

MFFFNPEm Resource

From: Tiktinsky, David
Sent: Wednesday, April 21, 2010 1:04 PM
To: Gwyn, Dealis W.
Cc: MFFFHearingFile Resource
Subject: Security RAls
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April 20, 2010

Mr. Dealis W. Gwyn, Licensing Manager
Shaw AREVA MOX Services
P.O. Box 7097
Aiken, SC 29804-7097

SUBJECT: SECOND REQUEST FOR ADDITIONAL INFORMATION REGARDING THE
REVIEW OF THE PHYSICAL PROTECTION PLAN, THE SAFEGUARDS
CONTINGENCY RESPONSE PLAN, AND THE TRAINING AND QUALIFICATION
PLAN FOR THE MIXED OXIDE FUEL FABRICATION FACILITY

Dear Mr. Gwyn:

We have reviewed the revised Physical Protection Plan (PPP), the revised Safeguards Contingency Response Plan (SCRCP), and the revised Training and Qualification Plan (TQP) dated December 17, 2009, for the Mixed Oxide Fuel Fabrication Facility (MFFF). The MFFF, which is located on the U.S. Department of Energy's (DOE's) Savannah River Site in Aiken, South Carolina, will process and fabricate MOX fuel for use in commercial nuclear power plants as part of the DOE's plutonium disposition program.

We have enclosed requests for additional information (RAIs) that are needed by the staff in order to complete the review of the SCRCP, PPP and the TQP for the MFFF. Enclosure 1 contains the non-sensitive version of the RAIs. Please provide us with a response describing how our questions were addressed and any other changes to licensing documents that were necessary to incorporate the response. The response should be provided within 14 days of the date of this letter.

In accordance with Title 10 of the *Code of Federal Regulations* 2.390 of the U. S. Nuclear Regulatory Commission's (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 Documents 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) 492-3229 or via e-mail at David.Tiktinsky@nrc.gov.

Sincerely,

/RA/

David Tiktinsky, Senior Project Manager
Mixed Oxide and Uranium
Deconversion Branch
Special Project and Technical
Support Directorate
Division of Fuel Cycle Safety
and Safeguards
Office of Nuclear Material Safety
and Safeguards

Docket No.: 70-3098

Enclosure: RAI (non-sensitive)

cc w/ enclosures:

S. Glenn, NNSA/SRS

J. Olencz, DOE

S. Jenkins, SC Dept. of HEC

D. Curran, Esq., NWS

A.J. Eggenberger, DNFSB

L. Zeller, BREDL

G. Carroll, NWS

D. Silverman, Esq.

If you have any questions, please contact me at (301) 492-3229 or via e-mail at David.Tiktinsky@nrc.gov.

Sincerely,

/RA/

David Tiktinsky, Senior Project Manager
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Second Request for Additional Information Related to Physical Protection for the Mixed Oxide Fuel Fabrication Facility

During a review of Revision (2) of the Physical Protection Plan (PPP), Revision (1.1) of the Safeguards Contingency Response Plan Revision (1.1) of the Training and Qualifications Plan (T&QP) dated December 17, 2009 for MOX Services in accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 70.34, the following additional information is needed before a staff determination can be made on the approval request.

Physical Protection Plan

PP-1: Section 1.1, page 11, Applicable Regulations.

Revise this section to include all documents used or referenced in the PPP. This will include U.S. Department of Energy (DOE) regulations/design basis threat (DBT), Vulnerability Assessments (VA), and Independent Analysis. Include the title, originating agency, and document date for each entry.

The regulations in 10 CFR 70.9(a) require that information required by statute or by the Commission's regulations, orders, or license conditions to be maintained by the applicant or the licensee shall be complete and accurate in all material respects.

PP-2: Figure 1-3, page 18 of 103, Mixed Oxide Fuel Fabrication Facility (MFFF) Layout.

Provide a clear site drawing. Drawings can be provided in electronic format to facilitate larger scale printing.

The drawings are difficult to read when printed in gray scale. The text within the shaded boxes is illegible.

