UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
1600 E. LAMAR BLVD
ARLINGTON TX 76011-4511

November 23, 2016

Mike Thomas, Director
Safety, Health and Environment Health
Power Resources, Inc.,
d/b/a Cameco Resources
P.O. Box 1210
Glenrock, WY 82637

SUBJECT: NRC INSPECTION REPORT 040-08964/2016-001

Dear Mr. Thomas:

The U.S. Nuclear Regulatory Commission (NRC) conducted an unannounced team inspection from June 21-14, 2016, onsite at the Smith Ranch and North Butte uranium recovery facilities, respectively, in Converse and Campbell County, Wyoming. A preliminary exit was conducted with you and members of your staff telephonically on September 12, 2016. The final exit was conducted with you and members of your staff telephonically on October 25, 2016, after the NRC inspectors completed a review of your internal dose assessment process. The purpose of the inspection was to examine activities conducted under your license as they relate to public health and safety, and to confirm compliance with the Commission's rules and regulations and the conditions of your license. Within these areas, the inspection consisted of selected examination of procedures and representative records, observations of activities, tours of the uranium recovery facilities and the environmental monitoring locations, and interviews with site personnel. The results for this inspection are documented in the inspection report enclosure.

Based on the results of this inspection, the NRC has determined that a Severity Level IV violation of NRC requirements occurred. This violation involved your failure to calculate the committed effective dose equivalent from bioassay data using the appropriate biological models. The violation was evaluated in accordance with the NRC Enforcement Policy included on the NRC's Web site at http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html. The violation is cited in the enclosed Notice of Violation (Notice) and the circumstances surrounding it are described in detail in the subject inspection report. The violation is being cited because the NRC identified the violation in accordance with the requirements of NRC Enforcement Policy, Section 2.3.2.b.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. If you have additional information that you believe the NRC should consider, you may provide it in your response to the Notice. The NRC review of your response to the Notice will determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

In accordance with 10 CFR 2.390 of the NRC's "Agency Rules of Practice," a copy of this letter, its enclosure(s), and your response, will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's Agencywide Documents Access and

Management System (ADAMS), accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html. To the extent possible, your response should not include any personal privacy or proprietary, information so that it can be made available to the Public without redaction.

Should you have any questions concerning this inspection, please contact Ms. Bernadette Baca, Health Physicist at (817) 200-1235, or the undersigned at 817-200-1549.

Sincerely,

/RA/

Lee Brookhart, Acting Chief
Fuel Cycle and Decommissioning Branch
Division of Nuclear Materials Safety

Docket: 040-08964
License: SUA-1548

Enclosure:
1. Notice of Violation
2. Inspection Report 040-08964/2016-001

w/Attachment:
1. Supplemental Information
2. SERP Evaluations

NOTICE OF VIOLATION

Power Resources, Inc. d/b/a Cameco
Converse County, Wyoming

Docket No. 040-08964
License No. SUA-1548

During an inspection conducted onsite June 21-23, 2016, at the Smith Ranch and North Butte facilities and continued review of additional information received through October 25, 2016, one violation of NRC requirements was identified. In accordance with the NRC Enforcement Policy, the violation is listed below:

> Title 10 CFR 20.1202(a) states, in part, that if the licensee is required to monitor under both 20.1502(a) and (b), the licensee shall demonstrate compliance with the dose limits by summing external and internal doses. The licensee may demonstrate compliance with the requirements by meeting one of conditions specified in paragraph (b) of this section.
>
> Title 10 CFR 20.1202(b)(3) requires, in part, the calculated committed effective dose equivalent to all significantly irradiated organs or tissues be calculated from bioassay data using the appropriate biological models.
>
> Contrary to the above, between 2006 through 2016 it was identified by the NRC that the licensee failed to calculate the committed effective dose equivalent to all significantly irradiated organs or tissues using the appropriate biological models. Specifically, the licensee used incorrect bioassay Intake Retention Fractions when calculating the committed effective dose equivalents for four individuals since 2006. The licensee did not attempt to demonstrate compliance using any other approved method from 10 CFR 20.1202(b).

This is a Severity Level IV violation (Section 6.3.d).

Pursuant to the provisions of 10 CFR 2.201, Power Resources, Inc. is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with a copy to the Regional Administrator, Region IV, within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation" and should include for each violation: (1) the reason for the violation, or, if contested, the basis for disputing the violation or severity level; (2) the corrective steps that have been taken and the results achieved; (3) the corrective steps that will be taken; and (4) the date when full compliance will be achieved. Your response may reference or include previous docketed correspondence, if the correspondence adequately addresses the required response. If an adequate reply is not received within the time specified in this Notice, an order or a Demand for Information may be issued requiring information as to why the license should not be modified, suspended, or revoked, or why such other action as may be proper should not be taken. Where good cause is shown, consideration will be given to extending the response time.

If you contest this enforcement action, you should also provide a copy of your response, with the basis for your denial, to the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001.

Your response will be made available electronically for public inspection in the NRC Public Document Room or in the NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information.

If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information).

In accordance with 10 CFR 19.11, you may be required to post this Notice within two working days of receipt.

Dated this 23rd day of November 2016

U.S. NUCLEAR REGULATORY COMMISSION

REGION IV

Docket:	040-08964
License:	SUA-1548
Report:	040-8964/2016-001
Licensee:	Power Resources dba Cameco Resources
Location:	Smith Ranch Highland Project and North Butte Johnson and Campbell Counties, Wyoming
Dates:	June 21- October 25, 2016
Lead Inspector:	Bernadette Baca, Health Physicist Fuel Cycle and Decommissioning Branch Division of Nuclear Materials Safety
Inspectors:	Douglas T. Mandeville, Project Manager Uranium Recovery Licensing Branch Division of Decommissioning, Uranium Recovery and Waste Program Office of Nuclear Materials Safety and Safeguards Dave Brown, Sr. Health Physicist Uranium Recovery Licensing Branch Division of Decommissioning, Uranium Recovery and Waste Program Office of Nuclear Materials Safety and Safeguards Lloyd Desotell, Hydrologist Uranium Recovery Licensing Branch Division of Decommissioning, Uranium Recovery and Waste Program Office of Nuclear Materials Safety and Safeguards Anthony Huffert, Senior Health Physicist Uranium Recovery Licensing Branch Division of Decommissioning, Uranium Recovery and Waste Program Office of Nuclear Materials Safety and Safeguards

Enclosure 2

EXECUTIVE SUMMARY

Power Resources, Inc.
NRC Inspection Report 040-08964/16-001

This inspection included a review of management organization and control, site status, site tours, site operations, radiation protection, environmental protection, and radioactive waste management. The licensee was conducting operations in accordance with regulatory and license requirements, with one exception as described below.

