

September 18, 2008

Mr. Charles G. Pardee
Chief Nuclear Officer
and Senior Vice President
Exelon Generation Company, LLC
Chief Nuclear Officer
AmerGen Energy Company, LLC
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: BRAIDWOOD STATION, UNITS 1 AND 2; BYRON STATION, UNIT NOS. 1 AND 2; DRESDEN NUCLEAR POWER STATION, UNITS 2 AND 3; LASALLE COUNTY STATION, UNITS 1 AND 2; LIMERICK GENERATING STATION, UNITS 1 AND 2; OYSTER CREEK NUCLEAR GENERATING STATION; PEACH BOTTOM ATOMIC POWER STATION, UNITS 2 AND 3; QUAD CITIES NUCLEAR POWER STATION, UNITS 1 AND 2; AND THREE MILE ISLAND NUCLEAR STATION, UNIT 1 - RE: GENERIC LETTER 2008-01, "MANAGING GAS ACCUMULATION IN EMERGENCY CORE COOLING, DECAY HEAT REMOVAL, AND CONTAINMENT SPRAY SYSTEMS," PROPOSED ALTERNATIVE COURSE OF ACTION (TAC NOS. MD7797, MD7798, MD7804, MD7805, MD7822, MD7823, MD7839, MD7840, MD7841, MD7842, MD7855, MD7860, MD7861, MD7868, MD7869, MD7888)

Dear Mr. Pardee:

On January 11, 2008, the Nuclear Regulatory Commission (NRC) issued Generic Letter (GL) 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems" (Agencywide Documents Access and Management System (ADAMS) Accession No. ML072910759). The GL requested licensees to submit information to demonstrate that the emergency core cooling, decay heat removal, and containment spray systems are in compliance with the current licensing and design bases and applicable regulatory requirements, and that suitable design, operational, and testing control measures are in place for maintaining this compliance.

In accordance with Section 50.54(f) of Title 10 of the *Code of Federal Regulations* (10 CFR), GL 2008-01 required that each licensee submit the requested information within 9 months of the date of the GL. The GL also stated that if a licensee cannot meet the requested 9-month response date, the licensee is required to provide a response within 3 months (hereinafter referred to as the "3-month submittal") of the date of the GL, describing the alternative course of action it proposes to take, including the basis for the acceptability of the proposed alternative course of action.

By letter dated April 11, 2008 (ADAMS Accession No. ML081020758), Exelon Generation Company, LLC, and AmerGen Energy Company, LLC (the licensees) replied to GL 2008-01 for the subject plants, and included 3-month responses for the following plants: Braidwood Station, Unit 1; Byron Station, Unit 2; Dresden Nuclear Power Station, Units 2 and 3; LaSalle County

C. Pardee

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Station, Units 1 and 2; Limerick Generating Station, Unit 2; Oyster Creek Nuclear Generating Station; Peach Bottom Atomic Power Station, Units 2 and 3; Quad Cities Nuclear Power Station, Unit 1; and Three Mile Island Nuclear Station, Unit 1. The NRC staff's assessment of the responses for each plant is contained in Enclosures 1 through 9 of this letter.

The NRC staff reviewed the licensees' proposed alternative course of action and the associated basis for acceptance for the above plants and concluded that, with the exception of the clarifications and associated requests discussed in the enclosures, it is acceptable. This letter allows the licensees to implement their proposed alternative course of action provided that implementation is consistent with the clarifications and associated requests discussed in the enclosures.

If you have any questions, please contact me at (301) 415-6606.

Sincerely,

/RA/

Joel Wiebe, Senior Project Manager
Plant Licensing Branch III-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. STN 50-456, STN 50-457,
STN 50-454, STN 50-455, 50-237,
50-249, 50-373, 50-374, 50-352, 50-353, 50-219,
50-277, 50-278, 50-254, 50-265, and 50-289

Enclosures:

Enclosure 1 – Braidwood Station, Unit 1
Enclosure 2 – Byron Station, Unit 2
Enclosure 3 – Dresden Nuclear Power Station, Units 2 and 3
Enclosure 4 – LaSalle County Station, Units 1 and 2
Enclosure 5 – Limerick Generating Station, Unit 2
Enclosure 6 – Oyster Creek Nuclear Generating Station
Enclosure 7 – Peach Bottom Atomic Power Station, Units 2 and 3
Enclosure 8 – Quad Cities Nuclear Generating Station, Unit 1
Enclosure 9 – Three Mile Island Nuclear Station, Unit 1

cc w/encl: See next page

Station, Units 1 and 2; Limerick Generating Station, Unit 2; Oyster Creek Nuclear Generating Station; Peach Bottom Atomic Power Station, Units 2 and 3; Quad Cities Nuclear Power Station, Unit 1; and Three Mile Island Nuclear Station, Unit 1. The NRC staff's assessment of the responses for each plant is contained in Enclosures 1 through 9 of this letter

The NRC staff reviewed the licensees' proposed alternative course of action and the associated basis for acceptance for the above plants and concluded that, with the exception of the clarifications and associated requests discussed in the enclosures, it is acceptable. This letter allows the licensees to implement their proposed alternative course of action provided that implementation is consistent with the clarifications and associated requests discussed in the enclosures.

If you have any questions, please contact me at (301) 415-6606.

Sincerely,
/RA/
 Joel Wiebe, Senior Project Manager
 Plant Licensing Branch III-2
 Division of Operating Reactor Licensing
 Office of Nuclear Reactor Regulation

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- Enclosure 2 – Byron Station, Unit 2
- Enclosure 3 – Dresden Nuclear Power Station, Units 2 and 3
- Enclosure 4 – LaSalle County Station, Units 1 and 2
- Enclosure 5 – Limerick Generating Station, Unit 2
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- Enclosure 7 – Peach Bottom Atomic Power Station, Units 2 and 3
- Enclosure 8 – Quad Cities Nuclear Generating Station, Unit 1
- Enclosure 9 – Three Mile Island Nuclear Station, Unit 1

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ADAMS Accession No. ML081710787

OFFICE	LPL3-2/PM	LPL3-2/LA	DSS/DD	DPR/PGCB/BC	LPL1-2/BC	LPL3-2/BC
NAME	JWiebe	THarris*	JWermiel	MMurphy	HChernoff (REnnis for)	RGibbs
DATE	9/17/08	9/17/08	9 / 16 /08	9 / 17 /08	9/17/08	9/18/08

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U.S. NUCLEAR REGULATORY COMMISSION

ASSESSMENT OF 3-MONTH RESPONSE

TO GENERIC LETTER 2008-01

BRAIDWOOD STATION, UNIT 1

DOCKET NO. 50-456

1. Background

On January 11, 2008, the Nuclear Regulatory Commission (NRC) issued Generic Letter (GL) 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems" (Agencywide Documents Access and Management System (ADAMS) Accession No. ML072910759). The GL requested licensees to submit information to demonstrate that the emergency core cooling, decay heat removal, and containment spray systems (hereinafter referred to as the "subject systems") are in compliance with the current licensing and design bases and applicable regulatory requirements, and that suitable design, operational, and testing control measures are in place for maintaining this compliance. Specifically, the GL requested licensees to provide: (1) a description of the results of evaluations that were performed in response to the GL; (2) a description of all corrective actions that the licensee determined were necessary; and (3) a statement regarding which corrective actions were completed, the schedule for completing the remaining corrective actions, and the basis for that schedule.

