Request for Additional Information from AREVA Enrichment Services on the Environmental Report for the AREVA Eagle Rock Enrichment Facility

RAI 1

Provide additional information regarding air emissions during construction and operation of the Eagle Rock Enrichment Facility (EREF).

a. Provide volume throughputs for vehicle and equipment fueling activities during construction and operation to facilitate the proper inclusion of these activities in impacts to air quality.

b. Provide details regarding the combined gasoline and diesel fueling station that will be operational on site, including size and design of storage tanks, spill prevention measures, fuel delivery systems, fuel dispensing equipment, and other factors that must be addressed to safely incorporate such fueling operations into site operating plans (e.g. safe distances from buildings housing UF_6, the Full Tails, Full Feed and Empty Cylinder Storage Pads, Full Product Cylinder Storage Pad, and Cylinder Transportation Path, amendments to Hazardous material management plans and training regimens, fire safety, etc.). Provide an air impact analysis for the fuel storage and dispensing activities.

The evaluation of air quality impacts requires consideration of all sources of potential air emissions for evaluation against the National Ambient Air Quality Standards. Because vehicle and equipment refueling on-site would be required during construction and operation of the EREF, impacts to air quality would occur. Sections 4.6.1 and 4.6.2 (AES, 2009a) do not consider refueling emissions.

RAI 2

Provide air impact analyses that show compliance with applicable Idaho state standards.

a. Provide an assessment of the impact that the estimated annual amount of fluorides released to the environment will have on livestock feed crops and forage that may be grown on contiguous parcels. Provide a qualitative analysis or perform appropriate dispersion modeling, as necessary, to estimate the resulting maximum potential accumulation of fluoride on crops and forage vegetation for comparison against the published safe levels in effect in Idaho (see Idaho Administrative Procedures Act [IDAPA] 58.01.01 Part 577) and to determine conformance with fluoride emission limits and ambient air quality standards in effect in Idaho (see IDAPA 58.01.01 Part 585).

b. Releases of ethanol and methylene chloride are anticipated from the EREF during operations (Section 4.6.2.1, AES 2009a). Provide air analyses that illustrate the impacts of releases of ethanol and methylene chloride that result from normal operation. Compare the resulting estimated impacts to the relevant standards in Idaho rules IDAPA 58.01.01 Parts 585 and 586.

The State of Idaho published specific rules regarding the emissions of various chemical species for the protection of the environment. The environmental report should contain an analysis of the expected emissions and compare the result with the appropriate state guidelines for the species anticipated to be emitted during operation of the EREF.

RAI 3

Provide air impact analyses that follow the latest guidance with the most up-to-date and most relevant available data.

a. Air dispersion analyses to assess human health impacts used recent meteorological data from the EBR station (now known as MFC) on the Idaho National Laboratory (INL) site (Section 4.6.2.3). This data is representative of the climate at the EREF site. However, older data from the Pocatello Municipal Airport (which is less representative than EBR data) was used in Section 4.6.1 (AES 2009a) to evaluate air emissions during construction. Provide revised impacts for construction and operation from the application of the AERMOD dispersion model, substituting the most recent 5 years of meteorological data available from INL's station EBR for the 1988-1992-era data.

b. Provide revised calculations for fugitive particulate emissions resulting from unpaved roads, using the Particulate Matter (PM) 10/PM30 and PM2.5/PM30 ratios in the U.S. Environmental Protection Agency's Modeling and Inventories AP-42: Fifth Edition, Section 13.2.2 - see Table 13.2.2-2 (1.5/4.9 and 0.15/4.9, respectively).

c. Provide an expanded discussion on how a 90% reduction in fugitive dust generation will result from proposed twice/day watering; demonstrate how this rate of watering will result in a sustained moisture ratio M of 4.5 necessary to ensure 90% reduction (see Figure 13.2.2-2 of U.S. Environmental Protection Agency's AP-42: Fifth Edition, Section 13.2.2). Revise fugitive dust reduction percentages in accordance with the expected moisture ratio, averaged over the typical construction day.

Update and revise Section 4.6 using the most up-to-date information such that an accurate assessment of the air impacts can be completed.

RAI 4

Provide additional information regarding the analysis performed to locate the proposed electrical transmission lines for EREF site power consumption.

a. Provide a copy of the Rocky Mountain Power conceptual study report (December 2008) that describes potential facility access to the electric grid (transmission line options) as identified during the NRC site visit in June.

Section 4.1.2 (AES 2009a) described land use considerations, but did not provide a basis for the locations of the proposed transmission lines. This information is needed to assess the construction and operation cumulative impacts of the proposed EREF.

RAI 5

Provide information regarding mitigation of impacts to site MW004.

a. Provide a copy of the memorandum of agreement with the Idaho State Historic Preservation Officer (SHPO) concerning site MW004.

b. Provide a copy of the preservation plan addressing Site MW004.

