POWER RESOURCES

Smith Ranch - Highland Uranium Project
P. O. Box 1210
Glenrock, Wyoming USA 82637
Casper: 307-235-1628
Douglas: 307-358-6541
Fax: 307-358-4533

August 30, 2005

ATTN: Document Control Desk
Gary S. Janosko, Chief
Fuel Cycle Facilities Branch,
Division of Fuel Cycle Safety and Safeguards
Office of Nuclear Material Safety and Safeguards
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, 2005

Dear Mr. Janosko:

In accordance with 10 CFR 40.65 and 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 through June 30, 2005. A copy of this report is also being forwarded to Mr. Paul Michalak, 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,

Ken Milmine
Manager-Health, Safety
& Environmental Affairs

KLM/bj

Enclosure

cc: Mr. Paul Michalak, USNRC Headquarters
Mr. Leonard Wert, Director DRSS, Region IV, USNRC
S.P. Collings w/o atta C. Foldenauer w/o 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, 2005 THROUGH JUNE 30, 2005

USNRC SOURCE MATERIAL LICENSE NO. SUA-1548

DOCKET NO. 40-8964

TABLE OF CONTENTS

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, 2005 no bioassays exceeded the action level of 15 µg/L uranium.

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 2005 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.

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 Table 1A, 1B, and 1C. 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 Central Processing Plant. The dryers at the Smith Ranch Central Processing Plant are zero emission vacuum dryers that do not require emission stack testing. Therefore, no stack tests were conducted during the report period. It is

anticipated that the CPF at Highland will remain on standby status during several upcoming report periods.

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 air particulates, 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. It is anticipated that the Highland CPF will remain in standby status for several upcoming reporting periods and monitoring of downwind air stations will only resume if the Highland CPF becomes operational.

Table 2 shows the air particulate and radon data collected at these sites during the report period. Review of data collected during the report period shows that the concentrations of 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 seven water wells and six 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 the four stock ponds (Stations SW-2, 3, 4, and 5) remained dry during the report period and five water wells (GW-6, 8, 9, 11 and 12) did not run during the report period. A review of data collected from the seven water wells and six stock ponds, with the exception of water well GW-5, show that the concentrations of uranium and radium-226 are well below the 10 CFR 20, Appendix B, Effluent Concentration Limits of 3.0E-07 μCi/mL and 6.0E-08 μCi/mL, respectively.

Water Well GW-5 is located in an area with shallow uranium mineralization, along with other radioactive minerals. These areas are referred to as the "Snow Claims", which have a zone depth from approximately 50 to 120 feet. Well GW-5 has a depth of approximately 100 feet, which falls in this mineralized zone. Due to the shallow nature, portions of the mineralized zone may dry out seasonally potentially causing uranium to oxidize, and as a result increase its solubility in water. Therefore, the higher uranium concentrations in this well are naturally occurring due to the uranium mineralization in the shallow aquifer in which GW-5 is completed. PRI does not believe that the higher uranium levels are due to impacts from mining operations due to the large distance to the nearest wellfield (approximately ½ mile from the F-Wellfield monitor well ring), and the known occurrence of these shallow ore basics.

Results for GW-5 of approximately 1.24 mg/L obtained during the 2nd Quarter of 2005 were slightly higher than results of approximately .876 from the 2nd Quarter 2004.

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 2005 soil and vegetation sampling at the irrigation areas is scheduled to be conducted in August 2005.

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 and Table 6, only Irrigator

2 operated during the report period. However, a sample was not taken during June due to an oversight, but a sample was taken immediately after the oversight was discovered on July 5, 2005. This data is shown in Table 6.

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 μCi/ml (60 pCi/L) at Satellite No. 2 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. Sampling was conducted on June 30, 2005, but due to drought conditions and the relatively limited amount of irrigation, there was 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.

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 February 23 and May 17, 2005. Shallow Well No. 1 contained insufficient water to sample on both occasions and as a result, there is no data available for the report period. Table 12 contains the applicable data for Shallow Well No. 2.

Comparison of the uranium and radium-226 data from Shallow Well No. 2 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 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 Wyoming Department of Environmental Quality. 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.

5.0 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.

