Exelon Generation

RS-16-103 Order No. EA-12-049

June 30, 2016

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

Peach Bottom Atomic Power Station, Units 2 and 3
Renewed Facility Operating License Nos. DPR-44 and DPR-56
NRC Docket Nos. 50-277 and 50-278

Subject: Mitigating Strategies Flood Hazard Assessment (MSFHA) Submittal

References:

1. NRC Letter, Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Recommendations 2.1, 2.3, and 9.3, of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident; dated March 12, 2012

2. Exelon Generation Company, LLC Letter to USNRC, Response to March 12, 2012 Request for Information Enclosure 2, Recommendation 2.1, Flooding, Required Response 2, Flooding Hazard Reevaluation Report, dated August 12, 2015 (RS-15-163)

3. Exelon Generation Company, LLC Letter to USNRC, Supplemental Response to NRC Audit Review Request for Additional Information Regarding Fukushima Lessons Learned – Flood Hazard Reevaluation Report, dated April 4, 2016 (RS-16-066)

4. NRC Letter, Supplemental Information Related to Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) regarding Flooding Hazard Reevaluations for Recommendation 2.1 of the Near Term Task Force Review of Insights from the Fukushima Dai-ichi Accident, dated March 1, 2013

5. NRC Staff Requirements Memoranda to COMSECY-14-0037, "Integration of Mitigating Strategies for Beyond-Design-Basis External Events and the Reevaluation of Flooding Hazards", dated March 30, 2015

6. NRC Letter, Coordination of Requests for Information Regarding Flooding Hazard Reevaluations and Mitigating Strategies for Beyond-Design-Basis External Events, dated September 1, 2015

7. Nuclear Energy Institute (NEI), Report NEI 12-06 [Rev 2], Diverse and Flexible Coping Strategies (FLEX) Implementation Guide, dated December 2015

8. U.S. Nuclear Regulatory Commission, JLD-ISG-2012-01, Revision 1, Compliance with Order EA-12-049, Order Modifying Licenses with Regard to Requirements for Mitigating Strategies for Beyond-Design-Basis External Events, dated January 22, 2016

9. NRC Letter, Peach Bottom Atomic Power Station, Units 2 and 3 – Interim Staff Response to Reevaluated Flood Hazards Submitted in Response to 10 CFR 50.54(f) Information Request – Flood-Causing Mechanism Reevaluation (CAC Nos. MF6598 and MF6599), dated March 31, 2016

On March 12, 2012, the NRC issued Reference 1 to request information associated with Near-Term Task Force (NTTF) Recommendation 2.1 for Flooding. One of the Required Responses in Reference 1 directed licensees to submit a Flood Hazard Reevaluation Report (FHRR). For Peach Bottom Atomic Power Station, Units 2 and 3 the FHRR was submitted on August 12, 2015 (Reference 2). Additional information was provided with Reference 3. Per Reference 4, the NRC considers the reevaluated flood hazard to be "beyond the current design/licensing basis of operating plants".

Concurrent to the flood hazard reevaluation, Peach Bottom Atomic Power Station, Units 2 and 3 developed and implemented mitigating strategies in accordance with NRC Order EA-12-049, "Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events". In Reference 5, the NRC affirmed that licensees need to address the reevaluated flooding hazards within their mitigating strategies for beyond-design-basis (BDB) external events, including the reevaluated flood hazards. This requirement was confirmed by the NRC in Reference 6. Guidance for performing mitigating strategies flood hazard assessments (MSFHAs) is contained in Appendix G of Reference 7, endorsed by the NRC in Reference 8. For the purpose of the MSFHAs and in Reference 6, the NRC termed the reevaluated flood hazard, summarized in Reference 9, as the "Mitigating Strategies Flood Hazard Information" (MSFHI). Reference 7, Appendix G, describes the MSFHA for flooding as containing the following elements:

- Section G.2 – Characterization of the MSFHI
- Section G.3 – Basis for Mitigating Strategy Assessment
- Section G.4.1 – Assessment of Current FLEX Strategies (if necessary)
- Section G.4.2 – Assessment for Modifying FLEX Strategies (if necessary)
- Section G.4.3 – Assessment of Alternative Mitigating Strategies (if necessary)
- Section G.4.4 – Assessment of Targeted Hazard Mitigating Strategies (if necessary)

In Reference 9, the NRC concluded that the "reevaluated flood hazards information, as summarized in the Enclosure [to Reference 9], is suitable for the assessment of mitigating strategies developed in response to Order EA-12-049" for Peach Bottom Atomic Power Station, Units 2 and 3.

