



January 26, 2017  
TJT:17:003

U.S. Nuclear Regulatory Commission  
Attn: Document Control Desk (03-H8)  
One White Flint North  
11555 Rockville Pike  
Rockville, Maryland 20852-2738

Gentlemen:

**Subject: Submittal of Integrated Safety Analysis (ISA) Summary Annual Update for AREVA Inc.'s (AREVA's) Richland, Washington Fuel Fabrication Facility; License No. SNM-1227; Docket No. 70-1257.**

Enclosed with this letter, in CD format, is the annual update of the ISA Summary for AREVA's Richland, Washington nuclear fuel fabrication facility. Attachment A provides a listing of the files contained on this CD. AREVA requests that this CD-Rom in its entirety be withheld from public disclosure in accordance with 10 CFR 2.390 or 10 CFR 2.790 in that portions of all files are either commercially proprietary in nature or contain security-related information, respectively. Attachment B provides an affidavit attesting that these files are either proprietary in nature or contain security related information. The annual update is being submitted in accordance with 10 CFR 70.72 (d)(3) and documents the changes to the Richland site's ISA summary. The changes are highlighted in yellow. PDF files with an expanded sized copy of the revised figures are provided on a separate CD. A list of the files contained on the ISA CD-Rom, including the file name, size, and sensitivity level (commercially proprietary or security-related) for each file, is included as Attachment C to this letter.

Technical contact information relative to the Richland Site ISA is as follows:

AREVA Inc.  
Attn: William L. Doane, Manager  
Nuclear Safety  
2101 Horn Rapids Road  
Richland, WA 99354  
Phone: 509-375-8717  
Email: [william.doane@areva.com](mailto:william.doane@areva.com)

Additionally, I can be reached at 509-375-8550 or via email at [timothy.tate@areva.com](mailto:timothy.tate@areva.com).

Very truly yours,

A handwritten signature in black ink that reads 'T. J. Tate'.

T. J. Tate, Manager  
Environmental, Health, Safety & Licensing

c: Nick Baker, NRC

**AREVA INC.**

NM5501

Attachment A: List of Electronic Files

Attachment B: Affidavit requesting that the AREVA ISA summary be handled as proprietary information.

Attachment C: Table of Contents and File Designations

Enclosure: Two Computer Discs with the electronic files (separate CD for revised figures)

## ATTACHMENT A

### FOLDER: Chapters

#### **Part 1 - Chapters 1 through 8 (One File)**

File Name: 001 E15-01-1 Chapters 1-8 Version 21.pdf

Chapter 1 - Introduction

Chapter 2 - Horn Rapids Road Site Information

Chapter 3 - Overview of AREVA Facilities, Operations and Hazards

Chapter 4 - ISA Team Credentials and Standard Methodologies

Chapter 5 - Quantitative Standards for Acute Chemical Exposures

Chapter 6 - Definition of Terms

Chapter 7 - General External and Facility Hazards

Chapter 8 - Horn Rapids Plant Administrative and Management Measures

#### **Part 2 - Chapter 9 through 19 (Various Files)**

Chapter 9 - UO<sub>2</sub> Building

File Name: 002 E15-01-2.9A Version 13.0 - UO2 Building.pdf

Chapter 9 - UO<sub>2</sub> Building

File Name: 003 E15-01-2.9B Version 14.0 - UO2 Building.pdf

Chapter 9 - UO<sub>2</sub> Building

File Name: 004 E15-01-2.9C Version 14.0 - UO2 Building.pdf

Chapter 9 - UO<sub>2</sub> Building

File Name: 005 E15-01-2.9D Version 14.0 - UO2 Building.pdf

Chapter 9 - UO<sub>2</sub> Building

File Name: 006 E15-01-2.9E Version 14.0 - UO2 Building.pdf

Chapter 10 - Dry Conversion Facility

File Name: 007 E15-01-2.10 Ver 14.0 - Dry Conv Facility.pdf

Chapter 11 - SF Building

File Name: 008 E15-01-2.11 Version 15.0 - SF Building.pdf

Chapter 12 - ELO Building

File Name: 009 E15-01-2.12 Version 14.0 - ELO Building.pdf

Chapter 13 - UF<sub>6</sub> Cylinder Recertification Facility

File Name: 010 E15-01-2.13 Version 10.2 - UF6 Cyl Recert.pdf

Chapter 14 - Ammonia Recovery Facility and Industrial Waste Water Treatment System