Management Organization and Controls

- The organizational structure and staffing levels maintained by the licensee during the inspection period met the requirements specified in the license and were sufficient for the work in progress. (Section 1.2a)

- The licensee's safety and environmental review evaluations were performed in accordance with license requirements. (Section 1.2b)

- The licensee was conducting audits and inspections as required by regulatory requirements and the license. (Section 1.2c)

- The licensee had provided the appropriate nuclear material reports to comply with the additional regulatory protocol requirements. (Section 1.2d)

In-Situ Leach Facilities

- The licensee was conducting in-situ recovery and restoration activities in accordance with the license and regulatory requirements. (Section 2.2b)

- The licensee had submitted an updated financial assurance package for NRC review. (Section 2.2d)

Radiation Protection

- The licensee implemented a radiation protection program that met the requirements of 10 CFR Part 20 and the license. The annual doses to employees were below occupational dose limits. (Section 3.2a)

- One violation was identified related to the licensee's failure to use the correct intake retention fractions when calculating committed effective dose equivalent to all significantly irradiated organs or tissues from bioassay data. (Section 3.2a)

- Instrumentation, radiological surveys, radiation work permits (RWP), and respiratory protection met license and regulatory requirements. (Section 3.2b-e)

Effluent Control and Environmental Protection and Maintaining Effluents from Materials Facilities As Low As Is Reasonably Achievable (ALARA)

- The licensee conducted environmental monitoring in accordance with license requirements. (Section 4.2a)

- The annual dose to members of the public was below regulatory requirements. (Section 4.2b)

- Wellfield and excursion monitoring were conducted in accordance with license requirements. (Section 4.2c)

Inspection of Radioactive Waste Processing

- The licensee conducted solid and liquid waste disposal operations in accordance with the license and regulatory requirements. (Section 5.2a-b)

Implementation of the Decommissioning Planning Rule

- The licensee was in compliance with the requirements of the Decommissioning Planning Rule. The licensee established and implemented plant controls, radiological monitoring, and response programs for spills and releases. The licensee maintained records of releases and updated financial assurance as required by the license. (Section 6.2)

Report Details

Site Status

At the time of the inspection, Power Resources, Inc. was extracting uranium using the in-situ recovery process. Uranium processing and drying operations were in progress at the Smith Ranch Central Processing Plant (CPP). Additionally, four satellite facilities (Sat-2, Sat-3, SR-1 and SR-2) and one remote satellite facility (North Butte) were in service. The Sat-2 facility was only supporting mine unit restoration activities.

Recovery Operations were ongoing at Smith Ranch mine units (MUs) 3, 7, 9, 10, 15, 15A, F, J, K and K-North as well as North Butte MUs 1 and 2. Eight Smith Ranch MUs were in active restoration: MUs 2, 4, 4A, C, D, E, H and I. MU 1 is in the stability-monitoring restoration phase. Note that mine unit extensions (e.g. MU-3-ext) are not called out separately.

Uranium recovery operations were on standby at the Highland CPP.

The Reynolds Ranch Satellite has received Wyoming Department of Environmental Quality (WDEQ) approval and the inspectors understand that a decision to proceed with construction depends on market conditions. The Gas Hills and Ruth Satellites are not in operation at this time, although the licensee inspected these facilities once per quarter.

The licensee indicated that due to current economic conditions, new mine unit production and development are not a top priority.

1 Management Organization and Controls (88005)

1.1 Inspection Scope

Ensure that the licensee has established an organization to administer the technical programs and to perform internal reviews, self-assessments, and audits.

1.2 Observations and Findings

a. Organizational Structure

The inspectors reviewed the licensee's organization structure for Smith Ranch and the North Butte Satellite facility. The Smith Ranch operation currently had approximately 103 full-time employees. This is an increase of approximately 2 employees since the previous NRC inspection in April 2015. The North Butte Satellite had 15 full-time employees. The changes in Cameco's staffing levels result from its decision to stop additional mine unit development at Smith Ranch and North Butte and relocation of staff from Cameco's Casper office to Smith Ranch.

At the time of the inspection, the licensee had no vacancies at Smith Ranch and was in the process of re-assigning staff in the "Health Physics Technician (HPT) in training" role at the North Butte Satellite. The licensee's Smith Ranch radiation safety staff consisted of one Radiation Safety Officer (RSO), three qualified HPTs and one HPT in training.

The inspectors determined that the licensee had sufficient staff to implement the radiation protection, groundwater monitoring, and environmental programs at its current operating level.

b. Safety and Environmental Review Panel

License Condition 9.4 of the performance-based license requires, in part, that the licensee shall establish a Safety and Environmental Review Panel (SERP) to evaluate if program changes require an NRC license amendment prior to implementation. The inspectors reviewed nine SERP evaluations performed by the licensee since the previous inspection. Details related to the SERPs can be found in Attachment 2. The inspectors concluded that the license had implemented the Operational Review Committee/Safety and Environmental Review Panel (ORC/SERP) determinations for all fourteen evaluations in accordance with the performance-based license conditions.

c. Audits and Inspections

The inspectors reviewed the audits and inspections being generated by the licensee in accordance with License Condition 9.7 and NRC Regulatory Guide 8.31, "Information Relevant to Ensuring That Occupational Radiation Exposures at Uranium Recovery Facilities Will Be As Low As Reasonably Achievable." The licensee was conducting and documenting a daily walk-through of all work and storage area of the facility to ensure good radiation practices were being followed as required by License Condition 11.7. The HPTs or trained plant operators perform the daily walk-through. The RSO or HPTs, when the RSO is not available, performed the weekly inspection of all facility areas to observe general radiation control practices and review required changes in procedures and equipment. These weekly reports were provided to site managers. The RSO generated a monthly report that summarizes the results of the weekly inspections, monitoring, and radiation exposure data, which was submitted to licensee management for review. The inspectors found that the audits and inspections met the requirements contained in the license.

The licensee arranged for Energy Fuels to perform the annual audit of the radiation safety program as required by 10 CFR 20.1101(c). The inspectors reviewed the draft 2015 audit report dated March 30, 2016. The audit report included a review of occupational exposures, radiation survey results, documented training activities, and compliance with license and regulatory requirements. The inspectors will review the final 2015 audit report during a future inspection.

d. Additional Protocol Verification

The inspectors verified that the licensee had provided the NRC with appropriate documentation to comply with 10 CFR 75.11, which relates to the "Agreement between the United States of America and the International Atomic Energy Agency for the Application of Safeguards in the United States." The licensee had provided the four necessary forms that provide contact information, the capacity of yellowcake production, the actual annual yellowcake production, and the quantity of yellowcake on hand. The licensee discussed how they determined these numbers, and the inspectors found the

reports to be accurate, complete, and consistent with the reports submitted on January 18, 2016, for calendar year 2015.

