

UNITED STATES NUCLEAR REGULATORY COMMISSION REGION II 245 PEACHTREE CENTER AVENUE NE, SUITE 1200 ATLANTA, GEORGIA 30303-1257

July 28, 2016

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 70-3098/2016-002

Dear Mr. Del Vecchio:

During the period from April 1 through June 30, 2016, 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 activities, and interviewed personnel.

Based on the results of this inspection, no violations or deviations were identified. In accordance with 10 CFR 2.390 of NRC's "Rules of Practice and Procedure," a copy of this letter and its enclosure 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.

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: NRC Inspection Report No. 70-3098/2016-002 w/attachment: Supplemental Information

cc w/encl: (See next page)

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cc w/encl: (See next page)

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OFFICE	RII: DCP	RII: DCP					
SIGNATURE		/RA via email/					
NAME	W. Gloersen	C. Huffman					
DATE	7/ /2016	7/26/2016	7/ /2016	7/ /2016	7/ /2016	7/ /2016	7/ /2016
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

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<u>cc w/encl:</u> Mr. Scott Cannon, Federal Project Director NA-262.1 P.O. Box A Aiken, SC 29802

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Ms. Susan Jenkins Division of Radioactive Waste Management Bureau of Health and Environmental Control 2600 Bull St. Columbia, SC 29201

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U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket No.:	70-3098
Construction Authorization No.:	CAMOX-001
Report No.:	70-3098/2016-002
Applicant:	CB&I AREVA MOX Services
Location:	Savannah River Site Aiken, South Carolina
Inspection Dates:	April 1 – June 30, 2016
Inspectors:	C. Huffman, Senior Resident Inspector, Construction Projects Branch 1 (CPB1), Division of Construction Projects (DCP)
Accompanying Personnel:	J. Yerokun, Director, Division of Construction Inspection (DCI) C. Regan, Acting Deputy Director, DCP
Approved by:	D. Seymour, Chief Construction Projects Branch 1 Division of Construction Projects

EXECUTIVE SUMMARY

CB&I AREVA MOX Services (MOX Services) Mixed Oxide (MOX) Fuel Fabrication Facility (MFFF) NRC Inspection Report (IR) Number (No.) 70-3098/2016-002

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 and applicable industry codes and standards. This inspection included, as applicable, the following inspection attributes: corrective action program, design control, special processes, procedures, and installation.

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

- PSSC-004, C2 Confinement System Passive Barrier
- PSSC-005, C3 Confinement System
- PSSC-009, Criticality Control
- PSSC-016, Emergency Generator Building
- PSSC-021, Fire Barriers
- PSSC-023, Fluid Transport Systems
- PSSC-036, MOX Fuel Fabrication Building

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. Construction activities were performed in a safe and quality-related manner. No findings of significance were identified (Section 2).

PSSC Inspections

PSSC-016, Emergency Generator Building

The inspectors observed construction activities related to PSSC-016, Emergency Generator Building (BEG), as described in Table 5.6-1 of the MFFF CAR. The inspection attributes observed were installation and inspection. The associated item relied on for safety (IROFS) component was QL-1 backfill material that supports the BEG foundation. Specifically, the inspectors observed backfill installation and inspection including nuclear density gauge measurements and sand cone testing. The inspectors also reviewed documentation associated with the inspection results. No findings of significance were identified (Section 3.a).

PSSC-021, Fire Barriers

The inspectors observed construction activities related to PSSC-021, Fire Barriers, as described in Table 5.6-1 of the MFFF CAR. The inspection attributes observed were installation and inspection. The associated IROFS components were fireproofing materials covering structural steel in Room C-137. Specifically, the inspectors observed installed coatings, quality control

(QC) inspection of coatings and reviewed documentation associated with its installation and inspection. No findings of significance were identified (Section 3.b)

PSSC-009, Criticality Control

The inspectors observed construction activities related to PSSC-009, Criticality Control, as described in Table 5.6-1 of the MFFF CAR. The inspection attributes observed were installation and inspection. The associated IROFS component was stainless steel drip tray material in Room C-334. Specifically, the inspectors observed drip tray installation and inspection including liquid penetrant testing. The inspectors also reviewed documentation associated with the inspection results. No findings of significance were identified (Section 3.c).

PSSC-023, Fluid Transport Systems

The inspectors observed construction activities related to PSSC-023, Fluid Transport Systems, as described in Table 5.6-1 of the MFFF CAR. The inspection attributes observed were installation and inspection. The associated IROFS components were the Active Gallery, Aqueous Polishing Building (BAP), and Room C-134 piping and pipe supports. Specifically, the inspectors observed installed piping, pipe support frames and observed welding activities and reviewed documentation associated with installation and inspection. No findings of significance were identified (Section 3.d).

PSSC-004, C2 Confinement System Passive Barrier

The inspectors observed construction activities related to PSSC-004, C2 Confinement System Passive Barrier, as described in Table 5.6-1 of the MFFF CAR. The inspection attributes observed were installation and inspection. The associated IROFS components were MOX Processing Building (BMP) Medium Depressurization Exhaust (MDE) heating, ventilation and air conditioning (HVAC) commodities. Specifically, the inspectors observed installed ductwork, QC inspection of ductwork and ductwork supports and reviewed documentation associated with its installation and inspection. No findings of significance were identified (Section 3.e).

PSSC-005, C3 Confinement System

The inspectors observed construction activities associated with PSSC-005, C3 Confinement System, as described in Table 5.6-1 of the MFFF CAR. The inspection attributes observed were installation and special processes. The associated IROFS components were high depressurization exhaust (HDE) filter housings FLU0001B, FLU0002B, FLU0003B, FLU0004B, FLU0005B, and FLU0006B. Specifically, the inspectors observed the internal welding and bracing of these HDE filter housings. Unresolved Item (URI) 70-3098/2016-002-001, associated with potentially inadequate welds of internal seismic braces in filter housings FLU0001B, FLU0002B, FLU0001B, FLU0002B, FLU0003B, FLU0004B, FLU0005B, and FLU0003B, FLU0004B, FLU0005B, and FLU0006B, was identified (Section 3.f).

PSSC-036, MOX Fuel Fabrication Building

The inspectors observed construction activities related to PSSC-036, MOX Fuel Fabrication Building, as described in Table 5.6-1 of the MFFF CAR. The inspection attributes observed were installation and inspection. The associated IROFS components were rebar and embeds associated with the in-process closure of a temporary construction opening (TCO) in Room C-304 and post installed embeds in Room C-145. Specifically, the inspectors observed installed rebar and embeds, QC inspection of embed attachment to walls with anchors, and reviewed documentation associated with its installation and inspection. No findings of significance were identified (Section 3.g).

REPORT DETAILS

1. <u>Summary of Facility Status</u>

During the inspection period, the applicant (CB&I AREVA MOX Services (MOX Services)) continued construction activities of principle systems, structures and components (PSSCs). Construction activities continued related to closure of temporary construction openings (TCOs) related to walls in the MOX Processing Building (BMP). Other construction activities included staging of process piping and installation of supports in the Aqueous Polishing Building (BAP) and BMP; installation of process piping in the BAP; installation of ventilation system ductwork and supports in the BAP and BMP; installation of drip trays in the BAP; 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. <u>Routine Resident Inspection Activities; (Inspection Procedure (IP) 88130,</u> <u>Construction: Resident Inspection Program for On-Site Construction Activities at</u> <u>the Mixed Oxide Fuel Fabrication Facility)</u>

a. <u>Scope and Observations</u>

The inspectors routinely reviewed the applicant's construction weekly status meetings 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 monitored the status of WP entries to verify construction personnel obtained proper authorizations to start work. The inspectors conducted daily tours of material storage and work areas to verify that materials and equipment were properly stored in accordance with QA requirements.

The inspectors reviewed various corrective action documents. The review included nonconformance reports (NCRs) and condition reports (CRs). The inspectors also reviewed the closure of selected NCRs and CRs.

The inspectors routinely performed tours of the MOX Fuel Fabrication Facility (MFFF) work areas to verify that MOX Services' staging of piping, pipe supports, installation of ductwork, and installation of glove-boxes, installation of fire dampers and fire doors met regulatory commitments and procedural requirements. The inspectors conducted tours of material storage areas at the MFFF, PAF, and A-Area to determine if MOX Services was properly storing equipment and materials in accordance with MOX Project Quality Assurance Plan (MPQAP) storage requirements. Specifically, the inspectors assessed MOX Services compliance with Project Procedure (PP) 10-38, Storage and Control of Material.

b. <u>Conclusions</u>

The inspectors routinely reviewed the applicant's construction weekly status meetings notes, reviewed the status of WPs maintained at various work sites, conducted frequent 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. Construction activities were performed in a safe and quality-related manner. No findings of significance were identified.

3. <u>PSSC Related Inspections</u>

- a. <u>PSSC-016, Emergency Generator Building</u>
- (1) <u>Attribute: Design Control and Special Processes</u>
- (a) <u>Scope and Observations</u>

The inspectors observed construction activities related to PSSC-016, Emergency Generator Building (BEG), as described in Table 5.6-1 of the MFFF Construction Authorization Request (CAR. The inspection attributes observed were installation and inspection. The associated item relied on for safety (IROFS) component was quality level 1 (QL-1) backfill material that supports the BEG foundation. Specifically, the inspectors observed backfill installation and inspection including nuclear density gauge measurements and sand cone testing. The inspectors also reviewed documentation associated with the inspection results.

The inspectors observed construction activities associated with BEG backfill. The inspectors observed installation and inspection of QL-1 backfill material that will support the BEG foundation. The inspectors observed nuclear density and sand cone measurements to determine whether the backfill met moisture and density requirements. The inspectors reviewed the following reports to determine whether testing had been performed and acceptable results were achieved:

S&ME 73467-73468 S&ME 73459-73460 S&ME 73454-73455 S&ME 73452-73453 S&ME 73388-73389 S&ME 73469-73470

The inspectors observed calibration stickers and associated documentation to determine whether instruments were adequate for the measurements being performed and within their calibration expiration date.

(b) <u>Conclusions</u>

The inspectors observed construction activities related to PSSC-016, Emergency Generator Building (BEG), as described in Table 5.6-1 of the MFFF CAR. The inspection attributes observed were installation and inspection. The associated IROFS component was QL-1 backfill material that supports the BEG foundation. Specifically, the inspectors observed backfill installation and inspection including nuclear density

gauge measurements and sand cone testing. The inspectors also reviewed documentation associated with the inspection results. No findings of significance were identified.

- b. <u>PSSC-021, Fire Barriers</u>
- (1) <u>Attributes: Installation, Inspection and Procedure Controls</u>
- (a) <u>Scope and Observations</u>

The inspectors observed construction activities related to PSSC-021, Fire Barriers, as described in Table 5.6-1 of the MFFF CAR. The inspection attributes observed were installation, inspection and procedure controls. The associated IROFS components were fireproofing materials covering structural steel in Room C-137. Specifically, the inspectors observed installed coatings, QC inspection of coatings and reviewed documentation associated with its installation and inspection.

The inspectors observed fireproofing coatings on structural steel supports in Room C-137 as detailed in WP Task 15-CP20-BAP-Fireproofing-C-3441-13. The inspectors observed the QC inspector utilizing inspection plan number S530-1, Protective Coatings, to conduct their inspection. The inspectors observed that the QC inspector used calibrated equipment to perform the required thickness measurements. The inspectors observed coatings applicators adhering to pot times for the intumescent fireproofing materials.

(b) <u>Conclusions</u>

The inspectors observed construction activities related to PSSC-021, Fires Barriers, as described in Table 5.6-1 of the MFFF CAR. The inspection attributes observed were installation and inspection. The associated IROFS components were fireproofing materials covering structural steel in Room C-137. Specifically, the inspectors observed installed coatings, QC inspection of coatings and reviewed documentation associated with its installation and inspection. No findings of significance were identified.

- c. <u>PSSC-009, Criticality Control</u>
- (1) Attributes: Installation, Special Processes and Inspection
- (a) <u>Scope and Observations</u>

The inspectors observed construction activities related to PSSC-009, Criticality Control, as described in Table 5.6-1 of the MFFF CAR. The inspection attributes observed were installation, special processes and inspection. The associated IROFS component was stainless steel drip tray material in Room C-334. Specifically, the inspectors observed drip tray installation and inspection including liquid penetrant testing. The inspectors also reviewed documentation associated with the inspection results.

The inspectors observed the weld quality of stainless steel drip trays in BAP Room C-334 to determine whether the welds were free from visual rejectable weld indications. The inspectors observed the performance of a liquid penetrant examination on Fuel Manufacturing Building (BMF) welds BMF-DS-PLS-B-02739-SH01-FW660, BMF-DS- PLS-B-02739-SH01-FW661 and BMF-DS-PLS-B-02739-SH01-FW662. The inspectors observed the liquid penetrant examination to determine whether System One employees performed the examination in accordance with procedure M-NDE-004, Liquid Penetrant Examination. Specifically, the inspectors observed the System One personnel clean the welds prior to inspection, maintain appropriate wait times between the applications of developer and penetrant, use adequate lighting to perform the inspection, and use calibrated equipment to verify surface temperature. The inspectors reviewed liquid penetrant reports PT-MOX-2518, PT-MOX-2519 and PT-MOX-2520 to determine whether inspection results were properly documented.

(b) <u>Conclusions</u>

The inspectors observed construction activities related to PSSC-009, Criticality Control, as described in Table 5.6-1 of the MFFF CAR. The inspection attributes observed were installation, special processes and inspection. The associated IROFS component was stainless steel drip tray material in Room C-334. Specifically, the inspectors observed drip tray installation and inspection including liquid penetrant testing. The inspectors also reviewed documentation associated with the inspection results. No findings of significance were identified.

- d. <u>PSSC-023, Fluid Transport Systems</u>
- (1) <u>Attribute: Installation</u>
- (a) <u>Scope and Observations</u>

The inspectors observed construction activities related to PSSC-023, Fluid Transport Systems, as described in Table 5.6-1 of the MFFF CAR. The inspection attributes observed were installation and inspection. The associated IROFS components were Active Gallery, BAP, and Room C-134 piping and pipe supports. Specifically, the inspectors observed installed piping, pipe support frames and observed welding activities and reviewed documentation associated with installation and inspection.

The inspectors observed portions of the assembly of pipe support modules 12N and 12S prior to installation in the Active Gallery (Room C-234) to determine whether the modules were fabricated in accordance with American Welding Society (AWS) D1.1, Structural Welding Code – Steel; and AWS D1.6 welding code. Specifically, the inspectors reviewed the weld quality of completed welds on structural stainless steel members to determine whether they met the requirements of AWS D1.6 and PP 11-51, AWS D1.1 and D1.6 General Welding Procedure.

The inspectors observed welding and QC inspection activities for closure welds in Oxalic Mother Liquors Recovery (KCD): KCD-0037400-01-FW001-C0R0 and KCD-0037400-01-FW002-C0R0 in Room C134 to determine whether welding activities were performed and inspected in accordance with Inspection Plan S562. The inspectors also reviewed the radiography reports CRT-MOX-2177 and CRT-MOX-2181 associated with these closure welds to determine whether the welds were free from rejectable defects.

The inspectors observed radiography reports on pipe KWD-5113700-01-FW012-C0R0 to determine whether the subcontractor, System One, performed the inspection in accordance with procedure M-NDE-003, Computed Radiography. The inspectors

observed the reading and interpretation of the radiography by qualified personnel to determine whether the welds were free from rejectable defects. The inspectors reviewed System One report number CRT-MOX-2209 to determine whether the results of the radiography were adequately documented.

(b) <u>Conclusions</u>

The inspectors observed construction activities related to PSSC-023, Fluid Transport Systems, as described in Table 5.6-1 of the MFFF CAR. The inspection attributes observed were installation and inspection. The associated IROFS components were Active Gallery, BAP, and Room C-134 piping and pipe supports. Specifically, the inspectors observed installed piping, pipe support frames and observed welding activities and reviewed documentation associated with installation and inspection. No findings of significance were identified.

e. <u>PSSC-004, C2 Confinement System Passive Barrier</u>

(1) <u>Attributes: Installation and Inspection</u>

(a) <u>Scope and Observations</u>

The inspectors observed construction activities related to PSSC-004, C2 Confinement System Passive Barrier, as described in Table 5.6-1 of the MFFF CAR. The inspection attributes observed were installation and inspection. The associated IROFS components were BMP Medium Depressurization Exhaust (MDE) heating, ventilation and air conditioning (HVAC) commodities. Specifically, the inspectors observed installed ductwork, QC inspection of ductwork and ductwork supports and reviewed documentation associated with its installation and inspection.

The inspectors observed the inspection and subsequent rework of weld number 15-C114-MDE-4140-FW001-C0R0. Specifically, the inspectors reviewed weld document number 1506585 to determine whether hold point requirements had been met and inspection items had been appropriately documented. The inspectors observed the QC inspector examine the ductwork weld internally and externally for defects. The inspectors observed the QC inspector properly reject a minor weld defect. The inspectors observed the subsequent weld rework, acceptance and documentation.

The inspectors observed the silicone elastomer gasket material that has been commercial grade dedicated for use on bolted connections of ductwork systems. The inspectors reviewed receipt inspection report QC-RIR-14-51461, specification DCS01-QGA-DS-SPE-V-15890-1 and engineering change request (ECR) 002216 to determine whether the dedicated items met the design requirements. The inspectors reviewed the documentation supplied by the gasket manufacturer to determine whether the gasket material was adequate for the potential atmospheric conditions in the MOX facility and that the gasket material would not have a deleterious effect on items that it contacts.

(b) <u>Conclusions</u>

The inspectors observed construction activities related to PSSC-004, C2 Confinement System Passive Barrier, as described in Table 5.6-1 of the MFFF CAR. The inspection attributes observed were installation and inspection. The associated IROFS

components were BMP MDE HVAC commodities. Specifically, the inspectors observed installed ductwork, QC inspection of ductwork and ductwork supports, and reviewed documentation associated with its installation and inspection. No findings of significance were identified.

- f. <u>PSSC-005, C3 Confinement System</u>
- (1) Attributes: Installation and Special Processes
- (a) <u>Scope and Observations</u>

The inspectors observed construction activities associated with PSSC-005, C3 Confinement System, as described in Table 5.6-1 of the MFFF CAR. The inspection attributes observed were installation and special processes. The associated IROFS components were high depressurization exhaust (HDE) filter housings FLU0001B, FLU0002B, FLU0003B, FLU0004B, FLU0005B, and FLU0006B. Specifically, the inspectors observed the internal welding and bracing of these HDE filter housings.

The inspectors observed vendor performed welds inside the filter housings. Specifically, the inspectors observed welds attaching seismic cross bracing inside the filter housings. The welds have the appearance of rejectable weld defects but more information from the vendor is required to make a determination. Therefore, Unresolved Item (URI) 70-3098/2016-002-001, Potentially Inadequate Welds of Internal Seismic Braces in Filter Housings FLU0001B, FLU0002B, FLU0003B, FLU0004B, FLU0005B, and FLU0006B, was identified.

(b) <u>Conclusions</u>

The inspectors observed construction activities associated with PSSC-005, C3 Confinement System, as described in Table 5.6-1 of the MFFF CAR. The inspection attributes observed were installation and special processes. The associated IROFS components were HDE filter housings FLU0001B, FLU0002B, FLU0003B, FLU0004B, FLU0005B, and FLU0006B. Specifically, the inspectors observed the internal welding and bracing of these HDE filter housings. URI 70-3098/2016-002-001 associated with potentially inadequate welds of internal seismic braces in filter housings FLU0001B, FLU0002B, FLU0003B, FLU0004B, FLU0005B, and FLU0006B was identified.

- g. PSSC-036, MOX Fuel Fabrication Building
- (1) <u>Attributes: installation and Inspection</u>
- (a) <u>Scope and Observations</u>

The inspectors observed construction activities related to PSSC-036, MOX Fuel Fabrication Building, as described in Table 5.6-1 of the MFFF CAR. The inspection attributes observed were installation and inspection. The associated IROFS components were rebar and embeds associated with the in-process closure of a temporary construction opening (TCO) in Room C-304 and post installed embeds in Room C-145. Specifically, the inspectors observed installed rebar and embeds, QC inspection of embed attachment to walls with anchors and reviewed documentation associated with its installation and inspection.

The inspectors observed the in process installation of rebar, rebar couplers and embed plates in the TCO of Room C-304. The inspectors observed the cleanliness of threaded rebar couplers to determine whether damage or debris would prevent them from adequately developing the attached rebar. The inspectors observed the stud welds attaching headed anchors to the embed plates to determine whether the acceptance criteria for stud welds specified in AWS D1.1, Structural Welding Code – Steel were met. It should be noted that this TCO is not yet complete but these items required in process inspection before they became inaccessible.