File Name: 011 E15-01-2.14 Ver 14.0 - ARF and Ind Waste.pdf

Chapter 15 - Blended Dysprosium and Uranium Processing Facility (BDU)

File Name: 012 E15-01-2.15 Version 9.2 - BDU Proc Fac.pdf

Chapter 16 - Detached Storage and Waste Handling Systems

File Name: 013 E15-01-2.16 Version 15 - Detached Storage.pdf

Chapter 17 - Fuel Services Building

File Name: 014 E15-01-2.17 Ver 7.1 - Fuel Services Bldg.pdf

Chapter 18 - Ventilation Systems (Plantwide)

File Name: 015 E15-01-2.18 Ver 14 - Vent Syst Plantwide.pdf

Chapter 19 - Product Development Test Facility

File Name: 016 E15-01-2.19 Version 7.0 PDTF.pdf

Chapter 20 – Ancillary Systems

File Name: 017 E15-01-2.20 Ver 7.0 Ancillary Systems.pdf

Chapter 21 – Uranyl Nitrate Storage Tank Building

File Name: 018 E15-01-2.21 Ver 5.0 UN Storage Tank Bldg.pdf

### **Revised Figures (Separate CD-Rom)**

Chapters E15-01-1

File Name: 019 E15-01-1 Version 21.0 Figure 3-2.pdf

Chapter E15-01-2.9D

File Name: 020 E15-01-2.9D Version 14.0 Figure 9-15.pdf

File Name: 021 E15-01-2.9D Version 14.0 Figure 9-16.pdf

File Name: 022 E15-01-2.9D Version 14.0 Figure 9-17.pdf

Chapter E15-01-2.16

File Name: 023 E15-01-2.16 Version 15.0 Figure 16-3.pdf

File Name: 024 E15-01-2.16 Version 15.0 Figure 16-6.pdf

Chapter E15-01-2.18

File Name: 025 E15-01-2.18 Version 14.0 Figure 18-1.pdf

File Name: 026 E15-01-2.18 Version 14.0 Figure 18-2.pdf

File Name: 027 E15-01-2.18 Version 14.0 Figure 18-3.pdf

File Name: 028 E15-01-2.18 Version 14.0 Figure 18-4.pdf

File Name: 029 E15-01-2.18 Version 14.0 Figure 18-5.pdf

File Name: 030 E15-01-2.18 Version 14.0 Figure 18-6.pdf

File Name: 031 E15-01-2.18 Version 14.0 Figure 18-8.pdf

File Name: 032 E15-01-2.18 Version 14.0 Figure 18-10.pdf

File Name: 033 E15-01-2.18 Version 14.0 Figure 18-12.pdf

File Name: 034 E15-01-2.18 Version 14.0 Figure 18-15.pdf

File Name: 035 E15-01-2.18 Version 14.0 Figure 18-17.pdf

File Name: 036 E15-01-2.18 Version 14.0 Figure 18-19.pdf

### Attachment C - Table of Contents (2017)

Sequence Number & File Name	Size in KB	Commercially Proprietary or Security Related
File: 001 E15-01-1 Chapters 1-8 Version 21.pdf	1,513	Yes
File: 002 E15-01-2.9A Version 13.0 - UO2 Building.pdf Includes systems: <ul style="list-style-type: none"> <li>• System 065 (UF<sub>6</sub> Cylinder Washing)</li> <li>• System 070 (ADU Precipitation and Drying)</li> <li>• System 080 (ADU Uranium Recovery)</li> <li>• System 090 (ADU Powder Production)</li> <li>• System 100 (ADU Process Offgas (POG))</li> </ul>	1,839	Yes
