AR Number: 00348545

Aff Fac:	Oyster Creek	**AR Type:**	CR	**Status:**	COMPLETE
Aff Unit:	01	**Owed To:**	A5330CAP	**Due Date:**	03/02/2007
Aff System:	243			**Event Date:**	06/29/2005
CR Level/Class:	4/D			**Disc Date:**	06/29/2005
How Discovered:	H02			**Orig Date:**	06/29/2005

Action Request Details

Subject: MONITORING OF LEAKAGE FOR CONCERNS OF DRYWELL CORROSION

Description: Originator: THOMAS E QUINTENZ Supv Contacted: John O'Rourke

Condition Description:
In a December 5, 1990, letter to the NRC Oyster Creek committed to a routine walkdown to identify changes in leakage from the sand bed drains.
In review of operator rounds, recurring tasks, and interview of knowledgeable personnel at the Oyster Creek site the is no evidence the routine walkdown is being implemented. This appears to be a commitment
which needs to be verified, and if confirmed should be implemented, or a change made in the commitment.

Immediate actions taken:
Discussed this with the Primary Containment System Manager and Operations
to determine if the walkdowns discussed have been completed. It was determined the walkdowns were done at some earlier years but are no longer
done as part of routine activities.

Recommended Actions:
Research this commitment to determine if it is still required and take appropriate actions to assure they are completed per the commitment.

What activities, processes, or procedures were involved?
Review of regulatory correspondence during preparation of the License Renewal Application.

Why did the condition happen?
Not known at this time.

What are the consequences?
May be a missed commitment

Were any procedural requirements impacted?
Not known at this time.

Were there any adverse physical conditions?
None identified

List of knowledgeable individuals:
Bob Barbieri

Repeat or similar condition?
Not known at this time.

Operable Basis:
The containment is fully operable and has passed all required testing currently.

Reportable Basis:
Licensing should have an activity to determine if missing this committment
is reportable.

SOC Reviewed by: JOHN F MURPHY 06/30/2005 09:37:16 CDT
SOC Comments:
ACIT to reg assurance for reportability.

WGE to System Manager to determine plan going forward.

Department review performed by: ROBERT J BARBIERI 07/13/2005 10:46:30
CDT
Evaluation Comments:
Condition/Problem Statement:

A commitment was made to the NRC to perform periodic walkdowns to inspect
for leakage. These walkdowns were performed and documented up to refueling
outage 17R. No documentation exists after 17R.

Statement of Cause:
Up to 17R, leakage inspections were treated as a project. A project manager was assigned and specific funding was obtained for each outage. After 17R, this no longer occurred. A specific PM should have been created
to ensure that this work was performed each refueling outage.

Extent of Condition:
These inspections are only for leakage during refueling outages which could affect the drywell shell. One other associated issue is to perform a camera inspection of the drain line from the Reactor Cavity Trough, which
is a major cause of leakage affecting the drywell shell. This drain line must be kept free of debris to ensure that leakage through the cavity liner drains effectively to keep water from pooling and running down the side of the drywell. A PM needs to be created to ensure that this activity is performed every refueling outage.

Evaluation of any SOC Comments:

Assign #: 01 **AR #: 00348545**

Aff Fac:	Oyster Creek	**Assign Type:**	TRKG	**Status:**	COMPLETE
Priority:		**Assigned To:**		**Due Date:**	07/15/2005
Schedule Ref:		**Prim Grp:**	ACAPALL	**Orig Due Date:**	
Unit Condition:		**Sec Grp:**			

Assignment Details

Subject/Description: MONITORING OF LEAKAGE FOR CONCERNS OF DRYWELL CORROSION

Assignment Completion

In Progress Notes:

Completion Notes:

Assign #: 02 **AR #: 00348545**

Aff Fac:	Oyster Creek	**Assign Type:**	ACIT	**Status:**	COMPLETE
Priority:		**Assigned To:**	U777DIF	**Due Date:**	08/23/2005
Schedule Ref:		**Prim Grp:**	A5301RAPR	**Orig Due Date:**	07/15/2005
Unit Condition:		**Sec Grp:**			

Assignment Details

Subject/Description: Review DW sand bed inspection issue for reportability.