In accordance with Section 50.54(f) of Title 10 of the *Code of Federal Regulations* (10 CFR), GL 2008-01 required that each licensee submit the requested information within 9 months (hereinafter referred to as the "9-month submittal") of the date of the GL. The GL also stated that if a licensee cannot meet the requested 9-month response date, the licensee is required to provide a response within 3 months (hereinafter referred to as the "3-month submittal") of the date of the GL, describing the alternative course of action it proposes to take, including the basis for the acceptability of the proposed alternative course of action.

2. Licensee's Proposed Alternative Course of Action

By letter dated April 11, 2008 (ADAMS Accession No. ML081020758), Exelon Generation Company, LLC (the licensee) submitted a 3-month response to GL 2008-01 for Braidwood Station, Unit 1. The licensee stated they cannot meet the requested 9-month schedule for submitting the requested information because walkdowns of the GL subject systems of Unit 1 cannot be completed. The walkdowns cannot be completed because portions of the GL subject systems are inaccessible during power operation due to elevated dose rates.

The licensee also stated that all other GL actions will be completed during the 9-month timeframe prescribed in the GL (i.e., by October 11, 2008). As an alternative course of action, the licensee plans to complete walkdowns of those areas only accessible during an outage during the next refueling outage of Unit 1 scheduled for spring 2009. The licensee's letter dated April 11, 2008, listed the following commitments for Braidwood, Unit 1:

1. Complete detailed walkdowns of Unit 1 inaccessible piping sections of GL 2008-01 subject systems prior to startup from the spring 2009 refueling outage.
2. Complete evaluations of GL 2008-01 subject systems using the results of the detailed walkdowns of Unit 1 inaccessible piping sections within 60 days following startup from the spring 2009 refueling outage.
3. Submit a supplemental response to the NRC documenting completion of the Unit 1 walkdowns and any impact upon the GL 2008-01 9-month response as a result of completed evaluations within 90 days following startup from the spring 2009 refueling outage.

The licensee stated that the alternative course of action is acceptable based on the following:

1. operating experience, which includes system walkdowns;
2. detailed evaluations; and
3. testing.

Based on the above considerations, the licensee stated that it has confidence that the subject systems, can fulfill their required functions. As such, the licensee concluded that completing performance of the detailed walkdowns of a portion of piping sections outside of the requested 9-month timeframe, but no later than startup from the next refueling outage for Unit 1, is an acceptable alternative course of action.

3. NRC Staff Assessment

The NRC staff finds that, with the exception of the clarifications and associated requests discussed below, that the licensee's proposed alternative course of action is acceptable based on the above-described operating experience, testing, and detailed evaluations associated with managing gas accumulation at Braidwood, Unit 1.

The NRC staff notes examples where the licensee's 3-month submittal dated April 11, 2008, does not clearly describe the content and/or schedule for the 9-month submittals. Specifically, the licensee does not provide information indicating if it will submit the walkdowns and evaluations of the accessible piping within the GL scope by the timeframe prescribed in the GL (i.e., by October 11, 2008).

The NRC staff requests the licensee to submit the information requested in GL 2008-01 as follows:

- (1) 9-Month Initial Submittal - For the portions of the subject systems that are accessible prior to the Braidwood, Unit 1, spring 2009, refueling outage, provide all GL requested information to the NRC by October 11, 2008.
- (2) 9-Month Supplemental (Post-Outage) Submittal - Except for the long-term items described below, provide all remaining GL requested information for the subject systems

to the NRC within 90 days following startup from the next refueling outage scheduled for spring 2009 at Braidwood, Unit 1.

For each of these two submittals (the 9-month initial and supplemental submittals), and consistent with the information requested in the GL, the licensee should provide: (1) a description of the results of evaluations that were performed in response to the GL; (2) a description of all corrective actions that the licensee determined were necessary; and (3) a statement regarding which corrective actions were completed, the schedule for completing the remaining corrective actions, and the basis for that schedule.

The NRC staff noted that the licensee's submittal dated April 11, 2008, did not mention other potential long-term actions that are identified in the GL. For instance, the industry is assessing whether it is necessary to perform pump testing to determine the allowable limits on ingested gas volume in pump suctions, as well as the need to develop an analysis capability to adequately predict void movement (entrapped gas) from piping on the suction side of the pumps into the pumps. It is unlikely this industry effort will be complete for the 9-month initial or supplemental submittals. Further, technical specification changes may be necessary to reflect the improved understanding achieved during response to the GL, but these cannot be fully developed for the 9-month initial or supplemental submittals. A Technical Specifications Task Force traveler may provide a generic example that can be adopted by licensees. The NRC staff requests that the licensee address in its 9-month submittal how it plans to track such long-term actions (e.g., Corrective Action Program and/or commitment tracking). The NRC plans to perform follow up inspections of licensee responses to GL 2008-01 at all plants using a Temporary Instruction inspection procedure.

U.S. NUCLEAR REGULATORY COMMISSION

ASSESSMENT OF 3-MONTH RESPONSE

TO GENERIC LETTER 2008-01

BYRON STATION, UNIT 2

DOCKET NO. 50-455

1. Background

On January 11, 2008, the Nuclear Regulatory Commission (NRC) issued Generic Letter (GL) 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems" (Agencywide Documents Access and Management System (ADAMS) Accession No. ML072910759). The GL requested licensees to submit information to demonstrate that the emergency core cooling, decay heat removal, and containment spray systems (hereinafter referred to as the "subject systems") are in compliance with the current licensing and design bases and applicable regulatory requirements, and that suitable design, operational, and testing control measures are in place for maintaining this compliance. Specifically, the GL requested licensees to provide: (1) a description of the results of evaluations that were performed in response to the GL; (2) a description of all corrective actions that the licensee determined were necessary; and (3) a statement regarding which corrective actions were completed, the schedule for completing the remaining corrective actions, and the basis for that schedule.

In accordance with Section 50.54(f) of Title 10 of the *Code of Federal Regulations* (10 CFR), GL 2008-01 required that each licensee submit the requested information within 9 months (hereinafter referred to as the "9-month submittal") of the date of the GL. The GL also stated that if a licensee cannot meet the requested 9-month response date, the licensee is required to provide a response within 3 months (hereinafter referred to as the "3-month submittal") of the date of the GL, describing the alternative course of action it proposes to take, including the basis for the acceptability of the proposed alternative course of action.

2. Licensee's Proposed Alternative Course of Action

By letter dated April 11, 2008 (ADAMS Accession No. ML081020758), Exelon Generation Company, LLC (the licensee) submitted a 3-month response to GL 2008-01 for Byron Station, Unit 2. The licensee stated they cannot meet the requested 9-month schedule for submitting the requested information because walkdowns of the GL subject systems of Unit 2 cannot be completed. The walkdowns cannot be completed because portions of the GL subject systems are inaccessible during power operation due to elevated dose rates.

The licensee also stated that all other GL actions will be completed during the 9-month timeframe prescribed in the GL (i.e., by October 11, 2008). As an alternative course of action, the licensee plans to complete walkdowns of those areas only accessible during an outage during the next refueling outage of Unit 2 scheduled for fall 2008. The licensee's letter dated April 11, 2008, listed the following commitments for Byron Station, Unit 2:

Enclosure 2

1. Complete detailed walkdowns of Unit 2 inaccessible piping sections of GL 2008-01 subject systems prior to startup from the fall 2008 refueling outage.
2. Complete evaluations of GL 2008-01 subject systems using the results of the detailed walkdowns of Unit 2 inaccessible piping sections within 60 days following startup from the fall 2008 refueling outage.
3. Submit a supplemental response to the NRC documenting completion of the Unit 2 walkdowns and any impact upon the GL 2008-01 9-month response as a result of completed evaluations within 90 days following startup from the fall 2008 refueling outage.

