GCA AMP Issues (8/9-13) - Auditor: Woodfield

Issue ID Date Identified	Issue Description	Actions Taken
68 8/11/2004	Explain how the number and magnitude of lifts for each crane within the scope of license renewal have been historically documented and will be documented in the future under a renewed license. Discuss how the responsible individual or individuals for ensuring that crane operations are within the crane design limits in regards to the number and magnitude of lifts for license renewal cranes track and maintain this information on a daily or outage basis. NRC Request for Additional Information 9/8: The response states that the PAA states: the cranes at NMP within the scope of license renewal are designed as standby or infrequent service cranes. Provide the exact location in the PAA where this statement is made. The staff can not find it. The response states: (Crane) capacity loads may be handled for initial installation of equipment and for infrequent maintenance. This is the lightest crane use as far as duty cycle is concerned. The staff believes the word lightest should be replaced with heaviest. Verify the correct wording of the statement.	1. As stated in the Program Attribute Assessment, the cranes at NMP within the scope of license renewal (WSLR) are designed as standby or infrequent service cranes as are most cranes in similar applications. This includes cranes where precise handling of equipment at slow speeds with long idle periods between lifts is required. Capacity loads may be handled for initial installation of equipment and for infrequent maintenance. This is the lightest crane use as far as duty cycle is concerned. Due to the infrequent use of the cranes below their rated capacity, it is concluded that by industry experience and engineering judgment that this meets the intent of NUREG 1801 XI.M23 for reviewing the number and magnitude of lifts and that a documented history is not required. Also, wear and fatigue are not aging effects requiring management due to infrequent use and lack of plant OE. 2. An example of an NMP procedure that controls the use of the cranes is N1-MPM-GEN-807, Inspection of Turbine and Reactor Building Cranes. The number and magnitude of the lifts are not required to be documented and are not documented at NMP. Response to Request for Additional Information: Program Attribute Assessment (PAA) for Units 1 and 2 Inspection of Overhead Heavy Load and Light Load Handling Systems Program, sections 6.1 and 6.2 identifies the cranes WSLR and reference the Crane Manufactures Association of America, Inc. (CMAA) Crane Service Class A. Service Class A is defined by CMAA as: “Class A (Standby or Infrequent Service), This service class covers cranes which my be used in installations such as power houses, public utilities, turbine rooms, motor rooms and transformer stations where precise handling of equipment at slow speeds, with long idle periods between lifts are required. Capacity loads may be handled for

GCA AMP Issues (8/9-13) - Auditor: Woodfield

Issue ID Date Identified	Issue Description	Actions Taken
		initial installation of equipment and for infrequent maintenance." The wording in the statement is correct. This is lightest service duty for a crane. Light service duty refers to the frequency of use to determine maintenance frequency. Other CMAA classes not applicable to NMP are as follows: Class B - Light Service – 2-5 lifts per hour per day Class C - Moderate Service – 5-10 lifts per hour per day Class D - Heavy Service – 10-20 lifts per hour per day Class E - Severe Service Class F – Continuous Severe Service

LR Contact	Hoppe	**LRA Revision Required?**	No
Assigned Department/	License Renewal	**PAA Revision Required?**	No
Individual	Hoppe		
Issue Status	Closed		
NRC Closure Date	9/14/2004		
LRA Section	B2.1.13		

GCA AMP Issues (8/9-13) - Auditor: Woodfield

Issue ID Date Identified	Issue Description	Actions Taken
69 8/11/2004	Explain the minimum qualifications and training requirements needed for an individual to perform crane inspections at Nine Mile Point. Explain if only crane operators can perform crane inspections.	Inspection and operation of cranes is performed by qualified maintenance personnel. Crane qualification is classified as an "advanced/specialized training". IAW NTP-TQ3-301, Training for Maintenance Workers. Training is conducted IAW approved lesson plans and job performance measures, (ex. MM3-TPE-00-002-3-0 for Operation of Overhead Cranes). Procedures which control operations of cranes include sections which require a qualified person to inspect the crane prior to use and operate the crane. (ex. N1-MMP-GEN-914).

LR Contact	Hoppe	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Hoppe	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	8/24/2004		
LRA Section	B2.1.13		

GCA AMP Issues (8/9-13) - Auditor: Woodfield

Issue ID Date Identified	Issue Description	Actions Taken
82 8/11/2004	Discuss the design of the foundations for NMP structures within license renewal and if any of these structures have porous concrete subfoundations. Discuss if any license renewal structures have any settlement issues and if there is a site de-watering system.	As described in sections 2.4A and 2.4B of the LRA, the structure foundations are reinforced concrete on bedrock. The use of porous concrete sub-foundation construction was not used at NMP. Settlement is not an AERM at NMP. There is no site dewatering system.

LR Contact	Hoppe	**LRA Revision Required?**	No
Assigned Department/	License Renewal	**PAA Revision Required?**	No
Individual	Hoppe		
Issue Status	Closed		
NRC Closure Date	8/24/2004		
LRA Section	B2.1.28		

GCA AMP Issues (8/9-13) - Auditor: Woodfield

Issue ID Date Identified	Issue Description	Actions Taken
83 8/11/2004	Since the service water pipe tunnel is susceptible to small wall cracks allowing inleakage of ground water, discuss the results of the latest inspections for the tunnel and how often these inspections are done. Discuss if there is any rust staining in the tunnel indicating corrosion of rebar in the concrete. Explain the basis for not performing any external waterproofing repairs to the tunnel. Discuss the crack repair process and the basis for the outer rebar in the tunnel walls not being susceptible to corrosion from the groundwater. Explain the design of the service water pipe tunnel such that if inleakage of ground water occurred again and the sump pumps failed, the flood depth would not exceed 3 inches as discussed in DER NM-1998-159. Discuss the latest inspections for the normal switchgear building, service water tunnels and the radwaste building for below grade exterior walls where groundwater inleakage has also occurred. NRC Request for Additional Information 9/13: Since the water leakage was not repaired from the external side, the applicant needs to address rebar in water as an AMR.	1. The repaired areas referenced in DER NM-1998-159 were recently inspected and there continues to be no in-leakage of water in the areas repaired. The frequency of inspections following the repairs as varied. Initially it was monthly, then quarterly, then annually. It is currently scheduled for inspection every refueling outage. (Inspection reports are attached) 2. Inspections of accessible areas adjacent to inaccessible areas can give an indication of the condition of the material in the inaccessible areas. Rust stains have not been identified on the internal surface of the concrete adjacent to areas of in-leakage through the concrete walls as referenced. Therefore it is reasonable to conclude that degradation of the reinforcing steel is not occurring 3. Water proof coating of the exterior surface of the structure foundations is not required due to successful repairs to water in-leakage paths from the inside of the structure. 4. The grout injection repairs to the wall have stopped the in-leakage of ground water. Due to the absence of flowing water, localized ground water contact with rebar possibly not protected from the grout injection process is insignificant and does not impact the integrity of the structure. DDC 2S11123 (attached) addresses the crack repair. 5. The tunnel is sectioned by various curbs and elevations. If the sump failed in the subject, the water would flow over the curb and into another sump. 6. The latest inspections have not identified signification in-leakage in structures WSLR. Inspection reports are attached. Response to Request for Additional Information: Entire respnse provided in answer to same AMR question. In summary, water leakage path was repaired and no signs of corrosion products from rebar observed to date. Therefore, no additional aging management required.

GCA AMP Issues (8/9-13) - Auditor: Woodfield

Issue ID Date Identified	Issue Description	Actions Taken
		9/17/04: NRC auditor to discuss with engineering branch.

LR Contact	Hoppe	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Hoppe	**PAA Revision Required?**	No
Issue Status	Waiting for NRC Response		
NRC Closure Date			
LRA Section	B2.1.28		

GCA AMP Issues (8/9-13) - Auditor: Woodfield

Issue ID Date Identified	Issue Description	Actions Taken
138 8/12/2004	The Unit 2 PAA has several errors as follows: 1. Under the PROGRAM DESCRIPTION, Nine Mile Point Unit 2 heading, the first sentence ends with the phrase "…whereas the GALL Report covers both the 1992 Edition with the 1992 Addenda and the 1995 Edition with the 1996 Addenda." This should be changed to "… whereas the GALL Report covers the 1989 through the 1995 Edition with the 1996 Addenda." 2. Under the PROGRAM DESCRIPTION, Nine Mile Point Unit 2 heading, the last sentence of the first paragraph ends with a reference to "(Ref. 2)". This should also specify the section of the referenced document for clarification. 3. Reference 30 of the Unit 2 PAA lists revision 13 of Regulatory Guide 1.147. This is incorrect. Revision 12 should be listed. The source document, NMP2-ISI-006, contains an error in Appendix H. The incorrect revision of Regulatory Guide 1.147 is referenced on Page H-4 of H-6 for code case N-491-1. The revision should be changed from 13 to 12.	The Unit 2 PAA will be revised to make corrections as described above. NMP2-ISI-006 will be revised to make the correction described above. 9/16/04: Draft revision to AMP basis document provided to auditor. Auditor accepted proposed revision. 9/20/04: Revision 3 to AMP basis document incorporated these changes and was approved.

LR Contact	Hoppe	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Hoppe	**PAA Revision Required?**	Complete
Issue Status	Closed		
NRC Closure Date	9/16/2004		
LRA Section	B2.1.25		

GCA AMP Issues (8/9-13) - Auditor: Woodfield

Issue ID Date Identified	Issue Description	Actions Taken
139 8/12/2004	The Unit 1 PAA has several errors as follows: 1. Under the PROGRAM DESCRIPTION, Nine Mile Point Unit 1 heading, the first sentence reads in part: "The ASME Section XI Inservice Inspection, Subsection IWF is an existing program that is consistent with the NRC GALL Report, Section XI.S3, "ASME Section XI, Subsection IWF," with the exception that the current licensing basis for NMP2 is based on the 1989 Edition with no Addenda (Ref. 3, Section 4.0),". The "NMP2" should be changed to "NMP1", and the reference to "Ref. 3, Section 4.0" appears to be incorrect. 2. The third paragraph of section 1.2 begins: "The following supports are exempted from the examination requirements of IWF-2000: (Ref. 0, Section 5.1 and Ref. Error! Reference source not found., Section 3.1.2)." The reference to "Ref. Error! Reference source not found., Section 3.1.2" appears to be incorrect. Ref. 3 does not have a Section 3.1.2. 3. The last sentence of section 6.2 ends with "Regulatory Guide 1.147 (Reference 30)." This should be changed to "Regulatory Guide 1.147 (Reference 31)." 4. Reference 31 of the Unit 1 PAA lists revision 13 of Regulatory Guide 1.147. This is incorrect. Revision 12 should be listed.	The Unit 1 PAA will be revised to make corrections as described above. 9/16/04: Draft revision of AMP basis document provided to auditor. Auditor accepted proposed revision. 9/20/04: Revision 3 to AMP basis document incorporated these changes and was approved.

LR Contact	Hoppe	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Hoppe	**PAA Revision Required?**	Complete
Issue Status	Closed		
NRC Closure Date	9/16/2004		
LRA Section	B2.1.25		

GCA AMP Issues (8/9-13) - Auditor: Woodfield

Issue ID Date Identified	Issue Description	Actions Taken
152 9/8/2004	On page B-46 of the NMP LRA, the program description for the ASME Section XI Inservice Inspection (Subsection IWE) Program states that the program is an existing program that manages aging effects due to degradation of NMP1 containment pressure-retaining polymers. This implies that degradation/aging of polymers is only applicable to Unit 1. However, on page 3.5-99 of the LRA, Table two (AMR) for the NMP Unit 2 Primary Containment Structure lists Polymer in Air as a component requiring aging management by the IWE program. Explain why the LRA Appendix B program description only discusses polymers in the Unit 1 containment as requiring aging management	LRA Section B2.1.23 will be revised to state that NMP2 containment pressure retaining polymers are also included in the IWE ISI program.

LR Contact	Hoppe	**LRA Revision Required?**	Yes
Assigned Department/	License Renewal	**PAA Revision Required?**	No
Individual	Hoppe		
Issue Status	Closed		
NRC Closure Date	9/14/2004		
LRA Section	B2.1.23		

GCA AMP Issues (8/9-13) - Auditor: Kennedy

Issue ID Date Identified	Issue Description	Actions Taken
88 8/11/2004	XI.M20, OCC: The NMP1 TBCLC System in in-scope for LR but not in scope for the GL 89-13 program and therefore not covered by this AMP. Clarify this apparent discrepancy.	As described in LRA section 2.3.3.A.25, the TBCLC system is in-scope for LR under criteria a(2) (i.e. NSR piping) with an intended function of preventing failure from affecting SR equipment. There is no applicable heat transfer intended function and, therefore, the TBCLC HX'x are not credited for cooling. As such, the service water side of the HX's are not in-scope. Therefore, the open-cycle cooling water program is not applicable to the TBCLC system.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/	License Renewal	**PAA Revision Required?**	No
Individual	Poehler		
Issue Status	Closed		
NRC Closure Date	9/8/2004		
LRA Section	B2.1.10		

GCA AMP Issues (8/9-13) - Auditor: Kennedy

Issue ID Date Identified	Issue Description	Actions Taken
89 8/11/2004	The AMP basis document discusses "indirect" performance testing of the NMP1 EDG cooling heat exchangers. Clarify what is meant by the term "indirect" and how it is considered consistent with GALL.	The EDG quarterly performance test procedures (Reference 25 of the Attribute Assessment document for XI.M20) do not independently test the operation of the DG cooling water system. However, the procedures do verify in Section 8.2.1that the diesel generator is operating satisfactorily at its rated load. Section 8.2.1. Refers to procedure N1-ST-M4A (DG 102) or N1-ST-M4B (DG 103), which require the EDG run at its rated load for one hour. Any degradation of the heat transfer capability of the heat exchanger would be self-evident through elevated coolant temperature. Also, the NMP1 EDG cooling water system does not have the instrumentation necessary to perform direct calorimetric testing of the EDG cooling water heat exchangers. Flow rate testing of the EDG cooling water system, performed under procedure N1-ST-Q25, provides additional assurance that fouling of the EDG cooling water heat exchangers has not occurred. This procedure was not referenced in the attribute assessment document but will be. GALL XI.M20, 3.1. States: "Cleanliness and material integrity of piping, components, heat exchangers, and their internal lining s or coatings (when applicable) that are part of the OCCW system or that are cooled by the OCCW system are periodically inspected, monitored, or tested to ensure heat transfer capabilities." Based on the above statement GALL does not require both inspection and testing. Since the EDG heat exchanger is subject to a visual internal inspection (Reference 22 of the attribute assessment) in addition to testing (performed indirectly due to instrumentation limitations), NMP1 meets GALL. Note: Revision to the AMP basis document required.

GCA AMP Issues (8/9-13) - Auditor: Kennedy

Issue ID Date Identified	Issue Description	Actions Taken

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	8/12/2004		
LRA Section	B2.1.10		

GCA AMP Issues (8/9-13) - Auditor: Kennedy

Issue ID Date Identified	Issue Description	Actions Taken
90 8/11/2004	The GALL attribute for Monitoring and Testing states that the "testing frequencies are in accordance with the utility commitments under NRC GL 89-13. Testing and inspections are done annually and during refueling outages." NMP's AMP basis document states that inspections are performed on a bi-annual basis and during refueling outages, per the commitments under GL 89-13. The reference provided that identifies NMP's commitment did not address test and inspection frequencies. Provide the proper reference.	The reference provided (Reference 15) was incorrect. By letters dated April 23, 1993, NMP1 informed the NRC that Generic Letter 89-13 required tests and activities have been implemented and that required continuing programs have been established as indicated in our letter dated December 10, 1990 (Reference 24 to the Attribute Assessment). With respect to recommended action II of GL 89-13, which addressed testing frequency, the December 10 letter states that the performance monitoring requirements were under evaluation by the Service Water Task Force, and that actions necessary to address the generic letter recommendation would be implemented prior to startup from the 1992 refueling outage. The December 10 letter did not indicate the testing interval but did indicate that the RBCLC and containment spray heat exchangers would be tested during power ascension testing; however, the cited procedure has been discontinued. (containment spray system does not credit the OCC program) The power ascension test was a one-time test only. The initial approach to ensuring thermal performance of the RBCLC heat exchangers was a combination of the one-time test with more frequent (quarterly) cleaning. Therefore, NMP never made any specific commitments for a frequency of thermal performance testing in response to GL 89-13. The current thermal performance testing frequency was established in response to INPO SOER 84-1. DER-1993-2092 documented that the recommendation of SOER 84-01 to establish thermal performance monitoring criteria had not been established. The DER indicated the following actions were in progress: • Develop New Procedure With Performance Criteria For RBCLC Heat Exchangers Thermal Performance • Perform For Information Only, RBCLC Heat Exchanger Thermal Performance Procedure To Verify Testing

GCA AMP Issues (8/9-13) - Auditor: Kennedy

Issue ID Date Identified	Issue Description	Actions Taken
		Method And Establish Baseline. • Incorporate Lessons Learned From Baseline Testing Into RBCLC Heat Exchanger Performance Monitoring Procedure, And Establish Permanent Testing Frequency. The current performance test for the RBCLC heat exchangers is performed under procedure N1-TTP-033, which has a frequency of every two years (corresponding to one fuel cycle for NMP1). This testing frequency meets the recommendations of GL 89-13 even though this frequency was not determined in response to the generic letter. Indirect testing of the EDG cooling water heat exchangers is performed quarterly under procedures N1-ST-Q25 and N1-ST-Q16A and N1-ST-Q16B. With respect to testing frequency, GL 89-13 states: “In implementing the continuing program for periodic retesting of safety-related heat exchangers cooled by service water in open-cycle systems, the initial frequency of testing should be at least once each fuel cycle, but after three tests, licensees and applicants should determine the best frequency for testing to provide assurance that the equipment will perform the intended safety functions during the intervals between tests and meet the requirements of GDC 44, 45, and 46. The minimum final testing frequency should be once every 5 years.” The wording of GALL Program X1.M20 appears to be aimed at ensuring that the applicants program meets the requirements of GL 89-13, not to meet requirements in excess of GL 89-13. The auditor’s question quotes the words from “Monitoring and Trending” in

GCA AMP Issues (8/9-13) - Auditor: Kennedy

Issue ID Date Identified	Issue Description	Actions Taken
		GALL X1.M20, which addresses all types of testing and inspections, some of which are done more frequently than thermal performance testing.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/8/2004		
LRA Section	B2.1.10		

91 8/11/2004	Based upon a review of the preventive maintenance (inspection) procedure for the NMP1 EDG cooling water heat exchangers, the acceptance criteria states "clean, no silt, no zebra mussels." Clarify what is meant by "clean."	This is a duplicate. See response to Issue No. 154.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date			
LRA Section	B2.1.10		

GCA AMP Issues (8/9-13) - Auditor: Kennedy

Issue ID Date Identified	Issue Description	Actions Taken
98 8/11/2004	XI.M.20, OCC: The AMP basis document discusses "indirect" performance testing of the Unit 1 EDG Cooling Water Heat Exchangers. Clarify what is meant by the term "indirect" and how it is considered consistent with GALL.	The EDG quarterly performance test procedures (Reference 25 of the Attribute Assessment document for XI.M20) do not independently test the operation of the DG cooling water system. Howerver, the procedures do verify in Section 8.2.1 that the diesel generator is operating satisfactorily as its rated load. Section 8.2.1 refers to procedure N1-ST-M4A (DG 102) or N1-ST-M4B (DG 103), which require the EDG run at its rated load for an hour. Any degradation of the heat transfer capability of the heat exchanger would be self-evident through elevated coolant temperature. Also, the NMP1 EDG cooling water sysem does not have the instrumentation necessary to perform direct caloricmetric testing of the EDG cooling water heat exchangers. Flow rate testing of the EDG cooling water system, performed under procedure N1-ST-Q25, provides additional assurance that fouling of the EDG cooling water heat exchangers has not occurred. This procedure was not referenced in the Attribute Assessment document but will be. GALL XI.M20, 3.1 states: "Cleanliness and material integrity of piping, components, heat exchangers, and their internal linings or coatings (when applicable) that are part of the OCCW system or that are cooled by the OCCW system are periodically inspected, monitored, or tested to ensure heat transfer capabilities." Based on the above statement GALL does not requrie both inspection and testing. Since the EDG heat exchanger is subject to a visual internal inspection (Reference 22 of the Attribute Assessment) in addition to testing (performed indirectly due to instrumentation limitations), NMP1 meets GALL. Note: Change to AMP basis document required.

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Issue ID Date Identified	Issue Description	Actions Taken

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/8/2004		
LRA Section	B2.1.10		

GCA AMP Issues (8/9-13) - Auditor: Kennedy

Issue ID Date Identified	Issue Description	Actions Taken
116 8/12/2004	Please provide documentation for the testing for the HVK water chemistry including frequency, parameters monitored and acceptance criteria. (Acceptance Criteria)	Currently, the effects of aging on the intended functions of the HVK System are determined by surveillance testing and not by sampling of the water chemistry. This system is often in continuous operation; therefore, performance adequacy is determined by the performance tests which trend key performance data that indicates loss of heat transfer capability, pump wear and/or flow changes (Reference N2-TSP-HVK-2Y001, "Performance Evaluation Test for Control Room Chiller 2HVK*CHL1A," Revision 3 and N2-TSP-HVK-2Y002, "Performance Evaluation Test for Control Room Chiller 2HVK*CHL1B," Revision 3). The water used in the HVK system is sourced from the make-up water system (MWS). The MWS is sampled in accordance with site procedure S-CTP-V666 on a monthly basis for the following parameters: Parameter / Action Level PH / <5.5 or > 8.0 Conductivity / 1.0 µS/cm Chloride / Sulfate / 10 ppb TOC / 200 ppb Silica / 200 ppb Sodium / 20 ppb Suspended Solids / 0.3 ppm NMP has committed to a program enhancement to be incorporated prior to the period of extended operation to include sampling frequency, parameters monitored and acceptance criteria for the HVK system.

LR Contact	Stuard	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Stuard	**PAA Revision Required?**	No

Issue Status	Closed
NRC Closure Date	9/8/2004

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Issue ID Date Identified	Issue Description	Actions Taken

LRA Section	B2.1.11

GCA AMP Issues (8/9-13) - Auditor: Kennedy

Issue ID Date Identified	Issue Description	Actions Taken
117 8/12/2004	Please provide a reference for the vendor recommended limits – the acceptance criteria are not listed in Ref 27 for the Diesel Jacket Cooling Water – Sampling and Analysis. How these limits are used in the test program?	The acceptance criteria for the Unit 1 Diesel Jacket Cooling Water is contained in Attachment 10 of the Chemistry Manual, Revision 4, and is as follows: Parameter Units Run/Startup Shutdown/Refuel Level 1 Level 2 Level 1 Level 2 Chromate ppm <1500 or >2250 <1300 or >2500 <1500 or >2250 <1300 or >2500 Isotopic µCi/ml (1) (1) (1) (1) pH pH units 7.5 – 9 7-10 7.5 – 9 7 - 10 Table Notes Note Description (1) LLD for all isotopics <10CFR20, Appendix B, Table II, Column 2 values. The reference for the vendor recommended limits for corrosion inhibitor concentration is Maintenance Instruction MI-1748, Electro-Motive Division of GM Corp., Rev. D. The diesel jacket cooling water is sampled and analyzed for chromate content quarterly or more often as required. The diesel jacket cooling water is also sampled for insoluble Iron and Copper metals to monitor the effectiveness of the corrosion inhibitor. (Note: this response was e-mailed to the auditor)

LR Contact	Stuard	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Stuard	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/8/2004		

GCA AMP Issues (8/9-13) - Auditor: Kennedy

Issue ID Date Identified	Issue Description	Actions Taken

LRA Section B2.1.11

GCA AMP Issues (8/9-13) - Auditor: Kennedy

Issue ID Date Identified	Issue Description	Actions Taken
118 8/12/2004	Have any DERs been written against the water chemistry program used in the diesel jacket cooling water system?	With respect to the NMP Unit 1 Diesel Jacket Cooling Water System there has been one DER found that documents chemistry parameters that deviate from control levels: DER U1-2000-3894 - Diesel jacket cooling water was outside its limit for pH and chromate concentration. Action request was initiated to correct out-of-spec situation. Corrective action taken in accordance with N1-CTP-V551, “Diesel Jacket Cooling Water – Corrective Actions.” There were also DER’s written to document corrosion or leaks associated with the Unit 1 diesel jacket water coolers: DER U1-1997-710 – During the performance of preventive maintenance (N1-MPM-079-412) a significant amount of corrosion products and MIC where observed when removing the end bells from the tube side (raw water) of diesel jacket cooling water heat exchangers HTX-79-02 and HTX-79-04, Emergency Diesel Generator DG-102. Following mechanical cleaning and restoration to service it was discovered that three tubes in HTX-79-04 were leaking and were plugged in accordance with the maintenance procedure (N1-MPM-079-412). The preventive maintenance procedure was revised to increase the frequency for performing cleaning and inspection of the heat exchangers. The heat exchangers were subsequently replaced in May 1997. The root cause for the tube failures was not determined prior to the replacement of the heat exchangers but was thought to be pitting of the tubes caused by mechanical removal of biological fouling. Further analysis for the premature tube failures was dispositioned to DER U1-1998-1962. DER U1-1998-1962 - During Eddy Current Testing of DG102 diesel jacket cooling water heat exchanger HTX 79-04 it was determined that 9 tubes indicated I.D. pitting of greater

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Issue ID Date Identified	Issue Description	Actions Taken
		than 60% thru wall. Further Eddy Current Tests determined that HTX 79-03 has degraded tubes as well with ID pitting greater than 70% thru wall. These degraded tubes are not considered a failure but it is a degrading trend. Heat exchangers HTX-79-03 and HTX-79-04 were replaced in December 1998. One of the replaced heat exchangers was sent to the original equipment manufacturer (Young Radiator) for failure analysis. The root cause was determined to be pitting corrosion initiated at the ID surface. Chlorine in the stagnant water was the ion primarily associated with the corrosion failure. Replacement of the tubes with a “corrosion resistant” material will be assessed and tracked under DER U1-1999-1478. DER U1-1999-1478 – An increase in level of the chromate tank for diesel generator 103 was discovered during routine operator rounds. The cause of the increasing tank level was determined to be tube leaks in diesel jacket cooling water heat exchanger HTX-79-05. A work order was implemented to perform a maintenance repair for HTX-79-05 which entailed plugging three tubes. The apparent cause was deficiencies in construction materials. Evidently raw water lying stagnant in the heat exchanger tubes induced pitting corrosion. A modification (N1-99-013) was initiated to replace the current heat exchangers with admiralty brass tubes with heat exchangers with tubes constructed of stainless steel. DER U1-1999-1501 – Eddy current testing revealed indications >50% wall loss on three tubes for diesel jacket cooling water heat exchanger HTX-79-05. The unacceptable tubes were plugged. The cause was determined to be “normal aging.” No further preventive/corrective actions taken. DER U1-2001-1355 - Eddy current testing revealed indications >50% wall loss on one tube for diesel jacket cooling water heat

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Issue ID Date Identified	Issue Description	Actions Taken
		exchanger HTX-79-04. The unacceptable tube was plugged. Previous studies under DER U1-1999-1478 indicate that the admiralty brass tubes are subject to pitting. A modification (N1-99-013) was initiated to replace the current heat exchangers with admiralty brass tubes with heat exchangers with tubes constructed of stainless steel.

LR Contact	Stuard	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Stuard	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/8/2004		
LRA Section	B2.1.11		

GCA AMP Issues (8/9-13) - Auditor: Kennedy

Issue ID Date Identified	Issue Description	Actions Taken
119 8/12/2004	Please provide the following references: N1-ST-M4A and M4B, N1-IPM-210-004, PCE 65680	The reference requested in the issue description have been provided to the auditor.

