



# Energy Fuels Resources

June 30, 2011

Mr. Steve Tarlton  
Hazardous Materials & Waste Management Division  
Colorado Department of Public Health and Environment  
HMWM-B2  
4300 Cherry Creek Drive South  
Denver, Colorado 80246-1530

Re: 2010 Annual Report and Financial Warranty Review  
Piñon Ridge Mill, Radioactive Materials License 1170-01

Dear Steve,

Energy Fuels Resources Corporation (Energy Fuels) is pleased to provide you with this 2010 Annual Report and Financial Warranty Review for the Piñon Ridge Uranium/Vanadium Mill, Radioactive Materials License 1170-01, Amendment 00. The Annual Report is provided in conformance with Condition 22.A of the license and the Annual Financial Warranty Review is provided in conformance with Condition 23.B of the license and 6 CCR 1007-1 Part 3, Section 3.9.5.6 of the CDPHE Rules and Regulations Pertaining to Radiation Control, as amended on March 16, 2011. This annual report and financial warranty review is for Calendar Year 2010. However, the above referenced license was not issued in its final form until March 7, 2011. As such, this Annual Report and Financial Warranty Review is not required but instead is provided under an abundance of caution to comply with the rules and regulations pertaining to the Piñon Ridge Mill.

## **2010 Annual Report**

Condition 22.A of the Piñon Ridge Mill Radioactive Materials License requires that the following information, at a minimum be included in the annual report:

- i. A detailed summary of activities for the preceding year, including: a listing of classified materials received for processing; the amounts of classified materials processed, the amounts of materials placed into the designated on-site impoundments;
- ii. Annual ALARA Report, including a summary of Occupational Doses;
- iii. Independent ALARA Audit Report;
- iv. Personnel and Facility Monitoring;
- v. Estimates of Radiation Doses to Members of the Public;
- vi. Environmental Monitoring and Analysis;
- vii. Water Quality Monitoring Report;

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- viii. Air Emissions Controls;
- ix. Quality Assurance and Quality Control;
- x. Liquids and Solids Management;
- xi. Annual Land Use Report; and
- xii. A summary of anticipated activities for coming year.

Because the radioactive materials license has only become active on March 7, 2011 and construction for the mill has not begun, most of the above items are not applicable. Each item is listed below in italics followed by the applicable information in regular text.

- i. A detailed summary of activities for the preceding year, including: a listing of classified materials received for processing; the amounts of classified materials processed, the amounts of materials placed into the designated on-site impoundments*

Only application comment response and baseline monitoring activities progressed in 2010. Application comment responses and baseline monitoring reports have been previously submitted to CDPHE with the exception of the “Environmental Radiological Monitoring Addendum No. 2,” dated June 30, 2011, which is included as Appendix A to this report. No radioactive materials were received, processed or disposed of in association with this license in 2010.

- ii. Annual ALARA Report, including a summary of Occupational Doses*

No ALARA Report was prepared for 2010 as there were no radioactive materials associated with this license present at the site in 2010. As a result there were no occupational doses associated with this license in 2010.

- iii. Independent ALARA Audit Report*

No Independent ALARA Audit Report was prepared for 2010 as there was no ALARA Report required for 2010 associated with this license (see *item ii.* above).

- iv. Personnel and Facility Monitoring*

No personnel and facility monitoring was conducted as there were no radioactive materials associated with this license present at the site in 2010. As a result no personnel or facility monitoring was required in 2010.

- v. Estimates of Radiation Doses to Members of the Public*

No estimates of radiation doses to members of the public were conducted for 2010 as there were no radioactive materials associated with this license present at the site in 2010. As a result there were no public doses associated with this license in 2010.

vi. *Environmental Monitoring and Analysis*

Baseline monitoring continued as scheduled in 2010 as follows:

- Meteorological monitoring continued through 2010 and was temporarily suspended following the first quarter of 2011. 2010 Meteorological data was presented in the following reports previously submitted to CDPHE:
  - First Quarter 2010 Data Report for Ambient Air Monitoring, dated May 7, 2010 and revised August 31, 2010
  - Second Quarter 2010 Data Report for Meteorological Monitoring, dated July 19, 2010 and revised August 31, 2010
  - Third Quarter 2010 Data Report for Meteorological Monitoring, dated December 21, 2010
  - Fourth Quarter 2010 Data Report for Meteorological Monitoring, dated March 4, 2011 and revised May 4, 2011
- PM-10 monitoring was temporarily suspended following the first quarter of 2010. 2010 PM-10 monitoring data was presented in the “First Quarter 2010 Data Report for Ambient Air Monitoring,” dated May 7, 2010 and previously submitted to CDPHE.
- Hi-Vol radiological particulate monitoring was temporarily suspended following the first quarter of 2010. 2010 Hi-Vol radiological monitoring data was presented in the “First Quarter 2010 Data Report for Ambient Air Monitoring,” dated May 7, 2010 and previously submitted to CDPHE.
- Environmental dosimetry was temporarily suspended following the third quarter of 2010. 2010 Environmental dosimetry monitoring data was presented in the following letter reports:
  - Environmental Radiological Monitoring Addendum No. 1, dated September 14, 2010 and previously submitted to CDPHE
  - Environmental Radiological Monitoring Addendum No. 2, dated June 30, 2011 and included as Appendix A to this report.
- Environmental radon continued through 2010 and was temporarily suspended following the first quarter of 2011. 2010 Environmental radon monitoring data was presented in the following letter reports:
  - Environmental Radiological Monitoring Addendum No. 1, dated September 14, 2010 and previously submitted to CDPHE
  - Environmental Radiological Monitoring Addendum No. 2, dated June 30, 2011 and included as Appendix A to this report.
- Surface water monitoring and sampling was temporarily suspended at the end of 2010. 2010 Surface water monitoring data was presented in the following reports, previously submitted to CDPHE:
  - Surface Water Monitoring Addendum No. 1, dated November 10, 2010
  - 2010 Surface Water Monitoring Summary Report, dated February 10, 2011