ATTACHMENT A

DATA TABLES 1-8

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

MONTH	Injection Pressure (PSI) RO #1	RO #2	RO #3	Grounwater Sweep GPM	Radium Ponds GPM	RO Feed GPM	Injection GPM	RO Concentrate GPM	Purge Flow GPM
JAN 05	0	0	0	0	0	0	0	0	0
FEB 05	0	0	0	0	0	0	0	0	0
MAR 05	0	0	0	0	0	0	0	0	0
APR 05	0	0	0	0	0	0	0	0	0
MAY 05	0	0	0	0	0	0	0	0	0
JUN 05	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 05	2,797	1,687	2,099	3,165
FEB 05	2,800	1,645	2,265	2,773
MAR 05	2,690	1,630	2,219	3,160
APR 05	2,706	1,615	2,213	3,573
MAY 05	2,454	1,617	2,041	3,516
JUN 05	2,097	1,661	2,026	3,650

TABLE 1C
AVERAGE RECOVERY RATES (GPM)

MONTH	Satellite No. 2	Satellite No. 3	Satellite SR-1	Central Processing Plant
JAN 05	2,837	1,738	2,110	3,183
FEB 05	2,840	1,695	2,277	2,799
MAR 05	2,728	1,685	2,233	3,193
APR 05	2,744	1,673	2,224	3,608
MAY 05	2,487	1,676	2,050	3,542
JUN 05	2,117	1,720	2,040	3,678

TABLE 1D
INJECTION TRUNK LINE PRESSURES (PSI)

MONTH	Satellite No. 2	Satellite No. 3	Satellite SR-1	Central Processing Plant
JAN 05	98	84	70	150
FEB 05	102	69	73	162
MAR 05	103	72	70	158
APR 05	99	77	71	173
MAY 05	92	80	73	178
JUN 05	92	82	78	177

TABLE 2

AIR SAMPLING DATA - 2005
ENVIRONMENTAL MONITORING SITES
1ST & 2ND QUARTERS

SAMPLE LOCATION	SAMPLE PERIOD	RADIONUCLIDE (µCi/ml)	CONCENTRATION (µCi/ml)	ERROR EST. +/- (µCi/ml)	L.L.D. (µCi/ml)	EFF. CONC. LIMIT (µCi/ml)	% EFF. CONC. LIMIT %
FENCE LINE	1ST	U-Nat	2.03E-16	N/A	1.00E-16	9.00E-14	0.2
Air Station	Quarter	Th-230	<1.00E-16	N/A	1.00E-16	3.00E-14	N/A
Restricted Area		Ra-226	<1.00E-16	N/A	1.00E-16	9.00E-13	N/A
Boundary		Pb-210	1.16E-14	9.42E-16	2.00E-15	6.00E-13	2.0
	2ND	U-Nat	4.38E-16	N/A	1.00E-16	9.00E-14	0.5
	Quarter	Th-230	4.76E-16	1.4E-16	1.00E-16	3.00E-14	1.6
		Ra-226	<1.00E-16	N/A	1.00E-16	9.00E-13	N/A
		Pb-210	9.4E-15	1.11E-15	2.00E-15	6.00E-13	1.6
		Rn-222	1.30E-09		3.00E-10	1.00E-08	13.0
VOLLMAN RANCH	1ST	U-Nat	1.59E-16	N/A	1.00E-16	9.00E-14	0.2
Air Station	Quarter	Th-230	<1.00E-16	N/A	1.00E-16	3.00E-14	N/A
Downwind Nearest		Ra-226	<1.00E-16	N/A	1.00E-16	9.00E-13	N/A
Residence		Pb-210	1.43E-14	9.94E-16	2.00E-15	6.00E-13	2.4
	2ND	U-Nat	2.30E-15	N/A	1.00E-16	9.00E-14	2.6
	Quarter	Th-230	3.23E-16	1.12E-16	1.00E-16	3.00E-14	1.1
		Ra-226	3.51E-16	1.26E-16	1.00E-16	9.00E-13	0.0
		Pb-210	1.01E-14	1.12E-15	2.00E-15	6.00E-13	1.7
		Rn-222	1.00E-09		3.00E-10	1.00E-08	10.0
DAVE'S WATER WELL	1ST	U-Nat	1.69E-16	N/A	1.00E-16	9.00E-14	0.2
Air Station	Quarter	Th-230	<1.00E-16	N/A	1.00E-16	3.00E-14	N/A
Background		Ra-226	<1.00E-16	N/A	1.00E-16	9.00E-13	N/A
Site		Pb-210	1.22E-14	9.56E-16	2.00E-15	6.00E-13	2.0
	2ND	U-Nat	1.80E-16	N/A	1.00E-16	9.00E-14	0.2
	Quarter	Th-230	<1.00E-16	N/A	1.00E-16	3.00E-14	N/A
		Ra-226	<1.00E-16	N/A	1.00E-16	9.00E-13	N/A
		Pb-210	8.76E-15	1.09E-15	2.00E-15	6.00E-13	1.5
		Rn-222	8.00E-10		3.00E-10	1.00E-08	8.0

