

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

July 16, 2013

Mr. Amir Vexler FMO Facility Manager Global Nuclear Fuel – Americas, L.L.C. P.O. Box 780, Mail Code J20 Wilmington, NC 28402

SUBJECT: GLOBAL NUCLEAR FUEL – AMERICAS, L.L.C. – NUCLEAR REGULATORY COMMISSION INTEGRATED INSPECTION REPORT 70-1113/2013-003

Dear Mr. Vexler:

The Nuclear Regulatory Commission (NRC) conducted announced, routine inspections from April 1 through June 30, 2013, at your Wilmington, North Carolina facility. The enclosed report presents the results of these inspections. The purpose of the inspections was to perform routine reviews of the implementation of plant operations, management organization and control, and operator training. The reviews were performed to determine whether activities authorized by the license were conducted safely and in accordance with NRC requirements. At the conclusion of the inspections, the findings were discussed with members of your staff at exit meetings held on April 18, May 16, and July 16, 2013.

During the inspections, the staff examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspections consisted of facility walk-downs; selective examinations of relevant procedures and records; interviews with plant personnel; and plant observations. Throughout the inspections, observations were discussed with your managers and staff. The inspections covered the following areas: fire protection, maintenance and surveillance, and emergency preparedness.

Based on the results of these inspections, the NRC has determined that no violations of NRC requirements occurred.

In accordance with 10 CFR 2.390 of NRC's "Rules of Practice," a copy of this letter and its enclosure will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at <u>http://www.nrc.gov/reading-rm/adams.html</u>.

If you have any questions, please call me at (404) 997-4629.

Sincerely,

/RA/

Marvin D. Sykes, Chief Fuel Facility Inspection Branch 3 Division of Fuel Facility Inspection

Docket No. 70-1113 License No. SNM-1097

Enclosure:

NRC Inspection Report No. 70-1113/2013-003 w/Attachment: Supplementary Information

cc w/encl: Scott Murray, Manager Facility Licensing Global Nuclear Fuels – Americas, L.L.C. Electronic Mail Distribution

W. Lee Cox, III, Chief North Carolina Department of Health and Human Services Division of Health Service Regulation Radiation Protection Section Electronic Mail Distribution If you have any questions, please call me at (404) 997-4629.

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Distribution w/encl: R. Johnson, NMSS M. Baker, NMSS T. Naquin, NMSS M. Sykes, RII M. Thomas, RII PUBLIC

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U.S. NUCLEAR REGULATORY COMMISSION REGION II

Docket No.:	70-1113
License No.:	SNM-1097
Report No.:	70-1113/2013-003
Licensee:	Global Nuclear Fuel - Americas, LLC
Location:	Wilmington, North Carolina
Dates:	April 1 through June 30, 2013
Inspectors:	 C. Rivera, Fuel Facility Inspector (Sections B.1 and C.1) S. Mendez, Fuel Facility Inspector (Section A.1) R. Russell, Fuel Facility Inspector (Sections A.1 and B.2) D. Terry-Ward, Construction Inspector (Section A.1) G. Wiseman, Senior Reactor Inspector (Section A.1) M. Thomas, Senior Fuel Facility Inspector (Section A.1)
Approved by:	M. Sykes, Chief Fuel Facility Branch 3 Division of Fuel Facility Inspection

EXECUTIVE SUMMARY

Global Nuclear Fuel - Americas, LLC NRC Integrated Inspection Report No. 70-1113/2013-003 April 1 – June 30, 2013

This is a quarterly integrated inspection report that documents routine, announced inspections that were conducted by NRC regional inspectors during normal shifts in the areas of fire protection, maintenance and surveillance, and emergency preparedness. During the inspection period, normal production activities were ongoing. These routine, announced inspections consisted of a selective examination of procedures and representative records, observations of activities, walk-downs of items relied on for safety (IROFS), and interviews with personnel.

Safety Operations

• The fire protection systems were adequately maintained in accordance with site procedures.(Section A.1)

Facility Support

- The Maintenance and Surveillance of Safety Controls program was implemented in accordance with the license application and regulatory requirements. (Section B.1)
- The Emergency Preparedness program was implemented in accordance with the emergency plan and regulatory requirements. (Section B.2)

Other Areas

- Closure of two violations related to management measures for IROFS, 2112002-03 and 2011004-01. (Section C.1)
- Closure of two event notices. (Section C.1)

<u>Attachment</u>

List of Persons Contacted List of Items Opened, Closed and Discussed Inspection Procedures Used List of Documents Reviewed

REPORT DETAILS

Summary of Plant Status

Global Nuclear Fuel – Americas (GNF-A), LLC manufactures uranium dioxide (UO₂) powder, pellets, and light water reactor fuel bundles at its Wilmington, NC facility. The facility converts uranium hexafluoride (UF₆) to UO₂ using a Dry Conversion Process (DCP) and performs UO₂, gadolinium pellet and fuel fabrication operations.