1.3 Conclusions

The organizational structure and staffing levels maintained by the licensee during the inspection period met the requirements specified in the license and were sufficient for the work in progress. The licensee's safety and environmental review panel evaluations were performed in accordance with license requirements. The licensee was conducting audits and inspections as required by regulation and the license. The licensee had provided the appropriate nuclear material reports to comply with the additional regulatory protocol reporting requirements.

2 In-Situ Leach Facilities (89001)

2.1 Inspection Scope

Determine if in-situ recovery activities were being conducted by the licensee in accordance with the NRC's regulatory requirements and the license.

2.2 Observation and Findings

a. Purge Storage Reservoir (PSR) 2

Previous inspection reports have documented the licensee's actions to characterize seepage from PSR-2. During the inspection, the licensee indicated that several additional monitoring wells were recently installed around PSR-2. These wells were installed to support the corrective action plan to address seepage emanating from PSR 2 which was submitted to the NRC on November 9, 2015 (ML15317A079). NRC staff has initiated an acceptance review of the proposed corrective action plan and will provide the licensee comments when the review is complete.

A review of the licensee's PSR-2 inspection records indicated that the reservoir was being operated with a minimum of four feet of freeboard as required by License Condition 10.1.6. PSR-2 provides water to the Sat- 2 Land Application Facility (Irrigator #2). At the time of the inspection, Irrigator #2 was operating at a rate of approximately 350 gpm. The licensee indicated that Irrigator #2 would likely continue to operate through mid-August.

b. Recovery Operations and Restoration

At the time of the inspection, uranium recovery operations were being performed at Smith Ranch MUs 3, 7, 9, 10, 15, 15A, F, J, K and K-North. Recovery Operations were also underway for North Butte MUs 1 and 2. During the inspection, the licensee provided an update on the status of wellfields in restoration. Smith Ranch MUs 2, 4, 4A, C, D, E, H and I were in restoration. The licensee presented isocontour figures for conductivity and uranium concentrations within Smith Ranch MUs 1, 4, C, D, E and H. These figures illustrated that restoration activities have resulted in significant declines in

these constituents over the last several years. Mine Unit 1 had continued to remain in the stability-monitoring condition.

The licensee submitted an alternate concentration limit (ACL) amendment application for the MU-B restoration in May 2013 (ML13168A522). The NRC staff provided comments on this submittal in January 2014 (ML14010A162) and a public meeting was held in September of 2015 to discuss staffs comments (ML15278A163). The NRC staff understood that Cameco continues to work on addressing the staff's comments from the September 2015 meeting.

c. Site Tours

The inspectors conducted site tours to observe in-situ recovery operations in progress. Areas toured included the Smith Ranch CPP, including the control room, analytical laboratory, and yellowcake drumming areas; the Vollman Ranch environmental monitoring station; PSR-2; the radium/selenium treatment building; Sat-2 for which all the MUs are now in restoration as of December 2014; Satellite SR-2; North Butte Satellite; and header houses (HHs) E-15 and K-10, Irrigator #2, and the Smith Ranch storage ponds. The inspectors observed plant equipment, radiation protection postings, and site security.

During the tour of the yellowcake dryer room, the inspectors observed 15 drums, some of which had been loaded the previous day, and all of which were sealed. During the tour of the yellowcake drum storage room, an inspector observed a loaded and sealed drum (Lot No. 806, Drum No. 4, gross weight 867 pounds) which gave the appearance of being pressurized. The lid of the drum was bulged upward, and the response of the drum lid to a firm push with the palm of the hand was spring-like. Upon his examination, the facility foreman agreed the drum appeared to be pressurized. The foreman subsequently asked the dryer operator to return Lot No. 806, Drum No. 4 to the dryer area for examination. Later the same day, the inspectors were informed by the foreman that Drum No. 4 was not pressurized. The foreman explained that the lid on Drum No. 4 was stretched, as were others in the most recent batch of drums and lids. The stretched lid caused the lid to bulge upward above the retaining ring which was secured to the drum. An NRC inspector returned to Drum No. 4 the same day to review and confirm the licensee's assessment. The inspector verified the licensee's assessment was adequate.

Site security included locked entries into the CPP, HHs, satellites, and the radium/selenium treatment building and video surveillance at appropriate site locations. Plant parameters were within required operating intervals, plant equipment appeared to be in good condition, radiological postings were in place, and site security was adequate. The inspectors confirmed that the licensee was maintaining control of areas and equipment in accordance with license and regulatory requirements.

License Condition 10.1.2 states, in part, the requirements for maintaining effluent controls for the yellowcake dryer. The inspectors interviewed the dyer operator for the facility regarding the checklists completed at the beginning of each operational work shift that the operators ensured the dryer vacuum was operating, and the audible loss of

vacuum alarm was functioning. The dryer operator showed the inspectors the computer system logs for the dryer operating pressure differential taken from the dryer chamber every 15 minutes. The inspectors determined that the licensee was operating the dryer effluent controls in accordance with license commitments.

The inspectors found that all entrance areas to the facility and wellfields were posted with the words, “Any Area Within This Facility May Contain Radioactive Material”, as required by License Condition 9.8. Additionally, the temporary storage of byproduct waste materials was located in fenced and locked restricted areas as required by License Condition 10.1.7.

