Entergy	CONDITION REPORT	CR-VTY-2007-00447

Originator: Lukens,Larry D
Originator Group: Eng P&C Codes Mgmt
Supervisor Name: Corbett,Patrick B
Discovered Date: 02/08/2007 09:22

Originator Phone: 3131
Operability Required: Y
Reportability Required: Y
Initiated Date: 02/08/2007 09:37

Condition Description:

Unable to locate 1991 video tape of primary containment sand cushion drain inspections.

As a result of CAR 91-063, a video tape of the sand cushion drain line inspections was made. This tape has not been found, despite an exhaustive search. What is known, however, is that the inspection results were evaluated and specifically found not to have affected the VY response to GL 87-05 (memo attached).

This tape was not a Quality Record; it was not an inspection required by Code or Regulation. Its loss has no effect on any installed plant equipment and has no operability implications.

This CR simply documents an unexpected administrative condition.

No specific action is required or suggested as a result of this CR.

Immediate Action Description:

Suggested Action Description:

Attachments:

Condition Description
February 1992 memo

Attachment Header

Document Name:

untitled

Document Location

Condition Description

Attach Title:

February 1992 memo

MEMORANDUM

TO: G. CAPPUCCIO VERNON DATE: 2/7/92

FROM: D.C. GIRROIR VERNON FILE: 3.1

SUBJECT: CAT A #CAR91063ME2, Review letter FVY 87-52

This commitment item required a review of the VY letter response to NRC Generic Letter 87-05, FVY 87-52 dated 5/8/87.

This letter was reviewed and determined that no revision is necessary as a result of the "pedestal leak" event.

Items 1) through 3) are unaffected by this event. The last item (page 3, "Response" needed to be considered. It states:

"Therefore, Vermont Yankee ... will conclude that no water has leaked into the sand gap area and if any water had it would have exited by way of the eight drain lines provided."

Later the paragraph further states:

"However, if our investigations indicate the drain lines were not operating properly or undetected water has penetrated the gap area, Vermont Yankee will submit a revised response for your review."

The original concern is that water (from the refuel cavity) has the potential to leak to this lower elevation, undetected, such that the sand cushion would become wet, be in contact with the drywell shell, and promote unacceptable corrosion.

The following is offered to address our letter statements and the original concern of NRC (and the BWR's Owners Group position):

1) The event condition was such that VY had leakage that WAS detected.
2) The sand cushion was not wetted. Visual inspection verified it to be dry.
3) There is an existing gap between the drywell shell and the sand cushion as verified by inspection.
4) The drain lines were once again verified to be open and operable.
5) The drywell shell was visually inspected and verified to be dry and evaluated to have no corrosion concern.

It is concluded that:

1) No water has leaked in the sand cushion area.
2) If water had leaked into this area it would have exited via the drain lines.
3) Undetected water also did not enter into the gap area between the

drywell and the sand cushion.

Based upon the above conclusions, the Vermont Yankee FVY 87-52 letter remains accurate and no revision is necessary.

In addition, the corrective actions taken are measures over and above our stated commitment. Most notable is the increased frequency of inspection of the sand drain lines and the torus floor areas.

Additional Note:

Our original Response did state/imply that we would revise our Response (for their review) if water penetrated the gap area. Our close communications on this issue with the NRC fulfills our basic commitment, to inform. Additionally, the finalized CAR was given to the NRC.

2/7/92

Entergy	CONDITION REPORT	CR-VTY-2007-00445

Originator: Lukens,Larry D
Originator Group: Eng P&C Codes Mgmt
Supervisor Name: Corbett,Patrick B
Discovered Date: 02/08/2007 09:13

Originator Phone: 3131
Operability Required: Y
Reportability Required: Y
Initiated Date: 02/08/2007 09:21

Condition Description:

Sand Cushion Drain Line Configuration

The current configuration of the sand cushion drain system cannot be used to identify unambiguously water intrusion into the sand cushion area.

This question was raised during the License Renewal Inspection.

This question does not affect the operability of any installed plant equipment. In the current licensing basis, it is clear that the sand cushion drain lines are not relied upon to help ensure primary containment structural integrity. This is a License Renewal question.

Immediate Action Description:

Suggested Action Description:

Evaluate the current design and configuration of the drain lines and determine their suitability for use as a leakage detection system.

Evaluate the installation of a collection facility to clearly identify water coming from the drains.

Revise OP 0150 to specifically direct the Operators to observe the 8 drain lines or a potential collection system. Include necessary training for Operators.

Establish and document the design basis and design function for the sand cushion drain lines.

Entergy	CONDITION REPORT	CR-VTY-2007-00442

Originator: Lukens,Larry D
Originator Group: Eng P&C Codes Mgmt
Supervisor Name: Corbett,Patrick B
Discovered Date: 02/08/2007 08:44

Originator Phone: 3131
Operability Required: Y
Reportability Required: Y
Initiated Date: 02/08/2007 08:57

Condition Description:

CAR 91-063 evaluation and conclusions may be potentially confusing.

CAR 91-063 (partial attached) describes a packing leak from valve MS-77. This leak became visible as water in the area of the drywell pedestal. The evaluation and conclusions are worded in such a way that it is difficult to determine precisely how the water from the packing leak found its way to the drywell pedestal.

This CR is written to evaluate whether the Apparent Cause evaluation of CAR 91-063 should be re-evaluated with the intent of making the evaluation and conclusions more clear regarding the path the water may have taken.

This CR has no effect on past or present operability of the primary containment. This issue arose as a result of helping the NRC License Renewal inspection team to understand how the 1991 packing leak of MS-77 relates to License Renewal.

Immediate Action Description:

Suggested Action Description:

Consider revisiting the apparent cause evaluation for CAR 91-063, looking for opportunities to clarify the probable path the water took before it appeared on the torus room floor.

Attachments:

Condition Description
CAR 91-063

Entergy	CONDITION REPORT	CR-VTY-2007-00443

Originator: Lukens,Larry D
Originator Group: Eng P&C Codes Mgmt
Supervisor Name: Corbett,Patrick B
Discovered Date: 02/08/2007 08:58

Originator Phone: 3131
Operability Required: Y
Reportability Required: Y
Initiated Date: 02/08/2007 09:02

Condition Description:

Results of 2007 Primary Containment Sand Cushion Drain Line Inspections

The inspection results (attached) and evaluations for sand cushion drain inspections completed in January 2007 are being entered into the corrective action process as the first step toward incorporating them into an Engineering document. This CR conveys the results and evaluation of those inpsections.

