Exelon Generation®

10CFR 50.59, 10CFR 72.48, NEI 99-04 (SECY 00-0045)

January 28, 2015

U. S. Nuclear Regulatory Commission
Attn.: Document Control Desk
Washington, DC 20555-0001

Peach Bottom Atomic Power Station (PBAPS), Units 1, 2 and 3 and
PBAPS Independent Spent Fuel Storage Installation (ISFSI)
Facility Operating License No. DPR-12
Renewed Facility Operating License Nos. DPR-44 and DPR-56
NRC Docket Nos. 50-171, 50-277, 50-278, and 72-29 (ISFSI)

Subject: Biennial 10CFR 50.59 and 10CFR 72.48 Reports for the Period 1/1/2013 through 12/31/2014 and Annual Commitment Revision Report for the Period 1/1/14 through 12/31/14

Enclosed are the 2013-2014 Biennial 10CFR 50.59 and 10CFR 72.48 Reports and the 2014 Annual Commitment Revision Report as required by 10CFR 50.59(d)(2), 10CFR 72.48, and SECY-00-0045 (NEI 99-04).

There are no new regulatory commitments contained in this transmittal.

If you have any questions or require additional information, please contact D. J. Foss at 717-456-4311.

Sincerely,

Patrick D. Navin
Plant Manager
Peach Bottom Atomic Power Station

cc: Senior Resident Inspector, USNRC, PBAPS
Commonwealth of Pennsylvania
Document Control Desk, USNRC, Washington DC

CCN: 14-105

Attachments

IE47
FSME20
NMSS26
NRR
FSME

Exelon Nuclear
Peach Bottom Atomic Power Station

Docket Nos. 50-171
50-277
50-278
72-29

2013-2014 Biennial 10CFR 50.59 and 10CFR 72.48 Reports and the 2014 Commitment Revision Report

These reports are issued pursuant to reporting requirements for Peach Bottom Atomic Power Station Units 1, 2 and 3. These reports address tests and changes to the facility and procedures as they are described in the Peach Bottom Final Safety Analysis Report and Independent Fuel Storage Safety Analysis Report for the TN-68 Spent Fuel Cask. These reports consist of those tests and changes that were implemented between January 1, 2013 and December 31, 2014. Also, this report identifies commitments that were revised during 2014 and require reporting in accordance with the guidelines of NEI 99-04, Managing Regulatory Commitments Made by Power Reactor Licensees to the NRC Staff endorsed by SECY-00-0045.

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Exelon Nuclear
Peach Bottom Atomic Power Station
Units 1, 2 and 3
Docket Nos. 50-171, 50-277, and 50-278

BIENNIAL 10CFR 50.59 REPORT
JANUARY 1, 2013 THROUGH DECEMBER 31, 2014
EVALUATION SUMMARIES

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Title: Structural Analysis Changes for Reactor Building Floor Loading for Independent Spent Fuel Storage Installation (ISFSI) Cask (ECR 12-00326)

Units Affected: 2 / 3

Year Implemented: 2013

Brief Description:

This activity was to revise calculations associated with postulated ISFSI cask tipping and sliding events in the Reactor Building and to approve modifications to the plant required to comply with the revised calculations. The seismic analyses of the reactor buildings with a TN-68 cask at specific locations were found to have non-conservative assumptions. Applying conservative assumptions resulted in reactor building floor stresses exceeding code allowable limits, but still operable. The calculation changes and modifications for this activity assure that code allowable stress limits will be met for postulated design conditions.

Summary of Evaluation:

The modification relocates the placement of the ISFSI cask on elevation 234' to a more structurally supported area of the floor. The only physical change to the plant is leveling the floor at the new cask locations on elevation 234'. Additionally, the engineering change requires the use of low friction plates to be placed under the casks at both 135' and 234' elevations. These plates are required to prevent cask tip-up and return to floor loads during a seismic event. The ECR also issues the calculations for ISFSI cask loads in the spent fuel pool.

The activity also processes a calculation for sliding due to tornado winds at the 234' elevation. The low friction plates used to prevent tip up during a seismic event could result in cask sliding from tornado wind loads. The sliding distance is small and has been found to be acceptable. There are no physical modifications to the plant involved with the calculation. The newer methodology used in the analyses has been accepted by the NRC and is referenced in the Standard Review Plan. Therefore, the change in methodology was acceptable. The floor slab remains fully qualified for the seismic design loads, so there is no increased risk to nuclear safety. It was determined that the activity did not result in a departure from a method of

evaluation described in the UFSAR used in establishing the design bases or in the safety analyses.

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Title: Replacement of the Automatic Voltage Regulators for Main Generators (ECRs 11-00381 and 12-00256)

Units Affected: 2 / 3

Year Implemented: Unit 3 – 2013, Unit 2 - 2014

Brief Description:

This activity involved the replacement of the Main Generator Automatic Voltage Regulator (AVR) for both Units 2 and 3. The AVR is designed to maximize electrical stability of the main generator during all design basis transients. The new AVR is also designed to support the main generator throughout its entire operating range. Utilizing updated technology, the new AVR will increase electrical stability during transients. The new AVR does not have any negative impact on the design bases or any UFSAR design functions and performance parameters. However, this change was considered as a change to a UFSAR described design function due to the existence of potential common cause failures that were not previously evaluated.