LR Contact	Stuard	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Stuard	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/8/2004		
LRA Section	B2.1.11		

GCA AMP Issues (8/9-13) - Auditor: Kennedy

Issue ID Date Identified	Issue Description	Actions Taken
120 8/12/2004	Reference 24, Attachment 10, does not appear to have a section for "Closed Loop Cooling" please provide the appropriate reference.	The acceptance criteria for the various monitored parameters for RBCLC, TBCLC, and CRAC are contained in Attachment 2 of NMP site procedure S-CTP-V666, Rev. 01 (reference 14 of the AMP assessment document). The acceptance criteria for the above mentioned systems were formerly contained in Attachment 10 of the NMP1 Chemistry Manual (reference 24 of the AMP assessment document) under “Closed Loop Cooling.” The AMP assessment document will be revised to reflect this change. The acceptance criteria for the diesel jacket cooling water are, however, still contained in Attachment 10 of the NMP1 Chemistry Manual.

LR Contact	Stuard	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Stuard	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/8/2004		
LRA Section	B2.1.11		

GCA AMP Issues (8/9-13) - Auditor: Kennedy

Issue ID Date Identified	Issue Description	Actions Taken
121 8/12/2004	Please provide copies of the following references N2-OSP-EGS-M@001, N2-OSP-EGS-M@002, N2-OSP-EGS-R001	The references requested in the issue description have been provided to the auditor.

LR Contact	Stuard	**LRA Revision Required?**	No
Assigned Department/	License Renewal	**PAA Revision Required?**	No
Individual	Stuard		
Issue Status	Closed		
NRC Closure Date	9/8/2004		
LRA Section	B2.1.11		

GCA AMP Issues (8/9-13) - Auditor: Kennedy

Issue ID Date Identified	Issue Description	Actions Taken
122 8/12/2004	What water chemistry is being used for the EGS? How long has it been in use and has there been any DERs writen against this system which are attributed to the water chemistry?	The NMP2 diesel jacket cooling water systems utilize demineralized water with silicate nitrite added as a corrosion inhibitor. The silicate nitrite chemistry has been used since initial commercial operation of NMP2 in October 1986. With respect to the NMP Unit 2 Diesel Jacket Cooling Water System, there have been nine (9) DER's written to document water chemistry parameters that deviate from control levels as follows: DER U2-1992-2936 – Diesel jacket cooling water silica found below the minimum level of 50 ppm on EDG 1, 2, and 3. Previous silica additions have been made to get levels within specification; however, levels have since dropped below minimum. The use of a commercially available corrosion inhibitor vice the current formulation made in-house is being investigated. The in-house formulation is known to be unstable and difficult to maintain. This issue will be tracked under DER 2-92-Q-0762. Corr-Shield K-7 was subsequently chosen as a commercially available corrosion inhibitor product. DER U2-1994-797 - Diesel jacket cooling water silica found below the minimum level of 50 ppm on EDG 3. Silica added to return levels to within specification. DER U2-1995-1685 - During the performance of the 10 year inspection (N2-MSP-EGS-10Y001) for Division 1 and 2 diesel generators evidence of lube oil was found on the jacket water side of the EDG 3 lube oil coolers. A chemical analysis established a Total Organic Content (TOC) on 191 ppm. Subsequent testing indicated TOC concentrations ranging from 150 to 191 ppm. Discussions with the OEM (Cooper-Bessemer) concluded the as-found levels of TOC would not affect engine operation provided baseline trending data was established to verify no rapid increasing trend in the TOC concentration. A monthly TOC

GCA AMP Issues (8/9-13) - Auditor: Kennedy

Issue ID Date Identified	Issue Description	Actions Taken
		sampling was established in N2-CTP-EGS-M521, “Diesel Jacket Cooling Water Chemical Surveillance.” The most recent results (5/19/95) indicate a decreasing trend in TOC concentration. DER U2-1999-1894 - During review of 2 years of diesel jacket cooling water chemistry data, an increasing trend was noted for nitrate levels for the Division 1 and 2 diesels and an increase in copper and iron levels for the Division 3 diesel. No maximum limits have been established for these parameters and the noted increasing trends have no impact on operability. Although nitrate levels are increasing, a review of the nitrite levels for the Division 1 and 2 diesels indicates levels have remained within acceptable limits with no indication of bacteria. The bacteria analysis methodology was reviewed and it was determined no change was required. For the Division 3 diesel further analysis indicates no real increasing trend in iron concentration with analytical error attributed as the apparent cause for the increasing trend indication; however, a slight increasing trend is indicated for copper levels. The Division 3 diesel jacket cooling water was changed out during RFO7. The source of copper to be evaluated by Tech. Support. The source of copper was identified under resolution to DER U2-2000-111 described below. DER U2-2000-111 - An increasing trend for copper content is indicated for the Division 3 diesel jacket cooling water. Since RFO6 the concentration of copper has increased from 2 ppm to 20.8 ppm as of the January 5, 2000 sample. The acceptance criterion for copper content per N2-CTP-EGS-M521 is no increasing trend. Discussion with members of the EMD owners group and the vendor indicate that the most probable cause of the increase in copper content in the jacket water can be traced to the AMOT thermostatic control valves. These valve inserts are replaced each refuel outage as part of the

GCA AMP Issues (8/9-13) - Auditor: Kennedy

Issue ID Date Identified	Issue Description	Actions Taken
		preventive maintenance activities. These valves utilize a copper powder in the bulb area to regulate the amount of opening of the valve. It is believed that the increase in the copper content is being caused by a small leak in one of the 9 inserts installed in the valve. During RF07 these inserts will be replaced as part of the normal maintenance activities, at this time they will be inspected to substantiate this conclusion. DER U2-2000-1603 - Samples of the Division 1 diesel jacket cooling water indicate chloride levels of 7 ppm which exceeds the control limit of < 6 ppm per N2-CTP-EGS-M521. Three (3) samples were taken to confirm that chlorides are stable which would indicate tube leakage in the jacket water heat exchangers is not the probable cause. The most likely cause of the increased chloride levels is cross contamination of the jacket cooling water with service water during work associated with RFO7 to support inspection of the diesel engine. The chloride was brought back to within specification by draining a portion of the jacket cooling water as calculated by the Chemistry department and refilling with demineralized water and the proper proportion of corrosion inhibitor (Corr-Shield). DER U2-2001-4768 - Diesel jacket cooling water silica levels found to be below control levels. Corr-Shield was added to the Division 1 diesel jacket cooling water per action request on 08/27/01. The subsequent sample on 08/31/01 indicated silica was in specification at 68 ppm. The next sample on 09/28/01 indicated silica levels had dropped to 28 ppm which is below control levels. Based on data provided by NMP, an independent analysis performed by the OEM confirmed no degradation of the jacket cooling water is indicated. The current specifications for diesel jacket cooling water were reviewed with the vendor of the Corr-Shield corrosion inhibitor additive. This review has determined that the specification for silica is unnecessary. Any

GCA AMP Issues (8/9-13) - Auditor: Kennedy

Issue ID Date Identified	Issue Description	Actions Taken
		increases in corrosion rate will be noted by an increasing trend in iron and copper. The silica specification has been removed from N2-CTP-EGS-M521. DER U2-2002-19 - During monthly surveillance of the diesel jacket cooling water the nitrite analysis resulted in 491 ppm which is below the acceptance criteria of 500 ppm. Investigation and discussions with the system engineer indicate there are known leaks in two (2) cylinders of the diesel engine. The addition of demineralized make-up water is causing dilution of the corrosion inhibitor concentration. Corrosion inhibitor was added to return the concentration to within acceptable limits. DER U2-2002-225 was written to address the system leaks. DER U2-2004-2038 - During surveillance of the Division 1 diesel jacket cooling water on 04/18/04, pH and iron content were found to exceed the acceptance criteria of N2-CTP-EGS-M521. This surveillance occurred after the system was completely drained to repair a ruptured heat exchanger tube. The system was refilled with demineralized water and Corr-Shield corrosion inhibitor. The cause of the out-of-specification results is the heat exchanger tube failure and subsequent refilling of the diesel jacket cooling water system. The estimated Corr-Shield addition requirements resulted in a higher pH. The initial high pH disrupted the protective corrosion layer causing the iron to increase. The diesel jacket cooling water will continue to be monitored and trended in accordance with N2-CTP-EGS-M521. There were also four (4) DER's written to document corrosion or leaks associated with the diesel jacket water coolers as follows: DER U2-1998-1267 - Eddy current testing of the Division 3 diesel jacket cooling water heat exchanger resulted in one indication that is greater than 50% of the tube wall thickness.

GCA AMP Issues (8/9-13) - Auditor: Kennedy

Issue ID Date Identified	Issue Description	Actions Taken
		This indication is on the tube outside diameter (jacket cooling water side) and is 52% of wall thickness. A minimum wall thickness evaluation confirmed sufficient wall thickness existed such that tube wall integrity was not adversely impacted. With only one localized indication on the jacket cooling water side of the tube it was concluded the indication was a result of the fabrication process and not aging related. DER U2-2002-1152 - Eddy current testing of the Division 2 diesel jacket cooling water heat exchanger resulted in one tube with an outside diameter (OD) indication of 84% through wall. The tube indication exceeded criteria established in NER-2M-029, “Heat Exchanger Tube Information,” Revision1, and was subsequently plugged. DER U2-2004-1271 - During periodic cleaning of the Division 1 diesel jacket cooling water heat exchangers, in RFO9, severe pitting and crevice corrosion was found on the end bells and flanges. The pitting is on the end plate and heat exchanger shell. Following cleaning, the heat exchangers were re-assembled using black RTV to aid in gasket and flange sealing under engineering approval. The diesel generator was subsequently run with no leaks. Approximately two (2) weeks later a leaking heat exchanger tube was discovered (reference DER U2-2004-1948 below). Twelve (12) tubes were ultimately plugged in 2EGS*E1A. DER U2-2004-1948 - During RFO9 the Division 1 diesel jacket cooling water was found leaking from the standpipe overflow. Chemical analysis determined that the jacket cooling water was diluted, indicative of a Service Water leak into the jacket cooling water system. Investigation found 2EGS*E1A had one (1) tube leak. A boroscope video of the heat exchanger indicated the tube failure was the result of a smaller secondary pit within a larger primary pit, which is not detectable with

GCA AMP Issues (8/9-13) - Auditor: Kennedy

Issue ID Date Identified	Issue Description	Actions Taken
		eddy current testing. Ultimately twelve (12) tubes were plugged in 2EGS*E1A. Per NER-2M-029, Rev. 2, up to 39 tubes in the Division 1 diesel jacket cooling water heat exchangers may be plugged. Action requests to facilitate replacement of the diesel jacket cooling water heat exchangers have been initiated.

LR Contact	Stuard	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Stuard	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/8/2004		
LRA Section	B2.1.11		

GCA AMP Issues (8/9-13) - Auditor: Kennedy

Issue ID Date Identified	Issue Description	Actions Taken
123 8/12/2004	For the EGS water chemistry what are the acceptance criteria used for the testing program and what is it based on?	The following are the NMP2 Diesel Jacket Cooling Water Chemistry Acceptance Criteria: Parameter — Acceptance Limits Sample Date/Time — N/A pH — 9.0 to 10.5 Nitrite — > 500 ppm Copper — No increasing trend Iron — No increasing trend Total Bacteria — < 1000 bacteria count / ml Conductivity — No increasing trend Total Suspended Solids — < 15 ppm(EDG1,EDG3), No increasing trend (EDG2) Total Organic Carbons (TOC) — No increasing trend Chloride — < 6 ppm Nitrate — No increasing trend Cond. To Nitrite Ratio — No increasing trend (Reference: N2-CTP-EGS-M521, Rev. 1 (reference 22 in the AMP assessment document)) The chemistry controls limits are designed to preclude long-term corrosion and maintain water quality consistent with vendor recommendations. Self assessments are also performed to compare sampling frequencies, parameters analyzed, and analytical methods with those recommended by EPRI, INPO and industry best practices. The NMP program is adjusted as appropriate based on the results of the self-assessment. (Note: this response was e-mailed to the auditor)

LR Contact	Stuard	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Stuard	**PAA Revision Required?**	No

GCA AMP Issues (8/9-13) - Auditor: Kennedy

Issue ID Date Identified	Issue Description	Actions Taken
124 8/12/2004	What is the appropriate reference citation for the Attribute Assessment document for the NMP1 Closed-Cycle Cooling Water System Program? A revised version was provided on 8/12/04.	The current version of the NMP Unit 1 Closed-Cycle Cooling Water System Program Attribute Assessment is revision 1. (A complete copy of revision 1 was provided to the auditor.)

LR Contact	Stuard	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Stuard	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/8/2004		
LRA Section	B2.1.11		

GCA AMP Issues (8/9-13) - Auditor: Kennedy

Issue ID Date Identified	Issue Description	Actions Taken
155 8/11/2004	XI.M.20, OCC: Based on a review of the preventive maintenance (inspection) procedure for the NMP1 EDG cooling water HX's, the acceptance criteria states "clean, no silt, no zebra mussels." Clarify what is meant by "clean."	The procedure referred to by the auditor is the preventive maintenance procedure N1-MPM-079-412, "Diesel Generator Cooling Water Heat Exchanger and Temperature Control Valve Maintenance." The acceptance criteria for this procedure does not include any criteria for cleanness. Procedure Section 7.3.1 is a step to "Inspect service water side for flow blockages such as, but not limited to: (Clean AND Repair/Replace as Necessary) - Biofouling (I.e. Zebra Mussels) - Silt - Corrosion Products Therefore, "clean" would indicate the absence of biofouling, silt or corrosion products of sufficient volume/serverity to create a flow blockage. NMP administrative procedure GAP-HSC-02, "System Cleanness Controls," manages cleanness for NMP systems by assigning a cleanness class with corresponding acceptance criteria. For the NMP1 EDG Cooling Water System, it is assigned a cleanness class of "D" with acceptance criteria defined for particulate contaminants (none), organic contaminants (none) and rust (no removable rust). In addition, inspection for zebra mussels and MIC are specifically required. These inspections are performed whenever the EDG cooling water system is opened for maintenance.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/8/2004		

GCA AMP Issues (8/9-13) - Auditor: Kennedy

Issue ID Date Identified	Issue Description	Actions Taken

LRA Section B2.1.10

GCA AMP Issues (8/9-13) - Auditor: Le

Issue ID Date Identified	Issue Description	Actions Taken
1 8/3/2004	What are the causes of damage or crack for fire barrier penetration seals and fire dampers for documented in all DERs listed on page 10 of AMP B2.1.16? What are preventative actions being implemented? NRC Request for Additional Information 9/8: NRC wants to see the response from the applicant in the form of a summary of the aging experience and not a repeat of the finding in each of the report.	(Original response deleted as it contained too much information and did not properly respond to the question.) Response to Request for Additional Information: A review of plant-specific operating experience has identified several instances of deficiencies affecting fire barrier penetrations and fire dampers at both NMP stations. The causes were attributed to design deficiencies, inadequate configuration controls or improper maintenance practices. None of the deficiencies were attributed to age-related mechanisms. The preventive actions implemented included upgrading of the design and configuration control documentation for the Fire Protection Program as well as repair of each specific component. Past and future deficencies associated with SSC's covered by the Fire Protection Program are evaluated for age-related causes and corrective and preventive actions are implemented as appropriate. Therefore, the Fire Protection Program is determined to be effective.

LR Contact	Hoppe	**LRA Revision Required?**	No
Assigned Department/	License Renewal	**PAA Revision Required?**	Yes
Individual	Brown		
Issue Status	Response Complete		
NRC Closure Date			
LRA Section	B2.1.16		

GCA AMP Issues (8/9-13) - Auditor: Le

Issue ID Date Identified	Issue Description	Actions Taken
2 8/3/2004	Since several U1 barrier penetration seals and fire dampers have been found damaged or cracked and are now repaired, what special activities, if any, does NMP1 have implemented to prevent or minimize future damage or crack on other U1 barrier penetration seals and fire dampers? NRC Request for Additional Information 9/8: NRC wants to see the response from the applicant in the form of a summary of the aging experience and not a repeat of the finding in each of the report.	(The original response has been deleted since it did not properly address the question.) Response to Request for Additional Information: The causes of the degraded fire barrier penetrations and fire dampers were attributed to design deficiencies, inadequate configuration controls and improper maintenance activities. The special activities implemented to prevent future problems were to upgrade the design and configuration control documents so that the components would be properly inspected, tested and maintained. Based upon current performance, these actions have proved to be effective. Past and future deficencies associated with SSC's covered by the Fire Protection Program are evaluated for age-related causes and corrective and preventive actions are implemented as appropriate. Therefore, the Fire Protection Program is determined to be effective.

LR Contact	Hoppe	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Brown	**PAA Revision Required?**	Yes
Issue Status	Response Complete		
NRC Closure Date			
LRA Section	B2.1.16		

GCA AMP Issues (8/9-13) - Auditor: Le

Issue ID Date Identified	Issue Description	Actions Taken
29 8/2/2004	The following is a list of documents, that the Nine Mile Point Audit team would lile to have available during their on-site AMP/AMR audit review: 1) Bases document for each AMR and AMP. They could be in the form of calculations, technical reports, basis document, or summary report. We prefer them in a stand alone document. However, an explanation on how such a document could be constructed from the ones provided would be marginally acceptable. 2) NMP LRA commitment list, if available. 3) Multiple hard copies of the complete NMP LRA. 4)UFSAR & T.S. 5)Key references to AMR/AMPs (including regulatory and industrial documents, plant implementing procedures) 6)Codes (ASME, ACI etc.) 7)The applicable Topical reports.	Information has been made available

LR Contact	Vandeputte	**LRA Revision Required?**	No
Assigned Department/	License Renewal	**PAA Revision Required?**	No
Individual	Vandeputte		
Issue Status	Closed		
NRC Closure Date	8/9/2004		
LRA Section	N/A		

GCA AMP Issues (8/9-13) - Auditor: Le

Issue ID Date Identified	Issue Description	Actions Taken
37 8/3/2004	In Procedure N1-FST-FPP-C001, Rev. 6, the surveillance to be performed, once per operating cycle, for accessible sides of the fire barriers. Fire barriers that are not accessible during normal plant operations to be performed during scheduled plant shut downs. Are those accessible sides and non-accessible areas being pre-defined and scheduled ahead of time, prior to conduct of this sruveillance?	Fire barrier/penetration seal inspections are normally scheduled during refueling outages to eliminate inaccessibility issues. During each operating cycle one group of fire barriers/penetration seals representing 10% of the total population is scheduled for inspection. In preparation for the inspection activity, a work package is assembled which includes, but is not limited to, penetration location drawings, fire barrier computerized schedule, penetration sealing details, and FSAR/Appendix R required barrier drawings. For fire barriers/penetration seals in the selected group that are determined to be inaccessible, an action request is initiated to inspect them during the next refueling outage. A fire barrier/penetration seal of the same type for the next group to be inspected will then be selected for the current inspection to maintain the 10% inspection population.

LR Contact	Hoppe	**LRA Revision Required?**	No
Assigned Department/	License Renewal	**PAA Revision Required?**	No
Individual	Hoppe		
Issue Status	Closed		
NRC Closure Date	9/15/2004		
LRA Section	B2.1.16		

GCA AMP Issues (8/9-13) - Auditor: Le

Issue ID Date Identified	Issue Description	Actions Taken
38 8/3/2004	Explain the difference between Gall's requirement of 10% of each penetration seals performed during walk downs at least once every refueling outage and that of the NMP's accessible fire barrier/penetration seals. How would all NMP's accessible b/p seals meet the Gall's 10% requirement?	The fire barriers/penetration seals are divided into 10 groups in the Master Equipment List (MEL) computer database. During each operating cycle one group is selected for inspection, which represents 10% of the total population. For fire barriers/penetration seals in the selected group that are found to be inaccessible, an action request is initiated to inspect them during the next refueling outage. A fire barrier/penetration seal of the same type for the next group to be inspected will then be selected for the current inspection to maintain the 10% inspection population. However, fire barrier/penetration seal inspections are normally scheduled during refueling outages to eliminate inaccessibility issues.

LR Contact	Hoppe	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Hoppe	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/15/2004		
LRA Section	B2.1.16		

GCA AMP Issues (8/9-13) - Auditor: Le

Issue ID Date Identified	Issue Description	Actions Taken
39 8/3/2004	Explain the term "not credited with managing the effects of aging for any components" for the Halon and CO2 fire suppression systems.	There are component types, as identified in Table 3.3.2.A-8 of the Nine Mile Point (NMP) License renewal Application (LRA), in the Halon and Carbon Dioxide systems that are susceptible to aging effects and are managed by the NMP Fire Protection Program. The Nine Mile Point (NMP) Units 1 and 2 Fire Protection Program Attribute Assessment document will be revised to indicate aging effects on the Halon and Carbon Dioxide systems are managed consistent, when enhancements are complete, with GALL. Specific enhancements will include specifying periodic visual examinations of the halon/carbon dioxide system components to detect signs of degradation. Note: A revision to the LRA and AMP Basis document is required. 9/16/04: Draft revision of AMP basis document provided to auditor. Auditor accepted proposed revision.

LR Contact	Hoppe	**LRA Revision Required?**	Yes
Assigned Department/ Individual	License Renewal Fallin	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/16/2004		
LRA Section	B2.1.16		

GCA AMP Issues (8/9-13) - Auditor: Le

Issue ID Date Identified	Issue Description	Actions Taken
40 8/3/2004	The Gall requires that the Halon and CO2 suppression systems be monitored during the period retest to detect any degradation in the system. The NMP FPP AMP is not consistent with Gall - please explain.	There are component types, as identified in Table 3.3.2.A-8 of the Nine Mile Point (NMP) License renewal Application (LRA), in the Halon and Carbon Dioxide systems that are susceptible to aging effects and are managed by the NMP Fire Protection Program. The Nine Mile Point (NMP) Units 1 and 2 Fire Protection Program Attribute Assessment document will be revised to indicate aging effects on the Halon and Carbon Dioxide systems are managed consistent, when enhancements are complete, with GALL. Specific enhancements will include specifying periodic visual examinations of the halon/carbon dioxide system components to detect signs of degradation. Note A revision to the AMP basis document and LRA is required. 9/16/04: Draft revisis to AMP basis document provided to auditor. Auditor accepted proposed revision.

LR Contact	Stuard	**LRA Revision Required?**	Yes
Assigned Department/	License Renewal	**PAA Revision Required?**	Yes
Individual	Fallin		
Issue Status	Closed		
NRC Closure Date	9/16/2004		
LRA Section	B2.1.16		

GCA AMP Issues (8/9-13) - Auditor: Le

Issue ID Date Identified	Issue Description	Actions Taken
76 8/11/2004	AMP B2.1.17 states that, for preventative actions, the existing program will be enhanced to state that components are inspected for corrosion, MIC, or biofouling. However, there is no mention of specific information regarding how the program will be enhanced to make the NMP AMP consistent with the GALL's XI.M27 requirements. Please address the overall enhancement aspect for Unit 1 and Unit 2 individually since the Unit 1's material is more susceptible to corrosion/MIC/or biofouling.	The NMP Units 1 and 2 Fire Protection Water System Program Attribute Assessment, Section 2.2, Preventive Actions, will be revised to provide more detail concerning program enhancements required to manage the effects of general corrosion, biofouling, and MIC. In the current program document, more detail regarding specific program enhancements can be found as follows: • Section 3.2 discusses an enhancement for visual inspection of piping internals to monitor internal corrosion conditions and the presence of biofouling that could reduce pipe wall thickness. • Section 4.2 discusses an enhancement to check the fire system water for microbiological contamination. Specifically, the fire system water will be sampled to detect the presence of the bacterial species associated with MIC. • Section 4.2 discusses an enhancement to perform non-intrusive techniques (e.g., volumetric testing) to identify evidence of loss of material due to corrosion. Enhancements will be incorporated to both Unit 1 and Unit 2 implementing procedures based on the results of the aging management review process and the resulting aging effects requiring management. Note: A revison to the AMP basis document is required. 9/16/04: Draft revision of AMP basis document provided to auditor. Auditor accepted proposed revision.

LR Contact	Hoppe	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Fallin	**PAA Revision Required?**	Yes

GCA AMP Issues (8/9-13) - Auditor: Le

Issue ID Date Identified	Issue Description	Actions Taken

Issue Status	Closed
NRC Closure Date	9/16/2004
LRA Section	B2.1.17

GCA AMP Issues (8/9-13) - Auditor: Le

Issue ID Date Identified	Issue Description	Actions Taken
77 8/11/2004	The GALL XI.M27 requires that piping's internal surfaces and its internal corrosion conditions be visually inspected and done before the end of the current operating license for each unit. The NMP AMP has no such statement that this requirement will be done. Please explain.	Discussion of current or required enhancements to perform visual inspections of internal surfaces to identify and monitor internal corrosion conditions is discussed in the following sections of the program assessment document: * Section 3.2 discusses an enhancement for visual inspection of piping internals to monitor internal corrosion conditions and the presence of biofouling that could reduce pipe wall thickness. * Section 4.2 discusses existing periodic visual inspections to assess the condition of the internal surfaces of system components. Note: Change to the LRA and AMP base document required. Also, Section 4.2 discusses a program enhancement to perform wall thickness evaluations of fire protection piping using non-intrusive techniques (e.g., volumetric testing) to identify evidence of loss of material due to corrosion. Secion 4.2 of the program assessment document will be revised to provide more detail and clarify that inspections required by the GALL before the end of the current license term will be performed. 9/16/04: Draft revision to AMP basis document provided to auditor. Auditor accepted proposed revision.

LR Contact	Hoppe	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Fallin	**PAA Revision Required?**	Yes
Issue Status	Closed		

GCA AMP Issues (8/9-13) - Auditor: Le

Issue ID Date Identified	Issue Description	Actions Taken
NRC Closure Date	9/16/2004	
LRA Section	B2.1.17	
78 8/11/2004	The NMP AMP states that sprinkler heads will be replaced as per requirements of NFPA-25 prior to achieving the fifty years service. Please confirm that those sprinklers that are not replaced will be visually inspected per the requirements of GALL's XI.M27, and explain how this will be carried out.	The Fire Protection Water System Program Attribute Assessment document, Section 4.2, will be revised to indicate any sprinkler heads not replaced prior to achieving fifty years of service will be tested and inspected on a sampling basis to ensure functionality in accordance with NFPA-25. Noe: The AMP basis document needs to be revised. 9/16/04: Draft revision to AMP basis document provided to auditor. Auditor accepted proposed revision.

LR Contact	Hoppe	**LRA Revision Required?**	No
Assigned Department/	License Renewal	**PAA Revision Required?**	Yes
Individual	Fallin		
Issue Status	Closed		
NRC Closure Date	9/16/2004		
LRA Section	B2.1.17		

GCA AMP Issues (8/9-13) - Auditor: Le

Issue ID Date Identified	Issue Description	Actions Taken
79 8/11/2004	The NMP AMP states that the current procedures (as in Ref 15 and Ref 44) include verification that the fire pumps are capable of maintaining the system discharge pressure. It appears that the proposed NMP AMP is consistent with the GALL's corresponding attribute requirements. Please elaborate what other enhancements are being contemplated, as referred to in the 2nd paragraph of the attribute write up under monitoring and trending section.	The program enhancements mentioned in Section 5.2, Monitoring and Trending, are discussed in more detail in other sections of the attribute assessment as follows: • Section 3.2 discusses an enhancement for visual inspection of piping internals to monitor internal corrosion conditions and the presence of biofouling that could reduce pipe wall thickness. • Section 4.2 discusses an enhancement to check the fire system water for microbiological contamination. Specifically, the fire system water will be sampled to detect the presence of the bacterial species associated with MIC. • Section 4.2 discusses an enhancement to perform non-intrusive techniques (e.g., volumetric testing) to identify evidence of loss of material due to corrosion. The NMP Unit 1 and 2 Fire Protection Water System Program Attribute Assessment, Section 5.2, will be revised to provide more detail regarding program enhancements. 9/16/04: Draft revision to AMP basis document provided to auditor. Auditor accepted proposed revision.