The inspectors conducted independent radiological surveys of the gamma exposure rates present in the Smith Ranch CPP, satellite facilities, HH, radium/selenium treatment plant, and North Butte processing plant. The surveys were conducted using a Ludlum Model 19 microR survey meter (Serial No. 33532, calibration date 8/12/2015) and a Thermo Scientific RadEye (Serial No. 13421, calibration date 10/27/2015). Gamma exposure rates measured by the inspectors were within regulatory limits for a restricted area. Inspectors and the RSO performed an outdoor survey of 22 points of the CPP building perimeter at intervals of about 50 feet at a distance of about 20 feet from the exterior building wall. Exposure rates ranged from 130 microroetgen per hour (μR/hr) at the wall location nearest the IX-5 and IX-6 columns to 20 μR/hr at the wall location nearest the T-34 soda ash and T-23 hot water tanks. The average of 22 measurements around the CPP was 46 μR/hr. Inspectors measured the highest gamma exposure reading of 4,000 μR/hr on contact with the F-20 sand filter. The inspectors did not identify any areas that had not already been posted as radiation areas by the licensee. The inspectors determined that the licensee identified and posted radiation areas as required by 10 CFR 20.1902.

d. Financial Assurance

In accordance with License Condition 9.5, the licensee submitted its most recent annual financial assurance updates for Smith Ranch on July 7, 2015; the Gas Hills Satellite on August 7, 2015; and the Ruth Satellite on December 4, 2014. The staff completed its review of the Smith Ranch update, which was documented in License Amendment 24, dated February 29, 2016. Cameco submitted its most recent update for the Ruth satellite on January 12, 2016. This submittal remains under review by the NRC staff. During the inspection, the NRC staff identified that Cameco had not made its annual financial assurance update for the North Butte satellite within the timeframe identified in License Condition 9.5. The failure to submit an annual financial assurance update within the timeframe identified in License Condition 9.5 resulted in a minor violation of License Condition 9.5. The licensee submitted the North Butte satellite financial assurance on July 11, 2016, (ML16204A065) to restore compliance with License Condition 9.5. This issue constitutes a violation of minor significance that is not subject to enforcement action in accordance with Section 2 of the NRC Enforcement Policy.

e. Highland Ponds

During the inspection, the NRC staff discussed the storm water management ponds located near the Highland CPP. The Highland CPP remains in standby, however, it appears that the ponds may have been previously used when the Highland CPP operated. The staff understands that the licensee had performed gamma surveys of the ponds (see ADAMS Accession Number ML15251A327). The staff also understood that the licensee had acquired additional land in the vicinity of the ponds to support decommissioning activities.

2.3 Conclusion

The licensee was conducting in-situ recovery and restoration activities in accordance with license and regulatory requirements. The licensee submitted an updated financial assurance package for NRC review.

3 Radiation Protection (83822)

3.1 Inspection Scope

Determine whether the licensee's radiation protection program was conducted in compliance with license and 10 CFR Part 20 requirements.

3.2 Observations and Findings

a. Occupational Exposures

The inspectors reviewed the licensee's dose assessment records for calendar year (CY) 2015 and the first half of CY2016. According to the licensee's records, 72 employees and contractors were monitored for external exposure using dosimeters that were exchanged on a quarterly basis in CY2015. In CY2016, 62 employees and contractors were being monitored. Occupationally monitored employees included CPP operators, wellfield personnel, satellite operators, health physics staff, electricians, laboratory staff, and maintenance workers. The highest deep dose equivalent for CY2015 was a CPP operator that received 438 mrem (4.4 mSv). At the time of the inspection, first quarter CY2016 dosimeter results were available. The highest deep dose equivalent for the first quarter CY2016 was a CPP operator that received 123 mrem (1.2 mSv).

The licensee conducted air sampling, in part, for assessment of internal exposures. The inspectors reviewed the licensee's radon-222 progeny air sampling records and the uranium particulate and worker breathing zone sample results for CY2015 and the first half of CY2016. The highest derived airborne concentration (DAC-hrs) for radon progeny for an employee in CY2015 was a CPP operator that received 32.43 DAC-hrs. The highest exposure to radon progeny for an employee during the first half of CY2016 was a CPP operator that received 14.62 DAC-hrs. The highest employee airborne uranium exposure during CY2015 was 4.33 DAC-hrs, received by a CPP operator. The highest employee airborne uranium exposure for the first half of CY2016 was 0.57 DAC-hrs received by a lab worker. All DAC-hrs results were below the regulatory

limit of 2,000 DAC-hrs per year and the Cameco administrative action level of 125 DAC-hours per quarter. The inspectors confirmed that the licensee had conducted air sampling at the required intervals.

PRI collects urine bioassays to ensure that the respiratory protection program and engineering controls for airborne uranium are being used appropriately. The licensee submitted bioassays to a commercial analytical laboratory for analysis on a monthly basis for the CPP operators, lab workers, and approximately five random workers, excluding office personnel. The inspectors reviewed the bioassay program to verify compliance with License Conditions 11.2 and 11.3.

Since 2006, five individual bioassay results exceeded the action level of 15 micrograms per liter (µg/L) of uranium in urine. A bioassay sample from a contractor starting work at Smith Ranch was collected on June 23, 2015, and had a baseline concentration of uranium in urine of 89.6 µg/L. A second sample collected on July 6, 2015, contained 42.4 µg/L. The individual's exit bioassay, collected on July 7, 2015, contained 6.02 µg/L. The licensee determined that this individual's bioassay did not indicate an intake during activities at Smith Ranch because the baseline concentration was much higher than the exit concentration. An additional twenty-three positive bioassay results were greater than the minimum detectable concentration of 5 µg/L.

The inspectors observed that the licensee performed internal dose assessments for bioassay results above the method detection limit of 5 µg/L in urine. The licensee has committed in Table 9-1 of its license application to take action when uranium in urine concentrations exceed 15 µg/L, which is consistent with the guidance in Regulatory Guide 8.22. Therefore, the licensee's actions taken for uranium bioassay between 5 µg/L and 15 µg/L were not required. The inspectors reviewed six forms titled, "Bioassay Dose Assessment," which the licensee provided during the inspection. The licensee used this form to estimate the radiological dose from a bioassay sample by calculating the uranium intake from a single urine sample. The form states the method used is based on Example 4 in Regulatory Guide 8.9, "Acceptable Concepts Models, Equations, and Assumptions for a Bioassay Program."

In four of the Bioassay Dose Assessment forms, the licensee used an incorrect intake retention fraction (IRF) from NUREG/CR-4884, "Interpretation of Bioassay Measurements," (June 1980) to calculate uranium intake. In all four instances, IRFs chosen by the licensee were from the "accumulated urine" data column of NUREG/CR-4884, rather than the "24-hour urine" column. In two of these four instances, in addition to using data from the incorrect column, the licensee used an IRF corresponding to 0.3 days instead of the correct value of 3 days, and an IRF of 0.2 days instead of the correct value of 2 days.

The use of the "accumulated urine" column IRFs is valid when: (a) the analysis is based on compounding a series of samples spaced more or less evenly over the time interval of interest, and (b) the rate of excretion of the radionuclide in urine does not vary over the time period of interest by greater than criteria specified in Regulatory Guide 8.9, Revision 1. Neither condition was met in the licensee's analyses because only one bioassay sample was used for the calculation and the chosen (accumulated) IRF

changed over the time period greater than the maximum rate specified in Regulatory Guide 8.9, Revision 1.

