



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
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August 1, 2013

Mr. Michael J. Pacilio
Senior Vice President, Exelon Generation Company, LLC
President and Chief Nuclear Officer, Exelon Nuclear
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: PEACH BOTTOM ATOMIC POWER STATION - NRC INTEGRATED
INSPECTION REPORT 05000277/2013003 AND 05000278/2013003
AND INDEPENDENT SPENT FUEL STORAGE INSTALLATION REPORT
07200029/2013001

Dear Mr. Pacilio:

On June 30, 2013, the U. S. Nuclear Regulatory Commission (NRC) completed an integrated inspection at your Peach Bottom Atomic Power Station (PBAPS), Units 2 and 3. The enclosed integrated inspection report documents the inspection results, which were discussed on July 19, 2013, with Pat Navin, Peach Bottom Plant Manager, and other members of your staff.

The inspection 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 inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

Based on the results of this inspection, no findings were identified.

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR), Section 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any), will be available electronically for public inspection in the NRC's Public Document Room or from the Publicly Available Records component of the NRC's Agencywide Documents Access

Management System (ADAMS). ADAMS is accessible from the NRC Website at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

Mel Gray, Chief
Reactor Projects Branch 4
Division of Reactor Projects

Docket Nos.: 50-277, 50-278
License Nos.: DPR-44, DPR-56

Enclosure: Inspection Report 05000277/2013003 and 05000278/2013003
w/Attachment: Supplementary Information

cc w/encl: Distribution via ListServ

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U. S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket Nos.: 50-277, 50-278

License Nos.: DPR-44, DPR-56

Report No.: 05000277/2013003 and 05000278/2013003

Licensee: Exelon Generation Company, LLC

Facility: Peach Bottom Atomic Power Station, Units 2 and 3

Location: Delta, Pennsylvania

Dates: April 1, 2013 through June 30, 2013

Inspectors: S. Hansell, Senior Resident Inspector
A. Ziedonis, Resident Inspector
E. DiPaolo, Limerick Senior Resident Inspector
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Approved by: Mel Gray, Chief
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SUMMARY OF FINDINGS

IR 05000277/2013003, 05000278/2013003; 04/01/2013 – 06/30/2013; Peach Bottom Atomic Power Station (PBAPS), Units 2 and 3; Integrated Inspection Report.

This report covered a three-month period of inspection by resident inspectors and announced inspections performed by regional inspectors. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated December 2006.

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

None.

Other Findings

None.

REPORT DETAILS

Summary of Plant Status

Unit 2 began the inspection period at 100 percent power. On May 17, 2013, operators reduced power to approximately 55 percent to perform planned activities that included control rod pattern adjustment, control rod testing, main turbine valve testing, main steam isolation valve (MSIV) testing, and reactor feed pump (RFP) maintenance and testing. The unit was returned to 100 percent rated thermal power (RTP) the next day. The unit remained at RTP through the end of the inspection period, except for brief periods to support planned testing and control rod pattern adjustments.

Unit 3 began the inspection period at 100 percent power. On April 27, 2013, operators reduced power to approximately 55 percent to perform planned activities that included control rod pattern adjustment, control rod testing, main turbine valve testing, and RFP maintenance and testing. The unit was returned to 100 percent RTP the next day. The unit remained at RTP through the end of the inspection period, except for brief periods to support planned testing and control rod pattern adjustments.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R01 Adverse Weather Protection (71111.01 – 3 samples)

.1 Readiness for Seasonal Extreme Weather Conditions (1 sample)

a. Inspection Scope

The inspectors performed a review of PBAPS's readiness for the onset of seasonal high temperatures. The review focused on the emergency switchgear (SWGR), safety-related batteries, the emergency cooling tower (ECT), the emergency diesel generators (EDGs), emergency core cooling systems (ECCS), emergency service water (ESW), high-pressure service water (HPSW), and the associated ventilation systems and room coolers. The inspectors reviewed the Updated Final Safety Analysis Report (UFSAR), technical specifications (TSs), control room logs, and the corrective action program (CAP) to determine what temperatures or other seasonal weather could challenge these systems, and to ensure PBAPS personnel had adequately prepared for these challenges. The inspectors reviewed station procedures, including PBAPS's seasonal weather preparation procedure, and applicable operating procedures. The inspectors performed walkdowns of the selected systems to ensure station personnel identified issues that could challenge the operability of the systems during hot weather conditions. Documents reviewed for each section of this inspection report are listed in the Attachment.

b. Findings

No findings were identified.

.2 Summer Readiness of Offsite and Alternate Alternating Current (AC) Power Systems
(1 sample)

a. Inspection Scope

The inspectors performed a review of plant features and procedures for the operation and continued availability of the offsite and alternate AC power systems to evaluate the readiness of the systems prior to seasonal high grid loading. The inspectors reviewed PBAPS's procedures related to these areas and the communication protocols between the transmission system operator and PBAPS. This review focused on changes to the established program and material condition of the offsite and alternate AC power equipment. The inspectors assessed whether PBAPS established and implemented appropriate procedures and protocols to monitor and maintain availability and reliability of both the offsite AC power system and the onsite alternate AC power system. The inspectors evaluated the material condition of the associated equipment by interviewing the responsible system manager, reviewing condition reports (CRs) and open work orders (WOs), and walking down the 500 kilovolt (kV) main power transformers, the non-vital 13.2 kV SWGR, the number 2 start-up and emergency auxiliary transformer (230 to 13.8 kV), the emergency auxiliary transformers (13.2 to 4.16 kV), and the emergency 4 kV SWGR.

b. Findings

No findings were identified.

.3 Readiness for Impending Adverse Weather Conditions (1 sample)

a. Inspection Scope

The inspectors reviewed PBAPS's preparations for the onset of severe thunderstorms and high winds on June 13, 2013. The inspectors reviewed the implementation of adverse weather preparation procedures before the onset of and during this adverse weather condition. The inspectors reviewed TSs, control room logs, emergency action level entry conditions, and the CAP to determine the anticipated adverse weather impact, and to ensure PBAPS personnel had adequately prepared and responded to the challenges. The inspectors performed general plant walkdowns verified that the actions defined in PBAPS's adverse weather procedure maintained the readiness of essential systems. The inspectors discussed readiness and staff availability for adverse weather response with operations and work control personnel.

b. Findings

No findings were identified.

1R04 Equipment Alignment

.1 Partial System Walkdowns (71111.04Q - 3 samples)

a. Inspection Scope

The inspectors performed partial walkdowns of the following systems:

- 'B' ESW with 'A' ESW inoperable on April 17, 2013
- E-1, E-2, and E-3 EDGs with E-4 out-of-service (OOS) the week of April 15, 2013
- Unit 2 high pressure coolant injection (HPCI) system on May 23, 2013

The inspectors selected these systems based on their risk-significance relative to the reactor safety cornerstones at the time they were inspected. The inspectors reviewed applicable operating procedures, system diagrams, the UFSAR, TSs, WOs, CRs, and the impact of ongoing work activities on redundant trains of equipment in order to identify conditions that could have impacted system performance of their intended safety functions. The inspectors also performed field walkdowns of accessible portions of the systems to verify system components and support equipment were aligned correctly and were operable. The inspectors examined the material condition of the components and observed operating parameters of equipment to verify that there were no deficiencies. The inspectors also reviewed whether PBAPS staff had properly identified equipment issues and entered them into the CAP for resolution with the appropriate significance characterization.

b. Findings

No findings were identified.