Section 3.8.6 (AES 2009a) notes that a significant archaeological site, MW004, was identified during the initial historical and cultural environmental resource review. Construction activities may impact this site. In order to mitigate the adverse effects of the project on the archaeological site, AREVA Enrichment Services (AES) proposes to enter into a Memorandum of Agreement (MOA) with the SHPO (AES 2009b). The MOA may include a discussion on the mitigation actions planned for site MW004. In addition, AES plans on developing a preservation plan to guide consideration of site MW004 during operations (AES 2009b). These pieces of information are needed to demonstrate compliance with Section 106 of the National Historic Preservation Act.

RAI 6

Provide information regarding protection of cultural resources.

a. Provide a copy of the Unanticipated Discovery Plan for the Eagle Rock Enrichment Facility.

b. Provide a copy of the EREF Environmental Preservation Plan (defines responsibilities, processes, and procedures) for findings of historic and archaeological resources that occur during routine and unplanned operations activities (i.e. ground disturbing activities that involve grading, excavations, and trenching).

c. Provide a copy of the EREF Environmental Preservation Plan for findings of historic and archaeological resources specific to the area encompassing the location of transmission lines on the proposed site.

Based on historic and cultural resource survey undertaken for the proposed EREF (Section 3.8.6; AES 2009a) there is a potential for archaeological remains to be found within the proposed project area or within the transmission line right-of-ways. While the initial historic and cultural resource survey identified many archaeological sites, a potential exists for discovering additional unexpected findings during earth moving activities. Therefore, AES committed to develop an Unanticipated Discovery Plan and a Preservation Plan (AES 2009b). This information is needed to demonstrate compliance with Section 106 of the National Historic Preservation Act.

RAI 7

Provide additional information regarding on-site workers and facility structures.

a. Provide an approximate population distribution of on-site workers during the period of time after enrichment operations have commenced and construction continues on the remainder of the facility.

b. Supply building location, heights and respective stack heights for all uranium emission release points.

Section 4.12.2 (AES 2009a) contains a description of radiological impacts to workers and the public. However AES did not provide an analysis of the radiological exposures of the construction workers anticipated during the overlap of the construction and operation phases of the proposed project (construction continues with the second enrichment unit - Separations Building Module 2 [SBM-2] while the first enrichment unit SBM-1 is operating). Provide information on the general location (center of gravity or average location) of these workers relative to radiological release points of the operating SBM-1.

Information on building heights and/or stack heights where emissions would occur is needed to perform confirmatory radiological and chemical air dispersion analysis, as considered in Section 4.12.2 (AES 2009a). Provide location and height of all emission release points (i.e. stack or ground release).

RAI 8

Provide additional information regarding site traffic during the period when construction and operations overlap.

a. Provide a quantitative breakdown of each of the four vehicle categories (employees, operational deliveries/waste, construction workers, and construction deliveries/waste) that will access the site during the period when construction and operations overlap.

The Environmental Report (AES 2009 a) and Supplement (AES 2009 b) notes increases in traffic volume during the period when construction and operation overlap. The text states "…this [1,210 trips] is the maximum number of additional vehicle trips anticipated even when project construction and operations activities overlap." Provide a quantitative breakdown of each of the four vehicle categories for each phase of the proposed project lifecycle. Include a time-varying (e.g., monthly) projection of vehicle categories for the overlap period, or a "snapshot" breakdown when total site traffic is expected to reach a maximum. This clarification is necessary to accurately assess the overall traffic impact on regional roads (particularly U.S. Route 20).

RAI 9

Clarify/provide additional information on construction-related wastes and proposed disposal location(s).

a. Provide projected generation (by weight) of non-hazardous construction-related wastes.
b. Provide preferred and alternative disposal locations for construction-related waste, along with their available capacities.

Throughout the environmental report (AES 2009a), landfill waste acceptance data is provided in terms of weight, especially for Peterson Hill. For consistency with the operational waste projection discussions (section 3.12.2 and associated tables), provide projections of nonhazardous construction wastes by weight (section 3.12.2.2 currently describes the waste by volume). Also discuss the available disposal capacities (by weight) of the proposed landfills where this waste may be shipped.

RAI 10

Provide additional information on facility plan for discharge of treated sanitary liquid waste.

a. Provide the technical rationale for discharging treated sanitary liquid waste into the cylinder storage pad stormwater retention basins instead of discharge to surface or groundwater.

Section 3.12.1.3.4 describes effluent discharge from the domestic sanitary sewage treatment plant. The effluent will be evaporated by discharge into the lined cylinder storage pad stormwater retention basin(s). Should cylinder storage pad runoff be contaminated, the discharge of uncontaminated aqueous waste to these basins would increase the volume of potentially contaminated wastewater. Also requested is the rationale for precluding discharge of treated sanitary liquid waste to surface or groundwater (e.g., via the stormwater detention basin). This clarification is necessary to explain the rationale for using this facility procedure rather than accepted practices for the minimization of radioactive wastes, as discussed in Sections 1.3.2 and 4.13.5 (AES 2009a).

RAI 11

Provide additional information on production of DUF_6 tails.

a. Provide clarification of the projected annual production of DUF_6 tails, including tonnage, filled cylinders, and outgoing DUF_6 waste shipments.

