



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION II  
SAM NUNN ATLANTA FEDERAL CENTER  
61 FORSYTH STREET, SW, SUITE 23T85  
ATLANTA, GEORGIA 30303-8931

April 10, 2009

Mr. David Stinson  
President and Chief Operating Officer  
Shaw AREVA MOX Services  
Savannah River Site  
P.O. Box 7097  
Aiken, SC 29804-7097

SUBJECT: MIXED OXIDE FUEL FABRICATION FACILITY- NRC  
INSPECTION REPORT 70-3098/2009-005

Dear Mr. Stinson:

During the period of February 23 through 26, 2009, the U.S. Nuclear Regulatory Commission (NRC) completed inspections of the corrective action program related to the construction of the Mixed Oxide Fuel Fabrication Facility. The purpose of the inspection was to determine whether activities authorized by the construction authorization were conducted safely and in accordance with NRC requirements. The enclosed inspection report documents the inspection results. At the conclusion of the inspections, the findings were discussed with those members of your staff identified in the enclosed report.

The inspections examined activities conducted under your construction authorization as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your authorization. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

Based on the results of these inspections, no violations of NRC regulatory requirements were identified. This inspection has concluded that condition reports and corrective actions taken and planned to be taken were in accordance with NRC requirements.

In accordance with 10 CFR 2.390 of NRC's "Rules of Practice," a copy of this document and its enclosures may be accessed through the NRC's public electronic reading room, Agency-Wide. Document Access and Management System (ADAMS) on the Internet at <http://www.nrc.gov/reading-rm/adams.html>.

D. Stinson

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Should you have any questions concerning this letter, please contact us.

Sincerely,

/RA/

Deborah A. Seymour, Chief  
Construction Projects Branch 1  
Division of Construction Projects

Docket No. 70-3098  
Construction Authorization No. CAMOX-001

Enclosure: 1. NRC Inspection Report 70-3098/2009-005  
w/ attachment

cc w/encl: (See next page)

D. Stinson

2

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ADAMS:  Yes      ACCESSION NUMBER: ML09100358       SUNSI REVIEW COMPLETE

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DATE	4/ /2009	4/ /2009	4/ /2009	4/ /2009	4/ /2009	4/ /2009	4/ /2009
E-MAIL COPY?	YES	YES	YES	YES	YES	YES	YES

D. Stinson

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Letter to D. Stinson from Deborah A. Seymour dated April 10, 2009.

SUBJECT: MIXED OXIDE FUEL FABRICATION FACILITY- NRC  
INSPECTION REPORT 70-3098/2009-005

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PUBLIC

**U.S. NUCLEAR REGULATORY COMMISSION  
REGION II**

Docket No.: 70-3098

Construction  
Authorization No.: CAMOX-001

Report No.: 70-3098/2009-005

Applicant: Shaw AREVA MOX Services

Location: Savannah River Site  
Aiken, South Carolina

Inspection Dates: February 23 – 26, 2009

Inspectors: J. Bartleman, Senior Construction Inspector, Construction  
Inspection Branch 3 (CIB3), Division of Construction Inspection  
(DCI), Region II (RII)  
W. Gloersen, Senior Project Inspector, Construction Projects  
Branch 2 (CPB2), Division of Construction Projects (DCP), RII  
G. Crespo, Senior Construction Inspector, Construction Inspection  
Branch 1 (CIB1), DCI, RII  
C. Julian, Senior Project Manager, CIB1, DCI, RII  
J. Heisserer, Construction Inspector, CIB3, DCI, RII

Accompanying  
Personnel: P. Bell, Quality Assurance Engineer, Fuel Cycle Safety  
and Safeguards (FCSS), Office of Nuclear Materials Safety  
Safeguards (NMSS), Headquarters (HQ)  
C. Ogle, Deputy Division Director, DCI  
J. Calle, Acting Branch Chief, CIB3, DCI  
B. Davis, Construction Inspector, Construction Inspection  
Branch 2 (CIB2), DCI, RII (trainee)  
E. Heher, Construction Inspector, CIB2, DCI, RII (trainee)