Summary of Evaluation:

As part of the AVR implementation, a power system stability study was performed in order to determine AVR settings and implement the Power System Stabilizer (PSS) function. The study includes the descriptive information, analyses, and referenced documents for the turbine, generator and exciter as well as the offsite power system and the stability studies for the electrical transmission grid at current and future EPU power levels. The study verified stability for the postulated loss of the nuclear unit, the largest operating unit on the grid, or the most critical transmission line. The study assured the probability of a loss of offsite power (LOOP) to the plant as a result of implementation of the AVR and PSS is unaffected.

The 50.59 Evaluation determined that this change did not more than minimally increase the frequency or consequences of a previously evaluated accident or create the possibility of a new accident since no accident initiators are involved. It does not increase the likelihood of occurrence of a previously evaluated malfunction of an SSC important to safety because the affected equipment does not interfere with any previously evaluated. It does not increase the consequences of a previously evaluated malfunction of equipment important to safety because there are no consequences associated with the activity. It does not create the possibility for a malfunction of an SSC important to safety with a different result than any previously evaluated in the UFSAR because no new failure modes are introduced. It does not result in a design basis limit for a fission product barrier as described in the UFSAR being exceeded or altered because no system parameters will change as a result of this activity.

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Title: Seismic Response Spectra Methodology Change to Support Main Steam and HPCI piping Modifications in Primary Containment (ECRs 11-00369 and 12-00178)

Units Affected: 2 / 3

Year Implemented: Unit 3 -2013, Unit 2 - 2014

Brief Description:

This activity involved an engineering analysis of Main Steam (MS) and High Pressure Coolant Injection (HPCI) System Turbine steam supply piping stresses and installation of associated supports inside Containment between the reactor pressure vessel (RPV) nozzles and the main steam anchors at the Containment for operation at the Extended Power Uprate (EPU) conditions. As a result, new snubber type pipe supports were installed on various steam lines.

The pipe stress analyses were performed using new seismic response spectra developed specifically for the MS lines inside the Containment. This required an update to the UFSAR, Appendix C for both Units 2 and 3. The development of new spectra for Maximum Credible Earthquake (MCE) is based on the same methodology that was used for the existing seismic response spectra for Design Earthquake (DE).

Summary of Evaluation:

The steam flow rate through the main steam (MS) piping increases for operation at the Extended Power Uprate (EPU) condition resulting in increased fluid transient loads. Therefore, new stress analyses for MS and HPCI steam piping have been performed in the design analyses. This has resulted in a change to the loading on the supports of the MS and HPCI Turbine steam supply piping. This activity addressed the impact on MS and HPCI steam supply piping and associated supports inside Containment and supporting Reactor Building (Drywell) structure.

As a result of the new stress analyses, pipe supports inside containment are affected. The loading on the existing pipe supports has changed to the extent requiring modifications of some of the supports on MS and HPCI piping and installation of new snubbers on MS lines. The piping stress analyses used new seismic response spectra which have been refined to reduce the built-in conservatism. The refinement includes using the higher damping values consistent with values listed in the UFSAR Table C.2.1 for generating response spectra for both seismic Design Earthquake (DE) and Maximum Credible Earthquake (MCE) independently instead of conservatively using a multiplier of 2.4 x DE Widened Response Spectra (WRS) for MCE response spectra. It was determined that the activity did not result in a departure from a method of evaluation described in the UFSAR used in establishing the design bases or in the safety analyses.

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Title: Removal of Radiographic Testing Requirements for High Pressure Service Water (HPSW) and Emergency Service Water (ESW) (ECRs 11-00379 and 13-00426)

Units Affected: 2 / 3

Year Implemented: 2013

Brief Description:

The two activities removed mandatory Radiographic Examination Testing (RT) requirements associated with the Class 3 High Pressure Service Water (HPSW) and Emergency Service Water (ESW) systems' piping butt welds. RT is not required by the original Construction Code (ANSI B31.1-1967) for this Class 3 piping. The proposed change will allow RT, Magnetic Particle Testing (MT), or Dye Penetrant Testing (PT) to be performed for final acceptance of HPSW piping butt welds.

Summary of Evaluation:

Maintenance and modifications of the HPSW and ESW Systems (Class 3 piping) are governed by Section XI. Section XI specifies hydrostatic or system leakage testing but refers to the original construction requirements for most of the other requirements for repair/replacement activities. The original Construction Code for the HPSW System piping is ANSI B31.1-1967. RT of Class 3 piping is not required by the original Construction Code and is not the only NDE method allowed by the latest Edition and Addenda of the ASME Section III Code currently endorsed by the NRC. The latest NRC endorsed Section III NDE requirements for butt welds greater than two inches nominal pipe size is RT, MT, or PT.

