UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
2100 RENAISSANCE BOULEVARD, SUITE 100
KING OF PRUSSIA, PENNSYLVANIA 19406-2713

October 22, 2013

EA-13-046

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

SUBJECT: THREE MILE ISLAND STATION, UNIT 1 - NRC SUPPLEMENTAL INSPECTION REPORT 05000289/2013010 AND ASSESSMENT FOLLOW-UP LETTER

Dear Mr. Pacilio:

On September 13, 2013, the U. S. Nuclear Regulatory Commission (NRC) completed a supplemental inspection pursuant to Inspection Procedure (IP) 95001, "Supplemental Inspection for One or Two White Inputs in a Strategic Performance Area," at your Three Mile Island Unit 1 (TMI) facility. The enclosed inspection report (IR) documents the inspection results, which were discussed on September 13, 2013, with members of your staff.

As required by the NRC Reactor Oversight Process Action Matrix, this supplemental inspection was conducted because a finding of low to moderate safety significance (White) was identified in the fourth quarter of 2012. This issue was documented previously in NRC Inspection Report 05000289/2012005 dated February 11, 2013, and involved Exelon's failure to promptly identify, during external flood barrier walkdowns, that external flood barriers in the Three Mile Island (TMI) air intake tunnel (AIT) were not sealed, as designed, to maintain the integrity of the external flood barrier system. The significance of this issue was finalized in NRC Inspection Report 05000289/2013009 and the NRC staff was informed on July 26, 2013, of your staff's readiness for this inspection.

The objectives of this supplemental inspection were to provide assurance that: (1) the root causes and the contributing causes for the risk-significant issues were understood; (2) the extent of condition and extent of cause of the issues were identified; and (3) corrective actions were or will be sufficient to address and preclude repetition of the root and contributing causes. The inspection consisted of examination of activities conducted under your license as they related to safety, compliance with the Commission's rules and regulations, and the conditions of your operating license.

Based on the results of this inspection, the NRC concluded that, overall, the supplemental inspection objectives were met and no significant weaknesses were identified. Additionally, no findings of significance were identified.

Based on the guidance in IMC 0305, "Operating Reactor Assessment Program," and the results of this inspection, the White finding will be closed and Three Mile Island Unit 1 will transition from the Regulatory Response Column of the NRC's Action Matrix to the Licensee Response Column retroactive to the beginning of the fourth calendar quarter 2013.

In accordance with 10 CFR 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 Public Document Room or from the Publicly Available Records System (PARS) component of NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Gordon K. Hunegs, Chief
Reactor Projects Branch 6
Division of Reactor Projects

Docket No.: 50-289
License No.: DPR-50

Enclosure: Inspection Report 05000289/2013010
w/Attachment: Supplemental Information

cc w/encl: Distribution via ListServ

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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No.:	50-289
License No.:	DPR-50
Report No.:	05000289/2013010
Licensee:	Exelon Generation Company, LLC
Facility:	Three Mile Island Station, Unit 1
Location:	Middletown, PA 17057
Dates:	September 9, 2013 through September 13, 2013
Inspectors:	B. Bickett, Senior Project Engineer, Lead Inspector S. Rich, Vermont Yankee Resident Inspector
Approved by:	Gordon K. Hunegs, Chief Reactor Projects Branch 6 Division of Reactor Projects

SUMMARY OF FINDINGS

IR 05000289/2013010; 9/09/2013 – 9/13/2013; Three Mile Island, Unit 1; Supplemental Inspection – Inspection Procedure (IP) 95001

A senior project engineer and resident inspector from the Division of Reactor Projects, Region I, performed this inspection. No significant weaknesses or findings were identified in this report. 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.

Cornerstone: Mitigating Systems

The NRC staff performed this supplemental inspection in accordance with IP 95001, "Supplemental Inspection for One or Two White Inputs in a Strategic Performance Area," to assess Exelon's evaluation associated with a performance deficiency issued in Inspection Report 05000289/2012005 dated February 11, 2013. The performance deficiency was associated with Exelon's failure to promptly identify, during external flood barrier walkdowns, that external flood barriers in the Three Mile Island (TMI) air intake tunnel (AIT) were not sealed, as designed, to maintain the integrity of the external flood barrier system. Specifically, prior to actions taken in August 2012, flood barrier reviews and previous walkdowns conducted by Exelon staff did not identify or verify a number of electrical cable conduit couplings (Crouse-Hinds fittings), in the AIT, were installed with flood sealant, as designed.

