

15.0 MANAGEMENT MEASURES

15.4 TRAINING AND QUALIFICATION

15.4.1 CONDUCT OF REVIEW

This section of the draft Safety Evaluation Report (DSER) contains the staff's review of the training and qualification information provided by the applicant in Chapter 15, Section 15.4 of the Construction Authorization Request (CAR). The objective of this review is to determine whether personnel who would perform activities relied on for safety will understand, recognize the importance of, and be qualified to perform these activities in a manner that adequately protects the public; worker health and safety; and the environment. The staff evaluated the applicant's provisions for training and qualification by reviewing Chapter 15, Section 15.5 of the CAR, other sections of the CAR, the applicant's quality assurance (QA) program description, the Mixed Oxide (MOX) Project Quality Assurance Plan (MPQAP), responses to staff requests for additional information (RAIs) and relevant documents available at the applicant's offices but not submitted by the applicant.

Pursuant to NUREG-1718, Section 15.4.3, "Areas of Review," the staff's review of the CAR included the following areas:

- Organization and management of training.
- Analysis and identification of functional areas requiring training.
- Position training requirements.
- Development of the basis for training, including objectives.
- Organization of instruction using lesson plans and other training guides;.
- Evaluation of trainee learning.
- Conduct of on-the-job training.
- Evaluation of training effectiveness.
- Personnel qualification.
- Applicant's provisions for continuing assurance, including the needs for retraining or reevaluation of qualification.

15.4.1.1 Organization And Management Of Training

The applicant describes its training program for the operations phase of the Mixed Oxide Fuel Fabrication Facility (MFFF) in CAR Section 15.4 and states that training program requirements apply to plant personnel who perform activities relied on for safety. The applicant's QA program, the MPQAP provides training and qualification requirements, during the design and construction phases, for QA training of personnel, for nondestructive examination, inspection and test personnel and for auditors. The staff reviewed these MPQAP commitments and requirements for training and qualification, and determined that they were acceptable for

construction activities, including design, procurement and fabrication. The staff review and conclusion were documented in an SER, on October 1, 2001 (Reference 15.4.3.6). The applicant specifically commits to the establishment of an operational training program in accordance with its description in CAR Section 15.4 and will update the program information in the license application for possession and use of special nuclear material (SNM).

The applicant's training program description requires that line managers are responsible for the content and effective conduct of training for their personnel. Line managers will be given the authority to implement training and their responsibilities are included in position descriptions. The applicant's training organization will provide support with planning, directing, analyzing, developing, conducting, evaluating and controlling a systematic performance-based training process. Plant procedures will establish the requirement for indoctrination and training of personnel performing activities relied on for safety. Lesson plans, which will be used for classroom and on-the-job training, will be included in the configuration management (CM) system and will be updated based on design changes or plant modifications. Auditable training records will be maintained to support management information needs for personnel training, job performance, and qualifications.

15.4.1.2 Analysis and Identification of Functional Areas Requiring Training

The applicant will perform a needs/job analysis and identify tasks to ensure that appropriate training is provided to personnel. A task list will be developed and updated as needed, and will be reviewed as part of the systematic valuation of training effectiveness.

15.4.1.3 Position Training Requirements

The applicant will develop minimum training requirements for positions whose activities are relied on for safety. Entry-level criteria will be defined for the positions, including minimum educational, technical, and experience requirements. Initial identification of job-specific training requirements will be based on experience from MELOX and La Hague operations in France and from United States experience.

15.4.1.4 Development of the Basis for Training

The applicant will establish learning objectives that identify the training content, based on the needs/job analyses and position-specific requirements. The task list will be used to develop the desired post-training performance objectives, including the knowledge, skills and abilities that the trainee should demonstrate; the conditions under which required actions will take place; and the standards of performance the trainee should achieve on completion of the training activity.

15.4.1.5 Organization of Instruction Using Lesson Plans and Other Training Guides

The applicant will use the learning objectives, derived from specific job performance requirements and the needs/job analysis, to develop lesson plans and other training guides. Lesson plans are approved prior to use, and are used for classroom and on-the-job training.

