


STATE CHANGE HISTORY

Initiate Done  
 4/25/2002 20 54 38  
 by admin Owner (None)

SECTION 1

Activity Request Id: CAP028186




Activity Type: CAP Submit Date: 5/26/1999 1:00:00

One Line Description: Biofouling Inspection Discrepancies Identified in Response to GL 8913, Action 1

Detailed Description: S-A-98-14-04 identified the need for the completion and implementation of a formal Generic Letter (GL) 89-13 program. The intent of GL 89-13 Action Item 1 was for nuclear power licensees and permit owners to inspect and identify biofouling problems, including both macroscopic and microscopic. After identification licensees were to update the original commitments and incorporate their control methods. Our original commitments were established in 1990, per "VPNPD-90-027/NRC-90-003 (Docket Nos. 50-266 and 50-301) Response to GL 89-13," prior to a known mussel population in the lake waters surrounding PBNP. Mussel infestation of the waters around PBNP was not identified until 1992. The commitments were never updated to reflect the change from identification to control of mussel infestation. A review of PBNP commitments in response to Action 1 of GL 8913 is underway and identified the following discrepancies and needed actions:\Discrepancies:\1. Per VPNPD 90-027/NRC-90-003 (Docket Nos. 50-266 and 50-301) Response to GL 89-13 stated: "The discharge flumes and the outside of the intake structure will be checked at least semiannually for macroscopic fouling, i.e. zebra mussels." Per NUTRK Item 89116A Action Number 1 (GL 89-13), closed 02-06-91: "Discharge flume inspections are included in the forebay/pumphouse inspections which are done annually." The pumphouse/forebay inspection is performed during each respective Units refueling outage. Previously this was every 12 months. This meant that both discharge flumes were inspected every year exceeding the original commitment timeframe of semi-annually. However as mentioned the intent of GL 8913 was to perform routine inspections if mussel infestation was a possibility and after identification update the commitment to inspection/cleaning as required.\2. Per VPNPD90-027/NRC-90-003 (Docket Nos. 50-266 and 50-301) Response to GL 89-13 stated: "The forebay and pumphouse have been inspected and sand removed as necessary on a regular basis. Future inspection of the forebay will be scheduled so that the entire forebay is inspected every two years." The intent of GL 89-13 was to perform routine inspections if mussel infestation was a possibility and after identification update the commitments to inspection/cleaning as required.\3. Per VPNPD90-027/NRC-90-003 (Docket Nos. 50-266 and 50-301) Response to GL 89-13 stated: "Wisconsin Electric will utilize current research data and information on control methods used at other power plants to determine appropriate operation of the existing system, or consider installation of an alternative system, to control zebra mussel infestation at Point Beach Nuclear Plant." No formal method for controlling zebra mussel infestation at PBNP exists. PBNP performs intermittent chlorination which controls veligers (juvenile mussels) and microbiological fouling (MIC). A chlorine dioxide treatment is performed, as desired, to control adult mussel infestation in the SW system. Intermittent chlorination will not control adult mussels. One time chlorine dioxide treatments produce a large mussel kill which could produce significant SW component fouling beyond their required design basis limits.\4. Per VPNPD90-027/NRC-90-003 (Docket Nos. 50-266 and 50-301) Response to GL 89-13 stated: "Most of the infrequently used pipes in the safety-related portion of the service water system have full flow established to them on a periodic basis during functional tests of safetyrelated equipment. The standby component cooling water heat exchangers are not on a frequent full flow test schedule. The operation of these heat exchangers, including blowdown frequency, is currently being reviewed. The blowdown frequency will be optimized for controlling corrosion and preventing flow blockage due to biofouling. The fire protection system emergency backup to the cooling for the auxiliary feedwater pumps is not currently flowtested. These lines will also be periodically tested for flow availability by using existing drain lines." \5. Per NUTRK Item 89116C Action Number 1 (GL 89-13), closed 02/03/92: "Information available from industry are being reviewed to determine appropriate blowdown frequencies. The blowdown frequencies for the CCW heat exchangers in OI-71 rev. 1, Oct. 16, 1990, are consistent with the goals of reducing silt build up in the heat exchangers. Not performing blowdown of the isolated heat exchangers is also appropriate for not providing fresh nutrients to possible

