



March 17, 2006
REL:06:009

U.S. Nuclear Regulatory Commission
Director, Office of Nuclear Material
Safety and Safeguards
Attn: Document Control Desk
Washington, D.C. 20555

Gentlemen:

**Subject: Revised License Pages for U-235 Possession Limit Increase; AREVA NP Inc.,
Richland Fuel Fabrication Facility; License No. SNM-1227, Docket No. 70-1257**

- Ref.: 1. Letter, D.W. Parker to USNRC, "Licensing Actions Requested to Support the Blended Low-Enriched Uranium (BLEU) Project at Framatome ANP's (FANP's) Richland, Washington Facility," DWP:03:030, August 27, 2003.
- Ref.: 2. Letter, J. Lubinski to D.W. Parker, "Review of Licensing Actions Needed to Support Blended Low-Enriched Uranium Project at Framatome ANP, Inc. - Richland (TAC No. L31777), October 23, 2003.
- Ref.: 3. Letter, D.W. Parker to USNRC, "Application for Amendment to License No. SNM-1227; Storage of Blended Low-Enriched Uranium (BLEU) - Derived Uranium Powder at Framatome ANP Richland Facility," DWP:03:039, November 17, 2003.
- Ref.: 4. Letter, D.W. Parker to USNRC, "Revised Application for Amendment to License No. SNM-1227; Storage of Blended Low-Enriched Uranium (BLEU) - Derived Urania Powder at Framatome ANP Richland Facility," DWP:04:004, March 3, 2004.
- Ref.: 5. Letter, G.S. Janasko to D.W. Parker, "Framatome ANP, Inc. - Amendment No. 42 - Storage of Blended Low-Enriched Uranium Powder (TAC L31794), May 27, 2004.
- Ref.: 6. Letter, R.E. Link to USNRC, "Application for Increased U-235 Possession Limit for the Framatome ANP, Inc. (FANP) Richland Fuel Fabrication Facility," REL:05:013, April 25, 2005.
- Ref.: 7. Letter, M.N. Baker to R. Link, "Framatome ANP, Inc., Request to Increase Possession Limit (TAC L31888)," September 30, 2005.
- Ref.: 8. Letter, R. E. Link to USNRC, "Updated Decommissioning Funding Plan (DFP) for Framatome ANP, Inc. (FANP) Richland Fuel Fabrication Facility," REL:05:034, December 29, 2005.

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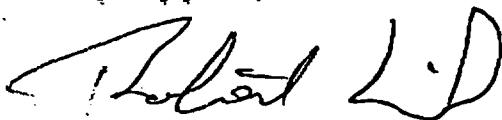
Via Reference 1, AREVA NP Inc. outlined its projected licensing needs to support addition of facilities and equipment required for its processing of Blended Low-Enriched Uranium (BLEU) powder. Those needs were two fold, namely (1) licensing of the downloading of BLEU powder from shipping containers into 55-gallon drums and subsequent storage of those drums in a newly constructed warehouse, and (2) increasing the site U-235 possession limit from 25,000 kg to 75,000 kg to accommodate peak BLEU material storage periods. Via Reference 2 the NRC concurred with AREVA NP's projected licensing requirements and requested that AREVA NP submit the download/storage amendment first, followed by submittal of the less time sensitive possession limit increase request in a separate amendment application. The download/storage amendment proceeded via an initial and a follow-up amendment request (References 3 and 4, respectively), culminating in NRC approval via Amendment 42 to AREVA NP's Richland site license (Reference 5).

AREVA NP's amendment request relative to the U-235 possession limit increase was submitted via Reference 6. Via Reference 7 the NRC requested an updated decommissioning funding plan (DFP) for the Richland site as a pre-requisite to completion of its review and approval of the U-235 possession limit increase request. That DFP was submitted via Reference 8.

