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FEB 7 2011  
L-2011-036  
10 CFR 50.54(f)

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

Re: Turkey Point Units 3 and 4  
Docket Nos. 50-250 and 50-251  
Response to NRC Request for Additional Information (RAI) Regarding NRC Generic  
Letter 2008-01 "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat  
Removal, and Containment Spray Systems"

References:

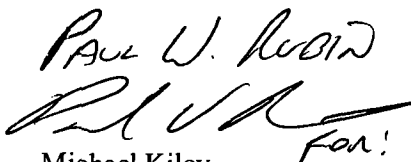
- 1) Units 3 and 4 Nine-Month Response to NRC Generic Letter 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems"
- 2) Turkey Point Unit 3: Nine-Month Supplemental (Post-Outage) Response to NRC Generic Letter 2008-01
- 3) Turkey Point Unit 4: Nine-Month Supplemental (Post-Outage) Response to NRC Generic Letter 2008-01
- 4) RAIs RE: Generic Letter 2008-01, Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems, e-mail from Jason Page (NRC), January 07, 2011 to Bob Tomonto (FPL)

The above references (1 through 3) provided Florida Power & Light's (FPL's) responses to NRC Generic Letter 2008-01 for Turkey Point Units 3 and 4. Additional information was requested by the NRC staff by e-mail dated January 7, 2011 (Reference 4). The RAI consisted of seven (7) questions concerning the Turkey Point implementation of NRC Generic Letter 2008-01 requirements. The attachments to this letter provide the FPL response to these questions.

This letter contains no new commitments and no revisions to existing commitments.

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

Very truly yours,



For:

Michael Kiley  
Site Vice President  
Turkey Point Nuclear Plant

A134  
NRC

Turkey Point Units 3 and 4  
Docket Nos. 50-250 and 50-251

L-2011-036  
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Attachments

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

Attachment 1

Response to 1/7/2011 RAIs Regarding Implementation of

NRC Generic letter 2008-01

### **Response to Request for Additional Information**

The following information is provided by Florida Power & Light (FPL) in response to the Nuclear Regulatory Commission's (NRC) Request for Additional Information (RAI). This information was requested in an e-mail (Reference 4) from the NRC Project Manager (PM) to the Turkey Point Licensing Manager dated January 7, 2011. Each of the seven (7) questions is documented below with the applicable FPL response.

#### **Question 1**

Since the technical specifications do not address ECCS suction piping, how is gas intrusion managed in this suction piping?

#### **Response 1**

The Technical Specification does not explicitly address suction piping of the ECCS systems, however, the operability of the associated pumps or flow path is affected by the condition of their associated suction pipe. For example if a void is found in the suction piping that exceeds the pre-established acceptance criteria, then the train and associated components would be inoperable and the appropriate ECCS Technical Specification entered.

Procedure 0-ADM-547 (Gas Accumulation Management Program, GAMP) was created in response to NRC Generic Letter 2008-01, Managing Gas Accumulation in High Head Safety Injection (HHSI), Low Head Safety Injection (LHSI), Residual Heat Removal (RHR), and Containment Spray (CS) Systems (GL 2008-01). This program includes details on monitoring, evaluating, trending, and controlling gas build-up in safety related fluid systems to maintain these systems OPERABLE. Attachments 1-6 (RHR/SI/CS Gas Accumulation Monitoring Points) of this procedure list the gas accumulation monitoring points for Units 3 and 4 RHR, SI and CS systems. The list includes the high points associated with the RHR, SI and CS suction piping.

Attachment 7 (UT Planning Flowchart) of 0-ADM-547 summarizes the Ultrasonic Testing (UT) process for the locations listed in Attachments 1-6. The UT results are compared against the acceptance criteria. If the results are within the acceptance criteria an Action Request (AR) is generated and the location vented. If the results are not within the acceptance criteria, the affected SSC is declared inoperable, the void is vented and an AR is generated. As a result, an AR is generated any time voids are identified when UT is performed. These ARs are screened for conditions adverse to quality and are what Turkey Point uses to trend and correct gas intrusion in suction and discharge piping. ARs that identify conditions adverse to quality are coded as Condition Reports (CRs) and receive condition evaluations. AR that identifies conditions not adverse quality may be coded as Routine Work Types (RWTs) for tracking purposes.

#### **Question 2**

Have changes been implemented in the core spray system which require the monitoring and, if necessary, venting of the core spray system?

#### **Response 2**

Unit 3:

No changes were implemented on Unit 3 Containment Spray System. One location was identified for monitoring. The location identified on Unit 3 Containment Spray System is monitored as part of procedure 0-ADM-547 (Gas Accumulation Management Program).

Unit 4:

A vent valve was installed on Unit 4 Containment Spray System. The vent valve installed is one of the three locations that were identified for monitoring. The vent valve was installed because that was the only point with a potential to exceed acceptance criteria. The locations identified on Unit 4 Containment Spray System are monitored as part of procedure 0-ADM-547 (Gas Accumulation Management Program).

These locations are monitored and vented (as required) under procedure 0-ADM-547. An AR is generated for any location where a void is detected.

**Question 3**

Address any discrepancies between the systems evaluated in the PWROG report and those at Turkey Point and any discrepancies between the PWROG pump suction void criteria and NRC Inspection guidance, Rev. 9.

**Response 3**

I. Discrepancies between the systems evaluated in the PWROG report and Turkey Point systems

One of the tasks associated with PWROG PA-SEE-450 was to survey operating plants to gather any correspondence between plants and the vendors relative to pump operability when subjected to gas ingestion. The goal of this survey is two-fold; one is to gather available data currently used by the plants to justify pump operability and the other is to assess whether there is consistency between the vendors relative to what is considered acceptable for various pump designs. The survey results and the final reports associated with the PWROG PA-SEE-450 provided insights on the nature of the interim pump acceptance criteria. This criteria was ultimately incorporated and refined through discussions with the NRC and Industry in documents such as NEI 09-10 and the NRC guidance referenced in the NRC TI 177.

The suction side of the ECCS (i.e. RHR, LHSI, HHSI, and CS) piping was evaluated at Turkey Point by considering the impact of the gas on pump operation. The void fractions used to determine the acceptance criteria were based upon the results of PWROG report Pump Gas Ingestion Tolerance criteria. The discharge side of the ECCS piping which has a diameter equal to or greater than 4" was evaluated at Turkey Point using the PWROG Gas Void pressure pulsations void size. However, small bore piping (i.e. less than 4") was not considered during this testing. Therefore, for 3" piping the acceptable void at Turkey Point was scaled down by the ratio of area between the two different pipe sizes. For the 2", SI piping additional conservatism was added based on analysis.

