

September 24, 2009

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

DATE/TIME: October 5, 2009  
10:00 a.m. - 4:00 p.m.

LOCATION: U.S. Nuclear Regulatory Commission  
Two White Flint North, Room T10 C4  
11545 Rockville Pike  
Rockville, MD 20852

Newly scheduled      \_\_\_ Revised      \_\_\_ Canceled

APPLICANT: Crow Butte Resources, Inc./North Trend Expansion Area

DOCKET: 04008943

PURPOSE: Teleconference to Discuss Meteorological, Radiological and  
Hydrogeological Issues Relating to North Trend Expansion Area ISR  
License Amendment.

PARTICIPANTS: NRC Offices                      Applicant  
Stephen Cohen                      Larry Teahon  
Ron Burrows                                      et al.  
Tom Lancaster  
et al.

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CATEGORY: Category 1. The public is invited to observe this meeting and will have opportunities to communicate with the NRC staff after the business portion, but before the meeting is adjourned. **Interested members of the public can participate in this meeting via a toll-free teleconference. For details, please call the NRC meeting contact by October 1, 2009.**

ENCLOSURE:           Agenda

NOTE:                   The NRC's Policy Statement "Enhanced Public Participation in NRC Meetings," May 28, 2002, applies to this meeting. The Policy Statement may be found on the NRC Web site, [www.nrc.gov](http://www.nrc.gov), and contains information regarding visitors and security.

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DISTRIBUTION:

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Office	DWMEP	DWMEP	DWMEP	
Name	RBurrows	BGarrett	RBurrows	
Date	9/ /09	9/ /09	9/ /09	/ /

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MEETING AGENDA  
Crow Butte Resources, Inc. / North Trend Expansion Area  
October 5, 2009

MEETING PURPOSE: Teleconference to Discuss Meteorological, Radiological and Hydrogeological Issues Relating to North Trend Expansion Area ISR License Amendment.

MEETING PROCESS:

<u>Time</u>	<u>Topic</u>	<u>Lead</u>
10:00 a.m.	Introductions	All
	Discussion of Meteorological Issues (list of issues attached)	All
	Discussion of Radiological Issues (list of issues attached)	All
	Discussion of Hydrogeological Issues (list of issues attached)	All
	Break for lunch	All
	Discussion of Other Issues (time permitting)	All
	Summary of Action Items	Moderator
	Public Comment/Questions	Moderator
4:00 p.m.	Adjourn	

Enclosure

Meteorological Issues  
Crow Butte Resources, Inc. / North Trend Expansion Area  
October 5, 2009

1. Justification of why Crow Butte data is representative of North Trend Expansion Area.
2. No concurrent data from National Weather Service station to demonstrate data represents long-term trends.
3. No information related to siting of meteorological instruments.
4. "Humidity" and "Winds" section numbers mislabeled.
5. No discussion on method used to calculate atmospheric stability or what type of instrumentation was used.
6. No data on mixing layer height.
7. In the notes to Table 2.5-13 (all stabilities), it reads "Percent occurrence for A stability class = 100%". It appears that "A" should read "All".
8. Lack of description of the types and specifications for the meteorological instruments used to collect relevant data.
9. Lack of data on system calibration and maintenance.
10. No recovery rates provided for meteorological data.

Radiological Issues  
Crow Butte Resources, Inc. / North Trend Expansion Area  
October 5, 2009

1. Justification for AM-6 as background control location.
2. Criteria for placement of pre-operational radon monitors.
3. No table number assigned to table on page 2.9-11 (mean radon concentration).
4. Justification for a lack of pre-operational airborne particulate monitoring program.
5. Insufficient justification for not sampling for airborne Th-230.
6. Justification for not monitoring radon flux.
7. Proposed vegetation sampling program not consistent with Regulatory Guide 4.14.
8. Crop sampling not addressed.
9. Livestock sampling not addressed.
10. Fish sampling not addressed.
11. Justification for using exposure rate correlation data developed from currently licensed facility for North Trend Expansion Area direct radiation readings.
12. Where does seventh data point from Table 2.9-12 of Technical Report come from?
13. Justification for using exposure rate correlation data developed from currently licensed facility for North Trend Expansion Area compass direct radiation readings.
14. Justification for location of soil sampling at air monitoring stations – see item #2 above.
15. Text of description of proposed surface soil sampling program does not comport with Figure 2.9-4 of the Technical Report.
16. Insufficient justification for not sampling for Th-230 in soil at airborne monitoring stations.
17. Sediment sampling from White River not consistent with Regulatory Guide 4.14.
18. No sediment sampling evaluation for Spring and Unnamed Creeks and Hall Canal.
19. It is stated in the Technical Report that that W-2 in Figure 2.7-1 is upstream of the site boundary. It appears to be downstream.
20. Surface water sampled for 5 quarters instead of at least 12 months. Only 3 quarters had the complete suite of radionuclides analyzed consistent with Regulatory Guide 4.14.

21. Missing radionuclide constituents from some quarterly samples.
22. The note to Table 2.9-6 indicated "groundwater". It appears that this should indicate "surface water".
23. Surface water results do not delineate between suspended and dissolved radionuclides.
24. No surface water sampling evaluation for Spring and Unnamed Creeks and Hall Canal.
25. Analytical results for surface soil sampling not included in Technical Report (Confirmatory).
26. Analytical results for subsurface soil sampling not included in Technical Report (Confirmatory).
27. Insufficient justification for not monitoring radon effluent.
28. Insufficient justification for not having an operational environmental air particulate monitoring program.

Hydrogeological Issues  
Crow Butte Resources, Inc. / North Trend Expansion Area  
October 5, 2009

1. Mineralogical information for the Basal Chadron Formation within North Trend.
2. Recent stream flow data and comparative assessment to past data.
3. Safety considerations and measures for potential flood impacts in Section 34.
4. Water supply wells in Table 2.2-12 were not all found in Figure 2.2-4 (e.g., # 55, 60, 61, 65, 98, 219, and 5,000 series wells).
5. Extend the Basal Chadron potentiometric surface map to include water supply wells close to the project area, where feasible.
6. Extend the Brule potentiometric surface map(s) to include representative water supply wells within and close to the project area, where feasible.
7. Considerations for the use of PVC well screens at certain locations.
8. Justification and formal request for the three-year alternate restoration schedule.
9. Further assess the cause of the Basal Chadron's increased hydraulic gradient that is parallel to the monocline fold axis.
10. The revised Figure 3.2-1 is missing.
11. Short-term stability analysis, construction, drawings, and associated monitoring wells for evaporation ponds in compliance with 10 CFR 41 (h) and 10 CFR 40 Appendix A.
12. Justification for baseline water quality indicators.
13. Justification for one overlying monitoring well per five acres and one baseline restoration well per four acres.
14. Penetration of screened interval of monitoring and production wells.
15. Consistent with NUREG 1569, the NRC must be notified in writing within seven days from the time an excursion is verified.
16. Commitment to current federal drinking water standards for restoration (e.g., 0.03 mg/ L for uranium).