Based on the results of the inspection, the inspectors concluded that Exelon had adequately performed a root cause analysis of the event and completed and/or planned corrective actions were reasonable to address the related issues. Based on the guidance in IMC 0305, "Operating Reactor Assessment Program," and the results of this inspection, the White finding will be closed and Three Mile Island Unit 1 will transition from the Regulatory Response Column of the NRC's Action Matrix to the Licensee Response Column retroactive to the beginning of the fourth calendar quarter 2013 (October 1, 2013). (Section 4OA4)

REPORT DETAILS

4. OTHER ACTIVITIES

4OA4 Supplemental Inspection (IP 95001)

.1 Inspection Scope

The NRC staff performed this supplemental inspection in accordance with IP 95001 to assess Exelon's evaluation of a White finding, which affected the Mitigating Systems cornerstone in the Reactor Safety strategic performance area. The inspection objectives were to:

- Provide assurance that the root and contributing causes of risk-significant issues were understood;
- Provide assurance that the extent of condition and extent of cause of risk- significant issues were identified; and
- Provide assurance that corrective actions for risk-significant issues were sufficient to address the root and contributing causes and to preclude repetition.

TMI Unit 1 entered the Regulatory Response Column of the NRC's Action Matrix in the fourth quarter of 2012 as a result of one inspection finding of low to moderate (White) safety significance. The White finding was associated with a performance deficiency issued in NRC Inspection Report 05000289/2012005 dated February 11, 2013, for Exelon's failure to promptly identify, during external flood barrier walkdowns, that external flood barriers in the Three Mile Island (TMI) air intake tunnel (AIT) were not sealed, as designed, to maintain the integrity of the external flood barrier system. The finding was characterized as having low to moderate (White) safety significance based on the results of a Phase 3 risk analysis performed by a region-based senior reactor analyst (SRA), as discussed in NRC Inspection Report 05000289/2013009.

Although it is likely that the condition existed from construction until 2012, the inspectors identified that the TMI engineering staff had relied on design and construction documentation, which indicated the flood sealant existed in the electrical conduit couplings, and did not independently verify this was the case prior to August 2012. Exelon staff implemented prompt interim compensatory actions to restore operability of the flood barrier system. These interim actions included staging sand and large earth-moving equipment which would be used to fill the underground cable vaults containing the entrance to the AIT cable conduits and, therefore, limit flood water leakage in order to maintain the decay heat removal function during a probable maximum flood (PMF) event. Exelon also installed flood seals upstream of the AIT conduits from the cable vaults in November 2012 to provide a watertight barrier. Specifically, the unsealed electrical conduits were sealed by the injection of a watertight qualified sealant material into the associated cable conduits from the cable vaults. The sealant material, as well as the underground concrete encased conduits, became the credited external flood barrier and met the current licensing basis requirements. Exelon staff informed the NRC staff on July 26, 2013 that they were ready for the supplemental inspection.

The inspectors reviewed Exelon's Root Cause Analysis (RCA) in addition to other evaluations conducted that supported the station's actions to address the performance issues involved. The inspectors reviewed corrective actions that were taken and/or planned to address the identified causes. The inspectors also held discussions with Exelon personnel to ensure that the root and contributing causes and the contribution of safety culture components were understood and corrective actions taken or planned were appropriate to address the causes and preclude repetition. Lastly, the inspectors conducted a flood barrier walkdown at the station which included inspection of the flood seals installed in the cable vaults.

.2 Evaluation of the Inspection Requirements

2.01 Problem Identification

a. As directed by IP 95001, determine that the evaluation documented who identified the issue (i.e., licensee-identified, self-revealing, or NRC-identified) and under what conditions the issue was identified.

The inspectors noted that Exelon's root cause analysis (RCA), as documented in issue report (IR) 1467101, describes the identification of the condition on August 2, 2012, during post-Fukushima flood walkdowns in which the NRC resident inspectors as well as Exelon contractors independently observed and questioned whether the Crouse-Hinds conduit fittings could be inspected to verify adequate internal sealant was present. Based on those questions, subsequent borescope inspection conducted by Exelon later determined that the sealant material was not present and that the flood barrier was degraded. The condition was reported by Exelon as a condition that could potentially impact the fulfillment of a safety function as reported in LER 2012-002-00 dated October 9, 2012.