The licensee stated that the alternative course of action is acceptable based on the following:

1. operating experience, which includes system walkdowns;
2. detailed evaluations; and
3. testing.

Based on the above considerations, the licensee stated that it has confidence that the subject systems can fulfill their required functions. As such, the licensee concluded that completing performance of the detailed walkdowns of a portion of piping sections outside of the requested 9-month timeframe, but no later than startup from the next refueling outage for Unit 2, is an acceptable alternative course of action.

3. NRC Staff Assessment

The NRC staff finds that, with the exception of the clarifications and associated requests discussed below, that the licensee's proposed alternative course of action is acceptable based on the above-described operating experience, testing, and detailed evaluations associated with managing gas accumulation at Byron Station, Unit 2.

The NRC staff notes examples where the licensee's 3-month submittal dated April 11, 2008, does not clearly describe the content and/or schedule for the 9-month submittals. Specifically, the licensee does not provide information indicating if it will submit the walkdowns and evaluations of the accessible piping within the GL scope by the timeframe prescribed in the GL (i.e., by October 11, 2008).

The NRC staff requests the licensee to submit the information requested in GL 2008-01 as follows:

- (1) 9-Month Initial Submittal - For the portions of the subject systems that are accessible prior to the Byron Station, Unit 2, fall 2008, refueling outage, provide all GL requested information to the NRC by October 11, 2008.
- (2) 9-Month Supplemental (Post-Outage) Submittal - Except for the long-term items

described below, provide all remaining GL requested information for the subject systems to the NRC within 90 days following startup from the next refueling outage scheduled for fall 2008 at Byron Station, Unit 2.

For each of these two submittals (the 9-month initial and supplemental submittals), and consistent with the information requested in the GL, the licensee should provide: (1) a description of the results of evaluations that were performed in response to the GL; (2) a description of all corrective actions that the licensee determined were necessary; and (3) a statement regarding which corrective actions were completed, the schedule for completing the remaining corrective actions, and the basis for that schedule.

The NRC staff noted that the licensee's submittal dated April 11, 2008, did not mention other potential long-term actions that are identified in the GL. For instance, the industry is assessing whether it is necessary to perform pump testing to determine the allowable limits on ingested gas volume in pump suction, as well as the need to develop an analysis capability to adequately predict void movement (entrapped gas) from piping on the suction side of the pumps into the pumps. It is unlikely this industry effort will be complete for the 9-month initial or supplemental submittals. Further, technical specification changes may be necessary to reflect the improved understanding achieved during response to the GL, but these cannot be fully developed for the 9-month initial or supplemental submittals. A Technical Specifications Task Force traveler may provide a generic example that can be adopted by licensees. The NRC staff requests that the licensee address in its 9-month submittal how it plans to track such long-term actions (e.g., Corrective Action Program and/or commitment tracking). The NRC plans to perform follow up inspections of licensee responses to GL 2008-01 at all plants using a Temporary Instruction inspection procedure.

U.S. NUCLEAR REGULATORY COMMISSION
ASSESSMENT OF 3-MONTH RESPONSE
TO GENERIC LETTER 2008-01
DRESDEN NUCLEAR POWER STATION, UNITS 2 AND 3
DOCKET NOS. 50-237 AND 50-249

1. Background

On January 11, 2008, the Nuclear Regulatory Commission (NRC) issued Generic Letter (GL) 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems" (Agencywide Documents Access and Management System (ADAMS) Accession No. ML072910759). The GL requested licensees to submit information to demonstrate that the emergency core cooling, decay heat removal, and containment spray systems (hereinafter referred to as the "subject systems") are in compliance with the current licensing and design bases and applicable regulatory requirements, and that suitable design, operational, and testing control measures are in place for maintaining this compliance. Specifically, the GL requested licensees to provide: (1) a description of the results of evaluations that were performed in response to the GL; (2) a description of all corrective actions that the licensee determined were necessary; and (3) a statement regarding which corrective actions were completed, the schedule for completing the remaining corrective actions, and the basis for that schedule.

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2. Licensee's Proposed Alternative Course of Action

By letter dated April 11, 2008 (ADAMS Accession No. ML081020758), Exelon Generation Company, LLC (the licensee) submitted a 3-month response to GL 2008-01 for Dresden Nuclear Power Station (DNPS), Units 2 and 3. The licensee stated they cannot meet the requested 9-month schedule for submitting the requested information because walkdowns of the GL subject systems of DNPS, Units 2 and 3, cannot be completed. The walkdowns cannot be completed because portions of the GL subject systems are inaccessible during power operation due to elevated dose rates and a nitrogen-inerted containment atmosphere.

The licensee also stated that all other GL actions will be completed during the 9-month timeframe prescribed in the GL (i.e., by October 11, 2008). As an alternative course of action, the licensee plans to complete walkdowns of those areas only accessible during an outage

during the next refueling outage for Unit 3 scheduled for fall 2008 and for Unit 2 scheduled for fall 2009. The licensee's letter dated April 11, 2008, listed the following commitments for DNPS, Units 2 and 3:

1. Complete detailed walkdowns of the inaccessible piping sections of GL 2008-01 subject systems prior to startup from each of the fall 2009 and fall 2008 refueling outages at DNPS, Units 2 and 3, respectively.
2. Complete evaluations of GL 2008-01 subject systems using the results of the detailed walkdowns of DNPS inaccessible piping sections within 60 days following startup from each of the fall 2009 and fall 2008 refueling outages at DNPS, Units 2 and 3, respectively.
3. Submit a supplemental response to the NRC documenting completion of the DNPS walkdowns and any impact upon the GL 2008-01 9-month response as a result of completed evaluations within 90 days following startup from each of the fall 2009 and fall 2008 refueling outages at DNPS, Units 2 and 3, respectively.

The licensee stated that the alternative course of action is acceptable based on the following:

1. operating experience, which includes system walkdowns;
2. detailed evaluations; and
3. testing.

Based on the above considerations, the licensee stated that it has confidence that the subject systems can fulfill their required functions. As such, the licensee concluded that completing performance of the detailed walkdowns of a portion of piping sections outside of the requested 9-month timeframe, but no later than startup from the next refueling outage for each unit, is an acceptable alternative course of action.

3. NRC Staff Assessment

The NRC staff finds that, with the exception of the clarifications and associated requests discussed below, that the licensee's proposed alternative course of action is acceptable based on the above-described operating experience, testing, and detailed evaluations associated with managing gas accumulation at DNPS, Units 2 and 3.

The NRC staff notes examples where the licensee's 3-month submittal dated April 11, 2008, does not clearly describe the content and/or schedule for the 9-month submittals. Specifically, the licensee does not provide information indicating if it will submit the walkdowns and evaluations of the accessible piping within the GL scope by the timeframe prescribed in the GL (i.e., by October 11, 2008).

The NRC staff requests the licensee to submit the information requested in GL 2008-01 as follows:

- (1) 9-Month Initial Submittal - For the portions of the subject systems that are accessible prior to the DNPS, Units 2 and 3, refueling outages, provide all GL requested information to the NRC by October 11, 2008.
- (2) 9-Month Supplemental (Post-Outage) Submittal - Except for the long-term items described below, provide all remaining GL requested information for the subject systems to the NRC within 90 days following startup from each of the fall 2009 and fall 2008 refueling outages at DNPS, Units 2 and 3, respectively.