II. Discrepancies between the PWROG pump suction void criteria and NRC Inspection Guidance, Rev. 10

The following is a summary of the criterion in question and pump data for the associated components:

PWROG Criteria (from PWROG Report Pump Gas Ingestion Criteria for mechanical integrity: PA-SEE-450 Task 2, Rev. 0):

Case	Single-Stage	Multi-Stage / Stiff Shaft	Multi-Stage / Flexible Shaft
Steady-State	2%	2%	2%
Transient	5% for 20 sec.	20% for 20 sec.	10% for 5 sec.
Q <sub>BEP</sub> Range	70%-120%	70%-140%	70%-120%

NEI 09-10 and NRC Inspection guidance:

	% Q/Q <sub>BEP</sub>	Φ for PWR Typical Pumps		
		Single Stage	Multi-Stage Stiff Shaft	Multi-Stage Flexible Shaft
Steady State Operation	40%-120%	0.02	0.02	0.02
Steady State Operation	<40% or >120%	0.01	0.01	0.01
Transient Operation	70%-120%	0.05 for ≤20 sec	0.20 for ≤20 sec	0.10 for ≤5 sec
Transient Operation	<70% or >120%	0.05 for ≤20 sec	0.05 for ≤20 sec	0.05 for ≤5 sec

Turkey Point (PTN) Associated Pump's data:

As outlined in PTN calculation PTN-110389-002-M02, PTN utilized void criteria (Φ) consistent with the Industry and NRC guidance. The following summarizes Best Efficiency Point (BEP) criteria used in the analysis for the respective ECCS pumps. In all cases, the PTN analysis is consistent with the Industry and regulatory guidance.

- RHR Best Efficiency Point (BEP) is 83% at 3750 gpm (RHR-3A Pump Curve, Ingersoll-Rand Curve No. 46933, 6/9/69.)
- CS Best Efficiency Point (BEP) is 75% at 1250 gpm (Goulds Pumps Certificate of Conformance, Dated 6/26/95, for Pump Serial Number 217B871, Model 3736.)
- SI Best Efficiency Point (BEP) is 65% at 450 gpm (HHSI Pump Curve, Worthington Pump Company, Pump Type WTS-811, Curve E-209011, dated 10/17/68.)

The differences between the original PWROG pump suction void criteria and the current NEI and NRC inspection guide criteria as summarized below.

1. QBEP range for steady state operation/single stage: 70%-120% vs. 40%-120%
2. QBEP range for steady state operation/Multi Stiff: 70%-140% vs. 40%-120%
3. QBEP range for steady state operation/Multi flexible: 70%-120% vs. 40%-120%
4. QBEP range for Transient operation/Multi Stiff: 70%-140% vs. 70%-120%
5. No data is included in the PWROG with regards to Steady State/Transient Operation when the pumps' % Q/ Q<sub>BEP</sub> is less than 40 or greater than 120 however, PTN for transient operations used a void fraction which is in accordance with NEI 09-10 and NRC Inspection guidance.

The PTN analysis was consistent with the original PWROG criteria and meets the existing Industry and NRC guidance.

**Question 4**

Were procedures changed to address suction piping venting of RHR, where necessary?

**Response 4**

Yes, procedures 3/4-OSP-202.2, RHR Pump and Piping Venting and 3/4-OP-050, Residual Heat Removal System were updated to reflect the installation of vent valves on the suction lines of Unit 3 and 4 RHR system. The following table shows the applicable locations:

U3		U4	
RHR Suction Points	Procedure	RHR Suction Points	Procedure
P-5	3-OP-050 and 3-OSP-202.2	P-22	4-OP-050 and 4-OSP-202.2
P-6	3-OP-050 and 3-OSP-202.2	P-25	4-OP-050 and 4-OSP-202.2
		P-44	4-OP-050 and 4-OSP-202.2

### **Question 5**

The licensee states that gas intrusion instances are entered into the CAP for evaluation if the void exceeds a certain criteria. How is the licensee aware of adverse trends at specific locations if all gas intrusion instances are not tracked and trended through the CAP?

### **Response 5**

All instances where a gas intrusion (i.e. exceeding or within acceptance criteria) has been detected are tracked and trended through CAP. In addition, a database exists with results of UT'd points for trending.

Procedure 0-ADM-547 (Gas Accumulation Management Program, GAMP) was created in response to NRC Generic Letter 2008-01, Managing Gas Accumulation in ECCS, RHR, and CS Systems (GL 2008-01). This program includes details on monitoring, evaluating, trending, and controlling gas build-up in safety related fluid systems to maintain these systems OPERABLE.

Section 4.4 (Trending) of this procedure requires that:

- void information is trended for each monitored point over each cycle of operation
- and that an AR is generated for each abnormality detected to document the investigation and corrective actions.

This process is illustrated in Attachment 7 (UT Planning Flowchart) of this procedure. As shown in this attachment after the results are obtained one of the following is performed:

- If the UT results show that the pipe is full of water, no action is required.
- If the UT results show that the pipe has a void which is within the acceptance criteria; an AR is generated and the location is vented.
- If the UT results show that the pipe is not full of water because the void size is outside of the acceptance criteria; the Shift Manager is notified of the system not being operable, the location is vented and an AR is generated.

### **Question 6**

The licensee states that due to previous gas intrusion, training was conducted for Operations personnel. Has training been updated or expanded beyond operations since evaluation of GL 2008-01?

### **Response 6**

Yes, training has been updated and expanded beyond operations since evaluation of GL 2008-01. Engineering had continuing training which included GL 08-01 training.

The concept of gas intrusion is covered with the operators during the Generic Fundamentals program, a separate lesson on water hammer, again during the initial training of SOER 97-1 and periodically in continuing training.

An information bulletin has been prepared and distributed to Operations, Engineering, Chemistry and Maintenance. The training bulletin has the purpose of enhancing knowledge on the Gas Accumulation Management Program.



**Question 7**

The licensee referenced gas transport analyses conducted by Numerical Applications, Inc. (NAI). Many licensees have contracted with NAI to evaluate gas voids using the computer code GOTHIC, if this is the case, confirm and note that the NRC is pursuing additional evaluation of the applicability of GOTHIC to two-phase, two component flow. The NRC may need to conduct further evaluation at a later date of the licensee's use of GOTHIC. If the licensee used another method for detailed gas transport analysis, explain the method used.

**Response 7**

All of the GAMP acceptance criteria were established such that the maximum void size at any location would not create a void exceeding 2% at any pump suction for a maximum duration of 0.5 seconds. This establishes an extremely conservative void size in that it uses the steady state 2% criteria for what in reality is a transient (5-20% void allowed) and as such, transport analysis was not required. GOTHIC was used to understand the behavior of the gases in the suction piping of the ECCS. In some cases however, a more complex analysis was required to address the behavior of potential gas voids located in the Emergency Core Cooling System (ECCS) discharge piping. Transport analyses were performed by an outside contractor using GOTHIC to address water hammer in ECCS discharge piping.