Assignment Completion

In Progress Notes:

7/15/05-WVS: Extended due date from 7/15/05 to 8/19/05.

This event is not reportable. Currently there does not appear to be any specific commitment to inspect the sandbed region drains for water leakage
during power operation. However, a commitment does exist (see Section
3.8.2.8 of the UFSAR) to take corrective actions if water leakage is discovered during power operation. Given that commitment, it appears
reasonable to expect that some activity would exist for assessing and determining when those corrective actions are required including specific

criteria for the amount of leakage, trending of data and thresholds for further evaluation.

The original commitment cited in this AR Description has been changed over
the years through a continual exchange of correspondence with the NRC.
Item (7) listed below appears to serve as the source of our current commitment to the Drywell Corrosion Monitoring Program (clarified by GPUN
on December 15, 1995). This commitment was added to Section 3.8.2.8 of
the UFSAR in Update 10, April 1997 and is therefore part of our design
basis documentation.

Background Information:

The following correspondence was located in Oyster Creek Licensing File
#86311 and is provided here as background.

(1) GPUN letter to the NRC (C320-90-302) dated 12/5/1990 stated that the
DW sand bed drains were inspected by routine walkdowns to identify any
changes in leakage.

This statement was apparently not captured in any existing commitment
tracking database (CTD) program and was not added to the current CTD when
it was created in the mid nineties. Over the years, our inspection program
concerning drywell corrosion monitoring has changed as the result of corrective actions taken to mitigate the concern with the effects of moisture in the sand bed region on drywell integrity.

(2) GPUN letter to the NRC (C321-92-2163) dated 5/26/1992 states, in part,
that we commit to continue taking UT drywell measurements at refueling
outages and at other outages of opportunity. Drywell thickness measurements will continue for the life of the plant. During 14R outage we

will take UT thickness measurements in the drywell sandbed region, once we have access to the sandbed region.

After the 15R outage, we will assess the condition of the drywell be evaluating the then current UT thickness measurements and will formulate an extended inspection plan. The plan will identify measurement locations including frequency of inspection for the remaining life of the plant.

(3) NRC letter to GPUN (TAC No. M79166) dated 6/30/1992 confirmed our drywell corrosion monitoring program commitments from the May 26, 1992 letter as acceptable.

(4) GPUN letter to the NRC (C321-93-2100) dated 3/25/1993 acknowledged the NRC letter of 6/30/1992 and confirmed our commitment to inform the NRC prior to implementing any changes to the Oyster Creek drywell thickness measurement inspection program.

(5) GPUN letter to the NRC (C321-95-2235) dated 9/15/1995 provided a description of the planned changes to the inspection program based on inspections performed during the 15R outage. With regard to the sandbed region, assessment of the UT data determined that corrosion has been arrested as a result of cleaning the area of sand and rust and coating the drywell during the 14R outage in December 1992. The inspection program for the sandbed region was to perform a visual inspection of the external epoxy coating during the 16R outage and, as a minimum, during the 18R outage (year 2000). The epoxy coating has an estimated life of 8 - 10 years which makes the current projected end of life between December 2000 and December 2002. A technical assessment of the coating will be made

based on the 18R outage inspections to determine additional (post 18R)
inspection criteria.

(6) NRC letter to GPUN (TAC No. M93658) dated 11/1/1995 confirmed our
changes to the drywell corrosion monitoring program commitments from the
September 15, 1995 letter as acceptable, but requested an additional commitment (since water leaking from the pools above the reactor cavity
has been a source of corrosion) to perform additional inspection within
approximately three months after the discovery of water leakage.

(7) GPUN letter to the NRC (C321-95-2360) dated 12/15/1995 provided our
commitment for the following actions should water leakage not associated
with normal refueling outage activities be discovered during power operation.

(1) NRC Resident Inspector will be notified of the discovery of leakage.
(2) The source of leakage will be investigated and appropriate corrective
actions taken.
(3) An evaluation of the impact of the leakage on drywell structural integrity will be performed to ensure sufficient margin is maintained for
operation to the next scheduled drywell inspection.
(4) In the unexpected event that the evaluation of the impact of the leakage on drywell structural integrity does not ensure sufficient structural margin will be maintained for operation to the next scheduled
outage, an additional drywell inspection will be performed within approximately three months after discovery of the water leakage.

