

February 2, 2011

Mr. Jim Kay, Licensing Manager  
Eagle Rock Enrichment Facility  
AREVA Enrichment Services LLC  
400 Donald Lynch Boulevard  
Marlborough, MA 01752

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION FOR AREVA ENRICHMENT SERVICES EAGLE ROCK ENRICHMENT FACILITY REVISED QUALITY ASSURANCE PROGRAM DESCRIPTION INCORPORATING THE 10 CFR PART 21 EXEMPTION (TAC L32757)

Dear Mr. Kay:

We have completed our initial technical review regarding the AREVA Enrichment Services, LLC (AES) Revision 4 of the Quality Assurance Program Description (QAPD) for the Design, Construction, Operation, and Decommissioning of the Eagle Rock Enrichment Facility. Revision 4 of the QAPD was transmitted by letter dated September 10, 2010. Our review of the revised QAPD has identified that additional information is needed before the staff can accept the revised QAPD.

In a submittal dated January 29, 2010, AES requested an exemption from Title 10 of the *Code of Federal Regulations* (10 CFR) Part 21 to modify the definitions contained in 10 CFR 21.3 for commercial grade item, basic component, critical characteristic, dedication, and dedicating entity. The U.S. Nuclear Regulatory Commission (NRC) approved this exemption request on July 28, 2010. In the same January 29, 2010 submittal, AES committed to incorporating the revised definitions and associated definition clarifications and to implementing a revised commercial grade item procurement strategy and dedication process. Revision 4 of the QAPD incorporates these commitments.

The enclosed Request for Additional Information addresses Revision 4 of the QAPD. Please provide the additional information requested in the enclosure within 30 days of the date of this letter.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," 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 Document Access and Management System (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

If you have any questions, please contact me at (301) 492-3110 or via email to [Breeda.Reilly@nrc.gov](mailto:Breeda.Reilly@nrc.gov).

Sincerely,

*/RA/*

M. Breeda Reilly, Senior Project Manager  
Advanced Fuel Cycle, Enrichment, and Uranium  
Conversion Branch  
Division of Fuel Cycle Safety  
and Safeguards  
Office of Nuclear Material Safety  
and Safeguards

Enclosure:  
Request for Additional Information

Docket No. 70-7015

cc: George Harper/AES

February 2, 2011

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," 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 Document Access and Management System (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

If you have any questions, please contact me at (301) 492-3110 or via email to [Breda.Reilly@nrc.gov](mailto:Breda.Reilly@nrc.gov).

Sincerely,

*/RA/*

M. Breda Reilly, Senior Project Manager  
Advanced Fuel Cycle, Enrichment, and Uranium  
Conversion Branch  
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and Safeguards  
Office of Nuclear Material Safety  
and Safeguards

Enclosure:  
Request for Additional Information

Docket No. 70-7015

cc: George Harper/AES

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## Request for Additional Information

### AREVA Enrichment Services Eagle Rock Enrichment Facility

#### Revision 4 of the Quality Assurance Program Description for Design, Operation, and Decommissioning of the Eagle Rock Enrichment Facility

January 27, 2011

- QAPD 1 - Section 2.1 of the Quality Assurance Program Description (QAPD), "Quality Assurance Program," states for quality assurance (QA) Level 1 that for items relied on for safety (IROFS) that contain a Safe-by-Design attribute, only the attribute is considered to be QA Level 1. Please clarify how this description will apply to commercial grade items.
- QAPD 2 - Please clarify if Section 1.0, "Introduction and Organization" and Section 2.0, "Quality Assurance Program" of the QAPD are applicable to fire protection systems.
- QAPD 3 - Section A.1 of Appendix A to the QAPD states the following:  
*"Those fire protection structures, systems, and components (SSCs) designated as QA Level [Fire Protection] FP IROFS will be:*
- 1. Designed, specified, procured, installed, and tested in accordance with requirements of the applicable NFPA code and/or standard(s) (see exceptions to IROFS commitments below).*
  - 2. Listed and/or approved by an independent agency such as Underwriters Laboratories, Factory Mutual, or other acceptable agency except in cases where such listing/approval is not required by NFPA code/standard (e.g., sprinkler piping is not required to be listed).*
  - 3. Inspected on receipt consistent with QAPD requirements to verify compliance to the criteria specified above."*