**Attachment 2**

**Excerpt from Turkey Point Procedure 0-ADM-547**

**Gas Accumulation Management Program**

Attachment 2

Excerpt from Turkey Point Procedure 0-ADM-547

Gas Accumulation Management Program

REVISION NO.: 3	PROCEDURE TITLE:  GAS ACCUMULATION MANAGEMENT PROGRAM  TURKEY POINT PLANT	PAGE:  13 of 42
PROCEDURE NO.: 0-ADM-547		

**ATTACHMENT 1**  
**UNIT 3**  
**RHR GAS ACCUMULATION MONITORING POINTS**  
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GRP # - Differentiates the monitoring points for a system to inside or outside containment.

- GRP 1 - RHR Outside Containment
- GRP 2 - RHR Inside Containment

MONITOR POINT - The point number assigned by the initial investigation of PTN for GL 2008-01. This allows cross referencing of the points being monitored to the correspondence documenting the initial evaluation and justifying monitoring these points.

VENT VALVE - The valve located at the high point to be used to remove air/void at that point. Those that do not have designated vents will have the void removed using some other method. Normally this will be to operate the system in a test mode and purge the void.

Acceptance Criteria is met when the measured 1/2 Arc length (column 7) is less than the specified value.

Acceptance Criteria assumes only one location is voided. If multiple voids are found, then additional Engineering evaluation will be required.

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**ATTACHMENT 1**  
**UNIT 3**  
**RHR GAS ACCUMULATION MONITORING POINTS**  
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OUTSIDE CONTAINMENT								
GRP #	MONITOR POINT	VENT VALVE	ISO DRAWING #	PIPE SIZE & SCH	LOCATION & ELEVATION	ACCEPTANCE CRITERIA (1/2 ARC) Technical Specification	PROCEDURE TO VENT/PURGE	PROCEDURE TO VENT POST MAINTENANCE
1	P-5	3-1490	5613-M-3050 Sh 1 5613-P-600-S Sh 2	14" Sch = 40	10' Access to RHR Pits Left side of MOV-3-860A Elevation = 7' 2-13/16"	4.42 in 4-3/8" T.S.3.5.2 T.S.3.6.2.1	3-OSP-202.2	3-OP-050
1	P-6	3-1491	5613-M-3050 Sh 1 5613-P-600-S Sh 2	14" Sch = 40	10' Access to RHR Pits Left side of MOV-3-860B Elevation = 7' 3-5/8"	1.89 in 1-7/8" T.S.3.5.2 T.S.3.6.2.1	3-OSP-202.2	3-OP-050
1	P-8	NA	5613-M-3050 Sh 1 5613-P-602-S Sh 3	10" Sch = 40S	HX Room 3" from the weld line of the elbow towards penetration #5 Elevation = 4' 10-1/2"	3.29 in 3-1/4" T.S.3.5.2 T.S.3.6.2.1	3-OSP-050.2	3-OP-050

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**ATTACHMENT 1**  
**UNIT 3**  
**RHR GAS ACCUMULATION MONITORING POINTS**  
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OUTSIDE CONTAINMENT								
GRP #	MONITOR POINT	VENT VALVE	ISO DRAWING #	PIPE SIZE & SCH	LOCATION & ELEVATION	ACCEPTANCE CRITERIA (1/2 ARG) Technical Specification	PROCEDURE TO VENT/PURGE	PROCEDURE TO VENT POST MAINTENANCE
1	P-9	NA	5613-M-3050 Sh 1 5613-P-602-S Sh 3	10" Sch = 40S	HX Room 3" from the Penetration #2 (See Node 380) Elevation = 4' 10-1/2"	3.07 in 3-1/16" T.S.3.5.2	3-OSP-050.2	3-OP-050
1	P-10	NA	5613-M-3050 Sh 1 5613-P-822-S Sh 1	2" Sch = 80S	Pipe & Valve Room 3" from the elbow downstream of Vent Valve 4-741B Elevation 25'-6"	1.78 in 1-3/4" T.S.3.0.3	3-OSP-050.2	3-OP-050
1	P-13	3-940-N	5613-M-3050 Sh 1 5613-P-601-S Sh 1	8" Sch = 120	Pipe & Valve Room 3" from Vent Valve 3-940N Elevation = 25'-11-1/4"	3.20 in 3-3/16" N/A	3-OSP-202.2	3-OP-050
1	P-48	NA	5613-M-3050 Sh 1 5613-P-601-S Sh 1	8" Sch = 40S	Pipe & Valve Room 3" from MOV-3-872 Elevation = 20'-0"	6.25 in 6-1/4" N/A	3-OSP-202.2	3-OP-050

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**ATTACHMENT 1**  
**UNIT 3**  
**RHR GAS ACCUMULATION MONITORING POINTS**  
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OUTSIDE CONTAINMENT								
GRP #	MONITOR POINT	VENT VALVE	ISO DRAWING #	PIPE SIZE & SCH	LOCATION & ELEVATION	ACCEPTANCE CRITERIA (1/2 ARC) Technical Specification	PROCEDURE TO VENT/PURGE	PROCEDURE TO VENT POST MAINTENANCE
1	P-67	3-761E	5613-M-3050 Sh 1 5613-P-602-S Sh 2	12"	10" from Vent Valve 3-761E, between the Vent Valve and the Flow Element Elevation = 24'-0"	2.52 in 2-1/2" T.S.3.0.3	3-OSP-202.2	3-OP-050
1	P-68	3-741C	5613-M-3050 Sh 1 5613-P-822-S Sh 1	2" Sch = 80S	Pipe & Valve Room 12" from Vent Valve 3-741C Elevation 25'-6"	3.73 in 3-11/16" T.S.3.0.3	3-OSP-202.2	3-OP-050

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**ATTACHMENT 1**  
**UNIT 3**  
**RHR GAS ACCUMULATION MONITORING POINTS**  
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INSIDE CONTAINMENT								
GRP #	MONITOR POINT	VENT VALVE	ISO DRAWING #	PIPE SIZE & SCH	LOCATION & ELEVATION	ACCEPTANCE CRITERIA (1/2 ARC)/ Technical Specification	PROCEDURE TO VENT/PURGE	PROCEDURE TO VENT POST MAINTENANCE
2	P-105	3-1495	5613-M-3064 Sh 1 5613-P-587-S Sh 1	10" Sch = 140 8" Sch = 120	Downstream of MOV-3-744B Elevation = 21'-0"	3.0 in Max. T.S.3.0.3	3-OSP-202.2	3-OP-050
2	P-108	3-1499	5613-M-3064 Sh 1 5613-P-587-S Sh 1	8" Sch = 120	Downstream of Penetration 11 Elevation = 26'-0"	3.5 in Max. N/A	3-OSP-202.2	3-OP-050
2	P-117	3-1498	5613-M-3064 Sh 1 5613-P-586-S Sh 1	8" Sch = 120	Upstream of Valve 3-876D Elevation = 22'-0"	3.5 in Max. N/A	3-OSP-202.2	3-OP-050
2	P-127	3-1496	5613-M-3064 Sh 1 5613-P-586-S Sh 1	8" Sch = 120	Upstream of Valve 3-876A Elevation = 21'-0"	2.5 in Max. T.S.3.0.3	3-OSP-202.2	3-OP-050