The regulations in 10 CFR 70.9(a) require that information required by statute or by the Commission's regulations, orders, or license conditions to be maintained by the applicant or the licensee shall be complete and accurate in all material respects

PP-3: Section 3, page 28, DBT and Section 6.2, page 56, Access to the Material Access Areas (MAA) and Controlled Access Areas (CAA).

Revise these sections to include parameters of the Insider Mitigation Program/Human Reliability Program to be used in lieu of the requirements in 10 CFR 26. Provide analysis/justification on how the proposed program meets or exceeds U.S. Nuclear Regulatory Commission (NRC) regulations.

The regulations in 10 CFR 70.9(a) require that information required by statute or by the Commission's regulations, orders, or license conditions to be maintained by the applicant or the licensee shall be complete and accurate in all material respects. The regulations in 10 CFR 26 define the requirements for the NRC Fitness for Duty (FFD) and Human Reliability Programs, particularly as applicable to licensees who are authorized to possess, use, or transport formula quantities of Strategic Special Nuclear Material (SSNM) under 10 CFR 70.

Enclosure

PP-4: Section 4, pages 30 and 31 Security Organization.

Revise section 4.1 to indicate where in the security organization the Technical Support Coordinator is located. Identify in figure 4-1 or 4-2 as appropriate.

The regulations in 10 CFR 70.9(a) require that information required by statute or by the Commission's regulations, orders, or license conditions to be maintained by the applicant or the licensee shall be complete and accurate in all material respects.

PP-5: Section 4.1, page 30-31, Establishment of Security Organization.

Revise this section when the Memorandum of Understanding (MOU) with the Savannah River Site (SRS) has been finalized.

The regulations in 10 CFR 73.46(h)(2) include the requirement to establish an MOU with local law enforcement.

PP-6: Section 4.3, page 35, Qualifications for Employment in Security.

Revise this section to show the correct referenced section in the T&QP. Section 4.3 of the PPP refers to Section 3.2 of the T&QP, which does not exist.

The regulations in 10 CFR 70.9(a) require that information required by statute or by the Commission's regulations, orders, or license conditions to be maintained by the applicant or the licensee shall be complete and accurate in all material respects.

PP-7: Section 4.6, page 36, Force on Force Exercises.

Revise to explain if MFFF operations is an 8 or 24 Hour operation 5 days or 7 days per week. Explain how the shifts will be managed to match the information shown in Table 4.6-1.

The regulations in 10 CFR 73.46 (b)(9) provide the requirements for Force on Force activities.

PP-8: Section 5.3, page 40, Vehicle Barricades/Barriers.

Revise this section to clarify the procedures on entry inspections on vehicles entering the Protected Property Area (PPA)(Owner Controlled Area)

It is stated in the PPP that approximately 5% of passenger vehicles are subject to entry inspections. It is not clear whether all passenger vehicles entering the PPA are inspected at a 5% rate or if only 5% of visitor vehicles entering the PPA are inspected.

PP-9: Section 5.4, page 42, MAA Barriers.

Revise this section to clarify the following points: a) The safe havens are described as being part of the MAA and at the same time being external to the MAA. b) The safe havens are described as meeting the NRC DBT but the MAA is designed to meet the DOE DBT.

The safe havens cannot be external to the MAA and at the same time be described as part of the MAA perimeter.

PP-10: Section 6.2, page 56, Access to the MAA and CAA.

Revise the title line to correct the reference to 10 CFR part 11(a). Revise this section to include the requirements as spelled out in 10 CFR 11.11(a).

PP-11: Section 7.5, page 71, Central and Secondary Alarm Stations (SAS).

Explain how the operations of the Central Alarm Station (CAS) are transferred to the SAS in the event of a failure of the CAS. (10CR73.46(e)(5))

PP-12: Figure 7-1, page 77, MFFF Perimeter Intrusion Detection and Assessment System (PIDAS) Layout. (U)

Provide a clear diagram of the MFFF PIDAS.

Diagrams can be submitted in electronic form to allow for local printing in larger formats that are easier to read. The regulations in 10 CFR 70.9(a) require that information required by statute or by the Commission's regulations, orders, or license conditions to be maintained by the applicant or the licensee shall be complete and accurate in all material respects.

PP-13: Section 10.3, page 86, Tactical Response Force.