Title 10 CFR 20.1202(a) states, in part, that if the licensee is required to monitor under both 20.1502(a) and (b), the licensee shall demonstrate compliance with the dose limits by summing external and internal doses. The licensee may demonstrate compliance with the requirements by meeting one of conditions specified in paragraph (b) of this section.

Title 10 CFR 20.1202(b)(3) requires, in part, the calculated committed effective dose equivalent to all significantly irradiated organs or tissues be calculated from bioassay data using the appropriate biological models. Contrary to the above, between 2006 and 2016, it was identified by the NRC that the licensee failed to calculate the committed effective dose equivalent to all significantly irradiated organs or tissues from bioassay data using the appropriate biological models. Specifically, the inspectors determined the licensee failed to use the correct bioassay Intake Retention Fractions when calculating the committed effective dose equivalents for four individuals since the 2006 (VIO 040-08964/16001-01).

Since the internal dose assessment error was identified back to 2006, the inspectors reassessed the dose for one employee, with the highest intake, to determine the cumulative magnitude of the licensee's errors. In the one employee's Bioassay Dose Assessment, the licensee used an IRF from the wrong column of Appendix B to NUREG/CR-4884 (accumulated urine, instead of 24-hour urine), and for an incorrect time after a single intake (0.3 days, instead of 3 days). The reported bioassay result for one employee was 30 µg/L and the time between the date of probable intake and sample date was 3 days. The licensee estimated an intake of 273 µg and a dose (neither a committed effective dose equivalent [CEDE] nor a committed dose equivalent [CDE]) of 3 mrem. Using the methodology in Regulatory Guide 8.9, Revision 1, the estimated intake was determined to be 20.8 mg and a CEDE of 36 mrem. When revising the individual's cumulative dose for the calendar year, the revised dose was still below regulatory limits.

In response to questions from inspectors, Cameco stated that it would revise its methods for calculating internal dose from worker exposures to soluble uranium. The first revision will address a new procedure for individuals to provide full void samples for at least 24 hours, or until uranium in urine concentrations fall below 15 µg/L, if an individual's urine sample concentration exceeds the action level of 15 µg/L of uranium in urine. The second revision will clarify how uranium intakes are calculated from bioassay and air sampling results, and then used for comparison to Cameco's 2.5 mg per week uranium intake action level and the assignment of internal dose.

In addition, the licensee's RSO explained that the uranium in urine concentrations and the calculated doses from bioassay data are entered into CAMRAD, the licensee's corporate radiation protection database; however there was no entry space for the calculated uranium intake. Cameco stated that it would modify CAMRAD to allow the RSO to add the calculated uranium intake to the database. The uranium intake will be added to the soluble uranium intake determined using air sample results.

Cameco's methods for collecting follow-up bioassay samples, determining individual dose from bioassay and air sample results, and comparing individual soluble uranium intake to its administrative action level will be reviewed in a future inspection.

The licensee also monitors for soluble uranium intake in compliance with 10 CFR 20.1201(e). The highest soluble uranium intake for CY2015 was received by a CPP operator and was calculated by the licensee to be 3.83 milligrams of uranium per year. The highest soluble intake of uranium for the first half of CY2016 was received by a lab worker and was calculated to be 0.51 milligrams of uranium over the first half of 2016. These values are based on monthly air samples collected in the CPP. Uranium intakes at a rate of 3.83 milligrams per year and 0.51 milligrams per half-year are below the regulatory limit of 10 milligrams of soluble uranium per week and below the licensee's administrative action level of 2.5 milligrams of soluble uranium per week.

The highest total effective dose equivalent calculated by the licensee, for employees and contractors during CY2015, was a CPP employee that received 527 mrem (5.27 mSv). This is below the annual regulatory limit of 5,000 mrem (50 mSv). The highest total effective dose equivalent calculated by the licensee, for employees and contractors during the first quarter of 2016 was a CPP employee that received 157 mrem (1.57 mSv).

b. Radiation Protection Surveys

The licensee is required to perform quarterly gamma radiation surveys throughout the satellite buildings and CPP in accordance with License Condition 9.7, which incorporates RG 8.30, "Health Physics Surveys in Uranium Recovery Facilities," Regulatory Position 2.4, on external radiation survey frequencies. At the time of this inspection, the inspectors determined that the licensee was conducting the gamma radiation surveys on a monthly frequency in all areas, except the HHs. Since there are approximately 500 HHs at the Smith Ranch uranium recovery facility, the licensee randomly selects about 50 per month for surveys. The inspectors reviewed the survey results and found them to meet the requirements of the license.

The inspectors reviewed weekly clean area surveys generated since the previous inspection for fixed and loose surface contamination for unrestricted and restricted areas. Alpha contamination surveys are conducted by the licensee on a weekly frequency in clean areas of the site and monthly in the process areas. For alpha contamination area surveys in unrestricted areas, the licensee requires removable alpha samples (i.e., smears) for total alpha contamination levels to be less than 250 disintegrations per minute per 100 square centimeters. The inspectors found that contamination surveys were being conducted in accordance with License Condition 9.7 and Regulatory Guide 8.30.

c. Instrumentation

The inspectors reviewed the licensee's operability, calibration, and maintenance records for portable radiation survey instruments. On an annual basis, the licensee sends all portable survey instruments to an outside vendor for calibration. The inspectors reviewed instrument calibration certificates and maintenance records for several portable survey instruments and found the calibration certificates to be adequate, maintenance records adequately maintained, and the instruments currently calibrated. The inspectors observed survey meters being used by the licensee's employees when exiting restricted areas. The survey instruments examined by the inspectors were in calibration and were being used appropriately by the licensee staff.

d. Radiation Work Permits

Since the previous inspection, 24 radiation work permits were issued. The inspectors reviewed a sampling of the permits and determined the permits included the necessary air sampling and protective equipment requirements for the work being performed. The majority of the radiation work permits were related to inspecting, clean out, and maintenance of process tanks, ion exchange columns, shaker tables, and the dryer. The inspectors noted that the radiation work permits included the appropriate personal protective equipment, respiratory protection, and air monitoring requirements. The inspectors noted the documentation of worker briefings on the radiation work permit as required in SHEQ Management System Health Physics Vol. IV Section 2.9.6 "RWP Use" was occurring on two different forms. The RSO explained that the workers are briefed on the radiation work permit and the job hazards analysis at the same time. Workers are then asked to sign the job hazards analysis form at the end of the briefing often leaving the radiation work permit unsigned. The inspectors reviewed the job hazards analysis forms and noted individuals on the radiation work permit were also on the job hazards analysis documentation. This issue was discussed with the RSO to ensure facility practices are in line with procedures.