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**ATTACHMENT 1**  
**UNIT 3**  
**RHR GAS ACCUMULATION MONITORING POINTS**  
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INSIDE CONTAINMENT								
GRP #	MONITOR POINT	VENT VALVE	ISO DRAWING #	PIPE SIZE & SCH	LOCATION & ELEVATION	ACCEPTANCE CRITERIA (1/2 ARC)/ Technical Specification	PROCEDURE TO VENT/PURGE	PROCEDURE TO VENT POST MAINTENANCE
2	P-142	3-1497	5613-M-3064 Sh 1 5613-P-586-S Sh 1	8" Sch = 120	Upstream of Check Valve 3-876B	2.0 in Max. T.S.3.0.3	3-OSP-202.2	3-OP-050

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**ATTACHMENT 2**  
**UNIT 3**  
**SI GAS ACCUMULATION MONITORING POINTS**  
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GRP # - Differentiates the monitoring points for a system to inside or outside containment.

- GRP 3 - SI Outside Containment
- GRP 4 - SI Inside Containment.

MONITOR POINT - The point number assigned by the initial investigation of PTN for GL 2008-01. This allows cross referencing of the points being monitored to the correspondence documenting the initial evaluation and justifying monitoring these points.

VENT VALVE - The valve located at the high point to be used to remove air/void at that point. Those that do not have designated vents will have the void removed using some other method. Normally this will be to operate the system in a test mode and purge the void.

Acceptance Criteria is met when the measured 1/2 Arc length (column 7) is less than the specified value.

Acceptance Criteria assumes only one location is voided. If multiple voids are found, then additional Engineering evaluation will be required.

REVISION NO.: 3	PROCEDURE TITLE:  GAS ACCUMULATION MANAGEMENT PROGRAM  TURKEY POINT PLANT	PAGE:  20 of 42
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**ATTACHMENT 2**  
**UNIT 3**  
**SI GAS ACCUMULATION MONITORING POINTS**  
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OUTSIDE CONTAINMENT								
GRP #	MONITOR POINT	VENT VALVE	ISO DRAWING #	PIPE SIZE & SCH	LOCATION & ELEVATION	ACCEPTANCE CRITERIA (1/2 ARG) Technical Specification	PROCEDURE TO VENT/PURGE	PROCEDURE TO VENT POST MAINTENANCE
3	P-12	3-895T	5613-M-3062 Sh 2 5613-P-597-S Sh 2	4"	3" from Vent Valve 3-895T Elevation = 29'-6"	2.29 in 2-1/4" T.S.3.0.3	0-OSP-202.3	0-OSP-202.3
3	P-15	3-1492	5613-M-3062 Sh 2 5613-P-823-S Sh 1	2" Sch = 160	3" from Vent Valve 3-1492 Elevation = 31'-0"	0.61 in 9/16" T.S.3.0.3	0-OSP-202.3	0-OSP-202.3
3	P-16	3-1493	5613-M-3062 Sh 2 5613-P-823-S Sh 1	2" Sch = 160	Pipe & Valve Room 3" from Vent Valve 3-1493 Elevation = 28' 3-3/8"	0.85 in 13/16" T.S.3.0.3	0-OSP-202.3	0-OSP-202.3
3	P-17	3-1494	5613-M-3062 Sh 2 5613-P-823-S Sh 2	2" Sch = 160	Pipe & Valve Room 3" from Vent Valve 3-1494 Elevation = 28' 5-1/2"	0.91 in 7/8" T.S.3.0.3	0-OSP-202.3	0-OSP-202.3

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**ATTACHMENT 2**  
**UNIT 3**  
**SI GAS ACCUMULATION MONITORING POINTS**  
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OUTSIDE CONTAINMENT								
GRP #	MONITOR POINT	VENT VALVE	ISO DRAWING #	PIPE SIZE & SCH	LOCATION & ELEVATION	ACCEPTANCE CRITERIA (1/2 ARC)/ Technical Specification	PROCEDURE TO VENT/PURGE	PROCEDURE TO VENT POST MAINTENANCE
3	P-30	3-1488	5613-M-3062 Sh 1 5613-P-599-S Sh 1	8" Sch = 10S	RWST 3" from the Vent Valve 3-1488 Elevation = 19'-1-5/8"	2.27 in 2-1/4" T.S.3.0.3	0-OSP-202.3	0-OSP-202.3
3	P-38	NA	5613-M-3062 Sh 2 5613-P-597-S Sh 2	4" Sch = 80S	3" from support 3-SIH-72 Elevation = 25'-5-3/8"	2.36 in 2-5/16" T.S.3.0.3	0-OSP-202.3	0-OSP-202.3
3	P-40	NA	5613-M-3062 Sh 2 5613-P-823-S Sh 1	2" Sch = 160	Pipe & Valve Room Second elbow from Penetration #28 Elevation = 26'-0"	1.85 in 1-13/16" T.S.3.0.3	0-OSP-202.3	0-OSP-202.3
3	P-49	NA	5613-M-3062 Sh 1 5613-P-597-S Sh 1	3" Sch = 80S	Pipe & Valve Room Upstream of MOV-3-869 Elevation = 26'-6"	2.74 in. N/A	0-OSP-202.3	0-OSP-202.3

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**ATTACHMENT 2**  
**UNIT 3**  
**SI GAS ACCUMULATION MONITORING POINTS**  
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OUTSIDE CONTAINMENT								
GRP #	MONITOR POINT	VENT VALVE	ISO DRAWING #	PIPE SIZE & SCH	LOCATION & ELEVATION	ACCEPTANCE CRITERIA (1/2 ARC) Technical Specification	PROCEDURE TO VENT/PURGE	PROCEDURE TO VENT POST MAINTENANCE
3	P-50	NA	5613-M-3062Sh 1 5613-P-823-S Sh 2	4" Sch = 120S	Containment Spray Room 3" from MOV-3-843B on the downstream side (node 26) Elevation = 29'-6"	3.50 in 3-1/2" T.S.3.0.3	0-OSP-202.3	0-OSP-202.3
3	P-51	NA	5613-M-3062 Sh 1 5613-P-597-S Sh 1	4" Sch = 80S	3" from Vent Valve 3-395D	1.43 in 1-7/16" T.S.3.0.3	0-OSP-202.3	0-OSP-202.3
3	P-65	3-940V	5613-M-3062 Sh 1 5613-P-597-S Sh 3	2"	3" from Vent Valve 3-940V Elevation = 28'-2"	0.65 in 5/8" T.S.3.0.3	0-OSP-202.3	0-OSP-202.3