The enclosure to this letter provides the Mitigating Strategies Assessments for Flooding Report for the Peach Bottom Atomic Power Station, Units 2 and 3. The assessment concluded that the existing FLEX strategy can be successfully implemented and deployed as designed for all applicable-flood causing mechanisms. For the local intense precipitation event, the assessment showed that storage and deployment of FLEX equipment is not adversely impacted and no

additional actions or procedural changes were required. For the river flood, including upstream dam failure, the assessment showed that the FLEX design basis flood completely bounds the reevaluated flood (i.e., MSFHI). However, the MSFHI did provide a value for time available to pre-stage FLEX equipment in the event that river level is expected to restrict access to the site. The assessment considered this time value and concluded that the FLEX strategy did not need to be modified for the river flood.

This letter contains no new regulatory commitments. If you have any questions regarding this report, please contact David P. Helker at (610) 765-5525.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 30th day of June 2016.

Respectfully submitted,

James Barstow
Director - Licensing & Regulatory Affairs
Exelon Generation Company, LLC

Enclosure: Peach Bottom Atomic Power Station, Units 2 and 3, Mitigating Strategies Assessments for Flooding Report, dated June 30, 2016

cc: Director, Office of Nuclear Reactor Regulation
NRC Regional Administrator - Region I
NRC Senior Resident Inspector – Peach Bottom Atomic Power Station
NRC Project Manager, NRR – Peach Bottom Atomic Power Station
Ms. Tekia Govan, NRR/JLD/JHMB, NRC
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Enclosure

Peach Bottom Atomic Power Station, Units 2 and 3

Mitigating Strategies Assessments for Flooding Report

dated June 30, 2016

(10 Pages)

Mitigating Strategies Assessments for Flooding

Peach Bottom Atomic Power Station, Units 2 and 3

June 30, 2016

Contents

1 Executive Summary

The Mitigating Strategies Flood Hazard Information (MSFHI), submitted with the Flood Hazard Reevaluation Report (FHRR), resulted in combined-effect flood hazard parameters for the Susquehanna River, including the Probable Maximum Precipitation (PMP)/Probable Maximum Flood (PMF) and upstream dam failure, that are bounded by the FLEX design basis (DB) flood hazard (equivalent to the DB flood hazard). Other flood-causing mechanisms from the Susquehanna River, including storm surge, seiche, and ice-induced flooding, were not explicitly addressed in the FLEX DB but are completely bounded by the PMF/dam failure combined-effect flood. Therefore, the FLEX DB completely bounds all MSFHI for the Susquehanna River and a Mitigating Strategies Assessment (MSA) is not required for this flood-causing mechanism.

The only MSFHI flood-causing mechanism considered in the MSA is the Local Intense Precipitation (LIP) flood. A MSA for the LIP event was conducted, which resulted in no changes to the FLEX strategy. Pre-staging of FLEX equipment is not required for a LIP flood because a LIP event is short term with insignificant consequences and resulting water level will not obstruct the travel path. LIP does not impact the FLEX strategy as designed, which can be deployed fully with no additional operator actions.