This CR affects no installed plant equipment; has no operability implications; and does not identify a deviation from any requirement.

Immediate Action Description:

Suggested Action Description:

Evaluate screen conditions; general condition of drain lines; discontinuities in drain lines; deposits or material in drain lines; observations of departure from clean, smooth drain line internal diameter

Attachments:

Condition Description
2007 Sand Cushion Drain Inspections

CODE PROGRAMS NDE RPT #07-001

Vermont Yankee
Non-Code Internal Visual Examination
Report Form for Components and Piping

Work Order No.: 51081726 01

Drawing No/Rev.: G-191481 Rev 2

Page 1 of 2 Date: 02/01/07

Component and/or Piping

Component ID: Sand drain tube BAY 2 System ID: SAND DRAIN Examined: ☒ In Place ☐ Removed

What is Being Examined: SAND DRAIN TUBE INTERNALS

Visual Aids

Light Source (Describe):	Remote Visual Examination Aids Used (Describe):
☐ Installed Lighting ☒ Temporary Lighting*	OLYMPUS FIBER SCOPE IPLEX MODEL

Method	* **Photo** See Remarks	**Sketch**
☐ Direct ☒ Remote	☐ None ☐ Attached	☒ None ☐ Attached

Indications	Acceptable	Recordable	N/A	Remarks/Observations
Cracks			X	
Physical Damage		X		Kink at 91"
Erosion/Corrosion			X	
Arc Strikes			X	
Loose Parts		X		Debris
Missing Parts			X	
Excessive Movement			X	
Alignment			X	
Clearances			X	
Thread Damage			X	
Loose Bolting			X	
Fractured Bolting			X	
Thread Engagement			X	
Evidence of Leakage			X	
Degraded Coatings			X	
Other (Explain)		X		See Attached

(*) Remarks: Light source integral to videoscope
Electronic Video Record Retained in Records Management

Examiner: Mike Griffin / Michael Griffin Level II Date 02/01/07

Examiner: Dave King Level III Date 02/01/07

Reviewer: Mike / F.T. Underkoffler RT Date 2/1/07

Remarks: Little change from 1787 4

ISI Group Evaluation Required? ☐ Yes ☒ No

Initials: TMG

Experience Hours Credit: 4.0

Supplemental Report Sheet

Vermont Yankee Non-Code Internal Visual Examination
Procedure NE 8064

Code Programs NDE Report #: 07-001 **Page 2 of 2**

Supplemental Information

Comments for Sand Drain inspection at Bay #2

1. No screen was evident at the end of the drain tubing. There was no obvious obstruction at the tube inlet.
2. Air flow was noted moving in the direction of the sand cushion.
3. Small stone type particle debris was noted in 10% to 15% of the tube length. While extensive, it does not appear that these obstructions would impede the flow of water that may come from the sand cushion area.
4. A tubing kink exists at 91" from the tubing inlet
5. A tubing joint was noted at 44" form the tubing inlet and appears to be functional.
6. Overall tube length is approximately 167"

CODE PROGRAMS NDE RPT # 07-002

Vermont Yankee
Non-Code Internal Visual Examination
Report Form for Components and Piping

Work Order No.: 510 81726 01

Drawing No/Rev.: G-191481 Rev 2

Page 1 of 2 Date: 02/01/07

Component and/or Piping

Component ID: Sand drain tube BAY 4 System ID: SAND DRAIN Examined: ☒ In Place ☐ Removed

What is Being Examined: SAND DRAIN TUBE INTERNALS

Visual Aids

Light Source (Describe):	Remote Visual Examination Aids Used (Describe):
☐ Installed Lighting ☒ Temporary Lighting*	OLYMPUS FIBER SCOPE IPLEX MODEL

Method	*** Photo** See Remarks	**Sketch**
☐ Direct ☒ Remote	☐ None ☐ Attached	☒ None ☐ Attached

Indications	Acceptable	Recordable	N/A	Remarks/Observations
Cracks			X	
Physical Damage		X		Kink at 87"
Erosion/Corrosion			X	
Arc Strikes			X	
Loose Parts			X	
Missing Parts			X	
Excessive Movement			X	
Alignment			X	
Clearances			X	
Thread Damage			X	
Loose Bolting			X	
Fractured Bolting			X	
Thread Engagement			X	
Evidence of Leakage			X	
Degraded Coatings			X	
Other (Explain)		X		See Attached

(*) Remarks: Light source integral to videoscope
Electronic Video Record Retained in Records Management

Examiner: Mike Griffin / Mike Griffin Level II Date 02/01/07

Examiner: Dave Hinel Level III Date 02/01/07

Reviewer: E. Wolfe / E.J. DeSeelhorst RI Date 2/1/07

Remarks: Water was observed in 1987

ISI Group Evaluation Required? ☐ Yes ☒ No

Initials: MG

Experience Hours Credit: 4.0

Supplemental Report Sheet

Vermont Yankee Non-Code Internal Visual Examination
Procedure NE 8064

Code Programs NDE Report #: 07-002 **Page 2 of 2**

Supplemental Information

Comments for Sand Drain inspection at Bay #4

1. Screen intact with approximately 40% of the screen area clear. Approximately 60% of the screen area has sand or other deposit impingement.
2. Air flow noted in the direction of the sand cushion.
3. Kink noted at approximately 87" from the drain tube entry.
4. Minor debris noted including what appears to be a nail.
5. Joint at 49" from tube entry appears to be functional.
6. Overall tube length was not measured for this tube due to scaffold obstruction and radiation dose consideration.

