



FPL.

POWERING TODAY.
EMPOWERING TOMORROW.®

AUG 06 2009

L-2009-178
10 CFR 50.54(f)

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

RE Florida Power & Light Company
Turkey Point Unit 3
Docket No. 50-250

Subject: Turkey Point Unit 3: Nine-Month Supplemental (Post-Outage) Response to NRC Generic Letter 2008-01

- References:
1. NRC Generic Letter 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems," dated January 11, 2008.
 2. Extension Request Regarding the Three-Month Response to NRC Generic Letter 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems," Letter No. L-2008-076, dated April 9, 2008 (ML081050251).
 3. Three-Month Response to NRC Generic Letter 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems," Letter No. L-2008-105, dated May 9, 2008 (ML081430648).
 4. Turkey Point, Units 3 & 4, 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. MD7890 and MD7891), dated September 19, 2008 (ML082540437).
 5. Nine-Month Response to NRC Generic Letter 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems," Letter No. L-2008-218, dated October 14, 2008.

The Nuclear Regulatory Commission (NRC) issued Generic Letter (GL) 2008-01 (Reference 1) to request that each licensee evaluate the licensing basis, design, testing and Corrective Action Program (CAP) action requests (ARs) for the Emergency Core Cooling System, Decay Heat Removal System, and Containment Spray System to ensure that gas accumulation is maintained less than the void volume that challenges operability of these systems, and that appropriate action is taken when conditions adverse to quality are identified.

By letter dated May 9, 2008 (Reference 3), FPL submitted the requested three-month response to GL 2008-01 for the Turkey Point units. The NRC Staff's assessment of the response for the Turkey Point units is documented in Reference 4.

AIBY
NRR

As promised in Reference 3, please find the enclosed FPL supplemental response to the nine-month response letter (Reference 5) for Turkey Point Unit 3. This supplemental response is being submitted within 90 days of startup from the Unit 3 spring 2009 outage in which the deferred actions were completed.

In summary, FPL has concluded that the subject systems and functions at Turkey Point Unit 3 are operable, and that Turkey Point Unit 3 is currently in compliance with the licensing basis documentation and applicable regulations, including 10 CFR 50 Appendix B, Criteria III, V, XI, XVI, and XVII, with respect to the concerns outlined in GL 2008-01 regarding managing gas accumulation in these systems/functions.

There are no new commitments contained in this letter.

If you have any questions regarding this matter, please contact Mr. Robert Tomonto, Licensing Manager, at (305) 246-7327.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on August 6, 2009.

Sincerely yours,


Michael W. Kiley
Site Vice President
Turkey Point Nuclear Plant

Enclosure: Turkey Point Unit 3 Nine-Month Supplemental (Post-Outage) Response to NRC Generic Letter 2008-01

cc: NRC Regional Administrator, Region II
USNRC Project Manager, Turkey Point Nuclear Plant
Senior Resident Inspector, USNRC, Turkey Point Nuclear Plant

Turkey Point Unit 3
Nine-Month Supplemental (Post Outage) Response to NRC Generic Letter 2008-01

As committed to the Nuclear Regulatory Commission (NRC) in Reference 5, this enclosure provides the nine-month supplemental response (post-outage) for Turkey Point Unit 3 to NRC Generic Letter 2008-01 for actions that were deferred until the Unit 3 spring 2009 refueling outage.

The following information is provided in this enclosure:

- a) A description of the results of evaluations performed pursuant to Generic Letter 2008-01 on the previously incomplete activities such as system piping walkdowns and ultrasonic testing (UT) at Turkey Point Unit 3 (see Section A of this enclosure).
- b) A description of any additional commitments and corrective actions determined necessary to assure system operability and compliance with the quality assurance criteria in Sections III, V, XI, XVI, and XVII of Appendix B to 10 CFR Part 50 and the licensing basis and operating license with respect to the subject systems, including a schedule and a basis for that schedule (see Section B.1 of this enclosure).

A. TURKEY POINT UNIT 3 EVALUATION RESULTS

1. Design Basis Documents

Changes to the Turkey Point Unit 3 design basis documentation were required as part of the modification process to incorporate twelve vent valves that were installed during the spring 2009 refueling outage. The locations of these valves are discussed below in Section A.3.

Calculations and analyses were performed to identify unvented locations at high points that could potentially harbor voids and to establish acceptance criteria for gas accumulation in the suction and discharge piping of the Unit 3 Emergency Core Cooling System (referred to at the Turkey Point units as Safety Injection, or SI), Decay Heat Removal System (referred to at the Turkey Point units as Residual Heat Removal, or RHR), and the Containment Spray System (CS). Discussions have been added to the design basis documents for these systems describing the long term gas accumulation monitoring program that has been implemented at the Turkey Point units.

Results of the analyses described above are discussed in Section A.2, below.

2. Confirmatory Walkdowns

a. Overview

System walkdowns were performed on inaccessible areas of the SI, RHR and CS piping during the spring 2009 Turkey Point Unit 3 outage. A combination of drawing reviews, laser level scanning, manual slope measurements and analyses were used to identify high points where gas could accumulate and challenge system function. Unvented high points were then evaluated to determine if the maximum gas volume that could potentially be present in that location exceeded pre-established screening criteria. The unvented high points with

Turkey Point Unit 3
Nine-Month Supplemental (Post Outage) Response to NRC Generic Letter 2008-01

maximum gas volumes that exceeded the screening criteria were subjected to UT examination and/or vent valve installation to determine the size of potential voids present in these areas prior to operating these systems.

In addition to the UT examinations performed for the initial screening of unvented high points, post-maintenance and post-modification UT examinations were performed. These examinations were performed at locations that were previously evaluated as high point potential void locations. The purpose was to verify that the refilled systems were full of water before returning the systems to service.

Results of the UT examinations were documented and added to the work packages. If a void was detected, it was entered into the Corrective Action Program to ensure that appropriate corrective actions were established for any detected gas voids.

b. Acceptance Criteria

Gas voids found during UT examinations that satisfied the acceptance criteria discussed in the following sections were considered acceptable without further evaluation. Gas voids that did not satisfy these acceptance criteria required further evaluation to determine if system operability was a concern. The general acceptance criteria for gas accumulation in RHR, CS and SI suction piping are based on limiting gas entrainment after a pump start. A Pressurized Water Reactor Owners Group (PWROG) program has established interim pump gas ingestion limits for suction and discharge piping. For suction piping, the acceptance criteria for a void fraction entering a single CS, SI or RHR pump is taken as 2% of the volume or less (continuous) and 5% of the volume or less (transient). For the discharge piping, the acceptance criteria were based on limiting the void size such that peak pressure pulsations did not exceed the design pressure capacity for the associated piping class, exceed relief valve set points on the particular piping system or cause large transient loadings on piping and piping supports. These limits have been used to establish acceptance criteria for the SI, RHR and CS suction and discharge piping at Turkey Point Units 3 and 4.