This activity is not a physical change to the HPSW system. This activity ensures final inspection of welds in accordance with NRC endorsed methods, and does not change HPSW system operating modes or design functions. Applying NRC endorsed NDE methods to final examination of piping butt welds assures the welds are of acceptable code quality so there is no change in the probability that an inferior quality weld will be introduced into service. In addition the proposed change does not change the function of any other any other safety related system. This activity does not introduce the possibility of an accident because an adverse effect on the HPSW system would not be an initiator of any accident and no new failure modes are being introduced. The 50.59 Evaluation determined that this change did not increase the frequency or consequences of a previously evaluated accident or create the possibility of a new accident since no accident initiators are involved. It does not increase the likelihood of occurrence of a previously evaluated malfunction of an SSC important to safety because the affected equipment does not interfere with any previously evaluated. It does not increase the consequences of a previously evaluated malfunction of equipment important to safety because there are no consequences associated with the activity. It does not create the possibility for a malfunction of an SSC important to safety with a different result than any previously evaluated in the UFSAR because no new failure modes are introduced. It does not result in a design basis limit for a fission product barrier as described in the UFSAR being exceeded or altered because no system parameters will change as a result of this activity.

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Title: Reactor Pressure Vessel and Drywell Strongback Qualification Tests (ECR 13-00378)

Units Affected: 2 / 3

Year Implemented: 2013

Brief Description:

This activity added detail to the UFSAR regarding exceptions to the requirements of ANSI N14.6-1978, "American National Standard for Special Lifting Devices for Shipping Containers Weighing 10,000 Pounds or More for Nuclear Materials", for the reactor head strongback / carousel and the drywell head strongback. The ANSI standard includes a requirement that "materials for load bearing members shall be subjected to a drop weight test in accordance with ASTM E 208 or a Charpy impact test in accordance with ASTM A 370..." This activity justified the omission of this testing for several components of the strongbacks. It also justified the use of the drywell head strongback during refueling outage P3R19.

Summary of Evaluation:

The activity justified continued use of the lifting devices without performance of the material testing. With regard to the load testing deficiency, use of the drywell head strongback is justified during refueling outage P3R19 only, with the requirement that the full 300% load test be performed prior to use beyond P3R19. These exceptions to the requirements of ANSI N14.6 are related to initial testing requirements only. The devices maintain the design safety factors required by ANSI N14.6, and must continue to satisfy all pre-use NDE requirements. The methods, procedures and steps for the use of these lifting devices are not affected by the allowed exceptions to the initial testing requirements.

The Peach Bottom commitment to performing these lifts in a single failure proof configuration is as stated in the UFSAR: "the criteria of NUREG-0612, Phase II are met, except for alternatives which may be approved on a case-by-case basis in accordance with station procedures."

Detailed consideration of the exceptions to the required testing provided in the Evaluation concluded that the omitted testing does not affect the safety of the lifting devices. These devices maintain their design safety factors and undergo NDE testing to ensure their continued integrity. The designer of these devices has concurred that there is no concern for their continued ability to function as intended based on their low stress usage and lack of susceptibility to brittle failure.

The 50.59 Evaluation determined that this change did not increase the frequency or consequences of a previously evaluated accident or create the possibility of a new accident since no accident initiators are involved. It does not increase the likelihood of occurrence of a previously evaluated malfunction of an SSC important to safety because the affected equipment does not interfere with any previously evaluated. It does not increase the consequences of a previously evaluated malfunction of equipment important to safety because

there are no consequences associated with the activity. It does not create the possibility for a malfunction of an SSC important to safety with a different result than any previously evaluated in the UFSAR because no new failure modes are introduced. It does not result in a design basis limit for a fission product barrier as described in the UFSAR being exceeded or altered because no system parameters will change as a result of this activity.

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Title: Condensate Storage Tank (CST) Standpipe Addition (ECR 12-00227)

Units Affected: 2

Year Implemented: 2014

Brief Description:

This activity modified the CST by adding a standpipe in the tank. The standpipe will prevent draining of CST to the condenser hotwell in the event of spurious opening of the hotwell makeup valves. Under Extended Power Uprate (EPU) conditions, the CST inventory dedicated to High Pressure Coolant Injection (HPCI) and Reactor Core Isolation Cooling (RCIC) suction is credited for Station Blackout (SBO), Anticipated Transient without Scram (ATWS) and Appendix R events and therefore, this modification preserves the availability of these systems. This activity does not impact plant operations at nominal CST levels; however, a new action of opening existing manually operated isolation valves is required to allow the CSTs to continue to perform their design function of providing a backup water supply to the CRD pumps when CST inventory is below the height of the installed standpipe.

Summary of Evaluation:

The installation of the standpipe in the CST does not adversely impact design bases or safety analyses as described in the UFSAR. This activity does not adversely impact plant operations, design bases or safety analyses as described in the UFSAR.

The 50.59 Evaluation determined that this change did not increase the frequency or consequences of a previously evaluated accident or create the possibility of a new accident since no accident initiators are involved. It does not increase the likelihood of occurrence of a previously evaluated malfunction of an SSC important to safety because the affected equipment does not interfere with any previously evaluated. It does not increase the consequences of a previously evaluated malfunction of equipment important to safety because there are no consequences associated with the activity. It does not create the possibility for a malfunction of an SSC important to safety with a different result than any previously evaluated in the UFSAR because no new failure modes are introduced. It does not result in a design basis limit for a fission product barrier as described in the UFSAR being exceeded or altered because no system parameters will change as a result of this activity.