15.4.1.6 Evaluation Of Trainee Learning

The applicant will evaluate trainee mastery of learning objectives through observation and demonstration or oral or written tests as appropriate. Evaluations will measure the trainee's skills and knowledge of job performance requirements.

15.4.1.7 Conduct Of On-the-Job Training

The applicant's description includes requirements for on-the-job training to be performed for IROFS activities using current performance-based training materials, conducted by designated personnel who are competent in the program standards and methods of conducting the training. Completion of on-the-job training will be demonstrated by actual task performance where feasible and appropriate. When the actual task cannot be performed by the trainee, a simulation of the task is performed using the conditions encountered with task performance, including references, tools, and equipment reflecting the actual task to the extent practical.

15.4.1.8 Evaluation Of Training Effectiveness

The applicant will systematically evaluate the training program's effectiveness in producing competent employees on a periodic basis. These evaluations, will include feedback from trainees, and will identify program strengths and weaknesses, determine whether program content matches current job needs and determine if corrective actions are needed to improve the program's effectiveness. Evaluation objectives will be developed, results will be documented and changes made to procedures, practices or training materials as necessary.

15.4.1.9 Personnel Qualification

The applicant discusses its commitments for personnel qualification in CAR Section 15.4.9. Qualification requirements for key management positions are addressed in CAR Chapter 4, and are in accordance with the applicable guidance in NUREG-1718, Section 15.4.4.3, "Regulatory Acceptance Criteria." CAR Chapter 4 currently stresses the organization for design and construction of the MFFF, and the applicant will revise the information with its license application to address operations and the qualifications of key plant management positions.

15.4.1.10 Applicant's Provisions For Continuing Assurance

The applicant's description of its provisions for continuing assurance of training and qualification of plant personnel include an evaluation of personnel performing activities relied on for safety to determine that they continue to understand, recognize the importance of, and have the appropriate qualifications needed to perform their activities. The evaluation may be by written or oral test, or performance evaluation. The evaluation results will be documented, and retraining or other appropriate action taken when indicated. Retraining will also be required for plant modifications, procedure changes and QA program changes when needed.

15.4.2 EVALUATION FINDINGS

In Chapter 15.4 of the CAR, DCS described its management measures for training and qualification to be used on PSSCs and associated activities at the proposed MFFF. Based on that information and the discussion provided in the sections above for training and qualification, the staff finds that the personnel who perform activities relied on for safety will understand,

recognize the importance of, and be qualified to perform these activities in a manner that will adequately protect the public, worker health and safety, and the environment. The applicant will establish an operational training program in accordance with its description in CAR Section 15.4, and will update the training program description for operations activities in its application for a 10 CFR Part 70 operating license. The staff concludes, pursuant to 10 CFR 70.23(b), that the management measures for training and qualification will provide reasonable assurance of protection against natural phenomena and the consequences of potential accidents.

15.4.3 REFERENCES

- 15.4.3.1 American Society of Mechanical Engineers (ASME). ASME–NQA–1–1994, "Quality Assurance Requirements for Nuclear Facility Applications." ASME: New York, New York. 1994.
- 15.4.3.2 Code of Federal Regulations, *Title 10, Energy*, Part 70, "Domestic Licensing of Special Nuclear Material."
- 15.4.3.3 ———. *Title 10, Energy*, Part 19, "Notices, Instructions and Reports to Workers: Inspection and Investigations."
- 15.4.3.4 Nuclear Regulatory Commission (U.S.), Washington, D.C. "Domestic Licensing of Special Nuclear Material, (10 CFR Part 70)." *Federal Register*: Vol. 64, No. 146. pp. 41338-41357. July 30, 1999.
- 15.4.3.5 Nuclear Regulatory Commission (U.S.) (NRC). NUREG-1220, Rev. 1, "Training Review Criteria and Procedures." NRC: Washington, D.C. January 1993.
- 15.4.3.6 Persinko, A., U.S. Nuclear Regulatory Commission, letter to, Hastings, P., Duke Cogema Stone & Webster RE Duke Cogema Stone & Webster Quality Assurance Program for the Construction of the MFFF, October 1, 2001.