LR Contact	Hoppe	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Fallin	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/16/2004		
LRA Section	B2.1.17		

GCA AMP Issues (8/9-13) - Auditor: Le

Issue ID Date Identified	Issue Description	Actions Taken
80 8/11/2004	The DER's listed in the NMP AMP, under the "Operating Experience" attribute, indicate that there was evidence of pipe wall thinning and inadequate system pressure was recorded. Please explain the causes for these deficiencies and provide information regarding corrective actions and preventative actions that have been taken to preclude the above deficiencies from reoccurring for Unit 1. Request for Additional Information: The applicant should summarize the DER's to include only those that are age-related, the causes and actions taken to improve the program.	(Original response deleted since it listed each DER but did not provide the proper information.) Response to Request for Additional Information: While pipe wall thinning and inadequate system pressure have been noted for Unit 1, those that were result of age related degradation did not result in a loss of intended function. Wall thinning was effectively detected and corrected before the pressure boundary failed. Corrective steps included root cause determinations and an evaluation of the pipe or tank design adequacy. Where appropriate, this has led to more aging resistant designs for replacement tanks and valves. In certain cases, the pipe had reached the end of its service life and was replaced, and in others, the wall thinning revealed deficiencies in the original specification for the material. Instances of low system pressure were caused by pump or regulator failures, valve seat leakage, and were often traceable to sand or silt intrusion unrelated to pressure boundary degradation. However, these deficiencies have led to improved maintenance practices for pumps, valves, and control devices, along with improved leak detection methods. Plant operating history, then, shows that the program effectively manages aging of pipe and tank walls by detecting and correcting degradation before the system is compromised in a manner affecting intended function.

LR Contact	Hoppe	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Brown	**PAA Revision Required?**	Yes
Issue Status	Response Complete		

GCA AMP Issues (8/9-13) - Auditor: Le

Issue ID Date Identified	Issue Description	Actions Taken

NRC Closure Date

LRA Section B2.1.17

GCA AMP Issues (8/9-13) - Auditor: Le

Issue ID Date Identified	Issue Description	Actions Taken
81 8/11/2004	The DER's listed in the NMP AMP, indicate that there was evidence of excessive leakage's in the Unit 2's Fire Water System. Please explain its causes and provide information regarding corrective actions and preventative actions that have been taken to preclude its re-occurrence Request for Additional Information 9/8: The applicant should evaluate and summarize the applicable DERs to indicate only those that are age-related, what the cause was and what actions were taken to improve the program.	(Original response deleted since it listed each DER and did not provide the proper information.) Response to Request for Additional Information 9/8: While NMP has experienced system leakage, the causes have not been related to aging of passive components. In most cases, excessive leak rates were caused by worn valve internals and loose bolts on a flange connection. The internal leakage was attributed to wear from sand and silt, so to reduce the level of these contaminants in the system and mitigate their effects, procedures were enhanced to ensure that stagnant legs are flushed. In other instances, indirect indications of leakage such as excessive pump cycling were the result of malfunctioning pressure control components which were not properly maintained. The only rupture occurred when insufficient building heat led to a frozen pipe. While not age related, these deficiencies have led to improvements in preventive maintenance practices and enhanced leak detection capabilities.

LR Contact	Hoppe	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Brown	**PAA Revision Required?**	Yes
Issue Status	Response Complete		
NRC Closure Date			
LRA Section	B2.1.17		

GCA AMP Issues (8/9-13) - Auditor: Nguyen

Issue ID Date Identified	Issue Description	Actions Taken
16 8/11/2004	XI. E2 Provide the justification for why the test frequency of 10 years is acceptable. (Note: this was justified in Section 3.6 of the V.C. Summer SER)	The assessment of attribute 4 (detection of aging effects) shall be amended. The phrase “and every 10 years thereafter” will be removed from the end of the third paragraph. The sentence below will be added to the end of the third paragraph. “The test frequency of these cables shall be determined by the applicant based on engineering evaluation not to exceed ten years.” This statement is taken from ISG-15 attribute 4 Note: a change to the LRA and AMP Basis Document is required

LR Contact	D. Taormina	**LRA Revision Required?**	Yes
Assigned Department/	License Renewal	**PAA Revision Required?**	Yes
Individual	D. Taormina		
Issue Status	Closed		
NRC Closure Date	9/8/2004		
LRA Section	B2.1.30		

GCA AMP Issues (8/9-13) - Auditor: Nguyen

Issue ID Date Identified	Issue Description	Actions Taken
17 8/11/2004	XI.E2 AMP: In Section 1.2, Scope of Program, suggest adding "as required by Aging Management Review" to the end of the second sentence in place of "within the scope of license renewal."	The assessment of attribute 1.0 (scope of program) will be amended to include the suggested phrase. The second sentence of 1.2 will state; These cables are used for radiation monitoring, nuclear instrumentation (source, intermediate, local and average power ranges) and other instrumentation that are subject to aging management review.

LR Contact	D. Taormina	**LRA Revision Required?**	No
Assigned Department/	License Renewal	**PAA Revision Required?**	Yes
Individual	D. Taormina		
Issue Status	Closed		
NRC Closure Date	9/8/2004		
LRA Section	B2.1.30		

GCA AMP Issues (8/9-13) - Auditor: Nguyen

Issue ID Date Identified	Issue Description	Actions Taken
31 8/10/2004	XI.E1 AMP: Confirm whether NMP program includes non-EQ electrical and I&C containment penetration assembly pigtails/connectors in an adverse localized environment.	Response: The containment electrical penetration pigtails and connectors located in adverse localized environments will be included within the scope of the E1 program. Attribute 1 (Scope) will be modified to reflect this inclusion. 1.2 Nine Mile Point Units 1 and 2 The Non-EQ Electrical Cables and Connections Program will be a new program at NMP that applies to accessible cables and connections within the scope of license renewal that are installed in adverse localized environments caused by heat, radiation, or moisture in the presence of oxygen. Connections include connectors, splices, electrical penetration assembly pigtails, terminal blocks, and fuse blocks. This program attribute will be consistent with the corresponding GALL attribute upon new program development. The U2 containment electrical penetration AMR reflects the inclusion of the cable and pigtails. The Unit 1 containment electrical penetration AMR provides descriptions of the penetrations with connections at the flange. Therefore, no pigtails exist at Unit 1. The connectors have been included in the site population of connectors evaluated in the cable and termination AMR. Note: The AMP basis document and the LRA will be revised

LR Contact	D. Taormina	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal D. Taormina	**PAA Revision Required?**	Yes
Issue Status	Closed		

GCA AMP Issues (8/9-13) - Auditor: Nguyen

Issue ID Date Identified	Issue Description	Actions Taken
NRC Closure Date	9/8/2004	
LRA Section	B2.1.29	
32 8/10/2004	XI.E1 AMP: The scope of the cables and connections program includes cables, connectors, terminal blocks, fuse holders and splices in adverse localized environments. However, in Table 3.6.2.C-1, NMP identifies cables in an adverse localized environment but does not identify connectors, terminal blocks, fuse holders or splices in an adverse localized environment. Confirm whether there are connections in an adverse localized environment at NMP.	Table 3.6.2.C-1 will be modified to reflect consistency with the GALL Volume 2, Chapter VI (A) table. The Component Type will be changed to “Conductor insulation for electrical cables and connections”. The “Air” environment will be removed. The separate component types for connectors, splices, fuse blocks, and terminal blocks will be eliminated. The AMP inspections will include an evaluation of connections that are in scope for license renewal and require an aging management review. Note: Revision to LRA required.

LR Contact	D. Taormina	**LRA Revision Required?**	Yes
Assigned Department/	License Renewal	**PAA Revision Required?**	No
Individual	D. Taormina		
Issue Status	Closed		
NRC Closure Date	8/13/2004		
LRA Section	3.6.2		

GCA AMP Issues (8/9-13) - Auditor: Nguyen

Issue ID Date Identified	Issue Description	Actions Taken
33 8/10/2004	XI.E1 AMP: In NMP's AMP basis document, a statement is made in the Operating Experience section that there is no plant-specific OE for this program, but does provide two examples of plant-specific OE for cables. Confirm whether these two examples represent remote (isolated) events or are part of a wide-spread	In support of the aging management review for cables and terminations, the deviation report database (ECAP), containing deviation event reports (DERs), was queried using selected keywords. The results were conservatively screened to determine which conditions might be potentially age-related. The DERs are listed in table 10.2 of the Aging Management Reviews (Unit #1 Cables and Terminations, Unit #2 Cables and Terminations). Fifty-three (53) DERs were identified for Unit1 with cable and connector degradation. One hundred five (105) DERs were identified for Unit 2 with cable and connector degradation. A review of the DERs found two (2) DERs with age related degradation at Unit 1 and one (1) DER with age related degradation at Unit 2. The examples listed represent an isolated event or condition and are not part of a wide-spread situation.

LR Contact	D. Taormina	**LRA Revision Required?**	No
Assigned Department/	License Renewal	**PAA Revision Required?**	No
Individual	D. Taormina		
Issue Status	Closed		
NRC Closure Date	9/8/2004		
LRA Section	B2.1.29		

GCA AMP Issues (8/9-13) - Auditor: Nguyen

Issue ID Date Identified	Issue Description	Actions Taken
34 8/10/2004	XI.E1 AMP: In the GALL description for detection of aging effects, a statement is included that provides justification that a 10-year inspection frequency is sufficient. The NMP AMP basis document identifies a 10-year inspection frequency but does not provide any justification. Provide the justification for the inspection interval.	The NMP justification for the 10-year inspection frquency is the same as that described in the GALL. The AMP basis document will be revised as folllows to include the justification: Revised Section 4.2 for NMP E1 AMP "Conductor insulation aging degradation from heat, radiation, or moisture in the presence of oxygen causes cables and connection jacket surface anomalies. Accessible electrical cables and connections installed in adverse localized environments are visually inspected at least once every ten years. This is an adequate period to preclude failures of the conductor insulation since experience has shown that aging degradation is a slow process. The first inspection for license renewal will be completed before the period of extended operation. This program attribute will be consistent with the corresponding GALL Attribute upon program development."

LR Contact	D. Taormina	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal D. Taormina	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/8/2004		
LRA Section	B2.1.29		

GCA AMP Issues (8/9-13) - Auditor: Nguyen

Issue ID Date Identified	Issue Description	Actions Taken
35 8/10/2004	XI.E1 AMP: In the GALL description for Detection of Aging Effects, a statement is included that links the parameter inspected (jacket surface anomaly) to the aging effect (heat, radiation or moisture in the presence of oxygen). The NMP AMP basis document does not provide a similar statement. Confirm NMP's intention as to whether the linkage of a parameter monitored to aging effect will be included in the future program documentation.	Nine Mile Point agrees to link the parameter inspected (jacket surface anomoly) to the aging effect (heat, radiation or moisture in the presence of oxygen). Revised Section 4.2 for NMP E1 AMP "Conductor insulation aging degradation from heat, radiation, or moisture in the presence of oxygen causes cables and connection jacket surface anomalies. Accessible electrical cables and connections installed in adverse localized environments are visually inspected at least once every ten years. This is an adequate period to preclude failures of the conductor insulation since experience has shown that aging degradation is a slow process. The first inspection for license renewal will be completed before the period of extended operation. This program attribute will be consistent with the corresponding GALL Attribute upon program development."

LR Contact	D. Taormina	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal D. Taormina	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	8/13/2004		
LRA Section	B2.1.29		

GCA AMP Issues (8/9-13) - Auditor: Nguyen

Issue ID Date Identified	Issue Description	Actions Taken
36 8/10/2004	XI.E1 AMP: What is the approximate percentage of in-scope cables in an adverse localized environment accessible for inspection?	Further clarification of the issue determined that the estimate was only applicable to in-scope cables. As adverse localized environments have not yet been defined for Units 1 and 2 an estimate specific to in-scope cables in localized environments can not be determined at this time. However, using a broader spaces approach an estimate of what percent of the total cables installed at Units 1 and 2 are accessible for inspection can be provided. This estimate was obtained from the ELECTRAK TRAC 2000 cable raceway systems (Unit 1 & Unit 2) utilized at the station and did not distinguish between types of cables or safety classification. The raceway system was queried for the number of cables in trays and provided what is believed to be a conservative estimate of between 55% to 60% of the cables at Unit 1 and 2 would be accessible for inspection. As this estimate of between 55% to 60% represents all cables this can be used at this time as an estimation of the percent of cables in an adverse localized environment that are accessible for inspection until specific adverse localized environments are determined.

LR Contact	D. Taormina	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal D. Taormina	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/8/2004		
LRA Section	B2.1.29		

GCA AMP Issues (8/9-13) - Auditor: Nguyen

Issue ID Date Identified	Issue Description	Actions Taken
44 8/11/2004	XI.E1, E2 & E3 Is plant operating experience included in the plant corrective action program which capture internal and external plant operating experience issues?	The Nine Mile Point Nuclear Interface Procedure NIP-ECA-01 is the site administrative procedure that controls the corrective action program. Item 1.1.2 of the applicability section states "The Corrective Action Program (CAP) and Deviation/Event Report (DER) shall be utilized to report all conditions (including significant) Adverse to Quality (CAQ) involving known failures, malfunctions, deficiencies, defective material and equipment, and non-conformance." NMP site operating experience related to degraded cables and connections is documented in the CAP Program.

LR Contact	D. Taormina	**LRA Revision Required?**	No
Assigned Department/	License Renewal	**PAA Revision Required?**	No
Individual	D. Taormina		
Issue Status	Closed		
NRC Closure Date	9/8/2004		
LRA Section	B3.1		

GCA AMP Issues (8/9-13) - Auditor: Nguyen

Issue ID Date Identified	Issue Description	Actions Taken
112 8/11/2004	XI.E3: AMP The attribute assessment document attribute 4 (Detection of Aging Effects) call for inspections at least once every 10 years. Provide a justification for this inspection frequency.	The attribute 4 assessment will be changed to state: 4.2 Nine Mile Point Units 1 and 2 The inaccessible medium-voltage cables installed in adverse localized environments caused by simultaneous exposure to significant moisture and significant voltage will be tested at least once every ten years. This is an adequate period to preclude failures of the conductor insulation since experience has shown that aging degradation is a slow process. The first testing for license renewal will be completed before the period of extended operation. Current plant procedures require periodic inspections of man-holes. This program attribute will be consistent with the corresponding GALL attribute upon new program development. Note: Revision to the LRA and AMP basis document required.

LR Contact	D. Taormina	**LRA Revision Required?**	No
Assigned Department/	License Renewal	**PAA Revision Required?**	Yes
Individual	D. Taormina		
Issue Status	Closed		
NRC Closure Date	8/13/2004		
LRA Section	B2.1.31		

GCA AMP Issues (8/9-13) - Auditor: Nguyen

Issue ID Date Identified	Issue Description	Actions Taken
125 8/11/2004	XI.E2 AMP Suggestion: In Section 1.2, Scope of Program, suggest adding “as required by Aging Management Review” to the end of the first sentence	The assessment of attribute 1.0 (scope of program) will be amended to include the suggested phrase. The first sentence of 1.2 will state; The Non-EQ Electrical Cables used in Instrumentation Circuits Progam applies to accessible and inaccessible electrical cables that are not in the EQ Program and are used in circuits with sensitive, high-voltage, low-level signals. These cables are used for radiation monitoring nuclear instrumentation (source, inermediate, local and average power ranges) and other instrument that are subject to Aging Management Review. Note: the AMP basis document will be revised

LR Contact	D. Taormina	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal D. Taormina	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/8/2004		
LRA Section	B2.1.30		

GCA AMP Issues (8/9-13) - Auditor: Nguyen

Issue ID Date Identified	Issue Description	Actions Taken
126 8/11/2004	XI.E2 AMP. Confirm that the test of the electrical cables also includes the connections. (Note: this issues is currently being discussed between the License Renewal Electrical Group and the NRC) NRC Request for Additional Information 9/8: The NRC is looking for a firm commitment of what the applicant is going to do once finalized ISG-15 is issued. Evaluating/modifying the AMP as appropriate when ISG-15 is formally issued is not acceptable to the NRC.	ISG-15 is currently under review between the NRC and NEI. The process for conducting cable testing is not resolved. Nine Mile Point will evaluate modifying the program as appropriate when ISG-15 is formally issued. Response to Request for Additional Information: When the NRC and the industry have reached an agreement on ISG-15 and it is issued by the NRC, NMP will incorporate it into the Non-EQ Instrumentation Cables Aging Management Program.

LR Contact	D. Taormina	**LRA Revision Required?**	Yes
Assigned Department/ Individual	License Renewal D. Taormina	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/28/2004		
LRA Section	B2.1.30		

GCA AMP Issues (8/9-13) - Auditor: Nguyen

Issue ID Date Identified	Issue Description	Actions Taken
127 8/11/2004	XI.E2 AMP: Provide the justification for why the test frequency of 10 years is acceptable. (Note: this was justified in Section 3.6 of the V.C. Summer SER)	The assessment of attribute 4 (detection of aging effects) shall be amended. The phrase “and every 10 years thereafter” will be removed from the end of the third paragraph. The sentence below will be added to the end of the third paragraph. “The test frequency of these cables shall be determined based on engineering evaluation not to exceed ten years.” This statement is taken from ISG-15 attribute 4 Note: the AMP basis document will be revised

LR Contact	D. Taormina	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal D. Taormina	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	8/13/2004		
LRA Section	B2.1.30		

GCA AMP Issues (8/9-13) - Auditor: Nguyen

Issue ID Date Identified	Issue Description	Actions Taken
128 8/11/2004	XI.E2 AMP: What is the acceptance criteria for cable testing results?	The assessment of attribute 6 (acceptance criteria) will be modified to state: 6.2 Nine Mile Point Units 1 and 2 "Surveillance test procedures and other calibration procedures provide the specific acceptance criteria for the loop calibration being performed. Where cable testing is conducted as an alternate to surveillance testing the acceptance criteria for each test will be defined by the specific type of test performed and the specific cable tested. This program attribute will be consistent with the corresponding GALL attribute." Note: the AMP basis document will be revised

LR Contact	D. Taormina	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal D. Taormina	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	8/13/2004		
LRA Section	B2.1.30		

GCA AMP Issues (8/9-13) - Auditor: Nguyen

Issue ID Date Identified	Issue Description	Actions Taken
129 8/11/2004	XI.E3 AMP: The Attribute assessment for attribute 3 (Parameters Monitored) does not provide enough detail of the type of testing to be conducted. The GALL provides specific examples of the types of testing. Provide additional details in the attribute assessment.	The attribute assessment for attribute 3 shall be amended to state: 3.2 Nine Mile Point Units 1 and 2 "The new Non-EQ Inaccessible Medium-Voltage Cable Inspection Program will include provisions to test in scope medium-voltage cables exposed to the adverse localized environments caused by significant moisture and significant voltage for testing. The specific type of test performed will be determined prior to the initial test, and is to be a proven test for detecting deterioration of the insulation system due to wetting, such as power factor, partial discharge, or polarization index, as described in EPRI TR-103834-P1-2, or other proven test at the time the test is performed. This program attribute will be consistent with the corresponding GALL attribute upon development of the new program." Note: The AMP basis document will be revised.

LR Contact	D. Taormina	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal D. Taormina	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	8/13/2004		
LRA Section	B2.1.31		

GCA AMP Issues (8/9-13) - Auditor: Nguyen

Issue ID Date Identified	Issue Description	Actions Taken
130 8/11/2004	XI.E3 AMP: The GALL program attribute 1 (scope) provides an exception for cables that are made for continuous wetting and continuous energization (i.e., submarine calbes). Include this exception statement in the attribute assessment statement.	The AMP basis document will be revised as follows: 1.2 Nine Mile Point Units 1 and 2 "The non-EQ Inaccessible Medium-Voltage Cable Inspection Program is a new program at NMP that applies to inaccessible medium-voltage cables within the scope of license renewal. The potential for the adverse localized environments caused by significant moisture simultaneously with significant voltage exists at NMP. Significant moisture is defined as periodic exposures to moisture that lasts more than a few days (e.g., cable in standing water). Periodic exposure to moisture that last less than a few days (i.e., normal rain and drain) are not significant. Significant voltage exposure is defined as being subjected to system voltage for more than twenty-five percent of the time. The moisture and voltage exposures described as significant in these definitions, which are based on operating experience and engineering judgment, are not significant for medium-voltage cables that are designed for these conditions (e.g., continuous wetting and continuous energization is not significant for submarine cables.)NMP procedures, and the design of such components as buried duct banks and junction boxes, are meant to prevent this environment from occurring. This program attribute will be consistent with the corresponding GALL attribute upon new program development."

LR Contact	D. Taormina	**LRA Revision Required?**	No
Assigned Department/	License Renewal	**PAA Revision Required?**	Yes
Individual	D. Taormina		
Issue Status	Closed		
NRC Closure Date	8/13/2004		

GCA AMP Issues (8/9-13) - Auditor: Nguyen

Issue ID Date Identified	Issue Description	Actions Taken
LRA Section	B2.1.31	
131 8/11/2004	XI.E3 AMP: The attribute assessment of the GALL Program Description makes the statement that “cable testing if warranted by an engineering evaluation.” What is meant by if warranted by an engineering evaluation?	The phrase “if warranted by an engineering evaluation” is intended to mean that the type of test conducted will be determined by an engineering evaluation. The phrase will be changed in the AMP basis document to state “Non-EQ inaccessible medium voltage cables in scope for license renewal that are exposed to significant moisture simultaneously with significant voltage will be tested to provide an indication of the condition of the conductor insulation.”

LR Contact	D. Taormina	**LRA Revision Required?**	No
Assigned Department/	License Renewal	**PAA Revision Required?**	Yes
Individual	D. Taormina		
Issue Status	Closed		
NRC Closure Date	8/13/2004		
LRA Section	B2.1.31		

GCA AMP Issues (8/9-13) - Auditor: Nguyen

Issue ID Date Identified	Issue Description	Actions Taken
132 8/11/2004	XI.E3 AMP: The GALL provides a definition for significant voltage and significant moisture. The AMP does not provide a definition for significant voltage and significant moisture, although the terms are used in the Program Description and attribute 1 (scope). Provide a definition for these terms.	Modify the attribute 1 – attribute assessment statement as follows: 1.2 Nine Mile Point Units 1 and 2 "The non-EQ Inaccessible Medium-Voltage Cable Inspection Program is a new program at NMP that applies to inaccessible medium-voltage cables within the scope of license renewal. The potential for the adverse localized environments caused by significant moisture simultaneously with significant voltage exists at NMP. Significant moisture is defined as periodic exposures to moisture that lasts more than a few days (e.g., cable in standing water). Periodic exposure to moisture that last less than a few days (i.e., normal rain and drain) are not significant. Significant voltage exposure is defined as being subjected to system voltage for more than twenty-five percent of the time. The moisture and voltage exposures described as significant in these definitions, which are based on operating experience and engineering judgment, are not significant for medium-voltage cables that are designed for these conditions (e.g., continuous wetting and continuous energization is not significant for submarine cables.)NMP procedures, and the design of such components as buried duct banks and junction boxes, are meant to prevent this environment from occurring. This program attribute will be consistent with the corresponding GALL attribute upon new program development."

LR Contact	D. Taormina	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal D. Taormina	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	8/13/2004		

GCA AMP Issues (8/9-13) - Auditor: Nguyen

Issue ID Date Identified	Issue Description	Actions Taken

LRA Section B2.1.31

GCA AMP Issues (8/9-13) - Auditor: Nguyen

Issue ID Date Identified	Issue Description	Actions Taken
133 8/12/2004	X.E1 EQ AMP: Include in the NMP Unit 1 & 2 analysis of the Program Description the EQ Component Reanalysis Attributes included in the GALL Program Description.	Agreed, the following section will be added to Nine Mile Point Units 1 & 2 Program Description assessment following the last paragraph; Important attributes for the reanalysis of an aging evaluation include analytical methods, data collection and reduction methods, underlying assumptions, acceptance criteria, and corrective actions (if acceptance criteria are not met). These attributes are discussed below. EQ Component Reanalysis Attributes The reanalysis of an aging evaluation is normally performed to extend the qualification by reducing excess conservatism incorporated in the prior evaluation. Reanalysis of an aging evaluation to extend the qualification of a component is performed on a routine basis pursuant to 10 CFR 50.49(e) as part of an EQ program. While a component life limiting condition may be due to thermal, radiation, or cyclical aging, the vast majority of component aging limits are based on thermal conditions. Conservatism may exist in aging evaluation parameters, such as the assumed ambient temperature of the component, an unrealistically low activation energy, or in the application of a component (de-energized versus energized). The reanalysis of an aging evaluation is documented according to the station's quality assurance program requirements, which requires the verification of assumptions and conclusions. As already noted, important attributes of a reanalysis include analytical methods, data collection and reduction methods, underlying assumptions, acceptance criteria, and corrective actions (if acceptance criteria are not met). These attributes are discussed below. Analytical Methods: The analytical models used in the reanalysis of an aging evaluation are the same as those previously applied during the prior evaluation. The Arrhenius methodology is an acceptable thermal model

GCA AMP Issues (8/9-13) - Auditor: Nguyen

Issue ID Date Identified	Issue Description	Actions Taken
		for performing a thermal aging evaluation. The analytical method used for a radiation aging evaluation is to demonstrate qualification for the total integrated dose (that is, normal radiation dose for the projected installed life plus accident radiation dose). For license renewal, one acceptable method of establishing the 60-year normal radiation dose is to multiply the 40-year normal radiation dose by 1.5 (that is, 60 years/40 years). The result is added to the accident radiation dose to obtain the total integrated dose for the component. For cyclical aging, a similar approach may be used. Other models may be justified on a case-by case basis. Data Collection and Reduction Methods: Reducing excess conservatism in the component service conditions (for example, temperature, radiation, cycles) used in the prior aging evaluation is the chief method used for a reanalysis. Temperature data used in an aging evaluation is to be conservative and based on plant design temperatures or on actual plant temperature data. When used, plant temperature data can be obtained in several ways, including monitors used for technical specification compliance, other installed monitors, measurements made by plant operators during rounds, and temperature sensors on large motors (while the motor is not running). A representative number of temperature measurements are conservatively evaluated to establish the temperatures used in an aging evaluation. Plant temperature data may be used in an aging evaluation in different ways, such as (a) directly applying the plant temperature data in the evaluation, or (b) using the plant temperature data to April 2001 X E-3 NUREG-1801 demonstrate conservatism when using plant design temperatures for an evaluation. Any changes to material activation energy values as part of a reanalysis are to be justified on a plant-specific basis. Similar methods of reducing excess conservatism in the component service conditions used in prior

GCA AMP Issues (8/9-13) - Auditor: Nguyen

Issue ID Date Identified	Issue Description	Actions Taken
		aging evaluations can be used for radiation and cyclical aging. Underlying Assumptions: EQ component aging evaluations contain sufficient conservatism to account for most environmental changes occurring due to plant modifications and events. When unexpected adverse conditions are identified during operational or maintenance activities that affect the normal operating environment of a qualified component, the affected EQ component is evaluated and appropriate corrective actions are taken, which may include changes to the qualification bases and conclusions. Acceptance Criteria and Corrective Actions: The reanalysis of an aging evaluation could extend the qualification of the component. If the qualification cannot be extended by reanalysis, the component is to be refurbished, replaced, or requalified prior to exceeding the period for which the current qualification remains valid. A reanalysis is to be performed in a timely manner (that is, sufficient time is available to refurbish, replace, or requalify the component if the reanalysis is unsuccessful).

