

**From:** [John Schmuck](#)  
**To:** [Burrows, Ronald](#)  
**Cc:** [Gersey, Linda](#); [Josh Leftwich](#); [Lancaster, Thomas](#); [Rhonda Grantham](#); [Doug Pavlick](#)  
**Subject:** RE: Request concurrence: revised draft license conditions for Designated Operator  
**Date:** Tuesday, July 29, 2014 11:45:07 AM

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Ron - Cameco Resources concurs with you proposed revision.

.john

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**From:** Burrows, Ronald [mailto:Ronald.Burrows@nrc.gov]  
**Sent:** Friday, July 18, 2014 3:06 PM  
**To:** John Schmuck  
**Cc:** Gersey, Linda; Josh Leftwich; Lancaster, Thomas; Rhonda Grantham; Doug Pavlick  
**Subject:** Request concurrence: revised draft license conditions for Designated Operator

John,

To address your concern, I have revised draft License Condition (LC) 9.7. We considered your proposed language below but needed to change some of the wording. For example, "act of god" is neither a defined occurrence nor is it an unambiguous inspectable event. In addition, we needed to add revised language to allow for the continued daily inspection by the Designated Operator until the radiation safety staff returns.

I believe that the revision to the May 23, 2014 version of draft LC 9.7 (ML14149A043), as indicated by the yellow highlighted text below in this e-mail, addresses your concerns regarding the timeliness of reviewing reports generated by the Designated Operator and site access issues.

The NRC staff is requesting your concurrence on the revised draft license, including the revisions sent to you on March 23, 2014 (ML14149A043), as soon as possible to facilitate the completion of the revised Safety Evaluation Report.

Thank you.

Ron

*Ronald A. Burrows*

Ronald A. Burrows CHP, RRPT  
U.S. Nuclear Regulatory Commission  
Federal and State Materials and Environmental  
Management Programs  
Uranium Recovery Licensing Branch  
301.415.6443

**Current** draft LC 9.7:

The licensee shall follow the guidance set forth in NRC, Regulatory Guides (as revised) 8.22, "Bioassay at Uranium Recovery Facilities," 8.30, "Health Physics Surveys in Uranium Recovery Facilities," and 8.31, "Information Relevant to Ensuring that Occupational Radiation Exposure at Uranium Recovery Facilities will be As Low As Is Reasonably Achievable (ALARA)" or NRC-approved equivalent.

**Revised** draft LC 9.7:

The licensee shall follow the guidance set forth in NRC Regulatory Guides 8.22, "Bioassay at Uranium Mills" (as revised), and 8.30, "Health Physics Surveys in Uranium Recovery Facilities" (as revised), or NRC-approved equivalent.

The licensee shall follow the guidance set forth in Regulatory Guide 8.31, "Information Relevant to Ensuring That Occupational Radiation Exposures at Uranium Recovery Facilities Will Be as Low as Is Reasonably Achievable" (as revised), or NRC approved equivalent, with the following exception:

The licensee may identify one or more qualified designees to perform daily inspections in the occasional absence of the radiation safety officer (RSO) and health physics technicians (HPTs). A qualified designee will meet the minimum qualifications and perform only those duties as outlined for a qualified Designated Operator as specified in the licensee's submittals dated March 4, 2014 (ML14064A143) and May 15, 2014 (ML14135A414).

A qualified designee may perform daily inspections on weekends, holidays, and times when both the RSO and HPTs must both be absent (e.g., illness or offsite training). With the exceptions of those instances when a Federal holiday falls on a Friday or Monday, the Thanksgiving holiday, or a site closure due to weather or other safety or security related event, qualified designees will not conduct the daily inspections for more than a total of two days per week. When a Federal holiday falls on a Friday or Monday, qualified designees may perform the daily inspections for a total of three consecutive days. For the Thanksgiving holiday only, qualified designees may perform the daily inspections for a total of four consecutive days. When weather or other safety or security related event causes a site closure, a qualified designee, if available, will continue performing the daily inspections until the RSO or HPT can access the site after such an event. The licensee will also have the RSO or HPT available by telephone while a qualified designee is performing the daily inspections.

Reports generated by a qualified designee will be reviewed by the RSO or an HPT as soon as practicable, but not later than the close of business of the next work

day following an absence (including site closure due to weather or other safety or security related event) , weekend, or holiday. The RSO or HPT review shall be annotated with date and time on the report or other document that can be inspected upon request.

**From:** John Schmuck [mailto:John\_Schmuck@Cameco.com]

**Sent:** Wednesday, May 28, 2014 4:38 PM

**To:** Burrows, Ronald

**Cc:** Gersey, Linda; Lancaster, Thomas; Rhonda Grantham; Josh Leftwich; Doug Pavlick

**Subject:** RE: Request concurrence: revised draft license conditions for Designated Operator

Ron - The Cameco proposed changes are in red below.

