



FPL Energy Point Beach, LLC, 6610 Nuclear Road, Two Rivers, WI 54241

FPL Energy

Point Beach Nuclear Plant

March 14, 2008

NRC 2008-0015
10 CFR 50.73

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

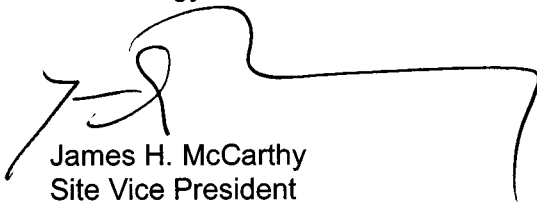
Point Beach Nuclear Plant, Unit 1
Docket 50-266
Renewed License No. DPR-24

Manual Reactor Shutdown Required by Technical Specification
LCO 3.8.1 AC Sources-Operating Not Met

Enclosed is Licensee Event Report (LER) 266-2008-001-00 for Point Beach Nuclear Plant, Unit 1. This LER documents the completion of a manual reactor shutdown required by Technical Specification LCO 3.8.1 AC Sources-Operating, not met. This event is reportable in accordance with 10 CFR 50.73(a)(2)(i)(A), as the completion of any nuclear plant shutdown required by the plant's technical specifications.

Very truly yours,

FPL Energy Point Beach, LLC



James H. McCarthy
Site Vice President

Enclosure

cc: Administrator, Region III, USNRC
Project Manager, Point Beach Nuclear Plant, USNRC
Resident Inspector, Point Beach Nuclear Plant, USNRC
PSCW

NRC FORM 366 (9-2007)		U.S. NUCLEAR REGULATORY COMMISSION		APPROVED BY OMB: NO. 3150-0104		EXPIRES: 08/31/2010																																					
LICENSEE EVENT REPORT (LER) (See reverse for required number of digits/characters for each block)																																											
1. FACILITY NAME Point Beach Nuclear Plant Unit 1				2. DOCKET NUMBER 05000266		3. PAGE 1 OF 4																																					
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9. OPERATING MODE <div style="text-align: center; font-size: 24px;">1</div>		11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR§: (Check all that apply) <table style="width: 100%;"> <tr> <td><input type="checkbox"/> 20.2201(b)</td> <td><input type="checkbox"/> 20.2203(a)(3)(i)</td> <td><input type="checkbox"/> 50.73(a)(2)(i)(C)</td> <td><input type="checkbox"/> 50.73(a)(2)(vii)</td> </tr> <tr> <td><input type="checkbox"/> 20.2201(d)</td> <td><input type="checkbox"/> 20.2203(a)(3)(ii)</td> <td><input type="checkbox"/> 50.73(a)(2)(ii)(A)</td> <td><input type="checkbox"/> 50.73(a)(2)(viii)(A)</td> </tr> <tr> <td><input type="checkbox"/> 20.2203(a)(1)</td> <td><input type="checkbox"/> 20.2203(a)(4)</td> <td><input type="checkbox"/> 50.73(a)(2)(ii)(B)</td> <td><input type="checkbox"/> 50.73(a)(2)(viii)(B)</td> </tr> <tr> <td><input type="checkbox"/> 20.2203(a)(2)(i)</td> <td><input type="checkbox"/> 50.36(c)(1)(i)(A)</td> <td><input type="checkbox"/> 50.73(a)(2)(iii)</td> <td><input type="checkbox"/> 50.73(a)(2)(ix)(A)</td> </tr> <tr> <td><input type="checkbox"/> 20.2203(a)(2)(ii)</td> <td><input type="checkbox"/> 50.36(c)(1)(ii)(A)</td> <td><input type="checkbox"/> 50.73(a)(2)(iv)(A)</td> <td><input type="checkbox"/> 50.73(a)(2)(x)</td> </tr> <tr> <td><input type="checkbox"/> 20.2203(a)(2)(iii)</td> <td><input type="checkbox"/> 50.36(c)(2)</td> <td><input type="checkbox"/> 50.73(a)(2)(v)(A)</td> <td><input type="checkbox"/> 73.71(a)(4)</td> </tr> <tr> <td><input type="checkbox"/> 20.2203(a)(2)(iv)</td> <td><input type="checkbox"/> 50.46(a)(3)(ii)</td> <td><input type="checkbox"/> 50.73(a)(2)(v)(B)</td> <td><input type="checkbox"/> 73.71(a)(5)</td> </tr> <tr> <td><input type="checkbox"/> 20.2203(a)(2)(v)</td> <td><input checked="" type="checkbox"/> 50.73(a)(2)(i)(A)</td> <td><input type="checkbox"/> 50.73(a)(2)(v)(C)</td> <td><input type="checkbox"/> OTHER</td> </tr> <tr> <td><input type="checkbox"/> 20.2203(a)(2)(vi)</td> <td><input type="checkbox"/> 50.73(a)(2)(i)(B)</td> <td><input type="checkbox"/> 50.73(a)(2)(v)(D)</td> <td></td> </tr> </table>						<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 checked="" 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 type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(v)(D)	
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10. POWER LEVEL <div style="text-align: center; font-size: 24px;">100%</div>		Specify in Abstract below or in NRC Form 366A																																									
12. LICENSEE CONTACT FOR THIS LER																																											
NAME Roger Clark						TELEPHONE NUMBER (Include Area Code) 920-755-7464																																					
13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT																																											
CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX																																		
14. SUPPLEMENTAL REPORT EXPECTED <input type="checkbox"/> YES (If yes, complete 15. EXPECTED SUBMISSION DATE) <input checked="" type="checkbox"/> NO					15. EXPECTED SUBMISSION DATE			MONTH	DAY	YEAR																																	
ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) On January 15, 2008, at 1404 Central Standard Time, Point Beach Nuclear Plant (PBNP) experienced a loss of transformer 1X04, low voltage station auxiliary transformer for Unit 1. The loss of 1X04 resulted in the declaration of an Unusual Event, SU1, "Loss of All Offsite Power to Essential Busses for GREATER THAN 15 Minutes." The Unusual Event was reported on EN# 43907 in accordance with 10 CFR 50.72(a)(1)(i), "The declaration of any of the Emergency Classes specified in the licensee's approved Emergency Plan," 10 CFR 50.72(b)(2)(xi), "News Release or Notification of Other Government Agency," 10 CFR 50.72(b)(2)(i), "Plant Shutdown Required by Technical Specifications." Technical Specification (TS) 3.8.1 Action Condition B, "Associated unit's 13.8/4.16 kV transformer inoperable," was entered at 1404 on January 15, 2008. This Condition has a Completion Time of 24 hours to return the transformer to operable status. At 1404, January 16, 2008 the Completion Time was not met and Unit 1 entered TS 3.8.1 Action Condition H with a Required Action to be in MODE 3 in 6 hours and MODE 5 in 36 hours. Unit 1 shutdown commenced at 1549 and Unit 1 was in MODE 3 at 1948, January 16, 2008.																																											