15.0 MANAGEMENT MEASURES

15.5 PLANT PROCEDURES

15.5.1 CONDUCT OF REVIEW

This section of the draft Safety Evaluation Report (DSER) contains the staff's review of procedure information submitted by the applicant in Chapter 15, Section 15.5 of the Construction Authorization Request (CAR). The objective of this review is to determine whether the applicant can adequately control potential facility operations in areas identified as items relied on for safety (IROFS), by developing, reviewing, approving, and controlling the implementation of written plant procedures that would protect the workers, the public, and the environment during any potential testing, startup, and operation of the facility. The staff evaluated the applicant's provisions for plant procedures by reviewing Chapter 15, Section 15.5 of the CAR, other sections of the CAR, responses to staff RAIs and relevant documents available at the applicant's offices but not submitted by the applicant.

For the construction approval, in accordance with guidance in the NUREG-1718, Section 15.5.4.3, "Regulatory Acceptance Criteria," the staff review is limited to verifying whether the applicant has adequately committed to establish a process for the production, use, and management control of written plant procedures.

15.5.1.1 Plant Procedures Commitment Description

In CAR Section 15.5, the applicant discusses general commitments for plant procedures applicable to the startup, testing, and operations phases of the MFFF, and states that the Mixed Oxide Project Quality Assurance Plan (MPQAP) provides the applicant's requirements for procedures for the design and construction phases. The staff reviewed the MPQAP requirements, in particular Section 5.0, "Instructions, Drawings and Procedures," and determined that they were acceptable for construction activities, including design, procurement and fabrication. The staff review and conclusion were documented in an SER, on October 1, 2001 (Reference 15.5.3.6). The applicant will describe its plant procedures for startup, testing and operation in more detail in the license application for possession and use of SNM.

CAR Section 15.5 provides additional description of the provisions for procedures and identifies four types of plant procedures that will be used to control activities: operating procedures, administrative procedures, maintenance procedures, and emergency procedures. All will be prepared, issued, used and controlled under the configuration management system and the MPQAP requirements.

Operating procedures will be used to directly control process operations by workstation and control room operators. They will include directions for normal operations, including startup and some testing, operation and shutdown, as well as off-normal conditions, including alarm response. They will also include operating limits and controls, controls to ensure operational safety and hold or check points. Administrative procedures will be used to perform management control activities that support operations, including configuration management (CM), safety, human-system interface, quality assurance (QA), design control, training and qualification, audits and assessment, incident investigations, records and document control, and reporting. Maintenance procedures will address preventive and corrective maintenance, surveillance for calibration, inspection and testing, and functional testing following maintenance.

Emergency procedures address the preplanned actions of plant personnel in the event of an emergency.

The applicant describes his commitments to review all plant procedures at least every 5 years to ensure continued accuracy and usefulness. Emergency procedures are initially reviewed annually and subsequently every 2 years. Additional reviews and modifications of procedures based on experience, incidents and identified inadequacies.

The applicant will develop procedures for test control for the preoperational testing program. These procedures will provide testing criteria for determining when tests will be required and how the activities will be performed. Tests will simulate the most adverse design conditions feasible, and results will be documented, evaluated and acceptability determined by responsible personnel. The applicant commits to developing all required plant procedures prior to the introduction of depleted uranium and plutonium oxides, and to validating the procedures during startup testing of the Mixed Oxide Fuel Fabrication Facility (MFFF).

15.5.2 EVALUATION FINDINGS

In Chapter 15.5 of the CAR, DCS described its management measures for establishing plant procedures to be used on PSSCs and associated activities at the proposed MFFF. Based on that information and the discussion provided in the sections above for plant procedures, the staff finds that the applicant is committed to and is capable of providing management control of PSSCs/IROFS during construction activities, including design, procurement and fabrication, through the development, review, approval, control, and implementation of written plant procedures that will protect the workers, the public, and the environment. The applicant will describe its plant procedures for startup, testing and operation in more detail in its application for a 10 CFR Part 70 operating license. The staff concludes, pursuant to 10 CFR 70.23(b), that the management measures for establishing plant procedures set forth in the CAR will provide reasonable assurance of protection against natural phenomena and the consequences of potential accidents.