File: 003 E15-01-2.9B Version 14.0 - UO2 Building.pdf Includes systems: <ul style="list-style-type: none"> <li>• System 120 (UNH Reprocessing)</li> <li>• System 130 (Conversion of UO<sub>2</sub> Pellets to U<sub>3</sub>O<sub>8</sub> Powder)</li> <li>• System 150 (Miscellaneous Uranium Recovery System (MURS))</li> <li>• System 186 (Supercritical CO<sub>2</sub> Extraction)</li> <li>• System 190 (UO<sub>2</sub> Pellet Dissolution)</li> <li>• System 335 (TNF-XI Inner Powder Filling, Storage, and On Plant Movement)</li> <li>• System 322 (UO<sub>x</sub> Powder Download Operation)</li> <li>• System 350 (Powder Drum Warehouse)</li> <li>• System 360 (Lube Blend Press Feed)</li> </ul>	4,841	Yes
File: 004 E15-01-2.9C Version 14.0 - UO2 Building.pdf Includes systems: <ul style="list-style-type: none"> <li>• System 370 (UO<sub>2</sub> Pellet Pressing)</li> <li>• System 380 (UO<sub>2</sub> Pellet Sintering)</li> <li>• System 390 (UO<sub>2</sub> Pellet Grinding and Inspection)</li> <li>• System 400 (UO<sub>2</sub> Pellet Storage)</li> <li>• System 410 (Powder Characterization Facility)</li> <li>• System 420 (Pellet QC Inspection)</li> </ul>	1,189	Yes
File: 005 E15-01-2.9D Version 14.0 - UO2 Building.pdf Includes systems: <ul style="list-style-type: none"> <li>• System 460 (Rod Loading)</li> <li>• System 470 (Rod Testing)</li> <li>• System 480 (Rod Transport and Storage)</li> <li>• System 490 (Rod Downloading)</li> <li>• System 540 (Bundle Assembly and Storage)</li> <li>• System 550 (Bundle Disassembly)</li> <li>• System 790 (Analytical Laboratories)</li> </ul>	1,972	Yes
File: 006 E15-01-2.9E Version 14.0 - UO2 Building.pdf Includes systems: <ul style="list-style-type: none"> <li>• System 323 (BLEU Receipt and Download)</li> <li>• System 355 (BLEU Powder Storage)</li> <li>• System 325 (BLEU Powder Preparation)</li> <li>• System 365 (BLEU Lube Blend)</li> </ul>	2,643	Yes

Sequence Number & File Name	Size in KB	Commercially Proprietary or Security Related
<ul style="list-style-type: none"> <li>• System 375 (BLEU Pellet Pressing)</li> <li>• System 385 (BLEU Pellet Sintering)</li> <li>• System 395 (BLEU Pellet Grinding/Inspection)</li> <li>• System 135 (Line 6 BLEU Scrap Recovery)</li> <li>• System 405 (BLEU Pellet Storage)</li> </ul>		
File: 007 E15-01-2.10 Ver 14.0 - Dry Conv Facility.pdf	3,400	Yes
File: 008 E15-01-2.11 Version 15.0 - SF Building.pdf	2,614	Yes
File: 009 E15-01-2.12 Version 14.0 - ELO Building.pdf	1,577	Yes
File: 010 E15-01-2.13 Version 10.2 - UF6 Cyl Recert.pdf	727	Yes
File: 011 E15-01-2.14 Ver 14.0 - ARF and Ind Waste.pdf	1,024	Yes
File: 012 E15-01-2.15 Version 9.2 - BDU Proc Fac.pdf	263	Yes
File: 013 E15-01-2.16 Version 15 - Detached Storage.pdf	3,089	Yes
File: 014 E15-01-2.17 Ver 7.1 - Fuel Services Bldg.pdf	261	Yes
File: 015 E15-01-2.18 Ver 14 - Vent Syst Plantwide.pdf	2,738	Yes
File: 016 E15-01-2.19 Version 7.0 PDTF.pdf	217	Yes
File: 017 E15-01-2.20 Ver 7.0 Ancillary Systems.pdf	243	Yes
File: 018 E15-01-2.21 Ver 5.0 UN Storage Tank Bldg.pdf	897	Yes