The inspectors observed the installation and inspection of embed plates using Hilti anchors in Room C-145. The inspectors reviewed WP 14-C145-ZMS-S-3000-M-2512 to determine whether procedural requirements were met and appropriate sign offs were documented. The inspectors observed the QC inspector to determine whether requirements such as torque setting, minimum spacing to adjacent embeds, and material dimensions were appropriately verified. The inspectors observed the torque wrench used to install the anchors to determine whether it was in calibration and of an acceptable torque range to meet the anchor torque requirements.

(b) <u>Conclusions</u>

The inspectors observed construction activities related to PSSC-036, MOX Fuel Fabrication Building, as described in Table 5.6-1 of the MFFF CAR. The inspection attributes observed were installation and inspection. The associated IROFS components were rebar and embeds associated with the in-process closure of a TCO in Room C-304 and post installed embeds in Room C-145. Specifically, the inspectors observed installed rebar and embeds, QC inspection of embed attachment to walls with anchors and reviewed documentation associated with its installation and inspection. No findings of significance were identified.

4. Exit Interview

The inspection scope and results were summarized throughout this reporting period and by the Senior Resident Inspector at an exit meeting with applicant senior management on July 14, 2016. Dissenting views were not expressed by the applicant. 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

- D. Del Vecchio, President and Chief Operating Officer
- M. Gober, Vice President, Engineering
- D. Gwyn, Licensing/Nuclear Safety Manager
- D. Ivey, Project Assurance Manager
- D. Livernois, Quality Control Manager
- A. Johnston, Quality Control
- E. Radford, Regulatory Compliance
- R. Morgan, System One

2. INSPECTION PROCEDURES (IPs) USED

- IP 88130 Resident Inspection Program For On-Site Construction Activities at the Mixed-Oxide Fuel Fabrication Facility
- IP 88131 Geotechnical Foundation Activities
- IP 88133 Structural Steel and Support Activities
- IP 88134 Quality Assurance Piping Relied on for Safety
- IP 88139 Ventilation and Confinement Systems
- IP 55050 Nuclear Welding General Inspection Procedure

3. LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Item Number	<u>Status</u>	Description
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70-3098/2016-002-001 Opened

(URI) Potentially Inadequate
Welds of Internal Seismic Braces
in Filter Housings FLU0001B,
FLU0002, FLU0003B,
FLU0004B, FLU0005B, and
FLU0006B (Section 3.f).

4. LIST OF ACRONYMS USED

AWS BAP BEG BMF BMP CAR CR DCI DCP	American Welding Society Aqueous Polishing Building Emergency Diesel Generator Building Fuel Manufacturing Building MOX Processing Building Construction Authorization Request Condition Report Division of Construction Inspection Division of Construction Projects
ECR	Engineering Change Request
HDE	High Depressurization Exhaust
HVAC	Heating, Ventilation, and Air Conditioning
IP	Inspection Procedure
IR	Inspection Report
IROFS	Items Relied on for Safety

KCD	Oxalic Mother Liquors Recovery
MDE	Medium Depressurization Exhaust
MFFF	MOX Fuel Fabrication Facility
MOX	Mixed Oxide
MOX Services	CB&I AREVA MOX Services
MPQAP	MOX Project Quality Assurance Plan
NCR	Non-conformance Report
NDE	Non-destructive Examination
NO.	Number
NRC	Nuclear Regulatory Commission
PAF	Process Assembly Facility
PP	Project Procedure
PSSC(s)	Principle System(s), Structure(s), and Component(s)
QA	Quality Assurance
QC	Quality Control
QL	Quality Level
QL-1	Quality Level 1
RII	Region II
Rev.	Revision
	•
RIR	Receipt Inspection Report
S&ME	(formerly) Soils and Materials Engineers
TCO	Temporary Construction Opening
WP	Work Package

5. <u>LIST OF PSSCs REVIEWED</u>

PSSC-004	C2 Confinement System Passive Barrier
PSSC-005	C3 Confinement System
PSSC-009	Criticality Control
PSSC-010	Double-Walled Pipe
PSSC-016	Emergency Generator Building
PSSC-023	Fluid Transport Systems
PSSC-036	MOX Fuel Fabrication Facility

Letter to D. Del Vecchio from Deborah Seymour dated July 28, 2016.

SUBJECT: MIXED OXIDE FUEL FABRICATION FACILITY- NRC INSPECTION REPORT NO. 70-3098/2016-001

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