A. <u>Safety Operations</u>

- 1. <u>Fire Protection Annual (Inspection Procedure (IP) 88055) and Fire Protection Triennial</u> (IP 88054)
 - a. Inspection Scope and Observations

The inspectors reviewed licensee procedures, drawings, calculations and toured plant areas containing safety controls and items relied on for safety (IROFS) to assess the material condition of fire protection equipment, systems, and features. Specifically the inspectors focused on Dry Conversion Process (DCP), Balance of Plant (BOP) and Fabrication. The inspectors verified that flammable materials were stored in marked cabinets as specified in approved procedures and that housekeeping and the control of combustible materials were adequate and consistent with the approved procedures. The inspectors verified that the cutting, welding, and hot work program was implemented in accordance with approved procedures.

The inspectors reviewed the Fire Hazards Analysis (FHA), Pre-fire Plan, fire protection records, and interviewed personnel assigned fire protection responsibilities. In order to verify that observed fire protection systems, ignition sources, fire hazards, existing plant layout and equipment configuration were properly described in the reviewed documents and that the systems were adequately maintained in a state of readiness and properly tested to verify their ability to performed their intended safety function.

The inspectors reviewed records and interviewed licensee personnel to verify that the observed fire protection and detection systems were maintained in an adequate state of readiness and had been properly tested to verify their ability to perform their safety function. The inspectors reviewed the redundancy of fire protection water sources and fire pumps to confirm they satisfied the applicable requirements of NFPA 801and NFPA 20.

The inspectors verified that a sample of sprinkler systems components were not obstructed, that the water supply to the fire suppression system was readily available with correct valve positioning and pumping capability, and that there were no visual confirmation of physical degradation of the system . The inspectors verified that the design of fire suppression, fire water supply and distribution system complied with the requirements of NFPA 13 and NFPA 20. The inspectors verified that the automatic suppression systems were inspected, tested, and maintained in accordance with NFPA 25. The inspectors verified that posting for fire-fighting restrictions were in effect for the required moderation restricted areas.

The inspectors walked down select fire hoses and extinguishers throughout the facility and determined that they were located at their designated locations and access was unobstructed. The inspectors observed that the CO₂ fire extinguishers in the dry conversion process area were within their periodic hydrostatic test interval, while the CO_2 fire extinguishers in other areas of the plant where production activities had ceased were not. During post-inspection teleconferences plant personnel stated that this issue had occurred five years ago. The licensee relies on a contractor to perform the periodic fire extinguisher inspections, including hydrostatic testing. Section 7.2, Fire Protection Program, states, in part, that routine inspection and testing of the fire protection system are conducted by GNF-A personnel and/or contract personnel under the direction of the site security and emergency preparedness function. Contrary to this requirement, the inspectors determined that oversight of contractors performing routine inspection and testing of the fire protection system was neither well defined nor performed. This is considered a minor violation since the risk of a fire in the areas were the extinguishers were overdue represent little to no risk to the areas containing special nuclear material (SNM).

The inspectors determined that fire dampers, doors, and penetration seals were being maintained in a condition that would ensure they were available and reliable to perform their safety function. The inspectors also reviewed work orders, procedure and preventive maintenance records for the fire dampers. The inspectors verified the condition of passive fire protection features, primarily the designated fire walls. The inspectors reviewed the fire alarm system to confirm that the detection methods and components were appropriate for the identified fire hazard areas and to determine if equipment was being maintained as required by the licensee's commitment to the NFPA standards. The inspectors walked down portions of the emergency lighting system and determined that the system performance met the requirements of NFPA 101.

The inspectors verified that the offsite fire support organizations were offered an opportunity for site orientation. The inspectors reviewed the licensee's portable radio and fixed emergency communication systems to verify that the licensee programs, procedures and manuals were in compliance with applicable NFPA requirements and to ensure they were available, operable, adequate, and reliable for their required fire response activities.