1R05 Fire Protection

.1 Resident Inspector Quarterly Walkdowns (71111.05Q – 6 samples)

a. Inspection Scope

The inspectors conducted tours of the areas listed below to assess the material condition and operational status of fire protection features. The inspectors verified that PBAPS controlled combustible materials and ignition sources were controlled in accordance with administrative procedures. The inspectors verified that fire protection and suppression equipment was available for use as specified in the area pre-fire plan, and passive fire barriers were maintained in good material condition. The inspectors also verified that station personnel implemented compensatory measures for OOS, degraded, or inoperable fire protection equipment, as applicable, in accordance with procedures.

- E-3 and E-4 EDGs on May 21, 2013
- Control structure fan room on June 12, 2013
- Unit 3 HPCI pump room on June 20, 2013
- Unit 3 'A' and 'C' core spray (CS) pump rooms on June 20, 2013
- Unit 3 reactor core isolation cooling (RCIC) pump room on June 20, 2013
- Unit 3 reactor building (RB) 135' elevation on June 21, 2013

b. Findings

No findings were identified.

1R11 Licensed Operator Regualification Program (71111.11 – 2 samples).1 Quarterly Review of Licensed Operator Regualification Testing and Traininga. Inspection Scope

The inspectors observed licensed operator simulator training on June 13, 2013, which included annual human performance evaluations using job performance measures (JPMs). The inspectors evaluated operator performance during the training scenario and verified the completion of operator actions, including the use of human performance tools, verification practices, and operator fundamentals, as outlined in station procedures. The inspectors assessed the clarity and effectiveness of communications, implementation of actions in response to alarms and changing plant conditions, and the oversight and direction provided by the control room supervisor. Additionally, the inspectors assessed the ability of the crew and training staff to identify and document crew performance problems.

b. Findings

No findings were identified.

.2 Quarterly Review of Licensed Operator Performance in the Main Control Rooma. Inspection Scope

The inspectors observed RFP maintenance and testing, and the planned power ascension from approximately 75 percent reactor power following the planned Unit 2 summer readiness load drop on May 18, 2013. The inspectors observed maintenance and test performance to verify that procedure use, crew communications, and coordination of activities between work groups met established expectations and standards. Additionally, the inspectors observed reactivity manipulations to verify that they were performed in a safe and controlled manner, and included the appropriate level of peer verification and supervisory oversight.

b. Findings

No findings were identified.

1R12 Maintenance Effectiveness (71111.12 – 2 samples)a. Inspection Scope

The inspectors reviewed the samples listed below to assess the effectiveness of maintenance activities on structures, systems, and components (SSCs) performance and reliability. The inspectors reviewed system health reports, CAP documents, maintenance WOs, and maintenance rule (MR) basis documents to ensure that PBAPS was identifying and properly evaluating performance problems within the scope of the MR. For each sample selected, the inspectors verified that the SSC was properly scoped into the MR in accordance with 10 CFR 50.65 and that the (a)(2) performance criteria established by the PBAPS staff were reasonable. As applicable, for SSCs classified as (a)(1), the inspectors assessed the adequacy of goals and corrective actions to return these SSCs to (a)(2) status. Additionally, the inspectors ensured that

PBAPS staff was identifying and addressing common cause failures that occurred within and across MR system boundaries.

- Unit 2 CS loop 'A' full flow test valve, MO-2-14-026A, and motor operator valve (MOV) program valve maintenance effectiveness
- Diesel driven fire pump (DDFP)

b. Findings

No findings were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13 - 3 samples)

a. Inspection Scope

The inspectors reviewed station evaluation and management of plant risk for the maintenance and emergent work activities listed below to verify that PBAPS performed the appropriate risk assessments prior to removing equipment for work. The inspectors selected these activities based on potential risk significance relative to the reactor safety cornerstones. As applicable for each activity, the inspectors verified that PBAPS personnel performed risk assessments as required by 10 CFR 50.65(a)(4) and that the assessments were accurate and complete. When PBAPS performed emergent work, the inspectors verified that operations personnel promptly assessed and managed plant risk. The inspectors reviewed the scope of maintenance work and discussed the results of the assessment with the station's probabilistic risk analyst to verify plant conditions were consistent with the risk assessment. The inspectors also reviewed the TS requirements and inspected portions of redundant safety systems, when applicable, to verify risk analysis assumptions were valid and applicable requirements were met.

- E-4 EDG planned maintenance and associated elevated risk on April 16, 2013
- Unit 2 RCIC planned maintenance and associated elevated plant risk on May 14, 2013
- Severe weather and associated elevated risk on Units 2 and 3 on June 13, 2013

b. Findings

No findings were identified.

1R15 Operability Determinations and Functionality Assessments (71111.15 - 4 samples)

a. Inspection Scope

The inspectors reviewed four operability determinations (ODs) for the following degraded or non-conforming conditions:

- Unit 3 RCIC pump elevated vibration levels on May 1, 2013
- Unit 2 and Unit 3 emergency SWGR and battery room ventilation on May 17, 2013
- Unit 2 CS loop 'A' full flow test MOV stem nut machining tolerance changes on June 3, 2013
- Unit 3 HPCI steam supply valve MO-3-23-014 on June 24 and 26, 2013

The inspectors selected these issues based on the risk significance of the associated components and systems. The inspectors evaluated the technical adequacy of the ODs to assess whether TS operability was properly justified and the subject component or system remained available such that no unrecognized increase in risk occurred. The inspectors compared the operability and design criteria in the appropriate sections of the TSs and UFSAR to PBAPS's evaluations to determine whether the components or systems were operable. Where compensatory measures were required to maintain operability, the inspectors determined whether the measures in place would function as intended and were properly controlled by PBAPS. The inspectors determined, where appropriate, compliance with bounding limitations associated with the evaluations.

b. Findings

No findings were identified.

1R18 Plant Modifications (71111.18 - 1 sample)

Temporary Modification

a. Inspection Scope

The inspectors reviewed the temporary modification listed below to determine whether the modification affected the safety functions of systems that are important to safety. The inspectors reviewed 10 CFR 50.59 documentation and post-modification testing results, and conducted field walkdowns of the modifications to verify that the temporary modification did not degrade the design bases, licensing bases, and performance capability of the affected systems.

- EDG fuel oil transfer system historical (1995) TS bases change and 50.59 evaluation to credit manual operator action in lieu of automatic action for EDG operability

b. Findings

No findings were identified.

1R19 Post-Maintenance Testing (71111.19 - 4 samples)

a. Inspection Scope

The inspectors reviewed the post-maintenance tests (PMTs) for the maintenance activities listed below to verify that procedures and test activities ensured system operability and functional capability. The inspectors reviewed the test procedure to verify that the procedure adequately tested the safety functions that may have been affected by the maintenance activity, that the acceptance criteria in the procedure was consistent with the information in the applicable licensing basis and/or design basis documents (DBDs), and that the procedure had been properly reviewed and approved. The inspectors also witnessed the test or reviewed test data to verify that the test results adequately demonstrated restoration of the affected safety functions.