TABLE 3

DIRECT RADIATION (GAMMA) MEASUREMENT DATA - 2005
ENVIRONMENTAL MONITORING SITES
1ST & 2ND QUARTERS

SAMPLE LOCATION	SAMPLE PERIOD	EXPOSURE RATE (mR/qtr)	ERROR ESTIMATE (mR/qtr)
FENCE LINE			
Air Station	1ST Quarter	44	2.0
Restricted Area Boundary	2ND Quarter	35	2.0
VOLLMAN'S RANCH			
Air Station	1ST Quarter	36	1.1
Downwind Nearest Residence	2ND Quarter	25	2.7
DAVE'S WATER WELL			
Air Station	1ST Quarter	38	1.2
Background Site	2ND Quarter	30	1.0

TABLE 4

WATER SAMPLING DATA - 2005
ENVIRONMENTAL MONITORING SITES
1ST & 2ND QUARTERS

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	0.0306			2.1E-08	3.0E-07	6.9
		Ra-226		0.4	0.3	4.0E-10	6.0E-08	0.7
	2ND Quarter	U-Nat	0.0195			1.3E-08	3.0E-07	4.4
		Ra-226		ND		ND	6.0E-08	0.0
SW-2 Stock Pond Section 2 T35N, R74W	1ST Quarter	U-Nat	DRY				3.0E-07	0.0
		Ra-226					6.0E-08	0.0
	2ND Quarter	U-Nat	DRY				3.0E-07	0.0
		Ra-226					6.0E-08	0.0
SW-3 Stock Pond Section 35 T36N, R74W	1ST Quarter	U-Nat	DRY				3.0E-07	0.0
		Ra-226					6.0E-08	0.0
	2ND Quarter	U-Nat	DRY				3.0E-07	0.0
		Ra-226					6.0E-08	0.0
SW-4 Stock Pond Section 36 T36N, R74W	1ST Quarter	U-Nat	DRY				3.0E-07	0.0
		Ra-226					6.0E-08	0.0
	2ND Quarter	U-Nat	DRY				3.0E-07	0.0
		Ra-226					6.0E-08	0.0
SW-5 Stock Pond Section 21 T36N, R73W	1ST Quarter	U-Nat	DRY				3.0E-07	0.0
		Ra-226					6.0E-08	0.0
	2ND Quarter	U-Nat	DRY				3.0E-07	0.0
		Ra-226					6.0E-08	0.0
SW-6 Stock Pond Section 22 T36N, R73W	1ST Quarter	U-Nat	0.0016			1.1E-09	3.0E-07	0.4
		Ra-226		ND		ND	6.0E-08	0.0
	2ND Quarter	U-Nat	0.0015			1.0E-09	3.0E-07	0.3
		Ra-226		0.7	5.00E-01	7.0E-10	6.0E-08	1.2