A plant-specific evaluation was performed for use in operability determinations to define acceptance criteria for gas voids in piping of the GL 2008-01 systems based upon the PWROG gas ingestion limits. These criteria apply to the entire system and, as such, are conservative. Results are provided in Table 1.

Turkey Point Unit 3
Nine-Month Supplemental (Post Outage) Response to NRC Generic Letter 2008-01

Table 1: Acceptance Criteria Used During the System Confirmation Walkdowns

System	Location	Acceptable Void Size
RHR	RHR suction piping (located $\geq 18'$ above the pump inlet elevation)	0.300 ft ³
RHR	RHR pump suction from the Containment Sump and RWST (located $< 18'$ above the pump inlet elevation)	0.150 ft ³
RHR	RHR hot leg return piping at standby conditions	0.885 ft ³
CS/SI	All CS / SI pump suction piping excluding piggyback piping	0.030 ft ³
CS/SI	Piggy back piping from RHR discharge	0.105 ft ³
RHR/CS/SI	All discharge piping OD $\geq 4''$	0.250 ft ³
SI	Discharge piping OD = 3"	0.150 ft ³
SI	Discharge piping OD = 2"	0.015 ft ³

The above limits are consistent with what was reported previously in Reference 5. In addition to the above limits, the average void fraction was also limited to 40% in any segment of pipe and a peak void fraction was limited to 80%. These limits are consistent with the maximum conditions present in industry tests (documented in Reference 8).

The acceptance criteria presented in Table 1 require no further evaluation for system impact on a generic basis. Discovered voids that have a volume less than or equal to these values will always be acceptable. However, exceeding these values will not necessarily be unacceptable. Increased allowable void size has been determined for a few specific locations on a case-by-case basis with a more detailed transient gas transport analysis. For example, High Point P-105 is on a ten inch RHR discharge pipe. Based on the results in Table 1, the acceptance criterion for this location stipulates that voids less than 0.25 ft³ would not compromise operability. However, detailed gas transport analysis has been done that justifies an increase of this value to 1.0 ft³. That means a void found in High Point P-105 as large as 1.0 ft³ would be still be acceptable.

Four high point locations are at the SI pump vent valves. Since it is difficult to calculate an acceptable void size for a location on a pump, the requirement (i.e., the acceptance criterion) for these particular locations is that the pump casings are to be water-solid. If they are found to not be water-solid, then they are to be vented until they are.

The containment spray discharge piping downstream of the pump discharge isolation valve can be completely voided. All piping upstream of this valve is required to meet established acceptance criteria.

In addition to the individual void limits specified above, the cumulative volume of all gas transported to the RCS must be less than the values shown in Table 2 and Table 3, below.

Turkey Point Unit 3
Nine-Month Supplemental (Post Outage) Response to NRC Generic Letter 2008-01

These values are taken from Reference 7 which documents an assessment performed by Westinghouse on the potential effects of noncondensable gas voids in SI piping. At UT test conditions of approximately 45 psia and 100°F, the cumulative limit is 17 ft³.

Table 2: Maximum Acceptable Gas Void in High Pressure SI Piping Evaluated for Cold Leg Injection under Transient Conditions

Pressure (psia)	Temperature (°F)	Volume (ft³)
1800	621	2.3
1000	545	3.8
400*	350*	7.7
14.7	212	173.2

* Corresponds to approximate residual heat removal / shutdown cooling system in-service conditions

Table 3: Maximum Acceptable Gas Void in Low Pressure SI Piping (RHR) Evaluated for Cold Leg Injection under Transient Conditions

Pressure (psia)	Temperature (°F)	Volume (ft³)
400*	350*	1.9
200	380	4.0
100	328	7.5
14.7	212	43.3

* Corresponds to approximate residual heat removal / shutdown cooling system in-service conditions

c. Results of Walkdowns and UT Examinations

To identify the locations that would require UT, piping isometrics were reviewed to identify natural high points and conservative pipe slope assumptions were made (e.g., it was assumed the pipe could slope either way). This review identified 41 previously inaccessible locations that would require UT examination during the 2009 spring outage at Unit 3. During the testing, gas voids were detected at eight (8) of these 41 locations. A summary of the results of these eight locations is provided below.

Turkey Point Unit 3
Nine-Month Supplemental (Post Outage) Response to NRC Generic Letter 2008-01

Table 4: Gas Voids Detected during Walkdowns UT Examinations

System	Location	Description	Acceptance Criteria	Measured Void Size
RHR	P-101	Discharge piping, 6" pipe upstream of refueling canal at elevation 52'5"	4.0 ft ³ at 58 psia (see Note 2)	3.644 ft ³ @ 38.6 psia
RHR	P-105	Discharge piping, 10" pipe downstream of MOV-3-744B at elevation 21'	1.0 ft ³ at 58 psia (see Notes 1 and 2)	0.077 ft ³ @350 psig or
RHR	P-106			0.731 ft ³ @38.6 psia
RHR	P-107			
RHR	P-108	Residual Heat Removal (RHR) discharge, 8" pipe downstream of Penetration 11 at elevation 26'	2.0 ft ³ at 58 psia (see Notes 1 and 2)	0.057 ft ³ @350 psig or 0.538 ft ³ @38.6 psia
RHR	P-111	RHR discharge, 8" pipe downstream of Penetration 11 at elevation 26'		0.0758 ft ³ @350 psig or 0.716 ft ³ @38.6 psia
RHR	P-127	Discharge piping, 8" pipe upstream of check valve 3-876A at elevation 23'	2.0 ft ³ at 58 psia (see Note 2)	0.077 ft ³ @350 psig or 0.723 ft ³ @38.6 psia
RHR	P-134	Suction piping, 14" pipe between valves MOV-3-750 and MOV-3-751 at elevation 15'6"	1.44 ft ³ at 35.5 psia (see Note 2)	0.418 ft ³ @35.5 psia

Note 1: This is for the combined volume of the identified high points.

Note 2: This value is based on detailed transient analysis which provides more margin than the acceptance criteria provided in Table 1.

