

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD PANEL

Before the Licensing Board:

G. Paul Bollwerk, III, Chairman  
Dr. Richard E. Wardwell  
Dr. Thomas J. Hirons

In the Matter of

CROW BUTTE RESOURCES, INC.

(Marsland Expansion Area)

Docket No. 40-8943-MLA-2

ASLBP No. 13-926-01-MLA-BD01

October 3, 2018

MEMORANDUM AND ORDER

(Scheduling Prehearing Conference and Providing  
Teleconference Agenda and Hearing Presentation Order)

In response to the Licensing Board's Memorandum and Order (Concerning Party Late Filings and Scheduling Prehearing Conference) (Sept. 10, 2018) (unpublished), the parties provided information on their availability for a prehearing conference call to be held on October 10, 2018. Based on that information, the teleconference is scheduled for Wednesday, October 10, 2018, beginning at 12:00 p.m. Eastern Time.

The Licensing Board will establish a bridge line for this conference. In the near future, the Board's law clerk will contact the parties with instructions on how to access the telephone bridge. In addition, the Board will provide a "listen-only" capability for members of the public. Members of the public interested in receiving the access information for the listen-only line should contact the Board's law clerk Sarah Ladin at Sarah.Ladin@nrc.gov or (301) 415-5277.

During the conference, the Board would like to discuss with the parties (1) the limited appearance session scheduled for Sunday, October 28, 2018; (2) logistics for the site visit to

Crow Butte Resources, Inc.'s (CBR) central processing facility scheduled for Monday, October 29, 2018; and (3) the general hearing process, including the evidentiary hearing order of presentation and the use of audio-visual technology to allow a witness to provide testimony remotely.

A. Limited Appearance Session

In a July 27, 2018 notice of hearing and an administrative order issued that same date, the Board outlined the general procedures that will govern the October 29, 2018 oral limited appearance session, as well as the opportunities afforded to provide written and audio-recorded limited appearance statements. See Notice of Hearing (Notice of Evidentiary Hearing and Opportunity to Provide Oral, Written, and Audio-Recorded Limited Appearance Statements); In the Matter of Crow Butte Resources, Inc. (Marsland Expansion Area), 83 Fed. Reg. 37,828, 37,829–30 (Aug. 2, 2018) [hereinafter Hearing Notice]; Licensing Board Memorandum and Order (Providing Administrative Directives Associated with Evidentiary Hearing and Limited Appearance Session) (July 27, 2018) at 9 (unpublished) [hereinafter Board Order]. At the prehearing conference, the Board will inquire about whether each of the parties intends to have a representative (or representatives) at the limited appearance session who would be identified for the record and will discuss party participation in a limited appearance session.

B. Site Visit

In a May 21, 2018 issuance, the Board requested that CBR arrange a site visit to its central processing facility near Crawford, Nebraska, that can be attended by the Board members, the Board's law clerks, and party representatives. See Licensing Board Memorandum and Order (License Amendment Effectiveness Stay Application, In Limine Motions, and Site Visit/Limited Appearance Session/Evidentiary Hearing Scheduling) (May 21, 2018) at 4–5 (unpublished). The Board appreciates CBR's willingness to, and efforts

associated with, hosting this site visit. At the prehearing conference, the Board anticipates that CBR will be able to provide the Board and the other parties with information regarding the following topics (as well as any others CBR deems appropriate):

1. What identifying information is needed from the Board and the parties about any individual who plans to attend the site visit, when is that information required, and where should it be sent?

2. How does CBR contemplate that those attending the site visit should get to the site (e.g., meet at central location and caravan to the facility in their own transportation, come directly to the facility in their own transportation) and what time would attendees be expected to arrive?

3. What time does CBR contemplate that the actual site tour will begin and conclude, what site areas does CBR anticipate showing site visit attendees, and how would attendees move among those site areas?