CODE PROGRAMS NDE RPT #07-003

Vermont Yankee
Non-Code Internal Visual Examination
Report Form for Components and Piping

Work Order No.: 51081726 01
Drawing No/Rev.: G-191481 Rev 2
Page 1 of 2 Date: 02/01/07

Component and/or Piping

Component ID: Sand drain tube BAY 6 System ID: SAND DRAIN Examined: ☒ In Place ☐ Removed

What is Being Examined: SAND DRAIN TUBE INTERNALS

Visual Aids

Light Source (Describe):	Remote Visual Examination Aids Used (Describe):
☐ Installed Lighting ☒ Temporary Lighting*	OLYMPUS FIBER SCOPE IPLEX MODEL

Method	*** Photo** See Remarks	**Sketch**
☐ Direct ☒ Remote	☐ None ☐ Attached	☒ None ☐ Attached

Indications	Acceptable	Recordable	N/A	Remarks/Observations
Cracks			X	
Physical Damage		X		Kink at 88"
Erosion/Corrosion			X	
Arc Strikes			X	
Loose Parts			X	
Missing Parts			X	
Excessive Movement			X	
Alignment			X	
Clearances			X	
Thread Damage			X	
Loose Bolting			X	
Fractured Bolting			X	
Thread Engagement			X	
Evidence of Leakage			X	
Degraded Coatings			X	
Other (Explain)		X		See Attached

(*) Remarks: Light source integral to Videoscope
Electronic Video Record Retained in Records Management

Examiner: Mike Griffin / [signature] **Level** II **Date** 02/01/07
Examiner: Dave King / [signature] **Level** II **Date** 02/01/07
Reviewer: F.T. Underhill / [signature] RI **Date** 2/1/07
Remarks: Little Deerfield 1987

ISI Group Evaluation Required? ☐ Yes ☒ No
Initials: MG

Experience Hours Credit: 4.0

Supplemental Report Sheet

Vermont Yankee Non-Code Internal Visual Examination
Procedure NE 8064

Code Programs NDE Report #: 07-003 **Page 2 of 2**

Supplemental Information

Comments for Sand Drain inspection at Bay #6

1. Screen appears to be intact with sand and other deposit impingements noted over approximately 98% of the screen surface area.
2. Kink noted at approximately 88" from the tube entry.
3. Joint noted at approximately 42" from tube entry. Joint appears to be intact and functional.
4. Overall length of drain tube is approximately 162" from tube entry.
5. No conclusive air flow was noted in this tube.

CODE PROGRAMS NDE RPT #07-004

Vermont Yankee
Non-Code Internal Visual Examination
Report Form for Components and Piping

Work Order No.: 51081726 01

Drawing No/Rev.: G-191481 Rev 2

Page 1 of 2 Date: 02/01/07

Component and/or Piping

Component ID: Sand drain tube BAY 8 System ID: SAND DRAIN Examined: ☒ In Place ☐ Removed

What is Being Examined: SAND DRAIN TUBE INTERNALS

Visual Aids

Light Source (Describe):	Remote Visual Examination Aids Used (Describe):
☐ Installed Lighting ☒ Temporary Lighting*	OLYMPUS FIBER SCOPE IPLEX MODEL

Method	*** Photo** See Remarks	**Sketch**
☐ Direct ☒ Remote	☐ None ☐ Attached	☒ None ☐ Attached

Indications	Acceptable	Recordable	N/A	Remarks/Observations
Cracks			X	
Physical Damage		X		Kink at 96"
Erosion/Corrosion			X	
Arc Strikes			X	
Loose Parts			X	
Missing Parts			X	
Excessive Movement			X	
Alignment			X	
Clearances			X	
Thread Damage			X	
Loose Bolting			X	
Fractured Bolting			X	
Thread Engagement			X	
Evidence of Leakage			X	
Degraded Coatings			X	
Other (Explain)		X		See Attached

(*) Remarks: light source integral to video scope
Electronic Video Record Retained in Records Management

Examiner: Mike Griffin / Michael Griffin Level II Date 02/01/07

Examiner: Dave King / Level III Date 02/01/07

Reviewer: F. T. Udy / RI Date 2/1/07

Remarks: Little change from 1987

ISI Group Evaluation Required? ☐ Yes ☒ No

Initials: MG

Experience Hours Credit: 4.0

Supplemental Report Sheet

Vermont Yankee Non-Code Internal Visual Examination
Procedure NE 8064

Code Programs NDE Report #: 07-004 **Page 2 of 2**

Supplemental Information

Comments for Sand Drain inspection at Bay #8

1. Screen intact with approximately 40% of the surface area clear and approximately 60% included by sand or other deposits.
2. Kink noted at approximately 96" form tube entry.
3. Joint noted at 47" from tube entry. Joint appears to be intact and functional.
4. Overall length of tube is approximately 172" measured from tube entry.
5. No conclusive air flow was noted in this tube.

CODE PROGRAMS NDE RPT # 07-005

Vermont Yankee
Non-Code Internal Visual Examination
Report Form for Components and Piping

Work Order No.: 51081726 01

Drawing No/Rev.: G-191481 Rev 2

Page 1 of 2 Date: 02/01/07

Component and/or Piping

Component ID: Sand drain tube BAY 10 System ID: SAND DRAIN Examined: ☒ In Place ☐ Removed

What is Being Examined: SAND DRAIN TUBE INTERNALS

Visual Aids

Light Source (Describe): ☐ Installed Lighting ☒ Temporary Lighting*

Remote Visual Examination Aids Used (Describe): OLYMPUS FIBER SCOPE IPLEX MODEL

Method ☐ Direct ☒ Remote

*** Photo** See Remarks ☐ None ☐ Attached

Sketch ☒ None ☐ Attached

Indications	Acceptable	Recordable	N/A	Remarks/Observations
Cracks			X	
Physical Damage		X		Kink at 94"
Erosion/Corrosion			X	
Arc Strikes			X	
Loose Parts			X	
Missing Parts			X	
Excessive Movement			X	
Alignment			X	
Clearances			X	
Thread Damage			X	
Loose Bolting			X	
Fractured Bolting			X	
Thread Engagement			X	
Evidence of Leakage			X	
Degraded Coatings			X	
Other (Explain)		X		See Attached

(*) Remarks: light source intergral to video scope
Electronic Video Record Retained in Records Management

Examiner: Mike Griffin / [signature] Level II Date 02/01/07

Examiner: Dave King / [signature] Level III Date 02/01/07

Reviewer: F-T-[signature] RI Date 3/1/07

Remarks: Little change from 1987

ISI Group Evaluation Required? ☐ Yes ☒ No

Initials: MG

Experience Hours Credit: 4.0

Supplemental Report Sheet

Vermont Yankee Non-Code Internal Visual Examination
Procedure NE 8064

Code Programs NDE Report #: 07-005 **Page 2 of 2**

Supplemental Information

Comments for Sand Drain inspection at Bay #10

1. Screen appears to have a slight gap between the screen surface and the tube end. Screen is intact with approximately 98% of the screen surface area included by sand and other impinged material.
2. Kink noted at approximately 94" from tube entry.
3. Joint noted at 44" from tube entry. Joint has a significant gap in the coupling, but appears to be intact and functional.
4. Overall tube length is approximately 166".
5. No conclusive air flow was noted.