P-101

UT identified a void in the riser leading to High Point P-101. This is a six inch diameter pipe that leads to the refueling canal. The void extended down the riser to within ten feet of the riser's bottom. This section of pipe is a dead leg connected to the primary RHR path. This gas had probably collected over several cycles from maintenance activities that trapped gas in pipes, and from nitrogen that came out of solution (back-leakage from the Accumulator). A calculation was done with the pipe entirely voided all the way down to the main run pipe (approximately 58 ft) at a pressure of 38.6 psia. This pressure was conservatively based on the Reactor Water Storage Tank (RWST) head. Although the actual pressure in the pipe at the time of the UT inspection is unknown, it is unlikely to have been greater than RWST pressure since there were several closed valves between this section of pipe and piping subjected to Accumulator pressure. Since the volume of gas in the dead leg was less than what has been found to be acceptable, the presence of gas at this high point did not present an operability concern for the system. The gas was vented using an existing valve. In the

Turkey Point Unit 3
Nine-Month Supplemental (Post Outage) Response to NRC Generic Letter 2008-01

future, this point will be monitored in accordance with the Gas Accumulation Management Program. The acceptance criteria for this location going forward was set as 4.0 ft³ @ 58 psia to allow for cumulative effects of a void being present in this section of piping concurrent with other voids in adjacent locations.

P-105, P-106 and P-107

UT identified a small void at a high point common to these three locations. It is in a ten inch diameter pipe on the primary RHR discharge. The size of the gas void based on UT measurements was approximately 0.077 ft³. The actual pressure in this section of pipe during the time of the UT measurements is unknown. It is possible that this section of pipe could have been at a higher pressure caused by back-leakage from the Accumulator through one of the check valves. At the time of the inspections, it is known that Reactor Coolant System pressure was no greater than 350 psig. If this section of pipe had become pressurized due to leaking check valves, its pressure would have been no greater than that of the Reactor Coolant System (RCS). Neglecting temperature effects (which are small), the ideal gas law requires a gas void of 0.077 ft³ at 350 psig to expand to 0.731 ft³ under a pressure of 38.6 psia. Detailed calculations have shown that voids in this section of pipe are acceptable up to 1.0 ft³ at 58 psig. Therefore, the gas void in High Points P-105, -106 and -107 did not present an operability concern for the system. A new vent valve, 3-1495, was added and the gas was vented off. In the future, this point will be monitored in accordance with the Gas Accumulation Management Program.

P-108 and P-111

UT identified a small void at High Point P-108. This is an eight inch diameter pipe on the RHR discharge. This gas void was likely caused by back-leakage through a check valve. The size of this void was calculated to be 0.057 ft³ conservatively assumed at 350 psig, or 0.538 ft³ at 38.6 psia. A new ¾ inch vent valve, 3-1499, was installed at the High Point P-108 and the void was vented.

Another void was found at High Point P-111. Based on the scan data, the pipe slopes up towards the containment penetration and was conservatively considered to be level through the penetration. The pipe outside containment is level based on walkdowns of accessible locations performed in fall 2008. Based on this assumption, the void size determined for this location was 0.0758 ft³ at 350 psig, or 0.716 ft³ at 38.6 psia.

Since P-108 and P-111 are on the same length of pipe, the void sizes were combined and compared to the acceptance criteria. Neglecting temperature effects (which are small), the ideal gas law would require the combined void size for P-108 and P-111 to expand from 0.1328 ft³ at a pressure of 350 psig to 1.254 ft³ at a pressure of 38.6 psia. Detailed analysis

Turkey Point Unit 3
Nine-Month Supplemental (Post Outage) Response to NRC Generic Letter 2008-01

(NAI-1400-005 Ref. 9) concluded that an acceptable combined void size for these locations is 2.0 ft³ at 58 psia. Since the combined void volume, 1.254 ft³, is less than the acceptance criteria, 2.0 ft³, these voids in the alternate RHR path are considered acceptable.

P-127

UT identified a small void at High Point P-127. This is an eight inch diameter pipe on the primary RHR discharge. The size of the gas void based on UT measurements was calculated to be approximately 0.077 ft³ at a conservatively assumed pressure of 350 psig or 0.723 ft³ at 38.6 psia. Detailed calculations have shown that voids in this section of pipe are acceptable up to 2.0 ft³ at 58 psia. Therefore, the gas void at High Point P-127 did not present an operability concern for the system. A new valve, 3-1496, was added and the gas was vented off. In the future, this point will be monitored in accordance with the Gas Accumulation Management Program.

P-134

UT identified a small void at High Point P-134. This is a fourteen inch diameter pipe on the RHR hot leg return suction line pulling water from the hot leg as part of the RCS cooling mode. The size of the gas void based on UT measurements was calculated to be approximately 0.418 ft³. Although the actual pressure in this section of pipe during the time of the UT measurements is unknown, it is believed to have been very low. The void is believed to have been created when a mass of water trapped between two closed valves, cooled and shrank. Detailed gas transient analyses have shown that voids in this section of pipe are acceptable up to 1.44 ft³. Therefore, the gas void in High Point P-134 did not present an operability concern for the system.

Note that in addition to the analyses performed for each of these independent high points, an analysis was performed for the possible cumulative effect of multiple voids on the interconnected discharge portions of these systems. This analysis confirms that the conclusions reached above for the individual voids remains valid when considering the cumulative effect of multiple voids, as well.

d. Post-Maintenance and Post-Modification UT Examinations

Maintenance and plant modification activities performed during the spring 2009 refueling outage that required draining and refilling of the SI, RHR and CS systems were reviewed to identify locations requiring follow-up UT examination to verify the effectiveness of filling and venting activities. From this review, thirteen locations were UTed to verify the system to be full. The post-maintenance and post-modification UT examinations performed detected gas voids at four of the thirteen locations. The following provides a summary of the UT examination results where the gas voids were detected.

Turkey Point Unit 3
Nine-Month Supplemental (Post Outage) Response to NRC Generic Letter 2008-01

During walkdowns that occurred when the unit was first brought down for the outage, voids were discovered in eight locations, three of which were P-105, P-108, and P-127 (the discovery of these eight locations was previously discussed in Section A.2.c and is also provided in Table 4). A void in a fourth location, P-142¹, was later identified using UT. These four locations were flushed early in the outage and later verified to be water-solid using UT. Vent valves were later installed at these four locations (i.e., P-105, P-108, P-127 and P-142) to provide future venting capability. In April 2009, Unit 3 was preparing to return to power and end the outage. After switching to Mode 3, voids were again discovered on April 11th at these four locations.

Table 5: Gas Voids Detected by Post-Maintenance and Post-Modification UT in RHR System In an Unsuccessfully Attempted Return from Outage in April 2009

Location	Description	Acceptance Criteria	UT Results
P-105	RHR Low Head Discharge Cross Tie Vent	Full	Void (04/11/09)
P-108	RHR Discharge Header Vent	Full	Void (04/11/09)
P-127	RHR Discharge Header Vent	Full	Void (04/11/09)
P-142	RHR Discharge Header Vent	Full	Void (04/11/09)

To correct the voided conditions, actions were scheduled to UT each location (to verify the voided condition), to vent each location (to purge the voids), and to UT each location again (to verify the void had been purged). These actions were successfully performed on High Points P-105 and P-142, which verified that water-solid conditions were reestablished. Before these actions could be completed on the remaining two locations, unrelated events forced the unit to return to Mode 5 and extend the outage. Since this meant draining and refilling these systems again, resolution of the remaining two voided locations was unnecessary. Once the unrelated events were resolved and the plant was readied to return to power, all systems were vented and the four locations were successfully UTed and verified to be water-solid.