4. What recommendations does CBR have about appropriate dress, including footwear?

5. Would attendees be permitted to take photos during the tour?

C. Evidentiary Hearing

The evidentiary hearing, scheduled to begin on Tuesday, October 30, 2018, and conclude on Thursday, November 1, 2018, in Crawford, Nebraska, will concern admitted Contention 2, which states as follows:

OST Contention 2: Failure to Include Adequate Hydrogeological Information to Demonstrate Ability to Contain Fluid Migration

The application and final environmental assessment fail to provide sufficient information regarding the geological setting of the area to meet the requirements of 10 C.F.R. Part 40, Appendix A, Criteria 4(e) and [5]G(2); the National Environmental Policy Act; and NUREG-1569 section 2.6. The application and final environmental assessment similarly fail to provide sufficient information to establish potential effects of the project on the

adjacent surface and ground-water resources, as required by NUREG-1569 section 2.7, and the National Environmental Policy Act.

LBP-18-3, 88 NRC \_\_, \_\_ (slip op. at 43) (July 20, 2018).<sup>1</sup> More specifically, four concerns were identified relative to this contention, see id., which will be the focus of the hearing. The 10 C.F.R. Part 2, Subpart L hearing regarding Contention 2 and these associated concerns, which is intended to assist the Board in creating an adequate record that will provide the basis for its decision on the merits of the contention, generally will proceed as outlined in this order.

At 8:00 a.m. Mountain Time (MT) on Tuesday, October 30, 2018, the Licensing Board will convene the evidentiary hearing.<sup>2</sup> After providing the parties with a brief opportunity to make an opening statement if they wish to do so,<sup>3</sup> the Board will impanel and swear in all the parties' witnesses and identify and admit all supporting exhibits relative to each of the parties' witnesses.

Previously, the Board had planned first to explore some geologic overview matters with OST witness Dr. Hannan LaGarry before moving on to question the parties' witnesses about the four Contention 2 concerns sequentially. See Tr. at 205–06. But in light of the recent disclosure

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<sup>1</sup> Although the contention's reference to 10 C.F.R. Part 40, Appendix A, Criterion 5G(2) was included in LBP-18-2, 87 NRC 21, 37 (2018), it was inadvertently omitted from LBP-18-3, a correction that is being noted here.

<sup>2</sup> Because of issues with the availability of intervenor Oglala Sioux Tribe's (OST) witnesses discussed below, to maximize the hearing time available on October 30, the Board will convene the hearing that day a half-hour earlier than the 8:30 a.m. MT start time set forth in its initial notice of hearing. See Hearing Notice, 83 Fed. Reg. at 37,829. Following the October 10 prehearing conference, the Board will issue a revised hearing notice regarding this earlier start time. The start times for the other two hearing days will be determined by the Board based on the progress being made in covering the items discussed below.

<sup>3</sup> During a September 26, 2018 prehearing conference called to discuss the matter of witness availability, the parties indicated they believed these statements would be five minutes or less. See Tr. at 231–32.

of the limited availability of OST witnesses Dr. David Kreamer and Mike Wireman on at least one of the scheduled hearing days, see Tr. at 200, 202–03; E-mail from David Frankel, OST Counsel, to Sarah Ladin, Licensing Board Law Clerk (Sept. 27, 2018 10:52 EDT) (ADAMS Accession No. ML18274A397) [hereinafter Frankel E-mail], in an effort to create as complete a record as possible under the circumstances, the Board will reconfigure its questioning to accommodate what we now understand to be these witnesses' availability.<sup>4</sup>

Accordingly, on Tuesday (the first hearing day) after all the parties' witnesses are sworn and their supporting exhibits are admitted, the Board will begin by inquiring into the issues raised in concern 2. This aspect of the contention challenges, "exclusively as a safety concern, the absence in the applicant's technical report, in accord with NUREG-1569 section 2.7, of a description of the effective porosity,[] hydraulic conductivity, and hydraulic gradient of site hydrogeology, along with other information relative to the control and prevention of excursions such as transmissivity and storativity." LBP-18-3, 88 NRC at \_\_\_ (slip op. at 43).<sup>5</sup> The Board anticipates questioning the witnesses about, among other things, Dr. Kreamer's testimony