(8) NRC letter to GPUN (TAC No. M92688) dated 2/15/1996 confirmed our
commitment as stated in the December 15, 1995 letter as acceptable.

Completion Notes:

Assign #: 03					AR #: 00348545
Aff Fac:	Oyster Creek	**Assign Type:**	ACIT	**Status:**	COMPLETE
Priority:		**Assigned To:**	U777RJB	**Due Date:**	10/26/2005
Schedule Ref:		**Prim Grp:**	A5330NESTE	**Orig Due Date:**	10/26/2005
Unit Condition:		**Sec Grp:**			

Assignment Details

Subject/Description: Create 2 new PM's to ensure inspections are performed eac h refueling outage to inspect key areas for leakage from the Reactor Cavity. One PM will be to perform w alkdowns to inspect for leakage. The other will be t o perform a camera inspection of the cavity trough d rain line prior to and during each refueling outage.

Assignment Completion

In Progress Notes: Closeout comments: Two PIMS Evals were created and assigned to the PM
coordinator. They are A2014243, E80 and E81, which request new PM's to
perform the required inspections. These evals were prepared in accordance
with procedure MA-MA-716-009.

Completion Notes:

Assign #: 04					AR #: 00348545
Aff Fac:	Oyster Creek	**Assign Type:**	CA	**Status:**	COMPLETE
Priority:		**Assigned To:**	U999FGA	**Due Date:**	11/28/2005
Schedule		**Prim Grp:**	A5340WC	**Orig Due**	11/28/2005

Ref: **Date:**

Unit Condition: **Sec Grp:** A5340CAP

Assignment Details

Subject/Description: PM coordinator to create 2 new PM tasks from assignment # 3. Contact system manager for any questions.

Assignment Completion

In Progress Notes:

****COMPLETE FOLLOWING STEPS PRIOR TO COMPLETION OF ASSIGNMENT****
1. Prior to start of work on the completion of any CA, ensure you have
reviewed the associated CR, investigation, this assignment, and if necessary contact the originator to ensure a complete understanding of the
requested action.
2. Implement the requested actions. (e.g. Procedure should be implemented not submitted for change)
3. Document completion of action by completing each field in the following form or marking NA.
4. Additional guidance is provided by:
Clicking Here

Record of Extensions

None, there were no extensions.

Note: Record the date, justification and approval received for each extension

Document Corrective Action and the Resolution:

IR 348545 documented that In a December 5, 1990, letter to the NRC Oyster
Creek committed to a routine walkdown to identify changes in leakage from
the sand bed drains. In review of operator rounds, recurring tasks, and interview of knowledgeable personnel at the Oyster Creek site the is

no
evidence the routine walkdown is being implemented. This appears to be a
commitment which needs to be verified, and if confirmed should be implemented, or a change made in the commitment.

Discussed this with the Primary Containment System Manager and Operations
to determine if the walkdowns discussed have been completed. It was determined the walkdowns were done at some earlier years but are no longer
done as part of routine activities. A Corrective action was made to generate two new PMs to insure the inspections are made during refuel
outagesPer procedure MA-MA-716-009 "Preventative Maintenance Work Order
Process" PIMs Evals A2014243.80 and A2014243.81 were made to Work
Management to create the shells for the PMs.
Eval A2014243.80 will perform inspections during refuel outages to check
for leakage from the reactor cavity.
Eval a2014243.81 will perform camera inspections of the reactor cavity
drain line both before and during the refuel outage. This drain line is a major factor in minimizing leakage, which effects drywell corrosion rate.

The PM shell was generated by the PM Coordinator. PM 18703M were
generated for eval A2014243.81. PM 18704M was generated for eval A2014243.80. Per Procedure MA-MA-716-009 requirements the evals were
reassigned to Maintenance Planning to develop the PMs. New Passport CA
348545-5 was made to track development of the PMs to completion.