REVISION NO.: 3	PROCEDURE TITLE:  GAS ACCUMULATION MANAGEMENT PROGRAM  TURKEY POINT PLANT	PAGE:  23 of 42
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**ATTACHMENT 2**  
**UNIT 3**  
**SI GAS ACCUMULATION MONITORING POINTS**  
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OUTSIDE CONTAINMENT								
GRP #	MONITOR POINT	VENT VALVE	ISO DRAWING #	PIPE SIZE & SCH	LOCATION & ELEVATION	ACCEPTANCE CRITERIA (1/2 ARC) Technical Specification	PROCEDURE TO VENT/PURGE	PROCEDURE TO VENT POST MAINTENANCE
<b>NOTE 1:</b> Pump Casing Water Solid is determined by water in the vent line which is the highpoint. The vent line may have air but must have some water present to consider the Pump Casing Water Solid.								
3	P-69	3-944A	5613-M-3062 Sh 1 5613-P-5022 Sh 1	3/4"	3B HHSI Pump Vent	Pump Casing Water Solid T.S.3.5.2	0-OSP-202.3	0-OSP-202.3
3	P-70	3-944B	5613-M-3062 Sh 1 5613-P-5021 Sh 1	3/4"	3B HHSI Pump Vent	Pump Casing Water Solid T.S.3.5.2	0-OSP-202.3	0-OSP-202.3
3	P-71	3-944C	5613-M-3062 Sh 1 5613-P-5019 Sh 1	3/4"	3A HHSI Pump Vent	Pump Casing Water Solid T.S.3.5.2	0-OSP-202.3	0-OSP-202.3
3	P-72	3-944D	5613-M-3062 Sh 1 5613-P-5020 Sh 1	3/4"	3A HHSI Pump Vent	Pump Casing Water Solid T.S.3.5.2	0-OSP-202.3	0-OSP-202.3

REVISION NO.: 3	PROCEDURE TITLE:  GAS ACCUMULATION MANAGEMENT PROGRAM  TURKEY POINT PLANT	PAGE:  24 of 42
PROCEDURE NO.: 0-ADM-547		

**ATTACHMENT 2**  
**UNIT 3**  
**SI GAS ACCUMULATION MONITORING POINTS**  
(Page 6 of 6)

INSIDE CONTAINMENT								
GRP #	MONITOR POINT	VENT VALVE	ISO DRAWING #	PIPE SIZE & SCH	LOCATION & ELEVATION	ACCEPTANCE CRITERIA (1/2 ARCY) Technical Specification	PROCEDURE TO VENT/PURGE	PROCEDURE TO VENT POST MAINTENANCE
4	P-120	3-1500	5613-M-3062 Sh 1 5613-P-764-S Sh 1	2" Sch = 160	Upstream of FE-3-933 Elevation = 26'-10"	N/A N/A	0-OSP-202.3	0-OSP-202.3

REVISION NO.: 3	PROCEDURE TITLE:  GAS ACCUMULATION MANAGEMENT PROGRAM  TURKEY POINT PLANT	PAGE:  25 of 42
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**ATTACHMENT 3**  
**UNIT 3**  
**CS GAS ACCUMULATION MONITORING POINTS**  
(Page 1 of 2)

GRP # - Differentiates the monitoring points for a system to inside or outside containment.

- GRP 5 - CS Outside Containment
- GRP 6 - CS Inside Containment (currently no points are identified)

MONITOR POINT - The point number assigned by the initial investigation of PTN for GL 2008-01. This allows cross referencing of the points being monitored to the correspondence documenting the initial evaluation and justifying monitoring these points.

VENT VALVE - The valve located at the high point to be used to remove air/void at that point. Those that do not have designated vents will have the void removed using some other method. Normally this will be to operate the system in a test mode and purge the void.

Acceptance Criteria is met when the measured 1/2 Arc length (column 7) is less than the specified value.

Acceptance Criteria assumes only one location is voided. If multiple voids are found, then additional Engineering evaluation will be required.



REVISION NO.: 3	PROCEDURE TITLE:  GAS ACCUMULATION MANAGEMENT PROGRAM  TURKEY POINT PLANT	PAGE:  26 of 42
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**ATTACHMENT 3**  
**UNIT 3**  
**CS GAS ACCUMULATION MONITORING POINTS**  
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OUTSIDE CONTAINMENT								
GRP #	MONITOR POINT	VENT VALVE	ISO DRAWING #	PIPE SIZE & SCH	LOCATION & ELEVATION	ACCEPTANCE CRITERIA (1/2 ARC)/ Technical Specification	PROCEDURE TO VENT/PURGE	PROCEDURE TO VENT POST MAINTENANCE
5	P-62	NA	5613-M-3062 Sh 1 5613-P-599-S Sh 2	16" Sch = 10S	Either side of "T" @ Node 375	2.39 in 2-3/8" T.S.3.6.2.1	3-NOP-068 or 3-OSP-068.2	3-NOP-068 or 3-OSP-068.2

INSIDE CONTAINMENT								
GRP #	MONITOR POINT	VENT VALVE	ISO DRAWING #	PIPE SIZE & SCH	LOCATION & ELEVATION	ACCEPTANCE CRITERIA (1/2 ARC)/ Technical Specification	PROCEDURE TO VENT/PURGE	PROCEDURE TO VENT POST MAINTENANCE
6	NONE							

REVISION NO.: 3	PROCEDURE TITLE:  GAS ACCUMULATION MANAGEMENT PROGRAM  TURKEY POINT PLANT	PAGE:  27 of 42
PROCEDURE NO.: 0-ADM-547		

**ATTACHMENT 4**  
**UNIT 4**  
**RHR GAS ACCUMULATION MONITORING POINTS**  
(Page 1 of 6)

GRP # - Differentiates the monitoring points for a system to inside or outside containment.

- GRP 1 - RHR Outside Containment
- GRP 2 - RHR Inside Containment

MONITOR POINT - The point number assigned by the initial investigation of PTN for GL 2008-01. This allows cross referencing of the points being monitored to the correspondence documenting the initial evaluation and justifying monitoring these points.

VENT VALVE - The valve located at the high point to be used to remove air/void at that point. Those that do not have designated vents will have the void removed using some other method. Normally this will be to operate the system in a test mode and purge the void.

Acceptance Criteria is met when the measured 1/2 Arc length (column 7) is less than the specified value.

Acceptance Criteria assumes only one location is voided. If multiple voids are found, then additional Engineering evaluation will be required.