Based on recent oral communication from the NRC that approval of AREVA NP's DFP is imminent, AREVA NP is now submitting revised pages to License No. SNM-1227 to reflect the requested U-235 possession limit increase. Accordingly, please find attached six copies of a revised Chapter 1, "Standard Conditions and Special Authorizations," of License No. SNM-1227. The possession limit change is reflected on Page 1-2. Also, please note that the revised Chapter 1 reflects the name change of Framatome ANP, Inc. to AREVA NP Inc., effective March 15, 2006. The NRC was officially notified of that name change via prior correspondence.

We appreciate the NRC's support in the overall process for licensing of AREVA NP's BLEU activities and look forward to completion of this final step. If you have questions, please feel free to contact me at 509-375-8537.

Very truly yours,



R. E. Link, Manager
Environmental, Health, Safety & Licensing

/mah

Enclosures

cc: M. N. Baker, USNRC

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CHAPTER 1 STANDARD CONDITIONS AND SPECIAL AUTHORIZATIONS

1.1 Corporate Information

The name of the applicant is AREVA NP Inc. (AREVA). Applicant is incorporated in the State of Delaware with its principal corporate offices located at 3315 Old Forrest Road, Lynchburg, Virginia 24506-0935. All of the common stock of Applicant is owned by AREVA NP USA, Inc., a Delaware corporation with headquarters in Bethesda, Maryland. AREVA NP USA Inc. is, in turn, wholly-owned by AREVA NP SAS, headquartered in Paris, France. The facility for which this application is being made is located at 2101 Horn Rapids Road, Richland, Washington 99354.

1.2 Site Location

The Engineering and Manufacturing Facility is located in the state of Washington, county of Benton, city of Richland. It is sited on a 320-acre tract, 0.9 miles west of the intersection of Stevens Drive and Horn Rapids Road within the north boundary of the city of Richland. The site is on the south side of Horn Rapids Road which provides access.

All activities with special nuclear materials are conducted within a controlled access area. The processing of uranium compounds is conducted primarily within the UO₂, Dry Conversion, and Specialty Fuels (SF) Buildings with some development activity or pilot scale work in the Engineering Laboratory. Liquid waste processing is conducted primarily in the Ammonia Recovery (AR) and Lagoon Uranium Recovery (LUR) facilities in conjunction with a system of waste storage lagoons and tanks. Solid waste is packaged in the various facilities and stored in containers in designated storage areas while awaiting shipment to a low level radioactive waste disposal site or incineration of the combustible waste in the SF Building. Storage of various uranium compounds is conducted in the various production facilities or in the Radioactive Materials Storage Warehouse, Materials Warehouse, Fuels Storage Warehouse, and the UNH Drum Storage Warehouse. Storage of UF₆ cylinders is conducted outside on pads and packaged fuel elements or other uranium products are stored outside or in a warehouse while awaiting shipment.

1.3 License Number and Period of License

1.3.1 Special Nuclear Materials License

This application applies to Special Nuclear Material License No. SNM-1227 (NRC Docket No. 70-1257). The current license expires on November 30, 2006.

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1.4 Possession Limits**1.4.1 Uranium-235**

1. Three hundred fifty grams, in addition to the limits listed below, of any enrichment or form for analytical purposes and for sources.
2. Seventy-five thousand kilograms contained in uranium compounds in any form enriched to a maximum of 5 wt% in the U-235 isotope.

1.4.2 Plutonium (<500 grams)

1. One milligram and not more than 1.5 millicuries as contained in sealed sources and standards.
2. Less than 500 grams as PuO₂ or PuO₂-UO₂ as stored waste.

1.5 Authorized Activities

Specific locations of authorized activities involving special nuclear materials are identified in Table I-1.1.

1.6 Exemptions and Special Authorizations**1.6.1 Criticality Accident Alarm System**

Pursuant to 10 CFR 70.24(a), AREVA's criticality accident alarm system is not required to monitor special nuclear material under water in the waste storage lagoons. The criticality alarm system is described in Section 10.6.

1.6.2 Plutonium Possession and Storage

Trace quantities of plutonium may enter the plant as contamination in uranium feedstock (UF₆, scrap pellets/powder, etc.) that contains reprocessed uranium in any amount. In addition, AREVA currently stores a small amount of plutonium as a contaminant in drummed solid waste generated during the past decommissioning of an onsite mixed oxide facility.