- Unit 2 and Unit 3 intake structure 480V motor control center E-224-P-A corrective maintenance on April 24, 2013
- Unit 3 main steam line (MSL) detection emergent maintenance on May 15, 2013
- E-1 EDG PMT following two-year overhaul on May 16, 2013
- Emergency SWGR and battery room fan damper backup nitrogen supply corrective maintenance on May 28, 2013

b. Findings

No findings were identified.

1R22 Surveillance Testing (71111.22 - 5 samples)

a. Inspection Scope (3 routine surveillances; 1 RCS sample; 1 IST sample)

The inspectors observed performance of surveillance tests (STs) and/or reviewed test data of selected risk-significant SSCs to assess whether test results satisfied TSs, the UFSAR, and PBAPS procedure requirements. The inspectors verified that test acceptance criteria were clear, tests demonstrated operational readiness and were consistent with design documentation, test instrumentation had current calibrations and the range and accuracy for the application, tests were performed as written, and applicable test prerequisites were satisfied. Upon test completion, the inspectors considered whether the test results supported that equipment was capable of performing the required safety functions. The inspectors reviewed the following STs:

- ST-O-013-301-3, RCIC Pump, Valve, Flow and Unit Cooler Functional and In-service Test on April 24, 2013
- ST-I-002-250-3, Core Flow Verification on May 13, 2013
- ST-I-01G-105-2, Automatic Depressurization System Channel 'B' Logic System Functional Test on May 22, 2013
- ST-O-033-300-2, ESW, Valve, Unit Cooler, and ECT Fans Functional Inservice Test on May 29, 2013
- ST-O-020-560-2, Reactor Coolant Leakage Test on June 11, 2013

b. Findings

No findings were identified.

Cornerstone: Emergency Preparedness

1EP6 EP Drill Evaluation (71114.06 - 1 sample)

Emergency Preparedness Drill Observation

a. Inspection Scope

The inspectors evaluated the conduct of a routine PBAPS emergency drill on April 3, 2013, to identify any weaknesses and deficiencies in the classification, notification, and protective action recommendation development activities. The inspectors observed emergency response operations in the simulator and technical support center to determine whether the event classification, notifications, and protective action

recommendations were performed in accordance with procedures. The inspectors also attended the station drill critique to compare inspector observations with those identified by PBAPS staff in order to evaluate PBAPS's critique and to verify whether the PBAPS staff was properly identifying weaknesses and entering them into the CAP.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification (71151 – 4 sample)

.1 Reactor Coolant System (RCS) Specific Activity and RCS Leak Rate

a. Inspection Scope

The inspectors reviewed PBAPS's submittal for the RCS specific activity and RCS leak rate performance indicators (PIs) for both Unit 2 and Unit 3 for the period of January 1, 2012, through March 31, 2013. To determine the accuracy of the PI data reported during those periods, the inspectors used definitions and guidance contained in Nuclear Energy Institute (NEI) Document 99-02, "Regulatory Assessment PI Guideline," Revision 6. The inspectors also reviewed RCS sample analysis and control room logs of daily measurements of RCS leakage, and compared that information to the data reported by the PI. Additionally, the inspectors observed chemistry technician surveillance activities that determined the RCS identified leakage rate, and discussed the chemistry RCS sampling data and analysis.

b. Findings

No findings were identified.

4OA2 Problem Identification and Resolution (71152 - 2 samples)

.1 Routine Review of Problem Identification and Resolution Activities

a. Inspection Scope

As required by Inspection Procedure (IP) 71152, "Problem Identification and Resolution," the inspectors routinely reviewed issues during baseline inspection activities and plant status reviews to verify that PBAPS entered issues into the CAP at an appropriate threshold, gave adequate attention to timely corrective actions, and identified and addressed adverse trends. In order to assist with the identification of repetitive equipment failures and specific human performance issues for follow-up, the inspectors performed a daily screening of items entered into the CAP and periodically attended condition report screening meetings.

b. Findings

No findings were identified.

.2 Semi-Annual Trend Review (1 Semi-annual Trend sample)

a. Inspection Scope

The inspectors performed a semi-annual review of site issues, as required by IP 71152, "Problem Identification and Resolution," to identify trends that might indicate the existence of more significant safety issues. In this review, the inspectors included repetitive or closely-related issues that may have been documented by PBAPS outside of the CAP, such as trend reports, PIs, major equipment problem lists, system health reports, MR assessments, and maintenance or CAP backlogs. The inspectors also reviewed PBAPS's CAP database for the six month period covering December 1, 2012 through May 31, 2013, to assess CRs written in various subject areas (equipment problems, human performance issues, etc.), and individual issues identified during the NRC's daily CR review (Section 4OA2.1). The inspectors reviewed the PBAPS's trend report for the fourth quarter of 2012 and the first quarter of 2013, conducted under LS-AA-125-1005, "Coding and Analysis Manual," to verify that PBAPS personnel were appropriately evaluating and trending adverse conditions in accordance with applicable procedures.

b. Findings and Observations

No findings were identified.

The inspectors noted minor adverse trends identified by PBAPS in the areas of site-wide human performance, maintenance work package quality, and aging equipment reliability. There were no adverse safety consequences as a result of these low level trend issues. Based on the overall results of the semi-annual trend review, the inspectors determined that PBAPS was appropriately identifying and entering issues into the CAP, adequately evaluating the identified issues, and properly identifying adverse trends before they became more safety significant problems.

.3 Annual Sample: Review of the Operator Workaround Program

a. Inspection Scope

The inspectors reviewed the cumulative effects of the existing operator workarounds (OWAs), operator burdens, existing operator aids and disabled alarms, and open main control room deficiencies to identify any effect on operator actions included in emergency operating procedures, and any impact on possible initiating events or mitigating systems. The inspectors evaluated whether station personnel had identified, assessed, and reviewed OWAs as specified in PBAPS procedure OP-AA-102-103, "Operator Work-Around Program."

The inspectors reviewed PBAPS's process to identify, prioritize and resolve main control room distractions to minimize operator burdens. The inspectors reviewed the system used to track these OWAs and recent PBAPS self assessments of the program. The inspectors also toured the control room and discussed the current OWAs with the operators to ensure the items were being addressed on a schedule consistent with their relative safety significance.

b. Findings and Observations

No findings were identified.

The inspectors determined that the issues reviewed did not adversely affect the capability of the operators to implement abnormal or emergency operating procedures. The inspectors also verified that PBAPS entered OWAs and burdens into the CAP at an appropriate threshold and planned or implemented corrective actions commensurate with their safety significance.