In Cameco's experience a variety of events that demand RSO attention may prevent review in the first three hours of the first work day following an absence, three day holiday or Thanksgiving holiday. In the worst case, it could artificially prevent the RSO from attending to other more important health physics business. Allowing the RSO an entire workday to perform the review will allow the RSO to appropriately prioritize their tasks, and if necessary extend their work day to ensure the review is performed.

Although very rare, a blizzard, fire or other act of god has closed the Crow Butte site. If the site was closed following an absence, a three day holiday or Thanksgiving holiday, the RSO may be unable to access the site. In that circumstance, the operators would remain on duty and continue to perform the daily inspections and respond accordingly. Cameco believes that the license language should reflect that circumstance to avoid the potential for dispute.

Please review our proposal. If those changes are acceptable to you, the body of changes to the license language are acceptable to Cameco.

Thanks. .john

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**From:** Burrows, Ronald [mailto:Ronald.Burrows@nrc.gov]

**Sent:** Friday, May 23, 2014 11:45 AM

**To:** John Schmuck

**Cc:** Gersey, Linda; Lancaster, Thomas

**Subject:** Request concurrence: revised draft license conditions for Designated Operator

Dear Mr. Schmuck,

As a result of your recent submittals pertaining to your request for a Designated Operator qualification program (refer to ADAMS accession # ML14064A143 and ML14135A414), the NRC staff has revised License Conditions (LCs) 9.2, 9.6 and 9.7 from the fourth draft renewal license (refer to ADAMS accession # ML123240392 and ML12348A240) as presented below. The changes to LC 9.6 are administrative changes to clarify implementation of this license condition and to avoid a conflict with the revised LC 9.7.

In addition, an administrative change was made to the last paragraph of LC 9.5 to incorporate the updated surety amount of \$43,223,280 approved in Amendment 27 to SUA-1534, on November 12, 2013 (refer to ADAMS accession # ML13311A162).

The NRC staff is requesting your concurrence on the revised draft LCs 9.2, 9.5, 9.6 and

9.7. **Highlighted** portions below indicate revised LC language.

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**Current** draft LC 9.2:

The licensee shall conduct operations in accordance with the commitments, representations, and statements contained in the license application dated November 27, 2007 (ADAMS package ML073480264), which is supplemented by submittals dated August 28, 2008 (ML082410902), May 12, 2009 (ML091470116), July 13, 2009 (ML091980473), September 17, 2010 (ML102640195), September 28, 2010 (ML102740030), February 8, 2012 (ML120450518), April 19, 2012 (ML121170487), August 16, 2012 (ML12235A355), August 30, 2012 (ML12250A421), and October 4, 2012 (ML12285A075) and any commitments submitted for verification specified in this license. The approved application, supplements, and information submitted for verification are hereby incorporated by reference, except where superseded by license conditions below.

Whenever the word "will", or "shall", or "would" is used in the above referenced documents, it shall denote a requirement.

**Revised** draft LC 9.2:

The licensee shall conduct operations in accordance with the commitments, representations, and statements contained in the license application dated November 27, 2007 (ADAMS package ML073480264), which is supplemented by submittals dated August 28, 2008 (ML082410902), May 12, 2009 (ML091470116), July 13, 2009 (ML091980473), September 17, 2010 (ML102640195), September 28, 2010 (ML102740030), February 8, 2012 (ML120450518), April 19, 2012 (ML121170487), August 16, 2012 (ML12235A355), August 30, 2012 (ML12250A421), October 4, 2012 (ML12285A075), **March 4, 2014 (ML14064A143), May 15, 2014 (ML14135A414)** and any commitments submitted for verification specified in this license. The approved application, supplements, and information submitted for verification are hereby incorporated by reference, except where superseded by license conditions below.

Whenever the word "will", "shall", or "would" is used in the above referenced documents, it shall denote a requirement.

**Current** draft LC 9.5

Financial Assurance. The licensee shall maintain an NRC-approved financial surety arrangement, consistent with 10 CFR 40, Appendix A, Criterion 9, adequate to cover the estimated costs, if accomplished by a third party, for decommissioning and decontamination, which includes offsite disposal of radioactive solid process or evaporation pond residues, and ground-water restoration as warranted. The surety shall

also include the estimated costs associated with all soil and water sampling analyses necessary to confirm the accomplishment of decontamination.