LR Contact	D. Taormina	**LRA Revision Required?**	No
Assigned Department/	License Renewal	**PAA Revision Required?**	Yes
Individual	D. Taormina		
Issue Status	Closed		
NRC Closure Date	9/8/2004		

GCA AMP Issues (8/9-13) - Auditor: Nguyen

Issue ID Date Identified	Issue Description	Actions Taken

LRA Section B.3.1

GCA AMP Issues (8/9-13) - Auditor: Nguyen

Issue ID Date Identified	Issue Description	Actions Taken
134 8/12/2004	X.E1 EQ AMP: The attribute assessment 6 (acceptance criteria) 1) Elaborate how the NMP EQ Program complies with 10 CFR 50.49 as described in GALL attribute 6 2) If question (1) cannot be answered, then explain how administrative controls and EQRM/MQRM calculations are acceptable for defining qualified life.	The Nine Mile Point assessment of the attribute 6 will be amended as noted; 6.2 Nine Mile Point Units 1 and 2 The NMP EQ Program complies with the acceptance criteria of 10 CFR 50.49 by maintaining each in-scope EQ component within its qualification basis. NMP1 and NMP2 each comply with the environmental qualification requirements of 10 CFR 50.49 in accordance with the applicable CLB. Section 3.2 of the Environmental Qualification Program procedure (OT-EDS-016) states, "The purpose of the NMP Environmental Qualification Program is to provide tangible evidence that equipment will operate on demand and to verify design perormance, thereby establishing assurance that the potential for common-mode failure under postulated normal and accident conditions is minimized". Requirements in this document apply to activities in support of the: - Identification of equipment important to safety subject to the requirements of 10CFR50.49 (EQ Equipment). - Management of the normal and accident environment conditions summary database, Enironmental Qualification Design Criteria (EQEDC). Responsibility for the determination of environmental conditions is discussed in NIP-EQP-001. - Identification of EQ design requirements, controls, and documetnation. - The EQCAP initiative (currently in progress) will establish and maintain a Generic Qualification Evaluation (GQE) and Plant Qualification Evaluation (PQE) in an electric management system database. The electronic management system will be used to verify and manage the adequacy of Environmental Qualification of components.

GCA AMP Issues (8/9-13) - Auditor: Nguyen

Issue ID Date Identified	Issue Description	Actions Taken
		- Establishment of EQ installation and configuration requirments. - Establishment of EQ maintenance requirements - Establishment and maintenance of EQ documentation requirments. - Establishment and maintenance of Environmental Qualification status. This program attribute is consistent with the corresponding GALL attribute.

LR Contact	D. Taormina	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal D. Taormina	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/8/2004		
LRA Section	B.3.1		

GCA AMP Issues (8/9-13) - Auditor: Nguyen

Issue ID Date Identified	Issue Description	Actions Taken
135 8/12/2004	X.E1 EQAMP: Include in the assessment for Program Description a definition for component types (active & passive), harsh environments, and important to safety (e.g., safety related, etc.) The definitions as provided in 10 CFR 50.49	The following paragraph will be the first paragraph in the NMP assessment of the Program Description: 10 CFR 50.49 specifically requires that an EQ program be established to demonstrate that certain electrical components located in harsh plant environments (that is, those areas of the plant that could be subject to the harsh environmental effects of a loss of coolant accident [LOCA], high energy line breaks [HELBS] or post-LOCA radiation) are qualified to perform their safety function in those harsh environments after the effects of in-service aging. All operating plants must meet the requirements of 10 CFR 50.49 for certain electrical components important to safety (defined as (1) safety-related electric equipment (Class 1E), (2) non-safety-related electric equipment (non-class 1E) whose failure under postulated environmental conditions could prevent satisfactory accomplishment of safety functions by safety-related equipment, and (3) certain post-accident monitoring equipment). 10 CFR 50.49 defines the scope of components (active and passive as defined by 10 CFR 54.21) to be included.

LR Contact	D. Taormina	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal D. Taormina	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/8/2004		
LRA Section	B.3.1		

GCA AMP Issues (8/9-13) - Auditor: Nguyen

Issue ID Date Identified	Issue Description	Actions Taken
136 8/12/2004	X.E1 EQ AMP: The attribute assessment for attribute 3 (Parameters Monitored or Inspected) does not provide adequate information to ensure components will be maintained within the qualification basis for the period of extended operation.	NMP attribute assessment will be modified to state; 3.2 Nine Mile Point Units 1 and 2 The NMP EQ Program does not require condition or performance monitoring, and these elements are not required to be part of the basis for the qualified life calculations at NMP. Design temperature limits may be supplemented by data obtained by direct measurement of ambient conditions. The administrative procedure for the Environmental Qualification Program (OT-EDS-016) states in section 3.6.1(5) “Verify applicable environmental conditions (temperature, pressure, radiation and humidity), both ambient and accident, for each component being reviewed.” Additionally, section 3.6.1(5)(b.)(2) states, “The design temperature may also be supplemented by data obtained by direct measurement from the Ambient Temperature Measuring Program.” This program attribute is consistent with the corresponding GALL attribute.

LR Contact	D. Taormina	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal D. Taormina	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/8/2004		
LRA Section	B.3.1		

GCA AMP Issues (8/9-13) - Auditor: Nguyen

Issue ID Date Identified	Issue Description	Actions Taken
137 8/12/2004	X.E1 EQ AMP: Attribute 4 assessment: Provide additional details of the Corrective Action Program to demonstrate what is meant by "as prescribed by plant procedures for corrective action."	The Nine Mile Point attribute 4 assessment will be amended as noted; 4.2 Nine Mile Point Units 1 and 2 The NMP EQ Program does not require detection of aging effects, but does require periodic monitoring to detect "Hot Spots" or environmental conditions that were not considered during establishment of the CLB for 10 CFR 50.49. Furthermore, if site personnel identify degradation and failures of qualified equipment they will be dispositioned in accordance with and as prescribed by plant procedures for corrective action. The Nine Mile Point Nuclear Interface Procedure NIP-ECA-01 is the site administrative procedure that controls the corrective action program. Item 1.1.2 of the Applicability section states "The Corrective Action Program (CAP) and Deviation/Event Report (DER) shall be utilized to report all conditions (including Significant) Adverse to Qualtiy (CAQ) involving known failures, malfunctions, deficiencies, defective material and equipment, and non-conformance." This program attribute is consistent with the corresponding GALL Note: A change to the AMP Basis document is required.

LR Contact	D. Taormina	**LRA Revision Required?**	No
Assigned Department/	License Renewal	**PAA Revision Required?**	Yes
Individual	D. Taormina		
Issue Status	Closed		
NRC Closure Date	9/8/2004		

GCA AMP Issues (8/9-13) - Auditor: Nguyen

Issue ID Date Identified	Issue Description	Actions Taken
LRA Section	B.3.1	

GCA AMP Issues (8/9-13) - Auditor: Patterson

Issue ID Date Identified	Issue Description	Actions Taken
11 8/10/2004	During stud testing is stud tensioning used?	No, Table IWB-2500-1, Examination Category B-G-1, Examination Items B6.20 and B6.30, Note (1) allows bolting to be examined (a) in place under tension; (b) when the connection is disassembled; or when the bolting is removed. Unit 1 studs are examined while still in the vessel and following the disassembly of the closure head. Unit 2 studs are examined following removal of the studs from the vessel. Note: Change to the AMP basis document required (add specifics to detection of aging effects attribute).

LR Contact	Petras	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Petras	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	8/20/2004		
LRA Section	B2.1.3		

GCA AMP Issues (8/9-13) - Auditor: Patterson

Issue ID Date Identified	Issue Description	Actions Taken
12 8/10/2004	Can the differences b/w the GALL ASME code requirements and NMPs committed ASME code requirements be readily identified (does a summary exist)?	No such summary document exists. NMP is committed to the 1989 edition of the ASME Code with no addenda. This was found acceptable by the NRC in SERs dated October 5, 2000 and March 3, 2000. As such, it was not considered necessary to perform such a comparison.

LR Contact	Petras	**LRA Revision Required?**	No
Assigned Department/	License Renewal	**PAA Revision Required?**	No
Individual	Petras		
Issue Status	Closed		
NRC Closure Date	8/20/2004		
LRA Section	B2.1.3		

GCA AMP Issues (8/9-13) - Auditor: Patterson

Issue ID Date Identified	Issue Description	Actions Taken
13 8/10/2004	What is the "stable lubricant" referred to in the GALL Program Attribute Assessment and what is the technical basis for its choice?	Per N1-MMP-GEN-901 and N2-MPM-GEN-904; DAG No. 156 Thread Lubricant is used on the NMP threads. Also this lubricant is recommended by the OEM (GE) for use on the reactor system (GE "Red Book" NEDE-31735P).

LR Contact	Petras	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Petras	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	8/20/2004		
LRA Section	B2.1.3		

GCA AMP Issues (8/9-13) - Auditor: Patterson

Issue ID Date Identified	Issue Description	Actions Taken
14 8/10/2004	Is NMP committed to the ASME XI code with no addenda as indicated in the LRA and the Program Attribute Assessment, or to the 1989 Addenda as appears to be referenced in the relief request?	The reference to the 1989 Addenda in Request for Relief ISI-11 was used as a basis to support the change in examination methods and not to use a later Addenda of Section XI. The 1989 Edition No Addenda is the current code of record.

LR Contact	Petras	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Petras	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	8/20/2004		
LRA Section	B2.1.3		

GCA AMP Issues (8/9-13) - Auditor: Patterson

Issue ID Date Identified	Issue Description	Actions Taken
15 8/10/2004	Do we use the heating hole in the center of the studs for radial UT testing?	No, With the NRC mandate to utilize Appendix VIII of the 1995 thru 1996 Addenda of Section XI as modified by the EPRI Performance Demonstration Initiative (PDI) qualified Ultrasonic Techniques, the closure head stud examination from the heater hole is not currently being used at NMP.

LR Contact	Petras	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Petras	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	8/20/2004		
LRA Section	B2.1.3		

GCA AMP Issues (8/9-13) - Auditor: Patterson

Issue ID Date Identified	Issue Description	Actions Taken
84 8/11/2004	What basis does the applicant propose for the initial sample sizes to be used? To what degree will the population be subdivided (for purposes of sample size selection)?	Initial sample size will be based on achieving 90% confidence that 90% of the population does not have the aging effect as described in EPRI TR-107514. The sample size will be subdivided based on common characteristics of the affected components such as materials of construction, fabrication process, operating environment, and aging effects as described in EPRI TR-107514. Note: The AMP basis document (attribute 4) will be revised. 9/16/04: Draft revision to AMP basis document provided to auditor.

LR Contact	Fallin	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Fallin	**PAA Revision Required?**	Yes
Issue Status	Waiting for NRC Response		
NRC Closure Date			
LRA Section	B2.1.20		

GCA AMP Issues (8/9-13) - Auditor: Patterson

Issue ID Date Identified	Issue Description	Actions Taken
85 8/11/2004	For selective leaching the PAA states that the "population of potentially affected components will be randomly sampled for inspection to confirm the absence of this aging effect." Please clarify how the samples selected will consider other (non-random) factors. NRC Request for Additonal Information 9/8: Selecting the locations where the aging effect is most likely to occur may be acceptable, but it is not a random sample. How does the applicant propose to resolve the conflict between these statements?	The sample size will be selected from the locations where the aging effect is most likely to occur as described in EPRI TR-107514. Response to Request for Additional Information: The population of potentially affected components will be based upon common characteristics of the components and not randomly. The process for identifying the population will be consistent with the methodology described in EPRI TR-107514, Age-Related Degradation Inspection Method and Demonstration.

LR Contact	Fallin	**LRA Revision Required?**	Yes
Assigned Department/ Individual	License Renewal Fallin	**PAA Revision Required?**	Yes
Issue Status	Waiting for NRC Response		
NRC Closure Date			
LRA Section	B2.1.20		

GCA AMP Issues (8/9-13) - Auditor: Patterson

Issue ID Date Identified	Issue Description	Actions Taken
86 8/11/2004	PAA for one-time inspection (including selective leaching) states: "The population represented will be based on common characteristics of the affected components such as materials of construction, fabrication process, operating environment, and aging effects. The sample size selected for inspection will focus on the most susceptible components.". Please clarify whether the sample "size" is what was intended. NRC Request for Additonal Information 9/8: Determination of the sample size and selection of the sample are not the same. Please clarify how these will be accomplished at NMP.	The sample size will be selected from the locations where the aging effect is most likely to occur as described in EPRI TR-107514. Note: The AMP Basis document program description will be revised. Response to Request for Additional Information: The sample size will be selected to provide a 90% confidence that 90% of the population does not have the degradation mechanism present, in accordance with the EPRI TR-107514.

LR Contact	Fallin	**LRA Revision Required?**	Yes
Assigned Department/ Individual	License Renewal Fallin	**PAA Revision Required?**	Yes
Issue Status	Waiting for NRC Response		
NRC Closure Date			
LRA Section	B2.1.20		

GCA AMP Issues (8/9-13) - Auditor: Patterson

Issue ID Date Identified	Issue Description	Actions Taken
87 8/11/2004	The representative sample of < 4" NPS piping is to be conducted using "existing site NDE practices." Please explain what techniques will be considered and how they will detect degradation (especially cracking and loss of material) from interior surfaces of small bore piping and components. Request for Additional Information 9/8: In the last paragraph of the applicant's response, what is meant by the term 'boat sample'?	All Quality Group A and B, ASME Code Class 1 and 2 Austenitic and Ferritic Piping selected examination samples (including piping <4" NPS) performed under the Alternate Risk-Informed Inspection Program require ultrasonic examinations. NMPNS is required to implement Appendix VIII, "Performance Demonstration for Ultrasonic Examination Systems," to ASME Section XI, Division 1, 1995 Edition with the 1996 Addenda, as administrated by the EPRI NDE Center, Performance Demonstration Initiative (PDI). All ultrasonic examination techniques being implemented at the NMPNS must be qualified under the PDI program. Ultrasonic examinations for the detection of degradation (such as cracking) is performed in two directions, and when examination in the circumferential direction is required, the circumferential examination must be performed in two directions, provided access is available. Dissimilar metal welds must be examined axially and circumferentially. For the detection of material loss, the 0 degree ultrasonic search unit is utilized to measure wall thickness. Destructive testing of this piping and fittings may also be used where practical The UT procedures are qualified to 2"NPS. For piping less than 2", liquid penetrant tests will be performed on the ID surface boat samples. The thickness of the boat samples can be verified using micrometers. Response to Request for Additional Information: Boat samples are sections of piping that have been cut from the system and are then cut in half. The tests are performed on the two resultant "boats."

LR Contact Fallin **LRA Revision Required?** No

GCA AMP Issues (8/9-13) - Auditor: Patterson

Issue ID Date Identified	Issue Description	Actions Taken
99 8/12/2004	When we implemented Fatigue Pro will we analyze more locations for environmental fatigue effects than those listed in NUREG/CR-6260? Verify that the NUREG/CR-6260-equivalent locations are the most limiting with respect to environmental fatigue for NMP.	NMP will analyze a sample of critcal component locations for evirornmentally effects. The sample of critical component locations will be chosen to represent the limiting locations such that they will bound the remaining component locations. The sample will include as a minimum, the locations equivalent to those identified in NUREG/CR-6260 but may include additional locations if these locations are determined to be more limiting with respect to environmental fatigue effects.

Assigned Department/	License Renewal	**PAA Revision Required?**	No
Individual	Fallin		
Issue Status	Waiting for NRC Response		
NRC Closure Date			
LRA Section	B2.1.20		

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/	License Renewal	**PAA Revision Required?**	No
Individual	Poehler		
Issue Status	Closed		
NRC Closure Date	8/20/2004		
LRA Section	B3.2		

GCA AMP Issues (8/9-13) - Auditor: Patterson

Issue ID Date Identified	Issue Description	Actions Taken
105 8/12/2004	The scope of the Program Attribute Assessment document does not appear to address the preventive and mitigative measures addressed in the GALL (current program or future Fatigue Pro program)	There are currently no preventive or mitigative actions in the Fatigue Monitoring Program. As part of the design change process while implementing FatiguePro, we will review existing operations pocedures which may be revised to include preventive/mitigative actions. The AMP Assessment for the Fatigue Monitoring Program needs to be modified to state that preventive/mitigative actions, such as procedural or design changes, will be taken if it is determined that design CUF values may be exceeded. A similar change needs to be made to the fatigue monitoring program procedure NIP-REL-06 and License Renewal Application section B3.2. Note: Change to the LRA and AMP Basis Document required. 9/16/04: Draft revision to AMP basis document provided to auditor.

LR Contact	Poehler	**LRA Revision Required?**	Yes
Assigned Department/	License Renewal	**PAA Revision Required?**	Yes
Individual	Poehler		
Issue Status	Waiting for NRC Response		
NRC Closure Date			
LRA Section	B3.2		

GCA AMP Issues (8/9-13) - Auditor: Patterson

Issue ID Date Identified	Issue Description	Actions Taken
140	Does the Fatigue Monitoring Program provide for partial cycle counting?	Currently the Fatigue Monitoring Program provide for partial cycle counting.
8/12/2004	NRC Request for Additional Information: During the interview with the FM PM, the project team understood the applicant to say that each partial cycle is currently treated as a full cycle (for counting purposes). Is this the case? If not, please describe the treatment of partial cycles in greater detail	Response to Request for Additional Information: Each event that is covered by the Fatigue Monitoring Program is initially counted as a full-cycle event. However, as stated is Section 3.3.4 of NIP-REL-06, when an evaluation of the event is necessary (i.e. the limit of cycles is being approached), the event is further evaluated to determine if it constituted a partial cycle or multiple cycles. Based upon preliminary information provided by the FMP Program Manager, evaluations utilizing partial cycle counting have not been performed for either NMP station.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/16/2004		
LRA Section	B3.2		

GCA AMP Issues (8/9-13) - Auditor: Patterson

Issue ID Date Identified	Issue Description	Actions Taken
141 8/12/2004	Will Fatigue Pro also address Environmental Fatigue? What version of Fatigue Pro will be used?	Fatigue Pro does not perform environmental fatigue calculations. Environmental fatigue calculations will be performed separately from fatigue monitoring for the NUREG/CR-6260 locations prior to Year 40. The results from Fatigue Pro can be used, coupled with environmental fatigue mutlipliers obtained from location-specific environmental fatigue calculations, to continually monitor environmental fatigue in the license renewal period. Faigue Pro Version 3.01 (I.e., the latest version) will be used for Nine Mile Point.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	8/20/2004		
LRA Section	B3.2		

GCA AMP Issues (8/9-13) - Auditor: Patterson

Issue ID Date Identified	Issue Description	Actions Taken
142 8/12/2004	A DER noted that the number of cycles in the SAR had been met. Has NMP had other incidents that caused them to exceed the number of cycles in the SAR?	No, there are not further similar incidents.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	8/20/2004		
LRA Section	B3.2		

143 8/12/2004	Will the SAR be revised as a result of Fatigue Pro?	NMP plans to revise the SAR as a result of Fatigue Pro implementation to eliminate the list of events as appropriate, as part of the design change process. Appropriate justification for removing the list of events will be included in the design change.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	8/20/2004		
LRA Section	B3.2		

GCA AMP Issues (8/9-13) - Auditor: Patterson

Issue ID Date Identified	Issue Description	Actions Taken
144 8/12/2004	What assurance does NMP have that Fatigue Pro will work? What self-assessments (specifically of a technical nature) will be performed? What is the frequency of the self-assessments?	We have been following industry experience, both domestic and international, where FatiguePro has been successfully implemented and working well. The NMP Fatigue Monitoring Procedure will be revised to reflect FatiguePro implementation, and specify the frequency and format of the outputs expected from the use of FatiguePro. Also, with respect to FatiguePro working properly, not only is it based on world-wide experience over the past 20 years, but more importantly, the software is developed under a nuclear QA software program that meets 10 CFR 50 Appendix B requirements. The development was done to satisfy both SI's and EPRI's nuclear QA requirements, and the NMP plant-specific customization will also be done under SI's QA Program. The verification and validation (V&V) associated with the plant-specific customization demonstrates full program functionality and proper operation and calculations.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	8/20/2004		
LRA Section	B3.2		

GCA AMP Issues (8/9-13) - Auditor: Patterson

Issue ID Date Identified	Issue Description	Actions Taken
145 8/12/2004	The scope of the Program Attribute Assessment document does not appear to address the preventive and mitigative measures addressed in the GALL (current program or future FatiguePro program)	There are currently no preventive or mitigative actions in the Fatigue Monitoring Program. As part of the design change process while implementing FatiguePro, we will review existing operations procedures which may be revised to include preventive/mitigative actions. Note: A change to LRA Section B3.2 is needed to revise the description of preventive actions to indicate what potential action may be taken if CUF design limits are approached. Also, App. A of the LRA will need to be revised accordingly. Also, the AMP Basis document needs to be revised to state that the preventive/mitigative actions, such as procedural or design changes, will be taken if it is determined that design CUF values may be exceeded. 9/16/04: Draft revision to AMP basis document provided to auditor.

LR Contact	Poehler	**LRA Revision Required?**	Yes
Assigned Department/ Individual	License Renewal Fallin	**PAA Revision Required?**	Yes
Issue Status	Waiting for NRC Response		
NRC Closure Date			
LRA Section	B3.2		

GCA AMP Issues (8/9-13) - Auditor: Patterson

Issue ID Date Identified	Issue Description	Actions Taken
146 8/12/2004	Will NMP use online CUF calculations for the locations and where are they? Will we use FatiguePro for Environmental Fatigue using the Fen method?	Yes. Locations are to be determined. The NMP FatiguePro application will utilize online CUF calculations for all limiting components. Refer to Tables 3-1 through 3-10 in Structural Integrity Report No. SIR-03-140, Revision 1, "Report on System Review and Recommendations for a Transient and Fatigue Monitoring System at the Nine Mile Point Nuclear Station," February 2004, for identification of the locations to be monitored. FatiguePro does not perform environmental fatigue calculations. Environmental fatigue will be performed separately from fatigue monitoring for the NUREG/CR-6260 locations prior to Year 40. The committed approach to be used is the Fen Approach" documented in NUREG/CR-6583 for carbon and low alloy steel, and NUREG/CR-5704 for stainless steel. The results from FatiguePro can be used, coupled with environmental fatigue multipliers obtained from location-specific environmental fatigue calculations, to continually monitor environmental fatigue in the license renewal period.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	8/20/2004		
LRA Section	B3.2		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
1 8/3/2004	B2.1.16	Le	What are the causes of damage or crack for fire barrier penetration seals and fire dampers for documented in all DERs listed on page 10 of AMP B2.1.16? What are preventative actions being implemented? NRC Request for Additional Information 9/8: NRC wants to see the response from the applicant in the form of a summary of the aging experience and not a repeat of the finding in each of the report.	(Original response deleted as it contained too much information and did not properly respond to the question.) Response to Request for Additional Information: A review of plant-specific operating experience has identified several instances of deficiencies affecting fire barrier penetrations and fire dampers at both NMP stations. The causes were attributed to design deficiencies, inadequate configuration controls or improper maintenance practices. None of the deficiencies were attributed to age-related mechanisms. The preventive actions implemented included upgrading of the design and configuration control documentation for the Fire Protection Program as well as repair of each specific component. Past and future deficencies associated with SSC's covered by the Fire Protection Program are evaluated for age-related causes and corrective and preventive actions are implemented as appropriate. Therefore, the Fire Protection Program is determined to be effective.

LR Contact	Hoppe	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Brown	**PAA Revision Required?**	Yes
Issue Status	Response Complete		
NRC Closure Date			

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
2 8/3/2004	B2.1.16	Le	Since several U1 barrier penetration seals and fire dampers have been found damaged or cracked and are now repaired, what special activities, if any, does NMP1 have implemented to prevent or minimize future damage or crack on other U1 barrier penetration seals and fire dampers? NRC Request for Additional Information 9/8: NRC wants to see the response from the applicant in the form of a summary of the aging experience and not a repeat of the finding in each of the report.	(The original response has been deleted since it did not properly address the question.) Response to Request for Additional Information: The causes of the degraded fire barrier penetrations and fire dampers were attributed to design deficiencies, inadequate configuration controls and improper maintenance activities. The special activities implemented to prevent future problems were to upgrade the design and configuration control documents so that the components would be properly inspected, tested and maintained. Based upon current performance, these actions have proved to be effective. Past and future deficencies associated with SSC's covered by the Fire Protection Program are evaluated for age-related causes and corrective and preventive actions are implemented as appropriate. Therefore, the Fire Protection Program is determined to be effective.

LR Contact	Hoppe	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Brown	**PAA Revision Required?**	Yes
Issue Status	Response Complete		
NRC Closure Date			

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
3 8/10/2004	B2.1.12	Wen	What is the status of NMP-1 Boraflex replacement program? How many have been replaced? Any examination made to the replaced Boraflex racks? If the answer is yes, what is the examination outcome? NRC Request for Additional Information 9/8: In its license renewal application, NMP1 plans to rely mainly on the short-length test coupons to monitor Boraflex panel conditions. However, in response to Question #3, the applicant stated that “no physical inspections of any kind are scheduled for the racks once they are removed.” Also, NMP1 has not performed any boron areal density measurement on the Boraflex panels. To monitor the conditions of the remaining two Boraflex panles, what information does NMP have that could justify that the test coupons and the Boraflex panels would have the same data reference (in light of 34 years NMP1 operation) to be used for the next 20 year license renewal prediction?	Replacement of 6 of the 8 Unit 1 Boraflex racks is underway and is planned for completion by the end of 2004. No physical inspections of any kind are scheduled for the racks once they are removed. Response to Request for Additional Information: The Boraflex panels which will remain in the fuel pool at NMP1 are used only in low flux areas and will not be in the vicinity of freshly discharged fuel. The short length coupons, however, will continue to be exposed to the worse case conditions so that their observed degradation will be conservative relative to that of the panels. The low historical silica levels in the pool, coupon surveillance results, and relatively low flux levels near the remaining panels are the key factors used by NMP1 to justify the continued use of the program to manage aging during the period of extended operation. They confirm that current and future environment to which the panels will be exposed is, and will be, relatively benign and that any degradation will be detected early, prompting additional testing in the pool and appropriate corrective action.

LR Contact	Brown	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Brown	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/16/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
4 8/10/2004	B2.1.12	Wen	Since late 1980, EPRI has issued many topical reports to assist utilities in managing Boraflex degradation in spent fuel racks. Which EPRI reports were adopted by NMP in developing its Boraflex Monitoring AMP If NMP Boraflex Monitoring Program deviates from EPRI recommendations, the deviation should be noted and justified. (The GALL pretty much follows the EPRI recommendations). NRC Request for Additional Information 9/8: (Note: this is consolidated question for items 4, 5, 6, 7 and 9) Consider the following facts/findings: (1) Nuclear Fuel Storage Racks", December 1988. coupon surveillance is not reliable, because the method of coupon Storage encapsulation, material, configuration, and flow condition may not accurately simulate the conditions in the racks; December (2) 1992. size of the gap but also on flow conditions around the Boraflex racks; and (3) Deviations from the GALL relative to in-situ rack testing have been degraded noticeably. NMP2, however, has not performed any boron areal density measurement to quantify the degree to which Boraflex racks has degraded. Explain why short-length coupon results from NMP2 can be used reliably to predict that the 5 % margin to criticality requirements will be maintained for the Boraflex racks over the proposed extended operating licenses. Specifically, what is the correlation of the behavior of Boraflex in the test coupons to that in the storage racks under the most limiting conditions (flow and gamma dose considerations).	The BMP program as defined in NMP response to GL 96-04 is the basis for the AMP basis document. While elements of EPRI TR-108761 are evident in the BMP program, no commitment to its recommendations has been either expressed or implied. Inasmuch as no reference was made to the document in the GALL, no reference to it was deemed necessary in the GALL comparison. However, the same EPRI documents listed in the GALL reference list in Section XI.M22 were used as developmental references in the BMP program documents, as follows: • NP-6159, "An Assessment of Boraflex Performance in Spent The industry Boraflex operating experience indicates that the test • TR-103300, "Guildlines for Boraflex Use in Spent Fuel Racks", December 1993. • TR-101986, "Boraflex Test Results and Evaluation", The loss of boron carbide from Boraflex racks depends not only on the The silica trending data clearly shows that NMP2 Boraflex racks were addressed in separate open issue resolutions. Response to Request for Additional Information: For the current licensing period, the use of short and long length coupons will continue in compliance with the CLB documented in the NMP2 response to GL 96-04. NMP acknowledges that definitive action will be required to manage the aging of the Boraflex panels prior to the period of extended operation. There are two possible courses of action that will be implemented for NMP2: 1. Replace the existing Boraflex racks prior to the period of extended operation and eliminate the need for the Boraflex Monitoring Program, or 2. Institute periodic in-situ testing during the period of extended operation in the spent fuel pool in order to objectively establish correlations between the condition of the coupons, the panels, and silica levels. The LRA and PAA will be revised accordingly.