Overall, the inspectors determined that Exelon's evaluation of the issue adequately documents the identification of the issue and the conditions under which the issue was identified.

b. As directed by IP 95001, determine that the evaluation documented how long the issue existed and prior opportunities for identification.

The inspectors noted that Exelon's RCA documented that the issue likely existed since construction of the plant. Exelon staff also considered and documented relevant opportunities for identification of degraded flood barriers, including AIT flood barriers, dating back as early as 1992. More importantly, the inspectors determined that Exelon appropriately focused greater attention on opportunities since 2007 for identification which could still be indicative or provide current station performance insights. In general, consistent with Exelon's overall analysis of the issue, the inspectors' determined that Exelon's 2010 activities to reconstitute the flooding design basis was the most relevant opportunity prior to August 2012 activities to have identified the degraded flood barriers in the AIT. Specifically, in the summer of 2010, Exelon personnel affirmed that these conduit fittings in the AIT were flood barriers but never challenged the assumption that the sealant was installed as expected.

Overall, the inspectors determined that Exelon's evaluation of the issue adequately documented how long the issue existed and prior opportunities for identification.

c. As directed by IP 95001, determine that the licensee's evaluation documents the plant specific risk consequences, as applicable, and compliance concerns associated with the issue(s).

Exelon documented their assessment of the aggregate, plant specific risk consequences associated with all flood protection deficiencies identified since September 2011 in technical evaluation (TE) 1399510-12. Exelon's analysis included the degraded AIT conduit seals without sealant material in addition to several other flood deficiencies. The inspectors noted that the analysis considered the full scope of those deficiencies and their aggregate effect on the capability to maintain a safe shutdown condition during a probable maximum flood event.

Exelon also documented and submitted related compliance concerns regarding the missing AIT conduit seals via LERs 2012-002-00 and 2012-002-01. Previously, as documented in IR 05000289/2013-003, NRC resident inspection staff closed those LERs with no additional findings of significance.

Overall, the inspectors determined that Exelon's evaluation of the issue adequately documented the plant specific risk consequences, as applicable, and compliance concerns associated with the issue.

d. Findings

No findings of significance were identified.

2.02 Root Cause, Extent of Condition, and Extent of Cause Evaluation

a. As directed by IP 95001, determine that the licensee evaluated the issue using a systematic methodology to identify the root and contributing causes.

The inspectors verified that the Exelon staff implemented LS-AA-125-1001, "Root Cause Analysis Manual," in the conduct of the station's cause analysis to identify the root and contributing causes. The station constructed an Event and Causal Factor chart supplemented by appropriate analysis techniques (E.g. TapRoot and Barrier Analysis) to identify and analyze causal factors. The inspectors noted these techniques were supported by data gathering via interviews and document reviews.

Overall, the inspectors determined that Exelon had evaluated the issue using a systematic methodology consistent with station procedures to identify root and contributing causes.

b. As directed by IP 95001, determine that the licensee's root cause evaluation was conducted to a level of detail commensurate with the significance of the issue.

Consistent with LS-AA-125-1001, "Root Cause Analysis Manual," and other applicable standards including LS-AA-125, "Corrective Action Program Procedure," Exelon conducted a RCA that identified causal factors associated with the discovery of a degraded flood barrier, specifically, the missing sealant in the AIT conduit seals. Exelon's root cause team determined that the station did not consider risk significance of external flood events or the consequence of flood barrier failure when validating flood protection features as a result of their station flood design reconstitution in 2010. Specifically, during that effort, station personnel initially determined that a number of flood protection features

were inaccessible by means of walkdowns and visual inspections, including the sealant installed in conduit seals in the AIT, and relied on design drawings and documentation to determine the features were adequate. However, the station did not sufficiently challenge these conclusions or inform those decisions with an evaluation that considered the risk significance of the feature, such as the consequence of flood barrier failure during an external flood event or the likelihood of overlooking deficiencies by not physically validating inaccessible flood protection features. Therefore, the station accepted the conclusion that sealant was likely present in the AIT conduit fittings based on design drawings and documentation reviews. The root cause team identified as a contributing factor that the flood protection system was not properly maintained due to inadequate design documentation and station knowledge prior to 2010, which prevented discovery before that time period.