For each of these two submittals (the 9-month initial and supplemental submittals), and consistent with the information requested in the GL, the licensee should provide: (1) a description of the results of evaluations that were performed in response to the GL; (2) a description of all corrective actions that the licensee determined were necessary; and (3) a statement regarding which corrective actions were completed, the schedule for completing the remaining corrective actions, and the basis for that schedule.

The NRC staff noted that the licensee's submittal dated April 11, 2008, did not mention other potential long-term actions that are identified in the GL. For instance, the industry is assessing whether it is necessary to perform pump testing to determine the allowable limits on ingested gas volume in pump suction, as well as the need to develop an analysis capability to adequately predict void movement (entrapped gas) from piping on the suction side of the pumps into the pumps. It is unlikely this industry effort will be complete for the 9-month initial or supplemental submittals. Further, technical specification changes may be necessary to reflect the improved understanding achieved during response to the GL, but these cannot be fully developed for the 9-month initial or supplemental submittals. A Technical Specifications Task Force traveler may provide a generic example that can be adopted by licensees. The NRC staff requests that the licensee address in its 9-month submittal how it plans to track such long-term actions (e.g., Corrective Action Program and/or commitment tracking). The NRC plans to perform follow up inspections of licensee responses to GL 2008-01 at all plants using a Temporary Instruction inspection procedure.

U.S. NUCLEAR REGULATORY COMMISSION

ASSESSMENT OF 3-MONTH RESPONSE

TO GENERIC LETTER 2008-01

LASALLE COUNTY STATION, UNITS 1 AND 2

DOCKET NOS. 50-373 AND 50-374

1. Background

On January 11, 2008, the Nuclear Regulatory Commission (NRC) issued Generic Letter (GL) 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems" (Agencywide Documents Access and Management System (ADAMS) Accession No. ML072910759). The GL requested licensees to submit information to demonstrate that the emergency core cooling, decay heat removal, and containment spray systems (hereinafter referred to as the "subject systems") are in compliance with the current licensing and design bases and applicable regulatory requirements, and that suitable design, operational, and testing control measures are in place for maintaining this compliance. Specifically, the GL requested licensees to provide: (1) a description of the results of evaluations that were performed in response to the GL; (2) a description of all corrective actions that the licensee determined were necessary; and (3) a statement regarding which corrective actions were completed, the schedule for completing the remaining corrective actions, and the basis for that schedule.

In accordance with Section 50.54(f) of Title 10 of the *Code of Federal Regulations* (10 CFR), GL 2008-01 required that each licensee submit the requested information within 9 months (hereinafter referred to as the "9-month submittal") of the date of the GL. The GL also stated that if a licensee cannot meet the requested 9-month response date, the licensee is required to provide a response within 3 months (hereinafter referred to as the "3-month submittal") of the date of the GL, describing the alternative course of action it proposes to take, including the basis for the acceptability of the proposed alternative course of action.

2. Licensee's Proposed Alternative Course of Action

By letter dated April 11, 2008 (ADAMS Accession No. ML081020758), Exelon Generation Company, LLC (the licensee) submitted a 3-month response to GL 2008-01 for LaSalle County Station (LSCS), Units 1 and 2. The licensee stated they cannot meet the requested 9-month schedule for submitting the requested information because walkdowns of the GL subject systems of LSCS, Units 1 and 2, cannot be completed. The walkdowns cannot be completed because portions of the GL subject systems are inaccessible during power operation due to high radiation areas and/or a nitrogen-inerted containment atmosphere during power operation.

The licensee also stated that all other GL actions will be completed during the 9-month timeframe prescribed in the GL (i.e., by October 11, 2008). As an alternative course of action, the licensee plans to complete walkdowns of those areas only accessible during an outage during the next refueling outage for Unit 2 scheduled for spring 2009 and for Unit 1 scheduled for spring 2010. The licensee's letter dated April 11, 2008, listed the following commitments:

1. Complete detailed walkdowns of the LSCS inaccessible piping sections of GL 2008-01 subject systems prior to startup from each of the spring 2010 and spring 2009 refueling outages at LSCS, Units 1 and 2, respectively.
2. Complete evaluations of GL 2008-01 subject systems using the results of the detailed walkdowns of LSCS inaccessible piping sections within 60 days following startup from each of the spring 2010 and spring 2009 refueling outages at LSCS, Units 1 and 2, respectively.
3. Submit a supplemental response to the NRC documenting completion of the LSCS walkdowns and any impact upon the GL 2008-01 9-month response as a result of completed evaluations within 90 days following startup from each of the spring 2010 and spring 2009 refueling outages at LSCS, Units 1 and 2, respectively.

The licensee stated that the alternative course of action is acceptable based on the following:

1. operating experience, which includes system walkdowns;
2. detailed evaluations; and
3. testing.

Based on the above considerations, the licensee stated that it has confidence that the subject systems can fulfill their required functions. As such, the licensee concluded that completing performance of the detailed walkdowns of a portion of piping sections outside of the requested 9-month timeframe, but no later than startup from the next refueling outage for each unit, is an acceptable alternative course of action.

3. NRC Staff Assessment

The NRC staff finds that, with the exception of the clarifications and associated requests discussed below, that the licensee's proposed alternative course of action is acceptable based on the above-described operating experience, testing, and detailed evaluations associated with managing gas accumulation at LSCS, Units 1 and 2.

The NRC staff notes examples where the licensee's 3-month submittal dated April 11, 2008, does not clearly describe the content and/or schedule for the 9-month submittals. Specifically, the licensee does not provide information indicating if it will submit the walkdowns and evaluations of the accessible piping within the GL scope by the timeframe prescribed in the GL (i.e., by October 11, 2008).

The NRC staff requests the licensee to submit the information requested in GL 2008-01 as follows:

- (1) 9-Month Initial Submittal - For the portions of the subject systems that are accessible prior to the LSCS, Units 1 and 2, refueling outages, provide all GL requested information to the NRC by October 11, 2008.
- (2) 9-Month Supplemental (Post-Outage) Submittal - Except for the long-term items described below, provide all remaining GL requested information for the subject systems to the NRC within 90 days following startup from each of the spring 2010 and spring 2009 refueling outages at LSCS, Units 1 and 2, respectively.

For each of these two submittals (the 9-month initial and supplemental submittals), and consistent with the information requested in the GL, the licensee should provide: (1) a description of the results of evaluations that were performed in response to the GL; (2) a description of all corrective actions that the licensee determined were necessary; and (3) a statement regarding which corrective actions were completed, the schedule for completing the remaining corrective actions, and the basis for that schedule.

The NRC staff noted that the licensee's submittal dated April 11, 2008, did not mention other potential long-term actions that are identified in the GL. For instance, the industry is assessing whether it is necessary to perform pump testing to determine the allowable limits on ingested gas volume in pump suction, as well as the need to develop an analysis capability to adequately predict void movement (entrapped gas) from piping on the suction side of the pumps into the pumps. It is unlikely this industry effort will be complete for the 9-month initial or supplemental submittals. Further, technical specification changes may be necessary to reflect the improved understanding achieved during response to the GL, but these cannot be fully developed for the 9-month initial or supplemental submittals. A Technical Specifications Task Force traveler may provide a generic example that can be adopted by licensees. The NRC staff requests that the licensee address in its 9-month submittal how it plans to track such long-term actions (e.g., Corrective Action Program and/or commitment tracking). The NRC plans to perform follow up inspections of licensee responses to GL 2008-01 at all plants using a Temporary Instruction inspection procedure.