LR Contact Brown **LRA Revision Required?** Yes

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken

Assigned Department/ Individual	License Renewal Brown	**PAA Revision Required?**	Yes
Issue Status	Waiting for NRC Response		
NRC Closure Date			

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
5 8/10/2004	B2.1.12	Wen	The Boraflex operating experience indicated that the test coupon surveillance is not reliable. NMP depends on test coupon surveillance and the measurement and trending of silica concentrations in the SFP for the input data to the RACKLIFE predictive code. To demonstrate that the input data to the RACKLIFE will yield valid and reliable results, how the correlation between the degradation in the coupons and degradation in the racks is established? NRC Request for Additional Information 9/8: (see issue 4)	NMP concurs that industry operating experience with short length coupons has yielded mixed results, and their ability to accurately predict long term degradation is limited. For this reason, NMP2 has chosen more reliable full-length coupons, the construction of which closely mimics that of the Boraflex panels, to monitor their physical degradation. Moreover, the location of these coupons is such that most limiting fuel assemblies being loaded into the Boraflex racks are positioned in the eight closest storage cells adjacent to the surveillance assembly. Notably, the full-length coupons are subjected to careful inspections at five-year intervals and changes in their physical condition, the measured silica levels, and the condition of the short length coupons have been consistent with the degradation predicted by RACKLIFE. Coupon width measurements performed on the short length coupons prior to each refueling outage are used to confirm the loss rate predicted by the RACKLIFE computer model. Boron loss in the Boraflex panels is assumed to be proportional to that measured in the short length coupons exposed to the highest flux conditions in the SFP, and should any indication of unexpected degradation occur, then direct areal density testing of the racks will be performed, thereby confirming the correlation is still valid. For these reasons, NMP is confident that the observed degradation of the full-length coupons and test results of the short length coupons are conservative representations of the aging of the Boraflex panels in the Unit 2 spent fuel racks. RACKLIFE model results are consistent with coupon results and both monitoring methods are used to decide upon appropriate conservative action for maintaining the spent fuel pool subcritical. Response to Request for Additional Information: (See Issue 4)

LR Contact	Brown	**LRA Revision Required?**	Yes
Assigned Department/ Individual	License Renewal Brown	**PAA Revision Required?**	Yes
Issue Status	Waiting for NRC Response		
NRC Closure Date			

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
6 8/10/2004	B2.1.12	Wen	What is the performance of the prefabricated test coupons at NMPs? (Both short-length and full-length). Any degradation observed? NRC Request for Additional Information 9/8: (See Issue 4)	Plant specific operating experience has shown that degradation is occurring in both the full and short length coupons. The extent to which this is occurring is not only consistent between the coupon types, but also with the predictions produced by the NMP RACKLIFE model. The most recent test and inspection report (NET-231-01) for Unit 2 reflects 10 years of service for the short and full-length coupon. The physical appearance of both the short and full-length coupons was considered good and consistent with documented changes noted by EPRI in NP-6159, TR-101986, TR-10330. Measurements of short length coupon #4 did not deviate from any of the established acceptance criteria used to bound that assumed in the criticality analysis for the Unit 2 spent fuel racks. Response to Request for Additional Information: (See Issue 4)

LR Contact	Brown	**LRA Revision Required?**	Yes
Assigned Department/ Individual	License Renewal Brown	**PAA Revision Required?**	Yes
Issue Status	Waiting for NRC Response		
NRC Closure Date			

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
7 8/10/2004	B2.1.12	Wen	Why is the neutron attenuation testing (also called blackness testing) considered unnecessary? NRC Request for Additional Information 9/8/04: (See Issue 4)	In the context of the GALL, routine in-situ blackness testing is an important measure of gap formation in the Boraflex panels. In lieu of such testing, NMP2 has taken the precautionary measure of relying upon full-length coupons, the construction of which closely mimics that of the Boraflex panels in the Spent Fuel Racks. Every five years the full-length coupons are visually inspected and gap formation is monitored and measured. The physical measurement of the gapping in these coupons is more accurate than the use of blackness testing, eliminating the need for in-situ blackness testing. The current criticality basis of the NMP2 Boraflex Spent Fuel racks assumes a conservative amount of gapping in the Boraflex material. Full-length coupon gap measurements are compared to the amount of gapping assumed in the criticality analysis to validate the ability of the NMP2 racks to perform their design function. Response to Request for Additional Information: (See Issue 4)

LR Contact	Brown	**LRA Revision Required?**	Yes
Assigned Department/ Individual	License Renewal Brown	**PAA Revision Required?**	Yes
Issue Status	Waiting for NRC Response		
NRC Closure Date			

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
8 8/10/2004	B2.1.12	Wen	Provide details regarding how the surveillance results assure that the 5% subcriticality margin will be maintained given the fact that NMP has not performed any boron areal density measurement. How the boron loss from the rack is assumed in the analysis? NRC Request for Additional Information 9/8: To compare the measured test coupon dimension changes against the bounding values (width reduction not exceeding 20.6% and gapping less than 4 % of the overall panel length), what steps have been added to consider the differences in configuration, geometry, and flow condition between the test coupons and Boraflex panels?	The predictive model used in the SFP is based upon maintaining a 5% subcriticality margin with a maximum 20% reduction in the boron in the panels. The RACKLIFE model conservatively predicts the reduction of Boraflex along with the short and long length coupon program. The predicted boron reduction rate has a consistent 100% margin relative the subcriticality analysis for the SFP. Boron areal density testing is performed on the short length coupons during each refueling outage to confirm the loss rate predicted by the RACKLIFE computer model. Boron loss in the Boraflex panels is assumed to be proportional to that measured in the short and long length coupons exposed to the highest flux conditions in the SFP, and should any indication of unexpected degradation occur, then direct areal density testing of the racks will be performed. Per NETCO calc (NET-167-01), 5 % subcriticality could be maintained if the width reduction of the panels did not exceed 20.6 % and gapping is less than 4% of the overall panel length. As part of the preparations for the calc, the BISCO batch records were reviewed and the average B4C areal density was determined to be 0.0332 ? 0.005 g B-10/cm2. The criticality analysis assumes an average width and thickness along with a 95/95 uncertainty adder on reactivity to account for the statistical variation on the as-built measurements of areal density. Response to Request for Additional Information: Unit 1: Low silica levels in the SFP, low flux levels around the Boraflex racks, and the placement of the coupons near freshly discharged fuel provide adequate justification to conclude that the coupons conservatively account for any differences in configuration, geometry, and flow conditions. Unit 2: For the current licensing period, additional analytical provisions beyond those defined in the CLB documented in the NMP2 response to GL 96-04 are neither planned nor required. To account for known degradation in the spent fuel pool, NMP2 plans to either replace the racks prior to the period of extended operation and eliminate the need for the Boraflex Monitoring Program, or institute in-situ testing of the racks as part of the BMP during the period of extended operation. The LRA and PAA will be revised accordingly.

LR Contact Brown **LRA Revision Required?** Yes

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
Assigned Department/ Individual	License Renewal Brown	**PAA Revision Required?**	Yes	
Issue Status	Waiting for NRC Response			
NRC Closure Date				
9 8/10/2004	B2.1.12	Wen	The silica trend clearly showed that Boraflex racks were degrading, why NMP BM program is not in 2nd level? (i.e. performing B-10 measurement) NRC Request for Additional Information 9/8: (See Issue 4)	While the historical trend in silica concentration in the SFP confirms that acknowledged degradation at a predicted rate is occurring, the current rate of increase in levels is not sufficient to warrant in-situ B-10 measurements. The action criterion is an unpredicted excursion in the rate of increase in silica levels. To date, this has not occurred to an extent that would dictate additional analysis or testing the SFP. Response to Request for Additional Information:
LR Contact	Brown	**LRA Revision Required?**	Yes	
Assigned Department/ Individual	License Renewal Brown	**PAA Revision Required?**	Yes	
Issue Status	Waiting for NRC Response			
NRC Closure Date				

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Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
10 8/10/2004	B2.1.12	Wen	DER-NM-2002-1711 "In Situ Blackness Testing of Boraflex in Spent Fuel Storage Racks" (Ref 21 for NMP1 and Ref 22 for NMP2 base document) was used for the conclusion that the indicators of Boraflex degradation used in NMP (i.e., RACKLIFE modeling and coupon surveillance) are sufficient to gauge the ability of the Boraflex racks in the spent fuel pool to meet their design basis. The argument used in the DER is weak [PWR corrective actions....PWR degradation], because it did not address the main message that the blackness testing is capable of finding significant boraflex problems.	It is agreed that the argument in the DER is not persuasive in the context of the GALL attribute assessment and will be deleted from the BMP basis document (AMP attribute assessment). Note: A change to the AMP basis document is required.

LR Contact	Brown	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Brown	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/8/2004		

11 8/10/2004	B2.1.3	Patterson	During stud testing is stud tensioning used?	No, Table IWB-2500-1, Examination Category B-G-1, Examination Items B6.20 and B6.30, Note (1) allows bolting to be examined (a) in place under tension; (b) when the connection is disassembled; or when the bolting is removed. Unit 1 studs are examined while still in the vessel and following the disassembly of the closure head. Unit 2 studs are examined following removal of the studs from the vessel. Note: Change to the AMP basis document required (add specifics to

LR Contact	Petras	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Petras	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	8/20/2004		

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Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
12 8/10/2004	B2.1.3	Patterson	Can the differences b/w the GALL ASME code requirements and NMPs committed ASME code requirements be readily identified (does a summary exist)?	No such summary document exists. NMP is committed to the 1989 edition of the ASME Code with no addenda. This was found acceptable by the NRC in SERs dated October 5, 2000 and March 3, 2000. As such, it was not considered necessary to perform such a comparison.

LR Contact	Petras	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Petras	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	8/20/2004		

13 8/10/2004	B2.1.3	Patterson	What is the "stable lubricant" referred to in the GALL Program Attribute Assessment and what is the technical basis for its choice?	Per N1-MMP-GEN-901 and N2-MPM-GEN-904; DAG No. 156 Thread Lubricant is used on the NMP threads. Also this lubricant is recommended by the OEM (GE) for use on the reactor system (GE "Red Book" NEDE-31735P).

LR Contact	Petras	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Petras	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	8/20/2004		

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Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
14 8/10/2004	B2.1.3	Patterson	Is NMP committed to the ASME XI code with no addenda as indicated in the LRA and the Program Attribute Assessment, or to the 1989 Addenda as appears to be referenced in the relief request?	The reference to the 1989 Addenda in Request for Relief ISI-11 was used as a basis to support the change in examination methods and not to use a later Addenda of Section XI. The 1989 Edition No Addenda is the current code of record.

LR Contact	Petras	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Petras	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	8/20/2004		

15 8/10/2004	B2.1.3	Patterson	Do we use the heating hole in the center of the studs for radial UT testing?	No, With the NRC mandate to utilize Appendix VIII of the 1995 thru 1996 Addenda of Section XI as modified by the EPRI Performance Demonstration Initiative (PDI) qualified Ultrasonic Techniques, the closure head stud examination from the heater hole is not currently being used at NMP.

LR Contact	Petras	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Petras	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	8/20/2004		

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Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
16 8/11/2004	B2.1.30	Nguyen	XI. E2 Provide the justification for why the test frequency of 10 years is acceptable. (Note: this was justified in Section 3.6 of the V.C. Summer SER)	The assessment of attribute 4 (detection of aging effects) shall be amended. The phrase “and every 10 years thereafter” will be removed from the end of the third paragraph. The sentence below will be added to the end of the third paragraph. “The test frequency of these cables shall be determined by the applicant based on engineering evaluation not to exceed ten years.”

LR Contact	D. Taormina	**LRA Revision Required?**	Yes
Assigned Department/ Individual	License Renewal D. Taormina	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/8/2004		

17 8/11/2004	B2.1.30	Nguyen	XI.E2 AMP: In Section 1.2, Scope of Program, suggest adding "as required by Aging Management Review" to the end of the second sentence in place of "within the scope of license renewal."	The assessment of attribute 1.0 (scope of program) will be amended to include the suggested phrase. The second sentence of 1.2 will state; These cables are used for radiation monitoring, nuclear instrumentation (source, intermediate, local and average power ranges) and other instrumentation that are subject to aging management review.

LR Contact	D. Taormina	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal D. Taormina	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/8/2004		

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Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
18 8/11/2004	B2.1.2	Saba	LRA Section B2.1.2 refers to the Peach Bottom SER for acceptance of the exception to GALL XI.M2 program. However, NMP technical staff says that NMP is not using past/precedent. Clarify this inconsistency. NRC Request for Additional Information 9/8: Add justification, other than referring to the approved SER by the NRC, in the LRA Section B2.1.2 for using EPRI R2 instead of 1994 version of EPRI TR-103515	The information provided in reference to the peach Bottom SER is presented for information only to aid in clarifying a previous NRC's approach to another similar applicant's position. The premise remains that NMP does not use past/precedent justifications for AMPs and AMRs on a generic basis. NRC Request for Additional Information 9/8: A detailed justification for the use of Revision 2 (2000 edition) of the EPRI Water Chemistry Guidelines will be added to the LRA. A description of each difference between the NMP1 and NMP2 Water Chemistry Control Program and the requirements of the 1994 edition of EPRI TR-103515 will be included, along with a specific justification for each difference. The document entitled “Comparison Of NMP1 And NMP2 Water Chemistry Control Program To NUREG-1801 (GALL) Program X1.M2 Requirements,” provides the basis for the information to be added to the LRA. The reference to the Peach Bottom LRA will be removed.

LR Contact	Poehler	**LRA Revision Required?**	Yes
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	Yes
Issue Status	Waiting for NRC Response		
NRC Closure Date			

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Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
19 8/11/2004	B2.1.2	Saba	Which EPRI revision is used for Units 1 and 2 Water Chemistry Control program? If you are using both R1 and R2, explain why? Identify the differences between R1/R2 and VIP 29 revision. Where EPRI R1 and R2 are used in the implementing procedures. NRC Request for Additonal Information 9/8: Explain why NMP is using both R1 and R2 versions of the EPRI Guideline, if the latest version has the best and most current industry understanding of water chemistry issues (NMP response to Issue 25). Provide justification	Section 5.1 of the site chemistry administrative procedure GAP-CHE-01 outlines the Unit 1 TS and the Unit 2 TRM documentation. Additionally, procedure References 5.2.2 and 5.2.3 identify the two EPRI revisions as applicable to the site Chemistry program. NMP Unit 1 maintains compliance with the 1996 Revision of EPRI TR-103515-R1. references/commitments. Specifically, U-1 Technical Specifications Bases for 3.2.3 defines the CLB requirement referencing the BWRVIP-29 (EPRI TR-103515-R1) for select chemistry parameters (Conductivty, Chlorides, and Sulfates). This U-1 reference is the only applicability for the Chemistry program for the BWRVIP-29 document. Other U-1 parameters and the U-2 Chemistry program is currently aligned with EPRI TR-103515, 2000 Revision. Response to Request for Additional Information: NMP1 is referencing both the Revision 1 and Revision 2 EPRI Water Chemistry Guidelines because NMP1 Technical Specifications reference Revision 1 in the bases for Technical Specification 3.2.3 and 4.2.3. The Technical Specification Limiting Conditions for Operation (LCO) are for Action Level 2 and 3 conductivity, chloride, and sulfate during startup/shutdown, hot standby, and power operations. Action level 1 chloride, sulfate, and conductivity during power operations for NMP1 are Technical Specification bases values, but not LCO's. This technical specification requirement was added prior to the issue of the latest EPRI BWR Water Chemistry Guidelines, in response to emerging problems with IGSCC in the NMP1 reactor internals. At the time, Revision 1 of the guidelines was the best, most current version of the guidelines available. For parameters and operating conditions other than those covered by the Technical Specifications, NMP1 references EPRI TR-103515-R2, BWR Water Chemistry Guidelines – 2000 Revision. NMP2 references only EPRI TR-103515-R2, BWR Water Chemistry Guidelines – 2000 Revision.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	No

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Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
Issue Status	Closed			
NRC Closure Date	9/17/2004			
20 8/11/2004	B2.1.2	Saba	Does NMP comply with the recommendations BWRVIP-62? If yes, explain how?	As discussed in the BWRVIP Program discussion, BWRVIP-62 is not currently approved by the NRC. The report, however, is cited in Attribtue 3, “Parameters Monitored/Inspected”, of the GALL, where it offers that the applicant may use the guidelines for inspection relief for vessel internal components with H2 water chemistry. NMP2 credited the BWRVIP-62 report in a shroud evaluation from 2000-2004, but is not currently invoking the noted BWRVIP-62 inspection relief. NMP1 has never taken credit for HWC in shroud re-inspection evaluations, thus has not invoked the inspection relief for vessel internal components. When the document is approved for license renewal by NRC (i.e., becomes a ‘–A’ document), NMP plans to take credit for the inspection relief that is permitted by BWRVIP-62. At such time and as applicable to the GALL text, NMP will make the appropriate changes to the BWRVIP LR basis document to define and clarify the applicable Unit 1 and Unit 2 inspection relief details. Note: A revision to the Reactor Vessel Internals AMP basis document is required (B2.1.8) A draft of the reviesion to the Rx Vessel Internals AMP basis document was provided to the NRC auditors on 9/17/04.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	Yes
Issue Status	Waiting for NRC Response		
NRC Closure Date			

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Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
21 8/11/2004	B2.1.2	Saba	Provide a listing of the parameters that are monitored along with their measurement frequencies and their limits. Provide tables of parameters and frequencies for monitoring the effectiveness of HWC and EPRI water chemistry limits.	Enclosure 1 and 2 of site administrative procedure GAP-CHE-01 contain the applicable NMP1 and NMP2 parameters and action level values/limits. These are consistent with EPRI TR-103515 Rev. 1 and Rev. 2. For NMP1, the sampling frequency is daily whereas for NMP2 the frequency is 3 times per week. The Program Attribute Assessments for the NMP1 and NMP2 Water Chemistry Control Programs will be modified to include the type of tables requested in the question. These tables will document equivalency with the requirements of the GALL or provide technical justification for parameters and frequencies that are not equivalent to GALL. Tables showing comparison between EPRI TR-103515 Rev. 0, 1 & 2 and NMP procedures were developed and provided to the NRC auditor on 9/16/04. NRC Auditor accepted information on 9/17/04.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/17/2004		

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Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
22 8/11/2004	B2.1.2	Saba	List DERs for the parameters exceeding their limits. Describe how the effect of these DER was evaluated, if any aging effect was detected. NRC Request for Additional Information 9/10 The intention of this question was to review the DERs that were issued because the measured parameters exceeded their limits and to obtain reasonable assurance that the water chemistry was effective in mitigating aging effects of the SCCs. The auditor asked to describe how the effect of these DER was evaluated, if any aging effect was detected. The NMP response does not include responses to these questions. Based on the review of the list that is provided, it appears that both Unit 1 and Unit had many DERs related to high dissolved oxygen level, higher conductivity, and metal (iron content). Explain how these issues were evaluated and corrected. In addition, explain if any aging effect due to above issues has been detected.	NEW RESPONSE PROVIDED ON 10/6: DER's from 2000-2004 were evaluated. This response covers the 2000-2004 DER's listed in the initial response to this issue plus some additional DER's found by searches of the ECAP database for NMP2 (the initial list for NMP2 does not appear to cover 2003-2004) These DER's represent more recent operating experience for NMP1 and NMP2 and are considered more representative of the plant's current performance. No aging effects were attributed to any of the instances when chemistry parameters exceeded action levels. Water Chemistry is a preventive program that manages aging by maintaining chemistry parameters within acceptable limits. It is not a condition monitoring program in which inspections are conducted to detect the effects of aging. In all cases where action levels were exceeded, the requirements of procedure GAP-CHE-01 were followed with respect to notification of Shift Supervisor (SSS), General Supervisor of Chemistry, and other management. In a few cases, when fuel warranty parameters were exceeded, the fuel vendor performed a review of possible deleterious effects on the fuel only, finding no deleterious effects in any case. Below is a summary of the major findings for both units. NMP1 Feedwater Dissolved Oxygen There are numerous DERs documenting feedwater dissolved oxygen levels exceeding Action Level 1. Action Level 1 for feedwater dissolved oxygen is <30 or >200 ppb, during power operations. This action level is based on the Fuel Warranty, rather than the EPRI Guidelines. This action level changed from Revision 8 of GAP-CHE-01 (<20 or >50 ppb) to its current value of <30 or >200 ppb in Revision 9 of GAP-CHE-01, which became effective on 4/29/2004. Most of the instances where feedwater dissolved oxygen exceeded action level 1 were brief. Durations ranged from <10 minutes to 8-1/2 hours, with most less than one hour. These incidents generally occurred during or after maintenance activities that required a portion of the system to be opened, or during condensate demineralizer evolutions such as transfer of resin to the cation tank, or ultrasonic resin cleaning (URC). When condensate or condensate spray pumps are taken out of service for maintenance, oxygen can enter the system through the pump seals. Oxygen injection, which is normally used to maintain feedwater dissolved oxygen in the desired band, is then secured. However,

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				there were several DERs in which startup or shutdown of oxygen injection was not well coordinated with removing or returning the pumps to service, causing high or low feedwater dissolved oxygen. Since the response of dissolved oxygen to startup/shutdown or maintenance evolutions is well understood and expected, and the high or low oxygen conditions were brief and self-correcting, the DER's written for feedwater dissolved oxygen were generally for trending purposes only and required no long term corrective action. However, programmatic changes were initiated as a result of DER 2002-3075. In this case, exceeding the action level was attributed to operator use of "air assist" to move resin without subsequent venting and filling of demineralizer. Also, it was noted that the fuel warranty limit on dissolved oxygen was low compared to typical industry practice. One corrective action was to renegotiate with the fuel vendor the action level 1 for dissolved oxygen to increase from >50 ppb to >200 ppb, which is the industry standard. Another corrective action was to change the operating procedure N1-OP-22 to restrict the use of "air assist" and to direct operators to vent and fill the CND after resin bed transfers. Air assist was implicated as a cause of elevated feedwater oxygen in several other DERs. No aging effects were noted in the DERs as being associated with the oxygen exceeding action levels. Feedwater Iron and Copper There were several DERs related to feedwater iron exceeding action level 1. Two of these DERs attributed the high iron to sudden lake water temperature changes that caused corrosion products to slough off the condenser tube outer diameter. One exceedance of the iron action level was attributed to extended low power operation during startup, and another exceedance was the result of malfunctioning ultrasonic generators that went undetected for a time (ultrasonic resin cleaning, or URC, is used to remove insoluble metals from the condensate demineralizer resin). The corrective actions for iron exceeding action levels was generally to ultrasonically clean (URC) the condensate demineralizer resin beds and to sample for metals (including iron) more frequently. These incidents generally lasted only a few days. Condensate Demineralizer Influent (CDI) Conductivity There were two DERs documenting condensate demineralizer

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				influent conductivity exceeding action level 1 of 0.10 µS/cm. One of these DERs attributed the elevated conductivity to dissolved gasses and other impurities. Both incidents occurred during a startup. Removal of dissolved gasses and other impurities is inefficient at low power because of low water temperature (solubility of gas decreases with increasing temperature) and low flows through the demineralizers. Therefore, elevated conductivity due to dissolved gasses and impurities is best remedied by continuing power ascension. Reactor Water Conductivity There were several DERs initiated when reactor water conductivity exceeded Action Level 1 (0.19 µS/cm). Most of these instances were directly attributable to hydrogen injection being secured, either for planned maintenance, or during unit startup or shutdown. Therefore, these DERs were for trending purposes only. One DER for high conductivity was attributed to use of a non-approved, high chloride solvent on the condensate pump seals during maintenance. A conductivity and chloride spike then occurred when the pump was returned to service. This DER resulted in several corrective actions that caused changes to maintenance procedures. The pump maintenance procedure was changed to specify that consumable materials meet requirements of GAP-CHE-01. All mechanical maintenance procedures were reviewed to ensure consumable materials are consistent with the requirements of GAP-CHE-01. Labeling for controlled materials was improved. The maintenance shop was briefed on importance of the chemical control program. One DER documented high conductivity due to noble metal chemical addition (NMCA). However, elevated conductivity is expected and is allowed by procedure for up to 5 months after NMCA. No aging effects were noted in any of the DERs related to high conductivity. Reactor Water Sulfate Three DERs were reviewed documenting reactor water sulfates exceeding action level 1 of 5ppb. Two of these were directly attributed to the reactor water cleanup (RWCU) system being out of service for maintenance. The other instance was attributed to power changes during startup. The duration of the elevated sulfates was 1 day or less in each instance. No aging effects were attributed to these events. Three other DERs documented an increasing trend in sulfate within action levels. This typically indicates a resin bed needs to be changed out.