STATE OF WASHINGTON     )  
  :  
COUNTY OF BENTON        )     ss

**Timothy J. Tate**, being duly sworn on oath, states as follows:

1. I am employed by AREVA Inc. (AREVA) as Manager, Environmental, Health, Safety and Licensing in Richland, Washington. I am responsible for the overall administration of the safety programs at AREVA’s Richland, Washington nuclear fuel fabrication facility, including regulatory licensing and permitting. This affidavit is based on my first hand, personal knowledge and is submitted in my capacity as Manager, Environmental, Health, Safety and Licensing.

2. I am familiar with the contents of the “Submittal of Integrated Safety Analysis (ISA) Summary Annual Update for AREVA Inc., Richland, Washington Fuel Fabrication Facility” (Annual ISA Summary Update), which provides the annual update to the Richland Site ISA as required by 10CFR70.72(d)(3). This Annual ISA Summary Update has been classified and designated as “Proprietary” by AREVA in accordance with the document control system and policies established by AREVA for the control and protection of proprietary and confidential information.

3. AREVA is engaged in the business of designing and manufacturing nuclear fuel assemblies for commercial nuclear reactors. Within the United States, there are two additional firms that design and manufacture nuclear fuel for commercial nuclear reactors and there are several other companies outside of the United States that engage in the same business as AREVA. Competition among these companies including AREVA is fierce and manufacturing costs of the nuclear fuel are critical to the maintenance of market share and to the growth of market share among utility customers.

4. The Annual ISA Summary Update contains commercial information of a confidential nature that is not available in public sources or available to the public. Sections also contain information that is considered security sensitive in accordance with USNRC RIS 2005-31. This information contained in the Annual ISA Summary Update is commercial and confidential because it:

- A. Reveals distinguishing aspects of AREVA's manufacturing processes by relating sequences of operations and/or sub-operations to optimize the efficiency and performance of manufacturing operations which a competitor within the field of nuclear fuel manufacturing may adapt for their own processes, reducing the competitor's expenditure of resources to achieve the same efficiencies, thereby gaining a competitive advantage to the disadvantage of AREVA.
- B. Reveals the use of process chemical additives for the enhancement of chemical processes which are believed to be unique in the industry both in terms of type and application, which if revealed to a competitor would provide for an unfair competitive advantage by reducing any expenditure by the competitor to develop and test the same concepts.
- C. Reveals aspects of privately funded development of process controls and parameters derived by AREVA over the course of optimizing the performance of waste treatment and other processes.
- D. Reveals technical rationale developed by AREVA relating to plant layout, structure, process flow and other technical information which a competitor could readily use without expenditure of funds and replicate in its facilities thereby gaining a competitive advantage to the disadvantage of AREVA.



5. AREVA Inc. will suffer considerable competitive harm if the contents of the license amendment package are made available to AREVA domestic and international competitors. Finally, this material cannot be reasonably segregated from other material which may not meet the criteria set forth in 10 CFR § 2.390.

Dated this 26 day of January, 2016.



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Timothy J. Tate  
Manager, Environmental, Health, Safety and Licensing

STATE OF WASHINGTON )  
  :        SS  
COUNTY OF BENTON     )

On this 26<sup>th</sup> day of January, 2017, before me, the undersigned, a Notary Public in and for the State of Washington, duly commissioned and sworn, personally appeared Timothy J. Tate to me known to be the Manager, Environmental, Health, Safety, and Licensing of AREVA Inc., the corporation that executed the foregoing instrument, and acknowledged the said instrument to be the free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that he is authorized to execute the said instrument.

Witness my hand and official seal hereto affixed the day and year first above written.



\_\_\_\_\_  
Mary Anne Heilman  
Notary Public in and for the State of Washington,  
residing at Benton, Washington.  
My commission expires: June 6, 2020