The inspectors reviewed procedure, training record and interviewed members of the emergency response organization (ERO) to verify that the licensee maintains programs and procedures adequate to maintain adequate fire response capabilities. The inspectors selected a sample of fire brigade qualifications, rosters and training records to verify that the fire brigade qualifications and training (including drills) meet the requirements of the license's approved procedures.

The inspectors reviewed the licensee corrective action program (CAP) entries for the past 12 months and determined that the licensee is identifying safety control or IROFS fire protection operability problems at an appropriate threshold and entering them into the CAP. Also, the Inspectors evaluated the corrective actions associated with related to the 2010 fire protection program assessment and determined that the corrective actions seem adequate but they are not all completed.

b. <u>Conclusion</u>

No findings of significance were identified.

B. Facility Support

1. Maintenance and Surveillance (IP 88025)

a. Inspection Scope and Observations

The inspectors reviewed the licensee's work control program provisions to ensure the adequacy of pre-job planning and preparation of work packages to support maintenance and surveillance activities. The inspectors reviewed maintenance and surveillance work packages for accuracy and to ensure that test packages effectively verified operability of IROFS and safety controls.

The inspectors reviewed maintenance work orders and interviewed maintenance technicians and determined that work activities were conducted in accordance with licensee requirements and approved procedures. The inspectors verified that post-maintenance testing and calibrations as specified by the licensee requirements and completed work packages were adequately reviewed prior to returning equipment to operational status.

The inspectors reviewed the licensee's problem identification and resolution program to verify that performance issues relating to the maintenance and surveillance of IROFS and safety controls were being entered into the correction action program and corrective actions were developed to ensure reliability and availability of IROFS.

b. Conclusion

No findings of significance were identified.

2. Emergency Preparedness (IP 88050)

a. Inspection Scope and Observations

The inspectors performed observation of plant activities, conducted personnel interviews, evaluated procedure changes, and inspected documentation and determined the Global Nuclear Fuels emergency preparedness program had been maintained in a state of operational readiness and had been coordinated with offsite support agencies.

The inspectors conducted a review of all the emergency plan changes to evaluate if the changes identified in the revisions may have decreased the effectiveness of the emergency plan. The Inspectors interviewed emergency response staff, reviewed change process documentation, and determined the changes made to the emergency plan and the facilities had been properly coordinated within the emergency preparedness program. The changes were implemented based on the licensee's determination the changes resulted in no decrease in effectiveness of the emergency plan and the revised plan continued to meet the licensing commitments and regulatory requirements.

The Inspectors reviewed a sampling of emergency plan implementing procedure changes and determined that the changes were in compliance with the emergency plan.

The inspectors determined current copies of the emergency plan and implementing procedures were readily available to members of the emergency response organization. The Inspectors reviewed the licensee's emergency call roster and verified the list was current and means were available to alert personnel to augment the on-shift staffing and the emergency response positions.

The inspectors reviewed emergency preparedness training records and interviewed the emergency response organization staff to verify the personnel assigned to emergency response positions were knowledgeable and trained to perform their duties. The inspectors verified that the licensee provided training for special emergency equipment such as for communications, radiation and chemical monitoring, and personal protection and the individuals responsible for utilizing the equipment were qualified. The inspectors verified that the licensee offered offsite responders periodic training, including fire, law enforcement, and medical, and the training included orientation tours, site-specific hazards training, and the identification of the locations and nature of radioactive and hazardous materials. The inspectors determined emergency preparedness drills and exercises were conducted to test emergency response performance objectives and deficiencies were entered into the CAP.

The inspectors reviewed the written off-site support and mutual aid agreements and interviewed the off-site response agencies and determined the off-site agencies maintained an adequate understanding of the written agreements and commitments. The inspectors interacted with the emergency management staff at the New Hanover Medical Center, New Hanover Emergency Management and 911 Operations Center, and the New Hanover County Fire Services and determined the licensee maintained an appropriate working relationship.

The inspectors conducted tours of the emergency response facilities and equipment storage locations at the site to evaluate the material condition and readiness of the facilities and equipment. The Inspectors toured the Emergency Control Center (ECC) and verified that the center was readily assessable and maintained the appropriate amount of communications and emergency preparedness equipment and supplies. The inspectors reviewed the accountability procedure and verified that accountability meeting points were assessable. The inspectors visited the New Hanover Medical Center to evaluate the material condition of the emergency equipment and survey instruments to verify the equipment and instruments were being maintained in a state of operational readiness. The inspectors visited the New Hanover Emergency Management and 911 Operations Center to verify the center was operational and available as an alternate location for the ECC.