15.5.3 REFERENCES

- 15.5.3.1 American Society of Mechanical Engineers (ASME). NQA-1-1994, "Quality Assurance Requirements for Nuclear Facility Applications." ASME: New York, New York. 1994.
- 15.5.3.2 Code of Federal Regulations, *Title 10, Energy*, Part 70, "Domestic Licensing of Special Nuclear Material."
- 15.5.3.3 Nuclear Regulatory Commission (U.S.), Washington, D.C. "Domestic Licensing of Special Nuclear Material (10 CFR Part 70)." *Federal Register*: Vol. 64, No. 146. pp. 41338- 1357. July 30, 1999.
- 15.5.3.4 ———. "Guidance on Management Controls/Quality Assurance, Requirements for Operation, Chemical Safety, and Fire Protection for Fuel Cycle Facilities." *Federal Register*: Vol. 54, No. 53. pp. 11590-11598. March 21, 1989.

- 15.5.3.5 Nuclear Regulatory Commission (U.S.) (NRC). Regulatory Guide 1.33, Rev. 2, "Quality Assurance Program Requirements (Operation)." NRC: Washington, D.C. February 1978.
- 15.5.3.6 Persinko, A., U.S. Nuclear Regulatory Commission, letter to, Hastings, P., Duke Cogema Stone & Webster RE Duke Cogema Stone & Webster Quality Assurance Program for the Construction of the MFFF, October 1, 2001.

15.0 MANAGEMENT MEASURES

15.6 AUDITS AND ASSESSMENTS

15.6.1 CONDUCT OF REVIEW

This section of the draft Safety Evaluation Report (DSER) contains the staff's review of the audits and assessment information provided by the applicant in Chapter 15, Section 15.6 of the Construction Authorization Request (CAR). The objective of this review is to determine whether the applicant has developed and adequately described a system of audits and assessments that provides reasonable assurance that the principal structures, systems, and components (PSSCs) identified by the applicant will be available and reliable to perform their safety function when needed. The staff evaluated the applicant's system of audits and assessments by reviewing Chapter 15, Section 15.6 of the CAR, other sections of the CAR, responses to staff requests for additional information (RAIs) and relevant documents available at the applicant's offices but not submitted by the applicant.

NUREG-1718, Section 15.6.3, "Areas of Review," defines the scope of the construction approval review pertaining to the applicant's planned system of audits and assessments. In reviewing the CAR, the staff has evaluated this system and the applicant's provisions for continued adherence to the system.

15.6.1.1 Audits and Assessments - General

In CAR Section 15.6.1, the applicant discussed general commitments to perform audits and assessments, and states that they are to be performed in accordance with the applicant's Mixed Oxide Project Quality Assurance Plan (MPQAP) requirements for structures, systems, and components (SSCs) and associated activities using a graded approach commensurate with their safety significance. The staff reviewed the MPQAP Section 18.0, "Audits," and Section 2.4, "Management Assessments," commitments for audits and assessments and determined that they were acceptable for construction activities in an SER (Reference 15.5.3.6) on October 1, 2001. The quality level of SSCs and their associated activities will be used to determine the frequency and rigor by which they are audited and assessed. The audits and assessments are to provide the applicant's management with feedback on the technical adequacy of SSCs and activities by evaluating how well the quality assurance (QA) program is being implemented and feedback on the program effectiveness in ensuring that SSCs are properly designed and constructed.

Audits and assessments of SSCs commensurate will be scheduled to provide coverage, consistency and coordination with ongoing work and at a frequency commensurate with the project status and importance of the work. All functional areas performing work controlled by the MPQAP will be audited at least once a year. Results of audits, assessments, surveillances, deficiencies and corrective action reports will be used to determine scope and frequency of functional area audits. Audits will be scheduled to begin as early in the life of the work as practical and will be continued at intervals consistent with the work schedule. External audits of PSSC suppliers will be performed prior to contract placement, with annual supplier evaluations and full audits required every three years. Annual project assessments to determine the overall effectiveness of the QA program will be conducted by the project manager and each functional area performing work on PSSCs will perform an internal management assessment annually. Additional audits and assessments of specific functions will be conducted as directed by management to provide an adequate assessment of compliance and effectiveness.