CODE PROGRAMS NDE RPT #07-006

Vermont Yankee
Non-Code Internal Visual Examination
Report Form for Components and Piping

Work Order No.: 510 81726 01
Drawing No/Rev.: G-191481 Rev 2
Page 1 of 2 Date: 02/01/07

Component and/or Piping

Component ID: Sand drain tube BAY 12 System ID: SAND DRAIN Examined: ☒ In Place ☐ Removed

What is Being Examined: SAND DRAIN TUBE INTERNALS

Visual Aids

Light Source (Describe):	Remote Visual Examination Aids Used (Describe):
☐ Installed Lighting ☒ Temporary Lighting*	OLYMPUS FIBER SCOPE IPLEX MODEL

Method	*** Photo** See Remarks	**Sketch**
☐ Direct ☒ Remote	☐ None ☐ Attached	☒ None ☐ Attached

Indications	Acceptable	Recordable	N/A	Remarks/Observations
Cracks			X	
Physical Damage		X		Kink at 87"
Erosion/Corrosion			X	
Arc Strikes			X	
Loose Parts		X		light debris
Missing Parts			X	
Excessive Movement			X	
Alignment			X	
Clearances			X	
Thread Damage			X	
Loose Bolting			X	
Fractured Bolting			X	
Thread Engagement			X	
Evidence of Leakage			X	
Degraded Coatings			X	
Other (Explain)		X		See Attached

(*) Remarks: light source intergral to video scope
Electronic Video Record Retained in Records Management

Examiner: Mike Griffin Level II Date 02/01/07
Examiner: Dave King Level III Date 02/01/07
Reviewer: F.T. Udy for the RI Date 2/1/07
Remarks: Little change from 0787

ISI Group Evaluation Required? ☐ Yes ☒ No
Initials: MG

Experience Hours Credit: 4.0

Supplemental Report Sheet

Vermont Yankee Non-Code Internal Visual Examination
Procedure NE 8064

Code Programs NDE Report #: 07-006 **Page 2 of 2**

Supplemental Information

Comments for Sand Drain inspection at Bay #12

1. Slight gap noted between the screen and tube end. Screen is intact with approximately 30% of the area clear and approximately 70% of the screen area included with sand and other impinged material.
2. Kink noted at approximately 87" from tube entry.
3. Minor debris noted.
4. Joint noted at 45" from tube entry. Joint has a gap but appears to be intact and functional.
5. Overall tube length is approximately167".
6. Small air flow noted in direction of the sand cushion.

CODE PROGRAMS NDE RPT # 07-007

Vermont Yankee
Non-Code Internal Visual Examination
Report Form for Components and Piping

Work Order No.: 51081726 01

Drawing No/Rev.: G-191481 Rev 2

Page 1 of 2 Date: 02/01/07

Component and/or Piping

Component ID: Sand drain tube BAY 14 System ID: SAND DRAIN Examined: ☒ In Place ☐ Removed

What is Being Examined: SAND DRAIN TUBE INTERNALS

Visual Aids

Light Source (Describe):	Remote Visual Examination Aids Used (Describe):
☐ Installed Lighting ☒ Temporary Lighting*	OLYMPUS FIBER SCOPE IPLEX MODEL

Method	* **Photo** See Remarks	**Sketch**
☐ Direct ☒ Remote	☐ None ☐ Attached	☒ None ☐ Attached

Indications	Acceptable	Recordable	N/A	Remarks/Observations
Cracks			X	
Physical Damage		X		Kink at 72" minor screen damage
Erosion/Corrosion			X	
Arc Strikes			X	
Loose Parts		X		Debris / string
Missing Parts			X	
Excessive Movement			X	
Alignment			X	
Clearances			X	
Thread Damage			X	
Loose Bolting			X	
Fractured Bolting			X	
Thread Engagement			X	
Evidence of Leakage			X	
Degraded Coatings			X	
Other (Explain)		X		See Attached

(*) **Remarks:** light source integral to video scope
Electronic Video Record Retained in Records Management

Examiner: Mike Griffin / Michael Griffin **Level** II **Date** 02/01/07

Examiner: Dave King / [illegible] **Level** III **Date** 02/01/07

Reviewer: F. T. Mac[illegible] / [illegible] RI **Date** 2/1/07

Remarks: Little change from 1987

ISI Group Evaluation Required? ☐ Yes ☒ No

Initials: MG

Experience Hours Credit: 4.0

Supplemental Report Sheet

Vermont Yankee Non-Code Internal Visual Examination
Procedure NE 8064

Code Programs NDE Report #: 07-007 **Page 2 of 2**

Supplemental Information

Comments for Sand Drain inspection at Bay #14

1. Screen intact and 100% clear. Minor damage to screen.
2. Minor debris noted.
3. Air flow noted in direction of sand cushion.
4. Kink noted at approximately 72" from tube entry.
5. Joint noted at approximately 47" from tube entry. Joint appears to be intact and functional.
6. Overall tube length is approximately 163".

CODE PROGRAMS NDE RPT # 07-008

Vermont Yankee
Non-Code Internal Visual Examination
Report Form for Components and Piping

Work Order No.: 51081726 01

Drawing No/Rev.: G-191481 Rev 2

Page 1 of 2 Date: 02/01/07

Component and/or Piping

Component ID: Sand drain tube BAY 16 System ID: SAND DRAIN Examined: ☒ In Place ☐ Removed

What is Being Examined: SAND DRAIN TUBE INTERNALS

Visual Aids

Light Source (Describe):	Remote Visual Examination Aids Used (Describe):
☐ Installed Lighting ☒ Temporary Lighting*	OLYMPUS FIBER SCOPE IPLEX MODEL

Method	* **Photo** See Remarks	**Sketch**
☐ Direct ☒ Remote	☐ None ☐ Attached	☒ None ☐ Attached

Indications	Acceptable	Recordable	N/A	Remarks/Observations
Cracks			X	
Physical Damage		X		Kink at 93"
Erosion/Corrosion			X	
Arc Strikes			X	
Loose Parts			X	
Missing Parts			X	
Excessive Movement			X	
Alignment			X	
Clearances			X	
Thread Damage			X	
Loose Bolting			X	
Fractured Bolting			X	
Thread Engagement			X	
Evidence of Leakage			X	
Degraded Coatings			X	
Other (Explain)		X		See Attached

