

**MATERIALS LICENSE**

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 36, 39, 40, and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

Licensee	
1. Framatome ANP, Inc. Lynchburg, Virginia Facility	3. License Number SNM-1168 - Amendment 8
2. P.O. Box 11646 Lynchburg, Virginia 24506-16465	4. Expiration Date August 30, 2013
	5. Docket No. 70-1201 Reference No.

6. Byproduct Source, and/or Special Nuclear Material	7. Chemical and/or Physical Form	8. Maximum amount that Licensee May Possess at Any One Time Under This License
A. Uranium enriched (and enriched processed uranium containing plutonium and other transuranic isotopes) up to 5.1%U-235	A. Uranium oxide pellet or pellet scrap	A. 15,000 kilograms of U-235
B. Uranium, natural or depleted	B. Oxide, pellet or powder	B. 100,000 kilograms of uranium
C. Byproduct material	C. Sealed sources	C. 10 curies with atomic numbers 3 to 83, inclusive
D. Plutonium	D. Sealed sources	D. 6 grams plutonium
E. Californium-252	E. Sealed sources	E. 4 milligrams of Californium-252
F. Uranium enriched in U-235	F. Any	F. 350 grams of U-235
G. Americium-241	G. Sealed sources	G. 5 curies Americium-241

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H. Byproduct material  
and Plutonium

H. Contamination on/  
within equipment,  
tooling, and  
components and waste

H. 1,000 curies, total

I. Any licensed material  
between atomic numbers  
3-96

I. Sealed sources

I. 1 µCi total

9. Authorized place of use: The licensee's existing facilities at Lynchburg, Virginia. Material identified in Condition 6.H., 7.H., and 8.H., may be used at temporary job sites throughout the United States where the U.S. Nuclear Regulatory Commission retains jurisdiction for regulating the use of licensed materials.

10. This license shall be deemed to contain two sections: Safety Conditions and Safeguards Conditions. These sections are part of the license, and the licensee is subject to compliance with all listed conditions in each section.

FOR THE NUCLEAR REGULATORY COMMISSION

Date: \_\_\_\_\_

By: \_\_\_\_\_

Gary S. Janosko, Chief  
Fuel Cycle Facilities Branch  
Division of Fuel Cycle Safety  
and Safeguards, NMSS  
Washington, DC 20555

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**SAFETY CONDITIONS**

- S-1. Authorized use: For use in accordance with statements, representations, and conditions of the licensee's application submitted on the following dates or as revised pursuant to 10 CFR 70.32 or 10 CFR 70.72: March 28, 2002; and supplements dated November 8, 2002; July 18, July 30, August 4, and December 18, 2003; March 10, May 27, August 17, October 15, and November 10, 2004; and April 11, May 13, May 19, June 22, and August 2, 2005, September 9, September 22, 2005, and December 21, 2005.
- S-2. The licensee shall inform the Regional Administrator, Region II, within 30 days if the State-permitting agency revokes the State-issued NPDES permit for the discharge of liquid effluents and shall inform the Regional Administrator, Region II, on a semiannual basis if the State-permitting agency supersedes, conditions, modifies, or otherwise nullifies the effectiveness of the State-issued NPDES permit for the discharge of liquid effluents.
- S-3. The licensee is hereby granted the exemptions and special authorizations in Section 1.5 of the application.
- S-4. Notwithstanding Section 5.2d of the licensee's application, when determining subcriticality based on computer calculations, the  $k_{\text{eff}}$  of a system or process shall not exceed 0.87 for normal conditions or 0.95 for credible off-normal conditions, including bias and uncertainty, with the exception of a finished (undamaged) fuel assembly in the drag gauge or air cleaning station under credible abnormal (fully flooded) conditions, which shall not exceed 0.98, including bias and uncertainty. This limit shall apply provided the fuel assembly has been analyzed to be within the area of applicability defined in Column 4 of Table 5-2 of the April 11, 2005, submittal.
- Prior to modifying the nuclear criticality safety validation methodology (as defined in the July 18, 2003 submittal), Framatome must perform an analysis to determine if the proposed methodology is more or less conservative than described in the July 18, 2003 submittal. If the analysis shows that the new methodology is more, or equally, conservative, then Framatome must submit a detailed description of the new methodology, and a justification for the conservatism, 60 days prior to implementation. If the analysis determines the methodology to be less conservative, then Framatome must obtain a license amendment before implementation.
- S-5. The ISA methodology shall be implemented and maintained as presented in the ISA Summary submitted on May 19, 2005. Accident scenario development shall be limited to What-If, FMEA, HAZOP and Fault Tree methods. Assignment of indices for initiating events and reduction of risk provided by IROFS shall be consistent with Chapter 5 of the ISA Summary. Demonstration that the performance criteria of Subpart H have been met shall be as prescribed in the "Use of Tables" section in the ISA Summary. Determination of likelihood shall be as defined in Chapter 9 of the ISA Summary. Framatome must obtain a license amendment for proposed deviations to the methodologies for items listed in this Safety Condition.