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
SW-7	1ST Quarter	U-Nat	ND			ND	3.0E-07	ND
Stock Pond		Ra-226		ND		ND	6.0E-08	ND
Section 22								
T36N, R73W	2ND Quarter	U-Nat	0.0278			1.9E-08	3.0E-07	6.3
		Ra-226		ND		ND	6.0E-08	ND
SW-8	1ST Quarter	U-Nat	0.0012			8.1E-10	3.0E-07	0.3
Stock Pond		Ra-226		0.4	3.00E-01	4.0E-10	6.0E-08	0.7
Section 18								
T36N, R72W	2ND Quarter	U-Nat	0.0889			6.0E-08	3.0E-07	20.1
		Ra-226		0.8	7.00E-01	8.0E-10	6.0E-08	1.3
SW-9	1ST Quarter	U-Nat	DRY				3.0E-07	0.0
Stock Pond		Ra-226					6.0E-08	0.0
Section 18								
T36N, R72W	2ND Quarter	U-Nat	0.0184			1.2E-08	3.0E-07	4.2
		Ra-226		1.3	4.00E-01	1.3E-09	6.0E-08	2.2
SW-10	1ST Quarter	U-Nat	0.0022			1.5E-09	3.0E-07	0.5
Stock Pond		Ra-226		0.5	3.00E-01	5.0E-10	6.0E-08	0.8
Section 19								
T36N, R72W	2ND Quarter	U-Nat	0.326			2.2E-07	3.0E-07	73.6
		Ra-226		ND	ND	ND	6.0E-08	ND
GW-1	1ST Quarter	U-Nat	0.0277			1.9E-08	3.0E-07	6.3
Windmill		Ra-226		1.4	4.00E-01	1.4E-09	6.0E-08	2.3
Section 1								
T35N, R74W	2ND Quarter	U-Nat	0.0252			1.7E-08	3.0E-07	5.7
		Ra-226		1.8	5.00E-01	1.8E-09	6.0E-08	3.0
GW-2	1ST Quarter	U-Nat	0.0313			2.1E-08	3.0E-07	7.1
Water Well		Ra-226		0.5	3.00E-01	5.0E-10	6.0E-08	0.8
Section 35								
T36N, R74W	2ND Quarter	U-Nat	0.0385			2.6E-08	3.0E-07	8.7
		Ra-226		0.8	3.00E-01	8.0E-10	6.0E-08	1.3

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-3	1ST Quarter	U-Nat	0.125			8.5E-08	3.0E-07	28.2
Windmill		Ra-226		1.5	6.00E-01	1.5E-09	6.0E-08	2.5
Section 27								
T36N, R74W	2ND Quarter	U-Nat	0.111			7.5E-08	3.0E-07	25.0
		Ra-226		1.4	4.00E-01	1.4E-09	6.0E-08	2.3
GW-4	1ST Quarter	U-Nat	NOT RUNNING				3.0E-07	0.0
Windmill		Ra-226					6.0E-08	0.0
Section 23								
T36N, R74W	2ND Quarter	U-Nat	0.108			7.3E-08	3.0E-07	24.4
		Ra-226		1.0	4.00E-01	1.0E-09	6.0E-08	1.7
GW-5	1ST Quarter	U-Nat	NOT RUNNING				3.0E-07	0.0
Windmill		Ra-226					6.0E-08	0.0
Section 30								
T36N, R73W	2ND Quarter	U-Nat	1.24			8.4E-07	3.0E-07	279.8
		Ra-226		2.1	5.00E-01	2.1E-09	6.0E-08	3.5
GW-6	1ST Quarter	U-Nat	NOT RUNNING				3.0E-07	0.0
Windmill		Ra-226					6.0E-08	0.0
Section 28								
T36N, R73W	2ND Quarter	U-Nat	NOT RUNNING				3.0E-07	0.0
		Ra-226					6.0E-08	0.0
GW-7	1ST Quarter	U-Nat	0.0293			2.0E-08	3.0E-07	6.6
Water Well		Ra-226		0.7	4.00E-01	7.0E-10	6.0E-08	1.2
Section 27								
T36N, R73W	2ND Quarter	U-Nat	0.0293			2.0E-08	3.0E-07	6.6
		Ra-226		0.7	4.00E-01	7.0E-10	6.0E-08	1.2
GW-8	1ST Quarter	U-Nat	NOT RUNNING				3.0E-07	0.0
Windmill		Ra-226					6.0E-08	0.0
Section 23								
T36N, R73W	2ND Quarter	U-Nat					3.0E-07	0.0
		Ra-226	NOT RUNNING				6.0E-08	0.0

