ml}$)	CONCENTRATION ($\mu\text{Ci}/\text{ml}$)	ERROR EST. +/- ($\mu\text{Ci}/\text{ml}$)	L.L.D. ($\mu\text{Ci}/\text{ml}$)	EFF. CONC. LIMIT ($\mu\text{Ci}/\text{ml}$)	% EFF. CONC. LIMIT %
FENCE LINE Air Station Restricted Area Boundary	1st Quarter	U-Nat	6.83E-16	N/A	1.00E-16	9.00E-14	0.8
		Th-230	3.00E-16	1.5E-16	1.00E-16	3.00E-14	1.0
		Ra-226	1.38E-15	2.17E-16	1.00E-16	9.00E-13	0.2
		Pb-210	5.47E-15	7.50E-16	2.00E-15	6.00E-13	0.9
	2nd Quarter	U-Nat	3.49E-16	N/A	1.00E-16	9.00E-14	0.4
		Th-230	2.38E-16	2.38E-16	1.00E-16	3.00E-14	0.8
		Ra-226	1.43E-16	1.59E-16	1.00E-16	9.00E-13	0.0
		Pb-210	7.70E-15	3.92E-15	2.00E-15	6.00E-13	1.3
		Rn-222	1.70E-09		3.00E-10	1.00E-08	17.0
VOLLMAN RANCH Air Station Downwind Nearest Residence	1st Quarter	U-Nat	2.81E-16	N/A	1.00E-16	9.00E-14	0.3
		Th-230	3.44E-16	1.72E-16	1.00E-16	3.00E-14	1.1
		Ra-226	4.53E-16	1.25E-16	1.00E-16	9.00E-13	0.1
		Pb-210	5.75E-15	7.50E-16	2.00E-15	6.00E-13	1.0
	2nd Quarter	U-Nat	5.69E-16	N/A	1.00E-16	9.00E-14	0.6
		Th-230	<1E-16	N/A	1.00E-16	3.00E-14	< 1.0
		Ra-226	<1E-16	N/A	1.00E-16	9.00E-13	< 1.0
		Pb-210	7.96E-15	4.94E-15	2.00E-15	6.00E-13	1.3
		Rn-222	1.10E-09		3.00E-10	1.00E-08	11.0
DAVE'S WATER WELL Air Station Background Site	1st Quarter	U-Nat	1.02E-16	N/A	1.00E-16	9.00E-14	0.1
		Th-230	2.04E-16	1.84E-16	1.00E-16	3.00E-14	< 1.0
		Ra-226	4.08E-16	1.43E-16	1.00E-16	9.00E-13	< 1.0
		Pb-210	1.42E-14	1.31E-15	2.00E-15	6.00E-13	2.4
	2nd Quarter	U-Nat	<1E-16	N/A	1.00E-16	9.00E-14	< 1.0
		Th-230	<1E-16	N/A	1.00E-16	3.00E-14	< 1.0
		Ra-226	<1E-16	N/A	1.00E-16	9.00E-13	< 1.0
		Pb-210	8.78E-15	3.81E-15	2.00E-15	6.00E-13	1.5
		Rn-222	1.20E-09		3.00E-10	1.00E-08	12.0

TABLE 3

**DIRECT RADIATION (GAMMA) MEASUREMENT DATA - 2008
ENVIRONMENTAL MONITORING SITES
1st & 2nd QUARTERS 2008**

SAMPLE LOCATION	SAMPLE PERIOD	EXPOSURE RATE (mR/qtr)
FENCE LINE		
Air Station	1st Quarter	53
Restricted Area Boundary	2nd Quarter	44
VOLLMAN'S RANCH		
Air Station	1st Quarter	43
Downwind Nearest Residence	2nd Quarter	36
DAVE'S WATER WELL		
Air Station	1st Quarter	44
Background Site	2nd Quarter	38