A condition report (CR) was issued to determine the source of the gas voids at these four locations. Since there had been no negative change of level or pressure in the Accumulators after they had been filled, there was no indication of Accumulator leakage. Therefore, it was concluded that although the pipe had been vented after installation of the vent valves, the action had been inadequate to fully purge the voids that had collected.

¹ This location had not been considered early-on for UT like the others. It was later identified as a location potentially susceptible to gas accumulation and therefore underwent UT to be prudent.

Turkey Point Unit 3
Nine-Month Supplemental (Post Outage) Response to NRC Generic Letter 2008-01

In May 2009, Unit 3 proceeded to return to power and end the outage. This time, a void was found in only one location. P-5 was found to contain a very small void with unknown length (because the pipe immediately penetrates a wall). This location was vented and then later verified to be water-solid. Additional information on the location is provided in the table below.

Table 6: Gas Voids Detected by Post-Maintenance and Post-Modification UT Safety Injection System In Return from Outage in May 2009

Location	Description	Acceptance Criteria	UT Results
P-5	RHR South Recirculation Sump Supply Header Downstream Vent	Full	Void (05/08/09); Water solid (later same day)

At the end of the spring outage, the Gas Accumulation Management Program was not yet in place at Turkey Point Unit 3. Because an organized program was not yet in place, and there was pipe insulation installed at some locations, it was discovered that three high points that should have been UTed at that time had not been. The locations were P-8 (RHR discharge line), P-9 (RHR discharge line), and P-10 (RHR crosstie line). Prior to the outage, these high-points had been inspected and were found to be water-solid before RHR had been placed in-service. The failure to UT these locations a second time at the end of the outage was dispositioned in a CR and found not to be an operability concern. This is because the RHR system had never been drained after it was initially verified to be water-solid. The pressurizer bubble had been maintained, preventing the introduction of air from a drained primary system, and thus, there was little opportunity for the introduction of gas. Monitoring these locations is required under the Gas Accumulation Management Program. All UT high points that require periodic inspections will have insulation that can be temporarily removed and re-installed, or modified to allow UT without removal.

3. Vent Valves

Inaccessible Locations

The walkdowns and UTs previously performed on inaccessible locations during the 2009 Turkey Point Unit 3 refueling outage identified voids in eight locations (the discovery of these eight locations was previously discussed in Section A.2.c and in Table 4). These locations were evaluated to determine required actions to prevent gas accumulation. An analysis determined that three locations required new vent valves to be installed. The remaining locations were determined to be acceptable as-is based on a comparison to the maximum potential void size that could exist or an existing ability to remove the void.

Turkey Point Unit 3
Nine-Month Supplemental (Post Outage) Response to NRC Generic Letter 2008-01

Table 7: Inaccessible Locations at Turkey Point Unit 3 Considered for Vent Valve Installation

Location	Description	Reason Identified*	Valve added?	Comment
P-101	RHR discharge, 6" pipe upstream of refueling canal at elevation 52'5"	Note 1	No	Vent valve 3-734B is already available for venting.
P-105	RHR discharge, 10" pipe downstream of MOV 3-744B at elevation 21'	Note 1	Yes	New Vent valve 3-1495 at P-105 will be used to vent P-106 and P-107.
P-106		Note 1	No	
P-107		Note 1	No	
P-108	RHR discharge, 8" pipe downstream of Penetration 11 at elevation 26'	Note 1	Yes	New Vent valve 3-1499 added.
P-111	RHR discharge, 8" pipe downstream of Penetration 11 at elevation 26'	Note 1	No	Vent valve 3-940N is available for venting.
P-117	RHR discharge, 8" pipe upstream of check valve 3-876D at elevation 22'	Note 2	Yes	New Vent valve 3-1498 added.
P-120	SI, 2" pipe upstream of FE-3-933 at elevation 26'-10"	Note 2	Yes	New Vent valve 3-1500 added.
P-127	RHR discharge, 8" pipe upstream of check valve 3-876A at elevation 21'	Note 1	Yes	New Vent valve 3-1496 added.
P-134	RHR suction, 14" pipe between valves MOV-3-750 and MOV-3-751 at elevation 15'6"	Note 1	No**	Calc found void to be acceptable.
P-142	RHR discharge, 8" pipe upstream of check valve 3-876B at elevation	Note 2	Yes	New Vent valve 3-1497 added.

*1 ≡ Void found during UT of inaccessible locations. These were identified in Table 4.

*2 ≡ Location deemed susceptible to gas accumulation during analytical stages.

** ≡ The void was located in a pipe volume between two MOVs. It was the result of procedure errors related to the opening and closing of these valves. A procedure change corrected this such that a void would no longer be created. As such, the installation of a vent valve was unnecessary.

Procedure changes have been implemented to specify use of the vent valves during normal system filling and venting, and during the monthly surveillances to vent the SI. The revised procedures are discussed in Section A.4 below.

Turkey Point Unit 3
Nine-Month Supplemental (Post Outage) Response to NRC Generic Letter 2008-01

Accessible Locations

Reference 5 states that all *accessible* locations at Turkey Point Unit 3 had been dispositioned in October 2008 as not requiring the installation, modification, or utilization of a new vent valve. While that statement was true at the time of the submittal of the nine-month response (Reference 5), on-going reviews sparked by evolving industry activities related to the GL have identified six accessible locations with a piping configuration that may be susceptible to gas accumulation where no venting capability exists. As a proactive enhancement, new vent valves were installed at each of these six locations during the spring 2009 refueling outage. The addition of these valves will allow for future venting, if it becomes necessary at these locations.

Vent valves added to Unit 3 *accessible* areas are identified below:

Table 8: Vent Valves added to Turkey Point Unit 3 Accessible Areas

Location	Description	Valve Number
P-5	RHR suction, 14" pipe upstream of MOV-3-860A at Elevation 7' 2-13/16"	3-1490
P-6	RHR suction, 14" pipe upstream of MOV-3-860B at Elevation 7' 3-5/8"	3-1491
P-15	SI discharge, 2" pipe off Penetration 59 at Elevation 31'	3-1492
P-16	SI discharge, 2" pipe off Penetration 58 at Elevation 28' 3-3/8"	3-1493
P-17	SI discharge, 2" pipe off Penetration 60 at Elevation 28' 5-1/2"	3-1494
P-30	SI suction, 8" pipe at first elbow downstream of valve 3-864C at Elevation 19' 1-5/8"	3-1488

4. Procedures

Nine procedures have been revised or created to implement the Gas Accumulation Management Program at Turkey Point Unit 3. Changes to incorporate the addition of twelve new vent valves on Unit 3 (six in inaccessible locations and six in accessible locations as discussed in Section A.3, above) were reflected in these procedure changes. Similarly, changes were made to require that system flushing is performed during cold shutdown, prior to returning the unit to service.