(*) Remarks: light source integral to Video Scope
Electronic Video Record Retained in Records Management

Examiner: Mike Griffin / Michael Griffin Level II Date 02/01/07

Examiner: Dave King / Dave King Level III Date 02/01/07

Reviewer: F.T. Underbakke / F.T. Underbakke RI Date 2/1/07

Remarks: Watts was discovered in 1987

ISI Group Evaluation Required? ☐ Yes ☒ No

Initials: TMG

Experience Hours Credit: 4.0

VYNEF 8064.04
NE 8064 Rev. 2
Page 1 of 1

Supplemental Report Sheet

Vermont Yankee Non-Code Internal Visual Examination
Procedure NE 8064

Code Programs NDE Report #: 07-008 **Page 2 of 2**

Supplemental Information

Comments for Sand Drain inspection at Bay #16

1. Screen intact approximately 80% clear and approximately 20% included by impinged material.
2. Double kink noted at approximately 93" form tube entry.
3. Air flow noted in the direction of the sand cushion.
4. Joint at approximately 48" from tube entry. Joint appears to have a slight gap but otherwise intact and functional.
5. Overall tube length is approximately 164".

Entergy	CONDITION REPORT	CR-VTY-2007-00258

Originator: Lukens,Larry D
Originator Group: Eng P&C Codes Mgmt
Supervisor Name: Corbett,Patrick B
Discovered Date: 01/24/2007 10:28

Originator Phone: 3131
Operability Required: N
Reportability Required: N
Initiated Date: 01/24/2007 10:31

Condition Description:

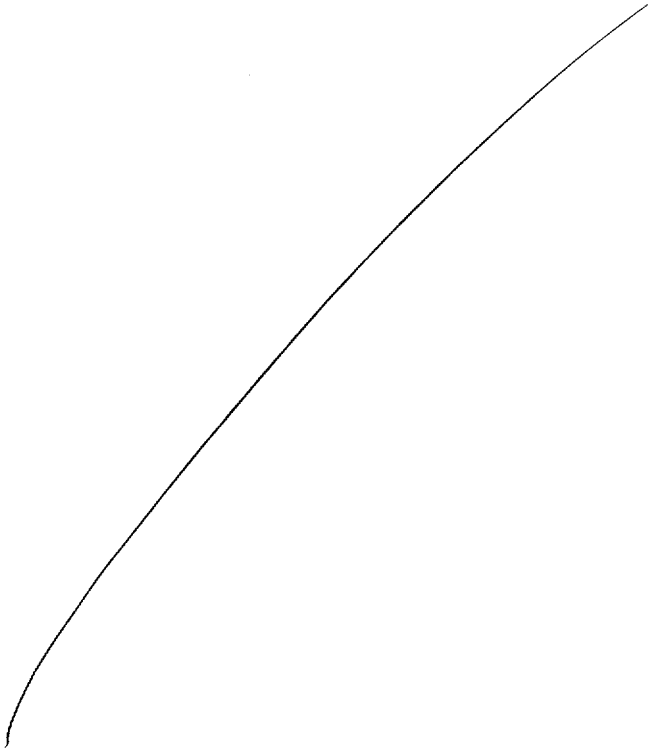
NDE Procedures may not be sufficiently clear concerning the writing of CRs for identified indications.

Procedures ENN-NDE-10.01; ENN-NDE-10.02; and ENN-NDE-10.03 do not explicitly reference EN-LI-102, and they do not contain explicit guidance to initiate a Condition Report upon identifying a non-conforming condition.

These procedures should be reviewed and revised to be consistent with EN-LI-102 and Management expectations.

Immediate Action Description:

Suggested Action Description:



Entergy	CONDITION REPORT	CR-VTY-2007-00257

Originator: Lukens,Larry D
Originator Group: Eng P&C Codes Mgmt
Supervisor Name: Corbett,Patrick B
Discovered Date: 01/24/2007 10:15

Originator Phone: 3131
Operability Required: N
Reportability Required: N
Initiated Date: 01/24/2007 10:26

Condition Description:

Engineering Standard ENN-EP-S-001, General Visual Containment Inspection, Step 5.2.3 contains unclear direction.

Containment General Visual Inspections are conducted by qualified examiners and the results are reviewed and accepted by the IWE Responsible Individual [RI] (Program Owner).
Steps 5.2.1 & 5.2.2 are the following:
5.2.1: The inspection criteria (Sections 5.3, 5.4, 5.5 and 5.6) form the basis for accepting existing conditions in plants. These inspection criteria have been evaluated and acceptable by calculation or code and do not deter or compromise the structural integrity of the primary containment pressure boundary.

5.2.2 Indications which do not exceed the inspection criteria are not required to be reported and are considered acceptable without the RI?s review.

Step 5.2.3 states, "The RI [the IWE Responsible Individual (Program Owner)] will determine if the conditions exceeding the inspection criteria are acceptable. A Condition Report (CR) shall be generated for all unacceptable conditions."

It is possible to interpret this direction as being contrary to the intent of the Corrective Action Process, which expects that non-conforming conditions are identified by CR and investigated in the corrective action process.

This step should be reviewed and revised to clarify that an individual identifying a condition that exceeds the acceptance criteria should initiate a CR.

Immediate Action Description:

Suggested Action Description:

Entergy	CONDITION REPORT	CR-VTY-1997-00307

Originator: Betti,Enrico J
Originator Group: Licensing Mgmt
Supervisor Name:
Discovered Date: 03/12/1997 00:00

Originator Phone: 2347
Operability Required: N
Reportability Required: N
Initiated Date: 03/13/1997 00:00

Condition Description:
The Teledyne corrosion evaluation, performed in 1990, did not consider the

The Teledyne corrosion evaluation, performed in 1990, did not consider the original ASME III design basis pressure when evaluating allowable corrosion limits. The resultant corrosion limits would ultimately compromise the ASME III design pressure capacity. In addition the Teledyne study neglected to address corrosion at the critical penetrations. In the process of performing work for the ECCS strainer design change and for the ITS project, it was discovered that the torus corrosion evaluation did not consider design pressure.