1.6.2.1 Plutonium Contaminated Feedstock

AREVA may receive, process, store, and ship reprocessed uranium containing plutonium and other transuranic isotopes.

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1. The concentration of transuranic isotopes (i.e., the alpha activity of plutonium and neptunium) in such uranium shall be limited to less than 50 Bq/gU or, for uranium enriched to less than 2.18% ^{235}U , to a lesser value which assures that the limit of 1 $\mu\text{gPu/g}^{235}\text{U}$ is not exceeded.
2. AREVA shall, when it expects to receive such uranium, obtain from the shipper certification that the uranium is within the limits for transuranics as specified in 1 above.

AREVA may receive, store, analyze and ship up to 200 gU of samples of reprocessed uranium whose transuranic activity exceeds 50 Bq/gU for purposes of confirming transuranic activity. If it is confirmed that the sample exceeds this limit, AREVA will either blend the remaining sample material to comply with the limit or return it to the shipper.

1.6.2.2 Plutonium Contaminated Waste Storage

AREVA is presently in possession of plutonium as PuO_2 and $\text{PuO}_2\text{-UO}_2$ left over from past decommissioning of an onsite mixed oxide facility. This material is in the form of contaminated solid waste stored in drums.

These containers shall be stored in the SF Building, Room 162 autoclave pit in accordance with the following controls:

1. These stored containers shall be sealed with gaskets.
2. The SF Building storage pit shall be exhausted by the building HVAC system. Two stages of HEPA filtration shall be provided prior to exiting the exhaust stack.
3. The air exiting the SF Building storage pit shall be continuously monitored and sampled, and the samples analyzed weekly for radioactive material content.

Assurance of containment shall be verified at least once every six months by visual inspection and smear survey of the stored waste drums. The inspection and surveys shall be documented. All indications of drum leakage shall be investigated and appropriate action taken.

4. In order to provide continued containment, AREVA may find it necessary to repackage the containers. These activities shall be performed using a special Radiation Work Procedure (RWP).

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5. All alpha contamination discovered by smear surveys or air sampling within the pit area shall be considered as plutonium alpha unless proven otherwise.

1.6.3 Labeling Exemption

Pursuant to 10 CFR 20.1904(a) requirements, a sign bearing the legend, "Every container or vessel in this area, unless otherwise identified, may contain radioactive material," may be posted at entrances to each building in which radioactive materials are used, stored or handled, in lieu of the requirement to have a "Caution, Radioactive Material" or "Danger, Radioactive Material" label affixed to each container of licensed material.

1.6.4 Waste Disposal

Pursuant to 10 CFR 20.2002, disposal of solid waste material containing 30 pCi/gram or less to other than a licensed waste disposal facility is authorized. The low enriched uranium shall not exceed 30 pCi/gram of dry solid waste material. The uranium shall be essentially uniformly distributed throughout the waste material.

1.6.5 Special Nuclear Material Safeguards

Specific safeguards requirements for special nuclear material are given in Safeguards Amendment SG-2 issued pursuant to 10 CFR Parts 70, 73, 74 and 75. Those conditions are not affected by this licensing action.

1.6.5.1 Physical Security

AREVA shall follow the special safeguards conditions given in the Safeguards Amendment SG-2 and the NRC-approved security plan submitted in accordance with the provisions of 10 CFR Part 73.67(c)(1). The NRC-approved security plan is:

EMF-538(P), "Physical Protection Plan for Material of Low Strategic Significance." This document shall be maintained in a current and approved status and shall be properly implemented.

1.6.5.2 Material Control and Accounting

AREVA shall follow the special safeguards conditions given in the Safeguards Amendment SG-2 and the NRC approved Fundamental Nuclear Material Control Plan (FNMC) submitted in accordance with 10 CFR Part 74.31(b). The NRC approved FNMC Plan is:

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EMF-12(P), "Nuclear Material Safeguards Procedures Description for the Fuels Fabrication Plants." This document shall be maintained in a current and approved status and shall be properly implemented.