Approved: Deborah A. Seymour, Chief  
Construction Projects Branch 1  
Division of Construction Projects

## EXECUTIVE SUMMARY

Shaw AREVA MOX Services, Mixed Oxide (MOX) Fuel Fabrication Facility (FFF)  
Nuclear Regulatory Commission (NRC) Inspection Report No. 70-3098/2009-005

A routine team inspection was conducted by regional and headquarters inspectors from the NRC during February 23-26, 2009. The inspection involved the observation and evaluation of the applicant's corrective action program (CAP) for facility construction of principal structures, systems, and components (PSSCs); and other areas associated with support of construction activities. The inspection also included quality assurance (QA) activities related to design verification and documentation control; problem identification and resolution (PI&R); and corrective actions. The inspectors reviewed procedures and corrective action documents associated with problem identification and corrective actions to resolve previous problems with documentation, engineering design, construction, materials and components.

### **Quality Assurance: Problem Identification, Resolution, and Corrective Action (Inspection Procedure 88110)**

MOX FFF personnel adequately documented the identification and classification of conditions adverse to quality in the site CAP. The CAP provided adequate follow up and closure of conditions adverse to quality in accordance with requirements.

### **Attachment:**

Persons Contacted  
Inspection Procedures Used  
List of Acronyms Used  
List of Documents Reviewed  
Condition Reports Reviewed  
Engineering Change Requests  
Non-Conformance Reports  
Surveillances  
Specifications  
Audits  
Deficiency Reports  
Lessons Learned

## REPORT DETAILS

### 1.0 Summary of Site Activities

The applicant continued to perform ongoing concrete, structural steel, and construction activities at Mixed Oxide Fuel Fabrication Facility (MOX FFF).

### 2.0 Quality Assurance: Problem Identification, Resolution, and Corrective Action (Inspection Procedure (IP) 88110)

#### a. Scope and Observations

The scope of the inspections encompassed a review of various MOX FFF documents and activities related to Quality Level 1 and 2 (QL-1 and QL-2) construction for conformance to NRC regulations, the Construction Authorization Request, the MOX Project Quality Assurance Plan (MPQAP), and applicable industry standards. The purpose of the inspection was to evaluate programmatic implementation of the applicant's problem identification, resolution and corrective action process. This included, as applicable: material procurement, construction, design and engineering, testing and inspection, records management, handling, storage and shipping and vendor related activities.

The inspection also focused on Shaw AREVA MOX Services' oversight of subcontractor and supplier activities. The inspectors reviewed applicable portions of SHAW/AREVA MOX Services' corrective action program (CAP) to assess the adequacy of the program and whether it has been effectively implemented. The inspectors reviewed procedures associated with problem identification and corrective actions to resolve previous problems with materials, components and construction activities.

The inspectors reviewed numerous condition reports (CRs), non-conformance reports (NCRs) and engineering change requests (ECRs) generated by the applicant to verify that there was proper documentation, prioritization and resolutions of problems identified. The inspectors observed that these items were adequately documented in the applicant's CAP. The inspectors verified that the classification of the condition, timeliness of management review, and timeliness of corrective actions for CRs were in accordance with the applicant's approved procedures. The inspections identified and focused on the following aspects of the applicant's programs as outlined below:

#### (1) Procedures

The inspectors reviewed changes made to the applicant's CAP implementing procedures during this problem identification and resolution (PI&R) inspection to determine if they were appropriately approved and implemented. Specifically, the inspectors reviewed Interim Change Notice (ICN) 02 to Revision 10 of MOX Services' Project Procedure (PP) 3-6, Corrective Action Process, to evaluate the adequacy of the process and to verify that site procedures contained provisions for identifying, reporting and documenting conditions adverse to quality.