REVISION NO.: 3	PROCEDURE TITLE:  GAS ACCUMULATION MANAGEMENT PROGRAM  TURKEY POINT PLANT	PAGE:  28 of 42
PROCEDURE NO.: 0-ADM-547		

**ATTACHMENT 4**  
**UNIT 4**  
**RHR GAS ACCUMULATION MONITORING POINTS**  
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OUTSIDE CONTAINMENT								
GRP #	MONITOR POINT	VENT VALVE	ISO DRAWING #	PIPE SIZE & SCH	LOCATION & ELEVATION	ACCEPTANCE CRITERIA (1/2 ARC) Technical Specification	PROCEDURE TO VENT/PURGE	PROCEDURE TO VENT POST MAINTENANCE
1	P-22	4-899C	5614-M-3050 Sh 1 5614-P-503-S Sh 2	14"	3" from MOV-4-860A Elev = 7'- 5-9/16"	4.40 in 4-3/8" T.S.3.5.2 T.S.3.6.2.1	4-OP-050	4-OP-050
1	P-23	4-940N	5614-M-3050 Sh 1 5614-P-504-S Sh 1	8"	Pipe & Valve Room 3" upstream of Vent Valve 4-876G Elev = 20'-0"	2.52 in 2-1/2" N/A	4-OP-050	4-OP-050
1	P-25	4-741G	5614-M-3050 Sh 1 5614-P-815-S Sh. 1	2"	2 <sup>nd</sup> elbow downstream of Valve 4-741B, 2' downstream from the weld line Elev = 27'- 3"	1.86 in 1-7/8" T.S.3.0.3	4-OSP-202.2	4-OP-050

REVISION NO.: 3	PROCEDURE TITLE:  GAS ACCUMULATION MANAGEMENT PROGRAM  TURKEY POINT PLANT	PAGE:  29 of 42
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**ATTACHMENT 4**  
**UNIT 4**  
**RHR GAS ACCUMULATION MONITORING POINTS**  
(Page 3 of 6)

OUTSIDE CONTAINMENT								
GRP #	MONITOR POINT	VENT VALVE	ISO DRAWING #	PIPE SIZE & SCH	LOCATION & ELEVATION	ACCEPTANCE CRITERIA (1/2 ARC) Technical Specification	PROCEDURE TO VENT/PURGE	PROCEDURE TO VENT POST MAINTENANCE
1	P-44	4-741G	5614-M-3050 Sh 1 5614-P-815-S Sh 1	2"	3 <sup>rd</sup> elbow upstream of Valve 4-741A, 3" downstream Elev = 27'- 3"	1.86in 1-7/8" T.S.3.0.3	4-OSP-202.2	4-OP-050
1	P-46	4-899E	5614-M-3050 Sh 1 5614-P-503-S Sh 2	14"	Downstream of MOV-4-860B, 3" downstream of 4-899E connection Elev = 7'- 4-15/16"	2.48in 2-7/16" T.S.3.5.2	4-OP-050	4-OP-050
1	P-52	4-767F	5614-M-3050 Sh 1 5614-P-505-S Sh 1	10"	3" Upstream of Valve 4-757C Elev = 5'- 0-1/2"	3.52 in 3-1/2" T.S.3.6.2.1	4-OSP-202.2	4-OP-050
1	P-53	4-1501A	5614-M-3050 Sh 1 5614-P-505-S Sh 3	12" Sch =40S	6" from Support SR-637 Near Valve 4-1501	3.64 in 3-5/8" T.S.3.0.3	4-OSP-202.2	4-OP-050

REVISION NO.: 3	PROCEDURE TITLE:  GAS ACCUMULATION MANAGEMENT PROGRAM  TURKEY POINT PLANT	PAGE:  30 of 42
PROCEDURE NO.: 0-ADM-547		

**ATTACHMENT 4**  
**UNIT 4**  
**RHR GAS ACCUMULATION MONITORING POINTS**  
 (Page 4 of 6)

OUTSIDE CONTAINMENT								
GRP #	MONITOR POINT	VENT VALVE	ISO DRAWING #	PIPE SIZE & SCH	LOCATION & ELEVATION	ACCEPTANCE CRITERIA (1/2 ARC) Technical Specification	PROCEDURE TO VENT/PURGE	PROCEDURE TO VENT POST MAINTENANCE
1	P-54	4-942L	5614-M-3050 Sh 1 5614-P-504-S Sh 1	8"	Pipe & Valve Room Upstream from MOV-4-872 between the valve and the Elbow Elev = 26'-0"	5.59 in 5-1/2" N/A	4-OSP-202.2	4-OP-050
1	P-73	4-761H	5614-M-3050 Sh 1 5614-P-505-S Sh 3	12" Sch =40S	3" Downstream from Vent Valve 4-761E	3.25 in 3-1/4" T.S.3.0.3	4-OSP-202.2	4-OP-050
1	P-74	4-767E	5614-M-3050 Sh 1 5614-P-505-S Sh 2	10"	Located Upstream of Valve 4-754A on the Elbow Elev = 5'- 0-1/2"	3.15 in 3-1/8" T.S.3.5.2	4-OSP-202.2	4-OP-050

REVISION NO.: 3	PROCEDURE TITLE:  GAS ACCUMULATION MANAGEMENT PROGRAM  TURKEY POINT PLANT	PAGE:  31 of 42
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**ATTACHMENT 4**  
**UNIT 4**  
**RHR GAS ACCUMULATION MONITORING POINTS**  
(Page 5 of 6)

INSIDE CONTAINMENT								
GRP #	MONITOR POINT	VENT VALVE	ISO DRAWING #	PIPE SIZE & SCH	LOCATION & ELEVATION	ACCEPTANCE CRITERIA (1/2 ARC)/Technical Specification	PROCEDURE TO VENT/PURGE	PROCEDURE TO VENT POST MAINTENANCE
2	P-204	4-940X-A	5614-M-3064 Sh 1 5614-P-509-S Sh 1	8" Sch =120	Upstream of Check valve 4-876E Elev = 21'-5"	4.5" N/A	4-OSP-202.2	4-OP-050
2	P-205	4-940J-A	5614-M-3064 Sh 1 5614-P-509-S Sh 1	8" Sch =120	Upstream of Check valve 4-876D Elev = 24'-4-7/16"	4.5" N/A	4-OSP-202.2	4-OP-050
2	P-208	4-4922-A	5614-M-3064 Sh 1 5614-P-509-S Sh 2	8" Sch =120	Downstream of vent valve 4-876E Elev = 23'-6"	2.5" T.S.3.0.3	4-OSP-202.2	4-OP-050