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
				NMP2 Condensate Demineralizer Effluent/Feedwater Dissolved Oxygen There are numerous DERs for condensate demineralizer effluent (CDE) and/or feedwater dissolved oxygen exceeding action level 1, 2 or 3. For the most part, these occurrences were related to placing a demineralizer back in service after the demineralizer had been out of service (typically for resin cleaning or replacement). Usually, the action level is only exceeded for 1-2 minutes after the demineralizer is put back in service. Most of these DERs were for trending purposes only, and as such, did not require long term corrective actions. However, the total time that action levels are exceeded is tracked as required by the fuel warranty. One DER (2001-4211) documented an extensive investigation into the causes and possible corrective actions for the oxygen spikes when demineralizers are placed back inservice. The DER concluded that the design of the demineralizers does not permit all the entrapped air to be removed prior to bringing the demineralizer back in service. However, the amount of entrapped air can be minimized (see table for details). DER 2001-4211 also noted the total time exceeding Action Level 1 in the previous 6 months was only 35 minutes, or 0.0035% of the time allowed by the fuel warranty. DER 2000-4675 attributed feedwater oxygen above the action level to piping upstream of the inlet AOV and downstream of the outlet AOV not being filled prior to putting the demineralizer back in service causing the oxygen spike. Changes to operations procedure N2-OP-5 were recommended, for filling the piping upstream of the inlet and downstream of the outlet AOVs after maintenance work (intrusive) has been performed on the AOV to minimize the air intrusion. DER 2004-2278 documented low feedwater oxygen due to the oxygen injection system not being put in service promptly after a condensate pump was returned to service after maintenance (normally oxygen injection can be secured when a pump is out of service due to leakage through the pump seals). A procedural change was made to remedy this. Feedwater Iron and Copper Three DER's were reviewed for feedwater iron, copper, or total metals exceeding action levels. These were attributed variously to falling behind on demineralizer ultrasonic resin cleaning (URC), extended operation at low power levels, or sudden temperature

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
				changes affecting condenser hotwell temperatures. Action levels were typically exceeded from one to several days, since iron sampling is normally done on a weekly integrated basis. Even at increased sampling frequencies, sampling is not instantaneous. Corrective action generally included condensate demineralizer resin bed cleaning and increased sampling. Condensate Demineralizer Influent (CDI) Conductivity There were five DERs in which condensate demineralizer influent (CDI) conductivity exceeded the action level 1 value of 0.10µS/cm. As for NMP1, these are generally attributed to the presence of noncondensable gasses during startup that are removed as power is increased, particularly as the steam jet air ejectors are activated. One DER resulted in a preventive action of placing a note in GAP-CHE-01 stating that elevated CDI conductivity during startup is an expected response (however, action level exceedance must still be reported). One instance of elevated CDI conductivity occurred after a scram. The elevated conductivity was attributed to HPCS initiation, which injected higher conductivity water into the reactor coolant system that subsequently reached the condenser, and routing of reactor water cleanup to the condenser when that system was taken offline. Reactor Water Conductivity No DERs were found during the time frame evaluated in which the GAP-CHE-01 limit for reactor water conductivity was exceeded. Reactor Water Sulfate There were several DERs for reactor water sulfates exceeding Action Level 1 value for power operation of >5 ppb. These were typically caused by exhausted resin beds which can cause resin throw, which was remedied by changing out the resin bed. Two DERs documented a condition where a new type of resin retention element was improperly installed in the demineralizers, allowing some resin beads to escape. The corrective action included reinstalling the retention elements properly, with a follow-up inspection 3 months later. One DER in which the action level was exceeded was due to a delay in putting in service a resin bed prepared several days earlier. A longer purge-rinse time should have been applied to remove organo-sulfates before putting this bed in service (organo-sulfates can build up when a resin bed sits unused in water). Several DERs documented increasing trends in sulfate above the

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
				chemistry goal of 2 ppb (not an action level). This provides a margin against exceeding the sulfate action levels and demonstrates NMP's commitment to maintaining the best possible reactor water chemistry. 10/13/04: NRC provided verbal acceptance during conference call.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	10/13/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
23 8/11/2004	B2.1.2	Saba	It appears that in R2 (2000 revision), chlorides and sulfates no longer needs to be measured daily. Is this applicable to NMP? If so, justify why this is applicable to NMP Units 1 and 2. NRC Additional Request for Information 9/8: Table 4-5b, footnote c states that these frequencies can be adjusted based on site-specific resource allocation needs. Recognizing that chloride and sulfate have associated near-term operational actions for off-term conditions, relaxation of the frequencies should only be performed when conductivity values and/or chemistry trends could be used to ensure that Action Level 1 limits are not exceeded. Considering numerous DERs for both Unit 1 and Unit 2 that are issued because conductivity and water chemistry exceeded their limits (NMP response to Issue 22), justify relaxation of the frequencies for Unit 2. Note that this justification should be added to the LRA Section B2.1.2 for acceptance of the exception to the GALL program	Table 4-5b, footnote c of the EPRI water chemistry guidelines (TR-103515-R2) clarifies the EPRI allowance/relaxation to sampling frequencies. Unit 1 still adheres to daily sampling (see Section 5.0 and 8.0 of N1-CSP-D100 (TS 4.2.3)), whereas, Unit 2 monitors 3 times per week (see Section 8.7 of N2-CSP-GEN-D100) . Response to Request for Additional Information: Refer to the attached document entitled “Comparison Of NMP1 And NMP2 Water Chemistry Control Program To NUREG-1801 (GALL) Program X1.M2 Requirements,” for the justification of the relaxed sampling frequency. All exceptions to the GALL, and the justification to the exceptions, are summarized in the narrative portion of the document. Also, the tables entitled “NMP2 Reactor Water – Startup/Hot Standby”, “NMP 2 Reactor Water, Power Operations (Normal Water Chemistry)”, and “NMP2 Reactor Water, Power Operations (Hydrogen Water Chemistry),” contained in the aforementioned document, document the detailed comparison to GALL and justification of the exceptions.

LR Contact	Poehler	**LRA Revision Required?**	Yes
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/17/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
24 8/11/2004	B2.1.2	Saba	It appears that in R2 (2000 revision), hydrogen water chemistry (HWC) or HWC with noble metals chemical addition (NMCA) no longer need to measure electrochemical potential (ECP) on a continuous basis. If this is applicable for NMP. Explain why. NRC Additional Request for Information 9/8: Clarify whether NMP ECP sampling/analysis, retained from BWRVIP-29 is consistent with EPRI 1994 (which is referred to in GALL as an acceptable version). If not provide justification.	Both units have retained the ECP sampling/analysis from BWRVIP-29, and as described below. Unit 1 measures ECP on a continuous basis, and is recorded daily (printout). If the U-1 continuous monitoring ECP probe is lost, chemistry administrative procedure GAP-CHE-03 directs the alternate actions. Unit 2 evaluates the ECP through direct inline dissolved oxygen and dissolved hydrogen measurements. As Unit 1, the GAP-CHE-03 procedure outlines alternate actions for a loss of either detection probe. Both plants methods meet the criteria of Table 4-4 (footnotes a and f) of the 1996 Version and Table 4-5b of the 2000 Version. Response to Request for Additional Information: ECP sampling/analysis for NMP1 and NMP2 have some differences from BWRVIP-29 (EPRI TR-103515), BWR Water Chemistry Guidelines – 1993 Revision, Normal and Hydrogen Water Chemistry, (1994 edition, Revision 0) endorsed by GALL. These differences are described and justified in the attached document entitled "Comparison Of NMP1 And NMP2 Water Chemistry Control Program To NUREG-1801 (GALL) Program X1.M2 Requirements."

LR Contact	Poehler	**LRA Revision Required?**	Yes
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/17/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
25 8/11/2004	B2.1.2	Saba	What are chlorides and sulfates action levels that are used in NMP Units 1 and 2. If these action levels are increased, provide justification. NRC Additional Request for Information 9/8: The project team finds the Unit 1 AL 1 values for conductivity, chloride, and sulfate acceptable (based on EPRI 1996 version), since these are reviewed and approved by the NRC (Safety Evaluation enclosed with the letter form Darl S Hood (NRC) to John H Mueller (NMPS), dated September 18, 1998). For Unit 2, although the 2000 version represents the best and most industry understanding of water chemistry, NMP2 needs to provide plant specific justification, if it is using higher action levels than those in the EPRI 1994 version.	Enclosure 1 and 2 in GAP-CHE-01 identify the applicable action level values (AL 1, 2, and 3) for chloride and sulfates, as well as other required parameters. Levels are aligned the industry guidance contained in EPRI 2000 with the exception for the Unit 1 AL 1 values for Conductivity, Chloride, and Sulfate, which are TS 3.2.3 bases requirements aligned to the 1996 (BWRVIP-29) EPRI Version. The justification for use of a different revision of the EPRI Water Chemistry Guidelines than the revision referenced in GALL is that the latest revision of the EPRI Water Chemistry Guidelines represent the best, most current industry understanding of water chemistry issues and as such, will be adopted as appropriate. A comparison of the NMP1 and NMP2 chloride and sulfate limits to the GALL requirements will be added to the Water Chemistry Program Attribute Assessments for NMP1 and NMP2. Response to Request for Additional Information: Justification for the higher chloride and sulfate levels is provided in the attached document entitled “Comparison Of NMP1 And NMP2 Water Chemistry Control Program To NUREG-1801 (GALL) Program X1.M2 Requirements,” specifically in the table entitled “NMP2 Reactor Water, Power Operations (Hydrogen Water Chemistry).” Exceptions to GALL and their justifications are also provided in the narrative summary at the beginning of the document.

LR Contact	Poehler	**LRA Revision Required?**	Yes
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/17/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
26 8/11/2004	B2.1.2	Saba	The 2000 revision added reactor water iron as a new diagnostic parameter. Is this parameter used for NMP Units 1 and 2. What aging effects will be detected by measuring this parameter? What are the limits? What implementing procedure is used?	Feedwater iron sampling is an EPRI requirement in both the 1996 and 2000 versions. Specifically, Table 4-5 of the 1996 version details the iron monitoring as a Control Parameter, where the 2000 version identifies it as a Diagnostic Parameter. The 2000 version also specifies iron in reactor water should be measured as a basis for mass balance but provides no numerical limit. Iron is monitored in both units in feedwater and reactor water. NMP has historically monitored, trended, and evaluated soluble and insoluble concentrations. In addition, minimizing the iron concentration is considered beneficial to crud buildup and radiation levels from both activated iron and cobalt in the vessel and RCS system. The limits for feedwater soluble iron are given below in ppb. There is no limit for reactor iron concentration in the EPRI Guidelines or NMP procedures. Action Level 1 / Action Level 2 / Action Level 3 EPRI (total iron) >5 / - / - Fuel Warranty (insoluble iron) >10 / >20 / >40 Fuel Warranty (soluble iron) >1.0 / >2.0 / >4.0 No specific aging effect is detected by measuring this parameter. The BWR Water Chemistry Guidelines are focused on prevention of IGSCC in coolant system piping and reactor internals. The technical bases for water chemistry control in the 2000 Water Chemistry Guidelines indicates iron has no effect on IGSCC crack growth in either normal water chemistry (NWC) or hydrogen water chemistry (HWC). High feedwater iron could indicate increased general corrosion rates of carbon steel feedwater system piping. Procedure GAP-CHE-01, "BWR Water Chemistry Operating Limits," Rev. 09, provides the action levels for iron. Implementing procedures are S-CTP-V640 Rev. 01, "In-Line Sampling Of Filterable Solids Cations And Anions Using RCT Model 505 Corrosion Product Sampler," and S-CTP-V645 Rev. 0, "Operation Of Centec Model 1000 Corrosion Product Sampler."

LR Contact Poehler **LRA Revision Required?** No

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID	LRA Section	NRC Inspector	Issue Description	Actions Taken
Date Identified				

Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/8/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
27 8/11/2004	B2.1.2	Saba	Similar to Issue No. 26, for continuous monitoring of dissolved oxygen concentration. Show location of these instruments, if any, on the P&ID.	For reactor water dissolved oxygen, the U-1 instrument is located on the Reactor Coolant Sentry Panel, which normally lines up the sample to the Clean-up Non-regenerative Heat Exchanger Outlet. An alternate source for the sample can be #11 Reactor Recirculation Loop (ref. Section 8.1.1 of N1-CSP-D100). Feedwater dissolved oxygen is also continuously monitored. The table below provides the P&ID numbers that show the sample points. System/Location - Reactor Water (D/S of Non-Regen HX) Valve - 110-492 P&ID - C18041C, Sheet 2, Rev. 24 LR Drawing Number - LR-18041-C, Sheet 2, Rev. 0 System/Location - Reactor Water (Reactor Recirc. Loop 11) Valve - 110-266 P&ID - C18041C, Sheet 2, Rev. 24 LR Drawing Number - LR-18041-C, Sheet 2, Rev. 0 System/Location - Feedwater P&ID - C18041, Sheet 11, Rev. 6 System/Location - Control Rod Drive (no Separate sample point, sampled via condensate demineralizer effluent P&ID - C18041C, Sheet 11, Rev. 6 The Unit 2 DO instrument for reactor water is located at the Reactor Sample Panel, which lines up the preferred sample point from the influent to the Reactor Water Clean-up Filter Demineralizer (valve 2SSR-V3). An alternate sample can be drawn from the Recirc System Loop A (valve 2SSR-V23) and residual heat removal system valves 2RHS*SOV35A, 2RHS*SOV35B, 2RHS*SOV36A, and 2RHS*SOV36B (ref. Section 8.4 of N2-CSP-GEN-D100). The P&ID drawing numbers for these valves are given below, along with the corresponding License Renewal (LR) drawing number. System - Reactor Water Valve - 2SSR-V3 P&ID - 017 Sheet D, Rev. 13 System - Reactor Water Valve - 2SSR-V23 P&ID - 017 Sheet G, Rev. 20 LR Drawing Number - 017-G-0 System - Reactor Water Valve - 2RHS*SOV35A P&ID - 017 Sheet G, Rev. 20

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
				LR Drawing Number - 017-G-0 System - Reactor Water Valve - 2RHS*SOV35B P&ID - 017 Sheet G, Rev. 20 LR Drawing Number - 017-G-0 System - Reactor Water Valve - 2RHS*SOV36A P&ID - 031 Sheet D, Rev. 19 LR Drawing Number 031-D-0 System - Reactor Water Valve - 2RHS*SOV 36B P&ID - 031 Sheet E, Rev. 20 LR Drawing Number 031-E-0 System - Feedwater P&ID - 017 Sheet A, Rev. 7 System - Control Rod Drive Valve - 2RDS-V93 P&ID 017 Sheet G, Rev. 20 LR Drawing Number 017-G-0 The NRC Audit team has access to all the License Renewal drawings because these part of the License Renewal Application. Other P&ID drawings will be available at the site for review by the audit team.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/8/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
28 8/11/2004	B2.1.2	Saba	Elaborate on the programs that are used for verification of the WCC program for primary water, condensate and feedwater, and control rod drive mechanism cooling water.	The Water Chemistry Program, a preventive program, is typically credited in conjunction with a condition monitoring program, such as Inservice Inspection (ASME Section XI AMP - GALL XI.M1) or Flow Accelerated Corrosion (GALL X1.M17). For small-bore piping less than NPS 4, including pipe, fittings, and branch connections, this verification is noted as being accomplished by the One-Time Inspection AMP (GALL XI.M32). These programs detect, monitor and trend the effects of aging such as loss of material and cracking, which could increase if the Water Chemistry Program is ineffective. Primary water components (reactor water) are typically covered by the ASME Section XI, IWBCD Inservice Inspection Program (GALL X1.M1), supplemented by One-Time Inspection (GALL X1.M32), when the examination method required by ASME Section XI is not adequate to detect the aging effect. For inner-diameter initiated cracking and loss of material, a volumetic examination is necessary to detect these aging effects before they can cause leakage of the component. For ASME Code Class 1 and 2 piping welds a Risk-Informed Inservice Inspection (RI-ISI) Program is implemented as an alternate to the ASME Section XI piping weld examination requirements. The Alternate Risk-Informed program requires a volumetric (ultrasonic) examination of selected Code Class 1 and 2 pressure retaining welds. Exclusion from the ultrasonic examination requirements is as denoted in ASME Section XI, subsections IWB and IWC. Typically welds in pipes 1” and less for Class 1 and pipes 4” and less for Class 2 are excluded from ultrasonic examination requirement. Therefore, piping components not subject to ultrasonic examination under either the standard ISI or RI-ISI programs, but which have corrosion-related aging effects initiating on the component inside surfaces, are typically included in the One-Time Inspection Program. A sample of these components will be subject to volumetric or destructive examination to detect such effects. The Flow-Accelerated Corrosion (FAC) Program (GALL X1.M17) is typically assigned for non-stagnant or non-low-flow condensate and feedwater piping components that are susceptible to flow-accelerated corrosion. The One-Time Inspection Program is used for feedwater and condensate components such as valves that are not subject to FAC inspections. One-Time Inspection is often credited for management of corrosion-related aging effects used for many Control Rod Drive Hydraulic System components that are not covered by the ASME Section XI IWBCD program.

LR Contact Poehler **LRA Revision Required?** No

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID	Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken

Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/10/2004		

29 8/2/2004	N/A	Le	The following is a list of documents, that the Nine Mile Point Audit team would lile to have available during their on-site AMP/AMR audit review: 1) Bases document for each AMR and AMP. They could be in the form of calculations, technical reports, basis document, or summary report. We prefer them in a stand alone document. However, an explanation on how such a document could be constructed from the ones provided would be marginally acceptable. 2) NMP LRA commitment list, if available. 3) Multiple hard copies of the complete NMP LRA. 4)UFSAR & T.S. 5)Key references to AMR/AMPs (including regulatory and industrial documents, plant implementing procedures) 6)Codes (ASME, ACI etc.) 7)The applicable Topical reports.	Information has been made available

LR Contact	Vandeputte	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Vandeputte	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	8/9/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
30 8/10/2004	Appx. B	Chang	For the new AMP's that NMP has committed to develop and implement prior to the period of extended operation, what is NMP's intention with respect to informing or submitting and requesting approval from the NRC when the new programs are developed and implemented?	As with any commitment NMP makes to the NRC, the resolution and/or implementation is subject to review by the NRC. Specifically for new AMPs, the NRC can utilize Inspection Procedure 71003 Post-Approval Site Inspection for License Renewal, to verify that outstanding commitments have been met. This procedure also includes specific wording whereby the assistance of NRR/DRIP/RLEP can be utilized to ensure the licensee commitments have been met. Currently there is no specific notification to the NRC required when a commitment has been satisfied. Consistent with the industry, NMP would prefer that any review of new AMPs be conducted as part of the inspection process.

LR Contact	Mazzaferro	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Mazzaferro	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/13/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
31 8/10/2004	B2.1.29	Nguyen	XI.E1 AMP: Confirm whether NMP program includes non-EQ electrical and I&C containment penetration assembly pigtails/connectors in an adverse localized environment.	Response: The containment electrical penetration pigtails and connectors located in adverse localized environments will be included within the scope of the E1 program. Attribute 1 (Scope) will be modified to reflect this inclusion. 1.2 Nine Mile Point Units 1 and 2 The Non-EQ Electrical Cables and Connections Program will be a new program at NMP that applies to accessible cables and connections within the scope of license renewal that are installed in adverse localized environments caused by heat, radiation, or moisture in the presence of oxygen. Connections include connectors, splices, electrical penetration assembly pigtails, terminal blocks, and fuse blocks. This program attribute will be consistent with the corresponding GALL attribute upon new program development. The U2 containment electrical penetration AMR reflects the inclusion of the cable and pigtails. The Unit 1 containment electrical penetration AMR provides descriptions of the penetrations with connections at the flange. Therefore, no pigtails exist at Unit 1. The connectors have been included in the site population of connectors evaluated in the cable and termination AMR. Note: The AMP basis document and the LRA will be revised

LR Contact	D. Taormina	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal D. Taormina	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/8/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
32 8/10/2004	3.6.2	Nguyen	XI.E1 AMP: The scope of the cables and connections program includes cables, connectors, terminal blocks, fuse holders and splices in adverse localized environments. However, in Table 3.6.2.C-1, NMP identifies cables in an adverse localized environment but does not identify connectors, terminal blocks, fuse holders or splices in an adverse localized environment. Confirm whether there are connections in an adverse localized environment at NMP.	Table 3.6.2.C-1 will be modified to reflect consistency with the GALL Volume 2, Chapter VI (A) table. The Component Type will be changed to “Conductor insulation for electrical cables and connections”. The “Air” environment will be removed. The separate component types for connectors, splices, fuse blocks, and terminal blocks will be eliminated. The AMP inspections will include an evaluation of connections that are in scope for license renewal and require an aging management review. Note: Revision to LRA required.

LR Contact	D. Taormina	**LRA Revision Required?**	Yes
Assigned Department/ Individual	License Renewal D. Taormina	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	8/13/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
33 8/10/2004	B2.1.29	Nguyen	XI.E1 AMP: In NMP's AMP basis document, a statement is made in the Operating Experience section that there is no plant-specific OE for this program, but does provide two examples of plant-specific OE for cables. Confirm whether these two examples represent remote (isolated) events or are part of a wide-spread situation.	In support of the aging management review for cables and terminations, the deviation report database (ECAP), containing deviation event reports (DERs), was queried using selected keywords. The results were conservatively screened to determine which conditions might be potentially age-related. The DERs are listed in table 10.2 of the Aging Management Reviews (Unit #1 Cables and Terminations, Unit #2 Cables and Terminations). Fifty-three (53) DERs were identified for Unit1 with cable and connector degradation. One hundred five (105) DERs were identified for Unit 2 with cable and connector degradation. A review of the DERs found two (2) DERs with age related degradation at Unit 1 and one (1) DER with age related degradation at Unit 2. The examples listed represent an isolated event or condition and are not part of a wide-spread situation.

LR Contact	D. Taormina	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal D. Taormina	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/8/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
34 8/10/2004	B2.1.29	Nguyen	XI.E1 AMP: In the GALL description for detection of aging effects, a statement is included that provides justification that a 10-year inspection frequency is sufficient. The NMP AMP basis document identifies a 10-year inspection frequency but does not provide any justification. Provide the justification for the inspection interval.	The NMP justification for the 10-year inspection frquency is the same as that described in the GALL. The AMP basis document will be revised as folllows to include the justification: Revised Section 4.2 for NMP E1 AMP "Conductor insulation aging degradation from heat, radiation, or moisture in the presence of oxygen causes cables and connection jacket surface anomalies. Accessible electrical cables and connections installed in adverse localized environments are visually inspected at least once every ten years. This is an adequate period to preclude failures of the conductor insulation since experience has shown that aging degradation is a slow process. The first inspection for license renewal will be completed before the period of extended operation. This program attribute will be consistent with the corresponding GALL Attribute upon program development."

LR Contact	D. Taormina	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal D. Taormina	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/8/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
35 8/10/2004	B2.1.29	Nguyen	XI.E1 AMP: In the GALL description for Detection of Aging Effects, a statement is included that links the parameter inspected (jacket surface anomaly) to the aging effect (heat, radiation or moisture in the presence of oxygen). The NMP AMP basis document does not provide a similar statement. Confirm NMP's intention as to whether the linkage of a parameter monitored to aging effect will be included in the future program documentation.	Nine Mile Point agrees to link the parameter inspected (jacket surface anomoly) to the aging effect (heat, radiation or moisture in the presence of oxygen). Revised Section 4.2 for NMP E1 AMP "Conductor insulation aging degradation from heat, radiation, or moisture in the presence of oxygen causes cables and connection jacket surface anomalies. Accessible electrical cables and connections installed in adverse localized environments are visually inspected at least once every ten years. This is an adequate period to preclude failures of the conductor insulation since experience has shown that aging degradation is a slow process. The first inspection for license renewal will be completed before the period of extended operation. This program attribute will be consistent with the corresponding GALL Attribute upon program development."

LR Contact	D. Taormina	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal D. Taormina	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	8/13/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
36 8/10/2004	B2.1.29	Nguyen	XI.E1 AMP: What is the approximate percentage of in-scope cables in an adverse localized environment accessible for inspection?	Further clarification of the issue determined that the estimate was only applicable to in-scope cables. As adverse localized environments have not yet been defined for Units 1 and 2 an estimate specific to in-scope cables in localized environments can not be determined at this time. However, using a broader spaces approach an estimate of what percent of the total cables installed at Units 1 and 2 are accessible for inspection can be provided. This estimate was obtained from the ELECTRAK TRAC 2000 cable raceway systems (Unit 1 & Unit 2) utilized at the station and did not distinguish between types of cables or safety classification. The raceway system was queried for the number of cables in trays and provided what is believed to be a conservative estimate of between 55% to 60% of the cables at Unit 1 and 2 would be accessible for inspection. As this estimate of between 55% to 60% represents all cables this can be used at this time as an estimation of the percent of cables in an adverse localized environment that are accessible for inspection until specific adverse localized environments are determined.

LR Contact	D. Taormina	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal D. Taormina	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/8/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
37 8/3/2004	B2.1.16	Le	In Procedure N1-FST-FPP-C001, Rev. 6, the surveillance to be performed, once per operating cycle, for accessible sides of the fire barriers. Fire barriers that are not accessible during normal plant operations to be performed during scheduled plant shut downs. Are those accessible sides and non-accessible areas being pre-defined and scheduled ahead of time, prior to conduct of this sruveillance?	Fire barrier/penetration seal inspections are normally scheduled during refueling outages to eliminate inaccessibility issues. During each operating cycle one group of fire barriers/penetration seals representing 10% of the total population is scheduled for inspection. In preparation for the inspection activity, a work package is assembled which includes, but is not limited to, penetration location drawings, fire barrier computerized schedule, penetration sealing details, and FSAR/Appendix R required barrier drawings. For fire barriers/penetration seals in the selected group that are determined to be inaccessible, an action request is initiated to inspect them during the next refueling outage. A fire barrier/penetration seal of the same type for the next group to be inspected will then be selected for the current inspection to maintain the 10% inspection population.

LR Contact	Hoppe	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Hoppe	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/15/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
38 8/3/2004	B2.1.16	Le	Explain the difference between Gall's requirement of 10% of each penetration seals performed during walk downs at least once every refueling outage and that of the NMP's accessible fire barrier/penetration seals. How would all NMP's accessible b/p seals meet the Gall's 10%	The fire barriers/penetration seals are divided into 10 groups in the Master Equipment List (MEL) computer database. During each operating cycle one group is selected for inspection, which represents 10% of the total population. For fire barriers/penetration seals in the selected group that are found to be inaccessible, an action request is initiated to inspect them during the next refueling outage. A fire barrier/penetration seal of the same type for the next group to be inspected will then be selected for the current inspection to maintain the 10% inspection population. However, fire barrier/penetration seal inspections are normally scheduled during refueling outages to eliminate inaccessibility issues.

LR Contact	Hoppe	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Hoppe	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/15/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
39 8/3/2004	B2.1.16	Le	Explain the term "not credited with managing the effects of aging for any components" for the Halon and CO2 fire suppression systems.	There are component types, as identified in Table 3.3.2.A-8 of the Nine Mile Point (NMP) License renewal Application (LRA), in the Halon and Carbon Dioxide systems that are susceptible to aging effects and are managed by the NMP Fire Protection Program. The Nine Mile Point (NMP) Units 1 and 2 Fire Protection Program Attribute Assessment document will be revised to indicate aging effects on the Halon and Carbon Dioxide systems are managed consistent, when enhancements are complete, with GALL. Specific enhancements will include specifying periodic visual examinations of the halon/carbon dioxide system components to detect signs of degradation. Note: A revision to the LRA and AMP Basis document is required. 9/16/04: Draft revision of AMP basis document provided to auditor. Auditor accepted proposed revision.

LR Contact	Hoppe	**LRA Revision Required?**	Yes
Assigned Department/ Individual	License Renewal Fallin	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/16/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
40 8/3/2004	B2.1.16	Le	The Gall requires that the Halon and CO2 suppression systems be monitored during the period retest to detect any degradation in the system. The NMP FPP AMP is not consistent with Gall - please explain.	There are component types, as identified in Table 3.3.2.A-8 of the Nine Mile Point (NMP) License renewal Application (LRA), in the Halon and Carbon Dioxide systems that are susceptible to aging effects and are managed by the NMP Fire Protection Program. The Nine Mile Point (NMP) Units 1 and 2 Fire Protection Program Attribute Assessment document will be revised to indicate aging effects on the Halon and Carbon Dioxide systems are managed consistent, when enhancements are complete, with GALL. Specific enhancements will include specifying periodic visual examinations of the halon/carbon dioxide system components to detect signs of degradation. Note A revision to the AMP basis document and LRA is required. 9/16/04: Draft revisis to AMP basis document provided to auditor. Auditor accepted proposed revision.

LR Contact	Stuard	**LRA Revision Required?**	Yes
Assigned Department/ Individual	License Renewal Fallin	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/16/2004		

41 8/11/2004	B2.1.7	Hsu	Regarding BWRVIP-27, is UT technology available to use on NMP's inspection of the SLC penetration? If so, does NMP use it?	No, the UT inspection technology is not available yet. NMP follows the guidance of BWRVIP-27 and performs a bare-metal visual inspection during each outage.

LR Contact	Petras	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Petras	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/8/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
42 8/11/2004	B2.1.4	Hsu	How do you detect flaw intrusions from an attachment weld into the RPV material?	NMP follows the guidelines of BWRVIP 48 in the detection of flaws in Vessel Attachment Welds. According to BWRVIP 48 NMP uses EVT-1 inspection method to find surface flaws. If any surface flaws are found the flaw is analyzed for intrusion following the guidelines of IWB-3600 which may include volumetric examination of the flaw for intrusion into the RPV base material.