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A. REPORTABLE OCCURRENCE

On January 15, 2008, at 1404 Central Standard Time (CST), Point Beach Nuclear Plant (PBNP) experienced a loss of transformer 1X04 [EA], low voltage station auxiliary transformer for Unit 1 (13.8/4.16 kV transformer). The loss of 1X04 resulted in the declaration of an Unusual Event, SU1, "Loss of All Offsite Power to Essential Busses for GREATER THAN 15 Minutes." The Unusual Event was reported on EN# 43907 in accordance with 10 CFR 50.72(a)(1)(i), "The declaration of any of the Emergency Classes specified in the licensee's approved Emergency Plan," 10 CFR 50.72(b)(2)(xi), "News Release or Notification of Other Government Agency," 10 CFR 50.72(b)(2)(i), "Plant Shutdown Required by Technical Specifications." PBNP concurrently experienced an unexpected loss of 480 V safeguards bus 1B04.

Technical Specification (TS) 3.8.1 Action Condition B, "Associated unit's 13.8/4.16 kV transformer inoperable," was not met as of 1404 on January 15, 2008. This Condition has a Completion Time of 24 hours to return the transformer to operable status. At 1404, January 16, 2008, the Completion Time was not met and Unit 1 entered TS 3.8.1 Action Condition H with a Required Action to be in MODE 3 in 6 hours and MODE 5 in 36 hours. Unit 1 commenced shutdown at 1549 and Unit 1 was in MODE 3 at 1948, January 16, 2008.

B. INITIAL CONDITIONS

Unit 1 was in MODE 1 at 100% power.

C. DESCRIPTION OF OCCURRENCE

Multiple loud abnormal noises were heard by an individual on the north side of the extension building at 0146 CST January 15, 2008. The noises were emanating from manhole number 3 (MH-03) located on the east side of the G05 Building. The noises lasted approximately 5 minutes. No arcing was observed from the cables in the manhole. There were no abnormal indications noted in the control room on the electrical panel. The NRC Resident Inspector was notified at 0505. MH-03 was inspected each hour from 0600 to 1100 with observed water in the manhole below the level of the cables. MH-03 inspections were then reduced to twice a shift. Walkdowns of all plant 4.16 kV and 13.8 kV busses were completed at 1150 with observations being normal.

