

QUALIFIED DESIGNATED OPERATOR

Cameco Resources Qualifications for Daily Walkthrough Inspections

Regulatory Guide 8.31 recommends a daily inspection be conducted by the Radiation Safety Officer (RSO) or designated health physics technician (HPT) and that a weekly inspection be conducted by the RSO and the facility foreman. In both the Crow Butte and Smith Ranch Highland license renewal applications, Cameco states that the RSO, HPT or a *qualified designated operator* would conduct the daily walkthrough inspection of the plant.

At Crow Butte and Smith Ranch Highland, NRC staff determined that Cameco had not adequately identified personnel that will perform the daily inspections in the absence of the radiation safety staff (i.e., the *qualified designated operator*). NRC staff decided that Cameco must identify the qualified personnel and provide sufficient health physics training consistent with the qualifications for radiation safety staff in Regulatory Guide 8.31 as it pertains to the daily inspections.

Cameco Response

Cameco will qualify Designated Operators to conduct daily walkthrough inspections of the plant/Satellite in the absence of the RSO or an HPT. Any problems noted during the daily inspection will be recorded in a logbook/inspection form, signed and dated, and retained on file for at least one year. The RSO will review the logbooks/inspection form periodically and take appropriate action to correct any noted problems.

Before a Designated Operator may conduct such inspections, he must be qualified by reason of training and experience to observe proper implementation of good radiation safety practices. In addition, any Designated Operator will have completed a truncated version of the radiation safety training as described in Regulatory Guide 8.31, Section 2.5.

At a minimum, a Designated Operator must have the following combination of education, training and experience:

Education: a high school diploma or equivalent

Training: New employee radiation safety training, including guidance pertinent to prenatal radiation exposure (Regulatory Guide 8.13) and instruction concerning risks from occupational radiation exposure (Regulatory Guide 8.29); and additional training applicable to conducting daily inspections at Cameco ISR facilities. In addition the Designated Operator will be required to demonstrate proficiency during daily inspections to the RSO.

Experience: Sufficient work experience in operations or maintenance at a uranium recovery facility, including procedures that involve health physics, industrial safety or industrial hygiene at a uranium recovery facility to demonstrate qualification.

Technical Basis

Cameco conducts daily walk-through inspections of all work and storage areas of the facility to ensure proper implementation of good radiation safety procedures, including good housekeeping and cleanup practices that minimize unnecessary contamination. Normally, these inspections are conducted by the RSO or an HPT. However, on certain occasions, such as weekends, holidays or on a backshift, a qualified operator may be designated to conduct the daily inspection.

The Designated Operator's obligations, in the conduct of these inspections, are to carefully observe through visual inspection radiation safety practices, housekeeping and implementation of the radiation safety program throughout the plant/satellite. Such duties might include, but not be limited to, inspecting for compliance with radiation safety postings, contamination control, proper control point ingress and egress, control of airborne radioactivity, worker protection practices in the yellowcake drying and packaging area, and proper storage of byproduct material.

A qualified Designated Operator has no authority for the development and administration of the radiation protection program, other than the conduct of the daily inspection. He may not approve plans for new equipment, process changes, or changes in operating procedures that might affect the radiation protection program. He will not conduct radiation safety audits or make determinations about personnel dosimetry. A qualified Designated Operator may not authorize non-routine maintenance jobs involving potential for personnel radiation exposure or radioactive contamination for which there are not standard operating procedures nor an existing radiation work permit.

Accordingly, training to qualify a Designated Operator to conduct daily inspections is a truncated version of that required for radiation safety personnel. The radiation safety training afforded to Designated Operators includes sufficient training such that they can make observations during daily inspections, but does not include more advanced topics as might be required for the facility RSO or HPT.

The curriculum for Designated Operator radiation safety training consists of additional training and practicum that would be applicable during the daily inspection, including:

1. Documentation and Recordkeeping Procedures
 - Completion and control of the daily inspection documentation
 - Reporting procedures for equipment malfunctions or violations of standard practices or procedures
2. Supervisory Duties and Responsibilities
3. Fundamentals of Health Protection
4. Personal Hygiene at UR facilities
5. Facility provided protection
6. Health protection measurements
7. Emergency Procedures

Upon completion of training and prior to designation, an operator will be required demonstrate an understanding daily inspections to the RSO. An operator who fails to qualify will be re-evaluated after receiving remedial training. All results will be maintained in each individual's training file. It will be co-signed by the operator and the RSO.

Designated Operators who have been qualified to conduct daily inspections will receive re-training on an annual basis. At a minimum the re-training will include the following:

- Any new relevant information that has become available during the past year
- A review of safety problems that have arisen during the year
- Changes in regulations, license conditions and procedures
- Facility contamination issues

References

1. Crow Butte License Renewal Application, License SUA-1534, Section 5.4.1.1, November 2007.
2. Crow Butte Safety Evaluation Report, License SUA-1534, December 2012
3. US NRC Regulatory Guide 8.22, Bioassay at Uranium Mills, Revision 1, August 1988
4. US NRC Regulatory Guide 8.30, Health Physics Surveys in Uranium Recovery Facilities, Revision 1, May 2002
5. US NRC Regulatory Guide 8.31, Information Relevant to Ensuring that Occupational Radiation Exposures at Uranium Recovery Facilities will be As Low As Reasonably Achievable, Revision 1, May 2002
6. Crow Butte Radioactive Material License, SUA-1534
7. RST Task Completion Check-off List, Smith Ranch-Highland Operation, undated
8. Cameco Resources, Wyoming Operations Training and Awareness Manual - Trailer Scans Training, Revision 4, September 6, 2013