

Environmental Impact Statement for the Proposed Eagle Rock Enrichment Facility in Bonneville County, Idaho

Final Report

Appendices A through I

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1
2
3 **ABSTRACT**

4 On December 30, 2008, AREVA Enrichment Services LLC (AES) submitted an application to
5 the U.S. Nuclear Regulatory Commission (NRC) for a license to construct, operate, and
6 decommission the proposed Eagle Rock Enrichment Facility (EREF). The proposed EREF
7 would be located in Bonneville County, Idaho, approximately 32 kilometers (20 miles) west of
8 Idaho Falls. Revisions to the license application were submitted by AES on April 23, 2009, and
9 April 30, 2010. If licensed, the proposed facility would enrich uranium for use in commercial
10 nuclear fuel for power reactors. AES would employ a gas centrifuge enrichment process to
11 enrich uranium to up to five percent uranium-235 by weight, with a planned maximum target
12 production of 6.6 million separative work units (SWUs) per year. AES initiated preconstruction
13 activities (e.g., site preparation) in late 2010 under an exemption approved by the NRC to
14 conduct such activities prior to licensing. If its license application is approved, AES expects to
15 begin facility construction in 2011 and commence initial production in 2014, reaching peak
16 production in 2022. AES's license would be for a term of 30 years. Prior to license expiration in
17 2041, AES would seek to renew its license to continue operating the proposed facility or plan for
18 the decontamination and decommissioning of the proposed facility per the applicable licensing
19 conditions and NRC regulations. The proposed EREF would be licensed in accordance with the
20 provisions of the *Atomic Energy Act*. Specifically, an NRC license under Title 10, "Energy," of
21 the U.S. *Code of Federal Regulations* (10 CFR) Parts 30, 40, and 70 would be required to
22 authorize AES to possess and use special nuclear material, source material, and byproduct
23 material at the proposed EREF site.

24 This Environmental Impact Statement (NUREG-1945) (EIS) was prepared in compliance with
25 the *National Environmental Policy Act of 1969*, as amended (NEPA), and the NRC regulations
26 for implementing NEPA (10 CFR Part 51). This EIS evaluates the potential environmental
27 impacts of preconstruction activities and of the proposed action, which is to construct, operate,
28 and decommission the proposed EREF near Idaho Falls in Bonneville County, Idaho. Also, this
29 EIS describes the environment potentially affected by AES's proposal, evaluates reasonable
30 alternatives to the proposed action, describes AES's environmental monitoring program and
31 mitigation measures, and evaluates the costs and benefits of the proposed action.

32
33 **Paperwork Reduction Act Statement**

34
35 This NUREG contains and references information collection requirements that are subject to the
36 Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). These information collections were
37 approved by the Office of Management and Budget, approval numbers 3150-0014, 3150-0017,
38 3150-0020, 3150-0009, 3150-0002, 3150-0123, and 3150-0047.

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EXECUTIVE SUMMARY

BACKGROUND

Under the provisions of the *Atomic Energy Act* and pursuant to Title 10 of the U.S. *Code of Federal Regulations* (10 CFR) Parts 30, 40, and 70, the U.S. Nuclear Regulatory Commission (NRC) is considering whether to issue a license that would allow AREVA Enrichment Services, LLC (AES) to possess and use byproduct material, source material, and special nuclear material at a proposed gas centrifuge uranium enrichment facility near Idaho Falls in Bonneville County, Idaho, for a period of 30 years. The scope of activities to be conducted under the license would include the construction, operation, and decommissioning of the proposed Eagle Rock Enrichment Facility (EREF). The application for the license was filed with the NRC by AES by letter dated December 30, 2008. Revisions to the license application were submitted by AES on April 23, 2009 (Revision 1) and April 30, 2010 (Revision 2). To support its licensing decision on AES's proposed EREF, the NRC determined that the NRC's implementing regulations in 10 CFR Part 51 for the *National Environmental Policy Act* (NEPA) require the preparation of an Environmental Impact Statement (EIS). The development of this EIS is based on the NRC staff's review of information provided by AES, independent analyses, and consultations with the U.S. Fish and Wildlife Service and other Federal agencies, Native American tribes, the Idaho State Historic Preservation Office (SHPO) and other State agencies, and local government agencies.

The enriched uranium produced at the proposed EREF would be used to manufacture nuclear fuel for commercial nuclear power reactors. Enrichment is the process of increasing the concentration of the naturally occurring and fissionable uranium-235 isotope. Uranium ore usually contains approximately 0.72 weight percent uranium-235. To be useful in light-water nuclear power plants as fuel for electricity generation, the uranium must be enriched up to 5 weight percent uranium-235.

THE PROPOSED ACTION

The proposed action considered in this EIS is for AES to construct, operate, and decommission a uranium enrichment facility, the proposed EREF, at a site near Idaho Falls in Bonneville County, Idaho. To allow the proposed action to take place, the NRC would issue a license to AES as discussed above. The proposed EREF would be located on a 186-hectare (460-acre) section of a 1700-hectare (4200-acre) parcel of land that it intends to purchase from a single private landowner. Current land uses of the proposed EREF property include native rangeland, nonirrigated seeded pasture, and irrigated cropland. The proposed EREF, if approved, would be situated on the north side of US 20, about 113 kilometers (70 miles) west of the Idaho/Wyoming State line and approximately 32 kilometers (20 miles) west of Idaho Falls. The eastern boundary of the U.S. Department of Energy's (DOE) Idaho National Laboratory (INL) is 1.6 kilometers (1 mile) west of the proposed property. The lands north, east, and south of the proposed property are a mixture of private-, Federal-, and State-owned parcels, with the Federal lands managed by the Bureau of Land Management (BLM).

Using a gas centrifuge process, the proposed EREF would produce uranium enriched up to 5 percent by weight in the isotope uranium-235, with a planned maximum target production of 6.6 million separative work units (SWUs) per year. An SWU is a unit of measurement used in the nuclear industry, pertaining to the process of enriching uranium for use as fuel for nuclear

1 power plants. If the license is approved, facility construction would begin in 2011 with heavy
2 construction (construction of all major buildings and structures) continuing for 7 years into 2018.
3 The proposed EREF would begin initial production in 2014 and reach peak production in 2022.
4 Operations would continue at peak production until approximately 9 years before the license
5 expires. Decommissioning activities would then begin and be completed by 2041.
6 Decommissioning would involve the sequential shutdown of the 4 Separation Building Modules
7 (SBMs) resulting in a gradual decrease in production. Each SBM would take approximately
8 4.5 years to decommission.

9
10 Supplemental information on a proposed 161-kilovolt (kV) electrical transmission line required to
11 power the proposed EREF was submitted by AES on February 18, 2010. The NRC has no
12 jurisdiction over transmission lines; therefore, the transmission line for the proposed EREF is
13 not considered part of the proposed action. However, construction and operation of this
14 transmission line are considered in this EIS under cumulative impacts.

15 16 **NRC EXEMPTION FOR AES TO CONDUCT CERTAIN PRECONSTRUCTION ACTIVITIES**

17
18 On June 17, 2009, AES submitted a request for an exemption from certain NRC regulations to
19 allow commencement of certain preconstruction activities on the proposed EREF site prior to
20 NRC's decision to issue a license for the construction, operation, and decommissioning of the
21 proposed EREF. On March 17, 2010, the NRC granted an exemption authorizing AES to
22 conduct the requested preconstruction activities. Under the exemption, these preconstruction
23 activities are not considered by the NRC as part of the proposed action, although the
24 environmental impacts of these activities are discussed in this EIS along with the impacts of
25 facility construction.

26
27 Specifically, the exemption covers the following activities and facilities:

- 28 • clearing of approximately 240 hectares (592 acres) for the proposed EREF
- 29 • site grading and erosion control
- 30 • excavating the site including rock blasting and removal
- 31 • constructing a stormwater retention pond
- 32 • constructing main access and site roadways
- 33 • installing utilities
- 34 • erecting fences for investment protection
- 35 • constructing parking areas
- 36 • erecting construction buildings, offices (including construction trailers), warehouses, and
37 guardhouses

1 This exemption authorizes AES to conduct the stated activities, provided that none of the
2 facilities or activities subject to the exemption would be components of AES's Physical Security
3 Plan or its Standard Practice Procedures Plan for the Protection of Classified Matter, or
4 otherwise be subject to NRC review or approval. AES initiated preconstruction activities in late
5 2010.

7 **PURPOSE OF AND NEED FOR THE PROPOSED ACTION**

9 The purpose of the proposed action would be to allow AES to construct, operate, and
10 decommission a facility using gas centrifuge technology to enrich uranium up to 5 percent by
11 weight of uranium-235, with a production capacity of 6.6 million SWU per year, at the proposed
12 EREF near Idaho Falls in Bonneville County, Idaho. This facility would contribute to the
13 attainment of national energy security policy objectives by providing an additional reliable and
14 economical domestic source of low-enriched uranium to be used in commercial nuclear power
15 plants.

16
17 Nuclear power currently supplies approximately 20 percent of the nation's electricity. The
18 United States Enrichment Corporation Paducah Gaseous Diffusion Plant, Paducah, Kentucky, is
19 currently the primary U.S. supplier of low-enriched uranium for nuclear fuel in the United States.
20 However, the URENCO USA facility (formerly known as the National Enrichment Facility) in Lea
21 County, New Mexico, which began initial operations in June 2010, may provide additional
22 enrichment services in the future as construction continues on its remaining cascade halls. The
23 American Centrifuge Plant (ACP) in Piketon, Ohio, which is currently under construction, and
24 the proposed Global Laser Enrichment (GLE) Facility in Wilmington, North Carolina, for which
25 the NRC is currently reviewing its license application, may also provide additional domestic
26 enrichment services in the future. The existing operating Paducah, Kentucky, enrichment plant
27 supplies approximately 15 percent of the current U.S. demand for low-enriched uranium. The
28 United States Enrichment Corporation also imports downblended (diluted) weapons-grade
29 uranium from Russia through the Megatons to Megawatts Program to supply an additional
30 38 percent of the U.S. demand. The remaining 47 percent of low-enriched uranium is imported
31 from foreign suppliers. The current primary dependence on a single U.S. supplier and foreign
32 sources for low-enriched uranium imposes reliability risks for the nuclear fuel supply to
33 U.S. nuclear power plants. National energy policy emphasizes the importance of having a
34 reliable domestic source of enriched uranium for national energy security. The production of
35 enriched uranium at the proposed EREF would be equivalent to about 40 percent of the current
36 and projected demand (15 to 16 million SWUs) for enrichment services within the United States.

38 **ALTERNATIVES TO THE PROPOSED ACTION**

39
40 In this EIS, the NRC staff considered a reasonable range of alternatives to the proposed action,
41 including alternative sites for an AES enrichment facility, alternative sources of low-enriched
42 uranium, alternative technologies for uranium enrichment, and the no-action alternative. Two of
43 the alternatives, the proposed action and the no-action alternative, were analyzed in detail. The
44 approved preconstruction activities discussed earlier are assumed to occur prior to NRC's
45 decision to grant a license to AES and, therefore, are assumed to occur under both the
46 proposed action and the no-action alternative.

1 Under the no-action alternative, the proposed EREF would not be constructed, operated, and
2 decommissioned in Bonneville County, Idaho. Uranium enrichment services would continue to
3 be performed by existing domestic and foreign uranium enrichment suppliers. However,
4 URENCO USA would provide and the ACP and potentially the proposed GLE Facility may
5 provide enrichment services in the future.
6

7 AES considered 44 alternative sites throughout the United States. AES evaluated these sites
8 based on various technical, safety, economic, and environmental selection criteria, and
9 concluded that the Eagle Rock site in Bonneville County, Idaho, met all of the criteria. The NRC
10 staff reviewed AES's site-selection process and results to determine if any site considered by
11 AES was obviously superior to the proposed Eagle Rock site. The NRC staff determined that
12 the process used by AES was rational and objective, and that its results were reasonable.
13 Based on its review, the NRC staff concluded that none of the candidate sites were obviously
14 superior to the AES preferred site in Bonneville County, Idaho.
15

16 The NRC staff examined three alternatives to satisfy domestic enrichment needs: (1) reactivate
17 the Portsmouth Gaseous Diffusion Plant near Piketon, Ohio; (2) downblend highly enriched
18 uranium instead of constructing a domestic uranium enrichment facility; and (3) purchase low-
19 enriched uranium from foreign sources. These alternatives were eliminated from further
20 consideration based on concerns related to reliability, excessive energy consumption, and
21 national energy security, and did not meet national energy policy objectives involving the need
22 for a reliable, economical source of domestic uranium enrichment.
23

24 The NRC staff also evaluated alternative technologies to the gas centrifuge process:
25 electromagnetic isotope separation, liquid thermal diffusion, gaseous diffusion, Atomic Vapor
26 Laser Isotope Separation, Molecular Laser Isotope Separation, and separation of isotopes by
27 laser excitation. These technologies were eliminated from further consideration based on
28 factors such as the technology immaturity, economic impracticality, or exclusive licensing.
29

30 In addition, the NRC staff considered conversion and disposition methods for depleted uranium
31 hexafluoride (UF_6): (1) beneficial use of depleted UF_6 , and (2) conversion at facilities other than
32 the new facilities that the U.S. Department of Energy (DOE) has built at Portsmouth and
33 Paducah. For the purposes of this analysis, because the current available inventory of depleted
34 uranium exceeds the current and projected future demand for the material, the depleted UF_6
35 generated by the proposed EREF was considered a waste product, and disposition alternatives
36 involving its use as a resource were not further evaluated.
37

38 Existing fuel fabrication facilities have not expressed an interest in performing depleted UF_6
39 conversion services, and the cost for the services would be difficult to estimate; therefore, this
40 alternative was eliminated from further consideration. However, International Isotopes, Inc.
41 submitted a license application to the NRC on December 31, 2009, to construct and operate a
42 depleted UF_6 conversion facility near Hobbs, New Mexico. On February 23, 2010, the NRC
43 staff accepted the license application, and has initiated a formal safety and environmental
44 review.
45
46

1 **POTENTIAL ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTION**

2
3 This EIS evaluates the potential environmental impacts of the proposed action. A standard of
4 significance has been established for assessing environmental impacts. Following the Council
5 on Environmental Quality’s regulations in 40 CFR 1508.27, the NRC staff has assigned each
6 impact one of the following three significance levels:

- 7
- 8 • SMALL. The environmental effects are not detectable or are so minor that they would
9 neither destabilize nor noticeably alter any important attribute of the resource.
 - 10
 - 11 • MODERATE. The environmental effects are sufficient to noticeably alter but not destabilize
12 important attributes of the resource.
 - 13
 - 14 • LARGE. The environmental effects are clearly noticeable and are sufficient to destabilize
15 important attributes of the resource.
 - 16

17 As described in Chapter 4, the environmental impacts of preconstruction and the proposed
18 action would mostly be SMALL. Some potential impacts would be SMALL to MODERATE or
19 MODERATE in a few cases; and there would be LARGE, though intermittent, short-term
20 impacts in one resource area during preconstruction. Methods for mitigating the potential
21 impacts are identified in Chapters 4 and 5. Environmental measurement and monitoring
22 methods are described in Chapter 6.

23
24 Summarized below are the potential environmental impacts of the proposed action on each of
25 the resource areas considered in this EIS. Each summary is preceded by the impact
26 significance level for the respective resource areas.

27
28 **Land Use**

29
30 SMALL. The construction of a uranium enrichment facility would alter the current land use,
31 which consists primarily of agriculture and undeveloped rangeland. The 240-hectare (592-acre)
32 proposed EREF site under consideration would be located entirely on a 1700-hectare
33 (4200-acre) private parcel of land. Bonneville County has zoned the location as G-1, Grazing,
34 which allows for industrial development, and is intended to allow certain activities that should be
35 removed from population centers in the county. The operation of a uranium enrichment facility
36 is consistent with the county’s zoning. It is not anticipated that construction and operation of the
37 proposed EREF would have any effect on the current land uses found on the surrounding public
38 lands managed by the BLM.

39
40 Restrictions to land use would begin with the purchase of the proposed property by AES. The
41 alteration of land use would begin during preconstruction and continue during construction.
42 Preconstruction activities would result in the alteration of the land as a result of activities such
43 as land clearing and grading, restricted access to the proposed EREF property, and cessation
44 of agricultural uses (grazing and crop production). The majority of impacts to land use would
45 occur during preconstruction. However, since large land areas in the county will continue to be
46 used for grazing and crop production, including the BLM-managed lands surrounding the
47 proposed EREF property, land use impacts resulting from preconstruction and construction
48 would be SMALL.

1 Operation of the proposed EREF would restrict land use on the proposed property to the
2 production of enriched uranium. The operation of the proposed EREF is not expected to alter
3 land use on adjacent properties. Impacts on land use due to operations would be SMALL.
4

5 At the end of decommissioning, the buildings and structures would be available for unrestricted
6 use. As a result, impacts on land use due to decommissioning would be SMALL.
7

8 **Historic and Cultural Resources**

9
10 SMALL TO MODERATE. Impacts to historic and cultural resources would occur primarily
11 during preconstruction. Construction would take place on ground previously disturbed by
12 preconstruction activities. There are 13 cultural resource sites (3 prehistoric, 6 historic, and
13 4 multi-component) in the surveyed areas of the proposed EREF property. One of these sites,
14 the John Leopard Homestead (MW004), is located within the footprint of the proposed EREF,
15 and has been recommended as eligible for the *National Register of Historic Places*. Site
16 MW004 would be destroyed by preconstruction activities. However, AES mitigated impacts to
17 site MW004 prior to land disturbance through professional excavation and data recovery, and
18 other similar homestead site types exist in the region. Therefore, the impact to site MW004
19 would be limited to a MODERATE level.
20

21 Construction and operation of the proposed EREF would be unlikely to result in visual or noise
22 impacts on the Wasden Complex, an important group of archaeological sites, because it is
23 located approximately 1.6 kilometers (1.0 mile) from the proposed EREF site and sits behind a
24 ridge that partially blocks the view. Other impacts during operations would be SMALL because
25 no intact historic or cultural resources would remain.
26

27 Decommissioning would not likely affect historic and cultural resources because any areas
28 disturbed during decommissioning would have been previously disturbed during preconstruction
29 and construction. Therefore, impacts would be SMALL.
30

31 **Visual and Scenic Resources**

32
33 SMALL TO MODERATE. Impacts to visual and scenic resources result when contrasts are
34 introduced into a visual landscape. The proposed project site and surrounding areas consist
35 primarily of sagebrush semi-desert to the north, east, and west of the proposed site. The
36 proposed facility would be located approximately 2.4 kilometers (1.5 miles) from areas of public
37 view, including US 20 and the Hell's Half Acre Wilderness Study Area (WSA) to the south which
38 contains the remains of a 4000-year-old lava flow. The BLM gave a Visual Resource
39 Management (VRM) Class I designation to the WSA, which applies to areas of high scenic
40 quality.
41

42 Visual impacts during preconstruction could result along US 20 from increased activity at the
43 proposed site and fugitive dust, but these would be of a relatively short duration. The clearing of
44 vegetation and installation of a perimeter fence would change the visual setting; however, they
45 would not drastically alter the overall appearance of the area. Impacts on visual and scenic
46 resources due to preconstruction would be SMALL.
47

1 Construction of the proposed EREF would introduce visual intrusions that are out of character
2 with the surrounding area. While initial construction activities would commence on a cleared
3 area, such a view is not very intrusive on the visual landscape. Similarly, fugitive dust
4 generated during the construction period would be of a temporary nature and cause minimal
5 disturbance to the viewshed. However, because of the extent of the proposed EREF project,
6 the type and size of equipment involved in construction, and the industrial character of buildings
7 to be built, construction of the proposed EREF would create significant contrast with the
8 surrounding visual environment, which is predominantly rangeland and cropland. Thus, visual
9 impact levels associated with construction would range from SMALL to MODERATE.

10
11 Construction and operation of the proposed EREF would be unlikely to result in visual impacts
12 on the Wasden Complex due to its distance from the proposed EREF site and location behind a
13 ridgeline that obscures views of the lower portions of the proposed facility. However, operations
14 would have an impact on the surrounding visual landscape. The proposed facility is visually
15 inconsistent with the current setting, and its operation is expected to alter the visual rating on
16 surround public lands, which would be a MODERATE visual impact. Also, plant lighting at night
17 could be perceivable at the trailhead of the Hell's Half Acre WSA, although probably not from
18 the Craters of the Moon National Park located 72 kilometers (45 miles) to the west of the
19 proposed EREF site.

20
21 At the end of decommissioning, the buildings and structures would be available for unrestricted
22 use. As a result, impacts on visual and scenic resources would remain MODERATE.

23 24 **Air Quality**

25
26 SMALL to LARGE. Air emissions during preconstruction and construction would include fugitive
27 dust from heavy equipment working on the proposed site, engine emissions from construction
28 equipment onsite and vehicles transporting workers and materials to the proposed site, and
29 emissions from diesel-fueled generators. The generators, although not intended to provide
30 power for construction activities, would be operated weekly for preventative maintenance.
31 During preconstruction, fugitive dust from land clearing and grading operations would result in
32 large releases of particulate matter. Such impacts would be MODERATE to LARGE during
33 certain preconstruction periods and activities that would be temporary and brief in duration.
34 Otherwise, impacts on ambient air quality from preconstruction would be SMALL for all
35 hazardous air pollutants (HAPs) and all criteria pollutants except particulates. Air quality
36 impacts during construction would be SMALL for all HAPs and all criteria pollutants.

37
38 During operations, the proposed EREF would not be a major source of air emissions, although
39 there is a potential for small gaseous releases associated with operation of the process that
40 could contain UF₆, hydrogen fluoride (HF), and uranyl fluoride (UO₂F₂). Also, small amounts of
41 nonradioactive air emissions consisting of carbon monoxide (CO), nitrogen oxides (NO_x),
42 particulate matter (PM), volatile organic compounds (VOCs), and sulfur dioxide (SO₂) would be
43 released:

- 44 • from the auxiliary diesel electric generators to supply electrical power when power from the
45 utility grid is not available
- 46
- 47 • during building and equipment maintenance activities
- 48

- 1 • from trucks, automobiles, and other vehicles in use onsite

2
3 Air emissions are not expected to impact regional visibility. Ambient air modeling predicts that
4 impacts on ambient air quality from the routine operation of the proposed EREF would be
5 SMALL with respect to all criteria pollutants and all HAPs.

6
7 During decommissioning, impacts would result from emissions including fugitive dust (mitigated
8 by dust suppression work practices) and CO, NO_x, PM, VOCs, and SO₂ from transportation
9 equipment and would be SMALL.

10 11 **Geology and Soils**

12
13 SMALL. Impacts on about 240 hectares (592 acres) of land would occur primarily during
14 preconstruction, as a result of soil-disturbing activities (blasting, excavating, grading, and other
15 activities) that loosen soil and increase the potential for erosion. Because these impacts are
16 short-term and can be mitigated, impacts on geology and soils would be SMALL. Construction
17 activities could cause short-term impacts such as an increase in soil erosion at the proposed
18 site. Soil erosion could result from wind action and rain, although rainfall in the vicinity of the
19 proposed site is low. Compaction of soils due to heavy vehicle traffic would increase the
20 potential for soil erosion via runoff. Impacts would be SMALL.

21
22 Impacts on soils during operations at the proposed facility would also be SMALL because
23 activities would not increase the potential for soil erosion beyond that for the surrounding area.
24 The impacts to soil quality from atmospheric deposition of pollutants during operations would be
25 SMALL.

26
27 Land disturbance associated with decommissioning could temporarily increase the potential for
28 soil erosion at the proposed EREF site, resulting in impacts similar to (but less than) those
29 during the preconstruction/construction phase. As a result, impacts to soils due to
30 decontamination and decommissioning activities would be SMALL.

31 32 **Water Resources**

33
34 SMALL. During preconstruction and construction, stormwater runoff would be diverted to a
35 stormwater detention basin, thus the potential for contaminated stormwater discharging to water
36 bodies on adjacent properties is low. No surface water sources would be used. Natural surface
37 water bodies are absent within and near the proposed EREF site, and groundwater occurs at
38 depths of 202 meters (661 feet) to 220 meters (722 feet). Annual maximum groundwater usage
39 rates from the Eastern Snake River Plain (ESRP) aquifer in Bonneville County during
40 preconstruction and construction comprise about 16 percent of the annual water right
41 appropriation that has been transferred to the proposed property for use as industrial water.
42 Therefore, impacts on surface water quality, the regional water supply, and groundwater quality
43 during preconstruction and construction would be SMALL.

44
45 Water usage rates during operations would remain well within the water right appropriation.
46 Both average and peak annual water use requirements would be less than 1 percent of the total
47 groundwater usage from the ESRP aquifer. No process effluents would discharge to the
48 retention or detention basins or into surface water. Therefore, liquid effluents would have a

1 SMALL impact on water resources. Because all the water discharged to the Cylinder Storage
2 Pads Stormwater Retention Basins would evaporate, the basins would have a SMALL impact
3 on the quality of water resources. The site Stormwater Detention Basin seepage would also
4 have a SMALL impact on water resources of the area because no wastewater would be
5 discharged to the basin.
6

7 Since the usage and discharge impacts to water resources during the decommissioning phase
8 would be similar to those during construction, the impacts to water resources would remain
9 SMALL.

10 **Ecological Resources**

11 SMALL TO MODERATE. Preconstruction activities such as land clearing could result in direct
12 impacts due to habitat loss and wildlife mortality as well as indirect impacts to ecological
13 resources in surrounding areas, primarily from fugitive dust and wildlife disturbance.
14 Approximately 75 hectares (185 acres) of sagebrush steppe habitat and 55 hectares
15 (136 acres) of nonirrigated pasture would be eliminated. Impacts on plant communities and
16 wildlife from preconstruction would be MODERATE. Construction activities that could impact
17 ecological resources include constructing the proposed UF₆ storage pads and EREF buildings.
18 However, most construction activities would occur in areas that would have already been
19 disturbed by preconstruction activities. Impacts on vegetation would occur primarily from any
20 additional vegetation clearing. Impacts would include the generation of fugitive dust, spread of
21 invasive species, changes in drainage patterns, soil compaction, erosion of disturbed areas,
22 potential sedimentation of downgradient habitats, and accidental releases of hazardous or toxic
23 materials (e.g., fuel spills). These activities could also result in some wildlife mortality and would
24 cause other wildlife to relocate as a result of noise, lighting, traffic, and human presence.
25 Collisions with construction equipment and other vehicles may cause some wildlife mortality.
26 No rare or unique plant communities, or threatened or endangered species, have been found or
27 are known to occur on the proposed site, although habitat on the proposed property is known to
28 be used by greater sage-grouse (a Federal candidate species). Construction (and
29 preconstruction) activities are not expected to result in population-level impacts on any
30 Federally listed or State-listed species, which the U.S. Fish and Wildlife Service has stated are
31 not present on the proposed EREF property. Impacts of construction of the proposed facility
32 would be SMALL.
33

34
35
36 Operation of the proposed EREF could result in impacts on wildlife and plant communities as a
37 result of noise, lighting, traffic, human presence, air emissions, and retention/detention ponds.
38 However, these impacts would be SMALL.
39

40 Vegetation and wildlife that became established near the proposed facility could be affected by
41 decommissioning activities. Impacts during decommissioning would be similar to those during
42 construction and would be SMALL.
43

44 **Noise**

45
46 SMALL. Most of the major noise-producing activities (site clearing and grading, excavations
47 [including the use of explosives], utility burials, construction of onsite roads [including the US 20
48 interchanges], and construction of the ancillary buildings and structures) would occur during

1 preconstruction. Noise impacts from initial preconstruction activities may exceed established
2 standards at some locations along the proposed EREF property boundary for relatively short
3 periods of time. However, because of the distances involved, expected levels of attenuation,
4 application of mitigation measures, and the expected limited presence of human receptors at
5 these locations, the impacts of noise during preconstruction would be SMALL for human
6 receptors. The nearest resident is located approximately 7.7 kilometers (4.8 miles) east of the
7 proposed site. No residence is expected to experience unacceptable noise levels during
8 construction. Noise impacts from construction may exceed established standards at some
9 offsite locations for relatively short periods of time. However, because of the distances involved,
10 expected levels of attenuation, and AES's commitment to appropriate mitigations, the impacts
11 would be SMALL for human receptors. During the overlap period when partial operations begin
12 while building construction continues, noise impacts from construction and operation are
13 expected to be additive, but still substantially reduced from noise levels during initial
14 construction.

15
16 Major noise sources associated with facility operation include the six diesel-fueled emergency
17 generators, commuter traffic, the movement of delivery vehicles, and operation of various
18 pumps, compressors, and cooling fans. Operational noise estimates at the proposed property
19 boundary satisfy all relevant or potentially relevant U.S. noise standards and guidance.
20 Residents in the vicinity of US 20, who would otherwise be unaffected by noise from the
21 proposed EREF industrial footprint, would be impacted by slightly increased traffic noise. Noise
22 impacts from proposed EREF operation would be SMALL.

23
24 Noise sources and levels during decommissioning would be similar to those during construction,
25 and peaking noise levels would be expected to occur for short durations. As a result, noise
26 impacts from decommissioning would be SMALL.

27 28 **Transportation**

29
30 SMALL TO MODERATE. Preconstruction activities for the proposed EREF would cause an
31 impact on the local transportation network due to the construction of highway entrances, the
32 daily commute of workers, daily construction deliveries, and waste shipments. Traffic
33 slowdowns or delays would only be expected to occur at the entrance to the proposed EREF
34 during access road construction and shift changes; the impacts on overall traffic patterns and
35 volumes would be MODERATE on US 20 and SMALL on Interstate 15 (I-15). The primary
36 impact would be increased traffic on nearby roads. Impacts during construction would occur
37 from transportation of personnel, construction materials, and nonradiological waste. All traffic to
38 and from the proposed EREF during preconstruction and construction would use US 20.
39 Construction activities at the proposed EREF site could result in a 55 percent increase in traffic
40 volume on US 20 (including the period when construction and operations overlap). Because
41 traffic volume is expected to remain below the design capacity of I-15 and traffic slowdowns or
42 delays would only be expected to occur at the entrance to the proposed EREF during shift
43 changes, the impacts on overall traffic patterns and volumes during construction would be
44 SMALL to MODERATE on US 20 and SMALL on I-15. For the most part, the impacts from the
45 truck traffic to and from the proposed site during construction would be SMALL.

46
47 Operations impacts would occur from the transport of personnel, nonradiological materials, and
48 radioactive material to and from the proposed EREF, especially during the period when

1 construction and operation overlap. Increased traffic during facility operation would have a
2 SMALL to MODERATE impact on the current traffic on US 20 (SMALL for any off-peak shift
3 change). The impacts of truck traffic to and from the proposed site during operation would be
4 SMALL. Annual transportation routine impacts and accident risks (radiological and chemical)
5 would be SMALL.
6

7 Traffic during the initial portion of the decommissioning would be approximately the same as for
8 the period when construction and operations overlap. Traffic after the cessation of operations
9 would be less than during either construction or operation. Impacts on local traffic on US 20
10 would be SMALL to MODERATE.
11

12 **Public and Occupational Health**

13

14 SMALL. During preconstruction, impacts on occupational safety resulting from injuries,
15 illnesses, and exposures to fugitive dust, pollutants, and vapors would be SMALL, based on
16 estimates of the number of incidents. During construction, nonradiological impacts could
17 include injuries and illnesses incurred by workers and impacts due to exposure to chemicals or
18 other nonradiological substances. All such potential impacts would be SMALL because all
19 activities would take place under typical construction workplace safety regulations. No
20 radiological impacts are expected during facility construction.
21

22 Nonradiological impacts during facility operation include worker illnesses and injuries and
23 impacts from worker or public exposure to hazardous chemicals used or present during
24 operations, mainly uranium and HF. Due to low estimated concentrations of uranium and HF at
25 public (proposed property boundary) and workplace receptor locations, nonradiological impacts
26 due to exposures to hazardous chemicals (including uranium and HF) during operations would
27 be SMALL.
28

29 Assessment of potential radiological impacts from facility operations considers both public and
30 occupational exposures to radiation, and includes exposures to workers completing the facility
31 construction during initial phases of operation. Exposure pathways include inhalation of
32 airborne contaminants, ingestion of contaminated food crops, direct exposure from material
33 deposited on the ground, and external exposure associated with the stored UF₆ cylinders.
34 Impacts from exposure of members of the public would be SMALL. Worker exposures would
35 vary by job type, but would be carefully monitored and maintained as low as reasonably
36 achievable (ALARA) and impacts would be SMALL.
37

38 For a hypothetical individual member of the public at the proposed EREF property boundary and
39 the nearest resident, the maximum annual total effective dose equivalents would be 0.014
40 millisievert per year (1.4 millirem per year) and 2.1×10^{-6} millisievert per year (2.1×10^{-4} millirem
41 per year), respectively. Dose equivalents attributable to operation of the proposed EREF would
42 be small compared to the normal background radiation range of 2.0 to 3.0 millisieverts (200 to
43 300 millirem) dose equivalent. This equates to radiological impacts during proposed EREF
44 operation that would be SMALL.
45

46 The nature of decommissioning activities would be similar to that during construction and
47 operation. Impacts from occupational injuries and illnesses and chemical exposures would be
48 SMALL. Occupational radiological exposures would be bounded by the potential exposures

1 during operation, because the quantities of uranium material handled would be less than or
2 equal to that during operations. An active environmental monitoring and dosimetry (external
3 and internal) program would be conducted to maintain ALARA doses to workers and to
4 individual members of the public. Therefore, the impacts of decommissioning on public and
5 occupational health would be SMALL.

6 7 **Waste Management**

8
9 SMALL. Solid nonhazardous wastes generated during preconstruction would be transported
10 offsite to an approved local landfill. Hazardous wastes (e.g., waste oil, greases, excess paints,
11 and other chemicals) generated during preconstruction would be packaged and shipped offsite
12 to a licensed treatment, storage, and disposal facility (TSDF). Impacts from nonhazardous solid
13 waste and hazardous waste generation during preconstruction would be SMALL due to the
14 available current or future capacity at local and regional disposal facilities. Construction would
15 generate about 6116 cubic meters (8000 cubic yards) of nonhazardous solid waste per year, not
16 including recyclable materials such as scrap structural steel, sheet metal, and piping. About
17 23,000 liters (6200 gallons) and 1000 kilograms (2200 pounds) of hazardous waste would be
18 generated annually. The impacts of nonhazardous and hazardous waste generation during
19 construction would be SMALL due to the available current or future capacity at local and
20 regional disposal facilities.

21
22 During operation, approximately 70,307 kilograms (154,675 pounds) of industrial,
23 nonhazardous, nonradioactive solid waste and approximately 146,400 kilograms
24 (322,080 pounds) of low-level radioactive waste (not including depleted UF₆) are expected to be
25 generated annually. The proposed facility would also generate approximately 5062 kilograms
26 (11,136 pounds) of hazardous wastes and 100 kilograms (220 pounds) of mixed waste
27 annually. All wastes would be transferred to offsite licensed waste disposal facilities with
28 suitable disposal capacity. The impacts of this waste generation would be SMALL.

29
30 During peak operation, the proposed EREF is expected to generate 1222 cylinders of depleted
31 UF₆ annually, which would be temporarily stored on an outdoor cylinder storage pad in
32 approved Type 48Y containers before being transported to a DOE-owned or private conversion
33 facility. Storage of uranium byproduct cylinders at the proposed EREF would occur for the
34 duration of, but not beyond, the proposed facility's 30-year operating lifetime. The impacts from
35 temporary storage of depleted UF₆, from the conversion of depleted UF₆ to U₃O₈ at an offsite
36 location, and from the transportation of the U₃O₈ conversion product to a potential disposal site
37 would be SMALL.

38
39 During decommissioning, radioactive material from decontamination of contaminated equipment
40 would be packaged and shipped offsite for disposal. Wastes to be disposed would include
41 7700 cubic meters (10,070 cubic yards) of low-level radioactive waste. Due to the availability of
42 adequate disposal capacity, waste management impacts would be SMALL.

43 44 **Socioeconomics**

45
46 SMALL. Employment and income impacts were evaluated using an 11-county ROI in Idaho –
47 including Bannock, Bingham, Blaine, Bonneville, Butte, Caribou, Clark, Fremont, Jefferson,
48 Madison, and Power Counties. Wage and salary spending and expenditures associated with

1 materials, equipment, and supplies would produce income and employment and local and State
2 tax revenue, resulting in a beneficial impact. Preconstruction would create 308 jobs and
3 \$11.9 million in the first year, and 1687 jobs would be created during the peak year of
4 construction with \$65.0 million of income. Operations would produce 3289 jobs and
5 \$92.4 million in income in the first year of full operations. The jobs created include jobs at the
6 proposed EREF and those indirectly created elsewhere in the 11-county ROI due to
7 preconstruction, construction, and operation of the proposed EREF. Because preconstruction
8 and construction activities would constitute less than 1 percent of total 11-county ROI
9 employment, the economic impact of constructing the proposed EREF would, therefore, be
10 SMALL.

11
12 As it is anticipated that a number of workers will move into the area during each phase of the
13 proposed project, with the majority of the demographic and social impacts associated with
14 population in-migration likely to occur in Bingham and Bonneville Counties, the impacts of the
15 proposed EREF on population, housing, and community services are assessed for a two-county
16 ROI, consisting of Bingham and Bonneville Counties. The migration of workers and their
17 families into surrounding communities would affect housing availability, area community
18 services such as healthcare, schools, and law enforcement, and the availability and cost of
19 public utilities such as electricity, water, sanitary services, and roads resulting in an adverse
20 impact. Because of the small number of in-migrating workers expected during preconstruction,
21 construction, and operations, the impact on housing and community and educational services
22 employment would be SMALL.

23
24 Decommissioning would provide continuing employment opportunities for some of the existing
25 workforce and for other residents of the 11-county ROI. Additional, specialized
26 decommissioning workers would also be required from outside the 11-county ROI.
27 Expenditures on salaries and materials would contribute to the area economy, although less
28 than during operations, and the State would continue to collect sales tax and income tax
29 revenues. The socioeconomic impact of decommissioning activities would be SMALL.

30
31 **Environmental Justice**

32
33 SMALL. The potential impacts of the proposed EREF would mostly be SMALL for the resource
34 areas evaluated. For these resources areas, the impacts on all human populations would be
35 SMALL. Potential impacts would be SMALL to MODERATE or MODERATE in a few cases,
36 which could potentially affect environmental justice populations; and there would be LARGE,
37 though intermittent, short-term impacts from fugitive dist during preconstruction. However, as
38 there are no low-income or minority populations within the 4-mile area around the proposed
39 facility, these impacts would not be disproportionately high and adverse for these population
40 groups.

41
42 Impacts of decommissioning would be SMALL. Because impacts on the general population
43 would generally be SMALL to MODERATE in other resource areas, and because there are no
44 low-income or minority populations defined according to Council on Environmental Quality
45 (CEQ) guidelines within the 4-mile area around the proposed facility, decommissioning would
46 not be expected to result in disproportionately high or adverse impacts on minority or low-
47 income populations.

48

1 **Accidents**

2
3 SMALL TO MODERATE. Six accident scenarios were evaluated in this EIS as a representative
4 selection of the types of accidents that are possible at the proposed EREF. The representative
5 accident scenarios selected vary in severity from high- to intermediate-consequence events and
6 include accidents initiated by natural phenomena (earthquake), operator error, and equipment
7 failure. The consequence of a criticality accident would be high (fatality) for a worker in close
8 proximity. Worker health consequences are low to high from the other five accidents that
9 involve the release of UF₆. Radiological consequences to a maximally exposed individual (MEI)
10 at the Controlled Area Boundary (proposed EREF property boundary) are low for all six
11 accidents including the criticality accident. Uranium chemical exposure to the MEI is high for
12 one accident and low for the remainder. For HF exposure to an MEI at the proposed property
13 boundary, the consequence of three accidents is intermediate, with a low consequence
14 estimated for the remainder. All accident scenarios predict consequences to the collective
15 offsite public of less than one lifetime cancer fatality. Impacts from accidents would be SMALL
16 to MODERATE. Plant design, passive and active engineered and administrative controls, and
17 management of these controls would reduce the likelihood of accidents.

18
19 **POTENTIAL ENVIRONMENTAL IMPACTS OF THE NO-ACTION ALTERNATIVE**

20
21 This EIS also considers the potential environmental impacts of the no-action alternative, which
22 are summarized below. It is assumed that preconstruction activities have taken place under the
23 no-action alternative. The impact conclusions presented in this EIS for the no-action alternative
24 address the impacts of denying the license, but do not include the impacts of the NRC-approved
25 preconstruction activities. This is because a decision by the NRC not to issue the license does
26 not cause the impacts of preconstruction under the no-action alternative. As described in
27 Chapter 4, the anticipated environmental impacts from the no-action alternative would range
28 from SMALL to MODERATE.

29
30 Should the nation's need for enriched uranium continue to increase and necessitate the
31 construction and operation of another domestic enrichment facility at an alternate location,
32 impacts could occur for each resource area and could range from SMALL to LARGE. The
33 nature and scale of these impacts could be similar to those of the proposed action, but would
34 depend on several facility- and site-specific factors.

35
36 **Land Use**

37
38 SMALL. Under the no-action alternative, AES would purchase the proposed property and
39 restrictions on grazing and agriculture would occur. The zoning designation for the property
40 would remain G-1 Grazing whether or not the proposed EREF is constructed. Current land
41 uses of grazing and farming could potentially resume. Impacts to local land use would be
42 SMALL.

43
44 **Historic and Cultural Resources**

45
46 SMALL TO MODERATE. Under the no-action alternative, the proposed EREF would not be
47 constructed. Site MW004 would not be affected by NRC's licensing action, and Section 106 of
48 the *National Historic Preservation Act* would not apply because no Federal action would be

1 involved. However, the removal of site MW004, which has already occurred, resulted in a
2 LARGE impact because the site no longer exists; but because AES removed this site through
3 professional excavation and data recovery and there are other homestead sites of this type
4 found in the region, the impact has been mitigated to a MODERATE level. No visual or noise
5 effects would occur to the viewshed for the Wasden Complex.
6

7 **Visual and Scenic Resources**

8
9 SMALL. Under the no-action alternative, since the proposed EREF would not be constructed,
10 no visual intrusions to the existing landscape would occur. The current land cover would be
11 altered, but no large industrial structures would be constructed. The existing natural character
12 of the area would largely remain intact. The lack of development would be consistent with
13 BLM's VRM Class I designation for the Hell's Half Acre WSA, and no intrusions to the Wasden
14 Complex viewshed would occur.
15

16 **Air Quality**

17
18 SMALL. Under the no-action alternative, the air quality impacts associated with construction
19 and operation of the proposed EREF would not occur. The proposed site could revert to
20 agricultural activities, which would impact ambient air quality through the release of criteria
21 pollutants from the operation of agricultural vehicles and equipment and the release of fugitive
22 dusts from the tilling of soils. Local air impacts associated with the no-action alternative would
23 be SMALL.
24

25 **Geology and Soils**

26
27 SMALL. Under the no-action alternative, no additional land disturbance from construction would
28 occur, and the proposed site could revert to crop production and grazing activities. Wind and
29 water erosion would continue to be the most significant natural processes affecting the geology
30 and soils at the proposed site. Impacts would be SMALL.
31

32 **Water Resources**

33
34 SMALL. Under the no-action alternative, additional water use may or may not occur, depending
35 on future plans for the proposed property. Water resources would be unchanged. Water usage
36 could continue at the current rate should agricultural activities resume at the proposed site. No
37 changes to surface water quality would be expected, and the natural (intermittent) surface flow
38 of stormwater on the proposed site would continue. No additional groundwater use or adverse
39 changes to groundwater quality would be expected. Impacts would be SMALL.
40

41 **Ecological Resources**

42
43 SMALL. Most impacts on ecological resources would occur during preconstruction. The
44 potential impacts associated with the construction, operation, and decommissioning of the
45 proposed EREF would not occur. Revegetation of the proposed site could occur with renewal of
46 some wildlife habitat. The land could revert to crop production and grazing activities. Impacts
47 would be SMALL.
48
49

1 **Noise**

2
3 SMALL. Under the no-action alternative, none of the noise impacts associated with proposed
4 EREF construction, operation, or decommissioning would occur. Land uses on the proposed
5 EREF site could revert to previous applications, livestock grazing and/or crop production, with
6 concomitant noise levels and SMALL impacts.
7

8 **Transportation**

9
10 SMALL. Under the no-action alternative, traffic volumes and patterns would remain unchanged
11 from existing conditions. The current volume of radioactive material and chemical shipments
12 from other sources in the area would not increase. Impacts would be SMALL.
13

14 **Public and Occupational Health**

15
16 SMALL. Under the no-action alternative, health impacts from construction, operation, and
17 decommissioning would not occur. Worker and public impacts from chemical and radioactive
18 hazards would also not occur. Should the land be returned to grazing and agriculture, current
19 use impacts would be expected and would be SMALL.
20

21 **Waste Management**

22
23 SMALL. Under the no-action alternative, no proposed EREF construction, operational, or
24 decommissioning wastes (including sanitary, hazardous, low-level radioactive wastes, or mixed
25 wastes) would be generated or require disposition. Impacts from waste management would be
26 SMALL.
27

28 **Socioeconomics**

29
30 SMALL. Under the no-action alternative, any beneficial or adverse consequences of the
31 proposed action would not occur. All socioeconomic conditions in the 11-county ROI would
32 remain unchanged. Impacts would be SMALL.
33

34 Population in the area surrounding the proposed EREF, in Bonneville and Bingham Counties, is
35 expected to grow in accordance with current projections, with the total population in the region
36 projected to be approximately 156,491 in 2013 and 168,331 in 2017. In association with
37 population growth, the social characteristics of the region, including housing availability, school
38 enrollment, and availability of law enforcement and firefighting resources, are expected to
39 change over time. However, future changes in these characteristics are difficult to quantify, and
40 no projections of their future growth are available.
41

42 **Environmental Justice**

43
44 SMALL. The no-action alternative would not be expected to cause any high and adverse
45 impacts. It would not raise any environmental justice issues.
46
47

1 **Accidents**

2
3 SMALL. Under the no-action alternative, potential accidents and accident consequences from
4 operation of the proposed EREF would not occur. Impacts would be SMALL.
5

6 **COSTS AND BENEFITS OF THE PROPOSED ACTION**

7
8 While there are national energy security and fiscal benefits associated with the proposed action,
9 and local socioeconomic benefits in the 11-county ROI in which the proposed EREF would be
10 located, there are also direct costs associated with the preconstruction, construction, and
11 operation phases of the proposed project, as well as impacts on various environmental
12 resources. These impacts would mostly be SMALL, and in a few cases SMALL to MODERATE,
13 or MODERATE in magnitude and small in comparison to the local and national benefits of the
14 proposed action. In addition, most of the impacts to environmental resources associated with
15 the proposed action would result from preconstruction activities at the proposed site, and would
16 also occur under the no-action alternative. The principal socioeconomic impact or benefit of the
17 proposed EREF project would be an increase in employment and income in the 11-county ROI.
18 Although the majority of the costs, and most of the socioeconomic impacts, of the various
19 phases of proposed EREF development would occur in the 11-county ROI, there would be
20 economic, fiscal and, in particular, energy security benefits, which would occur at the local,
21 State, and national levels.
22

23 Average employment created in the 11-county ROI during the year of peak construction is
24 estimated at 1687 full-time jobs, with \$0.7 million in State income tax revenues and \$5.1 million
25 in State sales taxes. During the proposed EREF full operations phase beginning in 2022,
26 3289 annual jobs would be created. During this period, the State of Idaho would benefit from
27 \$1.3 million annually in income taxes, while Bonneville County would collect \$3.5 million
28 annually in property tax receipts. Although it can be assumed that some portion of paid State
29 sales and income taxes would be returned to the 11-county ROI under revenue-sharing
30 arrangements between each county and the State government, the exact amount that would be
31 received by each county cannot be determined. Although there are economic and fiscal
32 benefits associated with the proposed action in the 11-county ROI, these impacts would be
33 SMALL.
34

35 The direct costs associated with the proposed action may be categorized by the following life-
36 cycle stages: facility construction, operation, depleted uranium disposition, and
37 decommissioning. In addition, costs would be incurred for preconstruction activities under both
38 the proposed action and the no-action alternative. In addition to monetary costs, the proposed
39 action would result in impacts on various resource areas, which are considered “costs” for the
40 purpose of this analysis. The resource areas and corresponding impacts are described in detail
41 in Chapter 4 of this EIS. As discussed earlier, the impacts of preconstruction and the proposed
42 action would mostly be SMALL, and in a few cases SMALL to MODERATE, or MODERATE, for
43 all resource areas.
44

45 The proposed action could result in the maximum annual production of 6.6 million SWUs of
46 enriched uranium in peak years, which would represent an augmentation of the domestic supply
47 of enriched uranium and, along with other planned new enrichment facilities, would meet the
48 need for increased domestic supplies of enriched uranium for national energy security. Thus,

1 the proposed action would generate national and regional benefits and costs. The national
2 benefit would be an increase in domestic supplies of enriched uranium that would assist the
3 national energy security need. The regional benefits would be increased employment,
4 economic activity, and tax revenues in the 11-county ROI. Costs associated with the proposed
5 project are, for the most part, limited to the resource areas in the 11-county ROI.
6

7 **COMPARISON OF THE PROPOSED ACTION AND NO-ACTION ALTERNATIVE**

8
9 The impacts of the proposed action and the no-action alternative are briefly summarized and
10 compared below. A more detailed summary and comparison is provided in Chapter 2,
11 Table 2-6. As discussed earlier, it is assumed that the previously discussed preconstruction
12 activities take place under both alternatives and, therefore, the impacts associated with
13 preconstruction activities take place regardless of which alternative is selected. As a result, the
14 comparison of alternatives presented below and in Chapter 2 is intended to highlight the
15 differences between the two alternatives after preconstruction activities have occurred.
16

17 Under the no-action alternative, the proposed EREF would not be constructed, operated, and
18 decommissioned in Bonneville County, Idaho. The Paducah Gaseous Diffusion Plant in
19 Paducah, Kentucky, the URENCO USA facility in Lea County, New Mexico, and the
20 downblending of highly enriched uranium under the Megatons to Megawatts Program would
21 remain the sole sources of domestically generated low-enriched uranium for U.S. commercial
22 nuclear power plants. The URENCO USA facility is still under construction and with the ACP,
23 which is currently under construction, may provide additional enrichment services in the future.
24 The license application for an additional enrichment facility, the proposed GLE Facility, is
25 currently under review by the NRC. Foreign enrichment sources would be expected to continue
26 to supply approximately 85 percent of U.S. nuclear power plants' demand until new domestic
27 enrichment facilities are constructed and operated.
28

29 The no-action alternative would have SMALL impacts on land use, visual and scenic resources,
30 air quality, geology and soils, water resources, ecological resources, noise, transportation,
31 public and occupational health, waste management, socioeconomics, environmental justice,
32 and facility accidents, and SMALL to MODERATE impacts on historic and cultural resources.
33 The costs and benefits of constructing, operating, and decommissioning the proposed EREF
34 would not occur. Additional domestic enrichment facilities could be constructed in the future
35 with impacts expected to be SMALL to LARGE, depending on facility- and site-specific
36 conditions.
37

38 In comparison to the no-action alternative, the proposed action would also have SMALL impacts
39 on land use, air quality, geology and soils, water resources, ecological resources, noise, public
40 and occupational health, waste management, socioeconomics, and environmental justice, but
41 would have SMALL to MODERATE impacts on historic and cultural resources, visual and scenic
42 resources, transportation, and facility accidents. The proposed action would have positive
43 impacts in the region on employment and income, and on State and Federal tax revenues.
44

45 **CUMULATIVE IMPACTS**

46
47 This EIS also considers cumulative impacts that could result from the proposed action when
48 added to other past, present, and reasonably foreseeable future actions (Federal, non-Federal,
49 or private). No ongoing or planned developments were identified within 16 kilometers (10 miles)

1 of the proposed project location, which includes the ROI for all affected resource areas except
2 socioeconomics, which extends to an 80.5-kilometer (50-mile) radius. Proposed developments
3 within 80.5 kilometers (50 miles) that could contribute to a regional socioeconomic impact in
4 combination with the proposed project include the proposed Mountain States Transmission
5 Intertie, a proposed 500-kV electrical transmission line running between western Montana and
6 southeastern Idaho. The preferred route lies approximately 40 kilometers (25 miles) to the west
7 of the proposed EREF site, running north-south. Two other alternate routes lie closer, the
8 nearest running adjacent to the western boundary of the proposed EREF property just outside
9 of INL property, and the other route crossing US 20 about 10 miles east of the proposed EREF
10 site. In addition, impacts from the construction of a proposed new 161-kV transmission line, a
11 substation, and substation upgrades for the proposed EREF are addressed as cumulative
12 impacts in this EIS, as this action is not under the NRC's jurisdiction and, therefore, not
13 considered by the NRC to be part of the proposed action. In general, the anticipated cumulative
14 impacts from the proposed action would be SMALL. Cumulative impacts associated with the
15 no-action alternative would be generally less than those for the proposed action, except in terms
16 of local job creation.

17

18 **SUMMARY OF ENVIRONMENTAL CONSEQUENCES**

19

20 Preconstruction activities and the proposed action would result in unavoidable adverse impacts
21 on the environment. These impacts would mostly be SMALL and SMALL to MODERATE or
22 MODERATE in a few cases, with the potential for temporary and brief LARGE impacts on air
23 quality from fugitive dust, and would, in most cases, be mitigated. The area needed for
24 construction and operation of the proposed EREF would be cleared of vegetation, which would
25 lead to the displacement of some local wildlife populations. There would be temporary impacts
26 from preconstruction and the construction of new facilities, including increased fugitive dust,
27 increased potential for soil erosion and stormwater pollution, and increased vehicle traffic and
28 emissions. Water consumption from onsite wells would be relatively small, and the risk for
29 significant adverse impacts on neighboring residential wells or public supply wells would be
30 SMALL. During operations, workers and members of the public could be exposed to radiation
31 and chemicals, although the impacts of these exposures would be SMALL.

32

33 Preconstruction and the proposed action would necessitate short-term commitments of
34 resources and would permanently commit certain other resources (such as energy and water).
35 This EIS defines short-term uses as generally affecting the present quality of life for the public
36 (i.e., the 30-year license period for the proposed EREF) and long-term productivity as affecting
37 the quality of life for future generations on the basis of environmental sustainability. The short-
38 term use of resources would result in potential long-term socioeconomic benefits to the local
39 area and the region.

40

41 Workers, the public, and the environment would be exposed to increased amounts of hazardous
42 and radioactive materials over the short term from operations of the proposed EREF.
43 Construction and operation would require a long-term commitment of terrestrial resources, such
44 as land, water, and energy. Short-term impacts would be minimized by the application of
45 appropriate mitigation measures. Upon the closure of the proposed EREF, AES would
46 decontaminate and decommission the buildings and equipment and restore them for
47 unrestricted use. Continued employment, expenditures, and tax revenues generated during the
48 proposed action would directly benefit the local, regional, and State economies.

49

1 Irreversible commitment of resources refers to resources that are destroyed and cannot be
2 restored, whereas an irretrievable commitment of resources refers to material resources that
3 once used cannot be recycled or restored for other uses by practical means. The proposed
4 action would include the commitment of land, water, energy, raw materials, and other natural
5 and human-generated resources. Following decommissioning, the land occupied by the
6 proposed facility would likely remain industrial beyond license termination. Water required
7 during preconstruction and the proposed action would be obtained from new and existing wells
8 at the proposed EREF property and would be replenished through natural mechanisms.
9 Wastewaters would be treated to meet applicable standards and would evaporate. Energy used
10 in the form of electricity and diesel fuel would be supplied through new infrastructure connecting
11 to existing systems in the Idaho Falls area. The specific types of construction materials and the
12 quantities of energy and materials used cannot be determined until final facility design is
13 completed, but it is not expected that these quantities would strain the availability of these
14 resources.

15
16 During operation of the proposed EREF, natural UF_6 would be used as feed material, requiring
17 the mining of uranium (not licensed by the NRC) and other front end operational steps in the
18 uranium fuel cycle (licensed by the NRC). This use of uranium would be an irretrievable
19 resource commitment.

20
21 Even though the land used to construct the proposed EREF would be returned to other
22 productive uses after the proposed facility is decommissioned, there would be some irreversible
23 commitment of land at other offsite locations used to dispose of solid wastes generated by the
24 proposed facility. In addition, wastes generated during the conversion of depleted UF_6
25 produced by the proposed facility and the depleted uranium oxide conversion product from the
26 conversion of depleted UF_6 would be disposed at a licensed offsite LLRW disposal facility. Land
27 used for disposal of these materials would represent an irreversible commitment of land. No
28 solid wastes or depleted uranium oxide conversion product originating from the proposed EREF
29 would be disposed of on the proposed EREF property. When the proposed facility is
30 decommissioned, some building materials would be recycled and reused. Other materials
31 would be disposed of in a licensed and approved offsite location, and the amount of land used
32 to dispose of these materials would be an irretrievable land resource.

33

ACRONYMS AND ABBREVIATIONS

1		
2		
3	²³⁴ U	uranium-234 (U-234)
4	²³⁵ U	uranium-235 (U-235)
5	²³⁵ UF ₆	uranium-235 hexafluoride
6	²³⁸ U	uranium-238 (U-238)
7	²³⁸ UF ₆	uranium-238 hexafluoride
8		
9	AAC	acceptable ambient concentration
10	AASHTO	American Association of State Highway and Transportation Officials
11	ACHP	Advisory Council on Historic Preservation
12	ACP	American Centrifuge Plant
13	ADAMS	Agencywide Documents Access and Management System
14	AERMOD	AMS/EPA Regulatory Model
15	AES	AREVA Enrichment Services, LLC
16	ALARA	as low as reasonably achievable
17	ANSI	American National Standards Institute
18	APE	Area of Potential Effect
19	Argonne	Argonne National Laboratory
20	ASTM	American Society of Testing and Materials
21	ATSDR	Agency for Toxic Substances and Disease Registry
22	AVLIS	Atomic Vapor Laser Isotope Separation
23		
24	BEA	U.S. Bureau for Economic Analysis
25	BLM	U.S. Bureau of Land Management
26	BLS	U.S. Bureau of Labor Statistics
27	BMP	best management practice
28	BSPB	Blending, Sampling, and Preparation Building
29		
30	CAA	<i>Clean Air Act</i>
31	CAB	Centrifuge Assembly Building or Controlled Area Boundary
32	CaF ₂	calcium fluoride
33	Cal/EPA	California Office of Environmental Health Hazard Assessment
34	CCS	Center for Climate Studies
35	CDC	Centers for Disease Control and Prevention
36	CEDE	committed effective dose equivalent
37	CEQ	Council on Environmental Quality
38	CFR	U.S. <i>Code of Federal Regulations</i>
39	CH ₄	methane
40	CTF	Centrifuge Test Facility
41	CO	carbon monoxide
42	CO ₂	carbon dioxide
43	CREP	Conservation Reserve Enhancement Program
44	CWA	<i>Clean Water Act</i>
45	CY	calendar year
46		
47	D&D	decontamination and decommissioning
48	DDT	dichlorodiphenyltrichloroethane

1	DEM	Digital Elevation Model
2	DNFSB	Defense Nuclear Facilities Safety Board
3	DNL	day/night average noise level
4	DOC	U.S. Department of Commerce
5	DOE	U.S. Department of Energy
6	DOEQAP	DOE Quality Assurance Program
7	DOL	U.S. Department of Labor, U.S. Bureau of Labor Statistics
8	DOT	U.S. Department of Transportation
9		
10	EA	Environmental Assessment
11	EDE	effective dose equivalent
12	EIA	Energy Information Administration
13	EIS	Environmental Impact Statement
14	EMP	Effluent Monitoring Program
15	EPA	U.S. Environmental Protection Agency
16	ER	Environmental Report
17	ERDA	Energy Research and Development Administration
18	EREF	Eagle Rock Enrichment Facility
19	ESA	<i>Endangered Species Act</i>
20	ESRP	Eastern Snake River Plain
21		
22	FBI	Federal Bureau of Investigation
23	FEMA	Federal Emergency Management Agency
24	FGR	Federal Guidance Report
25	FR	<i>Federal Register</i>
26	FTE	full-time equivalent
27	FWCA	<i>Fish and Wildlife Coordination Act</i>
28	FWS	U.S. Fish and Wildlife Service
29		
30	GAO	U.S. General Accounting Office
31	GCRP	U.S. Global Climate Change Research Program
32	GDP	Gaseous Diffusion Plant
33	GE	General Electric
34	GEVS	Gaseous Effluent Ventilation System
35	GHG	greenhouse gas
36	GLE	Global Laser Enrichment
37	GWP	Global Warming Potential
38		
39	HAP	hazardous air pollutant
40	HEPA	high-efficiency particulate air
41	HEU	high-enriched uranium
42	HF	hydrogen fluoride or hydrofluoric acid
43	HFC	hydrofluorocarbon
44	HPS	Health Physics Society
45	HRCQ	Highway Route Controlled Quantity
46	HVAC	heating, ventilating, and air conditioning
47	HUD	U.S. Department of Housing and Urban Development
48		
49		

1	I	Interstate
2	IAC	<i>Idaho Administrative Code</i>
3	ICRP	International Commission on Radiological Protection
4	IDAPA	<i>Idaho Administrative Procedures Act</i>
5	IDC	Idaho Department of Commerce
6	IDEQ	Idaho Department of Environmental Quality
7	IDFG	Idaho Department of Fish and Game
8	IDWR	Idaho Department of Water Resources
9	IGS	Idaho Geological Survey
10	INL	Idaho National Laboratory
11	IPCC	Intergovernmental Panel on Climate Change
12	IPCS	International Programme on Chemical Safety
13	IROFS	Items Relied on for Safety
14	IS	<i>Idaho Statutes</i>
15	ISA	Integrated Safety Analysis
16	ISAC	Idaho Sage-grouse Advisory Committee
17	ISACTAT	Idaho Sage-grouse Advisory Committee Technical Assistance Team
18	ISCORS	Interagency Steering Committee on Radiation Standards
19	ISTC	Idaho State Tax Commission
20	ITD	Idaho Transportation Department
21	IWRB	Idaho Water Resource Board
22		
23	LCF	latent cancer fatality
24	L _{dn}	day/night maximum average sound level
25	L _{eq}	equivalent sound level
26	LES	Louisiana Energy Services
27	LEU	low-enriched uranium
28	LLRW	low-level radioactive waste
29	LOS	level of service
30	LTTS	Low Temperature Take-off Stations
31	LWR	light water reactor
32		
33	MAPEP	Mixed Analyte Performance Evaluation Program
34	MCL	maximum contaminant level
35	MCNP	Monte Carlo N-Particle
36	MDC	minimum detectable concentration
37	MDEQ	Montana Department of Environmental Quality
38	MEI	maximally exposed individual
39	MFC	Materials and Fuels Complex
40	MLIS	molecular laser isotope separation
41	MOA	Memorandum of Agreement
42	MRI	Midwest Research Institute
43	MSL	mean sea level
44	MW(e)	Megawatt electric
45		
46	NAAQS	National Ambient Air Quality Standards
47	NCDC	National Climatic Data Center
48	NCES	National Center for Education Statistics

1	NCRP	National Council on Radiation Protection and Measurements
2	NEF	National Enrichment Facility
3	NELAC	National Environmental Laboratory Accreditation Conference
4	NELAP	National Environmental Laboratory Accreditation Program
5	NEPA	<i>National Environmental Policy Act of 1966</i>
6	NESHAP	National Emission Standards for Hazardous Air Pollutants
7	NHPA	<i>National Historic Preservation Act of 1966</i>
8	NIOSH	National Institute of Occupational Safety and Health
9	NIST	National Institute of Standards and Technology
10	NLCD 1992	National Land Cover Data 1992
11	NMFS	National Marine Fisheries Service
12	NMVOG	nonmethane volatile organic compound
13	NNL	National Natural Landmark
14	N ₂ O	nitrous oxide
15	NO ₂	nitrogen dioxide
16	NOAA	National Oceanic and Atmospheric Administration
17	NOI	Notice of Intent
18	NO _x	nitrogen oxides
19	NPCR	National Program of Cancer Registries
20	NPDES	National Pollutant Discharge Elimination System
21	NPS	National Park Service
22	NRC	U.S. Nuclear Regulatory Commission
23	NRCP	National Council on Radiation Protection
24	NRCS	U.S. Natural Resources Conservation Service
25	NRHP	<i>National Register of Historic Places</i>
26	NWS	National Weather Service
27		
28	O ₃	ozone
29	OECD	Organisation for Economic Co-operation and Development
30	OEL	occupational exposure levels
31	OSHA	Occupational Safety and Health Administration
32		
33	PAH	polycyclic aromatic hydrocarbon
34	Pb	lead
35	PCB	polychlorinated biphenyl
36	PFC	perfluorocarbon
37	PGA	peak ground acceleration
38	PM	particulate matter
39	PM _{2.5}	particulate matter equal to or smaller than 2.5 micrometers in diameter
40	PM ₁₀	particulate matter equal to or smaller than 10 micrometers in diameter
41	PNNL	Pacific Northwest National Laboratory
42	PSD	Prevention of Significant Deterioration
43	PTE	Potential to Emit
44	PWR	pressurized water reactor
45		
46	RAB	Restricted Area Boundary
47	RAI	Request for Additional Information
48	RCRA	<i>Resource Conservation and Recovery Act</i>
49		

1	REMP	Radiological Environmental Monitoring Program
2	RMP	Rocky Mountain Power or range management plan
3	ROI	region of influence
4	ROW	right-of-way
5		
6	SAAQS	State Ambient Air Quality Standards
7	SARA	<i>Superfund Amendments and Reauthorization Act</i>
8	SBM	Separations Building Module
9	SDWA	<i>Safe Drinking Water Act</i>
10	SER	Safety Evaluation Report
11	SF ₆	sulfur hexafluoride
12	SHPO	State Historic Preservation Office(r)
13	SILEX	separation of isotopes by laser excitation
14	SMCL	secondary maximum contaminant level
15	SO ₂	sulfur dioxide
16	SPCC	Spill Prevention Control and Countermeasures
17	SPL	sound pressure level
18	SUNSI	Sensitive Unclassified Non-Safeguards Information
19	SVOC	semivolatile organic compound
20	SWPPP	Stormwater Pollution Prevention Plan
21	SWU	separative work unit
22		
23	TEDE	Total Effective Dose Equivalent
24	TI	transportation index
25	TLD	thermoluminescent dosimeter
26	TRAGIS	Transportation Routing Analysis Geographic Information System
27	TSB	Technical Support Building
28	TSDF	treatment, storage, and disposal facility
29		
30	U ₃ O ₈	triuranium octaoxide
31	UO ₂ F ₂	uranyl fluoride
32	UBC	uranium byproduct cylinder
33	UF ₄	uranium tetrafluoride
34	UF ₆	uranium hexafluoride
35	UN	United Nations
36	UNFCCC	United Nations Framework Convention on Climate Change
37	URENCO	URENCO Group
38	USACE	U.S. Army Corps of Engineers
39	U.S.C.	<i>United States Code</i>
40	USCB	U.S. Census Bureau
41	USDA	U.S. Department of Agriculture
42	USEC	U.S. Enrichment Corporation
43	USGS	U.S. Geological Survey
44	USSLWG	Upper Snake Sage-grouse Local Working Group
45		
46	VOC	volatile organic compound
47	VRI	visual resource inventory
48		

1	VRM	visual resource management
2	VTM	vehicle miles traveled
3		
4	WSA	Wilderness Study Area

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APPENDIX A
ENVIRONMENTAL SCOPING SUMMARY REPORT

**ENVIRONMENTAL IMPACT STATEMENT SCOPING
PROCESS**

SCOPING SUMMARY REPORT

**Proposed AREVA Enrichment Services, LLC
Eagle Rock Enrichment Facility
Bonneville County, Idaho**

1. INTRODUCTION

On December 30, 2008, AREVA Enrichment Services LLC (AES) submitted its original application to the U.S. Nuclear Regulatory Commission (NRC) for a license to construct, operate, and decommission a gas centrifuge uranium enrichment facility to be located near Idaho Falls, Idaho. An Environmental Report was also submitted by AES at that time. On April 24, 2009, AES resubmitted its application to request an increase in enrichment capacity.

If licensed, the facility would enrich uranium for use in manufacturing commercial nuclear fuel for use in power reactors. Feed material would be natural (not enriched) uranium in the form of uranium hexafluoride (UF₆), which contains the uranium-235 isotope. AES proposes to use centrifuge technology to enrich this isotope in the UF₆ to up to 5 percent by weight. The centrifuge would operate at below atmospheric pressure and would have a capacity up to 6.6 million separative work units (SWU). The enriched UF₆ would be transported to a fuel fabrication facility, while the depleted UF₆ would be stored onsite until it is sold, disposed of commercially, or taken by the U.S. Department of Energy.

In accordance with NRC regulations in 10 CFR Part 51 and the National Environmental Policy Act (NEPA), the NRC is preparing an Environmental Impact Statement (EIS) on the proposed facility as part of its decision making process. The EIS will examine the potential environmental impacts associated with the proposed AES facility in parallel with the review of the license application. In addition to the EIS, the NRC staff will prepare a Safety Evaluation Report (SER) on health and safety issues raised by the proposed action. The SER will document the NRC staff evaluation of the safety of the activities proposed by AES in its license application and the compliance with applicable NRC regulations.

On May 4, 2009, NRC published a Notice of Intent in the *Federal Register* (74 *Federal Register* 20508-20509) to prepare an EIS and to conduct the public scoping process, in accordance with the NEPA process. The scoping process is designed to help determine the range of actions, alternatives, and potential impacts to be considered in the EIS, and to identify significant issues related to the proposed action. The NRC solicits input from the public and other agencies in order to focus on issues of genuine concern.

On June 4, 2009, the NRC staff held a public scoping meeting in Idaho Falls, Idaho, to receive both oral and written comments from interested parties. The meeting began with the staff providing a description of the NRC's role, responsibilities, and mission. This was followed by an overview of the licensing process, including information on the safety review and environmental review processes. Also, NRC staff provided information on the means for the public's participation. Most of the meeting time was spent taking comments from attendees regarding the scope of the environmental review.

After publishing the draft EIS, NRC will invite the public to comment on that document. NRC will announce the availability of the draft EIS, the dates of the public comment period, and information about the public meeting in the *Federal Register*, on NRC's AREVA Enrichment Services Gas Centrifuge Facility Web site (<http://www.nrc.gov/materials/fuel-cycle-fac/arevanc.html>), and in the local news media. After evaluating comments on the draft EIS, the NRC staff will issue a final EIS that will serve as the basis for the NRC's consideration of environmental impacts in its decision on the proposed enrichment facility.

This report summarizes the determinations and conclusions reached in the scoping process. It is organized into four main sections. Section 1 provides an introduction and background information on the environmental review process. Section 2 summarizes the comments and concerns expressed by government officials, agencies, organizations, and the public. Section 3 identifies the issues that the draft EIS will address, and Section 4 identifies issues that are not within the scope of the draft EIS. Where appropriate, Section 4 also identifies other occasions in the decision making process where issues that are outside the scope of the draft EIS may be considered.

2. ISSUES RAISED DURING THE SCOPING PROCESS

2.1 OVERVIEW

The public scoping process is an important component in determining the major issues that the NRC should address in the draft EIS. The comments provided by the public addressed several subject areas related to the proposed AES facility and the development of the draft EIS.

Members of the public were able to submit comments on the scope of the AES enrichment facility EIS by e-mail, postal mail, and by speaking and/or submitting written comments at the public scoping meeting held in Idaho Falls, Idaho, on June 4, 2009. The scoping period began on May 4, 2009 and ended June 19, 2009.

Comments were received from 131 individuals or organizations. Approximately 120 individuals not affiliated with the NRC attended the June 4, 2009, public scoping meeting.

Most of the scoping comments (89) were received by e-mail; 37 people provided oral comments at the scoping meeting (two of these had also sent e-mail comments); and 7 people sent their comments by postal mail. Some people used more than one submittal method; they were not counted twice. The scoping meeting transcript (ML 091980464) and the written comments are available on NRC's Electronic Reading Room Web site at <http://www.nrc.gov/reading-rm.html>.

In addition to private citizens, commenters included:

- Shoshone-Bannock Tribes
- A representative of the Governor of Idaho
- Representatives for Idaho's U.S. Senators
- A representative for the U.S. Congressman, 2nd District of Idaho
- Three members of the Idaho State House of Representatives
- A member of the Idaho State Senate
- The mayor of Idaho Falls
- U.S. Environmental Protection Agency, Region 10
- Greater Idaho Falls Chamber of Commerce
- Bonneville County Commissioners
- Representatives of other organizations and businesses, including:
 - A Partnership for Science and Technology
 - Auto Building Trade and Construction Council

- Carpenter and Millwright Local Union, No. 808
- Cooper, Roberts, Simonsen Associates
- Diversified Metal Products
- Eastern Idaho Regional Medical Center
- Forde Johnson Oil Company
- Friends of the Earth
- Grow Idaho Falls
- Healthy Environmental Alliance of Utah (HEAL Utah)
- Idaho Conservation League
- Idaho Falls Regional Development Alliance
- Idaho Families for the Safest Energy
- Idaho State University
- International Brotherhood of Electrical Workers, Local 449
- Mayor’s Youth Advisory Council (Idaho Falls)
- Snake River Alliance
- Tri-Valley Cares

The following general topics categorize the comments received during the public scoping period:

- NEPA and public participation
- Need for the proposed facility
- Alternatives
- Ecology
- Air quality and climate
- Geology and seismicity
- Water
- Land use and visual resources
- Human health
- Nuclear waste and hazardous materials
- Socioeconomics and cost
- Cultural resources and environmental justice
- Transportation
- Accidents
- Nonproliferation and security issues
- Cumulative impacts, and
- Miscellaneous topics

In addition to raising important issues about the potential environmental impacts of the proposed facility, some commenters offered opinions and concerns that typically would not be included in the subject matter of an EIS – these include general opinions about AES or issues that are more appropriately considered in the SER. Comments of this type are taken into consideration by the NRC staff, but they do not point to significant environmental issues to be analyzed. Other statements may be relevant to the proposed action, but they have no direct bearing on the evaluation of alternatives or on the decision making process involving the proposed action. For instance, general statements of support for or opposition to the proposed project fall into this category. Again, comments of this type have been noted but are not used in defining the scope and content of the EIS.

Section 2.2 summarizes the comments received during the public scoping period. Most of the issues raised have a direct bearing on the NRC's analysis of potential environmental impacts.

2.2 SUMMARY OF ISSUES RAISED

General comments supporting the facility: Nearly 50 percent of commenters expressed general support for the project. Many commenters provided specific reasons for their support, including: (1) the need for a domestic supply of enriched uranium to power the Nation's current and future nuclear reactors; (2) the need to produce more nuclear energy, which would reduce greenhouse gases and reduce the country's dependence on foreign oil; (3) the region's qualified workforce and long history in nuclear-related research and development; (4) the safety and efficiency of centrifuge technology; (5) the benefits to employment and other economic factors; and (6) AREVA's track record regarding safe operations, environmental stewardship, and community relations.

General comments opposing the facility: Approximately 30 percent of commenters stated their opposition to the project; in general, they stated that the increased risks to people and the environment outweighed the economic benefits. Many commenters mentioned that they thought AREVA had a poor track record in France, specifically they claimed that there had been routine dumping of radioactive liquids into the English Channel and a series of recent (2008) radioactive leaks and spills that were not reported to the public in a timely manner. Some commenters claimed that AREVA's mining activities in Niger over the past 40 years had depleted the local drinking water and radioactively contaminated the ground in the nearby town.

General concerns: Several commenters who were supportive of the proposed action noted that there were legitimate questions about potential environmental impacts that must be addressed in the draft EIS. Many commenters identified specific resource areas for which impacts should be addressed in the draft EIS. These included socioeconomic issues, water and air quality, waste management, noise, land use, geology and soils, cultural and environmental justice, ecology, public and occupational health, transportation, and security infrastructure impacts. More details on these issues can be found in the following sections of this scoping summary report.

The NRC staff will consider the comments provided during development of the EIS for the facility.

2.2.1 NEPA and Public Participation

Several commenters requested that public meetings be held in additional locations across the State to provide people throughout Idaho with the opportunity to comment on the proposal. Boise was mentioned most often, with commenters stating that it was the State capital and main population center. Other Idaho locations mentioned included Twin Falls, Coeur d'Alene, and the Wood River Valley. One commenter requested that meetings also be held in the Greater Yellowstone ecosystem area (specifically Wyoming), since that region's tourist industry could be adversely affected by having a nuclear facility in the vicinity.

Commenters pointed out that the impacts of the enrichment facility would not be limited to the Idaho Falls region. Most frequently mentioned were the tax incentives for the AREVA project that some thought were passed by the Idaho State Legislature and would affect Idahoans statewide. Other reasons given were that regions outside of Idaho Falls could be affected by accidents at the facility and by radioactive waste disposal.

Commenters mentioned the need to provide a forum in which the public could discuss and be informed about the radioactive wastes that the facility would generate, how the wastes would be handled, and the differences between the enriched uranium used to power reactors and the enriched uranium used for bombs.

2.2.2 Need for the Proposed Facility

Several made the general comment that uranium enrichment was needed for clean energy (nuclear power). On the other hand, a number of commenters wanted the EIS to include an in-depth analysis of the actual need for the proposed enrichment facility. They stated that the analysis should consider current and projected worldwide uranium enrichment capacity, the continuing downblending of surplus highly enriched uranium (HEU) in Russia and U.S. weapons stockpiles, and the current and projected number of nuclear power plants. In addition, mixed oxide fuel should be analyzed as another fuel supply. One commenter asked if plutonium, thorium, or other nuclear fuels could displace existing or potential demand for enriched uranium - will there be enough fuel capacity to serve the needs of future nuclear power plants without constructing the proposed facility.

Several commenters questioned the need for the proposed enrichment facility, given that there are renewable energy sources (solar, wind, biomass, geothermal, and hydropower) that are more environmentally friendly than nuclear power. One commenter stated that energy-need projections should take energy conservation and increased energy efficiencies into account.

2.2.3 Alternatives

One commenter stated that all reasonable alternatives should be evaluated, including ones that are outside the legal jurisdiction of the NRC, and that the EIS should discuss the reasons for eliminating alternatives that are not evaluated in detail. Reasonable alternatives should include, but are not limited to, alternative sites and different enrichment techniques. The commenter asked that the environmental impacts of the proposed action and no-action alternative be presented in comparative form and that the impacts of each alternative action be listed with corresponding mitigation measures.

Another commenter wanted the increased downblending of U.S and Russian HEU, as well as plutonium- and thorium-based fuels, to be analyzed as alternatives to the Eagle Rock Enrichment Facility (EREF). The analysis should include costs and environmental impacts.

2.2.4 Ecology

A few commenters raised concerns about endangered and sensitive species in the vicinity of the proposed facility. They stated that the NRC should try to site facilities and infrastructure to avoid areas of critical habitat for species of concern and that a mitigation plan should be prepared for impacts that could not be avoided.

Commenters were particularly concerned about increased habitat fragmentation, since the project area contains habitat that is crucial to sagebrush obligate species. One commenter noted that the sagebrush steppe habitat is considered by Federal agencies as "imperiled" and an area of primary concern. One commenter specifically mentioned sage grouse, pygmy rabbits, sage thrasher, sage sparrow, and birds of prey and recommended avoiding construction in any designated areas or lands for special management for these species. This commenter also suggested that the project minimize impacts to big game winter habitat. There were also concerns about impacts to nesting habitat for migratory birds.

One commenter wanted further analysis of the impacts associated with the construction of two access roads from U.S. Highway 20 to the project site, specifically the additional risk associated with fire and the spread of invasive weeds.

2.2.5 Air Quality and Climate

Air quality: A few commenters were concerned about the potential release of radioactive, hazardous, and toxic materials into the air. Commenters asked that the EIS include the following: (1) detailed information about ambient air conditions, (2) data on emissions of criteria pollutants, (3) information about mitigation measures, (4) an equipment emissions mitigation plan to reduce particulates and emissions associated with construction activities, (5) an evaluation of radioactive and nonradioactive emissions, (6) details on the use and disposal of filters, and (7) information on air impacts associated with accidents. One commenter requested that the applicant include air monitoring and reporting plans, including guidance for public alerts and containment.

Climate change: One commenter stated that the EIS should discuss how climate change could potentially influence the proposed project area resources and vice versa, especially within sensitive areas. He mentioned, as examples, changes in hydrology, sea level, weather patterns, precipitation rates, and chemical reaction rates.

2.2.6 Geology and Seismicity

Geology and soil: One commenter noted that construction of facilities and access roads may also inadvertently compact the soil or disturb it, thus compromising the ability of a site to handle the normal flow of organisms, nutrients, and toxic wastes. The commenter stated that the EIS analysis should include a detailed discussion of the "cumulative effects from this and other

projects on the hydrologic conditions of the project area.” Another commenter suggested establishing citing criteria to minimize soil disturbances and erosion on steep slopes.

Seismicity: A commenter recommended that the EIS discuss the potential for seismic risk associated with uranium enrichment activities and how this risk would be evaluated, monitored, and managed. They suggested that a seismic map be referenced or included in the EIS. The commenter stated that uranium enrichment activities could cause increased earthquake activity in tectonically active zone. Another commenter noted that eastern Idaho sits on a geologically unstable fault zone extending across southern Idaho to Yellowstone.

2.2.7 Water

Several commenters expressed concerns about adverse impacts the proposed facility would have on both surface water and groundwater. Of particular concern was the Snake River aquifer, which is located below the proposed site. The fear was that nuclear waste stored at the facility would seep into the aquifer and contaminate the groundwater.

Some commenters were concerned that water used by the facility would deplete the groundwater supply. In addition to depleting the supply, a commenter noted that the pumping action could increase existing groundwater contamination caused by seepage of toxic and radioactive contaminants into the groundwater. On the other hand, a few commenters stated that the facility would use less water than current agricultural activities.

A commenter recommended that the potential impacts to groundwater and other drinking water sources be fully analyzed and that mitigation measures be identified for significant impacts. They also stated that the EIS should document the project’s “consistency with applicable stormwater permitting requirements” and include a discussion of specific mitigation measures that may be needed to reduce “adverse impacts to water quality and aquatic resources.”

2.2.8 Land Use and Visual Resources

One commenter noted that the proposed AREVA facility would be located within an area of ranching and farming. There were local concerns about trespass, dust, impacts on livestock, impacts to local wells and groundwater, and traffic. Another commenter mentioned using visual resource management guidelines as an example of ways to minimize negative impacts.

2.2.9 Human Health

There were some comments related to the human health risks associated with long-term exposure to small amounts of uranium; increased risk for childhood leukemia and general concerns about cancer rates were mentioned.

One commenter questioned whether the NRC and AREVA could “scientifically demonstrate the legal requirement that this plant will not expose any member of the public to more than 10 mrem in any given year.” Exposure from waste disposal was specifically mentioned. This commenter wanted the EIS to include the following: (1) an explanation as to why uranium exposure has greater health effects than are presently calculated by NRC safety standards; (2) how the alpha recoil problem is addressed by the NRC, since “alpha emitters can leak through four HEPA filters in a

row, in excess of the 99.97 percent filtering rate used presently"; and (3) a response to the complaints in the report from Centers' for Disease Control and Prevention (CDC's) SENES group on the understatement of fluoride toxicity at Oak Ridge.

Another commenter wanted the EIS to describe the measures that would be taken to ensure that workers involved in the transport of radioactive materials would be protected, including those loading and unloading shipments.

2.2.10 Nuclear Waste and Hazardous Materials

Radioactive waste: Nearly 40 percent of the commenters mentioned the need to address the impacts (environmental and economic) associated with long-term storage of the nuclear waste that would be produced by the enrichment process. There were concerns that the proposed facility would be adding to the nuclear waste that is already being stored at Idaho National Laboratory, particularly since no permanent nuclear waste depository has been designated. Many commenters noted that depleted uranium is hard to store safely and becomes "more radioactive over time." Another commenter pointed out that, although the depleted uranium becomes more radioactive over time due to radioactive ingrowth, the level of radioactivity never exceeds that found in natural uranium ore deposits.

Commenters noted that the NRC is still in the process of preparing specific rules for the depleted uranium waste stream. One commenter stated that the draft EIS should include a discussion of the rulemaking process and how (or whether) the rulemaking and current licensing processes can proceed simultaneously.

Commenters wanted the draft EIS to consider the environmental impacts of a full range of disposition pathways for the depleted uranium tails, including currently available disposal sites and those that are proposed. The analyses should include indefinite storage of uranium hexafluoride, indefinite storage of some other conversion product, disposal at new-surface nuclear waste disposal sites, and disposal at deep geologic sites. Commenters wanted NRC to assess the costs of each alternative.

Some commenters asked that the draft EIS discuss the environmental impacts associated with recycle/reuse disposition pathways or deconversion of the waste to a safer form (to an oxide). They noted that the United States lacks an operational deconversion facility and that the two deconversion plants currently under construction may not be able to handle the added inventory from the Louisiana Energy Services plant in New Mexico and the proposed Eagle Rock facility.

One commenter stated that the draft EIS must provide a description of the financial assurance for the indefinite storage of the depleted uranium at the AREVA site.

Hazardous materials: A few commenters were concerned that hazardous materials from the facility would contaminate the air and water. One commenter stated that hazardous materials in retention basins have the potential to settle in sediments and be released into the air.

Commenters wanted the draft EIS to discuss the potential direct, indirect, and cumulative impacts of hazardous waste from construction and operation of the project, including waste types and volumes and transport, storage, disposal, and mitigation measures. There were also concerns about pollutants that could be associated with the ventilation system. One commenter

asked that subsequent environmental documentation include a management plan for toxic and hazardous materials.

2.2.11 Socioeconomics and Costs

Several commenters mentioned positive socioeconomic impacts that the facility would bring to the community, particularly jobs. One commenter stated that he had looked into the increased housing, schooling, and transportation needs that would be expected during construction and operations phases and determined that the region would be able to accommodate them.

Many people commented on the costs of building and operating the facility, which would be partly covered by tax subsidies and increased electricity rates; cost overruns and delays in France, Poland, and Finland were cited as examples.

One commenter wanted the draft EIS to provide an analysis of the global market for uranium, including a scenario in which nuclear plants do not expand beyond current numbers or even decline. Another commenter noted that the economies of the Teton Valley, Jackson, WY, and West Yellowstone into Cody, WY, are fairly dependent on tourism. He asked that the EIS look at how many new jobs and how much new money would be brought into the region if the same amount of money were used to create and support small businesses.

Other commenters asked about the ramifications of foreign ownership (see Section 2.2.17, miscellaneous topics).

2.2.12 Cultural Resource and Environmental Justice

Cultural resources: One commenter stated that the EIS should describe the process and outcome of government-to-government consultation between the NRC and each of the Tribal governments in the vicinity of the project, any issues raised, and how those issues were addressed.

Another commenter noted that the proposed facility would be in close proximity to the Fort Hall Indian Reservation and within the aboriginal territories of the Shoshone-Bannock Tribes. This commenter stated that they would like the Heritage Tribal Office (HeTO) to be part of the cultural surveys of the proposed site and to be notified of any inadvertent cultural or archaeological discoveries.

A third commenter pointed out that the proposed site is in an area of rich and relatively well-preserved prehistoric and historic resources, noting the Wasden site, which is within one mile of the project area, and the relatively undisturbed and abundant archaeological sites within Idaho National Laboratory and on public and private lands in the vicinity.

Commenters pointed out that mitigation for all culturally sensitive items needed to be done and asked that contractors and permanent employees be informed about cultural regulations and Federal laws concerning artifacts and retrieving and removing historic items.

One commenter wanted to know if AREVA will share information about transportation routes, hazards associated with shipment, and the number of shipments. He also wanted to know if AREVA would provide training to the Tribes Emergency Management and Response staff on identifying and responding to a transportation accident on the reservation.

Another commenter questioned the transportation route of product to and from the EREF and whether AREVA will share information regarding the number of shipments and hazards of the shipments, and whether the facility will provide training to the Tribes Emergency Management and Response staff to identify and respond to a transportation accident on the reservation.

Environmental justice: One commenter stated that the EIS should include an evaluation of environmental justice populations within the project area and should address the potential for disproportionate adverse impacts to minority and low-income populations. The commenter stated that the EIS should include: information describing the process used to inform communities about the project and the potential impacts on the communities; input received from the communities; and a description on how that input was used in project-related decisions. Another commenter stated that sensitive population exposure scenarios needed to be developed from the standpoint of both workers and members of the public.

2.2.13 Transportation

Some commenters asked that the EIS include an assessment of the impacts of the transportation of the facility's feedstock, product, and waste, and of transportation-related accidents, including transportation-related emissions and possible exposures. The EIS should also describe measures that will be taken to decrease the chances of a transportation accident involving radioactive material and to ensure that workers involved in the transport of radioactive materials will be protected, including those loading and unloading shipments. One commenter want the draft EIS to include information about what form the uranium will be in when it is transported to Idaho—yellowcake, gaseous uranium tetrafluoride, or uranium hexafluoride. Alternative transportation routes and modes should be analyzed; routes and modes that present a significant risk to the public and natural resources should be avoided.

One commenter stated that the EIS should provide information about the transportation of hazardous and toxic materials to and from the project site, including amounts, methods of transport, and the types of containment vessels.

Some commenters were concerned about traffic safety on portions of U.S. Highway 20 running from Idaho Falls to the proposed EREF. They pointed out that the highway already has safety issues, since it is used by large, slow-moving agricultural machinery with many access roads on both sides. The addition of construction workers and construction traffic would add to the already congested conditions and create an increased safety risk. Commenters asked that the EIS describe local transportation safety issues and suggest solutions. One commenter wanted further analysis of the impacts associated with the construction of two access roads from U.S. Highway 20 to the project site.

One commenter noted that AREVA workers would find themselves in competition for seating on airline flights that are already filled to capacity and suggested that the region pursue a carrier to establish a new service to Las Vegas.

2.2.14 Accidents

There were a few comments concerning accidents. One commenter wanted to know how AREVA would respond to accident scenarios on the proposed site and how the public would be informed. Another was concerned about transportation accidents resulting in the release of radioactive materials to the environment and asked that the EIS describe measures that will be taken to minimize the chances of this type of accident. A third commenter stated that the draft EIS must analyze the air impacts of all potential accidents. Note: Section 2.2.13 of this summary also discusses accidents.

2.2.15 Nonproliferation and Security Issues

Nonproliferation: Several commenters were concerned that uranium enrichment could lead to the production of nuclear bombs and wondered if the use of enrichment technology could undermine U.S. efforts involving international nonproliferation.

One commenter stated that since there is a potential connection between a facility's ability to enrich uranium to fuel grade and the ability to continue enrichment to weapons grade, a proliferation analysis must be included in the draft EIS. Another commenter asked for a nonproliferation impact assessment.

A commenter stated that the analysis must include "both a technical discussion and a discussion by the U.S. Departments of State and Energy and the White House of their efforts to curtail uranium enrichment elsewhere and whether or not those efforts are affected by commercial enrichment in this country." Another commenter wanted the EIS to explain why the International Atomic Energy Agency had not been involved in the project.

Security issues: Some commenters raised concerns about fissile material (which has the potential for nuclear bomb-making) getting into the hands of terrorists and hostile countries like Iran and North Korea. They pointed out that the AREVA facility as well as the nuclear materials shipments going to and from the facility were subject to attack. One commenter asked for a detailed accounting of AREVA's plans to secure its nuclear materials at the facility and during transport. Another commenter wanted an account of the environmental impact of sabotage to the fluoride gas supply. One commenter wanted AREVA to commit to donating money to increase the local police and fire departments.

2.2.16 Cumulative Impacts

One commenter stated that the draft EIS should include a detailed discussion of the cumulative effects from this and other projects on the hydrologic conditions of the project area. On a more general level, commenters wanted the EIS to identify the current condition, describe the trend in the condition, and predict the future condition for each resource that is at risk and/or significantly impacted by the proposed project before mitigation. The EIS should identify the resources that could experience cumulative impacts, the time period over which impacts could occur, and the geographic area impacted. Parties that would be responsible for avoiding, minimizing, and mitigating adverse impacts should be identified. Another commenter wanted the draft EIS to discuss the potential direct, indirect, and cumulative impacts of hazardous waste.

2.2.17 Miscellaneous Topics

Other potential facility operations: One commenter was concerned that AREVA would become involved in the re-enrichment of reprocessed uranium. The commenter wanted a clear statement in the draft EIS by AREVA that it would not engage in re-enrichment. If this statement could not be made, the commenter wanted the draft EIS to discuss the capacity of the plant to process contaminated reprocessed uranium, the measures to protect workers from additional radiation exposures, an analysis of unique waste streams, and the transportation risks associated with shipping the reprocessed uranium by land and sea.

Another commenter wanted the draft EIS to assess the use of the plant to separate other isotopes of uranium, such as U-233, or to purify uranium-contaminated materials.

Mining and milling operations: A few commenters wanted the EIS to fully analyze the “front end” impacts associated with the operation of the proposed enrichment facility. They wanted the draft EIS to look at the environmental and human health impacts in the communities where uranium mining and milling activities were occurring. It was noted that these activities would not likely be occurring in the United States.

Foreign ownership: A few commenters raised issues about the foreign ownership of AREVA. One commenter wondered who would pay in the event of an accident and if the United States Government would argue with France over damages. Another commenter wondered what would happen if AREVA went out of business and stated that AREVA could only survive financially if it was supported by the French government. The commenter stated that U.S. taxpayers would ultimately have to cover any damages resulting from accidents, nuclear waste, and other issues associated the facility. Another commenter was concerned that profits would go to France and not to the United States.

Facility design: One commenter advocated integrating International Atomic Energy Agency safeguards for the proposed facility at the design phase. Another commenter asked if the facility design had been approved by the NRC for use in the United States.

Comments on the Environmental Report and Safety Analysis Report: One commenter stated that AREVA had adequately addressed the safety and environmental issues in the Environmental Report submitted with the NRC application. Other commenters had areas of concern including: (1) the ability of the Idaho Falls fire department to provide timely support, given its distance from the proposed facility; (2) the adequacy of the emergency backup systems; (3) the transportation analysis; and (4) the impact analysis of ecological resources, particularly the pending Endangered Species Act listings of sage grouse and the pygmy rabbit. There was also a concern that the Environmental Report was not detailed enough to ensure the reduction of impacts or appropriate mitigation plans. Commenters asked that subsequent documents provide a more detailed analysis, particularly in the areas involving water, air, and public health.

One commenter stated that AREVA was pushing the NRC to exempt it from the requirement to provide decommissioning funding assurance for the licensed operating period of the facility. The commenter noted that the EREF Safety Analysis Report (SAR) excluded “escalation, contingency, interest, tails disposition, decommissioning, and any replacement equipment” in its cost estimates. The commenter wanted the draft EIS to discuss in detail the exemptions that were being considered, particularly those listed in the SAR.

Power usage: One commenter wanted the draft EIS to analyze an additional load that the AREVA facility would add to the power grid. Another commenter wanted a commitment to use renewable energy sources (including nuclear power) to run the facility.

Out of scope issues: A few commenters specifically asked that issues raised that were not directly related to the assessment of potential impacts of the project, or the decision making process, be dismissed from the draft EIS and discussed elsewhere.

3. SUMMARY AND CONCLUSIONS

3.1 SCOPE OF THE EIS AND SUMMARY OF ISSUES TO BE ADDRESSED

NEPA (Public Law 91-90, as amended), and the NRC's implementing regulations for NEPA (10 CFR Part 51), specify in general terms what should be included in an EIS prepared by the NRC staff. Regulations established by the Council on Environmental Quality (40 CFR Parts 1500-1508), while not binding on the NRC staff, provide useful guidance. The NRC staff has also prepared environmental review guidance to its staff for meeting NEPA requirements associated with licensing actions ("Environmental Review Guidance for Licensing Actions Associated with Office of Nuclear Material Safety and Safeguards (NMSS) Programs", NUREG -1748).

Pursuant to 10 CFR 51.71(a), in addition to public comments received during the scoping process, the contents of the draft EIS will depend in part on the environmental report. In accordance with 10 CFR 51.71(b), the draft EIS will consider major points of view and objections concerning the environmental impacts of the proposed action raised by other Federal, State, and local agencies, by any affected Indian tribes, and by other interested persons. Pursuant to 10 CFR 51.71(c), the draft EIS will list all Federal permits, licenses, approvals, and other entitlements which must be obtained in implementing the proposed action, and will describe the status of compliance with these requirements. Any uncertainty as to the applicability of these requirements will be addressed in the draft EIS.

Pursuant to 10 CFR 51.71(d), the draft EIS will include a consideration of the economic, technical, and other benefits and costs of the proposed action and alternatives to the proposed action. In the draft analysis, due consideration will be given to compliance with environmental quality standards and regulations that have been imposed by Federal, State, regional, and local agencies having responsibilities for environmental protection. The environmental impact of the proposed action will be evaluated in the draft EIS with respect to matters covered by such standards and requirements, regardless of whether a certification or license from the appropriate authority has been obtained. Compliance with applicable environmental quality standards and requirements does not negate the requirement for NRC to weigh all environmental effects of the proposed action, including the degradation, if any, of water quality, and to consider alternatives to the proposed action that are available for reducing adverse effects. While satisfaction of NRC standards and criteria pertaining to radiological effects will be necessary to meet the licensing requirements of the Atomic Energy Act, the draft EIS will also, for the purposes of NEPA, consider the radiological and non-radiological effects of the proposed action and alternatives.

Pursuant to 10 CFR 51.71(e), the draft EIS will normally include a preliminary recommendation by the NRC staff with respect to the proposed action. Any such recommendation would be

reached after considering the environmental effects of the proposed action and reasonable alternatives, and after weighing the costs and benefits of the proposed action.

The scoping process summarized in this report will help determine the scope of the draft EIS for the proposed facility. The draft EIS will contain a discussion of the cumulative impacts of the proposed action. The development of the draft EIS will be closely coordinated with the SER prepared by the NRC staff to evaluate the health and safety impacts of the proposed action.

The goal in writing the EIS is to present the impact analyses in a manner that makes it easy for the public to understand. This EIS will provide the basis for the NRC decision with regard to potential environmental impacts. Significant impacts will be discussed in greater detail in the EIS, and explanations will be provided for determining the level of detail for different impacts. This should allow readers of the EIS to focus on issues that were determined to be important in reaching the conclusions supported by the EIS. The following topical areas and issues will be analyzed in the EIS.

- *Public and worker safety and health.* The draft EIS will include a determination of potentially adverse effects on human health that result from chronic and acute exposures to ionizing radiation and hazardous chemicals as well as from physical safety hazards. These potentially adverse effects on human health might occur during facility construction and operation. Impacts associated with the implementation of the proposed action will be assessed under normal operation and credible accident scenarios.
- *Alternatives.* The draft EIS will describe and assess the no-action alternative and other reasonable alternatives to the proposed action. Other reasonable alternatives to the proposed action will be considered such as alternative sites, enrichment sources, or technological alternatives to the proposed centrifuge technology.
- *Waste management.* The draft EIS will discuss the management of wastes, including byproduct materials, generated from the construction and operation of the EREF to assess the impacts of generation, storage, and disposition. Onsite storage of wastes will also be included in this assessment.
- *Depleted uranium disposition.* The draft EIS will address concerns about the depleted uranium hexafluoride material, or tails, resulting from the enrichment operation over the lifetime of the proposed plant's operation. These concerns include the safe and secure storage and ultimate removal of this material from Idaho, and potential conversion of UF₆ to U₃O₈ and ultimate disposition.
- *Water resources.* The draft EIS will assess the potential impacts on groundwater quality and water use due to the implementation of the proposed action.
- *Geology and seismicity.* The draft EIS will describe the geologic and seismic characteristics of the proposed EREF site. Evaluation of the potential for earthquakes, ground motion, soil stability concerns, surface rupturing, and any other major geologic or seismic considerations that would affect the suitability of the proposed site will be addressed in the SER rather than in the draft EIS.
- *Compliance with applicable regulations.* The draft EIS will present a listing of the relevant permits and regulations that are believed to apply to the proposed EREF. These would include air, water, and solid waste regulations and disposal permits.

- *Air quality.* The draft EIS will make determinations concerning the meteorological conditions of the site location, the ambient air quality, and the contribution of other sources. In addition, the draft EIS will assess the impacts of the EREF's construction and operation on the local air quality.
- *Transportation.* The draft EIS will discuss impacts associated with the transportation of construction material, centrifuges, and feed and tails during both normal transportation and transportation under credible accident scenarios. The impacts on local transportation routes due to workers, large vehicles delivering needed equipment and materials, and vehicles removing waste from the proposed facility will be evaluated in the draft EIS.
- *Accidents.* The draft EIS will analyze the potential environmental impacts resulting from credible accidents at the EREF. The SER will assess the impacts associated with credible accidents at the proposed EREF, both from natural events and human activities. Based on the analyses, the EIS will summarize the potential environmental impacts resulting from credible bounding accidents at the proposed facility.
- *Land use.* The draft EIS will discuss the potential impacts associated with the changes in land use from predominately rangeland to industrial.
- *Socioeconomic impacts.* The draft EIS will address the demography, the economic base, labor pool, housing, utilities, public services, education, recreation, and cultural resources as impacted by EREF. The hiring of new workers from outside the area could lead to impacts on regional housing, public infrastructure, and economic resources. Population changes leading to changes to the housing market and demands on the public infrastructure will be assessed in the draft EIS.
- *Cost/benefits.* The draft EIS will address the potential cost/benefits of constructing and operating the EREF, and will discuss the cost/benefits of tails disposition options.
- *Cultural resources.* The draft EIS will assess the potential impacts of the proposed EREF on the historic and archaeological resources of the area and on the cultural traditions and lifestyle of Indian tribes.
- *Resource commitments.* The draft EIS will address the unavoidable adverse impacts, irreversible and irretrievable commitments of resources, and the relationship between local, short-term uses of the environment and the maintenance and enhancement of long-term productivity. In addition, associated mitigative measures and environmental monitoring will be presented.
- *Ecological resources.* The draft EIS will assess the potential environmental impacts of the proposed EREF on ecological resources including plant and animal species and threatened or endangered species or critical habitat that may occur in the area. As appropriate, the assessment will include an analysis of mitigation measures to address adverse impacts.
- *Need for the facility.* The draft EIS will provide a discussion of the need for the proposed EREF and the expected benefits.

- *Decommissioning.* The draft EIS will include a discussion of facility decommissioning and associated impacts.
- *Cumulative impacts.* The draft EIS will address the potential cumulative impacts from past, present, and reasonably foreseeable activities at and near the site.

4. ISSUES CONSIDERED OUTSIDE THE SCOPE OF THE ENVIRONMENTAL IMPACT STATEMENT

The purpose of an EIS is to assess the potential environmental impacts of a proposed action as part of the decision-making process of an agency-in this case, a licensing decision. As noted in Section 2.2, some issues and concerns raised during the scoping process are not relevant to the EIS because they are not directly related to the assessment of potential impacts or to the decision making process. The lack of in depth discussion in the EIS, however, does not mean that an issue or concern lacks value. Issues beyond the scope of the EIS either may not yet be ripe for resolution or are more appropriately discussed and decided in other venues.

Some of these issues raised during the public scoping will not be addressed in the EIS. Major categories of these issues not analyzed in detail in the EIS include nonproliferation concerns, security and safety issues, and credibility.

Some of these issues raised during the public scoping process for the proposed facility are outside the scope of the draft EIS, but they will be analyzed in the SER. For example, health and safety issues will be considered in detail in the SER prepared by NRC staff for the proposed action and will be summarized in the EIS. The draft EIS and the SER are related in that they may cover the same topics and may contain similar information, but the analysis in the draft EIS is limited to an assessment of potential environmental impacts. In contrast, the SER primarily deals with safety evaluations and procedural requirements or license conditions to ensure the health and safety of workers and the general public. The SER also covers other aspects of the proposed action such as demonstrating that the applicant will provide adequate funding for the proposed facility in compliance with NRC's financial assurance regulations.

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**APPENDIX B
CONSULTATION CORRESPONDENCE**

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**APPENDIX B
CONSULTATION CORRESPONDENCE**

B.1 Threatened and Endangered Species Consultation

June 17, 2009

Mr. Damien Miller
U.S. Fish and Wildlife Service
Eastern Idaho Field Office
4425 Burley Dr., Suite A
Chubbuck, ID 83202

Dear Mr. Miller:

SUBJECT: REQUEST FOR INFORMATION REGARDING ENDANGERED SPECIES AND
CRITICAL HABITATS FOR THE PROPOSED AREVA EAGLE ROCK
ENRICHMENT FACILITY LOCATED IN BONNEVILLE COUNTY, IDAHO

Dear Mr. Miller:

On December 30, 2008, AREVA Enrichment Services (AES) submitted an environmental report (ER) to the U.S. Nuclear Regulatory Commission (NRC). The ER is one part of an application for a license to authorize construction, operation, and decommissioning of a proposed uranium enrichment facility. The NRC staff is in the initial stages of developing an Environmental Impact Statement (EIS) for the proposed facility to be located near Idaho Falls, Idaho in Bonneville County. The facility, if licensed, would use a gas centrifuge based technology to enrich the isotope uranium-235 in uranium hexafluoride up to 5 percent by weight. The EIS will document the impacts associated with the construction, operation, and decommissioning of the proposed facility.

NRC requests a list of threatened or endangered species or critical habitats within the action area for the proposed facility. The proposed AES parcel is approximately 1,700 hectares (4,200 acres). AES states that the facility footprint encompasses 381 hectares (941 acres) of the site for which construction, operation, and decommissioning activities will occur. The proposed site is situated within Bonneville County, Idaho, on the north side of U.S. Highway 20, about 113 km (70 miles) west of the Idaho/Wyoming State line. The coordinates for the center of the action area are 43 degrees, 35 minutes, 7.37 seconds North and longitude 112 degrees, 25 minutes, 28.71 seconds West.

We have enclosed additional background information relating to ecological resources on the site, including a map showing the action area, as it appears in the AES ER.

D. Miller

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We intend to use the EIS process to comply with Section 7 of the Endangered Species Act of 1973, as amended. After assessing information you provide, we will determine what additional actions are necessary to comply with the Section 7 consultation process. If you have any questions or comments, or need any additional information, please contact Gloria Kulesa of my staff at 301-415-5308.

Sincerely,

/RA/

Andrea Kock, Chief
Environmental Review Branch
Environmental Protection
and Performance Assessment Directorate
Division of Waste Management
and Environmental Protection
Office of Federal and State Materials
and Environmental Management Programs

Docket No.: 70-7015

- Enclosures: .1. Ecology Field Study Report Proposed Site for the Eagle Rock Enrichment Facility
2. Ecology Field Study Report Proposed Site for the Eagle Rock Enrichment Facility – Fall 2008 Survey
3. Sage Grouse Survey Report Proposed for the Eagle Rock Enrichment Facility



United States Department of the Interior
FISH AND WILDLIFE SERVICE

Eastern Idaho Field Office
4425 Burley Dr., Suite A
Chubbuck, Idaho 83202
Telephone (208) 237-6975
<http://IdahoES.fws.gov>



JUL 15 2009

USNRC
Attn: Gloria Kulesa
MS T8 F5
11545 Rockville Pike
Rockville, MD 20854

Subject: Proposed Areva Eagle Rock Enrichment Facility in Bonneville County,
Idaho. SL #09-0471

Dear Ms. Kulesa:

The U.S. Fish and Wildlife Service (Service) is writing in response to your request for information about the potential impacts to endangered, threatened, proposed, and/or candidate species from the proposed Areva Eagle Rock Enrichment Facility in Bonneville County, Idaho. The Service has not identified any issues that indicate that consultation under section 7 of the Endangered Species Act of 1973, as amended, is needed for this project. This finding is based on our understanding of the nature of the project, local conditions, and/or current information indicating that no listed species are present. If you determine otherwise or require further assistance, please contact Sandi Arena of this office at (208)237-6975 ext 102.

Thank you for your interest in endangered species conservation.

Sincerely,

fe Damien Miller
Supervisor, Eastern Idaho Field Office

February 18, 2010

Damien Miller
U.S. Fish and Wildlife Service
Eastern Idaho Field Office
4425 Burley Dr., Suite A
Chubbuck, Idaho 83202

SUBJECT: REQUEST FOR INFORMATION REGARDING THREATENED OR
ENDANGERED SPECIES AND CRITICAL HABITATS FOR PROPOSED
TRANSMISSION LINE LOCATED IN BONNEVILLE COUNTY, IDAHO, TO
POWER THE PROPOSED AREVA EAGLE ROCK ENRICHMENT FACILITY

Dear Mr. Miller:

As discussed in our earlier letter to you dated June 17, 2008, AREVA Enrichment Services LLC (AES) has submitted an application to the U.S. Nuclear Regulatory Commission (NRC) for a license to construct, operate, and decommission a gas centrifuge uranium enrichment facility; and NRC is preparing an Environmental Impact Statement (EIS) in support of our licensing action for this facility. The proposed facility, the Eagle Rock Enrichment Facility (EREF), would be located in Bonneville County, Idaho, near Idaho Falls. Thank you for your July 15, 2009, response to our letter. The purpose of the present letter is to report an addition to the scope of the EREF project, a 161-kilovolt (KV) transmission line to power the facility, and request additional information for the vicinity of the proposed transmission line project.

On January 29, 2010, AES submitted supplemental information to NRC for the construction and operation of a proposed transmission line, an electrical substation, and substation upgrades. The locations of the transmission line and substations are shown in the January 29, 2010 submittal, a copy of which is enclosed. NRC's EIS for the proposed EREF will include a discussion of the impacts associated with the construction and operation of the transmission line project. NRC requests a list of threatened or endangered species and critical habitats within the action area for the proposed transmission lines and associated facilities. The action area is described below and in greater detail in the enclosure.

The new transmission line and associated structures would be located entirely on private land within Bonneville County. Rocky Mountain Power (RMP), a division of PacifiCorp, will be the builder, owner, and operator. The transmission line would originate from the existing RMP Bonneville Substation and extend in a general westward direction to the new point of service, the Twin Buttes Substation on the proposed EREF site. Beginning at the Bonneville Substation, the proposed transmission line route is west along the county road (West 65 North Street) to the existing RMP Kettle Substation, a distance of approximately 14.5 kilometers (9 miles), continuing west to the eastern portion of the EREF site, a distance of approximately 1.2 kilometer (0.75 mile), then north within the EREF site to its northern end, then west and south to the new RMP Twin Buttes Substation, for a distance of approximately 6.4 kilometers (4 miles). The area being affected by the transmission line is approximately 84 hectares (208 acres).

D. Miller

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NRC intends to use the EIS process to comply with Section 7 of the Endangered Species Act of 1973, as amended. After assessing the information you provide, we will determine what additional actions are necessary to comply with the Section 7 consultation process.

If you have any questions regarding this request, or need additional information, please contact Stephen Lemont of my staff at 301-415-5163 or Stephen.Lemont@nrc.gov.

Sincerely,

/RA/

Andrea Kock, Chief
Environmental Review Branch
Environmental Protection
and Performance Assessment Directorate
Division of Waste Management
and Environmental Protection
Office of Federal and State Materials
and Environmental Management Programs

Enclosure:
January 29, 2010 Ltr.

Docket No: 70-7015



United States Department of the Interior
FISH AND WILDLIFE SERVICE

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MAR 09 2010

Andrea Kock
US Nuclear Regulatory Commission
Washington, DC 20555-0001

Subject: Proposed Areva Eagle Rock Transmission Line Project Species List Request,
Bonneville County, Idaho
SL # 10-0242

Dear Ms. Kock:

The Fish and Wildlife Service (Service) is providing you with a list of endangered, threatened, proposed, and/or candidate species, and designated critical habitat which may occur in the area of the proposed Areva Eagle Rock transmission line project located in Bonneville, County. You requested this list by letter on February 18, 2010. This list fulfills the requirements for a species list under section 7(c) of the Endangered Species Act of 1973 (Act), as amended. If the project decision has not been made within 180 days of this letter, regulations require that you request an updated list. Please refer to the species list (SL) number shown above in all correspondence and reports.

Section 7 of the Act requires Federal agencies to assure that their actions are not likely to jeopardize the continued existence of endangered or threatened species. Federal funding, permitting, or land use management decisions are considered to be Federal actions subject to section 7. If the proposed action may affect a listed species, consultation with the Service is required. Formal consultation must be initiated for any project that is likely to adversely affect a threatened or endangered species. If a project involves a major construction activity and may affect listed species, Federal agencies are required to prepare a Biological Assessment. If a proposed species is likely to be jeopardized or if proposed critical habitat will be adversely modified by a Federal action, regulations require a conference between the Federal agency and the Service. A Federal agency may designate, in writing, you or another non-Federal entity to represent them in an informal consultation.

In a decision published in the July 9, 2007 Federal Register, the Service concluded that protections for the bald eagle (*Haliaeetus leucocephalus*) under the Act were no longer warranted. Effective August 8, 2007, the bald eagle is no longer included on the list of threatened and endangered species in the lower 48 states pursuant to the Act, and has been removed from all Idaho species lists. However, the protections provided to the bald eagle under the Bald and Golden Eagle Protection Act (BGEPA, 16 U.S.C. 668) and the Migratory Bird Treaty Act (MBTA, 16 U.S.C. 703) will remain in place. To assist with the delisting transition, the Service has developed National Bald Eagle Management Guidelines to advise land managers

and project proponents when, and under what circumstances, the protective provisions of the BGEPA and MBTA may apply to their activities. These guidelines, as well as additional information on the protection of bald eagles, are available on the Service's web site at: <http://www.fws.gov/migratorybirds/baldeagle.htm>. The Service also is available to provide technical assistance regarding bald eagle conservation.

In addition to listed species, transmission lines have the potential to affect migratory birds, which are afforded protection under the MBTA (40 Stat. 755; 16 U.S.C. 703-7 12). In addition to considering the potential impacts of the proposed project to listed species we recommend that you identify and implement measures to assure the project complies with the MBTA. The Service suggests your Agency review the Avian Power Line Interaction Committee's "Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006" for more information on migratory birds and transmission lines (www.aplic.org). Additionally, more information on impacts to migratory birds and/or the Service's recommendations can be found on the web at <http://www.fws.gov/migratorybirds>.

If you have any questions about your responsibilities under section 7 of the Act, or require further information, please contact Ty Matthews of our Eastern Idaho Field Office at (208)237-6975 extension 115. Thank you for your interest in endangered species conservation.

Sincerely,


Acting Supervisor
Eastern Idaho Field Office

Avian Power Line Interaction Committee (APLIC). 2006. Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006. Edison Electric Institute, APLIC, and the California Energy Commission. Washington D.C. and Sacramento, California.



BONNEVILLE COUNTY, IDAHO

LISTED SPECIES	COMMENTS
Canada lynx (<i>Lynx canadensis</i>)	LT
Ute ladies'-tresses (<i>Spiranthes diluvialis</i>)	LT
Utah valvata snail (<i>Valvata utahensis</i>)	LE
Grizzly bear (<i>Ursus arctos</i>)	LT

PROPOSED SPECIES

None

CANDIDATE SPECIES¹

Yellow-billed cuckoo (<i>Coccyzus americanus</i>)	C
Greater Sage-Grouse (<i>Centrocercus urophasianus</i>)	C

LE - Listed Endangered
LT - Listed Threatened
XN - Experimental/Non-essential population
PT - Proposed Threatened
C - Candidate

¹Candidate species have no protection under the Act, but are included for your early planning consideration. Candidate species could be proposed or listed during the project planning period, and would then be covered under Section 7 of the Act. The Service advises an evaluation of potential effects on candidate species that may occur in the project area.

July 14, 2010

Mr. Ty Matthews
U.S. Fish and Wildlife Service
Eastern Idaho Field Office
4425 Burley Dr., Suite A
Chubbuck, ID 83202

SUBJECT: NOTIFICATION OF THE ISSUANCE OF AND REQUEST FOR COMMENTS ON
THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE PROPOSED
AREVA ENRICHMENT SERVICES LLC EAGLE ROCK ENRICHMENT
FACILITY IN BONNEVILLE COUNTY, IDAHO

Dear Mr. Matthews:

The U.S. Nuclear Regulatory Commission (NRC) staff is reviewing an application submitted by AREVA Enrichment Services LLC (AES) for a license to construct, operate, and decommission a uranium enrichment facility near Idaho Falls in Bonneville County, Idaho. The proposed Eagle Rock Enrichment Facility (EREF), if licensed, would use a gas centrifuge process to enrich uranium-235 isotope found in natural uranium to concentrations up to 5 percent by weight. The enriched uranium would be used to manufacture nuclear fuel for commercial nuclear power reactors.

As part of the review of the application, the NRC has prepared a Draft Environmental Impact Statement (EIS) (NUREG-1945). The Draft EIS includes an analysis of relevant environmental issues, including potential impacts on ecological resources, and documents the NRC staff's preliminary determination regarding the environmental impacts from the preconstruction (e.g., site preparation), construction, operation, and decommissioning of the proposed uranium enrichment facility. Many of the activities required to build a uranium enrichment facility do not fall within NRC's regulatory authority and, therefore, are not "construction" as defined by the NRC. Such activities are referred to as "preconstruction" activities in Title 10 of the *U.S. Code of Federal Regulations* (10CFR) 51.45(c). The proposed 161-kilovolt (kV) electrical transmission line required to provide power to the proposed EREF also falls under this category.

By letters dated June 17, 2009, and February 18, 2010, the NRC requested information from the U.S. Fish and Wildlife Service (USFWS) on Federally listed threatened or endangered species or critical habitat that may be at or in the vicinity of the proposed EREF site and proposed transmission line project, respectively. In those letters, the NRC indicated that it intends to use the EIS process to comply with Section 7 of the Endangered Species Act of 1973, as amended (ESA); and that after assessing the information provided by the USFWS, the NRC will determine what additional actions are necessary to comply with the Section 7 consultation process. The USFWS responded to these letters as follows:

- In a letter dated July 15, 2009, the USFWS stated that no listed species are present [at the EREF site], and that no issues were identified that indicate that consultation under Section 7 of the ESA is needed for this project; and

- In a letter dated March 9, 2010, the USFWS provided a list of endangered, threatened, proposed, and candidate species that may potentially occur in the area of the proposed transmission line project. That list identified the following four Federally listed species: Canada lynx (*Lynx canadensis*), Ute ladies'-tresses (*Spiranthes diluvialis*), Utah valvate snail (*Valvata utahensis*), and Grizzly bear (*Ursus arctos*). The letter also identified the Yellow-billed cuckoo (*Coccyzus americanus*) and the Greater Sage-Grouse (*Centrocercus urophasianus*) as candidate species for listing, provided information on the status of the bald eagle (*Haliaeetus leucocephalus*), and indicated the potential of the transmission lines to affect migratory birds. However, in a subsequent telephone conversation between the NRC and you on April 15, 2010, you indicated that the list of endangered, threatened, proposed, and candidate species provided by the USFWS was for Bonneville County in general; you did not believe that these species are in the vicinity of, or potentially impacted by, the transmission line project; and consultation under Section 7 of the ESA would not be needed for these species for the project.

The Draft EIS describes the NRC staff's evaluation of the potential impact of the proposed EREF project on ecological resources. Based on this evaluation, which included consideration of the information provided by the USFWS, the NRC staff's preliminary conclusion is that the preconstruction, construction, operation, and decommissioning of the proposed project would not adversely affect any of the four Federally listed species. In the context of the National Environmental Policy Act of 1969, as amended (NEPA), under which the Draft EIS was prepared, the NRC staff's preliminary determination is that the impact on ecological resources from the preconstruction, construction, operation, and decommissioning of the proposed project would be small to moderate.

In accordance with our June 17, 2009, and February 18, 2010, letters, the NRC staff is forwarding the Draft EIS to you for your review and comment. We are requesting your comments on the Draft EIS and on our preliminary conclusions regarding listed species under USFWS purview and will address your comments in the Final EIS. Please provide any information or comments on the enclosed Draft EIS that you consider appropriate under the provisions of the NEPA, ESA, and Fish and Wildlife Coordination Act of 1934, as amended, during the comment period, which ends on Monday, September 13, 2010. Comments should be submitted either by mail to the Chief, Rules and Directives Branch, Division of Administrative Services, Office of Administration, Mailstop TWB-05-B01M, Washington, DC 20555-0001, or by e-mail to EagleRock.EIS@nrc.gov.

The NRC staff plans to hold a public meeting to discuss the contents of the Draft EIS on Thursday, August 12, 2010, at the Red Lion Hotel on the Falls Convention Center, 475 River Parkway, Idaho Falls, Idaho 83402. The meeting will convene at 7:30 p.m. and will continue until 10:00 p.m. The meeting will be transcribed and will include the following agenda items: (1) a brief presentation of NRC's roles and responsibilities and the licensing process, (2) a presentation summarizing the contents of the Draft EIS, and (3) an opportunity for interested government agencies, tribal governments, organizations, and individuals to provide comments on the Draft EIS. Additionally, the NRC staff will host informal discussions in an open house forum one hour before the start of the meeting, during which members of the public may meet and talk with NRC staff members. You and other USFWS staff are invited to attend.

T. Matthews

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If you have any questions or require additional information, please contact Mr. Stephen Lemont, Senior Project Manager, by phone at 301-415-5163, or by e-mail at Stephen.Lemont@nrc.gov.

Sincerely,

/RA/

Diana Diaz-Toro, Chief
Environmental Review Branch A
Environmental Protection
and Performance Assessment Directorate
Division of Waste Management
and Environmental Protection
Office of Federal and State Materials
and Environmental Management Programs

Docket No.: 70-7015

Enclosure:
Draft EIS

cc without enclosure: See next page

June 22, 2009

Mr. Cal Groen, Director
Idaho Fish and Game
600 South Walnut
Post Office Box 25
Boise, Idaho 83707

SUBJECT: REQUEST FOR INFORMATION REGARDING ENDANGERED SPECIES AND
CRITICAL HABITATS FOR THE PROPOSED AREVA EAGLE ROCK
ENRICHMENT FACILITY LOCATED IN BONNEVILLE COUNTY, IDAHO

Dear Mr. Groen:

On December 30, 2008, AREVA Enrichment Services (AES) submitted an environmental report (ER) to the U.S. Nuclear Regulatory Commission (NRC). The ER is one part of an application for a license to authorize construction, operation, and decommissioning of a proposed uranium enrichment facility. The NRC staff is in the initial stages of developing an Environmental Impact Statement (EIS) for the proposed facility to be located near Idaho Falls, Idaho in Bonneville County. The facility, if licensed, would use a gas centrifuge based technology to enrich the isotope uranium-235 in uranium hexafluoride up to 5 percent by weight. The EIS will document the impacts associated with the construction, operation, and decommissioning of the proposed facility.

NRC requests information on the following items within the action area for the proposed facility, if available:

- Endangered or threatened species, or other species of concern to the state of Idaho, that are known to be or likely to be at the proposed AREVA site, and nearest known locations based on the element occurrence database. Attached is a preliminary list of species compiled from Idaho Fish and Game (IDFG) county lists (plants) and the IDFG Snake River Basalts Ecological Section list (animals). Habitat on the site consists of sagebrush steppe, non-native grassland (primarily crested wheatgrass and cheatgrass), and irrigated crops.
- Nearest known lek sites (based on the element occurrence database), nesting habitat, brood-rearing habitat, and winter habitat for greater sage grouse, migratory status of the local population, the number of leks nears the site, and trends.
- Information on Sagebrush Reserves (location, size, species, management) or other sensitive or rare habitats in the project vicinity.
- Information on mule deer, pronghorn, and elk herds, including seasonal habitat (such as crucial winter habitat areas), local migration routes, and concerns such as population trends.
- Important migration routes for migratory birds.
- Maps or GIS shapefiles regarding species or habitats.
- Concerns of IDFG regarding potential impacts of the proposed project.

C. Groen

2

The proposed AES parcel is approximately 1,700 hectares (4,200 acres). AES states that the facility footprint encompasses 381 hectares (941 acres) of the site for which construction, operation, and decommissioning activities will occur. The proposed site is situated within Bonneville County, Idaho, on the north side of U.S. Highway 20, about 113 km (70 miles) west of the Idaho/Wyoming State line. The coordinates for the center of the action area are 43 degrees, 35 minutes, 7.37 seconds North and longitude 112 degrees, 25 minutes, 28.71 seconds West.

We have enclosed additional background information relating to ecological resources on the site, including a map showing the action area, as it appears in the AES ER.

We intend to use the EIS process to comply with Section 7 of the Endangered Species Act of 1973, as amended. After assessing information you provide, we will determine what additional actions are necessary to comply with the Section 7 consultation process. If you have any questions or comments, or need any additional information, please contact Gloria Kulesa of my staff at 301-415-5308.

Sincerely,

/RA/

Andrea Kock, Chief
Environmental Review Branch
Environmental Protection
and Performance Assessment Directorate
Division of Waste Management
and Environmental Protection
Office of Federal and State Materials
and Environmental Management Programs

Docket No.: 70-7015

Enclosures:

1. Special Status Plants and Species
2. Ecology Field Survey Report
3. Fall 2008 Survey
4. Sage Grouse Survey Report

cc: Paul Kjellander,
ID Office of Energy Resources

Idaho Special Status Plants and Species of Greatest Conservation Need

Earth lichen (*Catapyrenium congestum*)
Gray willow (*Salix glauca*)
Green spleenwort (*Asplenium trichomanes-ramosum*)
Iodine bush (*Allenrolfea occidentalis*)
Meadow milkvetch (*Astragalus diversifolius*)
Payson's bladderpod (*Lesquerella paysonii*)
Payson's milkvetch (*Astragalus paysonii*)
Red glasswort (*Salicornia rubra*)
Slickspot peppergrass (*Lepidium papilliferum*)
Ute ladies'-tresses (*Spiranthes diluvialis*)
Western Sedge (*Carex occidentalis*)

Utah valvata snail (*Valvata utahensis*)

Northern leopard frog (*Rana pipiens*)

Ring-necked snake (*Diadophis punctatus*)

Black-crowned night-heron (*Nycticorax nycticorax*)
Blue grosbeak (*Passerina caerulea*)
Burrowing owl (*Athene cunicularia*)
California gull (*Larus californicus*)
Ferruginous hawk (*Buteo regalis*)
Franklin's gull (*Larus pipixcan*)
Juniper titmouse (*Baeolophus ridgwayi*)
Lesser goldfinch (*Carduelis psaltria*)
Merlin (*Falco columbarius*)
Northern pintail (*Anas acuta*)
Peregrine falcon (*Falco peregrinus*)
Pinyon jay (*Gymnorhinus cyanocephalus*)
Sharp-tailed grouse (*Tympanuchus phasianellus*)
Swainson's hawk (*Buteo swainsoni*)
Virginia's warbler (*Vermivora virginiae*)
White-faced ibis (*Plegadis chihi*)
Yellow-billed cuckoo (*Coccyzus americanus*)

Canada lynx (*Lynx canadensis*)
Gray wolf (*Canis lupus*)
Great Basin ground squirrel (*Spermophilus mollis*)
Grizzly bear (*Ursus arctos*)
Idaho pocket gopher (*Thomomys idahoensis*)
Little pocket mouse (*Perognathus longimembris*)
Merriam's shrew (*Sorex merriami*)
Pygmy rabbit (*Brachylagus idahoensis*)
Spotted bat (*Euderma maculatum*)
Townsend's big-eared bat (*Corynorhinus/Plecotus townsendii*)
Townsend's pocket gopher (*Thomomys townsendii*)
Wyoming ground squirrel (*Spermophilus elegans*)

Enclosure 1



IDAHO DEPARTMENT OF FISH AND GAME

600 S. Walnut/P.O. Box 25
Boise, Idaho 83707

C.L. "Butch" Otter/Governor
Cal Groen/Director

August 4, 2009

Ms. Andrea Kock,
Chief, Environmental Review Branch
Nuclear Regulatory Commission
Washington, DC 20555-0001

RE: Request for information regarding endangered species and critical habitats for the proposed AREVA Eagle Rock Enrichment Facility located in Bonneville County, Idaho.

Dear Ms. Kock:

Idaho Department of Fish and Game (IDFG) has reviewed the above referenced request for information from the Nuclear Regulatory Commission (NRC) regarding the potential development of a uranium enrichment facility in Bonneville County, Idaho. Our interest in the project is in protecting fisheries, wildlife, plants and their habitats. To date, IDFG has been involved in this proposal as follows; (1) Our Regional Supervisor and environmental Staff Biologist from the Upper Snake Region were briefed on the potential for this project at our Idaho Falls Office in 2008 by AREVA staff while the project was still being considered, and (2) staff from the Idaho Falls office attended the Nuclear Regulatory Commission's public open house in Idaho Falls on 4 June 2009.

Resident species of fish and wildlife are the property of all citizens within the state and decisions affecting fish and wildlife therefore are the concern of all Idahoans. The Idaho Department of Fish and Game and the Idaho Fish and Game Commission, are charged with the statutory responsibility to preserve, protect, perpetuate, and manage all fish and wildlife in Idaho (Idaho Code § 36-103(a)). Your letter contains seven information requests. We responded to those we were able to and we offer additional summary comments regarding the AREVA project.

We note that IDFG has no specific project proposal upon which to comment. The summary letter sent to us has no specifics beyond a "parcel" size, a "footprint" size, and the location of the center of the facility. This is not sufficient for us to evaluate the effects the project may have on fish, wildlife, and their habitat. You refer in your letter to an application for a license submitted to the NRC but you have not provided this application for our consideration. For IDFG to consider more general questions, such as the request for our concerns about potential impacts of the project, we will need a specific project description that depicts not only the size and location of the project but enough specifics for us to gauge potential wildlife disturbances and impacts. The proposal description should include, but not necessarily be limited to:

- Location including all boundaries, fences, developed structures, access ways such as roads and trails,
- Size of developments including buildings, parking lots, power lines, energy production facilities, etc,
- Anticipated and licensed/permitted levels of discharges from the permitted activity including light, sound, odor, and water discharges,

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Ms. Andrea Kock
August 4, 2009

- Associated infrastructure such as trucking centers off-site, housing for workers (both permanent and temporary), power lines to be constructed, piping for materials, and any other construction associated with the project,
- Current land use patterns and conditions of all lands to be built upon or fenced from public and wildlife access,
- Public lands (state, federal, county, local, municipal) to be fenced or restricted in any way from public access or from fish/wildlife use. Included should be proposals to mitigate for these lands lost to the public or fish and wildlife, and
- Entire project life, license life, decommissioning and clean-up schedule and penalties for noncompliance.

We offer the following in response to your seven requests. The information provided in 1) and 2) was determined using the coordinates of the project center provided in your letter and a buffer with a radius of 8 km around that point intersected with data from the Idaho Fish and Wildlife Information System which includes data on sage-grouse, at-risk animals, and at-risk plants (Accessed July 28, 2009).

1) *Endangered or threatened species and species of other species of concern :*

The IDFG Conservation Data Center contains two individual observations of Ferruginous Hawks (*Buteo regalis*) and one nest observation for ferruginous hawks. Hibernacula for Townsend's big-eared bats (*Corynorhinus townsendii*) also occur in the area. Immediately west of the west-edge of the 8 km buffer is a group of lava tube caves that are important bat roosts and hibernacula. There are no known occurrences of at-risk plant species in the immediate vicinity of the project site. The nearest known occurrences of at-risk plants is 40 km NW of the site.

2) *Nearest known sage-grouse(Centrocercus urophasianus) lek sites:*

One sage-grouse lek was identified within the 8 km buffer of the center of the project. Additional leks were identified near the site but outside the buffer area. Without knowing the extent of developments associated with this project it is not possible to gauge what sage grouse habitats the project may affect. However, both "Key Sage Grouse Habitats" and "Perennial Grasslands" habitats are found along Highway 20 and fairly near the project that might be affected by the project. These habitats are described and graphed (Fig. 4-11 page 4-49) in the Conservation Plan for the Greater Sage Grouse in Idaho which is available as follows:
http://fishandgame.idaho.gov/cms/hunt/grouse/conserves_plan/

3) *Sagebrush Reserves:*

The Idaho National Engineering and Environmental Laboratory Sagebrush Steppe Ecosystem Reserve was established by proclamation in 1999. The Proclamation was signed by Secretary of Energy Bill Richardson, (for) the Regional Director, Region 1 U.S. Fish and Wildlife Service by Richard Munoz, (for) the State Director of Idaho, Bureau of Land Management by Elena Daly, (for) the Interim Director, Idaho Fish and Game by Don Wright. The Reserve itself lies both north and south of Highway 33, but does not reach as far south as Highway 20. The management plan may be found online as follows:

<http://ar.inel.gov/owa/getimage.2?F PAGE=1&F DOC=ID-074-02-067&F REV=00>

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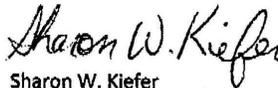
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Ms. Andrea Kock
August 4, 2009

4. *Information on mule deer, pronghorn, and elk herds and habitats:*
IDFG manages mule deer, pronghorn antelope, and elk by analysis units that are made up of Game Management Units (GMU). We do not have information on the property you are specifically developing, but your project would potentially be in GMU 63. We have summarized data regarding these three species in Appendix A. Aerial survey information on pronghorn in the area has been collected by consultants at Idaho National Laboratory. IDFG does not consider the location of this project to be winter range or critical range for mule deer or elk. Pronghorn do frequently use lands surrounding the proposed site throughout all seasons.
5. *Important migration routes for migratory birds:*
IDFG is unaware of any known migratory flight corridors for birds that fall near the stated center of the project. However, upon disclosure of other project developments we may reconsider this question.
6. *Maps or GIS shapefiles regarding species or habitats:*
IDFG has hundreds of GIS layers that we work with throughout each year. As stated, this request is too vague to respond adequately.
7. *Concerns of IDFG:*
We appreciate being asked to comment regarding this question. However, without a complete project description as discussed above, we do not have enough information to answer this question. Upon receipt of a full disclosure of the proposal IDFG staff will begin to consider and assess impacts to fish wildlife and habitats of whatever is disclosed. This is the most important question you asked us; we hope to receive a full project description so we may fulfill this request.

We look forward to further information about this project to better accommodate your information request. If you have any questions about our technical information, please contact Gary Vecellio, Environmental Staff Biologist in our Upper Snake Regional Office, (208)525-7290.

Sincerely,



Sharon W. Kiefer
Assistant Director-Policy

SWK/kc

Enclosures

Cc: S. Schmidt, G. Vecellio, L. Hebdon, IDFG
P. Kjellander, Idaho Office of Energy Resources

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Appendix A. Mule deer, pronghorn, and elk herd status.

IDFG does not conduct aerial surveys to estimate mule deer, elk or pronghorn herd sizes in Unit 63. Without aerial survey data herd sizes are tracked using harvest as an index of abundance. Hunting opportunities (season length and timing) for these species have remained stable over the last five years. For mule deer in unit 63 hunter numbers and harvest during the general any weapon season have remained fairly stable (Figure 1). There are no data to suggest that the mule deer population is declining. Elk hunter numbers and harvest in Unit 63 have increased slightly over the previous five years (Figure 2). There are no data to suggest the elk population is declining, and it may be slightly increasing. Hunter success (harvest per hunter) has increased in the Unit 63 controlled, any-weapon pronghorn hunts (Figure 3). Hunter numbers and harvest during the unit 63 general archery season pronghorn hunt have increased over time (Figure 4). There are no data to suggest that pronghorn populations are declining, and they may be increasing.

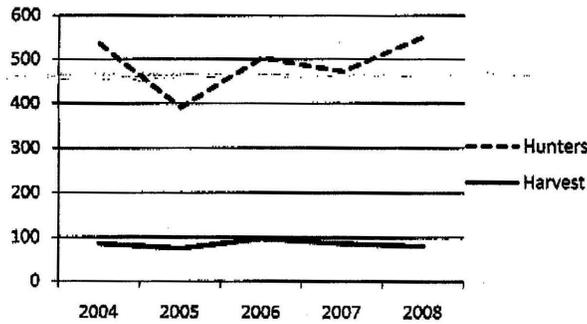


Figure 1. Unit 63 deer harvest and hunter trends from 2004 through 2008. Harvest includes whitetailed deer which averaged 31% of the harvest.

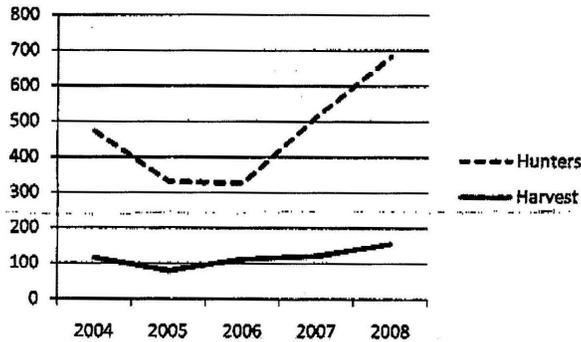


Figure 2. Unit 63 elk harvest and hunter numbers from 2004 through 2008.

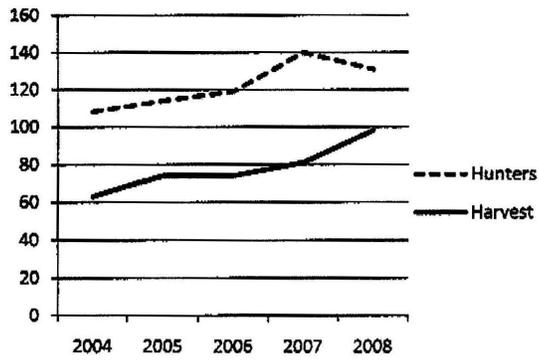


Figure 3. Unit 63 pronghorn harvest and hunter numbers for controlled hunts from 2004 through 2008.

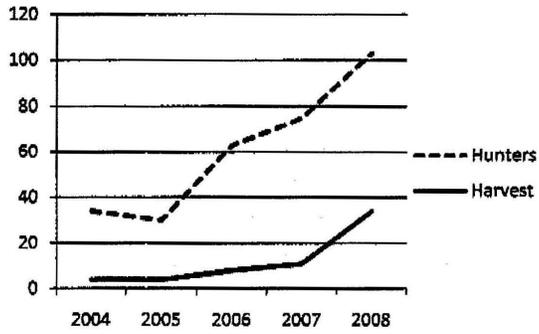
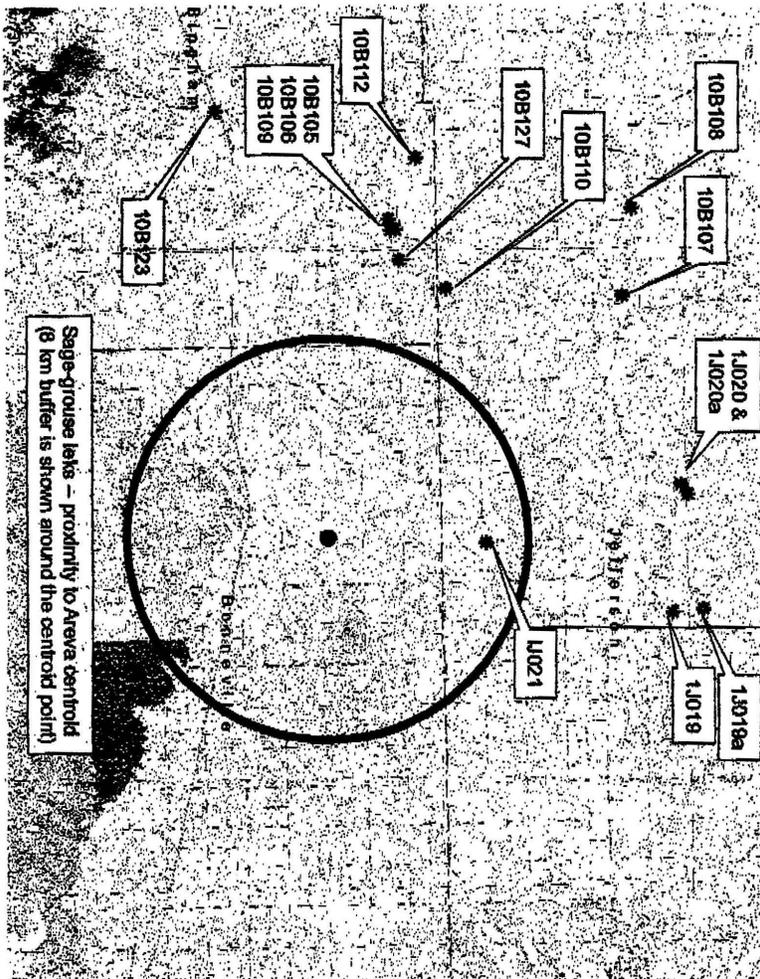


Figure 4. Unit 63 pronghorn harvest and hunter numbers for general season archery hunts from 2004 through 2008.



Location of known sage-grouse leks and 8km radius buffer associated with the center coordinates provided for the proposed Areva Uranium enrichment facility. Prepared for the Nuclear Regulatory Commission data request by Idaho Department of Fish and Game, 3 August 2009

Lemont, Stephen

From: Lemont, Stephen
Sent: Wednesday, February 10, 2010 8:56 AM
To: 'sharon.kiefer@idfg.idaho.gov'
Cc: Biwer, Bruce; Van Lonkhuyzen, Robert A.
Subject: Continuing NRC Coordination with IDFG Regarding Ecological Issues for AREVA Eagle Rock Enrichment Facility Environmental Impact Statement
Attachments: ID_Fish_Game_response 080409.pdf; ID_Fish_Game_request 012209.pdf; AES-O-NRC-10-00263 EREF Supplemental Info Trans Line_with_figure.pdf

Sharon W. Kiefer
Assistant Director-Policy
Idaho Department of Fish and Game
600 South Walnut
P.O. Box 25
Boise, Idaho 83707

Dear Ms. Kiefer:

I am Steve Lemont, the U.S. Nuclear Regulatory Commission's (NRC's) new Project Manager for the Environmental Impact Statement (EIS) that NRC is preparing in support of its licensing action for the proposed AREVA Enrichment Services LLC (AREVA) Eagle Rock Enrichment Facility (EREF) located in Bonneville County, Idaho. Thank you for your August 4, 2009 letter in response to NRC's letter of June 22, 2009, in which the NRC requested information regarding threatened or endangered species and critical habitats at the proposed EREF project site. In your letter, you responded to the general questions we posed, but stated that the Idaho Fish and Game (IDFG) staff would need more specific project information in order to consider and assess impacts of the proposed facility to fish, wildlife, and habitats. Copies of the above referenced IDFG and NRC letters are attached for your reference.

We apologize for not getting back to you sooner regarding the request made in your letter, but there have been a number of changes here and also on the EREF project as discussed below. The purposes of this email are to follow up with IDFG regarding the proposed EREF project, to: (1) provide you with the information you requested in your August 4, 2009 letter; (2) inform you of a change to the EREF project scope involving the addition of an electrical transmission line to power the facility; and (3) request additional information from IDFG for the EREF project site, as well as information for the transmission line route, similar to that requested previously for the EREF site.

NRC requests that you provide IDFG's response to NRC's information request below within 30 days of this email if possible.

