

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION  
ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

G. Paul Bollwerk, III, Chairman  
Dr. Kaye D. Lathrop  
Dr. Craig M. White

In the Matter of

AREVA ENRICHMENT SERVICES, LLC

(Eagle Rock Enrichment Facility)

Docket No. 70-7015-ML

ASLBP No. 10-899-02-ML-BD01

April 15, 2011

MEMORANDUM AND ORDER

(Initial Board Questions Regarding Environmental-Related Matters  
and Associated Administrative Directives)

In the Licensing Board's March 30, 2011 updated general schedule, we established a schedule for the National Environmental Policy Act (NEPA)/environmental-related portion of this mandatory/uncontested hearing under which, on or before April 22, 2010, the Board is to provide questions for the NRC staff and applicant AREVA Enrichment Services, LLC, (AES) to answer. See Licensing Board Memorandum and Order (Updated General Schedule) (Mar. 30, 2011) app. A at 2 (unpublished). The Board, however, has generated an initial round of questions that it is prepared to issue now, one week before that deadline. Those questions are included as Attachment A to this issuance.

The staff and AES responses to the Board's questions being issued this date should be filed on or before Monday, May 2, 2011.<sup>1</sup> As was outlined in the Board's May 19, 2010 initial

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<sup>1</sup> Although all of the questions can be answered by both the staff and AES if they so choose, they may wish to consult if either believes one party is in a better position to respond to the particular question. The Board anticipates that at least one party will respond to each question.

scheduling order, “[t]he answers shall, for each question, identify the responding subject matter expert(s) or individual(s), and be submitted in exhibit form, under oath, so that they are suitable for receipt into evidence without the necessity of the personal appearance of each expert or individual.” Licensing Board Initial Scheduling Order (May 19, 2010) at 4-5 (unpublished). Additionally, anticipating that these materials will be admitted into the evidentiary record of this proceeding, the parties should mark their answers and supporting materials in accord with the protocols established for the Atomic Energy Act (AEA)/safety-related portion of this proceeding. See Licensing Board Memorandum and Order (Providing Presentation Topics and Administrative Directives Associated with Mandatory Hearing on Safety Matters) (Dec. 17, 2010) at 10-12, 15-16 (unpublished); Licensing Board Memorandum and Order (Submission of Revised Exhibits) (Jan. 18, 2011) at 1-2 (unpublished). Moreover, to the degree the parties wish to reference material already admitted as evidentiary material in the AEA/safety-related portion of this proceeding, they should utilize the exhibit number assigned to that item.<sup>2</sup>

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<sup>2</sup> If AES or the staff has an objection to any portion of the other party’s responsive submission, including references in the NEPA/environmental portion of this proceeding to an exhibit already admitted relative to the AEA/safety portion of the hearing, that party should submit a motion in limine outlining that objection within seven days of the date of the filing of the material at issue.



ATTACHMENT A

Attachment A: Eagle Rock Enrichment Facility Environmental Inquiries

#	Document	Document Section	Document Page	Inquiry
1	Final Environmental Impact Statement (FEIS)	1.3 and 2.3.2.1	1-3, 1-7, and 2-39	As support for the purported need for a domestic supply of low enriched uranium (LEU), the FEIS offers a 2002 Department of Energy (DOE) letter referencing a statement taken from a U.S. Department of State "talking points" cable dated December 2001, FEIS at 1-7, and a statement from an unspecified DOE report to Congress from December 2000, FEIS at 2-39. Is there any more recent support for the proposition that a domestic supply of LEU is a priority as a matter of public policy?
2	FEIS	1.3.1	1-5 to -7	Notwithstanding the purported policy need for an independent domestic supply of LEU, to what degree does the NRC staff's analysis of the purpose and need for the Eagle Rock Enrichment Facility (EREF) presume that utilities will purchase separative work units (SWUs) from new domestic sources, rather than from their existing foreign suppliers? Put another way, must the staff conclude that the supply from foreign sources will be reduced substantially to justify the EREF as satisfying an otherwise unmet need for LEU?
3	FEIS	1.3.1	1-4 to -5	The staff's purpose and need analysis relies upon an anticipated increase in the number of newly-licensed nuclear power plants in the United States beginning in 2011. Does the aftermath of recent events at the Fukushima Daiichi facility associated with the March 2011 earthquake and tsunami call that assumption into question and if not, why not?

#	Document	Document Section	Document Page	Inquiry
4	FEIS	2.1.4.3	2-24	In discussing the decontamination and decommissioning of the EREF, the FEIS refers to both an "initial radiation survey" and a "final radiation survey." FEIS at 2-24. By comparing these surveys, AREVA Enrichment Services, LLC, (AES) would be able to determine if decontamination is complete under Commission regulations or further decontamination must be performed. What ensures that the surveys are (1) representative of the area being decontaminated/decommissioned; and (2) similar in scope and location so as to afford a proper comparative basis for making a decontamination decision?
5	FEIS	4.2 and 5.1	4-31, 4-34, 4-45, 4-57, 4-64, 4-75, 4-90, and 5-21 to -24	Which, if any, of the potential mitigation measures identified by NRC in several parts of section 4.2 and summarized in Tables 5-3 and 5-4 will be implemented by AES? Does NRC or state/local agencies have any authority to ensure that these measures are implemented? If so, how will the NRC or state/local agencies ensure effective implementation of the mitigation measures?
6	FEIS	4.2.2.1	4-6 and 4-7	(a) Have NRC, the Idaho State Historic Preservation Office (SHPO), and AES signed the memorandum of agreement (MOA) described in this section? Specifically, has the Idaho SHPO accepted the completed mitigation of site MW004 and AES's unanticipated discoveries and monitoring plan? Have the Shoshone Bannock Tribes signed as a concurring party on the MOA?  (b) Did AES/NRC consider other mitigation measures to preserve the resource, such as shifting the security fence and substation, rather than simply cataloging the site and if not, why not?