TABLE 4
WATER SAMPLING DATA - 2008
ENVIRONMENTAL MONITORING SITES
1st & 2nd QUARTERS 2008

SAMPLE LOCATION	SAMPLE DATE	RADIONUCLIDE	CONCENTRATION (mg/L)	CONCENTRATION (pCi/L)	ERROR EST. +/- (pCi/L)	CONCENTRATION (µCi/ml)	EFF. CONC. LIMIT (µCi/ml)	% EFF. CONC. LIMIT
SW-1 Stock Pond Section 3 T35N, R74W	1st Quarter	U-Nat Ra-226	DRY				3.0E-07 6.0E-08	
	2nd Quarter	U-Nat Ra-226	0.0159	0.1	1.00E-01	1.1E-08 1.0E-10	3.0E-07 6.0E-08	3.6 0.2
SW-2 Stock Pond Section 2 T35N, R74W	1st Quarter	U-Nat Ra-226	DRY				3.0E-07 6.0E-08	
	2nd Quarter	U-Nat Ra-226	DRY				3.0E-07 6.0E-08	
SW-3 Stock Pond Section 35 T36N, R74W	1st Quarter	U-Nat Ra-226	DRY				3.0E-07 6.0E-08	
	2nd Quarter	U-Nat Ra-226	0.0341	7.4	5.00E-01	2.3E-08 7.4E-09	3.0E-07 6.0E-08	7.7 12.3
SW-4 Stock Pond Section 36 T36N, R74W	1st Quarter	U-Nat Ra-226	DRY				3.0E-07 6.0E-08	
	2nd Quarter	U-Nat Ra-226	0.0019	1.0	2.00E-01	1.3E-09 1.0E-09	3.0E-07 6.0E-08	0.4 1.7
SW-5 Stock Pond Section 21 T36N, R73W	1st Quarter	U-Nat Ra-226	DRY				3.0E-07 6.0E-08	
	2nd Quarter	U-Nat Ra-226	0.0026	3.4	4.00E-01	1.8E-09 3.4E-09	3.0E-07 6.0E-08	0.6 5.7
SW-6 Stock Pond Section 22 T36N, R73W	1st Quarter	U-Nat Ra-226	DRY				3.0E-07 6.0E-08	
	2nd Quarter	U-Nat Ra-226	<3.0E-7	5.1	5.00E-01	5.1E-09	3.0E-07 6.0E-08	8.5

TABLE 4 (Continued)

SAMPLE LOCATION	SAMPLE DATE	RADIONUCLIDE	CONCENTRATION (mg/L)	CONCENTRATION (pCi/L)	ERROR EST. +/- (pCi/L)	CONCENTRATION (μ Ci/ml)	EFF. CONC. LIMIT (μ Ci/ml)	% EFF. CONC. LIMIT
SW-7 Stock Pond Section 22 T36N, R73W	1st Quarter	U-Nat Ra-226	0.0006	0.9	3.00E-01	4.1E-10 9.0E-10	3.0E-07 6.0E-08	0.1 1.5
	2nd Quarter	U-Nat Ra-226	<3.0E-7	2.7	3.00E-01	2.7E-09	3.0E-07 6.0E-08	4.5
SW-8 Stock Pond Section 18 T36N, R72W	1st Quarter	U-Nat Ra-226	0.0008	0.2	2.00E-01	5.4E-10 2.0E-10	3.0E-07 6.0E-08	0.2 0.3
	2nd Quarter	U-Nat Ra-226	0.0024	2.2	3.00E-01	1.6E-09 2.2E-09	3.0E-07 6.0E-08	0.5 3.7
SW-9 Stock Pond Section 18 T36N, R72W	1st Quarter	U-Nat Ra-226	0.0006	0.2	2.00E-01	4.1E-10 2.0E-10	3.0E-07 6.0E-08	0.1 0.3
	2nd Quarter	U-Nat Ra-226	0.0008	0.6	2.00E-01	5.4E-10 6.0E-10	3.0E-07 6.0E-08	0.2 1.0
SW-10 Stock Pond Section 19 T36N, R72W	1st Quarter	U-Nat Ra-226	DRY				3.0E-07 6.0E-08	
	2nd Quarter	U-Nat Ra-226	0.0131	4.5	4.00E-01	8.9E-09 4.5E-09	3.0E-07 6.0E-08	3.0 7.5
GW-1 Windmill Section 1 T35N, R74W	1st Quarter	U-Nat Ra-226	0.025	1.1	2.00E-01	1.7E-08 1.1E-09	3.0E-07 6.0E-08	5.6 1.8
	2nd Quarter	U-Nat Ra-226	0.0259	0.7	2.00E-01	1.8E-08 7.0E-10	3.0E-07 6.0E-08	5.8 1.2
GW-2 Water Well Section 35 T36N, R74W	1st Quarter	U-Nat Ra-226	0.0286	0.7	2.00E-01	1.9E-08 7.0E-10	3.0E-07 6.0E-08	6.5 1.2
	2nd Quarter	U-Nat Ra-226	0.0422	0.7	2.00E-01	2.9E-08 7.0E-10	3.0E-07 6.0E-08	9.5 0.0

TABLE 4 (Continued)