Proposed annual updates to the financial assurance amount, consistent with 10 CFR Part 40, Appendix A, Criterion 9, shall be provided to the NRC by October 1 of each year. If the NRC has not approved a proposed revision 30 days prior to the expiration date of the existing financial assurance arrangement, the licensee shall extend the existing arrangement, prior to expiration, for one year. Along with each proposed revision or annual update of the financial assurance estimate, the licensee shall submit supporting documentation, showing a breakdown of the costs and the basis for the cost estimates with adjustments for inflation, maintenance of a minimum 15-percent contingency, changes in engineering plans, activities performed, and any other conditions affecting the estimated costs for site closure.

Within 90 days of NRC approval of a revised closure (decommissioning) plan and its cost estimate, the licensee shall submit, for NRC review and approval, a proposed revision to the financial assurance arrangement if estimated costs exceed the amount covered in the existing arrangement. The revised financial assurance instrument shall then be in effect within 30 days of written NRC approval of the documents.

At least 90 days prior to beginning construction associated with any planned expansion or operational change that was not included in the annual financial assurance update, the licensee shall provide, for NRC approval, an updated estimate to cover the expansion or change. The licensee shall also provide the NRC with copies of financial assurance-related correspondence submitted to the State of Nebraska, a copy of the State's financial assurance review, and the final approved financial assurance arrangement. The licensee also must ensure that the financial assurance instrument, where authorized to be held by the State, identifies the NRC related portion of the instrument and covers the aboveground decommissioning and decontamination, the cost of offsite disposal of solid byproduct material, soil, and water sample analyses, and ground water restoration associated with the site. The basis for the cost estimate is the NRC-approved site closure plan or the NRC-approved revisions to the plan. Reclamation or decommissioning plan cost estimates and annual updates should follow the outline in Appendix C to NUREG 1569 (NRC, 2003), entitled "Recommended Outline for Site-Specific In Situ Leach Facility Reclamation and Stabilization Cost Estimates."

Crow Butte Resources, Inc., shall continuously maintain an approved surety instrument for the Crow Butte project, in favor of the State of Nebraska, in the amount of no less than \$35,398,802 for the purpose of complying with 10 CFR 40, Appendix A, Criterion 9, until a replacement is authorized by both the State of Nebraska and NRC.

**Revised** draft LC 9.5:

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(All paragraphs prior to last paragraph remain the same)

Crow Butte Resources, Inc., shall continuously maintain an approved surety instrument for

the Crow Butte project, in favor of the State of Nebraska, in the amount of no less than \$43,223,280 for the purpose of complying with 10 CFR 40, Appendix A, Criterion 9, until a replacement is authorized by both the State of Nebraska and NRC.

**Current** draft LC 9.6:

Release of surficially contaminated equipment, materials, or packages from restricted areas shall be in accordance with the NRC guidance document "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source, or Special Nuclear Material," (the Guidelines) dated April 1993 (ADAMS Accession No. ML003745526) or suitable alternative procedures approved by NRC prior to any such release.

The Guidelines shall also apply to the removal of equipment, materials, or packages from restricted areas that have the potential for accessible surface contamination levels above background regardless of the intent to release these items for unrestricted use. The licensee shall document their survey of equipment, materials, or packages prior to removing them from a restricted area.

Where surface contamination by both alpha- and beta-gamma-emitting nuclides exists, the limits established for alpha- and beta-gamma-emitting nuclides shall apply independently.

Personnel performing these contamination surveys for items released for unrestricted use or from restricted areas shall meet the qualifications as health physics technicians or radiation safety officer as defined in Regulatory Guide 8.31. Personal effects (e.g., notebooks and flash lights) which are hand carried need not be subjected to the qualified individual survey or evaluation, but these items should be subjected to the same survey requirements as the individual possessing the items.

For release to unrestricted areas, the licensee may provide its program for releasing equipment, materials, or packages that have the potential for accessible surface contamination levels above background (i.e., "controlled release") to NRC for review and written verification. The program shall demonstrate how the licensee will maintain radiological controls over the equipment, materials, or packages that have the potential for accessible surface contamination levels above background until they have been released for unrestricted use as specified above and what methods will be used to

limit the spread of contamination to unrestricted areas.

For releases with a final destination to one of the licensee's restricted areas, whether through an unrestricted area or not, the licensee may identify a qualified designee(s) to perform the surveys associated with releasing equipment, materials, or packages that have the potential for accessible surface contamination levels above background. The qualified designee(s) shall have completed education, training, and experience, in addition to general radiation worker training as specified by the licensee. The education, training, and experience required by the licensee verification. The licensee must receive written verification on its education, training, and experience requirements prior to allowing a designee(s) to perform these surveys.

**Revised** draft LC 9.6:

Release of superficially contaminated equipment, materials, or packages **for unrestricted use** shall be in accordance with the NRC guidance document "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source, or Special Nuclear Material," (the Guidelines) dated April 1993 (ADAMS Accession No. ML003745526), or **in accordance with a suitable alternative program which shall be approved** by NRC prior to any such release.