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Title: Reactor Feedpump Turbine (RFPT) Replacement – Electrical / Instrumentation (ECR 13-00265)

Units Affected: 2

Year Implemented: 2014

Brief Description:

In conjunction with the Reactor Feed Pump Turbine (RFPT) replacement, the mechanical overspeed device and trip mechanism was replaced with an electrical overspeed device and trip module. This change from functionally diverse to functionally equivalent overspeed protection fundamentally altered the means of performing this function and affects a design function of the Turbine Driven Feedwater Pump Control as described in UFSAR Section 7.10.4.

Summary of Evaluation:

As a result of this activity, the primary overspeed function is performed by a new protection device that is functionally equivalent to the previous device. While both devices are microprocessor based, they are electrically diverse and not subject to a common mode failure. Using guidance provided in NUREG/CR-6303 (Method for Performing Diversity and Defense-in-Depth Analyses of Reactor Protection Systems), the new overspeed protection device is design diverse (different architecture), equipment diverse (same manufacturer of fundamentally different designs), signal diverse (same parameter sensed by different sensors) and software diverse (different program architecture) as compared to the previous system. As such, the same defense-in-depth will be provided by the electrically diverse redundant overspeed devices as with the existing functionally diverse overspeed devices.

The proposed facility change will not alter the manner in which the RFPT, RFPT Speed Control, Feedwater Control, Lube Oil or 125 VDC systems are controlled or operated. The same monitoring and protective functions will be performed by the modified system as currently performed by the existing RFPT instrumentation and controls. This facility change does not affect any Nuclear Safety Related components.

With the same defense-in-depth, the facility change does not increase the likelihood of a malfunction of equipment important to safety or the frequency of accidents evaluated in the UFSAR. Although the new digital equipment has different modes of failure, the effect of these failures is the same and does not create the possibility of a different accident or the malfunction of equipment important to safety with a different result.

No new system interfaces are created and no physical changes are made to a steam path or barrier that could alter or affect the consequences of an accident. The radiological consequences of the malfunctions and accidents currently evaluated are not affected and are bounding for this facility change.

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Title: Allowance of Synthetic Roundslings for NUREG-0612 Heavy Load Lifts

Units Affected: 2 / 3

Year Implemented: 2014

Brief Description:

The activity revised UFSAR Section 10.4.11.1.5 to allow use of Twin-Path Extra TPXC Synthetic Roundslings constructed with K-Spec fiber used in combination with engineered softeners and abrasion protection devices, in addition to the currently referenced ANSI Standard B30.9-1971 slings. The activity was limited to slings used for NUREG-0612 Heavy Load Lifts. The reason for the change is to allow for use of an additional type/style of sling that has been developed since the issuance of the 1971 Standard. Specifically, the proposed activity will allow for the use of a particular "synthetic roundsling" for single failure proof heavy load lifts.

Summary of Evaluation:

This type of synthetic roundsling was developed after the issuance of the current UFSAR approved ANSI B30.9-1971 standard. The synthetic roundsling is included in ASME B30.9-2010, "Slings". Synthetic roundslings are fabricated from core yarns wound together with multiple turns and enclosed in protective cover(s). Synthetic roundslings offer similar capacities as the other type of slings, but with greater flexibility and lighter weight. As a result synthetic roundslings have become the preferred sling for rigging activities.

It is acceptable to allow use of Twin-Path Extra TPXC Synthetic Roundslings constructed with K-Spec fiber used in combination with engineered softeners and abrasion protection devices, in addition to the currently referenced ANSI Standard B30.9-1971 slings. The proposed UFSAR change limits the subset of synthetic roundslings to be used for NUREG 0612 heavy load lifts to "Twin-Path Extra TPXC Synthetic Roundslings constructed with K-Spec fiber. This style of synthetic roundsling provides required rated load capacities, superior fiber on fiber abrasion resistance, tell-tail overload and damage inspection features, and when combined with "Engineered Softeners" cut resistance protection.

Based on the improved material properties, sling construction, and the improved ability to inspect the roundsling, the Twin-Path Extra TPXC Synthetic Roundslings constructed with K-Spec fiber, along with engineered softeners and abrasion protection devices meet the intent of the NUREG 0612 heavy load handling requirements.

The 50.59 Evaluation determined that this change did not increase the frequency or consequences of a previously evaluated accident or create the possibility of a new accident since no accident initiators are involved. It does not increase the likelihood of occurrence of a previously evaluated malfunction of an SSC important to safety because the affected equipment does not interfere with any previously evaluated. It does not increase the consequences of a previously evaluated malfunction of equipment important to safety because there are no consequences associated with the activity. It does not create the possibility for a malfunction of an SSC important to safety with a different result than any previously evaluated

in the UFSAR because no new failure modes are introduced. It does not result in a design basis limit for a fission product barrier as described in the UFSAR being exceeded or altered because no system parameters will change as a result of this activity.