In summary, the radiation work permits were reviewed in conjunction with the licensee's internal procedures and license requirements and were found to have met these requirements.

e. Respiratory Protection

The inspectors examined the respiratory protection equipment and reviewed the licensee's procedures for respiratory protection. All respirators used at the facility were National Institute for Occupational Safety and Health certified and those examined by the inspectors appeared in like-new condition. The licensee's respiratory protection procedures included fit-testing of respirators for employees, inspection, storage of respirators, and annual audits of the respiratory protection program. The inspectors found the licensee's respiratory protection program to meet the license application and regulatory requirements. The inspectors noted that the licensee was not maintaining or using self-contained breathing apparatus (SCBA) respirators because of operational changes to less hazardous chemicals. Therefore, the inspectors did not include SCBA respirators during this inspection of the respiratory protection program.

3.3 Conclusions

The licensee implemented a radiation protection program that met the requirements of 10 CFR Part 20 and the license, with one exception as described in Section 3.2a. The annual doses to employees were below the occupation dose limits, instrumentation, radiological surveys, and respiratory protection met license and regulatory requirements.

4 Effluent Control and Environmental Protection; and Maintaining Effluents from Materials Facilities ALARA (87102 and 88045)

4.1 Inspection Scope

Determine if the environmental and effluent monitoring programs are adequate to monitor the impacts of site activities on the local environment.

4.2 Observations and Findings

a. Environmental Monitoring

License Condition 11.6 requires the licensee to establish an effluent and environmental monitoring program in accordance with the Section 5.3 of the approved license application. The inspectors reviewed the licensee's Semiannual Effluent and Environmental Monitoring Reports. The licensee's environmental monitoring program consisted of air particulate, radon, ambient gamma radiation, groundwater, and surface water. As part of the licensee's wastewater land application permit for WDEQ, sampling was required of the soil and vegetation, irrigation fluid, radium treatment system samples, soil samples at the irrigation areas, and monitoring wells at PSR-2.

For both reports, continuous air particulate sampling was conducted at three locations for the Smith Ranch site and six locations at the North Butte satellite facility. At the end of 2014, the Highlands satellite facility construction was completed and the air monitoring for this facility was suspended. The Highland satellite facility's air monitoring will resume when the facility becomes operational. The Smith Ranch air monitoring stations (AS) monitored conditions at a background station (AS-1), the Smith Ranch CPP restricted area boundary (AS-2), the nearest downwind resident to the Smith Ranch CPP restricted area (AS-3). The North Butte satellite facility locations include a background station (NB9), the nearest public residence to the North Butte satellite area (NB8), north side of the satellite (MB11), downwind of the North Butte area and wellfields (NB12), the south side of the satellite (NB13), and the satellite pad next to the man camp. The sample results reported by the licensee for natural uranium, radium-226, thorium-230 and lead-210 particulate monitoring indicated that airborne concentrations were at or near background concentrations.

The licensee also sampled for radon-222 concentrations in air at nine sample stations (Smith Ranch and North Butte areas). The inspectors reviewed the radon-222 concentrations and found the concentrations at all sample locations were lower than the 1E-08 microcurie per milliliter value approved in the Smith Ranch license.

b. Doses to Members of the Public

The inspectors evaluated the licensee's calculation of annual dose to the public from operations for calendar year 2015, as required by 10 CFR 20.1302. The licensee, using 10 CFR 20.1302(b)(1), demonstrated that the annual total effective dose equivalent to a person at the nearest residence was less than 100 millirem. The licensee calculated the highest total effective dose equivalent to a member of the public in calendar year 2015 to be 10.2 millirem for the Smith Ranch facility and 3.3 millirem for the North Butte facility.

c. Wellfield and Excursion Monitoring

License Condition 11.5 requires, in part, that the licensee monitor groundwater at the designated excursion monitoring wells twice a month. The license has approximately 1,300 groundwater monitoring wells that are sampled during a typical month using six field sampling personnel. The inspectors reviewed selected groundwater sampling records and concluded that these records indicated operational groundwater monitoring was being conducted as required by the license.

MU D perimeter monitoring well DM-003a remains on long-term excursion status. This well is located near underground mine workings from previous uranium mine operations not associated with this licensee. The licensee is pumping nearby wells to control this excursion and is in the process of developing a mitigation plan to address the water quality at this location.

The inspectors determined that the licensee had conducted the required monitoring for the excursion-monitoring program and submitted the required reports within a timely manner pursuant to License Condition 11.5.

The east and west Smith Ranch evaporation ponds were operational at the time of the inspection. The inspectors found the pond embankments, liners and fences to be in good condition. Additionally, no fluid was observed in the leak detection standpipes. The inspectors determined that the licensee had conducted daily inspections as required by License Condition 11.4. Since the previous inspection, there were no leaks from the ponds that the licensee was required to report (License Condition 12.1).

The inspectors reviewed the spills since the last inspection; three reportable spills had taken place since the last inspection. The three spills were evaluated and reported to the NRC as required by License Condition 12.1.

d. Casing Leak

The licensee also summarized recent actions related to the ongoing casing leak investigation in MUs C, E and F. The licensee stated that a remediation plan is being developed to address the impacted areas. The licensee is taking appropriate actions, the remediation plan will be reviewed by inspectors in a future inspection.

4.3 Conclusions

The licensee conducted environmental monitoring in accordance with license requirements. The annual dose to members of the public was below regulatory limits. Wellfield and excursion monitoring was being conducted in accordance with license requirements.

5 Inspection of Radioactive Waste Processing, Handling, and Storage (88035)

5.1 Inspection Scope

Determine if disposal activities conducted by the licensee were being conducted in compliance with regulatory requirements.

5.2 Observations and Findings

a. Solid Byproduct Waste

License Condition 9.6 requires, in part, that the licensee possess a waste disposal agreement to dispose of 11e.(2) byproduct material at an approved offsite location. From April 14, 2015, through the end of CY 2015, the licensee made 25 shipments of waste to a licensed facility. A total of 39 shipments were made from April 14, 2015, through June 23, 2016. The inspectors evaluated shipping papers (i.e., Bill of Ladings, radiological survey forms, byproduct material shipping, disposal manifest forms, and other documentation) for these shipments. These shipments included items such as barium sulfate sludge from the selenium treatment plant radium removal circuit, Sate-2 field trash, selenium removal circuit process material, and soil and sediment from evaporation ponds.