SAMPLE LOCATION	SAMPLE DATE	RADIONUCLIDE	CONCENTRATION (mg/L)	CONCENTRATION (pCi/L)	ERROR EST. +/- (pCi/L)	CONCENTRATION (μ Ci/ml)	EFF. CONC. LIMIT (μ Ci/ml)	% EFF. CONC. LIMIT
GW-3 Windmill Section 2 T36N, R74W	1st Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
	2nd Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
GW-4 Windmill Section 23 T36N, R74W	1st Quarter	U-Nat Ra-226	0.0768	0.5	2.00E-01	5.2E-08 5.0E-10	3.0E-07 6.0E-08	17.3 0.8
	2nd Quarter	U-Nat Ra-226	0.0779	0.5	2.00E-01	5.3E-08 5.0E-10	3.0E-07 6.0E-08	17.6 0.8
GW-5 Windmill Section 30 T36N, R73W	1st Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
	2nd Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
GW-6 Windmill Section 28 T36N, R73W	1st Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
	2nd Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
GW-8 Windmill Section 23 T36N, R73W	1st Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
	2nd Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
GW-9 Windmill Section 14 T36N, R73W	1st Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
	2nd Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	

TABLE 4 (Continued)

SAMPLE LOCATION	SAMPLE DATE	RADIONUCLIDE	CONCENTRATION (mg/L)	CONCENTRATION (pCi/L)	ERROR EST. +/- (pCi/L)	CONCENTRATION (µCi/ml)	EFF. CONC. LIMIT (µCi/ml)	% EFF. CONC. LIMIT
GW-10 Water Well Section 14 T36N, R73W	1st Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
	2nd Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
GW-11 Water Well Section 11 T36N, R73W	1st Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
	2nd Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
GW-12 Water Well Section 7 T36N, R72W	1st Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
	2nd Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
GW-13 Water Well Section 9 T36N, R74W	1st Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
	2nd Quarter	U-Nat Ra-226	0.0158	1.1	2.00E-01	1.1E-08 1.1E-09	3.0E-07 6.0E-08	3.6 1.8
GW-14 Water Well Section 10 T36N, R74W	1st Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
	2nd Quarter	U-Nat Ra-226	0.0017	1.4	2.00E-01	1.2E-09 1.4E-09	3.0E-07 6.0E-08	0.4 2.3
GW-15 Water Well Section 15 T36N, R74W	1st Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
	2nd Quarter	U-Nat Ra-226	0.0198	1.0	2.00E-01	1.3E-08 1.0E-09	3.0E-07 6.0E-08	4.5 1.7

TABLE 4 (Continued)

SAMPLE LOCATION	SAMPLE DATE	RADIONUCLIDE	CONCENTRATION (mg/L)	CONCENTRATION (pCi/L)	ERROR EST. +/- (pCi/L)	CONCENTRATION (μCi/ml)	EFF. CONC. LIMIT (μCi/ml)	% EFF. CONC. LIMIT
GW-16 Water Well Section 11 T36N, R74W	1st Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
	2nd Quarter	U-Nat Ra-226	0.162	0.7	2.00E-01	1.1E-07 7.0E-10	3.0E-07 6.0E-08	36.6 1.2
GW-17 Water Well Section 8 T36N, R74W	1st Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
	2nd Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
GW-18 Water Well Section 2 T36N, R74W	1st Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
	2nd Quarter	U-Nat Ra-226	0.0158	1.1	2.00E-01	1.1E-08 1.1E-09	3.0E-07 6.0E-08	3.6 1.8
GW-20 Water Well Section 27 T36N, R73W	1st Quarter	U-Nat Ra-226	<3.0E-7	0.5	2.00E-01	5.0E-10	3.0E-07 6.0E-08	0.8
	2nd Quarter	U-Nat Ra-226	<3.0E-7	0.5	2.00E-01	5.0E-10	3.0E-07 6.0E-08	0.8

TABLE 5

SATELLITE NO. 1 LAND APPLICATION FACILITY (IRRIGATOR NO. 1)
MONTHLY IRRIGATION FLUID DATA

IRRIGATION CYCLE		<u>Jan-08</u>	<u>Feb-08</u>	<u>Mar-08</u>	<u>Apr-08</u>	<u>May-08</u>	<u>Jun-08</u>
VOLUME (AF)							
MAJOR IONS (mg/L)	REP. LIMIT						
Ca	1.0						
Mg	1.0	Irrigator Did					
Na	1.0	Not Operate					
K	1.0						
HCO ₃	1.0						
SO ₄	1.0						
Cl	1.0						
NON-METALS							
TDS @ 180° C (mg/L)	10.0						
pH (standard units)	0.010						
SAR	0.01						
TRACE METALS (mg/L)							
As	0.001						
Ba	0.10						
B	0.10						
Se	0.001						
RADIOMETRIC							
U-nat (uCi/mL)	2.03E-10						
Ra-226 (uCi/mL)	2.00E-10						
Ra Err. Est. +/-							