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Title: Surveillance Interval Change of 4 kV Undervoltage Relays

Units Affected: 2 / 3

Year Implemented: 2014

Brief Description:

The activity involved a change to the frequency of the performance of the 4kV Undervoltage Relays and LOCA LOOP Functional Tests from 24 months (1R) to 48 months (2R). Although the Technical Specification (TS) Surveillance Requirements (SRs) are controlled in TS 5.5.14, Surveillance Frequency Control Program (SFCP), some of the testing affected also changed UFSAR requirements. Technical Requirements Manual (TRM) Appendix A (incorporated into the UFSAR be reference) requires testing of HGA and SV relays on an every refueling frequency that were formerly in the PBAPS Custom TS, but were relocated into the UFSAR as part of the transition to Improved Technical Specifications (ITS). These relays control the tripping of loaded breakers, fast transfer permissives, dead bus start of the diesel generator and sequential loading of vital loads. The test frequency also changes the licensing basis commitment to the test frequencies at a frequency contained in Regulatory Guide 1.9 Revision. 3 as identified in "Improved Technical Specification (ITS), 3.8.1".

Summary of Evaluation:

The frequency change will not prevent any of the associated SSCs included within the test from performing their design function as described in the UFSAR. Peach Bottom is committed to Regulatory Guide 1.9, Revision 3, Selection, Design, Qualification and Testing of Emergency Diesel Generator Units used as Class 1E Onsite Electric Power Systems at Nuclear Power Plants. The testing interval specified in this regulatory guide is once every refueling outage. The commitment to the Reg. Guide contents is documented in Technical Specification Bases TS B3.8.1.

The evaluation concluded that the change to the testing frequency would not have a significant adverse impact on the reliability of 4kV Undervoltage relays and LOCA LOOP logic. Many of the components being tested by the subject tests are also subject to other tests on a more frequent basis. Some of the components are normally operating or rotated/cycled in and out of service while the plant is operating.

The 50.59 Evaluation determined that this change did not increase the frequency or consequences of a previously evaluated accident or create the possibility of a new accident since no accident initiators are involved. It does not more than minimally increase the likelihood of occurrence of a previously evaluated malfunction of an SSC important to safety because the

affected equipment does not interfere with any previously evaluated. It does not increase the consequences of a previously evaluated malfunction of equipment important to safety because there are no consequences associated with the activity. It does not create the possibility for a malfunction of an SSC important to safety with a different result than any previously evaluated in the UFSAR because no new failure modes are introduced. It does not result in a design basis limit for a fission product barrier as described in the UFSAR being exceeded or altered because no system parameters will change as a result of this activity.

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Title: Time Increase for Suppression Pool Cooling (SPC) Operation for Extended Power Uprate (ECR 10-00478)

Units Affected: 2 / 3

Year Implemented: 2014

Brief Description:

This activity involved changing of the time requirement to implement suppression pool cooling (SPC) during a station blackout (SBO) event. The Extended Power Uprate (EPU) analysis included in the License Amendment Request (LAR) and NRC Safety Evaluation Report (SER) assumed that alternate AC power was available in one hour following the initiation of the SBO and suppression pool cooling (SPC) was also initiated at the same time. It was identified that operators would require an addition 30 minutes, following the availability of AC power, to initiate SPC.

Summary of Evaluation:

The SBO event was revised to incorporate a change to the initiation time of RHR in SPC mode. The original analysis was evaluated for a 60 minute initiation time. The new initiation time is evaluated for 90 minutes. This longer period of time before initiation, will increase the peak suppression pool temperature and peak drywell pressure, thus reducing the NPSHA and NPSH margin for the RHR pumps. The margin is reduced from 5.3 ft to 4.75 ft. However, since positive margin is available for the pumps to function adequately, the mitigation of the SBO event is still acceptable. Also, the minor increases in peak suppression pool temperature and peak drywell pressure are acceptable since there is sufficient design margin for these parameters.

The 50.59 Evaluation determined that this change did not increase the frequency or consequences of a previously evaluated accident or create the possibility of a new accident since no accident initiators are involved. It does not increase the likelihood of occurrence of a previously evaluated malfunction of an SSC important to safety because the affected equipment does not interfere with any previously evaluated. It does not increase the consequences of a previously evaluated malfunction of equipment important to safety because there are no consequences associated with the activity. It does not create the possibility for a malfunction of an SSC important to safety with a different result than any previously evaluated

in the UFSAR because no new failure modes are introduced. It does not result in a design basis limit for a fission product barrier as described in the UFSAR being exceeded or altered because no system parameters will change as a result of this activity.

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Title: Control Room Habitability Program Changes due to Construction of a Nearby Power Plant

Units Affected: 2 / 3

Year Implemented: 2014

Brief Description:

The scope of this activity was to issue a new hazardous chemical analysis due to the construction of an offsite power plant. The station is committed to Regulatory Guides 1.78 Rev. 0 and 1.95 Rev. 0 which give several "levels" of requirements, depending on proximity to hazardous chemicals and station ventilation design. Since initial licensing of the facility, a co-generation power plant was constructed within 5 miles of the Main Control Room (MCR) HVAC intake. This co-generation plant contains hazardous chemicals of sufficient quantity such that crediting the low probability of a hazardous chemical event occurring cannot be the only method to ensure control room habitability. This activity performs control room habitability evaluations in accordance with the Regulatory Guides to demonstrate that the function of the CRE to protect occupants will be maintained. This activity utilized the HABIT code in order to evaluate the dispersion of the hazardous chemicals. HABIT is an NRC approved code for use in this application. Since the previous method for evaluating chemicals was based on low probability, this was considered a change in methodology for PBAPS.