Immediate Action Description:
NOTIFIED APPROPRIATE MANAGERS/DEPT : Complete : Expr1
DISCUSSED EVENT WITH EMPLOYEE : Complete : Expr1
INVESTIGATED THE PROBLEM : Complete : Expr1

Suggested Action Description:
INITIATED DOCUMENT CHANGE : Complete : Expr1

EQUIPMENT:

Tag Name	Tag Suffix Name	Component Code	Process System Code
			PCAC
			NB

REFERENCE ITEMS:

Type Code	Description
APPENDIX	ITS
EDCR	EDCR96-415

TRENDING (For Reference Purposes Only):

Trend Type	Trend Code
CAUSE DEPT	CD-FLUID SYSTEMS ENGINEERING
PERSONNEL INJURY	PI-NON-INJURY
CAUSAL FACTOR CODES	CFC-M2A3
KEYWORDS	KW-DOORS
KEYWORDS	KW-ITS

Attachments:

Closure Description
ECCS STRAINER DESIGN SPECIFICATION PREPARATION IT WAS DISCOVI

Entergy	ADMIN	CR-VTY-1997-00307

Initiated Date: 3/13/1997 0:00 **Owner Group :** Eng DE Fluid Systems Mgmt

Current Contact:

Current Significance: C

Closed by: CONVERSION,IT 11/20/1997 0:00

Summary Description:

The Teledyne corrosion evaluation, performed in 1990, did not consider the

Remarks Description:

The ER 970307 was migrated from the VY Niagara application on 10/30/2003 to generate this CR.

Closure Description:

Entergy	CORRECTIVE ACTION	CR-VTY-1997-00307

CA Number: 1

	Group	Name
Assigned By:	Tech CA&A HU Staff	CVAX
Assigned To:	Eng DE Mech Civil Struct Mgmt	
Subassigned To :	Eng DE Mech Civil Struct Staff	

Originated By:	CVAX	11/18/1997 00:00:0C
Performed By:	Callaghan,James H	11/30/1999 00:00:0C
Subperformed By:	Callaghan,James H	11/30/1999 00:00:0C
Approved By:		
Closed By:	McCullough,Richard E	11/30/1999 15:17:0C

Current Due Date: 10/22/1999 **Initial Due Date:** 10/22/1999

CA Type: ER CA

Plant Constraint: NONE

CA Description:

ER-970307_01
ER970307_01

TORUS SHELL CORROSION EVALUATION/ASME III DESIGN BASIS PRESSURE. DETERMINE THICKNESS OF TORUS PLATE SECTIONS/GEOMETRIES OF CONCERN. REVISE CLAC VYC-1032. FORWARD RESULTS TO MECH. MAINT.

Niagara indicators set at Initiation and DH Review:

Commitment Type :: B
Source Type :: Corrective Action
Source Detail :: Event Report
Item to be completed during outage ::

Summary of Niagara Due Date Extensions:

On 06/03/1998 revision 4 changed the due date from 06/01/1998 to 10/01/1998.
On 09/29/1998 revision 5 changed the due date from 10/01/1998 to 11/13/1998.
On 11/10/1998 revision 6 changed the due date from 11/13/1998 to 12/31/1998.
On 01/07/1999 revision 7 changed the due date from 12/31/1998 to 04/30/1999.
On 04/28/1999 revision 8 changed the due date from 04/30/1999 to 06/04/1999.
On 06/02/1999 revision 9 changed the due date from 06/04/1999 to 08/06/1999.
On 08/16/1999 revision 10 changed the due date from 08/06/1999 to 10/22/1999.

Response:

Commitment ER-970307_01

DH Approval Comments:
complete.

Subresponse :

3/20/98 JHC. See detailed closure notes on VYAPF 0028.01; attached "task" by J Fitzpatrick.

Closure Comments:

The Commitment ER-970307_01 was migrated from the VY Niagara application on 10/30/2003 to generate this CA.

Close Out Comments indicated in Niagara ::

Attachment Header

Document Name:

CR-VTY-1997-00307

Document Location

Closure Description

Attach Title:

ECCS STRAINER DESIGN SPECIFICATION PREPARATION IT WAS DISCOVERED THAT THE DESIGN

Entergy	CORRECTIVE ACTION	LO-OEN-2005-00361

CA Number: 6

	Group	Name
Assigned By:	VTY OE Coordinator	Aho,Wayne Raymond
Assigned To:	VTY Eng DE Manager	Callaghan,James H
Subassigned To :	VTY Eng DE Mech Civil Struct Mgmt	

Originated By:	Aho,Wayne Raymond	08/09/2005 16:28:1(
Performed By:	Goodwin,Scott D	09/13/2005 13:44:1(
Subperformed By:		
Approved By:		
Closed By:	Goodwin,Scott D	09/13/2005 13:44:1(

Current Due Date: 09/13/2005 **Initial Due Date:** 09/15/2005

CA Type: APPLICABILITY REVIEW

Plant Constraint: NONE OEN

CA Description:

CR-JAF-2005-02593-RC Torus Leak Discovered Between The Support Between Bays "A" And "P" this requires a review and evaluation at VY.

Response:

requested action previously completed when event first occurred. Concluded that VY is not similar in configuration or susceptible to same event as has occurred at JAF. Refer to Attachment 1 for additional information. No further actions required.

Subresponse :

Closure Comments:

Attachments:

Ca Description
Torus Leak-JAF root cause
Resp Description
Info on JAF Torus Leak

From: **Unsal, Ahmet**
Sent: Tuesday, August 09, 2005 4:32 PM
To: Goodwin, Scott
Subject: FW: Information on JAF Torus Leakage

Attachments: VY HPCI & RCIC Stm Exhaust Arrangement.pdf

Is this what you are looking for?

Ahmet

From: Rogers, James
Sent: Thursday, June 30, 2005 2:41 PM
To: Unsal, Ahmet; Goodwin, Scott; Callaghan, James; LEWIS, RAYMOND S; debuman@nppd.com
Cc: Penny, Robert; Smith, Glenroy; Mulcahy, Francis; Mileris, George; Woods, Steven; White, Thomas F (Pilgrim)
Subject: RE: Information on JAF Torus Leakage

VY has reviewed the HPCI and RCIC steam exhaust lines, within the torus, in comparison to the physical arrangement provided. Unlike JAF, VYs lines extend into the torus through a 60° ELL and exit ~ 9 ft. (HPCI) and ~8 Ft. (RCIC) below the water surface. HPCI has a sparger at the exit point with none provided on RCIC

Review of our torus design indicates that we are similar to JAF in that a ring girder is provided.