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<sup>4</sup> The Board's current understanding is that while the NRC staff and CBR witnesses who provided prefiled direct/rebuttal testimony will all be available onsite at the Crawford hearing venue for all three days of the hearing, the same is not true for two of the three OST witnesses who provided such testimony. Based on the information received by the Board up to this point, we understand that Dr. Kreamer is available onsite on Tuesday and remotely on Thursday (but unavailable on Wednesday), Mr. Wireman is available onsite on Tuesday and Wednesday (but unavailable on Thursday), and Dr. LaGarry is available onsite all three days. If at any point the availability of any party's witness changes from what is outlined above, that party needs to contact the Board immediately with the change information.

<sup>5</sup> In its initial position statement, the staff noted a Board error in adding "hydraulic porosity" to the language of concern 2 in both LBP-18-2 and LBP-18-3. See NRC Staff's Initial Statement of Position (Aug. 17, 2018) at 23 n.95 (citing LBP-18-2, 87 NRC 21, 37 (2018); LBP-18-3, 88 NRC at \_\_\_ (slip op at 43)). We appreciate the staff bringing this matter to our attention and correct this error here, noting that the discussion of "hydraulic porosity" in the CBR technical report is a matter not within the scope of Contention 2.

regarding (1) mischaracterization of the hydrogeologic environment; (2) previous pumping test analyses from the renewal site; (3) utilization of alternative pumping test methods; (4) homogeneity and isotropy assumptions; (5) analysis for anisotropy; (6) discontinuities in Basal Chadron/Chamberlain Pass Formation (BC/CPF) thickness; and (7) analysis of selected pump test data.<sup>6</sup>

Thereafter, on Tuesday afternoon, if time permits, and on Wednesday (the second hearing day), the Board will consider concern 1,<sup>7</sup> with questions for the witnesses about Dr. Wireman's testimony on this topic that asserts that "the descriptions of the affected environment for establishing the potential effects of the proposed MEA operation on the adjacent surface water and groundwater resources" are inadequate. Id. Among other things, the Board anticipates questioning the witnesses regarding Mr. Wireman's and Dr. LaGarry's testimony pertaining to (1) the stratigraphy and contaminant pathways; and (2) the affected environment.

Subject to the caveat discussed below, see infra p. 8, the Board then will turn to concern 3, which alleges that the staff's Environmental Assessment (EA) and CBR's Technical Report (TR) fail "to develop, in accord with NUREG-1569 section 2.7, an acceptable conceptual model of site hydrology that is adequately supported by site characterization data so as to demonstrate with scientific confidence that the area hydrogeology, including horizontal and

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<sup>6</sup> During the prehearing conference, OST counsel represented that Dr. Kreamer would be available to testify until 5:00 p.m. MT on Tuesday. See Tr. at 236–37. If at any point that turns out not to be the case, OST should notify the Board immediately.

<sup>7</sup> Although during the September 26 prehearing conference the Board indicated that it likely would move to questioning regarding concern 3 after concern 2, see Tr. at 216–17, given the subsequent information provided by OST about Dr. Kreamer's total unavailability on Wednesday, with Mr. Wireman unavailable on Thursday, the Board will move to concern 1 after concern 2 to ensure we are able to obtain as much as possible of Dr. Wireman's testimony regarding concern 1.

vertical hydraulic conductivity, will result in the confinement of extraction fluids and expected operational and restoration performance.” LBP-18-3, 88 NRC at \_\_ (slip op. at 43). The Board plans to include questions concerning the testimony of OST witnesses Mr. Wireman and Dr. Kreamer regarding the geologic stratification conceptual model and numerical modeling at the Marsland Expansion Area (MEA) site.<sup>8</sup>

Thereafter, the Board will address concern 4, which claims the EA contains “unsubstantiated assumptions as to the isolation of the aquifers in the ore-bearing zones.” Id. The Board will focus on questions relating to the testimony of OST witnesses Mr. Wireman and Dr. Kreamer on the subjects of (1) their analysis assumptions; (2) any proffered evidence indicating hydrogeologic confinement of the production zone; (3) their summation of the natural and design confinement of the BC/CPF Aquifer; and (4) their opinion regarding the NRC staff’s conclusions concerning impacts to aquifer containment as it protects groundwater quality in the vicinity of the MEA.