- Dolores River baseline monitoring was completed in 2010. Dolores River monitoring data was presented in the following reports, previously submitted to CDPHE:
  - Dolores River Water Quality, First Quarter 2010, dated April 8, 2010
  - Dolores River Water Quality, Second Quarter 2010, dated August 10, 2010
  - Dolores River Water Quality 2010 Summary Report, dated December 16, 2010
- On-site groundwater monitoring (including monitoring and production wells) was continued on a reduced quarterly monitoring and annual sampling schedule through 2010 with no plans for suspension. Off-site groundwater monitoring was continued on a quarterly monitoring and annual sampling schedule (except Stone Spring which is on a semi-annual sampling schedule) through 2010 with no plans for suspension. On-site and off-site groundwater monitoring data was presented in the following reports, previously submitted to CDPHE:
  - Groundwater Monitoring Addendum, dated April 9, 2010
  - Groundwater Monitoring Addendum No. 2, dated August 10, 2010
  - Groundwater Monitoring 2010 Summary Report, dated February 2, 2011

All temporary suspensions of the baseline monitoring program met or were extended beyond those timelines outlined in a letter dated March 12, 2010 and subsequently approved by CDPHE. The baseline monitoring program will resume prior to start of construction of the mill according to the schedules set forth in the Operational Monitoring Plan, dated November 11, 2009.

vii. *Water Quality Monitoring Report*

Baseline groundwater and surface water quality through 2010 was summarized in the following reports, previously submitted to CDPHE:

- Dolores River Water Quality 2010 Summary Report, dated December 16, 2010
- Groundwater Monitoring 2010 Summary Report, dated February 2, 2011
- 2010 Surface Water Monitoring Summary Report, dated February 10, 2011

viii. *Air Emissions Controls*

No air emissions controls were implemented as there were no radioactive materials associated with this license present at the site in 2010. As a result there were no air emissions associated with this license in 2010.

ix. *Quality Assurance and Quality Control*

Quality Assurance and Quality Control (QA/QC) for environmental sampling is addressed in the various baseline monitoring reports (see *item vi.* above) and associated work plans previously submitted to CDPHE. No QA/QC is applicable to occupational monitoring in 2010 as no occupational monitoring was conducted in association with this license in 2010 (see *item iv.* above).

x. *Liquids and Solids Management*

No liquids and solids management activities were performed in 2010 as there were no radioactive materials associated with this license present at the site in 2010. As a result no disposal of radioactive materials occurred in association with this license in 2010.

xi. *Annual Land Use Report*

To the knowledge of Energy Fuels, there have been no changes of land use within a 5-mile radius of the mill site 2010. As indicated in the “Estimates of Radiation Doses to Members of the Public from the Piñon Ridge Mill”, dated November 2009 and submitted with the license application, there are six residences located within 5 miles of the mill site. Because the Piñon Ridge Mill was not licensed and did not start construction in 2010, there were no effects to the local demographic trends, possible factors contributing to land use trends, or efforts to mitigate the impact of the mill’s operation on local governments and socioeconomic conditions directly associated with this license in 2010.

xii. *A summary of anticipated activities for coming year*

Baseline monitoring has been temporarily suspended in 2011 until prior to the start of construction with the exception of the groundwater monitoring program, which will continue with quarterly monitoring and annual sampling of on- and off-site monitoring wells, production wells, domestic wells, stocks wells and semi-annual sampling of Stone Spring (see *item vi.* above).

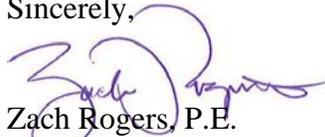
Energy Fuels plans to proceed with the final design of the mill facility and litigation associated with the license and the Montrose County Special Use Permit in 2011. We anticipate receiving an air permit from the Colorado Division of Air Quality and NESHAPs Construction Approval from U.S. EPA. Energy Fuels does not plan to start construction of the mill in 2011 due to the on-going litigation.

**2010 Financial Warranty Review**

All conditions factored into the calculation of the financial warranty for the mill remain the same as those stated in the Piñon Ridge Mill Decommissioning and Reclamation Cost Estimate,” dated October 2009 and previously submitted to CDPHE. The Decommissioning Funding Plan (DFP), dated March 2011 was prepared and submitted to CDPHE in 2011, prior to final issuance of the radioactive materials license. The DFP was recently revised and submitted to CDPHE on June 28, 2011 as part of proposed Amendment 01 to the license.

Please feel free to contact me at (303) 974-2151 if you need any additional information.

Sincerely,



Zach Rogers, P.E.  
Environmental Engineer

Attachment

Cc: Steve Brown (SENES)  
Frank Filas (Energy Fuels)

## **APPENDIX A**

Environmental Radiological Monitoring Addendum No. 2



# Energy Fuels Resources

June 30, 2011

Mr. Edgar Ethington  
Hazardous Materials & Waste Management Division  
Colorado Department of Public Health and Environment  
HMWM-HWC-B2  
4300 Cherry Creek Drive South  
Denver, Colorado 80246-1530

Re: Environmental Radiological Monitoring Addendum No. 2, Piñon Ridge Mill

Dear Mr. Ethington,

This Environmental Radiological Monitoring Addendum No. 2 for the Piñon Ridge Project augments the Baseline Radiological Report (prepared by Environmental Restoration Group and submitted with Energy Fuels Resources Corporation's [Energy Fuels'] Radioactive Material License Application dated November 2009) and the Environmental Radiological Monitoring Addendum No. 1 (prepared by Energy Fuels and submitted on September 14, 2010). This addendum includes additional environmental radon and gamma dosimetry monitoring data collected from the Third Quarter 2010 through the First Quarter 2011. A data CD including this addendum in pdf format is attached to assist the CDPHE in posting this information to its website.