Note: Restate the requested action and clearly document the implementation
of the Corrective Action to the requirements of LS-AA-125 Attachment 3.
"That which is not documented is not done."

Document any changes to the intent of the original Actions (Include appropriate Department Head Approval):

There were no changes to the original intent of this CA.

Note: Document any deviation from the specific action and document the
name of the Senior Manager/Director that authorized the deviation.

Document additional assignment determined during evaluation:

New Passport CA 348545-5 was made to track development of the PMs to
completion (see above).

Note: Do not close to a promise -CA Type Assignments can only be closed
to another CA Type Assignment on a CR.

Quality Signoff: Name: Ron Baran & Frank Aller Date: 11/22/2005

Note: Document the name of the person who is accountable for the completion of this assignment
DOCUMENT ADDITIONAL DETAILS HERE:

Completion Notes:

Assign #: 05 **AR #: 00348545**

Aff Fac:	Oyster Creek	**Assign Type:**	CA	**Status:**	COMPLETE
Priority:		**Assigned To:**	U777RJB	**Due Date:**	08/28/2006
Schedule Ref:		**Prim Grp:**	A5330NESTE	**Orig Due Date:**	04/01/2006
Unit Condition:		**Sec Grp:**			

Assignment Details

Subject/Description: Develop PMs 18703M & 18704M to inspect the DW liner

Assignment Completion

In Progress Notes:

****COMPLETE FOLLOWING STEPS PRIOR TO COMPLETION OF ASSIGNMENT****

1. Prior to start of work on the completion of any CA, ensure you have
reviewed the associated CR, investigation, this assignment, and if necessary contact the originator to ensure a complete understanding of the
requested action.
2. Implement the requested actions. (e.g. Procedure should be implemented not submitted for change)
3. Document completion of action by completing each field in the following form or marking NA.
4. Additional guidance is provided by clicking here .. :
Clicking Here

Record of Extensions: (Note: Record the date, justification and approval
received for each extension)
1. Please change the due date to 7/30/06. I have worked exclusively on the
Tritium project and License Renewal for the last three weeks. The PM's
have been created, but the planning needs to be done.
Extension request approved by S. Hutchins per telecom. J. Arvin 3/31/2006

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-----Original Message-----
From: Hutchins, Steven P
Sent: Wednesday, July 19, 2006 11:23 AM
To: Barbieri, Robert J
Cc: Frank, James E
Subject: RE: Due Date Extensions

Agreed.
-----Original Message-----
From: Barbieri, Robert J
Sent: Wednesday, July 19, 2006 11:16 AM
To: Hutchins, Steven P
Cc: Frank, James E
Subject: Due Date Extensions

Steve,
This is to request due date extensions for the following:

2. 348545-05 - This task is to develop two PM's related to Drywell corrosion due to leakage. The 2 PM's have already been created and planned
for 1R21. However, they need some modifications to capture the license
renewal commitments, as well as some details as to inspection locations.
Tom Quintenz has agreed to help with this task and submit the paperwork to
revise the PM's.
current due date: 7/26/06 Proposed Due Date: 8/27/06

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Document Corrective Action: (Note: Restate the requested action)
Develop PM's 18703M and 18704M to inspect the drywell liner.

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Document the Resolution: (Note: Clearly document the implementation of
the Corrective Action to the requirements of LS-AA-125 Attachment 3.
"That which is not documented is not done.")
PMs 18703M and 18704M have been developed to perform inspections to
identify and mitigate leakage onto the drywell shell during refueling outages. Also, work orders R2088493 and R2088495 have been planned for
1R21. However, work order R2088495 needs to be revised to contain the
correct scope of work. Two AR Evals have been assigned to planning to make
the required changes. An assignment was made to planning for these changes. The assignment is 348545, assignment 07, and is due 9/15/06.

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Document any changes to the intent of the original Actions (Include appropriate Department Head Approval): (Note: Document any deviation
from the specific action and document the name of the Senior

Manager/Director that authorized the deviation)

NA

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Document additional assignment determined during evaluation:
(Note(s):
Do not close to a promise - CA Type Assignments can only be closed to
another CA Type Assignment on a CR)

348545, 07

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Quality Signoff: (Note: Document the name of the person who is accountable for the completion of this assignment.)