40A3 Follow-up of Events and Notices of Enforcement Discretion (71153)

(Closed) Cask Event Report (CER) 05000277/05000278/07200029 dated February 22, 2013: Submittal of Independent Spent Fuel Storage Installation (ISFSI) CER

On January 24, 2013, PBAPS staff determined that in the June/July 2001 ISFSI loading campaign, a total of four Unit 3 fuel assemblies that were cooled for 9.8 years and had a decay heat value of 0.201 kW each, were loaded into four Transnuclear (TN) 68 storage casks. The Certificate of Compliance (CoC) 72-102, TS, Amendment 0, Section 2.1.1, Table 2.1.1-1, requires fuel assemblies to be cooled for 10 years before being loaded into casks.

PBAPS reported this event to the NRC within 24 hours of discovery on January 25, 2013, as a condition prohibited by TS, and followed up with a CER dated February 22, 2013, in accordance with TS 2.2.2 and 2.2.3. There were no actual safety consequences associated with this event. The four General Electric (GE) six 8x8 type fuel assemblies were each below the 0.312 kW assembly limit of TS 2.1.1.E.ii at the time they were loaded into the storage casks. The actual fuel decay heat values did not result in any thermal issues with the fuel or casks. PBAPS staff also entered the issue into the CAP as action request (AR) 1466359.

The inspectors determined that this performance deficiency was not more than minor because each spent fuel assembly had a calculated decay heat value of 0.201 kW at the time they were loaded into the storage casks, which is below the 0.312 kW per assembly limit in TN CoC 72-1027, TS 2.1.1, Amendment 0. The inspectors reviewed the PBAPS evaluation that determined the loading of the four fuel assemblies did not impact the shielding, confinement, and thermal design functions of the loaded TN-68 casks. The four assemblies that were loaded in June/July 2001 became compliant with the ten year cooling TS requirement on September 14, 2001. The NRC approved Amendment 1 to TN CoC 72-1027 in October 2007. Amendment 1 increased the TS average burn-up limit and decreased the TS minimum allowable cooling time for all fuel types except GE 7x7 assemblies. The revised minimum cooling time for the 8x8 assemblies was reduced to seven years in accordance with Amendment 1. In April 2013, PBAPS staff updated the four applicable TN-68 casks to the requirements of CoC 72-1027, Amendment 1, in accordance with 10 CFR 72 requirements. The inspectors reviewed the changes made in the fuel selection process with personnel from reactor engineering and determined that the improved process reduces the probability of a similar problem. PBAPS personnel also performed a review of all fuel assemblies currently stored in dry casks and did not identify any additional assemblies that did not meet the ten-year TS cooling time requirement for casks loaded to TS, Amendment 0 criteria.

In conclusion, the four spent fuel assemblies, at the time they were loaded, would meet the current TS requirements for fuel loaded under TS, Amendment 1, which Exelon now follows for cask loading. PBAPS submitted an exemption request to the NRC dated May 23, 2013, to document the four TN-68 casks that were loaded with one assembly that did not meet the minimum cooling time. This CER is closed.

4OA5 Other Activities

.1 Independent Spent Fuel Storage Installation (ISFSI) Cask Loading and Transport (60855, 60855.1)

a. Inspection Scope

The inspectors verified by direct observation and independent evaluation that PBAPS staff performed cask loading activities in a safe manner and in compliance with the CoC, TS, regulations, and Exelon procedures. The inspectors conducted direct observations of various aspects of the loading and preparation of one spent fuel cask (No. 63) during the week of May 13, 2013. The inspectors toured the ISFSI and observed portions of PBAPS's cask maneuvers at the ISFSI pad during the 2013 cask re-spacing campaign. The inspectors also reviewed PBAPS activities related to long-term operation and monitoring of the ISFSI. The inspectors visited the central alarm station (CAS) and observed the cask helium pressure monitoring alarms and indications.

The inspectors observed and evaluated PBAPS's loading of the third TN-68 cask associated with PBAPS's current ISFSI dry cask loading campaign for Unit 3, and reviewed documentation and records associated with the first two TN-68 loading activities. The inspectors observed TN-68 loading and processing operations including: placement of the cask into the spent fuel pool (SFP), loading spent fuel into the cask, removal of the cask from the SFP, decontamination and surveying, cask draining, vacuum drying, helium backfilling, leak testing, and transport of the cask to the ISFSI pad. The inspectors also observed the lid bolt torquing process via remote cameras on the cask platform. The inspectors were able to verify adherence to the bolt torquing pattern and multiple staged passes. During performance of the activities, the inspectors evaluated PBAPS's familiarity with procedures, supervisory oversight, and communication and coordination between the personnel involved. The inspectors attended PBAPS's briefings to assess their ability to identify critical steps of the evolution, potential failure scenarios, and human performance tools to prevent errors. The inspectors also reviewed the loading and monitoring procedures and evaluated PBAPS's procedure adherence. The inspectors attended pre-shift briefs and noted that the discussions included procedure adherence, three-way communications, and a review of the work activities.

The inspectors reviewed PBAPS's program associated with fuel characterization and selection for storage. The inspectors reviewed cask fuel selection packages to verify that PBAPS staff were loading fuel in accordance with the CoC and TS. In addition, the inspectors independently verified the cask loading for cask Nos. 61 and 63 via review of the digital recording. PBAPS staff did not plan to load any damaged fuel assemblies during this campaign.

The inspectors reviewed radiation protection (RP) procedures and radiation work permits (RWPs) associated with the ISFSI loading campaign. The inspectors also reviewed the

as-low-as-is-reasonably-achievable (ALARA) goal for the loading of all three casks to determine the adequacy of Exelon's radiological controls and to ensure that radiation worker doses were ALARA, and that project dose goals could be achieved. The inspectors reviewed radiological records from the current loading campaign to confirm that contamination levels measured on the TN-68 casks were within the limits specified by the TS and consistent with values specified in the UFSAR.

The inspectors toured the ISFSI pad to assess the material condition of the pad and the loaded TN-68 casks and verified that PBAPS staff appropriately performed surveillance tests in accordance with TS requirements. The inspectors also verified that transient combustibles were not being stored on the ISFSI pad or in the vicinity of the loaded casks. The environmental reports were reviewed to verify that areas around the ISFSI site boundary were within the limits specified in 10 CFR Part 20 and 10 CFR 72.104. The inspectors reviewed PBAPS's 10 CFR 72.48 screenings, corrective action reports, and the associated follow-up actions that were generated since the last loading campaign at PBAPS to ensure that issues were entered into the CAP, prioritized, and evaluated commensurate with their safety significance.

b. Findings

No findings were identified.

40A6 Meetings, Including Exit

Quarterly Resident Exit Meeting Summary

On July 19, 2013, the resident inspectors presented the inspection results to Pat Navin, Plant Manager, and other PBAPS staff, who acknowledged the findings. The inspectors verified that no proprietary information was retained by the inspectors or documented in this report.