Revise this section to include the following information:

- a) The total number of armed protective force (PF) within the protected area (PA) per shift.
- b) The number of PF personnel dedicated to response activities per shift.
- c) The number of PF personnel utilized for patrol functions per shift.
- d) How the PF is managed to allocate personnel for non-fulltime duties such as escort, vehicle inspection, alarm response/assessment, truck bay duties, and other PF duties, without creating manning shortfalls in fulltime positions such as PA/MAA ECFs.
- e) Section 10.3, subparagraph 4, states that a number of tactically-trained PF will deploy within the MAA. However, the plan does not identify them as dedicated responders and does not indicate what positions they are relinquishing when called to respond.
- f) Figure 4-2 lists security positions, but there is a caveat that states that the number of PF to be assigned to the MFFF has not been determined.
- g) The contingency plans should the DOE-SRS be unavailable or delayed due to other commitments. If not previously considered, this scenario should be considered for inclusion into the analysis for PF requirements.

10 CFR 73.46(h)(3) requires a tactical response team (TRT) consisting of a minimum of five members to be available to fulfill assessment and response requirements. The effectiveness of the alternate measures cannot be determined based on the information provided in Section 10.3, without knowing how many PF are available per shift, their duty positions, (full time-part time-dual purpose) and the information contained in the Sandia National Laboratories Penetration Delay Analysis Report.

PP-14: Section 3, page 28, Design Basis Threat.

Revise this section, particularly paragraph 2, to accurately describe the NRC DBT as depicted in 10 CFR 73.1 and Regulatory Guide 5.70 (C). Discuss the comparison between the DOE DBT and the NRC DBT and why the DOE DBT was selected for use when conducting the Final Design Vulnerability Assessment Study (FDVAS) Report (U) dated 15 April 2008, and the PPP.

Include a statement that when alternate methods are requested the alternate methods will be provided along with adequate analysis/justification on how and why they are equal to or more stringent than NRC requirements.

Safeguards Contingency Response Plan

SCR-1: Global.

Revise the plan to ensure consistency in the use of the terms "SNM" and "SSNM". SNM should be used to denote less than formula quantities of special nuclear material (SNM) and SSNM is used to denote formula quantities of SNM.

The regulations at 10 CFR 73.2 provide the definitions used in the CFR.

SCR-2: Tables 4-2 thru 4-5, pages 29 to 35, Penetration, Disturbance, Emergency, and Missing plutonium oxide Events and Objectives for Contingency Response.

Revise the response objective columns so that they are readily identifiable with the corresponding section of the condition/events column. A suggested method would be to use the method of section marking that is used in Table 4-1.

As the tables are currently laid out, it can be confusing to align the condition/event with appropriate response objectives. The regulations in 10 CFR 70.9(a) require that information required by statute or by the Commission's regulations, orders, or license conditions to be maintained by the applicant or the licensee shall be complete and accurate in all material respects.

SCR-3: Table 4-1, page 29, Penetration Threat (TC2): Events and Objectives for Contingency Responses.

Revise TC2-3 so that the section heading and the content of the section are in alignment.

The regulations in 10 CFR 70.9(a) require that information required by statute or by the Commission's regulations, orders, or license conditions to be maintained by the applicant or the licensee shall be complete and accurate in all material respects.

SCR-4: Section 5.1, page 38, Organizational Structure.

Revise the last paragraph in this section to correct the reference to section 9 of the PPP which relates to the Test and Maintenance Program vice PF training.

The regulations in 10 CFR 70.9(a) require that information required by statute or by the Commission's regulations, orders, or license conditions to be maintained by the applicant or the licensee shall be complete and accurate in all material respects.

SCR-5: Section 5.3, page 38, Systems Hardware.

Revise sub-paragraph 4 of this section to add a reference to section 7.8 of the PPP. Section 7.8 of the PPP pertains to the external protected area monitoring and assessment.

The regulations in 10 CFR 70.9(a) require that information required by statute or by the Commission's regulations, orders, or license conditions to be maintained by the applicant or the licensee shall be complete and accurate in all material respects.

Training and Qualification Plan

TQ-1: Section 1.5, page 9, Terms and Definitions.