The Guidelines or approved alternative program shall also apply to the removal of equipment, materials, or packages from restricted areas that have the potential for accessible surface contamination levels above background regardless of the intent to release these items for unrestricted use. The licensee shall document their surveys of equipment, materials, or packages prior to removing them from a restricted area.

Where surface contamination by both alpha- and beta-gamma-emitting nuclides exists, the limits established **in the Guidelines** for alpha- and beta-gamma-emitting nuclides shall apply independently.

Personnel performing these contamination surveys for items released for unrestricted use or from restricted areas shall meet the qualifications for health physics technicians or radiation safety officer as defined in Regulatory Guide 8.31, **except as provided in an alternative program submitted under one of the last two paragraphs of this license condition**. Personal effects (e.g., notebooks and flash lights) which are hand carried need not be **surveyed by personnel meeting the above qualifications**, but these items should be subjected to the same survey requirements as the individual possessing the items.

For release to unrestricted areas, the licensee may provide **an alternative program** for releasing equipment, materials, or packages that have the potential for accessible surface contamination levels above background (i.e., "controlled release") to the NRC headquarters staff for review and written verification. The **alternative program for**

**controlled release** shall demonstrate how the licensee will maintain radiological controls over the equipment, materials, or packages that have the potential for accessible surface contamination levels above background until they have been released for unrestricted use as specified **in the first paragraph above, and shall describe the methods that will be used to limit the spread of contamination to unrestricted areas. An alternative program proposed under this paragraph shall not be implemented without written verification from NRC headquarters staff.**

For releases with a final destination to one of the licensee's restricted areas, whether through an unrestricted area or not, the licensee may, **as part of an alternative program,** identify **one or more** qualified designees to perform the surveys associated with releasing equipment, materials, or packages that have the potential for accessible surface contamination levels above background. The qualified designees shall have completed education, training, and experience, in addition to general radiation worker training as specified by the licensee. **The licensee must submit the education, training, and experience requirements** for qualified designees to the NRC headquarters staff for review and written verification, **and** must receive written verification **of those requirements** prior to allowing qualified designees to perform these surveys.

**Current** draft LC 9.7:

The licensee shall follow the guidance set forth in NRC, Regulatory Guides (as revised) 8.22, "Bioassay at Uranium Recovery Facilities," 8.30, "Health Physics Surveys in Uranium Recovery Facilities," and 8.31, "Information Relevant to Ensuring that Occupational Radiation Exposure at Uranium Recovery Facilities will be As Low As Is Reasonably Achievable (ALARA)" or NRC-approved equivalent.

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The licensee shall follow the guidance set forth in NRC Regulatory Guides 8.22, "Bioassay at Uranium Mills" (as revised), and 8.30, "Health Physics Surveys in Uranium Recovery Facilities" (as revised), or NRC-approved equivalent.

The licensee shall follow the guidance set forth in Regulatory Guide 8.31, "Information Relevant to Ensuring That Occupational Radiation Exposures at Uranium Recovery Facilities Will Be as Low as Is Reasonably Achievable" (as revised), or NRC approved equivalent, **with the following exception:**

**The licensee may identify one or more qualified designees to perform daily inspections in the occasional absence of the radiation safety officer (RSO) and health physics technicians (HPTs). A qualified designee will meet the minimum qualifications and perform only those duties as outlined for a qualified Designated Operator as specified in the licensee's submittals dated March 4, 2014 (ML14064A143) and May 15, 2014 (ML14135A414).**



A qualified designee may perform daily inspections on weekends, holidays, and times when both the RSO and HPTs must both be absent (e.g., illness or offsite training). With the exceptions of those instances when a Federal holiday falls on a Friday or Monday and the Thanksgiving holiday, qualified designees will not conduct the daily inspections for more than a total of two days per week. When a Federal holiday falls on a Friday or Monday, qualified designees may perform the daily inspections for a total of three consecutive days. For the Thanksgiving holiday only, qualified designees may perform the daily inspections for a total of four consecutive days. The licensee will also have the RSO or HPT available by telephone while a qualified designee is performing the daily inspections.

Reports generated by a qualified designee will be reviewed by the RSO or an HPT as soon as practicable, but not later than the close of business 3 hours from the beginning of the next work day following an absence, weekend, or holiday (except where the site is closed the next work day for blizzard, fire or act of god). The RSO or HPT review shall be annotated with date and time on the report or other document that can be inspected upon request.

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Please let me know if you have any questions.

Regards,

Ron

*Ronald A. Burrows*

Ronald A. Burrows CHP, RRPT  
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Federal and State Materials and Environmental  
Management Programs  
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