The applicant commits to conducting its internal and external audits and assessments using procedures in accordance with the MPQAP requirements. These procedures will include requirements for scheduling and planning, certification of audit/assessment personnel, development of audit plans and checklists, audit/assessment performance, reporting and tracking of findings to closure and closure of the audit/assessment, and will emphasize timely reporting and correction of findings to prevent recurrence.

The applicant identifies the qualifications and responsibilities of the QA Manager, who will have overall responsibility for managing the QA program including audits and assessments of quality-affecting activities. The QA Verification Manager is directly responsible for ensuring that audits and assessments are conducted in accordance with the MPQAP requirements, including the lead auditor/auditor certification program, audit program management, reporting findings to management, evaluating effectiveness of QA program implementation, approving audit checklists and reports, maintaining the approved suppliers list, and providing input for continuous program improvements.

The applicant describes the training and qualification requirements and responsibilities for audit and assessment personnel. These include lead auditor and auditor training and certification and assessment personnel training appropriate to their activities. Audit and assessment procedures will require that personnel be independent of the activity being audited or assessed, and that they have appropriate authority, freedom and access to make the audit process meaningful and effective, and to properly audit or assess the assigned areas or activities. Checklists will establish acceptance criteria to determine acceptable performance and audit/assessment team determinations, results and reports are reviewed and approved by appropriate management.

Audits and assessments will be conducted using written procedures/checklists and will include detailed walkdowns of plant areas, including out-of-the-way and limited-access areas. If findings result, the deficiencies will be accurately documented for accurate evaluation and timely corrective actions, including immediate correction. Audit and assessment results will be reviewed by management having responsibility in the area audited/assessed. Audit and assessment findings and recommendations will be documented and distributed to appropriate management for review, and response will be required from responsible managers. Audit and assessment results will be tracked by the applicant's QA organization. The data will be analyzed and trended and resultant reports, which indicate quality trends and the effectiveness of management measures, will go to appropriate management for review, response, corrective action, and follow-up.

15.6.1.2 Audits

The applicant describes its requirement for audit team personnel, audit conduct and reporting of results in CAR Section 15.6.2. Audit team personnel will be independent of the areas and activities being audited and have no direct responsibility for the items they audit. Technical and programmatic audits will be performed to evaluate internal project activities using applicable procedures. External suppliers will be evaluated using applicable supplier evaluation procedures. Audit reports will be issued to appropriate management on a timely basis, followup reviews will be performed to verify effective completion of corrective actions for audit findings and status of open findings are routinely reported to project management. During construction, Internal audits as-built conditions against controlled drawings, specifications, and procedures based on committed construction codes and standards.

15.6.1.3 Assessments

The applicant's description and commitments for assessments include appropriate requirements as discussed in Section 15.6.1.1 above. In particular, annual project assessments to determine the overall effectiveness of the QA program will be conducted by the project manager and each functional area performing work on PSSCs will perform an internal management assessment annually. Additional audits and assessments of specific functions will be conducted as directed by management to provide an adequate assessment of compliance and effectiveness.

15.6.1.4 Provisions for Continuing Assurance

The applicant's provisions for adhering to its planned system of audits and assessments are described in CAR Section 15.6.4, and include maintaining the applicant's QA program current through deactivation of the proposed facility. Appropriate changes to the QA program and procedures for audits and assessments will be made due to reorganizations, revised activities, lessons learned, changes to applicable regulations, and program improvements. The applicant also committed to update the system of audits and assessments to reflect any differences between the CAR and its subsequent application for a 10 CFR Part 70 license.

15.6.2 EVALUATION FINDINGS

In Chapter 15.6 of the CAR, DCS described its planned system for audits and assessments to be used on PSSCs and associated activities at the proposed MFFF. Based on that information and the discussion provided in the sections above for audits and assessments, the staff finds that the applicant has adequately described its system for audits and assessments. The staff concludes, pursuant to 10 CFR 70.23(b), that the system for audits and assessments set forth in the CAR will provide reasonable assurance of protection against natural phenomena and the consequences of potential accidents.