Summary of Evaluation:

The 50.59 evaluation determined that this activity can be completed without a license amendment. The activity performed control room habitability evaluations in accordance with Regulatory Guide 1.78 and Regulatory Guide 1.95 to demonstrate that the MCR / MCREV systems will perform their design function during a hazardous chemical event. The current methodology for demonstrating that the MCR / MCREV systems will perform their design function is to credit the low probability of an event occurring. The activity used a method for assessing a specific chemical's effect on control room habitability in the event of a release for those chemicals which have a greater than negligible probability of occurrence. The method of performing a detailed evaluation for chemical events is described in Regulatory Guides (RG) 1.78 and 1.95. RG 1.78 and RG 1.95 contain NRC approved methodologies for performing detailed evaluations and assessing the impact on control room habitability. Since the activity utilized an NRC approved methodology intended for the specific application, it was not considered a departure from a method of evaluation described in the UFSAR used in establishing the design bases or in the safety analyses.

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There were no 10CFR 50.59 Evaluation Reports performed / implemented for Unit 1 during this reporting period.

End of 10CFR 50.59 Report

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Exelon Nuclear
Peach Bottom Atomic Power Station
Independent Spent Fuel Storage Installation (ISFSI)
Docket No. 72-29

BIENNIAL 10CFR 72.48 REPORT
JANUARY 1, 2013 THROUGH DECEMBER 31, 2014
EVALUATION SUMMARIES

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Title: TN-68 Cask Lid Poison Plate Conductivity Change

Units Affected: ISFSI TN-68 Casks – Certificate No. 1027, Amendment 1

Year Implemented: 2014

Brief Description:

The cask vendor discovered that suppliers could not obtain the thermal conductivity for the Type D poison plates for a new order of ISFSI casks for PBAPS. This change is addressed in a vendor calculation which analyzed the effect on the thermal, structural and confinement design functions of the TN-68 cask. The poison plates provide the necessary criticality control and provide the heat conduction path from the fuel assemblies to the cask cavity wall. The proposed change does not affect the criticality function since the required minimum areal density of Boron-10 remains unchanged. Reducing the thermal conductivity of the poison plate increases the maximum temperature of basket components. The increased temperatures affect the structural and confinement design functions. The increased temperatures may also affect the clearances between the cask components and the maximum internal pressure.

Summary of Evaluation:

There are no departures from methods of evaluation described in the TN-68 SAR to evaluate thermal, structural and confinement functions in the calculation. The maximum fuel cladding temperature for normal, off-normal, vacuum drying, and hypothetical fire accident case conditions increased by at most 11°F, but remain well below the allowable limits specified in the applicable NRC guidance document. The time at which the maximum fuel cladding temperature reaches the allowable temperature limit of 1058°F for buried accident case with lower poison plate conductivity is 2 hours shorter than the design basis model reported in the TN-68 SAR. The effect of the temperature increase on the internal fuel rod pressure and stress are discussed and found to be within allowable limits. The basket plate temperatures increase by, at most, 11°F for all considered conditions due to reduction of the poison plate conductivity. The calculation demonstrates that the cask internal pressure remain well below the design pressure for all considered conditions, the structural evaluation of the basket components as described in the UFSAR remain bounding and adequate clearances exist between various

components such that TN-68 cask with the proposed change continues performing its structural and confinement functions as designed. Based on the above discussion, the thermal, structural and confinement functions of TN-68 cask affected by reducing the poison plate conductivity remain within the appropriate limits and continue to satisfy their respective design requirements.

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End of 10CFR 72.48 Report

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Exelon Nuclear
Peach Bottom Atomic Power Station
Units 1, 2 and 3
Docket Nos. 50-171, 50-277, and 50-278

COMMITMENT REVISION REPORT
JANUARY 1, 2014 THROUGH DECEMBER 31, 2014
CHANGE SUMMARIES

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Letter Source: Letter to NRC dated 2/3/89, Response to NRC Inspection Report 85-42

Exelon Tracking No.: T00306

Nature of Commitment: The Radiation Materials Shipping Coordinator will perform a supervisory sign-off to verify inclusions and proper placement of restraints. Quality Control will do performance-based monitoring to verify conformance with requirements.

Summary of Justification:

Upgrades in the radwaste shipping program and procedures have resulted in substantial improvements in ensuring appropriate actions are performed involving shipments of radioactive material. Upgraded procedure quality and site operating practices justify the allowance for not tracking this commitment any longer. This commitment is considered to be historical in nature. The corrective actions taken were effective and the station is in compliance with requirements.

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Letter Source: Letter to NRC dated 6/30/89, Progress Report for Implementing Control Room Enhancements

Exelon Tracking No.: T00315

Nature of Commitment: Revise T-200 Emergency Procedure Nomenclature

Summary of Justification:

Upgrades in the procedure program have resulted in substantial improvements in procedure quality. Standard nomenclature for procedures is in place. The corrective actions taken were effective and the station is in compliance with requirements. This commitment is considered as historical and may be deleted from future commitment programmatic tracking since upgraded industry / PBAPS standards have eliminated the need for detailed tracking of this commitment.

Upgraded procedure quality and site operating practices justify the allowance for deleting this commitment.