ATTACHMENT: SUPPLEMENTARY INFORMATION

SUPPLEMENTARY INFORMATION

KEY POINTS OF CONTACT

Exelon Generation Company Personnel

M. Massaro, Site Vice President
P. Navin, Plant Manager
N. Alexakos, Emergency Preparedness Manager
J. Armstrong, Regulatory Assurance Manager
R. Bolding, Respiratory Physicist
J. Bowers, Training Director
B. Hennigan, Operations Training Manager
M. Herr, Operations Director
R. Holmes, Radiation Protection Manager
J. Kovalchick, Security Manager
T. Moore, Site Engineering Director
P. Rau, Work Management Director
R. Reiner, Chemistry Manager
R. Shortes, Radiological Engineering Manager
D. Striebig, Emergency Preparedness Coordinator

NRC Personnel

M. Gray, Branch Chief
S. Hansell, Senior Resident Inspector
A. Ziedonis, Resident Inspector
E. DiPaolo, Limerick Senior Resident Inspector
T. Dunn, Operations Engineer
J. Nicholson, Health Physicist
J. Schoppy, Senior Reactor Inspector
A. Turilin, Project Engineer
J. Woodfield, Storage and Transportation Engineer

LIST OF ITEMS OPENED, CLOSED, DISCUSSED, AND UPDATED

Opened/Closed

None

Closed

07200029/2013001	CER	Submittal of Independent Spent Fuel Storage Installation (ISFSI) Cask Event Report (CER) (Section 4OA3)
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Opened

None

Discussed/Updated

None

LIST OF DOCUMENTS REVIEWED

* -- Indicates NRC-identified

Section 1R01: Adverse Weather Protection

Procedures

OP-AA-108-111-1001, Severe Weather and Natural Disaster Guidelines, Revision 10
OP-AA-108-107-1001, Station Response to Grid Capacity Conditions, Revision 4
OP-PB-108-111-1001, Preparation for Severe Weather, Revision 9

CRs

1516039, Summer Readiness Work Package Required for MSL Drawers
1516206, Summer Readiness Work Package Required for MSL Drawers
1516241, Summer Readiness Work Package Required for MSL Drawers
1516242, Summer Readiness Work Package Required for MSL Drawers
1516248, Summer Readiness Work Package Required for MSL Drawers
1516253, Summer Readiness Work Package Required for MSL Drawers
1516257, Summer Readiness Work Package Required for MSL Drawers
1516260, Summer Readiness Work Package Required for MSL Drawers
1523478, Site 10 Backfilled Due to Tornado Watch
1524650, 24 EPZ Sirens Lose AC Power Due to Thunderstorm
1524670, 23 Peach Bottom Sirens OOS Due to Severe Weather
1524706, 'B' RHR Motor Hatch Unable to be Lifted
1529932, Site 10 Filled in due to Tornado Watch

Work Orders

C0247066-05, Unit 3 RHR 'B' and 'D', Remove and Reinstall Equipment Hatches for EPU

Miscellaneous

Unified Control Rom Log, Wednesday, May 29, 2013, Day Shift
Unified Control Rom Log, Friday, May 24, 2013, Day Shift

Section 1R04: Equipment Alignment

Procedures

SO 23.1.A-2, HPCI System Setup for Automatic or Manual Operation, Revision 21
COL 23.1.A-2, HPCI System, Revision 28

Section 1R05: Fire Protection

Procedures

FF-01, Fire Brigade, Revision 20
PF-132, Diesel Generator Building, Revision 8
PF-62, HPCI Pump Room, Revision 6
PF-13D, 3 'A' and 3 'C' CS Pump Room, Revision 2
PF-63, RCIC Pump Room, Revision 4
PF-13H, Unit 3 RB North Area Elevation 135'
PF-13P, Unit 3 RB South Area Elevation 135', Revision 5
T-345-2, Area 45 Fire Guide, Revision 1

Section 1R11: Licensed Operator Requalification Program

Procedures

OP-AA-103-102, Watch Standing Practices, Revision 12
TQ-AA-150, Operator Training Programs, Revision 8
TQ-AA-155, Conduct of Simulator Training and Evaluation, Revision 1
TQ-AA-203, On-the-Job Training and Task Performance Evaluation, Revision 9
TQ-AA-223-F050, Exelon Performance Training and Evaluation Template, Revision 8
TQ-JA-150-01, JPM Development, Revision 1
TQ-JA-150-04, JPM Work Practice Standards, Revision 01a
SO 10.1.D-2, RHR System Torus Cooling, Revision 20
SO 10.7.A-3, RHR System LPCI Mode Manual Start, Revision 7

CRs

1514506, High Differential Press on B1 Waterbox
1514507, High Differential Press on B2 Waterbox
1515289 2 'B' RFP Min Flow Valve AO-2139B Opened too Quickly
1515290, Unit 2 'C' Condenser Backpressure High during Load Drop
1515308, Drain Valve is Leaking Steady Stream
1515310, Drain Valves Found Leaking By
1515311, Drain Valve is Leaking By
1515313, Drain Valves Found Leaking By
1515314, Gasket Leak on HX
1515319, Unit 2 B2 Waterbox Inlet Valve has Split Indication
1515375, Valve Seat Leak By
1515970, 4.0 Critique For Night Work (PSO4) Unit 2 Load Drops
1515999, PSO4 EOS Critique for Night Shift 5.17.13 to 5.20.13
1516472, PSO5 Load Drop 4.0 Critique
1517081, Perform LOCA-Load Shed to Cooling Tower Fans
1517241, RE Critique for May 2013 Unit 2 Load Drops
1517997, Lube Oil to 2 'A' RFPT Bearing Press High
1519925, Actions for Isolated Room Coolers in Moisture Separator Area
*1531579, OIO Enhancement JPM Scripting Improvement Work Practice Evaluation

Miscellaneous

PBAPS JPM 2190010101 / PLOR-005C, Start-up the Torus Cooling System, Effective 05/10/13,
Performed 06/17/13
PBAPS Operations Training Department Human Performance and Coaching Evaluation Form
PLOT-5010-S39, RHR System Operator Training Lesson Plan

Section 1R12: Maintenance Effectiveness

Procedures

ST-O-37D-372-2, DDFP Battery Check, Revision 10, Performed 05/09/13
ST-O-37D-370-2, DDFP Operability Test, Revision 32, Performed 05/10/13
ST-O-37D-372-2, DDFP Battery Check, Revision 10, Performed 05/11/13

CRs

1519622, MO-2-14-026A Backseat
1519770, PSO4 EOS Critique for Night Shift 5.28.13 to 5.30.13

1520281, Machined Stem Nut Dimensions Old Vs New
1512396, 00D409 Battery Charger High Amperage
1512623, 0AD408 Voltage Higher Than Nominal Valve
1513588, Clearance and Tagging PI for Work Week 1323 is Red
1515391, 0BD408 Terminal Voltage Lower than Nominal Range
1517496, DDFP Battery Voltages Outside Nominal Values
1519839, DDFP Voltages Outside Nominal Values
1524993, DDFP Battery has a Loose Terminal

Miscellaneous

Unified Control Room Log, Night Shift, dated May 10, 2013

Section 1R13: Maintenance Risk Assessments and Emergent Work Control

CRs

1324453, NRC-Identified Enhancement to Protected Equipment Practices
1461292, NRC-Identified Protected Equipment Enhancement Actions

Section 1R15: Operability Evaluations

Procedures

AO 52D.2, Diesel Fuel Oil Day Tank Filling with Associated Transfer Pump OOS, Revision 4
ST-O-52D-203-2, DG Fuel Oil Transfer Pump 0CP060 and Suction Check Valve
CHK-0-52D-10099C Inservice Test, Revision 18
ST-C-095-885-2, Diesel Generator Main Fuel Tank Sampling and Analysis, Revision 14