Revise this section to remove the "bad weather" exemption. 10 CFR 73, Appendix B.I.C. sets the time requirements for medical and physical fitness requalification. Exemptions to this requirement are described in 10 CFR 73.46(b)(10)(B).

TQ-2: Section 4.1, page 19, Employment Suitability.

Revise section header and paragraph 1 to show the correct references. 10 CFR 73, Appendix B.I.A, contains information on employment suitability and qualifications.

The regulations in 10 CFR 70.9(a) require that information required by statute or by the Commission's regulations, orders, or license conditions to be maintained by the applicant or the licensee shall be complete and accurate in all material respects.

TQ-3: Section 4.1, page 20, Employment Suitability.

Revise the first sub-paragraph to show the parameters of the alternate physical fitness program or to refer to the section of the T&QP that contains the program details.

Section 5.2 of this T&QP contains the request to utilize an alternate physical fitness plan in accordance with 10 CFR 73.46(a) and 73.46(b)(12).

TQ-4: Section 5.1, page 22, Physical and Mental Qualifications of Uniformed Security Personnel.

Revise this section to show the correct reference. 10 CFR 73, Appendix B.I.B contains information on physical and mental qualifications.

Section 5.1 references 10 CFR 73.46(b)(4), which contains information on PF training, qualifications, and requalification.

TQ-5: Section 5.1.2, page 24, Initial Mental and Behavior Observation Qualifications.

Revise this section to correctly identify referenced regulations. Revise this section to add the requirements of 10 CFR 73, Appendix B.I.B.2.c.

This section references 10 CFR 26.22(a)(4) which does not exist. This section also includes a reference to the requirements set forth in 10 CFR 73 Appendix B.I.B.2.c, but does not include those requirements within this section.

TQ-6: Section 5.1.3, pages 25-26, Fitness-For-Duty Program.

Revise this section to incorporate the alternate measures to be used in lieu of the NRC FFD Program under 10 CFR 26 and the Behavioral Observation Program (BOP) (Insider Mitigation Program) under 10 CFR 26.29 and 26.33. Provide a differential analysis of the alternate measures and the NRC requirements and a justification for why it meets or exceeds NRC requirements. Ensure that this section is in alignment with FFD and BOP contents of the PPP.

TQ-7: Figure 5.2-1, page 28, Physical Fitness Training Program Flow Chart.

Review and revise this section to ensure that the sequence of events is in accordance with the revisions to Section 5.2 of this T&QP and regulatory medical procedures.

The second box from the top is titled, "Enters Physical Fitness Training Program." In parenthesis underneath the title it states, "within 30 days preceding Medical Certification." The first box is entitled "Medical Exam & Certification". This contradicts the information provided in Section 5.3 of this plan.

The regulations in 10 CFR 70.9(a) require that information required by statute or by the Commission's regulations, orders, or license conditions to be maintained by the applicant or the licensee shall be complete and accurate in all material respects.

TQ-8: Section 5.3.1, page 29, Physical Fitness Performance Testing.

Revise this section to comply with 10 CFR 73.46(a) and 73.46(b)(12) that allow alternate measures to be used and impose specific requirements on the alternate measures.

10 CFR 73.46(b)(12). The licensee may elect to comply with the requirements of this paragraph instead of the requirements of paragraphs (b)(10) and (b)(11) of this section. In addition to the physical fitness qualifications of paragraph I.C of Appendix B of this part, each licensee subject to the requirements of this section shall develop and submit to the NRC for approval site specific, content-based, physical fitness performance tests which will – when administered to each TRT member, armed response person, or guard – duplicate the response duties these individuals may need to perform during a strenuous tactical engagement.

(i) The test must be administered to each TRT member, armed response person, and guard once every 3 months. The test must specifically address the physical capabilities needed by armed response personnel during a strenuous tactical engagement at the licensed facility. Individuals who exceed three months without having been administered the test due to excused time off from work must be tested within 15 calendar days of returning to duty as a TRT member, armed response person, or guard.