Information Requested in August 4, 2009 Letter from IDFG

In response to your August 4, 2009 letter, the information you requested can be found in the NRC website for the EREF project, at <http://www.nrc.gov/materials/fuel-cycle-fac/arevanc.html>. Specifically, the Environmental Report (ER) that AREVA submitted to NRC for the EREF project (Environmental Report, Rev. 1, April 2009) contains information on the entire uranium enrichment facility project (see at <http://www.nrc.gov/materials/fuel-cycle-fac/eagle-rock.html>), with the information you requested contained in the following sections of the ER:

- Section 2.1.2 provides the location and a detailed description of the proposed site and facility.
- Section 3.1 describes the land use of the site.
- Section 3.5 describes the ecological resources of the site.
- Section 4.4 contains a description of the retention and detention basins.
- Section 4.5 describes the potential impacts to ecological resources.
- Sage Grouse Survey Report (Environmental Report, Field Study, Sage Grouse Survey Report).

If you have any problems accessing the above information or need additional information or clarifications, please let me know.

Electrical Transmission Line to Power the EREF

Electrical service beyond that currently existing near the proposed EREF would be required to operate the EREF. AREVA submitted supplemental information to NRC dated January 29, 2010, which shows the location of the proposed 161-kilovolt transmission line and associated structures (e.g., substations and substation upgrades), and provides information regarding its construction and operation and environmental impacts (including ecological resources). That supplemental information is also attached to this email. The transmission line is part of the proposed EREF project, and the environmental impacts of the construction and operation of this line will be addressed in the EREF EIS.

The new transmission line and associated structures would be located entirely on private property within Bonneville County. Rocky Mountain Power (RMP), a division of PacifiCorp, will be the builder, owner, and operator. The line would originate from the existing RMP Bonneville Substation and extend in a general westward direction to the new point of service, the Twin Buttes Substation on the proposed EREF site. Beginning at the Bonneville Substation, the proposed transmission line route is west along the county road (West 65 North Street) to the existing RMP Kettle Substation, a distance of approximately 14.5 kilometers (9 miles), continuing west to the eastern portion of the EREF site, a distance of approximately 1.2 kilometer (0.75 mile), then north within the EREF site to its northern end, then west and south to the new RMP Twin Buttes Substation, for a distance of approximately 6.4 kilometers (4 miles). The area being affected by the transmission line is approximately 84 hectares (208 acres).

Request for Additional Information

In accordance with our letter dated June 22, 2009, NRC requests additional information from IDFG for the EREF site, on the items listed below, beyond that provided with your August 4, 2009 letter. In addition, NRC requests information on the items listed below within the action area of the proposed transmission line and associated structures as well.

- Endangered or threatened species, or other species of concern to the State of Idaho, that are known to be or likely to be present, and nearest known locations based on the element occurrence database. Habitat in these areas consists of sagebrush steppe, post-fire plantings (crested wheatgrass and other grasses), and irrigated crops.
- Nearest known lek sites (based on the element occurrence database), nesting habitat, brood-rearing habitat, and winter habitat for greater sage grouse, migratory status of the local population, the number of leks near the site, and trends.
- Information on sensitive or rare habitats in the project vicinity.
- Information on mule deer, pronghorn, and elk herds, including seasonal habitat (such as crucial winter habitat areas), and local migration routes.
- Important migration routes for birds.
- Maps or GIS shapefiles regarding species or habitats.
- Concerns of IDFG regarding potential impacts of the proposed project.

Please contact me if you have any questions or need additional information. My contact information is provided below. The NRC appreciates your assistance and cooperation in this matter.

Thank you.

Sincerely,
Steve Lemont

Stephen Lemont, Ph.D.

Senior Environmental Project Manager
U. S. Nuclear Regulatory Commission
Office of Federal and State Materials and
Environmental Management Programs

Mail Stop: T-8F5

Washington, DC 20555-0001

Telephone: 301-415-5163

Fax: 301-415-5369

Email: Stephen.Lemont@nrc.gov

Lemont, Stephen

From: Hebdon,Lance [lance.hebdon@idfg.idaho.gov]
Sent: Wednesday, April 14, 2010 3:07 PM
To: Lemont, Stephen; Kiefer,Sharon
Cc: Vecellio,Gary; Kemner,Don; Biber, Bruce
Subject: RE: Sage-grouse Work by Wildlife Conservation Society

Steve-

During the conference call reference was made to some sage-grouse work being conducted by the Wildlife Conservation Society (WCS) in the vicinity of the project. We made a commitment to follow-up with and determine if the information being collected would be useful for inclusion in our comments on the AREVA project. The information being collected by the WCS is still preliminary and did not add information that would change our comments. Therefore you will not see any reference to their data. If you have questions feel free to contact me.

Lance

Lance Hebdon
Inter-Governmental Policy Coordinator
Director's Office
Idaho Department of Fish and Game
208-287-2711
lance.hebdon@idfg.idaho.gov

From: Lemont, Stephen [mailto:Stephen.Lemont@nrc.gov]
Sent: Monday, March 15, 2010 2:41 PM
To: Kiefer,Sharon
Cc: Hebdon,Lance; Vecellio,Gary; Kemner,Don; Hemker,Tom; Biber, Bruce
Subject: RE: Teleconference to Discuss Greater Sage-grouse Issues Related to the AREVA Eagle Rock Uranium Enrichment Facility Project, Bonneville County, Idaho

How about 9:00 am Mountain Time? I will provide the bridge line after you confirm. How many lines will you need?

From: Kiefer,Sharon [sharon.kiefer@idfg.idaho.gov]
Sent: Monday, March 15, 2010 11:42 AM
To: Lemont, Stephen
Cc: Hebdon,Lance; Vecellio,Gary; Kemner,Don; Hemker,Tom
Subject: RE: Teleconference to Discuss Greater Sage-grouse Issues Related to the AREVA Eagle Rock Uranium Enrichment Facility Project, Bonneville County, Idaho

Mr. Lamont – would Wednesday morning, (3/17) preferably before 10 am work? If you will provide me the bridge line, I will make sure that our headquarters and Upper Snake regional staff have the number to call in.

From: Lemont, Stephen [mailto:Stephen.Lemont@nrc.gov]
Sent: Friday, March 12, 2010 10:42 AM
To: Kiefer,Sharon
Cc: Hebdon,Lance; Biber, Bruce M.; Van Lonkhuyzen, Robert A.
Subject: Teleconference to Discuss Greater Sage-grouse Issues Related to the AREVA Eagle Rock Uranium Enrichment Facility Project, Bonneville County, Idaho

Dear Ms. Kiefer:

The purpose of this email is to request a teleconference with your agency to discuss questions the U.S. Nuclear Regulatory Commission (NRC) and its contractor, Argonne National Laboratory (Argonne), have regarding the recent U.S. Fish and Wildlife Service Greater Sage-grouse decision as it relates to the proposed AREVA Eagle Rock uranium enrichment facility project and associated proposed electrical transmission line in Bonneville County. My last contact with you was in an email dated February 10, 2010, regarding NRC's continuing coordination with the Idaho Department of Fish and Game (IDFG) on ecological issues for the Environmental Impact Statement (EIS) that the NRC is preparing in support of its licensing action for the AREVA Eagle Rock project. We understand that Mr. Lance Hebdon of IDFG is working on responding to the information requests in that email, and we very much appreciate that effort. With regard to the sage grouse, this includes information such as the local population in the vicinity of the proposed AREVA facility and transmission line and what areas that population uses for seasonal habitat.

Regarding the teleconference, we would like to ask about IDFG's thoughts and concerns for Eastern Idaho regarding the recent sage grouse decision, and about any suggestions, requirements and/or management guidelines you may have regarding the impacts, if any, of the proposed AREVA Eagle Rock project and transmission line on the sage grouse.

Please let me know your availability (dates and times) for a conference call next week to discuss the above matters. I will provide a bridge line for the call. In addition to myself, call participants on my end will be Bruce Biwer, the Argonne Project Manager for the Eagle Rock EIS, and Bob Van Lonkhuyzen, Argonne's ecological lead.

I look forward to hearing back from you soon.

Thanks,
Steve Lemont

Stephen Lemont, Ph.D.

Senior Environmental Project Manager
U. S. Nuclear Regulatory Commission
Office of Federal and State Materials and
Environmental Management Programs
Mail Stop: T-8F5
Washington, DC 20555-0001
Telephone: 301-415-5163
Fax: 301-415-5369
Email: Stephen.Lemont@nrc.gov

Lemont, Stephen

From: Kiefer, Sharon [sharon.kiefer@idfg.idaho.gov]
Sent: Wednesday, April 14, 2010 6:38 PM
To: Lemont, Stephen; bmbiwer@anl.gov
Cc: Hebdon, Lance; Vecellio, Gary
Subject: IDFG Response to NRC AREVA Supplemental Request
Attachments: E-mail from NRC to Sharon Kiefer regarding additional AREVA project information
2-10-2010.txt; Response to NRC AREVA transmission supplemental request Mar 2010.docx

Steve, I apologize for a bit of delay in our information response to your request. Please contact Gary, Lance or I if there are any questions or clarifications needed. We appreciated the telephone discussion regarding sage-grouse and other issues.

Sharon W. Kiefer
Idaho Department of Fish and Game
Assistant Director-Policy
sharon.kiefer@idfg.idaho.gov
please note new email address!!
208.334.3771
P.O. Box 25
Boise, ID 83707

The Idaho Department of Fish and Game (Department) is providing this information in response to a February 10, 2010 request by Stephen Lamont of the Nuclear Regulatory Commission (NRC) to Sharon Kiefer. These items are provided in supplement to the responses provided by the Department on August 4, 2009. This response incorporates potential issues related to a power line to service the infrastructure, which was not identified in 2009.

Sensitive and rare habitats or threatened species (power line only, site information previously provided)

Department staff considers the areas both north and south of your proposed power line to be important habitat for lek development, rearing, and migration of sage grouse. It is likely that a new above-ground transmission line will cause direct mortality of migrating sage grouse due to grouse striking the lines during flight. The locations of sensitive species from the Idaho Natural Heritage Database and occupied sage-grouse habitats in the vicinity of the proposed right-of-way for the power line are depicted in Figure 1. Department staff is unaware of any federally-listed species within the bounds of the project.

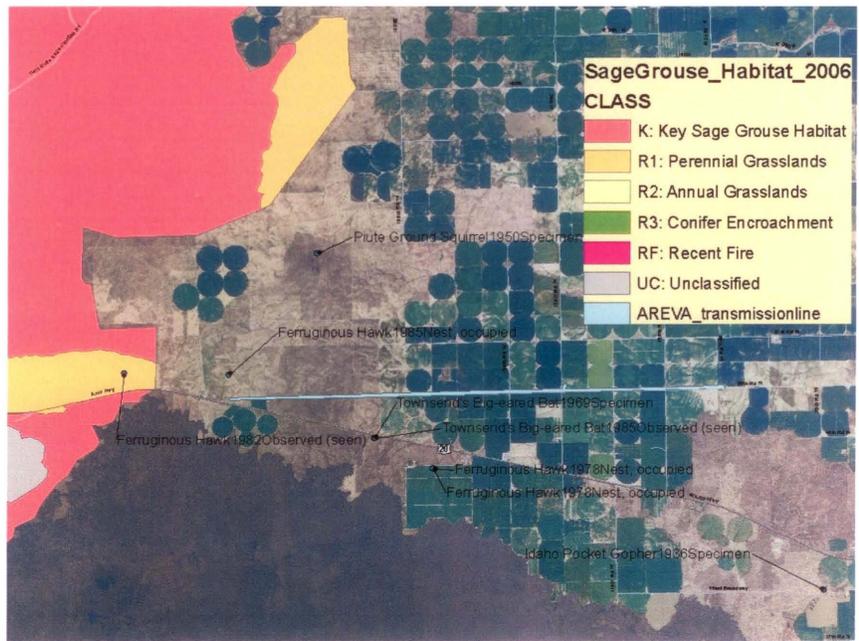


Figure 1. Location of sensitive species records from the IDFG Natural Heritage database and Sage-grouse habitat in proximity to the proposed AREVA transmission line.

Important migration routes for birds (power line only)

The addition of a power line, or an array of suspended lines will likely cause direct mortality of sage- and sharp-tailed grouse. As grouse fly across Highway 20 and over traffic during daily or seasonal migrations, we anticipate direct mortality of these birds due to collisions with newly-erected power lines. We request consideration of burying the new sections of line – this would be the most direct and effective way to avoid potential adverse effects to sage-grouse (and other flying and migrating wildlife). Power line burial has proven feasible to protect migrating sage grouse in Clark County near Small, Idaho as negotiated and constructed in 2007. This recommendation is consistent with the Idaho Sage-Grouse Conservation Plan which recommends avoiding construction of new power lines in grouse habitat or burying the line (Idaho Sage-Grouse Advisory Committee 2006) and is consistent with Department scoping comments for the Mountain States Transmission Intertie Project (available on request). If NRC and the applicant deem that it is not possible to bury the line, the Department requests that the licensee submit a proposal to the Department and USFWS describing:

- 1) How the line will be marked with high-visibility deflectors to reduce collisions by birds and bats,
- 2) How the licensee will survey the new line for the first 5 years to detect and record any sage- and sharp-tailed grouse mortality, and
- 3) How the licensee will mitigate for the direct loss of birds due to power line construction.

Concerns of the Department regarding potential wildlife effects of the proposed project

The Department has considered both the uranium enrichment plant and the (single) proposed power line identified in the latest version of the application. If constructed as proposed there will be various negative effects to wildlife and their habitats, as well as potential losses of public recreation benefits and use of some public lands. The Department offers the following as our assessment of likely impacts due to the project, and we request in order of preference that NRC require in the license that:

- The licensee to take measures to avoid and reduce wildlife and wildlife-related recreation impacts and subsequently,
- The licensee be required to fully mitigate for unavoidable wildlife, habitat, and wildlife-related recreational impacts due to project construction and operation.

We believe consultation with the Department and other natural resource managers would ensure implementation of effective measures to avoid, reduce, and mitigate adverse wildlife effects and ask the NRC to support such an approach.

Sage-grouse and sharp-tailed grouse

One of the documents provided was a sage-grouse survey report (MWH 2008). The stated goal of the effort was to “determine if greater sage grouse leks were in the vicinity of the site.” The survey was conducted during the week of May 5. The timing of this survey is so late that it is unlikely to have detected any leks that may have been present on the property. Additionally no efforts were made to identify other potential seasonal use (nesting or brood rearing) of the property by sage-grouse. We recommend that the consultants confer with Department biologists and adopt our techniques for lek searches and monitoring. To be useful, their grouse surveys should be repeated using more effective methods.

It is likely that the proposed project will directly impact year-round sage-grouse use through fence collision mortality and habitat loss associated with power line infrastructure (previously noted) and a fenced perimeter. Additionally, it is also likely that the proposed project will indirectly affect the adjacent available sage grouse habitat due to increased road access and human use, and increased noise disturbance.

Sharp-tailed grouse are known to exist in the area; therefore, it is likely the proposed project will have impacts to sharp-tailed grouse and sharp-tailed grouse habitat similar to that of sage grouse.

The proposed power line to the Bonneville substation will likely negatively impact sage and sharp-tailed grouse populations in the area by providing additional raptor and corvid (e.g., crows and ravens) perch sites.

Big game

The Department manages the following species classified as big game species, which may be impacted negatively by the project: Mule Deer, Elk, Moose, and Pronghorn Antelope. All of these species will be affected by losses of open (mainly private) range upon which to live and forage and the forage gleaned by open range or agricultural products produced as a function of the property's original uses. Any high fence or security perimeter fence will presumably exclude these species from access to native ranges or previously accessible agricultural habitats. However, because the actual lay-out of any perimeter fence is withheld, we are uncertain of the extent of wildlife/public exclusion through fencing or actual development. Increased noise and human disturbance will cause these species to avoid the site of the enrichment plant to an unknown degree or distance. We cannot determine at this time whether loss of this area for use by big game will cause animals to just shift to new range or actually cause other change to the herd (such as productivity, etc.).

Public Lands

The Department remains very concerned about the loss of public lands to wildlife and to wildlife-related recreation access due to the project. The Bureau of Land Management (BLM) owns and manages a parcel of land entirely within the project boundary. We are unclear about the ability of wildlife or humans to access this public land during project operation. If public land resides within a fenced area or an area of 'high security' and is inaccessible to big game or humans we would urge NRC to consider this land as permanently removed from public/wildlife use. We request that the licensee negotiate with BLM to replace similar acreage to be managed by BLM for multiple uses including wildlife habitat and human recreation. We urge NRC to necessitate this using an iterative process described below.

Similarly, the Department has concerns that human access to other surrounding BLM property for recreational use will be curtailed due to high security needs at this facility. Perhaps large wildlife will also have less access, or will be less willing to use public lands adjacent to the project due to project security or human activity. If wildlife avoid public lands surrounding the project due to noise, lights, roads, or human presence due to the facility, we urge NRC to require that the licensee study and disclose these effects, and fully mitigate for lands lost to wildlife due to project effects using the iterative process described below.

Cumulative effects of the project.

The Department has concerns that activities and developments anticipated by AREVA for operations at this site have not yet been identified. Original plans for this project were given to the public, and public support sought, when the project was depicted at a smaller scale than is currently requested. At a meeting on 18 June 2008 at IDFG offices in Idaho Falls, Department staff were told by AREVA that (1) only 30 megawatts (MW) of power would be necessary to operate this plant and (2) the water use would be equal to operation of 1 center pivot during growing season. We now see that (1) 78MW of power are required as is (2) "a dual redundant electrical supply utilizing separate feeders (*not one but two lines*) is required" (Eagle Rock Enrichment Facility Appendix H Environmental Report, Paragraph 1). As such, we find that AREVA continues to modify the project and to add project components that will cause impacts to fish, wildlife, or habitats. We understand that currently, only one power line is requested for permitting and licensing (from the Bonneville Substation to the Enrichment Plant), even though the Environmental Report describes a need for two power lines for redundancy. The Department remains concerned that post-licensing, a future action of AREVA will be to request another power line. We remain concerned that the cumulative effects of all of these incremental actions will combine to further negatively affect wildlife, habitats, and recreational human use to a degree not evaluated by requests for individual actions alone in the pre-licensing phase. The second powerline, if coming from the west, might have much higher impact to sage-grouse than the line identified to date.

We advise NRC to require complete identification of all anticipated activities (all power lines, new water rights, increased roads and traffic, lighting of the plant and surrounding desert, etc) so that the Department may assess the cumulative impacts and so that NRC may necessitate adequate protections and mitigations. We also recommend NRC include future actions be covered in the "Mitigated Protections" and mitigations license language suggested below.

Negotiated protections and mitigations

We recommend and ask that NRC adopt an approach in crafting this license similar to the iterative approach of Federal Energy Regulatory Commission (FERC) when licensing new hydroelectric facilities to require the licensee to collaborate with natural resources agencies to reach agreements to minimize and mitigate adverse effects to public trust resources as a condition of the license.

To advance successful negotiations of a package of adequate natural resource protections and commensurate mitigations, we ask NRC to devise a collaborative team to work with the licensee to include the Department. We offer that the Idaho Office of Species Conservation, the USFWS, and BLM would also be appropriate agency participants.

Citation

Idaho Sage-grouse Advisory Committee. 2006. Conservation Plan for the Greater Sage-grouse in Idaho. http://fishandgame.idaho.gov/cms/hunt/grouse/conserve_plan/

Lemont, Stephen

From: Lemont, Stephen
Sent: Tuesday, June 08, 2010 2:57 PM
To: 'Kiefer, Sharon'
Cc: lance.hebdon@idfg.idaho.gov; 'gary.vecellio@idfg.idaho.gov'; Kemner, Don; 'tom.hemker@idfg.idaho.gov'; KAY Jim (AREVA NP INC); Biwer, Bruce; 'Van Lonkhuyzen, Robert A.'
Subject: Additional Sage Grouse Information for AREVA Eagle Rock Project 060810

Sharon,

After I shared the Idaho Department of Fish and Game's April 14, 2010, comments on the subject project with AREVA, AREVA commissioned North Wind, Inc. to conduct a supplementary sage grouse survey for the Eagle Rock site and transmission line right-of-way. You can access the report for that study, dated May 13, 2010, via the following download link: <https://webapps.anl.gov/filetransfer/downloader/940198422265150/>. (NOTE: This download link is good only for 30 days from yesterday.) Also included in the download link are the reports of four other ecological surveys that are referenced in the North Wind report, some of which you may not have seen previously.

Please contact me if you have any questions or need additional information.

Regards,
Steve

Stephen Lemont, Ph.D.

Senior Environmental Project Manager
U. S. Nuclear Regulatory Commission
Office of Federal and State Materials and
Environmental Management Programs
Mail Stop: T-8F5
Washington, DC 20555-0001
Telephone: 301-415-5163
Fax: 301-415-5369
Email: Stephen.Lemont@nrc.gov

From: [Lemont, Stephen](#)
To: [Hebdon, Lance](#)
Cc: [Kiefer, Sharon](#); [Biber, Bruce M.](#); [Van Lonkhuyzen, Robert A.](#)
Subject: RE: Eagle Rock Enrichment Facility
Date: Wednesday, September 08, 2010 10:04:31 AM
Attachments: [Additional Sage Grouse Information for AREVA Eagle Rock Project.060810.msg](#)

Hi, Lance. Environmental Report (ER), Rev. 2 (AES, 2010) is a voluminous document that includes numerous appendices. In NRC's electronic document filing system, known as the Agencywide Documents Access and Management System (or ADAMS), this ER document is broken down into numerous parts. Publicly available portions of ER Rev. 2 are accessible electronically from NRC's public website for the AREVA Eagle Rock project, under License Application, at <http://www.nrc.gov/materials/fuel-cycle-fac/eagle-rock.html>. When you get to that web page, you will see a tabular listing of all the various parts of Rev. 2 of the license application, beginning with the parts of the Safety Analysis Report, Rev. 2. Scroll down to see the parts of Environmental Report, Rev.2; and web links to these are provided (i.e., click on the ADAMS Accession # (ML#) for each)..

I would like to point out that ER Rev. 2 is merely the original ER into which AREVA incorporated all the supplementary information it had provided to the NRC through approximately March/April 2010. I believe we already provided you with, or otherwise directed you to, all of the documentation relevant to ecology, but you are certainly free to look through what we have in the website. The supplementary sage grouse survey report that we directed you to in the attached email was provided by AREVA subsequent to, and therefore is not included in, ER Rev.2.

If you need additional assistance, please let me know.

Thanks,
Steve

Stephen Lemont, Ph.D.

Senior Environmental Project Manager
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Environmental Management Programs
Mail Stop: T-8F5
Washington, DC 20555-0001
Telephone: 301-415-5163
Fax: 301-415-5369
Email: Stephen.Lemont@nrc.gov

From: Hebdon, Lance [<mailto:lance.hebdon@idfg.idaho.gov>]
Sent: Wednesday, September 08, 2010 9:52 AM
To: Lemont, Stephen
Cc: Kiefer, Sharon
Subject: Eagle Rock Enrichment Facility

Stephen-
In reviewing the DEIS for the Eagle Rock Enrichment Facility I saw a reference to a

document cited as (AES, 2010) AREVA Enrichment Services, LLC. "Eagle Rock Enrichment Facility 4 Environmental Report, Rev. 2." Bethesda, Maryland. April.

Would you be able to send me an electronic copy of the report or give me a link where I can download it?

Thank you for your assistance,
Lance

Lance Hebdon
Inter-Governmental Policy Coordinator
Idaho Department of Fish and Game
208-287-2711
lance.hebdon@idfg.idaho.gov

The attachment referred to in this document is included in Section B.1 of Appendix B, directly preceding this document.

B.2 National Historic Preservation Act Consultation

June 17, 2009

Ms. Janet Gallimore, Executive Director
Idaho State Historical Society
2205 Old Penitentiary Road
Boise, Idaho 83712

SUBJECT: INITIATION OF THE NATIONAL HISTORIC PRESERVATION ACT SECTION 106
PROCESS FOR AREVA EAGLE ROCK ENRICHMENT FACILITY

Dear Ms. Gallimore:

On December 30, 2008, AREVA Enrichment Services (AES) submitted an environmental report (ER) to the U.S. Nuclear Regulatory Commission (NRC). The ER is one part of an application for a license to authorize construction, operation, and decommissioning of a proposed uranium enrichment facility. The NRC is in the initial stages of developing an Environmental Impact Statement (EIS) for the proposed facility to be located near Idaho Falls, Idaho in Bonneville County. The facility, if licensed, would use a gas centrifuge enrichment technology to enrich the isotope uranium-235 in uranium hexafluoride up to 5 percent by weight. The EIS that NRC is preparing will document the environmental impacts associated with the construction, operation, and decommissioning of the proposed facility.

The proposed AES parcel is approximately 1,700 hectares (4,200 acres). In November 2008, AES commissioned an archeological survey of the facility's footprint which involves approximately 381 hectares (941 acres) of the total parcel. The report is attached along with a map showing the area of potential effect, as it appears in the AES ER. As a result of the surveys, AES recorded a number of isolated finds and concluded that one find (MW004) was potentially eligible for inclusion in the National Register of Historic Places. AES proposes minimizing any adverse impacts through a mitigation plan for this find.

In the ER, AES indicated their submission of the archeological surveys to your office. As required by 36 CFR 800.4(a), the NRC is requesting the views of the State Historic Preservation Officer on any further actions necessary to identify historic properties that may be affected by the construction, operation, and decommissioning of the proposed facility, including whether find MW004 should be included in the National Register of Historic Places.

J. Gallimore

2

We intend to use the EIS process to comply with Section 106 of the National Historic Preservation Act of 1966, as described in 36 CFR Part 800.8. After assessing information you provide, we will determine any additional actions that are necessary to comply with the Section 106 consultation process. If you have any questions or comments, or need any additional information, please contact Gloria Kulesa of my staff on 301-415-5308.

Sincerely,

/RA/

Andrea Kock, Chief
Environmental Review Branch
Environmental Protection
and Performance Assessment Directorate
Division of Waste Management
and Environmental Protection
Office of Federal and State Materials
and Environmental Management Programs

Docket No.: 70-7015

Enclosure: Volume Report

September 16, 2009

Ms. Susan Pengilly
Deputy State Historic Preservation Officer
Idaho State Historical Society
2205 Old Penitentiary Road
Boise, Idaho 83712

SUBJECT: NOTIFICATION OF AN EXEMPTION REQUEST FROM U.S. NUCLEAR
REGULATORY COMMISSION'S (NRC) REGULATED ACTIONS SUBMITTED
BY AREVA ENRICHMENT SERVICES (AES)

Dear Ms. Pengilly:

On June 11, 2009, my staff sent a letter to the office of Idaho State Historical Society requesting input on identifying any cultural or historic properties that may be affected by the construction, operation and decommissioning of the proposed facility. We look forward to receiving your written feedback soon and will incorporate the details of your response within our environmental impact statement (EIS).

In addition, we want to communicate pertinent and new information to your office. On June 17, 2009, AREVA Enrichment Services (AES) requested an exemption that would allow them to commence certain activities prior to NRC's completion of its environmental review under Title 10 of the Code of Federal Regulations, Part 51 (10 CFR 51) and the Nuclear Regulatory Commission's issuance of a Materials License for the Eagle Rock Enrichment Facility under 10 CFR 70.

NRC's approval of the exemption would permit AES to undertake the following list of actions. These actions do not affect radiological health and safety or common defense and security. As such, NRC has determined that these activities do not require a license.

- Clearing, Grading and Erosion Control
- Excavation, Including Rock Blasting and Removal
- Construction of Storm Water Detention Pond, Highway Access and Site Roads
- Installation of Utilities, Storage Tanks and Fences
- Installation of Parking Areas, Construction Buildings, Offices, Warehouses and Guardhouses.

If approved, the exemption would allow AREVA to commence the above pre-construction activities before NRC completes its licensing determination. AREVA plans on performing this pre-construction work in September 2010. The approval to perform pre-construction does not equate to approval of a license to construct, operate and decommission a facility. AREVA assumes the risk of completing these activities and then not receiving a license to construct and operate the facility.

The pre-construction activities of both the environmental impacts above and construction of the facility will be considered in NRC's environmental impact statement which will be issued after pre-construction activities begin. We will continue to communicate with you regarding important issues for NRC to consider on assessing the environmental impacts of these pre-construction and construction activities.

NRC anticipates completing its review of the exemption request by mid December 2009. If approved, AES will supplement its Environmental Report to distinguish between the environmental impacts of the construction activities covered by the exemption and construction activities which will not be undertaken until after issuance of a license by the NRC. This supplement will allow NRC staff to consider the impacts of pre-construction in its cumulative impact analysis within the EIS.

Please respond by October 15, 2009 with any comments or concerns that you may have on this subject. If you have any questions or comments with regard to this request from AES, or need any additional information, please contact Mathews George of my staff on 301-415-7065.

Sincerely,

/RA/

Andrea Kock, Chief
Environmental Review Branch
Environmental Protection
and Performance Assessment Directorate
Division of Waste Management
and Environmental Protection
Office of Federal and State Materials
and Environmental Management Programs

Docket No.: 70-7015

February 17, 2010

Janet Gallimore
Executive Director and State Historic
Preservation Officer
Idaho State Historical Society
2205 Old Penitentiary Road
Boise, Idaho 83712

SUBJECT: CONTINUING CONSULTATION UNDER THE NATIONAL HISTORIC
PRESERVATION ACT SECTION 106 PROCESS FOR THE PROPOSED
AREVA EAGLE ROCK ENRICHMENT FACILITY

Dear Ms. Gallimore:

The U.S. Nuclear Regulatory Commission (NRC) previously contacted your office by letter dated June 17, 2009, informing you of the submittal by AREVA Enrichment Services LLC (AES) of an application to the NRC for a license to construct, operate and decommission a gas centrifuge uranium enrichment facility in Bonneville County, Idaho. The proposed facility, the Eagle Rock Enrichment Facility (EREF), would be located approximately 20 miles west of Idaho Falls. As discussed in our June 17, 2009 letter, NRC is developing an Environmental Impact Statement (EIS) for the proposed EREF. The purposes of the present letter are to inform you: (1) that the project scope has been modified to include the construction and operation of a 161-kilovolt (KV) electrical transmission line needed to power the proposed EREF; and (2) of a change to the Area of Potential Effect (APE) for the EREF site.

Transmission Line

On January 29, 2010, AES submitted supplemental information to NRC for the construction and operation of a proposed transmission line, an electrical substation, and substation upgrades. The submittal updates and supersedes AES' previous transmission line addendum dated December 4, 2009, (Supplemental Information, EREF Environmental Report, Appendix H, EREF 161-KV Transmission Line Project). A Cultural Resource Inventory report was included with the December 4, 2009, supplement. NRC understands that AES sent copies of both the December 4, 2009 and January 29, 2010, submittals to your office. The locations of the transmission line and substations are shown in AES' January 29, 2010, submittal. NRC's EIS for the proposed EREF will now include a discussion of the impacts associated with the construction and operation of the transmission line and associated substations. Likewise, our Section 106 consultation for the EREF project will expand to include the proposed transmission line right-of-way and other lands needed for this line and associated structures.

The new transmission line and associated structures would be located entirely on private land within Bonneville County. Rocky Mountain Power (RMP), a division of PacifiCorp, will be the builder, owner, and operator. The transmission line would originate from the existing RMP Bonneville Substation and extend in a general westward direction to the new point of service, the Twin Buttes Substation on the proposed EREF site. In AES' updated proposal, there will be no use of Bureau of Land Management and U.S. Department of Energy (Idaho National Laboratory) lands, as there was in AES' December 4, 2009, proposal.

Beginning at the Bonneville Substation, the proposed transmission line route is west along the county road (West 65 North Street) to the existing RMP Kettle Substation, a distance of approximately 14.5 kilometers (9 miles), continuing west to the eastern portion of the EREF site, a distance of approximately 1.2 kilometer (0.75 mile), then north within the EREF site to its northern end, then west and south to the new RMP Twin Buttes Substation, for a distance of approximately 6.4 kilometers (4 miles). The area being affected by the transmission line is approximately 84 hectares (208 acres).

As discussed above, as part of its December 4, 2009, supplement, AES commissioned an archeological survey of the APE associated with the transmission line and associated structures (see Cultural Resource Inventory). This survey, which identified nine sites that are recommended potentially eligible for inclusion on the National Register of Historic Places, encompassed a large area that included much of the area of the presently proposed transmission line shown in AES' January 29, 2010, submittal. However, to NRC's knowledge, none of the nine historic properties identified are within the presently proposed transmission line right-of-way. AES stated in its January 29, 2010, submittal that there are no cultural or historical resources along the proposed transmission line corridor.

EREF Project Site APE

Additionally, AES has indicated that the APE for the EREF project site has been modified. The original APE encompassed 240 hectares (597 acres). Based on an August 28, 2009, submission by AES to NRC, an additional 26 hectares (64 acres) was added to the main project APE, increasing the EREF project site APE to 265 hectares (656 acres). The additional acreage was surveyed by AES' archaeological contractor with no historic properties identified. NRC understands that AES provided your office with a copy of the report on this survey (Amendment to: A Class III Cultural Resource Inventory of the Proposed Eagle Rock Enrichment Facility, Bonneville County, Idaho, Western Cultural Resource Management, Inc., August 28, 2009).

If you have any questions regarding the project, or need additional information, please contact Stephen Lemont of my staff at 301-415-5163 or Stephen.Lemont@nrc.gov.

Sincerely,

/RA/

Andrea Kock, Chief
Environmental Review Branch
Environmental Protection
and Performance Assessment Directorate
Division of Waste Management
and Environmental Protection
Office of Federal and State Materials
and Environmental Management Programs

Docket No: 70-7015



Bruce M. Biwer
Environmental Systems Engineer
Radiological Health Risk Section

Environmental Science Division
Argonne National Laboratory
9700 South Cass Avenue, Bldg. 240
Argonne, IL 60439

1-630-252-5761 phone
1-630-252-4624 fax
bbiwer@anl.gov

April 16, 2010

Ms. Suzi Pengilly
Idaho State Historic Preservation Office
210 Main Street
Boise, ID 83702

Dear Ms. Pengilly,

Enclosed are copies of the additional documents that you indicated were needed by your office to conduct a review of the proposed AREVA Eagle Rock Enrichment Facility (EREF) in Bonneville County. The documents included are:

- 1) details of the proposed 161-kV transmission line required to power the EREF as provided in the February 18, 2010 submittal from AREVA Enrichment Services LLC (AES) to the U.S. Nuclear Regulatory Commission (NRC), also included are a set of higher resolution figures of the proposed transmission line corridor that were provided by AES under separate cover,
- 2) the MW004 treatment plan and the analysis of obsidian artifacts in the February 19, 2010 submittal from AES to the NRC (Enclosures 2 and 3, respectively, in that document), and
- 3) the report "AMMENDMENT TO: A CLASS III CULTURAL RESOURCE INVENTORY OF THE PROPOSED EAGLE ROCK ENRICHMENT FACILITY BONNEVILLE COUNTY, IDAHO" that details the survey of the additional 64 acres on the EREF property.

Please contact Steve Lemont at the NRC (301-415-5163 or stephen.lemont@nrc.gov) if you have any further questions.

Sincerely,

A handwritten signature in cursive script that reads "Bruce M. Biwer".

Bruce M. Biwer, Ph.D.
Environmental Science Division

cc: S. Lemont, NRC
D. O'Rourke, ANL
R. Van Lonkhuyzen, ANL



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Governor of Idaho

Janet L. Gallimore
Executive Director

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Archaeological Survey of Idaho
210 Main Street
Boise, Idaho 83702-7264
Office: (208) 334-3847
Fax: (208) 334-2775

Historical Museum and Education Programs
610 North Julia Davis Drive
Boise, Idaho 83702-7695
Office: (208) 334-2120
Fax: (208) 334-4059

Historic Preservation Office
210 Main Street
Boise, Idaho 83702-7264
Office: (208) 334-3861
Fax: (208) 334-2775

Old Penitentiary and Historic Sites
2445 Old Penitentiary Road
Boise, Idaho 83712-8254
Office: (208) 334-2844
Fax: (208) 334-3225
Statewide Sites
- Franklin Historic Site
- Pierce Courthouse
- Rock Creek Station & Stricker Homesite

Public Archives and Research Library
2205 Old Penitentiary Road
Boise, Idaho 83712-8250
Office: (208) 334-3356
Fax: (208) 334-3198
- Public Archives
- Research Library
- Oral History

North Idaho Office
112 W. Fourth Street, Suite 7
Moscow, ID 83843
Office: (208) 882-1540
Fax: (208) 882-1763

May 3, 2010

Stephen Lemont
Nuclear Regulatory Commission
Environmental Review Branch
U.S. Nuclear Regulatory Commission
Washington D.C., 20555-0001

RE: AREVA Eagle Rock Enrichment Facility, Bonneville County, Idaho

Dear Mr. Lemont:

Our office has received information on the expanded footprint, proposed 161 kV transmission line, and archaeological treatment plan for AREVA's proposed Eagle Rock Enrichment Facility in Bonneville County, Idaho. Our comments on each project component and associated document(s) are outlined below. We have also provided guidance on the next steps in the Section 106 review process.

1. **Expanded Footprint:** AREVA wishes to expand the originally proposed footprint for the enrichment facility by 64 acres. The expansion was surveyed by Western Cultural Resource Management and documented in a report dated August 28, 2009. Two sites and seven isolates were identified within the expansion area. We agree that sites AR-2 and AR-3 are not eligible for the National Register of Historic Places for the reasons stated in the report. Although not addressed in the report, we also recommend that the isolates (IF-19 through IF-25) are not eligible.

Before we can accept this report, however, we will need the following: 1) two copies of the report and site forms; and 2) maps showing the site locations attached to *each* site form. These requirements apply to this submission and any future archaeological reports and forms submitted to the Idaho SHPO. For backup and local reference, we send the second copy of the report and forms to the regional repository. In this case, we will send the second copy to the Museum of Natural History in Pocatello.

2. **Transmission Line:** We received a report and site forms completed by North Wind documenting archaeological survey of two proposed alternate routes for a transmission line to the planned Eagle Rock facility.



The Idaho State Historical Society is an Equal Opportunity Employer.

Stephen Lemont
Page 2
May 3, 2010

We found this report and the project proposal difficult to follow. To remedy this, we first recommend that the report be reformatted to discuss each alternate route separately with archaeological findings and potential effects described by route. The alternatives should be clearly marked on maps in the report.

As the preferred alternative is now known, it too can be shown on a map, and its specific findings and effects discussed in the report. It should be clearly pointed out that no federal land is involved in the preferred alternative, if that is still the case.

The environmental document presents good maps that should be included in the revised archaeological report. Also, the aerials recently sent showing the final surveyed areas (Figure 1, Sheet 1; Figure 1, Sheet 2, etc.) should be included in the revised report.

We will need to receive two copies of the revised report and two copies of each site form. A map should be attached to each site form. It appears that we do not have maps for isolate R1 and for archaeological sites R3 and R7. Archaeological site forms are filed separately from the IHSI forms, so we need a map attached to each.

What is NNR1? It appears on figure 13, but we cannot find any other reference to it.

3. Treatment of Site MW004 and Analysis of Obsidian Artifacts:

We support the proposed treatment of site MW004. We should receive two copies of the report that documents the investigations along with two copies of photographs and other appendices or attachments.

We appreciate receiving the letter report on the XRF analysis.

4. **Next steps:** When the project design is finalized and all of the archaeological survey and site evaluations have been completed, the NRC should draft a Memorandum of Agreement (MOA) that outlines mitigation measures. The agreed upon Treatment Plan should be referenced as planned mitigation, and the XRF can be listed as completed mitigation. If monitoring is required, that too should be described in the MOA.

We will be happy to review a draft of the MOA. NRC also needs to notify the Advisory Council on Historic Preservation of the adverse effect and determine the Council's participation. If the Council chooses to not participate, NRC and our office will conclude the agreement with Argonne (and/or AREVA) as concurring parties. Mitigation documentation will then be sent to our office for review and acceptance.

Stephen Lemont
Page 3
May 3, 2010

We appreciate your cooperation. If you have any questions, please do not hesitate to call me at 208-334-3847, ext. 107.

Sincerely,

Susan Pengilly
Deputy SHPO and
Compliance Coordinator

cc: Bruce M. Biber, Ph.D., Environmental Science Division, Argonne National Laboratory

From: [Suzi Pengilly](#)
To: [Lemont, Stephen](#)
Subject: RE: NRC Letter to ACHP re: Adverse Effect to Historic Property and MOA for AREVA Eagle Rock Enrichment Facility, Bonneville County, Idaho
Date: Wednesday, September 01, 2010 10:11:59 AM

The letter looks very thorough and complete. IT should be all they need, and they likely won't want to be involved, but you never know.

Thanks,
Suzi.

From: Lemont, Stephen [mailto:Stephen.Lemont@nrc.gov]
Sent: Wednesday, September 01, 2010 9:09 AM
To: Suzi Pengilly
Cc: Biver, Bruce M.; danorourke@anl.gov; Van Lonkhuyzen, Robert A.
Subject: NRC Letter to ACHP re: Adverse Effect to Historic Property and MOA for AREVA Eagle Rock Enrichment Facility, Bonneville County, Idaho

Hi, Suzi. Now that we've gotten past the completion of our Draft EIS and public meetings, the NRC staff has been able to prepare and send the subject letter to ACHP. You will be receiving a copy in the mail, but I have attached an advance copy for your reference. NRC is now in the process of drafting the MOA discussed in the letter.

By the way, thank you for your comments on our Draft EIS.

Regards,
Steve

Stephen Lemont, Ph.D.

Senior Environmental Project Manager
U. S. Nuclear Regulatory Commission
Office of Federal and State Materials and
Environmental Management Programs
Mail Stop: T-8F5
Washington, DC 20555-0001
Telephone: 301-415-5163
Fax: 301-415-5369
Email: Stephen.Lemont@nrc.gov

The attachment referred to in this document is provided later in Section B.2 of Appendix B. It is the letter to Mr. Reid Nelson, Director, Federal Agency Programs, Advisory Council on Historic Preservation, dated August 31, 2010.

Biwer, Bruce M.

From: Lemont, Stephen [Stephen.Lemont@nrc.gov]
Sent: Wednesday, September 29, 2010 12:21 PM
To: Suzi Pengilly
Subject: RE: Update on Section 106 Issues for the Proposed AREVA Eagle Rock Enrichment Facility Project in Bonneville County 092910

Suzi,

Do you still also need two copies of the expanded footprint report, including the site forms and maps?

Steve

Stephen Lemont, Ph.D.

Senior Environmental Project Manager
U. S. Nuclear Regulatory Commission
Office of Federal and State Materials and
Environmental Management Programs
Mail Stop: T-8F5
Washington, DC 20555-0001
Telephone: 301-415-5163
Fax: 301-415-5369
Email: Stephen.Lemont@nrc.gov

From: Suzi Pengilly [mailto:Suzi.Pengilly@ishs.idaho.gov]
Sent: Wednesday, September 29, 2010 12:21 PM
To: Lemont, Stephen
Subject: RE: Update on Section 106 Issues for the Proposed AREVA Eagle Rock Enrichment Facility Project in Bonneville County

Stephen,

Thank you for the update. With regard to the transmission line report, the only version that we have is dated December 4, 2009. Therefore, we still need two copies of the revised version.

Thanks,
Suzi.

From: Lemont, Stephen [mailto:Stephen.Lemont@nrc.gov]
Sent: Monday, September 27, 2010 10:12 AM
To: Suzi Pengilly
Cc: 'Biwer, Bruce M.'; O'Rourke, Daniel J.; Van Lonkhuizen, Robert A.
Subject: Update on Section 106 Issues for the Proposed AREVA Eagle Rock Enrichment Facility Project in Bonneville County

Suzi,

The purpose of this email is to follow up on your letter to me dated May 3, 2010 (see attached) and in so doing, provide you with an update on Section 106 activities by the U.S. Nuclear Regulatory Commission (NRC) for the proposed AREVA Eagle Rock Enrichment Facility (EREF) project. Also, I want to thank you for your July 22, 2010 comments on the Draft Environmental Impact Statement (EIS), which indicated your finding that the Historic and Cultural Properties sections accurately reflect the identification efforts conducted to date under Section 106 of the National Historic Preservation Act.

The discussion below follows the order of topics addressed in your May 3, 2010 letter, and includes some questions and issues to which I need your response:

1. **Expanded Footprint:** You requested two (2) copies of the August 28, 2009 report by Western Cultural Resource Management, including site forms and maps showing the site locations attached to *each* site form. I believe you are referring to the report, "Amendment to: A Class III Cultural Resource Inventory of the Proposed Eagle Rock Enrichment Facility, Bonneville County, Idaho," Prepared by Western Cultural Resource Management, Inc., August 28, 2009. The NRC does not have the requested maps so I plan to ask AREVA to send you the two copies of the report and site forms with the maps included. However, before I do that, please let me know if you still need these items.
2. **Transmission Line:** You also requested two (2) copies of the report on the transmission line portion of the project, including site forms, maps, and clarifications of various issues. The NRC does not have some of the requested items so I plan to ask AREVA to send you the two copies of the report with the additional items and any necessary clarifications included. However, before I do that, please note and/or respond to the following:
 - a. First, I want to point out that it appears from statements in your letter that you were not reviewing the most recent version of the cultural resource survey report for the proposed transmission line route. In January 2010, AREVA decided to drop and no longer consider the proposed transmission line coming from west of the proposed EREF site, which would have been located partially on lands of the Bureau of Land Management and Idaho National Laboratory. Thus, the proposed transmission line coming from the west is no longer part of the proposed EREF project. Accordingly, it was not addressed in the NRC's Draft EIS.
 - b. AREVA is currently proposing a single transmission line coming from the Bonneville Substation that is located east of the proposed EREF site, and has selected a route for that line that involves no Federal land. The archaeological and historical survey report on this single, preferred route was prepared by North Wind, Inc., and is dated January 21, 2010 ("Archaeological and Historic Survey Report, Archaeological Survey of Idaho. In: *Eagle Rock Enrichment Facility Transmission Line*," NWI 10247.001, Prepared by North Wind, Inc., January 21, 2010.). I thought AREVA had sent a copy of that report to your office.
 - c. Please let me know if you still need the two copies of North Wind's January 21, 2010 archaeological and historical survey report on the transmission line portion of the project, including site forms, maps, and clarifications (as necessary) of various issues.
3. **Treatment of Site MW004 and Analysis of Obsidian Artifacts:** Thank you for your support and acceptance of the proposed treatment of site MW004 and of the letter report of the XRF analysis of obsidian artifacts. The NRC has asked AREVA to provide your office with two copies of the requested report that documents the investigations associated with the treatment of site MW004, along with two copies of photographs and other appendices or attachments.
4. **Next steps:** As you know, in a letter dated August 31, 2010, the NRC notified the Advisory Council on Historic Preservation (ACHP) of the adverse effect on site MW004 and invited ACP to participate in the Section 106 consultation for the project. As I believe you also know, in a letter dated September 20, 2010, the ACHP responded that they do not believe that their participation in the consultation is needed at this time.

Also, the NRC is in the process of preparing a draft Memorandum of Agreement (MOA) for the project. I believe I mentioned during our conference call on July 19, 2010, that our legal counsel had developed a rough draft of the MOA. That rough draft is currently being revised by our legal counsel, after which it will be reviewed by NRC management. We will then send the MOA to your office and to the other parties for review. Please note that Argonne would not be a party to the MOA as they are serving only as consultant to the NRC for preparation of the EIS.

We also discussed during our July 19, 2010 conference call that The Shoshone-Bannock (S-B) Tribes would not be a party to the MOA because they have shown little interest in the project. However, based on a meeting that NRC staff had with the S-B Tribes on August 11, 2010 (the day before our public meeting on the Draft EIS in Idaho Falls) and on comments received from the tribes on the Draft EIS, the NRC is now considering inviting the S-B Tribes to be a concurring party on the MOA.

I look forward to receiving your responses to the questions and issues raised above. Please contact me if you have any questions or need additional information.

Thanks,
Steve

Stephen Lemont, Ph.D.

Senior Environmental Project Manager
U. S. Nuclear Regulatory Commission
Office of Federal and State Materials and
Environmental Management Programs
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Telephone: 301-415-5163
Fax: 301-415-5369
Email: Stephen.Lemont@nrc.gov

The attachment referred to in this document is provided earlier in Section B.2 of Appendix B. It is the letter to Stephen Lemont, Nuclear Regulatory Commission, dated May 3, 2010.

Biwer, Bruce M.

From: Suzi Pengilly [Suzi.Pengilly@ishs.idaho.gov]
Sent: Thursday, October 14, 2010 9:38 AM
To: Lemont, Stephen
Cc: Biwer, Bruce M.; O'Rourke, Daniel J.; Van Lonkhuyzen, Robert A.
Subject: RE: Further Update on Section 106 Activities for the AREVA Eagle Rock Enrichment Facility Project 101410

Thank you for the update--
suzi.

From: Lemont, Stephen [Stephen.Lemont@nrc.gov]
Sent: Wednesday, October 13, 2010 2:20 PM
To: Suzi Pengilly
Cc: Biwer, Bruce M.; O'Rourke, Daniel J.; Van Lonkhuyzen, Robert A.
Subject: Further Update on Section 106 Activities for the AREVA Eagle Rock Enrichment Facility Project

Hi, Suzi. This is to bring you up to date on the latest Section 106 activities for the subject project:

- As you may already know, AREVA's consultant began work last week on the mitigation of site MW006. It is my understanding that they are coordinating with Ken Reid of your office regarding the progress and interim findings of the mitigation work. I have asked AREVA to have their consultant prepare and submit a report on the mitigation, in accordance with the request in your May 3, 2010 letter; and AREVA has indicated their intention to do so.
- On October 8, 2010, the NRC sent a letter to The Shoshone-Bannock Tribes, inviting them to be a concurring party on the MOA. A copy of that letter is attached, although you will also be receiving a copy in the mail. On October 8, I gave Willie Preacher of the Tribes advance notice of this letter and what it is about.
- The NRC's attorneys are continuing to work on the draft MOA for the project.
- On October 11, 2010, I was informed by AREVA that the "expanded footprint" and "transmission line" reports and associated information requested in your May 3, 2010 letter were mailed out on that day. I had requested that they send the reports directly to you, but please keep on the lookout for them just in case they didn't. Please contact me if you don't receive the reports in the very near future. Also, if after you receive the reports you find that you have any questions or need additional information, please let me know. We look forward to receiving your comments on those reports.

Thanks,
Steve

Stephen Lemont, Ph.D.

Senior Environmental Project Manager
U. S. Nuclear Regulatory Commission
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Telephone: 301-415-5163
Fax: 301-415-5369
Email: Stephen.Lemont@nrc.gov

The attachment referred to in this document is provided later in Section B.2 of Appendix B. It is the letter to Chairman Small, the Shoshone-Bannock Tribes, dated October 8, 2010.

Biwer, Bruce M.

From: Suzi Pengilly [Suzi.Pengilly@ishs.idaho.gov]
Sent: Monday, October 18, 2010 1:10 PM
To: Lemont, Stephen
Cc: Biwer, Bruce M.; O'Rourke, Daniel J.; Van Lonkhuyzen, Robert A.
Subject: RE: Further Update on Section 106 Activities for the AREVA Eagle Rock Enrichment Facility Project 101810

I received the reports today, but have not looked at them. I will let you know if anything is missing.

From: Lemont, Stephen [<mailto:Stephen.Lemont@nrc.gov>]
Sent: Wednesday, October 13, 2010 2:20 PM
To: Suzi Pengilly
Cc: Biwer, Bruce M.; O'Rourke, Daniel J.; Van Lonkhuyzen, Robert A.
Subject: Further Update on Section 106 Activities for the AREVA Eagle Rock Enrichment Facility Project

Hi, Suzi. This is to bring you up to date on the latest Section 106 activities for the subject project:

- As you may already know, AREVA's consultant began work last week on the mitigation of site MW006. It is my understanding that they are coordinating with Ken Reid of your office regarding the progress and interim findings of the mitigation work. I have asked AREVA to have their consultant prepare and submit a report on the mitigation, in accordance with the request in your May 3, 2010 letter; and AREVA has indicated their intention to do so.
- On October 8, 2010, the NRC sent a letter to The Shoshone-Bannock Tribes, inviting them to be a concurring party on the MOA. A copy of that letter is attached, although you will also be receiving a copy in the mail. On October 8, I gave Willie Preacher of the Tribes advance notice of this letter and what it is about.
- The NRC's attorneys are continuing to work on the draft MOA for the project.
- On October 11, 2010, I was informed by AREVA that the "expanded footprint" and "transmission line" reports and associated information requested in your May 3, 2010 letter were mailed out on that day. I had requested that they send the reports directly to you, but please keep on the lookout for them just in case they didn't. Please contact me if you don't receive the reports in the very near future. Also, if after you receive the reports you find that you have any questions or need additional information, please let me know. We look forward to receiving your comments on those reports.

Thanks,
Steve

Stephen Lemont, Ph.D.

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Office of Federal and State Materials and
Environmental Management Programs
Mail Stop: T-8F5
Washington, DC 20555-0001
Telephone: 301-415-5163
Fax: 301-415-5369
Email: Stephen.Lemont@nrc.gov

The attachment referred to in this document is provided later in Section B.2 of Appendix B. It is the letter to Chairman Small, the Shoshone-Bannock Tribes, dated October 8, 2010.

From: Lemont, Stephen [mailto:Stephen.Lemont@nrc.gov]
Sent: Wednesday, January 26, 2011 10:01 AM
To: Suzi Pengilly
Cc: Biwer, Bruce M.; O'Rourke, Daniel J.; Van Lonkhuyzen, Robert A.
Subject: Section 106 Consultation Update and Questions - AREVA Eagle Rock Enrichment Facility

Suzi,

This is to provide you with an update on the U.S. Nuclear Regulatory Commission's (NRC's) Section 106 consultation efforts and activities related to the proposed AREVA Eagle Rock Enrichment Facility (EREF) project in Bonneville County, and to ask you some questions regarding the process.

UPDATE

Following is an update on recent Section 106 efforts and activities for the subject project:

- On December 22, 2010, the Shoshone-Bannock Tribes accepted the NRC's invitation to be a concurring party on the Memorandum of Agreement (MOA) for the proposed EREF project.
- The NRC has developed a draft MOA that is currently undergoing internal review by our management and legal counsel. When that review is complete, which will be in the near term, it will be distributed by the NRC for review and comment, to the Idaho State Historic Preservation Office, AREVA, and the Shoshone-Bannock Tribes.
- The NRC is currently working on completing the Final Environmental Impact Statement (EIS) for the project, and will provide you with copies when it is completed. The Final EIS will provide updated information on impacts to historic and cultural resources and on associated mitigation, and will discuss that an MOA is being developed.

QUESTIONS

Please respond to the following questions related to the Section 106 process for the proposed EREF project:

1. Regarding the two hard copies of the "expanded footprint" and "transmission line" reports that AREVA sent to you in October 2010, you had indicated in earlier correspondence that you received those reports. Does your office have any comments on those reports, or are they acceptable as is?
2. AES provided other cultural resources survey reports and related documents, these are listed in Attachment A to this email (items 2 and 3 in the attachment are the "expanded footprint" and "transmission line" reports, respectively.) I believe that you are aware of, and have reviewed and accepted, all of the documents listed in Attachment A. However, do you still need two hard copies of, and/or do you have any concerns with, any of these reports.
3. I understand from AREVA that their archaeological consultant, Western Cultural Resource Management, Inc. (WCRM) was in contact with Dr. Kenneth Reid of your office throughout their professional excavation and data recovery activities at site MW004, and that WCRM sent Dr. Reid the attached letter report dated November 17, 2010 (Attachment B). In the first paragraph of your attached November 26, 2010 letter

to AREVA (Attachment C), you referenced a "data recovery report" that Dr. Reid reviewed and accepted for this project. With regard to that data recovery report:

- a. Is that report the WCRM letter report dated November 17, 2010 (i.e., Attachment B)?
- b. Did you receive from AREVA the two hard copies of that report that you requested in your November 26, 2010 letter?
- c. Does your statement in your November 26, 2010 letter regarding Dr. Reid's acceptance of the data recovery report constitute your office's approval that the site MW004 mitigation has been completed to your office's satisfaction?
- d. If Dr. Reid does, in fact, consider the site MW004 mitigation to be complete, can you please send me a letter to that effect?

I look forward to hearing back from you on this update and on receiving your responses to my questions. If you need additional information, please let me know.

Thanks,
Steve

Stephen Lemont, Ph.D.

Senior Environmental Project Manager
U. S. Nuclear Regulatory Commission
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Email: Stephen.Lemont@nrc.gov

Attachment A
Cultural Resource Reports and Documents Provided by AREVA
for the Eagle Rock Enrichment Facility Project

1. A Class III Cultural Resource Inventory of the Proposed Eagle Rock Enrichment Facility, Bonneville County, Idaho (Volume I: Report and Volume II: Cultural Resource Documentation). Prepared by Western Cultural Resource Management, Inc. November 21, 2008.
2. Amendment to: A Class III Cultural Resource Inventory of the Proposed Eagle Rock Enrichment Facility, Bonneville County, Idaho. Prepared by Western Cultural Resource Management, Inc. August 28, 2009. **NOTE: This is the “expanded footprint” report.**
3. Archaeological and Historic Survey Report, Archaeological Survey of Idaho. In: *Eagle Rock Enrichment Facility Transmission Line*. NWI 10247.001. Prepared by North Wind, Inc. January 21, 2010. **NOTE: This is the “transmission line” report.**
4. Letter to U.S. Nuclear Regulatory Commission from Jim A. Kay, Licensing Manager, AREVA Enrichment Services LLC. Subject: Response to Request for Additional Information - AREVA Enrichment Services LLC Environmental Report for the Eagle Rock Enrichment Facility - RAI 6.a. *Unanticipated Discovery Plan*. September 18, 2009
5. A Treatment Plan for Historic Site MW004 in the Area of the Proposed Eagle Rock Enrichment Facility, Bonneville County, Idaho. Prepared by Western Cultural Resource Management, Inc. January 28, 2010. (This includes the obsidian artifacts report at the end.)

Attachment B

WCRM

WESTERN CULTURAL RESOURCE MANAGEMENT, INC.

November 17, 2010

Kenneth Reid, Ph.D.
State Archaeologist
Deputy State Historic Preservation Officer
Idaho State Historical Society
210 Main Street
Boise, ID 83702

Dear Dr. Reid,

This letter is to summarize Western Cultural Resource Management's data recovery activities for the Eagle Rock Enrichment Facility Project located in Bonneville County, Idaho (west of Idaho Falls) and to request a notice-to-proceed for our client, AREVA Enrichment Services, LLC (AES). Data recovery was conducted by WCRM from October 5 to November 8, 2010, and is now complete.

Project Background

AES is preparing an application to the U.S. Nuclear Regulatory Commission (NRC) to construct, operate, and decommission a gas centrifuge uranium enrichment plant called the Eagle Rock Enrichment Facility in Bonneville County. WCRM conducted cultural resource inventories of the proposed project area in 2008 and 2009, surveying a total of 1,005 acres and identifying and recording 13 new archaeological sites and 25 isolated finds (Ringhoff et al. 2008; Estes and Raley 2009). One of the sites, MW04 (a historic homestead with a small prehistoric lithic scatter), was determined eligible to the National Register of Historic Places by the NRC under 36 CFR part 60.4, Criteria A and D. The State Historic Preservation Office (SHPO) concurred with this determination in a letter dated September 29, 2009.

WCRM prepared a data recovery plan detailing treatment recommendations to mitigate adverse impacts of the proposed facility to the eligible archaeological site, MW04 (Ringhoff and Stoner 2010). This plan also includes the collection of all known obsidian bifacial tools within the project so that they can be chemically sourced through x-ray fluorescence analysis, per the recommendation of the Idaho SHPO.

Summary of Recommended and Completed Treatment

Table 1 shows the recommended treatment described in the data recovery plan as well as what activities took place during the data recovery effort. Recommended treatment for site MW04 included mapping the entire site with a total station transit, collecting a representative sample of surface historic artifacts, excavating up to six 1 x 1 m units in Feature 1 (a dugout), doing a Class III+ artifact inventory of Feature 8 (a historic refuse concentration) as well as excavating one 1 x

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1 m unit in that feature, and excavating one 1 x 1 m unit in Feature 7 (a possible privy). Additionally, 11 obsidian bifacial tools from multiple sites and isolated finds in the project area were to be collected.

All treatment proposed in the data recovery plan was completed or attempted. Not all the obsidian tools could be relocated, but all other activities were completed at least to the extent described in the treatment plan. Additionally, the treatment of Feature 1 required more work than originally proposed due to the unexpected discovery of a wood floor. While only six excavation units were initially recommended for that feature, 27 units were ultimately excavated in order to expose the extent of the wood floor (see Figures 1-4).

Table 1. Recommended and Completed Treatment of Cultural Resources for the Eagle Rock Enrichment Facility Project

Location	Recommended Treatment	Completed Treatment
MW04 - General site	Detailed mapping of entire site using total station transit.	Detailed mapping of entire site using total station transit.
MW04 - General site	Collection of a representative sample of diagnostic historic artifacts.	Collection of a representative sample of diagnostic historic artifacts.
MW04 - Feature 1 (dugout)	Linear series of up to six 1 x 1 m units to be excavated by hand, with at least one placed outside the feature.	Grid of 27, 1 x 1 m units (including one placed outside the feature) excavated by hand. Initial 6 units placed in a line along middle of feature, with additional units added as necessary to expose entire extent of feature's wood floor (an unexpected discovery).
MW04 - Feature 7 (possible privy)	One 1 x 1 m unit placed over feature and excavated by hand to a sufficient depth to determine if feature is cultural.	One 1 x 1 m unit placed over feature and excavated by hand in ten arbitrary 10 cm deep levels, with a 1.25 m deep auger test placed at the bottom. No cultural materials were revealed.
MW04 - Feature 8 (historic refuse concentration)	Set up a surface grid of 1 x 1 m units to cover entire feature and do a Class III+ artifact inventory for each unit. Collect a representative surface sample of the feature's artifacts. Excavate by hand one 1 x 1 m unit to determine presence or absence of subsurface materials.	Set up a surface grid of twelve 1 x 1 m units to cover entire feature and did a Class III+ artifact inventory for each unit. Collected a representative surface sample of the feature's artifacts. Excavated by hand one 1 x 1 m unit to determine presence or absence of subsurface materials; no subsurface cultural materials were identified.
Multiple sites and IFs throughout the area previously inventoried by WCRM	Collect 11 obsidian bifacial tools.	Collected 4 of the 11 known obsidian bifacial tools; 7 could not be relocated. One previously unidentified tool was also found and collected, bringing the total number of obsidian tools collected up to 5.

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At this time, field work related to the treatment of cultural resources related to this project is complete. WCRM is preparing a detailed final report that will contain discussion and analysis of the results of the data recovery. We respectfully request that a notice-to-proceed be granted to the project proponent, AES.

If you have any questions or comments, feel free to call me (775-358-9003).

Sincerely,



Jennifer Sigler, M.A., RPA
Project Manager
WCRM, Inc.

Jim Kay (AES)
Stacy Thomson (Areva NP)
Tom Lennon (WCRM)

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Figure 1. Feature 1 during excavation, with bed frame on wood floor of dugout. View facing southwest.



Figure 2. Wood floor of dugout (Feature 1) exposed in its entirety. View facing south.

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Figure 3. Wood floor of dugout (Feature 1) exposed in its entirety. View facing west.



Figure 4. Feature 1 with all excavation completed. View facing east.

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NEVADA 50 FREEPORT BLVD., SUITE 15, SPARKS, NV 89431 775 358-9003 FAX 775 358-1387

References Cited

Estes, Mark and Jaclyn Raley

- 2009 *Amendment To: A Class III Cultural Resource Inventory of the Proposed Eagle Rock Enrichment Facility, Bonneville County, Idaho.* Prepared by Western Cultural Resource Management, Inc., Sparks, Nevada for AREVA Enrichment Services, LLC, Bethesda, Maryland.

Ringhoff, Mary and Edward J. Stoner

- 2010 *A Treatment Plan for Historic Site MW04 in the Area of the Proposed Eagle Rock Enrichment Facility, Bonneville County, Idaho.* Prepared by Western Cultural Resource Management, Inc., Sparks, Nevada for AREVA Enrichment Services, LLC, Bethesda, Maryland.

Ringhoff, Mary, Edward J. Stoner, Collette Chambellan, and Steve Mehls

- 2008 *A Class III Cultural Resource Inventory of the Proposed Eagle Rock Enrichment Facility, Bonneville County, Idaho.* Prepared by Western Cultural Resource Management, Inc., Sparks, Nevada for AREVA Enrichment Services, LLC, Bethesda, Maryland.

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Attachment C



"The History and Preservation People"

Our mission: to educate through the identification, preservation, and interpretation of Idaho's cultural heritage.

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C.L. "Butch" Otter
Governor of Idaho

Janet L. Gallimore
Executive Director

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Historic Preservation Office
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Research Library
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Fax: (208) 334-3198

Oral History
Office: (208) 334-3863
Fax: (208) 334-3198

November 26, 2010

James A. Kay
Licensing Manager
AREVA
Solomon Pond Park
400 Donald Lynch Boulevard
Marlborough MA 01752

RE: Geotechnical Borings at the Propose Twin Buttes Substation within Cultural Resource Site 10BV246 (MW004), Eagle Rock Enrichment Facility, Bonneville County, Idaho

Dear Mr. Kay:

Thank you for requesting our views on geotechnical drilling within the boundaries of site 10BV246 (MW004) for the proposed Twin Buttes Substation. While Dr. Reid did review and accept the data recovery report for this project, *we will need two hard copies of the report sent to us in the mail. We do not accept reports via email.*

With this said, we agree that you can proceed with the geotechnical drilling at this location. As you know, however, we will need to have a fully signed Memorandum of Agreement from the Nuclear Regulatory Commission before construction of the facility can begin.

We appreciate your cooperation. If you have any questions, please feel free to contact me at 208-334-3847, ext. 107.

Sincerely,

Susan Pengilly
Deputy SHPO and
Compliance Coordinator

Cc: Stephen Lemont, NRC



The Idaho State Historical Society is an Equal Opportunity Employer.

August 31, 2010

Mr. Reid Nelson
Director, Federal Agency Programs
Advisory Council on Historic Preservation
Old Post Office Building
1100 Pennsylvania Avenue, Suite 803
Washington, DC 20004

SUBJECT: NOTIFICATION OF ADVERSE EFFECT TO A HISTORIC PROPERTY AND
ASSOCIATED MEMORANDUM OF AGREEMENT FOR PROPOSED AREVA
ENRICHMENT SERVICES LLC EAGLE ROCK ENRICHMENT FACILITY
PROJECT IN BONNEVILLE COUNTY, IDAHO

Dear Mr. Nelson:

With this letter, in accordance with 36 CFR 800.6(a)(1), the U.S. Nuclear Regulatory Commission (NRC) is notifying the Advisory Council on Historic Preservation (ACHP) of an adverse effect to site MW004 (John Leopard Homestead), as a result of the proposed AREVA Enrichment Services LLC (AES) Eagle Rock Enrichment Facility (EREF) project in Bonneville County, Idaho. The John Leopard Homestead is a *National Register of Historic Places* (NRHP)-eligible site. The NRC is drafting a Memorandum of Agreement (MOA) regarding the mitigation of the adverse effect to the John Leopard Homestead.

For your reference, this letter includes background on the NRC's activities pursuant to Section 106 of the *National Historic Preservation Act of 1966*, as amended (NHPA) to date, as well as a summary of the cultural resource information contained in the Draft Environmental Impact Statement (EIS) (NUREG-1945) for the proposed EREF. A copy of the EREF Draft EIS was provided to you by the NRC with a letter dated July 14, 2010 (Enclosure 1). In addition, the Draft EIS is available through the NRC's *Agencywide Documents Access and Management System* (ADAMS), at <http://www.nrc.gov/reading-rm/adams.html>. From this website, enter the Accession Number for the Draft EIS, ML101890384. The Draft EIS also may be accessed on the internet at <http://webwork.nrc.gov:300/reading-rm/doc-collections/nuregs/staff/sr1945/>.

Pursuant to 36 CFR 800.6(a)(1), the NRC staff invites the ACHP to participate in the NHPA Section 106 consultation for this project and requests your response within 15 calendar days of receipt of this letter and enclosures.

BACKGROUND

The NRC staff is reviewing an application submitted by AES for a license to construct, operate, and decommission a uranium enrichment facility, the proposed EREF, near Idaho Falls in Bonneville County, Idaho. AES submitted the original license application to the NRC on December 30, 2008. AES proposes to locate the facility in Bonneville County, Idaho, approximately 32 kilometers (20 miles) west of Idaho Falls. Revisions to the license application were submitted on April 23, 2009 (Revision 1), and April 30, 2010 (Revision 2). The proposed EREF, if licensed, would use a gas centrifuge process to enrich uranium-235 isotope found in natural uranium to concentrations up to 5 percent by weight. The enriched uranium would be

used to manufacture nuclear fuel for commercial nuclear power reactors. As part of the review of the application, the NRC has conducted an environmental review and prepared a Draft EIS, which includes an analysis of relevant environmental issues, including potential impacts on historic and cultural resources, and documents the NRC staff's preliminary determination regarding the environmental impacts from the preconstruction (e.g., site preparation), construction, operation, and decommissioning of the proposed EREF. The NRC is the lead Federal agency, in accordance with 36 CFR 800.1(a).

Note that many of the activities required to build a uranium enrichment facility (e.g., site clearing and grading, excavation, erection of fences, erection of support buildings) do not fall within the NRC's regulatory authority and, therefore, are not "construction" as defined by the NRC (see 10 CFR 51.4). Such activities are referred to as "preconstruction" activities in 10 CFR 51.45(c).

SECTION 106 CONSULTATION

By letter dated June 17, 2009 (Enclosure 2), the NRC staff initiated consultation under Section 106 of the NHPA with the Idaho State Historic Preservation Office (ID SHPO) concerning the proposed EREF project. Also, by the letter dated June 17, 2009 (Enclosure 2), and a supplemental letter dated February 17, 2010 (Enclosure 3), the NRC staff notified the ID SHPO that it will comply with its obligations under Section 106 of the NHPA, using the process set forth in 36 CFR 800.8(c). Pursuant to 36 CFR 800.8(c), the NRC staff is using the preparation of the EIS required by the *National Environmental Policy Act of 1969*, as amended (NEPA), to comply with its obligations under Section 106 of the NHPA. The NRC staff is using 36 CFR 800.8(c) in lieu of the procedures set forth in 36 CFR 800.3 through 36 CFR 800.6. As indicated below, consultation with the ID SHPO is ongoing.

In letters dated July 29, 2009 (Enclosure 4), and February 19, 2010 (Enclosure 5), the NRC staff also contacted the Shoshone-Bannock Tribes, identified as having potential interest in the proposed undertaking. To date, the Shoshone-Bannock Tribes have not responded to our consultation letters.

DRAFT EIS PRELIMINARY FINDINGS

To evaluate the potential impacts to historic and cultural resources resulting from the proposed EREF project, the NRC staff visited the proposed EREF site in June 2009, reviewed cultural resources survey reports prepared by AES's archaeological contractors, and conducted an independent historic and cultural resources records review. Preliminary findings regarding historical and cultural resources are summarized below and further discussed in the Draft EIS, Sections 3.3, 4.2.2, 4.2.16.2, and 4.3.2.

NOTE: Enclosures 6, 7, 10 and 12 identified below contain sensitive information and are withheld from public disclosure.

Proposed EREF Project Site

In the Draft EIS, the NRC staff presented its determination that the Area of Potential Effect (APE) for the NHPA Section 106 review of the proposed EREF project site is the 240-hectare (592-acre) portion of the proposed site that would be directly affected by preconstruction, construction, and operations activities. Two archaeological surveys have been undertaken by

an AES archaeological contractor for the proposed project site (Enclosures 6 and 7). The contractor directly examined 407 hectares (1005 acres) of the proposed AES property, within which the 240-hectare (592 acre) APE is included. The acreage surveyed included additional areas for expansion outside the presently proposed preconstruction, construction, and operations areas, which are no longer deemed necessary by AES for the proposed project.

Thirteen archaeological sites and 24 isolated finds were identified within the APE of the proposed EREF project site. Isolated finds are isolated occurrences of cultural resource material that are not associated with subsurface remains and are not considered archaeological sites. Three of the archaeological sites were prehistoric in age, six were from the historic era, and four contained evidence from both the historic and prehistoric periods. The prehistoric sites consisted of stone tools or evidence of stone tool manufacture. The historic sites were primarily historic trash scatters consisting of cans and glass. None of the isolated finds are considered eligible for listing on the NRHP. On the basis of the survey results, nine of the sites were recommended not eligible for listing on the NRHP. Site MW004, the John Leopard Homestead, is recommended eligible for listing on the NRHP for its potential to provide information on the practices of historic era farmers in the region. Several other sites of this type have been previously identified on Idaho National Laboratory property north of the proposed EREF site (see Enclosure 8), so removal of all sites of this type from the region is unlikely. Site MW004 consists of several structural remains including a cistern, privy and historic dugout house foundation. AES's archaeological contractor conducted additional research for the three other sites found during the survey and found that these sites lacked sufficient information to be considered significant (see Enclosure 6).

Site MW004 would be directly impacted by preconstruction of the proposed EREF. Preconstruction activities would destroy this site because it would be under the footprint of the proposed facility's security fence and an electrical substation for a transmission line that would bring power to the proposed EREF (see below). In a letter dated September 29, 2010 (Enclosure 9), the ID SHPO concurred with the evaluations and recommendations in the two AES survey reports, and agreed that site MW004 is the only one of the 13 sites located in the proposed EREF site eligible for listing on the NRHP, and recommended mitigation for the impacts to site MW004 to be included as stipulations in an MOA, discussed below.

Proposed 161-kilovolt (kV) Transmission Line Project

On January 19, 2010, AES informed the NRC of a license application change involving the addition to the proposed project of an electrical transmission line to power the proposed EREF. This new 161-kV transmission line would be run to the proposed EREF from Rocky Mountain Power's Bonneville Substation located to the east of the proposed EREF site, mostly along the right-of-way (ROW) of an existing 69-kV transmission line.

In the Draft EIS, the NRC staff presented its determination that the APE for AES's proposed 161-kV transmission line project is 202.3 hectares (500 acres) for the line itself. This is derived from the 22.12-kilometer (13.74-mile) proposed transmission line ROW length and 45.72 meters (150 feet) on either side of the centerline (91.4-meter [300-foot] total width). In addition to that, there is the fenced area at the proposed modified Bonneville Substation, which is 1.3 hectares (3.1 acres), and the proposed new Twin Buttes Substation that will occupy a 2.1-hectare (5.2-acre) fenced area on the proposed EREF site itself.

Portions of the proposed Twin Buttes Substation and of the proposed transmission line adjacent to the proposed EREF were surveyed previously as part of the survey for the main portion of the proposed EREF site (Enclosure 6). The ROW for the proposed transmission line has also been surveyed by an AES archaeological contractor for the presence of historical and cultural resources (Enclosure 10). This survey examined the 202.3-hectare (500-acre) APE. No historic and cultural resources were identified in these surveys. It is currently unclear whether additional areas would be needed for some aspects of the transmission line construction (e.g., pulling and tensioning sites). AES has provided an unanticipated discoveries and monitoring plan (Enclosure 11) to the NRC and Idaho SHPO, which will be in place during preconstruction and construction and which the NRC proposes to reference in the MOA.

MEMORANDUM OF AGREEMENT

As discussed above, during its environmental review and as documented in the Draft EIS, the NRC staff identified an adverse effect to the NRHP-eligible John Leopard Homestead (site MW004) located on the proposed EREF site. Preconstruction activities would destroy site MW004 because it would be under the footprint of the proposed EREF's security fence and an onsite electrical substation for the proposed 161-kV transmission line. In its letter dated September 29, 2009 (Enclosure 9), the ID SHPO recommended mitigation of the adverse effect through data recovery, historic research for the John Leopard Homestead site, and that all obsidian bifacial tools within the EREF project area be chemically traced to their geologic sources through x-ray fluorescence (XRF) analysis. Further, the ID SHPO stated that these mitigation measures should be drafted as stipulations in an MOA.

AES subsequently provided a Treatment Plan for site MW004 (Enclosure 12) that addresses the procedures that will be employed to conduct mitigation measures recommended by the ID SHPO. At the end of this plan is a letter that reports on the completed geochemical XRF analysis of obsidian artifacts collected at the ID SHPO's request (Letter to Kenneth Reid, State Archaeologist and Deputy State Historic Preservation Officer, Idaho State Historical Society, from Edward J. Stoner, Western Cultural Resource Management, Inc. December 18, 2009.). In a letter dated May 3, 2010 (Enclosure 13), the ID SHPO expressed its support for the proposed treatment of site MW004 and requested a report from AES that documents the investigations conducted as part of the mitigation along with photographs and other appropriate appendices and attachments.

The NRC is currently in the process of drafting an MOA as requested by the ID SHPO. As recommended in the ID SHPO's September 29, 2009, letter (Enclosure 9), AES's Treatment Plan (Enclosure 12) will be referenced with regard to the mitigation of site MW004; and as additionally stated in the ID SHPO's May 3, 2010, letter (Enclosure 13), the XRF analysis will be listed as completed mitigation, and any required monitoring will be described. Also, because AES has indicated that final design of the proposed EREF and associated 161-kV transmission line project will not be completed until after the NRC license is issued, the draft MOA will also address the survey by AES for historic cultural resources of any previously un-surveyed areas that may be identified following final design (e.g., transmission line construction pulling and tensioning sites). As such, AES's unanticipated discoveries and monitoring plan mentioned above (Enclosure 11) will be referenced in the draft MOA. The purpose of this plan is to: (1) monitor and protect existing and known archaeological sites and historic properties located within the proposed EREF site; (2) set forth the process for dealing with discoveries of human remains or previously unidentified archaeological sites that are discovered during activities that

R. Nelson

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cause surface or subsurface disturbances and may result in an irreversible loss of the resource; and (3) establish procedures for evaluation and treatment of unanticipated discoveries in accordance with 36 CFR 800.13.

Proposed signatories to this MOA will be the NRC, the ID SHPO, AES, and the ACHP, if it so chooses. Because the Shoshone-Bannock Tribes have not responded to our consultation letters, they are not included as either a signatory or concurring party.

As mentioned in the introduction to this letter, the NRC staff invites the ACHP to participate in the NHPA Section 106 consultation for this project pursuant to 36 CFR 800.6(a)(1) and requests your response within 15 calendar days of receipt of this letter and enclosures. If you have any questions or require additional information, please contact the Stephen Lemont, Senior Project Manager, at (301) 415-5163, or by email at Stephen.Lemont@nrc.gov.

Sincerely,

/RA/

Diana Diaz-Toro, Chief
Environmental Review Branch A
Environmental Protection
and Performance Assessment Directorate
Division of Waste Management
and Environmental Protection
Office of Federal and State Materials
and Environmental Management Programs

Docket No.: 70-7015

Enclosures: See attached list

cc w/o enclosures: S. Pengilly, ID SHPO
J. Kay, AES

LIST OF ENCLOSURES

1. Letter to Reid Nelson, Director, Office of Federal Agency Programs, Advisory Council on Historic Preservation, from D. Diaz-Toro, Chief, Environmental Review Branch A, Environmental Protection and Performance Assessment Directorate, Division of Waste Management and Environmental Protection, Office of Federal and State Materials and Environmental Management Programs, U.S. Nuclear Regulatory Commission. Subject: Section 106 Consultation, Notification of the Issuance of, and Request for Comments on the Draft Environmental Impact Statement for the Proposed AREVA Enrichment Services LLC Eagle Rock Enrichment Facility in Bonneville County, Idaho. July 14, 2010. ADAMS Accession No. ML101650142.
2. Letter to Janet Gallimore, Executive Director, Idaho State Historical Society, from Andrea Kock, Chief, Environmental Review Branch, Environmental Protection and Performance Assessment Directorate, Division of Waste Management and Environmental Protection, Office of Federal and State Materials and Environmental Management Programs, U.S. Nuclear Regulatory Commission. Subject: Initiation of the National Historic Preservation Act Section 106 Process for AREVA Eagle Rock Enrichment Facility. June 17, 2009. ADAMS Accession No. ML091660205.
3. Letter to Janet Gallimore, Executive Director and State Historic Preservation Officer, Idaho State Historical Society, from Andrea Kock, Chief, Environmental Review Branch, Environmental Protection and Performance Assessment Directorate, Division of Waste Management and Environmental Protection, Office of Federal and State Materials and Environmental Management Programs, U.S. Nuclear Regulatory Commission. Subject: Continuing Consultation under the National Historic Preservation Act Section 106 Process for the Proposed AREVA Eagle Rock Enrichment Facility. February 17, 2010. ADAMS Accession No. ML100471023.
4. Letter to Chairman Alonzo A. Cohy, The Shoshone Bannock Tribes, from Andrea Kock, Chief, Environmental Review Branch, Environmental Protection and Performance Assessment Directorate, Division of Waste Management and Environmental Protection, Office of Federal and State Materials and Environmental Management Programs, U.S. Nuclear Regulatory Commission. Subject: Initiation of the National Historic Preservation Act Section 106 Process for AREVA Eagle Rock Enrichment Facility. July 29, 2009. ADAMS Accession No. ML092090444.
5. Letter to Chairman Alonzo A. Cohy, The Shoshone Bannock Tribes, from Andrea Kock, Chief, Environmental Review Branch, Environmental Protection and Performance Assessment Directorate, Division of Waste Management and Environmental Protection, Office of Federal and State Materials and Environmental Management Programs, U.S. Nuclear Regulatory Commission. Subject: Continuing Consultation under the National Historic Preservation Act Section 106 Process for the Proposed AREVA Eagle Rock Enrichment Facility. February 19, 2010. ADAMS Accession No. ML100480141.

6. A Class III Cultural Resource Inventory of the Proposed Eagle Rock Enrichment Facility, Bonneville County, Idaho (Volume I: Report and Volume II: Cultural Resource Documentation). Prepared by Western Cultural Resource Management, Inc. November 21, 2008. ADAMS Accession Nos. ML101330115, ML101330103, ML101330104, ML101330106, ML101330107, ML101330108, ML101330109, ML101330110, ML101330125, ML101330112, ML101330113, and ML101330114. **NOTE: These documents contain sensitive information and are withheld from public disclosure.**
7. Amendment to: A Class III Cultural Resource Inventory of the Proposed Eagle Rock Enrichment Facility, Bonneville County, Idaho. Prepared by Western Cultural Resource Management, Inc. August 28, 2009. ADAMS Accession No. ML101330102. **NOTE: This document contains sensitive information and is withheld from public disclosure.**
8. Personal communication from Holly Gilbert, Idaho National Laboratory, to Daniel O'Rourke, Argonne National Laboratory. Subject: Uniqueness of Late 19th Century Homestead Sites in the General Vicinity of the EREF Property. April 26, 2010. ADAMS Accession No. ML101790310.
9. Letter to George A. Harper, Vice President, Engineering, Eagle Rock Enrichment Facility, AREVA Enrichment Services LLC, from Kenneth C. Reid, State Archaeologist and Deputy State Historic Preservation Officer, Idaho State Historical Society. Subject: Class III Cultural Resource Inventory of the Proposed Eagle Rock Enrichment Facility, Bonneville County, and amendment. September 29, 2009. ADAMS Accession No. ML092810293.
10. Archaeological and Historic Survey Report, Archaeological Survey of Idaho. In: *Eagle Rock Enrichment Facility Transmission Line*. NWI 10247.001. Prepared by North Wind, Inc. January 21, 2010. ADAMS Accession Nos. ML101330124 and ML101330101. **NOTE: These documents contain sensitive information and are withheld from public disclosure.**
11. Letter to U.S. Nuclear Regulatory Commission from Jim A. Kay, Licensing Manager, AREVA Enrichment Services LLC. Subject: Response to Request for Additional Information - AREVA Enrichment Services LLC Environmental Report for the Eagle Rock Enrichment Facility - RAI 6.a. Unanticipated Discovery Plan. September 18, 2009. ADAMS Accession No. ML092640684.
12. A Treatment Plan for Historic Site MW004 in the Area of the Proposed Eagle Rock Enrichment Facility, Bonneville County, Idaho. Prepared by Western Cultural Resource Management, Inc. January 28, 2010. ADAMS Accession No. ML100540693. **NOTE: This document contains sensitive information and is withheld from public disclosure.**
13. Letter to Stephen Lemont, Environmental Review Branch, Nuclear Regulatory Commission, from Susan Pengilly, Deputy SHPO and Compliance Officer, Idaho State Historical Society. Subject: AREVA Eagle Rock Enrichment Facility, Bonneville County, Idaho. May 3, 2010. ADAMS Accession No. ML101330126.



Preserving America's Heritage

September 20, 2010

Diana Diaz-Toro, Chief
Environmental Review Branch A
Environmental Protection and Performance Assessment Directorate
Division of Waste Management and Environmental Protection
Office of Federal and State Materials and Environmental Management Programs
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

**Ref: *Proposed Eagle Rock Enrichment Facility Project
Bonneville County, Wyoming***

Dear Ms. Diaz-Toro:

On September 1, 2010, the Advisory Council on Historic Preservation (ACHP) received your notification regarding the adverse effects of the referenced undertaking on the John Leopard Homestead, which is eligible for listing in the National Register of Historic Places. Based upon the information you provided, we have concluded that Appendix A, *Criteria for Council Involvement in Reviewing Individual Section 106 Cases*, of our regulations, "Protection of Historic Properties" (36 CFR Part 800), does not apply to this undertaking. Accordingly, we do not believe that our participation in the consultation to resolve adverse effects is needed at this time. However, if we receive a request for participation from the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer, affected Indian tribe, consulting party, or other party, we may reconsider this decision. Should circumstances change, and you determine that our participation is needed, please notify us accordingly.

Pursuant to 36 CFR §800.6(b)(1)(iv), you will need to file the final Memorandum of Agreement (MOA), developed in consultation with the Idaho SHPO and any other consulting parties, and related documentation with the ACHP at the conclusion of the consultation process. The filing of the MOA and supporting documentation with the ACHP is required in order to complete the requirements of Section 106 of the National Historic Preservation Act.

Thank you for providing us with the opportunity to review this undertaking. If you have any questions, feel free to contact Tom McCulloch at 202-606-8554, or via email at tmcculloch@achp.gov.

Sincerely,

Raymond V. Wallace

Raymond V. Wallace
Historic Preservation Technician
Office of Federal Agency Programs

ADVISORY COUNCIL ON HISTORIC PRESERVATION
1100 Pennsylvania Avenue NW, Suite 803 | Washington, DC 20004
Phone: 202-606-8503 | Fax: 202-606-8647 | achp@achp.gov | www.achp.gov

July 29, 2009

Chairman Alonzo A. Cohy
The Shoshone-Bannock Tribes
P.O. Box 306
Fort Hall, ID 83203

SUBJECT: INITIATION OF THE NATIONAL HISTORIC PRESERVATION ACT SECTION 106
PROCESS FOR AREVA EAGLE ROCK ENRICHMENT FACILITY

Dear Chairman Cohy:

On December 30, 2008, AREVA Enrichment Services (AES) submitted an environmental report (ER) to the U.S. Nuclear Regulatory Commission (NRC). The ER is one part of an application for a license to authorize construction, operation, and decommissioning of a proposed uranium enrichment facility. The NRC is in the initial stages of developing an Environmental Impact Statement (EIS) for the proposed facility to be located near Idaho Falls, Idaho in Bonneville County. The facility, if licensed, would use a gas centrifuge enrichment technology to enrich the isotope uranium-235 in uranium hexafluoride up to 5 percent by weight. The EIS that NRC is preparing will document the environmental impacts associated with the construction, operation, and decommissioning of the proposed facility.

The proposed AES parcel is approximately 1,700 hectares (4,200 acres). In November 2008, AES commissioned an archeological survey of the facility's footprint which involves approximately 381 hectares (941 acres) of the total parcel. The report is attached along with a map showing the area of potential effect, as it appears in the AES ER. As a result of the surveys, AES recorded a number of isolated finds and concluded that one find (MW004) was potentially eligible for inclusion in the National Register of Historic Places. AES proposes minimizing any adverse impacts through a mitigation plan for this find.

In the ER, AES indicated their submission of the archeological surveys to your office. As required by 36 CFR 800.4(a), the NRC is requesting the views of the tribe on any further actions necessary to identify historic properties that may be affected by the construction, operation, and decommissioning of the proposed facility, including whether find MW004 should be included in the National Register of Historic Places.

Chairman Cohy

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We intend to use the EIS process to comply with Section 106 of the National Historic Preservation Act of 1966, as described in 36 CFR Part 800.8. After assessing information you provide, we will determine any additional actions that are necessary to comply with the Section 106 consultation process. If you have any questions or comments, or need any additional information, please contact Mathews George of my staff on 301-415-7065.

Sincerely,

/RA/

Andrea Kock, Chief
Environmental Review Branch
Environmental Protection
and Performance Assessment Directorate
Division of Waste Management
and Environmental Protection
Office of Federal and State Materials
and Environmental Management Programs

Docket No.: 70-7015

Enclosure: Volume Report

cc: Willie Preacher
The Shoshone-Bannock Tribes

Stan Day
AES Eagle Rock Enrichment Facility

George A. Harper, P.E.
AES Eagle Rock Enrichment Facility

September 16, 2009

Chairman Alonzo A. Cohy
The Shoshone-Bannock Tribes
P.O. Box 306
Fort Hall, ID 83203

SUBJECT: NOTIFICATION OF AN EXEMPTION REQUEST FROM U.S. NUCLEAR
REGULATORY COMMISSION'S (NRC) REGULATED ACTIONS SUBMITTED
BY AREVA ENRICHMENT SERVICES (AES)

Dear Chairman Cohy:

On July 29, 2009, U.S. Nuclear Regulatory Commission (NRC) staff sent a letter to the office of The Shoshone-Bannock Tribe. My staff requested input from the tribe on identifying any cultural or historic properties that may be affected by the construction, operation and decommissioning of the proposed facility. We look forward to receiving your written feedback soon and will incorporate the details of your response within our environmental impact statement (EIS).

In addition, we want to communicate pertinent and new information to your office. On June 17, 2009, AREVA Enrichment Services (AES) requested an exemption that would allow them to commence certain activities prior to NRC's completion of its environmental review under Title 10 of the Code of Federal Regulations, Part 51 (10 CFR 51) and the NRC's issuance of a Materials License for the Eagle Rock Enrichment Facility under 10 CFR 70.

NRC's approval of the exemption would permit AES to undertake the following list of actions. These actions do not affect radiological health and safety or common defense and security.

- Clearing, Grading and Erosion Control
- Excavation, Including Rock Blasting and Removal
- Construction of Storm Water Detention Pond, Highway Access and Site Roads
- Installation of Utilities, Storage Tanks and Fences
- Installation of Parking Areas, Construction Buildings, Offices, Warehouses and Guardhouses.

If approved, the exemption would allow AREVA to commence the above pre-construction activities before NRC completes its licensing determination. AREVA plans on performing this pre-construction work in September 2010. The approval to perform pre-construction does not equate to approval of a license to construct, operate and decommission a facility. AREVA assumes the risk of completing these activities and then not receiving a license to construct and operate the facility.

The pre-construction activities of both the environmental impacts above and construction of the facility will be considered in NRC's environmental impact statement which will be issued after pre-construction activities begin. We will continue to communicate with you regarding important issues for NRC to consider on assessing the environmental impacts of these pre-construction and construction activities

NRC anticipates completing its review of the exemption request by mid December 2009. If approved, AES will supplement its Environmental Report to distinguish between the environmental impacts of the construction activities covered by the exemption and construction activities which will not be undertaken until after issuance of a license by the NRC. This supplement will allow NRC staff to consider the impacts of pre-construction in its cumulative impact analysis within the EIS.

Please respond by October 15, 2009 with any comments or concerns that you may have on this subject. If you have any questions or comments with regard to this request from AES, or need any additional information, please contact Mathews George of my staff on 301-415-7065.

Sincerely,

/RA/

Andrea Kock, Chief
Environmental Review Branch
Environmental Protection
and Performance Assessment Directorate
Division of Waste Management
and Environmental Protection
Office of Federal and State Materials
and Environmental Management Programs

Docket No.: 70-7015

cc:
Willie Preacher
The Shoshone-Bannock Tribes

Stan Day
AES Eagle Rock Enrichment Facility

George A Harper, P.E.
AES Eagle Rock Enrichment Facility

February 19, 2010

Chairman Alonzo A. Cohy
The Shoshone-Bannock Tribes
P.O. Box 306
Fort Hall, Idaho 83203

SUBJECT: CONTINUING CONSULTATION UNDER THE NATIONAL HISTORIC
PRESERVATION ACT SECTION 106 PROCESS FOR THE PROPOSED
AREVA EAGLE ROCK ENRICHMENT FACILITY

Dear Chairman Cohy:

The U.S. Nuclear Regulatory Commission (NRC) previously contacted you by letter dated July 29, 2009, informing you of the AREVA Enrichment Services LLC (AES) submittal of an application to NRC for a license to construct, operate, and decommission a gas centrifuge uranium enrichment facility in Bonneville County, Idaho, and NRC's preparation of an Environmental Impact Statement (EIS) in support of its licensing action for the facility. The proposed facility, the Eagle Rock Enrichment Facility (EREF), would be located about 20 miles west of Idaho Falls. The purpose of this letter is to inform you that the scope of the project has been modified to include the construction and operation of an electrical transmission line and associated structures needed to power the proposed EREF.

On January 29, 2010, AES submitted supplemental information to NRC for the construction and operation of a proposed transmission line, an electrical substation, and substation upgrades. The locations of the transmission line and substations are shown in the January 29, 2010, submittal, a copy of which is enclosed. Also, AES commissioned an archeological survey of the area of potential effect (APE) associated with the transmission line route; the Idaho State Historic Preservation Officer has a copy of the survey report. As discussed in AES' January 29, 2010, submittal, no historic properties were identified in the APE of the proposed transmission line project. NRC's EIS for the proposed EREF will include a discussion of the impacts associated with the construction and operation of this transmission line project. Likewise, NRC's Section 106 consultations for the EREF project will expand to include cultural resources along the proposed transmission line right-of-way.

The new transmission line and associated structures would be located entirely on private land within Bonneville County. Rocky Mountain Power (RMP), a division of PacifiCorp, will be the builder, owner, and operator. The transmission line would originate from the existing RMP Bonneville Substation and extend in a general westward direction to the new point of service, the Twin Buttes Substation on the proposed EREF site. Beginning at the Bonneville Substation, the proposed transmission line route is west along the county road (West 65 North Street) to the existing RMP Kettle Substation, a distance of approximately 14.5 kilometers (9 miles), continuing west to the eastern portion of the EREF site, a distance of approximately 1.2 kilometer (0.75 mile), then north within the EREF site to its northern end, then west and south to the new RMP Twin Buttes Substation, for a distance of approximately 6.4 kilometers (4 miles). The area being affected by the transmission line is approximately 84 hectares (208 acres).

A. Cohy

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As noted in our earlier letter, NRC intends to use the EIS process to comply with Section 106 of the National Historic Preservation Act, as described in 36 CFR Part 800.8. As required by 36 CFR 800.4(a), NRC is requesting the views of the tribes on any further actions necessary to identify historic properties that may be affected by the construction and operation of the proposed transmission line and associated structures. After assessing information you provide, we will determine any additional actions that are necessary to comply with the Section 106 consultation process.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice for Domestic Licensing Proceedings and Issuance of Orders," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records component of NRC's Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

If you have any questions regarding the project, or need additional information, please contact Stephen Lemont, of my staff at 301-415-5163 or Stephen.Lemont@nrc.gov.

Sincerely,

/RA/

Andrea Kock, Chief
Environmental Review Branch
Environmental Protection
and Performance Assessment Directorate
Division of Waste Management
and Environmental Protection
Office of Federal and State Materials
and Environmental Management Programs

Enclosure: As stated

Docket No: 70-7015

Lemont, Stephen

From: Lemont, Stephen
Sent: Friday, March 12, 2010 11:26 AM
To: 'Willie Preacher'
Subject: RE: Follow-up to Consultation Letters Regarding AREVA Eagle Rock Uranium Enrichment Facility, Bonneville County, Idaho

Willie,

Thank you for responding. I apologize for the misspelling of Chairman Coby's name in the letters. I noticed that too when I was preparing my email.

I look forward to hearing back from you regarding the letters.

Thanks again.

Steve

Stephen Lemont

Senior Environmental Project Manager
U. S. Nuclear Regulatory Commission
Office of Federal and State Materials and
Environmental Management Programs
Mail Stop: T-8F5
Washington, DC 20555-0001
Telephone: 301-415-5163
Fax: 301-415-5369
Email: Stephen.Lemont@nrc.gov

From: Willie Preacher [<mailto:wpreacher@sbtribes.com>]
Sent: Friday, March 12, 2010 11:06 AM
To: Lemont, Stephen
Subject: RE: Follow-up to Consultation Letters Regarding AREVA Eagle Rock Uranium Enrichment Facility, Bonneville County, Idaho

Stephen the name of our Chairman is Alonzo A. Coby, you do have it right in this letter to me, but the letter that was sent to him personally is addressed to Alonzo A. Coby. We are reviewing the letters and will get back with you and as soon as we can. -Willie

From: Lemont, Stephen [<mailto:Stephen.Lemont@nrc.gov>]
Sent: Friday, March 12, 2010 8:39 AM
To: Willie Preacher
Subject: Follow-up to Consultation Letters Regarding AREVA Eagle Rock Uranium Enrichment Facility, Bonneville County, Idaho

Dear Mr. Preacher:

I am Steve Lemont, the new U.S. Nuclear Regulatory Commission (NRC) Project Manager for the Environmental Impact Statement (EIS) that the NRC is preparing in support of its licensing action for the proposed AREVA Eagle Rock uranium enrichment facility in Bonneville County. NRC contacted Chairman Coby regarding this project in a letter dated July 29, 2009, and more recently in a letter dated February 19,

2010, regarding the proposed electrical transmission line for the AREVA Eagle Rock facility. For your reference, I have attached these two letters to this email.

The purpose of this email is to follow-up on the two letters, to request the views of the Shoshone-Bannock Tribes regarding any further actions necessary to identify historic properties that may be affected by the construction, operation, and decommissioning of the proposed AREVA Eagle Rock facility and the proposed transmission line and associated structures. Find MW004, which is discussed in the July 29 letter, has been determined to be eligible for listing in the National Register of Historic Places. Any other information you may have would also be appreciated. After assessing information you provide, we will identify any further actions that are necessary to comply with the consultation process under Section 106 of the National Historic Preservation Act.

If you have any questions regarding the project, or need additional information, please contact me at 301-415-5163 or Stephen.Lemont@nrc.gov. I appreciate your assistance in this matter, and look forward to receiving your response. Thank you.

Sincerely,
Steve Lemont

Stephen Lemont

Senior Environmental Project Manager
U. S. Nuclear Regulatory Commission
Office of Federal and State Materials and
Environmental Management Programs
Mail Stop: T-8F5
Washington, DC 20555-0001
Telephone: 301-415-5163
Fax: 301-415-5369
Email: Stephen.Lemont@nrc.gov

October 8, 2010

Chairman Nathan Small
The Shoshone-Bannock Tribes
P.O. Box 306
Fort Hall, Idaho 83203

SUBJECT: CONTINUING CONSULTATION UNDER THE NATIONAL HISTORIC PRESERVATION ACT SECTION 106 PROCESS FOR DEVELOPMENT OF MEMORANDUM OF AGREEMENT FOR THE AREVA ENRICHMENT SERVICES LLC EAGLE ROCK ENRICHMENT FACILITY PROJECT IN BONNEVILLE COUNTY, IDAHO

Dear Chairman Small:

The Nuclear Regulatory Commission (NRC) previously contacted The Shoshone-Bannock Tribes concerning the AREVA Enrichment Services LLC (AES) proposed Eagle Rock Enrichment Facility (EREF) in Bonneville County. Our most recent consultation letter, dated February 19, 2010, concerned alterations to the project's scope for the National Historic Preservation Act (NHPA) Section 106 review. Also, with a letter dated July 14, 2010, the NRC provided a copy of the project's Draft Environmental Impact Statement (EIS) for comment.

Preliminary findings regarding historical and cultural resources are discussed in the Draft EIS, Sections 3.3, 4.2.2, 4.2.16.2, and 4.3.2. One of these findings is that the proposed project is expected to cause an adverse effect on historic site MW004, the John Leopard Homestead. Site MW004 is a multi-component site consisting of a late nineteenth century to early twentieth century homestead component and a prehistoric component. The historic component of this site has been determined eligible for listing on the National Register of Historic Places (NRHP), and consists of a dug out depression, one possible privy depression, a cement lined cistern, one trash concentration, two rock piles, and a scatter of domestic trash. The prehistoric component consists of two non-diagnostic obsidian biface fragments and two flakes.

The NRC is in the process of drafting a Memorandum of Agreement (MOA) with the Idaho State Historic Preservation Office (ID SHPO) and AES, which will address the mitigation of the impacts to site MW004. In addition, because AES has indicated that final design of the proposed EREF and associated 161-kV transmission line project will not be completed until after the NRC license is issued, the draft MOA will also address the survey by AES for historical and cultural resources of any previously un-surveyed areas that may be identified following final design (e.g., transmission line construction pulling and tensioning sites). The draft MOA will also include reference to AES's unanticipated discoveries and monitoring plan.

Pursuant to Title 36 of the *U.S. Code of Federal Regulations* (36 CFR) Part 800.6(c)(3), the NRC staff invites The Shoshone-Bannock Tribes to participate in the development of the MOA for this project as a concurring party, and requests your response within 15 calendar days of receipt of this letter. As a concurring party, The Shoshone-Bannock Tribes will have the opportunity to review the draft MOA and provide comments prior to enactment of the agreement. If you accept the NRC's invitation, please provide the name and title of, and contact information for, the tribal member with whom we would coordinate for the MOA development.

If you have any questions regarding the MOA or the EREF project, or need any additional information, please contact Stephen Lemont at 301-415-5163, or by email at Stephen.Lemont@nrc.gov.

Sincerely,

/RA/

Diana Diaz-Toro, Chief
Environmental Review Branch A
Environmental Protection
and Performance Assessment Directorate
Division of Waste Management
and Environmental Protection
Office of Federal and State Materials
and Environmental Management Programs

Docket No.: 70-7015

cc: S. Pengilly, ID SHPO
J. Kay, AES

Biwer, Bruce M.

From: Lemont, Stephen [Stephen.Lemont@nrc.gov]
Sent: Friday, October 29, 2010 6:54 AM
To: wpreacher@sbtribes.com
Subject: RE: Invitation to Participate as Concurring Party in Section 106 Memorandum of Agreement for AREVA Eagle Rock Project 102910
Attachments: Letter to Shoshone-Bannock Tribes re Section 106 MOA Participation (ML102740387).pdf

Hi, Willie. I am just following up to find out if the council has considered the invitation in the attached letter, and if The Shoshone-Bannock Tribes would like to be a concurring party on the subject Memorandum of Agreement.

Thanks,
Steve

Stephen Lemont, Ph.D.

Senior Environmental Project Manager
U. S. Nuclear Regulatory Commission
Office of Federal and State Materials and
Environmental Management Programs
Mail Stop: T-8F5
Washington, DC 20555-0001
Telephone: 301-415-5163
Fax: 301-415-5369
Email: Stephen.Lemont@nrc.gov

From: Lemont, Stephen
Sent: Friday, October 08, 2010 3:30 PM
To: 'wpreacher@sbtribes.com'
Subject: Invitation to Participate as Concurring Party in Section 106 Memorandum of Agreement for AREVA Eagle Rock Project

Hi, Willie. This is to give you advance notice of a letter the U.S. Nuclear Regulatory Commission (NRC) is sending to Chairman Small regarding the development of a National Historic Preservation Act Section 106 Memorandum of Agreement (MOA) for the AREVA Eagle Rock Enrichment Facility project.

The letter, a copy of which is attached, discusses the need for, and basic content of, the MOA. However, the main purpose of the letter is to invite The Shoshone-Bannock Tribes to participate in the development of the MOA as a concurring party. In that role, The Tribes will have the opportunity to review the draft MOA and provide comments prior to enactment of the agreement. The MOA is currently being drafted by the NRC's attorneys and when ready, will be distributed for review by the parties to the agreement. These parties already include the Idaho State Historic Preservation Office and AREVA, in addition to the NRC.

Please contact me if you have any questions regarding the letter or if you need additional information. We hope the Tribes will accept the NRC's invitation and look forward to working with you on the development of the MOA. Thank you.

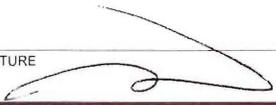
Sincerely,
Steve

Stephen Lemont, Ph.D.

Senior Environmental Project Manager

U. S. Nuclear Regulatory Commission
Office of Federal and State Materials and
Environmental Management Programs
Mail Stop: T-8F5
Washington, DC 20555-0001
Telephone: 301-415-5163
Fax: 301-415-5369
Email: Stephen.Lemont@nrc.gov

The attachment referred to in this document is included in Section B.2 of Appendix B, directly preceding this document.

NRC FORM 699 (9-2003)		U.S. NUCLEAR REGULATORY COMMISSION		DATE 11/30/2010
CONVERSATION RECORD				TIME
NAME OF PERSON(S) CONTACTED OR IN CONTACT WITH YOU Willie Preacher		TELEPHONE NO. 208-478-3707	TYPE OF CONVERSATION <input type="checkbox"/> VISIT <input type="checkbox"/> CONFERENCE <input checked="" type="checkbox"/> TELEPHONE <input type="checkbox"/> INCOMING <input checked="" type="checkbox"/> OUTGOING	
ORGANIZATION The Shoshone-Bannock Tribes, Fort Hall Indian Reservation, Idaho		SUBJECT Follow-up on NRC Invitation to The Shoshone-Bannock Tribes to be a Concurring Party on the Section 106 Memorandum of Agreement for the AREVA Eagle Rock Project		
SUMMARY (Continue on Page 2) I told Mr. Preacher that I was calling to follow up on the October 8, 2010, letter that the NRC sent to Chairman Small of The Shoshone-Bannock Tribes, inviting the Tribes to be a concurring party on the National Historic Preservation Act Section 106 Memorandum of Agreement, or MOA, for the AREVA Eagle Rock project. Mr. Preacher said that he gave the letter to Carolyn Smith, the Tribes' cultural resources person; and that he would check with her and get back to me.				
<i>Continue on Page 2</i>				
ACTION REQUIRED None.				
NAME OF PERSON DOCUMENTING CONVERSATION Stephen Lemont		SIGNATURE 		DATE 11/30/2010
ACTION TAKEN				
TITLE OF PERSON TAKING ACTION		SIGNATURE OF PERSON TAKING ACTION		DATE

From: Lemont, Stephen [mailto:Stephen.Lemont@nrc.gov]
Sent: Tuesday, December 21, 2010 10:19 AM
To: 'wpreacher@sbtribes.com'
Subject: Follow-up on NRC Invitation to Participate as Concurring Party in Section 106 Memorandum of Agreement for AREVA Eagle Rock Project

Willie,

The purpose of this email is to check back with you once more to find out if the Shoshone-Bannock Tribes would like to be a concurring party on the subject Memorandum of Agreement (MOA) for the AREVA Eagle Rock Enrichment Facility project. The U.S. Nuclear Regulatory Commission's (NRC's) invitation to be a concurring party was provided in the attached letter that was sent to Chairman Small on October 8, 2010. When I called you about this invitation on November 30, you mentioned that you had given the letter to Carolyn Smith, the Tribes' Cultural Resources Coordinator, and that you would check with her and get back to me.

The purpose and basic content of the MOA is discussed in the attached letter. As a concurring party, the Tribes will have the opportunity to review the draft MOA and provide comments prior to enactment of the agreement. The draft MOA is currently being completed by the NRC's attorneys and when ready, will be distributed for review by the parties to the agreement. Presently, these parties include the Idaho State Historic Preservation Office and AREVA, in addition to the NRC.

Please contact me if you have any questions regarding the attached letter or if you need additional information. We hope the Shoshone-Bannock Tribes will accept the NRC's invitation and look forward to working with you on the development of the MOA.

I look forward to receiving your reply soon. Thank you.

Sincerely,
Steve

Stephen Lemont

Senior Environmental Project Manager
U. S. Nuclear Regulatory Commission
Office of Federal and State Materials and
Environmental Management Programs
Mail Stop: T-8F5
Washington, DC 20555-0001
Telephone: 301-415-5163
Fax: 301-415-5369
Email: Stephen.Lemont@nrc.gov

The attachment referred to in this document precedes the October 29, 2010, email to Willie Preacher included in Section B.2 of Appendix B.

NRC FORM 699 (9-2003)		U.S. NUCLEAR REGULATORY COMMISSION		DATE 12/22/2010
CONVERSATION RECORD				TIME
NAME OF PERSON(S) CONTACTED OR IN CONTACT WITH YOU Carolyn Smith, Cultural Resources Coordinator		TELEPHONE NO. 208-221-0326		TYPE OF CONVERSATION <input type="checkbox"/> VISIT <input type="checkbox"/> CONFERENCE <input checked="" type="checkbox"/> TELEPHONE <input type="checkbox"/> INCOMING <input checked="" type="checkbox"/> OUTGOING
ORGANIZATION The Shoshone-Bannock Tribes, Fort Hall, Idaho				
SUBJECT NRC Invitation to the Tribes to be a Concurring Party on the Section 106 MOA for AREVA Eagle Rock Project				
SUMMARY (Continue on Page 2)				
<p>I confirmed the phone message I received today from Ms. Smith that the Tribes do want to be a party to the MOA. I explained that the Tribes would be a concurring party, meaning that they would be able to comment on the draft MOA. I said that the NRC is in the process of completing the draft MOA, and that it will be sent to the Idaho SHPO, AREVA, and the Tribes for review; and that I intend to hold a conference call to discuss all of our comments.</p> <p>Ms. Smith said to mail the draft MOA to her and to Willie Preacher. I said that I will probably send an advance copy of the draft MOA and transmittal letter to them by email, and asked for Ms. Smith's email address. It is csmith@sbtribes.com.</p>				
<i>Continue on Page 2</i>				
ACTION REQUIRED None				
NAME OF PERSON DOCUMENTING CONVERSATION Stephen Lemont		SIGNATURE 		DATE 12/22/2010
ACTION TAKEN				
TITLE OF PERSON TAKING ACTION		SIGNATURE OF PERSON TAKING ACTION		DATE

B.3 Other Consultation

October 2, 2009

Mr. Keith Dunbar
National Park Service
Chief of Park Planning
and Environmental Compliance
909 First Avenue,
Seattle, WA 98104

Dear Mr. Dunbar:

On December 30, 2008, AREVA Enrichment Services (AES) submitted an Environmental Report (ER) to the U.S. Nuclear Regulatory Commission (NRC). The ER is one part of an application for a license to authorize construction, operation, and decommissioning of a proposed uranium enrichment facility. The NRC staff is in the initial stages of developing an Environmental Impact Statement (EIS) for the proposed facility to be located 20 miles west of Idaho Falls, Idaho in Bonneville County. The facility, if licensed, would use a gas centrifuge based technology to enrich the isotope uranium-235 in uranium hexafluoride up to 5 percent by weight. The EIS will document the impacts associated with the construction, operation, and decommissioning of the proposed facility.

The proposed location for the facility is due north of the Hell's Half Acre National Natural Landmark. The proposed AES parcel is approximately 1,700 hectares (4,200 acres). AES states that the facility footprint encompasses 381 hectares (941 acres) of the site for which construction, operation, and decommissioning activities will occur. The proposed site is situated on the north side of U.S. Highway 20. The coordinates for the center of the action area are 43 degrees, 35 minutes, 7.37 seconds North and longitude 112 degrees, 25 minutes, 28.71 seconds West. The project area is currently mixed used for open range land and agriculture.

The Hell's Half Acre National Natural Landmark is managed by the Bureau of Land Management (BLM) as a Wildlife Study Area. The BLM has been contacted by both the NRC and AES concerning the project. The NRC wants to provide the National Park Service with an opportunity to comment on the abovementioned project. The NRC is requesting the views of your office on any impacts that may be caused by the construction, operation and decommissioning of the proposed facility. After assessing information you provide, we will determine if any additional actions or mitigation actions are necessary.

K. Dunbar

2

We would like a response from your office by **Oct 31, 2009**, if possible. If you have any questions or comments with regard to this, or need any additional information, please contact Mathews George of my staff on 301-415-7065.

Sincerely,

/RA/

Andrea Kock, Chief
Environmental Review Branch
Environmental Protection
and Performance Assessment Directorate
Division of Waste Management
and Environmental Protection
Office of Federal and State Materials
and Environmental Management Programs

Docket No.: 70-7015



United States Department of the Interior

NATIONAL PARK SERVICE
Pacific West Region
909 First Avenue, Fifth Floor
Seattle, Washington 98104-1060



IN REPLY REFER TO
EC-Hell's Half-Acre

December 28, 2009

Andrea Kock, Chief
Environmental Review Branch
Environmental Protection
and Performance Assessment Directorate
Division of Waste Management
and Environmental Protection
Office of Federal and State Materials
and Environmental Management Programs
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

RE: Application for license for proposed uranium enrichment facility north of Hell's Half-Acre Lava Field National Natural Landmark

Dear Ms. Kock:

Thank you for your letter dated October 2, 2009, concerning AREVA Enrichment Services' proposed uranium enrichment facility near Hell's Half-Acre Lava Field National Natural Landmark (NNL), which the National Park Service (NPS) oversees as part of the NNL program. As you know, Hell's Half-Acre Lava Field NNL is located on land owned by the Bureau of Land Management (BLM) and is a Wilderness Study Area (WSA). (Please note that it is not a Wildlife Study Area as the October letter stated.) It also appears that the State of Idaho may own sections of land within the NNL.

Hell's Half-Acre Lava Field NNL was designated in 1976 primarily for its geologic significance (e.g., single event, geologic process with a fully exposed pahoehoe lava flow). However, the NNL also provides an outstanding example of pioneer vegetation establishing itself on a lava flow. This is evidenced by numerous mosses, lichens, and ferns that have established themselves in, on, and among fractures, depressions, and small lava caves throughout the NNL/WSA. In addition, a significant number of visitors hike on trails located adjacent to the NNL/WSA, and many recreate on the lava flow within the NNL/WSA.

The Idaho National Laboratory (INL), administered by the U.S. Department of Energy, is located directly adjacent to the proposed project. The INL is an ecological field laboratory where scientists may set up long-term experiments which answer questions about human impact on the natural environment. It is a leading center for nuclear safety research, defense programs, nuclear waste technology and advanced energy concepts, and has an extensive environmental monitoring program both on- and off-site. Off-site monitoring data and information can be found at: <http://www.stoller-eser.com/index.htm>. DOE also funds a similar state-run monitoring program: http://www.deq.idaho.gov/inl_oversight/index.cfm. The greatest concern that has been identified on the INL is on-site groundwater contamination. Airborne radioactive contamination has not been detected off-site. While the proposed AREVA facility is not a

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IN AMERICA 

DOE project and is not officially connected with the INL. The INL has extensive information that should be relevant for developing impact analyses in the Environmental Impact Statement (EIS), because of the proposed project's close proximity to the INL. NPS recommends the following areas of analysis:

- Potential groundwater and airborne radioactive contamination that might impact the>NNL/WSA.
- Lighting impacts to the dark night sky at the>NNL, as well as at Craters of the Moon National Monument and Preserve (CRMO) located 45 miles west from the proposed facility.
- Cumulative impacts on the dark night sky at the>NNL and CRMO, especially since there is already a significant light dome associated with the>NNL.
- Construction impacts, especially from excessive dust, to the unique botanical resources of the>NNL (e.g., dust could settle and accumulate on these plants, including outlier juniper trees, depriving them of needed sunlight).

We would appreciate receiving a copy of the Draft EIS (please see attached instructions). Please also notify the following persons when the Draft EIS is available for review:

Mr. Steve Gibbons,
Coordinator
National Natural Landmarks
Program
National Park Service
810 State Route 20
Sedro Woolley, WA 98284
Telephone: (360) 854-7203
FAX: (360) 856-1934
Email:
steve_gibbons@nps.gov

Mr. Doug Neighbor,
Superintendent
Craters of the Moon National
Monument & Preserve
PO Box 29
Arco, ID 83213
Phone: (208) 527-1310
FAX: (208) 527-3073
E-mail:
doug_neighbor@nps.gov

Ms. Kelly Powell
Realty Specialist
168 S. Jackson St., 2nd Floor
Seattle, WA 98104-2853
Phone: (206) 220-4106
FAX: (206) 447-4246
Email:
kelly_powell@nps.gov

Thank you for the opportunity to provide these comments.

Sincerely,



Rory D. Westberg
Acting Regional Director
Phone: (206) 220-4106
FAX: (206) 220-4159
Rory_Westberg@nps.gov

Attachment

U.S. Department of the Interior
ENVIRONMENTAL REVIEW DISTRIBUTION REQUIREMENTS
September 2007

To expedite requests to the Department of the Interior (Department) for the review of environmental documents under the National Environmental Policy Act (NEPA); Section 4(f) of the Department of Transportation Act; project planning, design, and application documents under various Federal authorities; and requests for coordination and consultation early in project planning; please note the following:

Appendix III to the Council on Environmental Quality's (CEQ) regulations (49 FR 49778; December 21, 1984) lists the Director, Office of Environmental Project Review (now the Office of Environmental Policy and Compliance (OEPC)), as the individual responsible for receiving and commenting on other agencies' environmental documents. If properly followed, this process results in your agency receiving one set of comments consolidating the views of all commenting bureaus and offices within the Department. Therefore, please send all officially approved documents requesting environmental and other project review to the following address:

Director, Office of Environmental Policy and Compliance
U.S. Department of the Interior
Main Interior Building (MS 2462)
1849 C Street, NW
Washington, DC 20240

OEPC is the central coordination office for the Department on all environmental reviews proposed by other federal agencies. It is unnecessary to send copies of environmental and other project review requests to any other bureau or office within Interior, unless that bureau or office has been a part of your coordination or cooperating agency processes. However, a sufficient number of copies must still be sent to OEPC to allow distribution of the document to those Interior bureaus identified by OEPC to participate in the review process. The requested numbers of copies allow for simultaneous review throughout each bureau thus producing the Department's consolidated review in the shortest possible time. The following numbers of copies should be provided:

Twelve (12) copies of a draft and six (6) copies of a final document for projects in the Eastern United States including MN, IA, MO, AR, and LA. The same numbers of copies should be provided for projects in HI and the U.S. Territories (American Samoa, Commonwealth of Northern Mariana Islands, Guam, Puerto Rico, and U.S. Virgin Islands).

Eighteen (18) copies of a draft and nine (9) copies of a final document for projects in the Western United States westward of the western boundaries of MN, IA, MO, AR, and LA.

Eighteen (18) copies of a draft and nine (9) copies of a final document for review requests which are national in scope (e.g. agency regulations, scientific reports, special reports, program plans, and other interagency documents).

Sixteen (16) copies of a draft and eight (8) copies of a final document for projects in AK.

When a review document does not have draft and final versions, the larger number of copies is requested.

In an effort to help reduce the Federal government's cost for the reproduction of paper documents and to help reduce waste, we ask that you provide the URL for projects available on the Internet. Copies of environmental and project review documents that are available in CD-ROM or any other widely used electronic method may also be furnished in lieu of paper copies. When this is the case, we would still appreciate receiving one paper copy for our official file. Please provide an Internet address, CDs, one paper copy, or paper copies, as appropriate, directly to this office.

Appendix II to the CEQ regulations (49 FR 49754; December 21, 1984) lists Interior bureaus and offices having jurisdiction by law or special expertise on environmental quality issues. Appendix II should be used to determine appropriate Interior contacts for coordination during early planning, NEPA scoping, and other preliminary activities. Since this document may be out of date, it is recommended that you consult the following Internet addresses for the latest bureau contacts. <http://ceq.eh.doe.gov/nepa/nepanet.htm> or <http://www.doi.gov/oepe/nepacontacts.html>.

All early coordination and scoping requests, environmental assessments or reports not accompanied by project planning or design documents, findings of no significant impact, preliminary or working draft or final environmental impact statements, and similar material of a regional nature should be sent directly to Interior bureaus at the field level. It is not necessary to send copies of early coordination documents to the OEPC in Washington, DC. Please note that our Regional Environmental Officers (REO) serve as representatives of OEPC and should be contacted if there are questions about these procedures at the field level. A REO list is attached and is also available on our web site at: <http://www.doi.gov/oepe/reo.html>.

Representatives of your organization should establish direct working relationships with Departmental and bureau field level offices, which welcome such contact. This type of relationship is important not only during early project coordination, but also to expedite the early resolution of environmental issues that would otherwise surface during the formal review of a project document. In many cases, Interior's comments on an environmental review will designate an office at the field level for follow-up activities.

We ask that you make a wide distribution of this information throughout your organization. Such a distribution will greatly assist our agencies in better meeting our obligations under existing laws and in planning projects that will be mutually beneficial.

Attachment (REO List)

U.S. DEPARTMENT OF THE INTERIOR
OFFICE OF ENVIRONMENTAL POLICY and COMPLIANCE
REGIONAL ENVIRONMENTAL OFFICES

DIRECTOR
WILLIE R. TAYLOR

1849 C STREET, NW., MS 2342
WASHINGTON, DC 20240
PHONE: 202-208-3891
FAX: 202-208-6970
MAY 7, 2007

DEPUTY DIRECTOR
MARY JOSIE BLANCHARD

BOSTON - CT, MA, ME, NH, NJ, NY, RI, VT

Andrew L. Raddant
Diane Lazinsky

Phone 617-223-8565
Fax: 617-223-8569
408 Atlantic Avenue, Room 142
Boston, MA 02210-3334

PHILADELPHIA - DC, DE, IL, IN, MD, MI, MN, OH, PA, VA, WI, WV

Michael T. Chezick
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Valincia Darby

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200 Chestnut Street
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Joyce A. Stanley

Phone: 404-331-4524
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75 Spring Street, S.W.
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ALBUQUERQUE - AR, LA, NM, OK, TX

Stephen R. Spencer
Shirley Martinez

Phone: 505-563-3572
FAX: 505-563-3066
P.O. Box 26567, (MC-9)
Albuquerque, NM 87125-6567
1001 Indian School NW, Suite 348
Albuquerque, NM 87104

DENVER - CO, IA, KS, MO, MT, NE, ND, SD, UT, WY

Robert F. Stewart
Diane Niedzwiecki

Phone: 303-445-2500
FAX: 303-445-6320
P.O. Box 25007 (D-108)
Denver Federal Center
Denver, CO 80225-0007
(Bldg. 56, Rm. 1003, 6th & Kipling)

OAKLAND - AS, AZ, CA, CM, GU, HI, NV

Patricia S. Port
Harry (Chip) E. Demarest
John A. Perez

Phone: 510-817-1477
FAX: 510-419-0177
Jackson Center One
1111 Jackson Street, Suite 520
Oakland, CA 94607

PORTLAND - ID, OR, WA

Preston A. Sleeper
Trisha Allison O'Brien
Mandy Stanford

Phone: 503-231-6157
Fax: 503-231-2361
500 NE Multnomah Street, Suite 356
Portland, OR 97232-2036

ANCHORAGE - AK

Pamela A. Bergmann
Douglas L. Mutter

Phone: 907-271-5011
Fax: 907-271-4102
1689 C Street, Room 119
Anchorage, AK 99501-5126

June 24, 2009

Mr. Paul Kjellander
Office of Energy Resources
322 East Front Street
P.O. Box 83720
Boise, ID 83720

SUBJECT: REQUEST FOR INFORMATION REGARDING ENDANGERED SPECIES AND
CRITICAL HABITATS FOR THE PROPOSED AREVA EAGLE ROCK
ENRICHMENT FACILITY LOCATED IN BONNEVILLE COUNTY, IDAHO

Dear Mr. Kjellander:

On December 30, 2008, AREVA Enrichment Services (AES) submitted an environmental report (ER) to the U.S. Nuclear Regulatory Commission (NRC). The ER is one part of an application for a license to authorize construction, operation, and decommissioning of a proposed uranium enrichment facility. The NRC staff is in the initial stages of developing an Environmental Impact Statement (EIS) for the proposed facility to be located near Idaho Falls, Idaho in Bonneville County. The facility, if licensed, would use a gas centrifuge based technology to enrich the isotope uranium-235 in uranium hexafluoride up to 5 percent by weight. The EIS will document the impacts associated with the construction, operation, and decommissioning of the proposed facility.

NRC requests information on the following items within the action area for the proposed facility, if available:

- Endangered or threatened species, or other species of concern to the state of Idaho, that are known to be or likely to be at the proposed AREVA site, and nearest known locations based on the element occurrence database. Enclosed is a preliminary list of species compiled from Idaho Fish and Game (IDFG) county lists (plants) and the IDFG Snake River Basalts Ecological Section list (animals). Habitat on the site consists of sagebrush steppe, non-native grassland (primarily crested wheatgrass and cheatgrass), and irrigated crops.
- Nearest known lek sites (based on the element occurrence database), nesting habitat, brood-rearing habitat, and winter habitat for greater sage grouse, migratory status of the local population, the number of leks nears the site, and trends.
- Information on Sagebrush Reserves (location, size, species, management) or other sensitive or rare habitats in the project vicinity.
- Information on mule deer, pronghorn, and elk herds, including seasonal habitat (such as crucial winter habitat areas), local migration routes, and concerns such as population trends.
- Important migration routes for migratory birds.
- Maps or GIS shapefiles regarding species or habitats.
- Concerns of IDFG regarding potential impacts of the proposed project.

The proposed AES parcel is approximately 1,700 hectares (4,200 acres). AES states that the facility footprint encompasses 381 hectares (941 acres) of the site for which construction, operation, and decommissioning activities will occur. The proposed site is situated within Bonneville County, Idaho, on the north side of U.S. Highway 20, about 113 km (70 miles) west of the Idaho/Wyoming State line. The coordinates for the center of the action area are 43 degrees, 35 minutes, 7.37 seconds North and longitude 112 degrees, 25 minutes, 28.71 seconds West.

We have enclosed additional background information relating to ecological resources on the site, including a map showing the action area, as it appears in the AES ER.

We intend to use the EIS process to comply with Section 7 of the Endangered Species Act of 1973, as amended. After assessing information you provide, we will determine what additional actions are necessary to comply with the Section 7 consultation process. If you have any questions or comments, or need any additional information, please contact Gloria Kulesa of my staff at 301-415-5308.

Sincerely,

/RA/

Andrea Kock, Chief
Environmental Review Branch
Environmental Protection
and Performance Assessment Directorate
Division of Waste Management
and Environmental Protection
Office of Federal and State Materials
and Environmental Management Programs

Docket No.: 70-7015

Enclosures:

1. Special Status Plants and Species
2. Ecology Field Survey Report
3. Fall 2008 Survey
4. Sage Grouse Survey Report

Idaho Special Status Plants and Species of Greatest Conservation Need

Earth lichen (*Catapyrenium congestum*)
Gray willow (*Salix glauca*)
Green spleenwort (*Asplenium trichomanes-ramosum*)
Iodine bush (*Allenrolfea occidentalis*)
Meadow milkvetch (*Astragalus diversifolius*)
Payson's bladderpod (*Lesquerella paysonii*)
Payson's milkvetch (*Astragalus paysonii*)
Red glasswort (*Salicornia rubra*)
Slickspot peppergrass (*Lepidium papilliferum*)
Ute ladies'-tresses (*Spiranthes diluvialis*)
Western Sedge (*Carex occidentalis*)

Utah valvata snail (*Valvata utahensis*)

Northern leopard frog (*Rana pipiens*)

Ring-necked snake (*Diadophis punctatus*)

Black-crowned night-heron (*Nycticorax nycticorax*)
Blue grosbeak (*Passerina caerulea*)
Burrowing owl (*Athene cunicularia*)
California gull (*Larus californicus*)
Ferruginous hawk (*Buteo regalis*)
Franklin's gull (*Larus pipixcan*)
Juniper titmouse (*Baeolophus ridgwayi*)
Lesser goldfinch (*Carduelis psaltria*)
Merlin (*Falco columbarius*)
Northern pintail (*Anas acuta*)
Peregrine falcon (*Falco peregrinus*)
Pinyon jay (*Gymnorhinus cyanocephalus*)
Sharp-tailed grouse (*Tympanuchus phasianellus*)
Swainson's hawk (*Buteo swainsoni*)
Virginia's warbler (*Vermivora virginiae*)
White-faced ibis (*Plegadis chihi*)
Yellow-billed cuckoo (*Coccyzus americanus*)

Canada lynx (*Lynx canadensis*)
Gray wolf (*Canis lupus*)
Great Basin ground squirrel (*Spermophilus mollis*)
Grizzly bear (*Ursus arctos*)
Idaho pocket gopher (*Thomomys idahoensis*)
Little pocket mouse (*Perognathus longimembris*)
Merriam's shrew (*Sorex merriami*)
Pygmy rabbit (*Brachylagus idahoensis*)
Spotted bat (*Euderma maculatum*)
Townsend's big-eared bat (*Corynorhinus/Plecotus townsendii*)
Townsend's pocket gopher (*Thomomys townsendii*)
Wyoming ground squirrel (*Spermophilus elegans*)

Enclosure 1

February 18, 2010

Paul Kjellander
Idaho Office of Energy Resources
322 East Front Street, Suite 560
Post Office Box 83720
Boise, Idaho 83720-0199

SUBJECT: COORDINATION REGARDING ELECTRICAL TRANSMISSION LINE FOR
PROPOSED AREVA EAGLE ROCK URANIUM ENRICHMENT FACILITY,
BONNEVILLE COUNTY, IDAHO

Dear Mr. Kjellander:

As discussed in our earlier letter to you dated June 24, 2009, AREVA Enrichment Services LLC (AES) has submitted an application to the U.S. Nuclear Regulatory Commission (NRC) for a license to construct, operate, and decommission a gas centrifuge uranium enrichment facility. The proposed facility, the Eagle Rock Enrichment Facility (EREF), would be located in Bonneville County, Idaho, near Idaho Falls. NRC is preparing an Environmental Impact Statement (EIS) in support of its licensing action for this facility. The purpose of the present letter is to report an addition to the scope of the EREF project, a 161-kilovolt (KV) transmission line to power the facility.

On January 29, 2010, AES submitted information to NRC for the construction and operation of a proposed transmission line, an electrical substation, and substation upgrades. The locations of the transmission line and substations are shown in the January 29, 2010 submittal, a copy of which is enclosed. NRC's EIS for the proposed EREF will include a discussion of the impacts associated with the construction and operation of the transmission line project. NRC requests your office's feedback on potential impacts to electrical distribution in the area of the EREF or on any other matter related to the proposed transmission line or the EREF project itself. Also, we understand that your office coordinates with other State of Idaho agencies on energy resource matters. Therefore, please feel free to share this letter with other State agencies. NRC is already coordinating separately with the Idaho Department of Fish and Game and Idaho Department of Environmental Quality.

The new transmission line and associated structures would be located entirely on private land within Bonneville County. Rocky Mountain Power (RMP), a division of PacifiCorp, will be the builder, owner, and operator. The transmission line would originate from the existing RMP Bonneville Substation and extend in a general westward direction to the new point of service, the Twin Buttes Substation on the proposed EREF site. Beginning at the Bonneville Substation, the proposed transmission line route is west along the county road (West 65 North Street) to the existing RMP Kettle Substation, a distance of approximately 14.5 kilometers (9 miles), continuing west to the eastern portion of the EREF site, a distance of approximately 1.2 kilometer (0.75 mile), then north within the EREF site to its northern end, then west and south to the new RMP Twin Buttes Substation, for a distance of approximately 6.4 kilometers (4 miles). The area being affected by the transmission line is approximately 84 hectares (208 acres).

P. Kjellander

2

If you have any questions regarding this request, or need additional information, please contact Stephen Lemont of my staff at 301-415-5163 or Stephen.Lemont@nrc.gov.

Sincerely,

/RA/

Andrea Kock, Chief
Environmental Review Branch
Environmental Protection
and Performance Assessment Directorate
Division of Waste Management
and Environmental Protection
Office of Federal and State Materials
and Environmental Management Programs

Enclosure:
January 29, 2010 Ltr.

Docket No: 70-7015

November 23, 2010

Mr. Matt McMillen, Director
Environmental Compliance Division
Loan Programs Office, DOE
U.S. Department of Energy LP 10
1000 Independence Avenue, SW
Washington, DC 20585

SUBJECT: OCTOBER 21, 2010, TELEPHONE CONVERSATION REGARDING
COMPLIANCE WITH FARMLAND PROTECTION POLICY ACT FOR THE
PROPOSED AREVA ENRICHMENT SERVICES LLC EAGLE ROCK
ENRICHMENT FACILITY IN BONNEVILLE COUNTY, IDAHO

Dear Mr. McMillen:

The U.S. Nuclear Regulatory Commission (NRC) appreciates the participation of U.S. Department of Energy (DOE) Loan Programs Office (LPO) staff in telephone conversations with NRC staff regarding compliance with the Farmland Protection Policy Act (FPPA) for the proposed AREVA Enrichment Services LLC (AES) Eagle Rock Enrichment Facility (EREF). For this project, the NRC is currently reviewing the license application from AES, and the DOE LPO has offered AES a conditional loan guarantee.

During an October 21, 2010, telephone conversation between Mr. Joseph Montgomery, DOE LPO consultant, and Mr. Stephen Lemont of the NRC, Mr. Montgomery related the DOE LPO's decision to go through the FPPA process for the proposed EREF project, including the completion of the necessary U.S. Department of Agriculture forms over the next few weeks. This is appropriate because the DOE's loan guarantee action is subject to the requirements of the FPPA, but the NRC's licensing action is not. It was also discussed that in the Final Environmental Impact Statement the NRC is currently preparing in support of its licensing action, there will be language to the effect that (1) the DOE conditional loan guarantee action is subject to the requirements of the FPPA for purposes of the EREF project, and (2) the DOE has completed/will complete the required farmland conversion impact rating and any associated actions or determinations in compliance with the FPPA, as necessary.

M. McMillen

2

Please contact Mr. Stephen Lemont of my office at 301-415-5163, or by email at Stephen.Lemont@nrc.gov, if you have any questions. Thank you.

Sincerely,

/RA/

David L. Skeen, Acting Deputy Director
Environmental Protection
and Performance Assessment Directorate
Division of Waste Management
and Environmental Protection
Office of Federal and State Materials
and Environmental Management Programs

Docket No.: 70-7015

cc: Joseph Montgomery, DOE

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**APPENDIX C
AIR QUALITY ANALYSIS**

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APPENDIX C AIR QUALITY ANALYSIS

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Air quality modeling was performed to estimate concentration increments at the property boundary as a result of air emissions during the construction phase at the proposed Eagle Rock Enrichment Facility (EREF). Air quality modeling was performed for criteria air pollutants including sulfur dioxide (SO₂), nitrogen dioxide (NO₂), carbon monoxide (CO), and particulate matter (PM) (particulate matter equal to or smaller than 10 micrometers in aerodynamic diameter [PM₁₀] and particulate matter equal to or smaller than 2.5 micrometers in aerodynamic diameter [PM_{2.5}]). Air quality modeling for ozone (O₃) and lead was not conducted.¹ The following sections describe the air dispersion model, determination of surface characteristics, meteorological data processing, terrain data processing, and the modeling assumptions behind the results and the discussions presented in Section 4.2.4.

C.1 Selection of Air Dispersion Model

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For this modeling analysis, the latest version of the AMS/EPA Regulatory MODel (AERMOD) modeling system (Version 07026) (EPA, 2009) was used. AERMOD is the U.S. Environmental Protection Agency's (EPA's) preferred or recommended model for a wide range of regulatory applications (EPA, 2009). AERMOD is a refined, steady-state plume model that incorporates air dispersion based on state-of-the-art planetary boundary layer turbulence structure and scaling concepts, building wake effects, and plume downwash for point sources. It includes treatment of both surface and elevated sources (including multiple-point, area, and volume sources) and both simple and complex terrain, and can be applied to rural and urban areas. The model uses hourly sequential preprocessed meteorological data to estimate not only airborne concentrations but also dry and wet deposition fluxes for both particulate and gaseous emissions of nonreactive pollutants for averaging times ranging from one hour to periods as long as one to multiple years.

AERMOD contains three major separate components:

- AERMET – meteorological data preprocessor that incorporates air dispersion based on planetary boundary layer turbulence structure and scaling concepts
- AERMAP – terrain data preprocessor that incorporates complex terrain using digital elevation data

¹ At a regional level, ozone is formed by highly complex and nonlinear reactions involving nitrogen oxide (NO_x) and volatile organic compound (VOC) precursors. Air quality modeling for ozone requires extensive meteorological and emission data processing and substantial computational resources. Neither construction- nor operation-related activities would produce impacts high enough to have significant influence on regional ozone levels. No ozone modeling is therefore warranted. Air quality modeling for lead was not conducted because there are no significant sources of lead emissions related to the projected activities at the proposed EREF. Since the phase-out of leaded gasoline in the 1970s, ambient air impacts from lead emissions during construction and operation of the proposed EREF would be insignificant.

- 1 • AERMOD – air dispersion model to estimate airborne concentrations and dry/wet deposition
2 fluxes
3

4 In addition, AERSURFACE, a surface characteristics preprocessor part of AERMOD that
5 estimates surface characteristics including surface roughness length, albedo, and Bowen ratio
6 for input to the AERMET was also run to complement and refine the AERMOD results. Two
7 other related modeling programs, BPIPPRIME (a tool that calculates building parameters to
8 account for building downwash effects of point source(s) for input to the AERMOD) and
9 AERSCREEN (a screening model for AERMOD that produces estimates of regulatory design
10 concentrations without the need for meteorological data and is designed to produce more
11 conservative results than AERMOD) are also part of the AERMOD dispersion modeling system.
12 However, neither would have produced relevant or more accurate results applicable to the
13 proposed EREF site and were therefore not used.
14

15 **C.2 Determination of Surface Characteristics** 16

17 In order to compute the fluxes and stability of the atmosphere, AERMET needs three surface
18 characteristic parameters: surface roughness length, albedo, and the Bowen ratio. The surface
19 roughness length is a measure of irregularities at the surface, including vegetation, topography,
20 and structures, which influence the near-surface wind stress. Surface roughness length plays
21 the most crucial role in determining the magnitude of mechanical turbulence and the stability of
22 the boundary layer. The typical values range from 0.001 meter (0.003 feet) over calm water
23 surfaces and 1 meter (3.3 feet) or more over a forest or urban area. Albedo is the ratio of the
24 amount of radiation reflected from the surface to the amount of radiation incident on the surface.
25 Typical values range from 0.1 for thick deciduous forests to 0.9 for fresh snow. The Bowen
26 ratio, an indicator of surface moisture, is the ratio of sensible heat flux to the latent heat flux.
27 The Bowen ratio is used to determine the planetary boundary layer parameters for convective
28 conditions. The typical values range from 0.1 over water to 10 over desert at midday.
29

30 Surface characteristics should represent the meteorological data at the application site. If such
31 data is not available for the application site, then data from a nearby representative
32 measurement site must instead be used. The proposed EREF has no onsite meteorological
33 station. The nearest meteorological station is near the Materials and Fuels Complex (MFC)
34 within the Idaho National Laboratory (INL) site, which is located about 11 miles (18 kilometers)
35 west of the proposed EREF. The MFC and proposed EREF sites are located in the middle of
36 the Eastern Snake River Plain (ESRP), which is a wide flat bow-shaped depression extending
37 about 400 miles (640 kilometers). The elevation and terrain features and land uses surrounding
38 the MFC area are comparable to those of the proposed EREF site. Accordingly, the MFC site is
39 considered adequately representative of the proposed EREF site and was used as a substitute
40 for onsite meteorological data for this assessment.
41

42 The AERSURFACE tool was developed to aid users in obtaining realistic and reproducible
43 surface characteristic values, which is, in turn, input to AERMET. AERSURFACE requires land
44 cover data from the U.S. Geological Survey (USGS) National Land Cover Data 1992 archives
45 (NLCD92). These surface characteristics for the MFC site, downloaded from the USGS Web
46 site (<http://seamless.usgs.gov/>), were used as representative of the land cover types around the
47 proposed EREF site.
48

1 Seasonal surface characteristics were determined for each of twelve 30-degree sectors for this
2 analysis. A default upwind distance of 1 kilometer (0.6 mile) from the measurement sites on the
3 proposed EREF property was used to determine the surface roughness values, per
4 recommendation in EPA's AERMOD Implementation Guide (EPA, 2009). A default domain
5 defined by a 10-kilometer by 10-kilometer (6.2-mile by 6.2-mile) area centered on the
6 measurement sites at the proposed EREF property was used for determination of albedo and
7 Bowen ratio. To determine the Bowen ratio, the surface moisture condition around the
8 proposed site was needed to characterize the proposed EREF site relative to climatological
9 normals. Surface moisture conditions for the Bowen ratio were determined by year, based on
10 the 30-year (1971–2000) annual precipitation record at the Pocatello Municipal Airport, which
11 has more comprehensive precipitation data than other nearby meteorological sites, including
12 National Weather Service's (NWS) MFC station (NCDC, 2009a,b). For this analysis, annual
13 precipitation data from the MFC site for the years 2004–2008 were compared to the
14 representative dry, normal, and wet conditions established using the 30-year Pocatello Airport
15 precipitation data. If annual precipitation for each of these years falls within lower-30th
16 percentile or the upper-30th percentile of the 30-year record, dry and wet conditions,
17 respectively, are assigned. Otherwise, average moisture conditions are assigned. Year 2005
18 was characterized as a wet condition; 2008 was characterized as a dry condition; 2004, 2006,
19 and 2007 were characterized as average with respect to annual rainfall. Additional inputs to
20 affect surface characteristic values include whether the site is an airport, an arid region, or
21 experiences continuous snow cover most of the winter. For this analysis, the MFC site was
22 identified as a non-airport site, so the AERSURFACE model would select high surface
23 roughness values representative of commercial and industrial land cover. For selection of an
24 arid region such as the location of the proposed EREF, the AERSURFACE model uses the
25 seasonal characteristics for shrubland and bare rock/sand/clay categories that are more
26 representative of a desert area. Appropriate seasonal values for the three parameters are
27 applied, depending on whether the site experiences continuous snow cover most of the winter.
28

29 **C.3 Meteorological Data Processing**

30
31 The meteorological data preprocessor AERMET requires three types of data: data collected
32 from an onsite measurement program such as from an instrumented tower, if available; NWS
33 hourly surface observations; and NWS twice-daily upper air soundings. As discussed above,
34 the MFC site was assumed to represent the proposed EREF site for this assessment.
35

36 Meteorological data at the MFC site, including wind speed and direction, ambient temperature,
37 and standard deviation of horizontal wind direction, were collected at two heights (10 and
38 76 meters [33 and 249 feet]). Surface wind data measured at an elevation of 1.5 meters from a
39 nearby airport are typically used to describe surface characteristics for the site. Three airports
40 exist within a 50-mile (80-kilometer) radius of the proposed EREF: Idaho Falls (31 kilometers
41 [19 miles]), Pocatello (76 kilometers [47 miles]), and Rexburg (58 kilometers [36 miles]).
42 Because of its proximity to the proposed EREF site, hourly surface meteorological data from
43 Idaho Falls Fanning Field were used for estimating boundary layer parameters. Twice-daily
44 upper soundings data from the NWS station in Boise, Idaho, were used. This station is located
45 in the Western Snake River Plain and is the only station in Idaho at which upper soundings data
46 are collected. The most recent five years (2004 to 2008) of meteorological data from the NWS
47 station at the Idaho Falls Fanning Field Airport, together with meteorological data from MFC and
48 upper sounding data from the NWS station in Boise, Idaho, were processed as inputs to the

1 AERMOD model. Table C-1 presents detailed information on surface, upper-air, and onsite
 2 meteorological stations, data file formats, anemometer heights, and distance and direction from
 3 the proposed EREF.
 4

5 Typically, the wind speed threshold of sensors at monitoring stations not located at an airport is
 6 low (e.g., 0.134 meter per second [0.440 feet per second] for the MFC data), but the wind speed
 7 threshold for airport data is set at 1 meter per second (3.28 feet per second) by default in
 8 AERMET. Accordingly, AERMOD modeling results using non-airport data could be higher than
 9 using airport data. However, AERMOD tends to overpredict non-buoyant low-level releases in
 10 low-wind speed conditions (Paine and Connors, 2009), resulting in a conservative estimation of
 11 impact. An additional AERMOD run was made assuming the sensor threshold of 1 meter per
 12 second (3.28 feet per second) to determine the sensitivity of the modeling results to sensor
 13 threshold values. Tables C-2 and C-3 provide an indication of AERMOD’s sensitivity to wind
 14 speed thresholds.
 15

16 Figure C-1 presents a wind rose at the 10-meter (33-foot) level of the MFC station for the
 17 2004–2008 period. The area experiences the predominant southwest–northeast wind flows at
 18 the proposed EREF site. The mountains bordering the ESRP would act to channel the
 19 prevailing west winds into a southwesterly flow due to the northeast–southwest orientation of
 20 the ESRP between the bordering mountain ranges. The prevailing wind directions are from the
 21 southwest (about 16 percent of the time) and secondarily from the south-southwest
 22 (13.3 percent). Winds from northeast and north-northeast combined occur more than
 23 18 percent of the time. In January, winds blow equally from south-southwest, north-northeast,
 24 and northeast; in February, north-northeast winds prevail. From March through December,
 25

Table C-1 Meteorological Data Information

Station Name	Station ID	Location (lat/long) ^a	Elevation (m)	File Format	Anemometer Height (m)	Distance & Direction from Proposed EREF ^a	Notes
Surface							
Idaho Falls Fanning Field	KIDA USAF: 725785 WBAN: 24145	43.517°N 112.067°W	1445	ISHD (TD-3505)	7.9	19 mi east-southeast	NA ^b
Upper Air							
Boise	BOI WBAN: 24131 WMO: 72681	43.57°N 116.22°W	871	FSL	NA	190 mi west	NA
Onsite							
Materials and Fuels Complex (MFC)	NA	43.594°N 112.652°W	1568	NA	10 and 76	11 mi west	Sensor threshold = 0.134 m/s

^a Proposed EREF: latitude=43.585°N; longitude=112.425°W; elevation=1583 m.

^b NA = not applicable.

Source: Hukari, 2009; NCDC, 2009c; NOAA, 2009.

Table C-2 Maximum Air Quality Impacts Due to Emissions Associated with Construction Activities of the Proposed Eagle Rock Enrichment Facility in Idaho (Sensor Threshold = 0.134 meter per second [0.440 feet per second])

Pollutant ^a	Averaging Time	Concentration ($\mu\text{g}/\text{m}^3$, except ppm for CO) ^b				Percent of NAAQS/SAQS ^c	
		Maximum Increment ^d	Background ^e	Total	NAAQS/SAQS	Increment	Total
CO	1 hour	0.8	4.3	5.1	35	2.4	14.6
	8 hours	0.1	2.1	2.2	9	1.5	24.9
NO ₂	Annual	1.0	11.3	12.3	100	1.0	12.3
SO ₂	3 hours	11.3	159.7	171.0	1300	0.9	13.2
	24 hours	1.8	62.8	64.6	365	0.5	17.7
	Annual	0.1	15.7	15.8	80	0.1	19.7
PM ₁₀	24 hours	355.2	52.0	407.2	150	236.8	271.5
	Annual	15.9	22.0	37.9	50	31.8	75.8
PM _{2.5}	24 hours	15.9	21.0	36.9	35	45.3	105.3
	Annual	1.6	6.4	8.0	15	10.5	53.2

^a CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter $\leq 2.5 \mu\text{m}$; PM₁₀ = particulate matter $\leq 10 \mu\text{m}$; and SO₂ = sulfur dioxide.

^b To convert $\mu\text{g}/\text{m}^3$ to ppm for gaseous pollutants, such as SO₂ and NO₂, divide values in $\mu\text{g}/\text{m}^3$ by the product of 40.82 and the molecular weight.

^c NAAQS = National Ambient Air Quality Standards; SAAQS = State Ambient Air Quality Standards.

^d For short-term (≤ 24 hours) averages, the highest of the second-highest modeled concentrations over five years is presented, except for PM₁₀ and PM_{2.5}. For 24-hour PM₁₀, high-6th-high over five years (2004–2008) is presented. For PM_{2.5}, the highest of the five-year average of the 8th-highest concentration at each receptor is presented. For long-term (annual) average, the highest of the annual averages over five years is presented for NO₂ and SO₂. The highest of multi-year averaged annual means across the receptors are presented for PM₁₀ and PM_{2.5}.

^e Source: Table 4-4.

winds blow predominantly from southwest or south-southwest. Average annual wind speed is about 4.1 meters per second (9.2 miles per hour), and relatively low calm winds are recorded about 0.17 percent of the time due to low sensor threshold. Wind speeds of 4.6 meters per second (10.4 miles per hour) are the highest in spring, reducing in summer and fall, and become the lowest at 3.4 meters per second (7.7 miles per hour) in winter.

C.4 Terrain Data Processing

The AERMAP terrain data preprocessor was used to account for the effects of terrain features. The terrain elevations for source and receptor locations were estimated based on the Digital Elevation Model (DEM) elevation data in the USGS DEM format (USGS, 2008). For the AERMOD modeling, 12 vertices for the construction site of about 75 hectares (185 acres) were identified, and sixty-two receptors were placed along the property line of the proposed EREF site, the overall size of which is about 208 hectares (515 acres). No offsite receptors were

Table C-3 Maximum Air Quality Impacts Due to Emissions Associated with Construction Activities of the Proposed Eagle Rock Enrichment Facility in Idaho (Sensor Threshold = 1 meter per second [3.28 feet per second])

Pollutant ^a	Averaging Time	Concentration ($\mu\text{g}/\text{m}^3$, except ppm for CO) ^b				Percent of NAAQS/SAQS ^c	
		Maximum Increment ^d	Background ^e	Total	NAAQS/SAQS	Increment	Total
CO	1 hour	0.3	4.3	4.6	35	0.9	13.2
	8 hours	0.1	2.1	2.2	9	0.8	24.1
NO ₂	Annual	0.8	11.3	12.1	100	0.8	12.1
SO ₂	3 hours	6.3	159.7	166.0	1300	0.5	12.8
	24 hours	1.0	62.8	67.8	365	0.3	17.5
	Annual	0.1	15.7	15.8	80	0.1	19.7
PM ₁₀	24 hours	189.9	52.0	241.9	150	126.6	161.3
	Annual	13.1	22.0	35.1	50	26.2	70.2
PM _{2.5}	24 hours	12.0	21.0	33.0	35	34.1	94.1
	Annual	1.3	6.4	7.7	15	8.6	51.3

^a CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter $\leq 2.5 \mu\text{m}$; PM₁₀ = particulate matter $\leq 10 \mu\text{m}$; and SO₂ = sulfur dioxide.

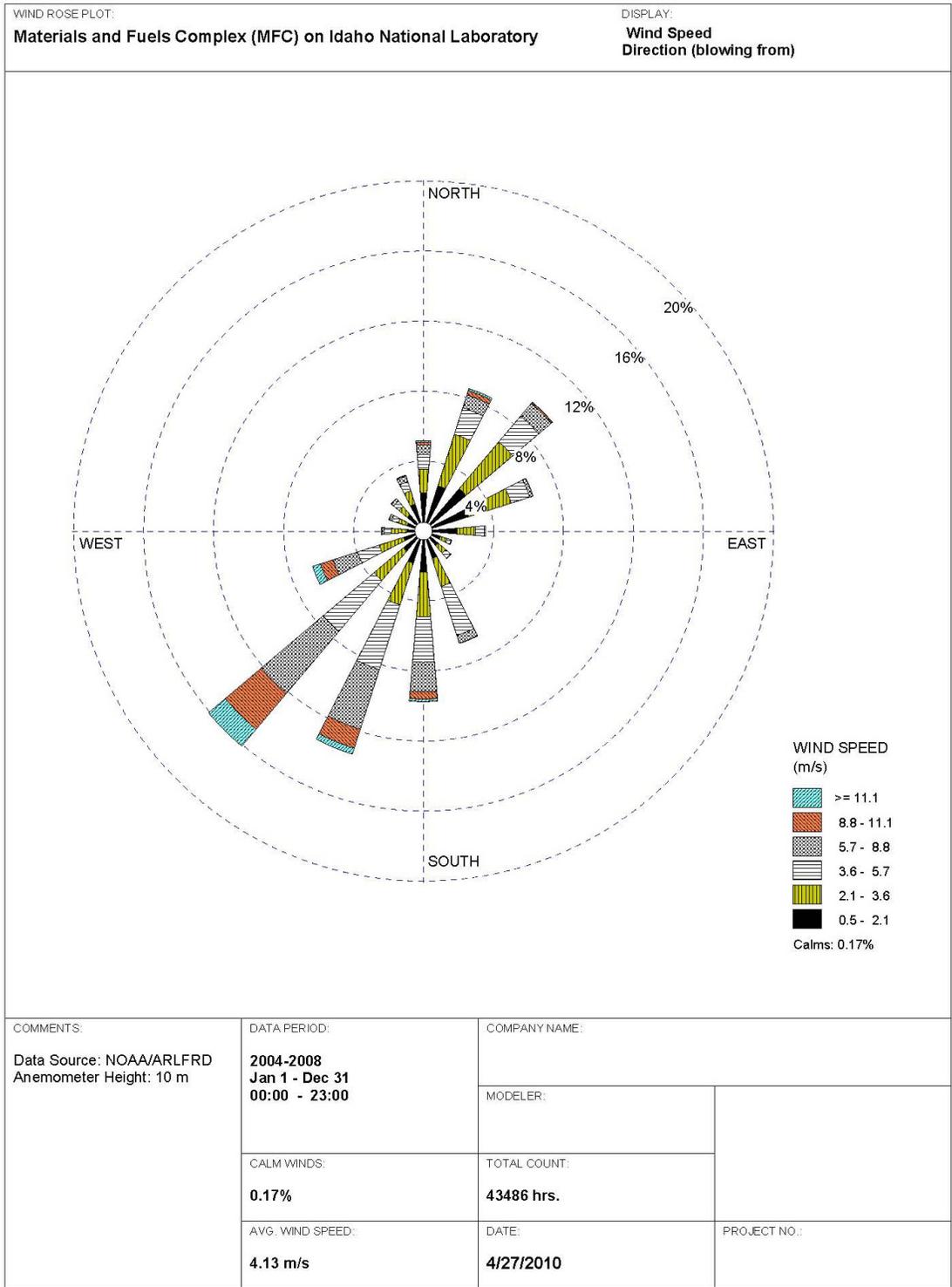
^b To convert $\mu\text{g}/\text{m}^3$ to ppm for gaseous pollutants, such as SO₂ and NO₂, divide values in $\mu\text{g}/\text{m}^3$ by the product of 40.82 and the molecular weight.

^c NAAQS = National Ambient Air Quality Standards; SAAQS = State Ambient Air Quality Standards.

^d For short-term (≤ 24 hours) averages, the highest of the second-highest modeled concentrations over five years is presented except PM₁₀ and PM_{2.5}. For 24-hour PM₁₀, high-6th-high over five years (2004–2008) is presented. For PM_{2.5}, the highest of the five-year average of the 8th-highest concentration at each receptor is presented. For long-term (annual) average, the highest of the annual averages over five years is presented for NO₂ and SO₂. The highest of multi-year averaged annual means across the receptors are presented for PM₁₀ and PM_{2.5}.

^e Source: Table 4-6.

1
2 established because most emission sources at the construction site would be either area
3 sources or point/mobile sources with low stack height, resulting in most emissions being
4 released at ground or near-ground level. Thus, maximum concentrations would occur in the
5 immediate vicinity of the source and would be adequately reflected in property boundary
6 receptors. The AREAPOLY source option was used to specify an area source as an irregularly
7 shaped polygon of a construction site, and one elevation representative of the construction site
8 was needed for input to the AERMOD. For receptors, AERMAP determines the elevations of
9 receptors along with hill height scale, which is the elevation of the terrain feature that dominates
10 the flow at a receptor of interest. The area surrounding the proposed EREF has no significant
11 terrain features nearby, so hill height scales for all receptors were equal to their elevations.
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Figure C-1 Wind Rose at 10-meter (33-foot) Level at the Meteorological Station near the Materials and Fuels Complex within the Idaho National Laboratory in Idaho, 2004–2008 (data from Hukari, 2009)

1 **C.5 Modeling Assumptions**
2

3 The following assumptions were established for air quality modeling and modeling result
4 interpretations:

- 5
- 6 • Construction activities would occur 5 days/week (or 260 days per year) and 10 hours per
7 day work schedule (7 am to 5 pm). In AERMOD, modeling was conducted for all 365 days
8 in a year, and maximum 24-hour concentration and annual average concentrations were
9 selected. Annual average concentrations were adjusted by multiplying the ratio of annual
10 working days to the possible number of days in a year (260/365).
11
 - 12 • Dry and wet deposition mechanisms are uncertain and are not recommended by EPA to be
13 included in regulatory compliance decisions (EPA, 2005, 2009), and thus are not
14 recommended for inclusion for typical applications unless special cases or objectives exist
15 (e.g., deposition impacts on vegetation). Accordingly, no dry and wet depositions for
16 construction-related PM modeling were assumed, i.e., conservatively, all PMs were
17 presumed to be airborne.
18
 - 19 • For the purpose of modeling demonstrations of compliance with the National Ambient Air
20 Quality Standards (NAAQS), the following modeled concentrations were used for
21 comparison with the NAAQS as recommended by EPA (EPA, 2005): highest of the second-
22 highest modeled concentrations over five years were presented for 1-hour and 8-hour CO
23 and 3-hour and 24-hour SO₂ and the highest of the annual averages over five years were
24 presented for annual averages for SO₂ and NO₂. For PM₁₀, high-6th-high over five years
25 (2004–2008) was presented. For PM_{2.5}, the highest of the five-year average of the high-
26 8th-high concentration at each receptor was presented. Highest of five-year average annual
27 means across the receptors for PM₁₀ and PM_{2.5} were presented.
28
 - 29 • It was assumed that about 75 hectares (185 acres) would be disturbed in any year
30 somewhere in the 208-hectare (515-acre) proposed EREF construction site. Accordingly,
31 emissions corresponding to disturbance of 75 hectares (185 acres) were uniformly
32 distributed over the 208-hectare (515-acre) proposed EREF construction site. Note that
33 modeled concentration increments are expected to be higher than values predicted here
34 when construction activities would occur near the construction site boundary.
35

36 **C.6 Modeling Results**
37

38 Air quality modeling estimates concentration increments over the background. To obtain total
39 concentrations for comparison with applicable air quality standards, these modeled
40 concentration increments were added to measured background concentrations at ambient air
41 quality monitoring sites operated by the Idaho Department of Environmental Quality
42 (see Table 4-4) that are representative of the proposed EREF site.
43

44 To quantify the anticipated bias introduced by the AERMOD model in estimating dispersion
45 concentrations in low wind speed conditions, the model was run at two low wind speed default
46 values, 0.134 meters per second (0.440 feet per second) and the higher 1 meter per second
47 (3.28 feet per second), with the results displayed in Tables C-2 and C-3, respectively. At either
48 low wind speed default value, the model predicted exceedance of only the particulate standards.

1 However, allowing the model to use the higher low wind speed default value resulted in
2 significant reductions in the extent to which the PM₁₀ standard was exceeded, 271.5 percent to
3 161.3 percent, and reduced the anticipated dispersed concentrations of PM_{2.5} from
4 105.3 percent of the standard to 94.1 percent of the standard.
5

6 During the construction phase, estimated maximum concentration increments and total
7 concentrations are shown in Tables C-2 and C-3 for a given sensor threshold of 0.134 meter per
8 second (0.440 feet per second) and a default AERMET sensor threshold of 1 meter per second
9 (3.28 feet per second), respectively.
10

11 **C.7 References**

12

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APPENDIX D
TRANSPORTATION METHODOLOGY, ASSUMPTIONS, AND IMPACTS

1 **APPENDIX D**
2 **TRANSPORTATION METHODOLOGY, ASSUMPTIONS, AND IMPACTS**
3

4 **D.1 Introduction**
5

6 This appendix presents the detailed methodology, input parameters and assumptions, and
7 results for the transportation impact assessment performed in this Environmental Impact
8 Statement (EIS) for the proposed Eagle Rock Enrichment Facility (EREF). The analysis
9 evaluates the transportation of:

- 10
- 11 • natural uranium hexafluoride (UF₆) (i.e., not enriched) feed to the proposed EREF
 - 12 • enriched UF₆ product to fuel fabrication facilities and international ports
 - 13 • depleted UF₆ to a conversion facility
 - 14 • empty feed, product, and tails cylinders containing residual contamination
 - 15 • low-level radioactive waste (LLRW) for disposal
- 16
17
18
19
20

21 Because rail access is not convenient to the proposed EREF site, AREVA Enrichment Services,
22 LLC (AES) has proposed to use only heavy-haul tractor-trailer combination trucks for the
23 transport of radioactive shipments.
24

25 The impact assessment determines the origin and destination of each type of shipment, the
26 amount of radioactive material in each shipment and the associated packaging, and impacts to
27 the environment from these shipments. The WebTRAGIS and RADTRAN 5 computer codes
28 (Johnson and Michelhaugh, 2003; Weiner et al., 2008) were used extensively in this analysis
29 and are discussed in more detail later. The appendix is organized into separate sections that
30 describe the radioactive materials, the shipping routes, the dose assessments, and the results.
31

32 **D.2 Methodology**
33

34 The transportation impact assessment considers human health risks from routine transport
35 (normal, incident-free conditions) of radioactive materials and from potential accidents. In both
36 cases, risks associated with the nature of the cargo itself, or “cargo-related” impacts, and those
37 related to the vehicle (regardless of type of cargo), or “vehicle-related” impacts, are considered.
38

39 The RADTRAN 5 computer code (Neuhauser and Kanipe, 2003; Weiner et al., 2008) was used
40 in the assessment of routine (incident-free) and accident cargo-related risk to estimate the
41 radiological impacts on collective populations. RADTRAN was originally developed by Sandia
42 National Laboratories in the late 1970s to facilitate calculations presented in *Final*
43 *Environmental Statement on the Transportation of Radioactive Material by Air and Other*
44 *Modes, Volumes I and II* (NUREG-0170) (NRC, 1977) and is the nationally accepted standard
45 program for calculating the risks of transporting radioactive materials. The code has been
46 updated several times to remain abreast of improvements in computer technology and has been
47 used extensively to calculate population risks associated with the transportation of radioactive
48 materials by truck, rail, air, ship, or barge.
49

1 **D.2.1 Routine Transportation Risk Methodology**
2

3 The radiological risk associated with routine (incident-free) transportation is cargo-related and
4 results from the potential exposure to low levels of external radiation near a loaded shipment. It
5 is assumed that there are no cargo-related risks posed by incident-free transport of hazardous
6 chemicals. No direct chemical exposure to radioactive material will occur during routine
7 transport because, as discussed in Section D.2.2.2, the packaging is designed and maintained
8 to ensure containment and shielding of contents during normal transport. Any leakage or
9 unintended release of radiological or chemical material is considered under accident risks.

10
11 Vehicle-related risks during routine transportation are caused by potential exposure to increased
12 vehicular emissions. These emissions include diesel exhaust, tire and brake particulate
13 emissions, and fugitive dust suspended from the roadbed by passing vehicles.

14
15 **D.2.1.1 Collective Population Risk**
16

17 The radiological risk associated with routine (incident-free) transportation results from the
18 potential exposure to low-level external radiation in the vicinity of loaded shipments. Even
19 under routine transportation conditions, some radiological exposure would occur. Because
20 radiological consequences (dose) would occur as a direct result of normal operations, the
21 probability of exposure is assumed to be 1 in RADTRAN 5. Because risk is typically defined as
22 the product of probability and consequence/magnitude, the risk is then equivalent to the
23 estimated dose. This risk is directly comparable to the accident risk discussed in Section D.2.2.
24

25 For routine transportation, RADTRAN 5 considers major groups of potentially exposed persons
26 and calculates exposure risks from routine highway transportation for the following population
27 groups:
28

- 29 • *Persons along the Route (Off-Link)*. Collective doses were calculated for all persons living
30 or working within 0.8 kilometer (0.5 mile) of each side of a transportation route. The total
31 number of persons within the 1.6-kilometer (1-mile) corridor was calculated separately for
32 each route considered in the assessment.
33
- 34 • *Persons Sharing the Route (On-Link)*. Collective doses were calculated for persons in all
35 vehicles sharing the transportation route. This group includes persons traveling in the same
36 or opposite directions as the shipment, as well as persons in vehicles passing the shipment.
37
- 38 • *Persons at Stops*. Collective doses were calculated for persons who might be exposed
39 while a shipment is stopped en route. For truck transportation, these stops include those for
40 refueling, food, and rest.
41
- 42 • *Crew Members*. Collective doses were calculated for truck transportation crew members
43 involved in the actual shipment of material. Workers involved in loading or unloading were
44 not considered.
45

46 The doses calculated for the first three population groups were summed to yield the collective
47 dose to the public; the dose calculated for the fourth group represents the collective dose to
48 occupationally exposed workers.
49

1 The RADTRAN 5 calculations for routine dose generically compute the dose rate as a function
2 of distance from a point source (Neuhauser and Kanipe, 2003). Associated with the calculation
3 of routine doses for each exposed population group are parameters such as the radiation field
4 strength, the source–receptor distance, the duration of exposure, vehicular speed, stopping
5 time, traffic density, and route characteristics (such as population density). The RADTRAN
6 manual contains derivations of the equations used and descriptions of these parameters
7 (Neuhauser and Kanipe, 2003; Weiner et al., 2008).

8 9 **D.2.1.2 Maximally Exposed Individual Risk**

10
11 In addition to the assessment of the routine (incident-free) collective population risk, the risk to a
12 maximally exposed individual (MEI) was estimated. In RADTRAN 5, the MEI is assumed to be
13 located 30 meters (100 feet) from the transport route as the radioactive shipment passes at a
14 speed of 24 kilometers per hour (15 miles per hour).

15 16 **D.2.1.3 Vehicle-Related Risk**

17
18 Vehicle-related health risks resulting from routine (incident-free) transportation are associated
19 with the generation of air pollutants during shipment and are independent of cargo. The health
20 endpoint assessed under routine transportation conditions was the excess latent mortality from
21 inhalation of vehicular emissions. These emissions consist of particulate matter in the form of
22 diesel engine exhaust, tire and brake particulates, and fugitive dust suspended from the
23 roadway by transport vehicles. Vehicle-related risks from routine transportation were calculated
24 for each shipment by multiplying the total distance traveled by the appropriate risk factor
25 (i.e., for the specific type of vehicle) for pollutant inhalation, as discussed in Section D.3.6.

26 27 **D.2.2 Accident Transportation Risk Methodology**

28
29 The cargo-related radiological risk from transportation accidents is attributable to the potential
30 release and dispersal of radioactive material into the environment during an accident and the
31 subsequent exposure of the nearby population through multiple exposure pathways
32 (i.e., inhalation, exposure to contaminated soil, or ingestion of contaminated food). Cargo-
33 related hazardous chemical impacts on human health during transportation accidents arise from
34 container failure and the inhalation of chemicals released during an accident.

35
36 The risk analysis for potential accidents differs fundamentally from that of routine (incident-free)
37 transportation because occurrences of accidents are statistical in nature and the accident risk
38 assessment is treated probabilistically. Accident risk is defined as the product of the accident
39 consequence (dose or exposure) and the probability of the accident occurring. In this respect,
40 the analysis estimates the collective accident risk to populations by considering a spectrum of
41 transportation-related accidents. The spectrum of accidents was designed to encompass a
42 range of possible accidents, including low-probability accidents that have high consequences
43 and high-probability accidents that have low consequences (such as “fender-benders”). For
44 radiological risk, the results for collective accident risk can be directly compared to the results
45 for routine collective risk because the latter results implicitly incorporate a probability of
46 occurrence of 1 if the shipment takes place.

1 Vehicle-related accident risks refer to the potential for transportation-related accidents and
2 resulting fatalities caused by physical trauma, both of which are independent of cargo.

3 4 **D.2.2.1 Radiological Accident Risk Assessment**

5
6 The RADTRAN 5 calculation of collective accident risk uses models that quantify the range of
7 potential accident severities and the responses of transported packages to accidents. The
8 spectrum of accident severity is divided into several categories, each of which is assigned a
9 conditional probability of occurrence – that is, the probability that if an accident occurs, it will be
10 of a particular severity. Release fractions, defined as the fraction of the contents in a package
11 that could be released in an accident, are assigned to each accident severity category on the
12 basis of the physical and chemical form of the contents. The model takes into account the
13 mode of transportation and the type of packaging through selection of the appropriate accident
14 probabilities and release fractions, respectively. The accident rates, the definition of accident
15 severity categories, and the release fractions used in this analysis are discussed further in
16 Sections D.3.1.3, D.3.4.1, and D.3.4.2.

17
18 For accidents involving the release of radioactive material, RADTRAN 5 assumes that the
19 material is dispersed in the environment according to standard Gaussian diffusion models.
20 For this risk assessment, default data for atmospheric dispersion were used, representing an
21 instantaneous ground-level release and a small-diameter source cloud (Neuhauser and
22 Kanipe, 2003). The calculation of the collective population dose following the release and
23 dispersal of radioactive material includes the following exposure pathways:

- 24
25 • external exposure to the passing radioactive cloud
26
27 • external exposure to contaminated ground
28
29 • internal exposure from inhalation of airborne contaminants
30
31 • internal exposure from the ingestion of contaminated food

32
33 For the ingestion pathway, the fraction of farmland in each State traversed was used as input to
34 the RADTRAN code. Farmland fraction is used by RADTRAN to consider the amount of
35 farmland that could be contaminated as a result of an accident, and subsequently lead to the
36 ingestion of contaminated foodstuffs. The majority of each shipping route is considered rural;
37 urban and suburban segments are generally minimized when routing radiological materials.
38 Doses of radiation from external exposure and the ingestion or inhalation of radionuclides were
39 calculated by applying standard dose conversion factors (Eckerman and Ryman, 1993;
40 ICRP, 1996).

41 42 **D.2.2.2 Chemical Accident Risk Assessment**

43
44 The risks from exposure to hazardous chemicals during transportation-related accidents, can be
45 either acute (resulting in immediate injury or fatality) or latent (resulting in cancer that would
46 present itself after a period of several years). However, none of the chemicals that might be
47 encountered in any of the transportation accidents involving UF₆ (i.e., HF and uranium

1 compounds) is carcinogenic. As a result, no excess chemically induced latent cancers would be
2 expected from accidental chemical releases.

3
4 The acute effects from uranium or HF intake considered were assumed to exhibit a threshold
5 nonlinear relationship with exposure (i.e., some low level of exposure can be tolerated without
6 inducing a health effect). To estimate risks, chemical-specific concentrations were developed
7 for potential irreversible adverse effects (DOE, 1999a). All individuals exposed at these levels
8 or higher following an accident were included in the transportation risk estimates.

9
10 The primary exposure route of concern with respect to accidental release of hazardous
11 chemicals would be inhalation. Although direct exposure to hazardous chemicals via other
12 pathways such as ingestion or absorption through the skin (dermal absorption) would also be
13 possible, these routes would be expected to result in much lower exposure than the inhalation
14 pathway doses for hydrogen fluoride (HF) or uranium compounds. The likelihood of acute
15 effects would be much lower for the ingestion and dermal pathways than for inhalation.

16
17 The acute health effects end point – potential irreversible adverse effects – was considered for
18 the assessment of cargo-related population impacts from transportation accidents involving
19 hazardous chemicals. Past analyses of depleted UF₆ shipments have shown that the estimates
20 of irreversible adverse effects to be approximately 1 to 3 orders of magnitude lower than the
21 estimates of public latent cancer fatalities from radiological accident exposure (DOE, 2004a,b;
22 NRC, 2005a). In addition, only one percent or fewer of persons experiencing irreversible
23 adverse effects from exposure to HF or uranium compounds actually results in fatality
24 (Policastro et al., 1997). Because radiological accident impacts would be SMALL and the
25 relative chemical hazards would be even smaller, no further analysis of chemical hazards posed
26 by transport was conducted for this EIS.

27 28 **D.2.2.3 Vehicle-Related Accident Risk Assessment**

29
30 Vehicle-related accident risk refers to the potential for transportation accidents that could
31 directly result in fatalities not related to the nature of the cargo. This risk represents fatalities
32 from physical trauma, and State-average rates for transportation fatalities are used in the
33 assessment. Vehicle-related accident risks are calculated by multiplying the total distance
34 traveled by the State-specific rates for transportation fatalities. In all cases, the vehicle-related
35 accident risks are calculated on the basis of distances for round-trip shipment, since the
36 presence or absence of cargo is not a factor in accident frequency.

37 38 **D.3 Input Parameters and Assumptions**

39
40 The principal input parameters and assumptions used in the transportation risk assessment are
41 discussed in this section. Transportation of hazardous chemical and radioactive materials is
42 governed by the *Hazardous Materials Transportation Act* and U.S. Department of
43 Transportation (DOT), U.S. Nuclear Regulatory Commission (NRC), and U.S. Environmental
44 Protection Agency (EPA) regulations. These regulations may be found in the U.S. *Code of*
45 *Federal Regulations* (CFR) at 49 CFR Parts 171–178 and 383–397, 10 CFR Part 71, and
46 40 CFR Parts 262 and 265, respectively. State organizations are also involved in regulating
47 such transport within their borders. All transportation-related activities must be conducted in
48 accordance with applicable regulations of these agencies. However, the DOT and NRC have

1 primary regulatory responsibility for shipment of radioactive materials. The regulations most
2 pertinent to this risk assessment can be found in 49 CFR Part 173, 49 CFR Part 397, and
3 10 CFR Part 71.

4 5 **D.3.1 Route Characteristics**

6
7 The transportation route selected for a shipment determines the potentially exposed population
8 and the expected frequency of transportation-related accidents. For truck transportation, the
9 route characteristics most important to the risk assessment include the total shipping distance
10 between each origin and destination and the population density along the route.

11 12 **D.3.1.1 Route Selection**

13
14 The DOT regulations concerning the routing of radioactive material shipments on public
15 highways are prescribed in 49 CFR 397.101. The objectives of these regulations are to reduce
16 the impacts of transporting radioactive materials, to establish consistent and uniform
17 requirements for route selection, and to identify the role of State and local governments in
18 routing radioactive materials. The regulations attempt to reduce potential hazards by
19 prescribing that populous areas be avoided and that travel times be minimized. In addition, the
20 regulations require that the carrier of radioactive materials ensures that the vehicle is operated
21 on routes that minimize radiological risks, and that accident rates, transit times, population
22 density and activity, time of day, and day of week are considered in determining risk. However,
23 the final determination of the route is left to the discretion of the carrier.

24
25 For this analysis, all domestic shipments to and from the proposed EREF are anticipated to
26 occur via heavy haul tractor-trailer combination trucks. There is no rail infrastructure at the
27 proposed site, and the closest rail access is at least 20 miles away (see Section 3.10).
28 Representative shipping routes were identified using the WebTRAGIS (Version 4.6.2) routing
29 model (Johnson and Michelhaugh, 2003) for all truck shipments. WebTRAGIS is a Web-based
30 version of TRAGIS (Transportation Routing Analysis Geographic Information System) and is
31 used to calculate highway, rail, or waterway routes within the United States. The routes were
32 selected to be reasonable and consistent with routing regulations and general practice, but they
33 are considered only representative because the actual routes used would be chosen in the
34 future and are often determined by the shipper. At the time of shipment, route selection would
35 reflect current road conditions, including road repairs and traffic congestion.

36
37 The HIGHWAY data network in WebTRAGIS is a computerized road atlas that includes a
38 complete description of the interstate highway system and of all U.S. highways. In addition,
39 most principal State highways and many local and community highways are identified. The
40 code is periodically updated to reflect current road conditions and has been compared with
41 reported mileages and observations of commercial trucking firms (Johnson and
42 Michelhaugh, 2003).

43
44 Routes are calculated within the model by minimizing the total impedance between origin and
45 destination. The impedance is a function of distance and driving time along a particular
46 segment of highway. Table D-1 presents a matrix of the shipping origins and destinations for
47 the various radioactive materials.

Table D-1 Shipping Origins and Destinations^a

Site/Facility	Feed	Product	Depleted UF ₆	LLRW	Empty Feed	Empty Product	Empty Tails
Port Hope, ON	In				Out		
Metropolis, IL	In				Out		
Portsmouth, VA	In	Out			Out		In
Baltimore, MD	In	Out			Out		In
Columbia, SC		Out				In	
Richland, WA		Out				In	
Wilmington, NC		Out				In	
Clive, UT				Out			
Hanford, WA				Out			
Oak Ridge, TN				Out			
Paducah, KY			Out				In
Portsmouth, OH			Out				In

^a In = incoming shipments to proposed EREF from origin; Out = outgoing shipments from proposed EREF to destination.

Source: AES, 2010.

1
2 Even though transportation regulations do not require restricted routing for trucking shipment of
3 natural uranium, low-enriched uranium, or depleted uranium, routing restrictions were applied as
4 follows:

- 5
6 • two drivers
7
8 • prohibit use of links prohibiting truck use
9
10 • prohibit use of ferry crossing; prohibit use of roads with hazardous materials prohibition
11
12 • Highway Route Controlled Quantity (HRCQ) preferred route
13
14 • prohibit use of roads with radioactive materials prohibition (HRCQ only)
15

16 Table D-2 presents the output from WebTRAGIS that was used in this transportation
17 assessment. For Port Hope, Ontario, an additional 241 kilometers (150 miles) of route distance
18 and one inspection stop were added to the WebTRAGIS output to account for the portion of the
19 route located in Canada.

20
21 **D.3.1.2 Population Density**

22
23 Three population density zones – rural, suburban, and urban – were used for the population risk
24 assessment. The fractions of travel and average population density in each zone were

Table D-2 Distance, Density, and Stop Information Generated by WebTRAGIS for Truck Route

Facility	Stops		Link Type	Distance per Trip		Population Density	
	Inspect	Rest		(km)	(mi)	(No./km ²)	(No./mi ²)
Feed Conversion, Port Hope, ON ^a	9	8	Rural	2834.7	1761.7	11.9	30.8
			Suburban	803.8	499.5	305.5	791.3
			Urban	85.0	52.9	2311.0	5985.4
Feed Conversion, Metropolis, IL	6	6	Rural	2306.0	1432.9	9.4	24.3
			Suburban	470.1	292.1	325.3	842.6
			Urban	56.1	34.8	2199.6	5697.0
International Port, Portsmouth, VA	9	8	Rural	3091.4	1921.0	12.7	32.8
			Suburban	898.2	558.1	306.4	793.7
			Urban	71.0	44.1	2216.1	5739.8
International Port, Baltimore, MD	10	9	Rural	2839.4	1764.3	12.4	32.2
			Suburban	860.4	534.6	307.9	797.5
			Urban	91.8	57.0	2291.1	5934.0
Fuel Fabrication, Columbia, SC	10	9	Rural	2867.9	1782.1	11.2	29.0
			Suburban	850.7	528.6	314.4	814.2
			Urban	77.1	47.9	2184.6	5658.1
Fuel Fabrication, Richland, WA ^b	2	3	Rural	822.7	511.2	9.8	25.4
			Suburban	149.8	93.1	305.9	792.2
			Urban	17.2	10.7	2185.7	5661.0
Fuel Fabrication, Wilmington, NC	8	10	Rural	3027.5	1881.2	11.7	30.3
			Suburban	1021.5	634.8	328.6	851.0
			Urban	87.6	54.4	2158.9	5591.5
Waste Disposal, Clive, UT ^b	1	1	Rural	378.9	235.4	10.5	27.2
			Suburban	105.0	65.3	352.7	913.5
			Urban	21.4	13.3	2360.3	6113.3
Waste Disposal, Hanford, WA ^b	2	3	Rural	856.6	532.3	9.5	24.5
			Suburban	149.2	92.7	306.4	793.6
			Urban	16.9	10.5	2174.4	5631.6
Waste Disposal, Oak Ridge, TN	7	8	Rural	2639.9	1640.4	10.7	27.7
			Suburban	642.5	399.2	310.5	804.1
			Urban	65.6	40.7	2218.1	5744.8

Table D-2 Distance, Density, and Stop Information Generated by WebTRAGIS for Truck Routes (Cont.)

Facility	Stops		Link Type	Distance per Trip		Population Density	
	Inspect	Rest		(km)	(mi)	(No./km ²)	(No./mi ²)
Depleted UF ₆ Conversion, Paducah, KY	7	6	Rural	2328.7	1447.0	9.5	24.6
			Suburban	478.2	297.1	324.9	841.4
			Urban	56.1	34.8	2199.6	5697.0
Depleted UF ₆ Conversion, Portsmouth, OH	8	8	Rural	2684.5	1668.1	12.1	31.2
			Suburban	645.4	401.0	295.9	766.5
			Urban	51.2	31.8	2266.0	5869.0

^a Includes an additional 241-kilometer (150-mile) segment and one inspection stop to account for the portion of the route located in Canada. Division of the additional segment by link type is consistent with the remainder of the route (rural 76.1 percent, suburban 21.6 percent, and urban 2.3 percent).

^b Nodes to the west of the proposed EREF were blocked to route all shipping traffic through Idaho Falls, as proposed by AES (AES, 2010).

1
2 determined using the WebTRAGIS routing model. Rural, suburban, and urban areas are
3 characterized according to the following breakdown: rural population densities range from 0 to
4 54 persons per square kilometer (0 to 139 persons per square mile); suburban densities range
5 from 55 to 1284 persons per square kilometer (140 to 3326 persons per square mile); and urban
6 covers all population densities greater than 1284 persons per square kilometer (3326 persons
7 per square mile). Use of these population density zones is based on an aggregation of the
8 11 population density zones provided in the WebTRAGIS model output (DOE, 2002). For
9 calculation purposes, information about population density was generated at the State level and
10 used as RADTRAN input for all routes. The population densities along a route are derived from
11 2000 Census data from the U.S. Census Bureau. Route-average population densities and other
12 route characteristics are provided in Table D-2.

13
14 **D.3.1.3 Accident and Fatality Rates**

15
16 For calculating accident risks, vehicle accident involvement and fatality rates are taken from
17 data provided in Saricks and Tompkins (1999). For each transport mode, accident rates are
18 generically defined as the number of accident involvements (or fatalities) in a given year per unit
19 distance of travel by that mode in the same year. Accident rates are derived from multiple-year
20 averages that automatically account for such factors as heavy traffic and adverse weather
21 conditions. For assessment purposes, the total number of expected accidents or fatalities is
22 calculated by multiplying the total shipping distance by the appropriate accident or fatality rate.

23
24 For truck transportation, the rates presented by Saricks and Tompkins (1999) are specifically for
25 heavy combination trucks involved in interstate commerce. Heavy combination trucks are rigs
26 composed of a separable tractor unit containing the engine and one to three freight trailers
27 connected to each other and the tractor. Heavy combination trucks are typically used for
28 shipping radiological materials that would be transported to and from the proposed EREF.
29 Truck accident rates are computed for each State on the basis of statistics compiled by the DOT

1 Office of Motor Carriers for 1994 to 1996. Saricks and Tompkins (1999) present accident
2 involvement and fatality counts, estimated kilometers of travel by State, and the corresponding
3 average accident involvement and fatality rates for the three years investigated. Fatalities
4 (including of crew members) are deaths that are attributable to the accident and that occurred
5 within 30 days of the accident.
6

7 The truck accident assessment presented in this EIS uses accident (fatality) rates for travel on
8 interstate highways. The total accident risk for a route depends on the total distance traveled in
9 each State along the route and does not rely on national average accident statistics. However,
10 for comparative purposes, the national average truck accident rate on interstate highways
11 presented in Saricks and Tompkins (1999) is 3.15×10^{-7} accident per truck-kilometer
12 (5.07×10^{-7} accident per mile). Note that the accident rates used in this assessment were
13 computed using all interstate highway shipments (regardless of the cargo), as 10 CFR Part 71
14 requires that HRCQ shipments be made over the interstate highway system.
15

16 **D.3.2 Packaging**

17

18 As noted in Section D.3, radioactive materials transported to and from the proposed EREF
19 would be subject to both DOT and NRC shipping regulations. All shipments of UF_6 can be
20 transported in Type A shipping containers having thermal protection (e.g., overpack or other
21 protective assembly) that meets DOT (49 CFR Part 173) and NRC (10 CFR Part 71)
22 requirements. Shipments of the product material are required to have fissile controls in addition
23 to the thermal protection. However, in this assessment of the radiological impacts, any
24 reduction in exposures due to the presence of a thermal and/or fissile overpack is ignored.
25 Packaging for radioactive materials must be designed, constructed, and maintained to ensure
26 that it will contain and shield the contents during normal transportation. For more highly
27 radioactive material, the packaging must also contain and shield the contents in severe
28 accidents. The type of packaging used is determined by the radioactive hazard associated with
29 the packaged material. Table D-3 summarizes the shipment packaging for the shipments
30 considered.
31

32 The uranium feed, depleted tails, and LLRW shipments would use Type A packaging. This type
33 of packaging must withstand the conditions of normal transportation without loss or dispersal of
34 the radioactive contents. "Normal" transportation refers to all transportation conditions except
35 those resulting from accidents or sabotage. Approval of Type A packaging is obtained by
36 demonstrating that the packaging can withstand specified testing conditions intended to
37 simulate normal transportation. Type A packaging usually does not require special handling,
38 packaging, or transportation equipment. The UF_6 feed and tails would be shipped in
39 Type 48Y cylinders (USEC, 1999), and LLRW would be shipped in 55-gallon drums. The
40 specifications for a Type 48Y cylinder are shown in Figure D-1 and Table D-4.
41

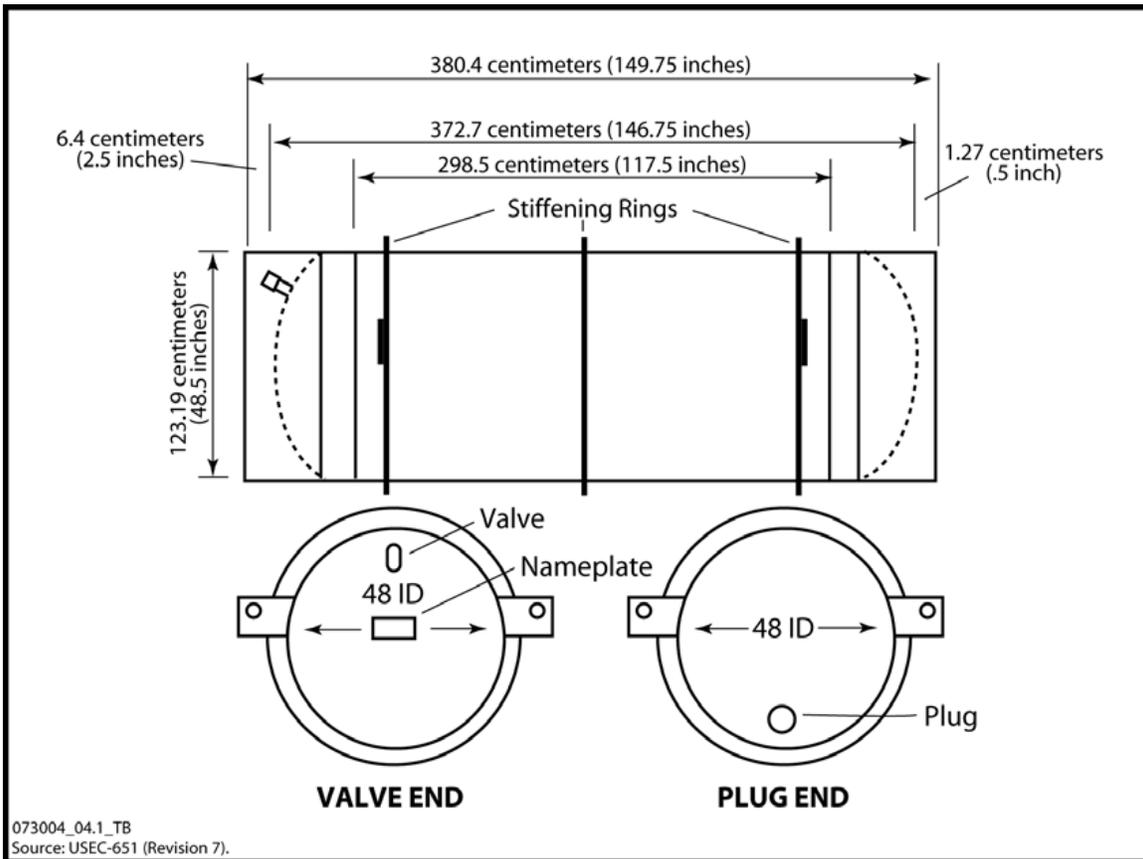
42 The enriched product would be shipped in Type 30B cylinders (USEC, 1999) within Type B
43 overpacks. Figure D-2 and Table D-5 show the specifications of a 30B cylinder. In addition to
44 meeting all Type A standards, Type B packaging must also provide a high degree of assurance
45 that the package integrity will be maintained even during severe accidents, with essentially no
46 loss of the radioactive contents or serious impairment of the shielding capability. Type B
47 packaging must satisfy stringent testing criteria (as specified in 10 CFR 71.73) that were
48 developed to simulate conditions of severe hypothetical accidents, including impact, puncture,

Table D-3 Annual Number of Containers and Trucks Required for Transport

Material	Type of Container	Number per Year	
		Containers	Trucks
Natural UF ₆	48Y	1424	1424
Enriched UF ₆	30B	1032	516
Depleted UF ₆	48Y	1222	1222
LLRW	55-gallon drum	954	16
Empty feed cylinders	48Y	1424	712
Empty product cylinders	30B	1032	516
Empty depleted UF ₆ cylinders	48Y	1222	611

Source: AES, 2010.

1



2

3

4

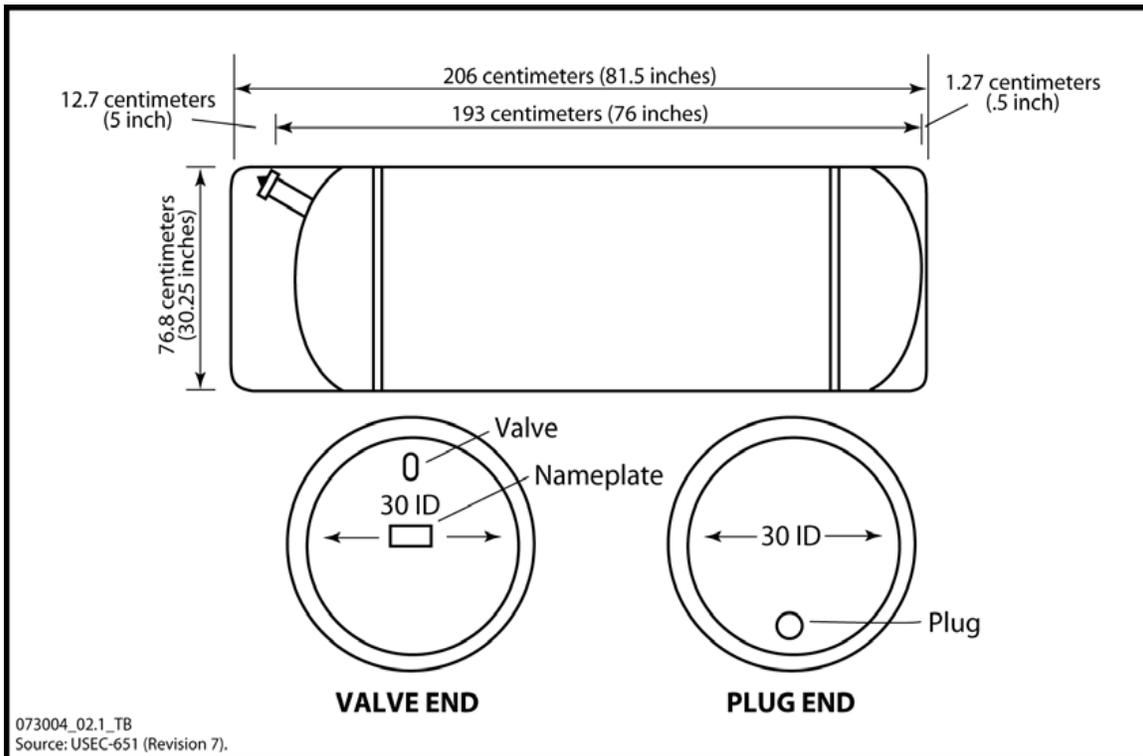
Figure D-1 Schematic of a Type 48Y Cylinder (USEC, 1995)

Table D-4 Type 48Y Cylinder Specifications

Parameter	Value
Nominal diameter	122 centimeters (48 inches)
Nominal length	380 centimeters (150 inches)
Wall thickness	1.6 centimeters (0.625 inches)
Nominal tare weight	2359 kilograms (5200 pounds)
Maximum net weight	12,500 kilograms (27,560 pounds)
Nominal gross weight	14,860 kilograms (32,760 pounds)
Minimum volume	4.04 cubic meters (142.7 cubic feet)
Basic material of construction	Steel: ASTM A-516
Service pressure	1380 kilopascals gage (200 pounds per square inch gage)
Hydrostatic test pressure	2760 kilopascals gage (400 pounds per square inch gage)
Isotopic content limit	4.5 percent ²³⁵ U (maximum with moderation control)
Valve used	2.54-centimeter valve (1-inch valve)

Source: USEC, 1995.

1



2

Figure D-2 Schematic of a Type 30B Cylinder (USEC, 1995)

3

4

Table D-5 Type 30B Cylinder Specifications

Parameter	Value
Nominal diameter	76 centimeters (30 inches)
Nominal length	206 centimeters (81 inches)
Wall thickness	1.27 centimeters (0.5 inches)
Nominal tare weight	635 kilograms (1400 pounds)
Maximum net weight	2300 kilograms (5000 pounds)
Nominal gross weight	2900 kilograms (6400 pounds)
Minimum volume	736 liters (26 cubic feet)
Basic material of construction	Steel: ASTM A-516
Service pressure	1380 kilopascals gage (200 pounds per square inch gage)
Hydrostatic test pressure	2760 kilopascals gage (400 pounds per square inch gage)
Isotopic content limit	5.0 percent ²³⁵ U (maximum with moderation control)
Valve used	2.54-centimeter valve (1-inch valve)

Source: USEC, 1995.

1
2 fire, and immersion in water. For shipping Type 30B cylinders, a UX-30 overpack would be
3 used (to provide protection and convenience in handling through consolidation). The UX-30 has
4 a diameter of 1.10 meters (43.5 inches) and is 2.44 meters (96 inches) in length (NRC, 2009).

5 6 **D.3.3 Shipment Configurations and Number of Shipments**

7
8 Several different types of radioactive materials are proposed for shipment to and from the
9 proposed EREF. Table D-6 presents the activity (amount) of each radionuclide that would be
10 present in containers of feed, product, depleted uranium, and LLRW. Previous EISs have
11 incorporated one year of decay to account for delay in shipping between the generation of
12 depleted UF₆ and any radioactive shipments. Due to the anticipated time frame of startup for
13 the proposed EREF and the impending availability of DOE conversion services, there is no
14 assurance that such decay would occur prior to shipment. Therefore, it was not considered in
15 this analysis.

16
17 The radionuclide inventories for the radioactive material shipments presented in Table D-6
18 include a number of short-lived radionuclides that are not included in the RADTRAN 5 default
19 library of radionuclides. Due to their short half-lives and relatively low activity, these
20 radionuclides do not significantly contribute to the population dose in an accident scenario
21 (incident-free doses are based on exterior dose rates and are not directly dependent on
22 radionuclide inventory). These short-lived radionuclides are assumed to be in equilibrium with
23 their parent radionuclides, so their internal dose contributions are included in the internal dose
24 conversion factors of the parent radionuclides. Furthermore, this simplifying assumption is
25 counterbalanced by the conservative assumption that there would be no decay period between
26 generation and shipment. Therefore, use of the RADTRAN 5 default library of radionuclides in
27 this analysis was considered adequate.

Table D-6 Curie Inventory in Selected Shipping Containers for Truck Transportation

Radionuclide	Feed (natural UF ₆)	Product (enriched UF ₆)	Depleted Uranium (tails/ depleted UF ₆)	Depleted UF ₆ Residue (heels)	Empty Product	LLRW
Thallium-207	3.84×10^{-8}	4.92×10^{-8}	1.94×10^{-8}	6.96×10^{-11}	2.45×10^{-10}	1.01×10^{-11}
Thallium-208	1.77×10^{-15}	2.26×10^{-15}	8.94×10^{-16}	3.20×10^{-18}	1.13×10^{-17}	4.63×10^{-19}
Lead-210	3.76×10^{-11}	5.68×10^{-11}	1.80×10^{-11}	6.83×10^{-14}	2.83×10^{-13}	9.87×10^{-15}
Lead-211	3.85×10^{-8}	4.93×10^{-8}	1.95×10^{-8}	6.98×10^{-11}	2.45×10^{-10}	1.01×10^{-11}
Lead-212	4.92×10^{-15}	6.30×10^{-15}	2.49×10^{-15}	8.92×10^{-18}	3.14×10^{-17}	1.29×10^{-18}
Lead-214	3.74×10^{-9}	5.64×10^{-9}	1.79×10^{-9}	6.79×10^{-12}	2.81×10^{-11}	9.82×10^{-13}
Bismuth-210	3.76×10^{-11}	5.68×10^{-11}	1.80×10^{-11}	6.83×10^{-14}	2.83×10^{-13}	9.87×10^{-15}
Bismuth-211	3.85×10^{-8}	4.93×10^{-8}	1.95×10^{-8}	6.98×10^{-11}	2.45×10^{-10}	1.01×10^{-11}
Bismuth-212	4.92×10^{-15}	6.30×10^{-15}	2.49×10^{-15}	8.92×10^{-18}	3.14×10^{-17}	1.29×10^{-18}
Bismuth-214	3.74×10^{-9}	5.64×10^{-9}	1.79×10^{-9}	6.79×10^{-12}	2.81×10^{-11}	9.82×10^{-13}
Polonium-210	1.21×10^{-11}	1.82×10^{-11}	5.78×10^{-12}	2.19×10^{-14}	9.08×10^{-14}	3.17×10^{-15}
Polonium-211	1.08×10^{-10}	1.38×10^{-10}	5.46×10^{-11}	1.96×10^{-13}	6.87×10^{-13}	2.83×10^{-14}
Polonium-212	3.15×10^{-15}	4.03×10^{-15}	1.60×10^{-15}	5.71×10^{-18}	2.01×10^{-17}	8.26×10^{-19}
Polonium-214	3.74×10^{-9}	5.64×10^{-9}	1.79×10^{-9}	6.79×10^{-12}	2.81×10^{-11}	9.82×10^{-13}
Polonium-215	3.85×10^{-8}	4.93×10^{-8}	1.95×10^{-8}	6.98×10^{-11}	2.45×10^{-10}	1.01×10^{-11}
Polonium-216	4.92×10^{-15}	6.30×10^{-15}	2.49×10^{-15}	8.92×10^{-18}	3.14×10^{-17}	1.29×10^{-18}
Polonium-218	3.74×10^{-9}	5.65×10^{-9}	1.79×10^{-9}	6.79×10^{-12}	2.81×10^{-11}	9.82×10^{-13}
Radon-219	3.85×10^{-8}	4.93×10^{-8}	1.95×10^{-8}	6.98×10^{-11}	2.45×10^{-10}	1.01×10^{-11}
Radon-220	4.92×10^{-15}	6.30×10^{-15}	2.49×10^{-15}	8.92×10^{-18}	3.14×10^{-17}	1.29×10^{-18}
Radon-222	3.74×10^{-9}	5.65×10^{-9}	1.79×10^{-9}	6.79×10^{-12}	2.81×10^{-11}	9.82×10^{-13}
Francium-223	6.13×10^{-10}	7.85×10^{-10}	3.10×10^{-10}	1.11×10^{-12}	3.91×10^{-12}	1.61×10^{-13}
Radium-223	3.85×10^{-8}	4.93×10^{-8}	1.95×10^{-8}	6.98×10^{-11}	2.45×10^{-10}	1.01×10^{-11}
Radium-224	4.92×10^{-15}	6.30×10^{-15}	2.49×10^{-15}	8.92×10^{-18}	3.14×10^{-17}	1.29×10^{-18}
Radium-226	3.74×10^{-9}	5.65×10^{-9}	1.79×10^{-9}	6.79×10^{-12}	2.81×10^{-11}	9.82×10^{-13}
Radium-228	4.41×10^{-14}	5.65×10^{-14}	2.23×10^{-14}	8.01×10^{-17}	2.81×10^{-16}	1.16×10^{-17}
Actinium-227	4.44×10^{-8}	5.69×10^{-8}	2.25×10^{-8}	8.06×10^{-11}	2.83×10^{-10}	1.17×10^{-11}
Actinium-228	4.41×10^{-14}	5.65×10^{-14}	2.23×10^{-14}	8.01×10^{-17}	2.82×10^{-16}	1.16×10^{-17}
Thorium-227	3.79×10^{-8}	4.85×10^{-8}	1.92×10^{-8}	6.87×10^{-11}	2.41×10^{-10}	9.94×10^{-12}
Thorium-228	4.91×10^{-15}	6.29×10^{-15}	2.49×10^{-15}	8.91×10^{-18}	3.13×10^{-17}	1.29×10^{-18}
Thorium-230	1.73×10^{-5}	2.61×10^{-5}	8.27×10^{-6}	3.13×10^{-8}	1.30×10^{-7}	4.53×10^{-9}

Table D-6 Curie Inventory in Selected Shipping Containers for Truck Transportation (Cont.)

Radionuclide	Feed (natural UF ₆)	Product (enriched UF ₆)	Depleted Uranium (tails/depleted UF ₆)	Depleted UF ₆ Residue (heels)	Empty Product	LLRW
Thorium-231	1.30×10^{-1}	1.67×10^{-1}	6.58×10^{-2}	2.36×10^{-4}	8.29×10^{-4}	3.41×10^{-5}
Thorium-232	8.83×10^{-13}	1.13×10^{-12}	4.47×10^{-13}	1.60×10^{-15}	5.63×10^{-15}	2.32×10^{-16}
Thorium-234	2.82×10^0	4.92×10^{-1}	2.83×10^0	5.12×10^{-3}	2.45×10^{-3}	7.41×10^{-4}
Protactinium-231	2.80×10^{-6}	3.58×10^{-6}	1.42×10^{-6}	5.07×10^{-9}	1.78×10^{-8}	7.34×10^{-10}
Protactinium-234m	2.82×10^0	4.92×10^{-1}	2.83×10^0	5.12×10^{-3}	2.45×10^{-3}	7.41×10^{-4}
Protactinium-234	3.67×10^{-3}	6.39×10^{-4}	3.68×10^{-3}	6.66×10^{-6}	3.18×10^{-6}	9.63×10^{-7}
Uranium-234	1.92×10^0	2.90×10^0	9.18×10^{-1}	0	0	5.04×10^{-4}
Uranium-235	1.30×10^{-1}	1.67×10^{-1}	6.58×10^{-2}	0	0	3.41×10^{-5}
Uranium-236	1.79×10^{-2}	2.29×10^{-2}	9.06×10^{-3}	0	0	4.69×10^{-6}
Uranium-238	2.82×10^0	4.92×10^{-1}	2.83×10^0	0	0	7.41×10^{-4}

Source: AES, 2010.

1
2 Table D-3 presents the number of packages and number of shipments that would be required
3 for transport to and from the proposed EREF. Uranium feed and depleted tails shipments would
4 consist of one Type 48Y cylinder per truck, and each cylinder would contain about 12.4 metric
5 tons (13.7 tons) of natural or depleted UF₆. Enriched UF₆ product would be shipped in
6 Type 30B cylinders in UX-30 overpacks, two cylinders per truck (although up to five cylinders
7 could be shipped per truck). Each 30B cylinder would contain approximately 2.3 metric tons
8 (2.5 tons) of product. Low-level radioactive waste would be shipped in 55-gallon waste drums,
9 60 drums per truck. The types and amounts of LLRW that would be shipped are discussed in
10 Section 4.2.9.2.

11 12 **D.3.4 Accident Characteristics**

13
14 Assessment of transportation accident risk takes into account the potential severity of
15 transportation-related accidents and the fraction of package contents that would be released to
16 the environment during an accident (commonly referred to as the release fraction). The method
17 used to characterize accident severities and the corresponding release fractions for estimating
18 both radioactive and chemical risks are described below.

19 20 **D.3.4.1 Accident Severity Categories**

21
22 A method to characterize the potential severity of transportation-related accidents is described
23 in NUREG-0170, *Final Environmental Statement on the Transportation of Radioactive Material*

1 *by Air and Other Modes* (NRC, 1977), and presented in *A Resource Handbook on DOE*
2 *Transportation Risk Assessment* (DOE, 2002). The NRC method divides the spectrum of
3 accident severities into eight categories, which are further subdivided into population zones
4 (rural, suburban, and urban) containing the fraction of occurrence within each zone. Other
5 studies have divided the same accident spectrum into six categories (Wilmot, 1981),
6 20 categories (Fischer et al., 1987), or more (Sprung et al., 2000). However, these latter
7 studies focused primarily on accidents involving shipments of spent nuclear fuel. In this
8 analysis, the NUREG-0170 scheme was used for all shipments.

9
10 The NUREG-0170 scheme for truck transportation accident classification is shown in
11 Figure D-3. Severity is described as a function of the magnitudes of the mechanical forces
12 (impact) and thermal forces (fire) to which a package may be subjected during an accident.
13 Because all accidents can be described in these terms, severity is independent of the specific
14 accident sequence. In other words, any sequence of events that results in an accident in which
15 a package is subjected to forces within a certain range of values is assigned to the accident
16 severity category associated with that range. The scheme for accident severity is designed to
17 take into account all credible transportation-related accidents, including those accidents with low
18 probability but high consequences and those with high probability but low consequences.

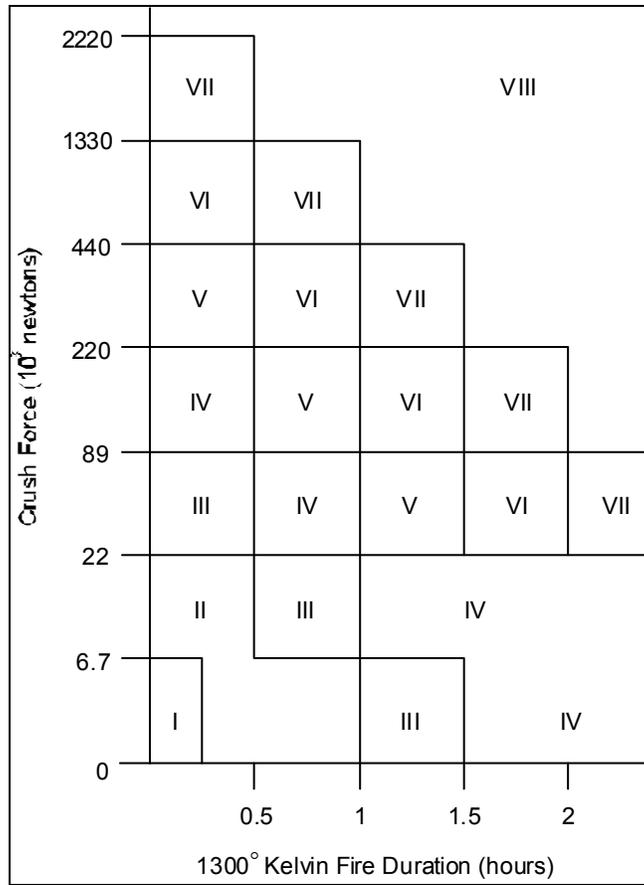
19
20 Each severity category represents a set of accident scenarios defined by a combination of
21 mechanical and thermal forces. A conditional probability of occurrence (i.e., the probability that
22 if an accident occurs, it is of a particular severity) is assigned to each category. These fractional
23 occurrences (conditional probabilities) for accidents by accident severity category and
24 population density zone are shown in Table D-7 and are used for estimating the radiological
25 transportation risks.

26
27 Category I accidents are the least severe but the most frequent; Category VIII accidents are
28 very severe but very infrequent. To determine the expected frequency of an accident of a given
29 severity, the conditional probability in the category is multiplied by the accident rate
30 (see Section D.3.1.3). Each population density zone has a distinct distribution of accident
31 severities related to differences in average vehicular velocity, traffic density, location (rural,
32 suburban, or urban), and other factors.

33 34 **D.3.4.2 Package Release Fractions**

35
36 In NUREG-0170, radiological and chemical consequences are calculated by assigning package
37 release fractions to each accident severity category. The release fraction is defined as the
38 fraction of package contents that could be released from the package as the result of an
39 accident of a given severity. Release fractions take into account all mechanisms necessary to
40 create release of material from a damaged package to the environment. The release fraction is
41 a function of the severity of the accident, the packaging, and the physical form of the material.
42 For instance, a low-impact accident, such as a “fender-bender,” would not be expected to cause
43 any release of material. Conversely, a severe accident would be expected to release nearly all
44 of the material in a shipment into the environment.

45
46 Representative release fractions for accidents involving all shipments were taken from
47 NUREG-0170 (NRC, 1977), for both Type A and Type B packages. The recommendations in
48 NUREG-0170 were based on best engineering judgments and have been shown to provide



1
2
3
4

Figure D-3 Scheme for NUREG-0170 Classification by Accident Severity Category for Truck Accidents (NRC, 1977)

Table D-7 Fractional Occurrences for Accidents by Severity Category and Population Density Zone

Severity Category	Fractional Occurrence	Fractional Occurrence by Population Zone		
		Low (Rural)	Medium (Suburban)	High (Urban)
I	0.55	0.1	0.1	0.8
II	0.36	0.1	0.1	0.8
III	0.07	0.3	0.4	0.3
IV	0.016	0.3	0.4	0.3
V	0.0028	0.5	0.3	0.2
VI	0.0011	0.7	0.2	0.1
VII	8.50×10^{-5}	0.8	0.1	0.1
VIII	1.50×10^{-5}	0.9	0.05	0.05

Source: NRC, 1977; DOE, 2002.

5

1 conservative estimates of material releases following accidents (Sprung et al., 2000). Release
 2 fractions for accidents of each severity category are provided in Table D-8. As indicated in the
 3 table, the amount of material released from a package ranges from zero for minor accidents to
 4 100 percent for the most severe accidents.

5
 6 Also important for the purposes of risk assessment are the fraction of the released material that
 7 can be entrained in an aerosol (part of an airborne contaminant plume) and the fraction of the
 8 aerosolized material that is respirable (of a size that can be inhaled into the lungs). These
 9 fractions depend on the physical form of the material. Most solid materials are difficult to
 10 release in particulate form and are, therefore, relatively nondispersible. Conversely, liquid or
 11 gaseous materials are relatively easy to release if the container is breached in an accident. The
 12 aerosolized fraction and respirable fraction for all radiological shipments were conservatively
 13 assumed to be 1 for all accidents involving Type A packages (Table D-8). These values are
 14 conservative due to the lack of data on package failure under severe conditions (DOE, 2002).

15
 16 **D.3.4.3 Atmospheric Conditions during Accidents**

17
 18 Hazardous material released to the atmosphere is transported by wind. The amount of
 19 dispersion, or dilution, of the contaminant depends on the meteorologic conditions at the time of
 20 the accident. Because predicting the specific location of a transportation-related accident and
 21 the exact meteorologic conditions at the time of the accident is impossible, generic atmospheric
 22 conditions were selected for the accident risk assessment. Neutral weather conditions were
 23 assumed, represented by Pasquill atmospheric stability Class D with a wind speed of 4 meters
 24 per second (9 miles per hour). Because neutral meteorological conditions are the most
 25 frequently occurring atmospheric stability condition in the United States, these conditions are
 26 most likely to be present in the event of an accident involving a hazardous material shipment.
 27 Observations at National Weather Service meteorological stations at more than 300 U.S.
 28 locations indicate that on a yearly average, neutral conditions (represented by Pasquill
 29 Classes C and D) occur about half (50 percent) the time; stable conditions (Pasquill Classes E
 30 and F) occur about one-third (33 percent) of the time; and unstable conditions (Pasquill
 31 Classes A and B) occur about one-sixth (17 percent) of the time (Doty et al., 1976). The neutral
 32

Table D-8 Fraction of Package Released, Aerosolized, and Respirable

Accident Severity	Release	Respirable	Aerosolized
I	0	1	1
II	0.01	1	1
III	0.1	1	1
IV	1	1	1
V	1	1	1
VI	1	1	1
VII	1	1	1
VIII	1	1	1

Source: DOE, 2002.

1 category predominates in all seasons, but it is most prevalent (nearly 60 percent of the
2 observations) during winter.

4 **D.3.5 Radiological Risk Assessment Input Parameters and Assumptions**

6 The dose (and the corresponding risk) to populations during routine (incident-free)
7 transportation of radioactive materials is directly proportional to the assumed external dose rate
8 from the shipment. The actual dose rate from the shipment is a complex function of the
9 composition and configuration of shielding and containment materials used in the packaging,
10 the geometry of the loaded shipment, and the characteristics of the contents.

12 Table D-9 provides a summary of information from various sources regarding estimates of the
13 external radiation near each type of shipping container. For the purposes of this EIS, the NRC
14 staff has assumed the most conservative dose rate for each type of container. Dose rates are
15 presented in terms of the transport index (TI), which is the dose rate at 1 meter (3 feet) from the
16 surface of a package. The regulatory limit established in 49 CFR 173.441 and 10 CFR 71.47 to
17 protect the public is 0.1 millisievert per hour (10 millirem per hour) at 2 meters (6 feet) from the
18 outer lateral sides of the transport vehicle.

20 Note that in Table D-9 the external radiation levels for an empty cylinder (Type 48Y or 30B) are
21 higher than those for a full cylinder. This occurs for two reasons. First, after UF₆ (feed, product,
22 or depleted tail) is removed from a cylinder, the radioactive uranium daughter products that build
23 up due to the radioactive decay of uranium collect at the bottom and form what is known as a
24 "heel." The nature of the radiation emitted from the uranium daughter products results in a
25 greater release of gamma radiation than occurs from just uranium. Second, uranium is very
26 dense and an effective shield material for gamma radiation. When a cylinder is full of UF₆, the
27 uranium daughters are distributed throughout the cylinder and emitted radiation must pass
28 through a significant thickness of uranium (and thus can be stopped or absorbed by the
29 uranium). Only gamma emissions from uranium daughters near the inner surface of the
30 cylinder can penetrate the cylinder and contribute to a nearby person's radiation exposure.
31 Because an empty cylinder contains largely vapor and no longer has the high shielding
32 capability of solid UF₆, and because the heel concentrates the more highly radioactive uranium
33 daughters next to the inner surface of the cylinder, the radiation levels near an empty cylinder
34 are higher than those for a full UF₆ cylinder.

36 In addition to the specific parameters discussed previously, values for a number of general
37 parameters must be specified within RADTRAN to calculate radiological risks. These general
38 parameters define basic characteristics of the shipment and traffic and are specific to the mode
39 of transportation; they include the speed of the vehicle, size of the crew, amount of time the
40 shipment is stopped for rest or inspection, and density of the population sharing the shipping
41 route. The RADTRAN user manual (Neuhauser and Kanipe, 2003; Weiner et al., 2008)
42 contains derivations and descriptions of these parameters. The general RADTRAN input
43 parameters used in the radiological transportation risk assessment are summarized in
44 Table D-10; default RADTRAN values were used for input parameters not described in this
45 appendix.

Table D-9 Direct Radiation Surrounding Shipping Containers^a

Container	Assumed Dose Rate (mrem/hr)	Measured/Estimated Dose Rate (mrem/hr)	Source
Feed (48Y)	1.0	0.7	NRC, 2006; Table D-7
		0.2	NRC, 2005b; Table 4.12, C-8
		0.29	NRC, 2005b; Table D-7
Product (30B)	1.0	0.4	NRC, 2006; Table D-7
		0.19	NRC, 2005b; Table D-7
Depleted UF ₆	1.0	1.0	DOE, 1999a; Sec. J.3.2.1.1
		0.28	NRC, 2005b; Table D-7
		0.23 (min)	Biwer et al., 2001; Table 5.4
		0.46 (max)	Biwer et al., 2001; Table 5.4
LLRW	1.0	1.0	NRC, 2006; Table D-7
		1.0	DOE, 2002; Table 4.2
		0.0042	NRC, 2005b; Table D-7
		0.5 (min)	Biwer et al., 2001; Table 5.4
		1.0 (max)	Biwer et al., 2001; Table 5.4
Empty feed	3.0	1.0	NRC, 2005b; Table C-8, D-7
		1.0	NRC, 2006; Table D-7
		3.0	AES, 2010
Empty product	5.0	1.0	Biwer et al., 2001; Table 5.4
		5.0	AES, 2010
Empty depleted UF ₆	3.0	1.0	Biwer et al., 2001; Table 5.4
		3.0	AES, 2010

^a At one meter.

To convert from millirem to millisievert, multiply by 1×10^{-2} .

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D.3.6 Routine Nonradiological Vehicle Emission Risks

Vehicle-related risks during incident-free transportation include incremental risks caused by potential exposure to airborne particulate matter from fugitive dust (resuspended particulates from the roadway) and diesel exhaust emissions. The health end point assessed under routine (incident-free) transport conditions is the excess (additional) latent mortality caused by inhalation of vehicular emissions. Strong epidemiological evidence suggests that increases in ambient air concentrations of PM₁₀ (particulate matter with a mean aerodynamic diameter less than or equal to 10 microns) lead to increases in mortality (EPA, 1996a,b). Currently, it is assumed that no threshold exists and that the dose–response functions for most health effects associated with PM₁₀ exposure, including premature mortality, are linear over the concentration

Table D-10 RADTRAN 5 Input Parameters

Parameter	Link Type	Value
Traffic volume (vehicles/hour) ^a	Rural	1155
	Suburban	2414
	Urban	5490
Vehicle speed (kph [mph])	Rural	88 (55)
	Suburban	40 (25)
	Urban	24 (15)
Number of people in adjacent vehicle		2
Crew size		2
Distance from source to crew (m)		5
Stop time (h/km) ^b		0.0014
Population density at stops ^b	1 to 10 meters	30,000
	10 to 800 meters	340
Latest cancer risk (fatal cancer per person-rem) ^c		6.0×10^{-4}
Vehicle emission rate (fatalities/km per 1 person/km ²)		8.36×10^{-10}
Vehicle accident (fatalities/km) ^d		1.42×10^{-8}

^a Previous EISs (and previous versions of RADTRAN) used values of 530, 760, and 2400. However, these values may underestimate current average traffic density on interstate highways (Weiner et al., 2008), which accounts for most of the mileage on routes used in this analysis.

^b Hostick et al., 1992.

^c EPA, 1999; ISCORS, 2002.

^d In lieu of a national average vehicle accident rate, state-specific rates were used (Saricks and Tompkins, 1999).

1
2 ranges investigated (EPA, 1996a). Over short and long terms, fatalities (mortality) may result
3 from life-shortening respiratory or cardiovascular diseases (EPA, 1996a; Ostro and
4 Chestnut, 1998). The long-term fatalities are also assumed to include those from cancer.

5
6 The increased ambient air particulate concentrations caused by the transport vehicle have been
7 related to premature latent fatalities in the form of risk factors for transportation risk
8 assessments (Biwer and Butler, 1999). A conservative vehicle emission risk factor of
9 8.36×10^{-10} latent fatalities per kilometer for truck transport (Biwer and Butler, 1999) was used in
10 this assessment. This value is for heavy combination trucks (Class VIII B) and for areas with
11 unit population density of one person per square kilometer (2.6 persons per square mile). One-
12 way shipment risks are obtained by multiplying the vehicle emission risk factor by the average
13 population density along the route and the route distance. The routine vehicle risks reported in
14 this analysis are for round-trip travel of the transport vehicle.
15

1 The vehicle risks reported here are estimates based on the best available data. However, as is
2 true for radiological risks, there is a large and not readily quantifiable degree of uncertainty in
3 the vehicle emission risk factors. For example, large uncertainties exist as to the extent of
4 increased mortality with an incremental rise in particulate air concentrations and as to whether
5 there are threshold air concentrations that are applicable. Also, estimates of the particulate air
6 concentrations caused by transport vehicles are dependent on location, road conditions, vehicle
7 conditions, and weather.

8
9 As discussed by Biber and Butler (1999), there are also large uncertainties in the human health
10 risk factors used to develop the emission risks. In addition, due to the conservatism in the
11 assumptions made by Biber and Butler to reconcile results with those presented by EPA
12 (EPA, 1993), latent fatality risks estimated with the above risk factor may be considered to be
13 near an upper bound (Biber and Butler, 1999). Use of this risk factor for Class VIII B trucks will
14 give estimated fatalities comparable to those from accident fatalities in some cases. In addition,
15 what exactly constitutes a fatality as a direct consequence of increased PM₁₀ levels from vehicle
16 emissions is an open question, but long-term fatalities have been associated with increased
17 levels of PM₁₀ (Biber and Butler, 1999).

18 19 **D.4 Summary of Transportation Impacts**

20
21 Table D-11 presents the estimated annual radiological and nonradiological impacts from truck
22 shipment of radioactive material, including collective population risk from incident-free transport,
23 latent cancer fatalities from the vehicle emissions, and fatalities from traffic accidents.

24 Table D-12 presents the estimated radiological impacts from potential accidents during these
25 shipments, including the contributions of each exposure pathway to the collective population
26 dose. The accident results are presented in terms of risk, which involves weighting the impact
27 of the various accident scenarios by the frequency that the accident scenario occurs.

28
29 The impact results in Table D-11 include a range of values for each type of shipment. This
30 range represents the lowest to highest impact for the various proposed shipping routes. For
31 example, for the feed materials, the values represent one year of shipments from any of the four
32 feed supply locations to the proposed EREF. If some feed materials were provided from one
33 location and the remaining amounts from another, the estimated impacts would fall somewhere
34 between the low and high values (impacts could be evaluated by multiplying the fraction of
35 material from a given location by the impacts from that location plus the fraction of material from
36 a second location multiplied by the impacts from the second location).

37
38 To evaluate the total impacts from the transportation of radioactive materials, a scenario must
39 be defined and the impacts from the various materials/routes can be summed. For example,
40 the proposed EREF would receive feed material from Metropolis, Illinois, the product material
41 would be shipped to Wilmington, North Carolina, LLRW would be shipped to Clive, Utah, and
42 depleted UF₆ would be shipped to Paducah, Kentucky. The impacts from these materials/routes
43 would then be summed to determine the total impacts for this scenario. Table 4-11 of this EIS
44 summarizes the potential transportation impacts, presented as a range of collective risk for each
45 type of shipment and the range of impacts summed over all shipping scenarios.

Table D-11 Annual Collective Population Risks from Truck Transportation

Material	Total Mileage (km)	Cargo-Related Radiological Impacts										Vehicle-Related Impacts	
		Dose Risk (person-rem)					Latent Cancer Fatalities					Latent Emission Fatalities	Physical Accident Fatalities
		Routine Crew	Public Off-Link	Public On-Link	Public Stop	Total Public	Maximum Individual	Accident	Crew	Public			
Feed, Port Hope, ON	5,302,406	1.6×10^1	5.7×10^0	1.8×10^2	1.2×10^2	3.1×10^2	1.9×10^{-4}	1.1×10^1	9.6×10^{-3}	1.9×10^{-1}	5.7×10^{-1}	7.5×10^{-2}	
Feed, Metropolis, IL	4,033,480	1.2×10^1	3.8×10^0	6.4×10^1	9.4×10^1	1.6×10^2	1.9×10^{-4}	1.1×10^1	7.2×10^{-3}	9.6×10^{-2}	3.5×10^{-1}	5.7×10^{-2}	
Feed, Baltimore, MD	5,399,096	1.7×10^1	6.6×10^0	1.3×10^2	1.3×10^2	2.7×10^2	1.9×10^{-4}	8.0×10^0	1.0×10^{-2}	1.6×10^{-1}	6.1×10^{-1}	7.7×10^{-2}	
Feed, Portsmouth, VA	5,782,010	1.8×10^1	6.8×10^0	1.3×10^2	1.4×10^2	2.8×10^2	1.9×10^{-4}	1.1×10^1	1.1×10^{-2}	1.7×10^{-1}	5.6×10^{-1}	8.2×10^{-2}	
Product, Columbia, SC	1,958,736	4.6×10^0	2.4×10^0	4.5×10^1	4.6×10^1	5.2×10^1	6.9×10^{-5}	8.5×10^0	2.8×10^{-3}	3.1×10^{-2}	2.0×10^{-1}	2.8×10^{-2}	
Product, Richland, WA	510,634	1.1×10^0	4.2×10^{-1}	9.4×10^0	1.2×10^1	2.2×10^1	6.9×10^{-5}	1.4×10^0	6.6×10^{-4}	1.3×10^{-2}	3.9×10^{-2}	7.3×10^{-3}	
Product, Wilmington, NC	2,134,589	5.1×10^0	3.0×10^0	5.2×10^1	5.0×10^1	1.1×10^2	6.9×10^{-5}	9.6×10^0	3.1×10^{-3}	6.6×10^{-2}	2.4×10^{-1}	3.0×10^{-2}	
Product, Baltimore, MD	1,956,414	4.6×10^0	2.4×10^0	4.8×10^1	4.5×10^1	9.5×10^1	6.9×10^{-5}	9.8×10^0	2.8×10^{-3}	5.7×10^{-2}	2.2×10^{-1}	2.8×10^{-2}	
Product, Portsmouth, VA	2,095,166	4.8×10^0	2.5×10^0	8.9×10^1	4.9×10^1	1.4×10^2	6.9×10^{-5}	6.5×10^0	2.9×10^{-3}	8.4×10^{-2}	2.0×10^{-1}	3.0×10^{-2}	
Depleted UF ₆ /tails, Paducah, KY	3,498,830	1.0×10^1	3.3×10^0	7.0×10^1	8.2×10^1	1.6×10^2	1.6×10^{-4}	7.4×10^0	6.0×10^{-3}	9.6×10^{-2}	3.1×10^{-1}	5.0×10^{-2}	
Empty feed, Port Hope, ON	2,651,203	2.3×10^1	8.6×10^0	2.7×10^2	1.7×10^2	4.5×10^2	2.9×10^{-4}	2.7×10^5	1.4×10^{-2}	2.7×10^{-1}	2.8×10^{-1}	3.8×10^{-2}	
Depleted UF ₆ /tails, Portsmouth, OH	4,131,704	1.3×10^1	4.1×10^0	8.1×10^1	9.6×10^1	1.8×10^2	1.6×10^{-4}	5.3×10^0	7.8×10^{-3}	1.1×10^{-1}	3.5×10^{-1}	5.9×10^{-2}	

Table D-11 Annual Collective Population Risks from Truck Transportation (Cont.)

Material	Total Mileage (km)	Cargo-Related Radiological Impacts										Vehicle-Related Impacts	
		Dose Risk (person-rem)					Latent Cancer Fatalities					Latent Emission Fatalities	Physical Accident Fatalities
		Routine Crew	Public Off-Link	Public On-Link	Public Stop	Total Public	Maximum Individual	Accident	Crew	Public			
Empty feed, Metropolis, IL	2,016,740	1.8×10^1	5.7×10^0	1.2×10^2	1.4×10^2	2.7×10^2	2.9×10^4	2.8×10^{-5}	1.1×10^{-2}	1.6×10^{-1}	1.8×10^{-1}	2.9×10^2	
Empty feed, Baltimore, MD	2,699,548	2.6×10^1	9.8×10^0	2.0×10^2	1.9×10^2	4.0×10^2	2.9×10^4	4.1×10^{-5}	1.6×10^{-2}	2.4×10^{-1}	3.0×10^{-1}	3.8×10^2	
Empty feed, Portsmouth, VA	2,891,005	2.7×10^1	1.0×10^1	1.9×10^2	2.0×10^2	4.0×10^2	2.9×10^4	2.8×10^{-5}	1.6×10^{-2}	2.4×10^{-1}	2.8×10^{-1}	4.1×10^2	
Empty product, Columbia, SC	1,958,736	2.3×10^1	1.2×10^1	2.3×10^2	2.3×10^2	4.7×10^2	3.5×10^4	1.7×10^{-5}	1.4×10^{-2}	2.8×10^{-1}	2.0×10^{-1}	2.8×10^2	
Empty product, Richland, WA	510,634	5.5×10^0	2.1×10^0	4.7×10^1	5.9×10^1	1.1×10^2	3.5×10^4	2.8×10^{-6}	3.3×10^{-3}	6.6×10^{-2}	3.9×10^{-2}	7.3×10^3	
Empty product, Wilmington, NC	2,134,589	2.5×10^1	1.5×10^1	2.6×10^2	2.5×10^2	5.3×10^2	3.5×10^4	2.0×10^{-5}	1.5×10^{-2}	3.2×10^{-1}	2.4×10^{-1}	3.0×10^2	
Empty depleted UF ₆ /tails, Port Hope, ON	2,275,120	2.0×10^1	7.3×10^0	2.3×10^2	1.5×10^2	3.9×10^2	2.5×10^4	2.3×10^{-5}	1.2×10^{-2}	2.3×10^{-1}	2.4×10^{-1}	3.2×10^2	
Empty depleted UF ₆ /tails, Metropolis, IL	1,730,658	1.5×10^1	4.9×10^0	1.0×10^2	1.2×10^2	2.2×10^2	2.5×10^4	2.3×10^{-5}	9.0×10^{-3}	1.3×10^{-1}	1.5×10^{-1}	2.5×10^2	
Empty depleted UF ₆ /tails, Baltimore, MD	2,316,607	2.2×10^1	8.5×10^0	1.7×10^2	1.6×10^2	3.4×10^2	2.5×10^4	4.2×10^{-5}	1.3×10^{-2}	2.0×10^{-1}	2.6×10^{-1}	3.3×10^2	
Empty depleted UF ₆ /tails, Portsmouth, VA	2,480,904	2.3×10^1	8.8×10^0	1.6×10^2	1.7×10^2	3.4×10^2	2.5×10^4	2.3×10^{-5}	1.4×10^{-2}	2.0×10^{-1}	2.4×10^{-1}	3.5×10^2	
Empty depleted UF ₆ /tails, Paducah, KY	1,749,415	1.6×10^1	5.0×10^0	8.4×10^1	1.2×10^2	2.1×10^2	2.5×10^4	2.3×10^{-5}	9.6×10^{-3}	1.3×10^{-1}	1.5×10^{-1}	2.5×10^2	

Table D-11 Annual Collective Population Risks from Truck Transportation (Cont.)

Material	Total Mileage (km)	Cargo-Related Radiological Impacts										Vehicle-Related Impacts			
		Dose Risk (person-rem)										Latent Cancer Fatalities		Latent Emission Fatalities	
		Routine Crew	Public Off-Link	Public On-Link	Public Stop	Total Public	Maximum Individual	Accident	Crew	Public	Latent Emission Fatalities	Physical Accident Fatalities			
Empty depleted UF ₆ /tails, Portsmouth, OH	2,065,852	1.9×10^1	6.2×10^0	1.2×10^2	1.4×10^2	2.7×10^2	2.5×10^4	1.7×10^{-5}	1.1×10^{-2}	1.6×10^{-1}	1.7×10^{-1}	1.7×10^{-1}	2.9×10^{-2}		
Solid waste, Clive, UT	8086	5.0×10^{-2}	1.0×10^{-2}	2.4×10^{-1}	1.9×10^{-1}	4.4×10^{-1}	2.1×10^{-6}	5.2×10^{-4}	3.0×10^{-5}	2.6×10^{-4}	1.2×10^{-3}	1.2×10^{-3}	1.1×10^{-4}		
Solid waste, Hanford, WA	16,362	9.0×10^{-2}	1.3×10^{-2}	2.9×10^{-1}	3.8×10^{-1}	6.8×10^{-1}	2.1×10^{-6}	4.2×10^{-4}	5.4×10^{-5}	4.1×10^{-4}	1.2×10^{-3}	1.2×10^{-3}	2.3×10^{-4}		
Solid waste, Oak Ridge, TN	53,573	3.1×10^{-1}	5.6×10^{-2}	9.5×10^{-1}	1.3×10^0	2.3×10^0	2.1×10^{-6}	2.2×10^{-3}	1.9×10^{-4}	1.4×10^{-3}	5.0×10^{-3}	5.0×10^{-3}	7.6×10^{-4}		

Table D-12 Doses and Total Risk of Latent Cancer Fatalities from Accidents during Truck Transportation of Radioactive Materials

Material	Route	Population Dose (person-rem)					Total Dose	Total Population Risk of LCF
		Ground	Inhaled	Resuspended Soil	Cloud Shine	Total Dose		
Feed	Port Hope, ON	1.2×10^{-1}	1.1×10^1	1.8×10^2	4.1×10^{-6}	1.1×10^1	6.6×10^{-3}	
Feed	Metropolis, IL	1.2×10^{-1}	1.1×10^1	1.8×10^2	4.2×10^{-6}	1.1×10^1	6.6×10^{-3}	
Feed	Baltimore, MD	1.7×10^{-1}	7.8×10^0	1.4×10^2	6.2×10^{-6}	8.0×10^0	4.8×10^{-3}	
Feed	Portsmouth, VA	1.2×10^{-1}	1.1×10^1	1.8×10^2	4.2×10^{-6}	1.1×10^1	6.6×10^{-3}	
Product	Columbia, SC	1.4×10^{-1}	8.3×10^0	1.3×10^2	2.9×10^{-6}	8.5×10^0	5.1×10^{-3}	
Product	Richland, WA	2.2×10^{-1}	1.4×10^0	2.2×10^3	4.7×10^{-7}	1.4×10^0	8.4×10^{-4}	
Product	Wilmington, NC	1.6×10^{-1}	9.5×10^0	1.5×10^2	3.3×10^{-6}	9.6×10^0	5.8×10^{-3}	
Product	Baltimore, MD	1.6×10^{-1}	9.6×10^0	1.5×10^2	3.3×10^{-6}	9.8×10^0	5.8×10^{-3}	
Product	Portsmouth, VA	1.1×10^{-1}	6.4×10^0	1.0×10^2	2.2×10^{-6}	6.5×10^0	3.9×10^{-3}	
Depleted UF ₆ /tails	Paducah, KY	5.7×10^{-2}	7.3×10^0	1.2×10^2	2.8×10^{-6}	7.4×10^0	4.4×10^{-3}	
Depleted UF ₆ /tails	Portsmouth, OH	4.1×10^{-2}	5.3×10^0	8.5×10^3	2.0×10^{-6}	5.3×10^0	3.2×10^{-3}	
Empty feed	Port Hope, ON	1.4×10^{-6}	2.5×10^{-5}	2.1×10^7	3.7×10^{-9}	2.7×10^5	1.6×10^{-8}	
Empty feed	Metropolis, IL	1.4×10^{-6}	2.6×10^{-5}	2.6×10^7	3.8×10^{-9}	2.8×10^5	1.7×10^{-8}	
Empty feed	Baltimore, MD	2.1×10^{-6}	3.9×10^{-5}	3.2×10^7	5.7×10^{-9}	4.1×10^5	2.5×10^{-8}	
Empty feed	Portsmouth, VA	1.4×10^{-6}	2.6×10^{-5}	2.6×10^7	3.8×10^{-9}	2.8×10^5	1.7×10^{-8}	
Empty product	Columbia, SC	6.5×10^{-7}	1.7×10^{-5}	1.4×10^7	1.7×10^{-9}	1.7×10^5	1.0×10^{-8}	
Empty product	Richland, WA	1.1×10^{-7}	2.7×10^{-6}	2.3×10^8	2.8×10^{-10}	2.8×10^6	1.7×10^{-9}	
Empty product	Wilmington, NC	7.4×10^{-7}	1.9×10^{-5}	1.6×10^7	1.9×10^{-9}	2.0×10^5	1.2×10^{-8}	
Empty DUF ₆ /tails	Port Hope, ON	1.2×10^{-6}	2.1×10^{-5}	1.8×10^7	3.2×10^{-9}	2.3×10^5	1.4×10^{-8}	
Empty DUF ₆ /tails	Metropolis, IL	1.2×10^{-6}	2.2×10^{-5}	1.8×10^7	3.3×10^{-9}	2.3×10^5	1.4×10^{-8}	
Empty DUF ₆ /tails	Baltimore, MD	2.2×10^{-6}	3.9×10^{-5}	3.3×10^7	5.9×10^{-9}	4.2×10^5	2.5×10^{-8}	

Table D-12 Doses and Total Risk of Latent Cancer Fatalities from Accidents during Truck Transportation of Radioactive Materials (Cont.)

Material	Route	Population Dose (person-rem)					Total Dose	Total Population Risk of LCF
		Ground	Inhaled	Resuspended Soil	Cloud Shine	Total Dose		
Empty depleted UF ₆ /tails	Portsmouth, VA	1.2×10^{-6}	2.2×10^{-5}	1.8×10^{-7}	3.3×10^{-9}	2.3×10^{-5}	1.4×10^{-8}	
Empty depleted UF ₆ /tails	Paducah, KY	1.2×10^{-6}	2.2×10^{-5}	1.8×10^{-7}	3.3×10^{-9}	2.3×10^{-5}	1.4×10^{-8}	
Empty depleted UF ₆ /tails	Portsmouth, OH	1.2×10^{-6}	2.2×10^{-5}	1.8×10^{-7}	3.3×10^{-9}	2.3×10^{-5}	1.4×10^{-8}	
Solid waste	Clive, UT	7.3×10^{-6}	5.1×10^{-4}	4.2×10^{-6}	1.9×10^{-10}	5.2×10^{-4}	3.1×10^{-7}	
Solid waste	Hanford, WA	5.9×10^{-6}	4.1×10^{-4}	3.5×10^{-6}	1.6×10^{-10}	4.2×10^{-4}	2.5×10^{-7}	
Solid waste	Oak Ridge, TN	3.1×10^{-5}	2.1×10^{-3}	1.8×10^{-5}	8.1×10^{-10}	2.2×10^{-3}	1.3×10^{-6}	

1 **D.5 Uncertainty in Transportation Risk Assessment**
2

3 There are many sources of uncertainty in assessing the risks of transporting radioactive
4 materials to and from the proposed EREF. Factors that can be quantified include the routing of
5 the material, shipping container characteristics, mode of transport, and source or destination of
6 the material. Each of these sources of uncertainty is discussed below.
7

8 **D.5.1 Routing of Radioactive Material**
9

10 There are many varying routes for the shipments of the radioactive materials to and from the
11 proposed EREF. WebTRAGIS simplifies the routing choices by allowing the analyst to select
12 various routing restrictions. These can range from no restrictions to HRCQ restrictions.
13 Choices include the shortest route, fastest route, and prohibit various routes. Based on the
14 NRC's previous analysis of different routing options (NRC, 2005b), the NRC staff used HRCQ
15 routing for the transportation impact assessment this EIS.
16

17 **D.5.2 Shipping Container Characteristics**
18

19 The characteristics of the shipping container are important in the assessment of both incident-
20 free and accident impacts. The routine (incident-free) impact is determined by the direct
21 radiation along the side of the shipping container and the length of the container. The accident
22 impacts are determined by the release fraction for each accident severity class. Historically,
23 NUREG-0170 (NRC, 1977) was developed to provide background material for a review by the
24 NRC of regulations dealing with the transportation of radioactive materials. In 2002, DOE
25 presented a review of the historical assessments, transportation models, and a compilation of
26 supporting data parameters, including release fractions, and generally accepted assumptions
27 (DOE, 2002). DOE also evaluated shipments of depleted UF₆ in Type 48Y containers
28 (DOE, 1999b); however, the release fractions were about one quarter of the DOE (2002) values.
29 For this assessment, the NRC staff chose to use the more conservative release fractions for
30 Type A containers (DOE, 2002).
31

32 **D.5.3 Source or Destination of Radioactive Material**
33

34 The source or destination of the radioactive material can also affect the transportation impact
35 analysis. For example, as discussed in Section D.4, it is not expected that all of the feed
36 material would be received exclusively from Port Hope, Ontario, Canada, or from Metropolis,
37 Illinois. It is a reasonable assumption that feed could come from multiple sources. Therefore,
38 the impact from transportation of feed material would range between the impacts evaluated for
39 Port Hope and Metropolis. The same rationale applies to other types of shipments.
40

41 **D.6 References**
42

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APPENDIX E
DOSE METHODOLOGY AND IMPACTS

1 **APPENDIX E**
2 **DOSE METHODOLOGY AND IMPACTS**

3
4 **E.1 Introduction**

5
6 This appendix discusses the methodology, data, and results for the analysis of the impacts on
7 workers (construction workers, nonradiological workers, and radiation workers) and members of
8 the general public that could result from routine operations at the AREVA Enrichment Services,
9 LLC (AES) proposed Eagle Rock Enrichment Facility (EREF).

10
11 The consideration of radiation impacts on EREF construction workers covers the period of time
12 when the proposed EREF is operational but not yet at full capacity. These workers would be
13 present and could possibly be exposed to radiation during normal operations at the proposed
14 facility. They may be exposed to external gamma radiation from stored depleted uranium
15 cylinders, low-enriched uranium (LEU) product cylinders, natural feed cylinders, and empty
16 cylinders. In addition, these workers would be exposed to radiation associated with the
17 atmospheric release of uranium during normal operations.

18
19 The consideration of radiation impacts on EREF radiation workers covers internal exposures
20 that may be associated with uranium enrichment operations, external exposures to depleted
21 uranium and LEU product cylinders, and external exposures associated with process
22 operations. Radiation dosimetry results associated with similar operational facilities will be used
23 to assess worker doses at the proposed EREF.

24
25 Radiation impacts on members of the general public may result from the atmospheric release of
26 uranium from normal operations as well as gamma radiation associated with stored depleted
27 uranium cylinders.

28
29 **E.2 Pathway Assessment Methodology**

30
31 The CAP88-PC Version 3.0 computer code was used to assess the impacts on nonradiological
32 workers and members of the general public from the atmospheric release of uranium
33 compounds associated with normal operations (Rosnick, 2007). The CAP88-PC code
34 estimates the total effective dose, which is the 50-year committed effective dose from internal
35 emitters plus the effective dose from external exposure.

36
37 **E.2.1 Members of the General Public**

38
39 Radiological impacts on members of the general public were estimated for the following:

- 40
41 • collective population living within 80 kilometers (50 miles) of the proposed EREF
42
43 • nearest resident
44
45 • persons located outside the fenced boundary of the proposed EREF
46
47

1 The consideration of radiological impacts on the collective population and nearest resident
2 covers the following pathways:

- 3
- 4 • external gamma radiation due to plume submersion
- 5
- 6 • external gamma radiation due to deposition
- 7
- 8 • inhalation of uranium compounds due to plume passage
- 9
- 10 • inhalation of uranium compounds due to resuspension
- 11
- 12 • ingestion of plant foods grown within 80 kilometers (50 miles) of the proposed EREF
- 13
- 14 • ingestion of meat products raised within 80 kilometers (50 miles) of the proposed EREF
- 15
- 16 • ingestion of milk produced within 80 kilometers (50 miles) of the proposed EREF
- 17

18 Since the area including and surrounding the proposed EREF is zoned for commercial use, for
19 assessment purposes, the receptors were modeled as nonradiological workers that spend
20 2000 hours per year next to the outer boundary of the proposed EREF. The consideration of
21 radiological impacts on persons working next to the outer fence line of the proposed EREF
22 covers the following pathways:

- 23
- 24 • external radiation due to stored depleted uranium tail, LEU product, natural feed, and empty
25 cylinders
- 26
- 27 • external gamma radiation due to plume submersion
- 28
- 29 • external gamma radiation due to deposition
- 30
- 31 • inhalation of uranium compounds due to plume passage
- 32
- 33 • inhalation of uranium compounds due to resuspension
- 34

35 **E.2.2 Construction Workers**

36

37 The consideration of radiological impacts on construction workers associated with continued
38 construction operations while the proposed EREF is operational covers the following pathways:

- 39
- 40 • external radiation due to stored depleted uranium tail, LEU product, natural feed, and empty
41 cylinders
- 42
- 43 • external gamma radiation due to plume submersion
- 44
- 45 • external gamma radiation due to deposition
- 46
- 47 • inhalation of uranium compounds due to plume passage
- 48

- 1 • inhalation of uranium compounds due to resuspension
2

3 These receptors were evaluated separately from persons working near the outer boundary
4 because of their proximity to radiation sources such as the LEU, product, depleted uranium tail,
5 natural feed, and empty cylinders.
6

7 **E.2.3 Nonradiological Workers**

8
9 The consideration of radiological impacts on nonradiological workers (i.e., general office staff) is
10 also considered. These workers are not actively working in the uranium processing areas but
11 rather are general office staff (administrative/secretarial support, etc.). The potential pathways
12 would include:
13

- 14 • external radiation due to stored depleted uranium tail, LEU product, natural feed, and empty
15 cylinders
16
17 • external gamma radiation due to plume submersion
18
19 • external gamma radiation due to deposition
20
21 • inhalation of uranium compounds due to plume passage
22
23 • inhalation of uranium compounds due to resuspension
24

25 The impacts associated with these workers are assessed using dosimetry records from similar
26 operating enrichment facilities (AES, 2010).
27

28 **E.2.4 EREF Radiation Workers**

29
30 Radiological impacts on the EREF radiation workers were estimated on the basis of dosimetry
31 records of historical operations at similar facilities. The EREF radiation workers would be under
32 a radiation dosimetry program that measures both external and internal radiation doses.
33

34 **E.2.5 Environmental Transport Methodology**

35
36 The CAP88-PC Version 3 computer code was used to estimate the radiological impacts
37 associated with the atmospheric transport of uranium compounds during normal operations
38 (Rosnick, 2007). CAP88-PC estimates the total effective dose associated with the external
39 inhalation and ingestion pathways. Version 3 of the computer code has incorporated dose
40 conversion and risk factors from Federal Guidance Report Number 13 (FGR 13) (EPA, 1999),
41 which used dose conversion factors from the International Commission on Radiological
42 Protection Publication 72 (ICRP 72) (ICRP, 1996).
43

44 The CAP88-PC computer code incorporates a modified version of the AIRDOS-EPA program to
45 calculate the environmental transport of radionuclides. Relevant sections of the CAP88-PC
46 Version 3 users guide are reproduced in this section as referenced.
47

1 At the center of the atmospheric transport model is the Gaussian plume model of Pasquill, as
 2 modified by Gifford:
 3

$$4 \quad \chi = \frac{Q}{2\pi\sigma_y\sigma_z\mu} \exp\left[-\frac{1}{2}\left(\frac{y}{\sigma_y}\right)^2\right] \left(\exp\left[-\frac{1}{2}\left(\frac{z-H}{\sigma_z}\right)^2\right] + \exp\left[-\frac{1}{2}\left(\frac{z+H}{\sigma_z}\right)^2\right] \right), \quad (1)$$

5
 6 where

- 7
- 8 χ = concentration in air (chi) at x meters downwind, y meters crosswind, and
- 9 z meters above ground (Ci/m³)
- 10 Q = release rate from stack (Ci/s)
- 11 μ = wind speed (m/s)
- 12 σ_y = horizontal dispersion coefficient (m)
- 13 σ_z = vertical dispersion coefficient (m)
- 14 H = effective stack height (m)
- 15 y = crosswind distance (m)
- 16 z = vertical distance (m)
- 17

18 The effective release height used in equation 1 considers buoyant plume rise due to compounds
 19 being released above ambient temperatures. For the proposed EREF, any released uranium
 20 compounds would be at ambient temperatures; therefore, the effective stack height is simply the
 21 height of the release point.
 22

23 Annual average meteorological data sets usually include frequencies for several wind-speed
 24 categories for each wind direction and the Pasquill atmospheric stability category. CAP88-PC
 25 uses reciprocal-averaged wind speeds in the atmospheric dispersion equations, which permit a
 26 single calculation for each wind speed category. Equation 1 is applied to ground-level
 27 concentrations in air at the plume centerline by setting y and z to zero, which results in
 28

$$29 \quad \chi = \frac{Q}{2\pi\sigma_y\sigma_z\mu} \exp\left[-\frac{1}{2}\left(\frac{H}{\sigma_z}\right)^2\right]. \quad (2)$$

30
 31 The average ground-level concentration in air over a sector of 22.5 degrees can be
 32 approximated by
 33

$$34 \quad \chi_{avg} = \frac{\int_0^{\infty} \exp\left[-\left(\frac{0.5}{\sigma_y}\right)y^2\right] dy}{x \tan(11.25^\circ)} * \frac{Q}{2\pi\sigma_y\sigma_z\mu} \exp\left[-\frac{1}{2}\left(\frac{H}{\sigma_z}\right)^2\right], \quad (3)$$

35
 36 which can be reduced further to
 37

$$\chi_{avg} = \frac{Q}{0.15871 \pi x \sigma_z \mu} \exp \left[-\frac{1}{2} \left(\frac{H}{\sigma_z} \right)^2 \right]. \quad (4)$$

The CAP88-PC code considers both dry and wet deposition as well as radioactive decay. Plume depletion is accounted for by substituting a reduced release rate Q' for the original release rate for each downwind distance x (Slade, 1968). The ratio of the reduced release rate to the original is the depletion fraction. The overall depletion fraction used in CAP88-PC is the product of the depletion fractions for precipitation, dry deposition, and radioactive decay.

Ground surface soil concentrations are calculated on an annual basis. Ingrowth and decay of progeny radionuclides are calculated by using Bateman's equations for the entire decay chain. Radionuclide concentrations in meat, milk, and vegetables are calculated by using elemental transfer factors from Report 123 of the National Council on Radiation Protection and Measurements (NCRP, 1996). The concentration in soil for each isotope is multiplied by the appropriate elemental transfer factor to generate a concentration in each ingestion pathway medium for that isotope in that sector.

E.3 Radiological Impact Assessment Input

The data and results of the radiological impacts are provided below for the following groups:

- collective population
- nearest resident
- member of the public adjacent to the outer boundary of the proposed EREF
- construction workers associated with the continued construction operations while the proposed EREF is operational
- construction worker at uranium hexafluoride (UF₆) cylinder pad
- EREF workers

E.3.1 Radionuclide Releases

The release of uranium compounds during normal operations was modeled by using the activity data provided in Table E-1. The radiological impacts were modeled by using releases from a 1.5-million-separative work unit (SWU) plant described in NUREG-1484 (NRC, 1994) linearly scaled up to a 6.6-million-SWU facility. For the 6.6-million-SWU facility, it was assumed that 19.5 megabecquerels (530 microcuries) of uranium was released. For conservatism, this same quantity of uranium was assumed to be released during the combined construction and operational phase in order to estimate the maximum potential dose that construction workers could incur.

Release points for airborne emissions were assumed to take place at an elevation of 40 m (132 ft). However, the CAP88-PC computer code does not account for building wake effects.

Table E-1 Source Term Used for the Radiological Impact Assessment for Normal Operations^a

Radionuclide	Wt%	Activity MBq (μCi)
Uranium-234	5.5×10^{-3}	9.5 (260)
Uranium-235	0.71	0.5 (10)
Uranium-238	99.3	9.5 (260)
Total		19.5 (530)

^a Members of the general public, 6.6-million-SWU facility. Annual uranium released: 760 grams, 19.5 MBq (530 μCi). Source: Derived from AES, 2010.

1
2 Therefore, doses were assessed based on a combination of ground-level releases and 40-m
3 stack releases. For conservatism, the maximum dose calculated for the same individuals or
4 collective population from either a 40-m release or a ground-level release was used for the dose
5 assessment.

6
7 **E.3.2 Population Distributions**

8
9 The general population distribution for the radiological impact assessment was made by
10 projecting the population of the 12 counties in Idaho (Bannock, Bingham, Blaine, Bonneville,
11 Butte, Caribou, Clark, Fremont, Jefferson, Lemhi, Madison, and Power) that fall within the
12 80-kilometer (50-mile) radius of the proposed EREF. Population estimates were made by using
13 the SECPOP 2000 computer code to year 2050 (NRC, 2003). A total of 267,256 persons was
14 considered for estimating the collective population dose. Table E-2 provides the population
15 distribution data used for the assessment.

16
17 The worker population distributions were derived on the basis of those workers who are
18 involved in the continued build-out of the adjoining Separation Building Modules (SBMs), the
19 UF₆ handling areas, and the storage areas for the full tails, full feed, and empty cylinders. In
20 total, approximately 400 construction-related persons were evaluated for the radiological dose
21 assessment. Table E-3 provides a breakdown of the individuals by labor craft and location.

22
23 **E.3.3 Exposure Time Fractions and Receptor Locations**

24
25 The CAP88-PC computer code assumes that an individual spends an entire year at the
26 locations provided. This assumption is overly conservative with regard to evaluating either the
27 construction worker collective population dose or the dose received by a hypothetical worker at
28 the site boundary because, on average, a worker is assumed to spend 2000 hours per year at a
29 job site. In order to account for this limitation, the collective construction worker doses and the
30 doses received by a hypothetical worker at the site boundary were scaled down by a factor of
31 4.38 (24 multiplied by 365.25/2000).

Table E-2 Extrapolated Data on Population within 80-kilometer (50-mile) Radius of Proposed EREF in 2050
 (distance from proposed EREF in kilometers [top line] and miles [bottom line])

Direction	0-1.6 (0-1)	1.6-3.2 (1-2)	3.2-4.8 (2-3)	4.8-6.4 (3-4)	6.4-8.0 (4-5)	8.0-16 (5-10)	16-32 (10-20)	32-48 (20-30)	48-64 (30-40)	64-80 (40-50)
S	0	0	0	0	0	0	169	20,589	3835	61,264
SSW	0	0	0	0	0	0	49	757	1172	3477
SW	0	0	0	0	0	0	49	55	5	38
WSW	0	0	0	0	0	0	0	33	9	6
W	0	0	0	0	0	0	0	0	10	2142
WNW	0	0	0	0	0	0	0	56	220	562
NW	0	0	0	0	0	0	0	0	0	84
NNW	0	0	0	0	0	0	53	299	58	18
N	0	0	0	0	0	0	921	223	146	70
NNE	0	0	0	0	0	0	290	559	157	831
NE	0	0	0	0	0	3	193	8	1365	4882
ENE	0	0	0	0	0	3	1561	9655	29,946	4229
E	0	0	0	0	0	17	1004	13,654	3436	37
ESE	0	0	0	0	0	14	12,744	68,188	421	0
SE	0	0	0	0	0	0	741	10,303	21	2
SSE	0	0	0	0	0	75	142	6214	78	114

**Table E-3 Worker Population Distribution during
Build-Out/Operational Phase**

Labor Craft	Plant Area	Craft Hours per Year	Persons
Civil/structural	UF ₆ Handling	109,174	54
	SBM	269,296	134
	Cylinder Pad	24,729	12
Mechanical	UF ₆ Handling	65,504	32
	SBM	161,577	80
	Cylinder Pad	14,837	7
Electrical	UF ₆ Handling	43,669	22
	SBM	107,718	53
	Cylinder Pad	9891	5
Totals	UF ₆ Handling	218,348	108
	SBM	538,592	267
	Cylinder Pad	49,459	24.5

Source: AES, 2009.

1
2 The hypothetical site boundary receptor was chosen so that a person would receive the dose;
3 therefore, this individual can be considered a maximally exposed individual. Since Bonneville
4 County zoning laws prohibit the land area adjacent to the proposed EREF to be zoned other
5 than for industrial use, the receptor was modeled as a worker that spends 2000 hours per year
6 at the proposed site boundary. On the basis of the release point and meteorological conditions
7 present at the proposed site, the receptor was assumed to be located 1.1 kilometers (0.7 mile)
8 north of the proposed site.
9

10 Table E-4 provides a listing of the receptor locations and the time fractions used to estimate the
11 radiological impacts on the nearest resident and the hypothetical worker at the proposed site
12 boundary.
13

14 **E.3.4 Agricultural Productivity**

15
16 The ingestion of vegetables, meat, and milk was considered in the radiological impact
17 assessment. The U.S. Environmental Protection Agency (EPA) rural food source scenario
18 option within CAP88-PC was selected for the assessment. On the basis of regional food
19 production, estimates were derived for the beef cattle density, milk cattle density, and land
20 fraction cultivated by vegetables. Table E-5 provides a list of the agricultural parameters used
21 in CAP88-PC for the radiological impact assessment.
22

23 **E.3.5 Radionuclide-Specific Input**

24
25 The radiological impacts were estimated by using the CAP88-PC Version 3.0 computer code.
26 This computer code uses the newer FGR-13/ICRP-72-based dose conversion factors. Uranium

Table E-4 Receptor Locations for Radiological Impact Assessment

Receptor	Direction from Source to Proposed Site Boundary	Distance from Source to Proposed Site Boundary in km (mi)	Time Spent at Location (h)
Nearest resident	North	8.0 (5.0)	8761
Member of the public at proposed site boundary:			
Cylinder pad	North	0.76 (0.47)	2000
Atmospheric release	North	1.1 (0.7)	NA ^a

^a NA = Not applicable.

1

Table E-5 Agricultural Input Parameters Used in the Radiological Impact Assessment

	Vegetable	Meat	Milk	Scenario
Fraction from assessed area	0.7	0.4	0.442	Collective population dose
Fraction home produced	0.3	0.6	0.558	Nearest resident
Cattle density (no./km ²)		11	1.78	Collective population/nearest resident
Cultivated land fraction	0.036			Collective population/nearest resident

Source: Derived from AES, 2010.

2

3 compounds released from the proposed EREF were assumed to be in the form of uranyl
4 fluoride (UO₂F₂), which would be more soluble than other forms of uranium, such as uranium
5 oxide. To properly capture this chemical phenomenon, “medium” lung clearance classes were
6 assigned to each uranium isotope.

7

8 Radionuclide transfer factors are used to model the uptake of radionuclides by plants and
9 animals. The transfer factors are element-dependent rather than radionuclide-dependent. The
10 default values for uranium found in the CAP88-PC Version 3.0 computer code were used for the
11 radiological impact assessment. A list of the element- and radionuclide-specific factors used for
12 all radiological impact modeling is provided in Table E-6.

13

14 **E.4 Results of the Radiological Impact Analyses**

15

16 This section provides the results of the radiological impact analyses. Radiological impacts were
17 estimated for the following:

18

- 19 • collective population
- 20
- 21 • nearest resident
- 22
- 23 • member of the public adjacent to the outer boundary of the proposed EREF
- 24

Table E-6 Radionuclide-Specific Input Used in the Radiological Impact Assessment

Parameter Name	Radionuclide			Element
	Uranium-234	Uranium-235	Uranium-238	Uranium
Lung clearance class	M	M	M	
Inhalation dose conversion factor (mrem/pCi)	1.29×10^{-2}	1.14×10^{-2}	1.06×10^{-2}	
Ingestion dose conversion factor (mrem/pCi)	1.83×10^{-4}	1.73×10^{-4}	1.65×10^{-4}	
Immersion dose conversion factor (mrem m ³ /μCi-yr)	7.14×10^5	7.55×10^8	2.92×10^5	
Ground surface dose conversion factor (mrem m ² /μCi-yr)	6.82×10^2	1.63×10^5	4.94×10^2	
Deposition velocity (m/s)	1.8×10^{-3}	1.8×10^{-3}	1.8×10^{-3}	
Particle size (μm)	1	1	1	
Milk transfer factor				4×10^{-4}
Meat transfer factor				8×10^{-4}
Forage uptake factor (pCi/kg of dry forage/dry soil)				0.1
Edible update factor (pCi/kg of wet soil/dry soil)				0.02

Source: Rosnick, 2007; EPA, 1999.

- 1
2 • construction workers associated with the continued construction operations while the
3 proposed EREF is operational
4
5 • construction worker at uranium hexafluoride (UF₆) cylinder pad
6
7 • EREF workers
8

9 **E.4.1 Collective Population**

10
11 Radiological impacts on members of the general population were estimated to be
12 1.74×10^{-3} person-rem/yr (1.74×10^{-5} person-Sv/yr). The breakdown by radionuclide follows
13 below:

- 14
15 • 9.3×10^{-4} person-rem/yr (54 percent) uranium-234
16
17 • 3.8×10^{-5} person-rem/yr (2 percent) uranium-235
18
19 • 7.7×10^{-4} person-rem/yr (44 percent) uranium-238
20

1 The inhalation pathway was the most dominant, accounting for approximately 88 percent of the
2 total dose. The ingestion pathway contributed to approximately 11 percent of the total dose.
3

4 **E.4.2 Individual Public Doses**

5
6 Radiological impacts were evaluated for the nearest resident and a member of the public next to
7 the proposed EREF site boundary. As shown in Table E-4, the nearest resident is located
8 8 kilometers (5 miles) to the north of the proposed EREF and is assumed to spend the entire
9 year at that one location. The dose to this individual was estimated to be 2.12×10^{-4} millirem
10 per year. The dominant pathway for this dose is inhalation, which makes up almost 94 percent
11 of the total dose.
12

13 Radiological impacts on the hypothetical member of the public next to the proposed site
14 boundary would be composed of both an external dose due to the stored UF₆ cylinders and an
15 inhalation dose due to the release of uranium under normal operations. The total annual dose
16 to this individual was estimated at 1.4 millirem per year; the external dose associated with the
17 stored cylinders would account for more than 99.86 percent of the total. Since the vast majority
18 of the dose is from external radiation associated with the UF₆ cylinders, it is more appropriate to
19 compare this dose to the dose associated with the regulations found in Title 10 of the U.S. *Code*
20 *of Federal Regulations* (10 CFR 20.1301). In comparison, this dose to the member of the public
21 at the site boundary is more than 70 times lower than the 100-mrem/yr dose limit for members
22 of the public as codified in 10 CFR 20.1301.
23

24 **E.4.3 Worker Doses**

25
26 Radiological impacts on construction workers were evaluated for the period when the proposed
27 EREF would be operational but construction would continue on the SBM and the Cylinder
28 Storage Pad. For this assessment, it was assumed that the cylinder pad would be constructed
29 in 20-percent increments. For conservatism, radiological impacts were evaluated for the time
30 when the last of the segments would be constructed. This scenario would yield the largest
31 external dose to the workers because of the quantity of cylinders on the pad. The impacts
32 would be dominated by the external dose associated with stored UF₆ cylinders on the pad. The
33 MCNP Version 5 computer code was used to estimate doses when the last 20 percent of the
34 pad would be under construction (X5 Monte Carlo Team, 2003).
35

36 The total annual collective worker dose to construction workers associated with continued
37 construction of the remainder of the proposed EREF while a portion of the proposed facility is
38 under construction was estimated to be 37.6 person-rem. More than 99 percent of the total
39 dose is associated with external exposures from the depleted uranium, LEU product, natural
40 feed, and empty cylinders. Likewise, approximately 64 percent of the collective worker dose is
41 associated with the workers constructing the storage pad. Table E-7 provides the collective
42 doses for both members of the general public living within 80 kilometers (50 miles) of the
43 proposed EREF and the construction workers associated with the build-out of the existing
44 facility.
45

46 The radiological impact on a construction worker completing the last section of the UF₆ storage
47 pad was estimated at 196 millirem per year, with essentially the entire dose attributable to the
48 depleted uranium, LEU product, natural feed, and empty cylinders on the storage pad. This

Table E-7 Collective Doses for Members of the General Public and Construction Workers during Proposed EREF Build-Out

Receptor	Collective Dose (person-rem/yr)	% Attributable to Cylinders on Pad
General public	1.74×10^{-3}	~0
Construction workers:		
SBM and UF ₆ handling area	13.6	99.99
Storage pad	24.0	99.99
Total	37.6	99.99

1

Table E-8 Summary of Individual Doses for Workers and Members of the Public

Receptor	Dose (mrem/yr)	Major Pathway
Nearest receptor	2.12×10^{-4}	Inhalation
Hypothetical member of the public at the proposed site boundary	1.4	External
Construction pad worker	196 ^a	External

^a This dose exceeds the dose limit in 10 CFR 20.1301 by a factor of 1.96. The construction pad workers should therefore be part of a radiation dosimetry program and reclassified as radiation workers.

2

3 dose is almost two times the annual dose limit to members of the general public; therefore,
 4 these workers should be part of a radiation dosimetry program and classified as radiation
 5 workers. Table E-8 provides a summary of the individual doses evaluated in the radiological
 6 impact assessment.

7

8 Annual whole-body dose equivalents accrued by workers at an operating uranium enrichment
 9 plant are typically low; they ranged from 0.22 to 0.44 millisievert in URENCO (2003, 2004, 2005,
 10 2006, 2007). In general, annual doses to workers are expected to range from 0.50 millisievert
 11 per year (5 millirem per year) for general office staff to 3 millisieverts per year (300 millirem per
 12 year) for cylinder handlers. The proposed EREF has proposed an administrative limit of
 13 0.01 sievert per year (1 rem per year) to any radiation worker. This limit is 20 percent of the
 14 regulatory limit provided in 10 CFR 20.1201. Table E-9 provides estimates of annual doses to
 15 representative workers within the proposed EREF. Table E-10 provides estimated dose rates at
 16 several areas at the proposed EREF.

17

Table E-9 Estimated Annual Exposures for Various Occupations at the Proposed EREF

Position	Annual Dose Equivalent (mrem)
General office staff (nonradiological workers)	<5.0
Typical operations and maintenance technician	100
Typical cylinder handler	300

Source: AES, 2010.

1

Table E-10 Estimated Dose Rates at Various Locations within the Proposed EREF

Position	Dose Rate (mrem/h)
Plant general area	0.01
Separation building – Cascade Halls	0.05
Separation building	0.1
Empty used UF ₆ shipping cylinder	
On contact	10
At 1 meter (3.3 feet)	1
Full UF ₆ shipping cylinder	
On contact	5
At 1 meter (3.3 feet)	0.2

Source: AES, 2010.

2

3 **E.5 References**

4

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APPENDIX F
SOCIOECONOMIC ANALYSIS METHODS

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APPENDIX F SOCIOECONOMIC ANALYSIS METHODS

This appendix describes the methods used to estimate the socioeconomic impacts of preconstruction and construction activities and facility operations of the proposed Eagle Rock Enrichment Facility (EREF). Impacts are evaluated for a two-county region of influence (ROI) consisting of Bingham and Bonneville Counties, Idaho. The ROI is the area in which the majority of the proposed EREF permanent employees would live and spend their wages and which is expected to be the primary source of labor for each phase of the proposed EREF (AES, 2010).

The socioeconomic analysis was divided into four main steps: (1) expenditure and employment data during construction and operations were used to estimate direct and indirect economic impacts; (2) the impact on direct State and local tax revenues were estimated; (3) the number of in-migrating workers required to fill onsite job positions during each project phase, and associated family members, was estimated based on information gathered from local economic development agencies; and (4) the resulting housing and local community service employment impacts were estimated.

F.1 Employment, Income, and Tax Impacts

Employment and income impacts include both direct and indirect employment and income associated with the various phases of the proposed EREF development. Direct employment and income are created by onsite activities at the facility itself, while indirect employment and income are created in the ROI as workers directly employed by the proposed EREF spend their salaries and as jobs are created with the purchase of materials, equipment, services, and other non-payroll expenditures. Direct employment and income created during each stage of the proposed project were estimated on the basis of anticipated labor inputs and salaries for the various engineering and construction activities associated with each phase of the proposed project. The indirect impacts of the proposed EREF on regional employment and income were estimated using regional economic multipliers. Multipliers capture the indirect (offsite) effects of onsite activities associated with construction and operation.

The multipliers used in this analysis were taken from the RIMS-II Input-Output Model developed by the U.S. Department of Commerce, Bureau of Economic Analysis (BEA, 2010). The multipliers take into account the flow of commodities to industries from producers and institutional consumers in the various sectors of the economy of the ROI. Input-output accounts also show consumption activities by workers, owners of capital, and imports from outside the region. The RIMS II model contains 528 sectors representing the industries of agriculture, mining, construction, manufacturing, wholesale and retail trade, utilities, finance, insurance and real estate, and consumer and business services. For each sector, the model also includes information on employee compensation; proprietary and property income; personal consumption expenditures; Federal, State, and local expenditures; inventory and capital formation; and imports and exports.

The RIMS-II multipliers measure the total (direct plus indirect) impact of direct facility employment on ROI output, income, and employment. Multipliers associated with each major expenditure category (for example, separator equipment, process building and offices, utilities,

1 spare parts, and construction payroll) taken from the RIMS-II model are multiplied by the
2 relevant direct employment number, with the resulting total impacts in each category
3 aggregated to produce the overall impact of each phase of the proposed facility.
4

5 State income tax revenue impacts were estimated by applying State income tax rates to
6 projected EREF project-related construction and operations earnings. State and local sales tax
7 revenues were estimated by applying appropriate State and local sales tax rates (see
8 Section 3.12.4) to after-tax income generated by construction and operations employees that
9 was spent within the ROI.

10 11 **F.2 Impacts on Population**

12
13 A number of workers, families, and children would migrate into the ROI, either temporarily or
14 permanently, with construction and operation of the proposed EREF. The capacity of regional
15 labor markets to provide sufficient numbers of workers in the appropriate occupations required
16 for facility construction and operation is closely related to the occupational profile of the ROI and
17 its occupational unemployment rates. Although Bingham and Bonneville Counties are expected
18 to be the primary sources of labor for the proposed EREF, some in-migration of workers,
19 families, and children into the ROI, either temporarily or permanently, is expected during each
20 phase of the proposed EREF. The capacity of regional labor markets to produce sufficient
21 numbers of workers in the appropriate occupations required for facility construction and
22 operation is closely related to the occupational profile of the ROI and occupational
23 unemployment rates. The number of in-migrating workers used in the analysis was assumed to
24 be small, with the majority of craft skills being available in the ROI. Sixty-five percent of
25 in-migrating workers were assumed to be accompanied by their families, which would consist of
26 an additional adult and one school-age child (AES, 2010), based on the national average
27 household size (U.S. Census Bureau, 2009).
28

29 **F.3 Impacts on Local Housing Markets**

30
31 The in-migration of workers during preconstruction, construction, and operation would have the
32 potential to substantially affect the housing market in the ROI. The analysis evaluated the
33 potential impacts resulting from the in-migration of both direct and indirect workers into the ROI
34 by estimating the increase in demand for rental housing, the type of housing most likely to be
35 occupied by construction workers, in the peak year of construction, and the increase in demand
36 for owner-occupied housing, the housing type most likely to be chosen by operations workers, in
37 the first year of operation. The relative impact on existing housing in the ROI was estimated by
38 calculating the impact of the proposed EREF-related housing demand on the forecasted number
39 of vacant rental housing units in the peak year of construction and the number of vacant owner-
40 occupied units in the first year of operations using data from the U.S. Census Bureau
41 (U.S. Census Bureau, 2009).
42

43 **F.4 Impacts on Community Services**

44
45 Impacts of proposed EREF in-migration on community service employment were estimated for
46 the two ROI counties in which most of the new workers would reside. The projected numbers of
47 in-migrating workers and families were used to calculate the numbers of new sworn police
48 officers, firefighters, and general government employees required to maintain the existing levels

1 of service for each community service. Calculations were based on the existing number of
2 employees per 1000 population for each community service. The analysis of the impacts on
3 educational employment estimated the number of teachers required for each school district to
4 maintain existing teacher–student ratios across all student age groups. Information on existing
5 employment and levels of service was collected from the individual jurisdictions providing each
6 service.

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8 **F.5 References**

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APPENDIX G
ENVIRONMENTAL JUSTICE ANALYSIS DATA

**APPENDIX G
ENVIRONMENTAL JUSTICE ANALYSIS DATA**

This appendix provides the data used in the assessment of the potential for disproportionately high and adverse human health or environmental effects on minority and/or low-income populations resulting from the preconstruction, construction, operation, and decommissioning of the proposed Eagle Rock Enrichment Facility (EREF).

Tables G-1 through G-4 present detailed Census data for the environmental justice analysis at the State, county, and Census block group levels for 2000 (U.S. Census Bureau, 2010). Minority and low-income populations are defined in Sections 3.13.1 and 3.13.2 of this Environmental Impact Statement (EIS). ArcView® geographic information system software was used to determine minority and low-income characteristics by block group. Minority and low-income data are shown for all block groups that lay partially or completely within the area 6.4 kilometers (4 miles) from the proposed EREF.

Table G-1 State and County Minority Population Totals, 2000

Location	Total Population	Minority Population	Percent Minority
Idaho	1,293,953	116,649	9.0
Bingham County	41,735	7332	17.6
Bonneville County	82,522	5948	7.2
Jefferson County	19,155	1749	9.1

Source: U.S. Census Bureau, 2010.

Table G-2 Census Block Group Minority Population Totals, 2000

Location	County	Total Population	Minority Population	Percent Minority
Census Tract 9503, Census Block Group 1	Bingham	1438	234	16.3
Census Tract 9715, Census Block Group 1	Bonneville	790	170	21.5
Census Tract 9715, Census Block Group 2	Bonneville	987	74	7.5
Census Tract 9601, Census Block Group 1	Jefferson	957	202	21.1

Source: U.S. Census Bureau, 2010.

**Table G-3 State and County Low-Income
Population Totals, 1999**

Location	Total Population ^a	Low-Income Population	Percent Minority
Idaho	1,263,205	148,732	11.8
Bingham County	41,342	5137	12.4
Bonneville County	81,532	8260	10.1
Jefferson County	19,155	1984	10.4

^a Total population for which poverty status has been determined.

Source: U.S. Census Bureau, 2010.

1

Table G-4 Census Block Group Low-Income Population Totals, 1999

Location	County	Total Population ^a	Low- Income Population	Percent Low- Income
Census Tract 9503, Census Block Group 1	Bingham	1384	162	11.7
Census Tract 9715, Census Block Group 1	Bonneville	692	109	15.8
Census Tract 9715, Census Block Group 2	Bonneville	1053	69	6.6
Census Tract 9601, Census Block Group 1	Jefferson	957	223	23.3

^a Total population for which poverty status has been determined.

Source: U.S. Census Bureau, 2010.

2

3 **G.1 References**

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APPENDIX H
BENEFIT-COST ANALYSIS OF PROPRIETARY DATA

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The text in this appendix is being withheld under 10 CFR 2.390.

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**APPENDIX I
PUBLIC PARTICIPATION AND
NRC RESPONSE TO COMMENTS
ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT**

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**APPENDIX I
PUBLIC PARTICIPATION AND
NRC RESPONSE TO COMMENTS
ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT**

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I.1 Introduction

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This appendix summarizes the public participation process conducted by the U.S. Nuclear Regulatory Commission (NRC) staff for the environmental review and preparation of the Environmental Impact Statement (EIS) in support of the NRC's decision on issuing a license to AREVA Enrichment Services LLC (AES) to construct, operate, and decommission a proposed uranium enrichment facility. This facility is the proposed Eagle Rock Enrichment Facility (EREF) near Idaho Falls in Bonneville County, Idaho. In particular, this appendix also presents all of the comments received by the NRC on the Draft EIS and the staff's response to those comments. The NRC staff has considered and addressed the approximately 1150 individual comments that were received from approximately 220 government officials and agencies, nongovernmental organizations, and members of the general public.

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29

I.2 Public Participation

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Public participation is an essential part of the environmental review process under the *National Environmental Policy Act of 1969*, as amended (NEPA). This section discusses the process for public participation during the NRC staff's development of the EIS for the proposed EREF. As indicated in the discussions below, the NRC conducted an open, public EIS development process consistent with NEPA and the NRC's regulations under Title 10 of the U.S. *Code of Federal Regulations* (10 CFR) Part 51.

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I.2.1 Initial Notification and Notice of Formal Proceeding

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Upon receipt of AES's license application for the proposed EREF and completion of an initial acceptance review, the NRC published a notice in the *Federal Register* on July 30, 2009 (74 FR 38052) of receipt and availability of the application and notice of hearing. The NRC's environmental review began following acceptance and docketing of the application, which included a Safety Analysis Report and an Environmental Report. The NRC conducted its reviews pursuant to the requirements of 10 CFR 70.65 and 10 CFR 51.60, respectively.

I.2.2 Public Scoping

The NRC is required under 10 CFR 51.20(b)(10) to prepare an EIS, and under 10 CFR 51.26 to issue a Notice of Intent (NOI) to prepare the EIS and conduct a scoping process for the EIS. The NRC's public scoping process for the EIS for the proposed EREF began on May 4, 2009, with the publication in the *Federal Register* of the NOI (74 FR 20508). This NOI established a 45-day scoping period, ending on June 19, 2009, during which the public could submit written comments on the appropriate scope of issues to be considered in the EIS. The NOI also provided a brief description of the proposed EREF project and information on alternatives to be evaluated and environmental impact areas to be analyzed in the EIS; summarized the NEPA process for the proposed project; identified where information on the proposed project could be accessed; announced a public scoping meeting to be held in Idaho Falls, Idaho, during the

1 scoping period, on June 4, 2009; and provided information on how to submit written comments
2 to the NRC.

3
4 At the public scoping meeting, the NRC staff provided a description of the NRC's role,
5 responsibilities, and mission; gave a brief overview of its environmental and safety review
6 processes; discussed how the public could effectively participate in the environmental review
7 process; and solicited comments from the public on environmental issues and concerns related
8 to the proposed project. Approximately 40 individuals provided oral comments at the meeting.
9 In addition, seven individuals provided written comments via regular postal mail and another
10 95 individuals provided comments via email during the scoping period. Scoping comments
11 were provided by government officials and agencies, nongovernmental organizations, and the
12 general public.

13
14 The oral and written scoping comments received by the NRC were summarized by the staff in
15 the *Scoping Summary Report*, issued on September 11, 2009. This report, which is included in
16 this EIS in Appendix A, also contains additional information on the scoping process and
17 identifies the issues that would be addressed in the EIS based on the public scoping comments.
18

19 **I.2.3 Draft EIS Development and Availability for Public Comment**

20
21 Once the NRC staff completed the scoping process, defined the proposed action and
22 alternatives, and determined the scope of the EIS, the staff prepared the Draft EIS. During
23 development of the Draft EIS, the NRC staff sought input from a number of sources, including
24 Federal, State and local government agencies, Tribal governments, and individuals.

25
26 Pursuant to 10 CFR 51.74, on July 21, 2010, the NRC staff published a Notice of Availability
27 (NOA) for the Draft EIS in the *Federal Register* (75 FR 42466), announcing the issuance of the
28 Draft EIS for public comment, in accordance with 10 CFR 51.73, 51.74, and 51.117. The NOA
29 contained a summary of the contents and preliminary findings of the Draft EIS; the NRC staff's
30 preliminary recommendation regarding issuance of the proposed license to AES; information on
31 the public comment meeting to be held in Idaho Falls, Idaho; information on how to submit
32 written comments at the public comment meeting, electronically, or by mail; and information on
33 how to access the Draft EIS and other documents related to the proposed EREF project.
34 Additionally, pursuant to 10 CFR 51.74, the NRC distributed the Draft EIS to approximately
35 135 individuals including Federal, Tribal, State, and local government officials and other
36 interested parties. Copies of the Draft EIS were also sent by the NRC staff to a public library in
37 Idaho Falls, to maintain in an information repository on the environmental review for the
38 proposed EREF project.

39
40 Also in the July 21, 2010, *Federal Register* notice, the NRC staff established a 45-day public
41 comment period on the Draft EIS, consistent with the cited NRC regulations. The official public
42 comment period began with publication in the *Federal Register* on July 23, 2010, of the Notice
43 of Availability of the Draft EIS (75 FR 43160). The public comment period ended on September
44 13, 2010.

45
46 Pursuant to 10 CFR 51.74, the NRC distributed the Draft EIS to approximately 135 individuals,
47 including Federal, Tribal, State, and local government officials and other interested parties.
48 Copies of the Draft EIS were also sent by the NRC staff to the Idaho Falls Public Library. The
49 staff had sent other information on the project to this library over the course of Draft EIS
50 development, including the AES Environmental Report and revisions (AES, 2010a). At the

1 request of the NRC staff, the library maintains an information repository on the proposed EREF
2 project.

3 4 **I.2.4 Draft EIS Public Comment Meetings**

5
6 The NRC staff conducted public meetings to receive oral and written comments on the Draft EIS
7 from members of the public. These meetings were held on August 9, 2010, in Boise, Idaho, and
8 on August 12, 2010, in Idaho Falls, Idaho. At these meetings, the NRC staff provided a
9 description of the NRC's role, responsibilities, and mission; gave a brief overview of its licensing
10 and environmental review processes; summarized the content and preliminary findings and
11 recommendations of the Draft EIS; provided information on how the Draft EIS could be
12 accessed or obtained and how to provide comments on the document; and solicited comments
13 from the public on the Draft EIS. Oral comments were provided by 50 individuals during the
14 Boise meeting and by 46 individuals during the Idaho Falls meeting. In addition, written
15 comments were provided to the NRC staff by 12 individuals at the Boise meeting and by
16 19 individuals at the Idaho Falls meeting. Court reporters recorded both meetings and prepared
17 a written transcript for each.

18 19 **I.2.5 Additional Public Comments Received on the Draft EIS**

20
21 In addition to the written comments submitted at the two public meetings, the NRC received
22 7 letters, 43 postcards, and 81 emails containing comments on the Draft EIS during the Draft
23 EIS public comment period.

24 25 **I.3 Draft EIS Public Comment Compilation, Identification, Organization, Review, and** 26 **Response**

27 28 **I.3.1 Comment Compilation**

29
30 The NRC staff made the public comment meeting transcripts part of the public record, contained
31 in the NRC's Agencywide Documents Access and Management System (ADAMS). The
32 meeting transcripts are also available in the NRC's public website for the proposed EREF
33 project, at <http://www.nrc.gov/materials/fuel-cycle-fac/arevanc.html#3>. Other comment
34 documents were added to ADAMS as they were received by the NRC.

35
36 Members of the public can access ADAMS at <http://www.nrc.gov/reading-rm/adams.html>. From
37 this website, the transcripts and other comment documents can be accessed by entering their
38 ADAMS Accession Numbers (or ML numbers). The ADAMS Accession Numbers for the
39 comment documents in which commenter's comments appear are identified in Table I-1.
40 See Section I.3.2 below for a complete description of the contents of Table I-1.

41 42 **I.3.2 Commenter and Comment Identification**

43
44 The NRC staff reviewed the public meeting transcripts, letters, postcards, and emails to identify
45 and extract the individual comments on the Draft EIS from these documents. These comments
46 are presented in Section I.5 of this appendix.

47
48 The NRC staff identified commenters from the meeting transcripts and comments submitted in
49 writing and assigned a unique identification number to each commenter, to aid the readers of

1 this appendix in locating comments submitted by individual commenters and the NRC staff's
2 corresponding responses to those comments. Table I-1 below lists all of the commenters on the
3 Draft EIS alphabetically by last name, their associated commenter number, the ADAMS
4 Accession Number(s) of the comment document(s) in which each commenter's comments
5 appear, and the subsection(s) of Section I.5 that contain their comments and the NRC
6 responses to those comments.

7
8 The NRC staff also assigned a unique comment number to each individual comment. The
9 public meeting transcripts contain multiple comments, and each written comment document
10 received contains one or more comments. The comment identification numbers consist of two
11 parts. The first part identifies the commenter (i.e., is the commenter identification number
12 discussed above). The second part identifies the specific comment within one of the transcripts
13 or submitted written comment documents, incrementing sequentially through each transcript
14 and document.

16 **I.3.3 NRC Comment Organization, Review, and Response**

17
18 From the meeting transcripts and other comment documents, the NRC staff has reviewed,
19 considered, and addressed the approximately 1150 individual comments that were received.
20 Comments relating to similar issues and topics have been grouped together, as permitted by
21 NRC regulations in 10 CFR 51.91. This grouping is also consistent with the Council on
22 Environmental Quality's NEPA regulations at 40 CFR 1503.4(b).

23
24 Section I.5 presents all of the comments received, including groups of similar comments, along
25 with the NRC staff's corresponding responses to these comments or groups of similar
26 comments. The NRC staff has categorized comments in subsections of Section I.5 according to
27 their relation to chapters and sections of this EIS and other issues. Section I.5 contains
28 29 subsections, or topics, under which the public comments have been categorized. Within
29 these subsections, the comments are further categorized, or grouped, by subtopics that the
30 comments have in common, and there are one or more such groupings of comments within
31 each Section I.5 subsection.

32
33 Each comment or group of similar comments in Section I.5 is introduced with a brief summary
34 by the NRC staff of the subject of the comment or comments. The text of the comment(s) is
35 then presented, preceded by the comment identification number(s) and commenter name(s).
36 This is then followed by the NRC response. For cases in which comments have resulted in a
37 modification to the Draft EIS, those changes are noted in the staff's response and are included
38 in this Final EIS. In cases for which the comments do not call for a detailed response, the NRC
39 staff explains why no further response is necessary.

41 **I.3.4 Major Comment Issues and Topics**

42
43 The majority of the comments received specifically address the scope of the environmental
44 review, analysis, and issues contained in the Draft EIS, including the NEPA process, purpose
45 and need, alternatives to the proposed action, existing conditions, potential environmental
46 impacts, proposed mitigation, environmental measurements and monitoring, and benefit-cost
47 analysis. However, other comments address topics and issues that were not part of the NEPA
48 review process for the proposed action. Those comments include questions about the NRC's
49 safety evaluation of the proposed EREF, security concerns, general statements of support of, or

1 opposition to, the proposed EREF project, and observations regarding past AES activities
2 (e.g., environmental and safety practices, financial activities) outside the United States.
3

4 **I.3.5 Comments on Out-of-Scope Issues and Topics**

5
6 The scope of the EIS analysis is defined in 10 CFR 51.71(c), NUREG-1748, “Environmental
7 Review Guidance for Licensing Actions Associated with NMSS Programs” (NRC, 2003), and the
8 *Scoping Summary Report* in Appendix A of this EIS. Several commenters raised issues that are
9 not related to – i.e., not within the scope of – the NRC staff’s environmental review of AES’s
10 application to construct, operate, and decommission the proposed EREF. These include the
11 comments regarding general opposition to, and support for, the proposed project, without
12 reference to EIS content, presented in Sections I.5.1 and I.5.2, respectively. Most of the other
13 comments on out-of scope issues and topics are identified in Section I.5.5 (Scope of the
14 Analysis). Because these comments do not directly relate to the content of the Draft EIS and
15 are outside the scope of the NEPA review of the proposed EREF, the NRC staff did not prepare
16 detailed responses to these comments.
17

18 **I.4 Mandatory Hearing**

19
20 By law, a license to construct, operate, and decommission the proposed EREF cannot be
21 issued until completion of a hearing before the NRC’s Atomic Safety and Licensing Board Panel
22 (ASLBP). The ASLBP is an adjudicatory body independent from the NRC staff. Among its
23 responsibilities, the ASLBP appoints judges to preside over NRC licensing cases in which a
24 hearing request has been submitted, or where a hearing is required under the *Atomic Energy*
25 *Act* of 1954 (AEA). Although the NRC did not receive any hearing request in connection with
26 the EREF application, the AEA requires a hearing with regard to the licensing of the
27 construction and operation of a uranium enrichment facility such as the proposed EREF. On
28 March 26, 2010, the Chief Judge of the ASLBP established a three-judge Board to preside over
29 this mandatory hearing. The purpose of the mandatory hearing is twofold: the Board must
30 determine whether the EREF application meets applicable safety requirements in NRC
31 regulations, and it must also determine whether the requirements of NEPA and the NRC’s
32 NEPA-implementing regulations have been satisfied.
33

34 On May 19, 2010, the ASLBP provided notice in the *Federal Register* of its adoption of a
35 bifurcated schedule for the mandatory hearing, such that separate safety and environmental
36 evidentiary hearings would be conducted. The safety hearing would be held first after issuance
37 of the staff’s Final Safety Evaluation Report (SER). The environmental hearing would be held
38 later, following issuance of the Final EIS. The SER, NUREG-1951 (NRC, 2010b), was issued in
39 September 2010, and the safety hearing was held January 25, 2011. Following completion of
40 the safety and environmental hearings, the ASLBP will issue written findings on whether the
41 requested license should be issued to AES. The Board’s findings will be subject to review by
42 the Commission. Evidence submitted during the hearings and January 25th only decisions of
43 the ASLBP and Commission are made publically available, except to the extent that they
44 contain proprietary or sensitive security information. This evidence, along with all adjudicatory
45 issuances and submittals, may be viewed by accessing the Electronic Hearing Docket
46 maintained by the NRC’s Office of the Secretary at <http://ehd1.nrc.gov/EHD/>.
47

Table I-1 Draft EIS Commenter Identification and Comment Response Locations

Commenter Name	Affiliation	Commenter Number	Comment Document(s) ADAMS Accession Number(s)	Subsection(s) Containing Comments and Responses
Aarti, Reham	Member of the Public	001	ML102310563	I.5.1, I.5.4
Allgood, Lane	Partnership for Science and Technology	002	ML102310563	I.5.3
Anderson, Philip A	Idaho Academy of Science	003	ML102530073	I.5.2
Anonymous	Member of the Public	004	ML102390243	I.5.21
Anonymous	Member of the Public	005	ML102280389	I.5.2
Anonymous	Member of the Public	006	ML102280389	I.5.2, I.5.18
Ayers, Arnold	Member of the Public	007	ML102320123	I.5.2, I.5.13, I.5.16, I.5.18
Bacheider, Carol	Member of the Public	008	ML102310563 ML102320123	I.5.1, I.5.5, I.5.13, I.5.19, I.5.22
Barclay, Steve	Member of the Public	009	ML102650572	I.5.1, I.5.4
Barracough, Jack	Member of the Public	010	ML102320123	I.5.2, I.5.13
Baxter, Donald E	Member of the Public	011	ML102390284	I.5.3
Berndt, Janice	Member of the Public	012	ML102580064	I.5.18
Blackburn, Kit	Member of the Public	013	ML102650572	I.5.1, I.5.8
Blair, William	Member of the Public	014	ML102580071	I.5.1, I.5.4, I.5.12, I.5.13, I.5.18
Bond, Dina	Member of the Public	199	ML102630195	I.5.1, I.5.6
Brailsford, Beatrice	Snake River Alliance	015	ML102320123 ML102580089	I.5.1, I.5.4, I.5.5, I.5.6, I.5.8, I.5.13, I.5.14, I.5.18, I.5.21, I.5.22, I.5.23, I.5.25

Table I-1 Draft EIS Commenter Identification and Comment Response Locations (Cont.)

Commenter Name	Affiliation	Commenter Number	Comment Document(s) ADAMS Accession Number(s)	Subsection(s) Containing Comments and Responses
Briggs, E. Manley	Member of the Public	016	ML102310563 ML102280275	I.5.12, I.5.17
Briggs, Sally	Member of the Public	017	ML102310563 ML102280511	I.5.1, I.5.13
Brown, Deb	Member of the Public	018	ML102650572	I.5.1, I.5.5
Buehler, George	Member of the Public	019	ML102580063	I.5.1, I.5.13, I.5.18
Busby, Tracey	Member of the Public	020	ML102390250	I.5.13
Campbell, Sean	Member of the Public	200	ML102630195	I.5.1, I.5.6
Campos, Giovanna	Member of the Public	201	ML102630195	I.5.1, I.5.6
Cannarozzo, Linda	Member of the Public	021	ML102650572	I.5.1, I.5.4
Carroll, Judy	Member of the Public	022	ML102530077	I.5.1, I.5.18
Casper, Rebecca	Member of the Public	023	ML102320123	I.5.2, I.5.13
Chalfant, Jana	Idaho Economic Development Association	024	ML102280389	I.5.2, I.5.3
Chew, Sue	Idaho State Representative, Boise District 17	025	ML102310563 ML102580070	I.5.1, I.5.4, I.5.5, I.5.13, I.5.16, I.5.28
Chiles, Robb	Greater Idaho Falls Chamber of Commerce	026	ML102310563 ML102320123	I.5.3, I.5.19
Cohn, Sara	Idaho Conservation League	027	ML102310563 ML102530075	I.5.3, I.5.5, I.5.9, I.5.11, I.5.13, I.5.14, I.5.16, I.5.17, I.5.18, I.5.21, I.5.25, I.5.27
Coney, David	Member of the Public	028	ML102310563	I.5.1, I.5.16

Table I-1 Draft EIS Commenter Identification and Comment Response Locations (Cont.)

Commenter Name	Affiliation	Commenter Number	Comment Document(s) ADAMS Accession Number(s)	Subsection(s) Containing Comments and Responses
Conner, Richard	Member of the Public	029	ML102650572	I.5.1, I.5.6
Cooke, Kerry	Member of the Public	030	ML102310563 ML102280511	I.5.4, I.5.5, I.5.13, I.5.18
Cooper, James	Member of the Public	031	ML102530074	I.5.1, I.5.4
Cottrell, Cindy	Member of the Public	032	ML102370760	I.5.1, I.5.4, I.5.5, I.5.13, I.5.17, I.5.18, I.5.19
Crapo, Mike	U.S. Senator – Idaho	033	ML102320123	I.5.2, I.5.3, I.5.4
Crockett, Greg ^a	Partnership for Science and Technology	034	ML102320123 ML102280389	I.5.2, I.5.3, I.5.4, I.5.19
Crowley, Stephen	Member of the Public	035	ML102310563 ML102580072	I.5.1, I.5.5
Cutler, Christina	The Shoshone-Bannock Tribes	036	ML102580061	I.5.8, I.5.9, I.5.13, I.5.14, I.5.17, I.5.18, I.5.21
Daly, Kathy	Member of the Public	037	ML102580056	I.5.1
Davidson, Brian	Member of the Public	038	ML102390248	I.5.2, I.5.19
Davis, Kreg	Electrical Wholesale Supply	039	ML102310563 ML103410527 ML103410530	I.5.2, I.5.19, I.5.28
Day, Collin	Member of the Public	040	ML102310563	I.5.4, I.5.5, I.5.13, I.5.28
de Weerd, Tammy	Mayor, City of Meridian, Idaho	041	ML102310563	I.5.2, I.5.19
Deal, John	Hyperion Power	042	ML102280389	I.5.2, I.5.3

^a The comment document provided and signed by Greg Crockett was also signed by an additional 114 individuals in support of the statement in the document.

Table I-1 Draft EIS Commenter Identification and Comment Response Locations (Cont.)

Commenter Name	Affiliation	Commenter Number	Comment Document(s) ADAMS Accession Number(s)	Subsection(s) Containing Comments and Responses
Deschamps, Rocky	Member of the Public	043	ML102320123	I.5.2, I.5.19
Donnelly, Dennis	Member of the Public	044	ML102320123	I.5.5, I.5.6
Drake, Joan W.	Member of the Public	045	ML102530072	I.5.18, I.5.25
Dudley, Mr. and Mrs. David	Members of the Public	046	ML102580057	I.5.1
Duffin, Alison	Member of the Public	202	ML102630195	I.5.1, I.5.4
Dugge, Danielle	Member of the Public	203	ML102630195	I.5.1, I.5.6
Dunham, Mark	Idaho Associated General Contractors	047	ML102310563	I.5.19
Emerson, Genevieve	Member of the Public	048	ML102580081	I.5.1, I.5.5, I.5.13, I.5.18, I.5.21
Everett, Victoria	Member of the Public	049	ML102310563	I.5.16, I.5.21
Fauci, Joanie	Member of the Public	050	ML102430033	I.5.1, I.5.5, I.5.6, I.5.13, I.5.16, I.5.18, I.5.19, I.5.21, I.5.22
Filkins, Susan	Member of the Public	204	ML102630195	I.5.1, I.5.6
Flowers, Jackie	Member of the Public	051	ML102320123	I.5.2, I.5.3, I.5.4
Fuger, Rod	Member of the Public	052	ML102600333	I.5.2
Fuhrman, Jared	Mayor, City of Idaho Falls, Idaho	053	ML102310563 ML102320123 ML102280389	I.5.2, I.5.3
Fullmer, Paul	Member of the Public	054	ML102280389	I.5.19
Galaviz, Claudia	Member of the Public	055	ML102650572	I.5.1, I.5.5

Table I-1 Draft EIS Commenter Identification and Comment Response Locations (Cont.)

Commenter Name	Affiliation	Commenter Number	Comment Document(s) ADAMS Accession Number(s)	Subsection(s) Containing Comments and Responses
Galaviz, Mark	Member of the Public	056	ML102650572	I.5.1, I.5.5
Garman, Steven P.	Sun Valley Air, LLC	057	ML102530079	I.5.1
Gerber, Matt	Member of the Public	058	ML102280389	I.5.2
Giles, Lance	Member of the Public	059	ML102280511	I.5.2, I.5.3
Gianotto, Ericka	Idaho Falls Mayor's Youth Advisory Council	060	ML102320123	I.5.3
Greco, Nancy	Member of the Public	061	ML102580036	I.5.1, I.5.6, I.5.18
Grigg, Trevor	Member of the Public	062	ML102310563	I.5.19
Guerri, Andrea	Member of the Public	205	ML102630195	I.5.1, I.5.4
Haga, Martha	Member of the Public	063	ML102500566 ML102500567	I.5.1, I.5.5, I.5.6, I.5.8
Hally, Tom	City Council Member, City of Idaho Falls	064	ML102390267	I.5.2
Hanson, Pamela	Member of the Public	206	ML102630195	I.5.1, I.5.4
Hardcastle, Ida	City Council Member, City of Idaho Falls	065	ML102280389	I.5.2, I.5.3, I.5.19
Hardesty, Toni	Idaho Department of Environmental Quality	066	ML102580073	I.5.5, I.5.11, I.5.13, I.5.16, I.5.17, I.5.18, I.5.21, I.5.22, I.5.27
Harris, Drew	Member of the Public	207	ML102630195	I.5.1, I.5.6
Hart, Mike	Member of the Public	067	ML102310563 ML102320123	I.5.2, I.5.3, I.5.4, I.5.6, I.5.10, I.5.14, I.5.21, I.5.23, I.5.28

Table I-1 Draft EIS Commenter Identification and Comment Response Locations (Cont.)

Commenter Name	Affiliation	Commenter Number	Comment Document(s) ADAMS Accession Number(s)	Subsection(s) Containing Comments and Responses
Harvey, Emily	Member of the Public	208	ML102630195	I.5.1, I.5.6
Hausrath, Anne	Member of the Public	068	ML102310563 ML102600323	I.5.1, I.5.3, I.5.4, I.5.13, I.5.16, I.5.28
Hawke, Scott	Member of the Public	069	ML102390285	I.5.3
Hemingway, Virginia	Member of the Public	070	ML102310563	I.5.1, I.5.16, I.5.18, I.5.21
Hensel, David	Member of the Public	071	ML102320123	I.5.4, I.5.5, I.5.6, I.5.18
Herring, J. Stephen	Member of the Public	072	ML102320123 ML102280389	I.5.2, I.5.4
Hollar, Courtney	Member of the Public	209	ML102630195	I.5.1, I.5.4
Holzmer, Mark	Member of the Public	073	ML102390271	I.5.3, I.5.19
Hoovis, Tyler	Member of the Public	210	ML102630195	I.5.1, I.5.4
Howard, Don	Member of the Public	074	ML102310563	I.5.13, I.5.28
Huddleston, Leslie	On behalf of U.S. Senator Mike Crapo of Idaho	075	ML102320123	I.5.2, I.5.3, I.5.4
Huebner, Martin	Member of the Public	076	ML102320123	I.5.2, I.5.3
Hyatt, Larry	Member of the Public	077	ML102310563 ML102320123 ML102580055	I.5.3, I.5.18, I.5.25
Jaquet, Wendy	Idaho State Representative, District 25	078	ML102530080	I.5.1, I.5.5, I.5.13, I.5.16, I.5.18

Table I-1 Draft EIS Commenter Identification and Comment Response Locations (Cont.)

Commenter Name	Affiliation	Commenter Number	Comment Document(s) ADAMS Accession Number(s)	Subsection(s) Containing Comments and Responses
Jensen, Kristen	Eastern Idaho Economic Development Partners	079	ML102280511 ML102280389	I.5.2, I.5.3
Joelson, Olivia	Member of the Public	211	ML102630195	I.5.1, I.5.4
Johnson, Don	Member of the Public	080	ML102320123	I.5.19
Johnson, Lea	Member of the Public	081	ML102650572	I.5.1, I.5.4
Johnson, Naomi	Member of the Public	212	ML102630195	I.5.1, I.5.4
Johnston, Michael P.	Member of the Public	082	ML102390241	I.5.2
Jones, Darvel	Member of the Public	213	ML102630195	I.5.1, I.5.6
Jones, Diane	Member of the Public	083	ML102310563	I.5.1, I.5.3, I.5.4, I.5.5, I.5.14, I.5.18, I.5.22
Jones, Michael R.	Member of the Public	084	ML102580034	I.5.1
Jonkowski, David	Member of the Public	085	ML102600323	I.5.1
Jull, Paula	Member of the Public	086	ML102580049	I.5.4, I.5.5, I.5.14, I.5.18, I.5.25
Kasnicki, Dennis	Member of the Public	087	ML102390270	I.5.5, I.5.13, I.5.19, I.5.21, I.5.27
Kay, Jim	AREVA Enrichment Services LLC	228	ML103410510	I.5.3, I.5.29
Kidwell, Stan	Member of the Public	088	ML102580060	I.5.4, I.5.5, I.5.6, I.5.8, I.5.14, I.5.18, I.5.21, I.5.28
Kiefer, Sharon W.	Idaho Department of Fish and Game	089	ML102580074	I.5.8, I.5.14, I.5.27

Table I-1 Draft EIS Commenter Identification and Comment Response Locations (Cont.)

Commenter Name	Affiliation	Commenter Number	Comment Document(s) ADAMS Accession Number(s)	Subsection(s) Containing Comments and Responses
Kjellander, Paul	On behalf of Idaho Governor Butch Otter	090	ML102310563	I.5.2, I.5.4, I.5.19
King, Jacob	Member of the Public	214	ML102630195	I.5.1, I.5.6
Kull, Arthur	Kull Food Technologies LLC	091	ML102390247	I.5.5
Lagergren, Ginna and Ken	Members of the Public	092	ML102510649	I.5.13
Landy, Louis	Member of the Public	093	ML102650572	I.5.1, I.5.8
Lange, Michael	Member of the Public	094	ML102320123	I.5.2, I.5.3, I.5.11
Larsen, Verlyn	Member of the Public	215	ML102630195	I.5.1, I.5.4
Lee, Beau	Member of the Public	216	ML102630195	I.5.1, I.5.6
Leeuwrik, Linda	Member of the Public	095	ML102530078	I.5.4, I.5.5, I.5.6, I.5.8, I.5.14, I.5.18, I.5.25, I.5.28
Makhijani, Arjun	Institute for Energy and Environmental Research	096	ML102320123 ML102280389	I.5.4, I.5.6, I.5.7, I.5.18
Martin, Bryan	Member of the Public	097	ML102310563	I.5.25
Martin, Linda	Grow Idaho Falls	098	ML102310563 ML102390240	I.5.2, I.5.3, I.5.4, I.5.6, I.5.11, I.5.16, I.5.19
Martin, Linda	On behalf of the Eastern Idaho Economic Development Partners	194	ML102310563 ML102320123	I.5.2, I.5.3
Martin, Linda	On behalf of the Eastern Idaho Economic Development Association	196	ML102320123	I.5.2, I.5.3
Mathieu, Brent	Member of the Public	099	ML102650572	I.5.1, I.5.6

Table I-1 Draft EIS Commenter Identification and Comment Response Locations (Cont.)

Commenter Name	Affiliation	Commenter Number	Comment Document(s) ADAMS Accession Number(s)	Subsection(s) Containing Comments and Responses
Matson, Wendy	Member of the Public	100	ML102310563 ML102650572	I.5.1, I.5.4, I.5.6, I.5.12, I.5.13, I.5.18, I.5.21
May-Chang, Jody	Member of the Public	101	ML102650572	I.5.1, I.5.5
Maynard, R.D.	Member of the Public	102	ML102310563	I.5.3, I.5.11, I.5.13
McCall, Karen	Member of the Public	103	ML102580087	I.5.1, I.5.4, I.5.5, I.5.6, I.5.13, I.5.17, I.5.18, I.5.19
McCollum, Carolyn	Member of the Public	104	ML102460018	I.5.4, I.5.18
McConaughy, Eve	Member of the Public	105	ML102260323	I.5.1, I.5.3, I.5.5, I.5.13, I.5.16, I.5.18
McConaughy, Ted	Member of the Public	106	ML102310563	I.5.1, I.5.5, I.5.19
McKay, Jean	Member of the Public	107	ML102320123 ML102280389	I.5.1
Mckelvey, Jodie	Member of the Public	217	ML102630195	I.5.1, I.5.4
McMahon, John C.	Member of the Public	108	ML102580051	I.5.6
McVey, Eugene	Member of the Public	109	ML102650572	I.5.1, I.5.8
Medlin, John and Susan	Members of the Public	110	ML102390273	I.5.4, I.5.5, I.5.13, I.5.18
Meikle, Robert	Member of the Public	111	ML102310563	I.5.2, I.5.18
Menlove, Mark	Member of the Public	112	ML102580033	I.5.1, I.5.6
Miller, Ken	Member of the Public	113	ML102320123 ML102580037	I.5.1, I.5.4, I.5.5, I.5.23, I.5.25

Table I-1 Draft EIS Commenter Identification and Comment Response Locations (Cont.)

Commenter Name	Affiliation	Commenter Number	Comment Document(s) ADAMS Accession Number(s)	Subsection(s) Containing Comments and Responses
Minick, David	Member of the Public	218	ML102630195	I.5.1, I.5.6
Mitchell, Anne	Member of the Public	114	ML102600333	I.5.2
Miyaoka, Neil	Member of the Public	219	ML102630195	I.5.1, I.5.6
Molenaar, Nicholas	Member of the Public	115	ML102280511	I.5.3, I.5.4
Mondy, Richard	Member of the Public	116	ML102360687	I.5.2
Morgan, Richard	Member of the Public	117	ML102650572	I.5.1, I.5.5
Morris, Caroline	Member of the Public	118	ML102580069	I.5.1, I.5.4, I.5.5, I.5.8
Naftzger, Tim	Member of the Public	220	ML102630195	I.5.1, I.5.6
Neilson, Bob	Member of the Public	119	ML102310563	I.5.2
Nicholson, Frank	Member of the Public	120	ML102280511 ML102580048	I.5.1, I.5.3, I.5.4, I.5.5, I.5.8
Nordstrom, Jennifer	Member of the Public	121	ML102580039	I.5.1, I.5.8
O'Brien, Kathy	Member of the Public	122	ML102580086	I.5.1, I.5.4, I.5.5, I.5.8, I.5.13, I.5.14, I.5.18, I.5.21, I.5.25
Otter, Butch	Governor, State of Idaho	123	ML102310563 ML102320123 ML102600333	I.5.2, I.5.4, I.5.19
Packwood, Lane	Idaho Department of Commerce	124	ML102310563	I.5.3, I.5.19, I.5.25
Paquette, Holly	Member of the Public	125	ML102310563	I.5.1, I.5.18

Table I-1 Draft EIS Commenter Identification and Comment Response Locations (Cont.)

Commenter Name	Affiliation	Commenter Number	Comment Document(s) ADAMS Accession Number(s)	Subsection(s) Containing Comments and Responses
Pengilly, Susan	Idaho State Historical Society, State Historic Preservation Office	126	ML102150425	I.5.9
Perrington, Mike	Member of the Public	221	ML102630195	I.5.1, I.5.6
Pierce, Vanessa	Health Environment Alliance of Utah (HEAL Utah)	198	ML102600070	I.5.18
Plowman, Sheila	Member of the Public	127	ML102580059	I.5.1, I.5.4, I.5.8, I.5.21
Poyser, Bob	AREVA Enrichment Services, LLC	128	ML102310563	I.5.2, I.5.4, I.5.13, I.5.18, I.5.19, I.5.28
Preacher, Willie	The Shoshone-Bannock Tribes	129	ML102580061	I.5.9, I.5.16, I.5.21, I.5.22
Price, Park and Sharon	Members of the Public	130	ML102390269	I.5.3, I.5.4, I.5.28
Prisament, Morty	Member of the Public	131	ML102580091	I.5.3, I.5.4, I.5.5, I.5.6, I.5.7
Proksa, Margo and Dennis	Members of the Public	132	ML102320123 ML102280389	I.5.5
Provencher, Richard B.	Member of the Public	133	ML102390264	I.5.2, I.5.3, I.5.4, I.5.8, I.5.13, I.5.16, I.5.17, I.5.18, I.5.19
Quapp, William	Member of the Public	134	ML102320123	I.5.2
Radford, Dave	Bonneville County Commissioner	135	ML102320123	I.5.2, I.5.3, I.5.8, I.5.9, I.5.19
Raines, Hannah	Member of the Public	222	ML102630195	I.5.1, I.5.4
Rainey, Susan	Member of the Public	136	ML102600323	I.5.16, I.5.18
Reeves, Ralph	Member of the Public	137	ML102280389	I.5.2, I.5.19

Table I-1 Draft EIS Commenter Identification and Comment Response Locations (Cont.)

Commenter Name	Affiliation	Commenter Number	Comment Document(s) ADAMS Accession Number(s)	Subsection(s) Containing Comments and Responses
Reichgott, Christine	U.S. Environmental Protection Agency, Region 10	138	ML102580090	I.5.3, I.5.9, I.5.10, I.5.11, I.5.13, I.5.14, I.5.19, I.5.25, I.5.27
Revier, John	On behalf of U.S. Congressman Mike Simpson of Idaho	139	ML102310563	I.5.2, I.5.4
Reynolds, Wendy	U.S. Department of the Interior, Bureau of Land Management, Upper Snake Field Office	140	ML102390288	I.5.8, I.5.10, I.5.14, I.5.23, I.5.25
Richens, Mason	Member of the Public	223	ML102630195	I.5.1, I.5.6
Rickards, Peter	Member of the Public	141	ML102580078	I.5.3, I.5.17, I.5.21, I.5.24
Rindlisbacher, Blake	Idaho Transportation Department	142	ML102580050	I.5.3, I.5.16
Risch, James	U.S. Senator – Idaho	143	ML102320123 ML102600333	I.5.2, I.5.3, I.5.4, I.5.13
Rodgers, Sara	Member of the Public	144	ML102580085	I.5.1, I.5.5
Rolsen, A.	Member of the Public	224	ML102630195	I.5.1, I.5.4
Rydalch, Ann	National Foundation for Women Legislators	145	ML102320123 ML102280389	I.5.2, I.5.3, I.5.4, I.5.19
Sayer, Doug	Premier Technology	146	ML102310563	I.5.2, I.5.19
Schueler, Joe	Member of the Public	147	ML102310563 ML102280511 ML102390244	I.5.1, I.5.3, I.5.4, I.5.5, I.5.6, I.5.7, I.5.9, I.5.13, I.5.14, I.5.16, I.5.17, I.5.18, I.5.19, I.5.22, I.5.28

Table I-1 Draft EIS Commenter Identification and Comment Response Locations (Cont.)

Commenter Name	Affiliation	Commenter Number	Comment Document(s) ADAMS Accession Number(s)	Subsection(s) Containing Comments and Responses
Schuler, Eric	Member of the Public	148	ML102310563	I.5.1, I.5.4, I.5.5, I.5.7, I.5.18, I.5.21
Secret, Wendi	Idaho Economic Development Association	149	ML102280389	I.5.2, I.5.3
SeEVERS, Katie	Member of the Public	150	ML102310563	I.5.1, I.5.4, I.5.12, I.5.13, I.5.18, I.5.19, I.5.25
Sellers, Beth	Member of the Public	151	ML102280389	I.5.2, I.5.3
Serr, Steven	Planning and Zoning Administrator, Bonneville County, Idaho	152	ML102310563 ML102320123	I.5.2, I.5.3, I.5.8, I.5.10, I.5.11, I.5.12, I.5.16, I.5.21
ShIPLEY, Andrea	Member of the Public	153	ML102580047	I.5.1, I.5.4, I.5.5, I.5.8, I.5.9, I.5.10, I.5.13, I.5.14, I.5.16, I.5.18, I.5.23, I.5.25
ShIPLEY, Andrea	On behalf of the Snake River Alliance	197	ML102320123	I.5.1, I.5.4, I.5.5, I.5.8, I.5.9, I.5.13, I.5.14, I.5.16, I.5.18, I.5.23, I.5.25
ShIPLEY, Diana	Member of the Public	154	ML102580077	I.5.1, I.5.19, I.5.22
Shivly, Jerry	Member of the Public	155	ML102320123	I.5.2, I.5.19
Simison, Robert	On behalf of Mayor Tammy de Weerd, City of Meridian, Idaho	156	ML102310563	I.5.2, I.5.19
Simpson, Erik	Idaho State Representative, District 32	157	ML102310563 ML102320123	I.5.2, I.5.3, I.5.4, I.5.16, I.5.17, I.5.18, I.5.19, I.5.21, I.5.22
Simpson, Mike	U.S. Congressman, Idaho	158	ML102310563	I.5.2, I.5.4

Table I-1 Draft EIS Commenter Identification and Comment Response Locations (Cont.)

Commenter Name	Affiliation	Commenter Number	Comment Document(s) ADAMS Accession Number(s)	Subsection(s) Containing Comments and Responses
Skinner, Robert	Member of the Public	159	ML102320123	I.5.3
Smith, Jeff	Local 449, IBEW	160	ML102320123	I.5.2
Smith, Marisa	Member of the Public	161	ML102460017	I.5.1, I.5.4, I.5.6
Smith, Michael	Member of the Public	162	ML102390261	I.5.2
Smith-Putnam, Cindy	Grow Idaho Falls	163	ML102320123	I.5.2, I.5.3, I.5.4, I.5.19
Solomon, Timothy	Regional Development Alliance	164	ML102310563	I.5.19
Staker, Lee	Bonneville County Commissioner	165	ML102310563	I.5.19
Stears, Allen	Member of the Public	166	ML102390245	I.5.2
Stevenson, Andrew	Idaho Falls Mayor's Youth Advisory Council	167	ML102320123	I.5.2
Stewart, Lon	Member of the Public	168	ML102580062	I.5.1, I.5.4, I.5.5, I.5.6, I.5.13, I.5.17, I.5.18, I.5.19
Stewart, Margaret	Member of the Public	169	ML102320123	I.5.1, I.5.4, I.5.5, I.5.12, I.5.16, I.5.18, I.5.21
Stimpson, Lisa	Member of the Public	225	ML102630195	I.5.1, I.5.4
Strobel, David	Member of the Public	170	ML102390266	I.5.2
Tanner, John	Member of the Public	171	ML102320123	I.5.2, I.5.4, I.5.12, I.5.17, I.5.18
Taylor, Amy	On behalf of U.S. Senator Risch of Idaho	172	ML102320123	I.5.2, I.5.3, I.5.4, I.5.13
Taylor, David	Member of the Public	173	ML102390262	I.5.2, I.5.4

Table I-1 Draft EIS Commenter Identification and Comment Response Locations (Cont.)

Commenter Name	Affiliation	Commenter Number	Comment Document(s) ADAMS Accession Number(s)	Subsection(s) Containing Comments and Responses
Thomas, Christopher	Health Environment Alliance of Utah (HEAL Utah)	174	ML102600070	I.5.18
Thomas, Ellen	Member of the Public	175	ML102580058	I.5.1, I.5.4, I.5.5, I.5.6, I.5.8, I.5.14, I.5.18, I.5.25
Thompson, Jeff	Idaho House of Representatives	176	ML102320123 ML102280389	I.5.2, I.5.3, I.5.4, I.5.19
Thompson, Jeff	On behalf of Idaho Governor Butch Otter	195	ML102320123 ML102600333	I.5.2, I.5.4, I.5.19
Thomson, T.J.	City Council Member, City of Boise, Idaho	177	ML102580170	I.5.3, I.5.28
Toinga, Jessica	Member of the Public	226	ML102630195	I.5.1, I.5.6
Trane, Randy	Member of the Public	178	ML102390252	I.5.2, I.5.3, I.5.19
Turek, Jolie	Eastern Idaho Economic Development Partners	179	ML102280511 ML102280389	I.5.2, I.5.3
Turner, Kaye	Member of the Public	180	ML102580084	I.5.1, I.5.4, I.5.5, I.5.17, I.5.18, I.5.19
Turner, Roger	Member of the Public	181	ML102320123 ML102580075 ML102580080	I.5.1, I.5.3, I.5.4, I.5.5, I.5.6, I.5.7, I.5.13, I.5.16, I.5.17, I.5.18, I.5.19, I.5.21, I.5.25, I.5.28
Ursenbach, Brianna	Member of the Public	182	ML102310563	I.5.4, I.5.19, I.5.28
Vincent, James D.	Member of the Public	183	ML102320123 ML102280389	I.5.1, I.5.4, I.5.5, I.5.13, I.5.14, I.5.18, I.5.19

Table I-1 Draft EIS Commenter Identification and Comment Response Locations (Cont.)

Commenter Name	Affiliation	Commenter Number	Comment Document(s) ADAMS Accession Number(s)	Subsection(s) Containing Comments and Responses
Vincent, Kitty	Member of the Public	184	ML102390263 ML102390272	I.5.1, I.5.4, I.5.5, I.5.6, I.5.8, I.5.9, I.5.10, I.5.12, I.5.13, I.5.14, I.5.18, I.5.19, I.5.21, I.5.23, I.5.25
Virgin, Wade	Idaho Department of Labor	185	ML102320123	I.5.19
Voss, Joseph	Member of the Public	227	ML102630195	I.5.1, I.5.6
Walker, Lauren	Walker Land and Cattle Company	186	ML102320123	I.5.2
Weber, John	Member of the Public	187	ML102310563	I.5.1, I.5.4, I.5.18, I.5.19, I.5.22
Weber-Wells, Lana	Member of the Public	188	ML102430049	I.5.1, I.5.5
Weil, Josh	Member of the Public	189	ML102310563	I.5.19
Whaley, Dave	Idaho State AFL-CIO	190	ML102440327	I.5.19
Woodruff, Liz	Member of the Public	191	ML102320123 ML102580035	I.5.1, I.5.4, I.5.5, I.5.6, I.5.8, I.5.9, I.5.10, I.5.12, I.5.13, I.5.14, I.5.16, I.5.18, I.5.19, I.5.21, I.5.23, I.5.25
Woodruff, Liz	On behalf of the Snake River Alliance	193	ML102310563 ML102310570	I.5.1, I.5.4, I.5.5, I.5.6, I.5.8, I.5.9, I.5.10, I.5.14, I.5.17, I.5.18, I.5.21, I.5.25, I.5.28
Young, Lisa	Member of the Public	192	ML102310563	I.5.1, I.5.4, I.5.5, I.5.6, I.5.13, I.5.14, I.5.16, I.5.17, I.5.18, I.5.21, I.5.25

1 **I.5 Public Comments on the Draft EIS and NRC Responses**
2

3 Following are all of the comments received by the NRC on the Draft EIS and the NRC staff's
4 responses to those comments. As discussed in Section I.3.3, the comments are arranged by
5 topic in the 29 subsections below, and multiple comments that address a similar issue/topic
6 have been grouped together for a common response. In cases where one or more commenters
7 had identical comments, those comments are shown only once preceded by the commenter
8 numbers and names of all the commenters who provided those identical comments. Also,
9 please note that some comments contain more than one issue/topic as presented below
10 because the comment text with respect to each issue cannot be readily separated from the
11 other issues. Such comments are necessarily included under more than one topic so that all of
12 the issues can be addressed in the NRC responses.
13

14 Note that comments taken from written comment documents (e.g., letters, emails) are
15 reproduced below "as is"; i.e., those comments are reproduced exactly as they were provided,
16 and the NRC staff has not attempted to correct spelling or grammatical errors in these
17 comments. Also, due to possible transcription errors by the court reporters during the public
18 comment meetings, the NRC regrets if the text of any oral comment does not exactly match
19 what was said at a public meeting.
20
21

22 **I.5.1 General Opposition to the Project**
23

24 The comments addressed in this subsection are those that are limited to expressing opposition
25 in some manner to the proposed EREF project. However, comments that contain general
26 opposition statements and also include topics that are relevant to issues addressed within the
27 scope of the EIS are not included in this subsection, but are instead included and addressed
28 elsewhere in Section I.5, in the subsections relevant to the specific topics discussed.
29

30 **Comment:** The following comment expresses concern that AES has already signed contracts to
31 sell the product of the proposed EREF when the proposed plant does not yet have an NRC
32 license.
33

34 **[015-04, Beatrice Brailsford]** AREVA has said U.S. companies have already signed contracts
35 for half its projected production. Those contracts raise another question, though.
36

37 I know the NRC has already heard concerns that it has a bias towards licensing. What about
38 selling the product of a plant that doesn't even have a license yet? I'd say we've gone well
39 beyond a learner's permit here.
40

41 **Response:** *AES has submitted a license application to the NRC for the construction, operation,*
42 *and decommissioning of the proposed EREF, to produce enriched uranium for commercial*
43 *nuclear reactors. As part of its business plan, AES may wish to ascertain that there is a*
44 *consumer for its product. AES appears to have done so by contracting future services to be*
45 *provided by the proposed EREF. These actions were taken by AES at the risk of not receiving*
46 *a license from the NRC, and such risks are borne solely by AES. These actions have no*
47 *bearing on the NRC's decision to grant or deny AES's license application.*
48

1 **Comment:** The following comment expresses concern about what resources provided by Idaho
2 taxpayers will be used for the proposed EREF project.

3
4 **[105-03, Eve McConaughey]** I am concerned about what resources e.g.
5 land/water/energy/raw materials will be used (provided by Idaho taxpayers).

6
7 **Response:** AES could contract with Idaho State or local government agencies, or apply for
8 resources from those agencies, to the extent permitted under Idaho law.

9
10
11 **Comment:** The following comments deal with the current operating and construction trends for
12 nuclear power plants in the U.S. and worldwide.

13
14 **[015-02, Beatrice Brailsford]** Eight years later, there are no more nuclear reactors operating in
15 the world, but as of June, URENCO, a German company, is enriching uranium in New Mexico.

16
17 **[015-12, Beatrice Brailsford]** Furthermore, eight years after Mr. Magwood's letter*, there are
18 no more nuclear reactors operating in the US or in the world, but as of June, Urenco, a German
19 company, is enriching uranium in New Mexico, which the draft NRC only sporadically
20 acknowledges.

21 * Note from NRC: This refers to a letter identified in comment 015-09 and archived in ADAMS under Accession
22 Number ML022350130.

23
24 **[180-09, Kay Turner]** Is it true there are less reactors operating now than there were eight
25 years ago?

26
27 **Response:** *Within the last 10 years, 32 new nuclear power plants have become operational in
28 the world, 31 have shutdown, and construction began on 50 additional nuclear plants (IAEA,
29 2010a, 2010b). One of the new plants under construction is in the United States. In addition, as
30 of December 2010, the NRC is actively reviewing 12 applications for a total of 20 nuclear
31 reactor units. The number of operating nuclear power plants in the world has risen from 416 in
32 1990 to 435 in 2000 and 441 in 2010. The net electrical power generated by these facilities rose
33 from 318,000 megawatts electric [MW(e)] in 1990 to 350,000 MW(e) in 2000 and 375,000
34 MW(e) in 2010 (IAEA, 2010a, 2010b).*

35
36 *URENCO USA, the uranium enrichment facility in New Mexico (formerly known as the National
37 Enrichment Facility [NEF]) that began initial operations in June 2010, is still under construction
38 and will continue to increase production as its remaining cascade halls are completed. This
39 facility is operated by Louisiana Energy Services LLC (LES), a U.S. Delaware limited liability
40 company.*

41
42
43 **Comment:** The following comments express general opposition to the proposed EREF project
44 and request that the NRC deny the license application.

45
46 **[014-04, William Blair]** I urge decision makers to disapprove this and any other radioactive
47 processing.

1 **[008-08, Carol Bachelder]** I am in favor of the no action alternative.
2
3 **[017-02, Sally Briggs]** I am Sally Briggs, an air breathing, water and milk drinking native of
4 Idaho...raised during a time when nuclear fallout drills consisted of sheltering under our desks
5 at school. Sometime later, grown with my own children, I received a postcard addressed to
6 "Dear neighbor" asking "Where were you between 1944 and 1972?" Informing me that I may
7 have been exposed to radioactive material released into the air, water, and soil by the Hanford
8 Nuclear Facility. Much later I learned in "secret" experiments. I have since become aware that in
9 its 45 year history 1million curies of iodine 131 have been released! SUCH HUBRIS! Do we
10 think the scientists employed by Areva are smarter or have a greater moral sense than those at
11 Hanford? LESS HUBRIS?
12
13 **[019-03, George Buehler]** I see this scheme as ill-considered, unnecessary, exploitive and
14 wrong. I am categorically opposed to the Areva Uranium Enrichment Plant.
15
16 **[046-01, Mr. and Mrs. David Dudley]** Just say NO to AREVA'S URANIUM FACTORY~
17 NUREG 1945!
18
19 **[050-01, Joanie Fauci]** I would like it to be known that I support the No Action Alternative and
20 wish for the NRC to adopt that alternative.
21
22 **[057-01, Steven Garman]** We do not need, do not want or will not tolerate an enrichment
23 facility in Idaho. Please reconsider.
24
25 **[068-05, Anne Hausrath]** We believe the proposed facility is a bad idea. It is not necessary to
26 meet Idaho's needs. It would pose a potential threat to the safety of our children, grandchildren,
27 and future generations, and we strongly recommend you to adopt the "no action alternative."
28
29 **[084-01, Michael Jones]** The environmental impacts of nuclear waste will be an unwanted
30 legacy. If you think the national debt will take forever to payoff, then you have no
31 comprehension of the servitude that nuclear waste will have on our country and future countless
32 generation. The enrichment facility is unnecessary for national defense, current domestic use.
33 Before you increase the waste load get a solution established that is sound and long term.
34
35 **[085-01, David Jonkouski]** The horrors of Ballistic Uranium is not ...[ILLEGIBLE TEXT]... to
36 electric generation by the atom. It is not necessary. The inventor of alternating current Tesla
37 said rightly "we are in a sea of energy." Wars are caused by artificial scarcity. If an intelligent
38 person who can do the math of electromagnetic theory of Maxwell and Heaviside can see pos
39 and neg vectors in quaternion calculus. This is FREE ...[ILLEGIBLE TEXT]...energy beyond
40 the trinomial of current easy to engineer math of Einstein, who knew that the universe was
41 curved, but in a quaternion (4 part) math it is easy to see small spaces are curved also. This is
42 the obvious proof of ambient energy. Free Science!
43
44 **[103-01, Karen McCall]** I am writing to express my opposition to Areva's gas centrifuge
45 uranium enrichment plant proposed to be built in Eastern Idaho. There are many reasons why
46 this plant is unnecessary:.. I am strongly opposed to Areva's proposal and want my comments
47 to go on record.
48
49 **[120-06, Frank Nicholson]** This enrichment factory: ...should not be licensed.
50

1 **[127-03, Sheila Plowman]** I oppose the building of the uranium enrichment plant.... Please Do
2 Not approve the building of this dangerous plant.

3
4 **[168-01, Lon Steward]** Areva should not be allowed to build a uranium enrichment plant in
5 Eastern Idaho.... From a business perspective, a financial perspective, world peace, energy
6 independence, environmental, global warming, and common sense perspectives, the Areva
7 enrichment plant in Eastern Idaho does not make sense and therefore the Nuclear Regulatory
8 Commission should not license the plant.

9
10 **[175-01, Ellen Thomas]** I oppose the proposed new Areva uranium factory in Idaho, or
11 anywhere else.

12
13 **[181-09, Roger Turner]** The State of Idaho should say no to this project and the NRC should
14 revise the final EIS to a no action alternative.

15
16 **[184-03, Kitty Vincent]** Human Folly: While we spend billions of dollars searching for water in
17 outer space on various planets, we are hard at work on Earth poisoning our own water supplies,
18 not to mention the air as well. Not only does this enrichment plant appear to unnecessary, it
19 seems to represent human folly at its best.

20
21 **[193-01, Liz Woodruff, on behalf of the Snake River Alliance]** And it's the proposition of the
22 Snake River Alliance that the NRC should not license the AREVA facility. First, uranium
23 enrichment should not occur in Idaho for use in power reactors, and secondly, the draft EIS is
24 inadequate.

25
26 ***Response:** The NRC staff acknowledges these comments and appreciates the public*
27 *participation. However, these comments are outside the scope of the EIS analysis because*
28 *they do not directly relate to the content of the Draft EIS.*

29
30
31 **Comment:** The following comments note that there is no need to rush through the process of
32 licensing the proposed EREF and to make sure that all risks have been addressed. Some of
33 these comments also express opposition to the proposed EREF project.

34
35 **[008-05, Carol Bachelder]** I appreciate the fact that AREVA put in an application in 2008, and
36 that was two years ago, and the Environmental Impact Statement was released two weeks ago,
37 and here we're having a hearing on it. It does seem like it's on the fast track, and we'd like to put
38 it on the slow track. I would like to derail it completely.

39
40 **[017-01, Sally Briggs]** I urge you, as regulators, to apply a healthy dose of skepticism to these
41 plans. Do we really need domestic production? Have all the risks been addressed? Please
42 demonstrate courage in protecting our children, grandchildren, and all those who follow.

43
44 **[025-01, Hon. Sue Chew]** So, you know, I'm looking at the issues that we're looking at in terms
45 of your EIS, and I do want to make sure that we aren't fast-tracking anything, that there aren't
46 any corners being cut, and that things aren't moving along too fast, because, really, just like in
47 the practice of medicine, when you make a mistake like this, you can't undo it. This is about life.

1 **[070-05, Virginia Hemingway]** For these, and many other reasons, I adamantly am opposed
2 to this plant being built and to the Idaho taxpayers' money paying for an off-ramp to nowhere,
3 except sagebrush. These few facts prove that once again, Idaho's leaders, and the NRC, have
4 shown they do not consider the long-term consequences of decisions made in haste, without
5 appropriate research. As a fourth generation Idahoan, I do not need, nor do I want, this kind of
6 danger in my state.

7
8 **[148-01, Eric Schuler]** Taken as a whole, the EIS suggests that this facility will have a
9 relatively low impact on the environment. Of course several aspects of this, of the—have been
10 overlooked in making this conclusion. For instance, as others have already noted, it does not
11 consider the impact of the exempted preconstruction activities, the high risk of wildfires in the
12 area, or the lack of an appropriate disposal pathway for depleted uranium. Accordingly, the true
13 impact of this facility is certainly larger than the DEIS suggests.

14
15 **[147-14, Joey Schueler]** 10. Why is this plant being pushed through so quickly? The EIS is still
16 in the assessment phase, yet many steps have already been taken that affect Idaho's budget. If
17 this decision so critical, it should be carefully considered and brought to the Idaho public before
18 money is expended on its behalf.

19
20 **[191-03, Liz Woodruff]** I don't think there's any reason to expedite any aspect of this process.

21
22 **Response:** *Consistent with the requirements of NEPA and the NRC's NEPA implementing*
23 *regulations under 10 CFR Part 51, the NRC staff evaluated and compared the environmental*
24 *impacts of the proposed action and its alternatives. The Draft EIS described the proposed*
25 *action (Chapters 1 and 2), the purpose and need for the proposed action (Chapter 1),*
26 *alternatives to the proposed action (Chapter 2), the potentially affected environment*
27 *(Chapter 3), the environmental impacts of the proposed action and proposed mitigation*
28 *(Chapters 4 and 5), the cumulative impacts of the proposed action (Chapter 4), and the benefits*
29 *and costs of the proposed action (Chapter 7). The analysis contained in the Draft EIS fully*
30 *considered the environmental impacts of the proposed action and alternatives. The NRC will*
31 *not make a final decision on whether to grant a license for the proposed EREF until after the*
32 *NRC's ASLBP conducts public hearings on the safety and environmental reviews. (The hearing*
33 *process is discussed in Section I.4 of this appendix).*

34
35
36 **Comment:** The following comments request that the NRC take AREVA's reputation, foreign
37 ownership, past and present business practices, and past and anticipated environmental and
38 safety record into account when considering whether to license the proposed EREF. Some of
39 these comments also express general opposition to the proposed EREF project.

40
41 **[031-01, James Cooper]** I am OPPOSED to the Areva project. As an Idaho taxpayer and voter
42 I feel this state does NOT NEED a foreign company to build any facility on our soil - much less
43 one which is subject to accidents and one whose profits go to another country.

44
45 **[032-04, Cindy Cottrell]** I'm against a foreign country making the profit from this plant and
46 leaving the contamination in our Country. Not just the by-product of waste will we have to store,
47 but Areva has a history of contamination in their own Country's waterways.

1 **[037-01, Katherine Daly]** The Areva uranium enrichment proposal is very disturbing to both of
2 us. Please don't sell us down the road. Areva does not meet with the approval of many
3 Idahoans who would like to preserve the natural integrity of our incredible state. PLEASE...just
4 say no to Areva.
5

6 **[048-03, Genevieve Emerson]** I am concerned that Areva has no true vested interest in the
7 overall health and well being of the land or the people of Idaho, other than economic gain, and
8 this poses a direct threat to present and future generations of all life in this area.
9

10 **[061-03, Nancy Greco]** It amazes me that, in a state which argues against federal involvement
11 in state affairs, even when that involvement benefits Idaho citizens, the same state would
12 welcome and encourage a harmful company which is almost entirely funded by the French
13 government. Please be very cautious in giving Areva the necessary pathway to this destructive
14 plant.
15

16 **[107-01, Jean McKay]** But I ask you, the Nuclear Regulatory Commission, to include in your
17 study of the potential environmental impacts the record of AREVA in France, and elsewhere.
18 And to delay any exemption or approval until after such a study has been completed and
19 revealed to the public.
20

21 You've already heard about situations that have occurred in France. The Nuclear Safety
22 Authority of France, the ASN, cited a series of frauds and human negligence fraud, and ordered
23 the closure of an AREVA subsidiary. Possible legal action was also being considered because
24 of repeated leaks during 2007, 2008 in the site's waste water evacuation system.
25

26 In California, or in South Carolina, sorry, a mixed oxide fuel assembly was removed from the
27 plant of Duke Energy/AREVA at Catawba facility because of potentially hazardous physical
28 changes. In addition, AREVA's plans in the United States to build an evolutionary power
29 reactor, an EPR, at various sites, including Idaho, have created controversy. In France, as of
30 August 2008, the construction of an evolutionary power reactor by AREVA has been delayed
31 because of technical and quality control problems. So, I urge you, the NRC, to include, to
32 broaden your study, evaluate these reported problems.
33

34 **[107-02, Jean McKay]** I ask the Nuclear Regulatory Commission to include in the report of
35 potential environmental impacts the record of Areva in France and elsewhere, and to delay any
36 exemption or approval until after such a study has been completed and revealed to the public.
37

38 #1 In July 18, 2008, a Paris newspaper revealed: The Ecology Minister of France announced a
39 2nd leak in a subsidiary of Areva due to a broken pipe. The 1st leak occurred on July 7, 2008,
40 and residents of the area were told not to drink the water, or to swim in, to irrigate crops with the
41 waters of nearby rivers.
42

43 The Nuclear Safety Authority (ASN) of France cited a series of "frauds and human negligence"
44 and ordered the closure of the Areva subsidiary. Possible legal action was being considered
45 because of "repeated leaks" during 2007 in the site's waste water evacuation system.
46

47 #2 In South Carolina, reported August 2008, an experimental mixed-oxide fuel assembly was
48 removed from the plant of Duke Energy/Areva Catawaba facility because of "potentially
49 hazardous physical changes."
50

1 In addition, Areva's plans in the U.S. to build EPR (Evolutionary Power Reactors) at various
2 sites including Idaho - have created controversy. In France, as of August 2008, the construction
3 of these Evolutionary Power Reactors by Areva have been delayed by technical and quality-
4 control problems.

5
6 Again, I urge the NRC to include a study and evaluation of these reported problems in its EIS,
7 and to report them to the public before any exemption or approval is considered.

8
9 **[118-05, Caroline Morris]** Additionally, Areva's palm-greasing tactics to persuade officials to
10 welcome the EREF, as the Mayor of Idaho City testified at the August Boise hearing, are pure
11 bribery. Likely many other Idaho officials and citizens received other valuable favors from Areva,
12 not publicly announced. Please refer to my letter to the editor published in the Idaho Stateman.
13 (I am traveling and cannot access its late August or early September printing date.)

14
15 **[120-04, Frank Nicholson]** This enrichment factory:...

16
17 • Poses a risk to Idaho's natural resources and people. If something were to happen and when
18 the plant is shutdown a foreign company does NOT have the incentive to do what is right. They
19 can leave and we have no recourse. BP is a great example. Also, importing and exporting the
20 nuclear fuel will not only put ourselves at risk but many others along the path.

21
22 **[122-02, Kathy O'Brien]** Areva also has a bad track record in France.

23
24 **[147-09, Joey Schueler]** 5. Areva's financial stability and history of ethics is unclear. Varied
25 opinions range from sound to on the verge of bankrupt and no clear agreements have been
26 made ensuring that they will do right by Idaho if this project fails (reference the BP oil spill for a
27 comparative potential scenario).

28
29 **[154-01, Diana Shipley]** Before backing a project such as AREVA proposes we need to
30 consider more than the jobs it would create. Before backing a project such as AREVA proposes
31 we need to consider more than the wining and dining that is taking place. In this tough economy
32 it would be easy to welcome AREVA when they are being so generous with catered trips and
33 lots of flourish.

34
35 The truth of the matter is this:

36
37 AREVA dumps at least one million gallons of radioactive waste into the English Channel a year,
38 contaminating water all the way up to the Arctic Circle. How are their environmental policies
39 going to take shape in Idaho? Will they be thoughtful that they are located near the aquifer
40 which provides drinking water to many Idahoans? I can't imagine they will give it a second
41 thought.

42
43 They have contaminated towns all around an open pit mine in Niger. Are they worried about the
44 people of those towns? How are they helping to recover the area back to an environmentally
45 safe one?

46
47 Their track record seems to be less than stellar when it comes to environmental issues. They
48 withheld information from the regulatory commission in France to secure a loan in their own
49 backyard.

1 **[169-01, Margaret Stewart]** And aside from AREVA's greed, grim, and very, very devastating
2 global environmental and human rights record around the world, particularly in Africa, I
3 vehemently oppose the NRC licensing of this facility on grounds that the facility has not been
4 proven necessary, a huge amount of dangerous radioactive waste that would be created has no
5 disposal place, the nuclear reactors that the EIS says will need AREVA's product more than
6 likely will never be built.

7
8 **[168-04, Lon Stewart]** Areva is processing and handling some of the most dangerous material
9 on earth. Unfortunately they do not have an exemplary environmental or safety record that
10 would be expected of a company handling such types of materials. Areva dumps radioactive
11 waste into the English Channel and there have been a couple of accidents at their plants in the
12 last few years while they were touting to be a safe company. Accidents will happen. Even if you
13 think you have enough redundancy built into the system, mechanical things will fail and people
14 will do stupid things no matter how much training and experience they have. The BP Gulf oil
15 spill is a case in point. This does not sound good to me.

16
17 **[181-07, Roger Turner]** It would be opposed because the AREVA company has a poor
18 environmental record, especially with respect to the radioactive waste handling. It would be
19 opposed by Idahoans because the AREVA company is in poor financial shape, a condition that
20 often results in shortcuts in worker safety, worker benefits, and environmental protection.... It
21 would be opposed because the company is dependent on taxpayers for front-end costs,
22 because of its own poor financial status.

23
24 **[180-04, Kaye Turner]** Is it true Areva pumps one million gallons of nuclear waste into the
25 English Channel every year? Is it true Areva pumps ANY nuclear waste into the English
26 Channel?

27
28 **[184-02, Kitty Vincent]** What matters is Areva's history of leaks and pollution overseas as well
29 as the fact that this plant would sit atop this magnificent aquifer.

30
31 **[183-03, James Vincent]** I live downwind and downstream of the proposed AREVA plant, and I
32 have concerns about my safety. As a reference, in July 2008, AREVA had two accidents in
33 France. One was a burst pipe at a plant at the Romans-sur-Isere, southeastern France, an
34 AREVA subsidiary. The pipe had been broken for several years. Jean-Pierre Gros of AREVA's
35 Head of Combustion said between 120 and 750 grams of enriched uranium had leaked.

36
37 Another accident happened also July of 2008 at the Tricastin site near the historic southeast city
38 of Avignon; 7,925 gallons of a liquid containing traces of unenriched uranium leaked from a
39 factory run by AREVA subsidiary, SOCTRI. I can't pronounce it, S-O-C-T-R-I, spilling from a
40 reservoir that overflowed. The leak flowed into the ground and into the two rivers, Gaffiere and
41 Lauzon.

42
43 French authorities banned the consumption of well water and watering of crops, as well as
44 swimming, fishing, and water sports. There's preliminary evidence of higher incidents of
45 pancreatic cancer in women in the Tricastin area. France's Nuclear Safety Authority classified
46 the Tricastin accident as one on a scale of zero to seven. However, there were 86 level one
47 incidents in France in 2007, and 114 in 2006.

1 **[183-10, James Vincent]** I have a photograph from page 17 of public Areva document
2 “Nunavut Mining Symposium Iqaluit April 2009 by Peter Wollenberg ARC” about one of their
3 operations in Canada. Even though this is a color photograph, I printed this with a black and
4 white printer. I would like to submit this to the commission. I believe the conclusions are
5 obvious, if this is supposed to be a secure Areva facility for radioactive core storage. My 5 year
6 old grandson could scale this six foot cyclone fence.
7

8 **[187-02, John Weber]** How can AREVA’s statement, in section 9.2, about protecting people
9 and the environment from radiation be taken seriously, knowing AREVA’s dismal track record in
10 Africa, and other parts of the world, for protecting people and the environment?
11

12 **Response:** *These comments raise issues that are outside the scope of the EIS. As discussed*
13 *in Section 1.4.5 of this EIS, the reputation of the applicant is an issue that is not within the scope*
14 *of the EIS. The proposed EREF would be fully subject to the NRC regulations for uranium*
15 *enrichment facilities, and to other applicable Federal, State, and local laws and regulations. The*
16 *NRC evaluates the submitted license application based on its own merits and performs an*
17 *independent verification of the proposal put forth in the applicant’s application. Further,*
18 *pursuant to 10 CFR Part 70 and 10 CFR Part 2, respectively, the NRC will implement oversight*
19 *(inspection) and enforcement programs during construction, operation, and decommissioning of*
20 *the proposed EREF to assure safe functions and compliance with NRC requirements.*
21
22

23 **Comment:** The following comments raise the issue of AREVA’s financial stability and/or the
24 availability of funds to ensure that the proposed EREF site is cleaned up properly.
25

26 **[008-04, Carol Bachelder]** And they say, oh, well, AREVA will be, you know, totally
27 responsible for the expenses. But this is based on projected earnings, like so many businesses
28 do. You know, you plan to pay your loans out of how much money you make. There aren’t any
29 guarantees for this, are there? The economic times, and being what they are. I just don’t see
30 that even the promise of jobs is enough to sell me on the feasibility of this plant.
31

32 **[028-02, David Coney]** Because the risk is so high, I’m going to ask AREVA to front the
33 money, prove it to us that you’re sincere. Invest in Idaho. Back your play with money. If I go
34 down to the bank, they’re going to say, where’s your money, buddy? I would ask AREVA to do
35 it, and if I can do it with five bucks to get a loan, they can do it with 5 billion, or 5 trillion, if they’re
36 sincere about what they’re bringing to the table. Now I would also ask them to prove to us that
37 they can be the best steward, and invest in Idaho, before they ask anything of us.
38

39 **[050-12, Joanie Fauci]** The NRC and the license agreement, if it occurs, should have specific
40 requirements for Areva, its owners, its stockholders, and the government under which it falls,
41 with regards to financial responsibility. This should cover all expenses, above and beyond. It
42 should cover all legal possibilities should the Areva corporation dissolve or go bankrupt before
43 all waste is removed from the Idaho site.
44

45 **[070-01, Virginia Hemingway]** On to Areva, because I have such a limited amount of time,
46 that company had 6.2 billion euros in net debt at the end of 2009, and as recently as June 4 of
47 2010, it has been downgraded by Standard & Poor’s to a debt rating of BBB plus, due to its
48 weakened profitability.
49

1 **[078-01, Hon. Wendy Jaquet]** As a member of the legislature at the time that the tax
2 exemptions were being considered (and I voted “no”) I had concerns about the financial viability
3 of the company.
4

5 **[083-05, Diane Jones]** How can we expect the company to -- whose financial future is
6 uncertain, to be able to guarantee that they will bear the cost of treating all that waste and
7 disposing of all that waste, when the process for disposing of the waste is not even known?
8 This seems highly reckless to me, and not a very sound economical calculation.
9

10 **[106-02, Ted McConaughey]** So, once again, I don’t want to come down, either for or against
11 the facility under consideration here, but I would like to say that the EIS itself ought to address
12 the possibility of failure at all stages, and have backup plans for funding whatever kind of
13 cleanup and disposal might be necessary, and that should be part of the environmental costs. I
14 mean, this is a very big environmental issue, if one of these facilities fail, as many of our nuclear
15 facilities have.
16

17 **[147-09, Joey Schueler]** 5. Areva’s financial stability and history of ethics is unclear. Varied
18 opinions range from sound to on the verge of bankrupt and no clear agreements have been
19 made ensuring that they will do right by Idaho if this project fails (reference the BP oil spill for a
20 comparative potential scenario).
21

22 **[154-02, Diana Shipley]** They are asking for loan guarantees from the United States
23 government and I wonder who will be left to clean up the waste and pay the bills if they bail out?
24 The answer is fairly obvious. We will be left holding the very unpleasant bag of troubles and if
25 you haven’t heard, AREVA is experiencing financial difficulties. We do not need to be the ones
26 to bail them out even though they are promising jobs, and wining and dining Idahoans in an
27 attempt to blind those Idahoans to the simple fact that they will not be doing us any favors in the
28 long run by contaminating our desert and leaving our communities with one toxic bill to pay.
29

30 **[180-03, Kaye Turner]** Is it true this French company is being heavily subsidized by the French
31 government and is otherwise in serious financial trouble? Is it true if the French and the
32 U.S. governments stopped propping up Areva financially it would go under?
33

34 **Response:** *NRC regulations in 10 CFR Part 70 require license applicants to be financially*
35 *qualified to safely construct, operate, and decommission their proposed facilities. These*
36 *regulations apply to AES’s application for the proposed EREF. However, the financial*
37 *verification process is outside the scope of this EIS and is conducted by the NRC in conjunction*
38 *with the safety review.*
39

40
41 **Comment:** The following comments express the concern that construction and operation of the
42 proposed EREF may be too risky and dangerous. Some of these comments also express
43 general opposition to the proposed EREF project.
44

45 **[001-01, Reham Aarti]** I think the risks are absolutely ridiculous, considering what the benefits
46 are going to be. I know people are worried about jobs, and they want more jobs in Idaho, and
47 everything. But I’m sorry, it’s not worth it, it’s not worth, you know, our children being in danger. I
48 mean, accidents happen all the time. Fires happen all the time. It’s not worth it, in the least bit,

1 and I know you guys do your job and everything's supposed to be really safe, but that doesn't
2 mitigate, you know, human error and everything else.

3
4 **[009-01, Steve Barclay; 013-01, Kit Blackburn; 018-01, Deb Brown; 021-01, Linda**
5 **Cannarozzo; 029-01, Richard Conner; 035-01, Stephen Crowley; 055-01, Claudia Galaviz;**
6 **056-01, Mark Galaviz; 063-01, Martha Haga; 081-01, Lea Johnson; 093-01, Louis Landry;**
7 **099-01, Brent Mathieu; 100-06, Wendy Matson; 101-01, Jody May-Chang; 109-01, Eugene**
8 **McVey; 117-01, Richard Morgan; 121-01, Jennifer Nordstrom; 161-01, Marisa Smith;**
9 **188-01, Lana Weber-Wells; 199-01, Dina Bond; 200-01, Sean Campbell; 201-01, Giovanna**
10 **Campos; 202-01, Alison Duffin; 203-01, Danielle Dugge; 204-01, Susan Filkins; 205-01,**
11 **Andrea Guerri; 206-01, Pamela Hanson; 207-01, Drew Harris; 208-01, Emily Harvey;**
12 **209-01, Courtney Hollar; 210-01, Tyler Hoovis; 211-01, Olivia Joelson; 212-01, Naomi**
13 **Johnson; 213-01, Darvel Jones; 214-01, Jacob King; 215-01, Verlyn Larsen; 216-01,**
14 **Beau Lee; 217-01, Jodie Mckelvey; 218-01, David Minick; 219-01, Neil Miyaoka; 220-01,**
15 **Tim Naftzger; 221-01, Mike Perrington; 222-01, Hannah Raines; 223-01, Mason Richens;**
16 **224-01, A. Rolsen; 225-01, Lisa Stimpson; 226-01, Jessica Toinga; 227-01, Joseph Voss]**

17 This enrichment factory:

- 18
- 19 • Is unnecessary
- 20 • Poses a risk to Idaho's natural resources and people
- 21 • Should not be licensed
- 22

23 **[022-01, Judy Carroll]** I am strongly opposed to Areva's plan to build a plant here because I do
24 not believe that the radioactive waste will be handled appropriately and taken out of Idaho.
25 Areva is taking advantage of Idaho in the fact that the unemployed and poor need jobs. What
26 they don't say is that Areva will also be bringing sickness and death to Idaho. We may seem like
27 a simple people but we do know in this state how important clean water and land are to our way
28 of life. Idahoans are the ones who are able to enjoy beautiful wilderness, rivers and wildlife. If
29 Areva needs uranium enriched, let them enrich it in France!

30
31 **[106-01, Ted McConaughy]** And I think that the point of all this is that things aren't going very
32 well. Our best-laid plans are "gang aft agley," I guess is the word, and because our record on
33 completing our project, our nuclear projects, is rather poor, and we don't have a very good way
34 of demonstrating that we actually can carry out these projects for the entire lifetime of the
35 project, including the nuclear fuel, the waste reprocessing, or waste disposal, I think that to
36 suggest that a 30 year lifetime of the plant is very optimistic, and that the nuclear fuel cycle itself
37 is - we make all kinds of optimistic projections here, which are very hard to ensure.

38
39 **[112-01, Mark Menlove]** I am writing to express my strong concern with the draft
40 Environmental Impact Statement for the Eagle Rock Enrichment Facility proposed in eastern
41 Idaho (NUREG-1945 draft).

42
43 In my view the enrichment factory poses a risk to the people and natural resources of Idaho, is
44 unnecessary, and should not be licensed.

45
46 **[113-09, Ken Miller]** So there is no reason for Idaho, of all places, to be sacrificed for a fuel
47 production factory for a generation resource that Idaho and our region do not need.

48

1 **[118-01, Caroline Morris]** The EREF is unnecessary, presents risks to Idaho's natural
2 resources and people, and should not be licensed. I oppose the EREF's licensing.... Please
3 consider my concerns and adjust the draft EIS, or deny the license.
4

5 **[120-04, Frank Nicholson]** This enrichment factory:...

6
7 • Poses a risk to Idaho's natural resources and people. If something were to happen and when
8 the plant is shutdown a foreign company does NOT have the incentive to do what is right. They
9 can leave and we have no recourse. BP is a great example. Also, importing and exporting the
10 nuclear fuel will not only put ourselves at risk but many others along the path.
11

12 **[125-02, Holly Paquette]** And so the main thing that I want to tell you is that most of the people
13 who have come in here today, and have supported AREVA, and said that Idaho needs AREVA,
14 have been talking about money, and that seems to be the underlying basis for why they're
15 supporting AREVA. And having introduced myself and my background, I want to tell you --
16 sorry, I'm a little emotional about this -- no amount of money is worth risking the environment or
17 the safety of the people of Idaho, and that includes the next generation of Idahoans.
18

19 **[144-01, Sara Rodgers]** This letter is in opposition to the licensing of the Eagle Rock
20 Enrichment Facility and to suggest that the draft EIS for the EREF is inadequate. Current lives
21 and many future lives are at risk and at stake in the licensing for one corporation. I urge you to
22 not license the Eagle Rock Enrichment Facility nor adopt the draft EIS.
23

24 **[150-09, Katie Seevers]** The potentially devastating health, environmental, and economic
25 effects to Idaho, that the licensing of the AREVA facility presents make me say that the rejection
26 of the licensing of this facility is in the best interest of our state and its citizens.
27

28 **[153-01, Andrea Shipley; 197-01, Andrea Shipley, on behalf of the Snake River Alliance]**
29 AREVA's proposed uranium enrichment factory will store radioactive waste above the sole
30 source aquifer for nearly 300,000 people, impact sensitive species, support transport of
31 radioactive materials into and out of Idaho, impact the Hell's Half Acre national monument,
32 support destruction of the John Leopard Homestead, which has been recommended for the
33 National Register of Historical Places, enjoy billions in state and federal largesse, and utilize
34 farmland that is potentially protected by the federal government. The Alliance is here to say it's
35 not worth the risk
36

37 **[184-06, Kitty Vincent]** The idea that this will boost the economy of Idaho is short sighted.

38
39 Affected could be the lives of the future citizens in Idaho and the West.

40
41 I strongly suggest that the Areva enrichment plant be denied a license. Idaho Falls needs to
42 develop other avenues to enhance its economy, in ways that do not threaten the people who
43 live there for hundreds of years to come as well as a major water source of the western United
44 States.
45

46 **[184-07, Kitty Vincent]** Areva's proposed Eagle Rock Enrichment Facility (EREF) will store
47 radioactive waste above the sole source aquifer for nearly 300,000 people; impact sensitive
48 species; require the transport of radioactive materials; impair the Hell's Half Acre National

1 Monument; support destruction of the John Leopard homestead, which has been recommended
2 for the National Register of Historic Places; devour billions of dollars in state and federal
3 largess; and obliterate farmland that is potentially protected by the federal government. The
4 Alliance is here to say it is not worth the risk.

5
6 **[192-01, Lisa Young]** As a member of the scientific community, and as a member and leader of
7 many organizations on campus and in the community, I can say that this proposal is irrational,
8 unnecessary, and a threat to the health, safety, environment, and tax dollars of all Idahoans.

9
10 **[192-07, Lisa Young]** Therefore, as a member of the scientific community, and as a member
11 and leader of many organizations on campus and in the community, I can say that this proposal
12 is irrational, unnecessary, and a threat to the health, safety, environment, and tax dollars of all
13 Idahoans. I urge you to select the “no action” alternative when evaluating AREVA’s license
14 application.

15
16 **Response:** *The proposed EREF would be licensed only if the Commission finds that public*
17 *health and safety and the environment would be adequately protected. In reviewing all of the*
18 *comments received on the Draft EIS, the NRC staff has determined that no information has*
19 *been provided in these comments that would change the findings and conclusions regarding*
20 *environmental impacts in the Draft EIS. Safety issues are not within the scope of the EIS and*
21 *are addressed in the NRC’s SER (NRC, 2010b).*

22 23 24 **I.5.2 General Support for the Project**

25
26 The comments addressed in this subsection are those that are limited to expressing support in
27 some manner for the proposed EREF project. However, comments that contain general support
28 statements and also include topics that are relevant to issues addressed within the scope of the
29 EIS are not included in this subsection, but are instead included and addressed elsewhere in
30 Section I.5, in the subsections relevant to the specific topics discussed.

31
32 **Comment:** The following comment supports the construction of transmission lines.

33
34 **[171-02, John Tanner]** As far as transmission lines are concerned, if we couldn’t build
35 transmission lines because of environmental impacts, we certainly couldn’t have wind farms,
36 because they need transmission lines in spades.

37
38 **Response:** *The NRC appreciates this comment and the public participation.*

39
40
41 **Comment:** The following comments express general support for the proposed EREF project.

42
43 **[005-01, Anonymous]** I support the EIS.

44
45 **[006-01, Anonymous]** I am supportive of the AREVA project but would like to have heard more
46 from the NRC on how waste from the process will be stored and ultimately disposed of.

1 **[007-004, Arnold Ayers]** And for those things, we ought to be considering, and building this
2 facility as fast as we can build it.
3

4 **[024-01, Jana Chalfant; 149-01, Wendi Secrist; 196-01, Linda Martin, on behalf of the**
5 **Idaho Economic Development Association]** The Idaho Economic Development Association
6 is grateful for the opportunity to show our support for the AREVA Project. IEDA represents over
7 seventy-five economic development professionals throughout the State. We have supported the
8 AREVA project from its beginning during the site selection phase with the Department of
9 Commerce, in several areas across the state.
10

11 We supported the legislation which positioned Idaho to ultimately become the site chosen for
12 the project. This was healthy economic legislation which provided for earned benefits for
13 performance, not only for the AREVA project, but *any* company that would present similar
14 investments in Idaho.
15

16 **[052-01, Rod Fuger]** Idaho wants and needs this project.
17

18 **[059-02, Lance Giles]** Official comment - Support licensing of facility.
19

20 **[058-01, Matt Gerber]** We need this for the country. Areva is good for us all.
21

22 **[065-03, Hon. Ida Hardcastle]** I appreciate being able to voice the support of myself and the
23 many residents, who I believe are the most pro-nuclear community in the country, that AREVA
24 be issued a license to begin construction and move forward with this very important facility to
25 this area as well as the entire nation.
26

27 **[079-01, Kristen Jensen; 179-01, Jolie Turek; 194-01, Linda Martin, on behalf of the**
28 **Eastern Idaho Economic Development Partners]** On behalf of the Eastern Idaho Economic
29 Development Partners (EIEDP) we wish to express support for the AREVA project. The EIEDP
30 represents a 13-county area surrounding the Eagle Rock Enrichment plant location, which is in
31 the effective immediate impact area for the project. We have issued previous letters of support
32 for the project.
33

34 **[090-01, Paul Kjellander, on behalf of Hon. Butch Otter; 123-01, Hon. Jeff Thompson, on**
35 **behalf of Hon. Butch Otter]** As such, the governor wants to state his support for the proposed
36 AREVA facility, Eagle Rock, which will be built and operated outside of Idaho Falls.
37

38 In conclusion, the Governor would strongly encourage the Nuclear Regulatory Commission to
39 move forward expeditiously in the review and granting of a license to AREVA so that this
40 important facility can begin construction next year.
41

42 **[137-05, Ralph Reeves]** I urge that this uranium low enrichment plant be approved
43

44 **[143-04, Hon. James Risch; 172-04, Amy Taylor, on behalf of Hon. James Risch]** In
45 closing, I support AREVA's application for the Eagle Rock Enrichment Facility, and recognize
46 the enormous positive impact they will have for our country, state, and local citizens.
47

1 **[145-05, Ann Rydalch]** I encourage you to follow the preliminary recommendation that AREVA
2 be issued a license to construct and operate the Eagle Rock Enrichment Facility here in
3 Bonneville County, Idaho Falls, Idaho, formerly called Eagle Rock, Idaho
4

5 **[158-01, Hon. Mike Simpson; 139-01, John Revier, on behalf of Hon. Mike Simpson]** I'm
6 writing today to express my strong support for AREVA's license application to construct and
7 operate the Eagle Rock facility. I'm sorry I cannot join you at the public hearings in Idaho Falls and
8 Boise, but I'd like to welcome the NRC to Idaho, and express my appreciation for the NRC's work
9 on this important matter.

10
11 **[160-01, Jeff Smith]** We fully support the need and the purpose of this EIS. I represent some
12 600 members and their families. We not only feel this is good for Local 449, but Idaho, but for
13 America and its future.
14

15 **[167-02, Andrew Stevenson]** Because of the effort made by both the NRC and AREVA, we
16 would like to, as a Council, voice our approval of the Environmental Impact Statement in its current
17 form, and urge the NRC to continue on to the next step in the process of getting this project a
18 reality.
19

20 **[166-01, Allen Stears]** I am writing in regards to the Areva EIS. It is my opinion that enough
21 safety procedures will be in place to protect the environment. Therefore I am in favor of granting of
22 a permit.
23

24 **[170-01, David Strobel]** I support Areva building an Enrichment Plant west of Idaho Falls, ID.
25 The benefit will far outweigh the risk.
26

27 **[176-05, Hon. Jeff Thompson]** I am pleased to give my support to AREVA, and agree with the
28 NRC recommendation to issue a license to AREVA to construct and operate the Eagle Rock
29 Enrichment Facility.
30

31 **Response:** *The NRC staff acknowledges these comments and appreciates the public*
32 *participation. However, these comments are not within the scope of the EIS analysis because*
33 *they do not relate to the content of the Draft EIS.*
34
35

36 **Comment:** The following comments express concern regarding possible misinformation that
37 has been put forth by various parties about the proposed EREF project and about the nuclear
38 power industry in general.
39

40 **[076-02, Martin Huebner]** If it's true, as we previously stated in Boise, that the Snake River
41 Alliance now is a research organization, that implies that maybe the Snake River Alliance has
42 dumped the precautionary principle, and now embraced the facts-based scientific principle. If
43 that is not the case, I sincerely hope that Snake River Alliance objectively looks at the facts, and
44 comes to the conclusion that most of us here already have, that safe, reliable, economical,
45 carbon-free nuclear power must be, and will be a vital part of America's future.
46

1 **[082-02, Michael Johnston]** There are a couple of groups here in the area, Snake River
2 Alliance and (?) Keep Yellowstone Nuclear Free, that try to misrepresent and distort the truth. I
3 have seen where they represent a small but very vocal group and generally turn out larger
4 groups of anti-nuclear people. I along with a lot of others here are normally very low key, quiet,
5 supportive of the INL and nuclear power, and sorry to say do not go to these meetings. This
6 morning I had breakfast with about 18 of these people and do not believe any of them will be at
7 the meeting to show their support. I think they assume you will know the true facts regarding
8 environmental and safety factors to discount what these antinuclear groups represent and/or
9 distort. How can one believe with a INL workforce here there is not great support for the nuclear
10 industry.

11
12 **[157-11, Hon. Erik Simpson]** Risk. At the Boise hearing, those opposed asked the NRC panel
13 if they could guarantee there would be no mishaps at the Eagle Rock Enrichment Facility. I
14 came to the conclusion that even if the NRC could ensure the public there would be no
15 problems at the facility, those who are opposed to this project would still be opposed. After all,
16 it's nuclear.

17
18 **[173-01, David Taylor]** ...I am strongly in favor of the construction and maintenance of the
19 Areva complex and hope the rest of the DOE INL site can be used for productive nuclear
20 research and generating capacity....

21
22 We cannot supplant the energy from fossil fuels to the electric grid without vast improvements to
23 the grid itself and to generating capacity. Nuclear is the only viable alternative and the only one
24 that is "eco friendly" to the environment. Fear mongers and professional detractors "Snake River
25 Alliance" use disgraceful tactics and words in attempting to keep their little source of revenue
26 alive.

27
28 We possess the technology (Gen IV reactors) and now need the common sense to use these
29 resources to help sustain a vibrant economy and standard of living that we have all come to
30 expect. The next generation will not have these opportunities if we squander and make feeble
31 attempts to make nuclear energy production a reality now.

32
33 I support Areva and the ideas that surround using nuclear technology as a great national effort.
34 It must be for national security and for economic security. We must have a federal government
35 that will establish certain protocols and reactor templates that if complied with will move to a fast
36 track for licensing and construction. From there the government must run interference against
37 all the special interest that come to bear only for the reason of capital extraction. Thanks for
38 allowing us to be part of this potentially wonderful venture that will not only bless the lives of
39 those who live and work here but for the whole nation.

40
41 **Response:** *In the EIS, the NRC staff provides an objective analysis of the potential*
42 *environmental impacts in all resource areas, based on NEPA and the NRC regulations for*
43 *implementing NEPA in 10 CFR Part 51. The NRC staff has followed these requirements and*
44 *has independently evaluated the information used for, and presented in, the EIS.*

45
46
47 **Comment:** The following comments support the development of the proposed EREF and point
48 out that Idaho is the proper location for such a facility and that the proposed facility can be

1 operated safely, based on the technical capability and experience of the workforce in the project
2 area and on local environmental and legal/regulatory factors. Some of these comments also
3 express general support for the project.
4

5 **[003-01, Philip Anderson]** This is to express *support* for the proposed Eagle Rock Enrichment
6 Facility near Idaho Falls, Idaho.
7

8 In addition, I want to draw your attention to the population demographics of eastern Idaho which
9 show that one of the highest concentrations of scientists and engineers in the nation already live
10 in this relatively lightly populated region. Therefore, public support of the project and its
11 technology would be among the most positive in the nation.
12

13 Specifically, because a substantial fraction of this population has the educational and
14 professional advantage of *understanding* nuclear technologies, organized opposition to the
15 project should be less than in other regions. One would expect the superstitious fears of and
16 opposition to “everything nuclear” to be less than in other regions, and any that might be
17 expressed in eastern Idaho can be answered or explained locally.
18

19 **[038-03, Brian Davidson]** Eastern Idaho’s long history with nuclear research and its current
20 safety-minded workforce are a strong reason to support Areva’s plant in our area. We have
21 proved time and again that not only can we operate such technology safely, but we also have
22 the commitment to ensure generated wastes are dealt with safely.
23

24 **[043-01, Rocky Deschamps]** I am going to speak just a little bit, and I won’t take much time.
25 I’m going to talk a little bit about, I spent six years on the Bingham County Planning and Zoning
26 Commission, the last two years as chairman of that Commission, and there’s one area here on
27 the Environmental Impact Statement that I’d just like to maybe touch just a little bit of base on,
28 and it talks about, it’s anticipated the number of workers moving into the area during each phase
29 of the proposed project they call them migration workers, that might have some impact on the
30 schools, health care, law enforcement, availability, cost of public utilities, such as electric, water,
31 sanitary, road, number of migrating workers expected during the construction and operations
32 might impact the housing.
33

34 My time on the Bingham County Planning and Zoning, we encourage businesses because our
35 schools are crying out, we need more students. We’re actually declining in our number of youth
36 in our schools. Our roads are very adequate. Our schools are adequate. We have an
37 infrastructure here in southeast Idaho because we are so used to having INL, we have the
38 colleges here that can train the workers. We have the high schools that are there that are ready
39 to accept anything new that we might have in this area in the schools. We have multiple,
40 multiple infrastructure in place because of the INL, and the experience we have with the INL out
41 there.
42

43 Also, I’ve been involved with the supply side. We have contractors in this area that are so
44 familiar with the requirements to build a facility like this, that it’s just -- you don’t find that in a lot
45 of areas. We also have suppliers that are used to supplying the specifications, the ASTM
46 specifications that are required on a nuclear facility to do that, so we are very able to take on a
47 facility like this, and take care of it, and do what we need to do.
48

1 **[065-02, Hon. Ida Hardcastle]** I spend a large amount of time in the city among the residents
2 and it is exciting to feel the enthusiasm most have for this project coming to Idaho Falls. Of
3 course the main interest is the economic impact it will have on the area, in other words - jobs.
4 Also the community supports the fact that there will be a very small environmental impact from
5 this facility. We thank the NRC again for their efforts in this particular concern. We have a top
6 notch workforce here which was recognized by AREVA in the beginning. The community as a
7 whole supports energy being produced by nuclear power. We simply have to address our
8 independence on foreign oil.

9
10 **[094-03, Michael Lange]** One of the things that they don't cover in NEPA is the biggest single
11 issue of safety, of building any plant in this country, whether you like coal, or nuclear, whatever,
12 and that's the quality of the people that build the plant. It's the skill level of the people that build
13 the plant. It's the safety training of the people that build the plant. And I can say that in Idaho,
14 the times I've worked here, and the people I worked with, you have very highly-trained people,
15 very safe people, very professional people that work hard. And I can tell you from working in
16 those facilities under those rules, and the NRC Commissioners would be the first to tell you, if
17 you've ever worked in a hot mockup on a nuclear plant, you've got 3 R next to you about a few
18 feet away, you better be doing it right.

19
20 **[111-02, Robert Meikle]** And Idaho Falls is one of the places that has 40 years of experience
21 doing this sort of thing. And I've been there for 40 years. My first construction company put the
22 seven big tanks in at CPP, at the Idaho Nuclear Engineering Laboratory, and I was still in
23 business 40 years later, and we took those same tanks out.

24
25 **[133-02, Richard Provencher]** Relative to the potential environmental impacts, this is a perfect
26 fit nuclear facility to locate in Idaho. ... Overall, this appears to be a facility that affords much
27 benefit to the country and Idaho Falls that far outweighs the low risk and low potential for
28 environmental impact and I am fully supportive of NRC granting a license to construct and
29 operate.

30
31 **[135-04, Hon. Dave Radford]** Being a political subdivision of the State of Idaho, Bonneville
32 County adopted a comprehensive plan that included located nuclear growth west of -- on the
33 western side of -- Bonneville County, so we think that will help expedite the process. We, as the
34 commission, agree with the Environmental Impact Statement's conclusion.

35
36 Historically, I serve on the Heritage Commission. I think history is important, that homestead, I
37 think, could be mitigated out there. Historically, Bonneville County, my predecessors at the
38 County Commission, took very limited resources in terms of property tax dollars and invested
39 them in improved roads to get out to the site 60 years ago. So, historically, we've been a
40 nuclear-friendly county, and I believe that it will continue. And we applaud your work, we respect
41 your work, and we hope for a great outcome for an expedited license for AREVA.

42
43 **[151-03, Beth Sellers]** The fact that Areva Enrichment *Services* selected Idaho Falls as the
44 location to construct and operate this enrichment facility speaks to the comfort level this
45 community has with all things nuclear. There are over 6 decades of nuclear energy R&D&D
46 experience at the INL. Locating a commercial capability next door makes logical sense, as the
47 synergy that will co-exist in the professional arena will be a natural outcome and provide benefit
48 to all involved.

1 **[152-01, Steven Serr]** I am also responsible for code compliance conformance for building
2 code, fire code, mechanical code, flood plain rules and regulations. And I have had an
3 opportunity to work with NRC staff. They've been in my office asking questions as to what we
4 figure impacts are, how we plan on addressing issues, if we have concerns on implementation
5 of this project. We've worked extensively with AREVA, and their staff, to make sure everything
6 that they are doing would be in compliance with NRC guidelines, with local rules and
7 regulations, and they've made every attempt to make adjustments to their plan, to make sure
8 that we have a safe facility.

9
10 **[152-03, Steven Serr]** As far as compliance with zoning rules and regulations, that area was
11 designed specifically for this type of facility. It's not designed to have other uses out there that
12 could be impacted by those uses.

13
14 **[152-07, Steven Serr]** One of the issues we were concerned, we talked specifically about, was
15 the storage facilities on site, to make sure that those are contained. We feel that the plan that
16 they have implemented for on-site retention containment, lined ponds, monitoring would
17 adequately protect the community. As far as code enforcement officers, that one of my major
18 charges, is any facility we have come in, that we do see that they are fully code compliant and
19 protect the public health, safety, and welfare of the community.

20
21 **[152-09, Steven Serr]** I wanted to address the issue as to the suitability of this property for
22 development of that site. Again, as the Commissioner mentioned earlier, this area has been
23 zoned and designated for this type of use. It's been planned that it could accommodate this type
24 of operation since 1960. So, it's been a long-designated piece of property, tract of land out there
25 for this type of use.

26
27 I approach this as an enforcement site for any facility that's built in the county. Our concern in
28 the county is making sure that things are built to code, built complaint, built safe, protect public
29 health, safety, and welfare. My office, we are responsible for enforcement of the building code,
30 the fire code, mechanical code, flood plain rules and regulations, and we have addressed most
31 of these issues with AREVA. We've made modifications for some of their design issues on what
32 they contemplate doing to try to mitigate, and make sure that the operation that they're
33 proposing out there will be a safe compliant operation.

34
35 ***Response:*** *The NRC staff acknowledges these comments and appreciates the public*
36 *participation. However, these comments are outside the scope of the EIS analysis because*
37 *they do not relate to the content of the Draft EIS.*

38
39
40 **Comment:** The following comments express support for the proposed EREF and state that the
41 operations at the EREF are expected to be safe and environmentally responsible because
42 operations would be based on a proven technology. Some of these comments cite the safety of
43 the nuclear industry as a whole.

44
45 **[039-02, Kreg Davis]** First. The project is environmentally responsible. It is tested. It is proven
46 technology. I think most people agree that we need safe, clean, secure, and abundant base
47 power, baseload power. This baseload power argument has not been discussed as much as I
48 think it should be tonight.

1 My business is very grateful for the business we get from wind and solar, and would continue to
2 hope those sectors expand, and at a rapid rate.

3
4 However, neither one of those provide baseload power. Nuclear can. In my opinion, AREVA's
5 project complements these important energy goals. I also believe that serious thinkers on this
6 issue agree -- nuclear power is the only technology able to deliver on all of these dimensions. I
7 acknowledge that there are reasonable people who have safety concerns, but most of those I
8 have spoken with, that oppose nuclear power, believe nuclear safety is possible. However,
9 there are those that let anxieties rule. Their doubts lead to fight against any implementation of
10 nuclear power. I personally believe that we are better to focus on growing a safe, clean, secure,
11 and abundant nuclear industry.

12
13 **[039-05, Kreg Davis]** First, this project is environmentally responsible. It is tested. It is proven
14 technology. I think most people agree that we need safe, clean, secure, and abundant base-
15 load power. In my opinion, Areva's project complements these important energy goals. I also
16 believe that serious thinkers on this issue agree nuclear power is the only technology able to
17 deliver on all of these dimensions. I acknowledge that there are reasonable people who have
18 safety concerns, but most of those I have spoken with that oppose nuclear power believe
19 nuclear safety is possible. However, there are those that let anxieties rule. Their doubts lead to
20 fight against any implementation of nuclear power. I personally believe that we are all better to
21 focus on growing a safe, clean, secure and abundant nuclear industry.

22
23 **[043-02, Rocky Deschamps]** The last thing that I was -- I'll just touch base on, and I'll touch it
24 very briefly, and that is, is that it's too bad that in this day and age that we treat nuclear power
25 the way we do. And I've gone through the Environmental Impact Statement, I didn't see
26 anything that touched on this. And the only figures that I have with it, on my note here, in 2006, I
27 don't have it. In 2006, there was 46 miners killed in coal mining accidents. If that would happen
28 in the nuclear industry, it would be shut down so fast, but coal is just left kind of as it is. So, I
29 think that we need to look at that a little bit and say geez, where -- I think that 2006 is probably a
30 pretty good year. If we looked at 2009, or 2008, it would even be worse, so I think we need to
31 take in a little bit of perspective, and look at that.

32
33 **[098-04, Linda Martin]** As far as technical impacts, the centrifuge technology is proven and
34 safe as based on other facilities across the world, and while there conceivably is a significant
35 gap in the supply-demand equation for enriched uranium to provide our current and future green
36 energy needs, we can address that with the EREF.

37
38 **[098-11, Linda Martin]** The company's use of centrifuge technology is a proven, safe method
39 of enriching uranium. This technology is more energy efficient, more environmentally friendly
40 and less expensive to operate than the other accepted uranium enrichment process called
41 gaseous diffusion.

42
43 **[116-01, Richard Mondy]** I am in full support of the proposed Eagle Rock enrichment facility.

44
45 I submit that nuclear power is as safe, if not safer, than petroleum based power. Opponents to
46 the facility neglect to admit the hazards of alternative sources, hazards such as the recent Gulf
47 oil spill.

1 It is easy for those with other agendas to be opposed when they can take a narrow view and
2 just 'cry wolf' without having to offer and substantiate a realistic alternative.

3
4 **[123-02, Hon. Butch Otter; 090-02, Paul Kjellander, on behalf of Hon. Butch Otter; 195-02,**
5 **Hon. Jeff Thompson, on behalf of Hon. Butch Otter]** AREVA is proposing to build a state-of
6 the-art, technologically-proven, modern facility to enrich uranium needed to operate the existing
7 U.S. fleet of 104 power reactors. AREVA's plant will incorporate many unique features which
8 have been developed over three decades of experience with centrifuge enrichment technology.
9 AREVA's vast experience and use of the technology will result in minimizing and, where
10 possible, eliminating any impacts on the surrounding environment and regional communities,
11 but there will remain, however, many significant beneficial impacts....

12
13 Safety, integrity, professionalism, and sustainability are demonstrated attributes that AREVA
14 embraces in all of its projects and operations, and the Governor believes they'll bring no less to
15 Idaho Falls. AREVA has been easy to work with, and they are as excited about coming to Idaho
16 as we are to have them locate their facility here.

17
18 As we look across the country today, there are not many, if any, states or regions that can claim
19 proposed major energy construction projects or facilities like the Eagle Rock Enrichment
20 Facility. While large projects are usually accompanied by some environmental impacts,
21 Governor Otter believes the end result of this facility will be very positive for Idaho and the
22 country. Eagle Rock will provide much needed domestic production of enriched uranium for our
23 existing U.S. nuclear power fleet, which will help enable U.S. utilities to move away from
24 importing nearly 90 percent of this important fuel product.

25
26 **[137-02, Ralph Reeves]** 2. The nuclear industry has a great safety record. Then there is oil
27 drilling, coal mining, etc.

28
29 **[143-03, Hon. James Risch; 172-03, Amy Taylor, on behalf of Hon. James Risch]** I also
30 note the centrifuge technology is proven, reliable, and efficient. The process will use 50 times
31 less electricity than a gaseous diffusion plant, and the amount of water used by the plant is less
32 than the current irrigation appropriation.

33
34 **[128-02, Bob Poyser]** In addition, the Eagle Rock enrichment facility will provide safe and
35 secure domestic enrichment services that American utilities need to generate carbon-free
36 energy.

37
38 **[163-04, Cindy Smith-Putnam]** Over the past five years, approximately a million and a half
39 Americans have died from smoking, automobile accidents, and alcohol-related incidents.
40 Obesity has claimed another million and a half lives over the same time period. And according
41 to the Institute of Medicine's landmark report titled, "To Err is Human," my own industry, health
42 care, is estimated to be responsible for the annual death of nearly 100,000 people through
43 medical errors. By contrast, according to the Director of the Carlsbad Environmental Monitoring
44 and Research Center, in that same period of time, the past five years, the nuclear industry has
45 produced zero deaths, and a relative danger index of 0.0.

1 **Response:** *The NRC staff acknowledges these comments and appreciates the public*
2 *participation. However, these comments are outside the scope of the EIS analysis because*
3 *they do not relate to the content of the Draft EIS.*

4
5
6 **Comment:** The following comments express support for the role of the proposed EREF as part
7 of the nuclear fuel cycle and/or support for nuclear power in general.

8
9 **[010-01, Jack Barraclough]** So, when a project like this comes in my study of nuclear needs,
10 it's just so obvious that this is what we need. You can look at all these things, and talk about the
11 aquifer, but this is trivial compared to the needs of this country.

12
13 ... and we don't need negativism, naysayers, we need positive support of this excellent project
14 that would help the world, and help the country, and I strongly support this.

15
16 **[033-01, Hon. Mike Crapo; 075-01, Leslie Huddleston, on behalf of Hon. Mike Crapo]** Now,
17 more than ever, it is critical to develop secure, economically feasible, and clean supplies of
18 domestic energy. EREF will supply America's existing operation fleet of nuclear power reactors,
19 and further augment the anticipated growth of new commercial nuclear power generation here
20 in the U.S.

21
22 **[034-01, Greg Crockett]** While I understand this is not a debate on nuclear energy policy, the
23 context in which decisions of this nature are made must be considered and cannot be ignored.
24 Daily headlines demonstrate the devastating environmental consequences of our heavy
25 dependence on petroleum fuels. Fires in Russia, floods in China and Pakistan, and oppressive
26 heat currently being experienced within the continental United States remind us continuously of
27 the ever-increasing consequences of climate change.

28
29 It is time for the U.S. to change directions in the interest of our energy future and our national
30 interest. It is time for the United States to reassume a leadership role worldwide in nuclear
31 energy. Our national security interests require that we have enrichment and fuel development
32 capabilities within our borders. I support the Draft Environmental Impact Statement, which
33 likewise recognizes those demands.

34
35 Demand for nuclear fuel is, and will dramatically increase in the future, and I think that's
36 demonstrated by the number of pending NRC license applications. To suggest that the Eagle
37 Rock Enrichment Facility's production is not or will not be necessary is pure folly. To meet our
38 current demand for enriched uranium, much of it is imported, and we need robust domestic
39 suppliers who can provide this service in an environmentally compatible manner.

40
41 We trust AREVA. We trust that the proposed Eagle Rock facility will provide this valuable
42 service to our nation. I support the Draft Environmental Impact Statement, and recommend that
43 it be accepted, and that the license process proceed.

44
45 **[038-02, Brian Davidson]** As we look to secure our nation's energy future, nuclear power has
46 got to be a part of it. Having Areva's uranium enrichment capacity in Idaho and the
47 United States will help nuclear power become an even more viable energy alternative.

1 **[039-04 and 039-07, Kreg Davis]** In the long run, this project will augment our base-load
2 electrical needs. Nuclear energy is a significant part of the answer to our energy needs. I
3 worked for Philips Semiconductors during the years when the semiconductor industry started
4 moving jobs from the United States overseas. Countries with empty fields, cheap and abundant
5 power, clean and plentiful water, an education program fully developed complete with a steady
6 stream of graduates, and low taxes. These countries provided all this and an invitation to come.

7
8 If America and Idaho are going to compete in this world, we too need to provide clean water,
9 quality education, and reasonable taxes. But we also need to provide energy — abundant
10 power — predictable base-load energy. I personally believe that nuclear energy should be a
11 significant part of that base. Areva's project helps us to achieve success. This project is good
12 for our planet and it is good for our economy. Thank you for giving me this time.

13
14 **[041-01, Hon. Tammy de Weerd; 156-01, Robert Simison, on behalf of Hon. Tammy de**
15 **Weerd]** I am speaking tonight on behalf of Mayor Tammy de Weerd of the City of Meridian,
16 which is the third largest city in Idaho, located here in the Treasure Valley, in support of the
17 purpose and need for the proposed Eagle Rock facility, as outlined in the EIS.

18
19 We believe that the proposed facility will help support our nation's nuclear power industry and
20 emphasize the importance of having a reliable source of enriched uranium for national energy
21 security, as is described in the EIS....

22
23 I think this could be a good partnership for the area. With that, I will go ahead and conclude my
24 comments, and say, as a nation, we need a generation of safe nuclear energy power plants and
25 we encourage you to move the EIS for the Eagle Rock facility forward, and know that it will
26 directly and indirectly benefit thousands of Idahoans.

27
28 **[042-01, John Deal]** We believe the Eagle Rock Facility is an important and necessary addition
29 to the fuel cycle in America and will depend on the Eagle Rock facility for fuel enrichment.

30
31 **[051-02, Jackie Flowers]** Something else this community is concerned about and cares about
32 is energy. As this country grapples with visions for a sustainable energy future, and energy
33 independence, we have to take action and stop the rhetoric. Nuclear energy provides
34 20 percent of the nation's electricity. We've already heard that tonight. Importantly, we've also
35 heard it provides more than 69 percent of emission-free electricity that keep the lights on in this
36 country. Let me stress, base load emission-free energy. With less than 15 percent of the nuclear
37 fuel supply necessary for the existing nuclear energy fleet coming from a single source inside
38 this country's border, we have an energy security problem that I believe rallies that of our
39 dependence on foreign oil. And this is an important step towards building that independence.

40
41 Nuclear energy is ready now to be a central part of a balanced common-sense approach to
42 clean energy diversity. I agree with the NRC staff's statement that this facility will contribute to
43 the attainment of national energy security policy objectives by providing an additional reliable
44 and economical domestic source of fuel for these important nuclear energy facilities.

45
46 **[064-01, Hon. Tom Hally]** I support the facility as it is part of a long term solution to our energy
47 needs. A nation we have failed to come up with a comprehensive energy policy. We all seem to
48 agree that we need to down size coal. In my opinion nuclear is part of the solution and I feel is

1 green. We need to move forward. Idaho Falls supports the facility and as a member of the Idaho
2 Falls city council I support the facility.

3
4 **[065-02, Hon. Ida Hardcastle]** The community as a whole supports energy being produced by
5 nuclear power. We simply have to address our independence on foreign oil.

6
7 **[067-03, Mike Hart]** With respect to the need, I, looking at global warming, I know there are
8 obviously impacts of nuclear energy, but the reality is, seven generations from now I think they
9 won't be worrying as much about depleted uranium as they will be about depleted glaciers,
10 depleted ice caps, and nuclear energy has a significant benefit. It's not without its warts, it's not
11 without its impacts, but there is "no free lunch" when it comes to energy.

12
13 You can conserve, but we do use energy. It is used globally, whether this is a French company,
14 whether it's used locally, or nationally, the reality is its carbon-free, and that carbon-free
15 resource is something that is very precious, and until we have alternative technologies that can
16 produce significant usable quantities of electricity, nuclear is a very positive step in between
17 now and a carbon-free future.

18
19 **[067-06, Mike Hart]** Also, they took exception with the cause and need for action. I think there's
20 most definitely a need for this, because there's a need for carbon-free energy. Throughout the
21 world, I think we've seen that global warming is a significant problem that we need to be paying
22 attention to, and there's also a demand for growth in nuclear energy. There's a couple of facts I
23 want to point out why we need nuclear energy, why we need this particular enrichment plant.

24
25 Carbon dioxide reflects, or absorbs, infrared energy that does not go back out to space. It
26 makes the planet warmer. That's simply a fact. Carbon dioxide is a greenhouse gas. Levels of
27 carbon dioxide have gone from 288 parts per million in 1850 to 369 parts per million in the year
28 2000. It doesn't matter where it comes from. That is a greenhouse gas that is increasing in
29 concentration. But I'll give you a hint as to where it's coming from: fossil energy. In 1990s, we
30 annually contribute 6.3 gigatons of carbon dioxide into the atmosphere through fossil
31 combustion. That's annual, 6.3 gigatons. The concern about 300,000 metric tons, 300,000 tons
32 of total waste versus 6.3 gigatons in a single year, I view the problem with carbon as much more
33 significant than the problem with depleted uranium.

34
35 So, what is a gigaton? Why is that a concern? Well, 2.3 gigatons is one part per million of
36 carbon dioxide in the atmosphere. So, every year we are steadily increasing carbon dioxide. So,
37 yes, global warming is occurring. Yes, it's our fault. Yes, carbon puts more of that in the
38 atmosphere, and I think nuclear energy is a stopgap that will – is worth pursuing. So, yes, there
39 is a need.

40
41 Energy demands are increasing worldwide. Currently, the population of the planet is about
42 4.5 billion. By 2050, that will double, and people are not less energy consumptive. Populations
43 like China and India used to be in the Third World. They have bought the second world, and
44 they've placed a firm down payment on the first one. So, energy consumption will go up as the
45 population goes up, so even if nuclear energy just holds its own at 15 percent, there will be a
46 need for more nuclear plants, and that means there will be a need for more enriched uranium.

1 **[072-01, Stephen Herring]** Good evening, my name is Steve Herring. I am a nuclear engineer
2 and have lived here in Idaho since earning my doctorate 31 years ago. During that time I have
3 seen the NRC carefully exercise its duty in protecting the public health through their diligent
4 review of proposed facilities. I would like to speak in favor of the AREVA license application for
5 the Eagle Rock Enrichment Facility.
6

7 This facility will be an important part of the nuclear fuel cycle and a key step in providing for
8 future electricity. In building this facility, AREVA will replace 60-year old technology for uranium
9 enrichment with new gas centrifuge technology that is more proliferation resistance, cleaner and
10 a factor of twenty to fifty times more efficient.
11

12 The 104 reactors in the US provide about 20% of total US electricity and 69% of the emission-
13 free electricity. However, today, the US has only one operating gas centrifuge plant and the last
14 gaseous diffusion plants are being decommissioned. The one gas centrifuge plant which began
15 operation in New Mexico in June 2010, will be capable of producing 3 *MSWU/yr*, about 25% of
16 the US need for enrichment. So the US is dependent on imported enrichment for 75% of its
17 commercial fuel needs.
18

19 We have seen the construction of many wind turbines in the hills east of Idaho Falls and through
20 the west in the last five years. I applaud the contribution that these turbines can make, though I
21 have yet to see any comparable contribution in Jackson or Sun Valley. But it is important to
22 remember that turbines in the best wind sites have capacity factors of only 30-35%. The nuclear
23 reactors fueled by means of the Eagle Rock Enrichment Facility will provide power with a
24 capacity factor above 90%, that is, they provide more than 90% of their maximum capacity
25 when averaged 24-7, year around. The US needs reliable, sustainable energy for decades to
26 come, and not just when the wind is blowing.
27

28 Thank you for the opportunity to comment.
29

30 **[082-01, Michael Johnston]** I would like to submit my support for the proposed AREVA
31 Enrichment Service's proposed gas centrifuge uranium enrichment plant to be built in Eagle
32 Rock, Idaho, report number, "NUREG- 1945 draft."
33

34 We need nuclear power and the facilities to support them. I feel this facility will be a safe asset
35 to the overall program. I started working at the Idaho National Laboratory (INL) in 1976 and
36 retired in 2000, I always felt safe there. One of my biggest complaints was the general US
37 population was never provided with enough truthful educational information to know how safe
38 Nuclear Power was and what a good source of safe power it was. I know just a little about the
39 planning, review process, and construction overview that goes into building nuclear facilities
40 after working at the INL and am supportive of this project.
41

42 **[098-13, Linda Martin]** Conceivably there is a significant gap in the supply/demand equation
43 for enriched uranium to provide for our current and future green energy needs. The uncertainty
44 of the future supply of energy could evolve into a national security issue. The Eagle Rock
45 Enrichment Facility would be a principal supplier for this valuable and needed material.
46

47 **[111-01, Robert Meikle]** The issue of risk is the risk of what we don't do if we don't adopt
48 nuclear. What are our options if we don't adopt nuclear? And so if we don't do nuclear, ten

1 years from now we'll still be doing coal. And what are the risks of coal, if we're doing coal ten
2 years--as opposed to doing nuclear?

3
4 And so I think you have to weigh the risks. You have to weigh them, carefully, and you have to
5 look at all of the science, and you have to look at all of the economics. But I don't think
6 economics should be the driver here.

7
8 Boone Pickens made one other really great point, and I've lived in Wyoming the last few years. I
9 understand Wyoming's economy, with coal and natural gas. But we need to go to natural gas,
10 and if we don't go to natural gas, we're going to be in trouble.

11
12 It's going to take all of these things. But Mr. Davis brought out what I think is the most important
13 point that's been made in this entire hearing, and that is we have to have a baseload. We have
14 to have a baseload that's reliable.

15
16 I was in the ski business in 1976-77, and in that year, we did not see one storm come through
17 from September clear through till January, and in that year wind wasn't going to do it, solar
18 wasn't going to do it for Idaho, nor was hydro. And so we've got -- we've got to look at the "big
19 picture" with our energy policy, and I think you're doing the right thing, although I totally agree,
20 there are risks. But the risks, when you look at the risks and weigh them against the rewards,
21 and our other alternatives, then we've got to move in this direction.

22
23 **[114-01, Anne Mitchell]** Thank you for granting Areva a license to help create a clean, efficient
24 energy source so direly needed in this country. They, of course, are a proven entity with a
25 sterling history for safety, economy in their enrichment facilities. Our country needs this forward
26 thinking element of clean energy and nuclear energy (so long over-looked by this country) is
27 direly needed. I strongly appreciate the NRC's approval of Areva's license and embrace this not
28 only for Idaho Falls, but also for my country which I love.

29
30 **[119-01, Bob Neilson]** One of the things that's very important in this country to be looking at in
31 these days and ages is carbon management, and because of carbon management and the
32 issues associated with it, I'm a strong supporter of renewable energy, including biomass,
33 geothermal, hydropower, solar and wind.

34
35 However, for the same reason, I'm also a supporter of nuclear energy. And because I'm a
36 supporter of nuclear energy, if you're going to have nuclear energy you have to have
37 enrichment plants. There's no way around that.

38
39 Now we've all talked about environmental impacts. It's an interesting, a little fact, that if you talk
40 about life cycle analysis for a variety of energy sources, and I'm talking about from the time that
41 you're talking about mining, through transportation, through conversion, through manufacturing,
42 through operation, through decommissioning. That if you look at nuclear energy in terms of
43 carbon management, it produces the same, or less, carbon dioxide on a life cycle basis than
44 wind energy does.

45
46 Now that doesn't say that nuclear is better or worse, or wind is better or worse. What it does
47 say, though, is that no matter what kind of energy generation technology you're talking about,
48 there are impacts, impacts to all of them, and those impacts need to be carefully considered, so

1 that we, as the citizens of Idaho, can make the decisions that are important to our livelihoods
2 and the state.

3
4 Now nuclear energy produces about 20 percent of the electrical energy in this country today. I
5 would maintain that because nuclear is one of the few sources that's baseload compared to
6 renewable energy for which most renewable energy is not baseload, we need to have nuclear
7 energy, and if we need to have nuclear energy we need to have enrichment, and I'm afraid that,
8 unfortunately, it's an important source among all the others. There's no "silver bullet." We need
9 a mix. Nuclear is a part of that mix.

10
11 **[123-04, Hon. Butch Otter; 090-04, Paul Kjellander, on behalf of Hon. Butch Otter; 195-04,**
12 **Hon. Jeff Thompson, on behalf of Hon. Butch Otter]** Third, Eagle Rock will help rebuild the
13 nation's nuclear infrastructure, and enhance energy security for all those who depend on
14 nuclear power for their health and welfare right here from Idaho.

15
16 **[128-01, Bob Poyser]** We welcome this opportunity to provide factual information about our
17 project to Boise and the surrounding communities. Assuming we are granted a license next
18 year, those in Boise, who make the trip to Idaho Falls by way of Highway 20, will see the
19 beginning of an important step towards our nation's energy independence, the development of a
20 significant investment in Idaho, and construction of an American facility which will provide jobs
21 to American workers, and strength to the local economy.

22
23 **[133-01, Richard Provencher]** I fully support the NRC's proposed preferred alternative to build
24 a uranium enrichment plant west of Idaho Falls, Idaho. The facility being pursued by AREVA will
25 provide an additional reliable and economical domestic source of low enriched uranium to be
26 used in commercial nuclear power plants. Having more capability for enrichment in this country
27 helps reduce the risk related to importation of this type of material from foreign sources. The
28 AREVA facilities planned capacity can provide 40% of the current and planned demand for
29 enriched uranium. AREVA's business plan fits well within the country's plan to reduce
30 dependency on foreign oil, improve the climate, and make nuclear energy a larger contributor to
31 the domestic energy supply. This creates a clear mandate for the capability which is critically
32 important to beginning the review of environmental impacts related to its operation.

33
34 **[134-01, William Quapp]** First of all, I commend the staff's preliminary conclusions, and hope
35 that they retain those conclusions on the favorable benefit cost assessment. My only
36 disagreement with the NRC's impact statements may be one of semantics. I believe that the
37 risks or impacts identified shouldn't be attributed to low and moderate, but the word should be
38 trivial. I believe those impacts are trivial compared to the impacts associated with a societal
39 continued importation of foreign oil. I believe, furthermore, that nuclear power can provide the
40 indigenous energy supply while employing Americans in the USA. And, in fact, I believe there is
41 no bigger impact than sending our soldiers to support energy policy in countries of foreign, or
42 the Middle East. So, I support the Draft EIS conclusions for the reasons that have been stated
43 therein, but for many more societal benefits, as I see it, in use of safe and sensible use of
44 nuclear power.

45
46 **[135-03, Hon. Dave Radford]** And, to me, when we develop nuclear in this country, and yet we
47 only arrive at 20 percent of our power, with French getting 80 percent of their power from
48 nuclear, and we have an opportunity to learn some things about getting this energy on the grid,

1 so I'm optimistic that it can eventually translate to more electricity, cheaper power, a better
2 quality of life.

3
4 **[143-01, Hon. James Risch; 172-01, Amy Taylor, on behalf of Hon. James Risch]** As a
5 U.S. Senator from Idaho, I have the privilege of serving as the Ranking Member of the
6 Subcommittee on Energy. From that position, I have seen firsthand the efforts this country is
7 making to formulate a forward-looking energy policy. Supporting nuclear power, and its
8 associated technologies, such as enrichment, is one way to make our country more energy
9 secure.

10
11 Years of broken energy policy have led us to become dependent on foreign sources of energy.
12 We've also lost our competitive edge in the nuclear field, a field where the United States and
13 Idaho once led. This community knows what it takes to regain that competitive edge, and once
14 again place Idaho and this nation at the pinnacle of the nuclear industry.

15
16 There is a growing recognition that nuclear power is the most viable option to meet the clean
17 energy demands of the future. Demand for enriched uranium is increasing in the United States
18 and across the world to fuel clean nuclear power. This proposed facility will allow that need to
19 be met from domestic sources, while providing a much needed economic boost to the entire
20 region.

21
22 **[146-01, Doug Sayer]** You know, what happens to my grandson happens to me. We're both
23 Idahoans. But more importantly, we're both Americans. And we have to have that baseload
24 energy. And until we have an alternative, nuclear is the answer. Decisions I made about my
25 grandson's future are important. I realize that the decisions that we make, and the projects that
26 we undertake are going to be his legacy to deal with....

27
28 We encourage you to pursue this license and approve it, so that we can get back to work and
29 build these nuclear projects like our country needs them.

30
31 **[151-01, Beth Sellers]** The purpose of the facility has been made clear in the draft EIS. It is in
32 the best interest of the citizens of the United States that we continue to support and increase the
33 percentage of electricity generated by commercial nuclear power. It is a proven mission-free
34 source of electricity. Furthermore, its increased use will enhance our national energy security.
35 The sooner we become self-sufficient in fulfilling our energy needs, the more secure our nation
36 will remain in these turbulent times.

37
38 **[152-08, Steven Serr]** And my planning hat side. We are encouraging development and
39 expansion. As mentioned, we are promoting alternate energy resource facilities. We have
40 160 megawatts of wind power under construction at this time. For promoting the nuclear side
41 with this, we've been promoting the nuclear research on the INL site, and we're also currently
42 producing, or hope to be producing a cogeneration facility with a four county region, with a
43 cogeneration facility for waste burning that also generates electricity.

44
45 So we are promoting all sources of energy. we feel this is also a safe one, that meets the needs
46 of the community, meets our rules and regulations.

1 **[155-01, Jerry Shivly]** First of all, it was going to help our nation, because we need the nuclear
2 energy.
3

4 **[163-02, Cindy Smith-Putnam]** The bigger picture is this project's significance to our regional
5 and national energy future, and it is the national energy future that fundamentally and absolutely
6 requires a significant reset from the status quo.
7

8 Currently, under the E in Energy, Grow Idaho Falls has taken an active role in supporting the
9 development and expansion of green renewable sources of energy. We can, we should, we
10 have, and we will continue to support the diversification of the energy portfolio of our region and
11 nation, to include harnessing the power of wind, water, heat, and light, to reduce the harmful
12 effects to the environment of carbon emitting sources, and to promote our national security by
13 becoming less reliant on foreign oil.
14

15 Increasing renewables, promoting conservation, decreasing use of fossil fuels, all very
16 important, we can, and we should do all of those things. And, yet, even taken together, none of
17 that is enough, not nearly enough to meet our growing energy demands. Nuclear energy stands
18 alone as the best way to produce the energy we need, while at the same time minimizing
19 harmful environmental and geopolitical consequences. It gives us the opportunity to turn away
20 from the practices of the past toward a more stable and sustainable energy future.
21

22 Therefore, just as we need to be independent of unstable and unpredictable sources of oil, we
23 also need to be independent of unstable and unpredictable sources of enriched uranium. Simply
24 put, the Eagle Rock Enrichment Facility beautifully addresses that need.
25

26 **[173-01, David Taylor]** ...I am strongly in favor of the construction and maintenance of the
27 Areva complex and hope the rest of the DOE INL site can be used for productive nuclear
28 research and generating capacity...
29

30 We cannot supplant the energy from fossil fuels to the electric grid without vast improvements to
31 the grid itself and to generating capacity. Nuclear is the only viable alternative and the only one
32 that is "eco friendly" to the environment. Fear mongers and professional detractors "Snake River
33 Alliance" use disgraceful tactics and words in attempting to keep their little source of revenue
34 alive.
35

36 We possess the technology (Gen IV reactors) and now need the common sense to use these
37 resources to help sustain a vibrant economy and standard of living that we have all come to
38 expect. The next generation will not have these opportunities if we squander and make feeble
39 attempts to make nuclear energy production a reality now.
40

41 I support Areva and the ideas that surround using nuclear technology as a great national effort.
42 It must be for national security and for economic security. We must have a federal government
43 that will establish certain protocols and reactor templates that if complied with will move to a fast
44 track for licensing and construction. From there the government must run interference against
45 all the special interest that come to bear only for the reason of capital extraction. Thanks for
46 allowing us to be part of this potentially wonderful venture that will not only bless the lives of
47 those who live and work here but for the whole nation.
48

1 **[176-02, Hon. Jeff Thompson]** As an eastern Idahoan and Representative, I'm excited to hear
2 that we are looking for sustainable energy solutions for our future, such as those provided by
3 AREVA. The demand for electricity is becoming greater, and with this demand we're beginning
4 to see prices soar. Nuclear energy offers a solution to our need for reliable energy sources now
5 and in the future.
6

7 **[178-02, Randy Trane]** This is a project that will serve two purposes. It will allow nuclear power
8 to serve the world and it will help the economy in the Eastern Idaho area with much needed
9 employment. I have several friends who are experts in the nuclear power industry and they are
10 telling me that this project will not have any negative impact on the environment in this area.
11

12 **[186-01, Lauren Walker]** We are supportive of the nuclear industry. Though we are, ourselves,
13 not employed by the industry, we feel that the experience that we've had is absolutely
14 compatible with the things that we do in our industry.
15

16 We're supportive of bringing back manufacturing to the United States. We've become a service-
17 oriented country. We need to start manufacturing for ourselves. Our dependence on foreign
18 energy has taught us by sad experience that it's time to bring our independence home. It's a win
19 for Idaho; it's a win for the United States of America.
20

21 **Response:** *The NRC staff acknowledges these comments and appreciates the public*
22 *participation. However, these comments are outside the scope of the EIS analysis because*
23 *they do not relate to the content of the Draft EIS.*
24
25

26 **Comment:** The following comments express confidence in AES's capabilities and/or in the
27 proposed EREF.
28

29 **[023-01, Rebecca Casper]** I am pleased as a community member with AREVA's arrival in our
30 community. They began giving back almost immediately upon their arrival, and corporate
31 citizenship like that is nothing to be taken lightly. To me, it's a sign of responsible management
32 and conscientious management, but that's just an observation.
33

34 **[033-02, Hon. Mike Crapo; 075-02, Leslie Huddleston, on behalf of Hon. Mike Crapo]** I am
35 confident EREF will meet the strong environmental and safety standards enforced by the NRC,
36 and other federal, state, and local entities.
37

38 **[034-04, Greg Crockett]** We trust AREVA.
39

40 **[053-02, Hon. Jared Fuhriman]** You know, it was just a year ago, March, that I had the
41 opportunity, along with two high school teachers and 20 high school students, to travel back to
42 Tricastin, France, and there we were able to go through the George Besse Plant, which the
43 Eagle Rock facility is modeled after. And I've got to tell you, it was very impressive as we were
44 on the site, be able to witness the production of that.
45

46 I had a chance to talk to elected officials there, as well as citizens of Tricastin, and they're very
47 proud of the George Besse plant, and they're with AREVA, that they're their neighbor, and also
48 the partnership in energy.
49

1 One of the things that I noted when I was back there. All the plants were built right next to cities.
2 And we had the opportunity to talk to many of the citizens, and there was absolutely no residual
3 problems, that they could ever detect. I had the opportunity to meet with many AREVA
4 executives and staff, both in France and the United States, and I have total confidence that the
5 Eagle Rock enrichment facility will be operated safely and efficiently.
6

7 **[053-03, Hon. Jared Fuhriman]** As Mayor of Idaho Falls, and as members of the City Council,
8 we're elected to represent the best interests that our city has to the best of our ability, so when a
9 proposed project like AREVA comes along, it's imperative that we do everything we can to
10 exercise our due diligence in ferreting out the project, itself, and making sure that it's the best fit
11 for our city and our communities.
12

13 It is my opinion that we have tried to turn over every stone possible, as we looked into AREVA,
14 and if it would be a benefit to our community. We have met with several mayors in eastern
15 Idaho, and received their endorsement on this project. Myself, along with several other
16 community leaders have personally met with representatives from AREVA numerous times, not
17 only here in Idaho Falls, but at the headquarters in Bethesda, Maryland, in addition to a
18 personal visit to Paris, France to the corporate office just to seek direction and information from
19 them.
20

21 One of the best pieces of evidence that I've obtained through my personal research regarding
22 the potential environmental impacts was when I, along with 24 other members of our
23 community, 20 of those being youth in our community, traveled back to Pierrelatte, France,
24 population of 13,000. Pierrelatte is next door to the Tricastin Georges Besse plant, which has
25 been operational for several years. I had the opportunity to personally visit with many of the city
26 and the community leaders, as well as speaking with many of the citizens, themselves, in
27 regards to the Tricastin plant, and if there was any residual issues that they have seen as a
28 result of having lived right next door to that plant.
29

30 I was able to see firsthand AREVA's sustainable development philosophy of protecting the
31 environment. Through this visit, I found no evidence of any negative environmental impact on
32 their community. What I saw, instead, was a vibrant and beautiful city and community.
33

34 **[098-12, Linda Martin]** In its application, AREVA has proven itself to be technically capable of
35 addressing and satisfying any NRC criteria or requirements, as well as addressing any waste
36 issues per DOE and NRC guidelines, which may be necessary for the full and successful
37 operation of this plant.
38

39 **[114-01, Anne Mitchell]** Thank you for granting Areva a license to help create a clean, efficient
40 energy source so direly needed in this country. They, of course, are a proven entity with a
41 sterling history for safety, economy in their enrichment facilities. Our country needs this forward
42 thinking element of clean energy and nuclear energy (so long over-looked by this country) is
43 direly needed. I strongly appreciate the NRC's approval of Areva's license and embrace this not
44 only for Idaho Falls, but also for my country which I love.
45

46 **[123-02, Hon. Butch Otter; 090-02, Paul Kjellander, on behalf of Hon. Butch Otter; 195-02,**
47 **Hon. Jeff Thompson, on behalf of Hon. Butch Otter]** AREVA is proposing to build a state-of
48 the-art, technologically-proven, modern facility to enrich uranium needed to operate the existing

1 U.S. fleet of 104 power reactors. AREVA's plant will incorporate many unique features which
2 have been developed over three decades of experience with centrifuge enrichment technology.
3 AREVA's vast experience and use of the technology will result in minimizing and, where
4 possible, eliminating any impacts on the surrounding environment and regional communities,
5 but there will remain, however, many significant beneficial impacts....
6

7 Safety, integrity, professionalism, and sustainability are demonstrated attributes that AREVA
8 embraces in all of its projects and operations, and the Governor believes they'll bring no less to
9 Idaho Falls. AREVA has been easy to work with, and they are as excited about coming to Idaho
10 as we are to have them locate their facility here.
11

12 As we look across the country today, there are not many, if any, states or regions that can claim
13 proposed major energy construction projects or facilities like the Eagle Rock Enrichment
14 Facility. While large projects are usually accompanied by some environmental impacts,
15 Governor Otter believes the end result of this facility will be very positive for Idaho and the
16 country. Eagle Rock will provide much needed domestic production of enriched uranium for our
17 existing U.S. nuclear power fleet, which will help enable U.S. utilities to move away from
18 importing nearly 90 percent of this important fuel product.
19

20 **[135-01, Hon. Dave Radford]** The people I've met at AREVA have been wonderful. They
21 already have 7,000 employees in the United States, so we're real comfortable with their way of
22 doing business here in eastern Idaho.
23

24 **[145-03, Ann Rydalch]** Our country is open to legal immigrants that come here for the
25 American dream. Our country is open to legal foreign companies that want to do business in the
26 United States. AREVA is a very experienced and credible company that wants to do business in
27 the U.S.
28

29 **[157-12, Hon. Erik Simpson]** I have great trust in those who have proposed this facility, and
30 have considered a multitude of emergency situations, and have a plan for mitigation. With that, I
31 am in support of the Draft EIS, and encourage the NRC to grant the license.
32

33 **[158-03, Hon. Mike Simpson; 139-03, John Revier, on behalf of Hon. Mike Simpson]** Areva
34 has a strong record of corporate safety and achievement, and the technology that Eagle Rock
35 will use have been well-proven in the United Kingdom, mainland Europe, and now in the United
36 States. I have the utmost confidence in the quality, safety, and security of their facilities.
37

38 **[162-01, Michael Smith]** It is my opinion that AREVA should in fact be granted the license and
39 permit to build the uranium enrichment facility located near Idaho Falls. I am a local citizen both
40 born and raised in Idaho, I as most Idahoans care a great deal about the environment and the
41 quality of life here in this area. I believe AREVA has gone beyond required measures to ensure
42 the process used in the proposed facility will protect the environment and the citizens of this
43 state.
44

45 While there are still clean up measures on going at the INL we as a nation and the organizations
46 working in the nuclear industry have learned a great deal in how to safely manage the relatively
47 small amounts of waste generated. I fully support the NRC for its decision to allow the
48 construction and operation of the new Eagle Rock Enrichment Facility.
49

1 I also applaud AREVA for their decision to trust Idaho and its citizens enough to desire joining
2 our neighborhood.

3
4 **[167-01, Andrew Stevenson]** We weren't without our concerns originally on this project. As
5 Erica mentioned, the facility is obviously going to have a significant impact on our community,
6 and we were concerned that some of these impacts could, potentially, be negative, and so we
7 wanted to find out more about that. But in March of 2009, AREVA took us to go see the
8 Georges Besse II facility in France, which is, essentially, the same thing they would be building
9 here, and while we were there, Erica actually raised some of those concerns.

10
11 She touched briefly on the myriad recreational activities that are available here, just because of
12 the pristine condition of our countryside, and our desire to see those areas preserved. There
13 was also some concern about pollution, particularly in the water supply due to accidental
14 pollution, but when we raised those questions, AREVA showed us some of the measures that
15 they'd implemented to prevent such spillage and pollution. And we have to say, we were
16 extremely impressed with it, even in cases of flood and earthquake, and crazy natural disasters
17 that are never going to happen. It was extremely unlikely that any waste was going to be spilled
18 into the surrounding area. An even greater reassurance came when we visited with residents of
19 Pierrelatte, a French town in the area around the Tricastin site. They all live relatively normal
20 lives, and there were no real noticeable effects from having that site on their borders. Most of
21 them actually said that they felt that having the site there improved their general lifestyles, so we
22 were very comforted by that. Also notable is the fact that the Tricastin site sits right on a river,
23 and yet in all the time that that facility has been there, there have really never been any major
24 issues with water contamination there, and that also eased our mind.

25
26 **Response:** *The NRC staff acknowledges these comments and appreciates the public*
27 *participation. However, these comments are outside the scope of the EIS analysis because*
28 *they do not relate to the content of the Draft EIS.*

31 **I.5.3 NEPA Process**

32
33 **Comment:** The following comment requests that the PowerPoint presentations and speaker's
34 notes from the public meetings be made public on the NRC's website.

35
36 **[115-01, Nicholas Molenaar]** Could the Power Point presentations be made public on your
37 Web site? Also speaker's notes please.

38
39 **Response:** *The NRC staff's PowerPoint presentations from the August 9 and August 12, 2010,*
40 *public meetings in Boise and Idaho Falls, Idaho, respectively, can be found on the NRC's public*
41 *website for the proposed EREF project, at [http://www.nrc.gov/materials/fuel-cycle-](http://www.nrc.gov/materials/fuel-cycle-fac/arevanc.html#3)*
42 *fac/arevanc.html#3 (click on "Meeting Slides" links). The PowerPoint presentation given by Liz*
43 *Woodruff of the Snake River Alliance during the August 9, 2010, public meeting in Boise, Idaho,*
44 *can also be found on the NRC's website for the proposed EREF project, at*
45 *<http://www.nrc.gov/materials/fuel-cycle-fac/arevanc.html#3> (click on "Meeting Transcript and*
46 *Other Meeting Information" link, and then on the "Slides from Public Meeting Between the*
47 *Nuclear Regulatory Commission and the Snake River Alliance" link).*

1 *There are no speakers' notes available from the two public meetings. However, the statements*
2 *of all of the speakers at these meetings can be found in the meeting transcripts, which are*
3 *available on the NRC's website at <http://www.nrc.gov/materials/fuel-cycle-fac/arevanc.html#3>*
4 *(click on "Meeting Transcript and Other Meeting Information" link).*
5
6

7 **Comment:** The following comment expresses concern that copies of the Draft EIS and
8 supporting documents were difficult to access and that inadequate numbers of hard copies of
9 these documents were made available to the public.

10
11 **[131-02, Morty Prisament]** Availability and Access to Documents: A related issue involves
12 availability and access to the copies of the EIS and the above-referenced technical supporting
13 documents. Distribution of the EIS and supporting documents has been extremely limited,
14 thereby limiting opportunities for comment. Adequate numbers of hard copy documents should
15 be provided to libraries, local government, and interested organizations in order to facilitate the
16 broadest public review opportunities. This is a project of statewide significance and, therefore,
17 multiple copies of the DEIS and all supporting documents should be, at minimum, made
18 available through the Boise Main Library, given that Boise is the State Capitol. I do acknowledge
19 that NRC did ultimately decide to hold a DEIS hearing in Boise. However, given that this was a
20 late decision by NRC, I was unable to re-schedule and was out of the country at the time.

21
22 **Response:** Pursuant to the NRC's regulations under 10 CFR 51.74, on July 21, 2010, the NRC
23 staff published a Notice of Availability (NOA) for the Draft EIS in the Federal Register
24 (75 FR 42466), announcing the issuance of the Draft EIS for public comment, in accordance
25 with 10 CFR 51.73, 51.74, and 51.117. Among other information, the NOA contained
26 information on how to access the Draft EIS and other documents related to the proposed EREF
27 project. Documents were made available in hard copy at the NRC's Public Document Room in
28 Rockville, Maryland, and at the Idaho Falls Public Library, 457 West Broadway, Idaho Falls,
29 Idaho 83402. The Idaho Falls Public Library maintains an information repository on the
30 environmental review for the proposed EREF project. Documents were also made available
31 electronically through the NRC's public website, the NRC's Agencywide Documents Access and
32 Management System (ADAMS), and the Federal Rulemaking website. Information on how to
33 access each of these venues was provided in the NOA. Additionally, pursuant to 10 CFR 51.74,
34 the NRC distributed the Draft EIS to approximately 135 individuals including Federal, Tribal,
35 State, and local government officials and other interested parties (including members of the
36 general public). Furthermore, references cited in the Draft EIS were publicly available through
37 the NRC's ADAMS website (<http://www.nrc.gov/reading-rm/adams/web-based.html>) and/or
38 through other publicly accessible venues such as the Internet, Federal, State and local
39 government agencies and their websites, and public libraries.

40
41
42 **Comment:** The following comment maintains that the NEPA process should be restarted due to
43 significant changes in the proposed Federal action.

44
45 **[131-06, Morty Prisament]** Scoping: NEPA provides for a public scoping process in order to
46 facilitate public and agency identification of issues to be analyzed in the DEIS. Public Scoping
47 meetings, also required by NEPA, provides opportunities to comments on the issues to be
48 studied in the DEIS. NEPA also stipulates that if the proposed federal action undergoes

1 significant changes, the scoping process needs to be re-started. Major changes to the proposed
2 action have occurred, not the least of which has been doubling the capacity of the centrifuges.
3 Therefore, the NEPA process should be re-started, beginning with a new Scoping Process, in
4 order to afford adequate opportunities for comment and properly focus the DEIR analysis.
5

6 Considering the extent and depth of my concerns, and those of others, the NEPA process does
7 not provide for NRC to simply address comments in a Final EIS. NEPA calls, instead, for re-
8 notifying and re-release of a revised EIS and, where needed, supporting documents. Also called
9 for is a formally revised project (preferred action) description and initiation of a new Scoping
10 Process.
11

12 **Response:** *As noted in Section 1.4.2 of the EIS, the NRC staff's announcement of the Notice of*
13 *Intent (NOI) to prepare the EIS, which initiated the NEPA process, was published in the Federal*
14 *Register on May 4, 2009 (74 FR 20508). Publication of this NOI was purposely delayed by the*
15 *NRC because AES notified the NRC of its intent to double the enrichment capacity of the*
16 *proposed EREF. The NOI was published after the modified license application was received by*
17 *the NRC from AES on April 23, 2009 (AES, 2009a), for the current proposed capacity of 6.6*
18 *million separative work units (SWUs) per year. The NOI established a 45-day scoping period*
19 *and announced a public scoping meeting that was held in Idaho Falls on June 4, 2009. No*
20 *significant changes in the scope of the EIS have occurred since that time which would*
21 *necessitate re-scoping the EIS.*
22

23 **Comment:** The following comment expresses concern that the commenter's scoping
24 comments were not addressed in the Draft EIS.
25

26 **[141-01, Peter Rickards]** The Eagle Rock Draft EIS appears incomplete, not addressing the
27 technical scoping issues I submitted. I do see the actual issues listed as received, on pages 88
28 & 89 of 234 in the appendix section, but no actual answers were given.
29

30 **Response:** *Responses to individual scoping comments were not prepared. Those comments*
31 *relevant to the scope of the EIS were considered in the preparation of the EIS as discussed in*
32 *Section 1.4.2 of the EIS.*
33

34
35 **Comment:** The following comment questions the analysis of impacts in the Draft EIS.
36

37 **[181-02, Roger Turner]** And what is the science and environmental research behind the
38 endorsement of the AREVA project? Well, science and environmental risks are being
39 downplayed on this proposed project, because of job creation, and economic development.
40

41 **Response:** *The NRC staff believes that it has provided an objective analysis in the EIS for all*
42 *resource areas, based on the requirements of NEPA and the NRC regulations for implementing*
43 *NEPA in 10 CFR Part 51. In the case of job creation and economic development, the*
44 *socioeconomic impacts, beneficial and adverse, were found to be SMALL as presented in*
45 *Section 4.2.12 of the EIS. The NRC staff does not believe that such a finding downplays the*
46 *potential adverse impacts found in other resource areas with SMALL-to-MODERATE or*
47 *MODERATE impacts.*
48
49

1 **Comment:** The following comment maintains that the Draft EIS fails to follow NEPA guidelines
2 with respect to a number of issues.

3
4 **[181-22, Roger Turner]** In summary the EIS fails to follow NEPA guidelines with respect to
5 evaluation of the need, evaluation of temporary storage risks, evaluation of treatment facilities
6 for depleted uranium. The EIS fails to follow up with a realistic evaluation of the proliferation
7 risks, and to advance alternatives to the dangerous centrifuge system and its risks to violating
8 the NPT treaty. The EIS must evaluate the risks of handling, moving and storing Uranium
9 compounds at Areva, in the context of historical accidents with the casks, spills and releases of
10 the material, the actual toxicity of the uranium and the associated indirect and cumulative risks
11 to the environment, as required by NEPA.

12
13 **Response:** *As stated in Section 1.1 of the EIS, the NRC has specific regulations under 10 CFR*
14 *Part 51 to implement the requirements of NEPA. The NRC staff has followed the requirements*
15 *of NEPA and the NRC regulations to independently evaluate all information used in the EIS.*
16 *The need for the proposed EREF is discussed in Section 1.3 of the EIS. Potential impacts and*
17 *risks from handling uranium compounds in various forms and the temporary storage of depleted*
18 *uranium are discussed in Sections 4.2.10 and 4.2.11. Potential impacts from disposal of the*
19 *depleted uranium are also discussed in Section 4.2.11. Potential impacts and risks from*
20 *transportation of uranium feed material and waste are addressed in Section 4.2.9. Additional*
21 *evaluation regarding proliferation risks is not within the scope of the EIS for reasons discussed*
22 *in Section I.5.6 of this appendix. Alternatives to the gas centrifuge technology are identified and*
23 *evaluated in Section 2.3.3. Accidental and intentional releases are considered in*
24 *Sections 4.2.15 and 4.2.18. The toxicity of uranium compounds is discussed in Section 3.11.3*
25 *and 4.2.15. Potential cumulative impacts and risks to the environment are covered in*
26 *Section 4.3.*

27
28
29 **Comment:** The following comments suggest that the NRC's approach is one of advocacy and
30 pre-determination.

31
32 **[120-01, Frank Nicholson]** Very superficial – Did not address critical issues. As with city
33 councils, your minds have already been made up.

34
35 **[131-01, Morty Prisament]** Independent Analysis: The overall tone of the document is one of
36 advocacy, which makes one question the objectivity of the document's conclusions. The
37 document relies upon a number of technical documents. What were these documents
38 precisely? Were these documents subjected to any type of independent peer review? Lacking
39 such review, the objectivity of these documents would, likewise, be in question. Specifically,
40 these documents relate to engineering studies, system safety and emergency response
41 (including failure analysis and redundancy procedures), human health and ecological health risk
42 assessments and associated probabilistic risk assumptions, benefit-cost analysis, socioeconomic
43 impact analysis, and groundwater quality impact-related studies. The discussion of these issues
44 is extremely limited given the scale of the action and associated risks.

45
46 **Response:** *The NRC is a regulatory agency charged with protecting public health and safety*
47 *and the environment. The NRC's mission does not include advocacy of nuclear technologies.*
48 *The NRC staff believes that it used the best technical documentation available to support all*

1 *aspects of the environmental review. The documents used are identified and cited as*
2 *references in the EIS.*

3
4
5 **Comment:** The following comments express concern regarding the level of detail provided in
6 the Draft EIS, such as information and analyses regarding impacts from construction, operation,
7 and decommissioning of the proposed EREF.

8
9 **[027-05, Sara Cohn]** The ICL has reviewed the draft (EIS) for the Eagle Rock Enrichment
10 facility and is concerned that construction and operation of the facility will pollute Idaho's natural
11 resources and compromise public health. The EIS does not provide the level of detail that would
12 allow ICL to assess environmental and public health impacts associated with the proposed
13 project. Additionally, under Section 102 of the National Environmental Policy Act, federal
14 agencies are directed to prepare detailed statements assessing the environmental impact of
15 and alternatives to major federal actions significantly affecting the environment. Section 102
16 also requires federal agencies to lend appropriate support to initiatives and programs designed
17 to anticipate and prevent a decline in the quality of the public health and the environment. ICL
18 believes the draft EIS does not accomplish either of these requirements. More detailed analysis
19 must be provided in the final EIS and the not yet released Safety Report to allow the public and
20 interested parties the opportunity to evaluate the project and to ensure that no adverse impacts
21 occur that pollute Idaho's clean water and clean air, or endanger public health.

22
23
24 **[105-06, Eve McConaughey]** My most serious concerns were around the EIS and why no
25 details were given for impacts of construction, operation, or decommissioning of the proposed
26 EREF.

27
28 **[120-01, Frank Nicholson]** Very superficial – Did not address critical issues. As with city
29 councils, your minds have already been made up.

30
31 **Response:** *Section 4.2 of the EIS presents detailed information and analyses regarding the*
32 *impacts on human health and the environment from construction, operation, and*
33 *decommissioning of the proposed EREF project. Chapter 2 describes and compares the*
34 *proposed action and alternatives to the proposed action. The NRC staff believes that sufficient*
35 *attention has been given to the level of detail of the information and analyses to ensure that the*
36 *NRC's obligations under NEPA and the NRC's NEPA-implementing regulations under 10 CFR*
37 *Part 51 have been met.*

38
39
40 **Comment:** The following comments indicate that the NRC needs improvement on its
41 implementation of public outreach.

42
43 **[059-01, Lance Giles]** No ads regarding meeting. Just articles or opinion pieces in local paper.
44 Information about meeting difficult to find. No actual EIS comment form.

45
46 **[105-01, Eve McConaughey]** I was not satisfied that the public received correct or true
47 information or that the public had full opportunity to express their concerns because of the
48 timing of the hearing and lack of information as presented by the officials. Presentation of the

1 EIS was very inadequate. It was completed only last month (July 2010). There was little
2 opportunity given for questioning prior to testimony.... Also there was too much early time in the
3 hearing allotted to elected and other officials out of the Boise area.

4
5 **[131-07, Morty Prisament]** Also of note that NRC outreach has been “lackluster” at best.

6
7 **[147-04, Joey Schueler]** I am in opposition to the Eagle Rock Uranium enrichment plant being
8 put in Idaho Falls, Idaho! Although I understand the positive incentive arguments for the
9 proposed plant, the arguments against the plant far outweigh the rather short term positive
10 benefits. I think careful consideration should be given to each of the fifteen points I listed below
11 when deciding whether to take this action. I also doubt many Idahoans know about this action
12 and should be brought to a larger table of discussion.

13
14 **Response:** *Public participation is an essential part of the NRC’s environmental review process*
15 *under NEPA. Section I.2 of this appendix discusses the process for public participation during*
16 *the NRC staff’s development of the EIS for the proposed EREF. As indicated in Section I.2, the*
17 *NRC conducted an open, public EIS development process consistent with NEPA and the NRC’s*
18 *NEPA implementing regulations under 10 CFR Part 51.*

19
20 *Written comments on the Draft EIS could be submitted in many forms, including postal mail,*
21 *emails, and uploads to the Federal rulemaking website, as well as written comments provided to*
22 *the NRC staff at the two public comment meetings. No EIS comment form was needed,*
23 *although the NRC staff did provide NRC Public Meeting Feedback forms at the public meetings,*
24 *which could be used, and were used by many of the meeting participants, to provide written*
25 *comments.*

26
27 *The NRC staff provided accurate information to the public at the two public meetings. This*
28 *information was commensurate with the time available for the NRC’s presentation and the need*
29 *to present information that could be understood by all meeting attendees. All members of the*
30 *public and government officials who registered to speak at the meetings were given an equal*
31 *opportunity to speak. Due to the very large numbers of registered speakers at the two*
32 *meetings, most of the meeting time was allotted to receiving public comments. Question and*
33 *answer sessions were also limited by the large number of meeting attendees and speakers, but*
34 *NRC staff were available prior to and after the meetings to discuss the Draft EIS with, and*
35 *respond to questions from, members of the public.*

36
37
38 **Comment:** The following comments relate to attendance and speakers/commenters at the NRC
39 public comment meetings for the Draft EIS.

40
41 **[068-06, Anne Hausrath]** I very much appreciate having a public meeting in Boise. This
42 proposed project would have a profound impact on Boise and all of Idaho.

43
44 I am concerned that it appears people from Idaho Falls who testified in Boise might be given
45 time in Idaho Falls as well at that public meeting. If that was the case I do not appreciate them
46 being given preference and allowed to testify first in Boise.

47
48 One opportunity to testify is great – thank you!

1 **[083-01, Diane Jones]** If I might, I'd like, respectfully, to make a comment on procedure. I'd
2 just like to say, if you're going to have a hearing in Idaho Falls and a hearing in Boise, I think it's
3 appropriate for people from Idaho Falls to testify there and not be able to testify twice in both
4 hearings. There's a lot of us from Boise who really appreciate being able to testify but, you
5 know, they have their hearing. There's one here for us.
6

7 **[098-06, Linda Martin; 098-15, Linda Martin]** Stakeholders that reside in the immediate
8 vicinity of the facility are the appropriate people to comment on these reviews. As residents,
9 voters, and taxpayers, we locally represent the immediate concerns for impacts to our
10 community.
11

12 **[178-01, Randy Trane]** Thank you for the opportunity to comment on the proposed Areva
13 project in the Idaho Falls, Idaho area. I hope common sense will prevail with this decision. It
14 seems as though the minority in this country rules the masses. The Snake River Alliance and
15 similar type people and groups have one objective in mind. That is to slow or stop progress at
16 any costs. Of course they are against any drilling of gas, oil or coal and they are against nuclear
17 power. I suppose they feel like solar and wind will take care of the world.... Please do not allow
18 this small minority group to override the wishes of this area and with needed nuclear power
19 worldwide.
20

21 **Response:** *Public meetings held by the NRC, such as the two public comment meetings the*
22 *NRC staff held on the Draft EIS for the proposed EREF project, are open to all members of the*
23 *public, and all persons who register to speak at such meetings are given an equal opportunity to*
24 *speak.*
25
26

27 **Comment:** The following comments caution the NRC to provide a careful, thorough, and
28 credible analysis in the EIS, and to consider all public comments provided.
29

30 **[067-04, Mike Hart]** I would urge the NRC to review their testimony for the legitimate concerns,
31 but also pay attention to the procedural trip wires, because an EIS is an important legal
32 document. It has to be done well, otherwise the proposal gets caught up in court. So, please do
33 your job, listen, and pay attention to the procedural trip wires....
34

35 I think the NRC has done a good job with the EIS, but I think they also need to make sure it's
36 procedurally tight, so we don't spend a lot of time in court, so that this EIS moves through
37 quickly, but that means they have to do a thorough and excellent job, and I would encourage
38 them to review all opposition comments, adhere to the letter of the law, follow the procedure,
39 and give us an EIS that we can proceed forward with the license.
40

41 **[077-01, Larry Hyatt]** I'd like to speak briefly to the issue of credibility and accuracy of information.
42 I've observed, personally, for over years, basically the life of the Snake River Alliance, and have
43 been a member of that group for many years, that time and time again, when they have taken
44 positions based on concerns, research, and positions of information to implement, and suggestions
45 and requests, that over and over and over again, they have been correct. And that says a heart full
46 of information for me. Therefore, I sincerely request that you evaluate, to the deepest level you
47 possibly can, all of the accurate, sincere information, that our Snake River Alliance has
48 compiled and presents to you.
49

1 **[098-07, Linda Martin]** We appreciate the time and expertise, and patience, at this point, the
2 NRC has devoted to the licensing and permitting process. We hope that your studies and
3 deliberations will continue to rely on scientific fact, and technology for a timely and positive
4 outcome for our community and Idaho.

5
6 **[145-02, Ann Rydalch]** I urge the NRC to continue to listen to scientific facts, and to disregard
7 untruthful or scare tactic statements, statements such as DOE is giving \$2 billion loan
8 guarantee, a misleading statement, because no money exchanges hands. DOE is not giving
9 AREVA the 2 billion dollars. However, by it being included in the Loan Guarantee Program,
10 AREVA and other companies in that program will be able to possibly receive lower interest
11 rates. It's like the Good Housekeeping Seal of Approval. Or another scare statement that
12 building this will cause further degradation of the habitat for sage grouse. The truth is, the NRC
13 preliminary conclusion, as described in Chapter Four, which I have read, the environmental
14 impacts of preconstruction and the proposed actions would mostly be small.

15
16 **[159-02, Robert Skinner]** My caution to the NRC is to take all comments and evaluate them
17 based on their technical merit.

18
19 **[177-02, Hon. T.J. Thomson]** Also, please adequately plan, at the front-end, for any
20 environmental impacts and long-term effects to the area and dedicate the time necessary to
21 realistically prepare for any unforeseen consequences, both financial and otherwise.

22
23 **Response:** *As stated in Section 1.1 of the EIS, the NRC has specifically formulated regulations*
24 *under 10 CFR Part 51 to implement the requirements of NEPA. In preparing this EIS, the NRC*
25 *staff has followed the requirements to independently evaluate and verify all information used in*
26 *the EIS. In addition, as demonstrated in Section I.5 of this appendix, the NRC staff has*
27 *reviewed and considered all comments provided on the Draft EIS in preparing the Final EIS.*

28
29
30 **Comment:** The following comments express appreciation for, and approval of, the NRC's
31 efforts with regard to the Draft EIS and licensing process for the proposed EREF.

32
33 **[034-05, Greg Crockett]** As citizens of the communities closest to the facility, we feel there are
34 certain potential environmental impacts that needed to be addressed in the EIS. We want to
35 thank NRC and its staff for the amount of work that went into the research and evaluation of this
36 Draft EIS along with the Safety Analysis Report.

37
38 Last June at the EIS scoping meeting held in Idaho Falls, we asked you to consider the
39 following potential impacts. (1) land use, (2) transportation, (3) geology and soils, (4) water
40 issues, (5) ecological issues, (6) air quality, (7) historic and cultural issues, (8) socioeconomic,
41 (9) public and occupational health, (10) noise, and (11) waste management.

42
43 We understand and support the NRC's primary role in the protection of public health and
44 safety and as neighbors of the Eagle Rock Enrichment Facility we thank you for your
45 dedication and expertise.

1 **[002-01, Lane Allgood]** Last June, at the EIS scoping meeting held in Idaho Falls, we asked
2 you to consider the following impacts. Land use, transportation, geology and soils, water issues,
3 air quality, historic and cultural issues, social, economic, public and occupational health, noise,
4 and waste management. All of those potential impacts were addressed in the EIS and we
5 appreciate that.
6

7 As citizens of the communities closest to the facility, these potential impacts are very important
8 to us. We want to thank you for the obvious amount of work that went into the research and
9 evaluation of this draft EIS, along with the safety analysis report, and after reviewing this draft,
10 we understand why the licensing process takes so long.
11

12 **[024-02, Jana Chalfant; 149-02, Wendi Secrist; 196-02, Linda Martin, on behalf of the**
13 **Idaho Economic Development Partners]** We appreciate the NRCs use of scientific expertise
14 to guide the decisions for issuance of the license and permit for the Eagle Rock Enrichment
15 Facility. We feel that the NRC procedures for the licensing process have been very satisfactory,
16 and thank you for your thoroughness.
17

18 **[026-04, Rob Chiles]** Over the last few years, the business community and members of the
19 Chamber of Commerce have shown support for this important economic development project.
20 We are here again tonight to commend you for a job well done. We are confident in your
21 analysis, and agree with your recommendation to grant AREVA the license.
22

23 **[033-03, Hon. Mike Crapo; 075-03, Leslie Huddleston, on behalf of Hon. Mike Crapo]** The
24 staff of the NRC have consulted with Tribal, federal, state, and local entities. They have
25 considered the comments released in the environmental review received during the public
26 scoping process. They have thoroughly reviewed the report revisions, and supplementary
27 information submitted b AES. I have confidence in the NRC to analyze potential impacts of
28 construction, operation, and decommissioning of this proposed facility.
29

30 I strongly support the NRC's preliminary recommendation that AREVA Enrichment Services be
31 issued a license to construct and operate the Eagle Rock Enrichment Facility.
32

33 **[042-03, John Deal]** We commend the process completed thus far and appreciate that the
34 NRC's only role is that of protecting public health and safety.
35

36 Hyperion Power, as a member of the Idaho community, and future neighbors of the Eagle Rock
37 Enrichment Facility, thank you for your dedication.
38

39 **[051-01, Jackie Flowers]** I want to thank you, the NRC staff, for your due diligence as you
40 evaluated the AREVA license application for the Eagle Rock Enrichment Facility, and your
41 commitment in safeguarding that process.
42

43 This facility is proposed to be located in our collective backyard. Your work has resulted in
44 identifying and evaluating potential environmental impacts that our community is concerned
45 about, important topics like water resources, air quality, waste management that could impact
46 our day-to-day lives, and our quality of life. You have also completed important work related to
47 safety analysis report, another topic of community concern. I appreciate the NRC's commitment

1 to its primary role, protecting public health and safety, as you have contemplated the application
2 before you.

3
4 As Idahoans look to welcoming new industry in eastern Idaho, we want to know that we are
5 doing so, while maintaining the clean, safe, and healthy environment we currently enjoy. We
6 look to you, the NRC staff, the experts, to conduct a thorough analysis. You have completed this
7 Draft EIS investigating areas of concern as expressed by the community, and we look forward
8 to welcoming AREVA to eastern Idaho.

9
10 **[065-01, Hon. Ida Hardcastle]** My name is Ida Hardcastle, I currently serve as the President of
11 the Idaho Falls City Council, a position I have held for 17 years. My husband and I came to
12 Idaho Falls 45 years ago for him to accept a position with the nuclear industry as an engineer.
13 Obviously we are very much in favor of this project. In addition we appreciate the efforts of the
14 NRC Staff as you have worked through this licensing applications and the detail to safety for the
15 Eagle Rock Enrichment Facility. Obviously the Draft EIS and the Safety Analysis Report have
16 taken a large amount of time and it appears that you have addressed appropriately the potential
17 impacts identified at the June EIS scoping meeting in Idaho Falls. We thank you for your
18 thoroughness.

19
20 **[053-01, Hon. Jared Fuhriman]** I also want to congratulate, and thank the NRC for a very
21 thorough draft EIS, and safety analysis report. It's obvious that a great deal of work has gone
22 into this production. I understand, acutely understand better, the great work and the effort that it
23 takes, and as mayor, I appreciate the detail in your research, and the potential impacts that it
24 has on this project and our communities.

25
26 Please be assured that before we decided to support this project, we did a great deal of
27 research ourselves, to ensure that this type of facility was appropriate for our community.

28
29 While I'm not a nuclear expert, many Idaho Falls residents are, and we have the luxury to
30 receive counsel from them when we have questions involving nuclear and environmental
31 issues.

32
33 I also agree, recognize the expertise of the NRC team that is working on this licensing
34 application, and I thank you for the time that you've given to us as we've traveled back to
35 Washington, D.C. and have met with you. We truly appreciate that. Your courtesy and frankness
36 has helped our community better understand the licensing process.

37
38 **[053-04, Hon. Jared Fuhriman]** I once again want to go on record one more time stating that
39 I'm personally satisfied with the thoroughness and the efforts that NRC has made to this point in
40 time regarding the EIS, and endorse that AREVA should be licensed to construct the Eagle
41 Rock Enrichment Facility.

42
43 **[079-03, Kristen Jensen; 179-03, Jolie Turek; 194-02, Linda Martin, on behalf of Eastern
44 Idaho Economic Development Partners]** We feel that the NRC procedures for the licensing
45 process have been very satisfactory, and thank you for your thoroughness.

1 **[094-04, Michael Lange]** So, AREVA, notwithstanding, I don't know AREVA. I've never worked
2 for AREVA, but I trust the NRC. And being -- during my time in government -- being what most
3 people in Montana would consider me a right-wing Republican, was also the president of a labor
4 union, I can tell you that I have confidence in a few government agencies to regulate properly.
5 One of them is the NRC, so we can be thankful that we have an agency that is that concerned
6 about safety, about mockups, about making sure that it's done right the first time. So, that's real
7 kudos for the Commission. I would extend that to you from personal experience.
8

9 **[098-07, Linda Martin]** We appreciate the time and expertise, and patience, at this point, the
10 NRC has devoted to the licensing and permitting process. We hope that your studies and
11 deliberations will continue to rely on scientific fact, and technology for a timely and positive
12 outcome for our community and Idaho.
13

14 **[094-01, Michael Lange]** I have a unique perspective. In 2002, I was elected to the Montana
15 State legislature. I served there for six consecutive years, before going on to lose the United
16 States Senate race in Montana. And the last four of those years, I served as the House Majority
17 Leader, so I'm well aware of the particulars of a NEPA review. I have thoroughly read this EIS,
18 and it is very professionally written. It is very accurately done. It does, in fact, comply with NEPA
19 requirements, and I commend the NRC for that effort.
20

21 **[133-09, Richard Provencher]** From an operational safety standpoint, the Nuclear Regulatory
22 Commission is involved in reviewing the license application and will ultimately ensure that
23 operations are being conducted safely, that proper safety controls are in place, and that
24 possible safety events have been evaluated with response plans in place. As an independent
25 licensing agent, it is comforting to know the NRC will review this facility as a third party to
26 ensure the protection of the public and environment.
27

28 **[135-04, Hon. Dave Radford]** And we applaud your work, we respect your work, and we hope
29 for a great outcome for an expedited license for AREVA.
30

31 **[138-01, Christine Reichgott, on behalf of the U.S. Environmental Protection Agency,
32 Region 10]** We note with appreciation that the DEIS addresses many of the issues we raised
33 during the project scoping period in June 2009, including analysis of cumulative impacts and
34 climate-change effects. Also, we commend NRC staff for working with a variety of stakeholders
35 and considering public comments in the NEPA analysis for the project. The DEIS document
36 includes a good description of resources within the project area, analysis of anticipated
37 environmental impacts from the project, mitigation measures to offset the impacts, and
38 monitoring programs for potential radiological and non-radiological releases from the facility to
39 the environment and measures to be taken to prevent such releases and ensure protection of
40 environmental resources and human health in case an accidental release occurred.
41

42 **[143-02, Hon. James Risch; 172-02, Amy Taylor, on behalf of Hon. James Risch]** I am
43 confident that the Nuclear Regulatory Commission will address the safety and environmental
44 impacts from this proposed facility.
45
46

1 **[176-01, Hon. Jeff Thompson]** Thank you all for attending tonight, and for listening to
2 everyone's concerns and questions. It is obvious you have taken time to address many of our
3 concerns in the Safety Analysis Report. We appreciate the commitment to protecting the
4 public's health and safety.
5

6 **Response:** *The NRC acknowledges these comments and appreciates the public participation.*
7
8

9 **Comment:** The following comments express approval of the Draft EIS and state that the
10 Draft EIS addresses the appropriate concerns.
11

12 **[011-01, Donald Baxter]** I am in complete agreement with the comment previously submitted
13 by another supporter of the Eagle Rock Facility. "I support the NRC assessments regarding the
14 potential impacts named in the draft EIS, and agree with the findings that the impacts are small
15 to moderate. We also find them more than acceptable when viewed in relation to the positive
16 benefits this project will bring, which are not small to moderate, but instead massive and
17 transformative. Finally, we agree with your preliminary conclusions that this project deserves to
18 move forward."
19

20 **[026-01, Rob Chiles]** After careful review with a number of scientific environmental and socio
21 economic experts, we strongly feel that the Draft EIS has covered all of our concerns. We are
22 convinced the NRC has done a thorough job in analyzing all the aspects of this project, and agree
23 the results are complete and accurate.
24

25 **[034-06, Gregg Crockett]** Following review of the Draft EIS, we concur that the following
26 potential impacts were evaluated and scored correctly under the Council on Environmental
27 Quality's significance levels:
28

- 29 • Land Use: Small
- 30 • Transportation: Small to Moderate
- 31 • Geology and Soils: Small
- 32 • Water Resources: Small
- 33 • Ecological Issues: Small to Moderate
- 34 • Air Quality: Small to Large (We do understand that during construction dust from heavy
35 equipment working on the proposed site will generate dust from land grading
36 operations that would result in a large but temporary condition. We live in eastern
37 Idaho with its wind and agricultural activity. We don't believe dust will be a significant
38 problem.)
- 39 • Historic and Cultural Issues: Small to Moderate
- 40 • Public and Occupational Health: Small
- 41 • Noise: Small
- 42 • Waste Management: Small
43

44 ...In closing we agree with the NRC staff recommendation that due to insignificant environment
45 impacts of the EREF, AREVA should be issued a license to construct and operate the facility
46

1 **[042-02, John Deal]** After reviewing the Draft EIS scoping on community impact we concur that
2 the impacts were scored correctly and reflect a conservative and measured approach to the
3 study.

4
5 **[051-03, Jackie Flowers]** I support the NRC staff recommendation that due to small
6 environmental impacts from the Eagle Rock Enrichment Facility, AREVA should be issued a
7 license to construct and operate the facility.

8
9 **[060-01, Ericka Gianotto]** Now with the release of the Environmental Impact Statement for the
10 public comment, our concerns about the impact on the surrounding area and whether this
11 facility would affect the pristine condition of Idaho's countryside, have been allayed.

12
13 While we know the facility will affect the surrounding area, we believe these impacts will be
14 small and have been or will be mitigated.

15
16 **[065-01 and 065-02, Hon. Ida Hardcastle]** My name is Ida Hardcastle, I currently serve as the
17 President of the Idaho Falls City Council, a position I have held for 17 years. My husband and I
18 came to Idaho Falls 45 years ago for him to accept a position with the nuclear industry as an
19 engineer. Obviously we are very much in favor of this project. In addition we appreciate the
20 efforts of the NRC Staff as you have worked through this licensing applications and the detail to
21 safety for the Eagle Rock Enrichment Facility. Obviously the Draft EIS and the Safety Analysis
22 Report have taken a large amount of time and it appears that you have addressed appropriately
23 the potential impacts identified at the June EIS scoping meeting in Idaho Falls. We thank you for
24 your thoroughness.

25
26 I spend a large amount of time in the city among the residents and it is exciting to feel the
27 enthusiasm most have for this project coming to Idaho Falls. Of course the main interest is the
28 economic impact it will have on the area, in other words - jobs. Also the community supports the
29 fact that there will be a very small environmental impact from this facility. We thank the NRC
30 again for their efforts in this particular concern. We have a top notch workforce here which was
31 recognized by AREVA in the beginning. The community as a whole supports energy being
32 produced by nuclear power. We simply have to address our independence on foreign oil.

33
34 **[067-05, Mike Hart]** One of the concerns was that there's project clearing going on before the
35 impact statement is done. NEPA requires you're not supposed to have an irrevocable
36 commitment of resources. I don't believe the site clearing counts as that, so as a result, I think
37 the project can continue forward without violating that NEPA precept.

38
39 **[069-01, Scott Hawk]** I support the NRC assessments regarding the hazards and potential
40 impacts addressed in the draft EIS I agree with the findings that the impacts are acceptable to
41 manage safely. I look forward to the massive and transformative positive benefits this project
42 will bring to Eastern Idaho. Finally, I agree with your preliminary conclusions that this project
43 deserves to move forward

44
45 **[073-01, Mark Holzmer]** I wholeheartedly support the NRC assessments regarding the
46 potential impacts named in the draft EIS. You concluded that the environmental impacts are
47 small to moderate, and I personally believe that your conclusions easily bound the

1 environmental impacts and may indeed be much lower. These impact findings are more than
2 acceptable, especially considering the positive benefits this project will bring to southeast Idaho.

3
4 Finally, I agree with your preliminary conclusions that this project deserves to move forward.

5
6 **[076-01, Martin Huebner]** I want to address my personal and informed opinion on the
7 adequacy of the Draft Environmental Statement for AREVA's proposed Eagle Rock facility. I
8 reviewed the EIS, and I find no errors or omissions in it. It is a well-crafted and complete
9 document, which should be accepted and approved, as is. The impact statement has been
10 criticized unnecessarily and repeatedly by the Snake River Alliance, who I have been dealing
11 with since it was founded years ago.

12
13 **[079-02, Kristen Jensen; 179-02, Jolie Turek; 194-02, Linda Martin, on behalf of Eastern
14 Idaho Economic Development Partners]** We feel confident that the NRC and AREVA have
15 addressed all necessary safety and environmental concerns in the draft EIS. We urge the NRC
16 to stay on scope and utilize scientific expertise to guide their decisions for issuance of the
17 license and permit for the EREF plant.

18
19 **[228-07, Jim Kay]** Our comments on the DEIS are only editorial. As we have indicated
20 previously, we believe the DEIS was well prepared and adequately supports the proposed
21 action to issue a license.

22
23 **[102-03, R.D. Maynard]** I applaud the NRC on your very thorough work on this licensing
24 application and appreciate the detail of research that went into the EIS.

25
26 I would suggest that anyone with concerns about environmental issues associated with this
27 project spend some time reading the environmental impacts, mitigation, environmental
28 measures, and monitoring programs, and summary of environmental consequences section of
29 the EIS.

30
31 I strongly support this as a citizen of the State of Idaho.

32
33 **[124-01, Lane Packwood]** We've also reviewed the EIS, and from a technical point of view, we
34 find it is adequate, and we encourage you to proceed to the next step, licensing.

35
36 **[130-01, Park and Sharon Price]** We support the NRC assessments regarding the potential
37 impacts named in the draft EIS and agree with the findings that the impacts are small to
38 moderate. The need for an enrichment facility as proposed by AREVA is long overdue. The
39 importance of increasing the production of power by nuclear generation is vital to the
40 United States.

41
42 **[135-04, Hon. Dave Radford]** We, as the commission, agree with the Environmental Impact
43 Statement's conclusion.

44
45 **[142-01, Blake Rindlisbacher, on behalf of the Idaho Transportation Department]** Thank
46 you for your early and close consultation with the Idaho Transportation Department in the
47 development of this environmental impact statement. We believe the statement as expressed in
48 this draft is accurate with regards to our state highway system and the impacts this project will

1 have on it. The mitigation you cite for those impacts are indeed appropriate and we encourage
2 the NRC to make ride sharing and shifts staggered from those of the Idaho National Laboratory
3 a part of the operating license for AREVA Enrichment Services. We will continue to discuss with
4 them the terms and conditions of their access to US-20, but specific operation behavior that
5 may reduce risk is beyond our authority to require.
6

7 **[145-01, Ann Rydalch]** We thank the NRC for the staff's preliminary conclusion that the Eagle
8 Rock Enrichment Facility would have mostly small impacts on the local environment and that
9 AREVA should be issued a license to construct and operate the facility. I encourage you to
10 follow the preliminary recommendation that AREVA be issued a license to construct and
11 operate the Eagle Rock Enrichment Facility here in Bonneville County, Idaho Falls, Idaho,
12 formerly called Eagle Rock, Idaho.
13

14 **[151-02, Beth Sellers]** The draft EIS covered a wide range of impacts. They are the standard
15 impacts that are seen with any major construction activity. The areas of most concern to me
16 include water resources, ecological and cultural resources, waste management, and the
17 transportation impacts to those of us in Idaho Falls. The NRC analysis was comprehensive and
18 the impacts were noted to be small in the majority of the impacts analyzed. For those
19 environmental impacts noted to be in the moderate to large range, the mitigations detailed by
20 the applicant were deemed acceptable.
21

22 I support the NRC staff recommendation that due to small environmental impacts from the
23 Eagle Rock Enrichment Facility, Areva should be issued a license to construct and operate the
24 facility.
25

26 **[152-02, Steven Serr]** I've had an opportunity to read your draft EIS. I agree with most of the
27 issues that you've stated in there as far as compliance, with what we feel are important within
28 the jurisdictions for enforcement.
29

30 **[157-05, Hon. Erik Simpson]** In conclusion, I want to state that I strongly support the AREVA
31 project, and feel the draft EIS is very adequate and considers the environmental factors associated
32 with the facility. I believe AREVA will be a positive addition to the State of Idaho, and an integral
33 part of our nation's development of energy independence.
34

35 **[159-01, Robert Skinner]** I have carefully read the Draft EIS, all of it I have not read totally,
36 because it is huge. You're going to put the guys that sell sleeping pills out of business, I'm sure,
37 but I would like to commend the crafters of this document for their hard work and diligence. I find
38 it to be thorough, and lacking in no respect technically. I am here to address the technical
39 aspects of the EIS....
40

41 I believe AREVA should be issued a license to construct and operate the Eagle Rock Enrichment
42 Facility at the earliest opportunity.
43

44 **[163-03, Smith-Putnam, Cindy]** As your EIS shows, and like in all human endeavors, the
45 project is not wholly devoid of impact. The air quality issue is an impact; yet, we are mindful that
46 land and dust issues are a normal part of any major construction, and will be temporary and
47 brief in duration. Risks and impacts are an inherent part of life on this planet. They cannot be

1 avoided, but they can be anticipated, and evaluated, weighed and measured in comparison to
2 their relative reward and benefits.

3
4 What is important to maintain, as Rocky said, is a sense of perspective when evaluating those
5 risks and impacts. And that is what the opponents of this license approval fail to do when they
6 engage in hyperbole and misdirection bringing more heat to the subject than light....

7
8 We support the Preliminary NRC assessments regarding the potential impacts named in the
9 Draft EIS, and we agree with the findings that the impacts are small to moderate. We also find
10 them more than acceptable when viewed in relation to the positive benefits this project will
11 bring, which are neither small nor moderate, but, instead massive, and transformative.

12
13 Finally, we agree with your preliminary conclusions that this project deserves to move forward.
14 We hope you will continue to rely on scientific fact in making these decisions, and not be
15 swayed by emotion or opinion, and we urge you to grant the license for the AREVA project in a
16 timely manner. Thank you for considering our perspective.

17
18 **Response:** *The NRC acknowledges these comments and appreciates the public participation.*

19
20
21 **I.5.4 Purpose and Need**

22
23 **Comment:** The following comment questions the need for the proposed EREF with regard to
24 U.S. national energy security.

25
26 **[015-09, Beatrice Brailsford]** The basis for and discussion of the second “need” - domestic
27 supplies of enriched uranium for national energy security - is beyond puzzling. Setting aside the
28 fact that the enriched uranium market is an international market, the key word in the current
29 rationale is “domestic.” The “national energy security policy objective” Areva’s plant is supposed
30 to meet was enunciated in a letter from Assistant Secretary William Magwood at the Department
31 of Energy (DOE) to the Nuclear Regulatory Commission eight years ago. The focus of the letter
32 was not that the US needed a foreign company to build a plant here, but rather that an
33 American company should have a stake in US enrichment capacity. The US Enrichment
34 Corporation has been granted a license - though not a federal loan guarantee - to build a plant,
35 which would seem to more directly meet the policy objective enunciated in the letter. If the NRC
36 is pointing to a “policy objective,” that objective must have been articulated more recently and
37 with a “higher profile” than a single letter from an Assistant Secretary provides.

38
39 **Response:** *While the enriched uranium market may be an international one, the addition of*
40 *domestic uranium enrichment capacity, as would be provided by the proposed EREF, would*
41 *help fulfill the need for U.S. domestic energy security, as discussed in Section 1.3 of the EIS.*
42 *As discussed in Section 1.6 of the EIS, AES is a Delaware limited liability corporation that was*
43 *formed solely to provide uranium enrichment services for commercial nuclear power plants. As*
44 *discussed in Section 1.3.2 of the EIS, one of the needs for the proposed EREF is increased*
45 *domestic uranium enrichment for enhanced energy security. The DOE letter (DOE, 2002)*
46 *referenced in the comment is one reflection of that need, and it also references the concurrence*
47 *of the U.S. Department of State on the matter.*

1 **Comment:** The following comment questions the adequacy of the economic justification for the
2 proposed EREF.

3
4 **[068-04, Anne Hausrath]** My husband and I raised our children in Idaho. We are very much
5 concerned about the current economic climate for their generation, and we believe there's a
6 responsibility of all of us to provide for that. I don't believe that this plant is adequate -- that the
7 economic is adequate justification for that.

8
9 **Response:** *As discussed in Section 1.3 of the EIS, the need for domestic enriched uranium*
10 *services is one of the reasons why the proposed EREF is needed. The potential beneficial*
11 *economic impacts are just one of the outcomes that result from the range of analyses over*
12 *multiple resource areas considered in the EIS.*

13
14
15 **Comment:** The following comment questions the credibility of statements in the Draft EIS that
16 the proposed EREF will aid the United States in achieving energy independence and/or more
17 national security.

18
19 **[147-17, Joey Schueler]** 13. The notion that this plant will aid the United States in achieving
20 energy independence and/or more national security is a myth. The United States does not
21 control all steps in the Nuclear Power generation process. As a result, every other step that we
22 can produce is dependent upon other nations and what they can contribute. Removing one step
23 in the process would curtail or stop our nuclear energy system.

24
25 **Response:** *The addition of domestic uranium enrichment capacity, as would be provided by the*
26 *proposed EREF, would help fulfill the need for U.S. domestic energy independence and*
27 *security, as discussed in Section 1.3 of the EIS. As noted in the comment, other steps are*
28 *required so as not to curtail or halt nuclear energy in the United States, but those aspects are*
29 *outside the scope of this EIS because they do not relate to the environmental review of the*
30 *proposed EREF project.*

31
32
33 **Comment:** The following comment questions the need for an AES uranium enrichment plant in
34 the U.S. when a similar plant AES is constructing in France could instead be expanded.

35
36 **[168-07, Lon Stewart]** If Areva is currently building a similar plant in France, economy of scale
37 would make more sense to expand that plant rather than building another plant in the western
38 United States.

39
40 **Response:** *As discussed in Section 1.3.1 of the EIS, the proposed action, which is to construct,*
41 *operate, and decommission a uranium enrichment plant near Idaho Falls in Bonneville County,*
42 *Idaho, is intended to satisfy the need for an additional reliable and economical domestic source*
43 *of uranium enrichment services. Expanding AES's plant in France would not satisfy that need.*

44
45
46 **Comment:** The following comment questions the premise in the Draft EIS regarding the need to
47 lessen the U.S. dependence on enriched uranium from foreign sources.

1 **[193-11, Liz Woodruff, on behalf of the Snake River Alliance]** And when our country gets
2 crude oil from overseas and refines it here, does that lessen our dependence? So these are
3 questions we need to ask about the premise set up in the EIS.
4

5 **Response:** *The proposed action is intended to satisfy the need for an additional reliable and*
6 *economical domestic source of uranium enrichment services. While the proposed action would*
7 *not entirely remove dependence on foreign sources, it would partially address that dependence.*
8
9

10 **Comment:** The following comments question the premise in the Draft EIS that a reliable source
11 of enriched uranium is needed.
12

13 **[191-07, Liz Woodruff]** The draft EIS fails to establish that the current approach to supplying
14 enriched uranium is unreliable. There is uranium enrichment in the US, enriched uranium has
15 always been an international market, the raw material comes from foreign sources, and this
16 system has adequately provided fuel for US reactors for decades.
17

18 **[193-10, Liz Woodruff, on behalf of the Snake River Alliance]** And I'd just like to pause here,
19 to check in on this theory of theirs, that there is this need for reliability. Have we ever shut down
20 a reactor because the fuel source was unreliable, in this country? It seems like it's been working
21 pretty well so far.
22

23 **Response:** *The proposed action is intended to satisfy the need for an additional reliable and*
24 *economical domestic source of uranium enrichment services to help ensure that no U.S.*
25 *reactors would have to be shut down in time of crisis because of lack of fuel. Past experience*
26 *may not be predictive of whether such a crisis will occur in the future. The current domestic*
27 *enrichment services are not sufficient to support U.S. demand if needed. As discussed in*
28 *Section 1.3.1 of the EIS, the current capacity falls short and is heavily dependent on the aging*
29 *Paducah Gaseous Diffusion Plant, which is not economical and expected to cease operations in*
30 *the near future due to the high cost of maintenance.*
31
32

33 **Comment:** The following comments suggest that demand in the U.S. for enriched uranium will
34 go down as the currently operating reactors are decommissioned.
35

36 **[181-10, Roger Turner]** 1. The purpose and need analyses needs up-dated in EIS. The
37 following conditions, in combination, eliminate the need for this project: (a) recent finds of large
38 amounts of natural gas in the U.S. is reducing interest in nuclear power and rendering nuclear
39 power uneconomical in comparison; (b) the cost of solar and wind power are coming down
40 resulting in a larger role for these power sources and; (c) with the reduction of nuclear power
41 plants in the U.S. domestic uranium enrichment plants will be able to supply the nuclear power
42 industry with ample supplies of U-235, without the need for this proposed, expensive, AREVA
43 plant. The aforementioned points are detailed below:
44

45 (A) Recent finds of large amounts of natural gas fields in the U.S. reducing the interest and
46 momentum by power companies in developing nuclear power. New finds of domestic natural
47 gas has resulted in a switch in interest from coal and nuclear to gas for power supplies. A
48 recent MIT study, that is more up-to-date than the study referenced in the draft EIS, reveals a

1 likely economically realistic switch to natural gas for the United States power supplies. This
2 study, by a group of 30 MIT faculty members, researchers and graduate students reflects the
3 more accurate conditions for power plant construction in the United States for the next 40 years.
4 The study shows a baseline global estimate of recoverable gas resources reaching some
5 16,200 trillion cubic feet (Tcf), enough to last over 160 years at current global consumption
6 rates. (The Future of Natural Gas -- Study finds significant potential to displace coal, reducing
7 greenhouse gas emissions, MIT, June 2010) In addition the study reports the following trend:
8

9 “Natural-gas consumption will increase dramatically and will largely displace coal in the power
10 generation sector by 2050 (the time horizon of the study) under a modeling scenario where,
11 through carbon emissions pricing, industrialized nations reduce CO₂ emissions by 50 percent by
12 2050, and large emerging economies, e.g. China, India and Brazil reduce CO₂ emissions by
13 50 percent by 2070. This assumes incremental reductions in the current price structures of the
14 alternatives, including renewables, nuclear and carbon capture and sequestration.”
15

16 According to U.S. Energy Information Administration Annual Energy Outlook 2010, domestic
17 and Canadian gas supply will increase, at least to 2035.
18

19 Shale gas provides largest source of growth in U.S. natural gas supply
20

21 The increase in U.S. natural gas production from 2008 to 2035 in the AEO-2010 Reference
22 case results primarily from continued growth in production of shale gas, recent discoveries in
23 deep waters offshore, and, to a lesser extent, stranded natural gas brought to market after
24 construction of the Alaska natural gas pipeline is completed in 2023. Shale gas and coalbed
25 methane make up 34 percent of total U.S. production in 2035, doubling their 17-percent share in
26 2008. Shale gas is the largest contributor to the growth in production, while production from
27 coalbed methane deposits remains relatively stable from 2008 to 2035.
28

29 (B) The cost of solar power is lower than nuclear power, resulting in a larger role for these
30 power sources. The New York Times reports the following article:
31

32 Solar power costs have been declining, the costs of nuclear power have been rising inexorably
33 over the past eight years, said Mark Cooper, senior fellow for economic analysis at Vermont
34 Law School’s Institute for Energy and Environment. Estimates of construction costs — about
35 \$3 billion per reactor in 2002 — have been regularly revised upward to an average of about
36 \$10 billion per reactor, and the estimates are likely to keep rising, said Mr. Cooper, an analyst
37 specializing in tracking nuclear power costs. (New York Times; Special Report: Energy and
38 Environment, Nuclear Energy Loses Cost Advantage, July 26, 2010)
39

40 (C) Switch to other power sources means no need for Areva. Given the above two examples of
41 a switch to other power sources than nuclear, the existing plans for enrichment will be adequate
42 to supply the U.S. nuclear industry. The Les Urenco company has plans to produce up to 6
43 million SWU; while the USEC produces 10.5 Million SWUs.
44

45 Also, in 2008, an amended agreement allows Russia to export increasing amounts LEU
46 available to nuclear power companies to the United States, starting with 442,000 pounds in
47 2011 and up to 13.7 Million pounds in 2020.
48

1 While it is true that some nuclear plants may expand their existing power plant, such as Watts
2 Bar 2 (TVA), there will be nowhere near the number of new units predicted by the NRC's Energy
3 Assessment Administration Report (EIA 2009a) and nowhere near the need for SWUs
4 referenced in the draft EIS for AREVA; and because of many nuclear plants are
5 decommissioning -- there will be less and less need for enriched uranium. Many of the firms
6 that initially consider nuclear construction are bound by State requirements that they be 'prudent
7 investors'. Therefore, many initial applicants to NRC are dropping out completely, or keeping
8 them on hold.

9
10 Consequently, the EIS should carefully review current studies and assessments that show a
11 general swing to natural gas, solar and wind. Unfortunately the NRC fails to take a hard look at
12 this purported need. A nuclear power plant hasn't been built in the United States in two
13 decades. The EIS needs to provide economic comparisons of nuclear vs. Solar and Natural
14 Gas. More and more companies are dropping their nuclear power applications to NRC, and
15 therefore the need for this plant is not justified, given the existing and soon to open facilities in
16 the U.S. to provide sources of enriched uranium.

17
18 **[187-06, John Weber]** I recommend the "no action alternative" for the following reasons. With
19 many of the current US reactors nearing the end of the design life expectancy and very few, if
20 any, new reactors likely to be build due to economics, a case has not been made for a need for
21 this plant.

22
23 **Response:** *As discussed in Sections 1.3.1 and 1.3.2 of the EIS, the need for the proposed*
24 *EREF is based on both the projected increase in the number of U.S. commercial nuclear*
25 *reactors and the current inadequate capacity for domestic enriched uranium production.*
26 *Section 1.3.1 has been revised to note that most current U.S. reactors that have come, or are*
27 *coming, to the end of their original 40-year license are undergoing a license renewal process for*
28 *an additional 20 years of operation. Therefore, as discussed in Section 1.3.1, a net increase in*
29 *U.S. reactors is expected, and the proposed EREF would help supply the additional enriched*
30 *uranium required for their operation, as well as ensure that U.S. capacity for enriched uranium*
31 *production would remain commensurate with U.S. demand.*

32
33
34 **Comment:** The following comments suggest that the correlation between future energy demand
35 and the corresponding future demand for low enriched uranium is speculative.

36
37 **[113-01, Ken Miller]** The Draft EIS in Section 1.3.1 suggests that "as future demand for
38 electricity increases, the need for low enriched uranium to fuel nuclear power plants is also
39 expected to increase," and they're citing the Energy Information Administration's Annual Energy
40 Outlook in 2009. In fact, the correlation between future energy demand and the corresponding
41 future demand for low enriched uranium today is speculative, at best.

42
43 **[113-07, Ken Miller]** The Draft EIS in Section 1.3.1 suggests that, "As future demand for
44 electricity increases, the need for Low Enriched Uranium to fuel nuclear power plants is also
45 expected to increase." In fact, any correlation between future electricity demand and a
46 corresponding future demand for Low Enriched Uranium is speculative at best. The Department
47 of Energy does not put the nation's future electricity eggs in the nuclear basket. Far from it: It
48 envisions a much more diverse energy portfolio that is more reliant than ever on energy
49 efficiency and conservation and other truly renewable baseload energy resources.

1 **Response:** *The quote in these comments from Section 1.3.1 of the Draft EIS does not include*
2 *the reference, immediately following the quote in the EIS text, that was given to*
3 *U.S. Department of Energy’s (DOE) Energy Information Administration’s (EIA) “Annual Energy*
4 *Outlook 2009 With Projections to 2030.” In that reference, the EIA of the U.S. Department of*
5 *Energy (DOE) estimates the increasing need for nuclear power (and therefore, enriched*
6 *uranium) based on an increasing need for electricity, taking into account increases from other*
7 *sources of electric power and conservation measures.*

8
9
10 **Comment:** The following comments note that the proposed EREF would use a more
11 economical and environmentally friendly uranium enrichment process.

12
13 **[098-11, Linda Martin]** The company’s use of centrifuge technology is a proven, safe method
14 of enriching uranium. This technology is more energy efficient, more environmentally friendly
15 and less expensive to operate than the other accepted uranium enrichment process called
16 gaseous diffusion.

17
18 **[143-03, Hon. James Risch; 172-03, Amy Taylor, on behalf of Hon. James Risch]** ...I also
19 note the centrifuge technology is proven, reliable, and efficient. The process will use 50 times
20 less electricity than a gaseous diffusion plant, and the amount of water used by the plant is less
21 than the current irrigation appropriation.

22
23 **Response:** *As stated in Section 1.3.1 of the EIS, the proposed action is intended to satisfy the*
24 *need for an additional economical domestic source of enriched uranium.*

25
26
27 **Comment:** The following comments support the national security goal of sufficient domestic
28 enrichment capability.

29
30 **[034-02, Greg Crockett]** It is time for the U.S. to change directions in the interest of our energy
31 future and our national interest. It is time for the United States to reassume a leadership role
32 worldwide in nuclear energy. Our national security interests require that we have enrichment
33 and fuel development capabilities within our borders. I support the Draft Environmental Impact
34 Statement, which likewise recognizes those demands.

35
36 **[051-02, Jackie Flowers]** Something else this community is concerned about and cares about
37 is energy. As this country grapples with visions for a sustainable energy future, and energy
38 independence, we have to take action and stop the rhetoric. Nuclear energy provides
39 20 percent of the nation’s electricity. We’ve already heard that tonight. Importantly, we’ve also
40 heard it provides more than 69 percent of emission-free electricity that keep the lights on in this
41 country. Let me stress, base load emission-free energy. With less than 15 percent of the nuclear
42 fuel supply necessary for the existing nuclear energy fleet coming from a single source inside
43 this country’s border, we have an energy security problem that I believe rallies that of our
44 dependence on foreign oil. And this is an important step towards building that independence.

45
46 Nuclear energy is ready now to be a central part of a balanced common-sense approach to
47 clean energy diversity. I agree with the NRC staff’s statement that this facility will contribute to

1 the attainment of national energy security policy objectives by providing an additional reliable
2 and economical domestic source of fuel for these important nuclear energy facilities.

3
4 **[123-04, Hon. Butch Otter; 090-04, Paul Kjellander, on behalf of Hon. Butch Otter; 195-04,**
5 **Hon. Jeff Thompson, on behalf of Hon. Butch Otter]** Third, Eagle Rock will help rebuild the
6 nation's nuclear infrastructure, and enhance energy security for all those who depend on
7 nuclear power for their health and welfare right here from Idaho

8
9 **[128-09, Bob Poyser]** AREVA is really excited to be a part of Idaho's business community, and
10 we look forward to continuing our work with the state, and the people of Southeastern Idaho.
11 We plan to build and operate a safe environmentally sustainable world class facility that is
12 important to America's energy security, important to our American utility customers, and
13 important to the advancement of Idaho's continued leadership in nuclear programs. Thank you
14 very much.

15
16 **[133-01, Richard Provencher]** I fully support the NRC's proposed preferred alternative to build
17 a uranium enrichment plant west of Idaho Falls, Idaho. The facility being pursued by AREVA will
18 provide an additional reliable and economical domestic source of low enriched uranium to be
19 used in commercial nuclear power plants. Having more capability for enrichment in this country
20 helps reduce the risk related to importation of this type of material from foreign sources. The
21 AREVA facilities planned capacity can provide 40% of the current and planned demand for
22 enriched uranium. AREVA's business plan fits well within the country's plan to reduce
23 dependency on foreign oil, improve the climate, and make nuclear energy a larger contributor to
24 the domestic energy supply. This creates a clear mandate for the capability which is critically
25 important to beginning the review of environmental impacts related to its operation.

26
27 **[158-02, Hon. Mike Simpson; 139-02, John Revier, on behalf of Hon. Mike Simpson]** It is
28 more important than ever, that our nation take the steps needed to end our dependence on
29 foreign sources of energy and become energy independent. Currently, the United States
30 imports nearly 90 percent of the uranium enrichment services it uses. The Eagle Rock facility
31 will provide a stable domestic supply of enriched uranium for existing and planned commercial
32 nuclear reactors, and it will serve an important part of an overall domestic energy strategy.

33
34 **[163-02, Cindy Smith-Putnam]** The bigger picture is this project's significance to our regional
35 and national energy future, and it is the national energy future that fundamentally and absolutely
36 requires a significant reset from the status quo.

37
38 Currently, under the E in Energy, Grow Idaho Falls has taken an active role in supporting the
39 development and expansion of green renewable sources of energy. We can, we should, we
40 have, and we will continue to support the diversification of the energy portfolio of our region and
41 nation, to include harnessing the power of wind, water, heat, and light, to reduce the harmful
42 effects to the environment of carbon emitting sources, and to promote our national security by
43 becoming less reliant on foreign oil.

44
45 Increasing renewables, promoting conservation, decreasing use of fossil fuels, all very
46 important, we can, and we should do all of those things. And, yet, even taken together, none of
47 that is enough, not nearly enough to meet our growing energy demands. Nuclear energy stands
48 alone as the best way to produce the energy we need, while at the same time minimizing

1 harmful environmental and geopolitical consequences. It gives us the opportunity to turn away
2 from the practices of the past toward a more stable and sustainable energy future.

3
4 Therefore, just as we need to be independent of unstable and unpredictable sources of oil, we
5 also need to be independent of unstable and unpredictable sources of enriched uranium. Simply
6 put, the Eagle Rock Enrichment Facility beautifully addresses that need.

7
8 **[171-03, John Tanner]** It is a fact that we import well more than half of the enriched uranium
9 that we presently need, not that some future reactors might need, but that we presently need.

10
11 Furthermore, we would like to shut down the one remaining gas diffusion enrichment plant in
12 Paducah, Kentucky, because the gaseous diffusion is so much more inefficient than gas
13 centrifuge technology. In fact, I think they use about 10 times as much electricity for a given
14 amount of separation as a gas centrifuge plant does.

15
16 Now, okay, we could import enriched uranium, but then not only the profits go abroad, but the
17 jobs, as well. I don't think that's what we want to do.

18
19 **[173-01, David Taylor]** ...I am strongly in favor of the construction and maintenance of the
20 Areva complex and hope the rest of the DOE INL site can be used for productive nuclear
21 research and generating capacity....

22
23 We cannot supplant the energy from fossil fuels to the electric grid without vast improvements to
24 the grid itself and to generating capacity. Nuclear is the only viable alternative and the only one
25 that is "eco friendly" to the environment. Fear mongers and professional detractors "Snake River
26 Alliance" use disgraceful tactics and words in attempting to keep their little source of revenue
27 alive.

28
29 We possess the technology (Gen IV reactors) and now need the common sense to use these
30 resources to help sustain a vibrant economy and standard of living that we have all come to
31 expect. The next generation will not have these opportunities if we squander and make feeble
32 attempts to make nuclear energy production a reality now.

33
34 I support Areva and the ideas that surround using nuclear technology as a great national effort.
35 It must be for national security and for economic security. We must have a federal government
36 that will establish certain protocols and reactor templates that if complied with will move to a fast
37 track for licensing and construction. From there the government must run interference against
38 all the special interest that come to bear only for the reason of capital extraction. Thanks for
39 allowing us to be part of this potentially wonderful venture that will not only bless the lives of
40 those who live and work here but for the whole nation.

41
42 **Response:** *As stated in Section 1.3.1 of the EIS, the proposed action is intended to satisfy the*
43 *need for an additional economical domestic source of enriched uranium.*

44
45
46 **Comment:** The following comments suggest that the proposed EREF is needed to address the
47 potential short-fall in enriched uranium supply with a safe, proven, and efficient uranium
48 enrichment process.

1 **[033-01, Hon. Mike Crapo; 075-01, Leslie Huddleston, on behalf of Hon. Mike Crapo]** Now,
2 more than ever, it is critical to develop secure, economically feasible, and clean supplies of
3 domestic energy. EREF will supply America's existing operation fleet of nuclear power reactors,
4 and further augment the anticipated growth of new commercial nuclear power generation here
5 in the U.S.
6

7 **[034-03, Greg Crockett]** Demand for nuclear fuel is, and will dramatically increase in the
8 future, and I think that's demonstrated by the number of pending NRC license applications. To
9 suggest that the Eagle Rock Enrichment Facility's production is not or will not be necessary is
10 pure folly. To meet our current demand for enriched uranium, much of it is imported, and we
11 need robust domestic suppliers who can provide this service in an environmentally compatible
12 manner.
13

14 **[067-06, Mike Hart]** Also, they took exception with the cause and need for action. I think there's
15 most definitely a need for this, because there's a need for carbon-free energy. Throughout the
16 world, I think we've seen that global warming is a significant problem that we need to be paying
17 attention to, and there's also a demand for growth in nuclear energy. There's a couple of facts I
18 want to point out why we need nuclear energy, why we need this particular enrichment plant.
19

20 Carbon dioxide reflects, or absorbs, infrared energy that does not go back out to space. It
21 makes the planet warmer. That's simply a fact. Carbon dioxide is a greenhouse gas. Levels of
22 carbon dioxide have gone from 288 parts per million in 1850 to 369 parts per million in the year
23 2000. It doesn't matter where it comes from. That is a greenhouse gas that is increasing in
24 concentration. But I'll give you a hint as to where it's coming from: fossil energy. In 1990s, we
25 annually contribute 6.3 gigatons of carbon dioxide into the atmosphere through fossil
26 combustion. That's annual, 6.3 gigatons. The concern about 300,000 metric tons, 300,000 tons
27 of total waste versus 6.3 gigatons in a single year, I view the problem with carbon as much more
28 significant than the problem with depleted uranium.
29

30 So, what is a gigaton? Why is that a concern? Well, 2.3 gigatons is one part per million of
31 carbon dioxide in the atmosphere. So, every year we are steadily increasing carbon dioxide. So,
32 yes, global warming is occurring. Yes, it's our fault. Yes, carbon puts more of that in the
33 atmosphere, and I think nuclear energy is a stopgap that will – is worth pursuing. So, yes, there
34 is a need.
35

36 Energy demands are increasing worldwide. Currently, the population of the planet is about
37 4.5 billion. By 2050, that will double, and people are not less energy consumptive. Populations
38 like China and India used to be in the Third World. They have bought the second world, and
39 they've placed a firm down payment on the first one. So, energy consumption will go up as the
40 population goes up, so even if nuclear energy just holds its own at 15 percent, there will be a
41 need for more nuclear plants, and that means there will be a need for more enriched uranium.
42

43 **[072-01, Stephen Herring]** I'd like to speak in favor of the AREVA license application for the
44 Eagle Rock Enrichment Facility, and particularly on the need for that facility.
45

46 This facility would be an important part of the nuclear fuel cycle, and a key step in providing for
47 future electricity. In building this facility, AREVA will replace 60-year old technology for uranium
48 enrichment, that is, the gaseous diffusion process, with the new gas centrifuge technology,

1 which is more proliferation-resistant, cleaner, and a factor of 20 to 50 times more energy
2 efficient.

3
4 The 104 reactors in the United States provide, as you've heard earlier this evening, about
5 20 percent of the total U.S. electricity, and about 70 percent of the carbon-free electricity.
6 However, today the U.S. has only one operating gas centrifuge plant, and the last gaseous
7 diffusion plant is in the process of being decommissioned. The one gas centrifuge plant in New
8 Mexico began operation in June 2010, and will be capable of producing 3 million separative
9 work units per year, which is about 25 percent of the U.S. need for enrichment. So, the U.S. is
10 importing, from one place or another, the enrichment needed for 75 percent of our nuclear
11 electricity.

12
13 We have seen the construction of many wind turbines in the hills east of Idaho Falls in the last
14 five years, and throughout the west. I applaud the contribution that these turbines can make,
15 though I have seen very little contribution from Jackson or Sun Valley, but it is important to
16 remember that these turbines, even at the best wind sites, have capacity factors of only 30 to
17 35 percent. A nuclear reactor's fuel by means of the Eagle Rock Enrichment Facility will provide
18 power with a capacity factor of above 90 percent; that is, they will produce 90 percent of their
19 maximum power for an average, year-round, 24/7. The U.S. needs reliable, sustainable energy
20 for the decades to come, and not just when the winds blow.

21
22 **[098-04, Linda Martin]** As far as technical impacts, the centrifuge technology is proven and
23 safe as based on other facilities across the world, and while there conceivably is a significant
24 gap in the supply-demand equation for enriched uranium to provide our current and future green
25 energy needs, we can address that with the EREF.

26
27 **[098-13, Linda Martin]** Conceivably there is a significant gap in the supply/demand equation
28 for enriched uranium to provide for our current and future green energy needs. The uncertainty
29 of the future supply of energy could evolve into a national security issue. The Eagle Rock
30 Enrichment Facility would be a principal supplier for this valuable and needed material.

31
32 **[123-02, Hon. Butch Otter; 090-02, Paul Kjellander, on behalf of Hon. Butch Otter; 195-02,**
33 **Hon. Jeff Thompson, on behalf of Hon. Butch Otter]** AREVA is proposing to build a state-of-
34 the-art, technologically-proven, modern facility to enrich uranium needed to operate the existing
35 U.S. fleet of 104 power reactors. AREVA's plant will incorporate many unique features which
36 have been developed over three decades of experience with centrifuge enrichment technology.
37 AREVA's vast experience and use of the technology will result in minimizing and, where
38 possible, eliminating any impacts on the surrounding environment and regional communities,
39 but there will remain, however, many significant beneficial impacts....

40
41 Safety, integrity, professionalism, and sustainability are demonstrated attributes that AREVA
42 embraces in all of its projects and operations, and the Governor believes they'll bring no less to
43 Idaho Falls. AREVA has been easy to work with, and they are as excited about coming to Idaho
44 as we are to have them locate their facility here.

45
46 As we look across the country today, there are not many, if any, states or regions that can claim
47 proposed major energy construction projects or facilities like the Eagle Rock Enrichment
48 Facility. While large projects are usually accompanied by some environmental impacts,
49 Governor Otter believes the end result of this facility will be very positive for Idaho and the

1 country. Eagle Rock will provide much needed domestic production of enriched uranium for our
2 existing U.S. nuclear power fleet, which will help enable U.S. utilities to move away from
3 importing nearly 90 percent of this important fuel product.
4

5 **[128-03, Bob Poyser]** This is a project that AREVA's American utility customers have
6 embraced, as demonstrated by their willingness to already contract, in advance, for more than
7 half of the production capacity of this facility.
8

9 All of the natural uranium that will arrive at the Eagle Rock facility under these contracts belong
10 to American utilities, and is destined for use in American reactors.
11

12 I would quickly like to address just a few of key aspects of the EIS, and the Eagle Rock facility.
13

14 Let me start by saying that a clear and definite need, today, in the United States, for enrichment
15 services exists. Today, more than half of the enriched material for America's current nuclear
16 plant plants is imported from Russia. Another one third is imported from other nations, and
17 Eagle Rock and Idaho will help significantly reduce America's dependence on these foreign
18 sources of supply.
19

20 Nevertheless, when Eagle Rock comes online, America will need to import enrichment services
21 just to fulfill the need for the current existing fleet of 104 reactors.
22

23 **[130-01, Park and Sharon Price]** We support the NRC assessments regarding the potential
24 impacts named in the draft EIS and agree with the findings that the impacts are small to
25 moderate. The need for an enrichment facility as proposed by AREVA is long overdue. The
26 importance of increasing the production of power by nuclear generation is vital to the United
27 States.
28

29 **[143-01, Hon. James Risch; 172-01, Amy Taylor, on behalf of Hon. James Risch]** As a
30 U.S. Senator from Idaho, I have the privilege of serving as the Ranking Member of the
31 Subcommittee on Energy. From that position, I have seen firsthand the efforts this country is
32 making to formulate a forward-looking energy policy. Supporting nuclear power, and its
33 associated technologies, such as enrichment, is one way to make our country more energy
34 secure.
35

36 Years of broken energy policy have led us to become dependent on foreign sources of energy.
37 We've also lost our competitive edge in the nuclear field a field where the United States and
38 Idaho once led. This community knows what it takes to regain that competitive edge, and once
39 again place Idaho and this nation at the pinnacle of the nuclear industry.
40

41 There is a growing recognition that nuclear power is the most viable option to meet the clean
42 energy demands of the future. Demand for enriched uranium is increasing in the United States
43 and across the world to fuel clean nuclear power. This proposed facility will allow that need to
44 be met from domestic sources, while providing a much needed economic boost to the entire
45 region.
46

47 **[145-04, Ann Rydalch]** As you know, nuclear power currently supplies about 20 percent of the
48 nation's electricity, and surveys show over 70 percent of the public throughout the nation
49 support nuclear energy. We have one company that is currently the sole U.S. supplier of low-

1 enriched uranium for nuclear fuel in the U.S., although there are some being built that may
2 provide enrichment services in the future. However, that still leaves an extremely high percent of
3 low-enriched uranium that is being imported from foreign suppliers, imposing reliability risks for
4 the nuclear fuel supply to U.S. nuclear power plants.

5
6 National energy policy emphasizes the importance of having a reliable domestic source of
7 enriched uranium for national energy security. The production of enriched uranium at the Eagle
8 Rock Enrichment Facility would be equivalent to about 40 percent of the current and projected
9 demand for enrichment services within the U.S. Thus, still a high percent of current and
10 projected demand for enrichment services that's left to fulfill.

11
12 **[157-10, Hon. Erik Simpson]** Need for an enrichment facility. At the Boise hearing that I
13 attended on Monday, those opposed to this project said there is no need for additional uranium
14 enrichment. They quoted a so-called expert from the Vermont School of Law who said, "The
15 nuclear renaissance is dying."

16
17 Now, at my count, currently there are 468 nuclear power plants planned around the world,
18 including 26, give or take, in the United States. This does not sound like a dying renaissance to
19 me. It is important the United States to continue to be a world leader in nuclear power
20 development and research. The Eagle Rock Enrichment Facility and the Idaho National
21 Laboratory will help continue this nuclear renaissance.

22
23 **[176-04, Hon. Jeff Thompson]** Additionally, the Eagle Rock plant will enrich uranium for use
24 as fuel for the nuclear reactors, which today accounts for 20 percent of U.S. electricity.

25
26 **Response:** *As stated in Section 1.3.1 of the EIS, the proposed action is intended to satisfy the*
27 *need for an additional economical domestic source of enriched uranium.*

28
29
30 **Comment:** The following comments question the location of the proposed EREF in Idaho
31 because nuclear power is not needed in Idaho.

32
33 **[015-13, Beatrice Brailsford]** There is, of course, another aspect to "purpose and need," and
34 that's the local rationale: why is this project proposed for this location. Here, too, the draft EIS
35 comes up short. We are told that nuclear reactors that would theoretically be supplied in part by
36 EREF are needed because of our need for non-coal "baseload" or "firm" generation resources.
37 In fact, nuclear power is not being considered at all as a baseload resource here in Idaho. Our
38 region's Sixth Power Plan, developed by the Northwest Power and Conservation Council and
39 vetted by utilities and energy officials in Idaho and throughout our region, projects that we will
40 meet 85 percent of our new electric load growth over the next 20 years through energy
41 efficiency, with the balance coming primarily from renewable generation, mostly from wind. Our
42 region's Power Plan does not anticipate any new large supply-side generation resources,
43 including nuclear.

44
45 **[025-04, Hon. Sue Chew]** And, you know, we've heard that the energy that would be
46 developed through this particular mechanism doesn't benefit our state. I'd like for us to reflect on
47 that.

1 **[032-01, Cindy Cottrell]** I am writing about my deep concerns of the proposal to open Areva
2 uranium enrichment plant in Idaho. This would be a big mistake. Of all the States in the United
3 States this should be the last State ever considered to take on such a plant. First of all, Idaho is
4 one of the few States who doesn't need nuclear power. We have all kinds of options for
5 alternative energy. A State like Rhode Island may need to consider such options but Idaho
6 should never be accepting energy that creates waste when there are other options. We have
7 thermal resources to tap, wind power, dams, and some solar. I'm sure more are options too
8 since we live in a large State with a variety of resources.

9
10 **[113-08, Ken Miller]** We are told that nuclear reactors that would theoretically be supplied in
11 part by EREF are needed because of our need for non-coal "baseload" or "firm" generation
12 resources. In fact, nuclear is not being considered at all as a baseload resource - here in Idaho
13 and at regulated electric utilities, at least. Our region's Sixth Power Plan, developed by the
14 highly regarded Northwest Power and Conservation Council and vetted by utilities and energy
15 officials in Idaho and throughout our region, projects that we will meet 85 percent of our new
16 electric load growth over the next 20 years through energy efficiency, with the balance coming
17 primarily from renewable generation, mostly from wind. Our region's Power Plan does not
18 anticipate any new large supply-side generation resources, including nuclear.

19
20 **Response:** *The location of the proposed EREF was not chosen by AES based on the need for*
21 *nuclear power in Idaho. The determination of the proposed EREF location is based on the*
22 *criteria identified in Section 2.3.1 of the EIS, which include factors related to geology, hydrology,*
23 *weather, required resources, available workforce, and local acceptance. The NRC reviewed*
24 *AES's site selection criteria and selection process as part of its environmental review.*

25
26
27 **Comment:** The following comments indicate that the justification for domestically enriched
28 uranium is unsupported.

29
30 **[015-23, Beatrice Brailsford]** In conclusion, since the only justification for the facility is an
31 asserted but unsupported need for domestically produced enriched uranium, which the EREF
32 does not in any case provide, a true "no action" alternative - without any preconstruction
33 activities - should be chosen.

34
35 **[153-14, Andrea Shipley; 161-03, Marisa Smith; 197-16, Andrea Shipley, on behalf of the**
36 **Snake River Alliance]** In conclusion, since the only justification for the facility is an asserted
37 but unsupported need for domestically produced enriched uranium, which the EREF does not in
38 any case provide, a no action alternative should be chosen.

39
40 **[100-05, Wendy Matson]** So therefore, I feel, very strongly, that since the only justification for
41 the facility is an asserted by unsupported need for domestically-produced enriched uranium,
42 which EREF does not, in any case provide. I vote for a no action alternative.

43
44 **[110-01, John and Susan Medlin]** As the Snake River Alliance presentation pointed out, there
45 is no current need for this facility, no compelling evidence that a nuclear renaissance is coming
46 (or inevitable), no rationale for a French company building a nuclear facility in Idaho that
47 purports to promote US energy security while importing inputs and exporting outputs, no
48 provision for the deteriorating and dangerous waste that will haunt us for decades or maybe

1 forever, no concern for yet another threat to the Snake River aquifer, the lifeblood of Idaho
2 agriculture.

3
4 So how can the NRC conclude that building this facility is vital, and that the most problematic
5 outcome to be evaluated is construction dust?
6

7 **[131-03, Morty Prisament]** Need for Action: The DEIS has not established a “need” for this
8 action, as required under NEPA. Need is required to be discussed in specific, quantitative,
9 terms and within the scope of global production and markets. there exists a competitive global
10 market to provide enriched uranium. Russia (CIS) has been one of the leading suppliers of
11 enriched U2. If there is a national security rationale for building such facilities in the U.S., the
12 EIS needs to discuss and document such an assertion. Moreover, the document needs to
13 explore the reasons why the supply of enriched U2 from nuclear weapons decommissioning
14 could not meet projected demand for enriched U2.
15

16 **[148-02, Eric Schuler]** But there’s a bigger issue here. Before we can ask whether the impact
17 will be small or devastating, we need to ask why we’re making an impact at all. This question is
18 paramount, but the draft EIS failed to provide a convincing answer. The EIS claims that the
19 EREF needs to be build to improve national security. For this to be a legitimate need, however,
20 the U.S.’s supply of enriched uranium would have to be unreliable currently. This is not the
21 case.
22

23 The U.S.’s enriched uranium sources are reliable partners and the U.S. even seems to tacitly
24 acknowledge this fact, when it states that some of the enriched uranium will be exported to
25 foreign countries. Even so, it is useful to evaluate the sources more fully, just to understand just
26 how unnecessary this facility is.
27

28 Now we’ve heard earlier that 90 percent of our enriched uranium is imported, and about half of
29 that is from Russia, and we’ve also heard that uranium enrichment is a necessary technology
30 because we need nuclear power to deal with global warming.
31

32 However, strictly speaking, that’s not true, as a great example of that is the megatons to
33 megawatts program that we operate with Russia. This is an agreement between Russia and the
34 U.S. where by Russian nuclear warheads are downblended to make fuel grade uranium, and
35 thus, since we have an abundant supply of warheads, is a very bountiful source of this
36 enrichment – or of enriched uranium. Moreover, this program diminishes the threat of
37 proliferation and prevents the environmental degradation associated with continued mining.
38

39 In other words, it’s beneficial in many ways, and it’s been existing for several years and there is
40 no reason to expect that it would not be renewed in the future.
41

42 The other enriched uranium sources are also reliable. Although much of the enriched uranium
43 is, indeed, imported, this fact alone does not indicate instability. We live in an age of
44 globalization and there is no international market for enriched uranium. Credit counseling with a
45 comparative advantage in the production of enriched uranium, whether because they have
46 highly-accessible reserves, low-cost labor in Africa, or other factors, will specialize in producing
47 enriched uranium while the U.S. focuses its resources in other areas, like agriculture.
48

1 Our reliance on this marked is not a sign of weakness or vulnerability, but a sign of efficiency.
2 Energy independence is an outdated idea, is one that is not based on security or patriotism, but
3 of ignorance.

4
5 The current system works, and has worked for several years. The entire project that we are
6 discussing here tonight is predicated on the assertion that it will provide national energy security
7 with respect to enriched uranium.

8
9 The fact of the matter is that this security already exists and the EREF facility is not necessary,
10 and if the benefits stated in this proposal do not exist, no amount of environmental impact is
11 tolerable, and this facility cannot be licensed.

12
13 **[182-01, Brianna Ursenbach]** The EIS states the facility is necessary for U.S. energy security;
14 however, this argument is based on the unstated and unproven premise that the U.S. must have
15 domestic sources for all of its nuclear fuel needs.

16
17 **[184-22, Kitty Vincent]** In conclusion, since the only justification for the facility is an asserted
18 but unsupported need for domestically produced enriched uranium, which EREF does not in any
19 case provide, a “no action” alternative should be chosen.

20
21 **[191-04, Liz Woodruff]** After reviewing the draft EIS in full, I believe it inadequately addressed
22 may critical issues and must be revised to integrate the following concerns. Most importantly,
23 the entire premise of the draft EIS, that there is a need for domestically supplied enriched
24 uranium, is deeply flawed, fully hypothetical, repeatedly contradicted and disproven in the draft
25 EIS itself, and an unacceptable warrant for the licensing of this facility. The NRC must either find
26 legitimate warrants for taking the proposed action that actually outweigh the environmental and
27 public health risks associated with this facility, or they must choose the “no action alternative”
28 and not license the proposed EREF.

29
30 **[191-19, Liz Woodruff]** Alternatives

31 • Since the only justification for the facility is an asserted but unsupported need for domestically
32 produced enriched uranium, which the EREF does not in any case provide, a “no action”
33 alternative should be chosen.

34
35 **[193-06, Liz Woodruff, on behalf of the Snake River Alliance]** First, the purpose and need
36 for this facility is not proven in the draft Environmental Impact Statement, for either current or
37 new reactors. It’s inadequately proven. It remains to be a hypothesis.

38
39 ***Response:*** *National energy policy issues are not within the scope of the EIS for the proposed*
40 *EREF. The proposed action is intended to satisfy the need for an additional reliable and*
41 *economical domestic source of enriched uranium.*

42
43
44 **Comment:** The following comments assert that there is no need for the proposed EREF
45 because an adequate supply of enriched uranium is and will be available, and that construction
46 and operation of the proposed facility would only result in an excess supply of domestically
47 enriched uranium.

1 **[009-02, Steve Barclay; 021-02, Linda Cannarozzo; 081-02, Lea Johnson; 161-02, Marisa**
2 **Smith; 202-02, Alison Duffin; 205-02, Andrea Guerri; 206-02, Pamela Hanson; 209-02,**
3 **Courtney Hollar; 210-02, Tyler Hoovis; 211-02, Olivia Joelson; 212-02, Naomi Johnson;**
4 **215-02, Verlyn Larsen; 217-02, Jodie Mckelvey; 222-02, Hannah Raines; 224-02, A.**
5 **Rolsen; 225-02, Lisa Stimpson]** The draft EIS makes an unproven assertion that there is a
6 need for domestically produced enriched uranium. However, this claim was never proven and
7 often contradicted in the draft. 1) The nuclear renaissance is too expensive and faces enormous
8 delays; 2) the current US fleet of reactors has operated with an adequate supply of fuel for
9 decades; 3) the draft EIS asserts that the licensing of this facility would create a supply of
10 enriched uranium in excess of the need.

11
12 **[015-01, Beatrice Brailsford]** According to the current Draft EIS, the purpose of AREVA's
13 enrichment factory is to meet two needs, for enriched uranium to fulfill electricity generation
14 requirements, and for domestic supplies of enriched uranium for national energy security. That
15 first need, enriched uranium for electricity generation is undeniably true, as long as the majority
16 of nuclear reactors use low enriched uranium fuel, but the Draft EIS does not even attempt to
17 make the case that that need is not already being met.

18
19 Furthermore, the draft clearly acknowledges that even if the nuclear renaissance occurs as
20 advertised, already planned new enrichment would exceed U.S. demand by about the same
21 amount as AREVA's factory might produce.

22
23 **[015-08, Beatrice Brailsford]** One of the most important parts on an EIS is the examination of
24 the purpose and need for the proposed action. According to the current draft EIS, the purpose
25 of Areva's Eagle Rock Enrichment Factory is to meet two needs: 1) The need for enriched
26 uranium to fulfill electricity generation requirements; and 2) the need for domestic supplies of
27 enriched uranium for national energy security.

28
29 That first "need" - enriched uranium for electricity generation - is undeniably true as long as the
30 majority of nuclear reactors use low-enriched uranium fuel. But the draft EIS does not even
31 attempt to make the case that that need is not already being met. It must do so. The draft does,
32 however, state "Based on the projected need for LEU by existing reactors and proposed new
33 reactors, with the target capacity of 6.6 million SWUs per year for the proposed EREF, the total
34 enrichment capacity in the United States would exceed the projected demand (approximately
35 16 million SWUs per year) by about 6 million SWUs per year if all of the enrichment facilities
36 were constructed and operated at their rated capacities" (Draft EIS, 1-6). Thus, even if the
37 "nuclear renaissance" occurs as advertised, which is not at all certain, already planned new
38 enrichment would exceed US demand by about the same amount as Areva's factory is slated to
39 supply.

40
41 **[030-05, Kerry Cooke]** Lack of need: The world already has redundancy in provision of
42 enriched uranium for nuclear plants. With additional enrichment facilities already approved or
43 under construction, the Areva facility would far exceed any expected need for more enriched
44 uranium, in the US and elsewhere. The idea that a new wave of nuclear reactors will demand
45 increased enriched uranium is based on unsubstantiated and wishful prognoses by the nuclear
46 industry. As is playing out every day in the financial market, financiers are shying away from this
47 industry that is risky at all levels: cost, market need, and remuneration, to name three. This
48 plant should be denied until and unless there is solid proof that there is a need.

1 **[068-01, Anne Hausrath]** I do not believe that we have been provided with sufficient evidence
2 of a need for domestically-produced uranium, enriched uranium.
3

4 **[071-03, David Hensel]** I think that, I don't mean to be unkind, but I don't think you did a very
5 good job of looking at a very good market analysis. And here I'm going to quote from the
6 Nuclear Engineering International, November 2009. And I'm assuming these guys aren't
7 appearing for Greenpeace. I mean, I don't necessarily read this magazine, but if I could quote
8 once again, they talk about "enrichment requirements for the world's growing fleet of nuclear
9 power plants are expected to expand significantly. Current enrichment capacity on a worldwide
10 basis is just sufficient to meet those requirements." And this is what I want to highlight, "but the
11 potential pace of enrichment capacity expansion is expected to outstrip the growth
12 requirements." So, we use this language of we want to be energy independent. I mean, and
13 that's sort of -- I mean, it's a meaningless term.
14

15 **[086-02, Paula Jull]** A new US plant to enrich uranium for electricity production is not needed.
16 Current supplies are clearly adequate, and already operating or planned new enrichment
17 capacity would exceed US demand by about the same amount as Areva's plant might produce.
18

19 **[088-02, Stan Kidwell]** Current supplies of enriched uranium are more than adequate, and
20 already operating or planned new enrichment capacity would exceed US demand by about the
21 same amount as Areva's plant might produce, even if a nuclear renaissance occurs.
22

23 **[095-02, Linda Leeuwrik]** • There is no need for a new US plant to enrich uranium for
24 electricity production. Current supplies are clearly adequate.
25

26 **[096-05, Arjun Makhijani]** ...but I can tell you, simple calculation that the treaty that the U.S.
27 and Russia have signed, if that enriched uranium on both sides is used, plus LES, plus
28 Portsmouth, plus a couple of years of operation of Paducah before it is shut down will provide
29 far more enrichment services than the entire lifetime, so what might happen here is, for the
30 entire U.S. reactor fleet, so you may be building a plant here that may wind up only exporting
31 enriched uranium, if there is a market.
32

33 **[103-02, Karen McCall]** "The potential pace of enrichment capacity expansion is expected to
34 out-strip the growth requirements." Nuclear engineering International , November 2009
35

36 **[113-06, Ken Miller]** First and foremost and as to the need for this facility, I do not believe
37 Areva's application contains a sound justification for this facility. Not only is there an adequate
38 existing supply of enriched uranium to meet current and expected needs of the U.S. domestic
39 nuclear reactor fleet, that capacity would exceed demand roughly by the amount of enriched
40 uranium EREF would produce.
41

42 **[118-04, Caroline Morris]** The draft EIS too asserts without proof a greater need for
43 domestically produced enriched uranium, Yet the document then contradicts the claim by these
44 factors showing no need for the EREF: 1) the enormous expense and delays of the US nuclear
45 renaissance, 2) decades of adequate fuel supply for currently operating the US reactors, and
46 3) creating an excess supply of enriched uranium by the licensing this proposed facility. Since
47 the only justification given for EREF, the asserted, unsupported need for more domestically
48 produced enriched uranium, is fallacious, a "no action" alternative should be chosen.
49

1 **[120-03, Frank Nicholson]** This enrichment factory: • Is unnecessary. We were told it was for
2 national consumption but as there is not that much demand, the finished product will be sent
3 overseas no matter what they promise.
4

5 **[122-03, Kathy O'Brien]** I understand that there is no need for a new US plant to enrich
6 uranium for electricity production. Current supplies are adequate, so it seems that this plant may
7 be useless as well as dangerous.
8

9 **[168-08, Lon Stewart]** Nuclear engineering periodicals are claiming the world has plenty of
10 enrichment capacity.
11

12 **[175-03, Ellen Thomas]** There is no need for a new US plant to enrich uranium for electricity
13 production. Current supplies are clearly adequate, and as we develop healthy solar, wind, tidal
14 and other truly clean energy systems, there is no need for new nuclear power plants.
15

16 **[180-11, Kaye Turner]** Is it possible we may not need this enriched uranium Areva wants to
17 produce?
18

19 **[183-06 and 183-14, James Vincent]** In conclusion, the EIS (4-136) states the French
20 company, AREVA's enriched product will be shipped overseas as is their profits. I do not see
21 how this proposed project will make my country have any more domestic control over our needs
22 for enriched fuel. The EIS specifies that the numbers of license requests for new enriched
23 uranium, EIS 1-6, are in excess of the need for the new enriched uranium. Given the potential
24 for accidents is considerable, I would urge the Nuclear Regulatory Commission to deny this
25 permit at this time. I would also like to thank the Commission for hearing my testimony.
26

27 **[191-07, Liz Woodruff]** The draft EIS fails to establish that the current approach to supplying
28 enriched uranium is unreliable. There is uranium enrichment in the US, enriched uranium has
29 always been an international market, the raw material comes from foreign sources, and this
30 system has adequately provided fuel for US reactors for decades.
31

32 **[191-09, Liz Woodruff]** The EIS specifies that the numbers of license requests for new
33 enrichment facilities in the US are in excess of the need for new enriched uranium (draft EIS,
34 1-6). The EIS does not adequately prove that the Areva facility is necessary.
35

36 **[193-08, Liz Woodruff, on behalf of the Snake River Alliance]** Third, there's currently
37 enough enriched uranium for domestic use, and AREVA is a French company and gets it
38 uranium supply from the international market. So how does this facility give us a more reliable
39 source of domestically-produced uranium, enriched uranium?
40

41 **[193-14, Liz Woodruff, on behalf of the Snake River Alliance]** The NRC acknowledges that
42 the licensing if this facility is in excess of the need by 6 million SWUs.
43

44 **[192-06, Lisa Young]** Perhaps if this facility was necessary and urgent, these risks could be
45 ignored. But it's clear that we do not need this facility. The current system and sources for
46 enriched uranium have provided adequate fuel for reactors for decades, and with a total of three
47 enrichment facilities expected in the U.S. in the nature future, one already in operation and two
48 that are being constructed right now, the need for more enriched uranium is nonexistent.
49

1 This enriched uranium will be shipped overseas, leaving the dangerous waste in Idaho for at
2 least 30 years and potentially much longer. There's no need to take these risks at this time and
3 the EIS unfairly represents these risks.

4
5 Producing this waste is irresponsible and my sense is this facility is irresponsible. Thanks.
6

7 **[192-12, Lisa Young]** Perhaps if this facility was necessary and urgent, these risks could be
8 ignored or set aside, but it is clear that we do not need this facility: the current system and
9 sources for enriched uranium have provided adequate fuel for reactors for decades, and with a
10 total of 3 enrichment facilities expected in the U.S. in the near future (1 already in operation,
11 2 being constructed), the "need" for more enriched uranium is non-existent. This enriched
12 uranium would be shipped overseas, leaving this dangerous waste in Idaho for at least
13 30 years, and potentially much longer. No, there is no need to take these risks at this time, and
14 the EIS unfairly represents these risks. Producing this waste is irresponsible and my sense is
15 this facility is irresponsible.

16
17 **Response:** *As pointed out in Section 1.3.1 of the EIS, the need for the proposed EREF includes*
18 *the need for domestically produced enriched uranium. The only currently operating uranium*
19 *enrichment facilities in the United States are the Paducah Gaseous Diffusion Plant (PGDP) and*
20 *URENCO USA (formerly known as the NEF). The operation of the PGDP is expected to cease*
21 *in the near future due to costs associated with maintaining an aging facility and the inefficiency*
22 *of the gaseous diffusion process compared to newer technologies such as uranium enrichment*
23 *using centrifuges. The URENCO USA facility is currently under construction, but started initial*
24 *operations in June 2010; it is expected to reach a capacity of 1.6 million SWUs per year in*
25 *August 2011 (about half of its full capacity of approximately 3 million SWUs per year, as*
26 *currently licensed by the NRC). Full licensed capacity would not be reached until sometime*
27 *later. An expansion to 5.9 million SWU per year is being considered by URENCO USA, but an*
28 *application for the expansion has not yet been submitted to the NRC. As discussed in*
29 *Section 1.3.1, of the other potential domestic sources of enriched uranium, the American*
30 *Centrifuge Plant (ACP) is not yet in operation and the GE-Hitachi Global Laser Enrichment LLC*
31 *(GLE) Facility is not yet licensed.*

32
33 *The decrease in an inadequate supply of enriched uranium for domestic reactors, due to the*
34 *eventual shutdown of the PGDP and the end of the Megatons to Megawatts Program, together*
35 *with increased domestic and global demand, emphasize the need for more domestic capacity.*
36 *As noted in Section 1.3.1, the NRC is currently processing license applications for more than*
37 *20 nuclear plants. The availability of foreign enriched uranium is expected to become more*
38 *competitive with the global expansion of nuclear power. Within the last 10 years, 32 nuclear*
39 *plants have become operational, with 60 additional nuclear plants currently under construction*
40 *(IAEA 2010) including one in the United States.*

41
42
43 **Comment:** The following comments assert that it is not clear that new nuclear reactors will be
44 constructed in the United States, thereby increasing the domestic need for enriched uranium.

45
46 **[009-02, Steve Barclay; 021-02, Linda Cannarozzo; 081-02, Lea Johnson; 161-02, Marisa**
47 **Smith; 202-02, Alison Duffin; 205-02, Andrea Guerri; 206-02, Pamela Hanson; 209-02,**
48 **Courtney Hollar; 210-02, Tyler Hoovis; 211-02, Olivia Joelson; 212-02, Naomi Johnson;**

1 **215-02, Verlyn Larsen; 217-02, Jodie Mckelvey; 222-02, Hannah Raines; 224-02,**
2 **A. Rolsen; 225-02, Lisa Stimpson]** The draft EIS makes an unproven assertion that there is a
3 need for domestically produced enriched uranium. However, this claim is never proven and
4 often contradicted in the draft. 1) The nuclear renaissance is too expensive and faces enormous
5 delays; 2) the current US fleet of reactors have operated with an adequate supply of fuel for
6 decades 3) the draft EIS asserts that the licensing of this facility would create a supply of
7 enriched uranium in excess of the need.
8

9 **[030-05, Kerry Cooke]** Lack of need: The world already has redundancy in provision of
10 enriched uranium for nuclear plants. With additional enrichment facilities already approved or
11 under construction, the Areva facility would far exceed any expected need for more enriched
12 uranium, in the US and elsewhere. The idea that a new wave of nuclear reactors will demand
13 increased enriched uranium is based on unsubstantiated and wishful prognoses by the nuclear
14 industry. As is playing out every day in the financial market, financiers are shying away from this
15 industry that is risky at all levels: cost, market need, and remuneration, to name three. This
16 plant should be denied until and unless there is solid proof that there is a need.
17

18 **[110-01, John and Susan Medlin]** As the Snake River Alliance presentation pointed out, there
19 is no current need for this facility, no compelling evidence that a nuclear renaissance is coming
20 (or inevitable), no rationale for a French company building a nuclear facility in Idaho that
21 purports to promote US energy security while importing inputs and exporting outputs, no
22 provision for the deteriorating and dangerous waste that will haunt us for decades or maybe
23 forever, no concern for yet another threat to the Snake River aquifer, the lifeblood of Idaho
24 agriculture.
25

26 So how can the NRC conclude that building this facility is vital, and that the most problematic
27 outcome to be evaluated is construction dust?
28

29 **[118-04, Caroline Morris]** The draft EIS too asserts without proof a greater need for
30 domestically produced enriched uranium, Yet the document then contradicts the claim by these
31 factors showing no need for the EREF: 1) the enormous expense and delays of the US nuclear
32 renaissance,...
33

34 **[131-04, Morty Prisament]** Finally, the document's projected demand for U2 is based upon
35 certain scenarios regarding future nuclear energy power plants. This scenario needs to be
36 defined in far greater detail and, further, the document needs to present alternative scenarios in
37 recognition of that alternative public policy decisions, domestically and globally, are equally
38 likely. A multitude of factors can influence these projections, including economics of nuclear
39 power as compared to alternatives, resolution of nuclear waste storage issues, liability issues,
40 system safety issues, proliferations concerns, and governments' ability and willingness to
41 provide funding (i.e.; loan guarantees, subsidies, excess liability coverage, etc.) to support
42 nuclear energy development.
43

44 **[153-05, Andrea Shipley; 197-05, Andrea Shipley, on behalf of the Snake River Alliance]**
45 Not to mention that the EIS claims that the need for AREVA's enriched uranium will be spurred
46 by the building of a fleet of reactors. Economic costs, delays, and safety issues all indicate that
47 this supposed renaissance is not only improbable, but unlikely.
48

1 **[169-01, Margaret Stewart]** And aside from AREVA's greed, grim, and very, very devastating
2 global environmental and human rights record around the world, particularly in Africa, I
3 vehemently oppose the NRC licensing of this facility on grounds that the facility has not been
4 proven necessary, a huge amount of dangerous radioactive waste that would be created has no
5 disposal place, the nuclear reactors that the EIS says will need AREVA's product more than
6 likely will never be built.

7
8 **[169-03, Margaret Stewart]** This Draft EIS appears to be based on the unproven assumption
9 that there will be a large number of nuclear reactors built needing AREVA's product. Given that
10 we all live in a globally threatened economic world, where scarce monies are ever-shrinking,
11 there are ever-present reactor construction delays, safety questions unanswered, and spiraling
12 out of control costs, these assumptions seem dubious, at best.

13
14 **[181-04, Roger Turner]** So, this brings to mind the other error in this EIS in assuming a need
15 for enrichment based on new nuclear power plants in the United States. Unfortunately, the
16 NRC fails to take a hard look at this purported need. A nuclear power plant hasn't been built in
17 the United States for two decades. The fact is, most states and power companies don't want
18 nuclear power plants with their high cost, especially the high cost of spent fuel storage and
19 cleanup. Especially considering that there's no permanent repository. The emphasis may be for
20 less nuclear, given the problems with waste, and the fact the higher cost that these states and
21 power companies must endure, because there isn't a permanent repository.

22
23 The final EIS should more carefully evaluate and revise the projected need for this plant. The
24 fact is, there's not general support in the U.S. for new nuclear power plants to the extent that
25 warrants this project, and other sources of enriched uranium meets our needs....

26
27 **[187-06, John Weber]** I recommend the "no action alternative" for the following reasons. With
28 many of the current US reactors nearing the end of the design life expectancy and very few, if
29 any, new reactors likely to be build due to economics, a case has not been made for a need for
30 this plant.

31
32 **[191-11, Liz Woodruff]** The EIS claims that the need fulfilled by the Areva facility will be
33 spurred by the building of a new fleet of reactors. Economic costs, delays, and safety issues all
34 indicate that this supposed resurgence is not only improbable, but unlikely.

35
36 **[193-09, Liz Woodruff, on behalf of the Snake River Alliance]** And finally, the draft EIS
37 claims the need for AREVA's enriched uranium will be spurred by the building of a new fleet of
38 reactors. But economic cost delays and safety issues all indicate the supposed renaissance is
39 unlikely.... And we would argue that this is not in fact a renaissance. That the very premise of
40 the EIS is incorrect. We're actually set up for a collapse of the nuclear power industry.

41
42 **Response:** *As discussed in Section 1.3.1 of the EIS, the NRC expects to license the next*
43 *generation of nuclear power plants using 10 CFR Part 52. Part 52 governs the issuance of*
44 *standard design certifications (DCs), early site permits (ESPs), and combined licenses (COLs)*
45 *for nuclear power plants. The NRC staff is engaged in numerous ongoing interactions with*
46 *vendors and utilities regarding prospective new reactor applications and licensing activities.*
47 *Based on these interactions, the NRC staff has received a significant number of new reactor*
48 *COL applications (COLAs) since 2007. As of December 2010, the NRC is actively reviewing*

1 12 COLAs for a total of 20 nuclear reactor units. The NRC has suspended 6 COLA reviews due
2 to changes in applicants' business strategies or the timing of their construction plans. One of
3 the suspended COLAs was converted by the applicant to an ESP application. Assuming
4 regulatory requirements are met, the NRC expects to issue two COLs by the end of 2011.

5
6 The NRC has three DC applications and two DC amendment applications currently under
7 review. As of December 2010, one DC application and one DC amendment are in rulemaking.
8 The NRC has received two Advanced Boiling Water Reactor (ABWR) DC renewal requests in
9 calendar year 2010 and expects to receive one new DC application by fiscal year 2012.

10
11
12 **Comment:** The following comments assert that foreign ownership of the proposed EREF and
13 other U.S. enrichment facilities does not fulfill the need for a domestic supply of enriched
14 uranium.

15
16 **[015-02, Beatrice Brailsford]** The National Energy Security Policy objective AREVA's plant is
17 supposed to meet was enunciated in a 2002 letter from the DOE to the NRC. The focus of that
18 letter was not that the U.S. needed a foreign company to build a plant here, but rather that an
19 American company should have a stake in U.S. enrichment capacity. Eight years later, there
20 are no more nuclear reactors operating in the world, but as of June, URENCO, a German
21 company, is enriching uranium in New Mexico. The NRC's efforts to ignore that plant in the
22 Draft EIS are painful to watch.

23
24 At any rate, let's go back to the need for domestic supplies of enriched uranium. The key word
25 here is "domestic." AREVA is owned by the French government.

26
27 **[015-10, Beatrice Brailsford]** At any rate, Areva is owned by the French government.

28
29 **[031-01, James Cooper]** I am OPPOSED to the Areva project. As an Idaho taxpayer and voter
30 I feel this state does NOT NEED a foreign company to build any facility on our soil - much less
31 one which is subject to accidents and one whose profits go to another country.

32
33 **[088-04, Stan Kidwell]** French-owned Areva's plant will not increase US energy security by
34 providing a "domestic" source of enriched uranium.

35
36 **[095-04, Linda Leeuwrik; 127-01, Sheila Plowman]** Areva's plant would not increase US
37 energy security by providing a "domestic" source of enriched uranium. Areva is owned by the
38 French government.

39
40 **[110-01, John and Susan Medlin]** As the Snake River Alliance presentation pointed out, there
41 is no current need for this facility, no compelling evidence that a nuclear renaissance is coming
42 (or inevitable), no rationale for a French company building a nuclear facility in Idaho that
43 purports to promote US energy security while importing inputs and exporting outputs, no
44 provision for the deteriorating and dangerous waste that will haunt us for decades or maybe
45 forever, no concern for yet another threat to the Snake River aquifer, the lifeblood of Idaho
46 agriculture.

1 So how can the NRC conclude that building this facility is vital, and that the most problematic
2 outcome to be evaluated is construction dust?

3
4 **[115-02, Nicholas Molenaar]** Why isn't there a United States Corporation capable and willing
5 to build this type of enrichment facility?

6
7 **[150-07, Katie Seevers]** The company who is creating this facility is French, and its production
8 of enriched uranium in the United States does not result in domestic control of that product as
9 addressed in the draft EIS, section 2-17.

10
11 **[153-03 and 153-04, Andrea Shipley; 191-10, Liz Woodruff; 197-04, Andrea Shipley, on**
12 **behalf of the Snake River Alliance]** The EIS clearly states that Areva's product will be
13 shipped overseas, therefore nullifying the project's effects on domestic uses of enriched
14 uranium. Because Areva is a French company, its production of enriched uranium in the U.S.
15 does not actually result in domestic control of that product (draft EIS, 2-17).

16
17 **[175-06, Ellen Thomas]** Areva's plant would not increase US energy security or
18 nonproliferation by providing a "domestic" source of enriched uranium. Areva is owned by the
19 French government.

20
21 **[183-06 and 183-14, James Vincent]** In conclusion, the (EIS 4-136) states the French
22 company, AREVA's enriched product will be shipped overseas as is their profits. I do not see
23 how this proposed project will make my country have any more domestic control over our needs
24 for enriched fuel. The EIS specifies that the numbers of license requests for new enriched
25 uranium, EIS 1-6, are in excess of the need for the new enriched uranium. Given the potential
26 for accidents is considerable, I would urge the Nuclear Regulatory Commission to deny this
27 permit at this time. I would also like to thank the Commission for hearing my testimony.

28
29 **[187-07, John Weber]** A plan owned by a foreign company will do nothing to protect US
30 national security.

31
32 **[193-08, Liz Woodruff, on behalf of the Snake River Alliance]** Third, there's currently
33 enough enriched uranium for domestic use, and AREVA is a French company and gets it
34 uranium supply from the international market. So how does this facility give us a more reliable
35 source of domestically-produced uranium, enriched uranium?

36
37 **[193-13, Liz Woodruff, on behalf of the Snake River Alliance]** So the uranium, which is what
38 we need the reliable supply of, is coming from international markets. Why does building a facility
39 by a French government-owned company in the US increase the reliability of that supply, if it's
40 coming internationally?

41
42 **[192-18, Lisa Young]** Indeed, I hope that it is recognized that, while the proposal for this facility
43 is based on the sole premise that a domestic uranium enrichment facility is needed to increase
44 our national energy security, it will not increase our national energy security to have a foreign
45 company enrich foreign chemicals, reap foreign profits, and sell the product to other foreign
46 nations, as the AREVA proposal promises to do.

47
48 **Response:** *As discussed in Section 1.6 of the EIS, AES is a Delaware limited liability*
49 *corporation that was formed solely to provide uranium enrichment services for commercial*

1 *nuclear power plants. The investigation of any foreign relationship to determine whether it is*
2 *inimical to the common defense and security of the United States is beyond the scope of this*
3 *EIS and was addressed as part of the NRC's SER (NRC, 2010b).*
4
5

6 **Comment:** The following comments suggest that the need for domestic production of enriched
7 uranium is not being met because the uranium feed material would be coming from a foreign
8 source.
9

10 **[083-02, Diane Jones]** I believe that the EIS really needs to address the obvious contradiction
11 between the assertion that enrichment uranium is needed for the US energy independence, and
12 the stated fact that the uranium itself may be imported and the product of enrichment may be
13 exported.
14

15 **[095-03 and 095-04, Linda Leeuwrik; 127-01, Sheila Plowman]** Areva's plant would not
16 increase US energy security by providing a "domestic" source of enriched uranium. Areva is
17 owned by the French government. The raw material for the plant would be imported and some
18 portion of its product would be exported.
19

20 **[153-02, Andrea Shipley; 197-02, Andrea Shipley, on behalf of the Snake River Alliance]**
21 The purpose and the need for this facility fails to be addressed in the EIS. There is already
22 uranium enrichment in the U.S., and the raw material comes from a foreign source. Since the
23 uranium that will be enriched by Areva will come from foreign sources, the licensing of this
24 facility does not create increased domestic control of reliable supplies of enriched uranium, Draft
25 EIS, 2-6
26

27 **[182-02, Brianna Ursenbach]** The EIS states the facility is necessary to US energy security;
28 however, this argument is based on the unstated and unproven premise that the U.S. must have
29 domestic sources for all of its nuclear fuel needs.
30

31 For the sake of argument, let us accept this dubious notion, and assume all parts of the fuel
32 cycle must be available in the U.S., to have a reliable and secure supply. From there it follows
33 that we would need to source all of our raw uranium domestically as well.
34

35 Yet the EIS acknowledges that the U.S. will continue to import yellow cake from foreign
36 countries. If we cannot get all the raw material, then we cannot convert it to UF₆ and domestic
37 enrichment facilities become irrelevant.
38

39 In many ways, this energy security argument is analogous to saying that we would be insulated
40 from OPEC, and oil supply fluctuations, if only we were to find all our oil in the U.S. Clearly,
41 both of these ideas are absurd.
42

43 Now one may argue that we simply need to resume uranium mining at home to solve this
44 conundrum. But while it is true that U.S. does have extensive uranium reserves, the legacy of
45 destruction and contamination left by past mining efforts make resurgence very improbable.
46

47 Indeed, as one example, the Navaho Nation, whose land contains nearly one-quarter of all U.S.
48 reserves, has specifically banned uranium mining. If mining is not going to be resumed in the

1 U.S. in any significant way, then additional enrichment facilities cannot ensure a reliable fuel
2 supply, and the Eagle Rock facility is once again shown to be unnecessary.

3
4 **[191-08, Liz Woodruff]** Since the uranium slated for enrichment will be from foreign sources,
5 the licensing of this facility does not in fact create increased domestic control of reliable supplies
6 of enriched uranium (draft EIS, 2-6).

7
8 **[193-08, Liz Woodruff, on behalf of the Snake River Alliance]** Third, there's currently
9 enough enriched uranium for domestic use, and AREVA is a French company and gets it
10 uranium supply from the international market. So how does this facility give us a more reliable
11 source of domestically-produced uranium, enriched uranium?

12
13 **[193-13, Liz Woodruff, on behalf of the Snake River Alliance]** So the uranium, which is what
14 we need the reliable supply of, is coming from international markets. Why does building a facility
15 by a French government-owned company in the US increase the reliability of that supply, if it's
16 coming internationally?

17
18 **Response:** *Although the NRC staff recognizes that some of the uranium feed material for the*
19 *proposed EREF may come from foreign sources, the specific need in the case of the proposed*
20 *EREF is for domestic uranium enrichment capacity, as discussed in Section 1.3.2 of the EIS.*
21 *The source of the uranium hexafluoride for enrichment is part of the need for energy security,*
22 *but is a separate concern and, therefore, not within the scope of this EIS. However, it should be*
23 *noted that, as discussed in Sections 2.1.3, 2.1.4.2, 4.2.9.2, D.3.1.1, and D.4 of the EIS, the*
24 *proposed EREF would receive a portion of its feed material from a U.S. UF₆ production plant in*
25 *Metropolis, Illinois; and would also receive UF₆ feed material from a production facility in Port*
26 *Hope, Ontario, Canada, which obtains some of its uranium feed from a U.S. source (Cameco,*
27 *2010).*

28
29
30 **Comment:** The following comments note that the enriched uranium product could be shipped
31 outside the U.S., thereby negating any enhanced U.S. energy security. Some of these
32 comments also suggest that the profits would also go overseas.

33
34 **[001-02, Reham Aarti]** And I just don't think there's any need for it. There's no need for that
35 uranium, especially when it's going somewhere else. It's not even helping us. It's not doing
36 anything here but creating trash. We're a big giant trash can for France, and I don't think it's
37 acceptable.

38
39 **[014-02, William Blair]** While some jobs would be created, the processed uranium would likely
40 be exported and much of the financial benefit would be to France.

41
42 **[015-03, Beatrice Brailsford]** And, finally, the product, enriched uranium. The Draft EIS tells
43 us that all AREVA's enriched uranium could, theoretically, be sold to U.S. companies, but it also
44 tells us that potential customers are in Washington, South Carolina, North Carolina, and
45 overseas. Is overseas a new state? But perhaps the theory will play out.

46
47 **[015-07, Beatrice Brailsford]** So, that's the proposal to meet the need of a domestic supply of
48 enriched uranium. A uranium factory without any national purpose will produce fuel for

1 everywhere in the world but here in Idaho, send its profits to France, and leave us with the
2 waste.

3
4 **[015-11, Beatrice Brailsford]** According to Areva, the natural uranium destined for its plant
5 here belongs to American companies. But according to the Nuclear Energy Institute, as of 2007,
6 owners and operators of US nuclear power plants bought 92 per cent of their uranium from
7 foreign sources. And where is the natural uranium converted to uranium hexafluoride on its way
8 to Idaho? According to the draft EIS, in Illinois, Canada, and overseas. And finally, the product,
9 enriched uranium. The Draft EIS tells us that enriched uranium from Areva's plant could
10 "theoretically" all be sold to US companies. But it also tells us that potential customers are fuel
11 fabrication facilities in Washington, South Carolina, North Carolina, and overseas.

12
13 **[040-02, Collin Day]** We don't need this facility. It's already been proven – or it's been shown
14 that all this is going to be exported out. It's not going to help our energy independence.

15
16 **[031-01, James Cooper]** I am OPPOSED to the Areva project. As an Idaho taxpayer and voter
17 I feel this state does NOT NEED a foreign company to build any facility on our soil - much less
18 one which is subject to accidents and one whose profits go to another country.

19
20 **[032-04, Cindy Cottrell]** I'm against a foreign country making the profit from this plant and
21 leaving the contamination in our Country.

22
23 **[071-04, David Hensel]** I think what you need to look at a little more closely is there doesn't
24 seem to be any guarantees that the enriched uranium that this plant is going to produce will be
25 used in this country, meaning there's no guarantee.

26
27 **[088-03, Stan Kidwell]** The raw material for the plant would be imported, a portion of its
28 product would be exported.

29
30 **[095-04, Linda Leeuwrik; 127-01, Sheila Plowman]** Some portion of its product would be
31 exported.

32
33 **[104-01, Carolyn McCollum]** There's little advantage to us Idahoans when Areva's nuclear
34 fuel would be sent worldwide and its profits back to France while we are left with its radioactive
35 waste, compounding INL's nuclear activities that have plutonium-contaminated the aquifer.

36
37 **[120-03, Frank Nicholson]** This enrichment factory: • Is unnecessary. We were told it was for
38 national consumption but as there is not that much demand, the finished product will be sent
39 overseas no matter what they promise.

40
41 **[147-08, Joey Schueler]** 4. Areva, a French company, will be the owner of this company
42 meaning much of the revenues will go over seas. It's also unclear how many employees will be
43 Idaho residents.

44
45 **[153-03 Andrea Shipley; 197-03, Andrea Shipley, on behalf of the Snake River Alliance]**
46 The EIS clearly states that AREVA's product will be shipped overseas, therefore nullifying the
47 project's effects on domestic uses of enriched uranium.

1 **[171-04, John Tanner]** Now, okay, we could import enriched uranium, but then not only the
2 profits go abroad, but the jobs, as well. I don't think that's what we want to do.
3

4 **[175-06, Ellen Thomas]** Areva's plant would not increase US energy security or
5 nonproliferation by providing a "domestic" source of enriched uranium. Areva is owned by the
6 French government. The raw material for the plant would be imported. Some portion of its
7 product would be exported.
8

9 **[180-10, Kaye Turner]** Is it true Areva is planning to export most of their product to other
10 countries?
11

12 **[191-10, Liz Woodruff]** The EIS clearly states that Areva's product will be shipped overseas,
13 therefore nullifying the project's effects on domestic uses of enriched uranium. Because Areva
14 is a French company, its production of enriched uranium in the US does not actually result in
15 domestic control of that product (draft EIS, 2-17).
16

17 **[193-07, Liz Woodruff, on behalf of the Snake River Alliance]** Secondly, the draft EIS clearly
18 states that AREVA's product will be shipped overseas, nullifying the project's effects on
19 domestic uses of enriched uranium....

20 And finally, quote: "Potential customers are fuel fabrication facilities in Richmond, Washington,
21 Columbia, South Carolina, Williams, North Carolina, and overseas, through ports in Virginia and
22 Maryland." So this domestic reliable supply of enriched uranium that we need in this country will
23 be shipped overseas by AREVA. The need argument is highly problematic and doesn't stand.
24

25 **[192-18, Lisa Young]** Indeed, I hope that it is recognized that, while the proposal for this facility
26 is based on the sole premise that a domestic uranium enrichment facility is needed to increase
27 our national energy security, it will not increase our national energy security to have a foreign
28 company enrich foreign chemicals, reap foreign profits, and sell the product to other foreign
29 nations, as the AREVA proposal promises to do.
30

31 **Response:** *As discussed in Section 1.3.2 of the EIS, one purpose of the proposed EREF is to*
32 *promote U.S. energy security by providing an additional domestic source of enriched uranium*
33 *production capacity. The export of any enriched uranium from the proposed EREF in excess of*
34 *that required by domestic U.S. customers is not inconsistent with that purpose, as long as this*
35 *export complies with applicable laws and regulations. The destination of the enriched uranium*
36 *from the proposed EREF is specified by the utility customer who is also responsible for*
37 *specifying the supplier of the uranium to be enriched. The NRC licenses the import and export*
38 *of radioactive materials under 10 CFR Part 110.*
39

40 *As discussed in Section 1.6 of the EIS, AES is a Delaware limited liability corporation that was*
41 *formed solely to provide uranium enrichment services for commercial nuclear power plants.*
42 *AES's principal business location is in Bethesda, Maryland, while operations would occur at the*
43 *proposed EREF in Bonneville County, Idaho. These locations, both within the United States,*
44 *would benefit from the investments made to construct and operate the proposed EREF.*
45 *Determination of the destination of any additional profits is not within the scope of this EIS.*
46
47

1 **I.5.5 Scope of the EIS Analysis**
2

3 **Comment:** The following comment discusses national versus local issues pertaining to the
4 construction of the proposed EREF.
5

6 **[035-01, Stephen Crowley]** I guess my concern is a certain kind of inconsistency in how you're
7 evaluating the cost and benefits. And it might just be a misunderstanding. But it seems to me
8 that the primary positive reason for constructing an enrichment facility is one having to do with
9 provision of safe energy resources for the nation. If that's correct, then what you've given me is
10 an argument for building an enrichment plant somewhere. Okay. Now I'm not -- I don't want to
11 bore into the issue of whether or not that's correct. But what I'm going to say is what you're
12 talking about is whether or not we should have a plant at all.
13

14 That's what I got. They call that dancing, where I'm from. Right. So the-- yes. So putting aside
15 any issues about the correctness or incorrectness of this judgment -- right -- this is an argument
16 for building a plant somewhere. Right.
17

18 Now what we haven't heard -- so what that makes me worry about, then is the process that the
19 EIS went through in ruling out a certain kind of alternative sources for this product; right?
20 Because, really, in conducting that process, what you thought about was whether or not to build
21 the Eagle Rock facility. Right? So it's a question of should the Eagle Rock facility be built or not,
22 and then you looked at alternative locations and ruled those out.
23

24 But that's not the same question; right. That's a question about a particular facility at a particular
25 place, and we've been -- we've identified positives and negatives of building that particular
26 facility; right. And whatever you think of those, those would be equally true if you built that
27 facility anywhere at all; right. There would be waste concerns. There would be economic
28 benefits.
29

30 So there's a certain kind of mismatch between the primary motivation for the existence of this
31 facility, right, which is a national motivation, and the terms of the debate, which is a particular
32 debate about an individual facility; right. So whether I agree with the proponents, or whether I
33 agree with the people who aren't impressed, I'm like -- I'm saying that seems to be inconsistent
34 with your primary motivation. That seems to me, that given that this is an EIS for a particular
35 facility, that general -- or that national level motivation has to come off the table; right. It should
36 be the issues about the particular facility under consideration, and if what you're doing is
37 identifying features of this facility that could equally well be provided by any other facility, then
38 those are not relevant to identifying whether or not to build this facility.
39

40 **Response:** *As pointed out in the comment, the need for the proposed EREF is national in*
41 *scope. The process used to select the location of the proposed EREF is discussed in*
42 *Section 2.3.1 of the EIS. Potential impacts of construction, operation, and decommissioning of*
43 *the proposed EREF at the chosen site are analyzed to comply with NEPA. All impacts,*
44 *regardless of whether they are similar to those if the facility were built elsewhere, must be*
45 *considered in the EIS.*
46
47

1 **Comment:** The following comment requests that certain conditions be included in AES's
2 license.

3
4 **[066-01, Toni Hardesty, on behalf of the Idaho Department of Environmental Quality]** In
5 addition to comments on the EIS, if the AREVA facility is granted a license by the NRC we
6 requested the following conditions be included in the license.

7
8 1. The state requests the NRC require AES to submit a yearly report to the Director of the
9 Idaho DEQ on or before January 15th of each year that identifies the number of cylinders of
10 DUF6 stored on site and the date of the longest stored container.

11
12 2. The state requests the NRC require AES to provide the state the same access to documents
13 and materials relating to the AES radiation protection program that is required to be provided to
14 the NRC.

15
16 3. The state requests the NRC require AES to allow Idaho DEQ to accompany NRC staff on
17 any of its inspections of the AES facility. In this regard, the state requests the NRC require AES
18 to allow Idaho DEQ staff the same access to its facilities, documents, materials and personnel
19 to which NRC is entitled. Idaho DEQ shall execute any confidentiality agreement necessary to
20 participate in such inspections and shall comply with all appropriate AES plant rules (e.g.,
21 safety, security) and any applicable NRC requirements when participating in such inspections.

22
23 4. The state requests the NRC require AES to provide the Idaho DEQ the physical security plan
24 for the AES facility.

25
26 5. The state requests that NRC require AES to provide periodic training to local emergency
27 responders for both transportation and plant operation incidents, and that the Idaho DEQ be
28 sent a copy of the training plan and notified when such training occurs.

29
30 6. It is common for facilities of this nature to fund monitoring programs run by a separate party,
31 in addition to their own program. The state requests that NRC require AES to fund an
32 independent third party Environmental Monitoring program for the Eagle Rock Facility.

33
34 **Response:** *As stated by the Idaho Department of Environmental Quality (IDEQ) in the above*
35 *comment, its request for including the license conditions is "in addition to comments on the EIS."*
36 *AES's license and the conditions in that license are not included in the scope of the EIS*
37 *analysis, and are separate issues that are determined by the Commission following the*
38 *issuance of the SER and Final EIS and the conclusion of the mandatory hearings. In the*
39 *meantime, the NRC plans to work with IDEQ and AES regarding IDEQ's requested license*
40 *conditions.*

41
42
43 **Comment:** The following comment relates to spent fuel rod reprocessing and high-level waste
44 generation and handling.

45
46 **[091-01, Arthur Kull]** I have followed the debate and arguments from both sides of the
47 spectrum and came to the conclusion that the NRC should grant AREVA the permit to build and

1 operate the uranium enrichment facility planned for the Idaho Falls area. It is an important step
2 for us in the US that spent fuel rods be reprocessed to

- 3
- 4 • Increase the utilization factor of the material that is now stored at the many power plants.
- 5
- 6 • Reduce the amount of high level waste generated that needs a permanent storage facility like
- 7 Yucca Mountain.
- 8

9 **Response:** *The construction, operation, and decommissioning of the proposed EREF does not*
10 *involve the reprocessing of spent fuel rods or the generation or handling of high-level waste.*
11 *Therefore, the subject of the above comment is not within the scope of the EIS.*

12

13

14 **Comment:** The following comments question the pursuit of technology that appears to have a
15 limited lifetime.

16

17 **[183-04, James Vincent]** My other issue is about estimates of uranium throughout the world.
18 The research I have done shows that there's somewhere between 50 years at the low end, and
19 100 years on the optimistic side. Why would we utilize a technology that costs literally billions of
20 dollars to implement, with public tax dollars for a loan guarantee, and I realize that it is a
21 guarantee, and Idaho tax incentives for a limited time technology? Even 100 years is not very
22 long, as far as reserves.

23

24 **[183-11, James Vincent]** My research has found known estimates world wide of uranium
25 somewhere between 50 years on the low end and 100 years on the optimistic side. Why would
26 we utilize a technology that costs literally billions of dollars to implement with public tax dollars
27 for a loan guarantee and Idaho tax incentives for a limited time technology, Even 100 years is
28 not very long as far as reserves.

29

30 **Response:** *The pursuit of the gas centrifuge technology for uranium enrichment, which has a*
31 *limited lifetime, is a national energy policy issue that is not within the scope of this EIS (which is*
32 *for the proposed EREF). As discussed in Section 1.3 of the EIS, the proposed action is*
33 *intended to satisfy the need for an additional reliable and economical domestic source of*
34 *uranium enrichment services. The above comments are directed at the choice of nuclear power*
35 *as an energy source. These comments are not within the scope of the EIS.*

36

37

38 **Comment:** The following comments raise various U.S. government issues that are not directly
39 related to the scope of the EIS.

40

41 **[110-02, John and Susan Medlin]** In the US today, government oversight of corporate
42 behavior is laughable, regardless of the riskiness of corporate operations. And the quaint
43 concept of "corporate social responsibility" has been completely replaced with single-minded
44 pursuit of profitability regardless of consequences to human, economic, and environmental
45 health. Ergo, corporations operate with neither external nor internal restraint, however vile the
46 consequences might turn out to be.

1 Now in Idaho we have the perfect combination: tough times, high joblessness, hungry
2 contractors, no government oversight at any level, and corporate greed. This is the recipe for
3 ruination of our environment, and subsequently our health and long term economic development
4 potential.

5
6 Add our unequivocal “NO” to the responses you have received regarding approval of this
7 proposal.

8
9 **[180-12, Kaye Turner]** And finally, I wonder if Iran was proposing a plant like this would the
10 United States have an objection to it?

11
12 **Response:** *U.S. government policies, including national energy policy issues, are not within the*
13 *scope of this EIS, which is for the proposed EREF. The proposed action is intended to satisfy*
14 *the need for an additional reliable and economical domestic source of uranium enrichment*
15 *services. The issues raised in the above comments are national policy issues that are outside*
16 *the scope of this EIS.*

17
18
19 **Comment:** The following comments relate to parts of the nuclear fuel cycle other than uranium
20 enrichment.

21
22 **[131-08, Morty Prisament]** Source and Implications of Uranium Proposed to be Used: The
23 source of uranium to be used and environmental implications related to extraction and transport
24 needs to be evaluated, including environmental justice and socioeconomic considerations.
25 National security considerations related to using proposed sources versus alternative sources
26 should also be discussed.

27
28 **[191-06, Liz Woodruff]** Radioactive material is inherently dangerous. Just the activities directly
29 connected with uranium enrichment pose risks, as do all other parts of the fuel chain. The NRC
30 should perform a complete analysis of the risks of uranium mining and milling, mixing yellow
31 cake with hexafluoride (itself a dangerous material), enriching UF6 in gas centrifuge plants,
32 storing and deconverting depleted UF6, disposing of depleted uranium and low level waste,
33 fabricating fuel from enriched uranium, and all intermediate transportation steps.

34
35 **[193-02, Liz Woodruff, on behalf of the Snake River Alliance]** But when we talk about the
36 waste, it's really important that everybody here understand what is being proposed. The
37 proposal is for a uranium enrichment factory, but that's only one part of the nuclear fuel chain.
38 The entire nuclear fuel chain is dirty, dangerous, and promotes the transportation of radioactive
39 materials on interstates, railways, and highways, which presents an enormous risk.

40
41 First, uranium is mined, which produces a waste stream, then it's transported, and it's milled
42 and refined, which produces a waste stream. Then it's transported and it's converted, which
43 produces a waste stream. And then it is transported to a uranium enrichment factory. That is
44 what is being proposed in Idaho. It's very important that we understand that this is in the middle
45 of the fuel chain. This not a nuclear power reactor. This is not a reprocessing facility. It's an
46 enrichment factory.

1 **Response:** *The proposed action is intended to satisfy the need for an additional reliable and*
2 *economical domestic source of uranium enrichment services. The comments are directed at*
3 *evaluating impacts related to the origin of the uranium to be enriched and impacts of other parts*
4 *of the nuclear fuel cycle, which are not part of the proposed action. Therefore, these comments*
5 *are not within the scope of the EIS.*
6
7

8 **Comment:** The following comments suggest that other energy options be pursued.
9

10 **[008-03, Carol Bachelder]** But the decommission process and the construction process, and
11 the transportation, and on and on and on -- how can we possibly expect any sort of economic
12 feasibility for the price of this energy that we're paying for with all these extensive expenses? It
13 boggles the mind. I don't see how we could possibly get, you know, the amount out of -- the
14 amount of energy out of this thing that we're going to put into it, you know, in the terms of
15 money. Energy is really kind of behind the whole argument here, and I'm interested in
16 alternative forms of energy, so I would have to support the not action alternative for the nuclear
17 plant. But solar has great potential because of economic warming. A month ago, the entire
18 United states, on the weather map, was red. If we could only figure out storage for this energy
19 from the sun, we could get through the whole winter. My neighbor has a big solar panel, and
20 she put drapes over it because, I mean, you don't want to warm your house in the summer time,
21 do you? But if you could store the energy from the heat of the sun during this summer, you
22 could get through the winter, and I don't think that the cost could possibly compare to the
23 amount of money that you're proposing to spend on this thing.
24

25 **[025-03, Hon. Sue Chew]** You know, when we look at our energy needs, you know, I really am
26 the "big picture" person. And not only should we look at nuclear as a source of energy, but, you
27 know, we've got a lot of other things that we really should be looking at in the state and in this
28 nation.
29

30 And I would like as much effort being put forth, and as much support, being put forth with our
31 other sources of energy. When we look at solar, we look at geo, when we look at wind, I'd like to
32 see that develop, especially in this state. And, you know, we've heard that the energy that would
33 be developed through this particular mechanism doesn't benefit our state. I'd like for us to reflect
34 on that.
35

36 And I'd like for, you know, the ingenuity of Idahoans here, our researchers are regular people
37 that have good ideas, really, to be supported in our state with regard to these other sources.
38 Conservation goes a long way, and I think that all these things need to be at the table, not just
39 nuclear, and, you know, I really have a caveat with regard to this, because of potential dangers.
40

41 **[032-06, Cindy Cottrell]** The jobs that this plant will produce will be few in comparison to the
42 cost of allowing it here. Maybe 300 people will get jobs that will not last forever, but only for the
43 lifetime of the plant. Right now it will cost tax payers would have to loan Areva \$2 billion. Other
44 types of energy would be much more worth the taxpayer's money. That's a lot of money for
45 300 jobs and waste to manage forever. Other kinds of energy that is less risky would be better
46 to invest in.
47

1 **[040-03, Collin Day]** We need to look at things like – I’ve been reading about the “smart grid.” I
2 think we have got plenty of energy in this country. We just need to use it smarter, or we need to
3 be smarter about how we use it.
4

5 **[044-01, Dennis Donnelly]** I would point out that this section of considering alternatives
6 assumes that it has to supply enriched uranium for national energy security; that is, they
7 assume that this plant is going to be built, and it neglects the alternative of not building these
8 plants.
9

10 I would point out that if you build this facility, it commits America, this is the unstated thing, it
11 commits America essentially to a future that includes nuclear power, and all the nightmares
12 associated with it. I would like to point out that there are other options that some of the
13 nightmares would be a police state in our communities, where the Soviet Russians and the
14 Germans that we already have that police state. These things are so dangerous that we’re
15 considering bombing Iran and the Israelis are considering bombing Iran for exactly the same
16 facility. It’s so dangerous. The reason is, of course, that you build this facility, and then you build
17 the reactors, the reactors breed plutonium, plutonium can make weapons. You can’t take that
18 away once you’ve done it.
19

20 The police state is a terrible thing. The rest of it has to do with the threat of military attack on
21 these facilities, on the plants. Nobody seems to address that all these atomic power plants are
22 built above ground. Any kind of terrorist or military attack on any one of them can take out two
23 states, that much area. We’ve seen Chernobyl. We know it can happen, and it has happened.
24 Even accidents can take out a large area. Right now we have major problems still from
25 Chernobyl, and everyone knows it.
26

27 I would like to point out there are alternatives that have not been considered, that I’d like to
28 mention. A couple of weeks ago, there was an announcement in the “New York Times”, and I
29 followed it up, and yes, it’s true, there was a study in North Carolina that concluded for the first
30 time that new power plants in North Carolina were cheaper to build with solar power than with
31 nuclear power. This is a major crossover point that should be considered. And you see there are
32 none of the problems, there are no activation products, there are no fission products, there are
33 no actinides, there is no plumbing of unmanageable wastes that we’re casting into the future for
34 all of geologic time that require management and armies to manage them. None of the
35 problems if you go with solar power, and with -- instead of nuclear power. And I would urge
36 everyone to consider personally their own career options right now.
37

38 If we go ahead with this plant, we’re committing to a future that dumps unmanageable problems,
39 and a police state on the future of this country, and every country. Whereas, if we do the
40 unspoken thing, let all our aging and outdated nuclear plants expire, and then use clean energy,
41 non-carbon energy for the future, and not this totally toxic nuclear energy.
42

43 **[050-06, Joanie Fauci]** The money being spent on these EIS documents, the hearings, the pre-
44 building, and the rest should instead be spent on research and production of alternative energy
45 sources. Alternative energy research and production also brings jobs.
46

47 **[071-01, David Hensel]** I’m not a proponent of nuclear power, and I may be a wacko, but the
48 reason I’m not a proponent of nuclear power, one of the reasons is don’t think it’s a very
49 cost-effective or a very good energy source as far as being competitive on the energy market.
50

1 **[083-03, Diane Jones]** As far as need, I know some speakers have attempted to make a case
2 for need in terms of jobs and tax base, and any project can be justified in terms of jobs and tax
3 base, including cleaning toxic waste. That's no really what we want in Idaho. There are plenty of
4 alternatives. I know that's not covered by the EIS, but in the "big picture," jobs could be created
5 with energy systems that might be based on wind and solar, that would have less adverse
6 environmental effects.

7
8 **[095-10, Linda Leeuwrik]** In both Idaho and the entire United States, we need to focus our
9 resources on developing clean and renewable sources of energy, rather than investing more
10 money into "dirty" sources and technologies that will leave us with waste that we have no good
11 solutions for dealing with. Thus, I cannot state adamantly enough, how opposed I am to Areva's
12 proposed enrichment facility in South East Idaho.

13
14 **[113-02, Ken Miller]** There's been talk about nuclear as a baseload power source, and as a
15 clean alternative to coal, and also gas to a degree, I suppose. It is true that nuclear power has a
16 capacity factor, as we heard earlier tonight, that does qualify it as baseload, but it's not the only
17 resource that can fill that bill. The U.S. Department of Energy does not put all of the nation's
18 future energy eggs in the nuclear basket. Far from it, it envisions a much more diverse energy
19 portfolio that is more reliant than ever on energy efficiency, and conservation, and other truly
20 renewable baseload energy resources.

21
22 In Idaho, we have other baseload energy resources, such as hydropower and geothermal, and
23 our utilities are working hand and glove with DOE at the INL, and at the National Renewable
24 Energy Laboratory, to more efficiently integrate wind and solar into our increasingly smart grid.
25 Our region's six power plan, which was adopted by the Northwest Power and Conservation
26 Council, projects that our region can meet 85 percent of our new load growth over the next 20
27 years through energy efficiency, and to a degree, renewable energy. The plan does not envision
28 the development of any large-scale regeneration for the next 20 years, and that would include
29 nuclear.

30
31 **[103-06, Karen McCall]** Areva wants US Federal loan guarantees in the amount of \$2 billion
32 dollars. US taxpayers would get far more energy for that money spent on renewables. An
33 analysis by Idaho Power shows that nuclear power would cost significantly more per megawatt
34 hour than wind, geothermal and biomass.

35
36 **[106-04, Ted McConaughy]** I also think that the – maybe the most interesting issue in favor
37 of this project is the idea that we need a stable baseload, and a carbon-free stable baseload.
38 And I feel like this – that there are alternatives for the baseload. I mean, certainly, hydro is one,
39 and we have other ways of storing energy.

40
41 For example, for instance, any of these – any electricity generator can produce hydrogen, and
42 we could store hydrogen, and I don't know the economics of these various things, but what I do
43 know is there are many possible ways of storing energy with efficient retrieval possible.

44
45 And so to think that we require immediate access to baseload power, at all times, I think ignores
46 the possibility that we have other storage options that might be – that might work in conjunction
47 with ephemeral power sources like wind and solar, in order to give us the essential benefits of
48 baseload power.

1 **[120-02, Frank Nicholson]** Thorium is a viable alternative making this type of enrichment
2 obsolete.

3
4 **[120-05, Frank Nicholson]** There are less dangerous methods of nuclear power being
5 developed. i.e., thorium. Wait until these methods are practical and then relook at a modified
6 proposal.

7
8 **[132-01, Margo and Dennis Proksa]** However, there are many who know the truth about
9 nuclear power - from mining to uranium enrichment and all the steps between - it's dirty,
10 dangerous, and expensive, And we think there's no need for a renaissance at all because there
11 are wiser alternatives to renewable sources.

12
13 We propose the following energy efficient strategies to be paid for with the \$2 billion loan from
14 the feds, and whatever Idaho is throwing in. Buy and install energy efficient appliances for every
15 Idahoan who needs them: hot water heaters, refrigerators, washers, and dryers, insulate Idaho
16 homes and commercial buildings that are inadequately protected, more cash for clunkers,
17 expand renewable energy resource development, wind, solar, geothermal, and the grid, build
18 bike paths throughout Idaho communities for everyone to use for commuting to work, and to
19 schools, and for recreation, encourage bike travel by making it safe and enjoyable, get young
20 people involved in energy issues and problem solving by developing an education program that
21 encourages imagination, ingenuity, and self-sufficiency that are carbon-free and nuclear-free.
22 Why not?

23
24 This would be an economic stimulus package that would diversify the population that needs
25 help the most, the unemployed and the middle class. This could have a positive and profound
26 effect locally and globally. It would create jobs for Americans, the appliance manufacturers who
27 buy raw materials like steel, and delivery and installation jobs, and jobs to extract recyclable
28 materials from old appliances. Jobs where they make insulation, and jobs to install the
29 insulation, jobs in manufacturing fuel efficient cars, trucks, and buses, jobs in city planning to
30 route bike paths throughout their communities, and jobs for road and path construction, as well
31 as the materials for that expansion, jobs in bike manufacturing, jobs in renewable energy
32 technologies.

33
34 There are abundant health benefits and energy savings with this plan. A healthier population,
35 because of the option to pedal around town, a broader cross section of Americans who will find
36 work in their communities, and the cost of energy at home and fuel for their vehicles will be
37 reined in, stress levels will drop improving everyone's attitude and outlook. Other states and
38 countries would admire Idaho for its truly progressive focus on the short and long-term goals.
39 Idaho could become a model for sustainable living. Tourism would increase just because people
40 would want to see progress to believe it, especially in such a scenic state.

41
42 In addition to these straightforward suggestions for energy savings, job creation, health benefits,
43 and collective attitude adjustment, there are a wealth of other positive side effects for Idaho if
44 AREVA does not build a uranium enriching plant here.

45
46 We would not have to loan a foreign company/country billions of dollars we can put to better use
47 ourselves. And we don't have to give them any more money if they underestimate costs, or
48 have technical problems they don't expect during construction, or pay for cleanup after they take
49 their profits and return to France. Idaho would not be responsible for the safety and cost of

1 storing tons of depleted uranium waiting patiently until the day comes when someone figures
2 out what to do with it, and where to put it. Idahoans would not have to share the roads with
3 thousands of loads of toxic and dangerous materials. Idahoans won't have to worry about living
4 downwind of smoke or emissions should there be a fire, or terrorist attack at the facility. We
5 don't have to endanger any wildlife because of habitat destruction, or lose productive farmland.
6 We can rest assured radioactive materials will not be lost in the system and used for making
7 bombs, since enrichment is a proliferable technology. The Snake River Aquifer would be
8 protected from further contamination.

9
10 The advantages of not financing AREVA are huge. U.S. energy policy must shift its attention
11 and resources to the development of carbon-free and nuclear-free alternatives that are faster,
12 cheaper, and less risky. We can think outside the dirty, dangerous, and expensive nuclear
13 power box.

14
15 **[147-19, Joey Schueler]** 15. Many things can be done to align our energy needs with the other
16 options available to power our grids in America and with far less reliance on foreign trade:

17
18 a. Renewable energy sources are available and new technologies can be developed
19 through U.S. ingenuity, providing a global demand for American jobs and products.

20
21 b. The American grid is old and outdated. The restructuring of our grid will effectively
22 limit waste, save the environment and provide an economic growth engine based on
23 America's "needs" not it's consumerist wants.

24
25 c. Perhaps we should limit our energy use... I know most Americans don't want to hear
26 that, but if it's that or sunbathing next to a depleted Uranium cesspool, which would you
27 choose?

28
29 **[168-09, Lon Stewart]** The United States could invest the DOE \$2 billion loan in American
30 companies that would apply towards carbon free renewable energy such as geothermal, wind
31 and solar power systems along with energy efficiency and conservation programs that would be
32 on line sooner than any nuclear facility. The money would be distributed over many multiple
33 companies rather than one facility. Even if a portion of the loan(s) defaulted, at least the money
34 was spent in the United States, on our projects, employing our people, and we saved some
35 energy in the process. The stone age did not end because we ran out of stone. The nuclear age
36 should not end because we used up all the uranium. The US can become energy independent if
37 we utilize our renewable energy sources and concentrate on conservation and efficiency
38 measures. This sounds much better to me.

39
40 **[175-03, Ellen Thomas]** There is no need for a new US plant to enrich uranium for electricity
41 production. Current supplies are clearly adequate, and as we develop healthy solar, wind, tidal
42 and other truly clean energy systems, there is no need for new nuclear power plants.

43
44 **[181-10, Roger Turner]** The following conditions, in combination, eliminate the need for this
45 project: (a) recent finds of large amounts of natural gas in the U.S. is reducing interest in nuclear
46 power and rendering nuclear power uneconomical in comparison. (b) the cost of solar and wind
47 power are coming down resulting in a larger role for these power sources and; (c) with the
48 reduction of nuclear power plants in the U.S. domestic uranium enrichment plants will be able to

1 supply the nuclear power industry with ample supplies of U-235, without the need for this
2 proposed, expensive, AREVA plant. The aforementioned points are detailed below:

3
4 (A) Recent finds of large amounts of natural gas fields in the U.S. reducing the interest and
5 momentum by power companies in developing nuclear power. New finds of domestic natural
6 gas has resulted in a switch in interest from coal and nuclear to gas for power supplies. A recent
7 MIT study, that is more up-to-date than the study referenced in the draft EIS, reveals a likely
8 economically realistic switch to natural gas for the United States power supplies. This study, by
9 a group of 30 MIT faculty members, researchers and graduate students reflects the more
10 accurate conditions for power plant construction in the United States for the next 40 years. The
11 study shows a baseline global estimate of recoverable gas resources reaching some 16,200
12 trillion cubic feet (Tcf), enough to last over 160 years at current global consumption rates. (The
13 Future of Natural Gas -- Study finds significant potential to displace coal, reducing greenhouse
14 gas emissions, MIT, June 2010) In addition the study reports the following trend:

15
16 “Natural-gas consumption will increase dramatically and will largely displace coal in the power
17 generation sector by 2050 (the time horizon of the study) under a modeling scenario where,
18 through carbon emissions pricing, industrialized nations reduce CO₂ emissions by 50 percent by
19 2050, and large emerging economies, e.g. China, India and Brazil reduce CO₂ emissions by
20 50 percent by 2070. This assumes incremental reductions in the current price structures of the
21 alternatives, including renewables, nuclear and carbon capture and sequestration.”

22
23 According to U.S. Energy Information Administration Annual Energy Outlook 2010, domestic
24 and Canadian gas supply will increase, at least to 2035.

25
26 Shale gas provides largest source of growth in U.S. natural gas supply

27
28 The increase in U.S. natural gas production from 2008 to 2035 in the AEO-2010 Reference
29 case results primarily from continued growth in production of shale gas, recent discoveries in
30 deep waters offshore, and, to a lesser extent, stranded natural gas brought to market after
31 construction of the Alaska natural gas pipeline is completed in 2023. Shale gas and coalbed
32 methane make up 34 percent of total U.S. production in 2035, doubling their 17-percent share in
33 2008. Shale gas is the largest contributor to the growth in production, while production from
34 coalbed methane deposits remains relatively stable from 2008 to 2035.

35
36 (B) The cost of solar power is lower than nuclear power, resulting in a larger role for these
37 power sources. The New York Times reports the following article:

38
39 Solar power costs have been declining, the costs of nuclear power have been rising inexorably
40 over the past eight years, said Mark Cooper, senior fellow for economic analysis at Vermont
41 Law School’s Institute for Energy and Environment. Estimates of construction costs — about
42 \$3 billion per reactor in 2002 — have been regularly revised upward to an average of about
43 \$10 billion per reactor, and the estimates are likely to keep rising, said Mr. Cooper, an analyst
44 specializing in tracking nuclear power costs. (New York Times; Special Report: Energy and
45 Environment, Nuclear Energy Loses Cost Advantage, July 26, 2010)

46
47 (C) Switch to other power sources means no need for Areva. Given the above two examples of
48 a switch to other power sources than nuclear, the existing plans for enrichment will be adequate
49 to supply the U.S. nuclear industry. The Les Urenco company has plans to produce up to
50

1 6 million SWU; while the USEC produces 10.5 Million SWUs. Also, in 2008, an amended
2 agreement allows Russia to export increasing amounts LEU available to nuclear power
3 companies to the United States, starting with 442,000 pounds in 2011 and up to 13.7 Million
4 pounds in 2020.

5
6 While it is true that some nuclear plants may expand their existing power plant, such as Watts
7 Bar 2 (TVA), there will be nowhere near the number of new units predicted by the NRC's Energy
8 Assessment Administration Report (EIA 2009a) and nowhere near the need for SWUs
9 referenced in the draft EIS for AREVA; and because of many nuclear plants are
10 decommissioning -- there will be less and less need for enriched uranium. Many of the firms that
11 initially consider nuclear construction are bound by State requirements that they be 'prudent
12 investors'. Therefore, many initial applicants to NRC are dropping out completely, or keeping
13 them on hold.

14
15 Consequently, the EIS should carefully review current studies and assessments that show a
16 general swing to natural gas, solar and wind. Unfortunately the NRC fails to take a hard look at
17 this purported need. A nuclear power plant hasn't been built in the United States in two
18 decades. The EIS needs to provide economic comparisons of nuclear vs. Solar and Natural
19 Gas. More and more companies are dropping their nuclear power applications to NRC, and
20 therefore the need for this plant is not justified, given the existing and soon to open facilities in
21 the U.S. to provide sources of enriched uranium.

22
23 **[193-12, Liz Woodruff, on behalf of the Snake River Alliance]** This is from a study by
24 Mark Cooper of Vermont Law School in June of 2009, and he argues that the cost projections
25 for new reactors are four times as high as the initial nuclear renaissance projections. So there's
26 an economic obstacle, significant economic obstacle that has to be overcome for this supposed
27 renaissance to occur.

28
29 He argues that nuclear reactors are, in fact, the worst option from the point of view of the
30 consumer in society.

31
32 He talks about the ways in which efficiency, cogeneration, biomass, geothermal, other
33 renewables, are less costly and more viable forms of energy production, leaving us with six
34 cents per kilowatt hour versus 12 to 20 cents per kilowatt hour, to pursue the nuclear option.

35
36 And I would argue, in fact, that this third point should have been an alternative pursued in the
37 EIS. You heard them say that they looked at the "no alternative," or the "no action alternative."
38 Why didn't they look at the efficiency and renewable energy alternative?

39
40 And finally, the additional cost of building a hundred new nuclear reactors could be 1.9 to
41 4.4 trillion dollars. Now I know that "billion" has lost its shock value lately, but we should kind of
42 be shocked by the trillion number, and this economic obstacle is certainly one that calls into
43 question the hypothesis posed by the NRC, that there'll be a need for new enriched uranium.

44
45 And just to underscore this, this is a chart that was just released in a Duke University study in
46 July of this year, and it shows, with the yellow line, the cost of nuclear going up and the cost of
47 solar coming down.

1 So this economic obstacle presented by the nuclear -- you know, before the nuclear industry, is
2 one that renewables are not facing. As a matter of fact, the costs are coming down.

3
4 And again, this obstacle is one that we believe will stop the supposed nuclear renaissance, and
5 actually lead to a nuclear collapse, therefore nullifying the claim that's the premise of the NRC,
6 that there's a need for new enriched uranium.

7
8 **Response:** *The issues raised in the above comments are national energy policy issues that are*
9 *not within the scope of this EIS, which is for the proposed EREF. The proposed action is*
10 *intended to satisfy the need for an additional reliable and economical domestic source of*
11 *uranium enrichment services. The alternatives in the comments raise national policy issues*
12 *(e.g., finding other sources of energy) that would not satisfy the need of the proposed action,*
13 *and therefore such alternatives are not within the scope of the EIS.*

14
15
16 **Comment:** The following comments raise objections to the preconstruction exemption granted
17 to AES by the NRC and suggest that the impacts of preconstruction were not evaluated in the
18 Draft EIS.

19
20 **[015-18, Beatrice Brailsford]** Because of an exemption granted in March 2010, Areva will be
21 allowed to start "preconstruction" activities as early as October 2010. This preconstruction
22 exemption shows a bias towards licensing. It appears the NRC has already made the decision
23 to allow the project to move forward even before the necessary impact assessments and public
24 comment periods have been completed. Preconstruction constitutes one part of a major federal
25 action. 40 CFR 1500.1(b) requires that information be available before an agency makes
26 decisions or takes any action. It is impossible for the NRC to produce a final EIS and ROD
27 before preconstruction starts in October. The NRC must either revise the current draft to include
28 the impacts of preconstruction or must write an additional EIS that specifically addresses
29 preconstruction activities. The NRC must not allow preconstruction to commence until after a
30 ROD is issued.

31
32 **[015-20, Beatrice Brailsford]** The transmission lines compound the negative impact the will
33 accrue to pronghorn antelope, greater sage grouse, and ferruginous hawks, which will all likely
34 abandon the Areva site and surrounding areas. Sage grouse is a candidate species for federal
35 protection. The Idaho Department of Fish and Game reaffirmed the threats transmission lines
36 would pose to wildlife, challenged the methodology of sage grouse and lek analysis in the draft
37 EIS, recommended burying transmission lines, and suggested Areva submit to plans to mitigate
38 for the expected wildlife impacts. These concerns do not appear to have been addressed in this
39 EIS and must be addressed before any preconstruction activities are allowed or before this EIS
40 review continues.

41
42 **[018-02, Deb Brown; 035-01, Stephen Crowley; 055-02, Claudia Galaviz; 056-01, Mark**
43 **Galaviz; 063-02, Martha Haga; 101-02, Jody May-Chang; 117-02, Richard Morgan; 188-02,**
44 **Lana Weber-Wells]** In particular, I am concerned that the NRC will allow Areva to start "pre-
45 construction" activities in October of 2010 — which would be before the Record of Decision on
46 this license is released. Moreover, preconstruction constitutes one part of a major federal action
47 and 40 CFR 1500.1(b) requires that information be available before an agency makes decisions
48 or takes any action. The impacts of preconstruction must be evaluated in the draft EIS, or
49 another EIS should be initiated to assess preconstruction impacts.

1 **[025-05, Hon. Sue Chew]** Trained as clinical pharmacist, I am taught to make sure of the facts
2 and additionally to cut corners ultimately costs lives or causes morbidity. I am thus particularly
3 concerned that the NRC start of the “preconstruction” activities in October of 2010 - which would
4 be before the Record of Decision is released.
5

6 In addition, preconstruction comprises one part of a major federal action in which 40 CFR
7 1500.1(b) requires that information be available before an agency makes decisions or takes any
8 action. The impacts of preconstruction must be evaluated in the draft EIS before preconstruction
9 begins. Alternatively, I would strongly recommend that an additional EIS should be initiated to
10 assess preconstruction impacts.
11

12 **[027-02, Sara Cohn]** Preconstruction has been mentioned by other folks, and I will mention it
13 also. It is unclear under what authority NRC can offer the exemption for preconstruction
14 activities when such impacts extend outside of NRC jurisdiction. For example, preconstruction
15 activities will impact species protected under the Endangered Species Act, such as sage
16 grouse, and others, and waters protected under the Safe Drinking Water Act, specifically the
17 sole source aquifer, the eastern Snake River plain. The project must consult with agencies like
18 EPA and the U.S. Fish and Wildlife Service, in order to analyze and release for public comment
19 the environmental and public health impacts of preconstruction activities, including clearing,
20 blasting, and grading, prior to conducting such activities.
21

22 **[027-12, Sara Cohn]** Preconstruction Exemption: It is unclear under what authority NRC may
23 offer exemptions for preconstruction activities when such impacts extend outside of NRC
24 jurisdiction. For example preconstruction activities may impact waters protected under the Safe
25 Drinking Water Act – the Eastern Snake River Plain Aquifer. The project must consult with EPA
26 in order to ensure the preconstruction activities will not impact the Eastern Snake River Plain
27 aquifer, a sole source aquifer for eastern Idaho.
28

29 **[027-21, Sara Cohn]** Preconstruction Exemption: It is unclear under what authority NRC may
30 offer exemptions for preconstruction activities when such impacts extend outside of NRC
31 jurisdiction. For example preconstruction activities will impact sensitive and candidate species.
32 Project impacts would normally require NRC to coordinate with the Idaho Department of Fish
33 and Game in order to analyze and release for public comment the environmental and public
34 health impacts of preconstruction clearing, blasting, and grading prior to conducting such
35 activities. According to the draft EIS, such preconstruction activities are expected to take place
36 prior to the licensing of the proposed facility. These efforts undermine the purpose of the EIS
37 process. A mitigation plan must be created to avoid, minimize, and plan for mitigation of affected
38 habitat.
39

40 **[030-01, Kerry Cooke]** There is nothing in the EIS to suggest there is any reason for haste.
41 There's no emergency facing this country, or any other country, that this facility must be built as
42 soon as possible. There's -- I guess I'm just going to say, that I think that there's -- there must
43 be some proof laid out here, that there's any reason to say work needs to start in October, when
44 so many questions are left to be answered, so much is still -- we're here talking to you tonight
45 about effects on the environment, many questions we have about the road into it, transmission,
46 and yet, you're going to allow preconstruction. It's totally puzzling to me, and I think really needs
47 much more explanation, and I actually believe shouldn't happen.
48

1 **[030-06, Kerry Cooke]** Haste: What's the hurry? Why is the NRC allowing Areva to start a
2 "preconstruction" phase this fall? During so-called preconstruction, the environment will be
3 greatly disturbed. I appear before you today in good faith that a decision has not been rendered
4 on this proposal, that all Verbal Comment will be considered, and that the EIS will be properly
5 completed and vetted before a decision is reached. There is no emergency that demands that
6 this project be fast-tracked, no national crisis dictating that rules be bent to allow early work.
7 The haste shown by Idaho lawmakers in pushing through funding for a road to the Areva site,
8 while not part of NRC domain, raises even higher my concern that decisions are being made by
9 greed rather than science and sound energy and fiscal policy. There is no reason to start
10 preconstruction before the EIS is released in final form.

11
12 **[035-02, Steve Crowley]** In particular, I am concerned that the NRC will allow Areva to start
13 "preconstruction" activities in October of 2010 - which would be before the Record of Decision is
14 released. Moreover, preconstruction constitutes one part of a major federal action and 40 CFR
15 1500.1(b) requires that information be available before an agency makes decisions or takes any
16 action. The impacts of preconstruction must be evaluated in the draft EIS, or another EIS should
17 be initiated to assess preconstruction impacts.

18
19 **[048-04, Genevieve Emerson]** I am appalled that pre-construction would even remotely be
20 considered as a viable option, as sage brush steppe can take a very long time to recover after it
21 has been razed. I strongly feel that the citizens of Idaho need more time to consider the
22 implications of such a facility, and pre-construction is extremely short-sighted and hasty.

23
24 **[078-03, Hon. Wendy Jaquet]** 3. I thought the exemptions were excessive.

25
26 **[086-01, Paula Jull]** The NRC has shown bias in allowing Areva to begin preconstruction
27 activities before the decision has been made.

28
29 **[087-01, Dennis Kasnicki]** Comment 1: At the subject meeting some attendees commented
30 that the NRC giving AREVA a "preconstruction exemption" constituted a bias toward ultimate
31 license approval. I totally agree. As paranoid as the NRC was regarding "appearances" (as I
32 saw it when I was with Region II) I can't believe you guys got away with that one.

33
34 **[088-07, Stan Kidwell; 095-07, Linda Leeuwrik; 122-06, Kathy O'Brien; 175-02, Ellen
35 Thomas]** The NRC has demonstrated a clear bias toward licensing by granting Areva
36 permission to begin "preconstruction" activities in October, long before any final decision has
37 been made. The NRC must withdraw its permission to begin.

38
39 **[105-02, Eve McConaughy]** Why were exemptions for pre-construction activities given prior
40 to licensing?

41
42 **[113-03, Ken Miller]** On the transmission issue, the NRC's exemption that authorizes AREVA
43 to undertake preconstruction activities as not part of the proposed action should not include
44 exempting utilities' installations including transmission lines and associated substations, and
45 other utility infrastructure.

46
47 **[113-14, Ken Miller]** As mentioned above, NRC erred in permitting AES to undertake myriad
48 preconstruction activities as beyond the purview of the EIS. This is only one indication that the

1 NRC appears biased toward approval of the EREF application even as it is soliciting public
2 comment and review of the Draft EIS. It is not too late for the NRC to remedy this egregious
3 oversight – deliberate or otherwise – and to subject this project to a complete environmental
4 review before any further preconstruction activities are allowed to take place.
5

6 **[118-02, Caroline Morris]** The possibility of NRC’s allowing the contractor Areva to begin
7 “preconstruction” activity in October 2010 troubles me, because it would predate release of this
8 license’s Record of Decision. Clearly, preconstruction is one part of this major federal action.
9 40 CFR 1500.1(b) requires agencies to release available information before making the
10 pertinent decisions or taking relevant actions. This draft EIS must evaluate the preconstruction
11 impact factors, since there is no time to initiate another EIS to consider preconstruction.
12

13 **[144-02, Sara Rodgers]** Given that nuclear energy and the extraction of nuclear material
14 create multi generational risk to human and environmental health, it is important to ensure all
15 necessary precautions are taken seriously and that the preventative principle is the dominant
16 paradigm when considering or planning their use. I am concerned that the NRC may allow
17 preconstruction activities prior the adoption of the EIS. This is a poor use of wise decision
18 making and resources. To demonstrate good faith efforts in preserving the health of Idaho and
19 Idahoans, I request that no activities are undertaken until the EIS includes preconstruction
20 activities and the entire EIS is adopted.
21

22 Given that Areva corporation which desires this license and access to Idaho’s resources is an
23 international firm with a poor environmental record, it is important to ensure no risk to domestic
24 communities in case a environmental hazard occurs in the near or very long future. Since the
25 risk of nuclear waste may occur for thousands of years, a prolonged planning process with
26 thoughtful regulations to ensure no risk to domestic populations seems a small sacrifice than to
27 start preconstruction without a well thought out and enforceable plan.
28

29 **[148-01, Eric Schuler]** Taken as a whole, the EIS suggests that this facility will have a
30 relatively low impact on the environment. Of course several aspects of this, of the — have been
31 overlooked in making this conclusion. For instance, as others have already noted, it does not
32 consider the impact of the exempted preconstruction activities, the high risk of wildfires in the
33 area, or the lack of an appropriate disposal pathway for depleted uranium. Accordingly, the true
34 impact of this facility is certainly larger than the DEIS suggests.
35

36 **[153-11, Andrea Shipley]** Because of an exemption granted in March 2010, Areva will be
37 allowed to start “preconstruction” activities as early as October 2010. This preconstruction
38 exemption shows a bias towards licensing. It appears the NRC has already made the decision
39 to allow the project to move forward even before the necessary impact assessments and public
40 comment periods have been completed. (draft EIS, xxviii).
41

42 Preconstruction constitutes one part of a major federal action. 40 CFR 1500.1(b) requires that
43 information be available before an agency makes decisions or takes any action. Considering
44 that public comment is open until September 13, 2010. It is impossible for the NRC to produce a
45 final EIS and ROD before preconstruction starts in October.
46

1 **[197-11, Andrea Shipley, on behalf of the Snake River Alliance]** Because of an exemption
2 in March 2010, AREVA will be allowed to start preconstruction activities as early as October
3 2010. This preconstruction exemption shows a bias toward the licensee.
4

5 **[169-04, Margaret Stewart]** And it has been spoken about before that preconstruction activities
6 by AREVA are a travesty to the public process of honest democracy. Allowing preconstruction
7 activities to proceed without an analysis of the ensuing environmental and human effects shows
8 a clear intention by the NRC to license this facility. And, to me, that appears to make a total
9 sham of the impact assessments, and also of these public comments and hearings.
10

11 **[181-23, Roger Turner]** NRC erred by approving pre-construction of AREVA before an EIS
12 was provided to the public. The timing of an EIS is critical. CEQ regulations instruct agencies to
13 “integrate the NEPA process with other planning at the earliest possible time to insure that
14 planning and decisions reflect environmental values.” 40 CFR §1501.2 (1987). An EIS must be
15 prepared “early enough so that it can serve practically as an important contribution to the
16 decision-making process and will not be used to rationalize or justify decisions already made.”
17 Andrus, 442 U. S., at 351–352, n. 3 (quoting 40 CFR §1502.5 (1979)).
18

19 BY NRC already approving pre-construction designs, they have showed that they are using the
20 EIS to rationalize or justify decisions already made. Federal funds have already been spent on
21 this project, before the EIS was available to the public. This is in violation of NEPA.
22

23 **[184-16, Kitty Vincent]** Because of an unwarranted exemption granted in March 2010, Areva
24 will be allowed to start “preconstruction” activities as early as October 2010. This
25 preconstruction exemption shows a bias toward licensing. It appears the NRC has already
26 decided to allow the project to move forward even before the necessary impact assessments
27 and public comment periods have been completed. (draft EIS, xxviii). Preconstruction
28 constitutes one part of a major federal action. 40 CFR 1500.1(b) requires that information be
29 available before an agency makes decisions or takes any action. Considering that public
30 comment is open until September 13, 2010. It is impossible for the NRC to produce a final EIS
31 and ROD before preconstruction starts in October.
32

33 **[184-21, Kitty Vincent]** The Idaho Department of Fish and Game, in a response to NRC dated
34 April 14, reaffirmed the threats transmission lines would pose to wildlife (draft EIS B-26) and
35 challenges the methodology of sage grouse and leak analysis in the EIS (B-27), recommends
36 burying transmission lines, and suggests Areva submit to plans to mitigate for the expected
37 wildlife impacts. These concerns do not appear to have been addressed in this EIS and must be
38 addressed before any preconstruction activities are allowed or before this EIS review continues.
39

40 **[191-01, Liz Woodruff]** Most importantly, preconstruction cannot begin in October 2010. That
41 would be a completely unacceptable outcome of these proceedings.
42

43 **[191-05, Liz Woodruff]** Moreover, preconstruction plans must be halted and no
44 preconstruction activities should be allowed until an evaluation of the environmental impacts of
45 those activities has been integrated into an EIS. To allow preconstruction in October of 2010 is
46 unacceptable, and I believe such action will be adamantly opposed by residents of the state....
47

48 • Because of an exemption granted in March 2010, Areva will be allowed to start
49 “preconstruction” activities as early as October 2010. This preconstruction exemption shows a

1 bias towards licensing. It appears the NRC has already made the decision to allow the project to
2 move forward even before the necessary impact assessments and public comment periods
3 have been completed. draft EIS, xxviii)

4
5 • Preconstruction constitutes one part of a major federal action. 40 CFR 1500.1(b) requires that
6 information be available before an agency makes decisions or takes any action. Considering
7 that public comment is open until September 13, 2010. It is impossible for the NRC to produce a
8 final EIS and ROD before preconstruction starts in October. The NRC must either revise the
9 current draft to include the impacts of preconstruction or must write an additional EIS that
10 specifically addresses preconstruction activities. The NRC should not allow preconstruction to
11 commence until after a ROD is filed....

12
13 • The draft EIS (draft 4-5) notes that “The greatest potential for impacts on historic and cultural
14 resources would occur during ground disturbance during preconstruction.” Yet these
15 preconstruction activities are specifically removed from review in this study. *Again, the impacts
16 of preconstruction must be integrated into this draft EIS.*

17
18 **[193-15, Liz Woodruff, on behalf of the Snake River Alliance]** AREVA was given an
19 unwarranted exemption, granted in March of 2010, to start preconstruction activities as early as
20 October of this year, two months away. This preconstruction exemption shows a bias towards
21 licensing, without hearing public comment first.

22
23 But preconstruction constitutes one part of a major federal action. 40 CFR 1500.1(b) requires
24 that information be available before an agency makes decisions or takes any action.

25
26 The NRC cannot simply grant an exemption for activities with excessive environmental impacts.

27
28 If you look at the EIS, all the environmental impacts happen in preconstruction, and then they
29 aren't being taken into consideration, in the EIS, as an area of impact because we granted an
30 exemption for those impacts.

31
32 And they must either include preconstruction in the EIS, or write an additional EIS to evaluate
33 preconstruction impacts. Preconstruction activities cannot occur until the impacts are analyzed,
34 and the record of decision is signed, and your comments getting in on September 13th will
35 certainly not give them adequate time before preconstruction starts to issue a record of
36 decision, and this is unacceptable.

37
38 **[193-19, Liz Woodruff, on behalf of the Snake River Alliance]** Now this is something that's
39 considered as a preconstruction impact in EIS, so this isn't given the weight and the technical
40 impact review, the small, moderate, and large that you saw.

41
42 But more specifically, in the EIS, in Appendix B, the Idaho Department of Fish and Game affirms
43 that the threat to transmission lines would be great for wildlife, and they recommend barring
44 transmission lines and suggest AREVA submit to plans to mitigate for the expected wildlife
45 impacts. These concerns must be addressed in the EIS, before any preconstruction activities
46 are allowed.

1 **[193-20, Liz Woodruff, on behalf of the Snake River Alliance]** And all of the issues
2 associated with the construction of this facility -- accidents, fire, air and water quality
3 degradation, the development of this land will impact several species, including raptors and
4 sagebrush obligate species. This includes the sage grouse. The sage grouse is a candidate
5 species for federal protection, and the only reason it's not listed yet is because of bureaucratic
6 process of listing. There's a delay. But the treatment of this issue is inadequate in the draft EIS.

7
8 The impacts to sage grouse from transmission and preconstruction warrant integration into this
9 EIS, or separate EISs, specifically around preconstruction and transmission issues.

10
11 **[192-14, Lisa Young]** Indeed, I hope to see preconstruction activities prohibited until a further
12 analysis of the environmental impacts of these activities can be fully evaluated, and until the
13 facility is actually licensed (a rather logical notion, I think).

14
15 **Response:** *On March 17, 2010, the NRC granted AES an exemption from the requirements of*
16 *the regulations under 10 CFR 30.4, 30.33(a)(5), 40.4, 40.32(e), 70.4, and 70.23(a)(7), which*
17 *govern the commencement of construction (NRC, 2010c). This action was in response to AES's*
18 *request dated June 17, 2009 (AES, 2009b), as supplemented by letter dated October 15, 2009*
19 *(AES, 2009c), that requested an exemption from specific requirements of 10 CFR Parts 30, 40,*
20 *and 70 to allow AES to commence certain construction activities associated with the proposed*
21 *EREF before completion of the NRC's environmental review under 10 CFR Part 51. The*
22 *exemption authorizes AES to conduct the specified preconstruction activities, provided that*
23 *none of the facilities or activities subject to the exemption would be components of AES's*
24 *Physical Security Plan or its Standard Practice Procedures Plan for the Protection of Classified*
25 *Matter, or otherwise be subject to NRC review or approval.*

26
27 *As discussed in the March 17, 2010, exemption approval, the NRC staff determined that*
28 *granting AES's exemption request is authorized by law; and has reasonable assurance that*
29 *granting the exemption request would not endanger life or property or the common defense and*
30 *security, and is otherwise in the public interest. Also, pursuant to 10 CFR 51.32, the*
31 *Commission has determined that the granting of this exemption will not have a significant effect*
32 *on the quality of the human environment.*

33
34 *Approval of the exemption request does not indicate that a licensing decision has been made by*
35 *the NRC. Preconstruction activities would be completed by AES with the risk that a license may*
36 *not be issued. Some of the preconstruction activities may be deferred by AES until, or continue*
37 *after, the commencement of construction, if a license is issued. Before a license would be*
38 *granted, the Final EIS must be issued, and the ASLBP must review the NRC staff's SER*
39 *(NRC, 2010b) and Final EIS, conduct mandatory hearings on the staff's safety and*
40 *environmental reviews, and issue adjudicatory decision(s), which are subject to Commission*
41 *review.*

42
43 *Although the exemption allows AES to proceed with certain activities that are considered*
44 *outside of NRC regulatory purview (they are not related to radiological health and safety or the*
45 *common defense and security) before obtaining an NRC license to construct and operate the*
46 *proposed EREF, the potential impacts of preconstruction were fully and accurately analyzed in*
47 *detail, in Section 4.2 of the Draft EIS. In addition, other Federal agencies, the Shoshone-*
48 *Bannock Tribes, and State and local government agencies have been consulted or otherwise*
49 *contacted regarding these impacts and the other impacts of the proposed project, as required.*

1 *The Federal, State, and local agencies with jurisdiction over, or other interest in, the*
2 *preconstruction activities, and the Shoshone-Bannock Tribes, have reviewed the Draft EIS and*
3 *have raised no objections to the preconstruction exemption. By law, AES is required to obtain*
4 *all other required Federal, State, and local permits and approvals in order to conduct*
5 *preconstruction activities.*
6
7

8 **I.5.6 Nuclear Proliferation**

9

10 **Comment:** The following comments relate to issues and concerns about proliferation and
11 nuclear weapons development related to the uranium enrichment technology and enriched
12 uranium product of the proposed EREF.
13

14 **[015-17, Beatrice Brailsford; 191-24, Liz Woodruff]** The NRC should produce an unclassified
15 non-proliferation assessment for the Areva enrichment plant. To refuse to do so based on the
16 fact that Areva intends to enrich uranium to no more than 5% misses an important point. Gas
17 centrifuge uranium enrichment is a proliferable technology. A comparable case occurred in
18 Idaho during the environmental evaluation of pyroprocessing. In that instance, no one was
19 arguing that the DOE intended to recover pure plutonium. But, because pyroprocessing is a
20 proliferable *technology*, the DOE produced a non-proliferation assessment as part of the final
21 EIS on the *facility*.
22

23 **[029-02, Richard Conner; 063-04, Martha Haga; 099-02, Brent Mathieu; 100-07, Wendy**
24 **Matson; 112-02, Mark Menlove; 161-04, Marisa Smith; 199-02, Dina Bond; 200-02, Sean**
25 **Campbell; 201-02, Giovanna Campos; 203-02, Danielle Dugge; 204-02, Susan Filkins;**
26 **207-02, Drew Harris; 208-02, Emily Harvey; 213-02, Darvel Jones; 214-02, Jacob King;**
27 **216-02, Beau Lee; 218-02, David Minick; 219-02, Neil Miyaoka; 220-02, Tim Naftzger;**
28 **221-02, Mike Perrington; 223-02, Mason Richens; 226-02, Jessica Toinga; 227-02,**
29 **Joseph Voss]** The draft EIS is inadequate and fails to address the fact that uranium enrichment
30 is a technology used for proliferation. The NRC should produce an unclassified non-proliferation
31 assessment for the EREF. To refuse to do so based on the fact that Areva intends to enrich
32 uranium to no more than 5% misses an important point: Gas centrifuge uranium enrichment is a
33 proliferable technology and precedents exist for nonproliferation assessments of proliferable
34 technology whether the license allows for proliferation or not.
35

36 **[044-01, Dennis Donnelly]** I would point out that this section of considering alternatives
37 assumes that it has to supply enriched uranium for national energy security; that is, they
38 assume that this plant is going to be built, and it neglects the alternative of not building these
39 plants.
40

41 I would point out that if you build this facility, it commits America, this is the unstated thing, it
42 commits America essentially to a future that includes nuclear power, and all the nightmares
43 associated with it. I would like to point out that there are other options that some of the
44 nightmares would be a police state in our communities, where the Soviet Russians and the
45 Germans that we already have that police state. These things are so dangerous that we're
46 considering bombing Iran and the Israelis are considering bombing Iran for exactly the same
47 facility. It's so dangerous. The reason is, of course, that you build this facility, and then you build
48 the reactors, the reactors breed plutonium, plutonium can make weapons. You can't take that
49 away once you've done it.
50

1 The police state is a terrible thing. The rest of it has to do with the threat of military attack on
2 these facilities, on the plants. Nobody seems to address that all these atomic power plants are
3 built above ground. Any kind of terrorist or military attack on any one of them can take out two
4 states, that much area. We've seen Chernobyl. We know it can happen, and it has happened.
5 Even accidents can take out a large area. Right now we have major problems still from
6 Chernobyl, and everyone knows it.

7
8 I would like to point out there are alternatives that have not been considered, that I'd like to
9 mention. A couple of weeks ago, there was an announcement in the "New York Times", and I
10 followed it up, and yes, it's true, there was a study in North Carolina that concluded for the first
11 time that new power plants in North Carolina were cheaper to build with solar power than with
12 nuclear power. This is a major crossover point that should be considered. And you see there are
13 none of the problems, there are no activation products, there are no fission products, there are
14 no actinides, there is no pluming of unmanageable wastes that we're casting into the future for
15 all of geologic time that require management and armies to manage them. None of the
16 problems if you go with solar power, and with -- instead of nuclear power. And I would urge
17 everyone to consider personally their own career options right now.

18
19 If we go ahead with this plant, we're committing to a future that dumps unmanageable problems,
20 and a police state on the future of this country, and every country. Whereas, if we do the
21 unspoken thing, let all our aging and outdated nuclear plants expire, and then use clean energy,
22 non-carbon energy for the future, and not this totally toxic nuclear energy.

23
24 **[050-14, Joanie Fauci]** The last point I wish to have addressed in the EIS concerns the
25 enriched uranium product. As this material has the potential to be used in nuclear weapons, I
26 ask that the NRC make it a requirement of the license that the enriched uranium is not to leave
27 US soil.

28
29 **[061-01, Nancy Greco]** I am very concerned about the possibility that Areva, a French owned
30 company, can quite possibly put our country in danger by opening the way to nuclear weapon
31 development.

32
33 **[067-07, Mike Hart]** With respect to proliferation, I am a member, or I was a member, of the
34 Global Freeze Movement. I'm a member of Global Zero. I don't like nuclear weapons. I have
35 concerns about proliferation, but not for this project. Uranium enrichment is going to occur
36 throughout the world because there will be nuclear energy throughout the world. I would like to
37 see that enrichment occur in the United States, and I think if there's any place the bad guys
38 won't find enrichment technology, and proliferate nuclear technology to weapons it would be
39 right here in Idaho Falls. I just don't see that technology escaping our backyard. So, I think with
40 respect to proliferation, the NRC probably should give credit to this facility, because it will be
41 contained, and by having proliferation -- by having enrichment here, there would be far fewer
42 proliferation concerns for my part. I'd much rather have the global nuclear fuel cycle provided by
43 the United States, even if we do export the fuel.

44
45 **[071-02, David Hensel]** A big concern I have with nuclear power is the risk of weapons
46 proliferation. And I don't think the EIS does a very good job of addressing that. The Federation
47 of American Scientists call, and I'm going to quote here, "Gas Centrifuge Uranium Enrichment
48 an open road to a nuclear weapon." It is what they consider breakout technology, meaning that
49 a plant that enriches uranium for nuclear power production can also be used to convert uranium

1 to a level rich enough to be used in a weapon. Once the feedstock has been raised to what you
2 guys call a low-level of enrichment, you're more than halfway to the point of being able to
3 produce weapons-grade uranium.
4

5 The gas centrifuge plants like AREVA is talking about using are definitely more efficient than the
6 old methods, but they're also smaller, easier to hide. They do use less electricity and less water,
7 which is a great thing, but it also means that it's more difficult to detect where they're being
8 used, and where they're being used in a manner that's not appropriate. And I think Iran has
9 come up several times, and it's going to be one of the flashpoints in the world, and it's all about
10 this technology that we're discussing here. And I'm not worried about what's going to happen
11 over here as far as producing nuclear-grade uranium. We have other ways of doing that, but I
12 think we need to pay attention to our perception with the rest of the world. The United States, for
13 better or worse is no longer the only big guy on the block. And if you look at the people that
14 have nuclear weapons now, nuclear power generation was the path, whether they did it
15 dangerously or not, to get to their nuclear weapons capabilities....
16

17 One thing I would specifically like to ask you to do, I think you, the NRC, should produce an
18 unclassified non-proliferation assessment for this plant. And I know that the talk has been well,
19 the uranium is only going to be enriched to 5 percent, so it's not a proliferation risk, but that
20 does miss the point. It's a proliferable technology. And a few years ago, a decade ago, or
21 whatever, there was the pyroprocessing plant that the Department of Energy was going to build
22 here. No one was saying that they were going to make weapons grade plutonium, but they did
23 this assessment because the process that they were doing was a proliferable technology. And I
24 really think that you should do this, and provide it in a non-classified manner, and provide that to
25 the public.
26

27 **[088-06, Stan Kidwell; 095-06, Linda Leeuwrik; 175-05, Ellen Thomas]** Gas centrifuge
28 uranium enrichment is a technology the Federation of American Scientists calls "an open road
29 to a nuclear weapon." At the very least, the Nuclear Regulatory Commission must produce an
30 unclassified proliferation assessment of Areva's plant.
31

32 **[096-03, Arjun Makhijani]** Finally, I would just remind you that there needs to be a non-
33 proliferation section in this. The non-proliferation is dismissed by saying 5% uranium cannot be
34 used to make weapons. This is completely correct, of course. But it has been the foreign policy
35 of this country with respect to Iran that a commercial enrichment plant has a proliferation risk,
36 even though they say, rightly or wrongly, which is a separate issue, that they're building a
37 commercial plant for commercial purposes. It's different to build a commercial enrichment plant
38 in a weapon state that's got surplus highly enriched uranium, completely different, but it has to
39 be part of your analysis. You can't say -- you can't undermine US-Foreign policy by saying
40 5 percent enrichment plant is not a proliferation issue, because you can't make weapons with
41 5 percent enrichment. You change the valving arrangement in the enrichment plant, you can
42 make 90 percent enriched uranium. And you know that, and I know that. You can't ignore
43 this very critical problem in your haste to give a license, and undermine non-standing
44 U.S. non-proliferation policy.
45

46 **[098-05, Linda Martin; 098-14, Linda Martin]** In addition, there is no evidence of any danger
47 or threat of nuclear proliferation from the design, construction, or operation of the proposed
48 facility.
49

1 **[103-07, Karen McCall]** A uranium enrichment plant can easily be converted into to making
2 bombs. This is an unacceptable possibility for nuclear proliferation.

3
4 **[108-01, John McMahon]** • The USA spent \$5+TRILLION on Nuclear Weapons and related
5 technology since 1945. This is an astounding waste of our Nations' engineering skill and
6 industrial capability!

7
8 The Obama administration apparently has already decided to enrich Uranium, something we
9 may even go to war over (again!!) to prevent the Iranians from doing! This can only mean the
10 US Congress will give its "blessing"(?) [The same "blessing" they gave to Custer and Generals
11 Crook and Miles]. Only this time it will be to make new Nuclear Weapons.

12
13 • This is unacceptable in light of our having just recently re-negotiated the Strategic Arms
14 Reduction Treaty (START) with Russia, et al.

15
16 • If the United States continues to enrich Uranium it does not need (or use) for Power
17 production and nuclear weapons retrofits, or God forbid, "New" N-Weapons, then this is
18 the height of fear mongering stupidity.

19
20 • This is not about our National Defense or our Energy Policy!

21
22 • It is irresponsible fiscal treachery! Taxpayers will revolt once they learn the true motives
23 for the Eagle Rock Enrichment Facility!

24
25 Here in Idaho we can and will mount a campaign to unseat some or all of the Four Horsemen of
26 the Apocalypse we send to the US Congress, especially since they are receiving heaps of filthy
27 lucre from the special interests promoting the Areva boondoggle!

28
29 **[131-05, Morty Prisament]** Proliferation and Terrorism: The draft EIS fails to adequately
30 address the fact that uranium enrichment is a technology used for proliferation. The NRC should
31 produce an unclassified non-proliferation assessment for the EREF. To refuse to do so, based
32 on the fact that Areva intends to enrich uranium to no more than 5%, misses an important point:
33 Gas centrifuge uranium enrichment is a proliferable technology and precedents exist for non-
34 proliferation assessments of proliferable technology, whether the license allows for proliferation
35 or not. NRC is aware that enriching uranium from commercial to weapons-grade is hardly a
36 formidable obstacle. In fact, the enrichment process becomes exponentially easier as levels of
37 enrichment increase. Moreover, the new centrifuge technology essentially doubles this nuclear
38 enrichment capability. These are the very issues that the U.S. is concerned about in the case of
39 Iran's nuclear program. Absent a thorough analysis of proliferation and terrorism issues, the
40 DEIS would be clearly inadequate.

41
42 **[147-12, Joey Schueler]** 8. Enriched Uranium is one of the critical components required for
43 nuclear weapons: http://en.wikipedia.org/wiki/Enriched_uranium. Bringing this component to
44 Idaho means an increased risk of terrorist threat and/or at least the assistance in nuclear
45 proliferation.

46
47 16. This one's more personal, but my mom taught me to be a "lover not a fighter" and the
48 product of this plant can be used to devastate entire civilizations (I say this on the 65th

1 anniversary of the bombing of Hiroshima and Nagasaki). We only just now sent a representative
2 from the U.S. to stand with the Japanese people in remembrance to those hundreds of
3 thousands of innocent civilians killed by this action. This is an important step in the United
4 States diplomatic stance with the world. Why do we insist on undermining it by not practicing
5 what we preach in regards to nuclear non-proliferation? In the words of a beautiful woman who
6 made public comment at the EIS hearing who had been notified of her potential exposure to
7 radiation by the government near the Hanford Nuclear Plant, "Such Hubris". Can't we find a
8 better path? Is the money too good?

9
10 **[168-05, Lon Stewart]** If this is a similar type of enrichment plant that Iran has built, and the US
11 is contemplating war over this issue, why would the US allow such a plant to be built on their
12 shores? We are having enough problems world wide, why create more problems for ourselves.
13 There are no huge benefits for the US in this venture. This does not sound good to me.

14
15 **[175-06, Ellen Thomas]** Areva's plant would not increase US energy security or
16 nonproliferation by providing a "domestic" source of enriched uranium. Areva is owned by the
17 French government. The raw material for the plant would be imported. Some portion of its
18 product would be exported.

19
20 **[181-12, Roger Turner]** The Draft EIS States that nuclear proliferation was dropped from the
21 scope of this EIS:

22
23 In the case of nonproliferation, the intent of constructing and operating the EREF is to produce
24 uranium enriched in uranium-235 up to approximately 5 weight percent for use in commercial
25 nuclear reactors, as mentioned in Section 1.2. This level of enrichment is not sufficient to
26 produce nuclear weapons. Nonproliferation is therefore out of scope.

27
28 The Non Proliferation Treaty (NPT) Signed by the U.S. and 188 other countries, provides,
29 among other thing, that members will: Provide assurance through the application of international
30 safeguards that peaceful nuclear energy in NNWS will not be diverted to nuclear weapons or
31 other nuclear explosive devices. The centrifuge technology violates this agreement. The NPT is
32 an indispensable legal and political instrument in preventing further proliferation of nuclear
33 weapons. In the absence of the NPT, many other countries might well acquire nuclear weapons.
34 Without the NPT safeguards requirements, monitoring and inspections of nuclear materials and
35 facilities in non-nuclear weapon states would be significantly weakened.

36
37 Although the 5% level of enrichment is not sufficient to produce nuclear weapons, the simple
38 addition of more centrifuge units, or a re-arrangement of the cascade system, may render such
39 a facility capable of producing weapons-grade Uranium. Consequently, the draft EIS erred in not
40 addressing the proliferation potential of this project. The Treaty on the Non-Proliferation of
41 Nuclear Weapons, also Nuclear Non-Proliferation Treaty (NPT or NNPT) is a treaty to limit the
42 spread (proliferation) of nuclear weapons. The treaty came into force in 1970, and currently there
43 are 189 states party to the treaty, five of which are recognized as nuclear weapon states: the
44 United States, Russia, the United Kingdom, France, and China. Four nonparties to the treaty
45 are known or believed to possess nuclear weapons.

46
47 Monitoring and verification is very important under the Treaty and it would be improbable that
48 the U.S. or the International Atomic Energy Agency (IAEA) could count the centrifuge units or

1 the analyze the way that a facility would carry out repeating cycles through the centrifuge units
2 to achieve weapons grade Uranium.

3
4 Consequently, the issue of enrichment through the centrifuge method, must be reviewed and
5 added to the EIS review. The NRC is obligated through NEPA to review the proliferation risks of
6 this technology, and it violates the principles of the Treaty, be dropped from the alternatives. If
7 the project is approved at all, the EIS should review other technologies that eliminate the
8 proliferation threat that this one poses.

9
10 **[184-09, Kitty Vincent]** Given this information, the Alliance believes the NRC should produce
11 an unclassified non-proliferation assessment for EREF. To refuse to do so based on the fact
12 that Areva intends to enrich uranium to no more than 5% misses an important point: Gas
13 centrifuge uranium enrichment is a proliferable technology. A comparable case occurred in
14 Idaho during the environmental evaluation of pyroprocessing. In that instance, no one was
15 arguing that the DOE intended to recover pure plutonium. But because pyroprocessing is a
16 proliferable *technology*, the DOE produced a non-proliferation assessment as part of the final
17 EIS on the *facility*.

18
19 **[192-15, Lisa Young]** Indeed, I hope to see a nonproliferation assessment devised to address
20 the fact that this plant will have the technology and the capability to enrich the uranium
21 hexafluoride to *beyond* the indicated 5%, posing an unacceptable proliferation risk (this is not *at*
22 *all* assuming that AREVA or America or any other party would assuredly *proceed* with this
23 process, but is merely recognizing the fact that this risk *exists* and because the consequences
24 of such a risk are so extremely significant, the least that needs to be done is a formal
25 assessment of the situation).

26
27 **[193-16, Liz Woodruff]** But the NRC should produce an unclassified nonproliferation
28 assessment for the EREF, because gas centrifuge uranium enrichment is a proliferation
29 technology. A comparable case occurred in Idaho during the environmental evaluation of
30 pyroprocessing.

31
32 In that instance, no one was arguing that the DOE intended to recover pure plutonium, but
33 because pyroprocessing is a proliferable technology, the DOE produced a nonproliferation
34 assessment as part of the final EIS on the facility. And we are asking that the NRC include a
35 nonproliferation assessment on this facility as well. Why? This is a demonstration of the rapidity
36 with which you can move from the generation of fuel for power reactors to fuel for weapons, a
37 key ingredient in weapons.

38
39 Each one of these rows is a cascade. Each one of these bars is a centrifuge, those big things
40 they use to enrich the uranium; right?

41
42 So you need 24 cascades to enrich uranium to fuel grade, and you can see as we go in a linear
43 fashion toward, you need two cascades to get it to weapons grade.

44
45 In other words, it's incredibly efficient technology for producing material that's a key ingredient in
46 nuclear weapons, and this underscores the point of why a nonproliferation assessment must be
47 included in the EIS, and is currently lacking.

1 **Response:** *In response to the above comments, the NRC staff provides the excerpt below from*
2 *an August 25, 2010, letter from Chairman Gregory B. Jaczko of the NRC to the Honorable John*
3 *M. Spratt, Jr., Congressman, U.S. House of Representatives (NRC, 2010d). This letter was in*
4 *response to Congressman Spratt’s June 30, 2010, letter (Spratt et al., 2010) in which he*
5 *requested that the NRC conduct a nuclear nonproliferation assessment as part of the review of*
6 *license applications for new nuclear technologies.*

7
8 *“The NRC has adopted a comprehensive regulatory infrastructure and implements an*
9 *integrated set of activities directed against the unauthorized disclosure of information*
10 *and technology considered important to common defense and security and the diversion*
11 *of nuclear materials inimical to public health and safety and the common defense and*
12 *security. The NRC’s key regulations in this area (10 CFR Parts 73, 74, and 95) provide*
13 *comprehensive requirements governing the control of, and access to, information,*
14 *physical security of materials and facilities, and material control and accounting. Other*
15 *NRC regulatory requirements are directed at preventing unauthorized disclosure of*
16 *classified information, safeguards information (SGI), and sensitive unclassified*
17 *nonsafeguards information. As appropriate, the NRC may supplement these*
18 *requirements by order consistent with its statutory obligation to protect the common*
19 *defense and security and public health and safety.*

20
21 *“Beyond the NRC’s regulations, uranium enrichment facility licensees have voluntarily*
22 *committed to implement additional measures to protect information associated with*
23 *classified enrichment technologies. The Nuclear Energy Institute developed a guidance*
24 *document for the enrichment facility licensees and certificate holders which the NRC*
25 *staff has endorsed. Licensees are now implementing these additional measures and*
26 *incorporating their commitments in their site security plans. These additional measures*
27 *and commitments become part of their licensing basis. In addition, the staff is working*
28 *with other agencies to provide additional Federal involvement in protecting uranium*
29 *enrichment technologies and establishing information protection measures.*

30
31 *“Given the NRC’s comprehensive regulatory framework, ongoing oversight, and active*
32 *interagency cooperation, it is the NRC’s current view that a formal nuclear*
33 *nonproliferation assessment would not provide any additional benefit to protection of the*
34 *common defense and security....*

35
36 *“I want to assure you that the NRC takes your concerns very seriously and that we will*
37 *continue to regulate nuclear materials and sensitive technology to ensure protection of*
38 *public health and safety and the environment, promotion of the common defense and*
39 *security, and fulfillment of U.S. obligations for nonproliferation and international*
40 *agreements.”*

41 42 43 **I.5.7 Alternatives Considered but Eliminated**

44
45 **Comment:** The following comments suggest that the proposed action is unnecessary because
46 the current U.S. program to purchase and downblend Russian highly enriched uranium could be
47 extended.
48

1 **[096-04, Arjun Makhijani]** Alternatives are not considered. This is also not in conformity with
2 the National Environmental Policy Act. You've eliminated alternative by fiat, saying we're not
3 going to have down blending of surplus HEU ...
4

5 **[147-18, Joey Schueler]** 14. The United States currently purchases enriched Uranium from
6 Russia for use in the few facilities it does have. While this may sound negative at the outset, we
7 are actually aiding Russia in downsizing its nuclear arsenal, which only further secures the
8 United States due to the instability of such a vast arsenal of weapons that could be sold on the
9 black market to terrorists or foreign Para-military groups. Enriching our own Uranium devalues
10 this peace seeking process and results in excessive storage of a highly toxic chemical on our
11 soil.
12

13 **[131-03, Morty Prisament]** Need for Action: The DEIS has not established a "need" for this
14 action, as required under NEPA. Need is required to be discussed in specific, quantitative,
15 terms and within the scope of global production and markets. there exists a competitive global
16 market to provide enriched uranium. Russia (CIS) has been one of the leading suppliers of
17 enriched U2. If there is a national security rationale for building such facilities in the U.S., the
18 EIS needs to discuss and document such an assertion. Moreover, the document needs to
19 explore the reasons why the supply of enriched U2 from nuclear weapons decommissioning
20 could not meet projected demand for enriched U2.
21

22 **[148-02, Eric Schuler]** But there's a bigger issue here. Before we can ask whether the impact
23 will be small or devastating, we need to ask why we're making an impact at all. This question is
24 paramount, but the draft EIS failed to provide a convincing answer. The EIS claims that the
25 EREF needs to be build to improve national security. For this to be a legitimate need, however,
26 the U.S.'s supply of enriched uranium would have to be unreliable currently. This is not the
27 case.
28

29 The U.S.'s enriched uranium sources are reliable partners and the U.S. even seems to tacitly
30 acknowledge this fact, when it states that some of the enriched uranium will be exported to
31 foreign countries. Even so, it is useful to evaluate the sources more fully, just to understand just
32 how unnecessary this facility is.
33

34 Now we've heard earlier that 90 percent of our enriched uranium is imported, and about half of
35 that is from Russia, and we've also heard that uranium enrichment is a necessary technology
36 because we need nuclear power to deal with global warming.
37

38 However, strictly speaking, that's not true, as a great example of that is the megatons to
39 megawatts program that we operate with Russia. This is an agreement between Russia and the
40 U.S. where by Russian nuclear warheads are downblended to make fuel grade uranium, and
41 thus, since we have an abundant supply of warheads, is a very bountiful source of this
42 enrichment – or of enriched uranium. Moreover, this program diminishes the threat of
43 proliferation and prevents the environmental degradation associated with continued mining.
44

45 In other words, it's beneficial in many ways, and it's been existing for several years and there is
46 no reason to expect that it would not be renewed in the future.
47

1 The other enriched uranium sources are also reliable. Although much of the enriched uranium
2 is, indeed, imported, this fact alone does not indicate instability. We live in an age of
3 globalization and there is no international market for enriched uranium. Credit counseling with a
4 comparative advantage in the production of enriched uranium, whether because they have
5 highly-accessible reserves, low-cost labor in Africa, or other factors, will specialize in producing
6 enriched uranium while the U.S. focuses its resources in other areas, like agriculture.

7
8 Our reliance on this market is not a sign of weakness or vulnerability, but a sign of efficiency.
9 Energy independence is an outdated idea, is one that is not based on security or patriotism, but
10 of ignorance.

11
12 The current system works, and has worked for several years. The entire project that we are
13 discussing here tonight is predicated on the assertion that it will provide national energy security
14 with respect to enriched uranium.

15
16 The fact of the matter is that this security already exists and the EREF facility is not necessary,
17 and if the benefits stated in this proposal do not exist, no amount of environmental impact is
18 tolerable, and this facility cannot be licensed.

19
20 **[181-13, Roger Turner]** Add Alternative to extend the Megatons to Megawatts Program in
21 order to supply the U.S. with enriched Uranium. The EIS should re-evaluate interest by the U.S.
22 to extending the Megatons to Megawatts program in order to obtain enriched uranium. The EIS
23 should re-evaluate the possibility of receiving other Foreign supplies of enriched uranium to
24 supply the U.S. needs.

25
26 **Response:** *Downblending of Russian highly enriched uranium under the Megatons to*
27 *Megawatts Program is an issue of national energy policy and is set to expire in 2013, as*
28 *discussed in Sections 1.3.1, 2.2, and 2.3.2.2 of the EIS. As such, this alternative does not fulfill*
29 *the need for the proposed action because it does not meet the objective of developing a reliable*
30 *domestic source of low enriched uranium to fulfill electricity generation requirements.*
31 *Therefore, it is not considered a viable alternative to enriched uranium from the proposed EREF*
32 *and, therefore, was eliminated from further consideration in the EIS.*

33 34 35 **I.5.8 Land Use**

36
37 **Comment:** The following comment expresses concern that farm land would be lost if the
38 proposed EREF project goes forward.

39
40 **[036-07, Christina Cutler, on behalf of the Shoshone-Bannock Tribes]** Also the loss of farm
41 land needs to be addressed. Loss of farm is and will continue to be an issue in this country, we
42 need to address the impact that loss has and how AREVA plans to mitigate the loss.

43
44 **Response:** *As stated in Section 4.2.1.1, approximately 202 hectares (500 acres) of farm land*
45 *would be lost due to construction and operation of the proposed EREF. The impacts of this loss*
46 *would be SMALL because that area constitutes approximately 0.25 percent of the land currently*
47 *cultivated in Bonneville County. In addition, the current zoning for the area is compatible with*
48 *the use for which the proposed EREF is intended.*

1 **Comment:** The following comment expresses concern about the likely, permanent loss of BLM-
2 managed public land to wildlife and to wildlife-related recreation access due to the construction
3 and operation of the proposed project
4

5 **[089-06, Sharon Kiefer, on behalf of the Idaho Department of Fish and Game]** Loss of
6 Public Lands to Public Access - The Department remains concerned about the likely, permanent
7 loss of public land to wildlife and to wildlife-related recreation access due to the construction and
8 operation of the proposed project. There is a BLM owned and managed parcel of land entirely
9 within the property boundary. Concerns regarding the loss of this parcel from wildlife-related
10 recreation and BLM management could be mitigated by the project proponent exchanging a
11 similar acreage outside the project area to be managed by BLM for multiple uses including
12 wildlife habitat and wildlife-related recreation. We are willing to work with AES and other parties
13 to pursue a solution but do not believe delay of the DEIS process and facility consideration is
14 necessary to address this issue.
15

16 **Response:** *Development of the proposed EREF would not alter the current situation on the*
17 *BLM-owned parcel of land, and BLM's access to this land will be unaltered (AES, 2010a). No*
18 *licensed activities will occur on the parcel.*
19

20
21 **Comment:** The following comment adds clarity to the nature of recreational impacts to the
22 Hell's Half Acre Wilderness Study Area (WSA).
23

24 **[140-02, Wendy Reynolds, on behalf of the Bureau of Land Management, Upper Snake**
25 **Field Office]** 2) While the BLM has commented on the reduction of the visual quality of the area
26 as a result of the construction and operation of the facility (Boggs, 2010), the BLM would like to
27 add clarity to the nature of recreational impacts as it concerns the Hell's Half Acre WSA. First,
28 the camping area described in the DEIS is not within the WSA itself. The proposed facility would
29 be seen from this area (particularly at night), however, so from a recreational standpoint a more
30 appropriate impact analysis might read, for example, "The construction and operation of the
31 proposed facility would reduce the quality of the recreational experience for campers at the
32 Hell's Half Acre trailhead."
33

34 **Response:** *The NRC appreciates the clarification and has modified the text accordingly in*
35 *Section 4.2.3.2 of the EIS.*
36
37

38 **Comment:** The following comment relates to Bonneville County's appraisal of the quality of the
39 farmland at the proposed EREF site and vicinity.
40

41 **[152-05, Steven Serr]** Issues were brought up, which I don't remember in particular were
42 addressed, as to the viability of the area out there as being a prime agricultural area. It is a
43 desert that we're irrigating and farming. A good portion of this site is not farmed.
44

45 Some of the facility will be on irrigated acreage. We have farms out on the west side that are
46 shutting down, and reverting back to natural habitat. Issues of suitability for that agricultural use
47 because of high-lift pumping and that. So we don't consider it to be an extreme prime
48 agricultural area that far out. Closer in, lower depths, it would be more prime.
49

1 **Response:** *It is acknowledged in Section 3.2.1 of the EIS that some prime farmland is found on*
2 *the proposed EREF property. However, the proposed EREF is sited in an area with county*
3 *zoning consistent with AES's intended operations. As discussed in Section 4.2.1, and as noted*
4 *in the comment, this area is not considered a prime agricultural area.*

5
6
7 **Comment:** The following comments note the suitability of the location of the proposed EREF
8 site, including with respect to Bonneville County's comprehensive plan and zoning rules and
9 regulations.

10
11 **[133-05, Richard Provencher]** The land where the facility is being located is baron with virtually
12 no other viable use other than farming, however, there are thousands of acres in this area that
13 are also not being used for farming.

14
15 **[135-04, Hon. Dave Radford]** Being a political subdivision of the State of Idaho, Bonneville
16 County adopted a comprehensive plan that included located nuclear growth west of -- on the
17 western side of -- Bonneville County, so we think that will help expedite the process. We, as the
18 commission, agree with the Environmental Impact Statement's conclusion.

19
20 **[152-03, Steven Serr]** As far as compliance with zoning rules and regulations, that area was
21 designed specifically for this type of facility. It's not designed to have other uses out there that
22 could be impacted by those uses.

23
24 **[152-09, Steven Serr]** I wanted to address the issue as to the suitability of this property for
25 development of that site. Again, as the Commissioner mentioned earlier, this area has been
26 zoned and designated for this type of use. It's been planned that it could accommodate this type
27 of operation since 1960. So, it's been a long-designated piece of property, tract of land out there
28 for this type of use.

29
30 I approach this as an enforcement site for any facility that's built in the county. Our concern in
31 the county is making sure that things are built to code, built complaint, built safe, protect public
32 health, safety, and welfare. My office, we are responsible for enforcement of the building code,
33 the fire code, mechanical code, flood plain rules and regulations, and we have addressed most
34 of these issues with AREVA. We've made modifications for some of their design issues on what
35 they contemplate doing to try to mitigate, and make sure that the operation that they're
36 proposing out there will be a safe compliant operation.

37
38 **Response:** *The NRC appreciates the confirmation of the information presented in Section 3.2.1*
39 *that the zoning of the area where the proposed EREF is to be located is compatible with the*
40 *intended use of the site.*

41
42
43 **Comment:** The following comments suggest that the Federal Farmland Protection Policy Act
44 (FPPA) applies to this EIS and to the proposed EREF project.

45
46 **[013-02, Kit Blackburn; 063-03, Martha Haga; 093-02, Louis Landry; 109-02, Eugene**
47 **McVey; 120-07, Frank Nicholson; 121-02, Jennifer Nordstrom]** Additionally, the draft EIS
48 may not be in compliance with the Federal Farmland Protection Act. The EIS claims that the

1 licensing of this facility is exempt from the Farmland Protection Act since the site is on private
2 property (EIS, 3-3). But because Areva has accepted a \$2 billion federal loan guarantee from
3 the Department of Energy, the Federal Farmland Protection Act applies to this license and the
4 required procedures under the Act must be completed prior to licensing.
5

6 **[015-21, Beatrice Brailsford; 088-09, Stan Kidwell; 122-05, Kathy O'Brien; 175-07,**
7 **Ellen Thomas]** The NRC should address both Areva's failure to comply with the Federal
8 Farmland Protection Act and its own failure to fully analyze the environmental effects of a large
9 range fire at the Areva site.

10
11 **[095-09, Linda Leeuwrik]** The NRC should address both Areva's failure to comply with the
12 Federal Farmland Protection Act and its own failure to fully analyze the environmental effects of
13 a large range fire at the Areva site.
14

15 **[118-03, Caroline Morris]** The draft EIS also may not comply with the Federal Farmland
16 Protection Act (Act), which applies because Areva has a \$2 billion federal loan guarantee from
17 the Department of Energy. The EIS claim of being exempt from the Act because the EREF site
18 is on private property is wrong. Areva's licensing must comply with the Act and its procedural
19 requirements before licensing.
20

21 **[127-02, Sheila Plowman]** Also, The NRC should address both Areva's failure to comply with
22 the Federal Farmland Protection Act and its own failure to fully analyze the environmental
23 effects of a large range fire at the Areva site.
24

25 **[153-01, Andrea Shipley; 197-01, Andrea Shipley, on behalf of the Snake River Alliance]**
26 Areva's proposed uranium enrichment factory will...utilize farmland that is potentially protected
27 by the Federal government.
28

29 **[153-12, Andrea Shipley; 184-17, Kitty Vincent]** Further, The EIS may not be in compliance
30 with the Federal Farmland Protection Act. The EIS claims that the licensing of this facility is
31 exempt from the Farmland Protection Act since the site is on private property (EIS, 3-3). But
32 because Areva has accepted a \$2 billion federal loan guarantee from the Department of Energy,
33 the Federal Farmland Protection Act applies to this license and the required procedures under
34 the Act must be completed prior to licensing.
35

36 **[184-07, Kitty Vincent]** Areva's proposed Eagle Rock Enrichment Facility (EREF)
37 will...obliterate farmland that is potentially protected by the federal government.
38

39 **[191-02, Liz Woodruff]** But I did want to provide further details on one aspect of the testimony
40 that I gave in Idaho, and that has to do with the fact that the DEIS may not be in compliance
41 with the Federal Farmland Protection Act. The EIS claims that the licensing of this facility is
42 exempt from the Farmland Protection Act, since the site is on private property. To quote the
43 Draft EIS, "Some of the land located within the proposed property was designated as prime
44 farmland by the U.S. Natural Resource Conservation Service. This is a federal designation.
45 Prime farmland is protected by the Federal Farmland Protection Policy Act. The intent of this act
46 is to protect prime farmland from other uses as the result of federal actions." I'm still quoting
47 from the EIS. "The act does not apply to federally permitted or licensed actions of private lands,

1 therefore, the act and its designation as prime farmland do not restrict land use on the proposed
2 EREF property.” And this is from EIS 3-3.

3
4 So, from information the Alliance gathered from the Idaho State USDS we confirmed that
5 because AREVA has accepted a \$2 billion federal loan guarantee, and this is a form of financial
6 insurance from the federal government with your taxpayer dollars, AREVA has even been
7 quoted as saying without access to this cheap capital, they would not build this facility in the
8 U.S., so this is clearly a form of financing. That the Federal Farmland Protection Act absolutely
9 applies to this license, and when the NRC consulted with the USDA in Idaho, they did not share
10 the information with that agency that there would be a loan guarantee. Perhaps it was not
11 known at that time, but it is known now.

12
13 Specifically, from 7 CFR, Section 258.2, “Federal program means those activities are
14 responsibilities of a federal agency that involve undertaking financing or assisting construction,
15 or improvements projects, or acquiring, managing, or disposing of the federal lands and
16 facilities.” So, simply put, this loan guarantee changes the game. And this isn’t a claim that you
17 can’t license the facility, this is a claim that you absolutely must go through the processes that
18 fall under the Federal Farmland Protection Act. It would be unacceptable to do otherwise.

19
20 **[191-20, Liz Woodruff]** • The EIS may not be in compliance with the Federal Farmland
21 Protection Act. The EIS claims that the licensing of this facility is exempt from the Farmland
22 Protection Act since the site is on private property. To quote the draft EIS:

23
24 “Some of the land located within the proposed property was designated as prime farmland by
25 the U.S. Natural Resources Conservation Service (NRCS). Prime farmland is protected by the
26 Federal Farmland Protection Policy Act (see Title 7 of the U.S. Code of Federal Regulations
27 (7 CFR 658.2). Per 7 CFR 658.2 (c)(1)(i), the intent of this Act is to protect prime farmland from
28 other uses as the result of Federal actions. The Act does not apply to Federally permitted or
29 licensed actions on private lands. Therefore, the Act and its designation as prime farmland do
30 not restrict land use on the proposed EREF property” (EIS, 3-3).

31
32 From information gathered from the Idaho State USDA, I’ve confirmed that because Areva has
33 accepted a \$2 billion federal loan guarantee from the Department of Energy, the Federal
34 Farmland Protection Act likely applies to this license and the required procedures under the Act
35 must be completed prior to licensing. From 7 CFR Section 258.2 (c):

36
37 “Federal program means those activities or responsibilities of a Federal agency that involve
38 undertaking, financing, or assisting construction or improvement projects or acquiring,
39 managing, or disposing of Federal lands and facilities.”

40
41 **[193-21, Liz Woodruff, on behalf of the Snake River Alliance]** My next point is that this
42 Environmental Impact Statement and the proposed licensing is potentially in violation of the
43 Farmland Protection Act. The EIS claims that this facility is exempt from the Farmland
44 Protection Act since the site is on private property.

45
46 So a red flag went off for me when I read this in the EIS, and so I called the relevant agencies,
47 federally, and in the state, and I was told that because AREVA accepted a \$2 billion federal loan

1 guarantee from the Department of Energy, the Farmland Protection Act applies, because it's a
2 federally-funded project.

3
4 The NRC must go back, review this section of the EIS, talk to the relevant agencies, discuss the
5 issues around this huge Department of Energy loan, and go through the process and
6 procedures necessary to determine that you're in compliance with the Farmland Protection Act.
7 This is on Prime A age farmland that they're proposing for this facility.

8
9 **[197-12, Andrea Shipley, on behalf of the Snake River Alliance]** Further, the EIS may not
10 be in compliance with the Federal Farmland Protection Act.

11
12 **Response:** *The FPPA is discussed in Section 3.2.1 of the EIS. As stated in the Draft EIS, it is*
13 *correct that the FPPA does not apply to Federally permitted or licensed actions on private lands*
14 *(including the potential licensing by the NRC of the proposed EREF) (7 CFR 658.2 (c)(1)(i)).*
15 *However, the text of Section 3.2.1 has been modified to acknowledge that the DOE, in issuing a*
16 *Federal loan guarantee to AES, is required by the FPPA to assess the project's effect on the*
17 *prime farmland that would be converted on the proposed EREF site.*

20 **I.5.9 Historic and Cultural Resources**

21
22 **Comment:** The following comment asks the NRC to incorporate design features in the
23 proposed EREF project to minimize impacts to cultural resources and to prepare a plan to
24 mitigate for impacts that cannot be avoided or minimized.

25
26 **[027-22, Sara Cohn]** *Avoid, Minimize, Mitigate:* In terms of priorities, the NRC should first site
27 facilities and infrastructure to avoid impacts to wildlife and cultural resources. If impacts cannot
28 be entirely avoided, the NRC should incorporate design features to minimize impacts. Lastly, a
29 plan should be prepared to mitigate for impacts that cannot be avoided or minimized.

30
31 **Response:** *The siting of a uranium enrichment facility involves a number of requirements, as*
32 *discussed in Section 2.3.1 of the EIS. Environmental protection and land use/demography were*
33 *two of the criteria categories used. Mitigation measures identified by AES to minimize impacts*
34 *to cultural resources during preconstruction, construction, and operation of the proposed EREF*
35 *are presented in Section 4.2.2.3 and Chapter 5. Further, procedures to address unexpected*
36 *discoveries in the case of cultural resources have been put in place, as mentioned in*
37 *Section 4.2.2.3.*

38
39 *The NRC's action with regard to the proposed EREF project is limited to granting a license, if*
40 *found to be warranted, for the construction, operation, and decommissioning of the proposed*
41 *facility. NRC is not the implementer or funding entity for the proposed activity. As a result, NRC*
42 *generally limits its analysis to the alternatives and actions reasonably available to the applicant.*

43
44 *When NRC reviews a proposed action, its ability to impose additional requirements and*
45 *environmental mitigation and monitoring measures beyond those proposed as part of the*
46 *license application is limited to those with a reasonable nexus to providing protection for*
47 *radiological health and safety and common defense and security. The NRC can, however,*
48 *require that the proposed facility be built in accordance with the submitted application, including*
49 *mitigation and monitoring measures proposed by the applicant that are not specifically required*

1 *by or directly related to NRC's regulations. Thus, the NRC does have the ability to hold*
2 *licensees to key mitigation and monitoring measures committed to in their applications and*
3 *subsequently incorporated in the NRC license directly or by reference.*
4
5

6 **Comment:** The following comment states that mitigation of impacts to aboriginal and ceded
7 areas, and to water, soil, plants, animals and air, need to be addressed in the EIS.
8

9 **[036-06, Christina Cutler, on behalf of the Shoshone-Bannock Tribes]** Mitigation of impacts
10 to aboriginal and ceded areas needs to be addressed. Mitigation issues regarding
11 environmental impacts to water, soil, plants, animals and air.
12

13 **Response:** *Mitigation measures identified by AES to minimize impacts during preconstruction,*
14 *construction, and operation of the proposed EREF are presented in Section 4.2 and Chapter 5*
15 *of the EIS for all resource areas as applicable. Further, procedures to address unexpected*
16 *discoveries in the case of cultural resources have been put in place, as mentioned in*
17 *Section 4.2.2.3.*
18

19 **Comment:** The following comment suggests that mitigation for all culturally sensitive items
20 needs to be done.
21

22 **[036-08, Christina Cutler, on behalf of the Shoshone-Bannock Tribes]** Mitigation for all
23 culturally sensitive items needs to be done. It is my understanding that since AREVA is required
24 to follow the NEPA process we can request mitigation for all of our concerns.
25

26 **Response:** *All known impacts on historic and cultural resources, as discussed in Section 4.2 of*
27 *the EIS, will be mitigated by AES.*
28
29

30 **Comment:** The following comment relates to a Memorandum of Agreement between the Idaho
31 State Historic Preservation Office (SHPO) and the NRC to resolve the effects on site MW004.
32

33 **[126-01, Susan Pengilly, on behalf of the Idaho State Historic Preservation Office]** Our
34 only recommendation is to add a statement saying that effects on site MW004 will be resolved
35 through a Memorandum of Agreement (MOA) between the NRC and the Idaho SHPO
36 (assuming that the Advisory Council on Historic Preservation does not want to be a signatory).
37 This statement should be added somewhere in Section 4.2.2, perhaps in the paragraphs
38 bounded by lines 13-24.
39

40 Also, please be aware that the MOA needs to be signed *before* the ROD is issued to ensure
41 compliance with Section 106. This has been a problem in the past with other Federal projects,
42 and the Advisory Council has made it very clear that the MOA needs to be finalized before
43 issuance of the ROD.
44

45 **Response:** *The most recent information of the consultations between the NRC, SHPO, and*
46 *Federally recognized Shoshone-Bannock Tribes concerning impacts on historic and cultural*
47 *resources has been added to Section 4.2.2.1 of the EIS.*
48
49

1 **Comment:** The following comment requests notification of the Heritage Tribal Officer of the
2 Shoshone-Bannock Tribes of any inadvertent cultural or archaeological discoveries, and training
3 of EREF site workers in cultural resources regulations and laws.
4

5 **[129-03, Willie Preacher, on behalf of the Shoshone-Bannock Tribes]** Regarding cultural
6 issues the tribes would like to have the Heritage Tribal Office (HeTO) to be a part of the cultural
7 surveys of this proposed site and to be notified of any inadvertent cultural or archaeological
8 discoveries. Also inform the contractors who may be utilized for the construction of the facility
9 and for the permanent employees of the cultural regulations and federal laws concerning
10 artifacts, retrieving and removing historic items, The INL who is a neighbor to this proposed site
11 has experienced decades of this type of behavior.
12

13 **Response:** *An inadvertent (unanticipated) discovery plan has been developed by AES for the*
14 *proposed EREF project and is discussed in Section 4.2.2.1 of the EIS. Pre-project training of*
15 *workers in cultural resources legislation and rules is identified as a mitigation measure in*
16 *Section 4.2.2.3 and Chapter 5 of the EIS.*
17
18

19 **Comment:** The following comment states that the Final EIS should discuss both (1) how issues
20 raised by tribes would be addressed by the project and (2) the outcomes of ongoing work with
21 the Idaho SHPO and affected tribes on potential effects requiring Section 106 review of the
22 *National Historic Preservation Act.*
23

24 **[138-08, Christine Reichgott, on behalf of the U.S. Environmental Protection Agency,**
25 **Region 10]** Consultation with Tribal Governments - The draft EIS indicates that there have
26 been contacts with Tribes that may be affected by the proposed project. This is especially
27 important because the DEIS states that the project would result in up to large impacts to
28 resources important to tribes (p. 4-4), including historical and cultural, visual, and ecological
29 resources. Construction activities, for example, would destroy historic and cultural resources at
30 MW004 site, while increased traffic and construction activities and the presence of an industrial
31 complex would significantly alter the visual landscape. Because of these and other impacts that
32 may be discovered during the project operations, we recommend that the final EIS include a
33 discussion of how issues raised by Tribes would be addressed by the project and outcomes of
34 the ongoing work with the Idaho State Historic Preservation Office and affected Tribes on
35 potential effects requiring Section 106 review of the National Historic Preservation Act.
36

37 **Response:** *Consultation with the SHPO and the affected Federally recognized Shoshone-*
38 *Bannock Tribes has been ongoing throughout the EIS process. The information on the status of*
39 *these consultations in Sections 1.5.4.2 and 4.2.2 of the EIS has been updated. An updated*
40 *discussion of the impacts on specific cultural resources is also presented in Section 4.2.2.*
41
42

43 **Comment:** The following comments were expressed over the destruction of the John Leopard
44 Homestead (site MW004).
45

46 **[135-04, Hon. Dave Radford]** Historically, I serve on the Heritage Commission. I think history is
47 important, that homestead, I think, could be mitigated out there. Historically, Bonneville County,
48 my predecessors at the County Commission, took very limited resources in terms of property

1 tax dollars and invested them in improved roads to get out to the site 60 years ago. So,
2 historically, we've been a nuclear-friendly county, and I believe that it will continue. And we
3 applaud your work, we respect your work, and we hope for a great outcome for an expedited
4 license for AREVA.

5
6 **[147-15, Joey Schueler]** 11. A historical landmark and a vast expanse of Idaho native habitat
7 will be destroyed to build this plant.

8
9 **[153-01, Andrea Shipley; 197-01, Andrea Shipley, on behalf of the Snake River Alliance;
10 184-07, Kitty Vincent]** Areva's proposed uranium enrichment factory will...support destruction
11 of the John Leopard homestead which has been recommended for the National Register of
12 Historic Places

13
14 **[191-23, Liz Woodruff]** Construction of the facility would lead to the destruction of a site that
15 has been recommended for the National Register of Historic Places. The John Leopard
16 homestead (MW004), would be destroyed in preconstruction activity. A Memorandum of
17 Understanding must be signed with the Idaho State Historic Preservation Office before any
18 activity is initiated that would affect this historic site.

19
20 **[193-24, Liz Woodruff, on behalf of the Snake River Alliance]** Areva's proposed Eagle Rock
21 enrichment facility will...impair a national monument in Idaho, and support destruction of a
22 historic site....

23
24 **Response:** *Impacts on historic and cultural resources are discussed in Section 4.2.2 of the EIS.
25 The NRC has been involved in consultation with the Idaho SHPO concerning the impacts on
26 the John Leopard Homestead (site MW004) throughout the EIS process. The discussion of the
27 consultation and mitigation efforts in Section 4.2.2 has been updated.*

28
29 *AES archaeological consultant, Western Cultural Resource Management, Inc. (WCRM),
30 conducted professional excavation and data recovery as mitigation site MW004 in October–
31 November 2010 following the process identified in a Treatment Plan previously reviewed by the
32 Idaho SHPO (Idaho SHPO, 2010). WCRM submitted a summary report on these data recovery
33 efforts to the Idaho SHPO on November 17, 2010 (WCRM, 2010). In a letter dated
34 November 26, 2010, the SHPO stated that the data recovery report had been reviewed and
35 accepted (Idaho SHPO, 2010). A detailed report on the site MW004 mitigation is being
36 prepared by AES.*

37 38 39 **I.5.10 Visual and Scenic Resources**

40
41 **Comment:** The following comment states that the Final EIS should include a discussion of how
42 issues such as visual impacts raised by tribes would be addressed by the project.

43
44 **[138-08, Christine Reichgott, on behalf of the U.S. Environmental Protection Agency,
45 Region 10]** Consultation with Tribal Governments - The draft EIS indicates that there have
46 been contacts with Tribes that may be affected by the proposed project. This is especially
47 important because the DEIS states that the project would result in up to large impacts to
48 resources important to tribes (p. 4-4), including historical and cultural, visual, and ecological

1 resources. Construction activities, for example, would destroy historic and cultural resources at
2 MW004 site, while increased traffic and construction activities and the presence of an industrial
3 complex would significantly alter the visual landscape. Because of these and other impacts that
4 may be discovered during the project operations, we recommend that the final EIS include a
5 discussion of how issues raised by Tribes would be addressed by the project and outcomes of
6 the ongoing work with the Idaho State Historic Preservation Office and affected Tribes on
7 potential effects requiring Section 106 review of the National Historic Preservation Act.
8

9 **Response:** *Consultation with the SHPO and the affected Federally recognized Shoshone-*
10 *Bannock Tribes has been ongoing throughout the EIS process. The visual impacts associated*
11 *with the project are discussed in Section 4.2.3 of the EIS.*
12

13
14 **Comment:** The following comment relates to mitigation measures for visual impacts from the
15 proposed EREF.
16

17 **[152-13, Steven Serr]** There was discussion as far as potential moderate impact on the facility
18 that it could create a visual impact on site. One of the very early things we discussed with
19 AREVA when they looked at the site was the potential for location on the site to keep it back
20 from visual appearances to the public, and also discussing what landscaping features might be
21 incorporated into it to even buffer it, to mitigate any visual impacts. We discussed lighting
22 issues, treescape, approach roads, and we feel that before this project would fully be built, that
23 we would have some approved mitigation plans to help eliminate any of those visual impacts, so
24 we could take that down from a moderate impact to a slight impact.
25

26 **Response:** *The NRC recognizes the ongoing consultations between AES and Bonneville*
27 *County regarding the construction and operation of the proposed EREF. Visual impact*
28 *mitigation measures that AES has identified are presented in Section 4.2.3.3 and Chapter 5 of*
29 *the EIS.*
30

31
32 **Comment:** The following comment relates to impacts on the wilderness values of Hell's Half
33 Acre WSA due to construction and operation of the proposed EREF.
34

35 **[140-03, Wendy Reynolds, on behalf of the Bureau of Land Management, Upper Snake**
36 **Field Office]** Second, Mr. Boggs indicates that the proposed facilities would be seen from
37 certain areas of the Hell's Half Acre WSA (particularly from the northern end of the hiking trail).
38 Because these areas are within the WSA itself, there would be adverse impact on wilderness
39 values associated with the implementation of the proposed action. The analysis in this case
40 could read, for instance, "The construction and operation of the proposed facility would have an
41 adverse impact on wilderness values because opportunities for solitude would be reduced due
42 to the facility being within sight of users of certain areas of the WSA. The impact would be
43 greatest at night when artificial lighting is in use". The BLM agrees with the characterization of
44 these impacts as MODERATE.
45

46 **Response:** *The NRC appreciates the clarification and has modified the text of Section 4.2.3.2*
47 *of the EIS accordingly.*
48
49

1 **Comment:** The following comments relate to the impacts of light pollution on Hell's Half Acre
2 WSA.

3
4 **[067-01, Mike Hart]** With respect to what I view as the public's best interest, first, I thank you
5 for the analysis. Looking through the EIS, Section 4.2.3, you analyze visual impacts which
6 include light pollution. As an astronomer, we use the area, Hell's Half Acre, for astronomy
7 parties. We use that because it's a good dark sky location that's relatively convenient. The EIS
8 doesn't specifically mention that, but in mitigation, it does identify that there will be low – or the
9 lights will be pointed downwards, and I would appreciate further mitigations to acknowledge that
10 the sky should be kept as dark as possible. Possibly for security, if you could use infrared
11 technology or something that doesn't require high light levels that would very much be
12 appreciated.

13
14 **[067-08, Mike Hart]** With respect to environmental impacts, I'd like to thank the NRC for
15 listening to my scoping comments about light pollution. This facility is located near 20 Mile Rock,
16 as we call it, or the lava hiking trail. We use that for star parties. If you go out tonight, it's the
17 Perseid Meteor Shower peak. This would be a great time to visit a dark sky 20 miles from town.
18 You can get away from the city lights. I hope this facility continues to be pursued, but with the
19 idea of keeping those lights to a minimum and keep that dark sky, preserve that resource.

20
21 **Response:** *AES has stated that light noise will be minimized to the extent practicable and that*
22 *all perimeter lights would be downfacing (AES, 2010a), as discussed in Section 4.2.3.3 and*
23 *Chapter 5 of the EIS.*

24
25
26 **Comment:** The following comments noted that the proposed EREF could have impacts to Hell's
27 Half Acre WSA.

28
29 **[153-01, Andrea Shipley]** Areva's proposed uranium enrichment factory will...impact the Hell's
30 Half Acre National Monument

31
32 **[184-07, Kitty Vincent]** Areva's proposed Eagle Rock Enrichment Facility (EREF) will...impair
33 the Hell's Half Acre National Monument

34
35 **[191-32, Liz Woodruff]** Visual and scenic resources. The proposed facility will have a visual
36 impact on the Hell's Half Acre National Monument.

37
38 **[193-24, Liz Woodruff, on behalf of the Snake River Alliance]** AREVA's proposed Eagle
39 Rock enrichment facility will...impair a national monument in Idaho....

40
41 **Response:** *Visual impacts on Hell's Half Acre WSA from the construction and operation of the*
42 *proposed EREF are discussed in Section 4.2.3 of the EIS. AES has identified a number of*
43 *measures to mitigate these impacts, as presented in Section 4.2.3.2 and Chapter 5 of the EIS.*

1 **I.5.11 Air Quality**
2

3 **Comment:** The following comment expresses concern about the potential release from the
4 proposed EREF of radioactive, hazardous, and toxic materials into the air.
5

6 **[027-13, Sara Cohn]** The ICL is very concerned about the potential release of radioactive,
7 hazardous and toxic materials into the air. Potential air releases associated with operation of
8 this facility should be further analyzed, reported, and permitted though Idaho's Department of
9 Environmental Quality.

10
11 **Response:** *Potential emissions of criteria pollutants and hazardous air pollutants during facility*
12 *operation are analyzed in Section 4.2.4.2 of the EIS. Potential radiological releases during*
13 *facility operation are analyzed in Section 4.2.10.2. The license that would be issued to AES by*
14 *NRC, if granted, would not exempt AES from its obligation to comply with other applicable*
15 *Federal, State, and local regulations or requirements, as noted in Section 1.5 of the EIS. Under*
16 *Idaho State regulations, AES would have to satisfy all air quality regulatory and permitting*
17 *requirements that may be enforced by the IDEQ.*
18
19

20 **Comment:** The following comment deals with mitigation of air pollution resulting from
21 construction of the proposed EREF.
22

23 **[027-17, Sara Cohn]** Air pollution resulting from construction of the proposed facility should be
24 avoided or reduced using the best available management practices and control technology. To
25 preserve Idaho's clean air during construction operations, the NRC should include mitigation
26 measures for these pollutants. For example, fugitive dust emissions can be controlled through
27 the use of water trucks, provided the Storm Water Pollution Prevention Program (SWPPP)
28 ensures no discharge of sediment from the site. Additionally, diesel emissions should be
29 reduced using best management practices for construction including limited idling of diesel
30 equipment and the use of low-emitting fuels and low-emitting technology for construction
31 equipment.
32

33 **Response:** *Mitigation measures for control of air pollutants during preconstruction and*
34 *construction of the proposed EREF have been identified by AES, and are presented in*
35 *Section 4.2.4.3 and Chapter 5 in the EIS. Further, IDEQ has the authority to require AES to*
36 *control fugitive dust emissions throughout the preconstruction and construction phases.*
37
38

39 **Comment:** The following comment requests that AES/NRC re-evaluate the need for an air
40 permit to construct using uncontrolled emission rates of toxic air pollutants.
41

42 **[066-24, Toni Hardesty, on behalf of the Idaho Department of Environmental Quality]** 22.
43 Chapter 1: pp 1-17, Table 1-2. This table summarizes that an air quality permit to construct is
44 not required for this project because the exemption criteria of IDAPA are satisfied. Toxic air
45 pollutant emissions are discussed on pages 4-24 through 4-27. In these pages it is concluded
46 that emissions of fluoride, ethanol, methylene chloride, and uranium from normal operations
47 meet the exemption criteria for toxic air pollutants in IDAPA 58.01.01 Section 223. In order to
48 meet the Section 223 exemption criteria for toxic air pollutants, uncontrolled emissions must

1 meet the exemption criteria as opposed to emissions from “normal” operations as discussed in
2 the Draft EIS.

3
4 In accordance with IDAPA 58.01.01 Section 210 an uncontrolled emissions rate of a toxic air
5 pollutant from a source or modification is calculated using the maximum capacity of the source
6 or modification under its physical and operational design without the effect of any physical or
7 operational limitations. Examples of physical and operational design include but are not limited
8 to: the amount of time equipment operates during batch operations and the quantity of raw
9 materials utilized in a batch process. Examples of physical or operational limitations include but
10 are not limited to: shortened hours of operation, use of control equipment, and restrictions on
11 production which are less than design capacity. It is not clear from the information provided in
12 the draft EIS whether uncontrolled emissions of fluoride, ethanol, methylene chloride, and
13 uranium were compared to the exemption thresholds, but the use of the term “normal
14 emissions” on page 4-27, line 37 does imply that air pollution mitigation measures were
15 inappropriately considered in the toxic air pollutant exemption determination. DEQ requests that
16 AES/NRC reevaluate the need for an air permit using uncontrolled emission rates of toxic air
17 pollutants.

18
19 **Response:** *The NRC staff based its analysis of air releases on operational data and*
20 *experiences provided by AES for other AES facilities using similar enrichment technology and*
21 *controls. This information from AES was reviewed and independently verified by the NRC staff*
22 *before using it in the EIS. To ensure the most conservative estimate possible, the NRC staff*
23 *constrained the releases of the subject materials to the shortest reasonable time frame, given*
24 *the nature of the activity resulting in a release. For example, methylene chloride is used for*
25 *equipment refurbishment, but that activity takes place only during the first shift. Consequently,*
26 *that time frame is reflected in the NRC’s estimate of the rate of methylene chloride release. In*
27 *the case of methylene chloride release, the NRC understands that this does represent an*
28 *uncontrolled release because it is the result of evaporative losses from benchtop operations*
29 *where methylene chloride vapors are subsequently vented to the atmosphere without passing*
30 *through any control devices. Although the NRC believes that its application of the IDEQ*
31 *regulations in the EIS is reasonable and conservative, the determination of whether the scenario*
32 *described meets the permit exemptions contained in IDEQ rules is solely the province of IDEQ;*
33 *and AES will be dealing directly, and the NRC will not be involved, with IDEQ with regard to air*
34 *permitting for construction and operation of the proposed facility.*

35
36 *The NRC’s use of the term “normal emissions” is meant to describe a condition where all*
37 *systems are operating as designed (i.e., no upset or off-normal conditions exist) and pollution*
38 *control devices are operating in accordance with their performance guarantees.*

39
40
41 **Comment:** The following comment asserts that there is a contradiction in statements in the EIS
42 regarding exceedances of ambient air quality standards for particulate matter during
43 preconstruction and construction of the proposed EREF.

44
45 **[066-25, Toni Hardesty, on behalf of the Idaho Department of Environmental Quality]** 23.
46 Chapter 4: pp 4-20, Table 4-5. This table shows that the National Ambient Air Quality Standards
47 will be exceeded for particulate matter during preconstruction and construction. Mitigation
48 measures are discussed in Section 4.2.4.3, pp-4-28. The opening paragraph of this section

1 states, "Impacts from the release of criteria pollutants from the operation of vehicles and
2 equipment during preconstruction, construction, and operation are not expected to result in
3 exceedances of ambient air quality standards...." This statement contradicts with the estimated
4 ambient impacts presented in Table 4-5 (which shows violations of the particulate matter
5 standards). It appears that the predicted ambient impacts shown in Table 4-5 should be updated
6 to reflect the ambient impacts that would occur when operating using the listed mitigation
7 measures which are expected to result in lower emissions that do not cause an exceedance.
8

9 **Response:** *To clarify, the EIS language quoted in the comment was included to emphasize that
10 exceedance of the particulate standard would result primarily from fugitive dust generation and
11 not from operation of reciprocating internal combustion engines (RICE). The estimated ambient
12 air impacts in Table 4-5 in the EIS include contributions from all sources of criteria pollutants.
13 The opening paragraph in Section 4.2.4.3 was revised to make that distinction. In this case,
14 mitigations of fugitive dust would be more valuable than efforts to minimize emissions from
15 RICE.*

16
17 *Data in Table 4-5 resulted from application of the appropriate U.S. Environmental Protection
18 Agency (EPA) AERMOD dispersion models. The mitigation measures identified by AES and
19 presented in the EIS can be expected to result in reduced emissions of criteria pollutants.
20 However, since a final mitigation strategy is not available, the suggested updated emission
21 reduction calculation cannot be completed at this time.*

22
23
24 **Comment:** The following comment expresses agreement with the Draft EIS that any potential
25 negative impacts on the air and water resources would be SMALL.

26
27 **[102-02, R.D. Maynard]** After reviewing the summary of the environmental consequences and
28 mitigation section of the draft EIS, I'm confident that any potential negative impact on the air and
29 water resources would be small.

30
31 **Response:** *The NRC staff acknowledges this comment and appreciates the participation.*

32
33
34 **Comment:** The following comment recommends that the NRC maximize implementation of the
35 air pollution mitigation measures described in the EIS and coordinate with the IDEQ throughout
36 the project lifespan to assure that federal and state air quality standards will be met by the
37 proposed project.

38
39 **[138-02, Christine Reichgott, on behalf of the U.S. Environmental Protection Agency,
40 Region 10]** For better protection of public health from air pollution exposure, EPA has set
41 National Ambient Air Quality Standards (NAAQS) for six principal pollutants or criteria pollutants
42 (see <http://www.epa.gov/air/criteria.html>) that should be used to determine if emissions from a
43 project would exceed daily and annual standards. Any projects that would generate emissions
44 exceeding the standards would have to include measures to demonstrate that, if implemented,
45 the project would comply with both state and federal air quality regulations. Even though
46 background concentrations of criteria pollutants within the project area and environs are
47 currently below the standards, it is likely that emissions within the project area could exceed the
48 standards because of the proposed project. As the DEIS noted, particulate matter (PM)

1 concentrations during construction activities would be moderate to large (p. 4-1 1) due to
2 fugitive dust releases to the air during ground disturbing activities even after application of
3 mitigation measures, although they would be temporary and brief in duration. The DEIS
4 indicates that air emissions associated with the ERF preconstruction and construction activities
5 alone would be 271.5% and 105% higher than NAAQS for 24-hour PM10 and PM2.5
6 concentrations, respectively (p. 4-20). Because of these anticipated exceedances of ambient air
7 quality standards, we recommend that NRC maximize implementation of the mitigation
8 measures described in the DEIS and coordinate with the Idaho Department of Environmental
9 Quality (IDEQ) throughout the project lifespan to assure that federal and state air quality
10 standards will be met by the project.

11
12 **Response:** *The NRC staff concurs with EPA's assessment that a properly designed and*
13 *executed mitigation plan will be essential for preserving ambient air quality during certain*
14 *phases of facility construction and agrees that collaboration with IDEQ is the best way to ensure*
15 *that adequate controls will be included in IDEQ permits.*

16
17 *The NRC's purpose and need statements in its environmental review documents reflect that*
18 *NRC is not the implementer or funding entity for the proposed activity. As a result, when the*
19 *NRC reviews a proposed action, its ability to impose additional requirements and mitigative*
20 *measures beyond those proposed as part of the application is limited to those with a reasonable*
21 *nexus to providing protection for radiological health and safety and common defense and*
22 *security. The NRC can, however, require that the facility be built in accordance with the*
23 *submitted application, including mitigation measures proposed by the applicant that are not*
24 *specifically required by or directly related to the NRC's regulations. Thus, the NRC does have*
25 *the ability to hold licensees to key mitigation measures committed to in their applications and*
26 *subsequently incorporated in the NRC license directly or by reference.*

27
28
29 **Comment:** The following comments express the belief that fugitive dust generation during
30 construction would not be a LARGE impact.

31
32 **[094-02, Michael Lange]** There are very few disagreements I would have. Only, I guess the
33 one I could say would be the dust mitigation issue more than likely can be mitigated down to a
34 moderate level. And I believe that we do that out at IWTU everyday now, so I think that's pretty
35 accurate. The rest of it looks very professionally done.

36
37 **[098-08, Linda Martin]** In the NRC assessment, the only topic which was described as small to
38 large concerns the subject of Air Quality. In this geographic region local, state, and regional
39 governments, agricultural interests, and private landowners frequently encounter dust or
40 "fugitive" dust when working on projects concerning the land. Therefore, these impacts would be
41 and should be considered to be normal, temporary, and brief in duration.

42
43 **[152-14, Steven Serr]** The dust issue was one of the other issues in the EIS that was mentioned,
44 that it would be a potential moderate impact. We do have a fairly aggressive plan for onsite
45 maintenance of water application to construction sites to mitigate any dust out from it. I feel that
46 given what we have encouraged developers to do on site during construction, that that could also
47 be minimized down to a small impact, as opposed to a moderate impact.

48

1 **Response:** *The NRC staff acknowledges these comments and appreciates the participation.*
2 *However, the NRC staff stands by its determination that fugitive dust generation would result in a*
3 *LARGE impact, for reasons discussed in Section 4.2.4.1 of the EIS.*

4 5 **I.5.12 Geology, Minerals, and Soil**

6
7 **Comment:** The following comments are related to the seismic hazards to the proposed EREF.

8
9 **[014-01, William Blair]** Idaho does not need more radioactive waste placed over the Snake
10 Plain Aquifer in an active earthquake area. Until a safe method of handling and storing
11 radioactive wastes for thousands of years is devised, NO new facilities should be approved.

12
13 **[016-01, Manley Briggs]** I think that the seismic activity in the area around the plant needs to
14 be considered. I understand that that was addressed and it was felt to not be significant. But
15 Idaho is very seismically active. It has the fifth largest number of earthquakes in the country.
16 The most recent earthquake was August 1st, 2010. It has had the two largest earthquake in the
17 lower United States in the last 50 years. The Hebo Lake earthquake on the Idaho-Montana
18 border was a 7.5 magnitude, and the Borah Peak earthquake, in 1983, was a 7.3 magnitude.
19 And if this material is being stored in an area close to those potential earthquakes, I feel that
20 that has to be addressed. There are fault lines that essentially completely surround the INL,
21 comes down from the Lost River, comes down from the north, and I think that certainly needs to
22 be addressed from the health point of view, because an earthquake could certain disrupt
23 storage.

24
25 **[0163-03, Manley Briggs]** Accordingly, I am concerned about the development of Areva's
26 Eagle Rock Enrichment Facility, where depleted uranium hexafluoride will be stored over the
27 aquifer. One of my concerns is that the INL is located in a seismically active area, and in
28 addition of numerous other natural and manmade accidents that could compromise the safety of
29 the stored material, an earthquake could pose a serious hazard.

30
31 As you are probably aware, Idaho is very active seismically, and has the fifth highest
32 earthquake activity in the nation. In addition, Idaho has experienced the two largest earthquakes
33 in the contiguous United States in the last fifty years – the 1959 Hebgen Lake Earthquake
34 (M7.5) and the Borah Peak earthquake (M7.3) in 1983. Both of these quakes occurred in
35 locations close to EREF. I have enclosed maps showing the close proximity of fault lines to the
36 INL. The Areva EIS needs to address this danger.

37
38 **[100-03, Wendy Matson]** Due to the indefinite storage of depleted uranium hexafluoride on
39 site, seismic activity in the area of the proposed facility poses a major safety hazard that could
40 lead to a critical level accident. And I wish that the NRC could clarify why a complete analysis of
41 this risk is delayed until the safety evaluation report.

42
43 **[150-04, Katie Seevers]** NRC should clarify why a complete analysis of seismic risk is delayed
44 until the safety evaluation report.

45
46 **[152-06, Steven Serr]** The issues they had, that were addressed, as to seismic protection, life,
47 safety, protection from earthquake damage. This area is in a seismic zone C on the building code
48 map, cause it's not an extreme risk area for seismic activity. The INL is in the same seismic zone

1 designation. We have multiple nuclear facilities that have been constructed, nuclear reactors that
2 have been built there have been safely functional during the seismic events we have experienced
3 in the past, with no negative impacts on it. We have discussed the seismic issues with AREVA, and
4 NRC staff, it was in my office, and felt that with compliance with the building code requirements that
5 we have, that we fully intend to implement, that we don't see that there would be an issue with--
6 issues of seismic, inappropriateness for this site to be built.

7
8 **[152-11, Steven Serr]** Discussion regarding the seismic area out there, we have talked about
9 seismic conditions, what the facility will need to be doing to meet safety issues as far as seismic
10 design criteria. The safety issue of long-term storage was addressed, also, as to the containers
11 that will be stored on site. The containers that they have on site, just to check and see, they're
12 designed for transportation containers. They're able to survive an auto wreck, impact damage in
13 an auto accident. Seismic conditions on site, worst case we'd have where there are outside
14 storage, if something would fall over, be a low impact on it. We determined that that would not be a
15 problem, as far as damage creating an issue in a seismic event that there could be any potential
16 leakage.

17
18 **[169-05, Margaret Stewart]** And, finally, I need to know why a complete analysis of the seismic
19 risks of this facility is being delayed until the safety evaluation report. As you all know, this area has
20 always been seismically active, and the production, transportation, and storage of such
21 dangerously radioactive materials in such a volatile region seems irresponsible, at best.

22
23 Now, I've used these signs before at hearings, and I use them again because geology doesn't
24 change that much. Back in -- before 1982, the U.S. Building Code upon which all buildings in
25 the U.S. must adhere to, and follow their codes, shows that this is the State of Idaho. Here's
26 INEL, as it was called back then, and this is a zone three potential for major damage. Just after
27 this date, INEL was looking to get approval from the U.S. Congress to build a nuclear facility, a
28 very, very -- I won't go into that -- but a very specific nuclear facility with lots of inherent
29 dangers, and it needed approval from Congress. And, uniquely, after 1992, the potential for
30 major damage changed. And INEL is here completely outside of the danger zone. And now we
31 go to 1989, and here is the potential for major damage with the yellow, and the proximity for
32 major fault system damage practically inevitable is here, and here is INEL, this little island that
33 there's no problem. So, I think that we really need to look at experts and science to give us this
34 kind of information that, in my book, appears to be based on politics, not on science.

35
36 **[171-01, John Tanner]** The entire Snake River Plain has been known as an area of very low
37 seismic activity, in spite of the high seismic activity in the surrounding hills and mountains. I was
38 working at the chemical processing plant when the Mt. Borah earthquake, a giant earthquake
39 struck, which caused a fault displacement of about, I think over 10 feet there, but we just barely felt
40 a tremor at the chemical processing plant, at the INL. And I point out how well the reactors in Japan
41 and Armenia have stood up to earthquakes that have happened there. I think it was Armenia, not
42 Azerbaijan, which is next door.

43
44 **[184-05, Kitty Vincent]** Who in their right mind would come to a city that has a nuclear facility
45 eighteen miles to the West at the foot of one of the most active seismic areas in the country?
46 Especially a facility that is owned and managed by a company that has a history of problems?
47

48 **[191-21, Liz Woodruff]** Geology and Soils. Due to the indefinite storage of depleted uranium
49 hexafluoride on site, seismic activity in the area of the proposed facility poses a major safety

1 hazard that could lead to a critical level accident. The NRC should clarify why a complete analysis
2 of seismic risk is delayed until the Safety Evaluation Report.

3
4 **Response:** As noted in Section 3.6 of the EIS and in accordance with 10 CFR 51.71(c) and
5 NUREG-1748, "Environmental Review Guidance for Licensing Actions Associated with NMSS
6 Programs" (NRC, 2003), a seismic hazards analysis is outside the scope of the EIS. The seismic
7 hazards analysis is addressed in Section 1.3.3.4.1 of the SER, NUREG-1951 (NRC, 2010b). As
8 discussed in Section 1.4 of the EIS, the development of the SER was closely coordinated with the
9 EIS analysis. Section 3.6.1.1 of the EIS describes the seismic setting and earthquakes in the
10 vicinity of the proposed EREF site as part of the regional geology discussion and summarizes the
11 results of the probabilistic seismic hazard study conducted as part of the safety review of AES's
12 license application and documented in the SER. Section 4.2.5.1 considers this information along
13 with local soil and groundwater conditions to conclude that the liquefaction potential of soils near
14 the proposed EREF is also low.

15
16 Section 3.6.1.1 of the EIS provides a map (Figure 3-15) showing the locations of Quaternary faults
17 and earthquakes of magnitudes greater than 3.0. This figure illustrates the low seismic activity
18 within the Snake River Plain. A new map (Figure 3-17), based on information from the
19 U.S. Geological Survey's Earthquake Hazards Program, has been added to Section 3.6.1.1 to
20 illustrate the low level of ground shaking in the vicinity of the proposed EREF associated with
21 earthquakes in the region.

22
23 Note that there is no risk of a criticality accident involving depleted uranium in the storage yard as a
24 result of seismic activity (or any other catastrophic event) as suggested in some of the comments.

25 26 **I.5.13 Water Resources**

27
28 **Comment:** The following comment talks about injection wells through which waste was
29 introduced into the aquifer.

30
31 **[008-06, Carol Bachelder]** I would like to speak about water. I'm not a nuclear engineer. I'm
32 not an expert in the field of water, but I've lived in Idaho most of my life, and I've educated
33 myself a little bit. I watch the news, and I read, and I remember the aquifer from years ago when
34 they had injection wells. Now, these injections wells were developed by nuclear scientists, and
35 engineers, and professional people. And you know what they did? They put waste down into the
36 aquifer, because at the time we thought that a little bit of waste wouldn't hurt anything. You
37 know, just sort of diffuses into the aquifer, and won't hurt anybody. I like to compare it to just a
38 little bit of Drano, you know, you put just a little Drano in your cereal, and it won't hurt you,
39 because it's just a little bit. So, they invented the injection wells, and another reason that they
40 thought this was safe was because they thought that there was very little movement of the water
41 down there. And the scientists, they figured that out, there's no movement. But when they put
42 microphones down into the injection wells, what did you get? You had gurgling.

43
44 Now, still water doesn't gurgle, so they concluded that there was movement of the water. And
45 the water was carrying the waste, and this was all done in the name of science.

46
47 **Response:** No injection wells are associated with the proposed EREF project. Also there would
48 be no wastewater discharges associated with the operation of the proposed EREF (see

1 Section 4.2.6.2 of the EIS). Therefore, contamination of the underlying aquifer would not be
2 expected.
3
4

5 **Comment:** The following comment expresses concerns over the various potential avenues for
6 water quality impacts and urges that updated information on the National Pollutant Discharge
7 Elimination System (NPDES) permit process and water protection measures be presented in
8 the Final EIS.
9

10 **[138-05, Christine Reichgott, on behalf of the U.S. Environmental Protection Agency,**
11 **Region 10]** The DEIS indicates that water quality may be adversely affected if the project
12 construction activities (blasting, surface grading, excavation, and surface pavement, building
13 roofs) alter the hydrology of springs and surface runoff such that erosion carries sediment and
14 pollutants to local drainages (p. 4-32), accelerating infiltration and migrating through soils to the
15 underlying aquifer. Also, groundwater extraction, land disturbance, material storage, waste
16 disposal, inadvertent chemical or hazardous liquid spills, and compaction produced by vehicular
17 traffic can all affect recharge to the local aquifer and groundwater quality. Because of such
18 potential impacts to water quality, we recommend that this aspect of the project be monitored to
19 assure that water quality is protected. The NRC should continue to coordinate with IDEQ and
20 Tribes that may be affected by the project to assure that the state and tribal water resources
21 (quantity and quality) are protected and used judiciously.
22

23 Since the project anticipates obtaining a National Pollutant Discharge Elimination System
24 (NPDES,) permit for planned preconstruction and construction activities likely to disturb up to
25 nearly 600 acres, the final EIS should include updated information on the permit application
26 process and measures to protect water quality.
27

28 **Response:** As stated in Table 1.2, and Sections 4.2.5.3 and 4.2.6.3 of the EIS, AES must
29 obtain an NPDES Construction General Permit for its site preparation and construction
30 activities. The NPDES permit sets standards and limits pertaining to the facility's industrial
31 wastewater, sewage, and stormwater discharges. Updates on the NPDES permitting process
32 can be viewed on the EPA's website at: [http://cfpub.epa.gov/npdes/stormwater/noi/
33 noidetail_new.cfm?ApplId=IDR10CI01](http://cfpub.epa.gov/npdes/stormwater/noi/noidetail_new.cfm?ApplId=IDR10CI01). This has also been added as a footnote to Table 1-2 in
34 Section 1.5.2 and a footnote in Section 4.2.6 of the FEIS. Water protection (i.e., mitigation)
35 measures to be implemented by AES are discussed in Section 4.2.6.3 and Chapter 5.
36

37 *The NRC's purpose and need statements in its environmental review documents reflect that the*
38 *NRC is not the implementer or funding entity for the proposed activity. As a result, when the*
39 *NRC reviews a proposed action, its ability to impose additional requirements and mitigation and*
40 *monitoring measures beyond those proposed as part of the application is limited to those with a*
41 *reasonable nexus to providing protection for radiological health and safety and common*
42 *defense and security. The NRC can, however, require that the facility be built in accordance*
43 *with the submitted application, including mitigation measures proposed by the applicant that are*
44 *not specifically required by or directly related to the NRC's regulations. Thus, the NRC does*
45 *have the ability to hold licensees to key mitigation measures committed to in their applications*
46 *and subsequently incorporated in the NRC license directly or by reference.*
47
48

1 **Comment:** The following comment encourages the use of low impact development techniques
2 to reduce adverse water resource impacts.

3
4 **[138-06, Christine Reichgott, on behalf of the U.S. Environmental Protection Agency,
5 Region 10]** In keeping with the use of sustainable practices, we encourage NRC to consider
6 use of Low Impact Development (LID) techniques during the proposed project activities because
7 some of them have the potential to reduce stormwater volumes and thus mimic natural
8 conditions as closely as possible. The techniques also lessen the impacts of stormwater runoff
9 from impervious surfaces such as paved parking lots, roads and roofs, and can provide energy
10 other utility savings. More information about LID practices can be found online at:
11 <http://www.low/impactdevelopment.org/> and <http://www.epa.gov/smartgrowht/stormwater.htm>.

12
13 **Response:** *The EPA's "low impact development" practices have been added to the list of
14 mitigation measures recommended by the NRC in Section 4.2.6.3 and in Chapter 5, Table 5-2.*

15
16 *The NRC's purpose and need statements in its environmental review documents reflect that the
17 NRC is not the implementer or funding entity for the proposed activity. As a result, when the
18 NRC reviews a proposed action, its ability to impose additional requirements and mitigation
19 measures beyond those proposed as part of the application is limited to those with a reasonable
20 nexus to providing protection for radiological health and safety and common defense and
21 security. The NRC can, however, require that the facility be built in accordance with the
22 submitted application, including mitigation measures proposed by the applicant that are not
23 specifically required by or directly related to the NRC's regulations. Thus, the NRC does have
24 the ability to hold licensee's to key mitigation measures committed to in their applications and
25 subsequently incorporated in the NRC license directly or by reference.*

26
27
28 **Comment:** The following comment expresses concerns regarding the amount of water that will
29 be used in the enrichment process, and the safety of the filtration system that will be used for
30 the evaporation process.

31
32 **[183-02 and 183-08, James Vincent]** I also am particularly concerned with the amount of
33 water that will be used in the enrichment process, and the safety of the filtration system that will
34 be utilized for the evaporation process.

35
36 **Response:** *The amount of water expected to be used by the proposed EREF is less than the
37 current appropriation for water use; therefore, the amount of water used would have a SMALL
38 impact, as further explained in Sections 4.2.6.1 and 4.2.6.2 of the EIS. Solid waste from the
39 filtration system is addressed in Section 4.2.11.2, with SMALL impacts expected.*

40
41
42 **Comment:** The following comments are concerned with water quality permitting issues.

43
44 **[027-12, Sara Cohn]** It is unclear under what authority NRC may offer exemptions for
45 preconstruction activities when such impacts extend outside of NRC jurisdiction. For example
46 preconstruction activities may impact waters protected under the Safe Drinking Water Act – the
47 Eastern Snake River Plain Aquifer. The project must consult with EPA in order to ensure the

1 preconstruction activities will not impact the Eastern Snake River Plain aquifer, a sole source
2 aquifer for eastern Idaho.

3
4 **[066-20, Toni Hardesty, on behalf of the Idaho Department of Environmental Quality] 18.**
5 The Proposed Eagle Rock Enrichment Facility potable water system will be classified as a non-
6 transient non-community public water system and subject to the requirements of the Idaho
7 Rules for Public Drinking Water Systems (IDAPA 58.01.08). DEQ expects that AES will comply
8 with all applicable regulations of the DEQ concerning the design, construction and operation of
9 the water system (Refer to IDAPA 58.01.08 for official rule language).

10
11 **[066-21, Toni Hardesty, on behalf of the Idaho Department of Environmental Quality] 19.**
12 Clean Water Act/surface water issues and requirements
13 We expect that AES will comply with all applicable DEQ regulations concerning surface and
14 ground water quality protection including but not limited to the requirements of IDAPA 58.01.02
15 and IDAPA 58.01.1 1. In that regard, DEQ would identify the following issues that this EIS
16 should consider and that AES in preconstruction, construction and operation should note:

- 17
18 • There are a number of intermittent or ephemeral streams on the property. AES will need
19 to obtain a Clean Water Act Section 404 dredge and fill permit from the US Army Corps of
20 Engineers (USACOE) if these are deemed waters of the U.S. and AES plans to place
21 dredge or fill material in the streams. The USACOE and EPA make the determination if a
22 stream is considered waters of the U.S.
- 23
24 • Construction projects larger than 1 acre are required to get coverage under the
25 construction storm water general permit from EPA if the storm water discharges to waters
26 of the U.S.
- 27
28 • If storm water discharges to waters of the U.S., then AES should determine whether this
29 facility is regulated under EPA's Multi-sector General Permit (MSGP) for storm water.

30
31 **[036-03, Christina Cutler, on behalf of the Shoshone-Bannock Tribes]** Question on what
32 about the water permits, not only the permits to use water for processing but also potable water,
33 as well the permits for disposal of water from the processing as well as septic water. They will
34 also need to address plant protection runoff water issues.

35
36 **Response:** *The approvals and permits pertaining to water use, water quality, and water runoff,*
37 *required for preconstruction, construction, and operation of the proposed EREF must be*
38 *obtained by AES from other regulatory agencies. Tables 1-1 and 1-2 of the EIS list applicable*
39 *requirements and the agencies to which AES must submit the appropriate applications.*

40
41 *The Safe Drinking Water Act and Idaho Administrative Procedures Act (IDAPA) 58.01 are listed*
42 *in Table 1-2 as potentially applicable permitting and approval requirements for the proposed*
43 *EREF's drinking water system.*

44
45 *The U.S. Army Corps of Engineers has issued a letter (Joyner 2008) stating that a Section 404*
46 *permit (authorized by the Clean Water Act) is not required for the intermittent streams located*
47 *on the proposed EREF property (see Table 1-2). A statement to this effect has also been*
48 *added to Section 3.7.1.*

1 *Updates on the NPDES construction permitting process can be viewed on the EPA's website at:*
2 *http://cfpub.epa.gov/npdes/stormwater/noi/noidetail_new.cfm?ApplId=IDR10CI01.*
3
4

5 **Comment:** The following comments present observations on water use and threats to the
6 Eastern Snake River Plain (ESRP) Aquifer.
7

8 **[007-01, Arnold Ayers]** For one, disposal wells don't gurgle. For two, we put monitors around
9 those wells which Jack Barraclough was well associated with, and instigated in the back history
10 of his time to monitor those things. And those wells worked, and those wells were able to
11 monitor what was coming out of the facilities directly under the facilities, as well as outside of
12 the facilities. If AREVA is monitoring what's going on, as they should do, there will be no
13 discharges that I can see that could ever come undetected from those facilities, in my
14 experience.
15

16 **[023-02, Rebecca Casper]** I will tell you that at no time since April 2007 has there been one
17 official conversation or unofficial conversation that I'm aware of, of the need for us, as a
18 planning committee, to prepare to alter our plan for any threats that might be posed by AREVA.
19 We were in existence before AREVA came on the scene. We still are, and it's never been a
20 problem. We've more talked about climate change than we have from threats of radioactivity, or
21 anything like that.
22

23 I will say that we've had no discussion, in my opinion, not because we've been remiss, but
24 rather because there are no threats that meet the worry and action threshold. Again, we care
25 about the safety and quality of the water. We would not -- we would be remiss in our duties if we
26 didn't explore every viable threat out there. And I am confident that my friend Jack would have --
27 he spoke earlier -- would have told you if there were some threats.
28

29 **[102-02, R.D. Maynard]** After reviewing the summary of the environmental consequences and
30 mitigation section of the draft EIS, I'm confident that any potential negative impact on the air and
31 water resources would be small.
32

33 **[133-06, Richard Provencher]** The facility does not require a large amount of water to operate.
34 This is good from an aquifer conservation and a waste minimization standpoint.
35

36 **[143-03, Hon. James Risch; 172-03, Amy Taylor, on behalf of Hon. James Risch]** The
37 process will use 50 times less electricity than a gaseous diffusion plant, and the amount of water
38 used by the plant is less than the current irrigation appropriation.
39

40 **Response:** *The comments are consistent with the NRC's finding that impacts on water*
41 *resources from preconstruction, construction, and operation of the proposed EREF would be*
42 *SMALL.*
43
44

45 **Comment:** The following comments express concern about contamination of the ESRP Aquifer
46 as a result of the proposed EREF project.
47

48 **[008-07, Carol Bachelder]** Another thing about the water was the hearings I went to several
49 months ago in Mountain Home, again, the scientists, the nuclear scientists were going to build a

1 reactor, and they started in one county, and it was disproved, and they went to another county
2 and it was disproved. The Snake River Alliance finally called this nuclear reactor Idaho's
3 "Nomadic Nuclear Reactor," which wasn't very scientific, but boy, it was funny. I mean, I liked
4 that. The "Nomadic Nuclear Reactor," because nobody wanted it. And the hearings from them
5 were mainly from the farmers around there. It was an agricultural area, and they were scared,
6 and they were mad, because they said this nuclear reactor is going to take our water. And this is
7 the west. And a lot of fights, and hangings, and range wars happened in the early west over
8 water. This is still the west, and these farmers were saying we don't want this nuclear reactor
9 here, and so it was disproved, and now it's off down somewhere else trying to get approval. And
10 that is stuff I've learned from the Snake River Alliance. They're not -- maybe they're not
11 scientific, maybe they're not totally educated, but they have a contribution to make.

12
13 **[010-02, Jack Barraclough]** When they say that this plant is going to ruin the aquifer, just read
14 the EIS and find out they're not going to discharge. And if they do, the monitor will pick it up and
15 changes will be made. So. I don't worry about this plant and what its effect on the aquifer is.

16
17 **[014-01, William Blair]** Idaho does not need more radioactive waste placed over the Snake
18 Plain Aquifer in an active earthquake area. Until a safe method of handling and storing
19 radioactive wastes for thousands of years is devised, NO new facilities should be approved.

20
21 **[015-05, Beatrice Brailsford]** The most domestic part of the proposal is that the waste will, in
22 fact, stay here. The plant would produce 320,000 tons of depleted uranium hexafluoride over its
23 licensed lifetime, and the door is already ajar for the license to be extended. That waste might
24 be stored on outdoor concrete pads above the Snake River aquifer until the plant is
25 decommissioned.

26
27 It's worth noting that New Mexico sharply limits how much, and how long waste can stay at the
28 plant there. The waste has to be treated before it can be disposed of. Two government-owned
29 treatment plants are under construction, over budget, and behind schedule. Waste the U.S. has
30 already accumulated will take a combined 43 years to process.

31
32 **[015-14, Beatrice Brailsford]** The EREF will produce more than 350,000 tonnes of depleted
33 uranium hexafluoride (DUF6) over its licensed lifetime, and the door is already ajar for the
34 license to be extended. That waste would be stored in 25,718 cylinders on outdoor concrete
35 pads above the Snake River Aquifer as long as the plant operates. DUF6 is both radioactive
36 and chemically toxic and has to be treated before it can be disposed of. The DOE has built two
37 plants to treat depleted uranium hexafluoride waste the US has already accumulated. That
38 treatment will take a combined 43 years to process. A private US corporation is seeking a
39 license for its own treatment plant. The draft EIS cavalierly dismisses any potential bottlenecks
40 by stating that the waste could simply be sent to the DOE treatment plants before they're ready
41 to process it and then their operating lives extended. But it is at least as likely that the DUF6 will
42 be stored in Idaho for an uncertain length of time above the Snake River Aquifer, a sole source
43 aquifer for nearly 300,000 people. Storage under these conditions must be fully evaluated under
44 NEPA.

45
46 **[017-03, Sally Briggs]** At Stake is the very air we all breath and the water we receive from our
47 amazing and priceless aquifer.

48

1 **[019-01, George Buehler]** As a long time resident of Southeast Idaho, I am very disturbed by
2 the possibility of the Areva Uranium Enrichment being located in my neighborhood. This area is
3 above a highly permeable aquifer which provides water for the most populous cities in the state.
4

5 **[020-01, Tracey Busby]** I do not support the idea of putting any type of nuclear plant /
6 enrichment facility above the Snake River Aquifer for the obvious environmental risks.
7

8 **[025-02, Hon. Sue Chew]** So, you know, when I look at the fact that we have an aquifer, and
9 we have potential waste that would be created upstream, I want to make sure that we have a
10 good plan there when we look at transportation into Idaho and out, that those things are
11 considered.
12

13 **[027-11, Sara Cohn]** Water Resources: The ICL is very concerned that spillage or leakage of
14 hazardous materials and waste from the proposed facility will further contaminate Idaho's
15 surface or groundwater. We are concerned that there will be large quantities of hazardous,
16 toxic, and radioactive materials produced and stored onsite and that these materials may
17 contribute to existing contamination of Idaho's waters. The Snake River Plain Aquifer is
18 southern Idaho's primary source of drinking and irrigation water and is already contaminated
19 with materials stored within the Idaho National Laboratory as well as nutrients associated with
20 historical and existing agricultural practices. Should the facility operations result in further
21 contamination of the aquifer, this pollution would have wide reaching affects on public health
22 and Idaho's agricultural economy. Toxic and radioactive materials from enrichment facilities
23 have been shown to leak through detention basins and contaminate groundwater. We are very
24 concerned the proposed facility may contaminate Idaho's waters the way similar facilities have
25 contaminated groundwater in Paducah, KY and Portsmouth, OH.
26

27 Due to the amount of pollutants expected to be stored onsite, the extremely hazardous nature of
28 waste products like depleted uranium, the possibility of waste spills, the possibility of leakage
29 from proposed retention basins, and the importance of the Snake River Plain Aquifer, much
30 more information is needed, in the final EIS, to ensure no endangerment of public health or
31 contamination of precious water resources. We request more information with regard to the
32 amount of waste and hazardous materials expected to be stored onsite, the types of
33 preventative measures that will be in place to ensure no contamination of water, as well as
34 plans outlining monitoring and reporting methods and responsible parties. The applicant should
35 also prepare reports and plans that detail the roles and responsibilities of agencies and AREVA
36 in the event of spillage or contamination from the site. These plans should outline remediation,
37 public alerts, public safety measures, and clean up strategies, among all other necessary
38 actions to protect environmental and public health.
39

40 Nitrate contamination of groundwater is also of concern. Recent findings indicate that long-term
41 exposure to elevated concentrations of nitrate may contribute to the risk of developing bladder
42 and ovarian cancers and non-Hodgkin's lymphoma.
43

44 **[030-03, Kerry Cooke]** One of the worst places anyone could think of for nuclear waste is
45 above the Snake River Plain Aquifer.
46

47 **[032-02, Cindy Cottrell]** Another reason Idaho should never be considered is because of the
48 risk involved to main waterways and land. If any accident were to occur which exposes the

1 environment to radiation or the storing of the waste to do so, it would contaminate much more
2 area than if it were next to the ocean somewhere. It would first contaminate one of the largest
3 underground aquifers, then continue down the beginning of the Snake River, passing all through
4 Southern Idaho and then into the Columbia River, contaminating the length of Oregon and
5 Washington before reaching the ocean. The contamination would ruin lands that grow needed
6 crops and range land for wildlife and cattle. The fish would also suffer and eventually the ocean
7 life would suffer. If it was near the ocean, it would reach the ocean which would be a disaster
8 but at least the in land would be free of the radiation.

9
10 **[040-01 and 040-04, Collin Day]** But are we really willing to risk storing all this stuff right on top
11 of an aquifer? It makes no sense to me. I mean, not only -- I mean, can you guarantee that
12 30 years from now, there will be no accidents, and none of that's going to leak into an
13 aquifer?... But there's just no need to take risks and gamble with things like the aquifer that,
14 you know, supplies drinking water to some 300,000 people, because 500 people need jobs.

15
16 **[048-01, Genevieve Emerson]** As a fifth generation steward of the land in Southern Idaho, as
17 well as a biologist, I found that the EIS for the proposed Eagle Rock Facility fails to consider
18 how such a facility, poised directly over the Snake River Aquifer, could have extremely serious
19 health implications for both wildlife and human beings who rely on this sole source of precious
20 water in a high mountain desert.

21
22 **[050-04, Joanie Fauci]** There is also the question, unknown scientific impact, of the interaction
23 of the waste and water. There is risk of it getting into the aquifer as well as how it reacts with
24 rain and excess moisture.

25
26 Safety should be given the highest risk factor in the EIS.

27
28 **[068-02, Anne Hausrath]** I am very much opposed to the storage of radioactive [waste] above
29 an important aquifer. This is a huge risk that I do not believe has been adequately addressed.

30
31 **[074-01, Don Howard]** I've been on the focus group at INEL forever, under Mark Marinet
32 (phonetic). We'd go out and we'd look at the site and the projects, and when you say a leach to,
33 on the water, well, they have a deal out there called Pit 9, that they dump this raw nuclear waste
34 in, and it's down, I think, about 139 feet in the aquifer, Under it is down about 459 feet. And if we
35 have leach, the gentleman said that they was putting a leach to rejuvenate the waters.

36
37 **[078-04, Hon. Wendy Jaquet]** I could not get a feeling for the safety processes that would
38 make me feel comfortable regarding our sole source aquifer. After the BP fiasco, I am now more
39 concerned.

40
41 **[087-02, Dennis Kasnicki]** Comment 2a: Many attendees expressed concern regarding
42 contamination, especially depleted uranium, getting into the Snake River Aquifer; that, by far,
43 seemed to be the biggest concern, and rightfully so. Does AREVA's Integrated Safety
44 Assessment address ALL CREDIBLE accident scenarios whereby depleted uranium (or other
45 contamination) could get into the Snake River Aquifer? Are the "probabilities" of all such
46 scenarios deemed at least "highly unlikely", or otherwise meet the requirements of 10 CFR 70?
47 If so, or if not, this should be loudly and clearly "called out" in the Draft EIS.

1 **[092-01, Ginna and Ken Lagergren]** The Areva plant is a BAD idea anywhere, and even
2 worse where they want to locate it over the Snake River Aquifer. Please listen to the testimony
3 of the organization Snake River Alliance for all the scientific reasons why the Areva uranium
4 factory should NEVER BE BUILT!!!
5

6 **[100-04, Wendy Matson]** The facility will store radioactive waste above the sole-source aquifer
7 for nearly 300,000 people. This scares me. This threat to a vital and unique resource outweighs
8 any perceived benefit of the facility.
9

10 **[102-01, R.D. Maynard]** I'm interested in any potential impacts to the environment, particularly
11 the Snake River aquifer, that construction and operation of the Eagle Rock enrichment facility
12 might cause.
13

14 Past waste disposal practices at the INL site, along with land application of fertilized and
15 pesticides, and excessive irrigation, have already caused some contamination of the aquifer.
16

17 **[103-03, Karen McCall]** The radioactive risk to Idaho is significant as this plant is proposed to
18 be built upstream of the Snake River Aquifer which is already contaminated by the activities at
19 the INL. Further degradation of this enormous water source is unacceptable and a risk to
20 agriculture in the state.
21

22 **[105-05, Eve McConaughy]** No mention was made of the potential contamination of the
23 aquifer or mention made of the location near the Snake River.
24

25 **[110-01, John and Susan Medlin]** As the Snake River Alliance presentation pointed out, there
26 is no current need for this facility, no compelling evidence that a nuclear renaissance is coming
27 (or inevitable), no rationale for a French company building a nuclear facility in Idaho that
28 purports to promote US energy security while importing inputs and exporting outputs, no
29 provision for the deteriorating and dangerous waste that will haunt us for decades or maybe
30 forever, no concern for yet another threat to the Snake River aquifer, the lifeblood of Idaho
31 agriculture.
32

33 So how can the NRC conclude that building this facility is vital, and that the most problematic
34 outcome to be evaluated is construction dust?
35

36 **[122-04, Kathy O'Brien]** I am also concerned about the wildlife in the area as well as the
37 Snake River Aquifer. This must be taken into account and given priority.
38

39 **[128-04, Bob Poyser]** Second, during the design of this facility, AREVA has applied standards
40 for environmental practices and protection above and beyond acceptable industry practices,
41 wherever possible. At the Eagle Rock facility, even rainwater runoff from the site will be directed
42 to a storm water retention basin. Similarly treated liquid waste from the domestic sanitary sewer
43 treatment plant will be directed to a fully lined retention basin with no outlet.
44

45 The lined retention basins will use evaporation, thus precluding any interaction with the water in
46 the aquifer.
47

48 These additional features are a part of Areva's commitment to sustainable development, and
49 the deployment of our best know-how to protect the environment.
50

1 **[147-06, Joey Schueler]** The site of this nuclear facility is located directly above the Snake
2 River Aquifer, which supplies water to over 300,000 individuals in Idaho (including the entire
3 Treasure Valley).
4

5 **[150-01, Katie SeEVERS]** The potential for a nuclear facility, which will site over a sole source
6 aquifer for about 300,000 residents, is beyond disconcerting. The location of the facility above
7 the Snake River aquifer causes further alarm when additional environmental effects are
8 considered.
9

10 **[153-01, Andrea Shipley; 197-01, Andrea Shipley, on behalf of the Snake River Alliance]**
11 Areva's proposed uranium enrichment factory will store radioactive waste above the sole source
12 aquifer for nearly 300,000 people,
13

14 **[168-03, Lon Stewart]** What does Idaho get out of this? We get highly radioactive waste that
15 increases in intensity over time, we get a chance to pollute the Eastern Snake River Aquifer, the
16 main source for water for all of Southeast Idaho and then pollute the Snake River which flows
17 through the Southwest portion of the state....
18

19 **[181-06, Roger Turner]** It would be opposed, because the waste is likely to remain in eastern
20 Idaho, posing a risk to the Snake River Plain Aquifer.
21

22 **[183-01, James Vincent]** Since the two US de-conversion facilities are not operational, and if
23 they do become operational they will first process already existing depleted uranium waste for
24 60 plus years of existing waste, from the 100 plus nuclear energy producing plants here in the
25 US, the timeline for the removal of the on site storage of Uranium hexafluoride DUF6 from Idaho
26 is in doubt. I have a problem with storing this waste above ground and possible leaching of
27 contaminants into the aquifer for our state.
28

29 Their figures are that these are increasing to 2,000 metric tons per year. And, in addition, there's
30 like 12 million cubic feet of low-level waste from these plants. Supposedly, we have around
31 60,000 metric tons of waste in this country that we have to get rid of one way or another.
32

33 **[183-07, James Vincent]** Since the two US de-conversion facilities are not operational, and if
34 they do become operational they will first process already existing depleted uranium waste for
35 60 plus years of existing waste, from the 100 plus nuclear energy producing plants here in the
36 US, the timeline for the removal of the on site storage of Uranium hexafluoride DUF6 from Idaho
37 is in doubt. I have a problem with storing this waste above ground and possible leaching of
38 contaminants into the aquifer for our state.
39

40 **[184-02, Kitty Vincent]** What matters is Areva's history of leaks and pollution overseas as well
41 as the fact that this plant would sit atop this magnificent aquifer.
42

43 **[184-01, Kitty Vincent]** Water is a resource in scarce supply in the West. The Snake River
44 aquifer is a huge water source for now and the future in not only the State of Idaho but also the
45 entire West. While several scientists at the meeting denied the potential threat to this water
46 source by the Areva project -- they are not employed by Areva so whatever expertise they have
47 is a moot point.
48

1 **[184-07, Kitty Vincent]** Areva’s proposed Eagle Rock Enrichment Facility (EREF) will store
2 radioactive waste above the sole source aquifer for nearly 300,000 people;
3

4 **[191-33, Liz Woodruff]** The facility will store radioactive waste above the sole source aquifer
5 for nearly 300,000 people. This threat to a vital and unique resource outweighs any perceived
6 benefit of the facility.
7

8 **[192-05 and 192-11, Lisa Young]** Idaho will not allow for this kind of risk, especially over its
9 precious aquifer, which could easily be contaminated after an accidental spill of depleted
10 uranium hexafluoride waste. With a spill of this material, the radioactive material has a potential
11 to enter the aquifer and poison our sole source of water.
12

13 **[192-11, Lisa Young]** This risk is unacceptable anywhere with the storage of depleted uranium
14 hexafluoride, and Idaho will certainly not allow for this kind of risk, especially over its precious
15 aquifer, which could easily be contaminated after an accidental spill of depleted uranium
16 hexafluoride waste...poisoning our sole water source.
17

18 **Response:** *As discussed in Section 4.2.6.2 of the EIS, there would be no wastewater*
19 *discharges associated with the operation of the proposed EREF. Chemical spills or releases*
20 *around vehicle maintenance and fueling locations, storage tanks, and painting operations are*
21 *not expected to affect groundwater in the Eastern Snake River Plain aquifer because it occurs*
22 *at great depths (about 660 ft) below the ground surface (see Section 3.7.2.2) and contaminants*
23 *would likely be cleaned up quickly and otherwise likely adsorbed by overlying soils long before*
24 *reaching the aquifer. Compliance with the facility’s Spill Prevention Control and*
25 *Countermeasures (SPCC) Plan would minimize the likelihood of inadvertent releases to the*
26 *ground surface during all project phases. Therefore, contamination of the underlying aquifer*
27 *would not be expected.*
28

29 *Section 4.2.6.2 has been modified to provide further information on the measures (e.g., system*
30 *or basin design) that would be taken by AES to assure that contaminated effluents are*
31 *contained within the Liquid Effluent Collection and Treatment System and potentially*
32 *contaminated effluents from the cylinder storage area are retained in the Cylinder Storage Pads*
33 *Stormwater Retention Basins and that inadvertent releases would be detected and corrected in*
34 *a timely manner. Releases associated with an accident would be addressed as part of the*
35 *facility’s emergency response planning with technical support and oversight from various*
36 *Federal, State, and local agencies. Any ground contamination from depleted uranium material*
37 *released by a potential accident would be isolated and retrieved in a timely manner.*
38
39

40 **I.5.14 Ecological Resources**

41

42 **Comment:** The following comment states that there is no discussion of impacts to the greater
43 sage-grouse (*Centrocercus urophasianus*) from the operation of the plant, and that AES should
44 place metal reflectors on the top wire of the fence to reduce the probability of sage-grouse
45 colliding with the fence, thus reducing mortality.
46

47 **[140-04, Wendy Reynolds, on behalf of the Bureau of Land Management, Upper Snake**
48 **Field Office]** 3) The BLM appreciates the lengthy and thorough discussion of the greater sage

1 grouse, particularly in the affected environment section of the document. In terms of the
2 analysis, however, there is no discussion of impacts to the greater sage grouse from the
3 operation of the plant. Here too, as with the impacts from preconstruction and construction
4 activities, the greater sage grouse would likely avoid the area due to human presence, noise,
5 and the use of artificial lights resulting in habitat displacement over an area substantial larger
6 than the footprint of the facility itself. Further, indirect impacts would occur once the boundary
7 fence is in place. Greater sage grouse are known to collide with the top wire of fences like the
8 fence proposed to encircle the AES property. Such collisions are known to be a source of
9 mortality amongst local and regional sage grouse populations. In view of this fact, the BLM
10 requests that AES place metal reflectors on the top wire of the fence. This mitigation measure
11 has been shown in recent preliminary and, as of yet, unpublished studies to reduce the
12 probability of sage grouse colliding with fence, thus reducing mortality.

13
14 **Response:** *Wildlife avoidance of the areas around the proposed facility is acknowledged in*
15 *Section 4.2.7.2 of the EIS, Facility Operation. Additional information has been included in*
16 *Section 4.2.7.2 regarding effects on sage-grouse during operation of the proposed EREF.*
17 *Information regarding the inclusion of markers on the boundary fence and metal reflectors on*
18 *the top wire of the fence has been added to the NRC-recommended additional mitigation*
19 *measures in Section 4.2.7.3 and Table 5-4, Section 5.2.*

20
21 *When NRC reviews a proposed action, its ability to impose additional requirements and*
22 *environmental mitigation measures beyond those proposed as part of the license application is*
23 *limited to those with a reasonable nexus to providing protection for radiological health and*
24 *safety and common defense and security. The NRC can, however, require that the proposed*
25 *facility be built in accordance with the submitted application, including mitigation and monitoring*
26 *measures proposed by the applicant that are not specifically required by or directly related to*
27 *NRC's regulations. Thus, the NRC does have the ability to hold licensees to key mitigation*
28 *measures committed to in their applications and subsequently incorporated in the NRC license*
29 *directly or by reference.*

30
31
32 **Comment:** The following comment expresses concern that the transmission lines compound
33 the negative impact that will accrue to wildlife, and points to the Idaho Department of Fish and
34 Game's (IDFG's) comments on this matter.

35
36 **[015-20, Beatrice Brailsford]** The transmission lines compound the negative impact the will
37 accrue to pronghorn antelope, greater sage grouse, and ferruginous hawks, which will all likely
38 abandon the Areva site and surrounding areas. Sage grouse is a candidate species for federal
39 protection. The Idaho Department of Fish and Game reaffirmed the threats transmission lines
40 would pose to wildlife, challenged the methodology of sage grouse and lek analysis in the draft
41 EIS, recommended burying transmission lines, and suggested Areva submit to plans to mitigate
42 for the expected wildlife impacts. These concerns do not appear to have been addressed in this
43 EIS and must be addressed before any preconstruction activities are allowed or before this EIS
44 review continues.

45
46 **Response:** *The concerns of IDFG are addressed in the EIS. A supplementary lek survey was*
47 *conducted by AES (see Section 3.8.3), and AES is committed to coordinating with IDFG during*
48 *monitoring (see Section 6.2.2). Measures for the protection of birds would be implemented in*

1 *the construction of the transmission lines (see Section 4.3.7). Regarding transmission line*
2 *burial, the cumulative impacts of a proposed, above-ground, 161-kV transmission line that*
3 *would serve the proposed EREF are analyzed (see Section 4.3), and this analysis concludes*
4 *that the line would have SMALL contributions to cumulative impacts in all resource areas.*
5 *Information regarding monitoring of the transmission line right-of-way for avian mortality has*
6 *been added to Section 6.2.2.*

7
8
9 **Comment:** The following comment asks the NRC to incorporate design features in the
10 proposed EREF project to minimize impacts to ecological resources and to prepare a plan to
11 mitigate for impacts that cannot be avoided or minimized.

12
13 **[027-22, Sara Cohn]** *Avoid, Minimize, Mitigate:* In terms of priorities, the NRC should first site
14 facilities and infrastructure to avoid impacts to wildlife and cultural resources. If impacts cannot
15 be entirely avoided, the NRC should incorporate design features to minimize impacts. Lastly, a
16 plan should be prepared to mitigate for impacts that cannot be avoided or minimized.

17
18 **Response:** *The siting of a uranium enrichment facility involves a number of requirements, as*
19 *discussed in Section 2.3.1 of the EIS. Environmental protection was one of the criteria*
20 *categories used. Mitigation measures identified by AES to minimize impacts to wildlife during*
21 *preconstruction, construction, and operation of the proposed EREF are presented in*
22 *Section 4.2.7.3 and Chapter 5.*

23
24 *The NRC's action with regard to the proposed EREF project is limited to granting a license, if*
25 *found to be warranted, for the construction, operation, and decommissioning of the proposed*
26 *facility. NRC is not the implementer or funding entity for the proposed activity. As a result, NRC*
27 *generally limits its analysis to the alternatives and actions reasonably available to the applicant.*

28
29 *When NRC reviews a proposed action, its ability to impose additional requirements and*
30 *environmental mitigation and monitoring measures beyond those proposed as part of the*
31 *license application is limited to those with a reasonable nexus to providing protection for*
32 *radiological health and safety and common defense and security. The NRC can, however,*
33 *require that the proposed facility be built in accordance with the submitted application, including*
34 *mitigation and monitoring measures proposed by the applicant that are not specifically required*
35 *by or directly related to NRC's regulations. Thus, the NRC does have the ability to hold*
36 *licensees to key mitigation and monitoring measures committed to in their applications and*
37 *subsequently incorporated in the NRC license directly or by reference.*

38
39
40 **Comment:** The following comment expresses concern regarding impacts to sage-grouse.

41
42 **[027-23, Sara Cohn]** There is significant concern regarding the long-term viability of greater
43 sage-grouse populations. The US Fish and Wildlife Service concluded that Greater sage-grouse
44 are warranted for protections under the Endangered Species Act but this action is precluded by
45 other priorities. The US Fish and Wildlife Service will continue to reassess the status of sage-
46 grouse. If sage-grouse are listed, the protections could have far reaching effects on land
47 management in Idaho and in the region.

1 Greater sage-grouse suffer from the loss, degradation, and fragmentation of habitat throughout
2 the west. It's estimated that only 50-60% of the original sagebrush steppe habitat remains in the
3 west (West 2000), and in 2007, the American Bird Conservancy listed sagebrush as the most
4 threatened bird habitat in the continental United States. 4 As such, we cannot stress enough
5 how important it is for agencies to consider impacts to sage-grouse, conserve existing habitat,
6 and actively restore altered sagebrush steppe habitats due to project-related impacts.
7

8 Depending on location and design specifics, the construction of additional roads within sage-
9 grouse habitat could constitute "nonlinear infrastructure" under the *Conservation Plan for the*
10 *Greater Sage-grouse in Idaho (Idaho Sage-Grouse Advisory Committee 2006)*. Nonlinear
11 infrastructure is defined as "human-made features on the landscape that provide or facilitate
12 transportation, energy, and communications activities." The *Conservation Plan* lists
13 infrastructure such as this as the second greatest threat for sage grouse, with wildfires as the
14 greatest risk. Road construction and use associated with the facility represents high risk for loss
15 of lek areas, nesting locations, and brood-rearing habitats (Braun 1986, Connelly et al. 2004)
16

17 *Coordination with local stakeholder groups:* We believe that an integral part of conserving and
18 recovering sage-grouse will be relying on the guidance from local stakeholder groups. As such,
19 we recommend that the applicant coordinate further efforts more closely with the US Fish and
20 Wildlife Service, local Sage-grouse Working Groups, the Idaho State Sage Grouse Advisory
21 Council, the Idaho Department of Fish and Game, and the Governor's Office of Species
22 Conservation. Conservation groups to consult include the Audubon Society, the Idaho Chapter
23 of the North American Grouse Partnership, the Idaho Falconer's Association, the Nature
24 Conservancy, the Western Watersheds Project as well as the Idaho Conservation League.
25

26 ***Response:*** *Impacts on sage-grouse are discussed in Section 4.2.7 of the EIS, along with*
27 *mitigation measures that include the planting of disturbed areas with sagebrush steppe species.*
28 *As shown in Figure 4-4, the site access road avoids sagebrush steppe habitat, being located*
29 *entirely within nonirrigated pasture. AES has committed to working with the U.S. Fish and*
30 *Wildlife Service (FWS), Bureau of Land Management (BLM), and IDFG in the development of*
31 *action levels and/or reporting levels for the ecological monitoring program for the proposed*
32 *EREF (see Section 6.2.2.1). These agencies work with many conservation groups for the*
33 *protection of sage-grouse and other species.*
34

35 *When considering the long-term viability of sage-grouse populations the proposed action is*
36 *evaluated considering short term impacts during preconstruction and construction*
37 *(Section 4.2.7.1) and cumulative impacts (Section 4.3.7) during the life of the facility. By*
38 *necessity, the viability of an entire population has to be viewed at the ecosystem level. The*
39 *ecosystem level used in this analysis was the Upper Snake sage-grouse planning area as*
40 *described in the July 2006 Idaho sage-grouse conservation plan (ISAC, 2006). The evaluation*
41 *takes into account past, present and reasonably foreseeable impacts. As part of the evaluation*
42 *it was recognized that past actions have caused extensive habitat fragmentation at the*
43 *proposed site and future actions were evaluated in terms of the incremental contribution to*
44 *environmental impacts from an area already heavily impacted by prior activities (e.g., cultivation*
45 *and cattle grazing). For example, the July 2006 plan describes the impact of roads as a linear*
46 *infrastructure feature and contributor to habitat fragmentation. US 20 is considered to be a*
47 *major highway in the project area and forms the southern boundary of the proposed EREF site.*

1 The July 2006 plan describes taking into account a 6.2 mile buffer on either side of a major road
2 to account for its impact.

3
4
5 **Comment:** The following comment discusses the effects of operation of the proposed EREF on
6 sage-grouse that are on public land.

7
8 **[089-05, Sharon Kiefer, on behalf of the Idaho Department of Fish and Game]** Recent
9 research on sage-grouse suggests that disturbance-related impacts from energy development
10 on counts of displaying male sage-grouse at leks were apparent out to 6.4 km or approximately
11 4 miles (Naugle et al. *in press*), and that most (79%) nests occur within 4 miles of leks (Doherty
12 et al. *in press* citing Colorado Division of Wildlife 200S-Appendix B Page 7). As noted in the
13 DEIS the property is adjacent to mapped key sage-grouse habitat with one sage-grouse lek
14 approximately 3.5 miles away from the site. Presence of an industrial facility this distance from
15 occupied sage-grouse habitat remains a consideration although we recognize the facility direct
16 footprint excludes occupied habitat.

17
18 There are guidelines that should be considered to help steer significant construction activity that
19 could benefit sage-grouse. The Upper Snake Sage-Grouse Local Working Group work plan
20 includes the following recommendation that would be applicable: *All land management agencies*
21 *adjust timing of energy exploration, development, and construction activity to minimize*
22 *disturbance of sage-grouse breeding activities. Energy-related facilities should be located*
23 *>3.2 kilometers from active leks whenever possible. Human activities within view of or*
24 *<0.5 kilometers from leks should be minimized during the early morning and late evening when*
25 *birds are near or on leks.* [http://fishandgame.idaho.gov/hunt/grouse/conserves_plan/upsnake_](http://fishandgame.idaho.gov/hunt/grouse/conserves_plan/upsnake_workplan.pdf)
26 [workplan.pdf](http://fishandgame.idaho.gov/hunt/grouse/conserves_plan/upsnake_workplan.pdf)

27
28 Likewise, Idaho Bureau of Land Management's (BLM) Seasonal Wildlife Restrictions and
29 Procedures for Processing Requests for Exceptions On Public Lands in Idaho (Information
30 Bulletins No. ID-2010-039) also includes recommendations for controlled surface and timing
31 limitation use near sage-grouse leks and/or nesting/early brood rearing habitat: *Potentially*
32 *disruptive larger-scale construction activities (e.g. , infrastructure/ energy development and*
33 *similar projects), shall be avoided within 6.4 km (~4 miles) of occupied or undetermined status*
34 *sage-grouse leks from March 1 to June 30 to reduce disturbance to lekking or nesting grouse*
35 *(and/or hens with early broods).*

36
37 If monitoring indicates sage-grouse do avoid public lands surrounding the facility due to post-
38 construction operational effects, such as lights and roads, we request AES to determine
39 corrective action or to mitigate the offsite public lands lost to wildlife due to project effects.

40
41 **Response:** AES has committed to the consideration of all recommendations of the FWS and
42 IDFG (see Section 4.2.7.3 of the EIS), and to working with the FWS, BLM, and IDFG in the
43 development of action levels and/or reporting levels for the ecological monitoring program for
44 the proposed EREF (Section 6.2.2.1). A measure recommending that AES coordinate with
45 IDFG regarding corrective action or mitigation has been added to the NRC-recommended
46 additional mitigation measures in Section 4.2.7.3 and Table 5-4, Section 5.2.

1 *The NRC's purpose and need statements in its environmental review documents reflect that the*
2 *NRC is not the implementer or funding entity for the proposed activity. As a result, when the*
3 *NRC reviews a proposed action, its ability to impose additional requirements and mitigative*
4 *measures beyond those proposed as part of the application is limited to those with a reasonable*
5 *nexus to providing protection for radiological health and safety and common defense and*
6 *security. The NRC can, however, require that the facility be built in accordance with the*
7 *submitted application, including mitigation measures proposed by the applicant that are not*
8 *specifically required by or directly related to the NRC's regulations. Thus, the NRC does have*
9 *the ability to hold licensees to key mitigation measures committed to in their applications and*
10 *subsequently incorporated in the NRC license directly or by reference.*

11
12
13 **Comment:** The following comment recommends that the NRC continue to work with the FWS
14 and IDFG as the project is implemented to monitor risks to individual species and identify
15 effective measures to reduce risks and protect the species and their habitat; and to also
16 coordinate with the Idaho National Laboratory (INL) and BLM due to their long term experiences
17 monitoring impacts to the species and associated habitats in and around the proposed project
18 area.

19
20 **[138-07, Christine Reichgott, on behalf of the U.S. Environmental Protection Agency,**
21 **Region 10]** Sections 4.2.7 discuss the project's impacts to ecological resources, including
22 vegetation and wildlife species. The DEIS indicates that vegetation removal, habitat
23 fragmentation, and ground disturbance would result in moderate impacts on plant communities
24 and wildlife species (p. 4-44). Most impacts to these resources would occur primarily on almost
25 592-acre area of the ERF footprint. About 185 acres of sagebrush steppe, 136 acres of non-
26 irrigated pastures, and 268 acres of irrigated cropland habitats would be lost. Such habitat loss
27 and alterations would impact a number of species including sage grouse, which is a candidate
28 species for listing under the Endangered Species Act, pygmy rabbits, and nesting migratory
29 birds and other species of concern (p. 4-46). Noting that some of the impacts would be indirect,
30 others would be direct, cumulative and unavoidable.

31
32 We appreciate measures to limit the project footprint impacts, including replanting almost
33 133 acres of that footprint with native species after construction activities and eliminating
34 grazing within the entire project area (4200 acres). Because of an arid environment at the
35 project site, however, planted vegetation would take years to establish or restoration could fail,
36 thus exacerbating loss of cover and habitat for the species. Given the usage of the project area
37 by sage-grouse and other sensitive wildlife species, and limited survey data for the species, it is
38 important that the NRC continue to work with the US Fish and Wildlife Service and the Idaho
39 Department of Fish and Game (IDFG) as the project is implemented to monitor risks to
40 individual species and identify effective measures to reduce risks and protect the species and
41 their habitat, particularly loss, degradation, and fragmentation of the sagebrush steppe habitat
42 due to construction activities, wildfire, and agriculture. Also, we believe that it would be useful
43 for the project to coordinate with the Idaho National Laboratory and Bureau of Land
44 Management due to their long term experiences monitoring impacts to the species and
45 associated habitats in and around the proposed project area.

46
47 **Response:** AES has committed to ongoing coordination with the FWS, IDFG, and BLM during
48 ecological monitoring program activities for the proposed EREF project (see Section 6.2.2.1 of

1 the EIS). A recommended mitigation measure that AES should also coordinate with INL has
2 been added to the NRC-recommended additional mitigation measures in Section 4.2.7.3 and
3 Table 5-4 in Section 5.2.

4
5 The NRC's purpose and need statements in its environmental review documents reflect that the
6 NRC is not the implementer or funding entity for the proposed activity. As a result, when the
7 NRC reviews a proposed action, its ability to impose additional requirements and mitigative
8 measures beyond those proposed as part of the application is limited to those with a reasonable
9 nexus to providing protection for radiological health and safety and common defense and
10 security. The NRC can, however, require that the facility be built in accordance with the
11 submitted application, including mitigation measures proposed by the applicant that are not
12 specifically required by or directly related to the NRC's regulations. Thus, the NRC does have
13 the ability to hold licensee's to key mitigation measures committed to in their applications and
14 subsequently incorporated in the NRC license directly or by reference.

15
16
17 **Comment:** The following comment recommends that the Final EIS include a discussion of how
18 issues such as ecological impacts raised by Tribes would be addressed by the project.

19
20 **[138-08, Christine Reichgott, on behalf of the U.S. Environmental Protection Agency,**
21 **Region 10]** Consultation with Tribal Governments - The draft EIS indicates that there have
22 been contacts with Tribes that may be affected by the proposed project. This is especially
23 important because the DEIS states that the project would result in up to large impacts to
24 resources important to tribes (p. 4-4), including historical and cultural, visual, and ecological
25 resources. Construction activities, for example, would destroy historic and cultural resources at
26 MW004 site, while increased traffic and construction activities and the presence of an industrial
27 complex would significantly alter the visual landscape. Because of these and other impacts that
28 may be discovered during the project operations, we recommend that the final EIS include a
29 discussion of how issues raised by Tribes would be addressed by the project and outcomes of
30 the ongoing work with the Idaho State Historic Preservation Office and affected Tribes on
31 potential effects requiring Section 106 review of the National Historic Preservation Act.

32
33 **Response:** Consultation with the affected Federally recognized Shoshone-Bannock Tribes has
34 been ongoing throughout the EIS process. The ecological impacts associated with the project
35 are discussed in Section 4.2.7.

36
37
38 **Comment:** The following comment expresses concerns that an historical landmark and
39 expanse of Idaho native habitat will be destroyed to build the proposed plant and that there
40 would be no return to the area's natural state after plant decommissioning

41
42 **[147-15, Joey Schueler] 11.** A historical landmark and a vast expanse of Idaho native habitat
43 will be destroyed to build this plant. After plant decommission, there will be no return to this
44 valuable area of Idaho's beautiful wilderness.

45
46 **Response:** There is an estimated 9,013,000 acres of land identified as existing key sage-
47 grouse habitat in Idaho. Approximately 592 acres on the 4200-acre proposed EREF property
48 would be disturbed by construction and operation of the proposed EREF, as discussed in

1 Section 4.2.1 of the EIS. The remainder of the 4200-acre property would revert to a more
2 natural state because cultivation and grazing activities on the site would cease, as noted in
3 Section 4.2.1.3. Thus, the land use impacts are considered to be SMALL and the general
4 character of the surrounding land is better preserved. Impacts on habitats are considered and
5 described in Section 4.2.7. Impacts related to decommissioning are discussed in
6 Section 4.2.16.7 and I.5.21. Impacts related to historic and cultural resources are described in
7 Sections 4.2.2 and I.5.9.
8
9

10 **Comment:** The following comment asks for more serious consideration of the wildlife species
11 that will be affected by construction, operation, and decommissioning of the proposed facility,
12 including the sage-grouse.
13

14 **[192-17, Lisa Young]** Indeed, I hope to see much more serious consideration of the wildlife
15 species that will be affected by all three stages of construction, operation, and decommissioning
16 of this facility, including the fact that the sage grouse, well-known to be a vulnerable species in
17 need of federal protection, makes its home in this region.
18

19 **Response:** As discussed in comment responses above, additional NRC-recommended
20 mitigation measures for the protection of wildlife have been added to the EIS, in Section 4.2.7.3
21 and Chapter 5, Table 5-4; and additional information regarding sage-grouse has been added in
22 Section 4.2.7.2.
23
24

25 **Comment:** The following comments express concerns about the wildlife in the area.
26

27 **[122-04, Kathy O'Brien]** I am also concerned about the wildlife in the area as well as the
28 Snake River Aquifer. This must be taken into account and given priority.
29

30 **[153-01, Andrea Shipley; 197-01, Andrea Shipley, on behalf of the Snake River Alliance]**
31 AREVA's proposed uranium enrichment factory will...impact sensitive species
32

33 **[184-07, Kitty Vincent]** Areva's proposed Eagle Rock Enrichment Facility (EREF) will store
34 radioactive waste above the sole source aquifer for nearly 300,000 people; impact sensitive
35 species; require the transport of radioactive materials; impair the Hell's Half Acre National
36 Monument; support destruction of the John Leopard homestead, which has been recommended
37 for the National Register of Historic Places; devour billions of dollars in state and federal
38 largess; and obliterate farmland that is potentially protected by the federal government. The
39 Alliance is here to say it is not worth the risk.
40

41 **Response:** Impacts on wildlife have been assessed and are discussed in Section 4.2.7 of the
42 EIS. Impacts would be SMALL to MODERATE. Mitigation measures for the protection of
43 wildlife are identified in Section 4.2.7 and Chapter 5.
44
45

46 **Comment:** The following comments suggest that beneficial ecological impacts could occur at
47 the proposed EREF site outside of the disturbed area footprint.
48

1 **[067-02, Mike Hart]** In terms of ecological impacts of the site, one thing I noticed was again the
2 analysis of the fact that you'll not -- you'll be ceasing grazing on that area, which for sage
3 grouse, the reality is what really causes threatened and endangered species listing of sage
4 grouse is not spoken -- but it's cows.
5

6 So, actually, getting cows off that range, and reseeded it with natural native plants, will actually
7 probably improve sage grouse habitat significantly, and I think you list it as a light impact.
8 Actually, I would go so far as to say it might actually be a benefit, of having an area. But when
9 you do reseed, do go with natives rather than reseeding with crested wheat grass or other non-
10 native species that are invasive.
11

12 **[067-10, Mike Hart]** With respect to ecological impacts, sage grass, I think having, and I
13 apologize to the farmers here, but I think getting the cows off the land will help the sage grass, and
14 let's just leave it at that.
15

16 **Response:** *The NRC acknowledges the potential for habitat improvement once grazing is not*
17 *practiced on the proposed EREF property. This is discussed in Sections 4.2.7.1 and 4.2.7.2 of the*
18 *EIS.*
19
20

21 **Comment:** The following comments express concerns about minimizing impacts to affected
22 habitat and wildlife during construction and operation of the proposed EREF.
23

24 **[027-20, Sara Cohn]** Ecological Resources: The draft EIS does not adequately address
25 impacts to ecological resources on site and the preconstruction exemption guarantees the loss
26 of large areas of habitat to sensitive and candidate species such as greater sage-grouse and
27 pygmy rabbit. The US Fish and Wildlife Service determined that greater sage-grouse warrant
28 protection under the Endangered Species Act, but listing is currently precluded by the need to
29 respond to other species at greater risk of extinction. As such, the greater sage-grouse is
30 considered a candidate species for listing and the status will be reviewed annually by the US
31 Fish and Wildlife Service. The BLM and Forest Service currently consider the greater sage-
32 grouse as a Sensitive Species.
33

34 The pygmy rabbit (*Brachylagus idahoensis*) is currently considered as a candidate species by
35 the US Fish and Wildlife Service, a Sensitive Species by the Bureau of Land Management, a
36 Species of Special Concern (Category C – Undetermined Status Species) on the Idaho State
37 Sensitive Species List (*Idaho Conservation Data Center, 1994*), and is managed by the Idaho
38 Department Idaho Fish and Game as protected, non-hunted species. As with greater sage-
39 grouse, loss of sagebrush steppe habitat has fragmented habitat and the US Fish and Wildlife
40 Service is conducting a status review to determine whether to propose listing under the
41 Endangered Species Act.
42

43 Because listing under the Endangered Species Act (ESA) is a possibility for both species, we
44 suggest the applicant design the project to avoid, minimize and mitigate for any impacts.
45 Furthermore, these steps should be submitted for review in the environmental analysis.
46

47 **Preconstruction Exemption:** It is unclear under what authority NRC may offer exemptions for
48 preconstruction activities when such impacts extend outside of NRC jurisdiction. For example

1 preconstruction activities will impact sensitive and candidate species. Project impacts would
2 normally require NRC to coordinate with the Idaho Department of Fish and Game in order to
3 analyze and release for public comment the environmental and public health impacts of
4 preconstruction clearing, blasting, and grading prior to conducting such activities. According to
5 the draft EIS, such preconstruction activities are expected to take place prior to the licensing of
6 the proposed facility. These efforts undermine the purpose of the EIS process. A mitigation plan
7 must be created to avoid, minimize, and plan for mitigation of affected habitat....

8
9 *Habitat, habitat fragmentation, and migration corridors:* Portions of the project area contain
10 habitat that is crucial to the sagebrush steppe obligate species such as sage-grouse, pygmy
11 rabbits, sage thrasher, sage sparrow, and others. Such habitat has been severely fragmented
12 and reduced through a variety of land management practices, including road construction and
13 development of rights of way corridors. Although communities cannot be listed under the
14 endangered species act, sagebrush steppe habitat is considered by federal agencies as
15 “imperiled” and an area of primary concern. The project should avoiding areas of critical habitat
16 for species of concern, minimize negative impacts by using seasonal restrictions and other
17 recommendations in the Idaho State Sage-Grouse Plan, and mitigate for any potential impacts
18 by working directly with the Idaho Department of Fish and Game and Local Sage-grouse
19 Working Groups. In addition, the NRC should establish siting criteria to minimize soil
20 disturbance and erosion on steep slopes, utilize visual resource management guidelines, and
21 avoid significant historic and cultural resource sites....

22
23 *Additional Wildlife:* In addition to sage-grouse, other wildlife including pygmy rabbits, sage
24 thrasher, sage sparrow, and birds of prey, are of concern. New construction and infrastructure
25 will also change crucial habitat for these species and may inhibit the ability of these species to
26 migrate. The project design should avoid construction in any designated areas or lands for
27 special management of these species. There are also elk, mule deer, and pronghorn antelope in
28 the proposed project area. The project should avoid and minimize all impact to big game winter
29 habitat. The project site contains good to excellent antelope and sage-grouse habitat. We are
30 concerned how the proposed project will impact this important habitat and the species that
31 depend on it. We are also greatly concerned the project will impact nesting habitat for migratory
32 birds.

33
34 *Invasive Weeds:* The most cost-effective way to deal with noxious weeds is to protect
35 strongholds of native vegetation from activities that either spread noxious weeds directly or
36 create suitable habitat by removing native vegetation and disturbing the soil. Project activities
37 should limit road construction in areas that contain mineral soils where weeds may become
38 established. Roads serve as a primary route for noxious weed species expansion. Special care
39 should be taken to safeguard ecologically intact areas that are not currently infested. The EIS
40 needs to analyze the effects of noxious weeds and describe management of weeds in the
41 project area. For example, management strategies may include ensuring the tires and
42 undercarriage of access vehicles are hosed down prior to site access to dislodge noxious
43 weeds. Further documentation should analyze the effects of regular weed control activities in
44 previously undisturbed areas. For example, weed treatments may affect non-target species and
45 vehicle access may increase fire hazard and soil disturbance.

46
47 **[036-05, Christina Cutler, on behalf of the Shoshone-Bannock Tribes]** Endangered species
48 may or may not be at the site at the time of survey; however it is known that there are

1 endangered species and sensitive species in the immediate area. How is there habitat and
2 survival going to be addressed, not just during operation of the facility but also and maybe most
3 important during the construction phase.

4
5 **Response:** *Mitigation measures for impacts to ecological resources during preconstruction,*
6 *construction, and operation of the proposed EREF are included in Section 4.2.7.3 and*
7 *Chapter 5 of the EIS. In response to other comments in this section, additional NRC*
8 *recommended mitigation measures have been added to the EIS, in Section 4.2.7.3 and*
9 *Chapter 5, for protection of sage-grouse, preventing the introduction of invasive plant species,*
10 *and minimizing indirect effects of weed control activities.*

11
12 *Impacts and mitigation should be understood in the context that the environment at the site has*
13 *been degraded by past agricultural and cattle grazing activities and at the ecosystem level*
14 *provides marginal habitat for sagebrush obligate species. In addition, the sage-grouse habitat*
15 *in the Upper Snake sage-grouse planning area is about 2.5 million acres in size with*
16 *approximately 83 percent of this habitat found on State or Federally owned and/or managed*
17 *lands with associated protections.*

18
19 *As shown in Figure 4-4, much of the project footprint is located outside of the sagebrush steppe*
20 *habitat, and the site access road avoids sagebrush steppe habitat, being located entirely within*
21 *nonirrigated pasture. In addition, grazing impacts would be removed from the remaining*
22 *sagebrush steppe, and the remaining irrigated crop areas would be planted with native species.*
23 *AES has committed to working with the FWS, IDFG, and BLM in the development of action*
24 *levels and/or reporting levels for the EREF ecological monitoring program (Section 6.2.2.1).*
25 *These agencies work with many conservation groups for the protection of sage-grouse and*
26 *other species. Section 4.2.7 discusses invasive plant species and control measures,*
27 *acknowledging that nontarget species may be affected.*

28
29
30 **Comment:** The following comments express a concern that the true scale of ecological impacts
31 is larger than that presented in the EIS.

32
33 **[083-06, Diane Jones]** Finally, I'd just like to say the EIS found only small and moderated
34 impacts from this project, this proposed project. One of the things that was looked at is removal
35 of sagebrush steppe and that was regarded as a moderate. I would like to say that when
36 sagebrush steppe is removed, it's removed, and it does not come back for a long time. That's
37 not small or moderate. It's a very large impact.

38
39 **[086-04, Paula Jull]** Antelope, sage grouse, and ferruginous hawks all will likely abandon the
40 Areva site and surrounding areas due to development and human activity. Sage grouse is a
41 candidate species for federal protection. The problem is compounded by construction of the
42 electric transmission line and poles proposed to support the facility, which sage-grouse are
43 known to avoid because they serve as perches for raptors.

44
45 **[088-08, Stan Kidwell; 095-08, Linda Leeuwrik]** Pronghorn antelope, greater sage grouse,
46 and ferruginous hawks all will likely abandon the Areva site and surrounding areas due to
47 development and human activity. Sage grouse is a candidate species for federal protection. The
48 problem is compounded by construction of the electric transmission line and poles proposed to

1 support the facility, which sage-grouse are known to avoid because they serve as perches for
2 raptors.

3
4 **[153-10, Andrea Shipley]** Accidents, fire, air and water quality and the development of on this
5 land will impact several species including raptors and sage-brush obligate species (draft
6 EIS 4.2.7) Pronghorn antelope, greater sage-grouse, and ferruginous haws all will likely
7 abandon the EREF site and area surrounding the EREF due to development and human
8 activity. Sage-grouse is a candidate species for federal ESA protection. USFWS recently
9 concluded that listing under the ESA is warranted, though formal listing is precluded by other
10 agency priorities. The EIS is inaccurate based on the true scale of ecological effects and the
11 problem is compounded by construction of the proposed electric transmission line and poles,
12 which sage-grouse are known to avoid because they serve as perches for raptors.

13
14 **[197-10, Andrea Shipley, on behalf of the Snake River Alliance]** Accidents, fire, air and
15 water quality and the development of on this land will impact several species including raptors
16 and sage-brush obligate species (draft EIS 4.2.7).

17
18 **[175-08, Ellen Thomas]** Pronghorn antelope, greater sage grouse, and ferruginous hawks all
19 will likely abandon the Areva site and surrounding areas due to development and human
20 activity. Sage grouse is a candidate species for federal protection. The problem is compounded
21 by construction of the electric transmission line and poles proposed to support the facility, which
22 sage-grouse are known to avoid because they serve as perches for raptors.

23
24 **[183-13, James Vincent]** I also believe that EIS does not fully take into account the impact on
25 antelope, sage grouse, and birds of prey.

26
27 **[184-15, Kitty Vincent]** Accidents, fire, air and water quality degradation and the development
28 of this land will impact several species including raptors and sage-brush obligate species (draft
29 EIS 4.2.7) Pronghorn antelope, greater sage grouse, and ferruginous hawks all will likely
30 abandon the EREF site and surrounding areas due to development and human activity. Sage
31 grouse is a candidate species for federal protection. The problem is compounded by
32 construction of the proposed electric transmission line and poles, which sage-grouse are known
33 to avoid because they serve as perches for raptors.

34
35 **[191-15, Liz Woodruff]** Ecology. • According to the NRC's own definition of the significance of
36 potential impacts, a large impact is one that "the environmental effects are clearly noticeable
37 and are sufficient to destabilize important attributes of the resource." According to the draft EIS,
38 the sage-brush steppe located within the proposed EREF would improve due to the elimination
39 of grazing. The NRC must flesh out the connection between claims of potential improvements
40 and the amount of habitat that will be compromised.

41
42 • Several species will be impacted by development on this land including sensitive species,
43 raptors, and sage-brush obligate species (draft EIS 4.2.7). Pronghorn antelope, greater sage-
44 grouse, and ferruginous hawks all will likely abandon the EREF site and areas surrounding the
45 EREF due to development and human activity. It is difficult to see how, when an ecosystem is
46 considered as a whole, it be improved if the animals that depend on it can no longer use it. In
47 other words, it is not a healthy sagebrush ecosystem if there are no antelope, grouse, and

1 hawks. The conclusion of small to medium potential ecological/wildlife impacts contained in the
2 draft EIS is inaccurate based on the true scale of ecological effects.

3
4 • This problem is compounded by construction of the proposed electric transmission line and
5 poles, which sage-grouse are known to avoid because they serve as perches for raptors.

6
7 • Sage-grouse is a candidate species for federal ESA protections. USFWS recently concluded
8 that listing under the ESA is warranted, though formal listing is precluded by other agency
9 priorities. The treatment of the threats to sage grouse is inadequate in the draft EIS.

10
11 **[193-20, Liz Woodruff, on behalf of the Snake River Alliance]** And all of the issues
12 associated with the construction of this facility--accidents, fire, air and water quality degradation,
13 the development of this land will impact several species, including raptors and sagebrush
14 obligate species. This includes the sage grouse. The sage grouse is a candidate species for
15 federal protection, and the only reason it's not listed yet is because of bureaucratic process of
16 listing. There's a delay. But the treatment of this issue is inadequate in the draft EIS.

17
18 The impacts to sage grouse from transmission and preconstruction warrant integration into this
19 EIS, or separate EISs, specifically around preconstruction and transmission issues.

20
21 **[197-14, Andrea Shipley, on behalf of the Snake River Alliance]** The EIS is inaccurate
22 based on the true scale of ecological effects, and the problem is compounded by construction of
23 the proposed electric transmission line and poles, which sage grouse are known to avoid
24 because they serve as perches for raptors.

25
26 **Response:** *The EIS acknowledges that many wildlife species would likely avoid the area near*
27 *the proposed facility during its construction and operation. The above comments do not present*
28 *information to support the statement that wildlife would avoid the entire 4200-acre proposed*
29 *EREF property. Other areas of the proposed property would still be usable as habitat, and*
30 *sagebrush steppe in those areas would be expected to improve over time. For the species that*
31 *use the sagebrush steppe habitat (including that which is contiguous to and outside the*
32 *proposed EREF property), such as pronghorn antelope, sage-grouse, and ferruginous hawk,*
33 *construction of the proposed EREF would noticeably alter that habitat, with a loss of 185 acres*
34 *plus an area of avoidance; however, this would neither destabilize the habitat used by these*
35 *species nor the species' populations because extensive sagebrush habitat is available outside*
36 *the proposed EREF property, as described in Section 4.2.7.1 of the EIS. Text has been added*
37 *in Section 4.2.7.2 to clarify impacts to sage-grouse during operations.*

38
39 *The impacts have taken into account that the sage-grouse habitat in the Upper Snake sage-*
40 *grouse planning area is about 2.5 million acres in size with approximately 83 percent of the*
41 *habitat found on State or Federally owned and/or managed lands. It should be further noted*
42 *many species adapt to disturbances and the fact that facilities such as this prohibit hunting as*
43 *evidenced by extensive areas of surface coal mining and reclamation in similar types of habitats*
44 *in Montana, Wyoming and Utah.*

1 **I.5.15 Noise**

2
3 No comments were received on the noise section of the Draft EIS.
4
5

6 **I.5.16 Transportation**

7
8 **Comment:** The following comment acknowledges the adequate safeguards that are in place for
9 shipping containers for radioactive waste materials such as spent nuclear fuel.
10

11 **[007-03, Arnold Ayers]** I've been involved with such things as a first responder from the Three
12 Mile Island reactor, and also was associated with the retrieval, but mostly with the arrival of that
13 fuel here in INL. That puts me in the prospect of knowing what's involved in transportation of
14 spent nuclear fuel. And yes, it is complicated, and yes it is difficult, and yes it has been solved
15 relatively well, quite well, in fact. The adequate safeguards that the NRC has put on materials
16 on shipping containers for that waste material has shown itself, and has proven itself time, and
17 time, and time again.
18

19 **Response:** *No spent nuclear fuel (SNF) would be generated at, or shipped to or from, the*
20 *proposed EREF. Transportation regulations for the shipment of the uranium materials used and*
21 *produced at the EREF are discussed in Appendix D of the EIS and are protective of human*
22 *health and the environment.*
23
24

25 **Comment:** The following comment contends that the Draft EIS does not consider methods to
26 minimize risks associated with alternative transport route options and transportation modes.
27

28 **[027-09, Sara Cohn]** The documents provided do not consider methods to minimize risks
29 associated with transport routes options. Alternative transportation modes, such as rail, should
30 be analyzed. Transportation routes and modes that present significant risk to public health and
31 natural resources should be avoided.
32

33 **Response:** *Transportation routes are determined by carriers in accordance with U.S.*
34 *Department of Transportation (DOT) regulations, which attempt to reduce potential hazards by*
35 *avoiding populous areas and minimizing radiological risks. Route selection is described in*
36 *Appendix D, Section D.3.1.1, of the EIS.*
37

38 *As noted in Sections 3.10.2 and 4.2.9.2, AES does not plan to perform any shipping operations*
39 *via rail because rail access is not readily available at or near the proposed EREF site. To use*
40 *rail as a transportation mode, shipments to and from the proposed EREF would require truck*
41 *transport to the nearest intermodal facility, which could incur additional risks to workers and*
42 *potentially the public at such facilities.*
43
44

45 **Comment:** The following comment emphasizes the opportunity for public comment in each and
46 every community through which radioactive material would be transported, and that the Fort Hall
47 Indian Reservation needs to be a part of this process.
48

1 **[028-01, David Coney]** One thing I'd like to emphasize is public comment in each and every
2 community that any transportation of radioactive material goes through. Specifically because
3 today is World Indigenous Day, I would say that the Fort Hall Indian Reservation needs to be a
4 part of this process. That's huge. And I just returned from an encampment down in New Mexico
5 where I witnessed, firsthand, the desecration of community due to the nuclear military-industrial
6 complex.

7
8 **Response:** *Impacts from transportation of materials to and from the proposed EREF are*
9 *discussed in Section 4.2.9 of the EIS. These impacts would be SMALL. Residents of the Fort*
10 *Hall Indian Reservation have had the opportunity to comment on the Draft EIS. In addition,*
11 *NRC staff met with the Shoshone-Bannock Tribal Council on August 11, 2010, to brief them on*
12 *the Draft EIS and discuss their concerns.*

13
14 *Transportation routes are determined by carriers in accordance with DOT regulations, which*
15 *attempt to reduce potential hazards by avoiding populous areas and minimizing radiological*
16 *risks. Those routes are also determined based on the origin and destination of shipments and*
17 *are not presently known. Therefore, holding public comment meetings in every community*
18 *through which transportation of radioactive material would occur would not be feasible.*
19 *However, all members of the public, regardless of their location, have had the opportunity to*
20 *provide comments on the Draft EIS, either in person or by postal mail or email.*

21
22
23 **Comment:** The following comment mentions that permanent impacts associated with the
24 proposed project would include the construction of two access roads from US Highway 20 to the
25 proposed project site.

26
27 **[027-10, Sara Cohn]** Permanent impacts associated with the project include the construction of
28 two access roads from Highway 20 to the project site.

29
30 **Response:** *Traffic impacts associated with construction of the two access roads from US 20 are*
31 *addressed in Section 4.2.9.1 of the EIS. The associated air quality and noise impacts are*
32 *addressed in Sections 4.2.4.1 and 4.2.8.1, respectively. In addition, please note that as*
33 *acknowledged in the response to Comment 142-01 below from Mr. Blake Rindlisbacher of the*
34 *Idaho Transportation Department (ITD), plans for access to US 20 have not been finalized, and*
35 *no decision has been made about whether to use two full-time operational connections.*

36
37
38 **Comment:** The following comment requests that Highway Route Controlled Quantity (HRCQ)
39 routing be written into the AES license as a condition of transportation operations since it was
40 used in the risk analysis.

41
42 **[066-16, Toni Hardesty, on behalf of the Idaho Department of Environmental Quality]** 14.
43 Appendix D: pp. D-9, Lines 6-14. Under input parameters and route selection, HRCQ routing
44 was used. Again on pp. D-30, Lines 14-15, "the NRC staff used HRCQ routing for the
45 transportation impact assessment in this EIS". DEQ would like to see this requirement written
46 into the license as a condition of transportation operations since it was used in the risk analysis.

1 **Response:** *The IDEQ preference is noted. However, HRCQ routing is not required for any*
2 *radioactive material shipments that would take place to or from the proposed EREF, as the*
3 *quantity of radioactive material within any package would not exceed the HRCQ threshold.*
4 *HRCQ routing was assumed in the transportation risk analysis because it results in longer*
5 *routes and a more conservative estimate of population risk.*

6
7
8 **Comment:** The following comment identifies an error in Appendix D of the Draft EIS regarding
9 the definition of the transport index (TI).

10
11 **[066-17, Toni Hardesty, on behalf of the Idaho Department of Environmental Quality] 15.**
12 Appendix D: pp. D-21, Lines 15-16. The transport index (TI) is incorrectly defined as the dose
13 rate at 1 meter from the lateral sides of the transport vehicle. The correct definition is the highest
14 measured dose rate at 1 meter from any side of the package surface.

15
16 **Response:** *The text of Section D.3.5 of the EIS has been corrected to state that the TI is*
17 *measured from the side of the package surface, as opposed to the side of the transport vehicle.*
18 *By using the TI of the package, without consideration of shielding by a transport vehicle, the*
19 *most conservative dose rate values have been assumed in the transportation risk assessment.*

20
21
22 **Comment:** The following comment questions the source of the population density number used
23 in Appendix D of the Draft EIS, and expresses disagreement with Table D-2.

24
25 **[066-18, Toni Hardesty, on behalf of the Idaho Department of Environmental Quality] 16.**
26 Appendix D: pp. D-23, Line 11 states "... assumed population density of one person per square
27 kilometer (2.6 persons per square mile)." DEQ is not sure where this density number comes
28 from and it is not in agreement with Table D-2 on pp. D-11, where the rural density is listed as
29 9.5 persons per km²

30
31 **Response:** *The emission risk factor is a unit risk factor (i.e., per unit area). As noted in*
32 *Section D.3.6 of the EIS, this (unit) risk factor is multiplied by the average population density*
33 *along the route and the route distance to obtain the one-way vehicle emission risk for the*
34 *shipment. The text of Section D.3.6 has been clarified on this matter.*

35
36 *The average rural population density for the route between the proposed EREF site and the*
37 *DOE depleted uranium hexafluoride (UF₆) conversion facility in Paducah, Kentucky, was*
38 *determined using the WebTRAGIS routing model (as were all of the population densities in*
39 *Table D-2). The value of 9.5 persons/km², which accounts for all rural transportation segments*
40 *in each State between the origin and destination (not just Idaho), has been verified. Table D-2*
41 *is correct.*

42
43
44 **Comment:** The following comment addresses the number of truckloads of waste that would be
45 transported over Idaho roads in need of repair.

1 **[070-03, Virginia Hemingway]** We will also have approximately 2,000 truckloads of incoming
2 waste being transported over our potholed roads which need fixing, more than we need a
3 \$750,000 off-ramp to a spot where there is nothing currently, except sagebrush.
4

5 **Response:** *Waste from operations of the proposed EREF would be transported from the*
6 *proposed EREF site to licensed treatment, storage, and/or disposal facilities (TSDFs). No*
7 *waste would be transported into Idaho from out-of-state locations as a result of preconstruction,*
8 *construction, operation, or decommissioning of the proposed EREF. The only materials*
9 *transported to the proposed EREF would be raw materials for preconstruction, construction, and*
10 *operation, including UF₆ feed material for the enrichment process.*
11

12 *Existing state and regional road conditions are not within the scope of the EIS. Road conditions*
13 *will vary over the lifetime of the proposed facility. However, the text in Section 3.10 of the EIS*
14 *has been modified to note that the 18-mile stretch of US 20 from Idaho Falls to the Bonneville-*
15 *Butte county line was resurfaced during the summer of 2010.*
16

17
18 **Comment:** The following comment expresses the commenter's difficulty understanding the
19 transportation issues to and from the proposed EREF.
20

21 **[078-02, Hon. Wendy Jaquet]** 2. I couldn't understand the transportation issues back and forth
22 to the enrichment plant. It seemed to make more sense to co locate.
23

24 **Response:** *All shipments to and from the proposed EREF would occur by truck. The proposed*
25 *EREF requires natural UF₆ feed material, which – as discussed in Section 4.2.9.2 of the EIS –*
26 *would be shipped to the proposed EREF site from facilities in Illinois and Ontario, Canada, that*
27 *convert uranium oxide to the fluoride form. The enriched UF₆ product from the proposed EREF*
28 *would be sent to fuel fabrication facilities, such as those located in the States of Washington,*
29 *North Carolina, and South Carolina (see Section 4.2.9.2), which convert the enriched fluoride*
30 *product back to an oxide form and incorporate this material into fuel rods for commercial nuclear*
31 *reactors (i.e., nuclear power plants). Co-location of the proposed EREF with any of these*
32 *facilities – or with a natural uranium supplier, enriched uranium customer, or waste disposal site*
33 *– could require significantly increased transport distances for the other materials because of the*
34 *dispersed locations of these facilities. As discussed in Section 2.3.1, the site selection process*
35 *also had other requirements necessary for the safe and economic operation of the proposed*
36 *EREF that would preclude siting it near some of these other facilities.*
37

38 **Comment:** The following comment identified improvements that have been made to US 20 to
39 accommodate existing facilities and future development.
40

41 **[098-01, Linda Martin]** Several comments have been made for the transportation. Due to the
42 potential localized increase in traffic density along Highway 20, we have tried to think ahead,
43 and we have tried to encourage improvements to that highway. These increased road
44 improvements will currently affect and advantageously speed future travelers through INL, Sun
45 Valley, Boise, and other tourist locales. So we think that that's a very important issue, that while
46 it may not appear that anything is there now, there are people that go past those sections, and if
47 you have several hundred people working, moving equipment and going through there, people
48 are going to need increased transportation access.
49

1 **Response:** *The NRC acknowledges this comment and recognizes that road improvements*
2 *along US 20 have been advocated to support increased tourism and promote general*
3 *development in the region.*

4
5
6 **Comment:** The following comment asks if AES will provide the Shoshone-Bannock Tribes with
7 information on shipment of materials to and from the proposed EREF, and if AES will provide
8 the Tribes with emergency response training.

9
10 **[129-02, Willie Preacher, on behalf of the Shoshone-Bannock Tribes]** The Tribes
11 Emergency Management Department questioned the transportation route of product to and from
12 the Eagle Rock Enrichment Facility and will AREVA share information regarding the amount of
13 shipments, hazards of the shipments, and will they provide training to the Tribes Emergency
14 Management and Response staff to identify and respond to a transportation accident on the
15 reservation.

16
17 **Response:** *As noted in Section 4.2.9.2 and Appendix D of the EIS, product destinations include*
18 *the States of Washington, North Carolina, South Carolina, Virginia, and Maryland. As noted in*
19 *Section 3.10.1, Interstate 15 (I-15) would serve as the primary route for all incoming and*
20 *outgoing truck shipments. Information about the number and hazard of shipments is provided in*
21 *Section 4.2.9. It is the NRC staff's understanding, from discussions with the Shoshone-*
22 *Bannock Tribes and with AES, that AES has coordinated, and will continue to coordinate, with*
23 *the tribes regarding various matters of interest to the tribes.*

24
25
26 **Comment:** The following comment acknowledges that the Draft EIS is accurate with regard to
27 the state highway system and the impacts the proposed project will have on it, and that the
28 mitigation cited for those impacts is appropriate. Also, the comment cautions that it has not yet
29 been decided whether access to US 20 will consist of two full-time, operational connections.

30
31 **[142-01 and 142-02, Blake Rindlisbacher, on behalf of the Idaho Transportation**
32 **Department]** Thank you for your early and close consultation with the Idaho Transportation
33 Department in the development of this environmental impact statement. We believe the
34 statement as expressed in this draft is accurate with regards to our state highway system and
35 the impacts this project will have on it. The mitigation you cite for those impacts are indeed
36 appropriate and we encourage the NRC to make ride sharing and shifts staggered from those of
37 the Idaho National Laboratory a part of the operating license for AREVA Enrichment Services.
38 We will continue to discuss with them the terms and conditions of their access to US-20, but
39 specific operation behavior that may reduce risk is beyond our authority to require.

40
41 With regards to the operational baseline stated in your statement, we offer this caution. We are
42 concerned over the description of their access to our highway as having two full-time,
43 operational connections; one east (the primary) and one west. This has not been decided. If we
44 concentrate resources at the east side of their facility by building a grade-separated
45 interchange, the need for a second, at-grade, access is triggered by phasing and the
46 management of incidents, not full-time operations. As you state, we are in negotiation with the
47 owner over terms and conditions. If the impacts are sensitive to the number and placement of
48 access, please consider this information when making your decision.

1 **Response:** NRC acknowledges that plans for access to US 20 to/from the proposed EREF
2 have not been finalized and that AES continues to consult with the ITD. The impacts described
3 in the EIS are not believed to be sensitive to the number and placement of the access roads.
4 However, the text of Section 4.2.9.1 of the EIS has been modified to clarify that plans for the
5 access road(s) have not been finalized.
6
7

8 **Comment:** The following comment calls attention to a number of minor matters in the text of
9 Section 3.10.1 of the Draft EIS.
10

11 **[142-03, Blake Rindlisbacher, on behalf of the Idaho Transportation Department]** With
12 regards to the facts in the draft, we would call your attention to the following minor matters. On
13 page 3-75, line 24, the driving lanes on US-20 is given as 12.5 meter (41-feet): this appears to
14 be a unit conversion error, as the driving lanes are generally 12 to 12.5 feet wide. On page 3-78,
15 line 6, the speed limit is states as 55 mph: it is 65 mph. And finally, on page 7-78, lines 34-37,
16 we are quoted as stating that the intersection of US 20 and I-15 "...may need to be upgraded to
17 handle increased traffic from the proposed EREF...." While this grade-separated intersection is
18 reaching the end of its useful life and presents a number of challenges for our maintenance
19 team, neither the character nor the count of the traffic predicted off this facility will trigger its
20 "need to be upgraded" in and of themselves. Rather, the increased loading (in terms of vehicles
21 and weight of vehicles) will bring sooner the day when the interchange will need to be rebuilt. A
22 secondary and cumulative impact (rather than a primary impact) in our opinion, and we have no
23 funded plans for that construction.
24

25 **Response:** The following text changes have been made in Section 3.10.1 of the EIS in
26 response to this comment:
27

- 28 • The reference to the lane width has been omitted.
- 29 • The text has been corrected to reflect the 65 mph speed limit.
- 30 • The text has been modified to clarify that the need for upgrade of the junction of US 20
31 and I-15 may be accelerated by, but would not be the direct result of, additional traffic to
32 and from the proposed EREF.
- 33 • Text has been added to note that there are no funded plans for this construction.
34
35

36 **Comment:** The following comment addresses the adequate capacity of the road (US 20) to
37 handle the flow of traffic during construction and operation of the proposed EREF.
38

39 **[152-12, Steven Serr]** There were three items in the EIS that I'd like to address. They noted in
40 here, a small to moderate impact on traffic conditions. We have discussed with AREVA the
41 issues on traffic. They've been working with the Transportation Department. The road that is
42 constructed out there has adequate capacity to handle any of the traffic flow, increased traffic
43 flows that would be created by the construction and operations over the long-term operation of
44 the facility. They're well within the traffic design standards, even with that increased traffic flow
45 on it. They are in the process of construction an overpass in their plans to access this site. With
46 that construction, we fell that it would not be a traffic flow impediment with approaching cars
47 coming in or out of the facility, or truck traffic.
48

1 **Response:** *The NRC acknowledges this comment and appreciates the participation in the*
2 *NEPA process Please note that, as acknowledged in the response to Comment 142-01 from*
3 *Mr. Blake Rindlisbacher of the ITD, plans for access to US 20 have not been finalized and*
4 *construction has not yet begun.*

5
6
7 **Comment:** The following comment discusses the waste classification of depleted uranium by
8 the State of Tennessee and its relation to the handling, storage, and transport of UF₆.

9
10 **[181-20, Roger Turner]** NEPA requires a hard look at environmental impacts even if waste
11 classification system is flawed....

12
13 Because depleted uranium has been evaluated by the State of Tennessee as a “solid waste” as
14 defined by RCRA, and because uranium hexafluoride is toxic, the EIS must examine more
15 closely the handling, storage, and transport of UF₆ including the environmental impacts, both
16 cumulative and indirect from the project at Areva, regardless of the “official” classification of it as
17 “Low-Level”, or Low Level Mixed waste.

18
19 **Response:** *Classification of waste by the State of Tennessee has no bearing on the handling,*
20 *storage, and transport of wastes generated at the proposed EREF. Impacts from the handling,*
21 *storage, transportation, and disposal of radioactive wastes, including depleted UF₆, are*
22 *addressed in Sections 4.2.9, 4.2.10, 4.2.11, and Appendix D of the EIS.*

23
24
25 **Comment:** The following comment asserts that the risks of accidents associated with the
26 transportation of radioactive materials to and from the proposed EREF site should require the
27 NRC to notify all relevant regional offices when radioactive material will be shipped.

28
29 **[191-16, Liz Woodruff]** Accidents. The risks of accidents associated with the transportation of
30 radioactive materials into and out of the site should require the Nuclear Regulatory Commission
31 to notify all relevant regional offices when radioactive material will be shipped to and from the
32 Areva facility.

33
34 **Response:** *Per 10 CFR 71.97, such notifications would not be required for the shipment of UF₆*
35 *or other radioactive materials and wastes that would be transported to or from the proposed*
36 *EREF.*

37
38
39 **Comment:** The following comment relates to risks associated with radioactive materials.

40
41 **[191-06, Liz Woodruff]** Radioactive Waste Poses an Unacceptable Risk. Radioactive material
42 is inherently dangerous. Just the activities directly connected with uranium enrichment pose
43 risks, as do all other parts of the fuel chain. The NRC should perform a complete analysis of the
44 risks of uranium mining and milling, mixing yellow cake with hexafluoride (itself a dangerous
45 material), enriching UF₆ in gas centrifuge plants, storing and deconverting depleted UF₆,
46 disposing of depleted uranium and low level waste, fabricating fuel from enriched uranium, and
47 all intermediate transportation steps.

1 **Response:** *The public health impacts from the transportation of radioactive and nonradioactive*
2 *materials to and from the proposed EREF, including radioactive waste and depleted UF₆, are*
3 *addressed in Section 4.2.9 and Appendix D of the EIS. Public health impacts from incident-free*
4 *transportation of materials to and from the facility would be SMALL, and public health impacts*
5 *from transportation accidents would also be SMALL. The risks posed by other activities in the*
6 *uranium fuel cycle (e.g., mining and milling) are not within the scope of this EIS, which is for the*
7 *proposed EREF.*

8
9
10 **Comment:** The following comment relates to the shipment of radioactive materials to and
11 through the State of Idaho and the storage of such materials in Idaho.

12
13 **[147-05, Joey Schueler]** 1. Nuclear compounds will be shipped to Idaho and the byproduct
14 waste of the process as well as enriched Uranium will be either shipped through our state or
15 stored in Idaho.

16
17 **Response:** *As discussed in Section 4.2.11 of the EIS, low level radioactive waste from*
18 *operation of the proposed EREF would be transported to licensed TSDFs. No radioactive waste*
19 *would be transported into Idaho as a result of the proposed EREF project. The only radioactive*
20 *materials transported to the proposed EREF would be UF₆ feed for the enrichment process.*

21
22
23 **Comment:** The following comments contend that radioactive materials are already transported
24 safely across Idaho.

25
26 **[133-08, Richard Provencher]** Last, the transportation corridor in this area is robust and has
27 been used successfully by other regional nuclear operators to safely transport large amounts of
28 radioactive materials without incident. This existing infrastructure has also prepared local
29 communities along transportation routes to respond to incidents should they occur making them
30 well prepared.

31
32 **[157-08, Hon. Erik Simpson]** Transportation of radioactive materials. Concern was raised in
33 western Idaho over the transportation of uranium hexafluoride and enriched uranium across
34 Idaho's highways. Radioactive materials are already transported across Idaho several times a
35 week. In fact, Idaho National Laboratory contractors have shipped more than 40,000 cubic
36 meters of low-level and transuranic waste safely across Idaho to out-of-state facilities during the
37 last decade.

38
39 **Response:** *The NRC acknowledges these comments.*

40
41
42 **Comment:** The following comments concern the cleanup costs for transportation accidents.

43
44 **[049-02, Victoria Everett]** And also, in the case of an accident, who plays for the cleanup?
45 Who's responsible for that? The State of Idaho? Or is it AREVA? You know, that wasn't
46 clarified. And in transportation, a truck gets in a wreck, it spills all over the ground. You know,
47 such cases as that. Say there is a fire, and there's a major disaster at the plant. Who pays for
48 that?

1 **[181-08, Roger Turner]** It would be opposed because the project would transport
2 approximately 2,000 trucks of radioactive material across the state highways with no financial
3 support dedicated, and provided to this state for safety, or for cleanup.
4

5 **Response:** *In general, cleanup and the costs of cleanup of radioactive material from accidents*
6 *involving the transportation of materials to and from the proposed EREF, or any other industrial*
7 *facility in the State of Idaho or elsewhere in the U.S., would be the responsibility of the carrier*
8 *and potentially the responsible facility (shipper or receiver, as would be pre-determined for each*
9 *shipment). The IDEQ, in cooperation with the ITD and local authorities (e.g., law enforcement*
10 *and the fire department), would be involved in emergency response and cleanup oversight.*
11

12
13 **Comment:** The following comments suggest that transportation risks and accidents, including
14 emergency response, are not covered in the Draft EIS.
15

16 **[025-02, Hon. Sue Chew]** So, you know, when I look at the fact that we have an aquifer, and
17 we have potential waste that would be created upstream, I want to make sure that we have a
18 good plan there when we look at transportation into Idaho and out, that those things are
19 considered.
20

21 **[027-03, Sara Cohn]** And finally, we are concerned with the transportation analysis in the draft
22 EIS, that it does not appropriately account for the hazardous and radioactive materials that will
23 be transported to and from the site. Analyzing traffic impacts alone does not adequately
24 encompass the potential impacts to public health, and the environment, associated with such
25 cargo. Perhaps that will be addressed in the safety analysis. I have not yet seen that. I don't
26 believe it's been out for public comment.
27

28 **[027-07, Sara Cohn]** Transportation: The ICL is very concerned about the transportation of
29 hazardous and toxic materials to and from the project site. Based on the size of the facility and
30 the number of trips expected to transport hazardous and toxic materials, the possibility of
31 accidental spills and subsequent contamination is high. Transportation risk analysis should be
32 provided within the final EIS to ensure that the transport of hazardous materials to and from the
33 site will not result in the pollution of Idaho's waters and air, or endanger public health. More
34 information is needed to understand the size and scale of the enrichment facility, the amount of
35 waste produced and transported from the site, and the amount of hazardous and toxic materials
36 imported and exported from the site. We also request information regarding the methods of
37 transport and the types of containment vessels that will be used to transport materials.
38

39 Detailed plans should be prepared to reduce contamination and public health risks in the event
40 of a spill or accident during transport.
41

42 **[050-02 Joanie Fauci]** One of the areas I feel is under-emphasized in the DEIS is the Safety
43 issue.

44 • There will always be safety issues with transportation, even of non-toxic substances. Nuclear
45 material (uranium) involves additional safety measures for transport and possible emergency
46 response.
47

1 **[068-03, Anne Hausrath]** I am opposed to the transport of radioactive waste. I believe this risk
2 has not been addressed.

3
4 **[105-04, Eve McConaughey]** The most glaring question, not addressed or answered
5 concerned the transportation risks and ultimate unresolved problem of waste disposal.

6
7 **[136-01, Susan Rainey]** No uranium enrichment facility outside Id Falls by AREVA!!! The
8 transport of radioactive material and the storage of nuclear waste are my biggest concerns.
9 There are safety issues! We will be at risk. How will the waste be disposed of? Snake River
10 Alliance did an excellent job explaining. NRC sounded like bureaucratic babble ignoring the real
11 dangers and concerns. How is this really going to help us here in Idaho, USA? Let's look at
12 other options. Not worth the risk.

13
14 **[153-08, Andrea Shipley; 197-08, Andrea Shipley, on behalf of the Snake River Alliance;
15 184-11, Kitty Vincent]** Accidents happen and there are risks associated with the transportation
16 of radioactive materials. The EIS should fully evaluate the safety threats posed by the
17 transportation of radioactive material into and out of the EREF. The accident scenarios should
18 include an analysis of the potential environmental and public health effects of an accident on
19 roadways in the event of a spill of the various radioactive materials that will be transported to
20 and from the facility.

21
22 **[169-02, Margaret Stewart]** And there has been inadequate addressing in the EIS of wildfire
23 threats, and transportation of nuclear material accidents.

24
25 **[191-31, Liz Woodruff]** Transportation. The EIS should fully evaluate the safety threats posed
26 by the transportation of radioactive material into and out of the EREF. The accident scenarios
27 should include an analysis of the potential environmental and public health effects of an
28 accident on roadways in the event of a spill of the various radioactive materials that will be
29 transported to and from the facility: uranium hexafluoride; enriched uranium, and depleted
30 uranium.

31
32 **[192-16, Lisa Young]** Indeed, I hope to see further examination of accident scenarios involving
33 large wildfires around the facility, as well as accident scenarios involving the transportation of
34 radioactive substances to and from the facility on our roads and highways.

35
36 **Response:** *The public health impacts from the transportation of radioactive and nonradioactive
37 materials, including the release of radioactive materials and other chemicals following a
38 transportation accident severe enough to rupture a cargo container, are addressed in
39 Section 4.2.9 and Appendix D of the EIS. Public health impacts from incident-free
40 transportation of materials to and from the facility would be SMALL, and public health impacts
41 from transportation accidents would also be SMALL.*

42
43 *The transportation of radioactive cargo is subject to both DOT and NRC shipping regulations as
44 discussed in Section D.3 of the EIS. Safety measures in the regulations include the proper
45 packaging of the material for shipment. Information about the containers that would be used to
46 transport radioactive cargo is included in Section D.3.2.*

1 *Emergency response plans for transportation accidents are not within the scope of the EIS, but*
2 *are addressed in the SER (NRC, 2010b). Cleanup for accidents involving the transportation of*
3 *materials to and from the proposed EREF, or any other industrial facility in the United States,*
4 *would be handled by the carrier, the responsible facility (shipper or receiver), and the*
5 *appropriate Federal, State, and local agencies.*
6
7

8 **I.5.17 Public and Occupational Health**

9

10 **Comment:** The following comment requests information related to the exposure of the public to
11 toxic, radioactive, and/or harmful pollutants from operation of the proposed EREF.
12

13 **[027-18, Sara Cohn]** Public Health. The ICL is concerned that operation of this facility may
14 expose Idahoans to toxic, radioactive, and/or harmful pollutants. Further detail and analysis
15 must investigate risks associated with water and air contamination from enrichment operations.
16 We request detailed information regarding the amounts and types of materials used, produced,
17 and stored onsite. We would like detailed information about how these materials may be
18 released and how releases may endanger public health. Detailed plans to contain releases as
19 well as alert and protect the public will be essential in the final EIS. Additionally, further analysis
20 must ensure no air releases during transportation of both uranium product and waste to and
21 from the site. The health of Idahoans is of primary import and should not be compromised by
22 enrichment product, waste, or transport.
23

24 **Response:** *The NRC staff believes that the EIS presents sufficient detail on the potential*
25 *impacts of exposures to toxic substances from proposed EREF operations. As reported in*
26 *Chapter 6 of the SER, NUREG-1951 (NRC, 2010b), UF₆ is the only chemical of concern with*
27 *regard to potential occupational or public health exposures that will be used at the proposed*
28 *EREF due to exposures to HF and uranium compounds produced in the interaction of UF₆ with*
29 *moisture. As shown in Section 4.2.10.2 and Appendix E, the EIS analyzes potential exposures*
30 *of members of the public to these substances via the air pathway during the proposed EREF*
31 *operations. The analysis shows that such exposures would be below regulatory limits and*
32 *would not harm members of the public. There would be no exposures to any toxic substances*
33 *by way of any water pathway; the facility would have no offsite waterborne effluent streams, as*
34 *discussed in Sections 2.1.4.2 and 4.2.6.2. Section D.3.2 in Appendix D discusses the*
35 *packaging requirements which preclude any releases of material during routine transportation*
36 *operations.*
37
38

39 **Comment:** The following comment asks why the ALARA (As Low As Reasonably Achievable)
40 constraint on air emissions of radioactive material to the environment is not addressed in the
41 EIS.
42

43 **[066-08, Toni Hardesty, on behalf of the Idaho Department of Environmental Quality]** 6.
44 Several places in the draft EIS reference the 100 millirem per year dose limit to any member of
45 the public. The draft EIS does not discuss the ALARA constraint on air emissions of radioactive
46 material to the environment of 10 millirem per year as stated in 10 CFR 20.1101(d). Please
47 explain why this is not addressed.
48

1 **Response:** A comparison of estimated doses associated with air emissions to the limits in
2 10 CFR 20.1101 has been added to Section 4.2.10.2.

3
4
5 **Comment:** The following comment questions the NRC's use of the high-pressure ion chamber
6 (HPIC) exposure in air measurement to derive a hypothetical soil concentration.

7
8 **[066-09, Toni Hardesty, on behalf of the Idaho Department of Environmental Quality]** 7.
9 Chapter 3: pp. 3-83 Line 12 discusses an average HPIC exposure rate in units of curie per
10 kilogram with micro roentgen per hour in parenthesis and cites IDEQ INL Oversight Program
11 (2008). The IDEQ INL Oversight Program only reports HPIC results in units of exposure per
12 hour (micro roentgen per hour). Activity per unit mass is typical of a soil concentration
13 measurement. If NRC has somehow used the HPIC exposure in air measurement to derive a
14 hypothetical soil concentration, they need to subtract the contribution from cosmic sources from
15 this measurement. Either way, the reference to IDEQ INL Oversight Program should only
16 include the micro roentgen per hour units and any inferences should be clearly stated.

17
18 **Response:** Section 3.11 of the EIS has been revised. The concentration units have been
19 corrected and changed from curie (Ci) per kilogram to coulomb (C) per kilogram

20
21
22 **Comment:** The following comment requests evaluation of potential elevated releases from the
23 proposed EREF that would result in higher impacts than the ground level releases evaluated in
24 the Draft EIS.

25
26 **[066-19, Toni Hardesty, on behalf of the Idaho Department of Environmental Quality]** 17.
27 Appendix E: pp. E-7, Line 45 through pp. E-8 Line 3 states "Since the exact height layout of the
28 release points was not available and the CAP88-PC computer code does not account for
29 building wake effects, releases were assumed to take place at ground level. Ground-level
30 releases result in larger concentrations of radionuclides in air for receptors near the source than
31 do elevated releases." This statement is true and is more conservative for hypothetical public at
32 the fence, but underestimates the dose to the nearest actual resident which is 8 km (5 mi) away.
33 Additionally, pp. 6-16 lines 14-17 state an approximate elevation of 40 meters (132 feet) for the
34 effluent emission points. This approximation could be used to run the CAP88-PC code. DEQ
35 requests clarification in the EIS and evaluation of this potential impact.

36
37 **Response:** The CAP-88-PC computer code was run for both ground level and 40-meter (m)
38 releases. For conservatism, the maximum values of the two runs were chosen for the dose
39 estimate. For the nearest resident, the maximum dose was associated with the ground level
40 release, while the maximum population dose was associated with the 40-m release. The text
41 and tables in Section 4.2.10.2 and Appendix E in the EIS have been modified to reflect these
42 changes.

43
44
45 **Comment:** The following comment expresses concerns about worker safety at the proposed
46 EREF and the need for safety procedures in general.

1 **[036-02, Christina Cutler, on behalf of the Shoshone-Bannock Tribes]** Safety procedures,
2 protecting human health and the environment, for the storage facility as well as the processing
3 facility need to make clear. Including but not limited to worker safety. Worker safety is always a
4 concern and should be thoroughly characterized and described in the proposal.
5

6 **Response:** *The proposed EREF would operate under a facility Health and Safety Plan*
7 *administered by a Health and Safety Organization that would implement the health and safety*
8 *requirements of the NRC and U.S. Occupational Safety and Health Administration (OSHA), as*
9 *specified in the relevant portions of 10 CFR 20 and 29 CFR 1910, respectively, cited in*
10 *Section 4.2.10 of the EIS. Procedures in the Emergency Plan for the proposed EREF would be*
11 *designed to protect workers under emergency conditions.*
12

13
14 **Comment:** The comment suggests that impacts to the public from air releases would be small.
15

16 **[133-04, Richard Provencher]** There appears to be only a small amount of air discharge of
17 radioactivity which results in virtually no impact to the nearest public receptor.
18

19 **Response:** *The NRC acknowledges the comment and appreciates the public participation.*
20

21
22 **Comment:** The following comment expresses a concern that impacts from fluoride exposure
23 could be underestimated.
24

25 **[141-03, Peter Rickards]** The SENES fluoride documents on underestimating fluoride impact
26 at Oak Ridge was not answered, despite acknowledging “someone” asked about it. The SENES
27 team does work for CDC, and underestimating the fluoride is unacceptable.
28

29 **Response:** *The SENES Oak Ridge Inc. fluoride documents concern releases of tens of*
30 *thousands of pounds of HF on an annual basis and are not directly applicable to the proposed*
31 *EREF. This is because HF releases from the proposed EREF are estimated to be less than*
32 *4.4 pounds per year, as stated in Section 4.2.10.2 of the EIS, a difference of about 1000 to*
33 *10,000 times less than those considered at Oak Ridge, resulting in much lower environmental*
34 *concentration levels than considered harmful in the SENES documents. Section 4.2.10.2 of the*
35 *EIS discusses the potential air concentrations of HF for workers and the public as a result of the*
36 *proposed EREF. For workers, the potential estimated concentrations would all be below OSHA*
37 *and National Institute for Occupational Safety and Health (NIOSH) standards. For members of*
38 *the public, estimated concentrations would be about 1000 times below State of Idaho*
39 *regulations.*
40

41
42 **Comment:** The following comment expresses concerns regarding risks due to uranium
43 materials due to the preconstruction exemption granted to AES by the NRC.
44

45 **[147-07, Joey Schueler]** 3. Contamination potentials are not being discussed or considered in
46 the environmental impact assessment process due to “exemptions” and were missing from the
47 public comment phase of the assessment and when asked to speak directly to this point by
48 myself, NRC / EIS representatives refused to comment. Yet, the NRC website acknowledges

1 that risks exist for this plant: "Hazards: The primary hazard in gaseous diffusion plants include
2 the chemical and radiological hazard of a UF₆ release and the potential for mishandling the
3 enriched uranium, which could create a criticality accident (inadvertent nuclear chain reaction).
4 Sited source: <http://www.nrc.gov/materials/fuel-cycle-fac/ur-enrichment.html>
5

6 **Response:** *AES would not be authorized to handle, store, or process uranium materials at the
7 proposed EREF until a license is granted by the NRC. The exemption to which this comment
8 refers allows preconstruction activities to be conducted by AES, such as site preparation
9 activities, before the license is granted, as discussed in Section 1.4.1 of the EIS; however, those
10 activities do not involve uranium materials. Therefore, there are no risks due to uranium
11 compounds associated with the preconstruction exemption. Risks associated with UF₆ at the
12 proposed facility, including those from operations, accidents, and potential terrorist acts, are
13 covered in Sections 4.2.10, 4.2.15, and 4.2.18.*
14
15

16 **Comment:** The following comment points out that enriched uranium is more hazardous than
17 depleted uranium.
18

19 **[147-13, Joey Schueler]** 9. Enriched Uranium is far more hazardous than the "Depleted
20 Uranium" used in Gulf military operations, even though many Desert Storm veterans fell prey to
21 cancer after their exposure to depleted Uranium in clearing bombed Iraqi vehicles, strongholds
22 and implements of war, deemed "safe" by our military leaders (sound familiar?).
23 http://en.wikipedia.org/wiki/Gulf_War#Effects_of_depleted_uranium
24

25 **Response:** *The EIS evaluates the potential doses to workers and members of the public
26 associated with UF₆ in storage and uranium releases associated with normal operations
27 (see Section 4.2.10), finding that the impacts would be SMALL.*
28
29

30 **Comment:** The following comment states that the public health risks of temporary storage of
31 depleted uranium should be addressed in the EIS.
32

33 **[181-11, Roger Turner]** Public Health risks of "Temporary" Storage of depleted Uranium
34 should be addressed in EIS. The draft EIS by the NRC significantly errs by minimizing the
35 human health and environmental risks in the risks of the storage of uranium in above-ground
36 pads in eastern Idaho. The EIS is flawed in its apparent assumption that another location will be
37 certified for off-site storage. The EIS fails to acknowledge that these casks may be breached by
38 handling or corrosion. Here is an excerpt of the EIS, under the Public Health section:
39

40 During peak operation, the proposed EREF is expected to generate 1222 cylinders of
41 depleted UF₆ annually, which would be temporarily stored on an outdoor cylinder
42 storage pad in approved Type 48Y containers before being transported to a DOE-owned
43 or private conversion facility.
44

45 The above paragraph, under the Public Health Section, in fact, does not even discuss public
46 health. The EIS must assume that the casks of depleted Uranium will remain for some time at
47 the site, as the treatment facility to convert UF₆ to the more stable oxide is behind in schedules
48 and experiencing budget problems affecting production. Anytime heavy equipment is operated

1 there is a risk that accidents will occur. In fact, casks of UF₆ were damaged by heavy
2 equipment at Oak Ridge, so the risk to workers and public health is real. The EIS needs to
3 define “temporary” and fully assess health and worker risks, for longer term storage at the
4 site....

5
6 The characteristics of UF₆ pose potential health and environmental risks. DUF₆ in cylinders
7 emits low levels of gamma and neutron radiation. Also, when released to the atmosphere, DUF₆
8 reacts with water vapor in the air to form hydrogen fluoride (HF) and uranyl fluoride (UO₂F₂),
9 both chemically toxic substances. Consequently, spills and air releases of this material is
10 potentially a significant adverse impact on the environment as defined by NEPA.

11
12 **Response:** *The EIS considers the dose to workers and the public associated with stored UF₆*
13 *cylinders in Section 4.2.10.2. The cylinder management program to minimize cylinder corrosion*
14 *is covered in Section 4.2.11.2. Accidents with potential impacts that bound those involving*
15 *heavy equipment and full cylinders are analyzed in Section 4.2.15. The consequences of the*
16 *accidents analyzed encompass those of a storage pad cylinder release.*

17
18
19 **Comment:** The following comment requests that information be added to the EIS regarding
20 certain filtering and ventilation systems and the associated risks that would be part of the
21 proposed EREF.

22
23 **[181-16, Roger Turner]** Inadequate description and risk evaluation of the first step in the
24 process. Sublimation of the solid UF₆ into the gas phase. How is this done? What is the size of
25 facility to accomplish this? What temperatures and pressures are required to sublime UF₆?
26 The EIS describes, on page 2-19 a system of pre-filters before the “cleaned gases would be
27 discharged to the atmosphere via rooftop stacks”. The EIS needs to describe this system and
28 how it functions. What systems would be in place to monitor these filters and their integrity?
29 What are the “clean gases” that will be discharged to the atmosphere and how are these gases
30 monitored? Are continuous stack samplers employed for this? Please describe them in the EIS.
31 What is the annual volume of gas produced and what are the safeguards?

32
33 The Section on SBM notes that a ventilation system will be in place: “The Gaseous Effluent
34 Ventilation System would be used to remove uranium and other radioactive particles and
35 hydrogen fluoride from the potentially contaminated process gas streams.”

36
37 The final EIS needs to go into some detail about the ventilation system. If there is a release of
38 UF₆, or HF, how does the ventilation system capture it? Once captured how is it specifically
39 treated and how does it provide protection to the workers and protection from release into the
40 atmosphere, or in the case of liquid or solid phases of it, protection from contact to workers?

41
42 **Response:** *Presentation of detailed information regarding the sublimation process and the*
43 *ventilation system of the EREF is beyond the scope of this EIS. However, Section 4.2.10.2 of*
44 *the EIS discusses the doses associated with the potential routine airborne release of uranium*
45 *from the proposed EREF; Section 4.2.15.2 discusses accident impacts including the rupture of a*
46 *Centrifuge Test Facility feed vessel; Section 4.2.15.3 discusses mitigation measures in place to*
47 *prevent this accident; and Section 5.2, Table 5-2, identifies mitigation measures associated with*
48 *the release of UF₆ and related compounds during operations. Sections 6.1.1 and 6.1.2 discuss*
49 *ambient air monitoring activities and reporting requirements.*

1 **Comment:** The following comments raise the issue of thyroid cancer in Elmore County and
2 state that this risk needs to be addressed in the EIS.

3
4 **[016-02, Manley Briggs]** However, a really interesting thing that I noticed was that Elmore
5 County had a statistically increased rate of thyroid cancer in those born after 1958. That means
6 they weren't affected by the nuclear bomb tests. But why do they have it? And it is pertinent, I
7 think, at least needs to be looked into, that Elmore County is the first county down-river from the
8 discharge of the Snake River aquifer at the Thousand Springs into the Snake River. So I think
9 that at least needs to be addressed by the Environmental Impact Statement.

10
11 **[016-04, Manley Briggs]** One last observation that I would like to point out is the high
12 incidence of thyroid cancer in Elmore County. Elmore is the first county below the Thousand
13 Springs, which is where the Snake River Aquifer empties into the Snake River. This was noted
14 in the 1999 NCI Report regarding the Nuclear-Bomb test fallout. This increased incidence
15 occurred only in individuals born after 1958 and thus could not be attributed to the Bomb fallout.
16 Could it be due to leaching of radioactivity into the aquifer from previously stored nuclear
17 materials? This would certainly have bearing on Areva's proposal, and should be examined by
18 the Areva EIS.

19
20 **Response:** *Increased thyroid cancer rates are associated with exposure to radioactive iodine*
21 *produced in nuclear fission, the characteristic chain reaction that occurs in a nuclear reactor or a*
22 *nuclear bomb. Thyroid cancer rates are not an issue related to the proposed EREF because*
23 *operations at the proposed EREF would not involve nuclear fission and would not produce*
24 *radioactive iodine. For reasons discussed in Section 4.2.6.2 of the EIS, operation of the*
25 *proposed EREF would not contaminate the Snake River Aquifer.*

26
27
28 **Comment:** The following comments express concern regarding the exposure risks as a result of
29 the proposed EREF.

30
31 **[147-01, Joey Schueler]** This is a very serious decision that we've entrusted to a very few
32 people, and I'm not convinced from this meeting -- cause you're convincing us as much as we're
33 trying to convince you tonight, right? I'm not very convinced that this is unbiased.

34
35 I'm extremely concerned about that, and the implications just are dire to me. And I have to ask:
36 What is the risk? Not the impact. What is the risk?

37
38 I've heard a lot of statements about what the impact is. And the economic impact is, yes, I'm
39 sure tremendous, and I think she put it well, that there's a dollar sign to this. But I'm not here to
40 hear about impact, whether it be pro or against. I want to know what the risk is to me and my
41 family, because that's what this is about. I know there's many environmental factors, but I think
42 if there's one thing we should be concerned about in Idaho, is our safety.

43
44 **[147-03, Joey Schueler]** I do not feel that any summary statement on impact of nuclear
45 enriched uranium plant that does not account for any statement on the potential risk of exposure
46 is a sound or unbiased summation on environmental impact. This concerns me greatly and
47 presents a basic failure on the part of the NRC, whether unintentional or planned.

1 **Response:** *In the EIS, the NRC staff analyzes the environmental impacts associated with the*
2 *construction, operation, and decommissioning of the proposed EREF. As part of its analysis,*
3 *the staff has considered the impacts – both positive and negative – that the proposed EREF*
4 *may have on members of the public. Further, the staff has considered how members of the*
5 *public may be affected by the proposed EREF both during normal operations and as a result of*
6 *certain abnormal events. The impacts that the staff analyzed in detail are listed in Section 1.4.3*
7 *of the EIS. These impacts include impacts related to public and occupational health, as well as*
8 *a variety of other impacts potentially affecting the quality of life. In Chapter 4 of the EIS, the*
9 *NRC staff discusses these impacts in detail. In EIS Sections 2.4 and 2.5, the staff provides a*
10 *summary of its analysis. Applying the impact scale outlined in Council on Environmental Quality*
11 *regulations, the staff has determined that all impacts related to the long-term safety of the public*
12 *would be SMALL.*

13
14 *In addition to analyzing environmental impacts potentially associated with the EREF, the NRC*
15 *staff conducted a rigorous safety review of AES's application. The staff conducted its safety*
16 *review to determine whether AES's application meets NRC regulations designed to protect*
17 *public health and safety. For example, NRC regulations in 10 CFR Part 20 prescribe radiation*
18 *dose limits for individual members of the public. The staff has determined that AES's*
19 *application satisfies all applicable safety-related criteria in NRC regulations. The staff's safety*
20 *findings are presented in its Safety Evaluation Report.*

21
22
23 **Comment:** The following comments discuss increasing radiation from stored depleted UF₆ and
24 the potential for accidental release.

25
26 **[032-05, Cindy Cottrell]** The problem with depleted uranium is that it becomes more
27 radioactive over the course of 1,000,000 years. Where would we store this knowing it will
28 become more radioactive?

29
30 **[103-05, Karen McCall]** Depleted uranium becomes more radioactive as it ages leaving an
31 ever increasing toxic legacy.

32
33 **[157-02, Hon. Erik Simpson]** Another issue related to the production of depleted uranium, that
34 has been overstated, to a great extent, deals with the radioactive level of the material over time.
35 It is true that depleted uranium tails from enrichment become more radioactive. The real
36 question is whether that presents a problem to anyone's future health and safety of the
37 environment. We all know that uranium is a naturally occurring radioactive element as found in
38 nature. Uranium also contains all of the naturally-occurring decay products of the uranium decay
39 chain.

40
41 After going through chemical purification and enrichment, the depleted uranium tails are
42 stripped of those other materials that are actually much less radioactive than the form of
43 uranium normally found in nature. So it is the build-up of those normal decay products in the
44 depleted uranium that give reason for the position that it becomes more radioactive, with time.
45 Truth be told, the uranium is actually building back up to its natural balance of uranium and
46 decay products. The ultimate question we need to address was storage and disposal of
47 depleted uranium, is can it be done safely and does this increase in radioactive, back to normal

1 levels, create a future problem for the environment? The answer to that -- uranium can be
2 very -- or it can be very safely stored and disposed.

3
4 **[168-03, Lon Stewart]** What does Idaho get out of this? We get highly radioactive waste that
5 increases in intensity over time, we get a chance to pollute the Eastern Snake River Aquifer, the
6 main source for water for all of Southeast Idaho and then pollute the Snake River which flows
7 through the Southwest portion of the state. We will probably get 350,000 tons of uranium waste
8 over the life of the facility that no one currently knows how to dispose of. And when an accident
9 occurs, which sooner or later it will, how many people will be affected? Doesn't sound good to
10 me.

11
12 **[171-06, John Tanner]** As far as disposal of decayed uranium is concerned, an honest
13 comparison of the radioactivity between depleted uranium and uranium ore would compare
14 equal amounts of uranium, not equal amounts of dirt. And on that basis, ore is far more
15 radioactive than depleted uranium. It's simply that in the depleted uranium, they've concentrated
16 the uranium, and it would make no sense to dilute it by mixing it with dirt just so we can say well
17 now it's ore. It should be buried, as is, and shallow, because some day we're going to need it.

18
19 **[180-06, Kaye Turner]** Is it true that depleted uranium becomes more radioactive over time?

20
21 **[193-05, Liz Woodruff, on behalf of the Snake River Alliance]** So once it is deconverted,
22 after treatment, if they come up with a solution for this, is the problem solved? Well, there is less
23 of it. But the funny thing about depleted uranium is that it becomes more radioactive. Over time,
24 as it decomposes, it exposes radon gas. And it's most radioactive in its millionth year.

25
26 **[192-13, Lisa Young]** The storage of the depleted uranium waste, which will likely not be
27 deconverted in any reasonable timeline, poses a serious risk to our health and safety as
28 Idahoans, and to the residents of any other region where the waste will be stored in the future.
29 Even after proper deconversion of this waste, the remaining waste, which cumulatively becomes
30 more of a radioactive threat over time, has nowhere to go for acceptable long-term storage, and
31 will continue to plague our waste storage sites with more and more barrels of poison, creating
32 more and more of a health and safety risk for the surrounding communities. Producing this
33 waste is irresponsible, and licensing a facility that will do just that is undeniably irresponsible.

34
35 **Response:** *While uranium isotopes in depleted UF₆ continue to decay at a constant rate after*
36 *the enrichment process is complete, daughter products from their decay build up and increase*
37 *the total radiation emitted from the material, which would be similar to that associated with*
38 *naturally-occurring uranium ore. For illustrative purposes, the dose rate at 1 meter from a*
39 *storage cylinder containing 10,000 kg of solid depleted uranium oxide would be expected to*
40 *increase from 0.26 mrem/hour in the first year to 1 mrem/hour at 10,000 years and*
41 *30 mrem/hour at 1 million years. As noted in Section 3.11.1 of the EIS, the average person in*
42 *the United States receives approximately 310 mrem per year from natural background radiation*
43 *sources.*

44
45 *Accident scenarios involving stored cylinders of depleted UF₆ at the proposed EREF are*
46 *encompassed by the accident analysis of more severe accidents presented in Section 4.2.15.2*
47 *and analyzed in greater detail in the SER (NRC, 2010b). The consequences of the analyzed*
48 *accidents bound accidents involving stored depleted UF₆ cylinders on the storage pad, including*

1 routine handling scenarios. The NRC staff concludes that through the combination of plant
2 design, engineered controls, and administrative controls, accidents at the facility pose a low risk
3 to workers, the environment, and the public.
4
5

6 **I.5.18 Waste Management** 7

8 **Comment:** The following comment expresses support for the project and a desire for more
9 information on the storage and disposal of wastes.
10

11 **[006-01, Anonymous]** I am supportive of the AREVA project but would like to have heard more
12 from the NRC on how waste from the process will be stored and ultimately disposed of.
13

14 **Response:** Storage and management of waste is discussed in Sections 2.1.4.2, 2.1.4.3, and
15 4.2.11 of the EIS.
16

17
18 **Comment:** The following comment concerns the storage of SNF.
19

20 **[007-02, Arnold Ayers]** You talk about associated with that, another is storage of fuels. People
21 are worried about storage. Well, I've got tell you, we did the testing on the storage for the spent
22 fuels that are actually being stored in power plants today, and found no discharges anywhere. If
23 we can do it for that, I see absolutely no reason why such facilities cannot be developed and
24 built for AREVA to be able to handle the waste products that they have over an indefinite period
25 of time.
26

27 Wait a minute, we're talking waste products. The reality is that that fuel has a very strong
28 potential under the right circumstances to become more fuel. It's not a waste product, it is
29 actually a potential energy resource.
30

31 **Response:** As reflected in the comment, no SNF would be generated or stored at the proposed
32 EREF. Section 4.2.11.2 of the EIS addresses the disposal of waste that will be generated
33 during operations at the proposed EREF.
34
35

36 **Comment:** The following comment expresses concern that there would be long term storage of
37 "spent uranium" at the proposed EREF site.
38

39 **[019-02, George Buehler]** I see this as the narrow end of the wedge to create long term
40 storage of spent uranium, since the process of establishing a permanent repository for nuclear
41 waste has been hopelessly grid-locked for decades.
42

43 **Response:** The United States is still in the process of considering a permanent repository for
44 high-level waste and SNF. Neither of these waste types would be generated by the proposed
45 EREF or stored at the EREF site. Furthermore, AES has stated that depleted UF₆ cylinders
46 would not be stored at the proposed EREF site beyond the licensed lifetime of the facility
47 (AES, 2010a).
48
49

1 **Comment:** The following comment asserts that the Draft EIS does not contain adequate
2 information regarding hazardous materials existing or proposed for storage at the proposed
3 EREF site.
4

5 **[027-19, Sara Cohn]** Hazardous Materials: The EIS does not contain adequate information
6 regarding hazardous materials existing onsite. Additionally, it is unclear how hazardous
7 materials will be stored during operation of the proposed project, and as mentioned above, no
8 adequate rules exist for disposal of such materials. The final EIS must provide detailed
9 information with regard to any hazardous materials existing or proposed for storage onsite and
10 any cumulative risk associated with the storage, transport, and use of hazardous materials
11 during project operations. The final EIS must include a Management Plan for Toxic and
12 Hazardous Materials. This document should be available for public comment and should
13 address health and accident risks associated with toxic and hazardous materials onsite as well
14 as accident prevention and management strategies. This information is incredibly important to
15 protect the health and lives of emergency responders and communities such as Idaho Falls,
16 Pocatello, and others that would potentially be harmed by facility operations. The ICL is
17 concerned that a hazardous materials analysis was not included in the draft EIS and that the
18 Safety Report for this facility has yet to be released. The Safety Report- an important document
19 that will evaluate the safety of the proposed facility and potential threats to public health – must
20 be released for public comment and evaluation before the final EIS is approved and the NRC
21 seeks a licensing decision.
22

23 **Response:** *For the purposes of responding to this comment, the NRC staff assumes that the*
24 *commenter's definition of "hazardous materials" includes hazardous and radioactive raw materials*
25 *and waste. The public and occupational health impacts of storing radioactive and hazardous*
26 *materials onsite are addressed in Section 4.2.10.2 of the EIS. The impacts of transportation*
27 *accidents involving the release of hazardous materials are addressed in Section D.2.2.2, and the*
28 *impacts of hazardous waste disposal are addressed in Section 4.2.11.2. Specific details about the*
29 *onsite storage of hazardous materials at the proposed EREF will not be available until the facility*
30 *design is finalized; and development of plans for management of toxic and hazardous materials*
31 *and for emergency response is not within the scope of the EIS. The quantities of hazardous*
32 *materials to be stored onsite are considered sensitive information and were taken into account as*
33 *part of the safety evaluation in the NRC's SER, NUREG-1951 (NRC, 2010b).*
34
35

36 **Comment:** The following comment requests additional detail about waste from the Gaseous
37 Effluent Ventilation System (GEVS) at the proposed EREF, including the use and disposal of
38 filters.
39

40 **[027-14, Sara Cohn]** The environmental documents mention the use of Gaseous Effluent
41 Ventilation Systems. We are concerned about the waste associated with the ventilation system
42 and would like more detail with regard to the use and disposal of any filter-like product that may
43 contain pollutants.
44

45 **Response:** *The impacts associated with the waste from the GEVS are addressed in*
46 *Section 4.2.11.2 of the EIS. Additional information about use and disposal of filter-like products*
47 *used in the GEVS has been added to that section, including the types of filters and the*
48 *processing of filters after removal from service.*
49

1 **Comment:** The following comment asks about who will pay for waste storage at the proposed
2 EREF site and eventual removal.

3
4 **[050-11, Joanie Fauci]** Who will pay for waste storage and eventual removal?

5
6 **Response:** *AES is responsible for all costs of preconstruction, construction, operation, and
7 decommissioning of the proposed EREF, including waste storage and removal.*

8
9
10 **Comment:** The following comment expresses concern that the Draft EIS does not evaluate
11 toxic waste impacts following decommissioning.

12
13 **[077-03, Larry Hyatt]** The most serious flaw in the EIS for Eagle Rock is that the evaluation of
14 impacts end at the decommissioning of the facility where as the toxic contaminants of the
15 enrichment process will be a serious environmental hazard for thousands of generations into the
16 future. Both the depleted Uranium and the centrifuged product are a poison to humans and the
17 proposal shows no assured containment of this material nor a method of rendering it safe. You
18 cannot show adequate stewardship to manage this dangerous byproduct for its life of toxicities.

19
20 **Response:** *Waste management impacts at the proposed EREF site following the conclusion of
21 decommissioning are not addressed in the EIS, because residual environmental hazards are
22 not anticipated. All waste and contaminated materials would be shipped to a licensed disposal
23 facility. The NRC license, as well as the AES Decommissioning Funding Plan, would require
24 the decontamination or removal of all materials from the site which prevent release of the facility
25 and site for unrestricted use as defined in 10 CFR 20.1402 (NRC, 2010b). The NRC staff has
26 found that AES's plans for financial assurance for decommissioning and AES's plan for
27 chemical process safety and controls meet the requirements in 10 CFR Part 70 and provide
28 reasonable assurance that public health and safety and the environment will be protected
29 (NRC 2010b).*

30
31 *The long-term impacts of the disposed waste are covered under the licenses (and their
32 supporting environmental analyses) that have been, and would in the future be, issued to
33 commercial radioactive waste disposal facilities. These facilities are licensed by the
34 Commission or designated Agreement States according to the requirements specified at
35 10 CFR Part 61 or compatible Agreement State regulations. Further, the NRC is currently
36 engaged in rulemaking to specify a requirement for a site-specific analysis for the disposal of
37 low-level radioactive wastes, including large quantities of depleted uranium (NRC, 2009). In the
38 interim, compliance with the performance objectives specified in Part 61, Subpart C, continues
39 to provide reasonable assurance that low-level radioactive waste can be safely disposed at
40 licensed facilities. On April 13, 2010, NRC staff summarized existing policy and guidance to
41 assist Agreement States in making informed decisions regarding compliance with the
42 performance objectives for land disposal of significant quantities of depleted uranium until a new
43 regulation is implemented (NRC, 2010a).*

44
45
46 **Comment:** The following comment expresses concern regarding the integrity of storage
47 containers for depleted UF₆.

1 **[125-01, Holly Paquette]** Having all that been said, I think the perfect picture for me, that
2 described what my worries are about this, with the storage of the uranium that we saw up there.
3 Now Representative Simpson from Idaho Falls came up and said -- which actually did not make
4 me feel better. I think he hoped that that would -- that those rusted containers are actually highly
5 regulated, checked, and meet all of the standards that are needed to be keeping the people
6 around it safe. For me, that was a shock, that that's considered perfectly regulated, and I think
7 that that brought to mind what's going on in the Gulf right now. We have a lot of trust in our
8 government, that they are regulating things, and that things are perfectly okay. If that means
9 that depleted uranium is being stored in rusted metal containers, that we have no way of getting
10 rid of, that frightens me.

11
12 **Response:** *As noted in Section 4.2.11.2 of the EIS, DOE has stored depleted UF₆ in Type 48Y
13 or similar cylinders outdoors since the mid-1950s, and cylinder leaks due to corrosion led DOE
14 to implement a cylinder management program. Proper and active depleted UF₆ cylinder
15 management, which includes routine inspections and maintaining the anticorrosion layer on the
16 cylinder surface, has been shown to limit exterior corrosion or mechanical damage and provide
17 for safe storage. AES has committed to the implementation of a similar cylinder management
18 program (see Section 4.2.11.3 of the EIS), which would help ensure safe storage of depleted
19 uranium at the proposed EREF site.*

20
21
22 **Comment:** The following comment concerns the transport of radioactive materials and waste
23 through Idaho and the storage of these materials in the State.

24
25 **[147-05, Joe Schueler]** 1. Nuclear compounds will be shipped to Idaho and the byproduct
26 waste of the process as well as enriched Uranium will be either shipped through our state or
27 stored in Idaho.

28
29 **Response:** *As discussed in Section 4.2.11 of the EIS, low-level radioactive waste from
30 operation of the proposed EREF would be transported from the proposed EREF site to licensed,
31 out-of-state TSDFs. Depleted UF₆ from the enrichment process would be stored at the
32 proposed EREF site until shipment to a DOE-owned or commercial conversion facility. AES has
33 stated that depleted UF₆ cylinders would not be stored at the proposed EREF site beyond the
34 licensed lifetime of the facility (AES, 2010a).*

35
36 *No radioactive waste would be transported into Idaho as a result of the proposed EREF project.
37 The only radioactive materials transported to the proposed EREF would be UF₆ feed for the
38 enrichment process.*

39
40
41 **Comment:** The following comment discusses potential uses for depleted uranium tails.

42
43 **[157-04, Hon. Erik Simpson]** Lastly, depleted uranium tails themselves are not considered
44 waste. The tails contain residual value in both the remaining uranium and fluorine that it
45 contains. In fact, the Idaho Company, International Isotopes, is in the process of licensing and
46 building a \$100 million facility in New Mexico specifically designed for the chemical
47 deconversion of depleted uranium from enrichment. The facility will extract the valuable fluoride
48 and sell that on the commercial market place.

1 **Response:** As stated in the text box in Section 2.1.5 of the EIS, depleted uranium is source
2 material as defined in 10 CFR Part 40, and, if treated as a waste, falls under the definition of
3 low-level radioactive waste per 10 CFR 61.2. After conversion from hexafluoride to a more
4 stable oxide form, the depleted uranium could potentially be used in various materials or
5 products. However, DOE currently plans to dispose of most of the depleted uranium oxide as
6 low-level radioactive waste (DOE, 2009). Should any depleted uranium generated at the
7 proposed EREF be sent to the proposed International Isotopes facility in the future, the fluoride
8 in the depleted UF₆ would be recovered and sold on the commercial market.
9

10
11 **Comment:** The following comment ask about depleted uranium generation as a result of
12 enriched uranium production.
13

14 **[180-05, Kay Turner]** Is it true that for every ton of enriched uranium produced there will be
15 seven tons of depleted uranium?
16

17 **Response:** On an annual basis at full production, the proposed EREF is anticipated to produce
18 approximately 2252 metric tons (2482 tons) of low-enriched UF₆ and 15,270 metric tons
19 (16,832 tons) of depleted UF₆ as stated in Section 2.1.4.2. The resulting ratio between the
20 enriched product and depleted tails is about 1.0 to 6.8 or about 1 to 7.
21

22
23 **Comment:** The following comment criticizes the classification system for radioactive wastes
24 and states that the EIS should evaluate risks to the public from radioactive wastes.
25

26 **[181-19, Roger Turner]** NEPA requires a hard look at environmental impacts even if waste
27 classification system is flawed. Classification of radioactive wastes in the U.S. errs because
28 waste categories are based on the origin of the waste, not on the physical, chemical, or
29 radiological properties that determine the hazards of the waste, and hence its safe and proper
30 management. Hence the system does not take into account actual radioactivity levels of waste
31 either overall or per unit volume. Thus, so-called “low-level waste” can contain materials more
32 radioactive than those classified as “high-level waste.” However, the NEPA requires that risks to
33 the public be evaluated, in addition to simply repeating the waste classification system
34 employed in the U.S.
35

36 **Response:** Discussion of the waste classification established by the NRC in 10 CFR Part 61 is
37 not within the scope of the EIS. Section 4.2.10 of the EIS presents the evaluation of the
38 radiological risks to workers and the public as a result of the proposed EREF.
39

40
41 **Comment:** The following comment states that the Draft EIS fails to recognize UF₆ as a
42 Resource Conservation and Recovery Act (RCRA)-permitted material, and requests that the
43 permit section of the Draft EIS be revised.
44

45 **[181-15, Roger Turner]** EIS Fails to recognize UF₆ as a RCRA permitted material. Depleted
46 Uranium was determined to be a Solid Waste as defined by RCRA and the EIS in Tennessee,
47 and the EIS fails to recognize the possibility that Idaho DEQ will similarly require a RCRA permit
48 for this material. Please revise Permit Section.
49

1 **Response:** *Classification of waste by the State of Tennessee has no bearing on the handling,*
2 *storage, and transport of wastes generation at the proposed EREF. To date, no States other than*
3 *Ohio and Tennessee have expressed interest in regulating UF₆ as a RCRA waste. IDEQ has not*
4 *indicated that UF₆ will be regulated as a RCRA waste in Idaho. Therefore, no change to*
5 *Section 1.5.2 in the EIS is necessary.*
6
7

8 **Comment:** The following comment asks whether solid waste generated at the proposed EREF
9 would require a Toxic Substances Control Act (TSCA) or RCRA permit, and states that the EIS
10 should describe the current status of mixed waste treatment acceptance criteria and shipping
11 requirements.
12

13 **[181-18, Roger Turner]** Also, this section reports that the final solid material would be shipped
14 off-site. This raises the issue of whether it would require a TSCA or RCRA permit. The EIS
15 should describe the current status of mixed waste treatment acceptance criteria, shipping
16 requirements.
17

18 **Response:** *Hazardous waste (RCRA) permits are required for the treatment, storage, or disposal*
19 *of hazardous wastes, and IDEQ implements RCRA within the State of Idaho. Text has been*
20 *added to Section 4.2.11.2 of the EIS to clarify that the proposed EREF would not treat, store, or*
21 *dispose of hazardous or mixed wastes in a manner that requires a RCRA permit. However, as*
22 *noted in Section 1.5.3, the proposed EREF would request a hazardous waste generator number.*
23

24 *TSCA is designed to regulate the introduction of new chemical substances or the significant*
25 *new use of an existing chemical substance. Neither applies to the proposed EREF, so TSCA*
26 *does not apply.*
27

28 *Section 4.2.11.2 states that hazardous wastes generated at the proposed EREF would be*
29 *collected at the point of generation, classified, packaged, and shipped offsite to a licensed*
30 *TSDf in accordance with Federal and State environmental and occupational regulations.*
31 *Additional text has been added to Section 4.2.9.2 to clarify that the transportation of hazardous*
32 *wastes is subject to U.S. Environmental Protection Agency (EPA) and DOT regulations. The*
33 *current status of mixed waste treatment acceptance criteria is not within the scope of the EIS.*
34
35

36 **Comment:** The following comment asks where the perfluoropolyether (PFPE) oil waste will be
37 stored at the proposed EREF site. The comment also asks for the kilowatt rating of each of the
38 four standby diesel generators, and how much diesel fuel will be stored on the site.
39

40 **[187-01, John Weber]** After reviewing the safety analysis report and the EIS, I have a few
41 questions and comments to present to NRC at this time. Because no Bobin (phonetic) oil
42 recovery system will be used, where will the PFPE oil waste be stored?
43 What is the kilowatt rating of each of the four standby diesel generators, and how much diesel
44 will be stored on the site?
45

46 **Response:** *Specific details about the storage location of PFPE oil waste and diesel fuel at the*
47 *proposed EREF will not be available until the facility design is finalized. The quantities of*
48 *hazardous materials stored onsite, including diesel fuel, are considered to be sensitive information.*

1 *However, such information was taken into account during the safety evaluation in the NRC's SER,*
2 *NUREG-1951 (NRC, 2010b).*

3
4 *As noted in Section 4.2.4.1 of the EIS, the development plan for the proposed EREF states that*
5 *each of the four diesel-fueled emergency generators will be rated at 2500 watts (i.e., 2.5 kilowatts).*
6

7
8 **Comment:** The following comments note that radioactive waste would remain in the
9 United States.

10
11 **[032-04, Cindy Cottrell]** I'm against a foreign country making the profit from this plant and
12 leaving the contamination in our Country.

13
14 **[187-04, John Weber]** In section 10.1, it states that: "DOE is entitled to take title to and dispose
15 of the waste." So the French citizens take the profits and the U.S. citizens get the waste.

16
17 **Response:** *To ensure domestic uranium enrichment services, the generation of depleted*
18 *uranium tails and uranium-contaminated waste that would need disposal in the domestic arena*
19 *would be expected.*

20
21
22 **Comment:** The following comments express concern over radioactive waste being left in the
23 State of Idaho.

24
25 **[014-03, William Blair]** Idaho does not need to add to its radioactive waste problem.

26
27 **[015-07, Beatrice Brailsford]** So, that's the proposal to meet the need of a domestic supply of
28 enriched uranium. A uranium factory without any national purpose will produce fuel for everywhere
29 in the world but here in Idaho, send its profits to France, and leave us with the waste.

30
31 **[061-02, Nancy Greco]** I am also worried about the threats to our beautiful environment, not
32 only from the construction and production of this plant, but also from the tons of waste which will
33 be left behind. Idaho is not the armpit of the nation, and should not be seen as the perfect
34 repository for more waste.

35
36 **[110-01, John and Susan Medlin]** As the Snake River Alliance presentation pointed out, there
37 is no current need for this facility, no compelling evidence that a nuclear renaissance is coming
38 (or inevitable), no rationale for a French company building a nuclear facility in Idaho that
39 purports to promote US energy security while importing inputs and exporting outputs, no
40 provision for the deteriorating and dangerous waste that will haunt us for decades or maybe
41 forever, no concern for yet another threat to the Snake River aquifer, the lifeblood of Idaho
42 agriculture.

43
44 So how can the NRC conclude that building this facility is vital, and that the most problematic
45 outcome to be evaluated is construction dust?
46

1 **[104-01, Carolyn McCollum]** There's little advantage to us Idahoans when Areva's nuclear
2 fuel would be sent worldwide and its profits back to France while we are left with its radioactive
3 waste, compounding INL's nuclear activities that have plutonium-contaminated the aquifer.
4

5 **Response:** *As discussed in Sections 2.1.3 and 4.2.11.2 of the EIS, all waste from operations at*
6 *the proposed EREF, including the depleted UF₆ tails cylinders, would be transported out of*
7 *Idaho for treatment and disposal. Until a depleted UF₆ conversion facility is available, cylinders*
8 *containing depleted UF₆ would be temporarily stored on an outdoor Cylinder Storage Pad.*
9 *Storage of depleted UF₆ cylinders at the proposed EREF would occur for the duration of the*
10 *facility's operating lifetime and before final removal of depleted UF₆ from the proposed EREF*
11 *site. However, AES has stated that depleted UF₆ cylinders would not be stored at the proposed*
12 *EREF site beyond the facility's licensed lifetime (AES, 2010a).*
13
14

15 **Comment:** The following comments are concerned with the costs of waste management and
16 disposal.
17

18 **[050-11, Joanie Fauci]** Who will pay for waste storage and eventual removal?
19

20 **[083-04, Diane Jones]** Assuming that the project goes forward, and the enriched uranium is
21 used in the United States, there's an assertion in the EIS that this would be an economical
22 source of enriched uranium. My question is: Does that economy include the cleanup of the
23 waste that's generated? It seems clear that the NRC has not yet figured out how this waste
24 should be, could be disposed of, and it's the -- who bears the cost?
25

26 **[096-02, Arjun Makhijani]** The cost of -- and I'm not saying do it, or don't do it here -- I'm just
27 commenting on the Environmental Impact Statement, and what will be at risk, and what
28 taxpayers might have to do if a private corporation unloads this DU under the Department of
29 Energy, as it can do by law, and it has said it might do. And the Department of Energy takes it,
30 and you're requiring them to put two or two and a half billion dollars out, and my estimate for
31 what it would cost to dispose of 300,000 metric tons of depleted uranium is closer to eight or ten
32 billion dollars. So, who's going to pay that? It's going to come -- everybody who is complaining
33 about the deficit should at least pay some attention to the potential cost of this.
34

35 **[171-07, John Tanner]** Now, as for who pays for disposal, so far the nuclear industry has been
36 paying for all nuclear waste disposal, not the taxpayer. They certainly haven't been getting their
37 money's worth as the saga at Yucca Mountain shows.
38

39 **Response:** *AES is responsible for all costs of preconstruction, construction, operation, and*
40 *decommissioning of the proposed EREF, including waste storage, removal, and disposal. In the*
41 *case of the depleted UF₆, the DOE would be required to take the material from the proposed*
42 *EREF, but AES would still be responsible for the costs associated with transport, conversion,*
43 *and disposal. Text has been added to Section 2.1.5.1 of the EIS for clarification.*
44
45

46 **Comment:** The following comments concern wastewater permitting and regulatory issues.
47

1 **[066-23, Toni Hardesty, on behalf of the Idaho Department of Environmental Quality]** 21.
2 Subsurface Sewage Disposal Requirements The wastewater system for the Visitor Center was
3 not discussed in the draft EIS. The Visitor Center will be located adjacent to Highway 20
4 approximately 1.5 miles from the enrichment facility. The exact site location has not been
5 determined. The wastewater system for the Visitor Center will be an onsite subsurface disposal
6 system with a projected flow of approximately 1500 gallons per day (gpd). Subsurface sewage
7 disposal is governed by the subsurface sewage rules (58.01.03) and permitting has been
8 delegated to the local Health District. DEQ participates in plan and specification review for
9 collection systems with more than 2 connections and large soil absorption systems. We expect
10 that AES will comply with all applicable regulations, licensing and operating requirements of
11 both DEQ and the local Health District related to this facility.
12

13 **[066-22, Toni Hardesty, on behalf of the Idaho Department of Environmental Quality]** 20.
14 Wastewater System Requirements The Proposed Eagle Rock Enrichment Facility wastewater
15 system consists of a collection system, private municipal wastewater treatment plant, and two
16 (2) total containment lined wastewater lagoons. The system will be classified as a Public
17 Wastewater System and subject to the requirements of the Wastewater Rules (IDAPA
18 58.01.16). DEQ expects that AES will comply with all applicable requirements.
19

20 **Response:** *Approvals and permits, such as those pertaining to municipal wastewater, must be*
21 *obtained by AES from other regulatory agencies. Table 1-1 in Section 1.5.1 of the EIS lists the*
22 *applicable requirements, including those for wastewater at the proposed EREF. Table 1-2 in*
23 *Section 1.5.2 lists the agencies to which AES must submit the appropriate applications.*
24

25 *A row for IDAPA 58.01.03 has been added to Table 1-1. The regulation is already listed in*
26 *Table 1-2, but the entry has been modified to note that a permit may be required for the Visitor*
27 *Center.*
28

29
30 **Comment:** The following comments note that little byproduct waste would be produced by the
31 proposed EREF.
32

33 **[133-03, Richard Provencher]** It includes an enclosed system that has virtually no byproduct
34 waste generated through the flow sheet.
35

36 **[133-06, Richard Provencher]** The facility does not require a large amount of water to operate.
37 This is good from an aquifer conservation and a waste minimization standpoint.
38

39 **Response:** *The NRC acknowledges the comments and appreciates the public participation.*
40

41
42 **Comment:** The following comments express concern about the operation of the Liquid Effluent
43 Collection and Treatment Systems at the proposed EREF.
44

45 **[027-15, Sara Cohn]** We also concerned that hazardous materials will be concentrated in
46 retention basins prior to and after evaporation of any water. These materials have the potential
47 to settle in sediments and be released into the air with other dust particles.
48

1 **[100-01, Wendy Matson; 191-17, Liz Woodruff]** Are the filtration systems set up to
2 decontaminate water prior to evaporation adequate, to ensure that containments will not be
3 released in the air?
4

5 **[181-18, Roger Turner]** Liquid Effluent Systems needs addressed. This section of the EIS
6 (Page 2-20) describes a process where contaminated liquids would be processed for uranium
7 removal through several precipitation units, filtration units, microfiltration units, and evaporation
8 units. These units need to be described in detail and evaluated with respect to human and
9 ecological risks. How are liquid contaminants collected and what is the risk to workers during
10 these spills? Also, this section reports that the final solid material would be shipped off-site. This
11 raises the issue of whether it would require a TSCA or RCRA permit. The EIS should describe
12 the current status of mixed waste treatment acceptance criteria, shipping requirements.
13

14 **[184-13, Kitty Vincent]** In addition we are concerned that the filtration systems set up to
15 decontaminate water prior to evaporation adequate to ensure that contaminants will not be
16 released in the air?
17

18 **Response:** *The proposed Liquid Effluent Collection and Treatment System is described in*
19 *Sections 2.1.4.2 and 4.2.6.2 of the EIS. Additional information about these systems has been*
20 *added to Section 4.2.11.2, including the processes for sampling and treating the various liquid*
21 *effluent streams.*
22

23 *As discussed in Sections 2.1.4.2 and 6.1.3 of the EIS, liquid effluent would be routed to*
24 *collection tanks and treated through a combination of precipitation and filtration to remove*
25 *radioactive material prior to evaporation.*
26

27 *As described in Sections 4.2.6.2 and 6.1.4, most stormwater runoff would be discharged to a*
28 *detention basin for evaporation to the atmosphere and ground infiltration. Treated sanitary*
29 *effluent and stormwater runoff from the cylinder storage areas would be discharged to lined*
30 *retention basins for evaporation to the atmosphere. Although the retention basins would not*
31 *receive process-related effluents and would not be expected to contain radioactivity or*
32 *hazardous constituents from other sources, stormwater and sediment from these basins would*
33 *be sampled periodically as part of the site environmental measurement and monitoring program*
34 *(as described in Chapter 6).*
35

36 *The public and occupational health impacts from operations of the proposed EREF are*
37 *addressed in Section 4.2.10, and the environmental impacts of the proposed Liquid Effluent*
38 *Treatment Systems are addressed in Section 4.2.6.2. As noted in Section 9.3.1.3 of the SER*
39 *(NRC, 2010b), the NRC staff has concluded that the proposed controls will ensure that radiation*
40 *levels to the public remain within regulatory limits and that as low as reasonably achievable*
41 *(ALARA) liquid effluent goals are met.*
42
43

44 **Comment:** The following comments deal with the safety of long-term storage of depleted UF₆ at
45 the proposed EREF site, the availability of the DOE conversion facilities, and ultimate
46 disposition.
47

1 **[006-01, Anonymous]** I am supportive of the AREVA project but would like to have heard more
2 from the NRC on how waste from the process will be stored and ultimately disposed of.
3

4 **[014-01, William Blair]** Idaho does not need more radioactive waste placed over the Snake
5 Plain Aquifer in an active earthquake area. Until a safe method of handling and storing
6 radioactive waste for thousands of years is devised, NO new facilities should be approved.
7

8 **[015-05, Beatrice Brailsford]** The most domestic part of the proposal is that the waste will, in fact,
9 stay here. The plant would produce 320,000 tons of depleted uranium hexafluoride over its
10 licensed lifetime, and the door is already ajar for the license to be extended. That waste might be
11 stored on outdoor concrete pads above the Snake River aquifer until the plant is decommissioned.
12

13 It's worth noting that New Mexico sharply limits how much, and how long waste can stay at the
14 plant there. The waste has to be treated before it can be disposed of. Two government-owned
15 treatment plants are under construction, over budget, and behind schedule. Waste the U.S. has
16 already accumulated will take a combined 43 years to process.
17

18 **[015-14, Beatrice Brailsford]** The EREF will produce more than 350,000 tonnes of depleted
19 uranium hexafluoride (DUF6) over its licensed lifetime, and the door is already ajar for the
20 license to be extended. That waste would be stored in 25,718 cylinders on outdoor concrete
21 pads above the Snake River Aquifer as long as the plant operates. DUF6 is both radioactive
22 and chemically toxic and has to be treated before it can be disposed of. The DOE has built two
23 plants to treat depleted uranium hexafluoride waste the US has already accumulated. That
24 treatment will take a combined 43 years to process. A private US corporation is seeking a
25 license for its own treatment plant. The draft EIS cavalierly dismisses any potential bottlenecks
26 by stating that the waste could simply be sent to the DOE treatment plants before they're ready
27 to process it and then their operating lives extended. But it is at least as likely that the DUF6 will
28 be stored in Idaho for an uncertain length of time above the Snake River Aquifer, a sole source
29 aquifer for nearly 300,000 people. Storage under these conditions must be fully evaluated under
30 NEPA.
31

32 **[030-04, Kerry Cooke]** The nuclear waste quagmire is not going to go away any time soon -
33 not during licensing of this project; not during construction; not during operation; and not during
34 decommissioning. The depleted uranium and low level waste the Areva plant will create will be
35 added to the nuclear waste burden Idaho already carries. This plan should go no further until
36 realistic plans are in place that address the need to take care of nuclear waste for centuries to
37 come.
38

39 **[032-02, Cindy Cottrell]** If Idaho allows this to happen, it will be the storage of all the waste
40 forever, long after the plant has closed. There is no site established for waste to go to and will
41 become the State of Idaho's problem for generations to come.
42

43 **[045-01, Joan Drake]** I write to oppose the construction of the Areva nuclear power plant. I am
44 very concerned that the proposed plant would produce an estimated 320,000 tons of depleted
45 uranium hexafluoride over its licensed lifetime. In view of this, and the fact that its license might
46 well be extended, indications are that this waste would likely be stored in or near Idaho until the
47 plant's decommissioning. Even after its removal and treatment, there is no certain disposal

1 pathway. The Areva plant should not be licensed until regulations are in place for the
2 environmentally safe disposal of large quantities of depleted uranium.

3
4 **[048-02, Genevieve Emerson]** The EIS fails to consider the influence of wild fires in the region
5 and also fails to adequately address the issue of waste storage and disposal, considering that
6 there are no viable methods yet in existence for safely storing hexafluoride and depleted
7 uranium.

8
9 **[050-03, Joanie Fauci]** One of the areas I feel is under-emphasized in the DEIS is the Safety
10 issue...

11
12 •The storage of radioactive waste is also a safety concern. There is no current repository for the
13 waste so how long it will stay in Idaho is unknown. Areva says it will get it out once the project is
14 complete, but what guarantee do we have of that. Maybe the NRC can put some rules in as
15 former governor of Idaho, Phil Batt, tried to institute with DOE waste at INL.

16
17 **[066-03, Toni Hardesty, on behalf of the Idaho Department of Environmental Quality]** 2.
18 Depleted Uranium Hexafluoride (DUF6) Waste Disposal Path Section 2.1.5.

19
20 Section 2.1.5 acknowledges that long term storage of DUF6 presents a chemical hazard and
21 that direct disposal is likewise prohibited because of this hazard.

22
23 *The Defense Nuclear Facilities Safety Board (DNFSB) has reported that long-term*
24 *storage of depleted UF6 in the UF6 form represents a potential chemical hazard if not*
25 *properly managed (DNFSB, 1995). For this reason, the strategic management of*
26 *depleted uranium includes the conversion of depleted UF6 stock to a more stable*
27 *uranium oxide (e.g., triuranium octaoxide [U308]) form for long-term management*
28 *(OECD, 2001). Also, the DOE evaluated multiple disposition options for depleted UF6*
29 *and agreed that conversion to U308 was preferable for long term storage and disposal of*
30 *the depleted uranium in its oxide form, due to the chemical stability of U308 (DOE,*
31 *2000). Therefore, the disposal option considered in the EIS is the conversion of the*
32 *depleted UF6 to U308 at either a DOE-owned or commercial conversion facility followed*
33 *by disposal as U308. Direct disposal of depleted UF6 was ruled out because of its*
34 *chemical reactivity (DOE, 1999b).*

35
36 For this reason the Draft EIS further acknowledges that DUF6 must be converted at one of two
37 facilities currently under construction.

38
39 *DOE is currently constructing two conversion plants to convert the depleted UF6 now in*
40 *storage at Portsmouth, Ohio, and Paducah, Kentucky, to U308 and hydrofluoric acid.*
41 *AES would transport the depleted UF6 generated by the proposed EREF to either of*
42 *these new facilities and pay DOE to convert and dispose of the material. The proposed*
43 *EREF would generate approximately 321,235 metric tons (354,101 tons) in total over its*
44 *operating lifetime (AES, 2010a). The depleted UF6 would be processed in a DOE*
45 *operated conversion facility and then shipped off site for disposal.*

46
47 Based on estimated capacity for depleted UF6 (DUF6) conversion at the Department of Energy
48 (DOE) facilities in Paducah, Kentucky, and Portsmouth, Ohio, DEQ understands that it may take

1 DOE approximately 25 years to address the current backlog of DUF6 stored at these facilities.
2 Based on this timetable, it will take additional time to convert the 25,718 cylinders (345,000
3 tons) of DUF6 projected to be generated during the licensed life of the Eagle Rock enrichment
4 facility (EREF). Accordingly, it can be expected that DUF6 will be stored at the Eagle Rock
5 enrichment facility for a period significantly in excess of the operating life of the facility and
6 potentially for a period of time which creates the “long term storage hazard” identified by
7 DNFSB.
8

9 **[070-02, Virginia Hemingway]** These statistics do not even begin to address the dangerous
10 impact of 350,000 tons of depleted uranium that will be stored in more than three--30,000
11 cylinders, which will be on cement pads above ground. Idaho is already a dumping ground for
12 nuclear waste, and there is no place for it to go. There will be no place for it to go, because
13 there are no plans for this waste to go anywhere.
14

15 **[071-05, David Hensel]** And I think that the -- once again, forgive me, but I just sort of feel like
16 well, the EIS says something is going to happen, and I don't think that's an adequate way to
17 address it. I mean, I think that there should be a more concrete analysis of what's going to
18 happen to that waste, how long it's going to be here, and what the likelihood, and what the cost
19 of that's going to be.
20

21 **[078-05, Hon. Wendy Jaquet]** Disposal of waste which is huge appears to still be a problem
22 and safety concerns loom.
23

24 **[086-03, Paula Jull]** Areva's plant would produce 320,000 tons of depleted uranium
25 hexafluoride over its licensed lifetime, and its license might well be extended. All this waste
26 might be stored in Idaho until the plant was decommissioned.
27

28 **[103-04, Karen McCall]** This plant would produce 350,000 metric tons of depleted uranium
29 which would be stored above ground. Depleted uranium has to be treated before it can be
30 disposed of. Currently there are two treatment plants being constructed which are over budget
31 and behind schedule with an enormous backlog of waste already needing to be treated.
32

33 **[111-03, Robert Meikle]** And I can tell you that when we see these slides of this nuclear waste
34 being stored, the way it was stored, there's no question -- that's going to scare “the heck” out of
35 people. But that's not the way we do it now, folks. It's much better technology for the storage of
36 nuclear waste, and it's been proven for many, many years.
37

38 **[036-01, Christina Cutler, on behalf of the Idaho Department of Environmental Quality]** I
39 am still questioning how they plan to dispose of the by-products/waste from the enrichment
40 process. What type of storage facility do they plan to have? How long do they plan to store the
41 waste? And what are they going to do with it eventually, long term storage at the facility or move
42 it somewhere else?
43

44 **[128-06, Bob Poyser]** Fourth. AREVA has a safe plan to temporarily store depleted uranium
45 material during the life of the facility and safely transport that material, as stipulated by law, to a
46 facility for deconversion.
47

1 While shipments of depleted uranium to a deconversion facility may occur throughout the life of
2 the project to reduce the total inventory, there will be no -- I say again -- no depleted uranium
3 left at the site when enrichment activities are completed and the NRC license is terminated.
4

5 **[133-07, Richard Provencher]** The byproduct that is generated as a result of the operation-
6 depleted uranium-is solid and stable and can be stored safely for a long period of time without
7 incident.
8

9 **[136-01, Susan Rainey]** No uranium enrichment facility outside Id Falls by AREVA!!! The
10 transport of radioactive material and the storage of nuclear waste are my biggest concerns.
11 There are safety issues! We will be at risk. How will the waste be disposed of? Snake River
12 Alliance did an excellent job explaining. NRC sounded like bureaucratic babble ignoring the real
13 dangers and concerns. How is this really going to help us here in Idaho, USA? Let's look at
14 other options. Not worth the risk
15

16 **[147-02, Joey Schueler]** And so I want you to address that, and look at that more seriously,
17 because I hear your statements and they didn't really speak to me about nuclear waste. And
18 you all know that's why we're here. It's not -- and the sagebrush is important, and the dust is
19 important, and economy is important. But we wouldn't be having public meetings if it weren't for
20 the fact that you're going to put something that's highly toxic into our state, and there is no real
21 solution. You've not given me one that I feel merits that choice.
22

23 So my real--what seems like the follow-up question, ends up being after we talk about risk, is:
24 What is your price? And I don't think there's a price for putting my family at risk. And I want you
25 to recognize that. And I want you -- can you -- I know this is public comment.
26

27 Can you answer me? Do you — can you tell me there is no risk to placing depleted uranium in
28 Idaho? Can any of you answer that in the affirmative or negative? Is there no risk? Or maybe
29 are you not at liberty to answer?...
30

31 Yes. And based on your statement, I'm not convinced that you can answer to me that there's no
32 risk. And if that is the answer that I'm to take away from this meeting, then the meeting should
33 not be about a process. To me, it should involve some element of outrage, to me, at the
34 audacity of non-Idahoans, whether they be French, or otherwise -- and in fact, now that I've this
35 testimony, Idahoans themselves, putting me, my family, my little nephews who are two and five,
36 at risk, cause you haven't -- you haven't really proven to me that isn't risk.
37

38 So I'm going to have to go with that, because that's a safety issue to me. So tell me the pros of
39 putting my family at risk, and why in Idaho, if there is risk, because I think we all know there is?
40 Is it because there's low population here? Is it a lesser target for terrorism, which is an issue,
41 hasn't been discussed? These mitigations, which I keep hearing, we're mitigating things, left
42 and right here, do they make my family less safe, and all of these people's families more or less
43 safe? Yeah. So your environmental requirements. You know, high -- we've had -- we've always
44 mitigated environmental consequences since the dawn of this country, and, you know, like we
45 see it in high obesity rates and things.
46

47 The FDA can write off whatever they want; it doesn't make it right, or okay. And so we're not
48 talking about impact. We're talking about what's right. We're not talking about what's in our best
49 interest, financially. We're talking about what's right.
50

1 So I hope you make a decision with that element in mind, knowing that people in Idaho are
2 aware of that, and are watching that.

3
4 **[147-11, Joey Schueler]** 7. I know this sounds obtuse, but enriched Uranium and the
5 byproduct of creating enriched Uranium (spent fuel) is extremely hazardous and brings a level
6 of instability to the area, especially considering the storing methods (see link):
7 <http://www.nrc.gov/waste/spent-fuel-storage.html>

8
9 **[157-03, Hon. Erik Simpson]** Now in the photograph that was showed, you saw the uranium
10 safely stored. I must confess, a little rust on the container is not a problem, and what isn't stated
11 is that that material is regularly monitored and inspected per federal guidelines. That was not
12 stated.

13
14 **[157-07, Hon. Erik Simpson]** Second, waste. In the Sun Valley area, a claim was made
15 uranium will be stored in Idaho, or depleted uranium will be stored in Idaho indefinitely, and the
16 storage of the material is a danger. Not true. Depleted uranium is stored safely daily throughout
17 the United States without incident. In fact, companies that store this product are required to
18 regularly monitor and inspect the waste containers. Depleted uranium can be deconverted to
19 remove the fluoride for use by a multitude of industries. International Isotopes, an Idaho Falls-
20 based company, is planning to construct a deconversion facility in New Mexico. And it was
21 announced today, Uranium Disposition Services, LLC was recently selected to conduct hot
22 functional testing of a conversion plant at Paducah, Kentucky, so there are plans for the waste
23 that will be generated by this facility.

24
25 **[168-06, Lon Stewart]** The Areva plant is not needed in the United States or the world. We
26 would be adding to a waste that we currently have more than we know what to do with, do not
27 know how to safely store it, and have no idea if what we think will work will actually work for
28 1 million years. This doesn't sound good to me.

29
30 **[181-03, Roger Turner]** The Draft EIS by the NRC significantly errs by minimizing the human
31 health and environmental risks in the long-term and short-term storage of uranium. The EIS is
32 flawed in its apparent assumption that another location will be certified for offsite storage, and
33 that the waste is categorized as low-level.

34
35 Here is an excerpt of the EIS that is directed under the title of "Public Health." "During the peak
36 operation, the proposed EREF is expected to generate 1,222 cylinders of depleted uranium
37 hexafluoride annually, which would be temporarily stored on an outdoor cylinder storage pad in
38 26 approved type 48-wide containers before being transported to a DOE-owned or private
39 conversion facility." That's their public health assessment of the project. But what facility are
40 they referring to?

41
42 In fact, this is not an EIS that carefully weighs the likelihood of another state stepping up to
43 accept this waste, especially if there are problems in treating the uranium. This is an EIS that
44 fails to follow the NEPA requirement to analyze realistic cumulative impacts.

45
46 We've seen these types of examples in this, and the fact that no state wants a certified spent
47 nuclear fuel site to accept commercial fuel. So, for now, all of these sites that create the waste
48 temporarily store this waste at their locations. And this was the -- this was an enabled legislation
49 that the Nuclear Waste Policy Act established in 1982, but they're still being stored temporarily.

1 **[181-05, Roger Turner]** The EIS is also fatally flawed in its assumption that a treatment facility
2 will be available to convert the depleted uranium. The depleted uranium must be treated before
3 stored.
4

5 **[181-11, Roger Turner]** Public Health risks of “Temporary” Storage of depleted Uranium
6 should be addressed in EIS. The draft EIS by the NRC significantly errs by minimizing the
7 human health and environmental risks in the risks of the storage of uranium in above-ground
8 pads in eastern Idaho. The EIS is flawed in its apparent assumption that another location will be
9 certified for off-site storage. The EIS fails to acknowledge that these casks may be breached by
10 handling or corrosion. Here is an excerpt of the EIS, under the Public Health section:
11

12 During peak operation, the proposed EREF is expected to generate 1222 cylinders of
13 depleted UF6 annually, which would be temporarily stored on an outdoor cylinder storage
14 pad in 26 approved Type 48Y containers before being transported to a DOE-owned or
15 private conversion 27 facility.
16

17 The above paragraph, under the Public Health Section, in fact, does not even discuss public
18 health. The EIS must assume that the casks of depleted Uranium will remain for some time at
19 the site, as the treatment facility to convert UF6 to the more stable oxide is behind in schedules
20 and experiencing budget problems affecting production. Anytime heavy equipment is operated
21 there is a risk that accidents will occur. In fact, casks of UF6 were damaged by heavy
22 equipment at Oak Ridge, so the risk to workers and public health is real. The EIS needs to
23 define “temporary” and fully assess health and worker risks, for longer term storage at the site.
24

25 **[181-21, Roger Turner]** As mentioned above, the temporary storing of depleted and enriched
26 uranium and at the Areva facility, is not a good idea, and the NRC should, if this project is
27 approved, evaluate an alternative that limits the inventory of it to a bare minimum, immediately
28 shipping it to the facilities to convert it to the more stable oxide, or for fuel fabrication.
29

30 **[180-07, Kaye Turner]** Is it true that depleted uranium has to be treated before it can be
31 disposed of?
32

33 Is it true the U.S. is building two treatment plants and both are behind schedule, over budget
34 and will have decades of already stored waste to treat?

35 Is it true Areva’s waste will stay in Idaho as long as Areva operates here?
36

37 **[183-01, James Vincent]** Since the two US de-conversion facilities are not operational, and if
38 they do become operational they will first process already existing depleted uranium waste for
39 60 plus years of existing waste, from the 100 plus nuclear energy producing plants here in the
40 US, the timeline for the removal of the on site storage of Uranium hexafluoride DUF6 from Idaho
41 is in doubt. I have a problem with storing this waste above ground and possible leaching of
42 contaminants into the aquifer for our state
43

44 Their figures are that these are increasing to 2,000 metric tons per year. And, in addition, there’s
45 like 12 million cubic feet of low-level waste from these plants. Supposedly, we have around
46 60,000 metric tons of waste in this country that we have to get rid of one way or another.
47

1 **[183-07, James Vincent]** Since the two US de-conversion facilities are not operational, and if
2 they do become operational they will first process already existing depleted uranium waste for
3 60 plus years of existing waste, from the 100 plus nuclear energy producing plants here in the
4 US, the timeline for the removal of the on site storage of Uranium hexafluoride DUF6 from Idaho
5 is in doubt. I have a problem with storing this waste above ground and possible leaching of
6 contaminants into the aquifer for our state.

7
8 **[191-12, Liz Woodruff]** • The draft EIS assumes that depleted uranium hexafluoride will not be
9 stored on site beyond the licensed life of the facility. But the draft EIS also acknowledges that
10 Areva may well apply for a license extension. The NRC must discuss the length of a potential
11 extension and whether or not cumulative waste storage would be allowed....

12
13 • Any newly operating deconversion facilities in the US will first process already existing
14 depleted uranium waste, the time-line for the removal of DUF6 from Idaho is therefore uncertain
15 and verifiably in excess of the time-line specified by Areva in the draft EIS.

16
17 **[193-04, Liz Woodruff, on behalf of the Snake River Alliance]** So once again the waste,
18 rusty cylinders. The U.S. already stores nearly 700,000 metric tons of depleted uranium. That's
19 in Paducah, Kentucky, Portsmouth, Ohio, and Oak Ridge, Tennessee. And all of that waste has
20 to be disposed of first, before the waste produced by a commercial, new commercial reactor --
21 or excuse me -- new commercial enrichment factory, like AREVA, could be disposed of. So we
22 are behind, we're back in line behind these other wastes.

23
24 So why is that waste just sitting there? Why has it been sitting there for so long? Well,
25 hexafluoride is highly reactive with water. So none of this waste can be disposed of until it's
26 treated in deconversion plants.

27
28 Those plants are under construction, over budget, and behind schedule. So this waste has
29 nowhere to go, nowhere to be deconverted before it can be disposed of, and it's the concern of
30 the Snake River Alliance, that that means this depleted uranium waste will be stored above the
31 aquifer for 300,000 people, the sole source aquifer in Idaho, for decades.

32
33 **[192-03 and 192-09, Lisa Young]** Also, it is not likely that the waste will be deconverted in a
34 timely manner, as the U.S. has no operational deconversion facilities, and even with those that
35 are up-and-coming, the current stockpile of around 704,000 tons of depleted uranium waste will
36 take several decades at least to fully deconvert, with our current capabilities. This facility is
37 estimated to produce an additional 320,000 tons of depleted uranium waste over the course of
38 its lifetime. When it comes time to decommission this facility, all of this waste will need to be
39 relocated, and, as the deconversion process looks limited, it will likely be transported elsewhere
40 for further storage.

41
42 **[192-04 and 192-10, Lisa Young]** The storage of the depleted uranium hexafluoride, which
43 reacts with water, water vapor, to produce two dangerous, corrosive, and soluble compounds,
44 UO_2F_2 and HF, is extremely unstable. The production of these compounds presents huge risks
45 in the storage timeline, as the corrosion of storage cylinders and the possibility for leaks is a
46 very real reality. Even *after* proper deconversion of this waste, the remaining waste, which
47 cumulatively becomes *more* of a radioactive threat over time, has nowhere to go for acceptable
48 long-term storage, and will continue to plague our waste storage sites with more and more

1 barrels of poison, creating more and more of a health and safety risk for the surrounding
2 communities. *Producing this waste is irresponsible*, and licensing a facility that will do *just that* is
3 undeniably irresponsible.

4
5 **Response:** *The onsite management of depleted UF₆ generated by the proposed EREF,*
6 *including details and impacts of temporary onsite storage, is addressed in the EIS, in*
7 *Sections 2.1.3 (facility description), 2.1.5 (depleted uranium management), 4.2.10.2*
8 *(radiological exposures), and 4.2.11 (waste management) of the EIS. It was determined that all*
9 *impacts would be SMALL.*

10
11 *The management of other (non-UF₆) wastes generated by the proposed EREF is addressed in*
12 *Section 4.2.11. Temporary storage of non-UF₆ wastes at the proposed EREF would be*
13 *conducted in accordance with license conditions.*

14
15 *As discussed in Section 2.1.5.1, the DOE has completed construction of two depleted uranium*
16 *conversion plants. The Portsmouth conversion plant is expected to begin full operations in*
17 *summer 2011, and the Paducah plant is expected to begin operation later in the year. As noted*
18 *in Section 4.2.11.2, the conversion of the existing DOE inventory of depleted uranium*
19 *hexafluoride to depleted uranium oxide is expected to consume the first 18–25 years of*
20 *operation at these two facilities. Depending on the timing of shipment to a conversion plant*
21 *(DOE or private), depleted UF₆ generated by the proposed EREF may continue to be stored in a*
22 *safe manner until conversion is possible.*

23
24 *The inventory of depleted UF₆ for conversion does not include any other form of LLRW or SNF*
25 *from commercial nuclear power plants. SNF from commercial nuclear power plants requires a*
26 *permanent high-level waste repository and would not be treated or processed at a depleted*
27 *uranium conversion plant. Similarly, LLRW that does not require conversion is eligible for*
28 *disposal at licensed disposal facilities.*

29
30 *Under the USEC Privatization Act, DOE is obligated to accept depleted UF₆ waste from the*
31 *proposed EREF (see Section 2.1.5.1). Depleted UF₆ from the proposed EREF would be stored*
32 *in steel containers and would not require treatment at the proposed EREF prior to shipment to a*
33 *conversion facility.*

34
35 *As noted in Section 4.2.11.2, proper and active depleted UF₆ cylinder management, including*
36 *routine inspections and maintaining the anticorrosion layer on the cylinder surface, has been*
37 *shown to limit exterior corrosion or mechanical damage and provide for safe and long-term*
38 *storage of depleted UF₆. AES has committed to the implementation of such a cylinder*
39 *management program as discussed in Section 4.2.11.3.*

40
41 *While awaiting shipment to a conversion facility, some amount of depleted UF₆ will be stored at*
42 *the proposed EREF for the operating life of the facility. If DOE is not able to take possession of*
43 *the depleted UF₆ as it is generated, the potential exists that some of the depleted UF₆ generated*
44 *over the facility lifetime will be stored onsite until license termination. However, AES has stated*
45 *that depleted UF₆ cylinders would not be stored at the proposed EREF site beyond the licensed*
46 *lifetime of the proposed facility (AES, 2010a).*

1 *DOE intends to reuse the conversion product to the maximum extent possible or package it for*
2 *disposal at an appropriate disposal facility (DOE, 2004a; DOE, 2004b; DOE, 2007a; DOE,*
3 *2007b; 72 FR 15870).*

4
5
6 **Comment:** The following comments express concern that disposal of depleted uranium is
7 currently not a viable option because NRC is in the midst of rulemaking on the disposal of large
8 quantities of depleted uranium.

9
10 **[012-01, Janice Berndt]** The Areva factory would produce 320,000 tons of waste materials
11 (depleted uranium hexafluoride) over its licensed lifetime. This waste could be stored in Idaho
12 until the plant is decommissioned. Even if it is removed and treated, there is no certain disposal
13 pathway. The draft EIS essentially ignores the fact that the U.S. does not have guidelines on
14 how the treated waste will be disposed. Areva's factory should not be licensed until regulations
15 are in place for disposal of large quantities of depleted uranium.

16
17 **[014-01, William Blair]** Idaho does not need more radioactive waste placed over the Snake
18 Plain Aquifer in an active earthquake area. Until a safe method of handling and storing
19 radioactive waste for thousands of years is devised, NO new facilities should be approved.

20
21 **[015-06, Beatrice Brailsford]** The draft EIS essentially ignores the fact that the U.S. does not
22 have guidelines on how large quantities of the treated waste will be disposed of, but it will most
23 certainly be disposed of in the United States.

24
25 **[015-15, Beatrice Brailsford]** The draft EIS essentially ignores the fact that the U.S. does not
26 have guidelines on how the treated waste will be disposed of. This failure is egregious. The
27 NRC is in the midst of a multi-year rulemaking process to establish guidelines for depleted
28 uranium disposal. The NRC is aware that the rulemaking has already stirred some controversy,
29 and the outcome is not certain. The NRC must fully discuss the disposal options under NEPA
30 and must not issue a record of decision or a license until the disposal rules are in place.

31
32 **[022-01, Judy Carroll]** I am strongly opposed to Areva's plan to build a plant here because I do
33 not believe that the radioactive waste will be handled appropriately and taken out of Idaho.
34 Areva is taking advantage of Idaho in the fact that the unemployed and poor need jobs. What
35 they don't say is that Areva will also be bringing sickness and death to Idaho. We may seem like
36 a simple people but we do know in this state how important clean water and land are to our way
37 of life. Idahoans are the ones who are able to enjoy beautiful wilderness, rivers and wildlife. If
38 Areva needs uranium enriched, let them enrich it in France!

39
40 **[027-01, Sara Cohn]** As the Federal Register announcement for this proposed rulemaking
41 suggests, NRC does not currently provide adequate guidance for the type of waste streams that
42 will be created by the proposed Eagle Rock facility and stored on site. Until regulations are in
43 place governing disposal of depleted uranium, and disposal facilities have implemented those
44 regulations, ICL believes it is inappropriate to license any new uranium enrichment facility. NRC
45 should consider the creation of adequate rules to guide the safe disposal of depleted uranium
46 as paramount to permitting individual facilities.

1 **[027-06, Sara Cohn]** Waste Storage: ICL has provided public comments on the scoping
2 analysis for the proposed AREVA Enrichment facility in Idaho Falls, Idaho (see Attachment A)
3 and provided comments on the Potential Rulemaking for the Safe Disposal of Unique Waste
4 Streams Including Significant Quantities of Depleted Uranium (see Attachment B). As the
5 Federal Register announcement for the potential rulemaking states, NRC does not currently
6 provide adequate guidance for disposal of the type of waste streams that will be created by the
7 proposed Eagle Rock enrichment facility and stored onsite. We are very concerned the lack of
8 appropriate regulations for the safe disposal of depleted uranium will facilitate unsafe storage of
9 such materials within the project site and above a sole source aquifer. Until rules are in place to
10 govern the disposal of depleted uranium and existing disposal facilities have implemented those
11 regulations, ICL believes it is inappropriate to license any new uranium enrichment facility in
12 Idaho. NRC should consider the creation of adequate rules to guide the safe disposal of
13 depleted uranium as paramount to permitting individual facilities.

14
15 From Attachment B:

- 16 • More clarity is needed with regard to the scope of the potential rulemaking.
- 17 • Until regulations are in place governing disposal of depleted uranium and disposal
18 facilities have implemented those regulations, it is inappropriate to license any new
19 uranium enrichment facility.
- 20 • The NRC should coordinate with appropriate federal agencies, such as the U.S.
21 Environmental Protection Agency (EPA) and others, to ensure comprehensive
22 analysis of potential disposal sites and to protect natural resource, human health,
23 ICL Comments on NRC public workshops and proposed rulemaking – depleted uranium and
24 national security.

25
26 **[030-02, Kerry Cooke]** Depleted uranium is adding to a waste burden that Idaho already
27 suffers with, and I believe that you owe it to the people of the United States to not license any
28 facility that is going to increase, make any more depleted uranium, until this question is
29 thoroughly solved, not proposed, not suggested, not theoretical, but solved. Just needs to stop.

30
31 **[032-05, Cindy Cottrell]** For every ton of uranium enriched enough for use in a nuclear power
32 reactor creates 7 tons of depleted uranium waste. No Country that enriches uranium has figured
33 out how to dispose of this waste. The problem with depleted uranium is that it becomes more
34 radioactive over the course of 1,000,000 years. Where would we store this knowing it will
35 become more radioactive?

36
37 **[045-01, Joan Drake]** I write to oppose the construction of the Areva nuclear power plant. I am
38 very concerned that the proposed plant would produce an estimated 320,000 tons of depleted
39 uranium hexafluoride over its licensed lifetime. In view of this, and the fact that its license might
40 well be extended, indications are that this waste would likely be stored in or near Idaho until the
41 plant's decommissioning. Even after its removal and treatment, there is no certain disposal
42 pathway. The Areva plant should not be licensed until regulations are in place for the
43 environmentally safe disposal of large quantities of depleted uranium.

44
45 **[066-04, Toni Hardesty, on behalf of the Idaho Department of Environmental Quality]**
46 Moreover, the PEIS assumes that once converted the low-level radioactive waste would be
47 disposed of at a commercial low level waste disposal facility:

48

1 *The Commission has stated that depleted uranium in any form (e.g., UF6, U308) is*
2 *considered a form of low-level radioactive waste (NRC, 2 005a). However, the chemical*
3 *reactivity of depleted UF6 precludes it from being a stable waste form, and thus makes it*
4 *unsuitable for direct disposal without conversion (DOE, 19996). As discussed in*
5 *Section 2.1.5.1, AES has requested the DOE to accept all depleted UF6 generated at the*
6 *proposed EREF for conversion to the oxide form for disposal (AES, 2010a) After*
7 *conversion of depleted uranium tails (depleted UF6) to U308, disposal of this U308 at a*
8 *commercial low-level waste disposal facility would be a viable option if the disposal*
9 *facility meets the requirements of 10 CFR Part 61.*

10
11 However, because this waste will be generated in Idaho it must be shipped to the Northwest
12 Compact facility at Hanford Washington. It is Idaho understands that the Hanford facility is
13 nearing its source term limit and would need an expansion license to accept the ERAES waste.
14 It is possible that this license might not be granted or that the facility might otherwise be
15 unavailable at the time waste is ready for disposal. Moreover Idaho understands that the Energy
16 Solutions facility in Clive Utah, which might otherwise accept the waste, currently will not do so
17

18 In light of the current situation at DOE facilities and the potential unavailability of licensed low
19 level radioactive waste disposal facilities, DEQ requests NRC provide more clarity on the
20 environmental risks associated with long term storage and further explain in detail how
21 AES/NRC plans to meet this commitment for DUF6 off site treatment/disposal.
22

23 **[070-02, Virginia Hemingway]** These statistics do not even begin to address the dangerous
24 impact of 350,000 tons of depleted uranium that will be stored in more than three --
25 30,000 cylinders, which will be on cement pads above ground. Idaho is already a dumping
26 ground for nuclear waste, and there is no place for it to go. There will be no place for it to go,
27 because there are no plans for this waste to go anywhere.
28

29 **[078-05, Hon. Wendy Jaquet]** Disposal of waste which is huge appears to still be a problem
30 and safety concerns loom.
31

32 **[083-05, Diane Jones]** How can we expect the company to -- whose financial future is
33 uncertain, to be able to guarantee that they will bear the cost of treating all that waste and
34 disposing of all that waste, when the process for disposing of the waste is not even known?
35 This seems highly reckless to me, and not a very sound economical calculation.
36

37 **[083-07, Diane Jones]** And then I think, myself, along with, I think, many members of this
38 audience, wonder how the generation of 350 metric tons of waste, of depleted uranium, for
39 which no known disposal route has been proposed, accepted, whatever, can be regarded as a
40 small impact.
41

42 **[086-04, Paula Jull]** Areva's plant should not be licensed until regulations are in place for
43 disposal of large quantities of depleted uranium.
44

45 **[088-05, Stan Kidwell]** Areva's plant should not be licensed until regulations are in place for
46 disposal of large quantities of depleted uranium.
47

1 **[095-05, Linda Leeuwrik]** Areva's plant would produce 320,000 tonnes of depleted uranium
2 hexafluoride over its licensed lifetime, and its license might well be extended. All this waste
3 would likely be stored in Idaho until the plant was decommissioned. Even after it is removed and
4 treated, there is no certain disposal pathway.

5
6 **[096-01, Arjun Makhijani]** Depleted uranium in large amounts from enrichment plants is not
7 covered by any U.S. environmental rule. The NRC has ruled, as stated in the EIS, that depleted
8 uranium from enrichment plants is low-level waste. However, the low-level waste rule itself, the
9 impacts of large amounts of depleted uranium have not been considered under the low-level
10 waste rule. According to the rule itself, and now according to the U.S. Nuclear Regulatory
11 Commission, which has admitted in October of 2005, and in 2009 started a process of
12 rulemaking as to how and under what conditions disposal of depleted uranium in large amounts
13 from enrichment plants should be carried out.

14
15 What does large amounts mean? Large means more than small, and small has been defined as
16 a few metric tons. This facility will produce 300,000 metric tons, approximately, I did a rough
17 addition from the EIS. That is definitely very large amounts of depleted uranium.

18
19 I want to read to you what the U.S. National Academy has said about depleted uranium, and its
20 concentrations of radioactivity, which are much, much higher than uranium ore. In fact, they're
21 quite a bit like the transuranic waste you have here in Idaho that the state government has
22 insisted be sent to the Waste Isolation Pilot Plant, and the National Academy, in considering the
23 question of depleted uranium, also shares my own opinion of quite longstanding, which has
24 been presented to the NRC in expert testimony on more than one occasion, that depleted
25 uranium is like the transuranic waste you have here in Idaho, that you don't want in this state,
26 and that you're sending to New Mexico because it is more than 100 nanocuries per gram of
27 alpha emitting long-lived radionuclides that grow in radioactivity over time, because you get
28 Thorium-230 and radium-226. And it's many, many times more radioactive than uranium ore,
29 including its radium and thorium that is present in uranium ore.

30
31 The Environmental Impact Statement does not consider the impacts of depleted uranium
32 disposal. And, in my opinion, it does not conform to the NRC regulations, 10 CFR Part 51.71,
33 and it does not conform to the regulations of the Council on Environmental Quality, and it does
34 not conform with the National Environmental Policy Act. And I will read it, but you can find on
35 page 224 that they, essentially, say, if the licensing requirements for land disposal of depleted
36 uranium can be met, then it be disposed of. However, every calculation of disposal of large
37 amounts of depleted uranium but one that has been done has shown that disposal of large
38 amounts in shallow land burial would grossly violate existing regulations by as much as 1,000
39 times over the radiation dose limit or more, including official calculations, except one done by
40 the NRC in 2009, which did not calculate doses according to the regulation; that is, it did not
41 calculate organ doses.

42
43 I won't detain you for long. I am going to submit for the record the comments I have already
44 given the NRC, as an invitee of the NRC to the deliberations on the rulemaking. And I will
45 observe that this particular EIS, the drafters of it have not talked to their counterparts, or appear
46 not to have talked to their counterparts in the section of the NRC that are actually currently
47 engaged in making the rule as to how the depleted uranium should be disposed of. And the
48 author of that paper, SECY 0187, by coincidence, himself, said that calculating doses the way
49 he did for a million years in shallow land burial was "silliness." And then the NRC moderator, like

1 you, said the other day that silliness is perhaps not an appropriate regulatory term, but I take it
2 in that spirit. We could invent some other regulatory equivalent of silliness, but NRC's own
3 invited geochemist agreed that even calculating shallow land burial doses for 10,000 years is
4 not appropriate. This stuff needs to be disposed of in deep disposal. The cost of -- and I'm not
5 saying do it, or don't do it here -- I'm just commenting on the Environmental Impact Statement,
6 and what will be at risk, and what taxpayers might have to do if a private corporation unloads
7 this DU under the Department of Energy, as it can do by law, and it has said it might do. And the
8 Department of Energy takes it, and you're requiring them to put two or two and a half billion
9 dollars out, and my estimate for what it would cost to dispose of 300,000 metric tons of depleted
10 uranium is closer to eight or ten billion dollars. So, who's going to pay that? It's going to come --
11 everybody who is complaining about the deficit should at least pay some attention to the
12 potential cost of this....

13
14 **[105-04, Eve McConaughey]** The most glaring question, not addressed or answered
15 concerned the transportation risks and ultimate unresolved problem of waste disposal.

16
17 **[122-01, Kathy O'Brien]** I do not want the waste from this plant here in Idaho or anywhere. It is
18 not clean energy because of the waste both from this plant and from nuclear power plants.
19 Areva's plant would produce 320,000 tonnes of depleted uranium hexafluoride over its licensed
20 lifetime, and its license might well be extended. All this waste might be stored in Idaho until the
21 plant was decommissioned. Even after it's removed and treated, there is no good way to
22 dispose of it.

23
24 **[150-02, Katie Seevers]** The draft EIS assumes that the depleted uranium hexafluoride will not
25 be stored on the site past the license life of the facility. However, it also acknowledges that
26 Areva may apply for a license extension. I find the lack of a fully developed rule on disposal of
27 depleted uranium problematic, especially when coupled with the prospect of seismic activity in
28 the area and the potentiality for a license extension.

29
30 **[174-01, Christopher Thomas; 198-01, Vanessa Pierce]** The classification of depleted
31 uranium for disposal purposes has been a contentious issue that the State of Utah, the Nuclear
32 Regulatory Commission, and other key-stakeholders have worked on for years, and relevant
33 rule-making to govern the disposal of this unique waste is still underway. As such, the
34 assumption in the draft EIS that there will be a disposal pathway for the depleted tails from the
35 AES facility is unfounded.

36
37 The draft EIS states that "[t]he depleted UF₆ would be sent to a DOE conversion facility, and
38 then shipped offsite for disposal" (2-25). Given the current NRC rule-making to develop a site-
39 specific analysis for the disposal of large quantities of depleted uranium, and the State of Utah's
40 own requirement for a site-specific analysis for DU disposal, it is premature to assume that
41 depleted uranium will be found suitable for disposal at EnergySolutions' Clive facility or any
42 other facility. Indeed, the standards by which any site could be found "suitable" for the safe,
43 long-term disposal of DU have yet to be codified.

44
45 The draft EIS does not explicitly identify any specific site for the final disposal of the converted
46 DU waste. We believe this is in part because no disposal site will currently accept depleted
47 uranium waste for disposal. For instance, note that DU oxide waste from DOE's Savannah River
48 Site (SRS) currently has no disposal pathway

49

1 Although there has been some effort to move this waste from South Carolina to the Waste
2 Control Specialists site in Texas, the waste would only be stored there on a temporary basis
3 rather than permanently disposed. Furthermore, the single trainload of SRS DU waste that
4 made its way to the Clive site is also being held in temporary storage until the completion of a
5 site specific analysis in accordance with Utah Rule R313-25-8 - Technical Analyses.
6

7 If disposal at a DOE site were indeed a “plausible strategy” as noted in the EIS (2-25), the DOE
8 would simply send this DU waste to one of its other disposal sites. The fact that DOE has been
9 forced to look at temporary storage options for the SRS DU appears to be prima facie evidence
10 that DOE has no disposal option. In light of recent events, the NRC Commission’s decision that
11 disposal of DU waste at a DOE site is a “plausible strategy” must be re-evaluated.
12

13 We believe the Draft EIS is deficient because it assumes that converted DU tails will have a
14 disposal pathway, when in reality the most recent evidence indicates that this waste could
15 indeed become an orphan waste stream, similar to the SRS DU. We believe that the final EIS
16 should assess what would happen if there is not a disposal pathway for the converted DU tails.
17 This assessment should address at least the following issues: how the DU tails would be
18 managed, the health and environmental risks of such management, who would manage them,
19 and at what cost. We believe these are critical issues that must be considered and addressed,
20 given that DU disposal is not currently feasible, and may not be feasible for the next many
21 years, especially if most or all near-surface disposal sites are eventually found to not be
22 protective of human health and the environment in the long-term.
23

24 **[136-01, Susan Rainey]** No uranium enrichment facility outside Id Falls by AREVA!!! The
25 transport of radioactive material and the storage of nuclear waste are my biggest concerns.
26 There are safety issues! We will be at risk. How will the waste be disposed of? Snake River
27 Alliance did an excellent job explaining. NRC sounded like bureaucratic babble ignoring the real
28 dangers and concerns. How is this really going to help us here in Idaho, USA? Let’s look at
29 other options. Not worth the risk.
30

31 **[148-01, Eric Schuler]** Taken as a whole, the EIS suggests that this facility will have a relatively
32 low impact on the environment. Of course several aspects of this, of the — have been
33 overlooked in making this conclusion. For instance, as others have already noted, it does not
34 consider the impact of the exempted preconstruction activities, the high risk of wildfires in the
35 area, or the lack of an appropriate disposal pathway for depleted uranium. Accordingly, the true
36 impact of this facility is certainly larger than the DEIS suggests.
37

38 **[150-03, Katie Seevers]** I find the lack of a fully developed rule on disposal of depleted
39 uranium problematic, especially when coupled with the prospect of seismic activity in the area
40 and the potentiality for a license extension.
41

42 **[153-07, Andrea Shipley; 197-07, Andrea Shipley, on behalf of the Snake River Alliance]**
43 This is not to mention the lack of a fully developed rule on disposal of depleted uranium in the
44 US, leaving no pathway for disposal of this waste, and a line of already existing depleted
45 uranium hexafluoride waiting for deconversion.
46

47 **[169-01, Margaret Stewart]** And aside from AREVA’s greed, grim, and very, very devastating
48 global environmental and human rights record around the world, particularly in Africa, I

1 vehemently oppose the NRC licensing of this facility on grounds that the facility has not been
2 proven necessary, a huge amount of dangerous radioactive waste that would be created has no
3 disposal place, the nuclear reactors that the EIS says will need AREVA's product more than
4 likely will never be built.

5
6 **[168-03, Lon Stewart]** ...We will probably get 350,000 tons of uranium waste over the life of
7 the facility that no one currently knows how to dispose of....

8
9 **[168-06, Lon Stewart]** The Areva plant is not needed in the United States or the world. We
10 would be adding to a waste that we currently have more than we know what to do with, do not
11 know how to safely store it, and have no idea if what we think will work will actually work for 1
12 million years. This doesn't sound good to me.

13
14 **[171-05, John Tanner]** The question of disposal of depleted uranium I suppose was left out of
15 the Environmental Impact Statement because that's not really going to be an AREVA, or an
16 Idaho problem. The depleted uranium that we produce will not be in the form that's suitable for
17 disposal; that is, if the nation wants it disposed of, it will have to be shipped out of state to a
18 conversion plant to convert the fluoride form to the oxide form, which, by the way, is the form
19 that it is when it's an ore. And then it will be a problem for the Department of Energy, and
20 possibly for the conversion plant which will be out of state.

21
22 **[175-04, Ellen Thomas]** Areva's plant would produce 320,000 tonnes of depleted uranium
23 hexafluoride over its licensed lifetime, and its license might well be extended. There is no
24 certain disposal pathway.

25
26 **[180-08, Kaye Turner]** Is it true the NRC has stated a whole new regulatory scheme has to be
27 developed to guide in the disposal of depleted uranium?
28 Is it true that no country on earth that enriches uranium knows how to dispose of the depleted
29 uranium?

30
31 **[181-01, Roger Turner]** So now comes a proposal to create and store 350,000 tons of uranium
32 compounds at eastern Idaho. Setting aside the radiation risk, uranium compounds exhibit a
33 similar heavy metal toxic characteristics as does mercury. So, why now is there support for
34 uranium enrichment project, for which there is no repository outside of Idaho?

35
36 **[191-13, Liz Woodruff]** The lack of a fully developed rule on disposal of depleted uranium
37 creates great uncertainty about the disposal pathway for this waste

38
39 **[192-13, Lisa Young]** The storage of the depleted uranium waste, which will likely not be
40 deconverted in any reasonable timeline, poses a serious risk to our health and safety as
41 Idahoans, and to the residents of any other region where the waste will be stored in the future.
42 Even after proper deconversion of this waste, the remaining waste, which cumulatively becomes
43 more of a radioactive threat over time, has nowhere to go for acceptable long-term storage, and
44 will continue to plague our waste storage sites with more and more barrels of poison, creating
45 more and more of a health and safety risk for the surrounding communities. *Producing this
46 waste is irresponsible, and licensing a facility that will do just that is undeniably irresponsible.*

47

1 **[193-03, Liz Woodruff, on behalf of the Snake River Alliance]** And we believe that the
2 storage of this radioactive waste, on site, in Idaho, poses an insurmountable risk to the licensing
3 of this facility. The enriched uranium then travels to a conversion facility, once again
4 transported, and then it's transported again to a reactor, where high-level radioactive waste in
5 the form of spent fuel is the result.
6

7 So how much waste is produced in the enrichment of uranium? Well, for one ton of enriched
8 uranium, seven tons of depleted uranium waste are produced, and this is a picture of depleted
9 uranium hexafluoride waste stored in Piketon, Ohio. You can see in the rusty cylinders on
10 concrete slabs. It's been sitting there for decades because the NRC has not established an
11 adequate disposal pathway for depleted uranium....
12

13 And the NRC has recently acknowledged this fact, and started a rule making process around
14 the disposal of depleted uranium meant to reclassify it, essentially, and find an adequate
15 disposal pathway.
16

17 So what have they decided? The NRC still wants to dispose of depleted uranium in shallow
18 dumps designed for a few hundred years. This is an inadequate disposal pathway. It has not yet
19 been an established rule it's a waste stream that becomes more radioactive, over time. There
20 are no deconversion facilities, and thus, it will be sitting above the Snake River aquifer for
21 decades.
22

23 Areva would add 320,000 metric tons of DUF6 to the current amount.
24

25 **Response:** *As discussed in Sections 4.2.11 and 4.13.4 of the EIS, AES intends to transport*
26 *depleted UF₆ to DOE facilities after temporary onsite storage for conversion and disposition by*
27 *the DOE (AES, 2010a), pursuant to Section 3113 of the 1996 USEC Privatization Act,*
28 *42 U.S.C. 2297h-11. On January 18, 2005, the NRC stated that, pursuant to Section 3113 of*
29 *the USEC Privatization Act, disposal at a DOE facility represents a plausible strategy for the*
30 *disposition of depleted uranium tails (NRC, 2005).*
31

32 *As stated in Section 4.13.3.5, DOE intends to reuse the conversion product to the maximum*
33 *extent possible or package it for disposal at an appropriate disposal facility (DOE, 2004a; DOE,*
34 *2004b; DOE, 2007a; DOE, 2007b; 72 FR 15870). DOE wastes disposed at DOE owned and*
35 *operated facilities are not subject to NRC or Agreement State licensing authority.*
36

37 *According to DOE Directive 435.1-1, if a non-DOE facility (e.g., a commercial facility) is used for*
38 *disposal of low-level radioactive waste, an exemption from DOE's policy of using only DOE*
39 *disposal facilities to manage radioactive wastes must be obtained (DOE, 2001). To obtain the*
40 *exemption, it must be shown that the non-DOE disposal facility complies with applicable*
41 *Federal, State, and local requirements, and has the necessary permits, licenses, and approvals*
42 *for the specific wastes to be disposed.*
43

44 *Commercial radioactive waste disposal facilities, in contrast to DOE disposal facilities, are*
45 *licensed by the NRC or designated Agreement State according to the requirements specified at*
46 *10 CFR Part 61 or compatible Agreement State regulations. Currently, the NRC is engaged in*
47 *rulemaking to specify a requirement for a site-specific analysis for the disposal of low-level*
48 *radioactive wastes, including large quantities of depleted uranium (NRC, 2009). In the interim,*

1 *compliance with the performance objectives specified in 10 CFR Part 61, Subpart C, continues*
2 *to provide reasonable assurance that low-level radioactive waste, including depleted uranium,*
3 *can be safely disposed at licensed facilities. On April 13, 2010, NRC staff summarized existing*
4 *policy and guidance to assist Agreement States in making informed decisions regarding*
5 *compliance with the performance objectives for land disposal of significant quantities of*
6 *depleted uranium until a new regulation is implemented (NRC, 2010a).*
7
8

9 **I.5.19 Socioeconomics**

10
11 **Comment:** The following comment asserts that economic risk should be given a higher priority
12 in the EIS.

13
14 **[050-13, Joanie Fauci]** The economic risk should be given a higher priority in the EIS.

15
16 **Response:** *The extent of the analysis of each resource area considered in the EIS is*
17 *dependent on its overall impact. As shown in Section 4.2.12 of the EIS, the NRC staff has*
18 *determined that the socioeconomic impacts of the proposed action would be SMALL.*
19 *Therefore, additional review is not warranted.*

20
21
22 **Comment:** The following comment outlines AES's position on the funding of the EREF project.

23
24 **[128-08, Bob Poyser]** Finally, let it be made clear. The Eagle Rock enrichment facility is being
25 fully funded through direct investment by AREVA, and like any major capital project, the balance
26 will be financed through a loan accompanied by interest charges, repayment schedules, and
27 certain protections for the lender.

28
29 AREVA will bear the full cost of construction and operation of the Eagle Rock enrichment
30 facility. Even the removal of depleted uranium from the site is accompanied by a payment to the
31 deconversion facility for its services.

32
33 In the final analysis, AREVA will bear the full cost of construction and operation.

34
35 **Response:** *The NRC acknowledges the comment.*

36
37
38 **Comment:** The following comment expresses EPA's interest in any information on how Tribes'
39 economic conditions would be enhanced because of the project.

40
41 **[138-09, Christine Reichgott, on behalf of the U.S. Environmental Protection Agency,**
42 **Region 10]** Since the project would result in economically beneficial impacts to the region, EPA
43 would be interested in any information on how Tribes' economic conditions would be enhanced
44 because of the project.

45
46 **Response:** *The socioeconomic impacts, beneficial or otherwise, on the Shoshone-Bannock*
47 *Tribes was included with the socioeconomic benefits to the citizens of Bannock, Bingham,*
48 *Caribou, and Power Counties, in which the tribes' reservation is located and most of the tribal*
49 *members in the region are believed to reside. It would be difficult to predict the specific benefits*

1 to, or enhancement of economic conditions of, the Tribes because of the difficulty in predicting
2 such factors as the number of tribal members who might be employed in some capacity by the
3 project.
4

5
6 **Comment:** The following comment asserts that the Socioeconomics part of the EIS has not
7 been given enough weight.
8

9 **[146-02, Doug Sayer]** So I want to point out in your EIS, when it comes to the socioeconomical
10 portion, that there is a piece that I don't think carried enough weight. You know, in the history of
11 nuclear energy in the last few years in the United States, the supply chain has broken down. As
12 we haven't had construction projects, it's deteriorated. I want to assure you, that's not the case
13 in Idaho. That network of suppliers is accredited, that understands the Code of Federal
14 Regulations, that understands safety significance, is alive and well. We encourage you to
15 pursue this license and approve it, so that we can get back to work and build these nuclear
16 projects like our country needs them.
17

18 **Response:** *The NRC staff acknowledges this comment and the technical expertise located in*
19 *the project area. The site selection process used by AES, as discussed in Section 2.3.1.3 of the*
20 *EIS, took the available construction and operations workforces into consideration as well as the*
21 *available technical resources. The analysis of the socioeconomic impacts took into account the*
22 *occupations likely to be required during construction and operation of the facility, and compared*
23 *them to the number of workers present in these occupations in the 11-county Region of*
24 *Influence (ROI) surrounding the site of the proposed facility. This information was then used to*
25 *estimate the number of in-migrating workers and their families likely to reside in this ROI, and*
26 *the potential impact in-migrants may have on housing, and on public and educational services.*
27 *The relatively small number of in-migrants likely to move into the ROI during these phases of*
28 *the project, and the likelihood that most in-migrants and their families are likely to live in urban*
29 *areas in this ROI, where there are good housing and educational choices and adequate existing*
30 *public service provision, will likely mean that the incremental impact of worker in-migration on*
31 *the provision of these resources in the ROI would be SMALL.*
32
33

34 **Comment:** The following comment expresses disagreement with the conclusions in the Draft
35 EIS on the socioeconomic effects of the proposed project.
36

37 **[150-08, Katie Seevers]** This concerns me, as does the prospect of an artificial local economy
38 supported by an unsustainable factory. In reference to table 2-6 of the draft EIS, I would like to
39 contest the conclusions drawn on the socioeconomic effects of the facility. Once it is
40 decommissioned, this area could very well resemble, economically speaking, so many of
41 Idaho's logging towns once the mill has been closed down. Tax dollars will be long gone, the
42 local area will quite probably be left with waste from the facility, and jobs that supported local
43 residents will be nonexistent.
44

45 **Response:** *In-migration of workers and their families associated with preconstruction,*
46 *construction, and operation of the proposed facility may require more teachers and other local*
47 *public service employees. However, the relatively small number of in-migrants likely to move*
48 *into the 11-county ROI during these phases of the project, and the likelihood that most in-*

1 *migrants and their families are likely to live in urban areas in this ROI, where there are good*
2 *housing and educational choices and adequate existing public service provision, will likely mean*
3 *that the incremental impact of worker in-migration on the provision of these resources in the ROI*
4 *would be SMALL, and unlikely to create “boom-bust” conditions. These impacts are described*
5 *in Section 4.2.12 of the EIS.*
6
7

8 **Comment:** The following comment questions the science and environmental research
9 supporting the analysis of impacts in the Draft EIS, including socioeconomic impacts.

10
11 **[181-02, Roger Turner]** And what is the science and environmental research behind the
12 endorsement of the AREVA project? Well, science and environmental risks are being
13 downplayed on this proposed project, because of job creation, and economic development.

14
15 **Response:** *The NRC staff believes it has provided an objective analysis in the EIS for all*
16 *resource areas, based on the requirements of NEPA and the NRC regulations for implementing*
17 *NEPA in 10 CFR Part 51. In the case of job creation and economic development, the*
18 *socioeconomic impacts, beneficial and adverse, were found to be SMALL as presented in*
19 *Section 4.2.12 of the EIS. Such a finding does not downplay the adverse impacts found in other*
20 *resource areas with SMALL-to-MODERATE or MODERATE impacts.*

21
22
23 **Comment:** The following comment expresses concern about the negative impact of the
24 proposed project on opportunities for hunting and fishing, due to the influx of people into the
25 area.

26
27 **[183-05 and 183-12, James Vincent]** My other main concern is personal. I live to hunt and fish
28 in Idaho. It is the main reason I love this state. I believe my opportunities to hunt and fish will be
29 severely limited if 1000 new residents are brought into Idaho Falls to work at this facility. There
30 will be many less opportunities to successfully apply for big game permits, and my favorite rivers
31 will be impacted with crowding. Already, there is talk of limiting the number of boats on the
32 South Fork of the Snake River. I am not the only resident who values Idaho outdoor activities,
33 and sustained controlled growth for the quality of Idaho life. I believe many of my neighbors also
34 live in Idaho Falls for the same reason.

35
36 **Response:** *Two hundred and sixty-six new temporary residents are expected in the 2-county*
37 *ROI, consisting of Bonneville and Bingham Counties, during the construction and*
38 *199 permanent residents are expected during operation of the proposed EREF, as discussed in*
39 *Sections 4.2.12.2 and 4.2.12.3 of the EIS. In general, the resulting impacts from the additional*
40 *residents would be SMALL, and the impact of these residents on the total number of big game*
41 *licenses issued by the State would also likely be SMALL.*

42
43
44 **Comment:** The following comments suggest that jobs and economic impacts should not be
45 considered in the EIS.

46
47 **[008-01, Carol Bachelder]** I know that this was an attempt to limit the discussion to the
48 environmental impact, but we have strayed, haven't we? Into jobs and economic projection.

1 **[087-04, Dennis Kasnicki]** Comment 3: This was a meeting on the Draft EIS.... I think ALL of
2 the attendees who commented in favor of this facility (perhaps in particular the “dignitaries” or
3 their representatives who commented) spoke from the standpoint of the potential economic
4 benefits of this plant to the area. Those comments were “off subject” and therefore distracting
5 and very inappropriate. I suppose this was a forum where anyone is free to say mostly anything,
6 but that IS a serious distraction and therefore a problem.
7

8 **[106-05, Ted McConaughy]** I think -- and as for jobs, I feel this is a fallacious argument that
9 should not be entertained in the environmental review process, because this is not a hearing on
10 jobs. As far as jobs goes, I think that any time we dedicate ourselves to building one facility,
11 especially something as massively expensive as this, we deprive ourselves of the opportunities
12 to build alternative facilities. That money is not going into research, and wind, or solar, or
13 biomass, or whatever. It's going into a single source, and we don't have that money back, so --
14 and any one of those sources would produce jobs. So I really would like to take the jobs issue
15 off the table. That's not to say it's unimportant, but it is to say that whatever we do, we will be
16 creating those jobs, and they will not be lost.
17

18 **Response:** *The economic impacts, including any benefits such as job creation, of the proposed*
19 *EREF are considered in the EIS analysis as presented in Section 4.2.12. While it is true that*
20 *other endeavors may produce jobs, the creation (or loss) of jobs is an integral part of the*
21 *socioeconomic impact analysis, as required under NEPA and the NRC's NEPA-implementing*
22 *regulations in 10 CFR Part 51, and is not “off subject.”*
23
24

25 **Comment:** The following comments address the issue of the influence of the proposed EREF
26 on future economic activity.
27

28 **[147-16, Joey Schueler]** 12. Even if one cannot accept that nuclear waste in Idaho could prove
29 hazardous, the sheer notion that a nuclear plant exists and nuclear waste resides and is
30 transported in our borders is a deterrent to other commercial interests and could hamper other
31 major industries from choosing Idaho as a site to locate their business, due to poor “livability”
32 incentives for their employee base.
33

34 **[184-04, Kitty Vincent]** They say the project will create jobs. Well, what might be lacking are
35 creative entrepreneurs who can help the Idaho Falls job market as my husband and I did when
36 we moved a fly line company to the city in the late 1990s. Idaho Falls has the potential to be a
37 major center for green energy products and projects. I have heard that most of the supposed
38 1000 jobs will actually be for people who are brought in to work on the project whose
39 qualifications meet the unique technical level of skill needed. Also, I truly believe property values
40 will be damaged by the presence of this facility as will the influx of new business. Who in their
41 right mind would come to a city that has a nuclear facility eighteen miles to the West at the foot
42 of one of the most active seismic areas in the country? Especially a facility that is owned and
43 managed by a company that has a history of problems?
44

45 **Response:** *In addition to the 590 direct jobs created at the proposed facility during the peak*
46 *year of construction, and the 550 direct jobs created during operations, the proposed EREF is*
47 *expected to produce 1097 indirect jobs in the 11-county ROI during the peak year of*
48 *construction and 2739 indirect jobs in this ROI during operations. On the other hand, while*

1 *there is no clear evidence to suggest that industrial and commercial plants and facilities are*
2 *averse to locating in areas with existing or proposed nuclear facilities, there is some evidence to*
3 *suggest that the perception of nuclear facilities may affect local property values, providing an*
4 *incentive for entrepreneurs and employees in some companies to look elsewhere for locations*
5 *for new plants and facilities. Text has been added to the EIS in Section 4.2.12 to summarize*
6 *these findings.*

7
8
9 **Comment:** The following comments express concern that the economic boost given to the
10 region is only temporary and that long-term impacts to the citizens of Idaho could be adverse.

11
12 **[032-06, Cindy Cottrell]** The jobs that this plant will produce will be few in comparison to the
13 cost of allowing it here. Maybe 300 people will get jobs that will not last forever, but only for the
14 lifetime of the plant. Right now it will cost tax payers would have to loan Areva \$2 billion. Other
15 types of energy would be much more worth the taxpayer's money. That's a lot of money for
16 300 jobs and waste to manage forever. Other kinds of energy that is less risky would be better
17 to invest in.

18
19 **[050-05, Joanie Fauci]** Another area I am very concerned about is economics.

20
21 • Many testifiers at the hearing were from the Idaho Falls area. They want jobs. They want jobs
22 now. They don't care about the future and their children's future in that area. Bringing nuclear
23 material to that area, with unknown future removal of it, is very short sighted. We should not be
24 sacrificing jobs now for a ruined environment for the rest of human life.

25
26 **[184-06, Kitty Vincent]** The idea that this will boost the economy of Idaho is short sighted.
27 Affected could be the lives of the future citizens in Idaho and the West.

28
29 **[189-01, Josh Well]** These jobs are temporary and nuclear waste is forever.

30
31 **Response:** *In addition to the 590 direct jobs created at the proposed facility during the peak*
32 *year of construction and the 550 direct jobs created during operations, the proposed EREF is*
33 *expected to produce 1097 indirect jobs in the 11-county ROI during the peak year of*
34 *construction and 2739 indirect jobs in the 11-county ROI during operations. On the other hand,*
35 *in Section 4.2.10 of the EIS, the NRC staff determined that impacts on human health from*
36 *preconstruction, construction, and operation of the proposed EREF would be SMALL. It was*
37 *determined in Section 4.2.11 that impacts from waste management, including the removal of all*
38 *radioactive material and waste from the proposed EREF by the end of the license period, would*
39 *also be SMALL.*

40
41
42 **Comment:** The following comments address the magnitude of the impact of employment,
43 income, and tax revenues, suggesting that the positive impacts are larger than those presented
44 in the EIS.

45
46 **[041-02, Hon. Tammy de Weerd; 156-02, Robert Simison, on behalf of Hon. Tammy de**
47 **Weerd]** We do feel that taking the "no action alternative" is not a viable option for the State of
48 Idaho, and believe, just by looking at the socioeconomic impacts, as others have stated, is valid

1 reasons why we should move this project forward. I just want to specifically point out that, you
2 know, while the draft EIS does list it as a small impact, due to the criteria that was used, in the
3 State of Idaho, that part of the region, the 11 counties over there, it is really not a small impact.
4 It has a tremendous impact, here, in the state, and we believe, as a city, that this will also
5 impact this side of the state, here, in the Treasure Valley, as we try to work more and more with
6 the products and services that are coming out of INL, and hope that there will be partnerships
7 that will come from the private industry as well as the research that's currently being done at
8 INL, that may answer questions that many people still might have about nuclear energy and
9 depleted uranium in the future. I think this could be a good partnership for the area.

10
11 **[098-03, Linda Martin]** The Regional Development Alliance has done several impact studies,
12 which have been noted in previous instances, and the positive local impact of diversifying the
13 tax base in Bonneville County is significant. Whereas the current annual tax rolls may reflect an
14 annual property tax income of a few hundred dollars, the Eagle Rock Enrichment Facility would
15 bring in approximately \$4 million.

16
17 We are looking forward to the thousands of jobs during the various phases. While all human
18 jobs and endeavors are subject to risk, this risk outweighs, by far -- I mean, this risk is
19 outweighed, by far, by the benefits of this project.

20
21 As an economic development agency, we are already receiving inquiries from projects
22 interested in this project, seeking to open new offices, and train and hire new employees.

23
24 This is a great thing for the economic health of our community and the State of Idaho. Quoting
25 testimony from the December 08 hearing in Idaho Falls: "We don't need a bailout. We need
26 AREVA."

27
28 **[098-10, Linda Martin]** The Regional Development Alliance conducted an IMPLAN economic
29 impact study regarding AREVA's Eagle Rock Enrichment Facility decision to locate in eastern
30 Idaho. The combined phases, for the purposes of this analysis, are expected to cover a
31 multiyear period (30-35 years) across three phases of development (design, construction,
32 operation) and would number in excess of \$5 Billion in total output.

33
34 The positive local impact of diversifying the tax base in Bonneville County, is significant.
35 Whereas the current annual tax rolls may reflect an annual property tax income of a few
36 hundred dollars, the Eagle Rock Enrichment Facility would bring in approximately \$4 Million.

37
38 As an economic development agency, we are already receiving inquiries from companies
39 interested in this project, seeking to open new offices, and train and hire new employees. This is
40 a great thing for the economic health of our community, and the state of Idaho. We are looking
41 forward to the thousands of jobs during the various phases of the project. And while all human
42 jobs and endeavors are subject to risk, this risk is outweighed by the benefits of the project.

43
44 Quoting previous testimony in December, 2008 from Rich Cartney "We don't need a bailout, we
45 need AREVA!"

46
47 **[124-02, Lane Packwood]** There is one -- I'd like to echo the comments of some of the other
48 speakers here tonight. We are somewhat surprised that the EIS finds that the economic and

1 fiscal benefits associated with the project to be small, and I think I just -- we -- we disagree that
2 it's small. It is, in fact, enormous. And just to put some perspective on the impact of this project,
3 just taking the numbers from peak facility construction alone, direct employment, 590 jobs, that
4 would decrease unemployment in the two county ROI by 10 percent. There's only 5100
5 unemployed workers in Bonneville and Bingham County. 590 jobs is an enormous impact. In
6 fact, the roll-up of all the jobs of the four phases examined nearly 3300 jobs. Just this project
7 alone would move Idaho unemployment by one-half a percent. So that is non-negligible impact
8 on employment in this state. The same with income generated by the project.... So, for
9 example, just the income generated by the 11 years leading up to full operation, just the
10 construction phases, is half a billion dollars, and that's almost five and a half times what the
11 estimate here, in Table 4-27, lists. The same with property taxes. Just a tremendous impact on
12 the economy. 2.8 million in income taxes generated, 6 million in sales and use taxes, 5.3 million
13 in property taxes. When the facility is operational, it'll be paying something like 3.5 million in
14 property taxes. Now Bonneville County only collects 23.8 million now, and just put that in some
15 perspective. What does that mean to a local economy? You know, 3.5 million is 58 teachers,
16 each year, year after year, just the average -- and that's the average salary, that's not starting
17 salary of teachers in Idaho. Fifty-eight. So I guess our point here tonight is just to encourage the
18 NRC to take a look at the economic impact, and to understand what a -- what a -- the scale of
19 the project, and we've heard various estimates of the overall cost, the capital expenditures, 2, 3,
20 4 million. Let's just say it's 3.5 billion. Let's just say that's the cap X of the project. Well, the
21 economy of the State of Idaho, the GDP is only 52 billion. That's 6.6 percent of our state GDP.
22 On a federal level, if we were to compare that to what size federal project would represent
23 6.6 percent of federal GDP, AREVA is to Idaho what a \$947 billion project out be to the national
24 economy. And that's bigger than the stimulus. So certainly not small in its impact.

25
26 **[164-01, Timothy Solomon]** The Regional Development Alliance is experienced in doing
27 economic impact analysis, and I want to congratulate you on the socioeconomics portion of the
28 EIS, which I'm going to address throughout my comments. We subsequently ran an additional
29 analysis based upon your numbers in the EIS, to see how those came out, and those job
30 numbers are "right on" in our estimation.

31
32 The job creation numbers for a region of this size are quite substantial. They are not an
33 insignificant impact on the state and on our region. 308 preconstruction jobs and
34 1,687 construction jobs will impact Idaho, in a very positive way, over the years in which those
35 activities take place. 3,289 direct, indirect, and induced jobs are also very, very significant
36 throughout the operational period.

37
38 The direct output effects of more than 315 million in the first full year of operations is not a small
39 impact, and provides a substantial base of potential business for local suppliers, service
40 providers, and sole proprietors, a very important part of our economy. Even if the output
41 remains static over a 20 year period, using the numbers in the EIS, the region would have a
42 base of 6.3 billion in total direct East Coast activity from which to draw for those business
43 opportunities over that operational period.

44
45 We do urge the NRC to take another look at your labor income numbers. We think they may be
46 slightly less than a project of this size, and a region of this size merits. However, if you just take
47 the 92.4 million that is outlined in the EIS, if you take that out over a 20 year operating history,

1 assuming no year-to-year change, we estimate nearly \$2 billion of labor income along on that
2 side of it.

3
4 The economic impact of AREVA's \$2 billion investment in Idaho is driven by capital investment
5 that leads to job creation. The Eagle Rock enrichment facility location in eastern Idaho is
6 absolutely critical to the economic vitality of the region. Real property has improved and begins
7 yielding tax revenues at a much higher level. New investments are made in tangible personal
8 property that keeps our manufacturing and processing capabilities and our job infrastructure on
9 the leading edge. Jobs are created; dollars are spent in the local economy. Business to
10 business and business to consumer transactions increase, real per capita income increase, tax
11 revenues throughout the area of impact, both direct and indirect, to the investment, increase,
12 and the general economy of the entire state is strengthened. And with that, we highly encourage
13 you strongly support the issuance of a license.

14
15 **[165-01, Hon. Lee Staker]** I won't get into a lot of details, other than to say the tax base of
16 Bonneville County is about \$5.9 billion, and you start looking at this as a tax base. Even though
17 the full taxes won't be from that, it is significant to Bonneville County.

18
19 **Response:** *Although the employment, income, and tax revenues created by the*
20 *preconstruction, construction and operation of the proposed facility may appear to be large,*
21 *when compared to the size of the economic and fiscal baseline of the 11-county ROI, the*
22 *employment impacts are SMALL. As discussed in Section 4.2.12 of the EIS, changes in total*
23 *(direct and indirect) employment during the peak year of construction would amount to less than*
24 *1 percent of total employment in the 11-county ROI. While the commenter is correct that*
25 *impacts are presented for discrete intervals for construction, preconstruction impacts occur only*
26 *in one year (2012), and operations impacts would be the same in each year beginning in 2022.*
27 *Chapter 7 of the EIS (Benefit-Cost Analysis) provides the total (i.e., summed over all years of*
28 *the project) employment, income, and fiscal impacts of the project. Labor income data and*
29 *assumptions used in the analysis of impacts have been verified.*

30
31
32 **Comment:** The following comments address the issues of financial incentives, including tax
33 breaks and the highway overpass grant, provided by the State of Idaho.

34
35 **[050-08, Joanie Fauci]** The State of Idaho has had to cut budgets everywhere. Yet somehow
36 they found money to loan to Areva and also provide tax breaks. This is wrong! I am mad that my
37 tax dollars have already been given to this project.

38
39 **[180-02, Kaye Turner]** Is it true the state of Idaho, i.e., the taxpayers are giving this company
40 huge tax breaks to build this nuclear plant?

41
42 **[098-02, Linda Martin]** Under economic impacts, there are no Idaho taxes directly going to
43 support the construction of this facility. As a group which encouraged the grassroots statewide
44 support of the legislation, it should be noted that it not only applies to AREVA, but to any other
45 new capital investment of similar magnitude. These are earned benefits to any company which
46 chooses to invest in Idaho, of similar monetary amounts. The DOE issued a federal loan
47 guarantee, not a federal loan. This was based on the technical ability and the creditworthiness
48 of AREVA, currently a U.S. corporation.

1 **[098-09, Linda Martin]** Economic Impacts: There are NO Idaho taxes directly going to support
2 the construction of this facility. As a group which encouraged the grassroots statewide support
3 of the legislation, it should be noted that it not only applies to AREVA, but to any other new
4 capital investment of similar magnitude. These are *earned* benefits to companies choosing to
5 invest in Idaho. The DOE issued a federal loan guarantee – not a federal loan. This was based
6 on technical ability and financial credit worthiness from AES, and American corporation.
7

8 **[106-03, Ted McConaughy]** Another concern I have here is this idea that government should
9 subsidize these industries, and we have Bob Poyser from AREVA saying, in quotes here:
10 “AREVA will bear full costs.” And so far, they have not. So far, the state throws in money for the
11 ‘interchange for nowhere’ and there’s other subsidies that come, right and left. And I think that
12 even the Tea Party people ought to be upset about these government facilities for this
13 construction here. We all ought to say no--AREVA should be funding this stuff, not the
14 government.
15

16 **[150-06, Katie SeEVERS]** My final concern I would like to address tonight are the economic
17 implications associated with this facility. The company who is creating this facility is French, and
18 its production of enriched uranium in the United States does not result in domestic control of
19 that product as addressed in the draft EIS, section 2-17. In spite of this, the State of Idaho has
20 “bent over backwards,” awarding tax exemptions funded by Idaho taxpayers. Additionally, the
21 Department of Energy has provided a \$2 billion loan guarantee with more of our tax dollars, and
22 then, to top all of this off, Idaho Department of Labor and Commerce granted \$750,000 towards
23 an overpass. Perhaps we could just write everybody in Bonneville County a check. All the same,
24 a substantial portion of our state and federal tax dollars are being allocated towards a facility
25 which will be decommissioned within 30 years.
26

27 **[182-03, Brianna UrSEnbach]** Assuming that the U.S. uranium fuel supply is insecure, it is
28 clear that the EREF will not fix it, and although it is not specifically related to the EIS, it is worth
29 noting that the federal and state tax dollars are being used to subsidize this project. Thus EREF
30 provides no tangible security improvements to the American people, but it does lay a financial
31 burden on them.
32

33 **[183-04, James Vincent]** My other issue is about estimates of uranium throughout the world.
34 The research I have done shows that there’s somewhere between 50 years at the low end, and
35 100 years on the optimistic side. Why would we utilize a technology that costs literally billions of
36 dollars to implement, with public tax dollars for a loan guarantee, and I realize that it is a
37 guarantee, and Idaho tax incentives for a limited time technology? Even 100 years is not very
38 long, as far as reserves.
39

40 **[183-11, James Vincent]** My research has found known estimates world wide of uranium
41 somewhere between 50 years on the low end and 100 years on the optimistic side. Why would
42 we utilize a technology that costs literally billions of dollars to implement with public tax dollars
43 for a loan guarantee and Idaho tax incentives for a limited time technology, Even 100 years is
44 not very long as far as reserves.
45

46 **[184-07, Kitty Vincent]** Areva’s proposed Eagle Rock Enrichment Facility (EREF) will store
47 radioactive waste above the sole source aquifer for nearly 300,000 people; impact sensitive
48 species; require the transport of radioactive materials; impair the Hell’s Half Acre National

1 Monument; support destruction of the John Leopard homestead, which has been recommended
2 for the National Register of Historic Places; devour billions of dollars in state and federal
3 largess; and obliterate farmland that is potentially protected by the federal government. The
4 Alliance is here to say it is not worth the risk.

5
6 **[191-25, Liz Woodruff]** State and federal largess. • In 2008, the state of Idaho showered Areva
7 with huge tax breaks funded by Idaho taxpayers, including a cap on property tax valuation at
8 \$400 million and unnecessary sales tax exemptions....

9
10 • Not convinced the state had already done enough, the state Departments of Labor and
11 Commerce gave Areva \$750,000 to help offset the cost of a highway interchange at its site,
12 even though the project hadn't been approved by the NRC and sidestepping traditional Idaho
13 Transportation Department review.

14
15 **Response:** *The NRC staff acknowledges these comments. However, the tax issues discussed*
16 *in the comment above are not issues in which the NRC is involved.*

17
18
19 **Comment:** The following comments concern the DOE loan guarantee.

20
21 **[032-06, Cindy Cottrell]** The jobs that this plant will produce will be few in comparison to the
22 cost of allowing it here. Maybe 300 people will get jobs that will not last forever, but only for the
23 lifetime of the plant. Right now it will cost tax payers would have to loan Areva \$2 billion. Other
24 types of energy would be much more worth the taxpayer's money. That's a lot of money for 300
25 jobs and waste to manage forever. Other kinds of energy that is less risky would be better to
26 invest in.

27
28 **[050-07, Joanie Fauci]** • The State of Idaho has had to cut budgets everywhere. Yet somehow
29 they found money to loan to Areva and also provide tax breaks. This is wrong! I am mad that my
30 tax dollars have already been given to this project.

31
32 • I have read that loan guarantees are frequently defaulted on. With the existing track record of
33 these, the US government/NRC, should not be offering any to Areva or any other company.

34
35 **[098-02, Linda Martin]** Under economic impacts, there are no Idaho taxes directly going to
36 support the construction of this facility. As a group which encouraged the grassroots statewide
37 support of the legislation, it should be noted that it not only applies to AREVA, but to any other
38 new capital investment of similar magnitude. These are earned benefits to any company which
39 chooses to invest in Idaho, of similar monetary amounts. The DOE issued a federal loan
40 guarantee, not a federal loan. This was based on the technical ability and the creditworthiness
41 of AREVA, currently a U.S. corporation.

42
43 **[098-09, Linda Martin]** Economic Impacts: There are NO Idaho taxes directly going to support
44 the construction of this facility. As a group which encouraged the grassroots statewide support
45 of the legislation, it should be noted that it not only applies to AREVA, but to any other new
46 capital investment of similar magnitude. These are *earned* benefits to companies choosing to
47 invest in Idaho. The DOE issued a federal loan guarantee – not a federal loan. This was based
48 on technical ability and financial credit worthiness from AES, and American corporation.

1 **[103-06, Karen McCall]** Areva wants US Federal loan guarantees in the amount of \$2 billion
2 dollars. US taxpayers would get far more energy for that money spent on renewables. An
3 analysis by Idaho Power shows that nuclear power would cost significantly more per megawatt
4 hour than wind, geothermal and biomass.
5

6 **[145-02, Ann Rydalch]** I urge the NRC to continue to listen to scientific facts and to disregard
7 untruthful or scare tactic statements, statements such as DOE is giving \$2 billion loan
8 guarantee, a misleading statement, because no money exchanges hands. DOE is not giving
9 AREVA the 2 billion dollars. However, by it being included in the Loan Guarantee program,
10 AREVA and other companies in that program will be able to possibly receive lower interest
11 rates. It's like the Good Housekeeping Seal of Approval.
12

13 **[154-03, Diana Shipley]** They are asking for loan guarantees from the United States
14 government and I wonder who will be left to clean up the waste and pay the bills if they bail out?
15

16 **[157-06, Hon. Erik Simpson]** I'd like to address some misconceptions I've read in Idaho's
17 newspapers, and read on the internet about this project. First, financing. AREVA was recently
18 awarded a \$2 billion loan guarantee by the Department of Energy. First, a federal loan guarantee
19 is not a taxpayer loan. It is not a bailout. A federal loan guarantee allows a company like AREVA
20 to secure a loan from a lender with the credit backing of the United States Government. This
21 arrangement allows a company to secure a better interest rate.
22

23 **[168-02, Lon Stewart]** Areva, a French government owned company, should not be subsidized
24 by the United States to build and operate a plant in the United States. What logical business
25 person would loan a foreign company \$2 billion dollars to build a plant that WILL have cost
26 overruns while under construction, where similar projects have a loan default rate of 50%,
27 where the company can declare bankruptcy and just leave the US., and the company does not
28 pay any royalties to the US? Doesn't sound good to me.
29

30 **[180-01, Kaye Turner]** I have nothing but questions that I hope will be answered honestly and
31 accurately before Areva is given permission to build their plant. Is it true the U.S. government, is
32 giving this company a \$2 billion loan guarantee to build this nuclear plant? And if Areva fails, we
33 the tax payers pick up the tab?
34

35 **[182-03, Brianna Ursenbach]** Assuming that the U.S. uranium fuel supply is insecure, it is
36 clear that the EREF will not fix it, and although it is not specifically related to the EIS, it is worth
37 noting that the federal and state tax dollars are being used to subsidize this project. Thus EREF
38 provides no tangible security improvements to the American people, but it does lay a financial
39 burden on them.
40

41 **[183-04, James Vincent]** My other issue is about estimates of uranium throughout the world.
42 The research I have done shows that there's somewhere between 50 years on the low end and
43 100 years on the optimistic side. Why would we utilize a technology that costs literally billions of
44 dollars to implement, with public tax dollars for a loan guarantee, and I realize that it is a
45 guarantee, and Idaho tax incentives for a limited time technology? Even 100 years is not very
46 long, as far as reserves.
47

1 **[183-11, James Vincent]** My research has found known estimates world wide of uranium
2 somewhere between 50 years on the low end and 100 years on the optimistic side. Why would
3 we utilize a technology that costs literally billions of dollars to implement with public tax dollars
4 for a loan guarantee and Idaho tax incentives for a limited time technology, Even 100 years is
5 not very long as far as reserves.
6

7 **[184-07, Kitty Vincent]** Areva's proposed Eagle Rock Enrichment Facility (EREF) will store
8 radioactive waste above the sole source aquifer for nearly 300,000 people; impact sensitive
9 species; require the transport of radioactive materials; impair the Hell's Half Acre National
10 Monument; support destruction of the John Leopard homestead, which has been recommended
11 for the National Register of Historic Places; devour billions of dollars in state and federal
12 largess; and obliterate farmland that is potentially protected by the federal government. The
13 Alliance is here to say it is not worth the risk.
14

15 **[187-05, John Weber]** Also, the US citizens bear most of the risk by giving the French
16 company multiple tax benefits and loan guarantees. Is it true the estimated cost of
17 decommissioning the plant is 3.5 billion U.S. dollars?
18

19 **[191-26, Liz Woodruff]** Warned by Areva that it probably wouldn't build the enrichment factory
20 without US taxpayer support, the Department of Energy reached into your pockets to grant the
21 French-owned company a \$2 billion loan guarantee.
22

23 **Response:** Section 1703 of Title XVII of the Energy Policy Act of 2005 authorizes the DOE to
24 support innovative clean energy technologies that are typically unable to obtain conventional
25 private financing due to high technology risks. In addition, the technologies must avoid, reduce,
26 or sequester air pollutants or anthropogenic emissions of greenhouse gases. Technologies
27 considered include: biomass, hydrogen, solar, wind/hydropower, nuclear, advanced fossil
28 energy coal, carbon sequestration practices/technologies, electricity delivery and energy
29 reliability, alternative fuel vehicles, industrial energy efficiency projects, and pollution control
30 equipment. DOE's mission is to accelerate the domestic commercial deployment of innovative
31 and advanced clean energy technologies at a scale sufficient to contribute meaningfully to the
32 achievement of national clean energy objectives. A loan guarantee is a contractual obligation
33 that the Federal Government will cover the debt obligation in the event of a default. In May
34 2010, the DOE issued a conditional commitment for a Federal loan guarantee to AES for the
35 proposed EREF. The award of the loan guarantee is contingent on a number of conditions
36 being met prior to loan closure, including issuance of the NRC license for the EREF. More
37 information on the DOE loan guarantee program is available at [http://lpo.energy.gov/
38 ?page_id=29](http://lpo.energy.gov/?page_id=29).
39
40

41 **Comment:** The following comments stress the importance of the economic boost that the
42 proposed EREF would have on the Idaho Falls area and the region.
43

44 **[026-02, Rob Chiles]** Over the last few years, the business community, and members of the
45 Chamber of Commerce, have shown tremendous support for this important economic
46 development project. The positive impacts are obvious. With so many America manufacturing
47 jobs going out of the country, we welcome AREVA's investment and the creation of jobs for U.S.
48 workers.
49

1 **[026-03, Robb Chiles]** I appreciate your time and the opportunity to speak to you on this truly
2 important project. We support your recommendation to grant a license for this project. As Mr.
3 Packwood so eloquently put in his -- regarding economic benefits, it just makes good business
4 sense.

5
6 **[034-07, Greg Crockett]** We do, however, disagree on the scoring of the socioeconomic
7 impacts. We believe that when you combine the four phases of the project over 30-35 years of
8 prospective operations, the total economic benefit to the region and state will be much higher
9 than stated in the Draft EIS.

10
11 **[038-01, Brian Davidson]** That plant will help Idaho stay on the forefront of nuclear power
12 technology and add as well as attract badly-needed good-paying jobs to our area of the state.

13
14 **[039-03 and 039-06, Kreg Davis]** Second, the Areva project is good for the economy, both in
15 the short and long run. In the short run, it will create many Idaho jobs, both in Idaho Falls and
16 Boise. A modest estimate of jobs created will number in the thousands. In addition, many more
17 jobs will be saved. In my industry—my company, my customers, my suppliers, my competitors
18 even the State of Idaho's DBS — I am aware of many Treasure Valley jobs that depend on
19 Areva's success.

20
21 I ask every Boise/Treasure Valley elected official to speak directly with your business
22 community and especially with anyone in the construction business. We have been among the
23 hardest hit during these difficult economic times. Ask these businesses and their employees —
24 your constituents — if Areva's project will save and create Boise jobs. If you have doubts, call
25 me. I can introduce you to many Boise/Treasure Valley based businesses and employees who
26 hope this Areva project is a success.

27
28 **[041-02, Hon. Tammy de Weerd; 156-02, Robert Simison, on behalf of Hon. Tammy de**
29 **Weerd]** We do feel that taking the "no action alternative" is not a viable option for the State of
30 Idaho, and believe, just by looking at the socioeconomic impacts, as others have stated, is valid
31 reasons why we should move this project forward..

32
33 I just want to specifically point out that, you know, while the draft EIS does list it as a small
34 impact, due to the criteria that was used, in the State of Idaho, that part of the region, the 11
35 counties over there, it is really not a small impact. It has a tremendous impact, here, in the state,
36 and we believe, as a city, that this will also impact this side of the state, here, in the Treasure
37 Valley, as we try to work more and more with the products and services that are coming out of
38 INL, and hope that there will be partnerships that will come from the private industry as well as
39 the research that's currently being done at INL, that may answer questions that many people
40 still might have about nuclear energy and depleted uranium in the future.

41
42 **[043-01, Rocky Deschamps]** I am going to speak just a little bit, and I won't take much time.
43 I'm going to talk a little bit about, I spent six years on the Bingham County Planning and Zoning
44 Commission, the last two years as chairman of that Commission, and there's one area here on
45 the Environmental Impact Statement that I'd just like to maybe touch just a little bit of base on,
46 and it talks about, it's anticipated the number of workers moving into the area during each phase
47 of the proposed project they call them migration workers, that might have some impact on the
48 schools, health care, law enforcement, availability, cost of public utilities, such as electric, water,

1 sanitary, road, number of migrating workers expected during the construction and operations
2 might impact the housing.

3
4 My time on the Bingham County Planning and Zoning, we encourage businesses because our
5 schools are crying out, we need more students. We're actually declining in our number of youth
6 in our schools. Our roads are very adequate. Our schools are adequate. We have an
7 infrastructure here in southeast Idaho because we are so used to having INL, we have the
8 colleges here that can train the workers. We have the high schools that are there that are ready
9 to accept anything new that we might have in this area in the schools. We have multiple,
10 multiple infrastructure in place because of the INL, and the experience we have with the INL out
11 there.

12
13 Also, I've been involved with the supply side. We have contractors in this area that are so
14 familiar with the requirements to build a facility like this, that it's just -- you don't find that in a lot
15 of areas. We also have suppliers that are used to supplying the specifications, the ASTM
16 specifications that are required on a nuclear facility to do that, so we are very able to take on a
17 facility like this, and take care of it, and do what we need to do.

18
19 **[047-01, Mark Dunham]** I'm excited about the positive impact of the AREVA project. We
20 believe this will be a major boost to Idaho's employment base, and my members are ready to be
21 a part of this project, and to assist in any way that we can.

22
23 I have 840 member companies in Idaho, with close to 200 in Eastern Idaho alone. Idaho's
24 contractors are ready to help with the construction of necessary infrastructure and facilities for
25 this important project.

26
27 On Saturday, Ken Simonson, who's the chief economist of the Associated General Contractors
28 of America, was in Idaho speaking to my members about the dismal state of the economy. He
29 told my members that Idaho's construction employment rate is at the same level as it was in
30 December of 1994. In my industry, it is about jobs, and it is about money, because that
31 translates into helping your families stay in Idaho, raise their future generations in Idaho. So we
32 think this will be helpful.

33
34 As a result, the importance of projects like the AREVA Eagle Rock enrichment plant cannot be
35 underestimated. Not only will the plant help with our nation's energy situation; it will have a
36 significant impact on Idaho's economy in terms of jobs.

37
38 Analysis of this project shows that the project will have economic benefits such as creating
39 almost 5000 direct, and indirect, jobs through the life of the project. It will also result in billions of
40 dollars in additional investment into Idaho's economy, and families, at a time the state would
41 benefit from increased economic development.

42
43 A George Mason University study commissioned by the AGC of America about infrastructure
44 investment, in general, says, indicates the construction jobs created would have significant
45 other impacts on the economy.

46
47 There would be indirect jobs from supplying construction materials and services. Most jobs
48 would be in the State of Idaho. There would also be additional jobs created when the

1 construction and supplier workers, and owners, spend their additional incomes throughout the
2 state's economy.

3
4 **[054-01, Paul Fullmer]** Areva is good for the community and economy just because for the
5 simple fact that it is cheaper on the electricity and it produces more jobs for Idaho.

6
7 **[062-01, Trevor Grigg]** And, you know, I want the same opportunity of prosperity that my
8 parents have had, and I know that these acquaintances and these friends, they want the same
9 opportunity of prosperity, and I think that this economic benefit that comes to our state through
10 this project is huge, and it gives us that opportunity.

11
12 **[065-02, Hon. Ida Hardcastle]** I spend a large amount of time in the city among the residents
13 and it is exciting to feel the enthusiasm most have for this project coming to Idaho Falls. Of
14 course the main interest is the economic impact it will have on the area, in other words - jobs.
15 Also the community supports the fact that there will be a very small environmental impact from
16 this facility. We thank the NRC again for their efforts in this particular concern. We have a top
17 notch workforce here which was recognized by AREVA in the beginning. The community as a
18 whole supports energy being produced by nuclear power. We simply have to address our
19 independence on foreign oil.

20
21 **[073-02, Mark Holzmer]** The Areva project has the potential to significantly improve the
22 economic base in southeast Idaho – impacts which are not small to moderate, but will have
23 immediate positive effects on our economy.

24
25 **[080-01, Don Johnson]** And I would just have to say that I represent a lot of people that this
26 job would really help. I've lived here all my life. I've raised my family. I've got five grandkids, and
27 I hope that this would help them in the future find employment, because God knows that we all
28 need more jobs in this state. So, I would highly recommend that you accept this application.

29
30 **[098-03, Linda Martin]** The Regional Development Alliance has done several impact studies,
31 which have been noted in previous instances, and the positive local impact of diversifying the
32 tax base in Bonneville County is significant. Whereas the current annual tax rolls may reflect an
33 annual property tax income of a few hundred dollars, the Eagle Rock Enrichment Facility would
34 bring in approximately \$4 million.

35
36 We are looking forward to the thousands of jobs during the various phases. While all human
37 jobs and endeavors are subject to risk, this risk outweighs, by far -- I mean, this risk is
38 outweighed, by far, by the benefits of this project.

39
40 As an economic development agency, we are already receiving inquiries from projects
41 interested in this project, seeking to open new offices, and train and hire new employees.

42
43 This is a great thing for the economic health of our community and the State of Idaho. Quoting
44 testimony from the December 08 hearing in Idaho Falls: "We don't need a bailout. We need
45 AREVA."

46
47 **[123-03, Hon. Butch Otter; 090-03, Paul Kjellander, on behalf of Hon. Butch Otter; 195-03,**
48 **Hon. Jeff Thompson, on behalf of Hon. Butch Otter]** First, the Eagle Rock project will

1 provide a much-needed stabilizing economic force in Idaho Falls, and the southeastern Idaho
2 region. Second, the facility will create much-needed high-quality jobs for the dedicated
3 workforce in the area. Eagle Rock will create thousands of construction and contractor jobs, and
4 in 30 years of operation, hundreds of long-term, high-end positions.
5

6 **[128-01, Bob Poyser]** We welcome this opportunity to provide factual information about our
7 project to Boise and the surrounding communities. Assuming we are granted a license next
8 year, those in Boise, who make the trip to Idaho Falls by way of Highway 20, will see the
9 beginning of an important step towards our nation's energy independence, the development of a
10 significant investment in Idaho, and construction of an American facility which will provide jobs
11 to American workers, and strength to the local economy.
12

13 **[128-07, Bob Poyser]** Eagle Rock will have a significant impact on the local and regional
14 economy. This facility will create much-needed jobs for Idaho workers. During construction, we'll
15 create about a thousand jobs locally, and support thousands more regionally. This is a
16 construction effort that will run for nearly seven years. Within two years from today, AREVA will
17 begin to hire and train a workforce that will eventually exceed 400 people, to operate and
18 maintain the Eagle Rock facility over the next 30 years of operating life.
19

20 We believe this is a positive, is positive news to the many hard-working people in Idaho who are
21 struggling with difficult economic conditions.
22

23 **[133-10, Richard Provencher]** For the community of Idaho Falls, the pursuit of this facility will
24 help bring jobs to the area, and potentially help with workers being displaced from the highly
25 successful Idaho Cleanup Project as it completes cleanup work. Studies have been performed
26 on jobs in the area which shows for every new job there is a secondary benefit of 1.8 to the
27 surrounding community-this will result in even more benefit to the community.
28

29 **[135-02, Hon. Dave Radford]** We're happy with the prospects. We're optimistic about the jobs.
30 Serving my third term, and recently running for re-election for my fourth term, the people that I
31 talked to on the street, it was all about jobs, jobs, jobs. That's what they were interested in, and
32 how can we promote that, how can we keep the quality of life that we have here in eastern
33 Idaho, but still further enhance our energy independence?
34

35 **[137-01, Ralph Reeves]** 1. This plant will add to our exports, which is desperately needed.
36

37 **[137-03, Ralph Reeves]** 3. This plant will result (in time) in a well trained work force with skills
38 that can be transferred to other jobs.
39

40 **[137-04, Ralph Reeves]** 4. This plant will likely foster support establishments which will likely
41 result in exports and well trained workers.
42

43 **[155-02, Jerry Shivly]** It was going to help Idaho Falls, because it was going to produce jobs.
44 And at that time, even in 2008 jobs were starting to fall off. And it's going to energize Idaho Falls
45 because every time new people come, they bring some of themselves. And we get together and
46 find out that we are better, and that we have a better product amongst us. The arts thrive, the
47 schools thrive, and we all thrive. And I am very much in favor of AREVA coming to Idaho Falls.
48

1 **[185-01, Wade Virgin]** What would AREVA do? My understanding is, and I hope my figures
2 are correct, it would bring 800 to 1,000 jobs to this area for construction, with several hundred
3 other jobs coming afterwards. I spent some time not long ago on the internet, and looked at
4 some of their jobs, and how well they pay. There would not only be jobs, there would be
5 secondary jobs that would be brought to this area.
6

7 I guess I can only say, and be brief in saying it, but I fully support, in fact, I strongly encourage
8 the application be approved for AREVA located here in the Idaho Falls area.
9

10 **[163-01, Cindy Smith-Putnam]** On behalf of Grow Idaho Falls, and although you and others
11 have already done a good job capturing it in the process leading up to the Draft EIS, I simply
12 cannot overstate the positive socioeconomic impacts this project would bring. Even now in this
13 very early stage, we are already seeing transportation improvements easing the flow of current
14 traffic along U.S. Highway 20 corridor, and that's because we've asked our officials to
15 anticipate, plan for, and assess these future needs, and to address them in advance. But when
16 it comes to economic development, this project's significance reaches far beyond the obvious
17 direct impact of jobs creation, dramatic expansion of tax revenues for our cash strapped state,
18 infrastructure development, and the multiplier effect of all of those dollars.
19

20 **[164-01, Timothy Solomon]** The Regional Development Alliance is experienced in doing
21 economic impact analysis, and I want to congratulate you on the socioeconomics portion of the
22 EIS, which I'm going to address throughout my comments.
23

24 We subsequently ran an additional analysis based upon your numbers in the EIS, to see how
25 those came out, and those job numbers are "right on" in our estimation.
26

27 The job creation numbers for a region of this size are quite substantial. They are not an
28 insignificant impact on the state and on our region. 308 preconstruction jobs and
29 1,687 construction jobs will impact Idaho, in a very positive way, over the years in which those
30 activities take place. 3,289 direct, indirect, and induced jobs are also very, very significant
31 throughout the operational period.
32

33 The direct output effects of more than 315 million in the first full year of operations is not a small
34 impact, and provides a substantial base of potential business for local suppliers, service
35 providers, and sole proprietors, a very important part of our economy.
36

37 Even if the output remains static over a 20 year period, using the numbers in the EIS, the region
38 would have a base of 6.3 billion in total direct East Coast activity from which to draw for those
39 business opportunities over that operational period.
40

41 We do urge the NRC to take another look at your labor income numbers. We think they may be
42 slightly less than a project of this size, and a region of this size merits. However, if you just take
43 the 92.4 million that is outlined in the EIS, if you take that out over a 20 year operating history,
44 assuming no year-to-year change, we estimate nearly \$2 billion of labor income along on that
45 side of it.
46

1 The economic impact of AREVA's \$2 billion investment in Idaho is driven by capital investment
2 that leads to job creation. The Eagle Rock enrichment facility location in eastern Idaho is
3 absolutely critical to the economic vitality of the region.

4
5 Real property has improved and begins yielding tax revenues at a much higher level. New
6 investments are made in tangible personal property that keeps our manufacturing and
7 processing capabilities and our job infrastructure on the leading edge.

8
9 Jobs are created; dollars are spent in the local economy. Business to business and business to
10 consumer transactions increase, real per capita income increase, tax revenues throughout the
11 area of impact, both direct and indirect, to the investment, increase, and the general economy of
12 the entire state is strengthened.

13
14 And with that, we highly encourage you strongly support the issuance of a license, and I thank
15 you, once again.

16
17 **[176-03, Hon. Jeff Thompson]** It is estimated the local region will see more than \$5 billion in
18 economic impact, and 5,000 in direct and indirect jobs will be created throughout the United
19 States for this contract.

20
21 **[178-02, Randy Trane]** This is a project that will serve two purposes. It will allow nuclear power
22 to serve the world and it will help the economy in the Eastern Idaho area with much needed
23 employment. I have several friends who are experts in the nuclear power industry and they are
24 telling me that this project will not have any negative impact on the environment in this area.

25
26 **[190-01, Dave Whaley]** The Idaho State AFL-CIO, representing approximately 24,000 affiliates
27 across the State of Idaho, would like to go on record in support of the AREVA Enrichment
28 Service's proposed gas centrifuge uranium enrichment plant being built in Eagle Rock, Idaho.

29
30 Idaho, like the rest of the United States, is experiencing record high unemployment. The jobs
31 this site will provide for the construction industry as well as future operation jobs when the
32 facility is complete will be instrumental in Idaho's economic recovery

33
34 **Response:** *The NRC acknowledges these comments and appreciates the public participation.*

35 36 37 **I.5.20 Environmental Justice**

38
39 No comments were received on the Environmental Justice section of the Draft EIS.

40 41 42 **I.5.21 Accidents**

43
44 **Comment:** The following comment expresses concern regarding worker safety associated with
45 accidents at the proposed EREF.

46
47 **[049-01, Victoria Everett]** But I'm concerned about the workers. It says you're providing jobs.
48 How safe are these jobs? You know, coal mines provide jobs, but they're not very safe jobs,

1 and, you know, it wasn't addressed, on the safety of the workers. If there is an accident, how
2 safe are these workers? Who pays for, you know, the damage done to them, and taking care of
3 their families?
4

5 **Response:** *The proposed EREF will be designed with a number of features that would protect*
6 *workers and mitigate the effects of accidents, as described in Section 4.2.15.3 of the EIS. In*
7 *addition to physical design features such as barriers, ventilation systems, and alarms, an*
8 *Emergency Plan would be implemented to minimize the consequences of accidents to workers.*
9 *Liability for payment for damages to workers would depend on the particular circumstances of*
10 *an accident. AES would be liable for cleanup costs for accident consequences at the proposed*
11 *EREF.*
12
13

14 **Comment:** The following comment asks if AES's Integrated Safety Assessment (ISA)
15 addresses all credible accident scenarios whereby depleted uranium (or other contamination)
16 could get into the Snake River Aquifer.
17

18 **[087-02, Dennis Kasnicki]** Comment 2a: Many attendees expressed concern regarding
19 contamination, especially depleted uranium, getting into the Snake River Aquifer; *that*, by far,
20 seemed to be the biggest concern, and rightfully so. Does AREVA's Integrated Safety
21 Assessment address ALL CREDIBLE accident scenarios whereby depleted uranium (or other
22 contamination) could get into the Snake River Aquifer? Are the "probabilities" of all such
23 scenarios deemed at least "highly unlikely", or otherwise meet the requirements of 10 CFR 70?
24 If so, or if not, this should be loudly and clearly "called out" in the Draft EIS.
25

26 **Response:** *AES's ISA (AES, 2010b) considered all credible accidents at the proposed EREF.*
27 *The analysis considered the consequences and the likelihood of each accident sequence.*
28 *Consequences included offsite impacts on the public and on the environment from airborne*
29 *releases of UF₆ and other forms of uranium resulting from an accident. Only accidents involving*
30 *an airborne release can conceivably result in significant quantities of uranium being released*
31 *because of the physical properties of the uranium materials used in the process. The*
32 *environmental consequences of UF₆ releases are analyzed in more detail in Section 4.2.18.2 of*
33 *the EIS. This section analyzes the consequences of a UF₆ release resulting from a terrorism*
34 *event and concludes that areas contaminated by deposition of airborne plumes of uranium*
35 *would be cleaned up to levels that would be protective of human health. Cleanup levels would*
36 *be determined through a risk analysis that would include analysis of a groundwater exposure*
37 *pathway. Cleanup of surface contamination would minimize possible migration of uranium to*
38 *the Eastern Snake River Plain Aquifer. Even in the absence of cleanup, it is unlikely that*
39 *uranium at levels of health concern could reach the aquifer from the surface in the vicinity of the*
40 *proposed EREF due to adsorption of uranium by soils of greater than 200 m (660 ft) thick*
41 *overlying the aquifer (see EIS Section 3.7.2.2).*
42
43

44 **Comment:** The following comment states that sensitive population exposure scenarios need to
45 be developed and addressed, not just from a worker standpoint but also from a member of the
46 public standpoint.
47

1 **[036-04, Christina Cutler, on behalf of the Shoshone-Bannock Tribes]** Sensitive population
2 exposure scenarios need to be developed and addressed, not just from a worker stand point but
3 also from a member of the public stand point.
4

5 **Response:** *As presented in Section 4.2.15 of the EIS, doses to members of the public are*
6 *evaluated ranging from a person at the site boundary to the entire collective population within*
7 *80 kilometers (50 miles) of the proposed EREF site. Health effects from potential exposures*
8 *were evaluated using State of Idaho or NRC reference values. These values included Idaho's*
9 *ambient air quality standard for HF (for routine emissions) and radiological exposure limits from*
10 *10 CFR Part 20. For accidents, the NRC staff used threshold consequence levels for exposure*
11 *to uranium and HF given in 10 CFR 70.61 and EPA's Acute Exposure Guideline Levels*
12 *(AEGs). The NRC staff believes that the reference values used are appropriate for evaluating*
13 *potential health impacts from operation of EREF on potentially impacted populations, including*
14 *workers, members of the public, and sensitive subpopulations.*
15
16

17 **Comment:** The following comment asks about how AES will respond to accident scenarios on
18 the proposed EREF site and how the public will be informed.
19

20 **[129-01, Willie Preacher, on behalf of the Shoshone-Bannock Tribes]** A question arose on
21 safety issues, how AREVA will respond internally to accident scenarios on the proposed site,
22 and how the public will be informed.
23

24 **Response:** *AES would respond to an accident in accordance with the EREF Emergency Plan*
25 *implemented by the EREF Emergency Management Organization. The public would be*
26 *informed through alert and notification procedures employed by local emergency management*
27 *organizations, such as fire and police departments, after these organizations are notified of an*
28 *emergency by the facility.*
29
30

31 **Comment:** The following comment is about the SER not being included in the Draft EIS.
32

33 **[141-03, Peter Rickards]** In addition...
34

- 35 1) We are not able to double check the downplaying of accidents and terrorism dose to the
36 public. The Safety Analysis Report (SER) is NOT included in the DEIS! Instead vague
37 summaries were used touting they would meet legal requirements.
38

39 In my history of 23 years of being lied to in EIS's, specifics are needed to demonstrate where
40 you are misinforming the public to the potential REAL environmental impacts of the proposed
41 plant. It is unacceptable to have an official draft comment period while withholding the MOST
42 important details!
43

44 What the DEIS says on webpage 66 of 430 is:

45 "As noted in Section 1.4, some of these issues are analyzed in detail in the NRC's SER and are
46 only summarized in the EIS. For example, within the area of safety and security, the SER
47 analyzes the probabilities and consequences of various accidents at the proposed EREF, as
48 well as measures to prevent those accidents and mitigate their effects. This EIS does not go

1 into the same level of detail, but provides, in Section 4.2.15, an accident analysis for the
2 purpose of assessing the potential environmental impacts of accidents.”
3

4 **Response:** *The SER (NRC, 2010b) documents the NRC’s safety review of the proposed EREF.*
5 *Most of the issues addressed in the SER are not within the scope of the EIS. As pointed out in*
6 *the comment, the safety review, as opposed to the environmental review covered in the EIS,*
7 *goes into much more detail on safety-related matters, including potential accidents, as*
8 *discussed in Section 1.4 of the EIS. Section 4.15 of the EIS provides a summary of the*
9 *accident analysis in the SER.*

10
11
12 **Comment:** The following comment pertains to certain information in the Draft EIS regarding
13 doses due to accidents.
14

15 **[141-05, Peter Rickards]** 3) While assuming the HEPA filters contain most of an accident
16 nuclear criticality, the DEIS does admit that a citizen at the fence line could receive a 570 mrem
17 dose, way above the 10 mrem annual limit! (Table 4-30, p 372/430). This dose seems not used
18 when dismissing transport accidents in metropolitan areas.
19

20 **Response:** *The 10 mrem/yr dose constraint is only applicable to routine facility operations. It is*
21 *not applicable to accident scenarios. In addition, the criticality event analyzed in Section 4.2.15*
22 *of this EIS is not applicable to the impacts of transportation of UF₆ or low level waste analyzed*
23 *in the EIS.*
24

25
26 **Comment:** The following comment requests certain information on accidents and problems at
27 the Metropolis, Illinois, Honeywell facility.
28

29 **[141-07, Peter Rickards]** 5) While I have found some great contradicting documents on the
30 NRC website, I was unable to find details on accidents and problems at current uranium
31 enrichment plants, including the Metropolis, Illinois Honeywell facility.
32

33 Please address the statement of Hydrogen explosions recently at the Honeywell uranium
34 enrichment facility from the article pasted below. Page 370/430 lists only 5 accident types
35 analyzed, which all seem to qualify for ignoring by probability math tricks. However, this article
36 mentions locals hospitalized from inhalation problems from Dec 2003. While NRC likes to dwell
37 on estimated death rates, the public needs to know ALL the potential impacts on their health,
38 including these scenarios. The article mentions a long problem with compliance at Honeywell,
39 which appears unaddressed as a potential REAL AND PROBABLE health impact. (See red
40 highlights) On the NRC website I could see references to Honeywell problems, but the searches
41 lead to long lists that obscured me finding the details.
42

43 **Response:** *The Metropolis, Illinois, Honeywell facility is a uranium conversion facility and not a*
44 *uranium enrichment facility. As such, the processes and events at the Honeywell facility may*
45 *not be applicable to the processes at the proposed EREF; a hydrogen fire is specifically not*
46 *relevant to the proposed EREF enrichment process. Hydrogen use would occur only in*
47 *laboratories at the proposed EREF where it would be used in small quantities under controlled*
48 *conditions. The NRC review focused on the processes at the proposed EREF.*

1
2 *The NRC reviewed potential accident sequences that the applicant evaluated as part of the*
3 *facility ISA. The ISA is performed by the applicant to identify those accident sequences which*
4 *may have notable consequences (see the performance requirements in 10 CFR 70.61)*
5 *including long-lasting health effects resulting from exposure to those chemicals associated with*
6 *NRC-licensed materials. In addition, the NRC independently evaluated certain accident*
7 *analyses to both verify the adequacy of the evaluations performed by the applicant and to*
8 *determine the potential impact to the public as pertinent to the EIS. A summary of the ISA was*
9 *submitted to the NRC as part of the license application and reviewed by staff to provide*
10 *reasonable assurance that the proposed operations will be conducted in a manner that assures*
11 *public health and safety and protects the environment. That review is not part of the EIS, but*
12 *was performed as part of the application review and documented in the Safety Evaluation*
13 *Report (NUREG-1951) (NRC, 2010b).*

14
15
16 **Comment:** The following comment asserts that there are certain issues that the criticality
17 analysis does not address.

18
19 **[141-02, Peter Rickards]** Specifically, the criticality analysis does not address the microscopic
20 particle size problem from criticalities, nor the “alpha recoil” problem with HEPA filters for normal
21 operations, nor the fire problems with HEPA filters.

22
23 **Response:** *With regard to the criticality analysis, as reported in Chapter 5 of the SER (NRC,*
24 *2010b), NRC staff used dose conversion factors for particulates consistent with both*
25 *10 CFR Part 20 and International Commission on Radiological Protection (ICRP) Publication 30.*
26 *ICRP 30 recommends use of a 1 micron activity median aerodynamic diameter (AMAD) particle*
27 *size when the particle size is unknown. Dispersion modeling of releases is consistent with*
28 *NUREG/CR-6410 and previous evaluations.*

29
30 *With regard to alpha recoil problems, the staff recognizes that enriched uranium is a low specific*
31 *activity material and there have been no apparent issues with alpha recoil for uranium materials.*

32
33 *Fire hazards and the potential consequence of fires are addressed in the facility ISA. NRC staff*
34 *reviewed the ISA summary and found the risks to be adequately controlled. The NRC staff*
35 *concluded that there is reasonable assurance that the proposed operations will be conducted in*
36 *a manner that ensures public health and safety and protects the environment, as reported in*
37 *Chapter 7 of the SER (NRC, 2010b).*

38
39
40 **Comment:** The following comment expresses concern about the threat to air quality in the
41 event of an accidental release of radioactive material.

42
43 **[100-02, Wendy Matson; 184-12, Kitty Vincent; 191-18, Liz Woodruff]** The amount of
44 radioactive material that will be present on the proposed site represents an implicit severe threat
45 to air quality in the event of an accidental release of radioactive toxins.

46
47 **Response:** *The human health consequences of representative accidents that involve releases*
48 *of UF₆ to the atmosphere are analyzed in Section 4.2.15.2 of the EIS. Releases from high-*

1 *consequence accidents, which involve the greatest releases of UF₆ to the atmosphere, were*
2 *analyzed. The analysis concludes that operation of the proposed EREF would pose an*
3 *acceptably low risk to workers, the environment, and the public from accidents. Air*
4 *concentrations of uranium and HF would subside quickly after an accident and would not*
5 *produce lasting effects on air quality.*
6
7

8 **Comment:** The following comments express concern about the cleanup costs following an
9 accident at the proposed EREF.

10
11 **[049-02, Victoria Everett]** And also, in the case of an accident, who plays for the cleanup?
12 Who's responsible for that? The State of Idaho? Or is it AREVA? You know, that wasn't
13 clarified. And in transportation, a truck gets in a wreck, it spills all over the ground. You know,
14 such cases as that. Say there is a fire, and there's a major disaster at the plant. Who pays for
15 that? And who pays the doctor bills of the families that have cancer?
16

17 **[050-10, Joanie Fauci]** Who will pay for all accidents which occur?
18

19 **Response:** AES would be liable for cleanup costs for accidents at the proposed EREF. Liability
20 for payment for damages to workers or members of the public, such as cancer-related claims,
21 would depend on the particular circumstances of an accident.
22
23

24 **Comment:** The following comments note the hazardous nature of uranium hexafluoride and the
25 potential risk from breached containers.
26

27 **[181-14, Roger Turner]** EIS fails to realistically evaluate container breaches. Moving, stacking
28 and unstacking cylinders has breached the containers, at the Oak Ridge Facility. The EIS needs
29 to be realistic about risks, where heavy equipment is in use because accidents and spills will
30 happen. Inspections are subject to human error and constrained by budgets. Inconsistent
31 pressure levels in containers are well known. Excess pressure in containers may make them
32 more susceptible to breaching or corrosion. Corrosion has been found on these containers at
33 Oak Ridge. The combination of problems were not adequately considered in the draft EIS.
34

35 The EIS fails to acknowledge toxicity of Uranium (both enriched and depleted) and the risks to
36 workers and the public when released. As mentioned above, the EIS also failed to consider
37 extended storage of containers, with additional risk of breached containers, as a result.
38

39 **[192-04 and 192-10, Lisa Young]** The storage of depleted uranium hexafluoride, which reacts
40 with water (gas or liquid) to produce two dangerous, corrosive, and soluble compounds, UO₂F₂
41 and HF, is extremely unstable. The production of these compounds presents huge risks in the
42 storage timeline, as the corrosion of storage cylinders and the possibility for leaks is a very real
43 reality.
44

45 **Response:** The cylinder management program to minimize cylinder corrosion is described in
46 Section 4.2.11.2 of the EIS. Risks to workers and the public of exposure to breached cylinders
47 are encompassed by the accident scenarios considered in the accident analysis in
48 Section 4.2.15 of the EIS. The accident analysis considers all credible accidents at the

1 *proposed EREF. The EIS evaluates several representative accident scenarios with*
2 *intermediate to high consequences. The scenarios analyzed in the EIS encompass the*
3 *consequences of cylinder handling accidents and releases due to cylinder corrosion and over-*
4 *pressurization. Regarding the toxicity of uranium, health effects from radiological exposure are*
5 *presented in Section 3.11.3.2 and from chemical exposure in Section 3.11.3.3.*
6
7

8 **Comment:** The following comments are concerned with wildfires in the vicinity of the proposed
9 EREF. Some commenters believe wildfires could have a major impact while others note the
10 conditions that would mitigate any major impacts.
11

12 **[004-01, Anonymous]** I am astonished you are not considering fire in the EIS review. I
13 suggest you revise your hurried considerations! [http://www.aolnews.com/world/article/thinking-](http://www.aolnews.com/world/article/thinking-the-unthinkable-russian-fires-fan-nuclear-fears/19589710?sms_ss=email)
14 [the-unthinkable-russian-fires-fan-nuclear-fears/19589710?sms_ss=email.](http://www.aolnews.com/world/article/thinking-the-unthinkable-russian-fires-fan-nuclear-fears/19589710?sms_ss=email)
15

16 **[015-21, Beatrice Brailsford; 088-09, Stan Kidwell; 122-05, Kathy O'Brien; 127-02, Sheila**
17 **Plowman]** The NRC should address both Areva's failure to comply with the Federal Farmland
18 Protection Act and its own failure to fully analyze the environmental effects of a large range fire
19 at the Areva site.
20

21 **[027-04, Sara Cohn]** Similarly, we are concerned that fire is not addressed as a potential
22 threat, when fuels exist on site and fires have recently been burning in the region.
23

24 **[048-02, Genevieve Emerson]** The EIS fails to consider the influence of wild fires in the region
25 and also fails to adequately address the issue of waste storage and disposal, considering that
26 there are no viable methods yet in existence for safely storing hexafluoride and depleted
27 uranium.
28

29 **[066-05, Toni Hardesty, on behalf of the Idaho Department of Environmental Quality]** 3.
30 Wildfires on the Snake River Plain and specifically the Idaho National Laboratory (INL) occur
31 with surprising regularity and typically burn tens of thousands of acres before being
32 extinguished (two such fires in 2010). Wildfires have threatened DOE facilities and caused
33 facility shutdowns due to particulate clogged air exchange filters; low visibility and destruction of
34 overhead power lines. The EIS should discuss the risk, potential environmental impacts from
35 wildfires, and safety procedures to be implemented to guard against potential releases as they
36 relate to the enrichment facility and the depleted UF6 storage cylinders.
37

38 **[067-09, Mike Hart]** With respect to the half-acre lava field, I think it actually protects this facility's
39 location from fires, because fires, typically, are drawn by wind, the wind pushes fire down wind,
40 with a big, huge lava barrier, there's less likelihood of a fire hitting the grounds because it has to go
41 through the lava first.
42

43 **[070-04, Virginia Hemingway]** As has been mentioned, we just escaped a fire that could have
44 totally decimated the INL, which is just almost right next to your facility, that you're -- that the
45 AREVA is planning. And in Russia, they are currently trying to control a fire that is coming very
46 close to where Chernobyl melted down, and, in fact, their emergency minister had this to say
47 about it.
48

1 He said that the heat from the fires in the region, which already has nuclear contamination from
2 the Chernobyl disaster, more than 20 years ago, could release harmful radioactive particles into
3 the atmosphere. In the event of a fire there, radionuclides could rise into the air, together with
4 combustion particles, resulting in a new pollution zone. And he said this on state television in
5 Russia.
6

7 **[152-04, Steven Serr]** We have--we've reviewed the issues as far as fire code protection. We
8 expressed concern over the safety on site, have they the ability to fight fires? AREVA has opted to
9 petition in to the fire district. We've had planning meetings with the fire district. We have another
10 planning meeting, this week, to work out responses in case of wildland fires coming in. We've
11 addressed safety setback issues to protect the facility. We don't have any real concerns to be able
12 to protect this facility from wildland fires with the implementation measures that they are planning
13 on putting in place, along with the expansion of the fire service facilities, and staff, and buildings
14 and equipment, to be able to provide that fire protection.
15

16 **[152-10, Steven Serr]** Some of these issues we brought up were regarding fire risk. We had a
17 meeting just yesterday with the fire department to discuss fire safety issues out there, response
18 time, what could be done for defensible space surrounding the operation. We felt we have
19 addressed the needs for making that site very safe, and protected from any fire hazard that might
20 occur from a wildfire issue. And, also, the fire district is addressing the potential increased demand
21 for fire needs, and that they have already acquired land on the west side of Idaho Falls to
22 construction additional fire stations, to provide additional equipment and support facilities for this
23 type -- for this plant.
24

25 **[148-01, Eric Schuler]** Taken as a whole, the EIS suggests that this facility will have a
26 relatively low impact on the environment. Of course several aspects of this, of the — have been
27 overlooked in making this conclusion. For instance, as others have already noted, it does not
28 consider the impact of the exempted preconstruction activities, the high risk of wildfires in the
29 area, or the lack of an appropriate disposal pathway for depleted uranium. Accordingly, the true
30 impact of this facility is certainly larger than the DEIS suggests.
31

32 **[157-09, Hon. Erik Simpson]** Fire. It is my understanding that AREVA is currently securing an
33 agreement for fire protection at the Eagle Rock Enrichment Facility. Although a wildfire is
34 something you have to plan for, it is by no means a showstopper for this project.
35

36 **[169-02, Margaret Stewart]** And there has been inadequate addressing in the EIS of wildfire
37 threats, and transportation of nuclear material accidents.
38

39 **[184-10, Kitty Vincent]** This waste and the facility will be threatened by wildfires at the
40 proposed site. The recent Jefferson Fire at the INL is but the latest example of such threats and
41 the EIS does not provide a detailed analysis of the threats posed by fire.
42

43 **[191-14, Liz Woodruff]** Threat Posed by Fire. The draft EIS fails to even consider the threats
44 associated with wildfires at the proposed site. While the draft EIS looks specifically at the
45 geology and weather patterns at the site, it does not provide a detailed analysis of the threats
46 posed by fire, claiming that fires do not occur east of the Idaho National Lab (INL). *The recent*
47 *example of the Jefferson Fire at and stretching east of the INL (and within 10 miles of the*
48 *proposed EREF) demonstrates this is a real hazard which warrants specific analysis.*
49

1 **[193-22, Liz Woodruff, on behalf of the Snake River Alliance]** And my final point before I
2 reach my conclusions are around fire. Fire poses an unacceptable risk to this facility. This
3 radioactive waste, and the facility as a whole, will be threatened by wildfires at the proposed
4 site, yet it is never addressed as an impact relevant to that specific geography in the EIS. The
5 DEIS does not provide a detailed analysis of the threats posed by fire, and some of you might
6 recall that just about, oh, three weeks ago, there was a huge fire over at the lab. The draft EIS
7 specifically says fires often don't occur east of the lab. Well, whoops -- let's go back.

8
9 Here's the lab and this is east, and that's the fire. So I'm pretty sure that fires occur east of the
10 lab. 150,000 acres just burned there over Superfund sites. This is the proposed facility. Actually,
11 if you looked at their map, it might even be a little closer. But this is about 10 miles. The EIS
12 evaluates earthquake risk specific to this geography. It evaluates flood risk specific to this
13 geography. It evaluates weather risks specific to this geography. It does not evaluate wildfires
14 specific to this geography. And it absolutely must.

15
16 **[192-16, Lisa Young]** Indeed, I hope to see further examination of accident scenarios involving
17 large wildfires around the facility, as well as accident scenarios involving the transportation of
18 radioactive substances to and from the facility on our roads and highways.

19
20 **Response:** *All credible accidents at the proposed EREF, including those initiated by natural*
21 *events, were considered in the accident analysis. Although wildfires can occur in areas*
22 *surrounding the facility, an accident associated with a wildfire was not considered a credible risk*
23 *to the facility due to the nature of the surrounding topography and vegetation (low density, low*
24 *height), vegetation management measures used onsite, the distance to the controlled area*
25 *boundary, and the resistance of UF₆ storage cylinders and process structures to fire by their*
26 *design and materials.*

27 28 29 **I.5.22 Decontamination and Decommissioning**

30
31 **Comment:** The following comment expresses concern regarding the future decommissioning of
32 the proposed EREF.

33
34 **[008-02, Carol Bachelder]** And it's interesting to me, that we're already talking about
35 decommission, and this isn't even "off the ground" yet. I mean, the plant is set for 30 years,
36 that's all a nuclear plant can operate, is 30 years, and then you have to take it down, and it sits
37 there, being radioactive, for how many generations? I don't even know.

38
39 **Response:** *The proposed EREF is not a nuclear power plant. The proposed EREF site would*
40 *be returned to free release conditions following the decommissioning process, as discussed in*
41 *Section 4.2.16 of the EIS.*

42
43
44 **Comment:** The following comments relate to the source and adequacy of funding for the
45 cleanup of the EREF site following cessation of operations of the proposed EREF.

46
47 **[050-09, Joanie Fauci]** Who will pay for the cleanup of this site?
48

1 **[066-02, Toni Hardesty, on behalf of the Idaho Department of Environmental Quality]** 1.
2 Financial Assurance - a. Section 2.1.4.3. states:

3
4 Decontamination and decommissioning of the proposed EREF would be funded in accordance
5 with the Decommissioning Funding Plan (DFP) for the proposed EREF (AES, 2010b). The
6 DFP, prepared by AES in accordance with 10 CFR 70.25(a) and the guidance in NUREG-1757
7 (NRC, 2006), would provide information required by 10 CFR 70.25(e) regarding AES's plans for
8 funding the decommissioning of the proposed EREF and the disposal of depleted uranium tails
9 generated as a result of plant operations. Funding would be provided by AES by means of a
10 Letter of Credit in accordance with NRC regulations in 10 CFR Part 70 and guidance in
11 NUREG-1757 (NRC, 2006).

12
13 However, Section 2.1.4.3 further states:

14
15 A complete estimate of the wastes and effluent to be produced during decommissioning would
16 be provided in the Decommissioning Plan that AES would submit prior to the start of the
17 decommissioning.

18
19 Please explain how an adequate cost estimate for the Decommission Funding Plan can be
20 prepared in the absence of a complete inventory/estimate of decommissioning wastes.

21
22 b. Due to NRC's approval of pre licensing construction activities at the site, DEQ requests NRC
23 explain in this EIS whether Financial Assurance Mechanisms similar to a "Decommissioning
24 Funding Plan" and associated financial assurance mechanisms have been required of the
25 Applicant concerning decommissioning and restoration to unrestricted use should the facility not
26 receive a license or initiate a business based withdrawal of the license application.

27
28 **[147-10, Joey Schueler]** 6. The term of this plant is 30 years, after which time the plant will be
29 decommissioned. This means 30 years of revenues and 50 to 100 to into perpetuity years of
30 cost and impact on Idaho's wilderness and economy. Will Areva still be paying for this cost? No,
31 the cost will fall to Idaho taxpayers.

32
33 **Response:** AES is required by the NRC's regulations under 10 CFR 20.1402 to fund the
34 cleanup of the proposed EREF site during decommissioning, as discussed in Section 2.1.4.3 of
35 the EIS. A summary breakdown of the estimated decommissioning costs is provided in
36 Chapter 10 of the SAR. The majority of the costs (excluding tails disposal) are associated with
37 the dismantlement, decontamination, processing, and disposal of centrifuges and other
38 equipment in the Separations Building Modules. These estimates are based on the centrifuge
39 manufacturer's prior decommissioning experience and current practices for decontamination
40 and disposal. The DFP must be adjusted periodically at intervals not to exceed three years as
41 required by the NRC's regulations under 10 CFR 70.25(e), thereby ensuring that the funding
42 plan is up-to-date using the latest available information.

43
44 *Should the license application be withdrawn or the license not be granted, no nuclear material*
45 *would have been present onsite. Thus, the site would have always been available for*
46 *unrestricted use, and no decontamination or decommissioning would be necessary.*

1 **Comment:** The following comment states that NRC license holders are required to provide
2 financial assurance for decommissioning.

3
4 **[157-01, Hon. Erik Simpson]** Historically, nuclear projects being discussed in eastern Idaho
5 are DOE actions. I just want to remind people, this is not a DOE action. NRC license holders are
6 required to provide financial assurance for decommissioning. They must prove to the NRC that
7 funds will be adequate for decommissioning. They must fund it before operations start. The
8 licensees are required to periodically review and update this funding, and with this license
9 requirement, there is no chance waste will be left behind, or that Idaho will be left with cleanup
10 responsibility for the AREVA facility.

11
12 **Response:** *The information in this comment is accurate.*

13
14
15 **Comment:** The following comment asks about the location(s) to which equipment that is to be
16 removed from, or replaced in, the proposed EREF would be stored or transported.

17
18 **[129-05, Willie Preacher, on behalf of the Shoshone-Bannock Tribes]** The AREVA
19 Enrichment Project will be in existence for a number of years, how many shutdowns, equipment
20 upgrades, or modifications will be anticipated during the life cycle of this process? Where will
21 equipment that is to be removed or replaced be stored or transported to, will it be left within the
22 facility or will it be transported out of state?

23
24 **Response:** *Shutdowns, upgrades, and modifications would be dependent on equipment*
25 *performance and future design improvements and cannot be accurately determined at this time.*
26 *Any equipment with radioactive contamination that is not decontaminated for free release after*
27 *use would necessarily be transported to, and disposed of, at an appropriately licensed LLRW*
28 *disposal facility. The locations of such facilities would depend on which facilities are licensed at*
29 *the times of disposal. Information on anticipated wastes generated during operation of the*
30 *proposed EREF is presented in Section 4.2.11 of the EIS.*

31
32
33 **Comment:** The following comments express concern about NRC accepting a letter of credit
34 from AES as the method of assuring funds for decommissioning of the proposed EREF.

35
36 **[015-16, Beatrice Brailsford]** The entire conundrum of storage, treatment, and disposal goes
37 hand in hand with the eventual challenges of decommissioning the EREF. The costs of those
38 activities are pegged at \$3.5 billion. The NRC, an agency charged with protecting the interests
39 of US citizens, must not settle for a letter of credit from Areva to cover these costs. At the very
40 least, the NRC must require a surety bond.

41
42 **[187-03, John Weber]** In section 10.0, one difference between the AREVA plant and the
43 National Enrichment Facility is -- this is quoted: "AES will utilize a letter of credit to provide
44 reasonable assurance of decommissioning funding, rather than a surety bond." Why is that? We
45 all currently know, after the last financial crisis, that a letter of credit is basically a worthless
46 piece of paper. They have many risks a couple of them, including insolvency of the Applicant
47 and insolvency of the bank issuing the letter of credit.

1 **Response:** *A letter of credit to assure funds for decommissioning is an acceptable financial*
2 *assurance method, as indicated in the NRC's regulations in 10 CFR 70.25(e).*
3
4

5 **Comment:** The following comments express concern that restoring the proposed EREF site to
6 unrestricted use after the end of the license period might not occur because of funding issues.
7

8 **[083-05, Diane Jones]** How can we expect the company to -- whose financial future is
9 uncertain, to be able to guarantee that they will bear the cost of treating all that waste and
10 disposing of all that waste, when the process for disposing of the waste is not even known? This
11 seems highly reckless to me, and not a very sound economical calculation.
12

13 **[129-04, Willie Preacher, on behalf of the Shoshone-Bannock Tribes]** Will the cost amount
14 that has been set aside for the D&D of the facility after the mission is complete be enough and
15 is there a guarantee that it will have be done and not a facility left standing in the desert west of
16 Idaho falls.
17

18 **[154-03, Diana Shipley]** They are asking for loan guarantees from the United States
19 government and I wonder who will be left to clean up the waste and pay the bills if they bail out?
20

21 **Response:** *As part of its license conditions, AES would be required to restore the proposed*
22 *EREF site to unrestricted use. Funding for decontamination and decommissioning would be*
23 *provided by AES in accordance with the NRC's regulations in 10 CFR 70.25(e), as discussed in*
24 *Section 2.1.4.3 of the EIS.*
25
26

27 **I.5.23 Greenhouse Gas Emissions**

28
29 **Comment:** The comment discusses the importance of enriched uranium in reducing
30 greenhouse gas (GHG) emissions.
31

32 **[067-06, Mike Hart]** Also, they took exception with the cause and need for action. I think there's
33 most definitely a need for this, because there's a need for carbon-free energy. Throughout the
34 world, I think we've seen that global warming is a significant problem that we need to be paying
35 attention to, and there's also a demand for growth in nuclear energy. There's a couple of facts I
36 want to point out why we need nuclear energy, why we need this particular enrichment plant.
37

38 Carbon dioxide reflects, or absorbs, infrared energy that does not go back out to space. It
39 makes the planet warmer. That's simply a fact. Carbon dioxide is a greenhouse gas. Levels of
40 carbon dioxide have gone from 288 parts per million in 1850 to 369 parts per million in the year
41 2000. It doesn't matter where it comes from. That is a greenhouse gas that is increasing in
42 concentration. But I'll give you a hint as to where it's coming from: fossil energy. In 1990s, we
43 annually contribute 6.3 gigatons of carbon dioxide into the atmosphere through fossil
44 combustion. That's annual, 6.3 gigatons. The concern about 300,000 metric tons, 300,000 tons
45 of total waste versus 6.3 gigatons in a single year, I view the problem with carbon as much more
46 significant than the problem with depleted uranium.
47

1 So, what is a gigaton? Why is that a concern? Well, 2.3 gigatons is one part per million of
2 carbon dioxide in the atmosphere. So, every year we are steadily increasing carbon dioxide. So,
3 yes, global warming is occurring. Yes, it's our fault. Yes, carbon puts more of that in the
4 atmosphere, and I think nuclear energy is a stopgap that will – is worth pursuing. So, yes, there
5 is a need.
6

7 Energy demands are increasing worldwide. Currently, the population of the planet is about
8 4.5 billion. By 2050, that will double, and people are not less energy consumptive. Populations
9 like China and India used to be in the Third World. They have bought the second world, and
10 they've placed a firm down payment on the first one. So, energy consumption will go up as the
11 population goes up, so even if nuclear energy just holds its own at 15 percent, there will be a
12 need for more nuclear plants, and that means there will be a need for more enriched uranium.
13

14 **Response:** *The NRC acknowledges the comment and appreciates the public participation.*
15
16

17 **Comment:** The following comment asks about the cumulative impact of greenhouse gas
18 emissions associated with the operation of the proposed facility on air quality and climate
19 change over the 30-year period of the license.
20

21 **[140-08, Wendy Reynolds, on behalf of the Bureau of Land Management, Upper Snake**
22 **Field Office]** What would be the cumulative impact of greenhouse gases emissions associated
23 with the operation of the facility on air quality and climate change over the thirty year period?
24

25 **Response:** *GHG impacts associated with the proposed EREF are discussed in Section 4.2.17*
26 *of the EIS. Impacts from preconstruction and construction are addressed separately from*
27 *impacts associated with operation. Workforce commuting, truck shipments of feedstocks,*
28 *finished enriched product and wastes, and onsite fossil fuel consumption in support of*
29 *operations are all considered for their contributions to GHG emissions during facility operation.*
30 *Conservative assumptions were applied wherever possible (e.g., it was assumed that the*
31 *majority of the workforce commuted from Idaho Falls and that no carpools or vanpools would be*
32 *used) to ensure that a maximum possible GHG emission (i.e., a bounding condition) was*
33 *calculated. However, for simplicity, all GHG emissions were represented as carbon dioxide*
34 *(CO₂) equivalents (CO₂-e).*
35

36 *Tables 4-35 and 4-36 display the estimated annual emissions of carbon dioxide equivalents*
37 *(CO₂-e) (emissions of all of the GHGs produced, represented as CO₂) associated with*
38 *workforce commuting and deliveries to and from the proposed facility during operation,*
39 *respectively. Annual values were calculated, based on the assumptions specified in*
40 *Section 4.2.17.4. However, although those assumptions collectively represent a feasible*
41 *condition of operation, the NRC has no basis for assuming that those operational conditions will*
42 *remain unchanged throughout the life of the facility. Likewise, although the points of origin and*
43 *destinations of shipments associated with facility operation are feasible for the purpose of*
44 *defining a bounding condition, the NRC notes that alternative sources of feedstocks as well as*
45 *alternative destinations for enriched product and wastes also exist. Thus, the NRC staff*
46 *believes that calculating the cumulative impact of 30 years of operation on the basis of the*
47 *bounding scenario would be highly speculative and would not yield reliable estimates of*
48 *cumulative impacts. Further, simply multiplying the values contained in Tables 4-35 and 4-36*

1 *by 30 would be an overly simplistic way of estimating lifetime GHG emissions because it would*
2 *ignore alternative sources of feedstock, alternative customers for enriched product, and the use*
3 *of alternative waste disposal facilities, as well as operational changes due to changing market*
4 *conditions over the proposed facility's lifetime. However, because the assumptions used to*
5 *define the bounding condition were all intentionally conservative, GHG emissions over the*
6 *proposed facility's lifetime would be no greater than 30 times the values represented in*
7 *Tables 4-35 and 4-36.*

8
9
10 **Comment:** The following comments raise concerns about the adequacy of the GHG emissions
11 section of the Draft EIS (Section 4.2.17).

12
13 **[015-22, Beatrice Brailsford]** With regard to assertions about EREF's role in reducing
14 greenhouse gas emissions and the claim that EREF will serve as a greenhouse gas "sink," such
15 reasoning omits the environmental and public health threats caused by EREF's operations, from
16 uranium mining to disposal of reactor waste and reactor decommissioning. If the EIS takes the
17 illogical leap of crediting EREF for reducing greenhouse gas emissions, the NRC is compelled
18 to likewise credit EREF for the documented threats posed by the nuclear power industry
19 throughout its fuel and waste cycles.

20
21 **[113-13, Ken Miller]** With regard to assertions about EREF's role in reducing greenhouse gas
22 emissions and the outlandish claim at Draft 4- 136 that EREF will serve as a greenhouse gas
23 "sink," such a tertiary benefit (theoretically reducing the operation of traditional coal plants and
24 as a result their emissions), such reasoning omits the environmental and public health threats
25 caused by EREF's operations, from uranium mining to disposal of reactor waste and reactor
26 decommissioning. If the EIS takes the illogical leap of crediting EREF for reducing greenhouse
27 gas emissions, the NRC is compelled to likewise credit EREF for the documented threats posed
28 by the nuclear energy industry throughout its fuel and waste cycles.

29
30 **[153-09, Andrea Shipley; 197-09, Andrea Shipley, on behalf of the Snake River Alliance]**
31 The draft EIS (4-136) stretches credulity in attaching "Green House Gas sink" attributes to
32 EREF. The reasoning in the EIS is that the project should be considered a greenhouse sink
33 because it would produce enriched uranium for use in nuclear reactors that might replace
34 traditional coal and other fossil fuel plants. By this logic, my car is a GHG sink when I am not
35 driving it. This tertiary GHG benefit is improper particularly in light of the EIS's failure to
36 acknowledge the secondary and tertiary environmental and public health threats created by
37 EREF and its operations, from uranium mining to disposal of reactor waste and reactor
38 decommissioning. If the EIS credits EREF for such greenhouse gas emission reductions due to
39 its contribution to nuclear reactors, it must also credit EREF for the known environmental and
40 health threats that are also attributed to the same nuclear reactors.

41
42 **[184-14, Kitty Vincent]** The draft EIS (4-136) stretches credulity in attaching "greenhouse gas
43 sink" attributes to EREF. The reasoning is that the project should be considered a greenhouse
44 gas sink because it would produce fuel for use in nuclear reactors that *might* replace fossil fuel
45 plants. This tertiary GHG claim is improper particularly in light of the EIS's failure to
46 acknowledge the secondary and tertiary environmental and health threats created by EREF and
47 its operations and the operations of nuclear reactors, from uranium mining to transportation,
48 disposal of reactor waste and reactor decommissioning.

1 [191-22, Liz Woodruff] The draft EIS (4-136) stretches credulity in attaching “GHG sink”
2 attributes to EREF. The reasoning in the EIS is that the project should be considered a
3 greenhouse sink because it would produce enriched uranium for use in nuclear reactors that
4 might replace traditional coal and other fossil fuel plants. This tertiary GHG benefit is improper
5 particularly in light of the EIS’s failure to acknowledge the secondary and tertiary environmental
6 and public health threats created by EREF and its operations, from uranium mining to disposal
7 of reactor waste and reactor decommissioning. If the EIS credits EREF for such greenhouse
8 gas emission reductions due to its contribution to nuclear reactors, it must also credit EREF for
9 the known environmental and health threats that are also attributed to the same nuclear
10 reactors.

11
12 **Response:** *The NRC’s analysis of GHG impacts was performed in a manner consistent with the*
13 *draft Council on Environmental Quality (CEQ) guidance (CEQ, 2010) and addressed only GHG*
14 *emissions associated directly with production of baseload power. The hypothetical scenario that*
15 *the NRC staff selected was intended to represent a bounding condition, but is nevertheless*
16 *feasible because it represents a situation where the entire potential annual output of enriched*
17 *uranium from the proposed EREF is used to fabricate fuel that is deployed in U.S. reactors. Coal*
18 *was chosen for comparison because coal currently provides a large percentage of baseload power*
19 *(in fact, coal combustion for power generation is the largest single source of GHG emissions in the*
20 *country) and, among the fossil fuels presently used for baseload power production, coal has the*
21 *greatest GHG footprint (in terms of amount of GHG emitted per kWh of power produced).*

22
23 *However, the NRC acknowledges here that use of the term “GHG sink” in the EIS was imprecise*
24 *and a source of confusion. A GHG sink is capable of removing GHGs from the atmosphere and*
25 *sequestering it indefinitely and not something that prevents the release of GHG. Although*
26 *objections to the use of the term “GHG sink” may be well founded, the argument clearly made in*
27 *the EIS text is that use of a nuclear reactor instead of a coal-fired power plant to generate baseload*
28 *power will avoid the release of GHGs to the atmosphere. Since the NRC cannot control the*
29 *transmission system operator’s use of the generator dispatch queue, the idea that a nuclear*
30 *reactor would always be selected in deference to a coal-fired plant must remain hypothetical.*
31 *However, when such a selection of generating source is made, avoidance of GHG emissions will*
32 *result.*

33
34 *With respect to suggestions that other environmental impacts of the nuclear fuel cycle must be*
35 *introduced into the analysis, these were not considered because the analysis was not intended to*
36 *be a complete life-cycle assessment. To expand the argument to a full life-cycle assessment*
37 *would have obligated the NRC to also introduce other environmental impacts across the entirety of*
38 *the coal fuel cycle. Instead, the analysis was intended to focus only on the matter of GHG*
39 *emissions related directly to electricity production in a manner consistent with the CEQ guidance.*

40
41 *To avoid any confusion, NRC has amended the text in Section 4.2.17 to clarify the parameters of*
42 *its analysis and to focus on a nuclear reactor’s ability to avoid the release of GHG rather than its*
43 *ability to act as a GHG sink.*

1 **I.5.24 Terrorism**
2

3 **Comment:** The following comment states the Draft EIS did not estimate the probability of
4 terrorism.

5
6 **[141-04, Peter Rickards]** 2) While the DEIS does not address disgruntled employee sabotage,
7 it at least acknowledges that terrorism could happen, during transport and at the facility. On
8 page 396/430 the DEIS actually admits that terrorism would equal the full release of a severe
9 transportation accident. However, the DEIS refuses to estimate the probability of terrorism,
10 allowing licensing by the usual trick of pretending a severe transport accident will never happen,
11 using probability math. By hiding behind probability math, the high doses the public can receive
12 are dismissed as acceptable risk.

13
14 While the public decides which energy policy is better for their families safety,
15 windmills/solar/geothermal vs. nuclear power, hiding the profound devastating impacts of these
16 accidents and terrorism is misleading and unacceptable.

17
18 **Response:** *The NRC considered a number of potential terrorist scenarios, including those*
19 *involving disgruntled employees, in its review. The impacts evaluated are representative of a*
20 *range of what could occur, as presented in Section 4.2.18.2 of the EIS.*

21
22 *The consideration of terrorism in the EIS does not include an estimate of probability because, as*
23 *discussed in Section 4.2.18.2, the likelihood of occurrence of any terrorist scenario is*
24 *speculative and cannot be determined. Thus, there is no discussion of risk, only the*
25 *presentation of potential impacts should a terrorist attack occur. Section 4.2.18.3 presents a*
26 *number of potential mitigation measures, to be imposed by the NRC, which would either help*
27 *avoid or lessen the consequence of such an event.*

28
29
30 **Comment:** The following comment questions statements in the Draft EIS regarding the public
31 health effects of an HF plume at the proposed EREF.

32
33 **[141-06, Peter Rickards]** 4) Pages 397&8/430 claims an HF plume at the facility may affect
34 1,900 members of the public, but also claims no fatalities, which seems untrue without detailed
35 explanation to justify the dismissal of severe impact, including death.

36
37 **Response:** *As stated in Section 4.2.18.2 of the EIS, the referred 1900 members of the public is*
38 *for a different DOE facility used as a reference point in the analysis for the proposed EREF,*
39 *where up to three irreversible health effects were estimated, of which about 1 percent, or fewer*
40 *than one (0.03), would result in fatality. The text in Section 4.2.18.2 notes that "it is expected*
41 *that much fewer than 1900 members of the public could be affected in the vicinity of the*
42 *proposed EREF because the DOE analysis was for a location with a higher population density*
43 *(>34,000 people within 16 kilometers [10 miles]) than that of the proposed EREF location, which*
44 *has no appreciable population within 16 kilometers (10 miles)." The risk of fatality would also be*
45 *correspondingly lower than this already low level.*

46
47 *Exposure to HF produces a wide range of health effects ranging from irritation of the eye, nose,*
48 *and skin to possible death depending on the HF concentration in air and duration of exposure.*
49 *Low-level exposures produce reversible health effects, as described in Section 3.11.3.3 of the*

1 *EIS. The estimated concentrations in HF plumes produced in release scenarios are at sublethal*
2 *concentrations beyond the proposed EREF site boundary.*
3
4

5 **I.5.25 Cumulative Impacts**

6

7 **Comment:** The following comment points out the need to address impacts from the proposed
8 EREF project in the distant future.

9
10 **[077-02, Larry Hyatt]** I just want to make one point in addition to what I said briefly in Boise,
11 was -- that is, the issue of stewardship. As you all know, human activity has results that we have
12 to live with for years, potentially hundreds, and maybe even thousands of years. But it is critical
13 in an evaluation like this in terms of its environmental impact that we seriously consider the year
14 5010.

15
16 **Response:** *As required under NEPA, in the EIS, the NRC staff has assessed all reasonably*
17 *foreseeable activities and impacts associated with the preconstruction, construction, operation,*
18 *and decommissioning of the proposed EREF project.*
19

20
21 **Comment:** The following comment asks if a redundant source of electrical power is a
22 requirement for operation of the proposed EREF, if AES has future plans to route a redundant
23 transmission line, and if a redundant source of electrical power is a reasonably foreseeable
24 future action that should be addressed in the cumulative impacts section of the EIS.
25

26 **[140-01, Wendy Reynolds, on behalf of the Bureau of Land Management, Upper Snake**
27 **Field Office]** 1) A reading of the draft document makes clear that one criterion used to select
28 the enrichment facility site was the presence of a redundant electrical power supply. It is further
29 presented in Table 2-3 that the Bonneville County site passed Phase I screening indicating that
30 there is a redundant power source available for the plant. However, the potential environmental
31 impacts of the construction and use of a redundant power supply is not discussed under Utilities
32 (2.1.3.2) (under the Proposed Action), nor is it discussed in the Environmental Impacts section
33 of the document. The construction and use of a redundant power source is not considered as a
34 reasonably foreseeable future action under the cumulative impacts section either.
35

36 These facts lead the BLM to ask: Is a redundant source of electrical power a requirement of the
37 plants operation? If so, where would the redundant source come from? As you know, areas to
38 the west of the plant (where a potential source of redundant power is available) are managed by
39 the Idaho National Laboratory (INL; Department of Energy). Non-mission essential rights-of way
40 (ROWs) on these lands are administered by the BLM, Upper Snake Field Office. Does AES
41 have future plans to route a redundant transmission line across INL and BLM-administered
42 lands?
43

44 **Response:** *The NRC does not require that the proposed EREF have a redundant source of*
45 *electrical power, and the absence of a redundant source does not raise a safety issue, as*
46 *determined by the NRC's safety review. The NRC is unaware of future plans that AES may*
47 *have regarding a redundant source of electrical power.*
48
49

1 **Comment:** The following comment expresses concerns regarding the cumulative impacts
2 section of the Draft EIS, in particular with regard to the definition of the ROIs for each resource;
3 the limited discussion of past, present, and reasonably foreseeable future actions that may
4 contribute to cumulative impacts (particularly for past actions); and the cumulative impact
5 analysis for the no-action alternative.
6

7 **[140-05, Wendy Reynolds, on behalf of the Bureau of Land Management, Upper Snake**
8 **Field Office]** 4) The BLM would also like to express some concerns with the cumulative impact
9 analysis section of the document. The NRC is correct in citing the regulations at 40 CFR§
10 1508.7 for the definition of what a cumulative impact is and in discussing the fact that ROI's (we
11 assume this is equivalent to a cumulative impact assessment area) can, and most likely, would
12 be different for each resource affected.
13

14 The primary concerns from the BLM's point of view is that the ROI's are not defined for each
15 resource, a cumulative impact baseline is not established for each ROI, and there is relatively
16 little discussion of past, present and reasonably foreseeable future actions that may contribute
17 to cumulative impacts (particularly for past actions). Although in some cases past and present
18 actions and their impacts are discussed (although the intensity of the impact is not), the
19 emphasis seems to be on the reiteration of the direct and indirect impact presentation. Further,
20 a cumulative impact analysis should be conducted for each resource affected by the proposed
21 action and no action alternative, which is not evident in this section (for additional guidance,
22 please refer to the Council on Environmental Quality's [CEQ's] 1997 publication, Considering
23 Cumulative Effects Under the National Environment Policy Act).
24

25 **Response:** *Section 4.3 of the EIS defines the ROI radius of the proposed EREF for cumulative*
26 *impacts for each resource area analyzed as 16 kilometers (10 miles), except for*
27 *socioeconomics, for which the ROI is defined as 80 kilometers (50 miles). Impacts on*
28 *resources from past, present and reasonably foreseeable future actions within these distances*
29 *are analyzed if the actions would affect the resource. Effects on the entire resource are*
30 *analyzed, even if the resource extends beyond 10 miles, for example, an ecoregion, in the case*
31 *of the 10-mile ROI. Within the 10-mile ROI, the actual geographic extent of effects may be less*
32 *than 10 miles for a given resource. Cumulative impacts are analyzed accordingly within the*
33 *resource area discussions. The 10-mile and 50-mile ROIs thus represent threshold distances*
34 *for identifying actions that could contribute to cumulative impacts on resources.*
35

36 *The cumulative impacts analysis in Section 4.3 considers the impacts of past actions mainly on*
37 *resources that have been significantly impacted in the past and that will incur additional impacts*
38 *from future actions, such as soils and ecological resources. For resources with relatively low*
39 *past impacts, such as air quality, the analysis focuses on incremental impacts from foreseeable*
40 *actions. A brief summary of major past actions, namely agriculture and the INL, has been*
41 *added to the introduction of Section 4.3.*
42

43 *Section 4.3 of the EIS also notes that cumulative impacts associated with the no-action*
44 *alternative would be generally less than those for the proposed action, with the exception of*
45 *socioeconomic impacts. Within the 10-mile ROI for all other resources, the no-action alternative*
46 *would have no impacts, as no other foreseeable actions occur within this distance, and the site*
47 *would be expected to continue to be used for agriculture. A statement to this effect has been*

1 added to the introduction of Section 4.3. The revised cumulative impacts analysis takes into
2 account CEQ's guidance (CEQ, 1997) and BLM's NEPA handbook (BLM, 2008).

3
4
5 **Comment:** The following comment asks about the cumulative impact to sage grouse from the
6 implementation of the proposed action and the no-action alternative, and how long the effects
7 would last.

8
9 **[140-06, Wendy Reynolds, on behalf of the Bureau of Land Management, Upper Snake**
10 **Field Office]** What would be the cumulative impact to sage grouse from the implementation of
11 the Proposed Action and the No Action alternative? How long would the effects last?
12

13 **Response:** As discussed in Section 4.3.7 of the EIS, the contribution to cumulative impacts
14 from the proposed EREF project on ecological resources would be SMALL. Text has been
15 added to Section 4.3.7 to include sage-grouse. The effects would last for the life of the
16 proposed transmission line and EREF site facilities that would affect sage-grouse. The no-
17 action alternative would have no impacts beyond current site use for agriculture because no
18 other foreseeable actions occur within the 10-mile ROI.
19

20
21 **Comment:** The following comment asks about the incremental impact on air quality, soil
22 resources, vegetation, wildlife, and grazing livestock from the periodic releases of small
23 amounts of uranium hexafluoride (UF₆) over the 30-year life of the facility.
24

25 **[140-07, Wendy Reynolds, on behalf of the Bureau of Land Management, Upper Snake**
26 **Field Office]** What would be the incremental impact on air quality, soil resources, vegetation,
27 wildlife and grazing livestock from the periodic release of small amounts of UF₆ over the thirty
28 year life of the facility?
29

30 **Response:** As discussed in Section 4.3.10 of the EIS, offsite air concentrations of uranium
31 compounds would be below detection limits and would be expected to have a SMALL impact
32 over the life of the facility. No measurable incremental impacts of any resource outside of the
33 proposed EREF security fence would be expected due to the low anticipated emission rate of
34 uranium from the proposed facility.
35

36 A conservative calculation estimates that existing (background) uranium soil concentrations, as
37 listed in Table 3-16 of the EIS, would increase approximately 2 percent (less than the standard
38 deviation of the soil measurements) immediately outside the proposed EREF security fence if
39 30 years of uranium emissions from the proposed EREF were considered. If 527 microcuries of
40 uranium were released on an annual basis, as discussed in Section 4.2.10.2 (AES estimates
41 actual releases will be about 3 percent of that value), a total of about 15,810 microcuries would
42 be released over the 30-year life of the facility. Considering a release of that amount, an
43 increase of about 34 pCi/kg of uranium in the soil would be expected using the atmospheric
44 dispersion factor in Table 4-17 ($1.80 \times 10^{-5} \text{ s/m}^3$), the deposition velocity of $1.8 \times 10^{-3} \text{ m/s}$ in
45 Table E-6, an estimated soil density of 1.5 g/cm^3 , and a mixing depth of 1 cm. For comparison
46 with Table 3-16, the value of 34 pCi/kg is approximately 2 percent of the combined uranium
47 isotope values and less than the standard deviation of the soil concentration measurements.
48 Moving further away from the proposed EREF, the corresponding soil concentrations at the

1 *nearest proposed site boundary where grazing could occur would be 20 percent less than the*
2 *value at the security fence. Thus, the impacts to soil and dependent resources such as*
3 *vegetation, wildlife, and grazing livestock would be SMALL and immeasurable.*
4
5

6 **Comment:** The following comment states that the EIS should provide cumulative risk analysis
7 regarding the amount of hazardous or toxic materials to be imported and exported across state
8 lines.
9

10 **[027-08, Sara Cohn]** The draft EIS should provide cumulative risk analysis regarding the
11 amount of hazardous or toxic materials to be imported and exported across state lines.
12

13 **Response:** *Such a cumulative impact analysis is beyond the scope of the EIS, as the ROI for*
14 *cumulative impacts (i.e., 10 miles) does not extend to the State borders. The risks of*
15 *transporting materials to and from the EREF and the impacts on waste management from EREF*
16 *operations under the proposed action alone are analyzed in Sections 4.2.9 and 4.2.11 of the*
17 *EIS, respectively.*
18
19

20 **Comment:** The following comment indicates that economic impacts regarding income and tax
21 revenues should also be evaluated in the EIS on a cumulative basis.
22

23 **[124-03, Lane Packwood]** I found it somewhat interesting that the EIS does take kind of a
24 “sliced bread” approach to income and taxes. They look at one year within preconstruction, one
25 year in construction, one year of operation, and take a look at what those revenues are, when,
26 in fact, we would encourage you to look at the length of -- or the lifetime of the facility. That’s all
27 a cumulative impact.
28

29 **Response:** *In Section 4.2.12 of the EIS, economic impacts of the proposed EREF are analyzed*
30 *on an annual basis during both the construction and operation periods of the proposed facility.*
31 *These benefits would accrue over the life of the facility. Chapter 7 of the EIS (Benefit-Cost*
32 *Analysis) provides the total (i.e., summed over all years of the project) employment, income,*
33 *and fiscal impacts of the project.*
34
35

36 **Comment:** The following comment recommends that the EIS should consider all sources of air
37 emissions and determine the contribution of each source to air quality, and that the Final EIS
38 should include information to allow accurate air quality impacts and mitigation measures and
39 their effectiveness to be determined.
40

41 **[138-03, Christine Reichgott, on behalf of the U.S. Environmental Protection Agency,**
42 **Region 10]** Air quality may also be impacted due to cumulative impacts from surrounding
43 activities such as agriculture and fire, herbicides to treat invasive plant species, and continued
44 management of radioactive materials at nearby Idaho National Laboratory. The EIS should
45 consider all sources of emissions and determine the contribution of each source to air quality -
46 negative or positive. Because the DEIS does not include refined analysis of emissions from
47 sources that are utilizing appropriate control technologies and more detailed construction

1 activities and schedules (p. 4-12), we recommend that the final EIS include that information so
2 accurate air quality impacts and mitigation measures and their effectiveness can be determined.

3
4 **Response:** *Air quality impact assessments from preconstruction and construction in the EIS are*
5 *based on all preconstruction- and construction-related information currently available. A more*
6 *detailed assessment is not possible until a specific construction schedule is developed by AES,*
7 *and such a schedule will not be available in time for publication of the Final EIS. Nevertheless,*
8 *it is the NRC's expectation that AES will be required to submit such a schedule, at the*
9 *appropriate time, to IDEQ and to Bonneville County in pursuit of necessary construction permits*
10 *and approvals.*

11
12 *Ambient air quality for Bonneville County for 2008 was summarized in Section 3.5.3.1 of the*
13 *EIS; all values were below their respective NAAQS values. EPA guidance regarding the use of*
14 *its AERMOD dispersion model indicates that circumstantial factors such as other sources of air*
15 *releases in the region of interest need not be quantified, but should be considered in the*
16 *interpretation of the dispersion modeling results (Federal Register [70 FR 68218]). Appropriate*
17 *identification and consideration of those other sources of air pollution in the area are provided in*
18 *Section 3.5.3. Decisions regarding amendment to Idaho's State Implementation Plan (SIP) that*
19 *might involve installation of a new ambient air quality monitoring station in the area of the*
20 *proposed EREF project are outside of the NRC's authority and, therefore, outside the scope of*
21 *the EIS and instead are the province of IDEQ. The NRC staff believes that the expected short*
22 *duration of NAAQS exceedance does not argue for a long-term commitment to ambient air*
23 *quality monitoring in this area.*

24
25
26 **Comment:** The following comment recommends that the routes for some proposed new
27 transmission lines be part of their own NEPA process.

28
29 **[197-15, Andrea Shipley, on behalf of the Snake River Alliance]** It is recommended that the
30 routes for some proposed new transmission lines be part of its own NEPA process, because of
31 potential impacts to wildlife and the land.

32
33 **Response:** *In Section 4.3 of the EIS, the impacts of the proposed new 161-kilovolt (kV) line that*
34 *would power the proposed EREF are analyzed as cumulative impacts within the ROI of the*
35 *facility, and as such, analyzed according to the route currently proposed by AES and Rocky*
36 *Mountain Power. Impacts on wildlife and land use are considered in the analysis. The*
37 *proposed 161-kV transmission line discussed in the EIS is the only new transmission line for the*
38 *proposed EREF of which the NRC is aware.*

39
40
41 **Comment:** The following comment maintains that the assessment of cumulative impacts in the
42 EIS should include shipments to and storage and production at the offsite fuel fabrication facility.

43
44 **[181-17, Roger Turner]** Cumulative effects include Fuel Fabrication. The NEPA requires an
45 assessment of cumulative impacts of this project. This would include additional shipments,
46 storage and production at the off-site fuel fabrication facility. Please add this process, risks, to
47 the cumulative evaluation of Areva plant.

1 **Response:** *Impacts at a fuel fabrication facility are beyond the scope of this EIS, which is for*
2 *the proposed EREF. Furthermore, the cumulative impacts analysis is concerned with impacts*
3 *to resources from actions within a geographic ROI around the proposed EREF. No offsite fuel*
4 *fabrication facility is within the ROI for affected resources.*
5
6

7 **Comment:** The following comments express a position that a proposed route for the Mountain
8 States Transmission Intertie (MSTI) near the proposed EREF is not certain and should not be
9 included in cumulative impacts.

10
11 **[113-11, Ken Miller]** Furthermore, the routes for some proposed new transmission lines,
12 including the proposed Mountain States Transmission Intertie (MSTI), have not been
13 determined and as such should not be considered as certain future transmission infrastructure.
14

15 **[184-19, Kitty Vincent; 191-28, Liz Woodruff]** The routes for some proposed new
16 transmission lines, including the proposed Mountain States Transmission Intertie, have not been
17 determined and as such should not be considered as certain future transmission infrastructure.
18

19 **[193-17, Liz Woodruff, on behalf of the Snake River Alliance]** My next point is regarding
20 transmission issues. The routes of some of the proposed new transmission lines, including the
21 MSTI intertie, have not been determined. Those routes have not been concluded yet in our
22 state, and thus should not be considered as certain future transmission infrastructure, as they
23 are currently in the EIS.
24

25 **Response:** *The preferred route for the MSTI as identified by project developers is within*
26 *40 kilometers (25 miles) of the proposed EREF site, and its construction is considered a*
27 *reasonably foreseeable action affecting socioeconomics within the ROI. Analyzed actions need*
28 *only be reasonably foreseeable to be included in the cumulative impacts analysis.*
29
30

31 **Comment:** The following comments suggest that burying the transmission line to power the
32 proposed EREF should be considered as an alternative, so as to minimize impacts to wildlife.
33

34 **[113-05, Ken Miller]** The idea of burying power lines, we believe, needs to be addressed in the
35 EIS before it's finalized, because we do believe -- we agree with the Department of Fish and
36 Game -- that there will continue to be harmful impacts to birds, bats, and other wildlife. This is
37 especially important given impacts of transmission line construction and operation could also
38 include wildlife disturbance and mortality.
39

40 Given all of that, we believe that to exempt the transmission work from – as preconstruction,
41 and to exempt that from the EIS review needs to be reassessed.
42

43 **[113-12, Ken Miller]** The Draft EIS should analyze the benefit of burying any additional
44 transmission lines to minimize the known harmful impacts to birds, bats, and other wildlife.
45

46 **[184-20, Kitty Vincent; 191-29, Liz Woodruff]** The draft EIS should also analyze the benefits
47 of burying any additional transmission lines to minimize the known harmful impacts to birds,
48 bats and other wildlife. This is especially important given “impacts of transmission line
49 construction and operation could also include wildlife disturbance and wildlife mortality.” (4-150)
50

1 **[193-18, Liz Woodruff, on behalf of the Snake River Alliance]** On another point on
2 transmission, and this is very key, the DEIS should also analyze benefits of bearing any
3 additional transmission lines, to minimize the known harmful impacts to wildlife in the area. This
4 is especially important given that impacts of transmission lines will disturb wildlife and cause
5 wildlife mortality.
6

7 **[191-30, Liz Woodruff]** The Idaho Department of Fish and Game, in a response to the NRC
8 dated April 14, reaffirmed the threats transmission lines would pose to wildlife (draft EIS B-26)
9 and challenges the methodology of sage grouse and lek analysis in the EIS (B-27),
10 recommends burying transmission lines, and suggests Areva submit to the NRC for review
11 plans to mitigate for the expected wildlife impacts. These concerns do not appear to have been
12 addressed in this EIS.
13

14 **Response:** *In Section 4.3 of the EIS, the cumulative impacts of a proposed, above-ground,*
15 *161-kV transmission line that would serve the proposed EREF are analyzed. Additional*
16 *discussion of the potential effects of the transmission line on sage-grouse has been added to*
17 *Section 4.3.7. This analysis concludes that the line would have SMALL contributions to*
18 *cumulative impacts in all resource areas. However, text regarding monitoring of the*
19 *transmission line right-of-way for avian mortality has been added to Section 6.2.2. Because the*
20 *line is a small action compared to the proposed EREF, the assessment does not analyze*
21 *impacts from alternative line designs. In any event, when evaluating the recommendation of*
22 *IDFG to bury the transmission line, AES determined that it was not practical, safe, or standard*
23 *utility company practice to bury high-voltage lines, such as the 161-kV line (AES, 2010e).*
24
25

26 **Comment:** The following comments express concern that impacts from the transmission line
27 should be considered as a direct action (i.e., more fully analyzed) rather than a cumulative
28 impact. The predominant concern expressed is that impacts to wildlife were not adequately
29 addressed as a result.
30

31 **[015-19, Beatrice Brailsford]** The NRC's exemption authorizing Areva to undertake
32 preconstruction activities should not include exempting utilities installations, including
33 transmission lines and associated substations and other utility infrastructure. Installation of 80-
34 foot, 161kv transmission lines should not be considered as having "cumulative" impacts but
35 rather direct impacts that must be analyzed in the EIS. But EREF could not operate without the
36 transmission line, which is critical to the proposed action. The NRC therefore errs when it
37 excludes this transmission line from the proposed action.
38

39 **[113-04, Ken Miller]** Installation of 80-foot tall, 161-kilovolt transmission lines should not be
40 considered as having cumulative impacts, as referred to in the EIS, but rather direct impacts
41 that must be analyzed in the EIS. Contrary to assertions, and this is in the Draft EIS 1-10, that
42 this transmission line is not considered by the NRC to be part of the proposed action. EREF
43 could not function without the transmission line, which is critical to the proposed action, and
44 must be considered for its environmental impacts.
45

46 The Draft EIS is in error when it suggests at page XLV that "impacts from the construction of a
47 proposed new 161 KV transmission line, a substation, and substation upgrades for the
48 proposed EREF are addressed as cumulative impacts in this EIS." This action is not under

1 NRC's jurisdiction, according to the EIS, and therefore not considered by the NRC to be part of
2 the proposed action.

3
4 We don't believe this is a defensible position. The EIS is replete with positive social and
5 economic benefits from this project. Erecting 80-foot transmission towers and stringing power
6 lines between them must be considered for their environmental impacts, just as Idaho's
7 Department of Fish and Game suggests. And I'll skip through this, and the Fish and Game
8 reference is in an April 14th letter of response to the NRC, which reaffirmed the threats
9 transmission lines would pose to wildlife. This is on B-26, 27, and 28 in the EIS, and it
10 challenges the methodology of sage grouse and lek analysis on the EIS. That's at Draft B-27. It
11 recommends burying transmission lines, and suggests that AREVA submit to the NRC for
12 review plans to mitigate for their wildlife impacts.

13
14 **[113-10, Ken Miller]** On the issue of transmission, the NRC's ill - advised exemption that
15 authorizes Areva to undertake preconstruction activities as not being part of the proposed action
16 should not include exempting utilities installations, including transmission lines and associated
17 substations and other utility infrastructure. Installation of 80-foot, 161-kV transmission lines
18 should not be considered as having "cumulative" impacts but rather direct and immediate
19 impacts that must be analyzed in the EIS.

20
21 Contrary to assertions (DRAFT EIS 1-10) that "this transmission line is not considered by the
22 NRC to be part of the proposed action," EREF could not function without the transmission line,
23 which is critical to the proposed action and must be considered for its environmental impacts.
24 This EIS claims repeatedly that the NRC has no jurisdiction over transmission lines and
25 therefore new transmission lines should not be considered as part of this EIS. Yet the NRC
26 claims authority to determine that EREF deserved credit for being a greenhouse gas sink?

27
28 This is not a defensible position. The EIS is replete with supposed "positive" social and
29 economic benefits from this project. Erecting transmission towers and stringing power lines
30 between them MUST be considered for their environmental impacts, just as Idaho's Department
31 of Fish and Game suggests. Actually, the installation and operation of this transmission line
32 have everything to do with the proposed action, and the failure of the NRC to consider these
33 impacts in the EIS phase cannot be defended, particularly given the acknowledgment by Areva
34 and NRC that impacts of transmission line construction and operation could also include wildlife
35 disturbance and wildlife mortality. The proposed transmission line route includes potentially
36 suitable habitat for sage brush obligate species, including migratory bird species. The Idaho
37 Department of Fish and Game's response to the NRC, dated April 14, reaffirmed the threats
38 transmission lines would pose to wildlife (Draft EIS B-26) and challenges the methodology of
39 sage grouse and lek analysis in the EIS (Draft B-27), recommends burying transmission lines,
40 and suggests that Areva submit to the NRC for review plans to mitigate for the expected wildlife
41 impacts.

42
43 **[150-05, Katie Seevers]** In addition to these concerns of effects to the environment, the Idaho
44 Department of Fish and Game has reaffirmed threats to the transmission lines would pose to
45 wildlife, which is discussed in the draft EIS, section B-26. With pronghorn antelope, sage
46 grouse, and excuse me if I pronounce this wrong -- ferruginous hawks, all making their habitat
47 on the proposed site, wildlife impact should be more closely examined by the NRC.

1 **[153-13, Andrea Shipley]** The EREF could not function without the transmission line, which is
2 critical to the proposed action. It is recommended that the routes for some proposed new
3 transmission lines be part of its own NEPA process because of potential impacts to wildlife and
4 the land.

5
6 **[197-13, Andrea Shipley, on behalf of the Snake River Alliance]** The EREF could not
7 function without the transmission line, which is critical to the proposed action.

8
9 **[184-18, Kitty Vincent; 191-27, Liz Woodruff]** The NRC's exemption that authorizes Areva to
10 undertake preconstruction activities as not part of the proposed action (draft EIS xxvii) should
11 not include exempting utilities installations, including transmission lines and associated
12 substations and other utility infrastructure. Installation of 80-foot, 161-kV transmission lines
13 should not be considered as having "cumulative" impacts but rather direct impacts that must be
14 analyzed in the EIS. Contrary to assertions (draft EIS 1-10) that "this transmission line is not
15 considered by the NRC to be part of the proposed action," EREF could not function without the
16 transmission line, which is critical to the proposed action.

17
18 **[184-21, Kitty Vincent]** The Idaho Department of Fish and Game, in a response to NRC dated
19 April 14, reaffirmed the threats transmission lines would pose to wildlife (draft EIS B-26) and
20 challenges the methodology of sage grouse and lek analysis in the EIS (B-27), recommends
21 burying transmission lines, and suggests Areva submit to plans to mitigate for the expected
22 wildlife impacts. These concerns do not appear to have been addressed in this EIS and must be
23 addressed before any preconstruction activities are allowed or before this EIS review continues.

24
25 **[191-30, Liz Woodruff]** The Idaho Department of Fish and Game, in a response to the NRC
26 dated April 14, reaffirmed the threats transmission lines would pose to wildlife (draft EIS B-26)
27 and challenges the methodology of sage grouse and lek analysis in the EIS (B-27),
28 recommends burying transmission lines, and suggests Areva submit to the NRC for review
29 plans to mitigate for the expected wildlife impacts. These concerns do not appear to have been
30 addressed in this EIS.

31
32 **[193-19, Liz Woodruff, on behalf of the Snake River Alliance]** Now this is something that's
33 considered as a preconstruction impact in EIS, so this isn't given the weight and the technical
34 impact review, the small, moderate, and large that you saw.

35
36 But more specifically, in the EIS, in Appendix B, the Idaho Department of Fish and Game affirms
37 that the threat to transmission lines would be great for wildlife, and they recommend barring
38 transmission lines and suggest AREVA submit to plans to mitigate for the expected wildlife
39 impacts. These concerns must be addressed in the EIS, before any preconstruction activities
40 are allowed.

41
42 **Response:** *In Section 1.4.1 of the EIS, the reason the NRC staff has analyzed the impacts of*
43 *the proposed new 161-kV transmission line, that would serve the proposed EREF, as*
44 *cumulative impacts is provided. However, the transmission line is not exempted from the EIS*
45 *review. The impacts of this line are analyzed in Section 4.3 as cumulative impacts within the*
46 *ROI of the proposed EREF. In addition, the environmental review is not diminished by the fact*
47 *that the impacts of the proposed transmission line are considered under cumulative impacts*
48 *rather than direct impacts because all impacts within a 16-kilometer (10-mile) ROI of the*

1 *proposed EREF are associated with the facility. Socioeconomic impacts consider additional*
2 *actions out to 80 kilometers (50 miles).*

3
4 *The proposed 161-kV transmission line, while considered by the NRC as preconstruction, is*
5 *analyzed under cumulative impacts as a foreseeable action. Because the line is necessary for*
6 *operations of the proposed EREF, it is given particular attention in the EIS and its impacts are*
7 *fully analyzed. The analysis concludes that the proposed transmission line would have SMALL*
8 *contributions to cumulative impacts, including the cumulative impacts on ecological resources*
9 *such as vegetation and birds.*

10
11
12 **Comment:** The following comments express concern that a license extension for the proposed
13 EREF is likely and that depleted uranium waste will be left on site after the original 30-year
14 license period.

15
16 **[015-05, Beatrice Brailsford]** The most domestic part of the proposal is that the waste will, in
17 fact, stay here. The plant would produce 320,000 tons of depleted uranium hexafluoride over its
18 licensed lifetime, and the door is already ajar for the license to be extended. That waste might
19 be stored on outdoor concrete pads above the Snake River aquifer until the plant is
20 decommissioned.

21
22 It's worth noting that New Mexico sharply limits how much, and how long waste can stay at the
23 plant there. The waste has to be treated before it can be disposed of. Two government-owned
24 treatment plants are under construction, over budget, and behind schedule. Waste the U.S. has
25 already accumulated will take a combined 43 years to process.

26
27 **[015-14, Beatrice Brailsford]** The EREF will produce more than 350,000 tonnes of depleted
28 uranium hexafluoride (DUF6) over its licensed lifetime, and the door is already ajar for the
29 license to be extended. That waste would be stored in 25,718 cylinders on outdoor concrete
30 pads above the Snake River Aquifer as long as the plant operates. DUF6 is both radioactive
31 and chemically toxic and has to be treated before it can be disposed of. The DOE has built two
32 plants to treat depleted uranium hexafluoride waste the US has already accumulated. That
33 treatment will take a combined 43 years to process. A private US corporation is seeking a
34 license for its own treatment plant. The draft EIS cavalierly dismisses any potential bottlenecks
35 by stating that the waste could simply be sent to the DOE treatment plants before they're ready
36 to process it and then their operating lives extended. But it is at least as likely that the DUF6 will
37 be stored in Idaho for an uncertain length of time above the Snake River Aquifer, a sole source
38 aquifer for nearly 300,000 people. Storage under these conditions must be fully evaluated under
39 NEPA.

40
41 **[045-01, Joan Drake]** I write to oppose the construction of the Areva nuclear power plant. I am
42 very concerned that the proposed plant would produce an estimated 320,000 tons of depleted
43 uranium hexafluoride over its licensed lifetime. In view of this, and the fact that its license might
44 well be extended, indications are that this waste would likely be stored in or near Idaho until the
45 plant's decommissioning. Even after its removal and treatment, there is no certain disposal
46 pathway. The Areva plant should not be licensed until regulations are in place for the
47 environmentally safe disposal of large quantities of depleted uranium.

1 **[086-03, Paula Jull]** Areva's plant would produce 320,000 tons of depleted uranium
2 hexafluoride over its licensed lifetime, and its license might well be extended. All this waste
3 might be stored in Idaho until the plant was decommissioned.

4
5 **[095-05, Linda Leeuwrik]** Areva's plant would produce 320,000 tonnes of depleted uranium
6 hexafluoride over its licensed lifetime, and its license might well be extended. All this waste
7 would likely be stored in Idaho until the plant was decommissioned. Even after it is removed and
8 treated, there is no certain disposal pathway.

9
10 **[097-01, Bryan Martin]** So based on the capabilities of those facilities, and what's going to be
11 produced here – well, just based on what's presently in existence, it would take over 22 years to
12 deconvert all of the existing nuclear waste, leaving at least 22 years of depleted uranium, on site
13 at Eagle Rock, before anything can be started.

14
15 And so that's a concern, because then you have 22 years of waste that's sitting on sites, that
16 can then be shipped off, you know, as time progresses, but with that type of lag, it suggests that
17 there will be waste present on site past the scheduled lifespan of the facility, that 30 years. And
18 so that kind of begs the question of, well, are you expecting this to be a license extension? And
19 so if that is the case, if that's kind of implied, that should be something that should be addressed
20 and discussed within the EIS before it's finalized.

21
22 **[122-01, Kathy O'Brien]** I do not want the waste from this plant here in Idaho or anywhere. It is
23 not clean energy because of the waste both from this plant and from nuclear power plants.
24 Areva's plant would produce 320,000 tonnes of depleted uranium hexafluoride over its licensed
25 lifetime, and its license might well be extended. All this waste might be stored in Idaho until the
26 plant was decommissioned. Even after it's removed and treated, there is no good way to
27 dispose of it.

28
29 **[150-02, Katie Seevers]** The draft EIS assumes that the depleted uranium hexafluoride will not
30 be stored on the site past the license life of the facility. However, it also acknowledges that
31 Areva may apply for a license extension. I find the lack of a fully developed rule on disposal of
32 depleted uranium problematic, especially when coupled with the prospect of seismic activity in
33 the area and the potentiality for a license extension.

34
35 **[153-06, Andrea Shipley; 197-06, Andrea Shipley, on behalf of the Snake River Alliance;**
36 **184-08, Kitty Vincent]** The draft EIS assumes that depleted uranium hexafluoride will not be
37 stored on site beyond the licensed life of the facility. But it also acknowledges Areva may apply
38 for a license extension. As a matter of fact, Areva plans to ask federal regulators for permission
39 to alter the normally required procedure as it ends the manufacturing of nuclear fuel in Virginia
40 because the company would still use the site for other nuclear activities. (Gentry, The News &
41 Advance © Copyright 2009). So, what's next for the Idaho facility if an extension is approved?
42 The NRC must discuss the length of an extension and whether cumulative waste storage would
43 be allowed.

44
45 **[175-04, Ellen Thomas]** Areva's plant would produce 320,000 tonnes of depleted uranium
46 hexafluoride over its licensed lifetime, and its license might well be extended. There is no
47 certain disposal pathway.

1 **[191-12, Liz Woodruff]** The draft EIS assumes that depleted uranium hexafluoride will not be
2 stored on site beyond the licensed life of the facility. But the draft EIS also acknowledges that
3 Areva may well apply for a license extension. The NRC must discuss the length of a potential
4 extension and whether or not cumulative waste storage would be allowed.
5

6 **[192-02, Lisa Young]** I'm concerned about many different issues surrounding this facility's
7 Environmental Impact Statement, but today I'll focus on the storage of depleted uranium
8 hexafluoride waste on site, and the future transportation and storage off site. While the proposal
9 commits to removing all of the depleted uranium waste from the site, after decommissioning, the
10 question still lingers. What if they receive a license extension? It's important to analyze the
11 environmental impact that the storage of this waste on site, beyond the timeline currently
12 implicated by the proposal, as this is a very real possibility and could result in very different
13 analyses of the storage of the waste on site.
14

15 **[192-08, Lisa Young]** I am concerned about many different issues surrounding this facility's
16 environmental impact statement, but in the comments that follow I will focus on the storage of
17 depleted uranium hexafluoride waste on-site, and the future transportation and storage of that
18 waste off-site. While the proposal commits to removing all of the depleted uranium waste from
19 the site after decommissioning, the question still lingers: what if they receive a license
20 extension? It's important to analyze the environmental impact of the storage of this waste on-
21 site beyond the timeline currently implicated by the proposal, as this is a very real possibility,
22 and could result in very different analyses of the storage of the waste on-site.
23

24 **Response:** *AES's license for the proposed EREF, if granted by the NRC, would be for a period*
25 *of 30 years for construction and operation of the proposed facility. Any extension of the license*
26 *would require a separate licensing action by the NRC and a separate environmental review at*
27 *the time of the application for license extension.*
28

29 **I.5.26 Mitigation**

30
31
32 Comments on mitigation measures can be found in the Section I.5 subsections specific to the
33 applicable resource areas.
34

35 **I.5.27 Environmental Measurement and Monitoring Programs**

36
37 **Comment:** The following comment asks why the Draft EIS references NRC Regulatory Guide
38 Revision 1 rather than Revision 2.
39

40 **[066-06 Toni Hardesty, on behalf of the Idaho Department of Environmental Quality]** 4.
41 Several places in the draft EIS reference NRC reg guide 4.15 revision 1 (1979). Please explain
42 why the NRC does not reference revision 2 (2007).
43

44 **Response:** *The NRC acknowledges that Revision 2 (2007) of Regulatory Guide 4.15 should*
45 *have been the proper reference. The reference list of Chapter 6 (Section 6.3) and the text of*
46 *Sections 6.1, 6.1.2, and 6.1.8 of the EIS has been revised accordingly.*
47
48

1 **Comment:** The following comment requests clarification in the EIS concerning how AES will tie
2 into the appropriate monitoring networks to the maximum extent possible in order to better
3 delineate INL impacts from impacts of the proposed EREF, as well as understanding the
4 broader regional impacts.

5
6 **[066-07, Toni Hardesty, on behalf of the Idaho Department of Environmental Quality]** 5.
7 The DEQ INL Oversight program works in conjunction with the INL (DOE and contractors) to
8 monitor soils, air quality, ground water and surface water through a complex monitoring system.
9 DEQ requests clarification in the EIS concerning how AES will tie into the appropriate
10 monitoring networks to the maximum extent possible in order to better delineate INL impacts
11 from AES impacts as well as understanding the broader regional impacts.

12
13 **Response:** *The NRC staff acknowledges this comment. However, the staff finds that the*
14 *actions AES has committed to taking with regard to monitoring of soils, air, groundwater, and*
15 *surface water will be sufficiently protective of the environment. These actions are described in*
16 *Chapter 6 of the EIS (Environmental Measurements and Monitoring Program).*

17
18 *When NRC reviews a proposed action, its ability to impose additional requirements and*
19 *environmental mitigation and monitoring measures beyond those proposed as part of the*
20 *license application is limited to those with a reasonable nexus to providing protection for*
21 *radiological health and safety and common defense and security. The NRC can, however,*
22 *require that the proposed facility be built in accordance with the submitted application, including*
23 *mitigation and monitoring measures proposed by the applicant that are not specifically required*
24 *by or directly related to NRC's regulations. Thus, the NRC does have the ability to hold*
25 *licensees to key mitigation and monitoring measures committed to in their applications and*
26 *subsequently incorporated in the NRC license directly or by reference.*

27
28
29 **Comment:** The following comment questions the locations of some of the deep groundwater
30 sampling locations on the proposed EREF site, and requests an explanation for why there are
31 no groundwater sampling wells in the southwest (SW) or south-southwest (SSW) sectors of the
32 monitoring locations map.

33
34 **[066-10, Toni Hardesty, on behalf of the Idaho Department of Environmental Quality]**
35 Chapter 6: pp, 6-3, Figure 6-1. Many of the deep groundwater sampling locations are too close
36 to the facility to ensure detection at depth. Additionally, it is generally accepted that the
37 groundwater flows in a southwesterly direction. Please explain why there are not groundwater
38 sampling wells in the SW or SSW sectors of the monitoring locations map.

39
40 **Response:** *Groundwater sampling wells are located on the proposed EREF property on the*
41 *basis of the predominant groundwater flow direction, which is from the northeast to the*
42 *southwest in the vicinity of the proposed EREF. Several of the groundwater sampling points*
43 *(wells) shown on Figure 6-1 in the EIS, indicated by the number 6, are located in the southwest*
44 *(downgradient) sector; these are mainly deep wells, but include one shallow well to monitor*
45 *perched groundwater near the facility. Two wells are located to the northeast (upgradient) of*
46 *the facility to provide sampling control points. The IDEQ has a statewide network of wells it*
47 *monitors to evaluate the overall quality of groundwater throughout the State to meet the*
48 *objectives of the State's Ground Water Quality Protection Act. Any monitoring outside of the*

1 *proposed EREF property boundary, therefore, would occur under the aegis of the State's*
2 *groundwater quality monitoring program. Section 6.1.5 of the EIS has been revised to include*
3 *this information.*

4
5
6 **Comment:** The following comment requests clarification on whether any gross alpha or beta
7 measurement over 10 percent of the listed U (uranium) value will be analyzed further, or if there
8 are specific criteria based on a gross alpha beta screening that will trigger the analysis.

9
10 **[066-11, Toni Hardesty, on behalf of the Idaho Department of Environmental Quality]** 9.
11 Chapter 6: pp. 6-4, Table 6-2 states "Isotopic analyses for uranium isotopes (238U, 236U,
12 235U, and 234U) would commence whenever gross alpha and gross beta activities indicate that
13 an individual radionuclide could be present in a concentration >10 percent of the specified
14 concentrations in Table 2 of Appendix B to 10 CFR Part 20." Please clarify whether any gross
15 alpha or beta measurement over 10% of the listed U value will be analyzed further, or if there
16 are specific criteria based on a gross alpha beta screening that will trigger the analysis.

17
18 **Response:** *Should a sample exhibit a gross alpha or beta measurement over 10 percent of the*
19 *listed uranium value in Table 2 of Appendix B to 10 CFR Part 20, the concentrations of the four*
20 *specific uranium isotopes would be determined. There are no other screening criteria that will*
21 *trigger the isotopic analysis (AES, 2010d).*

22
23
24 **Comment:** The following comment presents recommendations and questions regarding air
25 quality monitoring.

26
27 **[066-12, Toni Hardesty, on behalf of the Idaho Department of Environmental Quality]**
28 Chapter 6: pp. 6-6, Lines 10. , & Fig 6-1, pp. 6-3 describes the environmental monitoring sites.
29 DEQ has the following recommendations and questions:

- 30
- 31 • There should be an air sampling site on the west side of the property which is nearest the
32 INL.
 - 33
 - 34 • There should be an air sampling site between the facility and Hwy 20 to the south.
 - 35
 - 36 • The air sampling site on the southern fence of the facility is off-set to the SW and is
37 approximately 2 km from the road. This may not be a good indicator of off-site public
38 dose impact at the road and should be relocated.
 - 39
 - 40 • The wind rose for the nearest meteorological tower at MFC on pp. C-9 shows winds from
41 the SW and SSW to the NE are the predominate direction and magnitude, yet the only
42 sampling planned in the NE and ENE sectors are one TLD and two groundwater
43 samples collectively. Please explain why are there no air, soil, or vegetation samples in
44 the sectors where impacts are most likely to be observed.
 - 45

46 **Response:** *The NRC staff acknowledges this comment. However, the staff finds that the*
47 *actions AES has committed to taking with regard to monitoring of soils, air, groundwater, and*

1 surface water will be sufficiently protective of the environment. These actions are described in
2 Chapter 6 of the EIS (Environmental Measurements and Monitoring Program).

3
4 When NRC reviews a proposed action, its ability to impose additional requirements and
5 environmental mitigation and monitoring measures beyond those proposed as part of the
6 license application is limited to those with a reasonable nexus to providing protection for
7 radiological health and safety and common defense and security. The NRC can, however,
8 require that the proposed facility be built in accordance with the submitted application, including
9 mitigation and monitoring measures proposed by the applicant that are not specifically required
10 by or directly related to NRC's regulations. Thus, the NRC does have the ability to hold
11 licensees to key mitigation and monitoring measures committed to in their applications and
12 subsequently incorporated in the NRC license directly or by reference.

13
14
15 **Comment:** The following comment requests that the NRC define "sectors" in the cited sentence
16 in Chapter 6, on page 6-9, line 40 of the Draft EIS.

17
18 **[066-13, Toni Hardesty, on behalf of the Idaho Department of Environmental Quality]** 11.
19 Chapter 6: pp. 6-9, Line 40 states "Samples would be collected quarterly from each sector at
20 locations near the Owner Controlled Area fence line." Please define the "sectors".

21
22 **Response:** The sectors, shown on Figure 6-1 of the EIS, are the areas identified with the
23 16 compass directions centered on the proposed EREF. This has been added to the text of
24 Section 6.1.6.

25
26
27 **Comment:** The following comment requests clarification of information regarding
28 thermoluminescent dosimeters (TLDs) in the cited sentence in Chapter 6, on page 6-10, lines
29 6–8, and in Figure 6-1 of the Draft EIS.

30
31 **[066-14, Toni Hardesty, on behalf of the Idaho Department of Environmental Quality]** 12.
32 Chapter 6: pp. 6-10, Lines 6-8 states "The environmental TLDs would be placed at the Owner
33 Controlled Area fence line near the UF6 storage cylinders. In addition, two TLDs would be
34 placed at offsite locations for control purposes". This implies that TLDs are only placed near the
35 storage pads, but Fig 6-1 shows a network of 15 TLDs at the fence on all sides of the facility.
36 Please explain which description is correct.

37
38 **Response:** No implication was intended. TLDs would be placed along the entire fence line.
39 The text in Section 6.1.7 has been revised to state, "The environmental TLDs would be placed
40 along the Owner Controlled Area fence line."

41
42
43 **Comment:** The following comment recommends a change to the cited sentence in Chapter 6,
44 on page 6-10, lines 11-12 of the Draft EIS.

45
46 **[066-15, Toni Hardesty, on behalf of the Idaho Department of Environmental Quality]** 13.
47 Chapter 6: pp. 6-10, Lines 11-12 states "The TLD along the fence line would provide a
48 combined reading of background as well as above background readings associated with the

1 UF6 cylinders.” DEQ recommends this statement be changed to read “...provide a combined
2 reading of background as well as any above background readings associated with plant
3 operations and cylinder handling and storage.
4

5 **Response:** The text in Section 6.1.7 in the EIS has been changed as recommended.
6
7

8 **Comment:** The following comment expresses caution regarding the potential accumulation of
9 radioactivity elsewhere in the environment resulting from effluent releases from the proposed
10 EREF that are within regulatory limits
11

12 **[087-03, Dennis Kasnicki]** Comment 2b: Regardless of releases to the environment that are
13 within legal release limits, watch out for this contamination *accumulating* somewhere. Once, a
14 sewage treatment plant near Nuclear Fuel Services (Erwin, TN) had accumulated a sufficient
15 amount of HIGH enriched uranium to warrant an HEU license, and the NRC actually considered
16 licensing that sewage treatment plant as an option!
17

18 **Response:** The NRC acknowledges the comment regarding the potential accumulation of
19 radioactivity in the environment resulting from effluent releases from the proposed EREF that
20 are within regulatory limits. Such accumulations would be monitored and addressed through
21 the environmental measurements and monitoring program described in Chapter 6 of the EIS.
22
23

24 **Comment:** The following comment requests that monitoring data relating to wildlife and plants
25 be provided electronically to the IDFG within one year of collection.
26

27 **[089-01, Sharon Kiefer, on behalf of the Idaho Department of Fish and Game]** Ecological
28 Monitoring: The Department appreciates and supports the improvements in monitoring protocols
29 resulting from our previous consultation with AES and their contractors. The DEIS documents
30 the ecological monitoring program that would be carried out in accordance with generally
31 accepted monitoring protocols of the Department. Under the program, data would be collected,
32 recorded, stored, and analyzed. We request that monitoring data relating to wildlife and plants
33 be provided electronically to the Department within one year of collection and will pursue
34 discussion with AES for this coordination.
35

36 **Response:** The NRC staff acknowledges that the IDFG will pursue discussion with AES for this
37 request and coordination.
38
39

40 **Comment:** The following comment asks for clarification of what “anomalous” ecological
41 monitoring results might be and what appropriate efforts would be taken to reconcile them.
42

43 **[089-02, Sharon Kiefer, on behalf of the Idaho Department of Fish and Game]** Ecological
44 Monitoring: The DEIS states on page 6-18 lines 4-6, *Procedures would be established, as*
45 *appropriate, for data Collection, storage, analysis, reporting, and corrective actions. Actions*
46 *would be taken as necessary to reconcile anomalous results (AES, 2010a).* We are unsure what
47 “anomalous” results might be and what efforts to reconcile them would be appropriate. Please
48 clarify this issue.
49

1 **Response:** Generally accepted monitoring practices would be expected to include the
2 evaluation of data collection and analysis methods and determinations regarding necessary
3 corrective actions. Anomalous results would be expected to include those that would appear
4 unlikely based on other results of the ecological monitoring program. Potential actions could
5 include, for example, modifications of data collection methods.
6
7

8 **Comment:** The following comment requests that a statement be inserted in the ecological
9 monitoring section of Chapter 6 of the EIS, regarding the need to obtain appropriate permits
10 from IDFG or the FWS to handle, transport, or release wildlife, in order to conduct capture and
11 releases.
12

13 **[089-03, Sharon Kiefer, on behalf of the Idaho Department of Fish and Game]** Ecological
14 Monitoring: Page 6-18 lines 20-22, *Measures would be taken to release any entrapped wildlife.*
15 While the Department supports this measure, please insert the statement: Appropriate permits
16 to handle, transport or release wildlife will be obtained from IDFG or USFWS to conduct capture
17 and releases.
18

19 **Response:** The NRC staff acknowledges this comment. Section 6.2.2 of the EIS states that the
20 ecological monitoring program would be carried out in accordance with the requirements of the
21 IDFG and FWS. However, the staff finds that the actions AES has committed to taking with
22 regard to ecological monitoring, as described in Section 6.2.2, will be sufficiently protective of
23 the environment. It is the responsibility of the applicant, AES in this case, to obtain all required
24 Federal, State, and local permits and approvals for the project.
25
26

27 **Comment:** The following comment requests that certain text be inserted in the cited sentence in
28 Chapter 6, on page 6-18, lines 44–46 of the Draft EIS.
29

30 **[089-04, Sharon Kiefer, on behalf of the Idaho Department of Fish and Game]** Ecological
31 Monitoring: On page 6-18 lines 44-46, *Data collected for the ecological monitoring program*
32 *would be recorded on paper and/or electronic forms. These data would be kept on file for the life*
33 *of the proposed facility (AES. 20/0).* Please insert and will be provided to IDFG annually (as
34 mentioned above).
35

36 **Response:** The NRC staff acknowledges this comment. However, the staff finds that the
37 actions AES has committed to taking with regard to ecological monitoring, as described in
38 Section 6.2.2, will be sufficiently protective of the environment. The NRC staff acknowledges
39 that the IDFG will pursue discussion with AES for this request and coordination, as stated in its
40 Comment Number 089-01 above.
41
42

43 **Comment:** The following comment deals with the monitoring of emissions (radiological and
44 ambient air) and taking corrective action if air quality standards are not met. Also, the comment
45 points out that there is no monitoring station close to the proposed facility site.
46

47 **[138-04, Christine Reichgott, on behalf of the U.S. Environmental Protection Agency,**
48 **Region 10]** Since the project area and surrounding areas may include sensitive populations

1 such as the elderly and children, it will also be important to monitor emissions (radiological and
2 ambient air) and take corrective action if air quality standards are not met. Proposed monitoring
3 strategies should be tailored to local conditions because localized air quality impacts can be
4 substantial, even though area-wide and/or long term monitoring may show compliance with air
5 quality standards. The draft EIS indicates that monitoring data from a distant monitoring station
6 in Pocatello, for example, may not represent accurate air emission at the project site. Further,
7 there is no monitoring station close to the proposed facility site (p. 4-16).

8
9 **Response:** *As discussed in Section 3.13 of the EIS, information available to the NRC does not*
10 *indicate the presence of sensitive populations in the vicinity of the project. Given that air quality*
11 *impacts are expected to be localized and agricultural activities will continue in the vicinity of the*
12 *proposed EREF, no populations would appear to be at risk from short-duration, construction-*
13 *related impacts on air quality, especially since all construction activities would proceed under*
14 *the auspices of IDEQ-issued permits and Bonneville County-approved mitigation strategies.*
15 *Decisions regarding amendment to the SIP that might involve installation of a new ambient air*
16 *quality monitoring station in the project area are outside of the NRC's authority and the scope of*
17 *the EIS and instead are the province of IDEQ. The expected short duration of NAAQS*
18 *exceedance does not argue for a long-term commitment to ambient air quality monitoring in this*
19 *area.*

20
21
22 **Comment:** The following comment requests that the applicant include air monitoring and
23 reporting plans that are specific to the operations of the proposed facility.

24
25 **[027-16, Sara Cohn]** We request that the applicant include air monitoring and reporting plans
26 that are specific to the operations of the proposed facility. These plans should include guidance
27 for public alerts, immediate containment, responsible parties, etc., should air releases be
28 detected.

29
30 **Response:** *The IDEQ operating permit to be obtained by AES would specify that procedures*
31 *will be in place to guarantee the expected performance of the air filter systems through rigorous*
32 *monitoring, inspection, and maintenance programs and that responses to monitoring data would*
33 *be in accordance with applicable IDEQ regulations.*

34 35 36 **I.5.28 Benefit-Cost Analysis**

37
38 **Comment:** The following comments deal with the benefits and costs of the proposed EREF
39 project.

40
41 **[025-06, Hon. Sue Chew]** Furthermore, it is my opinion that this uranium enrichment project is
42 unnecessary and exposes the citizens of Idaho to a potential harm that cannot be offset by the
43 proposed benefits of such a program.

44
45 **[039-01, Kreg Davis]** Much has been said about how small money is compared to safety, and
46 we certainly would all agree with that. However, I would object to the minimization of the
47 importance of jobs, and jobs in the State of Idaho as it's been characterized. In the last several,
48 couple of years, 18 months, particularly, there's been a major economic downturn that has hit

1 this state. No one knows more, how more important it is, a job is, than somebody who is losing
2 it. I've been a first-hand witness of what it's like for people to lose their job, and I would hope
3 that no one in this room would minimize that in comparison to those people. Certainly still agree
4 with the safety issue. I would like to thank everyone here for the opportunity to speak in support
5 of the AREVA-proposed uranium enrichment plant.

6
7 **[040-04, Collin Day]** But there's just no need to take risks and gamble with things like the
8 aquifer that, you know, supplies drinking water to some 300,000 people, because 500 people
9 need jobs. I just--I don't see the point in that.

10
11 **[067-03, Mike Hart]** With respect to the need, I, looking at global warming, I know there are
12 obviously impacts of nuclear energy, but the reality is, seven generations from now I think they
13 won't be worrying as much about depleted uranium as they will be about depleted glaciers,
14 depleted ice caps, and nuclear energy has a significant benefit. It's not without its warts, it's not
15 without its impacts, but there is "no free lunch" when it comes to energy.

16
17 You can conserve, but we do use energy. It is used globally, whether this is a French company,
18 whether it's used locally, or nationally, the reality is its carbon-free, and that carbon-free
19 resource is something that is very precious, and until we have alternative technologies that can
20 produce significant usable quantities of electricity, nuclear is a very positive step in between
21 now and a carbon-free future.

22
23 **[068-04, Anne Hausrath]** My husband and I raised our children in Idaho. We are very much
24 concerned about the current economic climate for their generation, and we believe there's a
25 responsibility of all of us to provide for that. I don't believe that this plant is adequate -- that the
26 economic is adequate justification for that.

27
28 **[074-02, Don Howard]** ...what concerns me most is two things. One is economic impact that
29 Idaho does need. But the waste from the uranium we don't need. And I would say that the
30 economic--we need the economic boost that this will bring to the State of Idaho. But I say at
31 what cost to Idaho?

32
33 **[088-01, Stan Kidwell]** Areva's plant will do more harm than good to Idaho. Any jobs that
34 would be gained would not counter the damage, both fiscally and environmentally, that would be
35 done to Idaho.

36
37 **[095-01, Linda Leeuwrik]** I would like to voice my very strong opposition to the uranium
38 enrichment facility that the French company Areva is proposing to build not far from where I live
39 in South East Idaho. This facility would provide no real benefit or advantage to Idaho, instead
40 only leaving the waste for us to contend with for many years to come -- contaminating our land
41 and our water supply and negatively impacting our wildlife.

42
43 **[128-05, Bob Poyser]** Third. AREVA has, and will continue to incorporate sustainability
44 features, including the use of lead-certified building standards as a part of the overall effort to
45 ensure that we deploy our best efforts in creating a facility that is environmentally benign and
46 respects the site conditions.

47
48 **[130-02, Park and Sharon Price]** The benefits of this project substantially outweigh the
49 potential small or moderate impacts identified in the draft EIS.

1 We strongly support your preliminary conclusions that this project deserves to move forward.
2

3 **[147-04, Joey Schueler]** I am in opposition to the Eagle Rock Uranium enrichment plant being
4 put in Idaho Falls, Idaho! Although I understand the positive incentive arguments for the
5 proposed plant, the arguments against the plant far outweigh the rather short term positive
6 benefits. I think careful consideration should be given to each of the fifteen points I listed below
7 when deciding whether to take this action. I also doubt many Idahoans know about this action
8 and should be brought to a larger table of discussion.
9

10 **[177-01, Hon. T.J. Thomson]** As a Boise City Council Member, I am dedicated to safeguarding
11 tax payer dollars to assure that every penny spent is spent wisely. Outside of keeping this city
12 safe, fiscal responsibility is my highest priority. Every city project must be highly scrutinized to
13 assure we are getting the very best product available. And so, with fiscal stewardship in mind, I
14 ask that you exercise caution as you move forward with the Areva Plant. Considering the large
15 amount of state and federal tax dollars that will be invested into the plant, it is vital you assure
16 taxpayers that all costs regarding the management and disposal of waste are included in your
17 long-term budgeting process.
18

19 **[182-04, Brianna Ursenbach]** On balance, it is readily apparent, then, that this facility will not
20 be beneficial, so no amount of negative environmental impact, degradation, is acceptable. In
21 conclusion, this facility is not needed, not wanted, and cannot be licensed.
22

23 **[193-23, Liz Woodruff, on behalf of the Snake River Alliance]** So in conclusion, radioactive
24 waste poses an unacceptable risk to our state. You heard that the NRC has a cost-benefit
25 analysis. Well, based on our read and the reading of our members, and other Idahoans, it's very
26 clear that the costs of this facility are far greater than the benefits, to our public safety, to our
27 water, to our air, to our land, to wildlife habitat. And this definitely outweighs the hypothetical
28 and very risk assertion by the NRC, that we need uranium enrichment.
29

30 AREVA's proposed Eagle Rock enrichment facility will store radioactive waste at the sole
31 source aquifer for 300,000 people. It will impact sensitive species, require the transport of
32 radioactive materials, impair a national monument in Idaho, support destruction of a historic site,
33 devour billions of dollars in state and federal largesse to meet a hypothetical need that does not
34 yet exist, and obliterate farmland that is potentially protected by the Federal Government.
35

36 We are here to say this is simply not worth the risks, and new evaluations on the draft EIS are
37 needed, specifically around preconstruction and transmission issues, and until that time, this
38 facility should not be licensed.
39

40 ***Response:*** *The results of the benefit-cost analysis presented in Chapter 7 of the EIS show that*
41 *the benefits of the facility outweigh the costs. Although there are potential impacts the costs of*
42 *which cannot be quantified – impacts to air, water quality, or ecology, for example – these*
43 *impacts would be SMALL or SMALL-to-MODERATE, and would be unlikely to affect the*
44 *outcome of the benefit-cost analysis.*
45
46

1 **I.5.29 Editorial Comments**

2
3 **Comment:** The following comments identify typographical errors noted in the Draft EIS.

4
5 **[228-01, Jim Kay]** The word lightning is misspelled as lightening. (Table 3-10, Storm Events in
6 the Vicinity of the Proposed EREF Site, Page 3-26)

7
8 **[228-02, Jim Kay]** There is a typo in DEIS Table 3-15 in the row “Volcanic earthquakes” under
9 the column “Hazard Level.” The focal depth should be 2.5 mi versus 2.5 ft. (Table 3-15, Hazards
10 Associated with Basaltic Volcanism on the ESRP, Page 3-41)

11
12 **[228-03, Jim Kay]** There are typos on the emission factors. The value 2560 should be 2.560
13 and the value 10,292 should be 10.292. (Table 4-7, NRC’s Estimated Emissions of Criteria
14 Pollutants Resulting from Operations at the Proposed EREF, Page 4-24)

15
16 **[228-04, Jim Kay]** A D/Q value (2.43 x 10⁻⁷) is presented in the first full paragraph with units of
17 kg per square meters. The units for D/Q values are 1 over square meters (1/m²). (Section
18 4.2.4.2, Facility Operation, Generation and Release of Non-Criteria Chemical Pollutants Related
19 to EREF Operations, Page 4-27)

20
21 **[228-05, Jim Kay]** The DEIS specifies that the Retention Basins ...each would have a storage
22 capacity of about 83,000 cubic meters (76 acre-feet)... should be 67 acre-feet. (Section 4.2.6.2,
23 Facility Operation, Cylinder Storage Pads Stormwater Retention Basin, Page 4-40, Line 15)

24
25 **[228-06, Jim Kay]** In the 1st bullet, “apply water twice daily to...” should be twice daily (when
26 needed) for consistency with DEIS page 5-6, Ecological Resources. (Table 5-1, Summary of
27 Mitigation Measures Identified by AES for Preconstruction and Construction Environmental
28 Impacts, Air Quality Page 5-3)

29
30 **Response:** *The EIS has been reviewed and appropriate revisions have been made as noted in*
31 *the comments.*

32
33
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11. ABSTRACT (200 words or less)

AREVA Enrichment Services LLC (AES) submitted an application to the U.S. Nuclear Regulatory Commission (NRC) for a license to construct, operate, and decommission the proposed Eagle Rock Enrichment Facility (EREF) near Idaho Falls in Bonneville County, Idaho. If licensed, the proposed facility would enrich uranium for use in commercial nuclear fuel for power reactors. Feed material would be non-enriched uranium hexafluoride (UF₆). AES would employ a gas centrifuge process to enrich uranium up to 5 percent uranium-235 by weight, with a planned maximum target production of 6.6 million separative work units (SWUs) per year. The proposed EREF would be licensed in accordance with the provisions of the Atomic Energy Act. Specifically, an NRC license under Title 10, "Energy," of the U.S. Code of Federal Regulations (10 CFR) Parts 30, 40, and 70 would be required to authorize AES to possess and use special nuclear material, source material, and byproduct material at the proposed EREF site.

This Environmental Impact Statement (EIS) was prepared in compliance with the National Environmental Policy Act (NEPA) and the NRC regulations for implementing NEPA (10 CFR Part 51). This EIS evaluates the potential environmental impacts of the proposed action and its reasonable alternatives.

12. KEY WORDS/DESCRIPTORS (List words or phrases that will assist researchers in locating the report.)

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