In Section 4.2.7.1.3 (AES 2009a) and Table 4.2-2, the projection of annual full DUF_6 tails cylinders (1,222) doubled with the doubling of facility capacity. However, the projections of DUF_6 tonnage and outgoing DUF_6 cylinder shipments (approximately 857) in Section 4.13.3.6 (Costs Associated with Depleted UF_6 Conversion and Disposal) did not double. Provide a clarification or the rationale for the differences noted. In addition to environmental impacts, this may affect the cost estimate for conversion/disposal. This clarification is necessary to assess the impact of DUF_6 disposal and the associated transportation impacts.

RAI 12

Provide additional information on soil disturbances during the construction period.

a. Provide a description of any treatment or modifications required to make on-site excavated soils suitable for use as on-site fill.

b. Provide the volume of any additional soil to be brought from an off-site source to augment on-site soil used as fill, or clarify usage of on-site excavated soils.

c. Provide the volume of clay to be brought in from an off-site source to be used as liner material for the two retention basins.

d Provide the depths of facility foundations/footings and utility trenches (and any other structures requiring below-ground surface excavation or drilling).

Disturbances to soil at the EREF site include grading during site preparation and activities associated with building construction and infrastructure installation. Section 4.3 (AES 2009a) indicates that cut and fill of significant areas will be required, therefore provide a clarification of the extent of such operations.

RAI 13

Provide clarification on the extent of land disturbance anticipated at the EREF site.

a. Confirm the area to be landscaped and irrigated once construction completes.

RAI 14

Provide additional information regarding the storm water detention basin(s).

a. Supply information in regards to the National Pollutant Discharge Elimination System Construction General Permit (i.e. size and location of storm water detention basin).

b. Clarify whether the detention basin(s) created during construction will be used during operations.

c. Confirm whether wastewater (industrial or domestic) generated during construction would require discharge control (i.e. retention).

Section 3.4.11 provides a general description of the applicable Federal and State regulations for water resources on the proposed site. In this section, AES described the storm water retention/detention basins for the operations phase in detail. More information is needed for the construction phase to verify that AES is in compliance with the applicable Federal and State regulations with respect to storm water control.

RAI 15

Provide the means of handling sanitary needs during construction.

a. Clarify the type of system used (i.e. portable).

In section 3.4.12.1, AREVA refers the discussion on the retention and detention basins that treat effluent from the Domestic Sanitary Sewage Treatment Plant to section 3.4.1.1. Waste handling during the construction period is not addressed. This information is needed to clarify the impacts of the disposal of sanitary waste.

RAI 16

Clarify water demand usage information given for each phase of the project lifecycle.

a. Identify the year in which water usage for construction and operations become additive.

b. Clarify the point during the 7-year heavy construction period in which the process (makeup water) and fire protection water demand values under operations are added to the construction values. Provide a graphic that depicts the change in water demand usage between construction and operation.

c. Water demand use continues during construction years 8 through 11 as described in Section 3.4.6.1. Provide an estimate of average annual usage for construction activities during years 8 through 11.

d. Clarify and revise the discussion on the primary point of diversion for groundwater at the proposed site. According to the Idaho Water Review Board, the use of the current lava and spud wells are for irrigation and do not meet the specifications for potable water use. The primary use of water at the proposed site (not including fire tank refills) is for potable supply. Identify the need for a new well or other action planned and the means to accomplish the action (i.e. permit process).

e. Provide estimates of water use related to irrigation of landscaped areas.

f. Provide estimates of water usage during decontamination and decommissioning. Compare usage during this phase with anticipated water usage during the construction and operation phases.

As described in the Environmental Report (AES, April 2009a) and the Supplement (AES 2009b), an overlap exists with the construction and operations phases of the proposed project. AES should clarify the source of the potable water and provide estimates for each phase of the proposed project. This information will be used to determine water resource impacts, including decontamination and decommissioning.

RAI 17

Provide additional information regarding water usage and effluent processing during the Decommissioning Phase.

a. Provide estimates of water usage during the decommissioning phase and state whether usage would be higher or lower than average or peak usage during normal operation.

b. Describe the process used for handling decontamination rinsates (e.g., through the Liquid Effluent Treatment System Evaporator or a new facility built specifically for decommissioning).

Information is not available to assess the impacts of decontamination and decommissioning on water resources. Section 4.4 (AES 2009a) does not provide any discussion on water usage or processing during the decontamination and decommissioning phase. Section 10.1.6.8 of the Safety Analysis Report (AES 2009c) states that all wastes produced during decommissioning would be handled as they are during normal operation, but aqueous volume levels (usage and effluent) were not provided.

References:

AREVA Enrichment Services, LLC, Eagle Rock Enrichment Facility Environmental Report (AES, April 2009a).

AREVA Enrichment Services, LLC, Response to information needs identified by the U.S. Regulatory Commission for the AREVA Enrichment Services Eagle Rock Enrichment Facility-Environmental Report; letter dated July 7, 2009 (AES, 2009b).

AREVA Enrichment Services, LLC, Eagle Rock Enrichment Facility Safety Analysis Report (AES, April 2009c)