Additionally, Exelon conducted a programmatic and organizational review to identify latent organization weaknesses as well as potential programmatic and organizational contributors which allowed a 'knowledge gap' with regard to flood barrier system knowledge to exist for a prolonged period of time when initially identified as a problem. Exelon issued corrective actions to address organizational aspects of the issue.

In coming to its conclusion, Exelon's root cause team implemented their procedures and processes to determine appropriate causal factors. Overall, the inspectors determined that Exelon's RCA was conducted to a level of detail commensurate with the significance of the issue.

c. As directed by IP 95001, determine that the licensee's root cause evaluation included a consideration of prior occurrences of the issue and knowledge of operating experience (OE).

Exelon reviewed OE from multiple sources including the Institute of Nuclear Power Operations (INPO), Exelon fleet corrective action program, site corrective action process as well as relevant NRC generic information and communication items. Exelon's root cause team identified several internal and external OE items that were relevant to the station's experience. Exelon used that information to inform the root cause process and corrective actions.

The inspectors reviewed the internal and external operating experience items that Exelon identified as prior occurrences and missed opportunities. The inspectors determined that Exelon's root cause team appropriately considered relevant OE to inform their investigation and causal determination process. Additionally, the inspectors determined that Exelon used applicable experience to inform corrective actions, including extent of condition and cause actions.

Overall, the inspectors determined that Exelon's RCA included a consideration of prior occurrences of the issue and knowledge of OE.

d. As directed by IP 95001, determine that the licensee's root cause evaluation addresses the extent of condition and extent of cause of the issue.

Exelon's root cause team identified extent of condition and cause actions that subsequently reviewed each of the other major contributors to external event risk; external flood, fire, and seismic events to affirm that necessary design and protection features

previously assumed to be inaccessible should be physically inspected or have an evaluation that determines failure of that barrier would not impact safe shutdown. Exelon personnel specifically re-assessed all external flood protection features previously classified as 'inaccessible' in their post-Fukushima 10 CFR 50.54(f) response, "Flooding Walkdown Report" and created actions to physically inspect, test or modify all inaccessible flood protection features unless an evaluation would show that the consequence of failure would not impact safe shutdown and was acceptable. Similarly, Exelon personnel confirmed that the Fire Protection Program was previously modified in the Fall of 2010 to integrate risk insights into the program's process for classification of fire barriers as inaccessible. Additionally, Exelon reviewed the post-Fukushima 10 CFR 50.54(f) response for seismic attachments and supports to verify adequate measures to physically confirm seismic features and that consideration of risk had been evaluated for inaccessible components.

The root cause team's extent of review also identified that there was not a station process for evaluation of degraded flood barrier conditions to ensure the risk associated with external floods is adequately addressed by current programs and procedures. Unlike technical specification operability or fire protection program guidelines, the station did not have pre-established guidelines to address degraded conditions of the flood barrier system. This, in part, resulted in ineffective allocation of resources and work priorities in addressing degraded flood barrier issues. The station created a procedure OP-TM-108-115, "Functionality Assessment for Flood Barrier System Degradation," to ensure consistency in application of a functionality assessment and compensatory measures necessary for degraded flood barrier system features that incorporates this risk consideration.

Overall, the inspectors determined that Exelon's root cause addressed the extent of condition and extent of cause of the issue.

e. As directed by IP 95001, determine that the licensee's root cause, extent of condition, and extent of cause evaluations appropriately considered the safety culture components as described in IMC 0305.

Exelon conducted a safety culture component assessment in accordance with procedure LS-AA-125-1001, "Root Cause Analysis Manual." Exelon evaluated the 13 safety culture components as described in IMC 0310, "Components with the Cross-Cutting Areas." Exelon's root cause team did not conclude any cross-cutting component was a stand-alone contributing causal factor. However, the root cause team, in its evaluation, appropriately identified station performance gaps with respect to aspects of human performance, decision-making and corrective action program prior opportunities for identification during its review.

Overall, the inspectors determined that Exelon's root cause report included a proper consideration of whether the root cause, extent of condition, and extent of cause evaluations appropriately considered the safety culture components.

f. Findings

No findings of significance were identified.

02.03 Corrective Actions

a. As directed by IP 95001, determine that (1) the licensee specified appropriate corrective actions for each root and/or contributing cause, or (2) an evaluation that states no actions are necessary is adequate.