In accordance with the revisions to the site monitoring program, proposed in a letter to CDPHE dated March 12, 2010 and approved by CDPHE, the baseline radon monitoring at the Piñon Ridge Mill site was temporarily suspended First Quarter 2011 monitoring period and the environmental dosimetry monitoring was temporarily suspended following the Second Quarter 2010 (dosimetry monitoring was actually extended through the third Quarter 2010). Both monitoring programs will be restarted prior to mill construction.

## **Radon Ambient Air Monitoring**

In accordance with the September 2007 Work Plan and NRC Regulatory Guide 4.14, passive track-etch detectors were placed at each of the five air monitoring site (AMS) locations to measure radon-222 air concentrations. The track-etch detectors are mounted to the AMS structure support leg or hand railing at a heights ranging from approximately 6 to 11 feet from the ground surface. Three AMS locations are located on the site property and the remaining two locations are offsite and located upwind and downwind from the site. The five selected monitoring locations are discussed below:

**Air Monitoring Site #1:** This location is also referred to as Met Site #1 and is located near the northern boundary of the Site. This location includes the 10 meter (10m)

meteorological tower, one of the two on-site PM<sub>10</sub> monitoring locations, an air monitor for radionuclide sampling, a track-etch radon detector and an Optically-Stimulated Luminescence (OSL) dosimeter.

Air Monitoring Site #2: This location is also referred to as Met Site #2 and is located near the eastern boundary of the Site. This location includes the 30 meter (30m) meteorological tower, one of the two on-site PM<sub>10</sub> monitoring locations, an air monitor for radionuclide sampling, a track-etch radon detector and an OSL dosimeter.

Air Monitoring Site #3: This location is also referred to as the West Site and is located near the western boundary of the Site. This location includes an air monitor for radionuclide sampling, a track-etch radon detector and an OSL dosimeter.

Air Monitoring Site #4: This location is also referred to as the Cooper Site and is located northwest of the Site. This site is assumed to be upwind. This site will be the background site following startup of operations. This location includes an air monitor for radionuclide sampling, a track-etch radon detector and an OSL dosimeter.

Air Monitoring Site #5: This location is also referred to as the Carver Site and is located southeast of the Site. This site is assumed to be a downwind site, and was chosen as the site of the nearest residence. This location includes an air monitor for radionuclide sampling, a track-etch radon detector and an OSL dosimeter.

The radon-222 measurements have been collected for 12 calendar quarters to date, from the Second Quarter 2008 through the First Quarter 2011, with detectors exchanged quarterly. The track-etch detectors were provided and analyzed by Landauer, Inc., a National Voluntary Laboratory Accreditation Program (NVLAP) certified laboratory. The data from the first five quarters of data collection was presented in revision 1 of the Baseline Radiological Investigation Report, prepared by Environmental Restoration Group, Inc. and dated October 5, 2009. The data from the next four quarters of data collection was presented in Environmental Radiological Monitoring Addendum No. 1, prepared by Environmental Restoration Group, Inc. and dated September 14, 2010. Laboratory Radon Monitoring Reports for the past three calendar quarters are included in Attachment A.

The ambient radon monitoring results from all quarters of data collection are listed by site in Table 1a, attached. The average concentrations, listed by calendar quarter, along with the average wind speed and barometric pressure from Site 1 are presented in Table 1b.

There appear to be no spatial trends in the data set, other than the levels are similar across the AMS locations. The average radon concentrations as well as the range of radon concentrations have been fairly consistent across the five sites.

The average radon concentration by quarter is shown in Chart 1. There appears to be an loose overall inverse correlation between the average wind speed and radon concentration as well as a direct correlation between barometric pressure and radon concentration (see Charts 2 and 3, attached).

On average, the measured values are within the range of reported worldwide ambient background radon concentrations, 0.027 to 2.7 pCi/L reported in the 2000 United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR) Report to the General Assembly, Sources and Effects of Ionizing Radiation, Annex B.

### **Exposure Rate Monitoring (Environmental Dosimetry)**

In accordance with the September 2007 Work Plan and NRC Regulatory Guide 4.14, environmental optically-stimulated luminescence (OSL) dosimeters were placed at each of the five air monitoring station (AMS) locations to measure external ionizing radiation exposure. The OSL dosimeters hang on the AMS support structure railings or stairs at heights ranging from approximately 7 to 12 feet from the ground surface. The exposure measurements have been collected for nine calendar quarters to date, from the Third Quarter 2008 through the Third Quarter 2010, with OSL dosimeters exchanged quarterly. The dosimeters were provided and analyzed by Landauer, Inc. During each monitoring period eight OSL dosimeters were analyzed:

- One OSL dosimeter was placed at each of the five AMS locations,
- One duplicate dosimeter was collocated at one of the AMS locations on a rotating basis,
- One deployment control dosimeter was taken to the sites during deployment and collection and stored at an off-site location during the period, and
- One transit control dosimeter was shipped back to the laboratory as soon as practical after receiving the dosimeter.

The deployment control dosimeter results were used to correct the reported results. The corrections were made to subtract the exposure from the end of the monitoring period to dosimeter processing. The correction was calculated by dividing the deployment control result by the number of days from the start of the monitoring period to the date of processing to get an average daily exposure rate. The average daily exposure rate was multiplied by the number of days between the end of the monitoring period and date of processing to get a correction factor that was subtracted from each of the reported results. The corrections to reported values are summarized in Table 2a, attached.