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## SAFEGUARDS CONDITIONS

Section 1.0 - Material Control & Accounting

- SG-1.1 The licensee shall follow Chapters 1.0 through 9.0 of its "Fundamental Nuclear Material Control Plan," Revision 17, dated November 10, 2004. This Plan may be further revised in accordance with, and pursuant to, the provisions of either 10 CFR 70.32(c) or 70.34.
- SG-1.2 Deleted by Amendment 2, September 2004
- SG-1.3 Notwithstanding the commitment, in Sections 2.1.2.1 and 7.1 of the Fundamental Nuclear Material Control (FNMC) Plan identified in Safeguard Condition SG-1.1, to complete and confirm shipper receiver differences within 60 days of receipt, the licensee will have an additional 60 days to fulfill the above-stated commitment relative to the six shipments identified in the August 2, 2005, application. The material from each shipment should not be processed until the shipper receiver difference evaluation for that shipment has been completed and satisfactorily resolved. This condition expires on November 5, 2005.
- SG-1.4 Notwithstanding the commitment, in Sections 2.1.2.1 and 7.1 of the Fundamental Nuclear Material Control (FMNC) Plan, identified in Safeguard Condition SG-1.1, to complete and confirm shipper receiver differences within 60 days of receipt, the licensee will have an additional 60 days to fulfill the above-stated commitment relative to the 12 receipts identified in the September 9, 2005, application, and the September 22, 2005, supplement. The material from each shipment should not be processed until the shipper receiver difference evaluation for that shipment has been completed and satisfactorily resolved. This condition expires on January 24, 2006.
- SG-1.5 Notwithstanding the commitment, in Sections 2.1.2.1 and 7.1 of the Fundamental Nuclear Material Control (FMNC) Plan, identified in Safeguard Condition SG-1.1, to complete and confirm shipper receiver differences within 60 days of receipt, the licensee will have an additional 60 days to fulfill the above-stated commitment relative to the 8 receipts identified in the December 20, 2005, letter, as superseded by letter dated December 21, 2005. This extension results in the total extension granted to transaction numbers ending in 898, 899, 900, 901, 902, 903, and 904 being 120 days with the balance of transactions extended by 60 days. The material from each shipment must not be processed until the shipper receiver difference evaluation for that shipment has been completed and satisfactorily resolved. This condition expires on March 14, 2006.

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Section 2.0 - Physical Protection For SNM of Low Strategic Significance

SG-2.1 The licensee shall follow the physical protection plan entitled, "Framatome ANP, Inc., Security Plan, (Materials License No. SNM-1168, Docket No. 70-1201)," dated July 13, 2004, and as it may be further revised in accordance with the provisions of 10 CFR 70.32(e).

Section 3.0 - International Safeguards

SG-3.1 The licensee shall follow Codes 1 through 6 of the Transitional Facility Attachment No. 6A dated December 4, 1995, to the US/IAEA Safeguards Agreement.