From the statement above please clarify the following:

1. Please list the specific National Fire Protection Association (NFPA) codes and standards that will be considered the codes of record for fire protection systems at the facility.
2. Please clarify how the independent agencies (Underwriter Laboratories, Factory Mutual, etc.) will be verified for acceptance of items and services.
3. Please clarify which QAPD requirements will be used during receipt inspection to verify compliance that the QA Level FP IROFS are designed, specified, procured, installed and tested in accordance with the applicable NFPA Code.

ENCLOSURE

QAPD 4 – Section A.2.1 of Appendix A to the QAPD states, “Automatic fire suppression systems located in buildings and/or over areas containing licensed material-at-risk, which if released could exceed 10 CFR 70.61 performance requirements, as IROFS to satisfy 10 CFR 70.64(b) requirements. These IROFS will be designated as QA Level FP.” The cover letter dated September 10, 2010, for the Revised QAPD incorporating the 10 CFR Part 21 Exemption states, “This new QA designation describes the QA requirements for automatic pre-action fire sprinkler.”

1. Please clarify if the scope of Appendix A to the QAPD is only automatic pre-action fire sprinklers.
2. If Appendix A is only applicable to automatic fire suppression systems, please clarify the QA controls that will be used for other FP IROFS.

QAPD 5 – Section A.2.2 of Appendix A to the QAPD states, “The requirement for design verification in accordance with American Society of Mechanical Engineers (ASME) Nuclear Quality Assurance (NQA)-1, 1994 edition, Supplement 3S-1 for methods of design verification including any one or a combination of the following, as defined in design reviews, alternate calculations, or the performance of qualification tests, is not applicable.” The staff’s interpretation of the NQA-1 reference in Section 3.4 of the QAPD was that it was guidance for implementation.

Please clarify the use of Supplement 3S-1 in the AES QA Program. Does AREVA Enrichment Services (AES) commit to comply with Supplement 3S-1 of NQA-1-1994 for QA Levels 1 and 2 items under Section 3 of the QAPD, or is the American Society of Mechanical Engineers’s guidance used only for reference in developing QA requirements in the QAPD? The staff notes that it is clear that AES does not intend to commit to Supplement 3S-1 for FP IROFS.

QAPD 6 – Section A.2.3 of Appendix A to the QAPD states, “Section 4.0 is not applicable (e.g., Commercial Grade dedication and Part 21 do not apply). Procurement Document Control will be in accordance with applicable NFPA codes/standards and commercial grade practices.”

Please clarify the following of the above statement:

1. Please clarify the intent of the following statement, “Commercial Grade dedication and Part 21 do not apply.” There have not been any Part 21 exemption requests for reporting requirements issued for these components. Part 21 reporting requirements apply to all safety-related components that could create a substantial safety hazard and whose failure would exceed the performance requirements in 10 CFR 70.61.
2. Please describe the controls for Procurement Documents that are required by NFPA Codes and Standards. Please describe and justify any reduced level of QA procurement documentation control that will be provided for FP IROFS than that provided for QL-1 and QL-2 IROFS.

QAPD 7 – Section A.2.6 of Appendix A to the QAPD states the following:

*“Section 7.0 of the QAPD is not applicable. The following shall apply:*

- *Purchase documents shall include requirements for appropriate certifications to applicable NFPA code/standard requirements (i.e., listed and/or approved).*
- *Purchase documents shall be reviewed and approved by QA and personnel with sufficient experience and knowledge in the NFPA code/standard requirements.*
- *Receipt inspection will be performed to confirm certification of procured items as meeting applicable NFPA code/standard requirements (i.e., listed and/or approved).”*

Please describe the controls for “Control of Purchased Items and Services” that are required by NFPA Codes and Standards. Please describe and justify any reduced level of QA procurement documentation control that will be provided for FP IROFS than that provided for QL-1 and QL-2 IROFS.