1.6.6 Authorization at Reactor Sites

AREVA is authorized to possess fuel assemblies or fuel rods at reactor sites for the purpose of loading them into shipping containers and delivering them to a carrier for transport.

1.6.7 Authorized Release Guidelines

AREVA is authorized to release equipment, scrap or facilities for unrestricted use, or for termination of license according to the "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source, or Special Nuclear Material" as published by the U.S. Nuclear Regulatory Commission dated April 1993.

1.6.8 Authorized Criticality Alarm System Outage

AREVA is granted an exemption from 10 CFR 70.24(a) for the purpose of performing maintenance on the criticality alarm system. Sections of the criticality alarm system may be taken out-of-service provided that all movement or processing of fissile material in affected areas is halted for the duration of the outage. Health and Safety Technicians shall conduct continuous surveys of the areas during the criticality alarm system outage.

1.6.9 Notification

Notifications to the NRC shall be made as required by regulations with the exception of 10 CFR 20.2202(a)(2) and (b)(2) as they apply to restricted areas. Reports to the NRC shall be made as required by regulations with the exception of those paragraphs in 10 CFR 20.2203 which refer to 10 CFR 20.2202(a)(2) and (b)(2) as they apply to restricted areas.

1.6.10 Authorized Release Guidelines for Hydrofluoric Acid

AREVA is authorized to release hydrofluoric acid manufactured by the dry conversion process for unrestricted commercial use providing the following conditions are met:

1. A representative sample of each batch of hydrofluoric acid product shall be obtained and analyzed for uranium;

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2. A batch shall be no larger than 46,000 liters;
3. The specific activity of any batch released for unrestricted use shall be ≤ 3 pCi/ml.

1.6.11 Authorized Release Guidelines for Ammonium Hydroxide

AREVA is authorized to release ammonium hydroxide produced at the Ammonia Recovery Facility for unrestricted commercial use provided the following conditions are met:

1. A representative sample of each batch of ammonium hydroxide product shall be obtained and analyzed for uranium;
2. A batch shall be no larger than 40,000 liters;
3. The uranium concentration in the ammonium hydroxide shall not exceed 0.05 ppm.

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TABLE I-1.1 Specific Locations of Authorized Activities¹⁾

<u>Location</u>	<u>SNM</u>	<u>Authorized Activity</u>
SF Building	Pu and PuO ₂ -UO ₂ contaminated waste	Storage and repackaging.
	UO ₂ (up to 5 wt% U-235)	Storage, blending, pressing, sintering, fuel rod loading and downloading, fuel rod welding, fuel element assembly; process tests; associated quality control activities.
	Uranium Compounds (up to 5 wt% U-235)	Waste storage, sorting, incineration, packaging, and associated quality control activities.
UO ₂ Building (including Powder Storage)	Uranium Compounds (up to 5 wt% U-235)	All operational steps of fuel manufacturing from UF ₆ -UO ₂ conversion to packaging finished fuel elements, scrap recycling and reprocessing; process tests; waste sorting, packaging, and inspection; associated quality control activities.
ELO Building	Uranium Compounds (up to 5 wt% U-235)	All operational steps of fuel manufacturing involving uranium compounds; including process tests and scrap reprocessing.
PDTF Building	UO ₂ (up to 5 wt% U-235)	Hydraulic flow tests and seismic tests involving single fuel elements.

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<u>Location</u>	<u>SNM</u>	<u>Authorized Activity</u>
Dry Conversion Building	Uranium Compounds (up to 5 wt% U-235)	All operational steps of dry UF_6 - UO_2 conversion and powder preparation.
Radioactive Materials Storage Warehouse	Uranium Compounds (up to 5 wt% U-235)	Storage of closed and externally free-of-significant-contamination containers of product, scrap, and waste materials.
Temporary Storage Facilities	Uranium Oxide (up to 5 wt% U-235)	Storage of a planar array of closed containers of oxide pellets which are externally free of significant contamination.
Fuels Storage Warehouse	Uranium Compounds (up to 5 wt% U-235)	Storage of closed and externally free-of-significant-contamination containers of product, scrap and waste materials; and the unloading of such containers from shipping containers.
Materials Warehouse (Bay 2)	Uranium Compounds (up to 5 wt% U-235)	Storage of closed and externally free-of-significant-contamination containers of product, scrap, and waste materials; and the loading of such containers into shipping containers.
UNH Drum Storage Warehouse	Storage of Uranyl Nitrate solutions (up to 5 wt% U-235 and less than 140 gU/l)	Storage of Uranyl Nitrate solutions in a single tier of closed 55 gallon drums free of significant contamination.