The inspectors reviewed MOX CAP procedures and root cause analyses to verify that the applicant was performing a sufficient analysis of the issues, determining the cause of



the problem(s) and taking the necessary corrective action(s) in order to prevent recurrence.

The inspectors reviewed ICN 02 to MOX procedure PP 3-12 Supplier Evaluation, Revision 8, which described the methods for conducting surveillances to observe quality related activities on-site and off-site at vendor facilities. The inspectors observed that the procedure was adequate in describing the surveillance process. The inspectors examined numerous surveillances to determine that the results of surveillance observations were well documented and were found to be adequate. The inspectors concluded that surveillances of work in progress, where observations were noted, were not used for acceptance or rejection of the work activities. Applicant representatives affirmed that surveillances of work in progress were not used to accept or reject work activities, and the applicant initiated ICN 01 to ensure clarification was added to PP3-26 so that surveillances would not to be used for accepting or rejecting work activities.

The inspectors reviewed MOX procedure PP 3-5, Control of Non-Conforming Items, Revision 4 and a sample of NCRs to determine the adequacy of their disposition. In February 2008, the applicant initiated an effort to improve the documentation of NCRs. The applicant's efforts included the addition of guidance to the Non-Conforming Items procedure and creation of training on the NCR process for affected groups. The inspectors determined that the applicant had established adequate procedures for the identification, documentation and resolution of non-conforming items, as required by MPQAP, Section 15.

(2) Identification and Classification of Conditions Adverse to Quality

The inspectors reviewed numerous CRs to determine if measures were established to assure that conditions adverse to quality, such as: failures, deficiencies, deviations, malfunctions, defective material or equipment, nonconformances, and significant conditions adverse to quality, were promptly identified and resolved. The inspectors also conducted reviews of documentation and records to verify that conditions adverse to quality were appropriately classified according to their significance and that corrective actions were taken accordingly.

The inspectors attended two Management Review Committee (MRC) meetings in order to evaluate the applicant's process for review of recently initiated CRs, threshold values for assigning significance levels to initiated CRs, the evaluation process and remedial corrective actions, and corrective action plan used to preclude recurrence, as applicable. The inspectors observed that members of the MRC discussed the issues with professionalism, reached conclusions after thorough discussions and through management consensus.

(3) Documentation and Reporting of Conditions Adverse to Quality

The inspectors reviewed selected CRs to determine if the applicant's instructions and processes for reporting conditions adverse to quality were adequate and that these conditions were reported to the appropriate levels of the applicant's management who were responsible for tracking and dispositioning these issues. The inspectors reviewed the results of quality-related evaluations conducted on audit reports, specifications, internal surveillances, procurement activities, lessons learned, corrective action reports,

and management assessments, and verified that the results were reported to management.

The inspectors determined that the applicant adequately documented, reported, evaluated, and corrected conditions adverse to quality in the following areas: audits, procurement, handling, storage, receipt inspection, specifications, engineering and for quality affecting construction activities.

(4) Condition Report Follow-up, Closure, and Trending

The inspectors conducted reviews of documents and records to determine if the proper implementation and closure of corrective actions were completed in a timely manner. The inspectors also conducted reviews of trending data to determine if the appropriate criteria had been established for quality trending and that trend analysis information of potential or adverse trends were distributed to the affected organization's management and used to identify conditions adverse to quality.

The inspectors evaluated the applicant's Lessons Learned (LL) Program. The LL Logs from 2004-2009 were reviewed as well as Revision 2 of PP 1- 7, MOX Fabrication Facility Lessons Learned Program. The inspectors reviewed a sample of the applicant's LL and evaluated the process used to formulate LL and the process used to promote the identification and communication of LL. The inspectors concluded that appropriate actions had been applied by SHAW/AREVA MOX Services to implement their policies and practices described in PP 1-7.