2 List of Acronyms

- AMS – Alternate Mitigation Strategy
- BDBEE – Beyond Design Basis External Event
- CLB – Current Licensing Basis
- C.D. – Conowingo Datum, elevation equal to Mean Sea Level minus 0.7 feet
- DB – Design Basis
- ELAP – Extended Loss of A/C Power
- EOP – Emergency Operating Procedure
- FHRR – Flood Hazard Reevaluation Report
- FLEX – Strategy response to an ELAP and LUHS, postulated from a BDBEE
- FLEX DB – FLEX Design Basis (flood hazard); the controlling flood parameters used to develop the FLEX strategy, including Holtwood dam failure and wave effects
- FSG – FLEX Support Guideline (procedure)
- LIP – Local Intense Precipitation (1 square mile at PBAPS)
- LUHS – Loss of Ultimate Heat Sink
- MSA – Mitigating Strategies Assessment
- MSFHA – Mitigating Strategy Flood Hazard Assessment
- MSFHI – Mitigating Strategy Flood Hazard Information
- NRC – Nuclear Regulatory Commission
- NTTF – Near-Term Task Force
- PBAPS – Peach Bottom Atomic Power Station, Units 2 and 3
- PMF – Probable Maximum Flood
- PMP – Probable Maximum Precipitation
- RCIC – Reactor Core Isolation Cooling (system)
- RHR – Residual Heat Removal (system)
- RPV – Reactor Pressure Vessel
- SE – Special Event (procedure)
- SFP – Spent Fuel Pool
- SRV – Safety Relief Valve
- THMS – Targeted Hazard Mitigating Strategy
- TRIPs – Transient Response Implementation Procedures
- UFSAR – Updated Final Safety Analysis Report
- USACE – U.S. Army Corps of Engineers

3 Background

3.1 Purpose

On March 12, 2012, the NRC issued Reference 1 to request information associated with NTTF Recommendation 2.1 for Flooding. One of the required responses in Reference 1 directed licensees to submit a FHRR. The PBAPS FHRR was submitted on August 12, 2015 (Reference 2). Additional information was provided with Reference 3. Per Reference 4, the NRC considers the reevaluated flood hazard to be "beyond the design/licensing basis of operating plants".

Concurrent to the flood hazard reevaluation, PBAPS developed and implemented mitigating strategies in accordance with NRC Order EA-12-049, "Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events". Those strategies are described in the Peach Bottom Implementation of Diverse and Flexible Coping Strategies (FLEX) and Spent Fuel Pool Instrumentation Program (Reference 10).

In Reference 5, the Commission affirmed that licensees need to address the reevaluated flooding hazards within their mitigating strategies for BDBEE's. This requirement was confirmed by the NRC in Reference 6. Guidance for performing MSFHAs is contained in Appendix G of Reference 7, endorsed by the NRC in Reference 8. For the purpose of the MSFHAs and in Reference 6, the NRC termed the reevaluated flood hazard, summarized in References 9, as the MSFHI. Reference 7, Appendix G, describes the MSFHA for flooding as containing the following elements:

- Section G.2 – Characterization of the MSFHI
- Section G.3 – Basis for Mitigating Strategy Assessment (MSFHI-FLEX DB Comparison)
- Section G.4.1 – Assessment of current FLEX Strategy (if necessary)
- Section G.4.2 – Assessment for modifying FLEX Strategy (if necessary)
- Section G.4.3 – Assessment of AMS (if necessary)
- Section G.4.4 – Assessment of THMS (if necessary)

If a Section G.3 assessment shows that the FLEX DB flood completely bounds the reevaluated flood (i.e. MSFHI), only documentation for Sections G.2 and G.3 are required; assessments and documentation for the remaining sections (G.4.1 through G.4.4) are not necessary.

3.2 Site Description

PBAPS is located on the west bank of the Conowingo Pond, a large run-of-river reservoir of the Susquehanna River, about 38 miles north-northwest of Baltimore, Maryland. Conowingo Pond is formed by the backwater of the Conowingo Dam, located about 9 miles downstream. The Holtwood Dam, about 6 miles upstream from PBAPS, forms the upper limit of Conowingo Pond. The PBAPS site is approximately 620 acres and contains two operating BWR's (Units 2 and 3). Unit 1 was an experimental reactor that operated from 1967 through 1974, and now is in Safe Storage status.