15.6.3 REFERENCES

- 15.6.3 Code of Federal Regulations, *Title 10, Energy*, Part 70, "Domestic Licensing of Special Nuclear Material."
- 15.6.3 Nuclear Regulatory Commission (U.S.), Washington, D.C. "Domestic Licensing of Special Nuclear Material (10 CFR Part 70)." *Federal Register*: Vol. 64, No. 146. pp. 41338-41357. July 30, 1999.
- 15.5.3.6 Persinko, A., U.S. Nuclear Regulatory Commission, letter to, Hastings, P., Duke Cogema Stone & Webster RE Duke Cogema Stone & Webster Quality Assurance Program for the Construction of the MFFF, October 1, 2001.

15.0 MANAGEMENT MEASURES

15.7 INCIDENT INVESTIGATIONS

15.7.1 CONDUCT OF REVIEW

This section of the draft Safety Evaluation Report (DSER) contains the staff's review of the system for incident investigations referenced by the applicant in Chapter 15, Section 15.7.1 of the Construction Authorization Request (CAR). The objective of this review is to determine whether the applicant has developed and adequately described a system for the systematic investigation of incidents, assignment and acceptance of corrective actions, and follow-up to ensure completion of the actions, that provides reasonable assurance that the principal structures, systems, and components (PSSCs) identified by the applicant will be available and reliable to perform their safety function when needed and protect against natural phenomena and the consequences of potential accidents. The staff evaluated the applicant's system by reviewing Chapter 15, Section 15.7 of the CAR, Mixed Oxide Project Quality Assurance Plan (MPQAP) Section 16, responses to staff requests for additional information (RAIs) and relevant documents available at the applicant's offices but not submitted by the applicant.

Pursuant to NUREG-1718, Section 15.7.4.3., the staff's review of the CAR is limited to verifying whether the applicant has committed to establishing a system to adequately investigate incidents. Such as system includes provisions for the assignment and acceptance of corrective actions, and follow-up measures to ensure completion of corrective actions.

15.7.2.1 Incident Investigation and Corrective Action Process and Administration

In CAR Sections 15.7.1 and 15.7.2, the applicant discussed its commitments and process to perform incident investigation and corrective action, and states that the process currently in use during design and construction phases of the Mixed Oxide Fuel Fabrication Facility (MFFF) is as described in the applicant's MPQAP Section 16, "Corrective Action." The staff reviewed the MPQAP Section 16 commitments and determined that they were acceptable for construction activities in an SER, (Reference 15.7.3.9) on October 1, 2001. MPQAP Section 16.0 contains the applicant's system for identifying, classifying, followup, closure and trending of conditions adverse to quality, and significant event reports, verified by the staff as adequate for corrective action during construction activities, including design, procurement and fabrication. In CAR Section 15.7.2, the applicant commits to modify this process prior to startup testing to include the additional specific actions that are needed to support an operating facility.

The applicant's description in CAR Section 15.7.1 of the incident investigation and corrective action process for design, construction and operations includes management controls to promptly identify incidents/findings, evaluate the need to stop work, assign investigation teams, significance and root cause evaluations and corrective action planning, management approval, implementation, completion and tracking, as well as tracking and evaluation for adverse trends.

Corrective action process administration is discussed in CAR Section 15.7.2. The incident Investigation and deficiencies corrective action process will be administered by the applicant's QA organization during the design and construction phases of the MFFF. The applicant commits to providing a detailed description of the process in the MFFF license application that will address the prompt investigation of incidents, the use of qualified investigative teams, monitoring and documenting corrective actions, investigating team plans, methodologies,

personnel qualifications and independence and appropriate documentation and records requirements.

15.7.2 EVALUATION FINDINGS

In Chapter 15.7 of the CAR, DCS described its planned system for performing incident investigations relevant to PSSCs and associated activities during the construction of the proposed MFFF, including design, procurement and fabrication activities. Based on that information and the discussion provided in the sections above for audits and assessments, the staff finds that the applicant has adequately described its system for performing incident investigations. The staff concludes, pursuant to 10 CFR 70.23(b), that the system set forth in the CAR for performing incident investigations relevant to construction activities will provide reasonable assurance that the PSSCs identified by the applicant will protect against natural phenomena and the consequences of potential accidents.