(i) Construction

The inspectors interviewed CR originators to discuss the applicant's engineering evaluation for materials, installation methods, corrective actions, and the adequacy of system safety functions. The engineering evaluations, testing, and corrective actions performed adequately addressed the requirements of the MPQAP. The inspectors reviewed implementing procedures for PI&R of problems with electrical systems that were documented in CRs, inspection plans, surveillance reports, NCRs and ECRs to evaluate the quality control (QC) program's implementation and effectiveness.

NCRs, CRs, and ECRs generated by the applicant were reviewed by inspectors to verify that they were documented and problems were appropriately resolved. The inspectors noted that these items were adequately documented in the applicant's CAP. The inspector's review of MOX Services' procedures and interviews with the applicant's staff confirmed that a process existed for documenting and reporting conditions adverse to quality to the appropriate levels of management.

(ii) Audits

The inspectors conducted interviews with the QA manager and various staff members on the contents of selected CRs to determine that conditions adverse to quality in the area of audits were adequately reviewed and closed. The inspectors determined that reviews of vendor, engineering, and construction performance conducted by the MOX Services QA organization provided the proper level of oversight needed. The inspectors reviewed a variety of corrective action information, as well as QA audit/surveillance reports, inputs from personnel interviews, review of records and specifications.

(iii) Trending

Inspectors reviewed and evaluated the adequacy of the applicant's trending program. The inspectors reviewed Revision 3 of PP3-2, Trend Analysis, to verify that the applicant had a method for trending conditions adverse to quality and a method for evaluating the adequacy of the trend analysis program. The applicant had a formal trend analysis program, whereby trend analysis reports were issued to site management for review and to identify potential, negative or adverse trends within the QA Program or construction organization. The applicant's trend analysis data points were used to evaluate recurring trends that occurred in the areas of CRs and ECRs.

The trend analysis program was a good process for trending results. During the course of the inspection, detection of negative trends by the applicant provided the inspectors with a real time evaluation of trending the evaluation of negative CRs. The inspectors reviewed the second, third, and fourth quarter 2008 trend analysis reports and determined that the applicant had an effective process for identifying and resolving trends.

The applicant had a formal method for reviewing LL from across the construction and nuclear industries, as well as those that occurred within Department of Energy facilities. The broad application of LL within MOX FFF was used by the applicant to gain knowledge as to what types of activities or issues have caused problems elsewhere and if actions needed to be taken by the applicant to prevent similar problems from happening at MOX FFF. This ensured that configuration control reflected current program objectives, and information such as performance measures and performance indicators and other relevant feedback were factored into facility configuration management and management measures required to prevent these problems or issues from happening at the MOX FFF. The LL review process was used by the applicant to enhance lines of communication, evaluate conditions and problems; and to determine the best means to apply actions required to support construction activities, safety conscious work environment (SCWE) and to assist management, staff, and line workers in sharing information to avoid repeating similar mistakes at the MOX FFF site.

(5) Assessment of Safety Conscious Work Environment

The applicant's SCWE was evaluated by the inspectors through a review of the applicant's Employee Concerns Program (ECP) procedure, and through conducting random interviews of the applicant's staff. Interviews conducted of the applicant's staff provided an understanding of safety conscious industrial practices gained by employees; their experience, perceptions, and knowledge of the applicant's ECP; and the expectations to plan and execute their work based on the best available practices.

Most of the applicant's staff and contractors that were interviewed were knowledgeable of the applicant's ECP, understood how to use it, and indicated that they felt comfortable identifying issues and discussing concerns with supervision without fear of reprisal. The participants indicated that employees were encouraged to identify safety concerns, management visibly supported a SCWE, methods used by employees to report concerns were readily accessible, and no pushback or retaliation had been observed as a result of employee concerns. The inspectors determined that most personnel

interviewed were aware of the different avenues through which they could express concerns, including the CAP, informing their supervision, contacting the ECP coordinator, or contacting the NRC.

The inspectors interviewed the Employee Concerns Program manager and examined a sample of four employee concerns files. The inspectors concluded that the ECP was functional and it contained no technical concerns and that technical concerns were addressed by the applicant's established CAP.