#	Document	Document Section	Document Page	Inquiry
7	FEIS	4.2.3.2	4-11	The FEIS notes that operation of the proposed EREF is expected to have a MODERATE impact on the quality of the recreational experience of visitors to Hell's Half Acre Wilderness Study Area (WSA). Please describe the available data on the annual number of recreational visitors to the Hell's Half Acre WSA during the last decade, and the potential for increased recreational use of the Hell's Half Acre WSA over the next three decades.
8	FEIS	4.2.9.2, 5.1, and D.3.1.1	4-69, 5-14, 5-24, and D-9	<p>(a) Why does the FEIS address the environmental impacts of an accident related to the transportation of radiological materials, but not mitigation measures to reduce the risk of such accidents? <u>See</u> FEIS at 4-69, 5-14, 5-24.</p> <p>(b) Would the routing restrictions identified for modeling purposes in section D.3.1.1 be employed for actual shipments? FEIS at D-9.</p>
9	FEIS	4.2.15	4-111 and 4-117 to -119	<p>(a) Why were the accident scenarios discussed in section 4.2.15 of the FEIS chosen for evaluation? FEIS at 4-111, 4-117.</p> <p>(b) Why were the environmental impacts for the chosen accident scenarios not put in terms of the SMALL, MODERATE, LARGE significance scale? FEIS at 4-117 to -119.</p>

#	Document	Document Section	Document Page	Inquiry
10	FEIS	4.2.16	4-120 to -127	<p>Although there is not a final decommissioning plan today to be used to assess the environmental impacts of decommissioning, the basic staff conclusion seems to be that the various impacts, such as water use impacts, associated with decontamination/decommissioning are bounded by the impacts associated with construction/operation. Nonetheless, are there any instances in which such decontamination/decommissioning impacts are not bounded by construction/operation impacts because, for instance, the decontamination/decommissioning activities are different from those associated with construction/operation or the impact could foreseeably exceed, even if unintentionally, the impacts arising during construction/operation?</p>
11	FEIS	4.2.17.4	4-136 to -137	<p>Section 4.2.17.4 indicates that the greenhouse gas (GHG) emissions during operations comprise emissions from workforce transportation, deliveries of radiological and nonradiological materials, and consumption of fossil fuels onsite to support miscellaneous activities. However, the EISs for combined license (COL) applications indicate that uranium enrichment facilities are primarily responsible for the carbon footprint of the uranium fuel cycle due to their high energy demands, primarily supplied by coal-fired generation. See, e.g., [EIS] for [COLs] for South Texas Project Electric Generating Station Units 3 and 4: Final Report, NUREG 1937, at 6-9; <u>id.</u> app. 1, at 3 (recognizing the lower energy demands by gas centrifuge technology over gaseous diffusion technology). Why does the FEIS include a discussion of emissions generated by workforce transportation as being sufficiently related to the proposed action to be considered a source of GHG emissions, but not GHG emissions from the provision of electricity to power the centrifuges?</p>



#	Document	Document Section	Document Page	Inquiry
12	FEIS	6.1.2 and 6.1.4	6-6 and 6-9	<p>(a) Aside from quarterly analyses of water and/or sediment in the two Cylinder Storage Pads Stormwater Retention Basins, how would leakage of uranium hexafluoride (UF6) or its reaction products from stored cylinders be detected? What is the likelihood that small but continuous leaks would be detected by either the effluent monitoring or radiological environmental monitoring systems?</p> <p>(b) Given that the EREF site is located at a latitude and elevation where the ground and other outside surfaces are likely to be covered by snow during the winter months, will snow be allowed to accumulate on full cylinders residing on cylinder storage pads? If so, please explain how snow cover would impact the ability of monitoring systems to detect continuous small releases from damaged or improperly sealed cylinders, and discuss whether natural chemical or physical mechanisms could trap hazardous chemical or radiological materials in snow or ice on cylinder storage pads and then release it into the air or water when temperatures rise.</p>

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CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing MEMORANDUM AND ORDER (Initial Board Questions Regarding Environmental-Related Matters and Associated Administrative Directives), dated April 15, 2011, have been served upon the following persons by Electronic Information Exchange.

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AREVA ENRICHMENT SERVICES, LLC (Eagle Rock Enrichment Facility) – 70-7015-ML  
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[Original signed by Christine M. Pierpoint  
Office of the Secretary of the Commission

Dated at Rockville, Maryland  
this 15<sup>th</sup> day of April 2011