TABLE 6

**SATELLITE NO. 2 LAND APPLICATION FACILITY (IRRIGATOR NO. 2)
MONTHLY IRRIGATION FLUID DATA**

IRRIGATION CYCLE		<u>Jan-08</u>	<u>Feb-08</u>	<u>Mar-08</u>	<u>Apr-08</u>	<u>May-08</u>	<u>Jun-08</u>
VOLUME (AF)						5.34	21.00
MAJOR IONS (mg/L)	REP. LIMIT						
Ca	1.0					436	409
Mg	1.0	Irrigator Did	Irrigator Did	Irrigator Did	Irrigator Did	110	111
Na	1.0	Not Operate	Not Operate	Not Operate	Not Operate	96	88
K	1.0					30	29
HCO ₃	1.0					187	167
SO ₄	1.0					738	774
Cl	1.0					521	535
NON-METALS							
TDS @ 180° C (mg/L)	10.0					2420	2380
pH (standard units)	0.010					7.92	7.96
SAR	0.01					1.1	1
TRACE METALS (mg/L)							
As	0.001					0.002	0.004
Ba	0.1					0.1	0.1
B	0.10					<0.1	0.3
Se	0.001					1.22	1.24
RADIOMETRIC							
U-nat (uCi/mL)	2.03E-10					3.94E-07	3.91E-07
Ra-226 (uCi/mL)	2.00E-10					4.4E-07	2.70E-09
Ra Err. Est. +/-						2E-08	3.00E-10

TABLE 7A

**MONTHLY RADIUM GRAB SAMPLES
AT THE DISCHARGE FROM THE RADIUM TREATMENT SYSTEM
SATELLITE NO. 2**

SAMPLE DATE	25-Jan-08	14-Feb-08	19-Mar-08	15-Apr-08	15-May-08	10-Jun-08
RADIOMETRIC						
Ra-226 (uCi/mL)	4.90E-09	3.40E-09	5.20E-09	2.70E-09	2.00E-09	3.40E-09
Ra Err. Est. +/-	8.00E-10	4.00E-10	4.00E-10	3.00E-10	3.00E-10	3.00E-10

TABLE 7B

**MONTHLY RADIUM GRAB SAMPLES
AT THE DISCHARGE FROM THE RADIUM TREATMENT SYSTEM
SATELLITE NO. 3**

SAMPLE DATE	24-Jan-08	14-Feb-08	19-Mar-08	15-Apr-08	15-May-08	10-Jun-08
RADIOMETRIC						
Ra-226 (uCi/mL)	6.00E-10	4.10E-09	2.00E-10	8.00E-10	2.00E-10	1.50E-09
Ra Err. Est. +/-	3.00E-10	1.30E-09	1.00E-10	2.00E-10	1.00E-10	2.00E-10

TABLE 8

**SATELLITE NO. 2 PURGE STORAGE RESERVOIR
SHALLOW MONITORING WELLS
QUARTERLY WATER LEVEL DATA
SEMI-ANNUAL WATER QUALITY DATA**

SAMPLE SITE	Shallow Well No. 1 (South)		Shallow Well No. 2 (East)		
	19-Mar-08	10-Jun-08	19-Mar-08	10-Jun-08	
SAMPLE DATE					
WATER LEVEL (DTW)	13.7	11.25	10.2	7.53	
MAJOR IONS (mg/L)	Rep. Limit				
HCO ₃	1.0	227	224	236	317
SO ₄	1.0	2110	2470	2450	2380
Cl	1.0	291	245	316	489
NON-METALS					
Cond (µmho/cm)	1.0	4270	4590	4930	5370
pH (standard units)	0.01	7.53	7.69	7.81	7.37
TRACE METALS (mg/L)					
B	0.001	<.001	0.200	<.001	0.2
Se	0.0025	2.060	1.60	0.045	0.08
RADIOMETRIC					
U-nat (uCi/mL)	6.77E-10	1.07E-07	4.34E-10	2.53E-08	1.20E-09
Ra-226 (uCi/mL)	2.00E-10	2.00E-10	3.00E-10	2.00E-10	2.00E-10
Ra-226 Err. Est. +/- (uCi/mL)		2.00E-10	2.00E-10	1.00E-10	2.00E-10

ATTACHMENT B

SAFETY AND ENVIRONMENTAL EVALUATIONS COMPLETED IN 2008

None in 2008

ATTACHMENT C

NOTICE OF VIOLATION

Not applicable