The Susquehanna River drains an area of approximately 27,000 square miles upstream from PBAPS. The Susquehanna River watershed is regulated by 14 USACE flood control dams, located in the headwater portions of the watershed. The PBAPS finished grade has been established at 116 feet C.D. Grade rises abruptly surrounding the reactor building to elevation 135 feet C.D. on the west side of the site protected area (away from the Conowingo Pond). On both sides of Conowingo Pond, steeply sloping hills rise to about 300 feet above plant grade. Normal elevation of Conowingo Pond is maintained between 104 and 109.25 feet C.D at PBAPS.

3.3 Overview of FLEX Strategy

The FLEX strategy mitigates of the effects of an ELAP and LUHS, postulated from a BDBEE, by providing adequate capability to maintain or restore core cooling, containment, and SFP cooling capabilities at both units. The strategy is diverse and flexible to encompass a wide range of possible conditions, and is incorporated into the station's EOPs and FSGs. In the event of a river PMF, there is sufficient time to pre-deploy the FLEX equipment.

At the initiation of the event the operators will enter the TRIPs, which are the PBAPS specific EOPs, and procedure SE-11 (Loss of Offsite Power). FSGs will be entered when there has been a loss of offsite power, including the Conowingo Tie Line, and failure of the Emergency Diesel Generators, with confirmation of no imminent return to service of any of these power sources. The operators will line-up a pneumatic supply to the SRVs and commence a DC load shed. A gradual cooldown of the RPV will be performed with SRVs, and RPV pressure will be maintained at approximately 200 psig.

Initial RPV water level control will be accomplished using the RCIC System. The RCIC pump can take suction from the suppression pool (Torus), which is qualified to withstand a seismic event. The ELAP event will cause the RPV to be isolated from the Main Condenser. Pressure in the RPV will be controlled by manual and/or automatic actuation of the SRVs.

Station personnel will line-up portable FLEX Pumps to supply makeup water to the RPV, Torus and/or the SFP; and portable FLEX Generators to re-energize 480V AC components and 125V DC battery chargers. The FLEX Pumps will take suction from the Emergency Heat Sink (Emergency Cooling Tower) or the Ultimate Heat Sink (Conowingo Pond), and discharge through hoses. Ultimately this water would be supplied, via the RHR System, into the Torus, the RPV, and/or the SFP.

The FLEX electrical strategy utilizes two (2) quick-connection panels per unit, for connecting one (1) FLEX Generator. Two connection panels provide for redundancy and flexibility, only one of the two is required for full FLEX electrical capability. The electrical connection panels, the FLEX Generator staging areas, and the FLEX equipment fuel oil supply access are at elevations higher than the bounding FLEX DB flood level.

The FLEX mechanical strategy utilizes two (2) quick-connection locations per unit, for connecting one (1) FLEX Pump. Two connection locations provide for redundancy and flexibility, only one of the two is required for full FLEX makeup capability. One of the connection locations is in the Reactor Building, protected from the bounding FLEX DB flood. One of the FLEX Pump staging areas is at an elevation higher than the bounding FLEX DB flood level.

The FLEX equipment including FLEX Generators, cable trailers, FLEX Pumps, and hose trailers, are stored in a BDBEE-protected structure at an elevation lower than the bounding FLEX DB flood level. Sufficient warning time is available to pre-stage the FLEX equipment. Procedural guidance ensures that FLEX equipment will be relocated to the designated staging areas prior to the arrival of the postulated, bounding FLEX DB flood.

4 Characterization of MSFHI (NEI 12-06, Rev 2, Section G.2)

NRC has completed the "Interim Staff Response to Reevaluated Flood Hazards" (Reference 9) to the flood hazards information submitted in the Flood Hazard Reevaluation Report (Reference 2) and additional information submitted in Reference 3. The NRC "staff has concluded that the licensee's reevaluated flood hazard information is suitable for the assessment of mitigation strategies developed in response to Order EA-12-049 (i.e., defines the mitigating strategies flood hazard information described in Nuclear Energy Institute (NEI) guidance document NEI 12-06 (Reference 7)) for Peach Bottom". Enclosure 1 to Reference 9 includes a summary of the DB and reevaluated flood hazard (i.e. MSFHI) parameters, respectively. Table 1 of Enclosure 1 to Reference 9 lists the following flood-causing mechanisms for the DB flood hazards.