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Letter Source: Letter to NRC dated 1/31/91, Response to Limerick NRC Inspection Report 90-80

Exelon Tracking No.: T00999

Nature of Commitment: Minor revision to an emergency operating procedure and bases to alert the operators to the effective level range of the suppression pool temperature monitoring instruments

Summary of Justification:

Upgrades in the procedure program have resulted in substantial improvements in procedure quality. The corrective actions taken were effective and the station is in compliance with requirements. This commitment is considered as historical and may be deleted from future commitment programmatic tracking since upgraded industry / PBAPS standards have eliminated the need for detailed tracking of this commitment. Upgraded procedure quality and site operating practices justify the allowance for deleting this commitment.

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Letter Source: NRC Inspection Report 91-31 dated 2/7/92 (Cover Page)

Exelon Tracking No.: T01730

Nature of Commitment: Monthly testing of the Emergency Service Water (ESW) system

Summary of Justification:

Based upon satisfactory, consistent trending of ESW flow testing over the past 10+ years, there is adequate assurance that decreasing the frequency of testing is not risk significant. Current measured ESW flow rates through the emergency diesel generators as well as the plant ESW ring headers that support emergency equipment reveal that there is significant ESW flow margin. Engineering has determined that it is acceptable to measure ESW flow rates on a 12 week frequency. This change in frequency will not cause any adverse impact to system performance.

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Letter Source: NRC Inspection Report 91-21 dated 8/26/91 (Attachment 2)

Exelon Tracking No.: T01749

Nature of Commitment: Addition of Net Positive Suction Head (NPSH) information into the

Standby Liquid Control system lesson plans

Summary of Justification:

Upgrades in the training program have resulted in substantial improvements in ensuring appropriate training is administered to personnel, including the Standby Liquid Control system and NPSH. This commitment is considered to be historical in nature. The corrective actions taken were effective and the station is in compliance with requirements. There is no longer a need to track this commitment.

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Letter Source: Letter to NRC dated 9/9/91, Response to NRC Inspection Report 91-16

Exelon Tracking No.: T01874

Nature of Commitment: Aspects of the Operating Experience Assessment Program will be enhanced to ensure that information capture and training concerns are adequately addressed

Summary of Justification:

Upgrades in the operating experience program have resulted in substantial improvements in the assessment of operating experience. The corrective actions taken were effective and the station is in compliance with expectations. This commitment is considered as historical and may be deleted from future commitment programmatic tracking since upgraded industry / PBAPS standards have eliminated the need for detailed tracking of this commitment. Upgraded procedure quality and site operating practices justify the allowance for deleting this commitment.

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Letter Source: Letter to NRC dated 12/3/76, Response to NRC Inspection Report 76-35/25

Exelon Tracking No.: T03020

Nature of Commitment: Upgrade to surveillance test for analysis of release rates to facilitate supervisory review for compliance to limits

Summary of Justification:

The accounting for particulates and iodine is appropriately included in procedures. These requirements were subsequently moved from the Technical Specifications to the Offsite Dose Calculation Manual (ODCM). The corrective actions taken were effective and the station is in compliance with requirements. This commitment is considered as historical and may be deleted from future commitment programmatic tracking since upgraded industry / PBAPS

standards have eliminated the need for detailed tracking of this commitment. Upgraded procedure quality and site operating practices justify the allowance for deleting this commitment.

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Letter Source: Letter to NRC dated 1/6/78, Response to NRC Inspection Report 77-37

Exelon Tracking No.: T03071

Nature of Commitment: Control of chemistry instrumentation background and source checks

Summary of Justification:

The control of chemistry instrumentation background and source checks have been substantially improved since this commitment was made. The corrective actions taken were effective and the station is in compliance with requirements. This commitment is considered as historical and may be deleted from future commitment programmatic tracking since upgraded industry / PBAPS standards have eliminated the need for detailed tracking of this commitment. Upgraded procedure quality and site operating practices justify the allowance for deleting this commitment.

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Letter Source: Letter to NRC dated 1/6/78, Response to NRC Inspection Report 77-37

Exelon Tracking No.: T03072

Nature of Commitment: Control of chemistry laboratory reagents from being used in the performance of analyses of reactor coolant

Summary of Justification:

The control of chemistry reagents have been substantially improved since this commitment was made. The corrective actions taken were effective and the station is in compliance with requirements. This commitment is considered as historical and may be deleted from future commitment programmatic tracking since upgraded industry / PBAPS standards have eliminated the need for detailed tracking of this commitment. Upgraded procedure quality and site operating practices justify the allowance for deleting this commitment.

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Letter Source: Letter to NRC dated 2/23/94, Response to NRC Inspection Report 93-25

Exelon Tracking No.: T03256

Nature of Commitment: Revise maintenance procedure to address the use of stroke times and stroke lengths as acceptance criteria for motor-operated valve (MOV) actuator performance

Summary of Justification:

Upgrades in the MOV program and procedures have resulted in substantial improvements. The corrective actions taken were effective and the station is in compliance with expectations. This commitment is considered as historical and may be deleted from future commitment programmatic tracking since upgraded industry / PBAPS standards have eliminated the need for detailed tracking of this commitment. Upgraded procedure quality and site operating practices justify the allowance for deleting this commitment.