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-9 Windmill Section 14 T36N, R73W	1ST Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	0.0 0.0
	2ND Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	0.0 0.0
GW-10 Water Well Section 14 T36N, R73W	1ST Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	0.0 0.0
	2ND Quarter	U-Nat Ra-226	0.0441	 ND		3.0E-08 ND	3.0E-07 6.0E-08	10.0 ND
GW-11 Water Well Section 11 T36N, R73W	1ST Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	0.0 0.0
	2ND Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	0.0 0.0
GW-12 Water Well Section 7 T36N, R72W	1ST Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	0.0 0.0
	2ND Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	0.0 0.0
GW-13	1ST Quarter		NOT RUNNING					
	2ND Quarter		NOT RUNNING					
GW-14	1ST Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	0.0 0.0
	2ND Quarter	U-Nat Ra-226	0.0286	 3.6	 6.00E-01	1.9E-08 3.6E-09	3.0E-07 6.0E-08	6.5 6.0

TABLE 5

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

IRRIGATION CYCLE

VOLUME (AF)

MAJOR IONS (mg/L)	REP. LIMIT	JAN	FEB	MAR	APR	MAY	JUN
Ca	1.0						
Mg	1.0	IRRIGATOR	IRRIGATOR	IRRIGATOR	IRRIGATOR	IRRIGATOR	IRRIGATOR
Na	1.0	DID NOT	DID NOT	DID NOT	DID NOT	DID NOT	DID NOT
K	1.0	OPERATE	OPERATE	OPERATE	OPERATE	OPERATE	OPERATE
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

VOLUME (AF)

							17.7
MAJOR IONS (mg/L)	REP. LIMIT	JAN	FEB	MAR	APR	MAY	JUN
Ca	1.0						228
Mg	1.0	IRRIGATOR	IRRIGATOR	IRRIGATOR	IRRIGATOR	IRRIGATOR	92.1
Na	1.0	DID NOT	DID NOT	DID NOT	DID NOT	DID NOT	84.9
K	1.0	OPERATE	OPERATE	OPERATE	OPERATE	OPERATE	21.9
HCO_3	1.0						168
SO_4	1.0						573
Cl	1.0						262
NON-METALS							
TDS @ 180° C (mg/L)	10.0						1620
pH (standard units)	0.010						8.12
SAR	0.01						1.22
TRACE METALS (mg/L)							
As	0.001						0.002
Ba	0.1						ND
B	0.10						0.1
Se	0.001						0.247
RADIOMETRIC							
U-nat (uCi/mL)	2.03E-10						4.68E-07
Ra-226 (uCi/mL)	2.00E-10						ND
Ra Err. Est. +/-							

TABLE 7A

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

SAMPLE DATE		14-Jan-05	15-Feb-05	16-Mar-05	11-Apr-05	10-May-05	17-Jun-05
RADIOMETRIC	Rep. Limit						
Ra-226 (uCi/mL)	2.00E-10	3.20E-09	2.20E-09	2.60E-09	2.00E-09	1.30E-09	2.00E-09
Ra Err. Est.+/-		7.00E-10	6.00E-10	6.00E-10	4.00E-10	5.00E-10	5.00E-10

TABLE 7B

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

SAMPLE DATE		14-Jan-05	15-Feb-05	16-Mar-05	11-Apr-05	10-May-05	17-Jun-05
RADIOMETRIC	Rep. Limit						
Ra-226 (uCi/mL)	2.00E-10	9.70E-09	1.32E-08	1.40E-09	1.66E-08	1.10E-08	9.00E-10
Ra Err. Est.+/-		1.20E-09	1.60E-09	4.00E-10	1.10E-09	1.00E-09	3.00E-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)	
SAMPLE DATE		23-Feb-05	17-May-05	23-Feb-05	17-May-05
WATER LEVEL (DTW)		14.39	14.51	9.6	8.51
MAJOR IONS (mg/L)	Rep. Limit				
HCO_3	1.0	INSUFFICIENT		195	166
SO_4	1.0	WATER FOR		2370	2420
Cl	1.0	SAMPLING		358	307
NON-METALS					
Cond (µmho/cm)	1.0			4940	4840
pH (standard units)	0.01			7.69	7.48
TRACE METALS (mg/L)					
Ba	0.001			ND	0.1
Se	0.0025			0.091	0.092
RADIOMETRIC					
U-nat (uCi/mL)	6.77E-10			2.01E-08	1.80E-08
Ra-226 (uCi/mL)	2.00E-10			1.54E-08	1.60E-09
Ra-226 Err. Est. +/- (uCi/mL)				1.30E-09	5.00E-10