Name: R. Barbieri Date: 8/28/06

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Document Additional Details here: NA
Please revise due date.
This task is to develop two PM's related to Drywell corrosion due to leakage. The 2 PM's have already been created and planned for 1R21. However, they need some modifications to capture the license renewal
commitments, as well as some details as to inspection locations. Tom Quintenz has agreed to help with this task and submit the paperwork to
revise the PM's. Please change the due date to 8/27/06.

Completion Notes:

Assign #: 06 **AR #: 00348545**

Aff Fac:	Oyster Creek	**Assign Type:**	ACIT	**Status:**	COMPLETE
Priority:		**Assigned To:**	U000BP5	**Due Date:**	03/02/2007
Schedule Ref:		**Prim Grp:**	A5330NESTS	**Orig Due Date:**	09/30/2006
Unit Condition:		**Sec Grp:**			

Assignment Details

Subject/Description: Initiate eval for recurring task during operation Inititate an eval to create a recurring task for inspection for leakage during power operation in accordance with the commitment documented in the letter from the NRC dated February 15, 1996. This recurring task should check for leakage and if leakage is found provide direction for what actions are to be taken. This should reference the commitment, and should be placed into commitment tracking with the Regulatory Assurance Dept.

Assignment Completion

In Progress Notes:

Activity Description:

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Initiate an eval to create a recurring task for inspection for leakage during power operation in accordance with the commitment documented in the letter from the NRC dated February 15, 1996. This recurring task should check for leakage and if leakage is found provide direction for what actions are to be taken. This should reference the commitment, and should be placed into commitment tracking with the Regulatory Assurance Dept.

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Activity Completion: 2/27/07
Prepared by: Brooke Porras, SM

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Completion Notes: PM18705M (AR A2143031) has already been created for
this task on 05/06. Close IR.

Completion Notes:

Assign #: 07 **AR #: 00348545**

Aff Fac:	Oyster Creek	**Assign Type:**	CA	**Status:**	COMPLETE
Priority:		**Assigned To:**	U777RCY	**Due Date:**	09/15/2006

Schedule Ref:	**Prim Grp:** A5325PLN	**Orig Due Date:**	09/15/2006
Unit Condition:	**Sec Grp:**		

Assignment Details

Subject/Description: Revise work order R2088495 Revise WO R2088495 for 1R21 to incorporate work scope identified in AR A2127016, Eval 1. Please also incorporate contents of AR A2133631, Eval 4 for license renewal commitments. These requirements should also be incorporated into the Library copy.

Assignment Completion

In Progress Notes:

****COMPLETE FOLLOWING STEPS PRIOR TO COMPLETION OF ASSIGNMENT****

1. Prior to start of work on the completion of any CA, ensure you have
reviewed the associated CR, investigation, this assignment, and if necessary contact the originator to ensure a complete understanding of the
requested action.
2. Implement the requested actions. (e.g. Procedure should be implemented not submitted for change)
3. Document completion of action by completing each field in the following form or marking NA.
4. Additional guidance is provided by clicking here .. :

Clicking Here

Record of Extensions: (Note: Record the date, justification and approval
received for each extension)

N/A

Document Corrective Action: (Note: Restate the requested action)

Revise WO R2088495 for 1R21 to incorporate work scope identified

in AR
A2127016, Eval 1. Please also incorporate
contents of AR A2133631, Eval 4 for license renewal commitments. These
requirements should also be incorporated into the Library copy.

Document the Resolution: (Note: Clearly document the implementation of
the Corrective Action to the requirements of LS-AA-125 Attachment 3.
"That which is not documented is not done.")

Revised WO R2088495 as requested

Document any changes to the intent of the original Actions (Include appropriate Department Head Approval): (Note: Document any deviation
from the specific action and document the name of the Senior Manager/Director that authorized the deviation)

N/A

Document additional assignment determined during evaluation: (Note(s):
Do not close to a promise - CA Type Assignments can only be closed to
another CA Type Assignment on a CR)

N/A

Quality Signoff: (Note: Document the name of the person who is accountable for the completion of this assignment.)