License Condition 10.1.7 states, in part, that the licensee shall store 11e.(2) byproduct material in a restricted area. The inspectors observed that all waste storage bins were in restricted areas with surrounding fences and locked entries. Each area was posted appropriately as a restricted area and if necessary as a radiation area.

b. Review of Wastewater Treatment

As described in the license application, the licensee is authorized to dispose of plant and wellfield operations wastewater through land application or deep disposal well (DDW) injection.

In June 2016, the State of Wyoming issued the licensee a combined permit to continue to operate injection wells: SR DDW #1, SR DDW #2, RR DDW #1, Morton 1-20, Vollman 33-27, SRHUP #6, SRHUP #9, and SRHUP #10.

SRHUP #7 has been installed and the licensee is waiting for the final authorization to inject from WDEQ. SRHUP #8 is permitted but has not been installed.

The June 2016 permit imposed revised maximum injection pressure limits for the permitted wells. While some limits increased, most were decreased. Due to these new limits, SRHUP #10 was not operational at the time of the inspection. The licensee indicated further evaluation of this injection well was needed to determine its future capacity. SR DDW #2 has not been operational since January 2015. The licensee indicated it was not clear when SR DDW #2 would become operational again.

The licensee indicated the actual capacity of the operational injection wells over the past year was approximately 10-60 gpm with a total capacity of approximately 225 gpm. The licensee was not certain to what degree the new injection pressure limits would impact their operations, but were anticipating that once SRHUP #7 is operational, the total disposal capacity would exceed 200 gpm. The inspectors observed SRHUP #6 operating at a surface injection pressure of 1100 psi with and injection rate of 12.8 gpm.

The license application authorizes the licensee to dispose of wastewater at PSR-1, PSR-2 and the related land application facilities. PSR-1 and its associated land application facility was currently not in use. Prior to discharge to PSR-2, the plant's wastewater was processed to remove the excess uranium, radium-226, and selenium concentrations in the water. After treatment, the wastewater was sampled to ensure that it met the criteria specified in the license application as well as WDEQ requirements for land application. Combined, PSR-2 and the Satellite No. 2 Land Application Facility (Irrigator #2) provided an additional 180 gpm of disposal capacity.

At the time of the inspection, Irrigator #2 was operating at a rate of approximately 350 gpm. The licensee indicated that Irrigator #2 would likely continue to operate through mid-August. In accordance with Table 5-9 of the license application, the licensee samples the irrigation fluid monthly (when operational) at the PSR-2 suction line for the irrigator pivot for natural uranium, radium-226, selenium, and other chemical constituents.

The Semi-Annual Effluent and Environmental Monitoring Report for the reporting period of July 1 through December 31, 2015, indicated that for Irrigator #2, several chemical parameter analyses (bicarbonate, sulfate, chloride, total dissolved solids and pH) were missing for the July 2015 sample. The inspectors determined the missing parameters were not NRC required constituents. Additionally, the July and August 2015 uranium concentrations slightly exceeded the 10 CFR 20 Appendix B Effluent Concentration Limit. The exceedance of the 10 CFR 20 Appendix B limits in the report is based on the reporting period (six months) and not for an averaged concentration exposure over a year as specified in 10 CFR 20.1302(b)(2)(i). The doses to members of the public were below the annual limit set by regulation.

5.3 Conclusions

The licensee was conducting solid and liquid waste disposal operations in accordance with the license and regulatory requirements.

6 Implementation of the Decommissioning Planning Rule (TI 2600/017)

6.1 Inspection Scope

The inspectors conducted a review of the licensee's implementation of the Decommissioning Planning Rule (DPR).

6.2 Observations and Findings

The NRC issued the DPR on June 17, 2011 (76 Federal Register 35512) with an effective date of December 17, 2012. The DPR requires certain licensees to establish programs to: (1) minimize the introduction of radiological contamination into the site environment; (2) ensure that releases of radioactivity to the environment are promptly identified and characterized; (3) document radiological survey data which identifies the location and concentrations or quantities of contamination that may require remediation at the time of license termination; and (4) report updated financial assurance information as required by the DPR. The inspectors reviewed the licensee's implementation of the DPR.

The licensee is required to minimize the introduction of radiological contamination into the site environment. The licensee used a combination of procedural controls, plant design, and site inspections to meet this requirement. The most likely sources of environmental radiological contamination at the facility are spills and leaks. To counter the potential for spills and leaks, the licensee installed sump level alarms, differential flow alarms, high/low tank level alarms, high/low pressure alarms, tank level indicators, and automatic shutdown interlocks. The licensee used engineering controls including sumps, berms, and containments within site structures to contain leaks and spills. Operators were trained to respond to alarms, including identification and termination of releases and spills. Plant staff conducted routine plant walk downs, in part, to identify ongoing leaks, spills, and releases.

To avoid the potential for build-up of long-term gaseous and liquid effluent releases to the environment, the licensee established and implemented an NRC-approved environmental monitoring program. The licensee also developed instructions for responding to wellfield leaks and spills. Depending on the circumstances of the spill, the licensee's response may include gamma radiation surveys, soil sampling, solution sampling, spill containment, and soil/fluid recovery. The inspectors confirmed that the licensee had procedures and equipment, including calibrated survey meters, for responding to spills within a structure or the environment.

License Condition 12.1 provide the requirements for documenting unplanned releases of source or byproduct material as well as agency reporting requirements. The licensee established and implemented a program for recording radiological survey data collected in response to spills. Based on the circumstances of each spill, the licensee may choose to clean up the spill at that time, or delay cleanup until a later date. The inspectors confirmed that the licensee maintained records important to decommissioning in accordance with the requirements of 10 CFR 40.36(f). The inspectors reviewed the licensee's spill and release records as part of the routine inspection program. In addition, the NRC routinely reviewed the licensee's semi-annual effluent and

environmental monitoring reports, required to be submitted to the NRC in accordance with the respective license conditions.

Finally, the licensee is required by the DPR to update its financial assurance for spills that have not been cleaned up. License Condition 9.5 provides the requirements for maintaining financial assurance. The licensee's current financial assurance included costs of decommissioning, decontamination, and offsite disposal. The licensee is required to update the financial assurance amount at least annually.

6.3 Conclusions

The licensee was in compliance with the requirements of the Decommissioning Planning Rule. The licensee established and implemented plant controls, radiological monitoring, and response programs for spills and releases. The licensee maintained records of releases and updated financial assurance as required by the license.

7 Exit Meeting Summary

The NRC inspectors presented the preliminary inspection results to the licensee's representatives at the conclusion of the onsite inspection on August 4, 2016. After a review of the internal dose assessment program, the NRC inspectors presented the final inspection results to the licensee's representatives on October 25, 2016. During the inspection, the licensee did not identify any information reviewed by the NRC as proprietary that was included in this report.

