



**MAY 21 2012**

L-2012-229  
10 CFR § 50.73

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

Re: Turkey Point Nuclear Generating Station Unit 3  
Docket No. 50-250  
Reportable Event: 2012-001-00  
Containment Concrete Thickness At Spalled Patch Does Not Meet Technical  
Specification Design Value

The attached Licensee Event Report 05000250/2012-001-00 is submitted in accordance with  
10 CFR 50.73(a)(2)(i)(B).

If there are any questions, please call Mr. Robert Tomonto at 305-246-7327.

Very truly yours,

Michael W. Kiley  
Vice President  
Turkey Point Nuclear Generating Station

Attachment

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

IE22  
NRR

<b>NRC FORM 366</b> (10-2010)		<b>U.S. NUCLEAR REGULATORY COMMISSION</b>			APPROVED BY OMB: NO. 3150-0104		EXPIRES: 10/31/2013			
<b>LICENSEE EVENT REPORT (LER)</b>					Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the FOIA/Privacy Section (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to <a href="mailto:infocollects.resource@nrc.gov">infocollects.resource@nrc.gov</a> , and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.					
<b>1. FACILITY NAME</b> Turkey Point Unit 3					<b>2. DOCKET NUMBER</b> 05000250		<b>3. PAGE</b> 1 of 3			
<b>4. TITLE</b> Containment Concrete Thickness At Spalled Patch Does Not Meet Technical Specification Design Value										
<b>5. EVENT DATE</b>			<b>6. LER NUMBER</b>			<b>7. REPORT DATE</b>			<b>8. OTHER FACILITIES INVOLVED</b>	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO.	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
3	21	2012	2012	- 001	- 00	5	21	2012	FACILITY NAME	DOCKET NUMBER
<b>9. OPERATING MODE</b>  Defueled			<b>11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR§: (Check all that apply)</b>							
<b>10. POWER LEVEL</b>  0%			<input type="checkbox"/> 20.2201(b) <input type="checkbox"/> 20.2203(a)(3)(i) <input type="checkbox"/> 50.73(a)(2)(i)(C) <input type="checkbox"/> 50.73(a)(2)(vii)							
			<input type="checkbox"/> 20.2201(d) <input type="checkbox"/> 20.2203(a)(3)(ii) <input type="checkbox"/> 50.73(a)(2)(ii)(A) <input type="checkbox"/> 50.73(a)(2)(viii)(A)							
			<input type="checkbox"/> 20.2203(a)(1) <input type="checkbox"/> 20.2203(a)(4) <input type="checkbox"/> 50.73(a)(2)(ii)(B) <input type="checkbox"/> 50.73(a)(2)(viii)(B)							
			<input type="checkbox"/> 20.2203(a)(2)(i) <input type="checkbox"/> 50.36(c)(1)(i)(A) <input type="checkbox"/> 50.73(a)(2)(iii) <input type="checkbox"/> 50.73(a)(2)(ix)(A)							
			<input type="checkbox"/> 20.2203(a)(2)(ii) <input type="checkbox"/> 50.36(c)(1)(ii)(A) <input type="checkbox"/> 50.73(a)(2)(iv)(A) <input type="checkbox"/> 50.73(a)(2)(x)							
			<input type="checkbox"/> 20.2203(a)(2)(iii) <input type="checkbox"/> 50.36(c)(2) <input type="checkbox"/> 50.73(a)(2)(v)(A) <input type="checkbox"/> 73.71(a)(4)							
			<input type="checkbox"/> 20.2203(a)(2)(iv) <input type="checkbox"/> 50.46(a)(3)(ii) <input type="checkbox"/> 50.73(a)(2)(v)(B) <input type="checkbox"/> 73.71(a)(5)							
			<input type="checkbox"/> 20.2203(a)(2)(v) <input type="checkbox"/> 50.73(a)(2)(i)(A) <input type="checkbox"/> 50.73(a)(2)(v)(C) <input type="checkbox"/> OTHER							
			<input type="checkbox"/> 20.2203(a)(2)(vi) <input checked="" type="checkbox"/> 50.73(a)(2)(i)(B) <input type="checkbox"/> 50.73(a)(2)(v)(D)							
			Specify in Abstract below or in NRC Form 366A							
<b>12. LICENSEE CONTACT FOR THIS LER</b>										
NAME Bob Tomonto								TELEPHONE NUMBER (Include Area Code) 305-246-7327		
<b>13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT</b>										
CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	
<b>14. SUPPLEMENTAL REPORT EXPECTED</b>						<b>15. EXPECTED SUBMISSION DATE</b>		MONTH	DAY	YEAR
<input type="checkbox"/> YES (If yes, complete 15. EXPECTED SUBMISSION DATE)						<input checked="" type="checkbox"/> NO				
<b>ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)</b>										
<p>On March 21, 2012, during the 40 year tendon surveillance, a patch on the exterior face of the Unit 3 Containment was observed to be spalling. The patch is located along the top edge of the original construction opening. It is presumed that the patch was applied to fill the gap that would typically be created when the opening was filled in at the end of construction. The depth of the spall was measured as approximately 2 inches deep, and shallow re-bar was exposed at the top edge of the patched area. Technical Specification 5.2.1.c specifies the minimum thickness of the Containment concrete wall to be 3.75 feet. Plant drawing 5610-C-132 shows the thickness of the Containment exterior wall as 3.75 feet. Because there is no specified tolerance on the concrete thickness, literal compliance with the Technical Specifications leads to a conservative conclusion that the spall thickness has reduced the Containment concrete wall thickness to less than 3.75 feet in this very limited area. Therefore, this is reportable as a condition prohibited by Technical Specifications.</p> <p>Evaluation of the condition has determined that there is no effect on the integrity of the Containment to perform its function. Therefore, there was no effect on the health or safety of the public.</p>										