Overall, the inspectors found that Exelon specified appropriate, corrective actions for the root cause, contributing causes, extent of cause, and extent of condition, listed in the RCA.

Exelon's corrective actions to address the root and contributing causes were assigned in accordance with Exelon procedures LS-AA-125-1001, "Root Cause Analysis Manual" and LS-AA-125, "Corrective Action Program Procedure." Exelon took prompt corrective actions to restore the integrity of the flood boundary system. These included a compensatory action to fill the affected cable vaults with sand in the event of a flood until the conduits could be sealed. Installation of new foam seals in all conduits leading to the air intake tunnel was completed in November 2012.

In addition to immediate corrective actions, a number of key corrective actions were identified as a result of the root cause evaluation:

- Process and procedure development with associated operator training for assessing degraded flood barrier functionality and the required compensatory measures for flood barrier issues;
- Development and implementation of a plan to physically confirm the integrity of all flood barriers previously described as inaccessible, unless failure of that protection feature would not have an adverse effect on the ability to achieve and maintain safe shutdown;
- Training on the design of the flood barrier system and the operator actions leading up to and during an external flooding event; and
- Actions to affirm the extent of the issues were not similarly present with regard to other external risk significant events.

Overall, the inspectors determined that the corrective actions were appropriate and addressed the root and contributing causes. However, the inspectors questioned the plan to confirm the integrity of all flood barriers. The root cause stated that all inaccessible flood protection features would be physically confirmed unless the failure would not adversely affect the capability to achieve and maintain safe shutdown. The inspectors determined that Exelon's inaccessible flood protection feature matrix did not provide sufficient documentation in this regard specific to floor drains. Specifically, the inspectors noted that some floor drain systems were identified as inaccessible with no action planned to physically confirm the drains met the original design and did not cross the flood boundary. The inspectors also determined it was not clearly documented why there would be no adverse impact on safe shutdown ability from an incorrectly installed floor drain system. Exelon provided additional information that supported physical walkdowns of accessible areas as well as design and modification reviews that confirmed drain paths had not been modified. Exelon documented the observation in the corrective action program as IR 1558082.

b. As directed by IP 95001, determine that the licensee prioritized corrective actions with consideration of risk significance and regulatory compliance.

Overall, the inspectors determined that Exelon had appropriately prioritized corrective actions with consideration of risk significance and regulatory compliance.

Exelon took immediate compensatory action to pre-stage equipment necessary to fill the affected electrical cable vaults with sand and took prompt corrective action to seal the conduits into the AIT with new seals. The corrective actions to prevent recurrence have been completed including development and implementation of the flood barrier degraded functionality assessment process. The action plan to address the remaining inaccessible areas outlined a timely schedule commensurate with risk significance considerations for inspection or modification of the inaccessible areas that could adversely impact safe shutdown if in a degraded condition. The inspectors noted overall corrective actions are prioritized consistent with station procedures as well as risk insights and are expected to be completed by summer of 2014. However, the inspectors observed that actions for modification and testing of items included in the flood protection feature matrix are not prioritized based on risk. The inspectors determined that overall actions to complete necessary modification and testing are prioritized appropriately when considering the scope of testing and modifications planned. However, the inspectors noted that additional risk prioritization of activities in the inaccessible flood protection feature matrix were not addressed. Exelon entered this observation into their corrective action program as IR 1558082.

c. As directed by IP 95001, determine that the licensee established a schedule for implementing and completing the corrective actions.

Overall, the inspectors determined that Exelon had established an appropriate schedule for implementing and completing the corrective actions.

Exelon assigned due dates for corrective actions in accordance with procedure LS-AA-125, “Corrective Action Program Procedure.” Due dates for corrective actions were established and documented in the RCE in a table format. The inspectors verified that corrective actions scheduled to be completed before the inspection were completed and appropriately documented, and reviewed the status of other assigned corrective actions.

d. As directed by IP 95001, determine that the licensee developed quantitative and/or qualitative measures of success for determining the effectiveness of the corrective actions to prevent recurrence.

Overall, the inspectors determined that Exelon developed quantitative and qualitative measures of success for determining the effectiveness of the corrective actions to prevent recurrence.

Exelon established measures for determining the effectiveness of the corrective actions in the RCE. These measures included the following:

- Verified the action plan was approved by the plant health committee and that the actions listed by the plan were created and approved;
- Interviewed operators to assess their knowledge of the flood barrier system; and
- Audited issue reports related to flood barriers and to verify that they contain the functionality assessment required by the new process.