QAPD 8 – Section A.2.8 of Appendix A to the QAPD states, “Section 9.0 of the QAPD is not applicable. Control of Special Processes will be in accordance with applicable NFPA codes/standards and commercial practices.” Please describe the measures that will implement the Control of Special Processes as required by the NFPA codes/standards and justify any reduced level of QA control that will be provided for FP IROFS than that provided for QL-1 and QL-2 IROFS.

QAPD 9 – Section A.2.9 of Appendix A to the QAPD states, “Section 10 of the QAPD is not applicable. Inspection will be in accordance with applicable NFPA codes/standards and commercial practices.” Please describe the controls that will implement the inspection as required by the NFPA codes/standards and justify any reduced level of QA inspection control that will be provided for FP IROFS than that provided for QL-1 and QL-2 IROFS.

QAPD 10 – Section A.2.10 of Appendix A to the QAPD states, “Section 11 of the QAPD is applicable except for Paragraph 11.5, “Computer Program Testing.” Please clarify the following:

1. Paragraph 11.5 of the QAPD states, “Computer Program Testing is carried out in accordance with ASME NQA-1-1994, Basic Requirement 11, Test Control, and Supplement 11S-2, Supplementary Requirements for Computer Program Testing.” Please clarify the intent of AES with regard to the use of NQA-1-1994 for computer program testing. Is the reference in the QAPD a commitment to comply with the provisions of ASME NQA-1-1994, Basic Requirement 11 and Supplement 11S-2, Supplementary Requirements for Computer Program Testing for Quality Level 1 and 2 IROFS? If this is a commitment, please ensure that it is referenced as such in applicable portions of the license application and the QAPD and that sufficient guidance and criteria is included in the QAPD to provide reasonable assurance that the provisions of 11S-2 of NQA-1-1994 will be met.
2. Please clarify if any fire components IROFS will be initiated by computer programs that will need to be tested.

QAPD 11 – Section A.2.11 of Appendix A to the QAPD states, “Section 12 of the QAPD is not applicable. Control of Measuring and Test Equipment will be in accordance with applicable NFPA codes/standards and commercial practices.” Please describe the measures that will implement for Control of Measuring and Test Equipment as required by the NFPA codes/standards and justify any reduced level of QA control of measuring and test equipment that will be provided for fire protection IROFS than that provided for QL-1 and QL-2 IROFS.

QAPD 12 – Section A.2.13 of Appendix A to the QAPD states, “Section 14 of the QAPD is applicable. Inspection, Test and Operating Status will be in accordance with applicable NFPA codes/standards and commercial practices.” Please clarify if Section 14.0 of the QAPD is applicable or not, and if the NFPA codes/standards will be additional requirements in this section. Please describe the controls that will implement NFPA code requirements.

QAPD 13 – Section A.2.15 of Appendix A to the QAPD states, “All requirements of Section 16 “Corrective Action” shall apply except reportability requirements for 10 CFR Part 21.” Please clarify the intent of the statement above. There have not been any Part 21 exemption requests for reporting requirements issued for these components. Part 21 reporting requirements apply to all safety-related components that could create a substantial safety hazard and whose failure would exceed the performance requirements in 10 CFR 70.61.

QAPD 14 – Section A.2.17 of Appendix A to the QAPD states, “Section 18 of the QAPD is applicable except Section 18.2 “External Audits” is not required but may be implemented at the discretion of AES.” Please describe the controls that will be implemented to verify the acceptability of suppliers of fire components and justify any reduced level of QA controls that will be provided for FP IROFS than that provided for QL-1 and QL-2 IROFS.