- Local Intense Precipitation;
- Streams and Rivers;
- Failure of Dams and Onsite Water Control/Storage Structures;
- Storm Surge;
- Seiche;
- Tsunami;
- Ice Induced Flooding; and
- Channel Migrations/Diversions.

Table 2 of Enclosure 1 to Reference 9 lists the MSFHI parameters (specifically still-water elevation and wind-wave run-up elevation) for the following flood-causing mechanisms that are not bounded by the DB hazard and are to be used in the MSA:

- Local Intense Precipitation;
- Storm Surge;
- Seiche; and
- Ice Induced Flooding.

These are the reevaluated flood-causing mechanisms that are addressed in the Peach Bottom MSA. These mechanisms are consistent with those documented in the Peach Bottom FHRR, which has been submitted to (and reviewed by) the NRC in References 2 and 3. A more detailed description of these reevaluated flood-causing mechanisms, along with the basis for inputs, assumptions, methodologies, and models, is provided in the following references:

- Local Intense Precipitation (LIP): See Section 3.1 of Reference 2, Enclosure 1.
- Storm Surge and Seiche: See Section 3.4 of Reference 2, Enclosure 1.
- Ice-Induced Flooding: See Section 3.7 of Reference 2, Enclosure 1.

5 Basis for Mitigating Strategy Assessment (NEI 12-06, Rev 2, Section G.3)

For Peach Bottom, the FLEX DB flood, described in Reference 10, is equivalent to the plant's CLB flood. A complete comparison of the CLB and reevaluated flood hazards is provided in Section 4 of Reference 2, Enclosure 1.

The CLB flood hazard and, by relationship, the FLEX DB flood hazard did not consider the LIP flood and, as a result, do not bound the MSFHI. Therefore, further assessment of FLEX for the LIP flood is included in Section 6.

As indicated in Reference 2, storm surge, seiche, and ice-induced flooding, while not explicitly addressed in the CLB and FLEX DB flood hazards, were determined to be completely bounded by other MSFHI flood-causing mechanisms. The MSFHI for these mechanisms do not result in a water level exceeding the lowest plant grade elevation (115 feet C.D.) and do not challenge plant safety or the FLEX strategy. Therefore, no further assessment of FLEX for storm surge, seiche, and ice-induced flooding is required or included. Reference 2 also determined that the CLB and, by relationship, the FLEX DB completely bound the MSFHI for the "rivers and streams" flood-causing mechanism, including related combined-effects floods and hydrologically-induced upstream dam failure. This was affirmed by the NRC in Reference 9. However, the MSFHI did provide a value for time available to pre-deploy FLEX equipment in the event that river level is expected to restrict access to the site. Therefore, further assessment of FLEX for "rivers and streams" flooding, or related combined-effects floods, are provided in Section 6.

6 Assessment of Current Flex Strategy (NEI 12-06, Rev 2, Section G.4.1)

6.1 Assessment Methodology and Process

Local Intense Precipitation Flooding

- LIP is a short duration, low impact event at PBAPS and does not adversely impact the FLEX strategies. The MSFHI for LIP does not cause the ELAP/LUHS. Assuming the ELAP/LUHS occurs at the peak of the LIP, the LIP flood would completely drain from the site prior to significant FLEX deployment activities. The storage and deployment of FLEX equipment is not adversely impacted by the results of LIP. No LIP flood protection features are credited in the FLEX strategy to meet performance criteria. No procedural changes or additional actions are required due to LIP.