The data from the first four quarters of data collection was presented in revision 1 of the Baseline Radiological Investigation Report and the data from the following four quarters was presented in Environmental Radiological Monitoring Addendum No. 1. Laboratory Environmental/Low Level Dosimetry Reports for the Third Quarter 2010 is included in Attachment B. The environmental dosimetry results from all quarters of data collection are listed in Table 2b, attached.

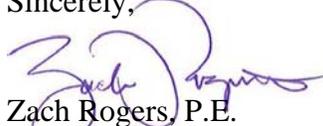
The average overall corrected gamma dose rates range from 113 to 136 mrem/yr (12.9 to 15.5  $\mu$ mrem/hr) by site as measured using the OSLs over nine calendar quarters. The average corrected dosimetry results by quarter are shown in Chart 4. There appear to be no seasonal trends in the data set, other than the levels are similar across the AMS

locations. A slight spatial trend is evident in that the detected exposure rates are higher at the locations closest to the mesa, to the south of the mill site, on a fairly consistent basis, specifically at sites 2 and 5. Exposure rates at site 3 are generally above the average level, but not as consistently as sites 2 and 5. Sites 1 and 4, located along Highway 90 and nearer to the center of the valley, exhibit the lowest exposure rates on a fairly consistent basis.

All dose rates are within the average worldwide exposures to natural radiation sources comprised of cosmic radiation, cosmogenic radionuclides, and external terrestrial radiation reported in the UNSCEAR Report. The typical ranges of average worldwide exposures reported in this reference document are to 60 to 160 millirem per year (mrem/yr).

Please feel free to contact me at (303) 974-2151 if you need any additional information.

Sincerely,



Zach Rogers, P.E.  
Environmental Engineer

Attachment

Cc: Phil Egidi (CDPHE)  
Dr. Angelique Diaz (U.S. EPA – Indoor Air)  
Steve Brown (SENES)  
Frank Filas (Energy Fuels)

## **TABLES**

**Table 1a**  
**Baseline Radon Ambient Air Monitoring Measurements**

Location	Sample Period	Radon-222 Conc. (pCi/L)	Error ± (pCi/L)	Average Rn-222 Conc. (pCi/L)	Standard Deviation of Average (pCi/L)	Rn-222 Conc. Range (pCi/L)
Site 1	2 <sup>nd</sup> Quarter 2008 <sup>(1)</sup>	0.9	-	1.2	0.9	0.4 to 3.8
	3 <sup>rd</sup> Quarter 2008	1.9	-			
	4 <sup>th</sup> Quarter 2008	1.8	-			
	1 <sup>st</sup> Quarter 2009	3.8	0.20			
	2 <sup>nd</sup> Quarter 2009	0.9	0.09			
	3 <sup>rd</sup> Quarter 2009	0.4	0.05			
	4 <sup>th</sup> Quarter 2009	1.2	0.10			
	1 <sup>st</sup> Quarter 2010	1.0	0.09			
	2 <sup>nd</sup> Quarter 2010	0.7	0.07			
	3 <sup>rd</sup> Quarter 2010	0.6	0.06			
	4 <sup>th</sup> Quarter 2010	0.7	0.07			
	1 <sup>st</sup> Quarter 2011	0.7	0.06			
Site 2	2 <sup>nd</sup> Quarter 2008 <sup>(1)</sup>	0.9	-	1.5	1.0	0.6 to 3.8
	3 <sup>rd</sup> Quarter 2008	1.9	-			
	4 <sup>th</sup> Quarter 2008	3.2	-			
	1 <sup>st</sup> Quarter 2009	3.8	0.20			
	2 <sup>nd</sup> Quarter 2009	1.3	0.11			
	3 <sup>rd</sup> Quarter 2009	1.2	0.10			
	4 <sup>th</sup> Quarter 2009	1.5	0.11			
	1 <sup>st</sup> Quarter 2010	1.1	0.09			
	2 <sup>nd</sup> Quarter 2010	0.6	0.06			
	3 <sup>rd</sup> Quarter 2010	0.8	0.08			
	4 <sup>th</sup> Quarter 2010	1.0	0.08			
	1 <sup>st</sup> Quarter 2011	1.2	0.09			
Site 3	2 <sup>nd</sup> Quarter 2008 <sup>(1)</sup>	0.6	-	1.2	1.0	<0.3 to 4.1
	3 <sup>rd</sup> Quarter 2008	1.7	-			
	4 <sup>th</sup> Quarter 2008	1.6	-			
	1 <sup>st</sup> Quarter 2009	4.1	0.21			
	2 <sup>nd</sup> Quarter 2009	0.7	0.08			
	3 <sup>rd</sup> Quarter 2009	0.9	0.09			
	4 <sup>th</sup> Quarter 2009	1.5	0.11			
	1 <sup>st</sup> Quarter 2010	0.8	0.08			
	2 <sup>nd</sup> Quarter 2010	<0.3	0.04			
	3 <sup>rd</sup> Quarter 2010	0.7	0.07			
	4 <sup>th</sup> Quarter 2010	0.6	0.06			
	1 <sup>st</sup> Quarter 2011	0.8	0.07			
Site 4	2 <sup>nd</sup> Quarter 2008 <sup>(1)</sup>	0.9	-	1.2	0.9	<0.3 to 3.6
	3 <sup>rd</sup> Quarter 2008	1.7	-			
	4 <sup>th</sup> Quarter 2008	1.7	-			
	1 <sup>st</sup> Quarter 2009	3.6	0.19			
	2 <sup>nd</sup> Quarter 2009	0.9	0.09			
	3 <sup>rd</sup> Quarter 2009	0.9	0.09			
	4 <sup>th</sup> Quarter 2009	1.1	0.10			
	1 <sup>st</sup> Quarter 2010	1.0	0.09			
	2 <sup>nd</sup> Quarter 2010	<0.3	0.04			
	3 <sup>rd</sup> Quarter 2010	0.5	0.06			
	4 <sup>th</sup> Quarter 2010	0.7	0.07			
	1 <sup>st</sup> Quarter 2011	0.8	0.07			