Additionally, during RFO 24, Visual Examination was performed on the torus external surface and on the internal surface above the water line and as far below the surface as possible. UT examination was performed in all areas where coating issues were identified. No concerns were identified within the HPCI and RCIC areas.

VY HPCI & RCIC
Stm Exhaust Arr...

From: Callaghan, James
Sent: Thursday, June 30, 2005 12:59 PM
To: Rogers, James
Subject: FW: Information on JAF Torus Leakage

From: Pace, Raymond
Sent: Thursday, June 30, 2005 10:29 AM
To: Unsal, Ahmet; Goodwin, Scott; Callaghan, James; LEWIS, RAYMOND S; 'debuman@nppd.com'
Cc: Penny, Robert; Smith, Glenroy; Mulcahy, Francis; Mileris, George; Woods, Steven; White, Thomas F (Pilgrim)
Subject: RE: Information on JAF Torus Leakage

One more item: What does the detail of the SR elbow stiffener look like? It appears to be welded directly to the torus shell. Or, is it welded to a penetration stiffening pad?

-----Original Message-----
From: Pace, Raymond
Sent: Thursday, June 30, 2005 10:23 AM
To: Unsal, Ahmet; Goodwin, Scott; Callaghan, James; LEWIS, RAYMOND S; 'debuman@nppd.com'
Cc: Penny, Robert; Smith, Glenroy; Mulcahy, Francis; Mileris, George; Woods, Steven; White, Thomas F (Pilgrim)
Subject: RE: Information on JAF Torus Leakage

All,

PNPS would like to see a plan drawing so we can figure out a dimension from the column in question the HPCI steam exhaust penetration. Our penetration is at mid-bay so it is more than 10 feet to either column.

Also, have you considered that early in plant life there were numerous problems with condensation in the exhaust line? After a first run the steam would condense in the line, that would suck in water resulting in a severe water hammer situation on a restart. PNPS had to resupport the HPCI line with snubbers for this event. We also added vacuum breakers to eliminate the potential.

Next item, PNPS has a submerged sparger on the end of the HPCI line to reduce the loading in the pool. This was original equipment. Your information seems to indicate that there is no sparger. Can you verify?

Thanks

Ray

-----Original Message-----
From: Unsal, Ahmet
Sent: Thursday, June 30, 2005 9:02 AM
To: Pace, Raymond; Goodwin, Scott; Callaghan, James; LEWIS, RAYMOND S; 'debuman@nppd.com'
Cc: Penny, Robert; Smith, Glenroy
Subject: Information on JAF Torus Leakage

To All:

On June 27, 2005, while performing RCIC testing, several cracks were found in the JAF TORUS structure. Further investigation has shown that the cracks are located close to the 24" HPCI steam exhaust line in the torus. There is a ring girder inside the torus close to the location of the cracks. The cracks might be the the result of fatigue due to thermal and/or condensation oscillation loads generated by the HPCI steam exhaust. There is also a similar configuration for the RCIC line, which also discharges to the torus.

Attached are sketckes, drawings showing the HPCI and RCIC configurations for JAF. Also, the UT mapping of the crack and pictures of the location of the crack are attached.

This information is sent to you so that you can investigate whether you have a similar condition at you plant.

If you need additional information, please contact me or Glen Smith at WPO.

<< File: Info Sites.TIF >> << File: MVC-581S.JPG >> << File: MVC-584S.JPG >>

Ahmet Unsal, PE
Sr. Staff Engineer
440 Hamilton Avenue
White Plains, NY 10601
Tel: 914 272 3529
Fax: 914 272 3537

Entergy	CORRECTIVE ACTION	LO-OEN-2005-00361

CA Number: 4

	Group	Name
Assigned By:	OEN Mgmt	Coulehan,Vincent
Assigned To:	OEN VTY Staff	Aho,Wayne Raymond
Subassigned To :		

Originated By:	Coulehan,Vincent	08/01/2005 07:11:47
Performed By:	Aho,Wayne Raymond	09/24/2005 12:22:09
Subperformed By:		
Approved By:		
Closed By:	Coulehan,Vincent	09/25/2005 19:30:30

Current Due Date: 10/01/2005 **Initial Due Date:** 10/01/2005

CA Type: OE IMPACT EVALUATION

Plant Constraint: NONE OEN

CA Description:

CR-JAF-2005-02593-RC Torus Leak Discovered Between The Support Between Bays "A" And "P" this requires an eval at VY

Response:

Design Engineering has evaluated this Root Cause in CA#6, and determined that it does not apply to Vermont Yankee.

Subresponse :

Closure Comments:

Close to the response provided

Attachments:

Ca Description
CR-JAF-2005-02593-RC Torus Leak Discovered Bet

Entergy	CONDITION REPORT	CR-VTY-2005-02002

Originator: Lipinski,Frank P
Originator Group:
Supervisor Name: Corbett,Patrick B
Discovered Date: 07/01/2005 09:25

Originator Phone: 5408
Operability Required: Y
Reportability Required: Y
Initiated Date: 07/01/2005 09:35

Condition Description:

Walkdown of Torus - post Fitzpatrick shutdown

Upon learning of the Fitzpatrick torus leak and after informing the shift manager, a walkdown of the torus was performed to look for moisture and weepage. Moisture was noted in bays 11, 10, 3 and 15.

It is suggested that these moisture indications be characterized and documented.

Immediate Action Description:

Walked down the area. Notified shift manager.

Suggested Action Description:

EQUIPMENT:

Tag Name	Tag Suffix Name	Component Code	Process System Code
TORUS	TORUS	MR=Y	NB

TRENDING (For Reference Purposes Only):

Trend Type	Trend Code
REPORT WEIGHT	1
EU	ESSE
EL	ESSE

Entergy	ADMIN	CR-VTY-2005-02002

Initiated Date: 7/1/2005 9:35 **Owner Group :** Eng SYS System Eng Mgmt

Current Contact: MMD

Current Significance: C - INVEST & CORRECT

Closed by: Burger,Frederick J 7/28/2005 11:30

Summary Description:

Walkdown of Torus - post Fitzpatrick shutdown

Upon learning of the Fitzpatrick torus leak and after informing the shift manager, a walkdown of the torus was performed to look for moisture and weepage. Moisture was noted in bays 11, 10, 3 and 15.

It is suggested that these moisture indications be characterized and documented.

Remarks Description:

Closure Description:

Trend data entered.