LR Contact	Petras	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Petras	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/8/2004		

43 8/11/2004	B2.1.4	Hsu	Is there any Low Alloy Steel in the RPV Internals?	No. The only Low Alloy Steel is in the RPV base material. The mention of BWRVIP-60 is there for evaluation of crack growth from attachment weld into the RPV base material (if necessary.)

LR Contact	Petras	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Petras	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/8/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
44 8/11/2004	B3.1	Nguyen	XI.E1, E2 & E3 Is plant operating experience included in the plant corrective action program which capture internal and external plant operating experience issues?	The Nine Mile Point Nuclear Interface Procedure NIP-ECA-01 is the site administrative procedure that controls the corrective action program. Item 1.1.2 of the applicability section states "The Corrective Action Program (CAP) and Deviation/Event Report (DER) shall be utilized to report all conditions (including significant) Adverse to Quality (CAQ) involving known failures, malfunctions, deficiencies, defective material and equipment, and non-conformance." NMP site operating experience related to degraded cables and connections is documented in the CAP Program.

LR Contact	D. Taormina	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal D. Taormina	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/8/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
45 8/12/2004	B2.1.18	Saba	NMP PAA for fuel oil chemistry (program description and parameters monitored/inspected) identifies ASTM Standards D 270 and 975 in addition to the standards that GALL referred to. Explain where and how these standards are used and if they are used instead of the standards identified by GALL. Then it is an exception to GALL. Justify use of these standards.	ASTM Standard D270 has been superceded by ASTM D4057, which is used at NMP in its place and is discussed in the GALL. Consequently, its discussion in the PAA is not relevant and will be deleted. The GALL discusses sampling standards, but does not address purity standards. D975 is the Standard Specification for Diesel Fuel Oils and is the appropriate ASTM standard to use for diesel fuel. It was mentioned in the PAA for completeness to round out the discussion of parameters monitored. Since neither standard conflicts with the GALL, their use in the PAA is not considered an exception. 9/15/04: Draft revision to the AMP basis document provided to auditor. Auditor accepted proposed revision. 10/13/04: Revisions to the U1 and U2 Fuel Oil Chemistry PAAs approved which incorporate this change.

LR Contact	Brown	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Brown	**PAA Revision Required?**	Complete
Issue Status	Closed		
NRC Closure Date	8/23/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
46 8/12/2004	B2.1.18	Saba	NMP does not use the modified Method A of ASTM D 2276 that is recommended by GALL for the filter pore size. Although, the auditor understands that this is a conservative approach. This is an exception to GALL. Clarify	NMP does not consider the use of sampling techniques which result in more precise measurements of smaller contaminants in EDG fuel oil to be an exception to the GALL

LR Contact	Brown	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Brown	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	8/23/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
47 8/12/2004	B2.1.18	Saba	GALL acceptance criteria states that the ASTM Standards D1796 and D2709 are used for determination of water and sediment contamination in diesel fuel. NMP PAA states that NMP uses ASTM D 2276 for particulate contaminates instead of D2709. However, it appears that NMP uses ASTM D 1796 instead of D2709. Clarify	NMP understands that the GALL should state that "[t]he ASTM Standards D 1796 OR D 2709 are used for guidance on the determination of water and sediment contamination in diesel fuel." It is true that D 1796, not D 2276, is used for water and sediment determination rather than D 2709 at NMP. D 2276 is used to determine particulate contaminants, which is an additional and separate test from the water and sediment tests performed under D 1796. The PAA will be revised appropriately. 9/15/04: Draft revision of AMP basis document provided to auditor. Auditor accepted proposed revision. 10/13/04: Revisions to the U1 and U2 Fuel Oil Chemistry PAAs approved which incorporate this change.

LR Contact	Brown	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Brown	**PAA Revision Required?**	Complete
Issue Status	Closed		
NRC Closure Date	8/23/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
48 8/12/2004	B2.1.18	Saba	Provide examples of measured parameters	Specific sample results from procedure N1-CSP-Q504 dated 6-10-04 were provided. NRC will evaluate unit 2 results at the next NMP site visit. 9/13/04 update: The DFO program at Unit 2 samples purity when it is received onsite, then monitors for water and particulates in the storage tanks. NMP previously provided diesel fuel oil sample results for incoming DFO for Unit 2. Monthly particulate/water sample results for Unit 2 have been subsequently supplied as of this date. Note that, unlike Unit 1, Unit 2 adds a preservative to the fuel oil, so there is no need to resample for ASTM 975 fuel purity standards on a periodic basis. Moreover, there is no GALL requirement to do so. Unit 2 samples for particulate and water monthly, as required by the Technical Specifications, and in excess of the quarterly sampling requirement for these contaminants in the GALL.

LR Contact	Brown	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Brown	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/15/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
49 8/12/2004	B2.1.18	Saba	Provide examples of the last inspections for verification of the effectiveness of the program. Was any aging effect identified? If any, identify the DER and the related corrective actions.	The most recent EDG tank inspections performed under N1-MPM-EGF-10Y001 and N2-MPM-EGF-10Y001 generated normal results. The initial UT of the Unit 2 FO tanks yielded no degradation of the tank wall below minimums. UT of the Unit 1 tanks has not yet been implemented. Consequently, no DERs or other corrective action was required for these inspections. 9/13/04 Update: Provided tank inspection results. NRC auditor accepted with no further questions.

LR Contact	Brown	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Brown	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/15/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
50 8/12/2004	B2.1.18	Saba	Identify and describe if there are differences between Unit 1 and Unit 2 Fuel Oil Chemistry program.	While there are no major differences in the two programs, they do differ slightly in the parameters that they monitor, so the enhancements may not be applicable to both units. In summary, then: • For Unit 1, no biocides, corrosion inhibitors or stabilizers added to diesel fuel oil at NMP1, but the program will be enhanced to expand sampling requirements and, if required, additives. • Unit 2 does not currently perform inspections on the Diesel Fire Pump Storage Tank, but the program will be expanded to include it. This is not applicable to Unit 1. • The Unit 1 tank sampling procedure does not include specific instructions to remove water found in any tank, this is accomplished through the corrective action process (DER/ACR) since water is not permitted in the tanks. This will be enhanced. • Unit 2 samples the incoming fuel for general appearance, but Unit 1 does not.

LR Contact	Brown	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Brown	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/13/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
51 8/12/2004	B2.1.18	Saba	Identify tanks and piping that protective coating is used. (The project team understands that preventive coating is not credited for NMP1.) Has any aging effects been detected with the components that were coated (related to coating, e.g., peeling)? Please describe. NRC Request for Additional Information 9/8: This response differs from the Unit 1 and 2 PAA, Section 2.2 which states that protective coatings are not credited with protecting of the diesel fuel tanks. Clarify.	Protective coatings are neither credited nor used on any fuel oil tanks at NMP, Units 1 or 2. Response to Request for Additional Information: Coatings are not credited on any fuel oil tanks at NMP, Units 1 or 2, since they simply do not exist. The PAA will be revised accordingly to clarify this point. 10/13/04: Revisions to the U1 and U2 Fuel Oil Chemistry PAAs approved which incorporate this change.

LR Contact	Brown	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Brown	**PAA Revision Required?**	Complete
Issue Status	Closed		
NRC Closure Date	9/15/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
52 8/13/2004	B2.1.9	Wen	Provide examples of the CHECKWORKS model predictions for the feedwater heater drains compare to actual field measurements. Have the predictions produced by the software been conservative or non-conservative?	Recent changes in plant chemistry have substantially increased the wear rate predictions provided by the CHECWORKS model. In general the inspections confirmed that the model predictions are fairly accurate from a line perspective and have been conservative. The inspection data is included in revisions to the model per modeling guidelines, which improves the accuracy of the line runs. In those cases where observed wear rates exceeded predictions, revisions to the model were made which improved the accuracy of the model. Further improvements are expected as the iterative process continues during the time preceding the period of extended operation. As this relates to the feedwater heater drains, when the CHECWORKS model was updated for the change in chemistry from NWC to HWC, there was an increase in their predicted wear rate. In response, additional components were selected within the feedwater heater drain system for inspection. While minor changes in wall thickness were detected, the measurements confirmed that, overall, the model was conservative. Future measurements of wear will be used to update, refine, and calibrate the accuracy the model with each inspection cycle.

LR Contact	Brown	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Brown	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/8/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
53 8/11/2004	B2.1.2	Saba	Similar to the above question, identify programs for detecting aging effect in low flow and stagnant flow areas. Describe how these areas will be selected and detected. The program attributes assessment document states that these areas are discussed in the ASME XI inservice inspection or one-time inspection program. Provide examples of inspections of these areas.	The ISI Program (GALL X1.M1) and One-Time Inspection programs are typically credited for management of aging of components. Components Classified as ASME Code Class 1, 2 or 3 (including their supports) subject to examination are included in the ISI program. For ASME Code Class 1 and 2 piping welds a Risk-Informed Inservice Inspection Program is implemented as an alternate to the ASME Section XI piping weld examination requirements. The Alternate Risk-Informed program requires a volumetric (ultrasonic) examination of selected Code Class 1 and 2 pressure retaining welds. Exclusion from the ultrasonic examination requirements are as denoted in ASME Section XI, subsections IWB and IWC. (Typically 1" and less for Class1 and 4" and less for Class 2). Additionally, all ASME Code Class 1, 2 and 3 components are subject to visual (VT-2) examination performed in conjunction with the system pressure tests as required by ASME Section XI. Because surface or visual examination methods on the out side diameter of the pipe cannot detect cracking initiating on the inner-diameter of a pipe, surface and visual examinations are not very useful for early detection of an aging effect causing cracking. Therefore, for small-bore pipe, the One-Time Inspection Program is also assigned which requires volumetric or destructive examinations of a sample of pipe with nominal size less than 4 inches. The One-Time Inspection Program is also credited for management of aging for components. An example is piping component LP-PIPE04-SS. This is a generic piping component created for license renewal purposes to represent liquid poison system piping from the reactor to the external isolation valve (NMP1 does not have unique component ID's for each segment of pipe). This piping is austenitic stainless steel and was determined to have a high-temperature water, low flow environment. In addition to the Water Chemistry Program, this component credits a visual examination conducted under the ASME Section XI (Program X1.M1) pressure testing program (NMP1-PT-003), and an inspection conducted under the One-Time Inspection Program (GALL X1.M32). Because the One-Time Inspection Program is a new program, the specific inspection method has not been determined yet but would be either a volumetric examination or destructive examination of a sample of piping. Another example is valve 2CSH*V84, a carbon steel globe valve in the NMP2 High-Pressure Core Spray System. The Aging Management Review for that system determined the environment was high-temperature, low-flow water. The aging effect of loss of material due to the mechanism general corrosion is managed by the Water Chemistry Program, and an inspection conducted under the One-Time Inspection Program. The One-time Inspection method is to

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
				be determined since this is a new program but would probably consist either of an ultrasonic examination or internal visual examination of the valve.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/10/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
54 8/11/2004	B2.1.2	Saba	Identify and describe differences between Unit 1 and Unit 2 Water Chemistry Control programs. NRC Request for Additional Information 9/8: Explain why Unit 2 chloride, sulfate and conductivity limits for Unit 2 are higher (more restrictive for Unit 1) than Unit 1's parameters. In another words, why R1 does not apply to Unit 2 as well?	The most significant difference is that the NMP1 reactor water chloride, sulfate, and conductivity limits for Reactor water bulk temperature = 200 degrees Farenheit and reactor thermal power = 10% (startup/Hot standby), and reactor thermal power >10% (power operation) are based on the 1996 EPRI guidelines referenced in Technical Specification 3.2.3. NMP2 has no such Technical Specification basis for any water chemistry control parameters. Other parameters for both NMP1 and NMP2 are based on the 2000 EPRI Water Chemistry Guidelines. Response to Request for Additional Information: Justification for the higher chloride and sulfate levels is provided in the attached document entitled "Comparison Of NMP1 And NMP2 Water Chemistry Control Program To NUREG-1801 (GALL) Program X1.M2 Requirements," specifically in the table entitled "NMP2 Reactor Water, Power Operations (Hydrogen Water Chemistry)." Exceptions to GALL and their justifications are also provided in the narrative summary at the beginning of the document. The higher conductivity action level 1 for NMP2 (>0.30 µS/cm) is still consistent with the requirements of the Revision 0 EPRI Water Chemistry Guidelines and therefore consistent with GALL. The bases for the lower action level 1 conductivity of >0.19 µS/cm for NMP1 is the discussion in the bases for NMP1 Technical Specifications 3.2.3 and 4.2.3, which indicates that maintaining conductivity 0.19 µS/cm ensures that IGSCC crack growth rates are bounded by core shroud analysis assumptions.

LR Contact	Poehler	**LRA Revision Required?**	Yes
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/17/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
55 8/11/2004	B2.1.2	Saba	Provide a sample of monitored parameters for the primary water, condensate and feedwater, and CRD.	Response was e-mailed to NRC auditor with information containing parameter values 9/17/04: Auditor provided feedback that the information provided was satisfactory and had no further questions at this time.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/17/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
56 8/11/2004	B2.1.2	Saba	LRA B2.1.2, Program description and Section A1.37 state that the aging mechanism/effects of concerns include 1) SCC, 2) loss of material, and 3) fouling. However, neither LRA nor PAA explains what is causing fouling aging effects, what SCCs are identified with this aging effect, and how fouling is controlled or mitigated.	For the aging management review process at NMP, loss of heat transfer due to fouling is an aging effect requiring management for components having an intended function of heat transfer, for certain material/environment combinations only. There are two causes of fouling. In non-open cycle cooling water systems, fouling can result from corrosion product transport and deposition on heat transfer surfaces, generally heat exchanger tube surfaces. In open-cycle cooling water systems, fouling is mainly caused by clogging of tubesheets by biological organisms and debris. Open-cycle cooling water systems are not addressed by the Water Chemistry Control (GALL X1.M2) Program. Note The AMP basis document and the LRA will be revised. LRA Sections B2.1.2 and A1.37 will be revised to remove fouling as an aging mechanism. For the material-environment combinations assigned to heat exchanger tubes in systems crediting the Water Chemistry Program for management of aging, typically stainless steel in some form of treated water, fouling was determined not to be an aging effect requiring management. A search of the Aging Management Review results for NMP1 and NMP2 revealed that the X1.M2 Water Chemistry Control Program was not assigned to manage loss of heat transfer due to fouling for any component. Components susceptible to loss of heat transfer due to fouling credited either the Open-Cycle Cooling Water Program or Closed-Cycle Cooling Water Programs.

LR Contact	Poehler	**LRA Revision Required?**	Yes
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	8/25/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
57 8/11/2004	B2.1.2	Saba	UFSAR supplement, recommend to be consistent in referring to EPRI revisions.	USAR supplement section A1.1.37 (NMP1) is consistent in that it refers to EPRI TR-103515-R1 and TR-103515-R2. USAR supplement section A2.1.36 (NMP2) will be revised to reference TR-103515-R2 only. The response to item 19 in the database addresses the differences between these two revisions.

LR Contact	Poehler	**LRA Revision Required?**	Yes
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/8/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
58 8/11/2004	B2.1.2	Saba	Provide ISI report for verification of effectiveness of WCC program.	NMP submittals of Owner's Activity Reports for Inservice Inspection are docketed with the NRC. These summarize the results of examinations performed during the most recent period of the current 10-year inspection interval for each unit, including examinations performed during the last two refueling outages. The two most recent such submittals are: Letter from W. C. Holston to USNRC, re: "Nine Mile Point Unit 2, Docket No. 50-410, License No. NPF-49, 2004 Owner's Activity Report for Inservice Inspections," dated July 20, 2004. (Accession #ML042120307) Letter from B. S. Montgomery to USNRC re: "Nine Mile Point Unit 1 Docket No. 50-220, Facility Operating License No. DPR-63, Submittal of Inservice Inspection Activity Reports," dated July 23, 2003. (Accession #ML032110132) These submittals are available in the NRC ADAMS system and also are available for NRC review during the next audit. 10/13/04: NRC provided verbal acceptance during conference call.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	10/13/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
59 8/11/2004	B2.1.2	Saba	Unit 2 PAA, page 11, states that NMP performed self-assessments of SCC. Provide the last two SA's	Self-assessments have been performed and will be made available for onsite review by the NRC Audit Team. 9/17/04: Copy of self-assessment provided to auditor. Auditor had no further questions.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/17/2004		

60 8/11/2004	B2.1.2	Saba	PAA states that scope of program is consistent with GALL. NMP uses EPRI R1/R2, this is an exception to GALL.	The Program Attribute Assessment will be changed to identify the use of a different revision of the EPRI Guidelines as an exception to GALL. This exception is justified on the basis that the latest revision of the EPRI Water Chemistry Guidelines represent the latest industry understanding of water chemistry issues. Note: The LRA already identifies this exception. NRC requests this issue be included in LRA Supplemental letter (10/13/04) Note: Change to the AMP Basis Document is required.

LR Contact	Poehler	**LRA Revision Required?**	Yes
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date			

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
61 8/11/2004	B2.1.2	Saba	Unit 1 Parameters Monitored/Inspected: For feedwater, condensate, and CRD, GALL recommends to measure conductivity, dissolved oxygen and concentrations of iron and copper (feedwater only) to monitored. NMP1 does not monitor iron and copper for feed water. NMP1 PAA does not include any discussion on the measurement of conductivity, dissolved oxygen and concentration of iron for condensate and CRD. These are exceptions to GALL. Justify! Identify what revision of the EPRI document is used.	NMP1 measures iron, copper, dissolved oxygen and conductivity in feedwater during startup/hot standy and power operations. The Action Level values are consistent with the 2000 EPRI Guidelines (TR-103515-R2) as given by GAP-CHE–01 Enclosure 1. For condensate, NMP measures influent conductivity during both startup and power operations with limits consistent with the 2000 EPRI Guidelines. For startup/hot standby, NMP1 meets the EPRI 2000 Guidelines by measuring feedwater dissolved oxygen (2000 revision requires DO be measured in either feedwater or polished condensate). Dissolved oxygen is measured during power operations for condensate and feedwater. The action levels are consistent with the 2000 EPRI Guidelines but are listed under Fuel Warranty Requirements. For CRD water, NMP1 monitors parameters in accordance with the EPRI 2000 Guidelines per GAP-CHE-01. In the NMP1 program attribute assessment, Parameters Monitored/Inspected will be revised to describe CRD water requirements. Also, compliance with the EPRI 2000 Guidelines will be noted as an exception. The latest revision of the EPRI Water Chemistry Guidelines represent the latest industry understanding of water chemistry issues and as such, will be adopted as appropriate.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/8/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
62 8/11/2004	B2.1.2	Saba	Unit 1 Parameters Monitored/Inspected: NMP1 PAA states that WCC program does not monitor hydrogen peroxide as recommended by GALL. This is an exception. Justify. NRC Request for Additional Information 9/8: GALL Report XI.M2, parameters monitored/inspected, 1st paragraph requires hydrogen peroxide to be monitored. In addition, both NMP Unit 1 and Unit 2 PAA for water chemistry (last paragraph under parameters monitored/inspected) state that NMP does not directly monitor for hydrogen peroxide. This differs from the above response. Clarify.	GALL does not actually require hydrogen peroxide to be monitored directly. GALL text indicates hydrogen peroxide is a contributor to the Electrochemical Potential (ECP). NMP1 measures ECP which is a measure of the electrochemical potential of the water which includes hydrogen peroxide. Response to Request for Additional Information: EPRI Rev. 2 Guidelines, Section 5.2.1.13, indicates that accurate measurement of hydrogen peroxide (H_2O_2) is extremely difficult due to rapid decomposition to water and oxygen in sample lines. Recombination with hydrogen in sample lines at NMCA plants can also occur. Per GAP-CHE-03, "BWR vessel and Internals Program (BWRVIP) Mitigation Systems Operating Limits and Goals," NMP1 and NMP2 both determine the hydrogen/oxidant molar ratio using the radiolysis/ECP model described in BWRVIP-62, "Technical Basis for Inspection Relief for BWR Internals Components with Hydrogen Injection." The hydrogen/oxidant molar ratio is $[H_2]/[O_2 + 0.5H_2O_2]$. The EPRI Rev. 2 Guidelines Section 5.4.1 indicate that an ECP of <-0.23 (V, SHE) can be achieved when the hydrogen/oxidant molar ratio is > 2. NMP1 measures ECP directly which ensures that excessive hydrogen peroxide is not present. The molar ratio calculated by the model described above is used as a secondary parameter to assess the effectiveness of HWC, while ECP is used as the primary parameter. For NMP2, the molar ratio calculated by the model is used as a secondary measure of the effectiveness of HWC, while the measured hydrogen to oxygen molar ratio provide a primary measure of the effectiveness of HWC.

LR Contact	Poehler	**LRA Revision Required?**	Yes
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/17/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
63 8/11/2004	B2.1.2	Saba	Unit 2 Parameters Monitored/Inspected: Identify EPRI revision is used and provide justification. GALL recommends monitoring hydrogen concentration to determine ECP. NMP2 uses molar ratio of H2 to O2 to determine ECP. This is an exception. Justify this exception. NRC Request for Additional Information 9/8: Auditor agrees that this exception can be covered under the exception for the use of a version of EPRI Guideline other than the one recommended. However, justification for use of H2 to O2 ratio for ECP determination should be included in the justification for acceptance to the EPRI version.	GALL text and EPRI Guidelines do not require hydrogen to be monitored as a control parameter. The statement in section 3.2 of the Program Attribute Assessment is incorrect. EPRI 2000 Guidelines (TR-103515-R2) allow use of H2 / O2 molar ratio as an alternate ECP estimation technique. In response to another NRC auidit question (see issue 65 of the database), the Program Attribute assessment will be changed to indicate an exception for the use of an alternate revision to the EPRI Guidelines than that referenced by GALL. A separate exception will not be identified for use of H2 to 02 molar ratio for ECP estimation. The latest revision of the EPRI Water Chemistry Guidelines represent the latest industry understanding of water chemistry issues and as such, will be adopted as appropriate. Response to Request for Additional Information: Justification for the use of H2 / O2 molar ratio in lieu as an alternate method to estimate ECP is included in the document entitled "Comparison Of NMP1 And NMP2 Water Chemistry Control Program To NUREG-1801 (GALL) Program X1.M2 Requirements," specifically in the table entitled "NMP2 Reactor Water, Power Operations (Hydrogen Water Chemistry)."

LR Contact	Poehler	**LRA Revision Required?**	Yes
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/17/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
64 8/11/2004	B2.1.2	Saba	Unit 2 Parameters Monitored/Inspected: For auxiliary systems, NMP2 measures silica, total organic carbon, and suspended solids. What aging effect is being mitigated by monitoring these parameters.	As identified in the Unit 2 basis document, the auxiliary system listed for silica, total organic carbon, and suspended solids is the Spent Fuel Pool system/Supression Pool. These three parameters are monitored for varying reasons that do not necessarily mitigate an aging affect. Specifically, silica is measured as an indicator to assess the level of degradation of the bora-silica reactivity control system (Boraflex). Total organic carbon (TOC) is monitored to indicate the presence of organic matter, which can further lead to contaminants that can cause various corrosion mechanisms, particularly if these contaminants found there way into the reactor coolant system. The EPRI 2000 Water Chemistry Guidelines recommend all auxiliary systems with a potential crosstie to the reactor be maintained as free of chemical impurities as possible in order to aid in maintaining reactor water parameters within recommended values and maximize run times of reactor water cleanup and condensate polishing systems. Limits for suspended solids are based on fuel vendor recommendations, according to the NMP2 USAR. No specific reason is given.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	8/25/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
65 8/11/2004	B2.1.2	Saba	Monitoring and Trending: Identify what revision of EPRI guideline is used. If different from the revision identified by GALL, explain why. NRC Request for Additional Information: NMP1- The referenced NRC commitment document is for chloride, sulfate, and conductivity monitoring and limits. Other parameters are included in that document. Based on the review of the NMP responses to other related questions, the other parameters are being monitored/trended using EPRI R2. Provide justification if their sampling frequencies are different from those in the 1994 version of EPRI Guidelines. NMP2- Provide justification if the sampling frequency of any monitored parameter is different from that specified in the 1994 version of EPRI Guidelines	NMP1- Sampling frequencies are given in procedure N1-CSP-D100, "Reactor Coolant Chemistry." This procedure references EPRI TR-103515 Rev.1, BWR Water Chemistry Guidelines. Use of Revision 1 of the BWR Water Chemistry Guidelines is the result of an NRC commitment documented in Technical Specification Basis for Technical Specification 3.2.3 and 4.2.3. NMP2 – Sampling frequencies are given in procedure N2-CSP-GEN-D100, "Reactor Water/Auxiliary Water Chemistry Surveillance." This procedure references the 2000 EPRI Guidelines although the number is given as TR-103515 Rev. 1. However, NMP2 follows the 2000 EPRI BWR Water Chemistry Guidelines (TR-103515-R2) because these are more recent than the edition referenced in GALL and provide guidelines for hydrogen water chemistry/noble metal chemical addition (HWC/NMCA) which Revision 1 does not. HWC/NMCA is used for mitigation of intergranular stress corrosion cracking of reactor internals and coolant piping. The Program Attribute Assessment is to be modified to identify use of a different EPRI Water Chemistry Guidelines revision as an exception to the "Monitoring and Trending" attribute. The latest revision of the EPRI Water Chemistry Guidelines represent the latest industry understanding of water chemistry issues and as such, will be adopted as appropriate. Response to Request for Additional Information: The attached document entitled "Comparison Of NMP1 And NMP2 Water Chemistry Control Program To NUREG-1801 (GALL) Program X1.M2 Requirements," provides a summary of all differences between NMP's Water Chemistry Control Program and the requirements of GALL, including sampling frequencies. Justification is provided if these sampling frequencies are less conservative than those specified by the 1994 (R0) EPRI Guidelines.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/17/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
66 8/11/2004	B2.1.2	Saba	Acceptance Criteria: Identify what revision of EPRI guideline is used. If different from the revision identified by GALL, explain why.	NMP1 – Acceptance criteria are derived from the 2000 EPRI BWR Water Chemistry Guidelines (TR-103515-R2), with the exception of NMP1 Action Level 1 values for Conductivity, Chloride, and Sulfate, which are TS 3.2.3 bases requirements. These values are aligned to the 1996 EPRI BWR Water Chemistry Guidelines (TR-103515-R1, BWRVIP-29). With the exception noted above, NMP1 and NMP2 are following the 2000 EPRI BWR Water Chemistry Guidelines (TR-103515-R2) because these are more recent than the edition referenced in GALL and provide guidelines for hydrogen water chemistry/noble metal chemical addition (HWC/NMCA) which Revision 1 does not. HWC/NMCA is used for mitigation of intergranular stress corrosion cracking of reactor internals and coolant piping. The NMP1 and NMP2 Water Chemistry Control Attribute Assessment documents will be changed. Use of a different revision to the EPRI Guidelines than that referenced in GALL will be noted as an exception to the Acceptance Criteria attribute. Appropriate technical justification will be provided in the document for this exception. The latest revision of the EPRI Water Chemistry Guidelines represent the latest industry understanding of water chemistry issues and as such, will be adopted by NMP as appropriate. Note: The LRA and AMP basis document will be revised. The LRA identifies use of different revisions of EPRI Water Chemistry Guidelines than that referenced in GALL as an exception to the attributes “Scope” and “Parameters Monitored/Inspected,” but not acceptance criteria. This is also an exception for the “Acceptance Criteria” attribute.