**Table 1a (continued)**  
**Baseline Radon Ambient Air Monitoring Measurements**

Location	Sample Period	Radon-222 Conc. (pCi/L)	Error ± (pCi/L)	Average Rn-222 Conc. (pCi/L)	Standard Deviation of Average (pCi/L)	Rn-222 Conc. Range (pCi/L)
Site 5	2 <sup>nd</sup> Quarter 2008 <sup>(1)</sup>	0.8	-	1.2	0.9	0.3 to 3.3
	3 <sup>rd</sup> Quarter 2008	1.8	-			
	4 <sup>th</sup> Quarter 2008	1.8	-			
	1 <sup>st</sup> Quarter 2009	3.3	0.19			
	2 <sup>nd</sup> Quarter 2009	0.9	0.09			
	3 <sup>rd</sup> Quarter 2009	(2)	(2)			
	4 <sup>th</sup> Quarter 2009	1.3	0.10			
	1 <sup>st</sup> Quarter 2010	0.9	0.08			
	2 <sup>nd</sup> Quarter 2010	0.5	0.05			
	3 <sup>rd</sup> Quarter 2010	0.3	0.04			
	4 <sup>th</sup> Quarter 2010	0.4	0.04			
	1 <sup>st</sup> Quarter 2011	0.7	0.06			

Notes:

- (1) The Second Quarter 2008 monitoring period was from March 8 through July 1, 2008.
- (2) This detector was found on the ground during detector collection and observed a much higher average radon concentration and is not included in this table. See Addendum No. 1 text for details.

**Table 1b**  
**Baseline Radon Measurements by Quarter**

<b>Sample Period</b>	<b>Average Rn-222 Concentration (pCi/L)</b>	<b>Standard Deviation of Average (pCi/L)</b>	<b>Rn-222 Concentration Range (pCi/L)</b>	<b>Site 1 Average Wind Speed (m/s)</b>	<b>Site 1 Average Barometric Pressure (in. Hg)</b>
2 <sup>nd</sup> Quarter 2008 <sup>(1)</sup>	0.8	0.13	0.6 to 0.9	3.60	24.55
3 <sup>rd</sup> Quarter 2008	1.8	0.10	1.7 to 1.9	2.81	24.65
4 <sup>th</sup> Quarter 2008	2.0	0.66	1.6 to 3.2	2.32	24.67
1 <sup>st</sup> Quarter 2009	3.7	0.29	3.3 to 4.1	2.58	24.63
2 <sup>nd</sup> Quarter 2009	0.9	0.22	0.7 to 1.3	3.41	24.56
3 <sup>rd</sup> Quarter 2009	0.9	0.33	0.4 to 1.2	3.11	24.68
4 <sup>th</sup> Quarter 2009	1.3	0.18	1.1 to 1.5	2.35	24.61
1 <sup>st</sup> Quarter 2010	1.0	0.11	0.8 to 1.1	2.02	24.58
2 <sup>nd</sup> Quarter 2010	0.5	0.18	<0.3 to 0.7	3.93	24.52
3 <sup>rd</sup> Quarter 2010	0.6	0.19	0.3 to 0.8	2.72	24.66
4 <sup>th</sup> Quarter 2010	0.7	0.22	0.4 to 1.0	2.43	24.65
1 <sup>st</sup> Quarter 2011	0.8	0.21	0.7 to 1.2	2.56	24.62

**Table 2a  
Ambient Gamma Dose Rate Corrections**

Description	Third Quarter 2010	
	(total mrem)	
	reported	corrected <sup>(1)</sup>
Site 1 (pCi/L)	36.5	33.6
Site 2 (pCi/L)	41.5	38.6
Site 3 (pCi/L) <sup>(2)</sup>	41.1	38.2
Site 4 (pCi/L)	33.8	30.9
Site 5 (pCi/L)	41.5	38.6
Transit Control (pCi/L)	9.1	
Deployment Control (pCi/L)	40.5	
Days in quarter	92	
Days until processing (after end date)	7	
Start Date	7/1/10	
End Date	10/1/10	
Date Processed	10/8/10	
Daily Control Rate (pCi/L/day)	0.409	
Deployment Control Correction (pCi/L)	2.9	

Notes:

(1) All reported values were corrected by subtracting a correction factor based on the deployment control results. The deployment control correction was calculated as the average daily value of the deployment control multiplied by the number of days before the OSL was processed after the end date (date of collection).

Example Correction Calculation (Third Quarter 2010, Site 1):

Deployment control daily average = deployment control value (40.5 pCi/L)/(days in quarter + days until processing[92+7 days]) = 0.409 pCi/L/day

Deployment control correction = deployment control daily average (0.409 pCi/L/day) \* days until processing (7) = 2.9 pCi/L

Corrected value = reported value (36.5 pCi/L) - deployment control correction (2.9 pCi/L) = 33.6 pCi/L