SUPPLEMENTAL INSPECTION INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

Licensee

M. Beshore, Reclamation Manager, Chief Hydrologist
T. Coleman, Radiation Safety Officer
K. Garoutte, Safety, Health, Environment Quality Manager
C. Griffitts, Restoration/Satellite Foreman
D. Laird, Central Processing Plant Foreman
D. Pavlick, General Manger US Operations
M. Thomas, Safety, Health, Environment Quality Director

Items Opened, Closed and Discussed

Opened

040-08964/16001-01	VIO	Failure to use correct bioassay Intake Retention Fractions when calculating the committed effective dose equivalents.

Closed

None

Discussed

None

Inspection Procedures

IP88005	Management Organization and Controls
IP89001	In-Situ Leach Facilities
IP83822	Radiation Protection
IP88045	Effluent Control and Environmental Protection
IP87102	Maintaining Effluents from Materials Facilities ALARA
IP88035	Radioactive Waste Processing, Handling, Storage and Transportation

List of Acronyms

ACL	Alternate Concentration Limit
ADAMS	Agencywide Documents Access and Management System
ALARA	As Low As Is Reasonably Achievable
Bq	Becquerel
CPP	Central Processing Plant
CFR	Code of Federal Regulations
CY	Calendar Year
DAC-hrs	derived air concentration hours
DDW	Deep Disposal Well
DOT	U.S. Department of Transportation
gpm	gallons per minute
HH	Header House
HPT	Health Physics Technician
IP	NRC Inspection Procedure
JHA	Job Hazard Analysis
mrem	millirem
mSv	milliSievert
MU	Mine Unit
NRC	U.S. Nuclear Regulatory Commission
µR/hr	microroentgen per hour
ORC	Operational Review Committee
Pb	Lead
PSR	Purge Storage Reservoir
RG	NRC Regulatory Guide
RSO	Radiation Safety Officer
RWP	Radiation Work Permit
SERP	Safety and Environmental Review Panel
WDEQ	Wyoming Department of Environmental Quality

SERP EVALUATIONS

1. ORC/SERP 8/14-4 dated August 5, 2014, approved the startup of operations in Mine Unit 7. The hydrogeologic test report documented the pump test results and the baseline ground water quality data.

2. ORC/SERP 515-05 dated May 13, 2015, described an experiment at header house 4 in Mine Unit 4 related to bio-stimulation efforts to aid ground water restoration.

3. ORC/SERP 8/15-07 dated August 5, 2015, addressed the addition of a reverse osmosis unit to satellite SR-1.

4. ORC/SERP 8/15-08 dated August 26, 2015, described an experiment to perform a cross hole test in Mine Unit 7.

5. ORC/SERP 8/15-09 dated August 26, 2015, documented the qualifications of an RSO for the Smith Ranch facility.

6. ORC/SERP 8/15-10 dated August 26, 2015, documented the clarification of the measurement of the flow rate at the North Butte satellite.

7. ORC/SERP 11/15-11 dated November 18, 2015, documented the qualifications of the RSO for the Smith Ranch Highland facility.

8. ORC/SERP 2/16-01 dated February 14, 2016, presented the hydrogeologic test report for the Mine Unit 10 extension. The hydrogeologic test report documented the pump test results and the baseline ground water quality data.

9. ORC/SERP 3/16-03 dated March 13, 2016, documented a change in the sampling frequency during ground water restoration activities.

Management System (ADAMS), accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html. To the extent possible, your response should not include any personal privacy or proprietary, information so that it can be made available to the Public without redaction.

Should you have any questions concerning this inspection, please contact Ms. Bernadette Baca, Health Physicist at (817) 200-1235, or the undersigned at 817-200-1549.

Sincerely,

/RA/

Lee Brookhart, Acting Chief
Fuel Cycle and Decommissioning Branch
Division of Nuclear Materials Safety

Docket: 040-08964
License: SUA-1548

Enclosure:
1. Notice of Violation
2. Inspection Report 040-08964/2016-001

w/Attachment:
1. Supplemental Information
2. SERP Evaluations

ADAMS Accession Number: ML16323A110

■ SUNSI Review by: BBC	ADAMS: ■ Yes ☐ No	■ Non-Sensitive ☐ Sensitive	■ Publicly Available ☐ Non-Publicly Available	Keyword: NRC-002

OFFICE	RIV:FCDB	NMSS/DUWP	NMSS/DUWP	NMSS/DUWP	NMSS/DUWP	C:FCDB
NAME	BBaca	DMandeville	DBrown	LDesotell	AHuffert	LBrookhart
SIGNATURE	/RA/	/RA/email	/RA/email	/RA/email	/RA/email	/RA/
DATE	11/23/16	11/22/16	11/22/16	11/22/16	11/22/16	11/23/16

OFFICIAL RECORD COPY

Letter to M. Thomas from Lee Brookhart dated November 23, 2016

SUBJECT: NRC INSPECTION REPORT 040-08964/2016-001

DISTRIBUTION:
Regional Administrator Kriss.Kennedy@nrc.gov
Deputy Regional Administrator Scott.Morris@nrc.gov
DNMS Director Mark.Shaffer@nrc.gov
DNMS Deputy Director Linda.Howell@nrc.gov
Acting Branch Chief, FCDB Lee.Brookhart@nrc.gov
HP, FCDB Bernadette.Baca@nrc.gov
HP, DNMS Martha.Poston-Brown@nrc.gov
HP, FCDB Linda.Gersey@nrc.gov
SHP, FCDB Robert.Evans@nrc.gov
Public Affairs Officer, Victor.Dricks@nrc.gov
RITS Coordinator Marisa.Herrera@nrc.gov
Regional Counsel Karla.Fuller@nrc.gov
NMSS/DUWP/URLB Bill.VonTill@nrc.gov
NMSS/DUWP/URL, David.Brown@nrc.gov
NMSS/DUWP/URLB Anthony.Huffert@nrc.gov,
NMSS/DUWP/URLB Lloyd.Desotell@nrc.gov
NMSS/DUWP/URLB Douglas.Mandeville@nrc.gov,
Mike_Thomas@cameco.com
Brent_Berg@cameco.com
Doug_Pavlick@cameco.com
Travis_Coleman@cameco.com
Scott.Ramsay@wyo.gov
Ryan.Schierman@wyo.gov
Dale.Anderson1@wyo.gov
Robert.Breuer@wyo.gov
Kyle.Wendtland@wyo.gov