CRs

1276499, RCIC Vibration in Alert Range
1331025, U3 RCIC Recurring Issue of High Vibrations/Oil Results
1363491, EACE 1331025 Unit 3 RCIC Pump, C Code Repair 3R19
1399787, U3 RCIC Pump Vibrations in Alert Range
1440447, Evaluate Deferral of P3R19 CM A183004 to On-Line / P3R20
1514694, Failure of RT-M-40W-625-2 Step 6.1.27
1516113, RV-0-36B-00779 Failed RT-M-40W-625-2
1516291, Incorrect Control ID for ESBP HVAC Backup Nitrogen Bottle
1516940, Inst N2 B/U Supply Pressure is Reading High Out of Spec
1517771, PCR-0-36B-18045 External Leakage
1517798, 0AV35 Fan Rotating Backward - 64RPM
1518304, PSO1 EOS Critique for Night Shift 5/24/13 to 5/27/13
*1518168, On Shift Operability/Functionality Reviews
1520281, Machined Steam Nut Dimensions Old vs. New
1510906, HPCI Exhaust Pot SV-53 Cycling More Frequently

WOs / ARs

A1779249, 20P036 Oil Samples Dark
A1279156, Pri I/A Inner Check to 0AV035 0AV036 and 0BV036 Fan
A1866358, Emergency SWGR Room Temperature

Drawings

M-399, Emergency SWGR, Battery Room, Laboratory Supply and Exhaust, Sheet 1,
Revision 32

M-399, Emergency SWGR, Battery Room, Laboratory Supply and Exhaust, Sheet 4, Revision 5

Miscellaneous

Calculation ME-OO63, Bottled Nitrogen Quantities Sufficient for Damper Actuation

Calculation PM-727, Emergency SWGR and Battery Room Maximum Temperature with Loss of
Instrument Air, Revision 0

PBAPS TS 3.8.1 AC Sources - Operating

P-S-08A, Emergency SWGR and Battery Rooms HVAC System Design Basis Document,
Revision 7

Section 1R18: Plant Modifications

Procedures

AO 52D.1, Transferring Diesel Fuel Oil Between Storage Tanks, Revision 9

AO 52D.2, Diesel Fuel Oil Day Tank Filling With Associated Transfer Pump OOS,

OP-AA-108-115, ODs, Revision 11

SO 40D.1.A, Control Room Ventilation Startup and Control Room Emergency Ventilation High
Radiation Trip Restoration and Automatic Operation Alignment, Revision 12

SO 40.7.B, Place Control Room Emergency Ventilation In Service from the Control Room,
Revision 12

ST-O-40D-325-2, 'B' Control Room Emergency Ventilation Train Operational Test, Revision 7

ST-O-40D-327-2, Control Room Emergency Ventilation Capability Test, Revision 3

ST-C-095-885-2, DG Main Fuel Tank Sampling and Analysis, Revision 14

ST-O-52D-203-2, DG Fuel Oil Transfer Pump 0CP060 and Suction Check Valve CHK-0-52D-
10099C Inservice Test, Revision 18

CRs

*1493047, LTA TS Bases for Manual Action for EDG Fuel Oil Transfer

1496304, TS Concerns with WW1316 ESW Pipe Replacement Fuel Oil PMT

1496751, TS Bases Revision 1 and Revision 2 Recordkeeping Issue

1498416, PSO1 End of Shift Critique Dayshift April 1st Through 4th

1491781, E3 D/G Lube Oil Storage Tanks Less Than Half LG

WOs / ARs

A1745897, Replace E-4 ESW 6" Supply Piping in EDG Window EOC

A1745898, Replace E-3 ESW 6" Supply Piping in EDG Window EOC

A1745899, Replace E-2 ESW 6" Supply Piping in EDG Window EOC

A1745900, Replace E-1 ESW 6" Supply Piping in EDG Window EOC

Miscellaneous

ECR 00-00292, Main Control Room Emergency Ventilation (MCREV) TS Bases Change

IMC 0612, Appendix B, Issue Screening

IMC 0612, Appendix E, Examples of Minor Issues

NRC Enforcement Policy SL IV Violation Examples

Operator Training Lesson Plan PLOT 5040D – Control Room Ventilation

Operator Training Lesson Plan PLOT 5052 – EDGs

ROP PIM Search: NCVs Related to "Surveillance Requirement" from 06/01/2010 to 06/10/2013

TSs Section 3.7.4, MCREV System
TSs Bases Section 3.7.4, MCREV System
TSs Section 3.8, Electrical Power Systems
UFSAR Table 14.9.10, Parameters and Assumptions Used in Post-LOCA Radiological Consequences Analysis

Section 1R19: Post-Maintenance Testing

Procedures

SI3T-MIS-9547-C1CQ, Calibration/Functional Check of Channel C Group 1, 4 and 5 of PCIS Logic for TIS-90547C, Revision 16, Performed 05/03/2013
ST-O-052-411-2, E-1 DG Fast Start and Full Load Test, Revision 21, Performed 05/11/13
RT-O-052-251-2, E-1 DG Inspection Post-Maintenance Functional Test, Revision 23, Performed 05/11/13
RT-M-40W-625-2, Emergency SWGR and Battery Room Fan Damper Backup Nitrogen Leak Check, Revision 8, Performed 05/28/13

CRs

1512832, E-1 EDG Vertical Drive Coupling Bushing Wear
1512844, E-1 EDG PMT/Functional Test, Overspeed Trip Low in Alert Range
1512853, RT-O-052-251-2 E-1 EDG Inspection Post-Maintenance Functional Test Aborted

Miscellaneous

Unified Control Room Log, Day Shift, dated May 10, 2013
Unified Control Room Log, Night Shift, dated May 10, 2013
Unified Control Room Log, Day Shift, dated May 11, 2013

Section 1R22: Surveillance Testing

Procedures

ST-O-013-301-3, RCIC Pump, Valve, Flow and Unit Cooler Functional and In-service Test, Revision 40, Performed 04/24/13
RT-O-013-725-3, RCIC Response Time Test, Revision 10
ST-I-002-250-3, Core Flow Verification, Revision 2
ST-O-02F-560-3, Daily Jet Pump Operability, Revision 16
Temporary Change #13-0051, ST-O-02F-560-3, Daily Jet Pump Operability, Revision 0
ST-O-033-300-2, ESW, Valve, Unit Cooler, and ECT Fans Functional Inservice Test, Revision 37
ER-AB-331-1006, BWR Reactor Coolant System Leak Monitoring and Action Plan, Revision 2
SI-3F-20A-354-XXCQ, Calibration Check of Drywell Floor Drain Sump Flow Instruments, Revision 6
ST-O-020-560-2, Reactor Coolant Leakage Test, Revision 13

CRs

1506327, Unit 3 RCIC Start Time > 50 seconds
1466222, Unit 3 RCIC Start Time > 50 seconds
1496901, RCIC Start Time > 50 seconds for ST-O-013-301-2
1487723, Improvement Opportunity for RCIC Surveillance Testing Method
1364066, Adjusted Closure of U2/U3 RCIC Response Time Tests