River Flooding

- In the sequence of events for the FLEX strategies, the FLEX DB flood is the same as the PBAPS DB flood, which is the same as the PBAPS CLB flood documented in the UFSAR. PBAPS is flood protected to elevation 135-ft (C.D.). The MSFHI flood level is 127.6-ft (C.D.). Therefore, PBAPS has over seven (7) feet of flood protection margin above the MSFHI flood level, and the reevaluated flood hazard is bounded by and is less impactful than the DB flood. The ELAP is assumed to occur at peak reevaluated flood level because that is the most extreme flood condition.

- The PBAPS FLEX strategy pre-stages FLEX equipment if river elevation is predicted to impede access along the equipment deployment path. This time is 78 hours from onset of PMP to river level above normal (109-ft (C.D.)); and an additional 24 hours from above normal level until flood water reaches site grade (115-ft (C.D.)).

- Although the PBAPS FLEX equipment is stored below flood level, time is available and station procedures and guidance address the needed actions. The FLEX equipment will be relocated to a position higher than the flood elevation, prior to the arrival of flood levels that could potentially impede access. The relocation strategy takes into account the increasing flood levels, and not just the ultimate flood height.

    - The guidance for protection of FLEX equipment (NEI 12-06, Rev 2, Section 11.3) was followed, and the FLEX equipment is not impacted by MSFHI.

    - No flood protection features are credited in the FLEX strategy to meet performance criteria (NEI 12-06, Rev 2, Section G.5).

- Deployment of FLEX equipment (Section 6.2.3.2 of NEI 12-06, Rev 2)

    - The deployment of FLEX Equipment is not impacted by MSFHI. There is adequate warning time, before flood waters impede access, to pre-stage FLEX Equipment. FLEX equipment fuel is readily available at an elevation higher than the flood elevation. The time available to pre-deploy FLEX equipment, determined by the MSFHI for the river flood, is sufficient in accordance with approved site procedures.

    - FLEX equipment staging areas and connection points for the pump discharge and generator are at an elevation higher than the FLEX DB flood and the MSFHI flood elevation. FLEX pump suction requires working at an elevation just below the maximum MSFHI flood elevation. However, there is adequate time to make this connection prior to arrival of flood waters. Making this connection is part of the pre-deployment strategy. Availability and access to connection points is not impacted by the MSFHI.

    - There are no temporary flood barriers used in the PBAPS FLEX strategy

- Procedural Interfaces (Section 6.2.3.3 of NEI 12-06, Rev 2)

    - No procedural changes are required due to MSFHI. PBAPS procedure SE-4 already addresses pre-staging of FLEX equipment.

- Utilization of Off-Site Resources (Section 6.2.3.4 of NEI 12-06, Rev 2)

    - Site access routes are not impacted by MSFHI. FLEX Equipment will be pre-deployed via the most direct access route from the FLEX Equipment Storage Building to the FLEX Equipment staging area. There is no change to access route due to MSFHI. The PBAPS strategy is to stage on-site and pre-deploy, in lieu of obtaining resources from off-site during the flood.

- The FLEX equipment storage meets the guidance of Section 11.3 of NEI 12-06, Rev 2, considering the impacts of the MSFHI.

- The impacts of the MSFHI have been used in place of the FLEX DB flood in the consideration of robustness of plant equipment. The FLEX DB bounds the MSFHI for the most limiting river flood event. Therefore, use of the MSFHI in lieu of the DB only increases margin of flood protection for safety-related SSCs.

- The MSFHI water level does not adversely impact the location of connection points (Section 3.2.2.17 of NEI 12-06, Rev 2). The primary connection point is an installed connection suitable for both the on-site and off-site FLEX Equipment. The location of

the connection points provides reasonable assurance of that at least one connection will be available.

- All flood protection features credited in the FLEX strategies are permanent/passive features (seals and walls) and meet the performance criteria in Section G.5. The DB provides governance for the design capacity of these features since it bounds the MSFHI for the river flood. Adequacy of the penetration seals were addressed with the NTTF Recommendation 2.3 Flooding Walkdowns (references 11 and 12).