U.S. NUCLEAR REGULATORY COMMISSION

ASSESSMENT OF 3-MONTH RESPONSE

TO GENERIC LETTER 2008-01

LIMERICK GENERATING STATION, UNIT 2

DOCKET NO. 50-353

1. Background

On January 11, 2008, the Nuclear Regulatory Commission (NRC) issued Generic Letter (GL) 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems" (Agencywide Documents Access and Management System (ADAMS) Accession No. ML072910759). The GL requested licensees to submit information to demonstrate that the emergency core cooling, decay heat removal, and containment spray systems (hereinafter referred to as the "subject systems") are in compliance with the current licensing and design bases and applicable regulatory requirements, and that suitable design, operational, and testing control measures are in place for maintaining this compliance. Specifically, the GL requested licensees to provide: (1) a description of the results of evaluations that were performed in response to the GL; (2) a description of all corrective actions that the licensee determined were necessary; and (3) a statement regarding which corrective actions were completed, the schedule for completing the remaining corrective actions, and the basis for that schedule.

In accordance with Section 50.54(f) of Title 10 of the *Code of Federal Regulations* (10 CFR), GL 2008-01 required that each licensee submit the requested information within 9 months (hereinafter referred to as the "9-month submittal") of the date of the GL. The GL also stated that if a licensee cannot meet the requested 9-month response date, the licensee is required to provide a response within 3 months (hereinafter referred to as the "3-month submittal") of the date of the GL, describing the alternative course of action it proposes to take, including the basis for the acceptability of the proposed alternative course of action.

2. Licensee's Proposed Alternative Course of Action

By letter dated April 11, 2008 (ADAMS Accession No. ML081020758), Exelon Generation Company, LLC (the licensee) submitted a 3-month response to GL 2008-01 for Limerick Generating Station, Unit 2. The licensee stated they cannot meet the requested 9-month schedule for submitting the requested information because walkdowns of the GL subject systems of Limerick Generating Station, Unit 2, cannot be completed. The walkdowns cannot be completed because portions of the GL subject systems are inaccessible during power operation due to high radiation areas and/or a nitrogen-inerted atmosphere.

The licensee also stated that all other GL actions will be completed during the 9-month timeframe prescribed in the GL (i.e., by October 11, 2008). As an alternative course of action, the licensee plans to complete walkdowns of those areas only accessible during an outage during the next refueling outage of Unit 2 scheduled for spring 2009. The licensee's letter dated April 11, 2008, listed the following commitments for Limerick Generating Station, Unit 2:

Enclosure 5

1. Complete detailed walkdowns of the Unit 2 inaccessible piping sections of GL 2008-01 subject systems prior to startup from the spring 2009 refueling outage.
2. Complete evaluations of GL 2008-01 subject systems using the results of the detailed walkdowns of Unit 2 inaccessible piping sections within 60 days following startup from the spring 2009 refueling outage.
3. Submit a supplemental response to the NRC documenting completion of the Unit 2 walkdowns and any impact upon the GL 2008-01 9-month response as a result of completed evaluations within 90 days following startup from the spring 2009 refueling outage.

The licensee stated that the alternative course of action is acceptable based on the following:

1. operating experience, which includes system walkdowns;
2. detailed evaluations; and
3. testing.

Based on the above considerations, the licensee stated that it has confidence that the subject systems can fulfill their required functions. As such, the licensee concluded that completing performance of the detailed walkdowns of a portion of piping sections outside of the requested 9-month timeframe, but no later than startup from the next refueling outage for Unit 2, is an acceptable alternative course of action.

3. NRC Staff Assessment

The NRC staff finds that, with the exception of the clarifications and associated requests discussed below, that the licensee's proposed alternative course of action is acceptable based on the above-described operating experience, testing, and detailed evaluations associated with managing gas accumulation at Limerick Generating Station, Unit 2.

The NRC staff notes examples where the licensee's 3-month submittal dated April 11, 2008, does not clearly describe the content and/or schedule for the 9-month submittals. Specifically, the licensee does not provide information indicating if it will submit the walkdowns and evaluations of the accessible piping within the GL scope by the timeframe prescribed in the GL (i.e., by October 11, 2008).

The NRC staff requests the licensee to submit the information requested in GL 2008-01 as follows:

- (1) 9-Month Initial Submittal - For the portions of the subject systems that are accessible prior to the Limerick Generating Station, Unit 2, spring 2009, refueling outage, provide all GL requested information to the NRC by October 11, 2008.

- (2) 9-Month Supplemental (Post-Outage) Submittal - Except for the long-term items described below, provide all remaining GL requested information for the subject systems to the NRC within 90 days following startup from the spring 2009 refueling outage at Limerick Generating Station, Unit 2.

For each of these two submittals (the 9-month initial and supplemental submittals), and consistent with the information requested in the GL, the licensee should provide: (1) a description of the results of evaluations that were performed in response to the GL; (2) a description of all corrective actions that the licensee determined were necessary; and (3) a statement regarding which corrective actions were completed, the schedule for completing the remaining corrective actions, and the basis for that schedule.

The NRC staff noted that the licensee's submittal dated April 11, 2008, did not mention other potential long-term actions that are identified in the GL. For instance, the industry is assessing whether it is necessary to perform pump testing to determine the allowable limits on ingested gas volume in pump suction, as well as the need to develop an analysis capability to adequately predict void movement (entrapped gas) from piping on the suction side of the pumps into the pumps. It is unlikely this industry effort will be complete for the 9-month initial or supplemental submittals. Further, technical specification changes may be necessary to reflect the improved understanding achieved during response to the GL, but these cannot be fully developed for the 9-month initial or supplemental submittals. A Technical Specifications Task Force traveler may provide a generic example that can be adopted by licensees. The NRC staff requests that the licensee address in its 9-month submittal how it plans to track such long-term actions (e.g., Corrective Action Program and/or commitment tracking). The NRC plans to perform follow up inspections of licensee responses to GL 2008-01 at all plants using a Temporary Instruction inspection procedure.

U.S. NUCLEAR REGULATORY COMMISSION
ASSESSMENT OF 3-MONTH RESPONSE
TO GENERIC LETTER 2008-01
OYSTER CREEK NUCLEAR GENERATING STATION
DOCKET NO. 50-219

1. Background

On January 11, 2008, the Nuclear Regulatory Commission (NRC) issued Generic Letter (GL) 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems" (Agencywide Documents Access and Management System (ADAMS) Accession No. ML072910759). The GL requested licensees to submit information to demonstrate that the emergency core cooling, decay heat removal, and containment spray systems (hereinafter referred to as the "subject systems") are in compliance with the current licensing and design bases and applicable regulatory requirements, and that suitable design, operational, and testing control measures are in place for maintaining this compliance. Specifically, the GL requested licensees to provide: (1) a description of the results of evaluations that were performed in response to the GL; (2) a description of all corrective actions that the licensee determined were necessary; and (3) a statement regarding which corrective actions were completed, the schedule for completing the remaining corrective actions, and the basis for that schedule.

In accordance with Section 50.54(f) of Title 10 of the *Code of Federal Regulations* (10 CFR), GL 2008-01 required that each licensee submit the requested information within 9 months (hereinafter referred to as the "9-month submittal") of the date of the GL. The GL also stated that if a licensee cannot meet the requested 9-month response date, the licensee is required to provide a response within 3 months (hereinafter referred to as the "3-month submittal") of the date of the GL, describing the alternative course of action it proposes to take, including the basis for the acceptability of the proposed alternative course of action.