The station experienced a lockout and loss of Low Voltage Station Auxiliary Transformer 1X04, (offsite power supply to the Unit 1 4.16 kV safeguards busses) at 1404. The loss of 1X04 placed the unit in multiple Technical Specification Action Conditions. All four emergency diesel generators (EDGs) responded as designed to supply power to 4.16 kV safeguards busses 1A05 and 1A06, as well as 480 V safeguards bus 1B03. PBNP concurrently experienced an unexpected loss of 480 V safeguards bus 1B04. An Unusual Event was declared at 1415 due to the loss of offsite power.

Transformer 1X04 overcurrent neutral relay was found tripped at 1430. Power was restored to the 1B04 safeguards bus at 2031. At 1548 on January 16, 2008, the electrical system was aligned so Unit 1 received offsite power via 2X04 low voltage station auxiliary transformer for Unit 2. With this electrical lineup, Unit 1

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safeguards busses continued to be powered from the EDGs and the non-safeguards busses were powered from 2X04 (Unit 2 offsite power).

PBNP commenced a shutdown of Unit 1 at 1549, January 16, 2008, due to requirements of TSAC 3.8.1.B, "Associated unit's 13.8/4.16 kV transformer inoperable." MODE 2 was reached at 1920 and MODE 3 was reached at 1948.

Offsite power was restored to 1A05 and 1A06 4.16 kV safeguards busses with cross connect power from Unit 2 by 1740. The Unusual Event was exited at 2035 on January 16, 2008.

D. APPARENT CAUSE

The cause of the event was determined to be failure of a cable between the 1X04 transformer and the 1A03 bus. The failed cable is an Okonite manufactured 1000 KCMIL single conductor cable, rated for 5000 V, with butyl rubber insulation and a neoprene jacket. The failed cable was installed during original plant construction. The cables from the 1X04 transformer were routed underground through conduits to the facade. The facade is an unheated enclosure that protects the containment from the weather. From the facade the cables are routed through buildings to non-safeguards busses 1A03 and 1A04. The error was sealing the conduits for the 1X04 cables where they entered the facade, eliminating a drain path for ground water. The conduits were sealed due to a concern for ice forming from water draining from the conduits. The sealing severely reduced the ability of the conduits to drain water that entered them. The sealing could have led to submersion of the cables for long periods of time. The Unit 2 cables from 2X04 do not have the conduits sealed at the facade.

The causal evaluation determined that the apparent cause of the cable failure from 1X04 transformer to the 1A03 and 1A04 busses was a direct fault to ground of the B5 cable in the supply to the 1A03 bus. This fault was most likely caused by long term degradation of the cable's outer jacket, shield and insulation. This degradation was most likely caused by submersion in water over long periods of time due to the seals placed in the underground conduits. These seals prevented drainage of water from the conduits.

The apparent cause of the loss of the 480 V safeguards bus 1B04 was high frequency transients caused by the repeated grounding of cabling associated with the low side of transformer 1X04, which feeds bus 1A03 and bus 1A04, resulting in the actuation of the 50G/A52-84 relay.

There were no SSCs inoperable at the start of the event that contributed to the event.

E. CORRECTIVE ACTIONS

All of the cables from 1X04 to busses 1A03 and 1A04 were tested and a decision was made to replace cable sections from 1X04 to the facade. The cable sections from the facade to non-safeguards busses 1A03 and 1A04 were tested and are in good condition. A temporary modification was completed that installed replacement cables via an overland route from 1X04 to the facade.

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F. SAFETY ASSESSMENT

The safety significance of the event is low. There was no safety system functional failure.

The plant response during and following the transient was as expected, with the exception of the loss of 1B04 bus. The station was able to maintain the plant in a safe, controllable condition because plant equipment performance allowed a stable configuration to be maintained. There was no impact on the health and safety of the public and no impact on the employee health and safety.

The loss of 480 V safeguards bus 1B04, caused by a trip signal to breaker 1A52-84 was of low safety significance. The existing power supplies were sufficient for the safeguards buses (all four EDGs were running, 480 V safeguards bus 1B03 was energized from G01 EDG via 4.16 kV safeguards bus 1A05), no lockout (86) relays actuated on any safeguards buses. Additionally, power to 1A03 and 1A04 was available via the 4.16 kV crossties to 4.16 kV buses 2A03 and 2A04, providing an additional level of defense in depth.

The combination of conditions which existed supports the conclusion that safety significance is low.

G. ADDITIONAL INFORMATION

There are no previous occurrences.