

March 22, 2011

MEMORANDUM TO: Bill Von Till, Chief
Uranium Recovery Licensing Branch
Decommissioning and Uranium Recovery
Licensing Directorate
Division of Waste Management
and Environmental Protection
Office of Federal and State Materials
and Environmental Management Programs

FROM: Ronald A. Burrows, Project Manager **/RA/**
Uranium Recovery Licensing Branch
Decommissioning and Uranium Recovery
Licensing Directorate
Division of Waste Management
and Environmental Protection
Office of Federal and State Materials
and Environmental Management Programs

SUBJECT: PUBLIC MEETING SUMMARY

On March 17, 2011, a public meeting was held at NRC Headquarters, at the request of Cameco Resources/Crow Butte Operations, to discuss health physics issues related to the license renewal of the Crow Butte facility in Dawes County, Nebraska. A summary of the meeting is enclosed.

Enclosure: Meeting Summary

CONTACT: R. Burrows, FSME/DWMEP
(301) 415-6443

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DISTRIBUTION:
 KMcConnell JWhitten/RIV LGersey/RIV BKlukan
 Meeting Attendees

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OFFICE	DWMEP	DWMEP	DWMEP
NAME	RBurrows	BGarrett	RBurrows
DATE	3 /22/11	3/22/11	3/22/11

OFFICIAL RECORD COPY

MEETING SUMMARY

DATE: March 17, 2011

TIME: 10:00 a.m. to 2:00 p.m.

PLACE: U.S. Nuclear Regulatory Commission, Headquarters
Two White Flint North, Rockville, Maryland
Room T-3C1

PURPOSE: This meeting was held at the request of Cameco Resources/Crow Butte Operations (Cameco) to discuss health physics issues related to the license renewal of the Crow Butte facility in Dawes County, Nebraska.

ATTENDEES:

See Attached Attendees List.

BACKGROUND:

By letter dated November 27, 2007, Crow Butte Resources, Inc., (CBR) submitted to the U.S. Nuclear Regulatory Commission (NRC) staff a request to renew its source material license for its uranium in situ recovery (ISR) facility located in Crawford, Nebraska. By letter dated June 30, 2010 (ML101800386), staff submitted to CBR open issues related to this license renewal. These open issues addressed various health physics topics addressing the inhalation classification of yellowcake, radiological monitoring, and exposure calculations.

DISCUSSION:

NRC staff read the opening statement for the meeting and Cameco proceeded to present its information used to derive an inhalation classification for yellowcake produced at its Crow Butte facility. This information is summarized in Attachment 3. Cameco then presented its proposed radiological sampling plan that includes airborne, contamination and direct radiation surveys. This information is summarized in Attachment 4. After Cameco's presentation, the meeting was opened for questions.

After Cameco discussed its experimental data for deriving the inhalation classification of yellowcake, the staff requested clarification on Cameco's interpretation of this data. Specifically, it is unclear to staff how the experimental data presented in Attachment 3 is used to draw the conclusions in Table 5 of this paper. Cameco will provide further clarification to NRC staff.

To address the open issues in the June 30, 2010, letter from NRC staff, Cameco developed a draft sampling plan (the plan) that they intend to implement over the next year or so. This plan involves taking various airborne, contamination, and direct radiation measurements throughout its facility. The plan also includes analyzing various occupational and public exposure scenarios. Cameco confirmed with NRC staff that it will use the 10 CFR 20, Appendix B, effluent concentration value for "Rn-222 with daughters present" to assess radon exposures when radon concentrations are used for dose assessment.

There were no questions from members of the public.

ACTIONS:

Cameco will provide NRC staff with clarification on how data presented in Table 5 of its March 14, 2011 paper (attachment 3) is derived. Specifically, Cameco will provide clarification on how the percentages of Class D and Class W uranium is derived using its experimental data.

ATTACHMENTS

1. Agenda
2. List of Attendees
3. Cameco Presentation on Yellowcake Solubility Characteristics (paper dated March 14, 2011)
4. Cameco Presentation on the Draft Crow Butte Sampling Plan (dated March 15, 2011)

MEETING AGENDA
Cameco Resources/Crow Butte Operations
March 17, 2011

MEETING PURPOSE: Meeting to Discuss Health Physics Issues Related to License Renewal

MEETING PROCESS:

<u>Time</u>	<u>Topic</u>	<u>Lead</u>
10:00 a.m.	Introductions	All
	Discussion of Health Physics Issues (See items on next page)	All
	Summary of Action Items	Moderator
	Public Comment/Questions	Moderator
2:00 p.m.	Adjourn	

Addition to Agenda as of 3/10/11

Details of Health Physics Issues to be Discussed

- 1) Lung Study Results:
 - Calculated Site Specific DAC for Natural Uranium - 4.8×10^{-10} (ICRP 30)
 - SERP
- 2) Mixed DAC/Isotopic Analysis:
 - Collect and evaluate isotopic data and evaluate need for Mixed DAC
 - in-plant, wellfield and spill locations
 - SERP, if required
- 3) Radiation Protection Program Evaluation, Proposed Sampling Objectives:
 - Evaluate whether existing Radiation Protection Program consistently overestimates occupational dose
 - office workers
 - lab workers
 - wellfield operators
 - wellfield construction
 - Evaluate public dose to vendors active at near-plant locations
 - Evaluate dose constraint rule
 - Beta/gamma campaign
 - Gross alpha counting
 - Detection limits
 - Data reduction and interpretation
 - Dose build-up
 - SERP to implement sampling program followed by SERP(s), as required.

LIST OF PARTICIPANTS

DATE: March 17, 2011
10:00 a.m. – 2:00 p.m.

MEETING: Cameco Resources/Crow Butte Operations

NAME	ORGANIZATION	PHONE NUMBER or E-mail (work)
Christopher Pugsley	Thompson & Pugsley	202-496-0780
Douglas Mandeville	NRC/URLB	301-415-0724
John Schmuck	Cameco Resources	307-316-7587
Brett Klukan	NRC/OGC	301-415-3629
James Webb	NRC/URLB	301-415-6252
Tom Youngblood	NRC/RDB	301-415-5875
Nathan Goodman	NRC/FSME/URLB	301-415-2703
Stephen J. Cohen	NRC/FSME/URLB	301-415-7182
Josh Leftwich	Cameco Resources	307-274-0088
Ron Burrows	NRC/URLB	301-415-6443
Jan Johnson*	Tetra Tech	
Robert Meyer*	Tetra Tech	
Linda Gersey*	NRC, Region IV	
Larry Teahon*	Cameco Resources	
Rhonda Grantham*	Cameco Resources	
Paul Hildenbrand*	Lidstone & Associates	
Carrie Chase*	Cameco Corporation	
John Takala*	Cameco Corporation	

*Attended Via Telephone