2. Licensee's Proposed Alternative Course of Action

By letter dated April 11, 2008 (ADAMS Accession No. ML081020758), AmerGen Energy Company, LLC (the licensee) submitted a 3-month response to GL 2008-01 for Oyster Creek Nuclear Generating Station (OCNGS). The licensee stated they cannot meet the requested 9-month schedule for submitting the requested information because walkdowns of the GL subject systems of OCNGS cannot be completed. The walkdowns cannot be completed because portions of the GL subject systems are inaccessible during power operation due to containment being inerted.

The licensee also stated that all other GL actions will be completed during the 9-month timeframe prescribed in the GL (i.e., by October 11, 2008). As an alternative course of action, the licensee plans to complete walkdowns of those areas only accessible during an outage during the next refueling outage of OCNGS scheduled for fall 2008. The licensee's letter dated April 11, 2008, listed the following commitments:

1. Complete detailed walkdowns of the inaccessible piping sections of GL 2008-01 subject systems prior to startup from the fall 2008 refueling outage.
2. Complete evaluations of GL 2008-01 subject systems using the results of the detailed walkdowns of inaccessible piping sections within 60 days following startup from the fall 2008 refueling outage.
3. Submit a supplemental response to the NRC documenting completion of the walkdowns and any impact upon the GL 2008-01 9-month response as a result of completed evaluations within 90 days following startup from the fall 2008 refueling outage.

The licensee stated that the alternative course of action is acceptable based on the following:

1. operating experience, which includes system walkdowns;
2. detailed evaluations; and
3. testing.

Based on the above considerations, the licensee stated that it has confidence that the subject systems can fulfill their required functions. As such, the licensee concluded that completing performance of the detailed walkdowns of a portion of piping sections outside of the requested 9-month timeframe, but no later than startup from the next refueling outage for OCNGS, is an acceptable alternative course of action.

3. NRC Staff Assessment

The NRC staff finds that, with the exception of the clarifications and associated requests discussed below, that the licensee's proposed alternative course of action is acceptable based on the above-described operating experience, testing, and detailed evaluations associated with managing gas accumulation at OCNGS.

The NRC staff notes examples where the licensee's 3-month submittal dated April 11, 2008, does not clearly describe the content and/or schedule for the 9-month submittals. Specifically, the licensee does not provide information indicating if it will submit the walkdowns and evaluations of the accessible piping within the GL scope by the timeframe prescribed in the GL (i.e., by October 11, 2008).

The NRC staff requests the licensee to submit the information requested in GL 2008-01 as follows:

- (1) 9-Month Initial Submittal - For the portions of the subject systems that are accessible prior to the OCNGS, fall 2008, refueling outage, provide all GL requested information to the NRC by October 11, 2008.

- (2) 9-Month Supplemental (Post-Outage) Submittal - Except for the long-term items described below, provide all remaining GL requested information for the subject systems to the NRC within 90 days following startup from the fall 2008 refueling outage at OCNCS.

For each of these two submittals (the 9-month initial and supplemental submittals), and consistent with the information requested in the GL, the licensee should provide: (1) a description of the results of evaluations that were performed in response to the GL; (2) a description of all corrective actions that the licensee determined were necessary; and (3) a statement regarding which corrective actions were completed, the schedule for completing the remaining corrective actions, and the basis for that schedule.

The NRC staff noted that the licensee's submittal dated April 11, 2008, did not mention other potential long-term actions that are identified in the GL. For instance, the industry is assessing whether it is necessary to perform pump testing to determine the allowable limits on ingested gas volume in pump suction, as well as the need to develop an analysis capability to adequately predict void movement (entrapped gas) from piping on the suction side of the pumps into the pumps. It is unlikely this industry effort will be complete for the 9-month initial or supplemental submittals. Further, technical specification changes may be necessary to reflect the improved understanding achieved during response to the GL, but these cannot be fully developed for the 9-month initial or supplemental submittals. A Technical Specifications Task Force traveler may provide a generic example that can be adopted by licensees. The NRC staff requests that the licensee address in its 9-month submittal how it plans to track such long-term actions (e.g., Corrective Action Program and/or commitment tracking). The NRC plans to perform follow up inspections of licensee responses to GL 2008-01 at all plants using a Temporary Instruction inspection procedure.

U.S. NUCLEAR REGULATORY COMMISSION
ASSESSMENT OF 3-MONTH RESPONSE
TO GENERIC LETTER 2008-01
PEACH BOTTOM ATOMIC POWER STATION, UNITS 2 AND 3
DOCKET NOS. 50-277 AND 50-278

1. Background

On January 11, 2008, the Nuclear Regulatory Commission (NRC) issued Generic Letter (GL) 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems" (Agencywide Documents Access and Management System (ADAMS) Accession No. ML072910759). The GL requested licensees to submit information to demonstrate that the emergency core cooling, decay heat removal, and containment spray systems (hereinafter referred to as the "subject systems") are in compliance with the current licensing and design bases and applicable regulatory requirements, and that suitable design, operational, and testing control measures are in place for maintaining this compliance. Specifically, the GL requested licensees to provide: (1) a description of the results of evaluations that were performed in response to the GL; (2) a description of all corrective actions that the licensee determined were necessary; and (3) a statement regarding which corrective actions were completed, the schedule for completing the remaining corrective actions, and the basis for that schedule.

In accordance with Section 50.54(f) of Title 10 of the *Code of Federal Regulations* (10 CFR), GL 2008-01 required that each licensee submit the requested information within 9 months (hereinafter referred to as the "9-month submittal") of the date of the GL. The GL also stated that if a licensee cannot meet the requested 9-month response date, the licensee is required to provide a response within 3 months (hereinafter referred to as the "3-month submittal") of the date of the GL, describing the alternative course of action it proposes to take, including the basis for the acceptability of the proposed alternative course of action.

2. Licensee's Proposed Alternative Course of Action

By letter dated April 11, 2008 (ADAMS Accession No. ML081020758), Exelon Generation Company, LLC (the licensee) submitted a 3-month response to GL 2008-01 for Peach Bottom Atomic Power Station (PBAPS), Units 2 and 3. The licensee stated they cannot meet the requested 9-month schedule for submitting the requested information because walkdowns of the GL subject systems of PBAPS, Units 2 and 3, cannot be completed. The walkdowns cannot be completed because portions of the GL subject systems are inaccessible during power operation due to high radiation areas and nitrogen-inerted containment.

The licensee also stated that all other GL actions will be completed during the 9-month timeframe prescribed in the GL (i.e., by October 11, 2008). As an alternative course of action, the licensee plans to complete walkdowns of those areas only accessible during an outage during the next refueling outage for Unit 2 scheduled for fall 2008 and for Unit 3 scheduled for fall 2009. The licensee's letter dated April 11, 2008, listed the following commitments:

1. Complete detailed walkdowns of the PBAPS inaccessible piping sections of GL 2008-01 subject systems prior to startup from each of the fall 2008 and fall 2009 refueling outages at PBAPS, Units 2 and 3, respectively.
2. Complete evaluations of GL 2008-01 subject systems using the results of the detailed walkdowns of PBAPS inaccessible piping sections within 60 days following startup from each of the fall 2008 and fall 2009 refueling outages at PBAPS, Units 2 and 3, respectively.
3. Submit a supplemental response to the NRC documenting completion of the walkdowns and any impact upon the GL 2008-01 9-month response as a result of completed evaluations within 90 days following startup from each of the fall 2008 and fall 2009 refueling outages at PBAPS, Units 2 and 3, respectively.