6.2 Results

- For the river flood:
  - All boundary conditions and assumptions made in the initial FLEX design are maintained. There are no differences. The MSFHI is bounded by the FLEX DB.
  - The sequence of events for the FLEX strategies is not impacted by MSFHI (including impacts due to the environmental conditions created by MSFHI) in such a way that the FLEX strategies cannot be implemented as currently developed. There are no impacts. The MSFHI is bounded by the FLEX DB.
  - The validation performed for the deployment of the FLEX strategies is not impacted by MSFHI. There are no impacts. The MSFHI is bounded by the FLEX DB.
- The LIP flood does not adversely impact the FLEX strategies and no procedural changes or additional actions are required.

6.3 Conclusions

The assessment concluded that the existing FLEX strategy can be successfully implemented and deployed as designed for all applicable-flood causing mechanisms. For the LIP event, the assessment showed that storage and deployment of FLEX equipment is not adversely impacted and no additional actions or procedural changes were required. For the river flood, including upstream dam failure, the assessment showed that the FLEX DB flood completely bounds the MSFHI. However, the MSFHI did provide a value for time available to pre-stage FLEX equipment in the event that river level is expected to restrict access to the site. The assessment considered this time value and concluded that the FLEX strategy did not need to be modified for the river flood.

7 References

1. NRC Letter, Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Recommendations 2.1, 2.3, and 9.3, of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident; dated March 12, 2012.

2. Exelon Generation Company, LLC Letter to USNRC, Response to March 12, 2012, Request for Information Enclosure 2, Recommendation 2.1, Flooding, Required Response 2, Flooding Hazard Reevaluation Report, dated August 12, 2015 (RS-15-163).

3. Exelon Generation Company, LLC Letter to USNRC, Supplemental Response to NRC Audit Review Request for Additional Information Regarding Fukushima Lessons Learned – Flood Hazard Reevaluation Report, dated April 04, 2016 (RS-16-066).

4. NRC Letter, Supplemental Information Related to Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) regarding Flooding Hazard Reevaluations for Recommendation 2.1 of the Near Term Task Force Review of Insights from the Fukushima Dai-ichi Accident, dated March 1, 2013.

5. NRC Staff Requirements Memoranda to COMSECY-14-0037, "Integration of Mitigating Strategies for Beyond-Design-Basis External Events and the Reevaluation of Flooding Hazards", dated March 30, 2015.

6. NRC Letter, Coordination of Requests for Information Regarding Flooding Hazard Reevaluations and Mitigating Strategies for Beyond-Design-Basis External Events, dated September 1, 2015.

7. Nuclear Energy Institute (NEI), Report NEI 12-06 [Rev 2], Diverse and Flexible Coping Strategies (FLEX) Implementation Guide, dated December 2015.

8. U.S. Nuclear Regulatory Commission, JLD-ISG-2012-01, Revision 1, Compliance with Order EA-12-049, Order Modifying Licenses with Regard to Requirements for Mitigating Strategies for Beyond-Design-Basis External Events, dated January 22, 2016 [Effective February 29, 2016 per Federal Register / Vol. 81, No. 39].

9. NRC Letter to Exelon, "Peach Bottom Atomic Power Station, Units 2 and 3 – Interim Staff Response to Reevaluated Flood Hazards Submitted in Response to 10 CFR 50.54(f) Information Request – Flood-Causing Mechanism Reevaluation (CAC NOS. MF6598 and MF6599)", dated March 31, 2016 (ADAMS ML16091A136).

10. Peach Bottom Implementation of Diverse and Flexible Coping Strategies (FLEX) and Spent Fuel Pool Instrumentation Program (CC-PB-118).

11. Exelon Generation Company, LLC Letter to NRC, Response to Request for Information Regarding the Flooding Aspects of Recommendation 2.3, dated November 19, 2012 (RS-12-174).

12. Exelon Generation Company, LLC Letter to NRC, Supplemental Response to Request for Information Regarding the Flooding Aspects of Recommendation 2.3, dated January 29, 2016 (RS-16-012).