15.7.3 REFERENCES

- 15.7.3.1 Nuclear Regulatory Commission (U.S.), Washington, D.C. "Domestic Licensing of Special Nuclear Material (10 CFR Part 70)." *Federal Register*: Vol. 64, No. 146. pp. 41338–41357. July 30, 1999.
- 15.7.3.2 Code of Federal Regulations, *Title 10, Energy*, Part 70, "Domestic Licensing of Special Nuclear Material."
- 15.7.3.3 Department of Energy (U.S.) (DOE). DOE–STD–1010–92, "Guide to Good Practices for Incorporating Operating Experiences." DOE: Washington, D.C. July 1992.
- 15.7.3.4 ———. DOE–NE–STD–1004–92, "Root Cause Analysis Guidance Document." DOE: Washington, D.C. February 1992.
- 15.7.3.5 Nuclear Regulatory Commission (U.S.), Washington, D.C. "Domestic Licensing of Special Nuclear Material (10 CFR Part 70)." *Federal Register*: Vol. 64, No. 146. pp. 41338-41357. July 30, 1999.
- 15.7.3.6 Nuclear Regulatory Commission (U.S.) (NRC). Information Notice 96–28, "Suggested Guidance Relating to Development and Implementation of Corrective Action." NRC: Washington, D.C. May 1996.
- 15.7.3.7 ———. NUREG/CR–4616, "Root Causes of Component Failures Program: Methods and Applications." NRC: Washington, D.C. December 1986.
- 15.7.3.8 ———. NUREG/CR–5665, "A Systematic Approach to Repetitive Failures." NRC: Washington, D.C. February 1991.
- 15.7.3.9 Persinko, A., U.S. Nuclear Regulatory Commission, letter to, Hastings, P., Duke Cogema Stone & Webster RE Duke Cogema Stone & Webster Quality Assurance Program for the Construction of the MFFF, October 1, 2001.

15.0 MANAGEMENT MEASURES

15.8 RECORDS MANAGEMENT

15.8.1 CONDUCT OF REVIEW

This section of the draft Safety Evaluation Report (DSER) contains the staff's review of the facility records management system provided by the applicant in Chapter 15, Section 15.8 of the Construction Authorization Request (CAR). The objective of this review is verify that the applicant has developed and adequately described a facility records management system that complies with NRC requirements. The staff evaluated the applicant's facility records management system by reviewing Chapter 15, Section 15.8 of the CAR, other sections of the CAR, responses to staff requests for additional information (RAIs) and relevant documents available at the applicant's offices but not submitted by the applicant.

NUREG-1718, Section 15.8.3, "Areas of Review," defines the scope of the construction approval review of the applicant's facility records management system to include: (1) the process whereby records are specified, created, verified, categorized, indexed, inventoried, protected, stored, maintained, distributed, and deleted or preserved; (2) the handling and control of various kinds of records and the methods of recording media that comprise the records, including contaminated and classified records; and (3) the physical characteristics of the record storage facilities with respect to the preservation and protection of the records for their designated lifetimes.

The applicant's description of its facility records management system, in CAR Section 15.8, addresses commitments for the records management program, including record generation, receipt, storage, preservation, safekeeping, correction, retrieval, and disposition, for program changes and provisions for continuing adequate records management.

15.8.1.1 Records Management Program

In CAR Section 15.8.1, the applicant describes its facility records management system, and states that the system for controlling records management responsibilities and the generation, review, approval, classification, verification, indexing, storage, protection, maintenance, correction, retrieval and disposition of quality assurance (QA) records will be in accordance with the Mixed Oxide Project Quality Assurance Plan (MPQAP) requirements. The staff reviewed the MPQAP Section 17.0, "Quality Assurance Records," commitments for audits and assessments and determined that they were acceptable for construction activities in an SER, (Reference 15.8.3.6) on October 1, 2001. Section 17.0 of the MPQAP, "Quality Assurance Records," commits the applicant to adhere to the requirements of 10 CFR Part 50, Appendix B, Criterion 17, "Quality Assurance Records," and Basic Requirement 17 and Supplement 17S-1 of NQA-1-1994 Part I, as revised by Regulatory Guide 1.28 (Rev.3). The applicant did not request to be excepted from any of these requirements. The staff reviewed the applicant's commitments and the description of the QA program for records in accordance with NUREG-1718 and compared them to the applicable requirements of 10 CFR Part 50, Appendix B, and the NQA-1 provisions. The staff reviewed the MPQAP description of the Mixed Oxide Fuel Fabrication Facility (MFFF) QA records management system and verified that MPQAP Section 17.0 meets the requirements of 10 CFR Part 50, Appendix B, and NQA-1.