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<sup>8</sup> Because Dr. Kreamer’s testimony regarding concerns 3 and 4, if available, would add to the completeness of the evidentiary record and because the Board now believes it will be possible for Dr. Kreamer to provide remote video testimony that can be received and displayed at the Crawford hearing facility, per OST counsel’s representation that Dr. Kreamer will be available remotely all day on Thursday, see Frankel E-mail, the Board will allow Dr. Kreamer’s testimony via video webconference on Thursday when it anticipates discussing concerns 3 and 4. OST thus should advise Dr. Kreamer that ASLBP information technology specialist Joe Deucher will make arrangements with him to test the video connection to the Crawford hearing facility, preferably on the afternoon of Monday, October 29, 2018, when Dr. Kreamer is at the location where, and using the computer with which, he will provide his testimony.

That being said, given the longstanding schedule for this evidentiary hearing, see Tr. at 198–200, technical difficulties with obtaining Dr. Kreamer’s testimony on Thursday are unlikely to provide a basis for the Board to afford an additional opportunity for Dr. Kreamer to testify subsequent to the Thursday session. Cf. Phila. Elec. Co. (Peach Bottom Atomic Power Station, Units 2 & 3), ALAB-566, 10 NRC 527, 530 (1979) (indicating witness preparing testimony but claiming additional time is needed because of commitments to other cases must expend extra effort to meet prescribed schedules in each case).

With respect to the Board's anticipated inquiry of Dr. LaGarry regarding the stratigraphy and hydrogeology of the area, as well as its questions about his qualifications to make certain statements in his rebuttal testimony about the requirements of the National Environmental Policy Act, depending on when consideration of concern 1 is concluded on Wednesday, the Board may decide to question Dr. LaGarry at that point. Otherwise, it will defer those questions until after consideration of concerns 3 and 4 has been completed.

After the Board has concluded its questioning on a particular concern, the parties will be afforded an opportunity to submit, in camera, additional questions for the Board to ask witnesses to ensure the record is complete. The parties should have some method of providing the Board with legible questions within a period of ten to fifteen minutes.

The hearing will adjourn by the conclusion of the third day (Thursday).

In addition to discussing the order of presentation outlined above, at the prehearing conference the Board will provide an explanation of the new exhibit marking system that will be employed for this hearing, which includes the use of the exhibit cover sheets that the parties have utilized. Also, the Board will review the post-hearing process for submitting transcript corrections and closing the evidentiary record.

#### D. Other Topics

If any party wishes to add any other agenda items for discussion during the prehearing conference relative to the three subject matter areas outlined under sections A through C



above, that party should inform the Board and the other parties of those subjects by a filing submitted on or before Monday, October 8, 2018.

It is so ORDERED.

FOR THE ATOMIC SAFETY  
AND LICENSING BOARD

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G. Paul Bollwerk, III, Chairman  
ADMINISTRATIVE JUDGE

Rockville, Maryland

October 3, 2018

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

In the Matter of )  
)  
CROW BUTTE RESOURCES, INC. ) Docket No. 40-8943-MLA-2  
)  
In-Situ Leach Uranium Recovery Facility, ) ASLBP No. 13-926-01-MLA-BD01  
Crawford, Nebraska )  
)  
(License Amendment – )  
Marsland Expansion Area) )

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing **MEMORANDUM AND ORDER (Scheduling Prehearing Conference and Providing Teleconference Agenda and Hearing Presentation Order)** have been served upon the following persons by Electronic Information Exchange.

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**MEMORANDUM AND ORDER (Scheduling Prehearing Conference and Providing Teleconference Agenda and Hearing Presentation Order)**

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[Original signed by Brian Newell ]  
Office of the Secretary of the Commission

Dated at Rockville, Maryland  
this 3<sup>rd</sup> day of October, 2018