Turkey Point Unit 3
Nine-Month Supplemental (Post Outage) Response to NRC Generic Letter 2008-01

Table 9: Procedure Changes for New Vent Valves

Procedure	Procedure Title
0-AMD-547	"Gas Accumulation Management Program"
0-OSP-202.3	"Safety Injection Pump and Piping Venting"
3-GOP-305	"Hot Standby to Cold Shutdown"
3-GOP-503	"Cold Shutdown to Hot Standby"
3-NOP-062	"Safety Injection"
3-NOP-068	"Containment Spray System"
3-OP-050	"Residual Heat Removal System"
3-OSP-068.2	"Containment Spray System Inservice Test"
3-OSP-202.2	"RHR Pump and Piping Venting"

Implementation of the Gas Accumulation Management Program and these procedures is intended to be an ongoing process that will continue to evolve with industry, site and corporate experience as well as reflect evolving NRC concerns. As such, this list of procedures is not final and may be expanded in the future to address additional program enhancements.

Completion of the Unit 4 procedures cannot be obtained until completion of the fall 2009 Unit 4 refueling outage. At that time, system walkdowns will be completed for the inaccessible areas, all vulnerable locations will be identified, and the necessary vents will be installed. Once all vulnerable locations have been identified and the number of vent valves and their locations are known, procedure revisions can be made completing the necessary program changes for Unit 4. This is consistent with information previously provided to the NRC in Reference 5 which stated that the walkdowns would not be completed on Unit 4 until the fall 2009 outage. More information will be provided 90 days after the fall 2009 outage in the Unit 4 nine-month supplemental response to GL 20008-01.

5. Training

Currently, site training has been provided to Turkey Point personnel involved with executing field UTs. Additionally, generic training on entrained gas management is being developed. This training is designed as modules with target audiences of Engineering, Maintenance, Operations, and Chemistry. The mission of these modules will be to ensure the target population has the appropriate knowledge to prevent actions that might create voids or encumber the ability to manage them once they exist, to identify symptoms of gas intrusion, and to promote effective corrective actions. When these training modules are complete and issued to the industry, they will be evaluated by FPL staff and implemented, as appropriate. Like the gas management program, training on this issue will evolve with industry experience. Future training needs beyond this will be identified by the Turkey Point Training Review Committee.

Turkey Point Unit 3
Nine-Month Supplemental (Post Outage) Response to NRC Generic Letter 2008-01

B. DESCRIPTION OF NECESSARY ADDITIONAL COMMITMENTS AND CORRECTIVE ACTIONS

1. Additional Commitments and Corrective Actions

a. Additional Commitments

No additional regulatory commitments are being addressed in this response.

b. Additional Corrective Actions

Corrective actions for Turkey Point Unit 3 that had not been previously identified in Reference 5 such as procedure revisions and the installation of specific vent valves have already been discussed elsewhere in this submittal. Beyond these, there is no additional corrective action for Unit 3.

2. Commitment and Corrective Action Updates

a. Commitment Updates

Four regulatory commitments were identified in the nine-month response letter (Reference 5). They are reiterated below with an update as appropriate.

- i. (Excerpt from Reference 5) From Reference 3, FPL will provide a complete GL 2008-01 submittal 90 days after the end of the Unit 3 spring 2009 refueling outage. This submittal will complete the design evaluation review based on the completed walkdowns of inaccessible area piping, completed evaluation results, and schedule for any additional corrective actions based on the completed evaluations for Unit 3.

Update: The spring 2009 outage ended on May 9, 2009. Ninety days after this date is August 7, 2009. This letter is being provided by this date and completes the design evaluation review for Turkey Point Unit 3. Therefore, this commitment is satisfied.

- ii. (Excerpt from Reference 5) From Reference 3, FPL will provide a complete GL 2008-01 submittal 90 days after the end of the Unit 4 fall 2009 refueling outage. This submittal will complete the design evaluation review based on the completed walkdowns of inaccessible area piping, completed evaluation results, and schedule for any additional corrective actions based on the completed evaluations for Unit 4.

Update: The Turkey Point Unit 4 fall outage is tentatively scheduled to start near the end of October 2009 and to be complete near the end of November 2009. Ninety days after this will be the beginning of March 2010. If the outage goes according to this schedule, a letter similar to this will be provided for Unit 4 before this date. If the outage does not go

Turkey Point Unit 3
Nine-Month Supplemental (Post Outage) Response to NRC Generic Letter 2008-01

according to this schedule, the letter will be provided 90 days after the completion of the outage, consistent with the regulatory commitment.

- iii. (Excerpt from Reference 5) FPL commits to submit to the NRC proposed changes to the Turkey Point Units 3 and 4 Technical Specifications based upon the final, approved version of Technical Specification Task Force (TSTF) traveler for unacceptable gas accumulation in SI, adjusted, as needed, to account for plant-specific Turkey Point Units 3 and 4 design and licensing basis, within 180 days following NRC publication of the Notice of Approval of the TSTF traveler in the Federal Register and the Consolidated Line Item Improvement Process Notice of Availability.

Update: Industry efforts are currently underway to prepare the subject TSTF. However, a Notice of Approval of the TSTF traveler or a Consolidated Line Item Improvement Process Notice of Availability has not yet been published. Consequently, this commitment remains unchanged and unscheduled.

- iv. (Excerpt from Reference 5) FPL commits to developing a long term gas monitoring program for Turkey Point to manage gas accumulation in SI, RHR, and CS Systems. FPL will develop the program and associated procedures in parallel with the industry activities and implement the program by June 30, 2009.