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Letter Source: Letter to NRC dated 10/30/85, Response to NRC Inspection Report 85-31/28

Exelon Tracking No.: T03326

Nature of Commitment: Develop a procedure to perform a final comparison of the liner serial number on the proposed shipping papers with that recorded on the applicable fuel floor operating procedure

Summary of Justification:

Upgrades in the radwaste shipping program have resulted in substantial improvements in the control of radwaste since this commitment was made. The corrective actions taken were effective and the station is in compliance with requirements. This commitment is considered as historical and may be deleted from future commitment programmatic tracking since upgraded industry / PBAPS standards have eliminated the need for detailed tracking of this commitment. Upgraded procedure quality and site operating practices justify the allowance for deleting this commitment.

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Letter Source: Letter to NRC dated 12/31/86, Response to NRC Inspection Report 86-21/22

Exelon Tracking No.: T03339

Nature of Commitment: Generate procedures to require company approval of radwaste computer programs prior to their use

Summary of Justification:

Upgrades in the radwaste shipping program have resulted in substantial improvements in the control of radwaste since this commitment was made. The corrective actions taken were effective and the station is in compliance with requirements. This commitment is considered as historical and may be deleted from future commitment programmatic tracking since upgraded industry / PBAPS standards have eliminated the need for detailed tracking of this commitment. Upgraded procedure quality and site operating practices justify the allowance for deleting this commitment.

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Letter Source:	Letter to NRC dated 6/13/78, Response to NRC Inspection Report 78-09-12
Exelon Tracking No.:	T03342
Nature of Commitment:	Revise primary containment vacuum breaker surveillances to either perform a bypass test or evaluate differential pressure to ensure that the vacuum breakers are closed

Summary of Justification:

Upgrades in surveillances have resulted in substantial improvements in the conduct of surveillance tests. The corrective actions taken were effective and the station is in compliance with requirements. This commitment is considered as historical and may be deleted from future commitment programmatic tracking since upgraded industry / PBAPS standards have eliminated the need for detailed tracking of this commitment. Upgraded procedure quality and site operating practices justify the allowance for deleting this commitment.

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Letter Source:	Letter to NRC dated 3/16/95, Response to NRC Inspection Report 95-01
Exelon Tracking No.:	T03909
Nature of Commitment:	Improve control of shielding installations with engineering change documentation, 10 CFR 50.59 reviews and health physics procedures

Summary of Justification:

Upgrades in the control of shielding have resulted in substantial improvements. The corrective actions taken were effective and the station is in compliance with requirements. This commitment is considered as historical and may be deleted from future commitment programmatic tracking since upgraded industry / PBAPS standards have eliminated the need for detailed tracking of this commitment. Upgraded procedure quality and site operating

practices justify the allowance for deleting this commitment.

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Letter Source: Letter to NRC dated 7/7/97, Response to NRC Inspection Report 97-02

Exelon Tracking No.: T04024

Nature of Commitment: Establish training requirements for personnel performing scaffold installation

Summary of Justification:

Upgrades in the training program have resulted in substantial improvements in ensuring appropriate training is administered to personnel involved with scaffolds. A standard training program is in place in accordance with improved industry / PBAPS standards. Therefore, this commitment is considered to be historical in nature. The corrective actions taken were effective and the station is in compliance with requirements. There is no longer a need to track this commitment.

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Letter Source: Letter to NRC dated 1/29/98, Response to NRC inspection Report 97-07

Exelon Tracking No.: T04047

Nature of Commitment: Upgrade vendor training to emphasize the need for open dialogue with supervision

Summary of Justification:

Upgrades in the training program have resulted in substantial improvements in ensuring appropriate training is administered to vendor personnel including open communications. A standard training program is in place in accordance with improved industry / PBAPS standards. Therefore, this commitment is considered to be historical in nature. The corrective actions taken were effective and the station is in compliance with requirements. There is no longer a need to track this commitment.

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Letter Source: Letter to NRC dated 6/3/98, Response to NRC Inspection Report 98-01

Exelon Tracking No.: T04143

Nature of Commitment: Revise operations manual to reflect expectation that when the

control room supervisor moves to other areas of the control room that another senior licensed operator is in the controls area

Summary of Justification:

Upgrades in the operations administrative procedures have resulted in substantial improvements to operations conduct. The corrective actions taken were effective and the station is in compliance with requirements. This commitment is considered as historical and may be deleted from future commitment programmatic tracking since upgraded industry / PBAPS standards have eliminated the need for detailed tracking of this commitment. Upgraded procedure quality and site operating practices justify the allowance for deleting this commitment.

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Letter Source: Letter to NRC dated 7/10/98, Response to NRC Inspection Report 98-05

Exelon Tracking No.: T04422

Nature of Commitment: Improve performance monitoring of plant equipment by system managers

Summary of Justification:

Upgrades in the conduct of plant engineering have resulted in substantial improvements in the performance monitoring of plant equipment. The corrective actions taken were effective and the station is in compliance with requirements. This commitment is considered as historical and may be deleted from future commitment programmatic tracking since upgraded industry / PBAPS standards have eliminated the need for detailed tracking of this commitment. Upgraded procedure quality and site operating practices justify the allowance for deleting this commitment.

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End of Commitment Revision Report

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