

November 13, 2008

MEMORANDUM TO: Margie Kotzalas, Chief
MOX Branch
Special Projects and Technical
Support Directorate
Division of Fuel Cycle Safety
and Safeguards
Office of Nuclear Material Safety
and Safeguards

FROM: David Tiktinsky, Sr. Project Manager */RA/*
MOX Branch
Special Projects and Technical
Support Directorate
Division of Fuel Cycle Safety
and Safeguards
Office of Nuclear Material Safety
and Safeguards

SUBJECT: IN-OFFICE REVIEW SUMMARY: MIXED OXIDE FUEL
FABRICATION FACILITY MANAGEMENT MEASURES

On July 7-10, 2008, and July 14 -16, 2008, U.S. Nuclear Regulatory Commission staff conducted in-office reviews at Shaw AREVA MOX Services in Aiken, South Carolina and Bethesda, Maryland. The reviews focused on supporting documentation related to Chapter 15 "Management Measures," specifically configuration management. The purpose of the reviews was to support the staff's evaluation of the license application to possess and use radioactive material for the Mixed Oxide Fuel Fabrication Facility.

CONTACT: David Tiktinsky/NMSS/FCSS
(301) 492-3229

M. Kotzalas

2

I am enclosing the in-office review summary initiated on July 7-10, 2008, and July 14-16, 2008, and the handout from the July 7-10 in-office review (OUO). The handout contains Official Use Only –security related and proprietary information.

Enclosures:

1. In-Office Review Summary
2. Handout from July 7-10, 2008 In-Office review (OUO)

cc: w/o enclosures

G. Smith, NNSA

J. Olenz, NNSA

H. Porter, SC Dept of HEC

D. Silverman, Esq. MOX Services

D. Gwyn, MOX Service

A.J. Eggenberger, DNFSB

L. Zeller, BREDL

G. Carroll, Nuclear Watch South

D. Curran, Esq., Nuclear Watch South

~~OFFICIAL USE ONLY – SECURITY RELATED INFORMATION, PROPRIETARY~~

~~When separated from enclosure 2, handle as non-sensitive~~

M. Kotzalas

2

I am enclosing the in-office review summary initiated on July 7-10, 2008, and July 14-16, 2008, and the handout from the July 7-10 in-office review (OUO). The handout contains Official Use Only –security related and proprietary information.

Enclosures:

1. In-Office Review Summary
2. Handout from July 7-10, 2008 In-Office review (OUO)

cc: w/o enclosures

G. Smith, NNSA

J. Olenz, NNSA

H. Porter, SC Dept of HEC

D. Silverman, Esq. MOX Services

D. Gwyn, MOX Service

A.J. Eggenberger, DNFSB

L. Zeller, BREDL

G. Carroll, Nuclear Watch South

D. Curran, Esq., Nuclear Watch South

DISTRIBUTION:

FCSS r/f

ML082610617

OFFICE	FCSS/MB	FCSS/MB	FCSS/MB	FCSS/MB
NAME	PBell	CGibbs	DTiktinsky	MKotzalas
DATE	08/ 21 /08	08/ 22 /08	09/ 18 /08	11/13/08

OFFICIAL RECORD COPY

~~OFFICIAL USE ONLY – SECURITY RELATED INFORMATION, PROPRIETARY~~

~~When separated from enclosure 2, handle as non-sensitive~~

Summary of In-Office Reviews
Configuration Management Program
Shaw AREVA MOX Services, MOX Fuel Fabrication Facility
Bethesda, Maryland, July 7-10, 2008
Aiken, South Carolina, July 14-16, 2008

PARTICIPANTS

NRC

Paul Bell
Kevin Morrissey (Aiken Only)

MOX Services

Dealis Gwyn
Roger Alley
Bob Foster
Gary Hedrick
Dave Kehoe

Laurie Wood
Scott Salzman
John Gregory
Bill Hennessy

PURPOSE

The U.S. Nuclear Regulatory Commission staff performed in-office reviews to evaluate supporting documentation associated with management measures, specifically with respect to the fulfillment and implementation of 10 CFR Part 70 requirements regarding configuration management program elements. The in-office reviews were part of the staff's ongoing review of the adequacy of the applicant's license application (LA). The review evaluated the basic objectives of the configuration management program used to establish consistency among design requirements, physical configuration and documentation (including analysis, drawings, and procedures) for activities and to ensure that consistency is maintained as changes are being made throughout design phases, construction, testing and operation of the facility.

DISCUSSION

10 CFR 70.72(a) states that a licensee or applicant shall establish a configuration management system to evaluate, implement, and track each change to the site, structures, processes, systems, equipment, components, computer programs, and activities of personnel. The staff met with representatives of Shaw AREVA MOX Services (MOX Services) at the Shaw AREVA engineering offices in Aiken, South Carolina and Bethesda, Maryland, to discuss the implementation of configuration management in relation to methodologies used for developing and implementing the configuration management process as presented in the applicant's LA.

Representatives from MOX Services provided background information and discussion of the status of Nuclear Safety Evaluation/Nuclear Criticality Safety Evaluations, Maintenance, Training and Qualification and Procedures, Quality Assurance, Audits and Assessments, Incident Investigations, Configuration Management and Records Management.

The following significant elements of the configuration management program were reviewed:

- MOX Services has completed and implemented a facility-specific configuration management plan. The applicant's configuration management plan was reviewed by the staff to evaluate effective control of the facility's as-built configuration, and to determine how each of the key elements of the configuration management plan will be implemented.

- The staff's review of MOX Services' Software Design Group's Software Configuration Management Plan indicated that the applicant has developed engineering guidelines for use of design, analysis and operations data. These guidelines provided detailed information about software configuration management and the rules that will be applied to programmable logic controller, manufacturing information system and laboratory management information systems.
- The staff reviewed the applicant's design change control process and the determination factors used for design development, which included applicable basis, design inputs, and regulatory requirements. Design procedures PP9-14, *Design Process*, PP9-21 *Engineering Change Request*, and PP-9-20, *Safety and Design Integration* were reviewed.
- During the staff's in-office reviews, the applicant made a formal presentation on the application of management measures described in tables in the LA. Many examples of physical controls applied as management measures were provided. The staff's review covered the examples of physical controls such as functional tests, periodic surveillance, calibration, controlled listing identification, and vendor specification which were credited as management measures for Items Relied on for Safety (IROFS).
- 10 CFR 70.64(a)(1) states, in part, that for quality standards, the MFFF design must be developed and implemented in accordance with management measures, to provide adequate assurance that items relied on for safety will be available and reliable to perform their function when needed. The tables representing the application of management measures were reviewed and cross referenced to management measures described in Chapter 15 of the LA.
- Discussions were held regarding the adequacy of the application of physical controls. Applied IROFS, including administrative, enhanced administrative, and engineering controls (both active and passive) were reviewed and discussed. The applicant will provide a bridging document to provide methodological details for the application of management measures to IROFS for a future in-office review.

DOCUMENTS REVIEWED

1. PP9-21, Engineering Change Request, Revision 4
2. DCS01-AAJ-EW-PDG-Q-00004-0, Shaw AREVA MOX Services SDG Software Configuration Management Plan: NNSA Technical Baseline
3. PP9-20, Safety and Design Integration, Revision 2
4. PP9-1 SSC Quality Levels & Marking Design Documents, Revision 10
5. PP9-3, Design Control, Revision 14
6. PP9-14, Design Process, Revision 3
7. PP1-1, Quality Assurance Grading, Revision 1
8. DCS01-AAJ-DS-PQI-X-40012-1, Configuration Management Plan
9. PP9-8, Technical Documents, Revision 8