1511653, Recurring Downward Spike in Smooth Core Flow Unit 3
1513262, FI-3-02-3-092B Downscale
1513746, I/I-3-02-3-064D is Failed
1517703, Obtain PB3 Jet Pump Data for Core Flow Calculation
1518334, Risk Not Fully Evaluated for Scheduled Test
1518584, Low EDG Cooling Water Flow During ST-O-033-300-2

Miscellaneous

Unit 3 TS 3.5 ECCS and RCIC System
Unit 3 TS Bases B.3.5 ECCS and RCIC System
Unified Control Room Log, Thursday, April 25, 2013, Night Shift

Section 1EP6: Drill Evaluation

CRs

1497998, PB 2013 EP Off-Year Exercise – EOF H.4.6 DC Failure
1498034, PB 2013 EP Off-Year Exercise – EOF H.2.5 DC Failure
1498064, PB 2013 EP Off-Year Exercise – EOF A.1.8 DC Failure
1498115, PB 2013 EP Off-Year Exercise – JIC G.2.2 DC Failure
1498121, PB 2013 EP Off-Year Exercise – EOF G.5.5 DC Failure
1498643, PB 2013 EP Off-Year Exercise - Scenario Control Issues
1499369, NOS ID: Potential Improvements for EP Drill Scenario

Miscellaneous

Exelon Nuclear Emergency Preparedness PBAPS April 3, 2013 EP Exercise Controller /
Evaluator Handbook

Section 4OA1: Performance Indicator Verification

Procedures

LS-AA-2001, Collecting and Reporting of NRC PIs Data, Revision 14
LS-AA-2090, Monthly Data Elements for NRC RCS Specific Activity, Revision 4
LS-AA-2100, Monthly Data Elements for NRC RCS Leakage, Revision 5
ST-O-020-560-2, Reactor Coolant Leakage Test (sample of completed test records),
Revision 13
ST-O-020-560-3, Reactor Coolant Leakage Test (sample of completed test records),
Revision 15
ST-C-095-820-2, Determination of Dose Equivalent $\mu\text{Ci/g}$ I-131 in Primary Coolant, Revision 4
ST-C-095-820-3, Determination of Dose Equivalent $\mu\text{Ci/g}$ I-131 in Primary Coolant, Revision 4
ST-C-095-864-2, Off Gas Monitor Response and Release Rate Verification by a Grab Sample,
Revision 2
ST-C-095-864-3, Off Gas Monitor Response and Release Rate Verification by a Grab Sample,
Revision 2
CH-407, Sampling of Reactor Water, Revision 8
CY-AA-130-3010, Dose Equivalent Iodine Determination, Revision 2
CY-AA-130-3010-F-01, Dose Equivalent Iodine Determination, Revision 1

Miscellaneous

NEI 99-02, Regulatory Assessment PI Guideline, Revision 6
BI PI data – 1st quarter 2012 through the 1st quarter 2013

Section 40A2: Identification and Resolution of ProblemsProcedures

RT-O-050-540-2, Verification of Generator Gross and Net Reactive Power Capability Test, Revision 5, performed 5/30/13
 LS-AA-120, Issue Identification and Screening Process, Revision 14
 LS-AA-125, CAP Procedure, Revision 17
 LS-AA-125-1005, Coding and Analysis Manual, Revision 8
 OP-AA-102-103, Operator Work-Around Program, Revision 3
 OP-AA-115-101, Operator Aid Postings, Revision 2
 RT-O-100-940-2, Quarterly Audit of Equipment Status Tags, Revision 2

CRs

1519480, Generator Rotor High Temperature Alarms Early
 1519590, MCR Alarms Received During Generator MVAR Capacity Test

1435853, PBAPS Operations Training Contributors to Online Performance
 1448009, Peach Bottom Operations Yellow Zone Breach
 1454653, PEA Human Performance Yellow Zone Breach
 1456652, Incorrect Component Manipulation in the Radiological Waste Control Room
 1458476, NOS ID: Escalation – Ops Failure to Correct Adverse Trend CC
 1458560, SM LP Improvement Plan
 1461279, Implement the PBAPS 2013 Human Performance Improvement Plan
 1462287, OP-AA-102-104 – Potential Gaps Identified
 1462788, Operations CAP Metrics Rated Overall Yellow
 1463255, Inconsistent Application of the Operator Excellence Program
 1464942, Results of OP Procedure Review
 1465536, Management’s Response to Declining Performance Trends and FLSs Closing Worker Performance Gaps
 1492028, NOS ID: Operator Excellence Program Plans Documentation Gaps
 1502116, NOS ID: Operations Rated Yellow by Site NOS
 1436520, Safety and Human Error Prevention Tools Declining Trend in Maintenance
 1448023, Peach Bottom Maintenance Yellow Zone Breach
 1457933, Deficiency Identified during Maintenance Fundamentals CIA
 1465748, Maintenance EOS Trend – Error Precursors
 1471975, NSRB Issue for Action – HU Standards
 1492037, NOS ID: PB Maintenance Rated Chronic Yellow by NOS
 1441868, CCA for Aging and Material Condition Issues Identified
 1458449, Goal for PI OM.01 Unplanned Entries in S/D LCO’s Exceeded
 1471344, Equipment Aging CCA Action Item (IR 1441868-02)
 1492813, Periodic Station Trend Review – 4Q12/1Q13
 1494316, NOS ID: Timely Resolution of Non-Conforming Conditions
 1494322, NOS ID: Work Package Instruction and Procedure Quality
 1494329, NOS ID: Investigation of Organizational Issues
 1523871, 2013 PB MCA Performance Gap – ER-1
 1500668, EST Audit Results
 1525548, 20C894 A/C Unit Design Flaw / Operator Workaround

Miscellaneous

Unified Control Room Log, Thursday, May 30, 2013, Day Shift
 PBAPS Top 10 Plant Health Issues List
 Peach Bottom Station Trend Review, 4Q12 / 1Q13 Analysis
 Plant Health Committee July 3, 2013 Meeting Package
 PBAPS Equipment Reliability Webpage: System IQ and Plant IQ
 List of IRs 12/01/12 – 05/31/13
 List of Current Open IRs as of 06/18/13
 List of Open PIMS ARs as of 06/19/13
 NOS Peach Bottom Site Status Reports: 05/01/13, 04/10/13, 03/27/13, 02/19/13, 01/01/13,
 12/12/12
 PBAPS List of OWAs and Operator Challenges

Section 40A5: Other ActivitiesCorrective Action Request Reports (ARs)

1131123	1296660	1411774
1330242	1297948	1449248
1228407	1315252	1466359
1233264	1330859	1512949
1233316	1331001	1513594
1238950	1338652	1513846
1240991	1349919	1513921
1245433	1376960	
1264755	1376968	

Design and Licensing Basis Documents

Certificate No. 1027, CoC For Spent Fuel Storage Casks, Amendment 0
 Certificate No. 1027, CoC For Spent Fuel Storage Casks, Amendment 1
 10 CFR 72.212 Report ISFSI (TN-68 Amendment 0 and 1), Revision 12