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biofoulers. Procedure changes have been submitted for including a verification that water from the fire protection system is available to the bearing coolers for the turbine driven auxiliary feed pumps on a yearly basis." Documentation for determining the CCW heat exchanger blowdown frequency could not be located for this action item.\NB. Per NUTRK Item 89116C Action Number 1, closed 02/03/92. "PC-73 Part 6 Rev 0 dated Jan 28, 1992 has been issued " for the FP system to AF bearing coolers A review of PG73 Part 6 determined that the flow verification to the AF bearing coolers is only a flushing exercise and not a functional test verifying adequate cooling.\C. Documentation that a formal review of piping requiring periodic flushing could not be located in plant records.\SIGNIFICANCE: Regulatory compliance with Generic Letter 89-13 \CORRECTIVE ACTIONS: None\RECOMMENDATIONS: 1. For Discrepancy 1 listed above revise the original commitment for the discharge flume to the actual timeframe performed. The updated commitment should evaluate historical information in determining the required frequency for not only visual inspections but for cleaning Information collected during these inspections/cleaning should be reported to the zebra mussel control program coordinator/administrator for tracking and trending This evaluation should implement guidance from GL 89-13 Enclosure 1 and Supplement 1 to GL 89-13.\2 For Discrepancy 2 listed above revise the original commitment to reflect the 18month cycle. The updated commitment should evaluate historical information in determining the required frequency for not only visual inspections, but for cleaning also. Information collected during these inspections/cleaning should be reported to the zebra mussel control program coordinator/administrator for tracking and trending. This evaluation should implement guidance from GL 89-13 Enclosure 1 and Supplement 1 to GL 89-13.\3. For Discrepancy 3 listed above establish a formal biofouling control program. This program should include both macroscopic biofoulers (zebra mussels) and microscopic biofoulers (MIC), evaluate and implement a proactive control method to reduce the risk of mussel infestation at PBNP (i.e. continuous chlorination during peak zebra mussel months or an alternative method) and microbiological corrosion. The program should track and trend all zebra mussel data collected at PBNP to determine the frequency for inspection and cleaning of susceptible structures, systems, and components, and place all relevant information into appropriate plant records. In addition re-evaluate the susceptibility of structures, systems, and components at PBNP for mussel infestation using historical data including previous inspections and previously documented reports. This review should include all open cycle service water systems as defined by the NRC in Generic Letter 89-13. This evaluation should implement guidance from GL 89-13 Enclosure 1 and Supplement 1 to GL 89-13. This program should be the controlling document for GL 89-13 Action 1 and encompass all the actions taken to meet the intent of GL 89-13 Action 1.\4. For Discrepancy 4 listed above review and determine low flow and stagnant lines in open-cycle service water systems as defined by the NRC in GL 89-13. These lines should then be periodically flushed and flow tested to ensure that all design basis requirements are met. The testing should be a functional test verify design basis parameters not just that flow exists. This evaluation should implement guidance from GL 89-13 Enclosure 1 and Supplement 1 to GL 89-13. Specifically PBNP should evaluate the use of wet layup in periodically flushed in flow tested lines.\5. In general update Action 1 commitments to reflect that zebra mussels have been located in the waters around PBNP. Revise the commitment to a proactive position rather than an identification position.

<b>Initiator:</b>	OMILLIAN, MICHAEL  	<b>Initiator Department:</b>	EESN Engineering Equipment Systems NSSS Mech PB 
<b>Date/Time of Discovery:</b>	4/25/2002 20:54:38	<b>Date/Time of Occurrence:</b>	4/25/2002 20:54:38
<b>Identified By:</b>	(None)	<b>System:</b>	SW PB
<b>Equipment # (1st):</b>	(None)	<b>Equipment Type (1st):</b>	(None)
<b>Equipment # (2nd):</b>	(None)	<b>Equipment Type (2nd) :</b>	(None)
<b>Equipment # (3rd):</b>	(None)	<b>Equipment Type (3rd) :</b>	(None)
<b>Site/Unit:</b>	Point Beach - Common		
<b>Why did this occur?:</b>			
<b>Immediate Action Taken:</b>			
<b>Recommendations:</b>			
<input checked="" type="checkbox"/> <b>Notify Me During Eval?:</b>	N	<input checked="" type="checkbox"/> <b>SRO Review Required?:</b>	N

SECTION 2

Operability Status: (None)      ☉ Compensatory Actions: N  
 Basis for Operability:  
 ☉ Unplanned TSAC Entry: N      ☉ External Notification: N

SECTION 3


Screened?: N      ☉ Significance Level: D  
 INPO OE Reqd?: N      Potential MRFF?: N  
 ☉ QA/Nuclear Oversight?: N      ☉ Licensing Review?: N  
 Good Catch/Well Doc'd?: NA

SECTION 4

Inappropriate Action:  
 Process: N/A - Not Applicable      Activity: (None)  
 Human Error Type: (None)      Human Perf Fail Mode: (None)  
 Equip Failure Mode: (None)      Process Fail Mode: (None)  
 Org/Mgt Failure Mode: (None)      ☉ Group Causing Prob: (None)  
 Hot Buttons: (None)

SECTION 5

CAP Admin: PBNP CAP Admin      Prescreener: MAURICE LAFORREST (Deleted)

☉ Project: Corrective Action Program (CAP) 

☉ State: Done      ☉ Active/Inactive: Inactive  
 ☉ Submitter: admin      ☉ Owner: (None)  
 AR Type: Parent      ☉ Last Modified Date: 4/25/2002 20:54:38  
 ☉ Last Modifier: admin      ☉ Last State Change Date: 4/25/2002 20:54:38  
 ☉ Last State Changer: admin      ☉ Close Date: 8/4/2000 1:00:00

NUTRK ID: CR 99-1425  
 # of Children: 11  
 References: LEVEL C GL 89-13 VPNPD-90-027 QCR 98-0319 AM 3.19 NP 7.7.15 PBF-9203 CR 00-1566  
 Update: \ (20000804 XX5927 MJL3) Actions have been completed or transferred. Action #4 describes the creation of the Zebra Mussel Control Program. The remaining actions of this CR have been transferred directly or indirectly to CR 001566, which is tracking the completion of actions described in the GL 89-13 Action Plan. This parent record is closed.  
 Prescreen Comments: This issue does not affect operability or reportability  
 Import Memo Field:  
 OPR Completed?: N  
 OLD\_ACTION\_NUM:  
 sub\_tsid: 0      original\_project\_id: 0

Site: Point Beach

Cartridge and Frame:

**CHANGE HISTORY**

4/25/2002 20:54:42 by admin

Submit Date Changed From 4/25/2002 20 54 38 To 5/26/1999 1 00 00