Update: A site-specific Gas Accumulation Management Program has been developed and implemented at Turkey Point Unit 3. This involved the creation of new program documents and the assignment of a program owner. This will be a "living" program, meaning it will evolve to incorporate on-going industry, site and corporate experience as well as reflect evolving NRC concerns. Implementation of this program and the supporting procedures was complete by June 30, 2009. As such, this commitment has been satisfied.

b. Corrective Action Updates

Corrective actions were previously identified in the nine-month response (Reference 5) in sections requesting a detailed list of items that had not been completed, a schedule for their completion, and the basis for that schedule. An update of these items is provided below:

i. Reference 5: Section A. EVALUATION RESULTS / Licensing Basis Evaluation / Section 3 (page 4 of 24)

- a) (Excerpt from Reference 5) FPL plans to evaluate the TSTF traveler and submit a TS change request, as needed. However, no current schedule exists for the availability of the TSTF traveler for use in revising the Turkey Point TSs. As such, FPL plans to perform these actions within 180 days following NRC publication of the Notice of

Turkey Point Unit 3
Nine-Month Supplemental (Post Outage) Response to NRC Generic Letter 2008-01

Approval of the TSTF traveler in the Federal Register and the Consolidated Line Item Improvement Process (CLIIP) Notice of Availability. This will allow an appropriate amount of time for its evaluation and necessary actions taken that result from that evaluation that might lead to a TS change submittal.

Once the Notice of Approval of the TSTF traveler is published in the Federal Register, its review and evaluation will be tracked in the Corrective Action Program. The proposed changes will be submitted, as needed, 180 days after the Notice of Approval has been published in the Federal Register.

Update: Industrial efforts are currently underway to prepare the subject TSTF. However, a Notice of Approval of the TSTF traveler or a CLIIP has not yet been published. Consequently, the response to this item remains unchanged and unscheduled.

- b) (Excerpt from Reference 5) Any changes to licensing basis documents resulting from industry testing and analytical programs related to gas accumulation are dependent upon the completion of these industry efforts. A defined schedule does not currently exist for their completion, and it is not clear what the outcome will be. As such, there is no clear basis at this time on what to estimate a completion date for this item. As these changes become more clearly defined, they will be captured and tracked in the Corrective Action Program.

Update: Turkey Point has implemented a Gas Accumulation Management Program. This program will evolve to incorporate on-going industry experience. Operating [industry] experience will be routinely reviewed and if appropriate, be incorporated into the program in a controlled manner employing the Corrective Action Program. This may include the identification and implementation of future changes to procedures and licensing basis documents resulting from industry testing and analytical programs. Currently, the UFSAR and design basis documents have been revised to incorporate a discussion on the management of accumulated gas in the RHR, SI and CS Systems in accordance with the site program.

- c) (Excerpt from Reference 5) Changes to the UFSAR will be completed by June 30, 2009. This will provide sufficient resources to perform an engineering review and evaluation of the proposed UFSAR changes along with the associated procedure changes and incorporate the information related to the long term gas monitoring program.

This revision to the UFSAR and revisions to the implementing procedures will be tracked in the Corrective Action Program.

Turkey Point Unit 3
Nine-Month Supplemental (Post Outage) Response to NRC Generic Letter 2008-01

Update: The Turkey Point UFSAR has been revised to describe the methodology by which the accumulation of gas is monitored in the RHR, SI and CS Systems. This has been done in accordance with the identified schedule.

- d) (Excerpt from Reference 5) FPL will provide a complete GL 2008-01 submittal for Unit 3, 90 days after the end of the Unit 3 Spring 2009 refueling outage. This submittal will complete the design evaluation review based on the completed walkdowns of inaccessible area piping, completed evaluation results, and schedule for any additional corrective actions based on the completed evaluations for Turkey Point Unit 3.

Update: The spring 2009 outage ended on May 9, 2009. Ninety days after this date is August 7, 2009. This letter is being provided before this date and completes the design evaluation review for Turkey Point Unit 3. Therefore, this commitment is satisfied.

- e) (Excerpt from Reference 5) FPL will provide a complete GL 2008-01 submittal for Unit 4, 90 days after the end of the Unit 4 Fall 2009 refueling outage. This submittal will complete the design evaluation review based on the completed walkdowns of inaccessible area piping, completed evaluation results, and schedule for any additional corrective actions based on the completed evaluations for Turkey Point Unit 4.

Update: The Turkey Point Unit 4 fall outage is tentatively scheduled to start near the end of October 2009 and to be completed near the end of November 2009. Ninety days after this will be the beginning of March 2010. If the outage goes according to this schedule, a letter similar to this will be provided for Unit 4 before this March 2010 date. If the outage does not go according to this schedule, the letter will be provided 90 days after the completion of the outage, consistent with the regulatory commitment.

ii. Reference 5: Section A. EVALUATION RESULTS / Design Basis Evaluation / Section 12 (page 16 of 24)

- a) (Excerpt from Reference 5) There is no existing long term void management program for Turkey Point. Such a program will provide specific acceptance criteria and establish practices consistent with industry standards. New procedures and other necessary documentation are needed to implement this. Implementation of such a program will be complete by June 30, 2009, to allow time for industry advancements and for coordination with the FPL Fleet.

This item will be tracked in the Corrective Action Program.

Turkey Point Unit 3
Nine-Month Supplemental (Post Outage) Response to NRC Generic Letter 2008-01

Update: A site-specific program has been developed and implemented at Turkey Point Unit 3. This involved the creation of new program documents and the assignment of a program owner. This will be a "living" program, meaning it will evolve to incorporate on-going industry, site and corporate experience. This program and its supporting procedures were implemented on or before June 30, 2009.

- b) (Excerpt from Reference 5) A discussion of long term void management will be inserted in the design basis documents for SI, CS and RHR Systems. This is scheduled for June 30, 2009, to coincide with the implementation of the void management program.

This item will be tracked in the Corrective Action Program.

Update: The design basis documents for the RHR, SI and CS Systems have been revised in accordance with the identified schedule to include a discussion on the methodology used to monitor the accumulation.

- c) (Excerpt from Reference 5) Currently, there is no existing procedure requirement to perform UT checks to confirm systems are full following valve manipulations, system realignments, and maintenance. New procedures and/or procedure revisions are needed to address this. These procedures will identify the location, acceptance criteria, the required frequency for monitoring and actions to quantify the gas void when discovered. Trending of void identification will be included. These procedures will be implemented on or before June 30, 2009, to coincide with implementation of the void management program.

This item will be tracked in the Corrective Action Program.

Update: Since the issuance of Reference 5, a Gas Accumulation Management Program has been implemented at Turkey Point Unit 3. Procedure requirements have been implemented that make it necessary to verify the RHR, SI or CS System to be full of water to satisfy its safety function after any kind of activity that may introduce gas in the piping. The locations, acceptance criteria, monitoring frequency and actions for trending purposes are identified in the program and/or supporting procedures.

(Note: the referenced text above mentions that when a gas void has been identified, its size will be quantified and trended, but it does not stipulate under what circumstances this is to be done. Trending and the determination of the size of a void are not necessarily meaningful in all scenarios. If found after a period of operation, knowing the volume of a gas void and trending its growth can be valuable

Turkey Point Unit 3
Nine-Month Supplemental (Post Outage) Response to NRC Generic Letter 2008-01

information in assessing a system for its past, current and future health. However, if a bubble is found following maintenance when the system had been emptied, its size would be meaningless for trending or assessing the system's health. As such, the program only requires quantification and trending of voids when that information is meaningful.)