(ii) Within 30 days before the first administration of the physical fitness performance test, and on an annual basis thereafter, TRT members, armed response personnel, and guards shall be given a medical examination including a determination and written certification by a licensed physician that there are no medical contraindications, as disclosed by the medical examination, to participation in the physical fitness performance test.

(iii) Guards whose duties are to staff the central or secondary alarm station and those who control exit or entry portals are exempt from the performance test specified in paragraph (b)(12) of this section, provided that they are not assigned temporary response guard duties.

TQ-9: Section 5.3.4, page 30, TRF/SRT Fitness Standard.

Revise this section as necessary, to ensure that it is in accordance with the PPP Section 10.3. 10 CFR 73.46(h)(3) requires that a TRT be available at the facility (i.e., at the PA) to fulfill assessment and response requirements.

Note: A revision to the PPP Section 10.3 may require revisions to other sections of this Plan that pertain to physical fitness training and testing.

TQ-10: Table 6-1, page 34, Standard Protective Force Equipment.

Revise the table to include the number of rounds of ammunition to be associated with the M134D mini-gun and the Squad Automatic Weapon system, 223 cal/5.56mm. Revise this table to show that a "helmet, combat", is part of the standard PF equipment in accordance with 10 CFR 73 Appendix B.V.5.

TQ-11: Section 6.2, page 35, Armed Protective Force Personnel.

Revise this section to align the weapons to be utilized with the ammunition listed as being available in accordance with Table 6-1.

The sub-paragraph entitled "Ammunition" lists ammunition that would be available for shotguns without listing shotguns as an available weapon. The section does not include the 30cal/7.62mm weapon, the M134D, or Squad Automatic Weapon systems, if used.

The regulations in 10 CFR 70.9(a) require that information required by statute or by the Commission's regulations, orders, or license conditions to be maintained by the applicant or the licensee shall be complete and accurate in all material respects.

TQ-12: Section 6.4, page 36, TRT.

Revise this section to ensure alignment with the PPP, Section 10.3 in accordance with 10 CFR 73.46(h)(3).

TQ-13: Section 7.6, page 43, DOE-SRS LE, PF, SRT and Off-Site LE Support.

Revise sub-paragraphs 1, 2, 4, and 5, or paragraph 2. Sub-paragraphs 1 and 5 and sub-paragraphs 2 and 4 are duplicative.

The regulations in 10 CFR 70.9(a) require that information required by statute or by the Commission's regulations, orders, or license conditions to be maintained by the applicant or the licensee shall be complete and accurate in all material respects.

TQ-14: Section 8.3.2, page 54, Weapons Requalification.

Revise this section header to show 10 CFR 73.46(b)(4), (b)(7), and Appendix B: III & IV. Revise this section to ensure all aspects of weapons requalification training are addressed.

TQ-15: Section 10.2, page 73, Physical Requalification.

Revise this section to correct the reference to Section 3.3 of this Plan. Section 3.3 does not exist.

The regulations in 10 CFR 70.9(a) require that information required by statute or by the Commission's regulations, orders, or license conditions to be maintained by the applicant or the licensee shall be complete and accurate in all material respects.

TQ-16: Section 10.11, page 75, SRT Records.

Revise this section as necessary to ensure that it is in accordance with the PPP Section 10.3. 10 CFR 73.46(h)(3) requires that a TRT be available at the facility (i.e., at the PA) to fulfill assessment and response requirements.

Note: A revision to the PPP Section 10.3 may require revisions to other sections of this Plan that pertain to records.

License Application

Sec-1 : LA Section 1.1.3

Clarify whether MOX Services will have enough control over the guard/responder force and its property such that the requirements of 10 CFR 70.61(f) can be met? Due to the applicant not having direct contractual jurisdiction over the guard force, explain the protocol, procedures and processes that will be developed and implemented to remove a Department of Energy contracted guard/responder and/or guard/responder-related property from the controlled area such that compliance with this requirement of 10CFR70.61 can be demonstrated.

The regulatory requirements in 10 CFR70.61 requires that the licensee establish a controlled area to comply with the performance requirements as defined in 10 CFR.70.61(a)-(d). Additionally, 10 CFR 70.61(f) states that,"... the licensee must retain the authority to exclude or remove personnel and property from the area."