**Table 2b**  
**Control Corrected Ambient Gamma Dose Rates using OSL Dosimeters**

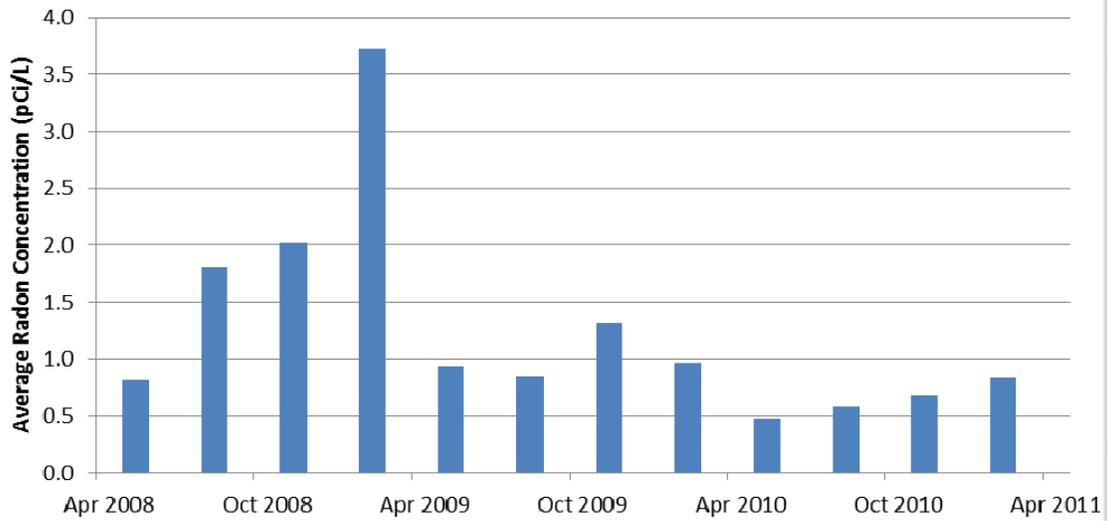
Location	Period (Quarter)	Dose (mrem)	Average Dose per Monitoring Period (mrem)	Average Projected Annual Dose (mrem/yr)	Average Projected Dose Rate ( $\mu$ rem/hr)
Site 1	3 <sup>rd</sup> Quarter 2008	21.0	28.3	113	12.9
	4 <sup>th</sup> Quarter 2008	27.0			
	1 <sup>st</sup> Quarter 2009	23.2			
	2 <sup>nd</sup> Quarter 2009	24.3			
	3 <sup>rd</sup> Quarter 2009	27.3			
	4 <sup>th</sup> Quarter 2009	25.3			
	1 <sup>st</sup> Quarter 2010	34.7			
	2 <sup>nd</sup> Quarter 2010	27.9			
	3 <sup>rd</sup> Quarter 2010	33.6			
Site 2	3 <sup>rd</sup> Quarter 2008	30.9	33.8	135	15.4
	4 <sup>th</sup> Quarter 2008	27.1			
	1 <sup>st</sup> Quarter 2009	36.2			
	2 <sup>nd</sup> Quarter 2009	30.1			
	3 <sup>rd</sup> Quarter 2009	31.1			
	4 <sup>th</sup> Quarter 2009	29.8			
	1 <sup>st</sup> Quarter 2010	35.1			
	2 <sup>nd</sup> Quarter 2010	38.1			
	3 <sup>rd</sup> Quarter 2010	38.6			
Site 3	3 <sup>rd</sup> Quarter 2008	28.4	32.3	129	14.8
	4 <sup>th</sup> Quarter 2008	36.5			
	1 <sup>st</sup> Quarter 2009	24.8			
	2 <sup>nd</sup> Quarter 2009	30.0			
	3 <sup>rd</sup> Quarter 2009	30.1			
	4 <sup>th</sup> Quarter 2009	30.0			
	1 <sup>st</sup> Quarter 2010	30.7			
	2 <sup>nd</sup> Quarter 2010	33.5			
	3 <sup>rd</sup> Quarter 2010	38.2			
Site 4	3 <sup>rd</sup> Quarter 2008	37.7	29.3	117	13.4
	4 <sup>th</sup> Quarter 2008	24.8			
	1 <sup>st</sup> Quarter 2009	35.8			
	2 <sup>nd</sup> Quarter 2009	21.5			
	3 <sup>rd</sup> Quarter 2009	31.2			
	4 <sup>th</sup> Quarter 2009	25.5			
	1 <sup>st</sup> Quarter 2010	27.0			
	2 <sup>nd</sup> Quarter 2010	29.7			
	3 <sup>rd</sup> Quarter 2010	30.9			
Site 5	3 <sup>rd</sup> Quarter 2008	27.8	33.9	136	15.5
	4 <sup>th</sup> Quarter 2008	31.0			
	1 <sup>st</sup> Quarter 2009	29.9			
	2 <sup>nd</sup> Quarter 2009	31.0			
	3 <sup>rd</sup> Quarter 2009	26.3			
	4 <sup>th</sup> Quarter 2009	34.0			
	1 <sup>st</sup> Quarter 2010	30.1			
	2 <sup>nd</sup> Quarter 2010	28.8			
	3 <sup>rd</sup> Quarter 2010	38.6			

Notes:

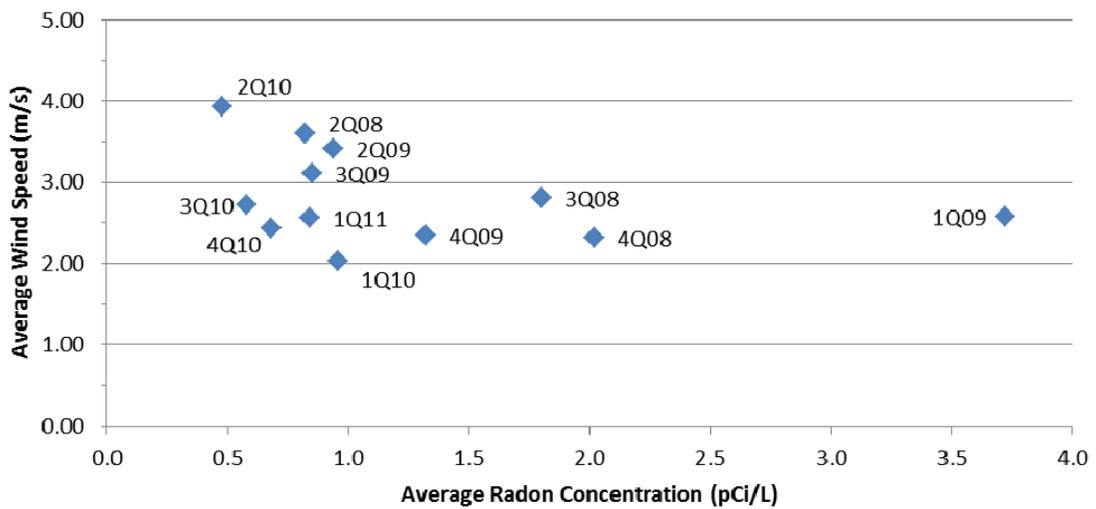
- (1) Dosimeter was damaged during processing; result is an estimated value from the laboratory