The applicant further describes the records management system in CAR Section 15.8.1 and requires applicable project procedures, dual facility storage and fireproof backup tape storage

for electronic data management system (EDMS), and use of fireproof storage for other documents such as radiographs, microfilm, etc. The procedures control the generation of records, their review and approval as records, receipt process, storage, preservation and safekeeping. Records requiring correction or revision will be retrieved by authorized individuals in accordance with the applicable procedures. Original records will be retained and the revision processed per the applicable project procedures. Records file folders, and interfacing links to associated documents/records, will be structured to ensure timely retrievability of records. All "lifetime" QA records will be stored for the operating life of the MFFF.

15.8.1.2 Records Management Program Changes

The applicant's discusses the requirements that routine audits, surveillances and assessments of document control and records management will be performed to evaluate the implementation of the program. Findings and observations from such oversight functions and other monitoring activities may result in program improvements. Any changes to program procedures are administered in accordance with the applicable procedures.

15.8.1.3 Continuing Records Management Provisions

The applicant's provisions for ensuring that the continuing adequacy of its records management system includes commitments to keep the program procedures current. The records management procedures will be revised based on lessons learned during implementation, corrective actions from audits, surveillances, or assessment, improvements based on trend analysis, and changes due to regulations, commitments, reorganizations, revised schedules or program improvements. The facility records management system will also be revised to reflect any changes in the license application between the construction approval review and the review for a license to possess and use special nuclear material (SNM).

15.8.2 EVALUATION FINDINGS

In Chapter 15.8 of the CAR, DCS described its planned records management system to be used on PSSCs and associated activities at the proposed MFFF. Based on that information and the discussion provided in the sections above for the records management system, the staff finds that the applicant has adequately described its system for records management. The staff concludes, pursuant to 10 CFR 70.23(b), that the records management system set forth in the CAR will provide reasonable assurance of protection against natural phenomena and the consequences of potential accidents. Section 17.0 of the MPQAP, "Quality Assurance Records," commits the applicant to adhere to the requirements of 10 CFR Part 50, Appendix B, Criterion 17, "Quality Assurance Records," and Basic Requirement 17 and Supplement 17S-1 of NQA-1-1994 Part I, as revised by Regulatory Guide 1.28 (Rev.3). The applicant did not request to be excepted from any of these requirements. The staff reviewed the applicant's commitments and the description of the QA program for records in accordance with NUREG-1718 and compared them to the applicable requirements of 10 CFR Part 50, Appendix B, and the NQA-1 provisions. The staff reviewed the MPQAP description of the MFFF QA records management system and has verified that MPQAP Section 17.0 meets the requirements of 10 CFR Part 50, Appendix B, and NQA-1. Therefore, the staff further concludes that the MPQAP commitments, description, and requirements for QA records are adequate and acceptable for use on the MFFF design and construction activities including procurement and fabrication.

15.8.3 REFERENCES

The requirements for records management are addressed in the following:

- 15.8.3.1 Code of Federal Regulations, *Title 10, Energy*, Part 19, "Notices, Instructions and Reports to Workers: Inspection and Investigations."
- 15.8.3.2 ———, *Title 10, Energy*, Part 20, "Standards for Protection Against Radiation."
- 15.8.3.3 ———, *Title 10, Energy*, Part 21, "Reporting of Defects and Noncompliance."
- 15.8.3.4 ———, *Title 10, Energy*, Part 25, "Access Authorization for Licensee Personnel."
- 15.8.3.5 Nuclear Regulatory Commission (U.S.), Washington, D.C. "Domestic Licensing of Special Nuclear Material (10 CFR Part 70)." *Federal Register*: Vol. 64, No. 146. pp. 41338-41357. July 30, 1999.
- 15.8.3.6 Persinko, A., U.S. Nuclear Regulatory Commission, letter to, Hastings, P., Duke Cogema Stone & Webster RE Duke Cogema Stone & Webster Quality Assurance Program for the Construction of the MFFF, October 1, 2001.