

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

May 12, 2011

MEMORANDUM AND ORDER

(Third Set of Board Questions Regarding Environmental-Related Matters)

Previously, in issuances dated April 15 and 30, 2011, relative to the National Environmental Policy Act (NEPA)/environmental-related portion of this mandatory/uncontested hearing the Licensing Board posed a series of questions to the NRC staff and applicant AREVA Enrichment Services, LLC, (AES) regarding various aspects of the staff's February 2011 final environmental impact statement. In both instances, the Board indicated that, based on the staff and/or AES answers to the Board's questions, additional questions might be forthcoming. See Licensing Board Memorandum and Order (Second Set of Board Questions Regarding Environmental-Related Matters) (Apr. 22, 2011) at 2 (unpublished); Licensing Board Memorandum and Order (Initial Board Questions Regarding Environmental-Related Matters and Associated Administrative Directives) (Apr. 15, 2011) at 3 (unpublished) [hereinafter Board Initial Environmental Questions]. After reviewing the parties' responses to the Board's first two sets of questions, we have decided that a third set of questions is appropriate, which is included as Attachment A to this issuance.



ATTACHMENT A

Attachment A: Eagle Rock Enrichment Facility Environmental Inquiries

#	Document	Document Section(s)	Document Page(s)	Inquiry
20	Final Environmental Impact Statement (FEIS); Prefiled Exh. NRC000136	FEIS app. I	FEIS app. I, at I-130; Prefiled Exh. NRC000136, at 3-4	In its response to environmental question 6(a), the NRC staff indicated that the memorandum of agreement (MOA) regarding the Eagle Rock Enrichment Facility (EREF) site was still being finalized, with a teleconference on the matter tentatively planned for May 3, 2011. Relative to this MOA, please provide a discussion (a) updating the status of the MOA; and (b) addressing the concern expressed by the Idaho State Historic Preservation Office in comment 126-01 that to comply with National Historic Preservation Act section 106, the MOA must be signed before the record of decision (ROD) is issued.
21	Prefiled Exh. NRC000136		9-10	In its response to environmental question 10, the staff indicated that “there could be circumstances where [decontamination/decommissioning (D&D)] impacts to historical and cultural resources and ecological resources could possibly exceed those of construction/operations” and suggested a scenario that might create such a circumstance whereby “a historic property was found on additional land needed for D&D, and if the significant resource could not be avoided and it was one of the only examples of that particular site type in the region.” In this answer, is the staff referring to a hypothetical situation or is there some specific property on the EREF site that the staff has in mind relative to this response?

#	Document	Document Section(s)	Document Page(s)	Inquiry
22	Prefiled Exh. NRC000136		10-11	<p>In its response to environmental question 11, the staff indicated that greenhouse gas (GHG) emissions from electricity production for the EREF amounts to only a "minor indirect contribution to the EREF GHG operational footprint" for three reasons: dominant use of hydropower in Idaho; greater reliance on natural gas in Idaho; and the lesser energy demands of EREF compared to a conventional gaseous diffusion plant. The staff's response, however, does not provide a quantitative showing as to why EREF electricity use generates small GHG emissions compared to annual emissions during facility operation or construction.</p> <p>The staff does estimate that 100,000 separative work units (SWUs) are required to fuel a 1,000 megawatt reference reactor for one year, FEIS at 1-3 n.2, meaning that for a forty-year reference reactor, approximately 4 million SWUs would be required. Further, the staff has indicated that for the nominal gaseous diffusion process using coal-fired electricity production, the SWU output for a forty-year reference reactor would result in approximately 17 million metric tons of GHG emissions. <u>See</u> [EIS] for [COLs] for South Texas Project Electric Generating Station Units 3 and 4: Final Report, NUREG-1937, app. I, at I-3. Moreover, at its nominal operating capacity the EREF will produce 6 million SWU annually. <u>See</u> FEIS at 1-3.</p>

#	Document	Document Section(s)	Document Page(s)	Inquiry
22 (cont'd)				<p>Therefore, if the EREF were a gaseous diffusion plant using coal-fired electricity production (rather than a gas centrifuge facility using hydroelectric/natural gas electricity production), it seemingly could be responsible for producing up to 17 million metric tons of GHG emissions in 2/3 of a year (to generate 4 million SWUs) or approximately 25.5 million metric tons of GHGs annually (to generate 6 million SWUs).</p> <p>Further, in the EREF FEIS, the staff finds annual GHG emissions on the order of 10,000 metric tons to be worthy of discussion, even though ultimately they are deemed to result in SMALL impacts. See FEIS at 4-136 to -137 (26,136 metric tons of GHG annually from EREF operation and 7,745 metric tons of GHG averaged for each year of the seven-year preconstruction and heavy construction period for the facility).</p> <p>Given the nature of the staff's FEIS GHG analysis generally, and the apparent differential the staff analysis suggests exists between annual GHG emissions from a gaseous diffusion facility using coal-fired electricity production and the EREF, as a gas centrifuge facility using hydroelectric/natural gas electricity production, please provide a discussion that shows, on a quantitative basis, what annual GHG emissions would result from the EREF's electricity consumption.</p>

#	Document	Document Section(s)	Document Page(s)	Inquiry
23	Prefiled Exh. AES000064		5-6	<p>In its answer to environmental question 15(b), applicant AREVA Enrichment Services, LLC, (AES) indicated that the focus of its Phase I “sensitive properties” screening process was upon sites that included monuments, forests, wildlife refuges, scenic river parkways, and recreation areas. AES also indicated that the Hell’s Half Acre Wilderness Study Area near the EREF did not fall into these categories because that area bears the designation of a “National Natural Landmark” (NNL). How is an NNL different from the other designated “sensitive properties” (e.g., a national monument or forest, a wildlife refuge, or a recreation area) such that it did not warrant consideration as a “sensitive property” under the Phase I screening process?</p>
24	Prefiled Exh. AES000064	Table I	13-15	<p>In its response to environmental question 5(a), AES provided a table that outlines AES’s planned implementation actions relative to each of the staff’s recommended construction/operation mitigation measures. Please provide a discussion regarding whether, and why, the staff is satisfied with the planned AES implementation actions described in Table I concerning the activities associated with (a) stormwater management with respect to roofs; (b) wildlife protection for basins with water quality unsuitable for wildlife; (c) wildlife protection for offsite lands lost to wildlife due to project effects; and (d) radiological effects relative to using empty cylinders to reduce external exposure to workers.</p>

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CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing Licensing Board “**MEMORANDUM AND ORDER (Third Set of Board Questions Regarding Environmental-Related Matters)**”, dated May 12, 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  
**MEMORANDUM AND ORDER (Third Set of Board Questions Regarding  
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[Original signed by Linda D. Lewis]\_\_\_\_\_  
Office of the Secretary of the Commission

Dated at Rockville, Maryland  
this 12<sup>th</sup> day of May 2011