The components of the effectiveness review were entered into the corrective action program. The inspectors determined that qualitative and quantitative measures of success had been developed for determining the effectiveness of the corrective action to prevent recurrence.

e. As directed by IP 95001, determine that the licensee's planned or taken corrective actions adequately address a Notice of Violation (NOV) that was the basis for the supplemental inspection, if applicable.

The NRC issued a NOV to Exelon on April 30, 2013 [Inspection Report 05000289/2013009]. At that time, the NRC concluded that no further information or written response was required regarding the circumstances surrounding the violation or with regard to corrective actions planned or taken. During this inspection, the inspectors confirmed that information the NRC was previously aware of and that Exelon's root cause evaluation and corrective actions adequately addressed the NOV.

f. Findings

No findings of significance were identified.

02.04 Evaluation of IMC 0305 Criteria for Treatment of Old Design Issues

The inspectors determined this issue did not meet the IMC 0305 criteria for treatment as an old design issue.

4OA6 Exit Meeting

On September 13, 2013, the inspectors presented the inspection results to Mr. Mark Newcomer, Plant Manager and other members of his staff, who acknowledged the findings. The inspectors asked Exelon if any of the material examined during the inspection should be considered proprietary. Exelon did not identify any proprietary information.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel
R. Libra, Site Vice President
M. Newcomer, Plant Manager
D. Atherholt, Regulatory Assurance Manager
W. McSorley, Senior Staff Engineer
F. McGuire, Engineer
J. Lopez Ferrer, Engineer
S. Taylor, Engineer
G. Ciraula, Engineering Manager
T. Arnold, Regulatory Specialist
D. Hass, Cycle Manager
M. Fitzwater, Regulatory Engineer
W. Croft, Regulatory Engineer

LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

Closed

05000289/2012005-03	NOV	Failure to Identify and Correct Missing Electrical Conduit Flood Seals in the Air Intake Tunnel

LIST OF DOCUMENTS REVIEWED

Condition Reports

00697596	00881153	01086844	01091213
01104245	01104952	01268247	01276881
01276883	01399510	01401487	01467101
01473083	01513468	01523263	015418000
01556586*	01558082*		

**Issued as a result of NRC inspection.*

Procedures
CC-AA-201, Plant Barrier Control Program, Rev. 6
CC-TM-201-1001, Plant Barrier Controls Program Implementation, Rev. 4
ER-TM-450, Structures Monitoring Program, Rev. 0
LS-AA-125-1001, Root Cause Analysis Manual, Rev. 10
LS-AA-125, Corrective Action Program Procedure, Rev. 17
OP-AA-108-115, Operability Determinations, Rev. 11
OP-TM-AOP-002, Flood, Rev. 3

Engineering Evaluations
ECR 12-00402, Revise AIT Flood Protection Boundary, Rev. 1

Technical Evaluation 1473081-03, Review of Extent of Concrete Joints for Flood Protection, Rev. 0
Technical Evaluation 1399510-12, Aggregate Consequences of All Flood Protection Deficiencies Identified since September 2011, Rev. 1

Miscellaneous
TMI Flood Barrier System Drawings (multiple)
SDBD-T1-122, System Design Basis Document for Flood Protection Systems, Rev. 3
Seismic Walkdown Report for the Three Mile Island Generating Station Unit 1, November 8, 2012
Flooding Walkdown Report for the Three Mile Island Generating Station Unit 1, November 2, 2012
NEI 12-07, Guidelines for Performing Verification Walkdowns of Plant Flood Protection Features, Rev. 0

LIST OF ACRONYMS USED

ADAMS	Agencywide Document Access Management System
AIT	Air Intake Tunnel
CAP	Corrective Action Program
CFR	Code of Federal Regulations
DRP	Division of Reactor Projects
IMC	Inspection Manual Chapter
INPO	Institute of Nuclear Power Operations
IR	Inspection Report
LER	Licensee Event Report
NEI	Nuclear Energy Institute
NOV	Notice of Violation
NRC	U. S. Nuclear Regulatory Commission
OE	Operating Experience
PARS	Publicly Available Records System
PMF	Probable Maximum Flood
RCA	Root Cause Analysis
SDP	Significance Determination Process
TE	Technical Evaluation
TMI	Three Miles Island Unit 1