## **CHARTS**

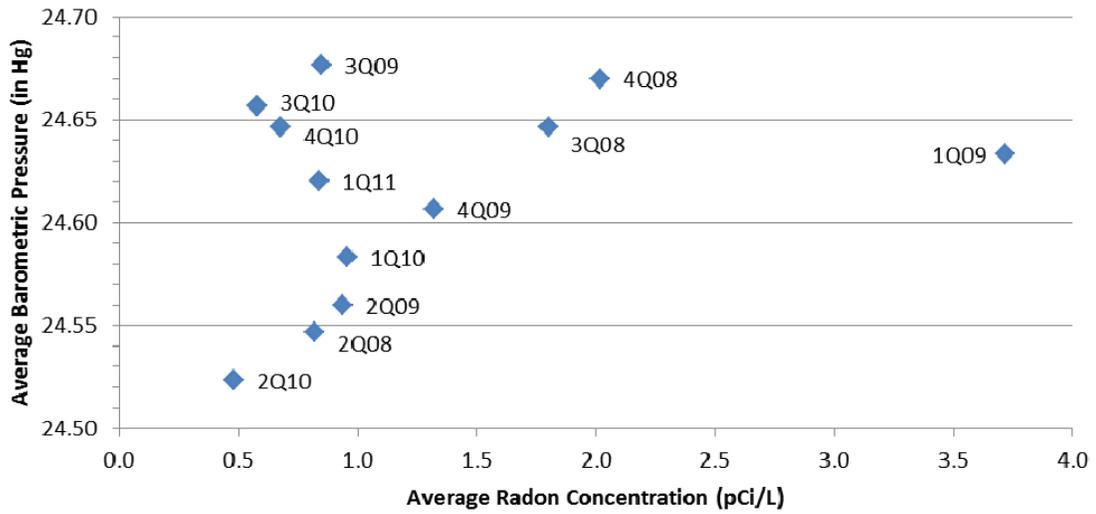
**Chart 1**  
**Environmental Radon Concentration**



**Chart 2**  
**Wind Speed vs Radon Concentration**



**Chart 3**  
**Barometric Pressure vs Radon Concentration**



**Chart 4**  
**Environmental Dosimetry**



**ATTACHMENT A**

**Third Quarter 2010 through First Quarter 2011 Laboratory  
Radon Monitoring Reports**

# Radon Monitoring Report

ENERGY FUELS RESOURCES  
 ATTN: ZACH ROGERS  
 44 UNION BLVD, STE 600  
 LAKEWOOD, CO 80228

# LANDAUER

Landauer, Inc. 2 Science Road Glenwood, Illinois 60425-1586  
 Telephone: (800) 528-8327 Facsimile: (708) 755-7048

Acct. No. **0410143**

Detector Number	Detector Type	Starting Date	Ending Date	Field Data / Comments	Exposure pCi/lI-days	Avg. Radon Conc. pCi/l
4804615	DRNF	01-JUL-10	01-OCT-10	SITE #1	53.4 ±5.56	0.6 ±0.06
4804616	DRNF	01-JUL-10	01-OCT-10	SITE #2	78.1 ±7.22	0.8 ±0.08
4804617	DRNF	01-JUL-10	01-OCT-10	SITE #3	61.3 ±6.13	0.7 ±0.07
4804618	DRNF	01-JUL-10	01-OCT-10	SITE #4	48.4 ±5.19	0.5 ±0.06
4804619	DRNF	01-JUL-10	01-OCT-10	SITE #5	31.7 ±3.79	0.3 ±0.04

RECEIVE OCT 25 2010

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O.C. Release	Process No.	Report Date	Date Received
LMR	A22035	18-OCT-10	07-OCT-10

RESULTS RELATED ONLY TO MONITORS  
 AS RECEIVED BY LANDAUER.

# Radon Monitoring Report

ENERGY FUELS RESOURCES  
 ATTN: ZACH ROGERS  
 44 UNION BLVD, STE 600  
 LAKEWOOD, CO 80228

# LANDAUER

Landauer, Inc. 2 Science Road Glenwood, Illinois 60425-1586  
 Telephone: (800) 528-8327 Facsimile: (708) 755-7048

Acct. No. 0410143

Detector Number	Detector Type	Starting Date	Ending Date	Field Data / Comments	Exposure pCi/l-days	Avg. Radon Conc. pCi/l
4804537	DRNF	01-OCT-10	01-JAN-11	SITE #1	68.2 ±6.22	0.7 ±0.07
4804538	DRNF	01-OCT-10	01-JAN-11	SITE #2	93.9 ±7.77	1.0 ±0.08
4804539	DRNF	01-OCT-10	01-JAN-11	SITE #3	54.3 ±5.28	0.6 ±0.06
4804540	DRNF	01-OCT-10	01-JAN-11	SITE #4	65.2 ±6.03	0.7 ±0.07
4804541	DRNF	01-OCT-10	01-JAN-11	SITE #5	32.6 ±3.56	0.4 ±0.04

RECEIVED FEB 10 2011

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Q.C. Release LMR	Process No. A22106	Report Date 01-FEB-11	Date Received 18-JAN-11
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RESULTS RELATED ONLY TO MONITORS  
 AS RECEIVED BY LANDAUER.