(6) Procurement, Handling, Storage and Shipping and Vendor Related Issues.

The inspectors reviewed MOX FFF corrective action reports and the associated corrective actions for procurement, handling, storage and shipping and vendor related issues. Inspectors reviewed general requirements delineated in specifications for procurement of the static and seismic design, fabrication, inspection, testing, and delivery of the annular, conventional, and slab tanks.

The inspectors reviewed the applicant's current MPQAP, Revision 6, Change 1, which included a review of pertinent aspects of the applicant's QA implementing procedures and was consistent with the nuclear QA requirements outlined in 10 CFR 50, Appendix B; ASME NQA-1, 1994 and 1995 Addenda; and Inspection Procedure 88110, Quality Assurance: Problem Identification, Resolution, and Corrective Action. The inspectors reviewed Fluid Transport System quality assurance requirements for welded equipment components which will be located in the Aqueous Polishing and MOX Processing Units at the MOX FFF. Inspectors evaluated that documents affecting quality and activities which influenced the achievement and verification of quality requirements were adequate; and the objectives for QL-1 and QL-2 principal systems, structures, and components, and their associated procurement controls, were properly implemented.

The inspectors reviewed the applicant's receiving inspection system, material and nonconforming controls, processes used for discovery of problems and the corrective actions taken to prevent their recurrence. The inspectors evaluated problem identification controls by reviewing CRs, receiving inspection reports, quality inspections, surveillances, construction and procurement specifications, supplier deficiency reports, drawing and change control, procurement contracts, and the flow-down of terms and conditions. Discussions with MOX personnel and the review of documentation indicated that adequate provisions were in place to ensure that problems were identified and nonconforming items were discovered, documented and controlled.

Shaw/AREVA MOX Services' PI&R and corrective actions associated with the objectives for procurement, handling, storage and shipping were attained. The inspectors observed that the safety-significance of activities was clearly communicated in procedures, construction and procurement specifications, ECRs, fabrication drawings, process and work control documents, QA inspections and deficiency reports. The inspectors noted that the results of Shaw/AREVA MOX Services vendor audits and surveillances culminated in the identification of some findings, supplier deficiency reports and NCRs. The inspectors noted that Shaw/AREVA MOX Services had identified findings of noteworthy significance that included: weaknesses in radiographic image quality; less than adequate weld filler material receipt inspection requirements; and inadequate examination of markings, protective seals and gas blankets.

(b) Conclusions

MOX FFF has properly implemented the requirements specified in their MPQAP and 10 CFR 50 Appendix B. The quality methods and objectives for evaluating, reporting, and resolving conditions that were identified by personnel working at or for the MOX FFF had been achieved. The inspectors concluded that appropriate actions had been applied by SHAW/AREVA MOX Services to implement their policies and practices described in PP 1-7, MOX Fuel Fabrication Facility Lessons Learned Program, Revision 2. The applicant had adequately implemented nonconforming items control, as required in Section 15 of the MOX Project Quality Assurance Plan.

The inspectors determined that the applicant had established a program and appropriate implementing procedures that adequately implemented the CAP as described in the applicant's MPQAP and the QA regulatory requirements specified in 10 CFR 50, Appendix B, Criterion XVI, Corrective Action. No findings of significance were identified.

**3.0 Exit Meeting**

The inspectors conducted an exit meeting on February 26, 2009 with the SHAW/AREVA MOX Services' management team. The exit meeting described the areas inspected and documentation reviewed and discussed the inspection results in detail with the applicant's staff. The applicant acknowledged the issues presented during the meeting. Although proprietary documents and processes were reviewed during this inspection, the proprietary nature of these documents or processes was not included in this report. No dissenting comments were received from the applicant.