**LICENSEE EVENT REPORT (LER)  
CONTINUATION SHEET**

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**NARRATIVE****DESCRIPTION OF THE EVENT**

On March 21, 2012, during the 40 year tendon surveillance inspection being conducted in Refueling Outage 25, a patch on the exterior surface of the Unit 3 Containment was observed to be spalling, resulting in falling pieces of concrete grout. The location of the spall was in the northwest quadrant, above elevation 42 feet.

Investigation found that the spall occurred in a concrete patch that was located along the top edge of the original Containment construction opening. It is presumed that this patch was placed when the opening was filled in at the end of construction, though this cannot be verified. The area was approximately 2 inches deep, and shallow re-bar was exposed at the top edge of the patched area. The rebar showed evidence of minor corrosion.

Technical Specification 5.2.1.c specifies that the minimum Containment concrete wall thickness is 3.75 feet. Plant drawing 5610-C-132, Revision 4, "Containment Structure Wall Elevation & Det. – Unit 3," shows the thickness of the Containment concrete exterior wall as 3.75 feet with no tolerance on thickness. Therefore, literal compliance with the Technical Specifications leads a conservatively conclusion that the spalled area was reduced to less than 3.75 feet.

Civil engineering review of this spalling indicated that it was an isolated case where the concrete patch became loose due to aging and the effects of environmental conditions that may have been exacerbated by the perceived quality of the original repair. No other visible degraded concrete areas of concern were identified during the engineering walkdowns.

Condition Report 1746929 was initiated to determine causes and corrective actions. This report is submitted in accordance with 10 CFR 50.73(a)(2)(i)(B).

**CAUSE OF THE EVENT**

The cause of the event is an isolated case wherein a concrete patch became loose. Aging and environmental conditions, as well as the possible original quality of the repair, caused loosening of the patch and the resultant spalling.

**ANALYSIS**

Primary Containment provides the boundary that ensures that the release of radioactive materials from the containment atmosphere will be restricted to those leakage paths and associated leak rates assumed in the safety analyses. This restriction, in conjunction with the leakage rate limitation, will limit the site boundary radiation doses to within the dose guideline values of 10 CFR Part 100 during accident conditions.

The Containment structure is of post-tensioned concrete design, whose principal design function is to withstand the internal pressure caused by a Maximum Hypothetical Accident as defined in Updated Final Safety Analysis (UFSAR) Section 5.1.1. The internal pressure is resisted by application of an opposing external pressure type load on the structure via the post-tensioning tendons (UFSAR Section 5.1.2).

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**NARRATIVE**

Since the plant drawings specify the same thickness as the Technical Specifications, literal compliance with the Technical Specifications leads to a conservative conclusion that the spall reduced the thickness of the wall to below 3.75 feet in this localized area.

Engineering evaluation of the spalled area was performed and yielded the following:

ASME Section XI, Subsection IWL-3211 states, "The condition of the concrete surface is acceptable if the responsible engineer determines that there is no evidence of damage or degradation...sufficient to warrant further evaluation or performance or repair/replacement activities." The identified condition meets the category as specified in ASME Section XI. The spalled grout is non-structural, and the rust on the exposed rebar is minor.

The identified localized area of shallow spalling will not adversely affect the integrity of the Containment building, and the building is structurally acceptable in its present condition.

**CORRECTIVE ACTIONS**

Repairs to the spalled location have been completed in the field.

**PREVIOUS SIMILAR EVENTS**          None