Name: Robert Yarnes Date: 9/05/06

Document Additional Details here:

Completion Notes:	

Assign #: 08 **AR #: 00348545**

Aff Fac:	Oyster Creek	**Assign Type:**	ACIT	**Status:**	COMPLETE
Priority:		**Assigned To:**	U777RJB	**Due Date:**	09/13/2006
Schedule Ref:		**Prim Grp:**		**Orig Due Date:**	09/13/2006
Unit Condition:		**Sec Grp:**			

Assignment Details

Subject/Description: Evaluate impact of water found in bottles Evaluate the impact of the leakage on the drywell structural integrity to ensure sufficient structural margin is maintained for operation to the next scheduled drywell inspection

Assignment Completion

In Progress Notes:

Based on a December 15, 1995 letter from GPUN to NRC, the following
commitments were made:

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If, during power operation leakage is discovered, we will:

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1. Notify NRC Resident
2. Investigate source of leakage and corrective actions will be taken
3. Evaluate the impact of leakage on DW structural integrity, to ensure
sufficient structural margin is maintained for operation to the next scheduled DW inspection.
4. If effects on structural integrity do not ensure adequate margin to operate to next outage, we will perform additional DW inspections within
approximately 3 months after discovery of water leakage.

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During preparation for NRC AMP Inspection for long term operation

and
license renewal, OC self identified that on line inspections weren't occurring since around 2000.

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This was entered in the CAP system as a deficiency under IR 348545 by the
License Renewal team. The letters between NRC and GPUN were reviewed and
the above summary of known commitments is accurate, as stated in the Dec
15, 1995 letter.

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PMs were put in place to start doing quarterly "at power" monitoring (PM18705M), to perform an outage monitoring and assessment plan(PM18704M),
and to look at the condition of the trough prior to and during the refueling process (PM18703M). These PMs are currently in place.

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In March 2006, an informal walk-down was performed by the system engineer
to assess our current program, as a part of NRC inspection readiness for a
license renewal AMP inspection. Presence of water was found in 3 of 5
bottles (Approximately 15 gallons) and was documented in IR 470325.
Further inspection indicated that there was no active leak. There were no
signs of water on the floor or drywell wall and there was no observed flow
of water through the tubing.

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Based on review of past inspection reports, and known lack of a PM to
empty the bottles, it is likely that this water was from the previous 3 refueling outages. The bottles were emptied as a means of ongoing monitoring to verify that an active leak was not present and to confirm
that the most likely source was from past outage activities. Since March
2006, there have been 5 inspections of the bottles contents (Not all formally documented) and no new water has been found in the bottles.
Tubing to the bottles was inspected for active flow and none was found.

Therefore, we are in compliance with the following commitments:

1. NRC is aware of current condition

2. ID source of leakage: based on ongoing inspections - there is no active leakage. A sample of residual water left in bottle after emptying, showed no activity levels, which provides further indication that there is not an active leak. This suggests that the water collected in the past during refueling outages is most likely due to condensation collecting on steel surfaces, as the entire plant cooled down during shut down.

3. Based on the above indicators that there is no current active leak when the plant is at power, and the minimal amount of water collected over a long period of time, it is unlikely that this has contributed to any appreciable drywell corrosion. The amount of water (15 gallons maximum) that was found is insignificant when compared to the amount of water found in the mid 1980's when sand bed corrosion was initially found (Hundreds of gallons). In addition, the conditions of the Drywell vessel during operation are at elevated temperature (Greater than 140 degrees). This would dry remaining small amounts of moisture that could collect on the surface of the Drywell vessel. Expected corrosion rates for these conditions are less than a mil per year, which has been verified by ongoing inspections of the Drywell vessel, as recently as 2004 (20R). Based on Engineering Judgment, structural margin is maintained until the next inspection (1R21).

4. Since adequate margin is maintained, no inspection is required until 1R21.

References:
- September 15, 1995 - Letter from GPUN to NRC

- November 1, 1995 letter from NRC to GPUN
- December 15, 1995 letter from GPUN to NRC

A peer review of this evaluation has been performed by P. Tamburro.

Completion Notes: