



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
245 PEACHTREE CENTER AVENUE N.E., SUITE 1200
ATLANTA, GEORGIA 30303-1200

May 1, 2018

Mr. David Del Vecchio
President and Chief Operating Officer
CB&I AREVA MOX Services
Savannah River Site
P.O. Box 7097
Aiken, SC 29804-7097

SUBJECT: MIXED OXIDE FUEL FABRICATION FACILITY- NRC INSPECTION REPORT
NUMBER 70-3098/2018-002

Dear Mr. Del Vecchio:

During the period from January 1, 2018, through March 31, 2018, the U. S. Nuclear Regulatory Commission (NRC) completed inspections pertaining to the construction of the Mixed Oxide Fuel Fabrication Facility. The purpose of the inspections was to determine whether activities authorized by the construction authorization and license application 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 and license application 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 construction activities, and interviewed personnel.

NRC inspectors documented a finding of very low safety significance (SLIV) in this report. This finding involved a violation of NRC requirements. The NRC is treating this violation as a non-cited violation (NCV) consistent with Section 2.3.2.a of the Enforcement Policy. If you contest the violations or significance of this NCV, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the United States Nuclear Regulatory Commission, ATTENTION: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region II; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Senior Project Manager at the MFFF.

This letter, its enclosure, and your response (if any) will be made available for public inspection and copying at <http://www.nrc.gov/reading-rm/adams.html> and at the NRC Public Document Room in accordance with 10 CFR 2.390, "Public Inspections, Exemptions, Requests for Withholding."

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

Sincerely,

/RA/

Michael Ernstes, Chief
Construction Inspection Branch 2
Division of Construction Oversight

Docket No. 70-3098

Construction Authorization No.: CAMOX-001

Enclosure: NRC Inspection Report No. 70-3098/2018-002
w/attachment: Supplemental Information

cc w/encl: (See next page)

cc w/encl:

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Letter to D. Del Vecchio from Michael Ernstes dated May 1, 2018

SUBJECT: MIXED OXIDE FUEL FABRICATION FACILITY- NRC INSPECTION REPORT
NO. 70-3098/2018-002

Distribution w/encl:

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- J. Eargle, RII
- P. Carman, RII
- PUBLIC

PUBLICLY AVAILABLE NON-PUBLICLY AVAILABLE SENSITIVE NON-SENSITIVE

ADAMS: Yes ACCESSION NUMBER: **ML18121A350** SUNSI REVIEW COMPLETE FORM 665 ATTACHED

OFFICE	RII: DCO	RII: DCO	RII: DCO	HQ:	RII: DCO			
SIGNATURE	Via email	Via email	Via email	Via email	ME			
NAME	P. Carman	J. Eargle	D. Harmon	D. Tiktinsky	M. Ernstes			
DATE	4/26/2018	4/26/2018	4/26/2018	4/27/2018	05/01/2018			

U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket No.: 70-3098

Construction
Authorization No.: CAMOX-001

Report No.: 70-3098/2018-002

Applicant: CB&I AREVA MOX Services

Location: Savannah River Site
Aiken, South Carolina

Inspection Dates: January 1 – March 31, 2018

Inspectors: P. Carman, Project Manager, Construction Inspection Branch 2
(CIB2), Division of Construction Oversight (DCO)
J. Eargle, Senior Project Manager, CIB2, DCO
D. Harmon, Construction Inspector, CIB2, DCO

Accompanying Personnel: W. Jones, Director, DCO
M. Ernstes, Branch Chief, CIB2, DCO
D. Tiktinsky, Senior Project Manager, Fuel Manufacturing Branch
(FMB), Division of Fuel Cycle Safety and Environmental
Review (FCSE), Office of Nuclear Materials Safety and
Safeguards (NMSS)

Approved by: Michael Ernstes, Chief
Construction Inspection Branch 2
Division of Construction Oversight

Enclosure

EXECUTIVE SUMMARY

CB&I AREVA MOX Services (MOX Services)
Mixed Oxide (MOX) Fuel Fabrication Facility (MFFF)
NRC Inspection Report (IR) Number (No.) 70-3098/2018-002

The scope of the inspections encompassed a review of various MFFF activities related to Quality Level (QL)-1 (safety-related) construction for conformance to U.S. Nuclear Regulatory Commission (NRC) regulations, the Construction Authorization Request (CAR), the MOX Project Quality Assurance Plan (MPQAP), applicable sections of the License Application (LA) and applicable industry codes and standards. This inspection included, as applicable, the following inspection attributes: Control of Materials, Equipment, and Services; Installation; Procedures; Quality Assurance (QA) Interfaces; and Special Processes.

The following principal systems, structures and components (PSSCs) are discussed in this inspection report:

- PSSC-004, C2 Confinement System Passive Barrier
- PSSC-009, Criticality Controls
- PSSC-036, MOX Fuel Fabrication Building Structure

Routine Resident Inspections

The inspectors routinely reviewed the applicant's weekly construction status package, reviewed the status of work packages maintained at various work sites, conducted daily tours of work and material storage areas, observed installation of mechanical equipment, and reviewed various corrective action documents to assess the adequacy of the MOX Services' corrective action program. The detailed inspection activities identified Non-cited Violation (NCV) 70-3098/2018-002-01, Failure to Enter Issues Into The Corrective Action Program. This NCV is associated with the applicant's failure to initiate condition reports (CRs) in accordance with procedures. (Section 2)

PSSC Inspections

PSSC-004, C2 Confinement System Passive Barrier

The inspectors observed installation activities and reviewed documents related to the installation of medium depressurization exhaust (MDE) duct spool BAP-L5-A9-03-MDE-6A which connects to item relied on for safety (IROFS) fire damper MDE*DMPF0518C(3HR). The inspectors observed in-process welding, reviewed welding records and procedures, and reviewed material records associated with the work activities. No violations of more than minor significance were identified. (Section 3.a)

PSSC-009, Criticality Controls

The inspectors observed installation activities and reviewed documents related to the installation of demister KCA*DMST2010. The inspector observed the installation of the demister and reviewed implementing procedures. Additionally, the inspectors reviewed drawings, design specifications, and inspected completed welds and weld repairs. No violations of more than minor significance were identified. (Section 3.b)

PSSC-036, MOX Fuel Fabrication Building Structure

The inspectors observed construction activities and reviewed documents related to the concrete pour of temporary construction opening (TCO) TCO-MP-1-24, located in room D-106 of the shipping and receiving area (BSR). The inspectors observed activities at the concrete batch plant and pour site, and reviewed associated records to verify construction activities were conducted in accordance with project procedures and applicable codes and standards. No violations of more than minor significance were identified. (Section 3.c)

REPORT DETAILS

1. Summary of Facility Status

During the inspection period, the applicant (CB&I AREVA MOX Services (MOX Services)) continued construction activities of principal systems, structures and components (PSSCs). Other construction activities included staging of process piping and installation of supports in the Aqueous Polishing Area (BAP); installation of process piping in the BAP; installation of ventilation system ductwork and supports in the BAP and MOX Processing Area (BMP); installation of fire dampers in the BAP and BMP; and installation of various gloveboxes in the BAP and BMP. The applicant continued to receive, store, assemble, and test glove boxes and process equipment at the Process Assembly Facility (PAF).

2. Routine Resident Inspection Activities

a. Inspection Procedure (IP) 88130, Construction: Resident Inspection Program for On-Site Construction Activities at the Mixed Oxide Fuel Fabrication Facility

(1) Scope and Observations

The inspectors reviewed the applicant's construction weekly status meeting notes. The inspectors held discussions with MOX Services design engineers, field engineers, quality assurance (QA) and quality control (QC) personnel, and subcontractor construction personnel in order to maintain current knowledge of construction activities and any problems or concerns.

The inspectors reviewed the status of work packages (WPs) maintained at various work sites. The inspectors reviewed various corrective action documents. The review included non-conformance reports (NCRs) and condition reports (CRs). The inspectors routinely performed tours of the MOX Fuel Fabrication Facility (MFFF) work areas to observe ongoing work activities and communications.

The inspectors reviewed the critical lift package associated with the installation of Module 17 into the active gallery. The review of the package included the review of PP11-36, "Critical Lift Record Card," and the PP-36E, "Equipment Evaluation Form." The inspectors reviewed rigging vendor information to ensure that equipment capabilities exceeded lifting requirements. Additionally, field change requests (FCRs) were reviewed to ensure the changes were incorporated into the lift and that the changes did not impose any challenges not previously examined. Finally, the inspectors witnessed the final placement of Module 17 into the active gallery.

The inspectors reviewed procedure PP11-58, "Weld Filler Material Control," and performed a walk down of the weld filler material storage room in the secure warehouse to determine if the procedure was being adequately implemented. Specifically, the inspection was to determine if:

- The room was being controlled as a Level B storage area;
- Welding filler metal was marked, segregated, and stored properly;
- Coated electrodes that were not in a hermetically sealed container were stored in ovens;

- The room was properly secured;
- Items were not kept on the floor;
- Rod ovens were checked daily; and
- The room was free of food and drinks

The inspectors reviewed the MQAP and procedure PP3-4, "Records Management," and performed a walk down of the permanent and temporary records storage rooms. The inspectors reviewed the evaluations performed to determine if the rooms and/or storage cabinets met their required fire rating. The inspector's walk down was performed to ensure that the rooms were kept free of excessive combustibles and were properly secured. The inspectors reviewed records associated with the control of the temperature and humidity to ensure these parameters were within procedural limits. Additionally, the inspectors reviewed corrective action documents to determine if any problems, deviations, or non-compliances were properly captured in the corrective action program.

(2) Conclusions

Introduction: The NRC identified a severity level (SL) IV non-cited violation (NCV) for the applicant's failure to initiate CRs in accordance with procedures. Specifically, the applicant failed to document problems related to an installed fire damper being different than the specified fire damper, and for relative humidity (RH) being outside of procedural requirements for the permanent records single storage facility.

Description: MQAP Section 17.2.4.C 2) Permanent Storage, states, in part, that "MOX Services records permanent storage shall either invoke the Single Storage Facility provision of section 4.4.1, Alternate Single Storage Facility provision of section 4.4.2 or the Dual Storage Facilities provision of section 4.4.4 of Supplement 17S-1 of NQA-1-1994." The applicant chose to utilize a single storage facility provision of section 4.4.1. The inspectors reviewed the applicant's evaluation of the single storage facility performed on December 8, 2016. The inspectors noted that the applicant identified that the heating, ventilation, and air conditioning (HVAC) plan for this room indicated the fire damper that was supposed to be installed was a Greenheck Model FD-110 per the design drawing, but a Greenheck Model OFSD-211 was actually installed. The applicant evaluated the installed damper, and determined that it met the requirements for a single storage facility, and took no additional actions related to the fire damper. The inspectors noted that the applicant did not initiate a CR in accordance with procedure PP3-6, "Corrective Action Process," Rev. 18.

The inspectors reviewed PP3-4, "Records Management," Rev. 9 to determine if records were being stored in accordance with procedural requirements. The inspector noted that for the single storage facility, PP3-4 requires, in part, that "Temperature and humidity of the Records room shall be monitored to ensure temperature and humidity are generally maintained in the range of 40 to 76 deg. F and 30-50% RH. Short term deviations outside of these ranges of not more than +/- 15% RH are permissible as long as the duration is no longer than ten consecutive days and cumulative deviation is no more than 30 days in a calendar year." The inspectors reviewed the annual report documenting the data collected by the temperature and humidity monitors. The inspectors noted that in a memorandum dated October 25, 2017, the applicant identified that the RH exceeded 50% for a total of 34 days. The memorandum also identified the

cause of the non-compliance to be the inability of the air conditioning unit in the room to dehumidify, and stated that a dehumidifier will be ordered and installed in the room. The inspectors noted that the licensee did not enter the issue into the corrective action program in accordance with procedure PP3-6.

Analysis: Using the guidance contained in Inspection Manual Chapter 0613 "Power Reactor Construction Inspection Reports," dated 02/09/2017, the inspectors determined that the applicant's failure to initiate CRs to document problems was a more than minor finding. Specifically, the deficiency represented a substantive failure to implement a procedure. This finding was determined to be a SLIV violation using Section 6.5, "Facility Construction (10 CFR Parts 50 and 52 Licensees and Fuel Cycle Facilities) of the NRC Enforcement Policy, dated 11/01/2016, because the applicant failed to adequately implement QA procedures.

Enforcement: MPQAP Section 5, Instructions, Procedures, And Drawings, states, in part, that, "Quality-affecting activities are prescribed by and performed in accordance with documented, approved QA procedures and other approved implementing documents (drawings, specifications, etc.) appropriate to the MOX Project work scope." Procedure PP3-6, "Corrective Action Process," Rev. 18, Section 3.3.1 states, in part, that all personnel "initiate CRs to document problems including programs, processes, equipment issues which are recurring or require further investigation, human performance issues, failures, malfunctions, deficiencies, deviations, potential items for improvement, Adverse Conditions and Significant Adverse Conditions."

Contrary to the above on October 25, 2017, and December 8, 2016, the applicant failed to initiate CRs to document problems related to the installed fire damper being different than the specified fire damper, and the RH being outside of procedural requirements for the Single Storage Facility. This finding was determined to be a SLIV violation using Section 6.5 of the NRC Enforcement Policy. This violation is being treated as an NCV, consistent with Section 2.3.2 of the NRC Enforcement Policy. The violation was entered in the applicant's corrective action program as CRs 10888-MOX-CR-18-100, and 10888-MOX-CR-18-104 and the applicant was planning appropriate corrective actions. (NCV 70-3098/2018-002-01, Failure to Enter Issues Into The Corrective Action Program)

3. PSSC Inspections

a. PSSC-004, C2 Confinement System Passive Barrier

(1) Scope and Observations

The inspectors observed construction activities related to PSSC-004, C2 Confinement System Passive Barrier, as described in Table 5.6-1 of the MFFF Construction Authorization Request (CAR). The inspection attributes observed were Installation and Special Processes.

The inspectors observed construction activities and reviewed documents related to the installation of medium depressurization exhaust (MDE) duct spool BAP-L5-A9-03-MDE-6A which connects to item relied on for safety (IROFS) fire damper MDE*DMPF0518C(3HR). The inspectors reviewed welding and material records and performed independent visual examinations of weld 16-C532-MDE-5237-FW008-C0R0 within Quality Level (QL)-1 Low Risk (LR) work package 16-C532-MDE-0003-V-5237.

The inspectors observed in-process gas tungsten arc welding of a sheet to plate (weld 16-C532-MDE-5237-FW008-C0R0) making up part of duct spool BAP-L5-A9-03-MDE-6A. The inspectors observed welding activities to verify that the proper welding technique sheet (WTS) was used, the filler metal type and size was selected in accordance with the WTS, base metals were adequately cleaned and welding was protected from weather or other contaminants, hold points were observed, and welding equipment variables and techniques were in accordance with the WTS. The inspectors reviewed weld and material records to verify that records provided adequate traceability to all aspects of the welding activity, including traceability to the welder who performed the work, base metals, and the weld filler metal.

The inspectors reviewed material markings and traceability documents to verify that the material size and type was selected in accordance with design and fabrication specifications and drawings, and that the material was traceable to test reports or certifications. The inspectors reviewed certificates of compliance and certified material test reports (CMTRs) for the base material and weld filler metal to verify that the mechanical and chemical properties of the materials met American Society for Testing and Materials (ASTM) A 240/A 240M or American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (BPVC), Section II, Part C specifications.

The inspectors reviewed the WTS and supporting procedure qualification records (PQRs) used for the weld to verify that the WTS was qualified and contained the required essential variables in accordance with American Welding Society (AWS) D9.1M/9.1 and project procedure requirements. The inspectors reviewed the welder qualification test report and welder qualifications to verify that the welder performing the weld was qualified for the weld process and parameters in accordance with AWS D9.1/9.1 requirements.

(2) Conclusions

No violations of more than minor significance were identified.

b. PSSC-009, Criticality Controls

(1) Scope and Observations

The inspectors observed construction activities related to PSSC-009, Criticality Controls, as described in Table 5.6-1 of the MFFF CAR. The inspection attributes observed were Installation, Procedures, QA Interfaces, and Special Processes. The inspected IROFS was demister KCA*DMST2010.

The inspectors reviewed DCS01-RRJ-CG-CAL-H-06008-D, "Minimum Critical And Maximum Permissible Parameters Of Pu-Containing Media," and the associated/incorporated engineering change requests (ECRs) to determine the maximum allowable slab thickness of the tank, and other critical dimensions. The inspectors reviewed the applicants receipt inspection report QC-RIR-14-49693, "Receiving Inspection Report For Demister KCA*DMST2010" to verify the appropriate slab thickness measurement from the vendor. The inspectors performed field measurements from the tank to a sample of walls and other equipment with specified distances. Additionally, the inspector observed the installation of the tank and independently verified procedural adherence during this evolution.

The inspectors reviewed 10888-MOX-NCR-17-7713, which was written by the applicant for a cracked vendor weld. The inspectors reviewed the applicant's corrective actions by performing a visual inspection and reviewing weld records to verify that the repairs were done in conformance with DCS01-KKJ-DS-SPE-L-12045-3, "Specification For Demisters, Leakage Detection Pots, And Separator Pots," and applicable welding codes and that appropriate nondestructive examination (NDE) was performed. Additionally, the inspectors visually examined a sample of welds on the tank to determine if they met the sizes specified in vendor drawing 1001500, "Subcritical Flat Demister, QL-1," and were free of surface defects such as porosity, cracks, and excessive undercut.

(2) Conclusions

No violations of more than minor significance were identified.

c. PSSC-036, MOX Fuel Fabrication Building Structure

(1) Scope and Observations

The inspectors observed construction activities related to PSSC-036, MOX Fuel Fabrication Building Structure, as described in Table 5.6-1 of the MFFF CAR. The inspection attributes observed were Installation and Control of Materials, Equipment, and Services.

The inspectors observed construction activities and reviewed documents related to the concrete pour of temporary construction opening (TCO) TCO-MP-1-24, located in room D-106 of the Shipping and Receiving Area (BSR). The inspectors observed activities at the concrete batch plant, performed inspections of pre- and post-pour activities, and reviewed records associated with materials and testing to verify construction activities were conducted in accordance with project procedures and applicable codes and standards.

The inspectors reviewed the concrete batch plant certificate of conformance to verify that the batch plant was inspected and certified to National Ready Mixed Concrete Association standards. The inspectors witnessed calibration activities at the batch plant and reviewed calibration records to verify that moisture probes were calibrated within the requirements of project procedures and that the required frequency of calibration was met. The inspectors reviewed the concrete batch tickets to verify that the amount of concrete material used in the mix was in accordance with the approved mix design from the concrete mixing and delivering specification. The inspectors reviewed CRs and an NCR related to an amount of out of tolerance material during the concrete mix and programmatic issues with the operation of the concrete batch plant. The inspectors reviewed these reports to verify that the engineering evaluations performed and managerial review was adequate for the conditions.

The inspectors reviewed the concrete placement log to verify that parameters such as temperature, slump, air content, delivery time, and truck drum revolutions were in accordance with the concrete mixing and delivering specification, inspection plans, and project procedures. The inspectors reviewed the concrete test cylinder reports to verify that test specimens for concrete strength testing were sampled at the required location and frequency and that the 28 day design strength was in accordance with the concrete mixing and delivering specification.

The inspectors reviewed a sample of records for pre- and post-placement activities, and performed independent inspections, to verify that equipment and materials were set up properly and in acceptable condition for use, quality control inspection points were observed in accordance with inspection plans, curing duration and temperature was in accordance with project procedures and inspection plans, and finishing of formed surfaces conform to project procedures and inspection plans.

The inspectors reviewed material certification and test reports for the Portland cement, coarse and fine aggregates, and fly ash used in the concrete mix. The inspectors reviewed these documents to verify that the material classifications used were in accordance with the concrete mixing and delivering specification, and that the chemical composition and physical properties meet the requirements of the applicable ASTM standard and the concrete mixing and delivering specification. The inspectors reviewed a sample of in-process concrete testing reports for the coarse and fine aggregates, to include soundness, potential reactivity, Los Angeles abrasion, and material finer than No. 200 sieve. The inspectors reviewed these reports to verify that tests were performed at an appropriate frequency in accordance with the concrete mixing and delivering specification and that the tests were performed in accordance with the appropriate ASTM standards. The inspectors reviewed a CR related to the review timeframe requirements of test reports from subcontractors. The inspectors reviewed this CR for applicability of the inspection activities described in this paragraph, and to verify that an adequate level of evaluation and managerial review was completed for the condition.

The inspectors reviewed an audit of the subcontractor who performed the strength test on the concrete test cylinder and the sample of in-process concrete tests required by the concrete mixing and delivering specification. The inspectors reviewed the audit to verify that it was performed in accordance with the MPQAP and project procedures and that the audit evaluated the appropriate activities performed by the subcontractor. The inspectors reviewed the qualified suppliers list (QSL) to verify that the subcontractor was approved for the activities and the appropriate information was documented in accordance with project procedures.

(2) Conclusions

No violations of more than minor significance were identified.

4. Exit Meeting

The inspection scope and results were summarized throughout this reporting period and by the Senior Project Manager at an exit meeting with applicant management on April 18, 2018. Although proprietary documents and processes may have been reviewed during this inspection, the proprietary nature of these documents or processes was not included in this report.

SUPPLEMENTAL INFORMATION

1. PARTIAL LIST OF PERSONS CONTACTED

B. Wood, Acting Director of Construction / Project Management
D. Del Vecchio, President
D. Gwyn, Licensing / Nuclear Safety Manager
D. Ivey, Project Assurance Manager
D. Yates, Licensing
E. Radford, Regulatory Compliance Manager
G. Rousseau, Deputy Project Manager / Executive Vice President
J. Starling, Licensing
M. Gober, Vice President Engineering

2. INSPECTION PROCEDURES (IPs) USED

IP 55050 Nuclear Welding General Inspection Procedure
IP 88108 Quality Assurance: Control of Materials, Equipment, and Services (Pre-licensing and Construction)
IP 88130 Resident Inspection Program For On-Site Construction Activities at the Mixed-Oxide Fuel Fabrication Facility
IP 88132 Structural Concrete Activities
IP 88139 Ventilation and Confinement Systems

3. LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

<u>Item Number</u>	<u>Status</u>	<u>Description</u>
70-3098/2018-002-01	Open/Closed	NCV: Failure to Enter Issues Into The Corrective Action Program (Section 2)

4. LIST OF ACRONYMS USED

ADAMS Agency-Wide Document Access and Management System
ASME American Society of Mechanical Engineers
ASTM American Society for Testing and Materials
AWS American Welding Society
BAP Aqueous Polishing Building
BMP MOX Processing Building
BPVC Boiler and Pressure Vessel Code
BSR Shipping and Receiving Area
CAR Construction Authorization Request
CB&I Chicago Bridge and Iron
CFR Code of Federal Regulations
CIB 2 Construction Inspection Branch 2
CMTR Certified Material Test Report
CR Condition Report
DCO Division of Construction Oversight
ECR Engineering Change Request
FCR Field Change Request
FCSE Division of Fuel Cycle Safety and Environmental Review

FMB	Fuel Manufacturing Branch
HVAC	Heating, Ventilation, and Air Conditioning
IP	Inspection Procedure
IR	Inspection Report
IROFS	Items Relied on for Safety
LA	License Application
LR	Low Risk
MDE	Medium Depressurization Exhaust
MOX	Mixed Oxide
MOX Services	CB&I AREVA MOX Services
MFFF	MOX Fuel Fabrication Facility
MPQAP	MOX Project Quality Assurance Plan
NCR	Non-conformance Report
NDE	Nondestructive Examination
NMSS	Office of Nuclear Materials Safety and Safeguards
No.	Number
NRC	U.S. Nuclear Regulatory Commission
NCV	Non-Cited Violation
PAF	Process Assembly Facility
PP	Project Procedure
PQR	Procedure Qualification Record
PSSC	Principal System, Structure and Component
QA	Quality Assurance
QC	Quality Control
QL	Quality Level
QSL	Qualified Suppliers List
Rev.	Revision
RH	Relative Humidity
RII	Region II
SL	Severity Level
TCO	Temporary Construction Opening
WP	Work Package
WTS	Welding Technique Sheet