REVISION NO.: 3	PROCEDURE TITLE:  GAS ACCUMULATION MANAGEMENT PROGRAM  TURKEY POINT PLANT	PAGE:  32 of 42
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**ATTACHMENT 4**  
**UNIT 4**  
**RHR GAS ACCUMULATION MONITORING POINTS**  
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INSIDE CONTAINMENT								
GRP #	MONITOR POINT	VENT VALVE	ISO DRAWING #	PIPE SIZE & SCH	LOCATION & ELEVATION	ACCEPTANCE CRITERIA (1/2 ARC)/Technical Specification	PROCEDURE TO VENT/PURGE	PROCEDURE TO VENT POST MAINTENANCE
2	P-209	4-940H-A	5614-M-3064 Sh 1 5614-P-509-S Sh 2	8" Sch =120	Upstream of valve 4-940H Elev = 21'-5"	3.5" T.S.3.0.3	4-OSP-202.2	4-OP-050
2	P212	4-940L-A	5614-M-3064 Sh 1 5614-P-509-S Sh 4	8" Sch =120	Upstream of Check valve 4-876C Elev = 21'-6"	3.0" T.S.3.0.3	4-OSP-202.2	4-OP-050
2	P-213	N/A	5614-M-3050 Sh 1 5614-P-574-S Sh 1	14" Sch =140	At MOV-4-750 Elev. 19'-0"	N/A	Procedures that open MOV-3-750 and MOV-3-751 open 750 first to vent any trapped gasses to the RPV. (CR 00-1164)	4-OP-050

REVISION NO.: 3	PROCEDURE TITLE:  GAS ACCUMULATION MANAGEMENT PROGRAM  TURKEY POINT PLANT	PAGE:  33 of 42
PROCEDURE NO.: 0-ADM-547		

**ATTACHMENT 5**  
**UNIT 4**  
**SI GAS ACCUMULATION MONITORING POINTS**  
(Page 1 of 6)

GRP # - Differentiates the monitoring points for a system to inside or outside containment.

- GRP 3 - SI Outside Containment
- GRP 4 - SI Inside Containment.

MONITOR POINT - The point number assigned by the initial investigation of PTN for GL 2008-01. This allows cross referencing of the points being monitored to the correspondence documenting the initial evaluation and justifying monitoring these points.

VENT VALVE - The valve located at the high point to be used to remove air/void at that point. Those that do not have designated vents will have the void removed using some other method. Normally this will be to operate the system in a test mode and purge the void.

Acceptance Criteria is met when the measured 1/2 Arc length (column 7) is less than the specified value.

Acceptance Criteria assumes only one location is voided. If multiple voids are found, then additional Engineering evaluation will be required.



REVISION NO.: 3	PROCEDURE TITLE:  GAS ACCUMULATION MANAGEMENT PROGRAM  TURKEY POINT PLANT	PAGE:  34 of 42
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**ATTACHMENT 5**  
**UNIT 4**  
**SI GAS ACCUMULATION MONITORING POINTS**  
(Page 2 of 6)

OUTSIDE CONTAINMENT								
GRP #	MONITOR POINT	VENT VALVE	ISO DRAWING #	PIPE SIZE & SCH	LOCATION & ELEVATION	ACCEPTANCE CRITERIA (1/2 ARC) Technical Specification	PROCEDURE TO VENT/PURGE	PROCEDURE TO VENT POST MAINTENANCE
3	P-27	4-1493A	5614-M-3062 Sh 2 5614-P-783-S Sh 2	2"	Pipe & Valve Room 3" from Vent Valve 4-1493 Elev = 28'-6"	1.11 in 1-1/8" T.S.3.0.3	0-OSP-202.3	0-OSP-202.3
3	P-28	4-1494A	5614-M-3062 Sh 2 5614-P-783-S Sh 2	2"	Pipe & Valve Room 3" from Vent Valve 4-1494 Elev = 28'-6"	1.05 in 1-1/32" T.S.3.0.3	0-OSP-202.3	0-OSP-202.3
3	P-29	4-1492A	5614-M-3062 Sh 2 5614-P-783-S Sh 3	2"	Pipe & Valve Room 3" from Vent Valve 4-1492 Elev = 31'-0"	0.95 in 15/16" * T.S.3.0.3	0-OSP-202.3	0-OSP-202.3

\* If P-27 and P-28 are determined to be full water, then the acceptance criteria for P-29 is 11/4" (1.25") half arc length.

REVISION NO.: 3	PROCEDURE TITLE:  GAS ACCUMULATION MANAGEMENT PROGRAM  TURKEY POINT PLANT	PAGE:  35 of 42
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**ATTACHMENT 5**  
**UNIT 4**  
**SI GAS ACCUMULATION MONITORING POINTS**  
(Page 3 of 6)

OUTSIDE CONTAINMENT								
GRP #	MONITOR POINT	VENT VALVE	ISO DRAWING #	PIPE SIZE & SCH	LOCATION & ELEVATION	ACCEPTANCE CRITERIA (1/2 ARC) Technical Specification	PROCEDURE TO VENT/PURGE	PROCEDURE TO VENT POST MAINTENANCE
3	P-56	4-942J	5614-M-3062 Sh 2 5614-P-572-S Sh 4	4" Sch =80S	3" from the Vent Valve 4-942J Elev = 20'-9-3/8"	2.73 in 2-11/16" T.S.3.0.3	0-OSP-202.3	0-OSP-202.3
3	P-58	4-947D 4-947C	5614-M-3062 Sh 2 5614-P-572-S Sh 3	4" Sch =80S	3" from Vent Valve 4-947C Elev = 33'-9"	2.17 in 2-5/32" T.S.3.0.3	0-OSP-202.3	0-OSP-202.3
3	P-59	4-947A 4-947B	5614-M-3062 Sh 1 5614-P-572-S Sh 1	3" Sch =80S	3" from Vent Valve 4-947A Elev = 33'-9"	1.58 in 1-1/2" T.S.3.0.3	0-OSP-202.3	0-OSP-202.3
<b>NOTE 1:</b> Location P-41 is common to the suctions of both HHSI and CS. Purging for either system will eliminate the void for both.								
3	P-41 NOTE 1	NONE	5614-M-3062 Sh 1 5614-P-502-S Sh 3	16"	Downstream of MOV-4-864B on the opposite side of the Elbow Elev. = 19'-0"	3.43 in 3-7/16" T.S.3.0.3	0-OSP-202.3	0-OSP-202.3

REVISION NO.: 3	PROCEDURE TITLE:  GAS ACCUMULATION MANAGEMENT PROGRAM  TURKEY POINT PLANT	PAGE:  36 of 42
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**ATTACHMENT 5**  
**UNIT 4**  
**SI GAS ACCUMULATION MONITORING POINTS**  
(Page 4 of 6)

OUTSIDE CONTAINMENT								
GRP #	MONITOR POINT	VENT VALVE	ISO DRAWING #	PIPE SIZE & SCH	LOCATION & ELEVATION	ACCEPTANCE CRITERIA (1/2 ARG/ Technical Specification	PROCEDURE TO VENT/PURGE	PROCEDURE TO VENT POST MAINTENANCE

**NOTE 2:** Pump Casing Water Solid is determined by water in the vent line which is the highpoint. The vent line may have air but must have some water present to consider the Pump Casing Water Solid.