## SUPPLEMENTAL INFORMATION

### 1. List of Applicant Personnel Contacted

J. Adair, Civil - Mechanical Engineering Manager  
W. Elliott, Engineering Vice-President  
D. Gwyn, Regulatory Affairs Manager  
R. Justice, Quality Assurance Programs Manager  
D. Kehoe, Quality Assurance Engineer  
O. Mendiratta, Licensing Engineer  
G. Shell, Quality Assurance Manager  
D. Stinson, President and Chief Operating Officer  
R. Whitley, Supply Quality Manager  
D. Ivey, Lead Auditor  
F. Willis, Licensing Engineer  
N. Simpson, Licensing Engineer  
J. Collins, Senior Electrical Engineer, Facilities Design Group (FDG)  
D. DePriest, Electrical Engineer, FDG  
J. Bourachot, Manager, Manufacturing Design Group (MDG)  
D. Chamberlain, Methods and Procedures Manager, MDG  
S. Harding, Quality Control (QC) Inspector  
D. Pike, Construction Manager  
R. Sauce, Field Engineer  
K. Ramsey, Quality Assurance (QA) Engineer  
J. O'Dell, Engineering Assurance Specialist

### 2. Inspection Procedures Used

IP88110      Quality Assurance: Problem Identification, Resolution, and  
                  Corrective Action (Construction, Pre-Operation, and  
                  Operation)

### 3. List of Acronyms Used

ADAMS	Agency-Wide Document Access and Management System
BPP	Baker Concrete Construction Project Procedure
CCI	U.S. NRC Center for Construction Inspection
CFR	Code of Federal Regulations
CIB	Construction Inspection Branch
CPB	Construction Project Branch
CR	Condition Report
DCI	Division Construction Inspection
DCP	Division Construction Projects
ECP	Employee Concerns Program
ECR	Engineering Change Request
FDG	Facilities Design Group
FFF	Fuel Fabrication Facility
ICN	Interim Change Notice
IP	Inspection Procedure

LL	Lessons Learned
MDG	Manufacturing Design Group
MOX	Mixed-Oxide
MPQAP	MOX Project Quality Assurance Plan
MRC	Management Review Committee
NCR	Nonconformance Report
NMSS	Nuclear Materials Safety and Safeguards
PI&R	Problem Identification & Resolution
PP	Project Procedure
PSSC	Principal Structures, Systems, and Components
QA	Quality Assurance
QC	Quality Control
QL	Quality Level
RII	U.S. NRC Region II
SCWE	Safety Conscious Work Environment
SR	Surveillance Report
SRS	Savannah River Site

#### 4. Procedures Reviewed

PP 1-7, MOX Fabrication Facility Lessons Learned Program, Revision 2  
 PP 3-2, Trend Analysis, Revision 3  
 PP 3-4, Records Management, Revision 6  
 PP 3-5, Control of Nonconforming Items, Revision 4  
 PP 3-6, Corrective Action Process, Revision 10  
 PP 3-10, Stop Work Notification, Revision 3  
 PP 3-12, Supplier Evaluation, Revision 8  
 PP 3-16, Supplier Verification, Revision 6  
 PP 3-25, Root Cause Analysis, Revision 2  
 PP 3-26, Surveillance Activities, Revision 0  
 PP 3-29, Quality Control Inspection at Supplier Facilities, Revision 1  
 PP 4-4, Occurrence Reporting and Performance Analysis, Revision 0  
 PP 9-3, Design Control, Revision 15  
 PP 9-9, Engineering Specifications, Revision 8  
 PP 9-21, Engineering Change Requests, Revision 5  
 PP 10-10, Procurement Change Management, Revision 2  
 PP 10-14, Vendor Submittal Management, Revision 2  
 PP 11-25, Control of QL-1 and QL-2 Material, Revision 0  
 PP 11-26, Material Handling, Storage and Control, Revision 0  
 PP 11-35, Construction Inspection and Acceptance Testing, Revision 2  
 BPP-118, Installation of Embedded Piping