The licensee stated that the alternative course of action is acceptable based on the following:

1. operating experience, which includes system walkdowns;
2. detailed evaluations; and
3. testing.

Based on the above considerations, the licensee stated that it has confidence that the subject systems can fulfill their required functions. As such, the licensee concluded that completing performance of the detailed walkdowns of a portion of piping sections outside of the requested 9-month timeframe, but no later than startup from the next refueling outage for each unit, is an acceptable alternative course of action.

3. NRC Staff Assessment

The NRC staff finds that, with the exception of the clarifications and associated requests discussed below, that the licensee's proposed alternative course of action is acceptable based on the above-described operating experience, testing, and detailed evaluations associated with managing gas accumulation at PBAPS.

The NRC staff notes examples where the licensee's 3-month submittal dated April 11, 2008, does not clearly describe the content and/or schedule for the 9-month submittals. Specifically, the licensee does not provide information indicating if it will submit the walkdowns and evaluations of the accessible piping within the GL scope by the timeframe prescribed in the GL (i.e., by October 11, 2008).

The NRC staff requests the licensee to submit the information requested in GL 2008-01 as follows:

- (1) 9-Month Initial Submittal - For the portions of the subject systems that are accessible prior to the PBAPS, Units 2 and 3, refueling outages, provide all GL requested information to the NRC by October 11, 2008.
- (2) 9-Month Supplemental (Post-Outage) Submittal - Except for the long-term items described below, provide all remaining GL requested information for the subject systems to the NRC within 90 days following startup from each of the fall 2008 and fall 2009 refueling outages at PBAPS, Units 2 and 3, respectively.

For each of these two submittals (the 9-month initial and supplemental submittals), and consistent with the information requested in the GL, the licensee should provide: (1) a description of the results of evaluations that were performed in response to the GL; (2) a description of all corrective actions that the licensee determined were necessary; and (3) a statement regarding which corrective actions were completed, the schedule for completing the remaining corrective actions, and the basis for that schedule.

The NRC staff noted that the licensee's submittal dated April 11, 2008, did not mention other potential long-term actions that are identified in the GL. For instance, the industry is assessing whether it is necessary to perform pump testing to determine the allowable limits on ingested gas volume in pump suction, as well as the need to develop an analysis capability to adequately predict void movement (entrapped gas) from piping on the suction side of the pumps into the pumps. It is unlikely this industry effort will be complete for the 9-month initial or supplemental submittals. Further, technical specification changes may be necessary to reflect the improved understanding achieved during response to the GL, but these cannot be fully developed for the 9-month initial or supplemental submittals. A Technical Specifications Task Force traveler may provide a generic example that can be adopted by licensees. The NRC staff requests that the licensee address in its 9-month submittal how it plans to track such long-term actions (e.g., Corrective Action Program and/or commitment tracking). The NRC plans to perform follow up inspections of licensee responses to GL 2008-01 at all plants using a Temporary Instruction inspection procedure.

U.S. NUCLEAR REGULATORY COMMISSION
ASSESSMENT OF 3-MONTH RESPONSE
TO GENERIC LETTER 2008-01
QUAD CITIES NUCLEAR POWER STATION, UNIT 1
DOCKET NOS. 50-254

1. Background

On January 11, 2008, the Nuclear Regulatory Commission (NRC) issued Generic Letter (GL) 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems" (Agencywide Documents Access and Management System (ADAMS) Accession No. ML072910759). The GL requested licensees to submit information to demonstrate that the emergency core cooling, decay heat removal, and containment spray systems (hereinafter referred to as the "subject systems") are in compliance with the current licensing and design bases and applicable regulatory requirements, and that suitable design, operational, and testing control measures are in place for maintaining this compliance. Specifically, the GL requested licensees to provide: (1) a description of the results of evaluations that were performed in response to the GL; (2) a description of all corrective actions that the licensee determined were necessary; and (3) a statement regarding which corrective actions were completed, the schedule for completing the remaining corrective actions, and the basis for that schedule.

In accordance with Section 50.54(f) of Title 10 of the *Code of Federal Regulations* (10 CFR), GL 2008-01 required that each licensee submit the requested information within 9 months (hereinafter referred to as the "9-month submittal") of the date of the GL. The GL also stated that if a licensee cannot meet the requested 9-month response date, the licensee is required to provide a response within 3 months (hereinafter referred to as the "3-month submittal") of the date of the GL, describing the alternative course of action it proposes to take, including the basis for the acceptability of the proposed alternative course of action.

2. Licensee's Proposed Alternative Course of Action

By letter dated April 11, 2008 (ADAMS Accession No. ML081020758), Exelon Generation Company, LLC (the licensee) submitted a 3-month response to GL 2008-01 for Quad Cities Nuclear Power Station (QCNPS), Unit 1. The licensee stated they cannot meet the requested 9-month schedule for submitting the requested information because walkdowns of the GL subject systems of QCNPS, Unit 1, cannot be completed. The walkdowns cannot be completed because portions of the GL subject systems are inaccessible during power operation due to high radiation areas and/or nitrogen-inerted containment.

The licensee also stated that all other GL actions will be completed during the 9-month timeframe prescribed in the GL (i.e., by October 11, 2008). As an alternative course of action,

the licensee plans to complete walkdowns of those areas only accessible during an outage during the next refueling outage of Unit 1 scheduled for spring 2009. The licensee's letter dated April 11, 2008, listed the following commitments:

1. Complete detailed walkdowns of the Unit 1 inaccessible piping sections of GL 2008-01 subject systems prior to startup from the spring 2009 refueling outage.
2. Complete evaluations of GL 2008-01 subject systems using the results of the detailed walkdowns of Unit 1 inaccessible piping sections within 60 days following startup from the spring 2009 refueling outage.
3. Submit a supplemental response to the NRC documenting completion of the Unit 1 walkdowns and any impact upon the GL 2008-01 9-month response as a result of completed evaluations within 90 days following startup from the spring 2009 refueling outage.

The licensee stated that the alternative course of action is acceptable based on the following:

1. operating experience, which includes system walkdowns;
2. detailed evaluations; and
3. testing.

Based on the above considerations, the licensee stated that it has confidence that the subject systems can fulfill their required functions. As such, the licensee concluded that completing performance of the detailed walkdowns of a portion of piping sections outside of the requested 9-month timeframe, but no later than startup from the next refueling outage for Unit 1, is an acceptable alternative course of action.

3. NRC Staff Assessment

The NRC staff finds that, with the exception of the clarifications and associated requests discussed below, that the licensee's proposed alternative course of action is acceptable based on the above-described operating experience, testing, and detailed evaluations associated with managing gas accumulation at QCNPS, Unit 1.

The NRC staff notes examples where the licensee's 3-month submittal dated April 11, 2008, does not clearly describe the content and/or schedule for the 9-month submittals. Specifically, the licensee does not provide information indicating if it will submit the walkdowns and evaluations of the accessible piping within the GL scope by the timeframe prescribed in the GL (i.e., by October 11, 2008).

The NRC staff requests the licensee to submit the information requested in GL 2008-01 as follows:

- (1) 9-Month Initial Submittal - For the portions of the subject systems that are accessible prior to the QCNPS, Unit 1, spring 2009, refueling outage, provide all GL requested information to the NRC by October 11, 2008.