The inspectors reviewed after-action reports of incidents since the last program inspection where the ECC was activated. The inspectors verified problems or deficiencies associated with the incidents and the emergency response were entered into the corrective action program. The inspectors reviewed the 2012 emergency plan internal audit and assessment to determine if findings were identified for tracking and resolution.

b. Conclusion

No findings of significance were identified.

C. <u>Other Areas</u>

1. Follow-Up

a. (Closed) Violation (VIO) 70-1113/2012-002-03: Failure to implement management measures for SOLE IROFS 503-16

The inspectors identified a violation involving the failure to ensure that management measures for an engineered control identified as an IROFS was properly implemented and maintained to ensure that it was available and reliable to perform the intended function when needed, to satisfy the performance requirements of 10 CFR 70.61. Specifically, during the cleanout and re-installation of the gadolinium press rotary valve and the subsequent start-up of the press, management measures were not effectively implemented and maintained for SOLE IROFS 503-16, the gadolinium press feed tube sensor. The licensee's "Reply to Notice of Violation" (ML121850031) included short term actions taken and longer term preventive measures that will be taken to prevent recurrence. The inspectors reviewed the implementation of the actions and found them adequate and reasonable to prevent re-occurrence. The licensee enhanced management measures to ensure proper reassembly of the rotary valve press and installed an active engineering control on the gadolinium press that is designed to alert operators of improper re-assembly. This modification was also installed on the rotary press for UO2 powder presses as a preventive measure. This item is closed.

 b. (Closed) VIO 07001113/2011-004-01: Failure to implement management measures for IROFS

The inspectors identified a violation that was issued for failure to implement management measures to ensure that IROFS would perform their intended function when needed to comply with the performance requirements of 10 CFR 70.61. Multiple examples were identified. One of the examples was the failure to establish management measures for the wet scrubber system to ensure that IROFS 201-19 and SOLE IROFS 201-08 were available and reliable to perform their intended function. The licensee, in letters dated November 30, 2011 and amended on March 24, 2013, identified specific corrective actions that were being taken in response to the violation.

The inspectors verified that the licensee had performed an ISA reviews, including plant walkdowns to validate assumptions and ensure IROFS management measures were being appropriately applied. The inspectors reviewed the IROFS verification project and determined that the verification project is adequate to prevent re-occurrence. The licensee reviewed all the IROFS credited in their ISA and evaluated if management measures were implemented adequately. A total of 683 condition reports were written from the verification project. The licensee used the criteria established in the corrective action procedure for the verification project. At the time of the inspection, 95 of the written conditions were closed. The inspectors reviewed selected condition reports and interviewed staff involved in the process and determined that the appropriate preventive measures have been implemented to prevent recurrence. This item is closed.

c. (Closed) LER 2013-002-0: EN 48695, Unanalyzed Condition, DSR Masonry Wall

The modifications to the existing masonry wall were inspected and determined to be adequate to provide fire exposure protection from adjacent areas. The accident sequences were reviewed and the IROFS identified have been determined to provide adequate protection for a fire occurring adjacent to the DSR room.

D. Exit Meeting

The inspection scope and results were presented to members of the licensee's staff at various meetings throughout the inspection period and were summarized on, April 18, May 16, and July 16, 2013, to A. Vexler and staff. No dissenting comments were received from the licensee. Proprietary information was discussed but not included in the report.

SUPPLEMENTAL INFORMATION

1. LIST OF PERSONS CONTACTED

Name	<u>Title</u>
E. Anderson	GLE Industrial Safety
W. Bascome, PE	Facilities Engineer
S. Brown	EMT Training Coordinator
M. Campbell	Fire Safety Manager
C. Davidson	ERT Training Coordinator
J. DeGolyer	Nuclear Safety Projects
L. Frith	Project Manager IROFS Verification Project
J. Head	Senior Vice President, Regulatory Affairs
P. Lachance	Engineering (emergency lighting)
D. Livengood	GAD Ceramics Process Engineer
P. Ollis	Licensing Engineer
S.Murray	Licensing and Liabilities Manager
D. Raines	Training Coordinator
J. Reeves	Integrated Safety Analysis Manager
J. Rohner	Criticality Safety Program Manager

Other licensee employees contacted included engineers, technicians, production staff, and office personnel.

2. LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

	ltem	Status	Description
Number VIO 70-1113/2012-0	02-03	Closed	Failure to implement management measures for SOLE IROFS 503-16 (C.1.a)
VIO 70-1113/2011-00	04-01	Closed	Failure to implement management measures for IROFS (C.1.b)
LER 70-1113/2012-0	04-0	Closed	Mass control limit exceeded (C.1.a)
LER 70-1113/2013-0	02-0	Closed	Unanalyzed condition, DSR masonry wall (C.1.c)

3. INSPECTION PROCEDURES USED

- IP 88025, Maintenance and Surveillance IP 88050, Emergency Preparedness IP 88054, Fire Protection Triennial
- IP 88055, Fire Protection Annual

4. LIST OF DOCUMENTS REVIEWED

Records:

Work Orders:

450818, 444365, 444366, 444367, 446828, 446830, 446832, 446950, 447774, 447775, 447776, 445226, 452792, 452403, 489502, 452990, 444939, 441611, 442549

Radiological Contingency and Emergency Plan (RC&EP) for Global Nuclear Fuel – Americas, LLC, submission dated December 7, 2012

Emergency Control Center Monthly Inspection Checklists, conducted January – May 2013 Letter of Support/Agreement, New Hanover Regional Medical Center, dated December 5, 2011

Letter of Support/Agreement, New Hanover County Department of Emergency Management, dated July 22, 2011

Letter of Support/Agreement, New Hanover County Sheriff's Office, dated August 29, 2012 Memorandum of Understanding, New Hanover County Fire and Rescue (NHCFR) and

GNF-A, dated July 1, 2011

Emergency Plan Change Package, Plan Changes 1 through 6, Administrative Changes, Parts 1 and 2, Reduction in Effectiveness Review – Assessment and Justification, submitted December 7, 2012

Reports:

Wilmington Field Service Center DAM Power Outage Report, dated November 30, 2012 2012 4th Quarter Drill Report, dated November 12, 2012

2012 Building Evacuation Drill Report, dated November 19 - 29, 2012

- 2012 GNF-A Radiological Contingency and Emergency Plan (RC&EP) Audit and Assessment
- 2012 1st Quarter Drill Report and Incident Report, Suspicious Package Event, dated February 22, 2013

Incident Report, HF Dermal Exposure, dated April 3, 2013

Incident Report, Partial Loss of Offsite Power from Castle Hayne Feeder, dated April 16, 2013

Incident Report, FMO Overhead Water Leak, dated October 7, 2012

Procedures:

- GE Wilmington Site, Emergency response organization administrative / SOG Manual, Revision (Rev.)10
- Global Nuclear Fuel Americas, LLC, Radiological Contingency and Emergency Plan, Rev. 15
- OP# 1070.26, "Gad Manual Press Dump," Rev. 19
- P/P-10-10, "Configuration Management Program: Nuclear Manufacturing Operations," Rev. 23
- OP#1020.13, "3B, 4B, and 6B Rotary Presses," Rev. 48

PRI-12-03, "Calibration Program for Instrumentation and Controls"

OP#1070.47, "Gad Pellet Grinding," Rev. 17

OP#1040.12, "UO2 Pellet Grinding," Rev. 22

OP#2300.00, "Work Order Administration," Rev. 6

WI-27-104-28, "CWS General System Monitoring Outages and Severe Weather," Rev. 8 CP-20-108, "RC&EP Training," Rev. 0

RC&EP Procedure #3, "Communications (External)," Rev. 20 RC&EP Procedure #7, "Radiological," Rev. 24 WI-28-114-07, "Communications Advisor," Rev. 0 WI-28-114-09, "Radiological Safety Coordinator," Rev. 0 WI-28-118-01, "Emergency Plan Revision Review Guidance," Rev. 0

Condition Reports Written as a Result of the Inspection:

CR 6489, NRC Observations for ECC Equipment, during IP 88050 inspection, dated May 15, 2013

Condition Reports Review:

- Action Tracking System (ATS)
- ATS Finding ID: 1891, the Annual/Semi-annual Fire Detection/Alarm System Device check sheets are not controlled documents, finding date November 17, 2011
- ATS Finding ID: 1892, there is no annual inspection or test procedure for Fire Alarm Control Panels, finding date November 17, 2011
- ATS Finding ID: 1893, annual smoke detector alarm testing is not conducted per the test method specified in NFPA 72, finding date November 17, 2011
- ATS Finding ID: 1894, Annual testing of addressable heat detectors is not conducted per the test method specified in NFPA 72, finding date November 17, 2011
- ATS Finding ID: 1895, there is no semi-annual inspection or annual test of electromechanical devices, finding date November 17, 2011
- ATS Finding ID: 1896, there is no semi-annual inspection of Fire Alarm Control Panels, finding date November 17, 2011
- ATS Finding ID: 1897, there is no semi-annual inspection of notification appliances (horn and strobes), finding date November 17, 2011
- ATS Finding ID: 1898, there is no semi-annual load voltage testing for Fire Alarm control panel batteries, finding date November 17, 2011
- ATS Finding ID: 1899, there is no quarterly test of supervisory devices, such as air pressure switches on dry-pipe sprinkler systems and room temperature switches in the pump buildings, finding date November 17, 2011
- ATS Finding ID: 1900, the format of PM routes does not lend itself well to use as a detailed ITM procedure where acceptance criteria are required, finding date November 17, 2011
- ATS Finding ID: 1901, Battery testing is done for short duration via a load bank verses the 30 minute test specified in NFPA 72, finding date November 17, 2011
- ATS Finding ID: 1902, the method of conduct of the annual horn/strobe functional test is not formally documented, finding date November 17, 2011

CR2334, CR6473, CR4709, CR3991, CR550

- CR 4228, Fire in Junction Box Apparent Cause for DAM, dated December 3, 2012
- CR 4520, Communications Issues During Tornado/Severe Weather Alarms, dated December 26, 2012
- CR 4574, Building Evacuation Alarm Functionality, dated November 27, 2012

Other Documents:

- Preventive maintenance work order # 426223, annual smoke detector PM (Karnes), and equipment no. A0009626, target start dated September 24, 2012
- Preventive maintenance work order # 440245, annual, batteries test annual (Karnes), equipment no. A0009628, target start January 28, 2013

Certificate of Compliance, UL Certification for the Alarm System, applicant ID no. 383091-728, expires March 31, 2014

Date Sheet 85010-0145, EST Life Safety & Communications, EST3 Base Platform with Signature Series Fire Alarm, Issue 2

GEH Fire Alarm System Study Summary, November 2012

Edwards Systems Technology Intelligent Analog Photoelectric Sensor, Model 2551, number 270014

Fire Detection – Alarm System ITM Report (Wilmington), dated April 18, 2013

Global Nuclear Fuels Facility, Fire Detection – Alarm System, Inspection/Test/ Maintenance Review Report, dated November 18, 2011

Global Nuclear Fuels Facility, Fire Protection/Test/Maintenance Review report, dated August 6, 2010

Global Nuclear Fuel, training document "Use of Motorola XTS 1500 Radios" Motorola product spec sheet, XTS 1500, XTS 1500 digital portable radio, R3-4-2007J Motorola Solutions, performance characteristics specification, NTN9857, IMPRES 2000 MAH NIMH intrinsically safe battery, print date 4/17/2013

Change Requests:

2332, 10371, 10265, 10371, 10355, 10716

Material Control and Accounting Training for Special Nuclear Material

Overweight Boat in FMO, Root Cause Investigation Report, dated October 17, 2012 QRA-203-01, Rev. 1, May 22, 2012

FTI Test No. F1 1070.26, GAD Press Dump Station Mechanical Feeder Rotor In-Position Indicator, Rev. 0

Root Cause Analysis, Feed Tube Safe Mass Excursion on Gad Press Dump Station on February 13, 2012

Drawings:

E200E1001, 13.8 KV Electrical Distribution, Single Line Diagram, Rev. 9

2171E96-001, Fire Alarm System, drawing index, Rev. 7

2171E96-016, Fire Alarm System, FMO Area Buildings, Plan View Electrical Rev. 5

2171E96-061 Dry Conversion Process, Building ground floor, plan view electrical, Rev. 2

2171E96-092, Fire Alarm System, Single Line Diagram (Part) A, RS-485 Loops A & D, Rev. 16

2171E96-118, DCP Building Damper Control System, Damper Power Supply Panel, Enclosure & Internal Wiring Details, Rev. 1

DCPSP002, Panel Schedule, Building 98, Rev. 1

SPSS, Panel Schedule, Building 70, Rev. 0

ECC2EMP, Panel Schedule, Building 65, Rev. 2

DWG3000B10, Dry Conversion Process DCP HF Pipe ISO, Rev. 4