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<u>Location</u>	<u>SNM</u>	<u>Authorized Activity</u>
Laundry Facility	Uranium Compounds (up to 5 wt% U-235)	Cleaning of contaminated protective clothing and equipment.
UF ₆ Cylinder Storage Areas	UF ₆ (up to 5 wt% U-235)	Outside storage of UF ₆ cylinders (full and empty).
Packaged Fuel Storage Areas	UO ₂ (up to 5 wt% U-235)	Outside storage of fuel packed for shipment; the transport containers are closed, sealed and properly labeled for shipment.
Packaged Waste Storage Areas	Uranium Compounds (up to 5 wt% U-235)	Outside storage of contaminated materials (including low level waste and incinerator ash) which are packaged, sealed, labeled and externally free of contamination.
Process Chemical Waste Storage Lagoon System	Uranium Compounds (up to 5 wt% U-235)	Transfer, mixing, sampling, storage and solar evaporation of contaminated liquid wastes.
Process Chemical Waste Storage Tank System	Uranium Compounds (up to 5 wt% U-235)	All activities associated with storage and processing of contaminated liquid wastes.
Retention Tanks	Uranium Compounds (up to 5 wt% U-235)	Interim storage of potentially contaminated liquid wastes.
High Uranium Solids Pond	Uranium Compounds (up to 5 wt% U-235)	Transfer of uranium bearing solids, leaching for uranium recovery.
Solids Trench	Uranium Compounds (up to 5 wt% U-235)	Transfer and storage of contaminated solids awaiting leaching or burial.

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<u>Location</u>	<u>SNM</u>	<u>Authorized Activity</u>
Lagoon Uranium Recovery/Solids Processing Facility/ Silicon Removal Facility	Uranium Compounds (up to 5 wt% U-235)	Recovery of uranium from lagoon liquids and solids and removal of silicon from lagoon liquids.
Ammonia Recovery Facility	Uranium Compounds (up to 5 wt% U-235)	Removal and recovery of ammonia from uranium contaminated liquid wastes.
Lagoon 5A IX Process-ARF Building	Uranium Liquid Wastes (up to 5 wt% U-235 and less than 140 gU/l concentrations in filters and resins)	Filtration and ion exchange of uranium liquid wastes.
Any Permanent or Portable Building having HEPA filtration and Isokinetic sampling.	Uranium solid waste (up to 5 wt% U-235)	Sorting and compaction.
UF ₆ Cylinder Recertification Facility	Uranium Compounds, solid and in water solution (up to 5 wt% U-235)	Cylinder recertification activities, including hydrostatic strength testing, wall thickness measurement, internal examination, and pressure testing.
Operations Scrap Warehouse	Uranium Compounds (up to 5 wt% U-235)	Storage of closed and externally free-of-significant- contamination containers of product and scrap materials; and the unloading of such containers from and the loading of such containers into shipping containers.
Modular Extraction/ Recovery Facility (MERF)	Uranium Solid Waste (up to 5 wt. % U-235)	Sorting, shredding, compaction and uranium recovery.
Sea-land Containers	Uranium Compounds (up to 5 wt. % U-235)	Storage of a planar array of closed containers of uranium compounds which are externally free of significant contamination.

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<u>Location</u>	<u>SNM</u>	<u>Authorized Activity</u>
Fuel Services Building	UO ₂ (up to 5wt% U-235)	Disassembly of fuel assemblies and decontamination of fuel rods and components.

¹⁾ The locations described in this table are shown on the site plan. Figure II-10.1.

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