The program and its supporting procedures were implemented on or before June 30, 2009. This will be a "living" program, meaning it will evolve to incorporate on-going industry, site and corporate experiences.

- d) (Excerpt from Reference 5) FPL will determine if and when additional vent locations are required in currently inaccessible areas. If new vents are required, a modification will be generated and entered into FPL's Corrective Action Program. These corrective actions will be completed in a time commensurate with the safety significance of the vent location, but no later than the next refueling outage for the particular Turkey Point unit beginning after October 11, 2008.

Update: Walkdowns of the Turkey Point Unit 3 inaccessible areas occurred at the beginning of the spring 2009 outage. Based on the results of these walkdowns and analyses, six new vent valves were installed. In addition, six accessible locations that were identified during the spring 2009 outage have had new vent valves installed as an enhancement. Further discussion of these vent valves was previously provided in Section A.3.

Walkdowns of the Turkey Point Unit 4 inaccessible areas will occur during the fall 2009 outage. Currently, this is scheduled to start near the end of October 2009 and be complete near the end of November 2009.

iii. Reference 5: Section A. EVALUATION RESULTS / Testing Evaluation / Section 6 (page 20 of 24)

- a) (Excerpt from Reference 5) A new procedure or revision will be implemented to include language assuring that the CS System (discharge and suction piping up to the first closed discharge line isolation valve) is "sufficiently" full of liquid to reliably perform the intended safety function. This will be consistent with GL 2008-01 and will consider acceptance criteria for gas voiding in the CS piping. This will be complete by June 30, 2009, to be implemented coincident with the long term void management program.

This item will be entered and tracked in the Corrective Action Program.

Turkey Point Unit 3
Nine-Month Supplemental (Post Outage) Response to NRC Generic Letter 2008-01

Update: Most of the CS System piping is designed to be full of air at atmospheric conditions when not operating. However, for the CS System to be considered operable, the pump discharge and suction piping up to the first closed discharge line isolation valve must be filled with water. The Gas Accumulation Management Program implemented at Turkey Point Unit 3 ensures that this portion of the CS System is operable. Locations where gases could potentially accumulate in the CS System, pump discharge and suction piping up to the isolation valve, are periodically monitored using UT and/or vented to verify the system is filled. Revised program procedures reflect this.

The Gas Accumulation Management Program and its supporting procedures were implemented on or before June 30, 2009. It will be a "living" program, meaning it will evolve to incorporate on-going industry, site and corporate experiences.

- b) (Excerpt from Reference 5) Revisions of existing surveillance procedures and/or creation of new procedures are needed to establish appropriate surveillance criteria to provide a more refined analytical basis for operability determinations. Similarly, these criteria will provide a more quantitative means for system trending to identify potential conditions adverse to quality more effectively. This will be complete by June 30, 2009, to be implemented coincident with the long term void management program.

This item will be entered and tracked in the Corrective Action Program.

Update: At the time that Reference 5 was submitted, there was no formal program at Turkey Point to monitor gas voids found in the RHR, SI and CS Systems. At best, a chronic occurrence of voiding at a particular location might have been casually recognized and documented in a corrective action report as a recurring occurrence of voids, but there was no official method to quantify the size of the void, assess if trends indicated conditions were deteriorating, or establish an acceptance criterion. Since that time, a Gas Accumulation Management Program has been implemented at Turkey Point Unit 3 that defines requirements to monitor, evaluate, trend, and control gas build up in the RHR, SI and CS Systems. Under this program, gas voids will be trended. From this data, current, past and future health of these systems can be determined, and corrective actions, as appropriate, can be identified and acted upon. This provides a more refined and quantitative approach in the assessment of system operability.

This program and its supporting procedures were implemented on or before June 30, 2009. This will be a "living" program, meaning it will evolve to incorporate on-going industry, site and corporate experiences.

Turkey Point Unit 3
Nine-Month Supplemental (Post Outage) Response to NRC Generic Letter 2008-01

- c) (Excerpt from Reference 5) Appropriate procedures will be revised or created to include requirements following valve manipulations, system realignments, and maintenance for confirmatory UT examinations, including acceptance criteria and actions to quantify gas void when discovered. Trending of void identification will be included. This will be complete by June 30, 2009, to be implemented coincident with the long term void management program.

These actions will be entered and tracked in the Corrective Actions Program.

Update: This is the same as item B.2.b.ii.c), above. Please refer to the update provided for that item.

iv. Reference 5: Section A. EVALUATION RESULTS / Corrective Actions Evaluation / Section 2 (page 21 of 24)

Corrective actions relevant to how gas accumulation has been addressed at the Turkey Point units have already been captured in earlier sections. No new items were uncovered here.

No update necessary.

v. Reference 5: Section C. CORRECTIVE ACTION SCHEDULE / Section 2 (page 22 of 24)

- a) (Excerpt from Reference 5) FPL plans to evaluate the TSTF traveler and submit a TS change request, as needed. However, no current schedule exists for the availability of the TSTF traveler for use in revising the Turkey Point TSs. As such, FPL plans to perform these actions within 180 days following NRC publication of the Notice of Approval of the TSTF traveler in the Federal Register and CLIIP issuance. This will allow an appropriate amount of time for its evaluation and necessary actions taken that result from that evaluation that might lead to a TS change submittal.

Once the Notice of Approval of the TSTF traveler is published in the Federal Register, its review and evaluation will be tracked in the Corrective Action Program.

Update: This is the same as item B.2.b.i.a), above. Please refer to the update provided for that item.

- b) (Excerpt from Reference 5) Any changes to licensing basis documents resulting from industry testing and analytical programs related to gas accumulation are dependent upon the completion of these industry efforts. A defined schedule does not currently exist for their completion, and it is not clear what the outcome will be. As such, there is no clear basis at this time on what to estimate a completion date for

Turkey Point Unit 3
Nine-Month Supplemental (Post Outage) Response to NRC Generic Letter 2008-01

this item. As these changes become more clearly defined, they will be captured and tracked in the Corrective Action Program.

Update: This is the same as item B.2.b.i.b), above. Please refer to the update provided for that item.

- c) (Excerpt from Reference 5) As stated in Section B [of Reference 5], FPL commits to developing a long term gas monitoring program by June 30, 2009. A number of actions will be required to support this program. These actions include:
- Revisions of existing surveillance procedures and/or creation of new procedures to provide a more analytical basis for operability determinations and provide a more quantitative means for system trending.
 - Revising the design basis documents and/or UFSAR for SI, CS and RHR Systems to include a discussion of long term void management.
 - Incorporating confirmatory UT requirements in the appropriate procedure following valve manipulations, system realignments, and/or maintenance, including acceptance criteria and actions to quantify gas void when discovered.

These items will be tracked in the Corrective Action Program.

Update: A long term gas monitoring program has been implemented at Turkey Point Unit 3. It provides guidance on monitoring, evaluating, trending, and controlling gas build-up in these safety-related fluid systems to maintain them in an operable state. The program and procedures for Unit 3 were in place by June 30, 2009.

(Note: Completion of this for Unit 4 cannot be fully obtained until the fall 2009 refueling outage. At that time, system walkdowns will be completed, all vulnerable locations on these systems will be identified, and the necessary vents will be installed. Once all the vulnerable locations have been identified, and the number of vent valves and their locations are known, procedure revisions can be made, completing the necessary program changes for Unit 4. This is consistent with the information provided in Reference 5 which stated that the walkdowns would not be completed on Unit 4 until the fall 2009 outage. More discussion will be provided in the Unit 4 nine-month supplemental response to GL 2008-01 to be provided 90 days after the fall 2009 outage at Unit 4.)

At the time that Reference 5 was submitted, there was no formal program at Turkey Point that established controlled monitoring of gas voids found in the RHR, SI and CS Systems. At best, a chronic occurrence of voiding at a particular location might

Turkey Point Unit 3
Nine-Month Supplemental (Post Outage) Response to NRC Generic Letter 2008-01

have been recognized and documented in a corrective action report as a recurring presence of voids, but there was no official method to quantify the size of the void, assess if trends indicated conditions were deteriorating, or establish an acceptance criterion. Since that time, a Gas Accumulation Monitoring Program has been implemented at Turkey Point Unit 3 that defines requirements to monitor, evaluate, trend, and control gas build up in the RHR, SI and CS Systems. Under this program, gas voids are formally quantified, assessed and trended. From this data, the current, past and future health of these systems can be determined, and corrective actions, as appropriate, can be identified and acted upon. This provides a more refined and quantitative approach in the assessment of system operability.

This program and its supporting procedures were implemented on or before June 30, 2009. This will be a "living" program, meaning it will evolve to incorporate on-going industry, site and corporate experiences.

The design basis documents and UFSAR sections for the RHR, SI and CS systems have been revised to include a discussion of long term void management. These changes were implemented on or before June 30, 2009.

Procedure changes have been made to require UT monitoring after actions such as valve manipulations, system realignments, and/or maintenance that could result in creating a void in one of these systems. Acceptance criteria and the requirement to trend voids are also described in the program and implemented in the procedures. Further description of the procedures is provided in Section A.4.

- d) (Excerpt from Reference 5) FPL will determine if additional vent locations are required in currently inaccessible areas. If new vents are required, a modification will be generated and entered into FPL's Corrective Action program. These corrective actions will be completed in a time commensurate with the safety significance of the vent location, but no later than the next refueling outage for the particular Turkey Point unit beginning after October 11, 2008.

Update: This is the same as item B.2.b.ii.d), above. Please refer to the update provided for that item.

- e) (Excerpt from Reference 5) A new procedure or revision will be implemented to include language assuring that the CS System (discharge and suction piping up to the first closed discharge line isolation valve) is "sufficiently" full of liquid to reliably perform the intended safety function. This will be consistent with GL 2008-01 and will consider acceptance criteria for gas voiding in the CS piping. This will be

Turkey Point Unit 3
Nine-Month Supplemental (Post Outage) Response to NRC Generic Letter 2008-01

complete by June 30, 2009, to be implemented coincident with the long term void management program.

This item will be tracked in the Corrective Action Program.

Update: This is the same as item B.2.b.iii.a), above. Please refer to the update provided for that item.

- f) (Excerpt from Reference 5) One location (Point P-13) was identified with UT that had a void, but was evaluated to be acceptable. This location will receive periodic UT verification to monitor the size of the void.

This item will be entered and tracked in the Corrective Action Program.

Update: The location of this void was in the 8" diameter alternate RHR line of Turkey Point Unit 3. The size of the void was determined using UT, and a prompt operability determination concluded the existing void was too small to compromise the operability of a structure, system or component (SSC) described in the current licensing basis. Venting capability for this location could be provided through an existing valve (3-940N) but not at operating pressure. Therefore, recurring monitoring was established for this location to verify the size of the void would not grow to compromise operability of any connected SSCs. This periodic monitoring continued until the 2009 refueling outage when conditions were appropriate to vent the line and discharge the void. The periodic monitoring showed there was no change in the size of the void through the remainder of the operating cycle. After this, the void was successfully vented.

The most probable cause for the creation of this gas void was felt to be inadequate venting performed on the Alternate RHR piping following outage activities. To address this at Unit 3, Turkey Point procedures were revised to require UT verification that the Alternate RHR piping has been properly vented through the existing valve following outage activities.

Conclusion

FPL has evaluated the previously unevaluated portions of the applicable systems at Turkey Point Unit 3 that perform the functions described in the GL and has concluded that these systems are operable.

Turkey Point Unit 3
Nine-Month Supplemental (Post Outage) Response to NRC Generic Letter 2008-01

References

1. NRC Generic Letter 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems," dated January 11, 2008.
2. Extension Request Regarding the Three-Month Response to NRC Generic Letter 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems," Letter No. L-2008-076, dated April 9, 2008 (ML081050251).
3. Three-Month Response to NRC Generic Letter 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems," Letter No. L-2008-105, dated May 9, 2008 (ML081430648).
4. Turkey Point, Units 3 & 4, 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. MD7890 and MD7891), dated September 19, 2008 (ML082540437).
5. Nine-Month Response to NRC Generic Letter 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems," Letter No. L-2008-218, dated October 14, 2008.
6. "GL 2008-01 Evaluation of High Point Gas Voids inside Unit 3 Containment," PTN-110389-002-M04.
7. "Non-Condensable Gas Voids in SI Piping; Assessment of Potential Effects on Reactor Coolant System Transients Including Chapter 15 Events." Westinghouse Letter and Attachment, LTR-LIS-08-543, dated August 19, 2008.
8. "Testing and Evaluation of Gas Transport to the Suction of ECCS Pumps," Revision 0. WCAP-16631-NP.
9. Numerical Applications, Inc. (NAI) Report Number NAI-1400-005 Rev. 1 "Evaluation of Gas Accumulation in Turkey Point ECCS Discharge Piping – Unit 3 Inside Containment".
10. Numerical Applications, Inc. (NAI) Report Number NAI-1400-002 Rev. 0 "Evaluation of Gas Accumulation in Turkey Point ECCS Suction Piping".