- (2) 9-Month Supplemental (Post-Outage) Submittal - Except for the long-term items described below, provide all remaining GL requested information for the subject systems to the NRC within 90 days following startup from the spring 2009 refueling outage at QCNPS, Unit 1.

For each of these two submittals (the 9-month initial and supplemental submittals), and consistent with the information requested in the GL, the licensee should provide: (1) a description of the results of evaluations that were performed in response to the GL; (2) a description of all corrective actions that the licensee determined were necessary; and (3) a statement regarding which corrective actions were completed, the schedule for completing the remaining corrective actions, and the basis for that schedule.

The NRC staff noted that the licensee's submittal dated April 11, 2008, did not mention other potential long-term actions that are identified in the GL. For instance, the industry is assessing whether it is necessary to perform pump testing to determine the allowable limits on ingested gas volume in pump suction, as well as the need to develop an analysis capability to adequately predict void movement (entrapped gas) from piping on the suction side of the pumps into the pumps. It is unlikely this industry effort will be complete for the 9-month initial or supplemental submittals. Further, technical specification changes may be necessary to reflect the improved understanding achieved during response to the GL, but these cannot be fully developed for the 9-month initial or supplemental submittals. A Technical Specifications Task Force traveler may provide a generic example that can be adopted by licensees. The NRC staff requests that the licensee address in its 9-month submittal how it plans to track such long-term actions (e.g., Corrective Action Program and/or commitment tracking). The NRC plans to perform follow up inspections of licensee responses to GL 2008-01 at all plants using a Temporary Instruction inspection procedure.

U.S. NUCLEAR REGULATORY COMMISSION
ASSESSMENT OF 3-MONTH RESPONSE
TO GENERIC LETTER 2008-01
THREE MILE ISLAND NUCLEAR STATION, UNIT 1
DOCKET NO. 50-289

1. Background

On January 11, 2008, the Nuclear Regulatory Commission (NRC) issued Generic Letter (GL) 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems" (Agencywide Documents Access and Management System (ADAMS) Accession No. ML072910759). The GL requested licensees to submit information to demonstrate that the emergency core cooling, decay heat removal, and containment spray systems (hereinafter referred to as the "subject systems") are in compliance with the current licensing and design bases and applicable regulatory requirements, and that suitable design, operational, and testing control measures are in place for maintaining this compliance. Specifically, the GL requested licensees to provide: (1) a description of the results of evaluations that were performed in response to the GL; (2) a description of all corrective actions that the licensee determined were necessary; and (3) a statement regarding which corrective actions were completed, the schedule for completing the remaining corrective actions, and the basis for that schedule.

In accordance with Section 50.54(f) of Title 10 of the *Code of Federal Regulations* (10 CFR), GL 2008-01 required that each licensee submit the requested information within 9 months (hereinafter referred to as the "9-month submittal") of the date of the GL. The GL also stated that if a licensee cannot meet the requested 9-month response date, the licensee is required to provide a response within 3 months (hereinafter referred to as the "3-month submittal") of the date of the GL, describing the alternative course of action it proposes to take, including the basis for the acceptability of the proposed alternative course of action.

2. Licensee's Proposed Alternative Course of Action

By letter dated April 11, 2008 (ADAMS Accession No. ML081020758), AmerGen Energy Company, LLC (the licensee) submitted a 3-month response to GL 2008-01 for Three Mile Island Nuclear Station (TMI), Unit 1. The licensee stated they cannot meet the requested 9-month schedule for submitting the requested information because walkdowns of the GL subject systems of TMI, Unit 1, cannot be completed. The walkdowns cannot be completed because portions of the GL subject systems are inaccessible during power operation due to high radiation areas.

The licensee also stated that all other GL actions will be completed during the 9-month timeframe prescribed in the GL (i.e., by October 11, 2008). As an alternative course of action,

the licensee plans to complete walkdowns of those areas only accessible during an outage during the next refueling outage for Unit 1 scheduled for fall 2009. The licensee's letter dated April 11, 2008, listed the following commitments:

1. Complete detailed walkdowns of the Unit 1 inaccessible piping sections of GL 2008-01 subject systems prior to startup from the fall 2009 refueling outage.
2. Complete evaluations of GL 2008-01 subject systems using the results of the detailed walkdowns of Unit 1 inaccessible piping sections within 60 days following startup from the fall 2009 refueling outage.
3. Submit a supplemental response to the NRC documenting completion of the Unit 1 walkdowns and any impact upon the GL 2008-01 9-month response as a result of completed evaluations within 90 days following startup from the fall 2009 refueling outage.

The licensee stated that the alternative course of action is acceptable based on the following:

1. operating experience, which includes system walkdowns;
2. detailed evaluations; and
3. testing.

Based on the above considerations, the licensee stated that it has confidence that the subject systems can fulfill their required functions. As such, the licensee concluded that completing performance of the detailed walkdowns of a portion of piping sections outside of the requested 9-month timeframe, but no later than startup from the next refueling outage for Unit 1, is an acceptable alternative course of action.

3. NRC Staff Assessment

The NRC staff finds that, with the exception of the clarifications and associated requests discussed below, that the licensee's proposed alternative course of action is acceptable based on the above-described operating experience, testing, and detailed evaluations associated with managing gas accumulation at TMI, Unit 1.

The NRC staff notes examples where the licensee's 3-month submittal dated April 11, 2008, does not clearly describe the content and/or schedule for the 9-month submittals. Specifically, the licensee does not provide information indicating if it will submit the walkdowns and evaluations of the accessible piping within the GL scope by the timeframe prescribed in the GL (i.e., by October 11, 2008).

The NRC staff requests the licensee to submit the information requested in GL 2008-01 as follows:

- (1) 9-Month Initial Submittal - For the portions of the subject systems that are accessible prior to the TMI, Unit 1, fall 2009, refueling outage, provide all GL requested information to the NRC by October 11, 2008.

- (2) 9-Month Supplemental (Post-Outage) Submittal - Except for the long-term items described below, provide all remaining GL requested information for the subject systems to the NRC within 90 days following startup from the fall 2009 refueling outage at TMI, Unit 1.

For each of these two submittals (the 9-month initial and supplemental submittals), and consistent with the information requested in the GL, the licensee should provide: (1) a description of the results of evaluations that were performed in response to the GL; (2) a description of all corrective actions that the licensee determined were necessary; and (3) a statement regarding which corrective actions were completed, the schedule for completing the remaining corrective actions, and the basis for that schedule.

The NRC staff noted that the licensee's submittal dated April 11, 2008, did not mention other potential long-term actions that are identified in the GL. For instance, the industry is assessing whether it is necessary to perform pump testing to determine the allowable limits on ingested gas volume in pump suction, as well as the need to develop an analysis capability to adequately predict void movement (entrapped gas) from piping on the suction side of the pumps into the pumps. It is unlikely this industry effort will be complete for the 9-month initial or supplemental submittals. Further, technical specification changes may be necessary to reflect the improved understanding achieved during response to the GL, but these cannot be fully developed for the 9-month initial or supplemental submittals. A Technical Specifications Task Force traveler may provide a generic example that can be adopted by licensees. The NRC staff requests that the licensee address in its 9-month submittal how it plans to track such long-term actions (e.g., Corrective Action Program and/or commitment tracking). The NRC plans to perform follow up inspections of licensee responses to GL 2008-01 at all plants using a Temporary Instruction inspection procedure.