Entergy	OPERABILITY	CR-VTY-2005-02002

OperabilityVersion: 1

Operability Code: EQUIPMENT OPERABLE

Immediate Report Code: NOT REPORTABLE

Performed By: Wisniewski,Andrew T 07/01/2005 12:53

Approved By: Keith,Ronald M 07/01/2005 12:56

Operability Description:

Qualified personnel (Operations and Engineering) walked down the Torus and identified that the leakage in bays 3 and 15 was oil coming from RHR-39Aand RHR-34B valve operators. Bays 10 and 11 had indications of condensation or leakage from above the Torus. These indications need to be investigated. These indications are above the Torus water line and therefore are not leakage from the Torus. There is no indication of any Torus leakage.

Approval Comments:

Entergy	ASSIGNMENTS	CR-VTY-2005-02002

Version: 2

Significance Code: C - INVEST & CORRECT

Classification Code: C

Owner Group: Eng SYS System Eng Mgmt

Performed By: Dudley,Mona M 07/06/2005 10:40

Assignment Description:

Screening Data
Significance C - INVEST & CORRECT
Owner : Eng SYS System Eng Mgmt
Comments:
Trending Items
RW - 1 (SELF-IDENTIFIED)
<<End>>

Entergy	ASSIGNMENTS	CR-VTY-2005-02002

Version: 1

Significance Code: C - INVEST & CORRECT

Classification Code: C

Owner Group: Eng SYS Manager

Performed By: Lipinski,Frank P 07/01/2005 09:50

Assignment Description:

characterize and document moisture on the torus.

Entergy	REPORTABILITY	CR-VTY-2005-02002

Reportability Version: 1

Report Number:

Report Code: NOT REPORTABLE

Boilerplate Code: NOT REPORTABLE

Performed By : Hamer,Michael J 07/01/2005 11:04

Reportability Description:

Not reportable - This CR does not provide sufficient information for a reportability determination. Moisture on the torus does not present a degraded condition. If further investigation discovers a condition similar to the JAF problem, a new CR would need to be initiated to document that specific condition.

Entergy	CORRECTIVE ACTION	CR-VTY-2005-02002

CA Number: 1

	Group	Name
Assigned By:	CRG/CARB/OSRC	
Assigned To:	Eng SYS System Eng Mgmt	
Subassigned To :	Eng SYS System Eng Staff	Vekasy,Stephen A

Originated By:	Dudley,Mona M	07/06/2005 10:42:33
Performed By:	LeFrancois,Mark P	07/26/2005 14:31:01
Subperformed By:	Vekasy,Stephen A	07/13/2005 15:39:12
Approved By:		
Closed By:	Burger,Frederick J	07/28/2005 11:29:18

Current Due Date: 08/04/2005 **Initial Due Date:** 08/04/2005

CA Type: CA - INVEST & CORR

Plant Constraint: 0 NONE

CA Description:

C - INVEST & CORRECT (Review CR for full details)
The CRG has initially classified this CR as
Classification Code - "C"
Significance Code - INVEST & CORRECT

Per the CRG, Perform an Investigation of the issues identified in this CR and determine if additional actions are required within 30 days.

All Attachments are to be in PDF format

Ensure all Screening Comments have been addressed in the investigation - (CR assignment tab)
Develop adequate corrective actions and issue CAs. (Due Dates per LI 102 Attachment 9.5)
LT CAs Require Approval from Site VP/ GMPO or Director prior to initiating.

Response:

Approved. Per review IAW EN LI 102 Section 5.9.1 all correct actions are complete. Please close this CR.

Subresponse :

See attached description of the investigation. No further tracking is required.

Closure Comments:

Trend data entered.

Attachments:

Subresp Description
CR investigation

Attachment Header

Document Name:

untitled

Document Location

Subresp Description

Attach Title:

CR investigation

CR-VTY-2005-2002 indicates that "Upon learning of the Fitzpatrick torus leak and after informing the shift manager, a walkdown of the torus was performed to look for moisture and weepage. Moisture was noted in bays 11, 10, 3 and 15." This walkdown of the entire torus to look for leakage was performed by Frank Lipinski and B.C. Current. System Engineering was immediately asked by OPS to evaluate the findings described in the CR.

Qualified personnel (Operations and System Engineering) performed a walkdown of the Torus to determine the source of the moisture identified on the outside of the torus. The walkdown team included:

Steve Vekasy	System Engineer - qualified for System Engineering walkdowns
Steve Jonasch	System Engineer - qualified for System Engineering walkdowns
Ted Underkoffler	Code Programs Engineer – VT-2 qualified
Bill Fields	Code Programs Engineer
Mike Flory	Auxiliary Operator – VT-2 qualified

The subject CR identified "moisture" trails down the side of the torus shell in bays 3, 10, 11 and 15. The author of the CR initiated the CR based on observations of the torus shell from the floor at elev. 213'. He did not go up to the torus catwalk to identify the source of the leakage.

The inspection began on the torus floor with the initiator of the CR to accurately identify the "moisture" identified in the CR. The five individuals above then went to the torus catwalk to the areas immediately above the identified "moisture" on the torus shell below. The stain tracks leading to the "moisture" identified on the torus shell below were all readily identified. Each of the four stain trails initiated on the upper quadrant of the torus well above water level (which is at approx. mid point on the torus). Each of the four stain trails was caused by external "moisture" leaking onto the upper quadrant of the torus. The upper quadrant is in the air space of the torus. There was no evidence of through wall leakage. Through wall leaks can only begin below the midpoint of the torus.

"Moisture" identified in the CR in bay 3 was determined to be coming from oil leaking from the Limitorque operator of V10-34B. At the request of the duty Shift Manager, I submitted FRF 886 to have the oil cleaned up. I identified the leaking operator to the MOV program coordinator, and discussions are ongoing as to when to repair the gaskets in the operator. WOR 05-064986 was initiated to document the oil leak.

"Moisture" identified in bays 10 and 11 was identified as one of many condensation stains occurring under the general area of the heating steam discharge into the HHB condensate drain system. The fact that heating steam condenses in this area and runs down the upper quadrant of the torus is well known to OPS.

"Moisture" identified in bay 15 was very minor oil leakage from V10-34A which does not need further follow-up.

There are no safety concerns with the current condition of the torus shell. There is no evidence of any through wall leak. All of the conditions described in the CR are moisture trails which initiate above the Torus water line and therefore are not leakage from the Torus. Leakage from other sources onto the exterior of the torus is not a safety concern.