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July 28, 2010

Mr. Robert E. Link, Manager
Environmental, Health, Safety
and Licensing
AREVA NP, Inc.
2101 Horn Rapids Road
Richland, WA 99354-5102

SUBJECT: APPROVAL OF AREVA NP, INC.'S LICENSE AMENDMENT APPLICATION TO
INSTALL A SUPERCRITICAL CO₂ EXTRACTION PROCESS AT ITS RICHLAND,
WASHINGTON FUEL FABRICATION FACILITY (TAC NO. L32689)

Dear Mr. Link:

In accordance with your amendment request dated June 12, 2008, and supplements dated August 22, 2008; June 5, July 13, November 11, and December 4, 2009; February 4 e-mail and attachment from C.D. Manning dated April 16, April 28, and e-mail and attachment from C.D. Manning dated July 1, 2010; and pursuant to Part 70 to Title 10 of the *Code of Federal Regulations* (10 CFR), Materials License No. SNM-1227 is hereby amended to authorize the operation of a uranium extraction process using supercritical carbon dioxide (CO₂) at the existing uranium dioxide building.

License Condition S-1 of your license is hereby amended to include the dates of June 12 and August 22, 2008; June 5, July 13, November 11, and December 4, 2009; February 4, April 16, April 28, and July 1, 2010. In addition, the following condition has been added and reads as follows:

S-6 Pressure vessels used in the supercritical CO₂ extraction process that have an outside diameter of more than six inches shall be constructed, certified, and maintained in accordance with the American Society of Mechanical Engineers Boiler and Pressure Vessel Code, Section VIII, Division 1, without exception.

The following Safeguard Condition has been brought forward and updated, as appropriate:

SG-1.1 The licensee shall follow Sections 0.0 through 8.0 (with all pages designated as Version 4.0 of E07-01-001) of the Fundamental Nuclear Material Control Plan. This Plan may be further revised in accordance with, and pursuant to, the provisions of 10 CFR 70.32(c) or 70.34.

All other conditions of this license shall remain the same. Enclosed are copies of the amended Materials License SNM-1227 and the Safety Evaluation Report (SER). As stated in Section 15 of the SER, no further evaluation of the environmental impacts associated with AREVA's use of the proposed process is required, because it meets the criteria for a categorical exclusion under 10 CFR 51.22(c)(11).

This letter and the enclosed amendment conclude this action and close the assigned Technical Assignment Control Number L32689.

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R. Link

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If you have any questions regarding this matter, please contact Rafael Rodriguez of my staff at (301) 492-3111 or via e-mail at Rafael.Rodriguez@nrc.gov.

Sincerely,

/RA/

Michael D. Tschiltz, Deputy Director
Fuel Facility Licensing Directorate
Division of Fuel Cycle Safety
and Safeguards
Office of Nuclear Material Safety
and Safeguards

Docket No.: 70-1257
License No.: SNM-1227

Enclosures:

1. Materials License SNM-1227, Amendment 1 (Non-Public Version)
2. Safety Evaluation Report (Non-Public Version)
3. Updated Chapter 6 of AREVA's license
4. Materials License SNM-1227, Amendment 1 (Public Version)
5. Safety Evaluation Report (Public Version)

cc (w/o enclosures):

Loren J. Maas, Manager
Licensing and Compliance
AREVA NP, Inc.
2101 Horn Rapids Road
Richland, WA 99354-5102

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If you have any questions regarding this matter, please contact Rafael Rodriguez of my staff at (301) 492-3111 or via e-mail at Rafael.Rodriguez@nrc.gov.

Sincerely,

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Michael D. Tschiltz, Deputy Director
Fuel Facility Licensing Directorate
Division of Fuel Cycle Safety
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Office of Nuclear Material Safety
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