3	P-75	4-944E	5614-M-3062 Sh 1 5614-M-3062 Sh. 1	3/4"	4A HHSI Pump Vent	Pump Casing Water Solid <b>NOTE 2</b> T.S.3.5.2	0-OSP-202.3	0-OSP-202.3
3	P-76	4-944F	5614-M-3062 Sh 1 5614-M-3062 Sh. 1	3/4"	4A HHSI Pump Vent	Pump Casing Water Solid <b>NOTE 2</b> T.S.3.5.2	0-OSP-202.3	0-OSP-202.3
3	P-77	4-944G	5614-M-3062 Sh 1 5614-M-3062 Sh. 1	3/4"	4B HHSI Pump Vent	Pump Casing Water Solid <b>NOTE 2</b> T.S.3.5.2	0-OSP-202.3	0-OSP-202.3

REVISION NO.: 3	PROCEDURE TITLE:  GAS ACCUMULATION MANAGEMENT PROGRAM  TURKEY POINT PLANT	PAGE:  37 of 42
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**ATTACHMENT 5**  
**UNIT 4**  
**SI GAS ACCUMULATION MONITORING POINTS**  
 (Page 5 of 6)

OUTSIDE CONTAINMENT								
GRP #	MONITOR POINT	VENT VALVE	ISO DRAWING #	PIPE SIZE & SCH	LOCATION & ELEVATION	ACCEPTANCE CRITERIA (1/2 ARC) Technical Specification	PROCEDURE TO VENT/PURGE	PROCEDURE TO VENT POST MAINTENANCE
<b>NOTE 2:</b> Pump Casing Water Solid is determined by water in the vent line which is the highpoint. The vent line may have air but must have some water present to consider the Pump Casing Water Solid.								
3	P78	4-944H	5614-M-3062 Sh 1 5614-M-3062 Sh. 1	3/4"	4B HHSI Pump Vent	Pump Casing Water Solid <b>NOTE 2</b> T.S.3.5.2	0-OSP-202.3 At least every 31 days.	0-OSP-202.3

REVISION NO.: 3	PROCEDURE TITLE:  GAS ACCUMULATION MANAGEMENT PROGRAM  TURKEY POINT PLANT	PAGE:  38 of 42
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**ATTACHMENT 5**  
**UNIT 4**  
**SI GAS ACCUMULATION MONITORING POINTS**  
(Page 6 of 6)

INSIDE CONTAINMENT								
GRP #	MONITOR POINT	VENT VALVE	ISO DRAWING #	PIPE SIZE & SCH	LOCATION & ELEVATION	ACCEPTANCE CRITERIA (1/2 ARC) Technical Specification	PROCEDURE TO VENT/PURGE	PROCEDURE TO VENT POST MAINTENANCE
4	P26	4-941B-A	5614-M-3062 Sh 1 5614-P-571-S Sh. 1	3"	On horiz. pipe, next to support 4-SIH-35 Elev. = 26'-0"	0.0 in N/A	0-OSP-202.3	0-OSP-202.3
4	P60	4-941B-A	5614-M-3062 Sh 1 5614-P-571-S Sh. 1	3"	Between MOV-4-869 & Elbow Elev = 19'-0"	2.74 in T.S.3.0.3	0-OSP-202.3	0-OSP-202.3
4	P-224	4-941B-A	5614-M-3062 Sh 1 5614-P-792-S Sh 1	2" Sch =160	Upstream of valve 4-941B Elev = 26'-10"	0.75" N/A	0-OSP-202.3	0-OSP-202.3

REVISION NO.: 3	PROCEDURE TITLE:  GAS ACCUMULATION MANAGEMENT PROGRAM  TURKEY POINT PLANT	PAGE:  39 of 42
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**ATTACHMENT 6**  
**UNIT 4**  
**CS GAS ACCUMULATION MONITORING POINTS**  
(Page 1 of 3)

GRP # - Differentiates the monitoring points for a system to inside or outside containment.

- GRP 5 - CS Outside Containment
- GRP 6 - CS Inside Containment

MONITOR POINT - The point number assigned by the initial investigation of PTN for GL 2008-01. This allows cross referencing of the points being monitored to the correspondence documenting the initial evaluation and justifying monitoring these points.

VENT VALVE - The valve located at the high point to be used to remove air/void at that point. Those that do not have designated vents will have the void removed using some other method. Normally this will be to operate the system in a test mode and purge the void.

Acceptance Criteria is met when the measured 1/2 Arc length (column 7) is less than the specified value.

Acceptance Criteria assumes only one location is voided. If multiple voids are found, then additional Engineering evaluation will be required.

REVISION NO.: 3	PROCEDURE TITLE:  GAS ACCUMULATION MANAGEMENT PROGRAM  TURKEY POINT PLANT	PAGE:  40 of 42
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**ATTACHMENT 6**  
**UNIT 4**  
**CS GAS ACCUMULATION MONITORING POINTS**  
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OUTSIDE CONTAINMENT								
GRP #	MONITOR POINT	VENT VALVE	ISO DRAWING #	PIPE SIZE & SCH	LOCATION & ELEVATION	ACCEPTANCE CRITERIA (1/2 ARC) Technical Specification	PROCEDURE TO VENT/PURGE	PROCEDURE TO VENT POST MAINTENANCE
<b>NOTE 1:</b> Location P-41 is common to the suctions of both HHSI and CS. Purging for either system will eliminate the void for both.								
5	P-41 <b>NOTE 1</b>	NONE	5614-M-3062 Sh 1 5614-P-502-S Sh 3	16"	Downstream of MOV-4-864B on the opposite side of the Elbow Elev. = 19'-0"	3.43 in 3-7/16" T.S.3.03	4-NOP-068 or 4-OSP-068.2	4-NOP-068 or 4-OSP-068.2
5	P42	NONE	5614-M-3068 Sh 1 5614-P-502-S Sh 1	8"	Upstream of MOV-4-844A Elev = 20'	2.74 in 2-3/4" T.S.3.6.2.1	4-NOP-068 or 4-OSP-068.2	4-NOP-068 or 4-OSP-068.2
5	P43	4-896U	5614-M-3068 Sh 1 5614-P-502-S Sh 1 5614-P-5039	8"	Downstream of Valve 4-844B just before the reducer Elev = 20'	2.76 in 2-3/4" T.S.3.6.2.1	4-NOP-068 or 4-OSP-068.2	4-NOP-068 or 4-OSP-068.2

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**ATTACHMENT 6**  
**UNIT 4**  
**CS GAS ACCUMULATION MONITORING POINTS**  
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INSIDE CONTAINMENT								
GRP #	MONITOR POINT	VENT VALVE	ISO DRAWING #	PIPE SIZE & SCH	LOCATION & ELEVATION	ACCEPTANCE CRITERIA (1/2 ARC) Technical Specification	PROCEDURE TO VENT/PURGE	PROCEDURE TO VENT POST MAINTENANCE
6	NONE							



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**ATTACHMENT 7**  
**UT PLANNING FLOWCHART**  
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