# Radon Monitoring Report

ENERGY FUELS RESOURCES  
 ATTN: ZACH ROGERS  
 44 UNION BLVD, STE 600  
 LAKEWOOD, CO 80228

# LANDAUER

Landauer, Inc. 2 Science Road Glenwood, Illinois 60425-1586  
 Telephone: (800) 528-8327 Facsimile: (708) 755-7048

Acct. No. 0410143

Detector Number	Detector Type	Starting Date	Ending Date	Field Data / Comments	Exposure pCi/l-days	Avg. Radon Conc. pCi/l
4818587	DRNF	01-JAN-11	01-APR-11	SITE #1	62.1 ±5.70	0.7 ±0.06
4818588	DRNF	01-JAN-11	01-APR-11	SITE #2	104.2 ±8.1	1.2 ±0.09
4818589	DRNF	01-JAN-11	01-APR-11	SITE #3	73.1 ±6.39	0.8 ±0.07
4818590	DRNF	01-JAN-11	01-APR-11	SITE #4	71.3 ±6.28	0.8 ±0.07
4818591	DRNF	01-JAN-11	01-APR-11	SITE #5	63.0 ±5.76	0.7 ±0.06

Invoice # \_\_\_\_\_ Invoice Date: \_\_\_\_\_  
 Coding: \_\_\_\_\_ Amount: \_\_\_\_\_  
 Coding: \_\_\_\_\_ Amount: \_\_\_\_\_  
 Coding: \_\_\_\_\_ Amount: \_\_\_\_\_  
 Coding: \_\_\_\_\_ Amount: \_\_\_\_\_  
 Dept Appl By: \_\_\_\_\_ Date: \_\_\_\_\_  
 Entered By: \_\_\_\_\_ Date: \_\_\_\_\_  
 Acct Appl By: \_\_\_\_\_ Date: \_\_\_\_\_

RECEIVED APR 26 2011

**ATTACHMENT B**

**Third Quarter 2010**

**Laboratory Environmental/Low Level Dosimetry Reports**

RECEIVED OCT 15 2010

# LANDAUER

Landauer, Inc. 2 Science Road Glenwood, Illinois 60425-1586 Telephone: (708) 755-7000 Facsimile: (708) 755-7016

## ENVIRONMENTAL / LOW LEVEL DOSIMETRY REPORT

ADDRESS ACCOUNT NO. SERIES CODE  
ENERGY FUEL RESOURCES 291438  
ATTN : MARTY OLSON  
31525 HWY 90  
NECLA, CO 81424

FOR EXPOSURE PERIOD 07/01/2010

### NET CUMULATIVE TOTALS (MILLIREMS)

LOCATION ID NUMBER	IDENTIFIER (CLIENT SUPPLIED)	NOTE CODE	EXPOSURE OF DOSIMETER (MILLIREMS AMBIENT DOSE EQUIVALENT)	CALENDAR QUARTER	YEAR TO DATE	PERMANENT	ADJUST-MENTS	NUMBER OF DOSIMETERS REPORTED	INCEPTION DATE OF PERM. TOTAL
000X9	DEPLOY CONTROL		GROSS NET						
00001			40.5 0.0					8	/ /
00002			36.5 -4.0	-4.0	-2.9	-7.2		8	/ /
00003			41.5 0.9	0.9	8.1	28.0		7	/ /
00004			41.1 0.5	0.5	3.4	21.3		8	/ /
00005			33.8 -6.7	-6.7	-3.6	19.2		8	/ /
00006			41.5 1.0	1.0	0.7	6.2		8	/ /
			40.0 -0.5	-0.5	10.5	34.5		8	/ /

Q.C. Release	Process No.	Reported Date	Date Processed	Date Received	Minimum Detectable Dose In This Process, Millirems Ambient Dose Equivalent	ONLY PAGE
ac	B0C001	10/11/2010	10/08/2010	10/07/2010	0.10	1

## **Transit Control Results**

# LANDAUER

Landauer, Inc. 2 Science Road Glenwood, Illinois 60425-1586 Telephone: (708) 755-7000 Facsimile: (708) 755-7016

**RECEIVED AUG 24 2010**

ENVIRONMENTAL / LOW LEVEL DOSIMETRY REPORT

ADDRESS  
 ACCOUNT NO.      SERIES CODE  
 291438

ENERGY FUEL RESOURCES  
 ATTN: MARTY OLSON  
 31025 HWY 90  
 NEOLA, CO 81424

FOR EXPOSURE PERIOD      07/01/2010

NET CUMULATIVE TOTALS (MILLIREMS)

LOCATION ID NUMBER	IDENTIFIER (CLIENT SUPPLIED)	NOTE CODE	EXPOSURE OF DOSIMETER (MILLIREMS AMBIENT DOSE EQUIVALENT)	CALENDAR QUARTER	YEAR	PERMANENT	ADJUST-MENTS	NUMBER OF DOSIMETERS REPORTED	INCEPTION DATE OF PERM. TOTAL
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GROSS      NET

00000      TRANSIT CONTROL      NC      9.1

NOTES (COLUMN 3) :      NC      Returned Separately From The Deployment Control

G.C. Release      Process No.      Reported Date      Date Processed      Date Received      Minimum Detectable Dose In This Process, Millirems Ambient Dose Equivalent      ONLY PAGE

AC      920001      07/14/2010      07/13/2010      07/08/2010      0.10      1