#### 5. Condition Reports (CRs) Reviewed

CR-2007-0012  
 CR-2007-0018  
 CR-2007-0037  
 CR-2007-0040  
 CR-2007-0042  
 CR-2007-0049  
 CR-2007-0051

CR-2007-0052  
CR-2007-0059  
CR-2007-0092  
CR-2007-0099  
CR-2007-0112  
CR-2007-0133  
CR-2007-0151  
CR-2007-0152  
CR-2007-0165  
CR-2007-0165  
CR-2008-0005  
CR-2008-0016  
CR-2008-0024  
CR-2008-0047  
CR-2008-0048  
CR-2008-0049  
CR-2008-0050  
CR-2008-0051  
CR-2008-0052  
CR-2008-0059  
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CR-2008-0083  
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CR-2008-0464



CR-2008-0465  
 CR-2008-0477  
 CR-2008-0501  
 CR-2009-0013  
 CR-2009-0015  
 CR-2009-0019  
 CR-2009-0033  
 CR-2009-0034  
 CR-2009-0043  
 CR-2009-0047

6. Engineering Change Requests

ECR 001558, Non Standard Pipe Fittings, Revision 0  
 ECR 001561, Pipe Commercial Grade Item Evaluation, Revision 0  
 ECR 001183, Specification for Annular Tanks to Address Change to  
 Fabrication and Testing Requirements, Revision 3  
 ECR 00254, Revisions to Slab and Annular Tanks, Revision 0  
 ECR 00879, Change Procurement Specification for Conventional Tanks  
 (DCS01-KKJ-DS-SPE-L-16265-3) , Revision 0  
 ECR 000934, Hydrostatic Test Pressure Chart Requirement in  
 Procurement Specification for Conventional Tanks, Revision 0  
 ECR 000557, ASME Code Reconciliation: DCS01-AAJ-DS-DOB-M-  
 40121-3, Revision 0  
 ECR 00173, Revision to Tank Procurement Specifications to Latest  
 Version of the Code, Revision 0  
 ECR 001207, Exemption to Allow Piping to Be Procured by Shop  
 Fabricator: As Nominal Wall instead of Minimum Wall, Revision 0  
 ECR 00881, Procurement Specification for Annular Tanks (DCS01-KKJ-  
 DS-SPE-L-16264-3), Revision 0

7. Non-Conformance Reports

NCR-QC-07-0069  
 NCR QC-07-0044, dated April 10, 2007  
 NCR QC-07-0082, dated February 18, 2007  
 NCR CE-08-1-0160, Existing floor levels not in compliance with ACI 117-  
 90  
 NCR QC-08-203 & 211, "Worst case" Bend Radius  
 NCR QC-08-407, Walk-down of Rebar in Lay Down Area  
 NCR QC-08-413, Walk-down of Rebar in Lay Down Area  
 NCR QC-08-416, Walk-down of Rebar in Lay Down Area  
 NCR QC-08-0469, dated July 18, 2008  
 NCR QC-08-0524, dated May 7, 2008  
 NCR QC-08-0550-S, dated October 5, 2008  
 NCR CE-09-0567-5, Resistance Reading to Ground of 1060 ohms  
 NCR CE-09-0568-5, Resistance Reading to Ground of 1351 ohms  
 NCR FC-09-0611, dated January 30, 2009  
 NCR QC-09-0621-S, dated February 5, 2009  
 NCR CE-196, Surveillance of NDE of Rebar Bends  
 NCR QC-203, Rebar Bend Radius