5. **LIST OF PSSCs REVIEWED**

- PSSC-004, C2 Confinement System Passive Barrier
- PSSC-009, Criticality Controls
- PSSC-036, MOX Fuel Fabrication Building Structure

6. **RECORDS AND DOCUMENTS REVIEWED**

Calculations

DCS01-RRJ-CG-CAL-H-06008-D, Minimum Critical and Maximum Permissible Parameters of Pu-Containing Media, Rev. D

Calibration Records

Form PP11-5D, Aggregate Moisture Form, 1/11/2018

Form PP11-5D, Aggregate Moisture Form South Plant Moisture Probe Calibrations,
1/10/2018

Certified Material Test Reports (CMTRs)

Certified Material Test Report from Arcos for PO 906285, Heat No. 744825, 7/15/2013
 Certified Material Test Report from Edgen Murray for PO 500105-7613154-OP, Heat No.
 E0L3, 10/30/2012
 Certified Material Test Report from Edgen Murray for PO 500105-7613154-OP, Heat No.
 E0L3, 10/25/2012

Condition Reports (CRs)

10888-MOX-CR-16-283
 10888-MOX-CR-17-160
 10888-MOX-CR-17-249
 10888-MOX-CR-17-382
 10888-MOX-CR-17-383
 10888-MOX-CR-18-010
 10888-MOX-CR-18-038
 10888-MOX-CR-18-055
 10888-MOX-CR-18-057
 10888-MOX-CR-18-069
 10888-MOX-CR-18-076
 10888-MOX-CR-18-099
 10888-MOX-CR-18-102
 10888-MOX-CR-18-103

CR for NCV in Section 2

10888-MOX-CR-18-100
 10888-MOX-CR-18-104

Construction Specifications

DCS01-BKA-DS-SPE-B-09325-6, Section 03051 – Mixing and Delivering for Quality
 Level QL-1 and QL-2 Concrete, Revision 6

Design Specifications

DCS01-KKJ-DS-SPE-L-12045-3, Specification for Demisters, Leakage Detection Pots,
 and Separator Pots, Rev. 3

Drawings

08716-00003005_00003-0036, HVAC First Floor Plan, Rev. H
 08716-00004024_-9039, BAP L5 A9 03 MDE 6A, Revision A
 08716-00004024_-9070, BAP L5 A9 03 MDE Spool Lead Sheet, Revision D
 1001500, Subcritical Flat Demister, QL-1, Rev. 3

DCS01-XGA-DS-PLI-V-22614, MOX Fuel Fabrication Facility HVAC-BAP MDE/HAS
Systems Level 05 Area 09 Col A-E; 3.9-6 Part Plan El. 52'-6" to 73'-0", Sheet 3,
Revision 2

Field / Engineering Change Requests (FCRs/ECRs)

ECR-024326, Application of Permissible Parameters to MFFF Small Equipment, Rev. 0
ECR-026060, Additional Configurations for RRJ-CAL-06008-D, Rev. 0
FCR-002334, SS Decking Substitution for the Active Gallery Mock-Up, Rev. 3
FCR-007247, Module 17 Rigging Construction Aids, Rev. 1

Inspection Plans and Records

C103, Concrete Placement Inspection, Revision 16
C112, Pre-Placement Inspection, Revision 25
C114, Post-Placement Inspection, Revision 7
Form PP11-12A, Concrete Placement Pre-Pour Checklist, 1/11/2018
Form PP11-12B, Concrete Placement Post-Pour Checklist, 1/11/2018
Form PP11-12C, Concrete Curing, 1/15/2018

Non-conformance Reports (NCRs)

10888-MOX-NCR-17-7713, DCS01-UFJ-DS-SPE-M-15011 Rev. 2, 7/12/2017
10888-MOX-NCR-18-8071, Too Much Fly Ash in Truck, 1/16/2018

Material Reports

08716-00008828-4165, Potential Reactivity of Aggregates Report – 74051, Revision A
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