Drawings

S-1014, Refueling Floor Exclusion & Special Precaution Areas for Movement of Heavy Loads
 During Plant Operation, Revision 2
 Drawing C-10044 Revision 0 - ISFSI Cask Layout

Engineering Evaluations

349-T-VC-25, Fuel Selection Package PBM-0061 for Cask TN-68-61-A, Revision 0
 349-T-VC-27, Fuel Selection Package PBM-0063 for Cask TN-68-63-A, Revision 0
 349-T-VC-29, Alternate Assembly List for FSPs PBM-0060 to PBM-0064, Revision 0
 1131123-11, ISFSI Cask #1 Lid Seal Leakage Root Cause Report, dated 12/21/10
 1330242-11, ISFSI Floor Loading Calculations Operability Review, dated 4/13/12
 50.59 form for activity SF-900 Revision 10
 50.59 form for activity ST-H-071-801-2 Revision 10, ST-H-071-803-2 Revision 8,
 ST-H-071-804-2, Revision 3
 50.59 Form for Activity ECR/11-00544 Revision 0
 50.59 Form for Activity SF-420 Revision 15, SF-421 Revision 3, SF-490 Revision 13
 50.59 Form for Activity SF-220 Revision 28, SF-221 Revision 6
 50.59 Form for Activity SI2P-71-ISFSI-XXC3 Revision 4

50.59 Form for Activity SF-210
50.59 Form for Activity SF-220 Revision 30, SF-221 Revision 10, SF-230 Revision 11,
SF-261 Revision 1 and SF-290 Revision 10
50.59 Form for Activity ECR/11-00535 Revision 0
50.59 Form for Activity SF-640
50.59 Form for Activity ECR 12-00128
72.48 Screenings Nos. PB-2012-7248-001-S through -020-S Revision 0
72.48 Screenings Nos. PB-2013-7248-001-S through -013-S Revision 0 PB-2012-7248-018-S,
RT-M-071-901-2, ISFSI Cask Inspection Under Protective Cover for Moisture 72.48 Screening
Evaluation, Revision 0
PB-2012-7248-020-S, SF-290, Spent Fuel Cask Transport and Unloading Operations 72.48
Screening Evaluation, Revision 0
PB-2012-7248-024-S, PBAPS ISFSI Cask Respacing 72.48 Screening Evaluation, Revision 1
PB-12-00094 000, Amendment Upgrade for ISFSI Cask Respacing
PB-12-00310 001, Generate an ECR Type DCP for Respacing Casks on ISFSI pad

Completed Surveillance and Functional Testing

RT-X-071-902-2, ISFSI Cask and Storage Area Inspection, performed 9/6/12 & 12/6/12
SI2P-71-ISFS-XXC3, Channel Operational Test of ISFSI Low Pressure Switches PS-
707**A and PS-707**B (OOT611 & OOT612), performed 4/23/13

Miscellaneous

NF-AA-330 Attachment 7, 2012 Annual SNM Inventory, performed 7/12/12
NRC Information Notice 2013-07: Premature Degradation of Spent Fuel Storage Cask
Structures and Components from Environmental Moisture, dated 4/16/13
PEA-22209, On-site Examination of the Lid Seal from Spent Fuel Cask TN-68-01-A Powerlabs
Report, dated 12/14/10
Peach Bottom Unit 3 ISFSI Cask TN-68-63 Loading Verification, performed 5/4/13
Document No. E-35050 (Areva-TN Inc.) Peach Bottom – Cask Surface Dose Rate
Limits for the 59 Currently Loaded Casks (TN-68-01 through TN-68-59)
Calculation PS-0959 Revision 1; Seismic Analysis & Design Calculation of Cask Storage Slab
Calculation 349-T-VC-25 Revision 0; Fuel Selection Package PBM-0061 for Cask TN-68-61-A

Procedures

LS-AA-125, CAP Procedure, Revision 17
MA-PB-716-1000, Control of Bolting/Torquing/Tensioning, Revision 0
RT-M-071-901-2, ISFSI Cask Inspection Under Protective Cover for Moisture, Revision 0
SF-150, Control of Cask Placement and Location on ISFSI Pad, Revision 18
SF-210, Preparation for an Independent Spent Fuel Storage Campaign, Revision 16
SF-220, Spent Fuel Casks TN-68-01 Through TN-68-47 Loading and Transport Operations,
Revision 29
SF-221, Spent Fuel Casks TN-68-01 Through TN-68-44 and TN-68-48 Through TN-68-64
Loading and Transport Operations, Revision 10
SF-290, Spent Fuel Cask Transport and Unloading Operations, Revision 9
SF-421, Radiation Protection Requirements for Spent Fuel Casks TN-68-01 Through TN-68-44
and TN-68 48 Through TN-68-64 Loading and Transport Operations, Revision 5
SI2P-71-ISFS-XXC3, Channel Operational Test of ISFSI Low Pressure Switches PS-
707**A and PS-707**B, Revision 7

Training

Qualifications for the following positions, Transnuclear TN-68 72.48 Evaluator, TN TN-68 72.48 screener, PB ISFSI Campaign Coordinator, PB ISFSI Cask Operator, PB ISFSI Cask U/E Rigger, PB ISFSI Cask Transportation Operator, PB ISFSI HP Technician

Work Orders

C0238718 C0242157 R1234162-01 R1238154-02 R1238154-33

LIST OF ACRONYMS

AC	alternating current
ADAMS	Agencywide Documents Access and Management System
ALARA	as low as is reasonably achievable
AR	action request
CAP	corrective action program
CAS	central alarm station
CER	cask event report
CFR	Code of Federal Regulations
CoC	Certificate of Compliance
CRs	condition reports
CS	core spray
DBD	design basis document
DDFP	diesel drive fire pump
ECCS	emergency core cooling system
ECT	emergency cooling tower
EDG	emergency diesel generator
ESW	emergency service water
HPCI	high-pressure coolant injection
HPSW	high-pressure service water
IMC	inspection manual chapter
IP	inspection procedure
IR	issue report
ISFSI	independent spent fuel storage installation
JPM	job performance measures
kV	kilovolt
LERs	licensee event reports
MCREV	main control room emergency ventilation
MOV	motor-operated valve
MR	maintenance rule
MSIV	main steam isolation valve
MSL	main steam line
NCV	non-cited violation
NEI	Nuclear Energy Institute
NRC	Nuclear Regulatory Commission
OD	operability determination
OOS	out-of-service
OWAs	operator work arounds
PARS	publicly available records

PBAPS	Peach Bottom Atomic Power Station
PI	performance indicator
PMT	post-maintenance testing
RB	reactor building
RCIC	reactor core isolation cooling
RCS	reactor core system
RFP	reactor feed pump
RTP	rated thermal power
RP	radiation protection
RWP	radiation work permit
SDP	significance determination process
SFP	spent fuel pool
SSCs	structures, systems, and components
STs	surveillance tests
SWGR	switchgear
TN	transnuclear
TS	Technical Specification
UFSAR	Updated Final Safety Analysis Report
WOs	work orders