8. Surveillances

SR-QA-08-011, Surveillance of PP11-35 Hydro  
 SR-QC-08-029, Surveillance of Tinsel Test  
 SR-QC-08-046,  
 SR-QC-08-052, Surveillance of NDE of Rebar Bends  
 SR-QC-08-062, Surveillance of Rebar Bend Radius  
 SR-QC-08-068, Surveillance of "Worst Case" Bend Radius  
 SR-CE-08-167, Surveillance on Welds Identified by NCRs  
 SR-CE-08-189, Surveillance of No. 11 Mechanical Splice Testing Results  
 SR-QA-08-194, Status of Corrective Actions for 2007 Procurement Audit  
 DCS-07-A08  
 SR-QC-08-205, Attempt to Qualify 5 Ironworkers to the Requirements of  
 PP11-45, Revision 0  
 SR-QA-08-210, Review of all 2008 CRs to Determine if there were  
 Deficiencies  
 SR-QC-08-238, Perform General Walk-down of Reinforcing Steel Lay-  
 down Areas  
 SR-QC-08-244, General Walk-down of Rebar in Lay-down Areas  
 SR-QC-08-249, General Walk-down of Rebar in Lay-down Areas  
 SR-QA-08-267, Procurement Condition Report Review  
 SR-QC-08-290, Calibration of Precision Laser  
 SR-QA-08-339, US Concrete Testing-Supplier  
 SR-QA-08-373, Surveillance of PP9-13 Using Approved Checklist  
 SR-QC-08-383, Verify Documentation for the Installation of Conduit Duct  
 Bank  
 SR-CE-08-402, Installation of Manholes, Conduits and Backfill  
 SR-CE-08-434, 3-Day Surveillance on HDPE Piping Installation & Hydro  
 Testing on HDPE Piping  
 SR-CE-08-435, 3-Day Surveillance on Fire Protection Piping Installation  
 CASE-09-VE08, Computer Aided Structural Engineering Annual  
 Evaluation  
 PTI-09-VS77, Surveillance of Premier Technology Inc.  
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 WYL-09-VE10, Wyle Independent Testing Lab. Annual Evaluation  
 FFI-09-VE73, Flanders CSC Triennial Audit  
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9. Construction / Procurement Specifications

DCS01-EEJ-DS-SPE-E-25210-4, Section 16170, Grounding and Bonding  
 DCS01-EEJ-DS-SPE-E-25130-0, 208/120 Volt AC Three Phase Vital  
 Power & Essential Power Inverters  
 DCS01-EEJ-DS-SPE-E-25148-2, Variable Frequency Drives  
 DCS01-AAJ-DS-TRD-D-40122-2, Functional Classification List  
 Shaw AREVA MOX Services, Construction Specification: Division 15 -  
 DCS01-KKJ-DS-SPE-M-15120-1, Shop Fabrication of Piping  
 DCS01-KKJ-DS-SPE-L-16265-3, Procurement Specification for  
 Conventional Tanks, Revision 3

DCS01-KKJ-DS-SPE-L-16264-3, Procurement Specification for Annular Tanks, Revision 3  
 DCS01-KKJ-DS-SPE-L-16263-2, Procurement Specification for Slab Tanks, Revision 2

10. Supplier Deficiency Reports

PTI-09-VS-83-01  
 PTI-08-VS-55-01  
 PTI-08-VS-55-02  
 PTI-08-VS-55-03  
 PTI-08-VS-83-04

11. Lessons Learned Information

Lessons Learned Logs 2004 – 2009  
 LL-2007-008, Forms, Rebar and Embedment Configurations  
 LL-2008-216, HEPA Filter Testing Arrangement Inconsistent with SAR Description  
 LL-2008-174, Loss of Nuclear Criticality Safety Double Contingency  
 LL-2008-127, Glovebox Window Changes May Damage Gloves  
 LL-2008-126, Glovebox Gloves May be Damaged While Outside Gloveboxes

12. Miscellaneous

Quality Assurance Plan (Docket No. 070-03098), Revision 6, Change 1  
 Engineering Directive 1700-11 – Review and Approval of MDG Documents  
 MRC CR Summary for February 24, 2009 and February 26, 2009  
 Shaw AREVA MOX Services Employee Concern Program FY 2008 Annual Activity Report, December 2008  
 Contract Terms and Conditions, Section F, Design and Build Subcontracts for Conventional Tanks 10888-S-1415  
 Contract Terms and Conditions, Section F, Design and Build Subcontracts for Annular Tanks 10888-S-1412  
 Contract Terms and Conditions, Section F, Design and Build Subcontracts for Slab Tanks 10888-S-1414.