LR Contact	Poehler	**LRA Revision Required?**	Yes
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/8/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
67 8/11/2004	B2.1.2	Saba	Operating Experience: NMP1 listed many DERs that reported for WCC where parameters monitored exceeded the limits. Was WCC revised as a result of these DERs? If so, provide information. PAA states that this element is consistent with GALL, explain how.	The assessment basis document identifies many DER's that involve instances where the action level values were exceeded for brief periods of time. Many of these instances were short term events caused by maintenance activities or off-normal plant operation. Corrective measures implemented in accordance with existing station procedures were sufficient to correct the deviation. Some DER's only documented an increasing trend, not an actual exceedance of action levels, and therefore are for trending purposes only. Of the DER's listed in the NMP1 Water Chemistry Control Program Attribute Assessment Section 10.2, two resulted in changes to the program. DER-2001-4066 was initiated for high sulfate concentration in the reactor coolant system. The root cause was exhaustion of the precoat resin as a result of an increase in hydrogen peroxide, during plant shutdown after hydrogen injection was shut off. A contributor to this event was use of a new type of resin. The corrective action affecting the Water Chemistry Control Program was: "Unit 1 Chemistry to place steps in the chemistry shutdown guidelines for chemistry monitoring of the new filter media to evaluate performance during an extended outage. This will provide documentation when to change a filter during extended outages." The action taken was: Steps added to shutdown guidelines for monitoring of RWCU system (Note, the shutdown guidelines are contained in procedure N1-CTP-GEN-@621, "Chemistry Shutdown/Startup Action Guidelines.") DER-2002-4989 was initiated as a result of soluble zinc levels exceeding fuel warranty limits. Zinc injection had just been started for the first time. The deviation was the result of the zinc injection system not functioning as designed. The corrective action resulting in changes to the Water Chemistry Control Program was: "The disposition is to work with GE to revise the operating procedure for the skid to require timely monitoring of zinc levels when flows are changed." The action taken was: Changes have been made to N1-CTP-V727, "Depleted Zinc Oxide (DZO) Skid Operation," to incorporate recommendations of this DER. Included in the change to the procedure is a requirement to sample feedwater an hour after changing zinc flow above 50 gpm. No further action required

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
				Therefore, the Water Chemistry Control Program has been modified when warranted by plant operating experience. With respect to GALL conformance, the GALL Operating Experience Attribute for Water Chemistry Control discusses many IGSCC-related generic communications. NMP has fully implemented all industry guidance from the BWRVIP which has been developed principally to address IGSCC in the reactor internals and coolant piping, including the latest BWR Water Chemistry Guidelines. The latest BWR Water Chemistry Guidelines are developed based on industry operating experience and as such, represent the best, most current understanding of water chemistry issues.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/8/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
68 8/11/2004	B2.1.13	Woodfield	Explain how the number and magnitude of lifts for each crane within the scope of license renewal have been historically documented and will be documented in the future under a renewed license. Discuss how the responsible individual or individuals for ensuring that crane operations are within the crane design limits in regards to the number and magnitude of lifts for license renewal cranes track and maintain this information on a daily or outage basis. NRC Request for Additional Information 9/8: The response states that the PAA states: the cranes at NMP within the scope of license renewal are designed as standby or infrequent service cranes. Provide the exact location in the PAA where this statement is made. The staff can not find it. The response states: (Crane) capacity loads may be handled for initial installation of equipment and for infrequent maintenance. This is the lightest crane use as far as duty cycle is concerned. The staff believes the word lightest should be replaced with heaviest. Verify the correct wording of the statement.	1. As stated in the Program Attribute Assessment, the cranes at NMP within the scope of license renewal (WSLR) are designed as standby or infrequent service cranes as are most cranes in similar applications. This includes cranes where precise handling of equipment at slow speeds with long idle periods between lifts is required. Capacity loads may be handled for initial installation of equipment and for infrequent maintenance. This is the lightest crane use as far as duty cycle is concerned. Due to the infrequent use of the cranes below their rated capacity, it is concluded that by industry experience and engineering judgment that this meets the intent of NUREG 1801 XI.M23 for reviewing the number and magnitude of lifts and that a documented history is not required. Also, wear and fatigue are not aging effects requiring management due to infrequent use and lack of plant OE. 2. An example of an NMP procedure that controls the use of the cranes is N1-MPM-GEN-807, Inspection of Turbine and Reactor Building Cranes. The number and magnitude of the lifts are not required to be documented and are not documented at NMP. Response to Request for Additional Information: Program Attribute Assessment (PAA) for Units 1 and 2 Inspection of Overhead Heavy Load and Light Load Handling Systems Program, sections 6.1 and 6.2 identifies the cranes WSLR and reference the Crane Manufactures Association of America, Inc. (CMAA) Crane Service Class A. Service Class A is defined by CMAA as: “Class A (Standby or Infrequent Service), This service class covers cranes which my be used in installations such as power houses, public utilities, turbine rooms, motor rooms and transformer stations where precise handling of equipment at slow speeds, with long idle periods between lifts are required. Capacity loads may be handled for initial installation of equipment and for infrequent maintenance.” The wording in the statement is correct. This is lightest service duty for a crane. Light service duty refers to the frequency of use to determine maintenance frequency. Other CMAA classes not applicable to NMP are as follows: Class B - Light Service – 2-5 lifts per hour per day Class C - Moderate Service – 5-10 lifts per hour per day Class D - Heavy Service – 10-20 lifts per hour per day Class E - Severe Service Class F – Continuous Severe Service

LR Contact Hoppe **LRA Revision Required?** No

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken

Assigned Department/ Individual	License Renewal Hoppe	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/14/2004		

69 8/11/2004	B2.1.13	Woodfield	Explain the minimum qualifications and training requirements needed for an individual to perform crane inspections at Nine Mile Point. Explain if only crane operators can perform crane inspections.	Inspection and operation of cranes is performed by qualified maintenance personnel. Crane qualification is classified as an “advanced/specialized training”. IAW NTP-TQ3-301, Training for Maintenance Workers. Training is conducted IAW approved lesson plans and job performance measures, (ex. MM3-TPE-00-002-3-0 for Operation of Overhead Cranes). Procedures which control operations of cranes include sections which require a qualified person to inspect the crane prior to use and operate the crane. (ex. N1-MMP-GEN-914).

LR Contact	Hoppe	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Hoppe	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	8/24/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
70 8/11/2004	B2.1.26	Wen	Both NMP1 and NMP2 are under Appendix J Option B testing requirements, what are the current test intervals for Type A, Type B, and Type C test? How were these intervals slected?	Type A test: For both NMP1 and 2 the Type A leakage test s presently on a 10 year test interval. The next NMP1 Type A test will be due on 2009/RFO20, and 2010/RFO12 for unit 2. Type B tests: In accordance with App. J Option B, Type B tests based on performance can be extended out to 120 months (10 year) frequency. After two consecutive successful as-found tests frequency can be extended to 60 months and can go to 120 month frequency after completion of three successful as-found tests. Air-lock leak rate testing is not allowed to be placed on an extended frequency, tested at least every 30 months. Type C tests: Tests performed on a 30 month frequency until successful performance is established. Frequency may be extended to 60 months after two consecutive successful as-found tests. Some Type C components such as MSIVs, FW IVs, and Vent and Purge valves per Reg. Guide 1.163 are limited to a 30 month test frequency. The frequencies described above are reflected in App. J Program documents NMP1-APPJ-001 and NMP2-APPJ-001. Note: A change to the AMP basis document is required (attribute 5)

LR Contact	E. Taormina	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal E. Taormina	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/8/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
71 8/11/2004	B2.1.26	Wen	A visual examination of accessible interior and exterior surface of the containment for evidence of structural degradation that might affect either the primary containment structural integrity or leak tightness is required prior to each Type A test. In selecting Appendix J Option B, there are additional requirements associated with this selection (3 visual examinations in each 10-year period). How are these visual examinations scheduled and controlled in NMP operating procedures?	The containment visual inspections are captured in each Appendix J Unit Program Plan, Section II step 1.6 of NMP2-APPJ-001 and Section I step 9.2 and Section II step 1.6 of NMP1-APPJ-01. The site PMST program is used for scheduling inspection activities.

LR Contact	E. Taormina	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal E. Taormina	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/8/2004		

72 8/11/2004	B2.1.26	Wen	Some containment isolation valves are governed under both Appendix J Type C test and containment isolation valve inservice testing programs. If there is conflict in test interval between these two programs, which program prevails?	The more restrictive test interval would prevail. If the Appendix J test interval was on an extended frequency and not due, however IST testing was required; testing to meet the IST test requirements would be performed.

LR Contact	E. Taormina	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal E. Taormina	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/8/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
73 8/11/2004	B2.1.26	Wen	Have NMP ever conducted a self-assessment of the containment leak rate program to confirm the compliance with regulatory criteria and evaluate the need for improvements to the program?	Yes, provided below is a listing of recent assessments, both internal and external that have performed, which have assessed various aspects of the Appendix J program: 1993: Vendor used to perform a review of the Unit 2 App. J program implementation 2004: May of 2004 INPO Assist visit performed to compare selected site programs against best industry practices. The App. J program was included in the programs reviewed. The program scope and implementation was found to be sound, with high experience level of the program owners and an awareness of improvement opportunities. Health Reports: The Program Health Report is updated regularly. The report evaluates program performance and tracks status of program related actions and issues.

LR Contact	E. Taormina	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal E. Taormina	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/8/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
74 8/13/2004	B2.1.9	Wen	Describe how the CHECKWORKS software was validated for use at NMP.	CHECWORKS software was installed and is maintained using site procedural controls for non-safety related software. This Code is used at NMP as an engineering aid / tool in a manner consistent with the industry. While credit was taken for the basic software verification performed by EPRI Solutions, the specific installation test case provided with the software was run satisfactorily after it was installed. CHECWORKS model runs are reviewed and documented in engineering technical reports with originator and reviewer. The key aspects of the review process include an independent verification that all site specific inputs to the code are proper, and that the results are reasonable. Further assurance is provided by the cyclic updates that provide for the comparison of inspection data with predicted wear rates.

LR Contact	Brown	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Brown	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/8/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
75 8/11/2004	B2.1.22	Saba	NMP AMP scope of program includes low alloy steel and cast iron material (piping) in addition to the GALL carbon steel. Explain how cast iron and low alloy steel components aging effect will be managed. For example, how selective leaching, if any, for cast iron will be detected and managed.	The Buried Pipe and tank inspection program will be consistent with NUREG 1801. The program is based on the design and installation of buried components to industry standards. The buried systems and materials within the scope of license renewal subject to aging management are identified in the scoping, screening and AMR reports. The aging effects requiring management (AERM) for malleable cast iron and low alloy steel are managed with this program also. Although the program specifies carbon steel, low alloy steel and malleable cast iron are in the same material group as carbon steel with similar AERM. This AMP supports materials for systems WSLR subject to AERM and the program will be consistent will GALL. Selective leaching is an AERM for gray cast iron and it will be discovered by hardness testing.

LR Contact	Hoppe	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Hoppe	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	8/25/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
76 8/11/2004	B2.1.17	Le	AMP B2.1.17 states that, for preventative actions, the existing program will be enhanced to state that components are inspected for corrosion, MIC, or biofouling. However, there is no mention of specific information regarding how the program will be enhanced to make the NMP AMP consistent with the GALL's XI.M27 requirements. Please address the overall enhancement aspect for Unit 1 and Unit 2 individually since the Unit 1's material is more susceptible to corrosion/MIC/or biofouling.	The NMP Units 1 and 2 Fire Protection Water System Program Attribute Assessment, Section 2.2, Preventive Actions, will be revised to provide more detail concerning program enhancements required to manage the effects of general corrosion, biofouling, and MIC. In the current program document, more detail regarding specific program enhancements can be found as follows: • Section 3.2 discusses an enhancement for visual inspection of piping internals to monitor internal corrosion conditions and the presence of biofouling that could reduce pipe wall thickness. • Section 4.2 discusses an enhancement to check the fire system water for microbiological contamination. Specifically, the fire system water will be sampled to detect the presence of the bacterial species associated with MIC. • Section 4.2 discusses an enhancement to perform non-intrusive techniques (e.g., volumetric testing) to identify evidence of loss of material due to corrosion. Enhancements will be incorporated to both Unit 1 and Unit 2 implementing procedures based on the results of the aging management review process and the resulting aging effects requiring management. Note: A revison to the AMP basis document is required. 9/16/04: Draft revision of AMP basis document provided to auditor. Auditor accepted proposed revision.

LR Contact	Hoppe	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Fallin	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/16/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
77 8/11/2004	B2.1.17	Le	The GALL XI.M27 requires that piping's internal surfaces and its internal corrosion conditions be visually inspected and done before the end of the current operating license for each unit. The NMP AMP has no such statement that this requirement will be done. Please explain.	Discussion of current or required enhancements to perform visual inspections of internal surfaces to identify and monitor internal corrosion conditions is discussed in the following sections of the program assessment document: * Section 3.2 discusses an enhancement for visual inspection of piping internals to monitor internal corrosion conditions and the presence of biofouling that could reduce pipe wall thickness. * Section 4.2 discusses existing periodic visual inspections to assess the condition of the internal surfaces of system components. Note: Change to the LRA and AMP base document required. Also, Section 4.2 discusses a program enhancement to perform wall thickness evaluations of fire protection piping using non-intrusive techniques (e.g., volumetric testing) to identify evidence of loss of material due to corrosion. Secion 4.2 of the program assessment document will be revised to provide more detail and clarify that inspections required by the GALL before the end of the current license term will be performed. 9/16/04: Draft revision to AMP basis document provided to auditor. Auditor accepted proposed revision.

LR Contact	Hoppe	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Fallin	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/16/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
78 8/11/2004	B2.1.17	Le	The NMP AMP states that sprinkler heads will be replaced as per requirements of NFPA-25 prior to achieving the fifty years service. Please confirm that those sprinklers that are not replaced will be visually inspected per the requirements of GALL's XI.M27, and explain how this will be carried out.	The Fire Protection Water System Program Attribute Assessment document, Section 4.2, will be revised to indicate any sprinkler heads not replaced prior to achieving fifty years of service will be tested and inspected on a sampling basis to ensure functionality in accordance with NFPA-25. Noe: The AMP basis document needs to be revised. 9/16/04: Draft revision to AMP basis document provided to auditor. Auditor accepted proposed revision.

LR Contact	Hoppe	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Fallin	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/16/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
79 8/11/2004	B2.1.17	Le	The NMP AMP states that the current procedures (as in Ref 15 and Ref 44) include verification that the fire pumps are capable of maintaining the system discharge pressure. It appears that the proposed NMP AMP is consistent with the GALL's corresponding attribute requirements. Please elaborate what other enhancements are being contemplated, as referred to in the 2nd paragraph of the attribute write up under monitoring and trending section.	The program enhancements mentioned in Section 5.2, Monitoring and Trending, are discussed in more detail in other sections of the attribute assessment as follows: • Section 3.2 discusses an enhancement for visual inspection of piping internals to monitor internal corrosion conditions and the presence of biofouling that could reduce pipe wall thickness. • Section 4.2 discusses an enhancement to check the fire system water for microbiological contamination. Specifically, the fire system water will be sampled to detect the presence of the bacterial species associated with MIC. • Section 4.2 discusses an enhancement to perform non-intrusive techniques (e.g., volumetric testing) to identify evidence of loss of material due to corrosion. The NMP Unit 1 and 2 Fire Protection Water System Program Attribute Assessment, Section 5.2, will be revised to provide more detail regarding program enhancements. 9/16/04: Draft revision to AMP basis document provided to auditor. Auditor accepted proposed revision.

LR Contact	Hoppe	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Fallin	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/16/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
80 8/11/2004	B2.1.17	Le	The DER's listed in the NMP AMP, under the "Operating Experience" attribute, indicate that there was evidence of pipe wall thinning and inadequate system pressure was recorded. Please explain the causes for these deficiencies and provide information regarding corrective actions and preventative actions that have been taken to preclude the above deficiencies from reoccurring for Unit 1. Request for Additional Information: The applicant should summarize the DER's to include only those that are age-related, the causes and actions taken to improve the program.	(Original response deleted since it listed each DER but did not provide the proper information.) Response to Request for Additional Information: While pipe wall thinning and inadequate system pressure have been noted for Unit 1, those that were result of age related degradation did not result in a loss of intended function. Wall thinning was effectively detected and corrected before the pressure boundary failed. Corrective steps included root cause determinations and an evaluation of the pipe or tank design adequacy. Where appropriate, this has led to more aging resistant designs for replacement tanks and valves. In certain cases, the pipe had reached the end of its service life and was replaced, and in others, the wall thinning revealed deficiencies in the original specification for the material. Instances of low system pressure were caused by pump or regulator failures, valve seat leakage, and were often traceable to sand or silt intrusion unrelated to pressure boundary degradation. However, these deficiencies have led to improved maintenance practices for pumps, valves, and control devices, along with improved leak detection methods. Plant operating history, then, shows that the program effectively manages aging of pipe and tank walls by detecting and correcting degradation before the system is compromised in a manner affecting intended function.

LR Contact	Hoppe	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Brown	**PAA Revision Required?**	Yes
Issue Status	Response Complete		
NRC Closure Date			

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
81 8/11/2004	B2.1.17	Le	The DER's listed in the NMP AMP, indicate that there was evidence of excessive leakage's in the Unit 2's Fire Water System. Please explain its causes and provide information regarding corrective actions and preventative actions that have been taken to preclude its re-occurrence Request for Additional Information 9/8: The applicant should evaluate and summarize the applicable DERs to indicate only those that are age-related, what the cause was and what actions were taken to improve the program.	(Original response deleted since it listed each DER and did not provide the proper information.) Response to Request for Additional Information 9/8: While NMP has experienced system leakage, the causes have not been related to aging of passive components. In most cases, excessive leak rates were caused by worn valve internals and loose bolts on a flange connection. The internal leakage was attributed to wear from sand and silt, so to reduce the level of these contaminants in the system and mitigate their effects, procedures were enhanced to ensure that stagnant legs are flushed. In other instances, indirect indications of leakage such as excessive pump cycling were the result of malfunctioning pressure control components which were not properly maintained. The only rupture occurred when insufficient building heat led to a frozen pipe. While not age related, these deficiencies have led to improvements in preventive maintenance practices and enhanced leak detection capabilities.

LR Contact	Hoppe	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Brown	**PAA Revision Required?**	Yes
Issue Status	Response Complete		
NRC Closure Date			

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
82 8/11/2004	B2.1.28	Woodfield	Discuss the design of the foundations for NMP structures within license renewal and if any of these structures have porous concrete subfoundations. Discuss if any license renewal structures have any settlement issues and if there is a site de-watering system.	As described in sections 2.4A and 2.4B of the LRA, the structure foundations are reinforced concrete on bedrock. The use of porous concrete sub-foundation construction was not used at NMP. Settlement is not an AERM at NMP. There is no site dewatering system.

LR Contact	Hoppe	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Hoppe	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	8/24/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
83 8/11/2004	B2.1.28	Woodfield	Since the service water pipe tunnel is susceptible to small wall cracks allowing inleakage of ground water, discuss the results of the latest inspections for the tunnel and how often these inspections are done. Discuss if there is any rust staining in the tunnel indicating corrosion of rebar in the concrete. Explain the basis for not performing any external waterproofing repairs to the tunnel. Discuss the crack repair process and the basis for the outer rebar in the tunnel walls not being susceptible to corrosion from the groundwater. Explain the design of the service water pipe tunnel such that if inleakage of ground water occurred again and the sump pumps failed, the flood depth would not exceed 3 inches as discussed in DER NM-1998-159. Discuss the latest inspections for the normal switchgear building, service water tunnels and the radwaste building for below grade exterior walls where groundwater inleakage has also occurred. NRC Request for Additional Information 9/13: Since the water leakage was not repaired from the external side, the applicant needs to address rebar in water as an AMR.	1. The repaired areas referenced in DER NM-1998-159 were recently inspected and there continues to be no in-leakage of water in the areas repaired. The frequency of inspections following the repairs as varied. Initially it was monthly, then quarterly, then annually. It is currently scheduled for inspection every refueling outage. (Inspection reports are attached) 2. Inspections of accessible areas adjacent to inaccessible areas can give an indication of the condition of the material in the inaccessible areas. Rust stains have not been identified on the internal surface of the concrete adjacent to areas of in-leakage through the concrete walls as referenced. Therefore it is reasonable to conclude that degradation of the reinforcing steel is not occurring 3. Water proof coating of the exterior surface of the structure foundations is not required due to successful repairs to water in-leakage paths from the inside of the structure. 4. The grout injection repairs to the wall have stopped the in-leakage of ground water. Due to the absence of flowing water, localized ground water contact with rebar possibly not protected from the grout injection process is insignificant and does not impact the integrity of the structure. DDC 2S11123 (attached) addresses the crack repair. 5. The tunnel is sectioned by various curbs and elevations. If the sump failed in the subject, the water would flow over the curb and into another sump. 6. The latest inspections have not identified signification in-leakage in structures WSLR. Inspection reports are attached. Response to Request for Additional Information: Entire respnse provided in answer to same AMR question. In summary, water leakage path was repaired and no signs of corrosion products from rebar observed to date. Therefore, no additional aging management required. 9/17/04: NRC auditor to discuss with engineering branch.

LR Contact	Hoppe	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Hoppe	**PAA Revision Required?**	No
Issue Status	Waiting for NRC Response		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
84 8/11/2004	B2.1.20	Patterson	What basis does the applicant propose for the initial sample sizes to be used? To what degree will the population be subdivided (for purposes of sample size selection)?	Initial sample size will be based on achieving 90% confidence that 90% of the population does not have the aging effect as described in EPRI TR-107514. The sample size will be subdivided based on common characteristics of the affected components such as materials of construction, fabrication process, operating environment, and aging effects as described in EPRI TR-107514. Note: The AMP basis document (attribute 4) will be revised. 9/16/04: Draft revision to AMP basis document provided to auditor.

LR Contact	Fallin	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Fallin	**PAA Revision Required?**	Yes
Issue Status	Waiting for NRC Response		
NRC Closure Date			

NRC Closure Date

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
85 8/11/2004	B2.1.20	Patterson	For selective leaching the PAA states that the "population of potentially affected components will be randomly sampled for inspection to confirm the absence of this aging effect." Please clarify how the samples selected will consider other (non-random) factors. NRC Request for Additonal Information 9/8: Selecting the locations where the aging effect is most likely to occur may be acceptable, but it is not a random sample. How does the applicant propose to resolve the conflict between these statements?	The sample size will be selected from the locations where the aging effect is most likely to occur as described in EPRI TR-107514. Response to Request for Additional Information: The population of potentially affected components will be based upon common characteristics of the components and not randomly. The process for identifying the population will be consistent with the methodology described in EPRI TR-107514, Age-Related Degradation Inspection Method and Demonstration.

LR Contact	Fallin	**LRA Revision Required?**	Yes
Assigned Department/ Individual	License Renewal Fallin	**PAA Revision Required?**	Yes
Issue Status	Waiting for NRC Response		
NRC Closure Date			

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
86 8/11/2004	B2.1.20	Patterson	PAA for one-time inspection (including selective leaching) states: "The population represented will be based on common characteristics of the affected components such as materials of construction, fabrication process, operating environment, and aging effects. The sample size selected for inspection will focus on the most susceptible components.". Please clarify whether the sample "size" is what was intended. NRC Request for Additonal Information 9/8: Determination of the sample size and selection of the sample are not the same. Please clarify how these will be accomplished at NMP.	The sample size will be selected from the locations where the aging effect is most likely to occur as described in EPRI TR-107514. Note: The AMP Basis document program description will be revised. Response to Request for Additional Information: The sample size will be selected to provide a 90% confidence that 90% of the population does not have the degradation mechanism

LR Contact	Fallin	**LRA Revision Required?**	Yes
Assigned Department/ Individual	License Renewal Fallin	**PAA Revision Required?**	Yes
Issue Status	Waiting for NRC Response		
NRC Closure Date			

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
87 8/11/2004	B2.1.20	Patterson	The representative sample of < 4" NPS piping is to be conducted using "existing site NDE practices." Please explain what techniques will be considered and how they will detect degradation (especially cracking and loss of material) from interior surfaces of small bore piping and components. Request for Additional Information 9/8: In the last paragraph of the applicant's response, what is meant by the term	All Quality Group A and B, ASME Code Class 1 and 2 Austenitic and Ferritic Piping selected examination samples (including piping <4" NPS) performed under the Alternate Risk-Informed Inspection Program require ultrasonic examinations. NMPNS is required to implement Appendix VIII, "Performance Demonstration for Ultrasonic Examination Systems," to ASME Section XI, Division 1, 1995 Edition with the 1996 Addenda, as administrated by the EPRI NDE Center, Performance Demonstration Initiative (PDI). All ultrasonic examination techniques being implemented at the NMPNS must be qualified under the PDI program. Ultrasonic examinations for the detection of degradation (such as cracking) is performed in two directions, and when examination in the circumferential direction is required, the circumferential examination must be performed in two directions, provided access is available. Dissimilar metal welds must be examined axially and circumferentially. For the detection of material loss, the 0 degree ultrasonic search unit is utilized to measure wall thickness. Destructive testing of this piping and fittings may also be used where practical The UT procedures are qualified to 2"NPS. For piping less than 2", liquid penetrant tests will be performed on the ID surface boat samples. The thickness of the boat samples can be verified using micrometers. Response to Request for Additional Information: Boat samples are sections of piping that have been cut from the system and are then cut in half. The tests are performed on the two resultant "boats."

LR Contact	Fallin	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Fallin	**PAA Revision Required?**	No
Issue Status	Waiting for NRC Response		
NRC Closure Date			

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
88 8/11/2004	B2.1.10	Kennedy	XI.M20, OCC: The NMP1 TBCLC System in in-scope for LR but not in scope for the GL 89-13 program and therefore not covered by this AMP. Clarify this apparent discrepancy.	As described in LRA section 2.3.3.A.25, the TBCLC system is in-scope for LR under criteria a(2) (i.e. NSR piping) with an intended function of preventing failure from affecting SR equipment. There is no applicable heat transfer intended function and, therefore, the TBCLC HX'x are not credited for cooling. As such, the service water side of the HX's are not in-scope. Therefore, the open-cycle cooling water program is not applicable to the TBCLC system.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/8/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
89 8/11/2004	B2.1.10	Kennedy	The AMP basis document discusses "indirect" performance testing of the NMP1 EDG cooling heat exchangers. Clarify what is meant by the term "indirect" and how it is considered consistent with GALL.	The EDG quarterly performance test procedures (Reference 25 of the Attribute Assessment document for XI.M20) do not independently test the operation of the DG cooling water system. However, the procedures do verify in Section 8.2.1that the diesel generator is operating satisfactorily at its rated load. Section 8.2.1. Refers to procedure N1-ST-M4A (DG 102) or N1-ST-M4B (DG 103), which require the EDG run at its rated load for one hour. Any degradation of the heat transfer capability of the heat exchanger would be self-evident through elevated coolant temperature. Also, the NMP1 EDG cooling water system does not have the instrumentation necessary to perform direct calorimetric testing of the EDG cooling water heat exchangers. Flow rate testing of the EDG cooling water system, performed under procedure N1-ST-Q25, provides additional assurance that fouling of the EDG cooling water heat exchangers has not occurred. This procedure was not referenced in the attribute assessment document but will be. GALL XI.M20, 3.1. States: "Cleanliness and material integrity of piping, components, heat exchangers, and their internal lining s or coatings (when applicable) that are part of the OCCW system or that are cooled by the OCCW system are periodically inspected, monitored, or tested to ensure heat transfer capabilities." Based on the above statement GALL does not require both inspection and testing. Since the EDG heat exchanger is subject to a visual internal inspection (Reference 22 of the attribute assessment) in addition to testing (performed indirectly due to instrumentation limitations), NMP1 meets GALL. Note: Revision to the AMP basis document required.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	8/12/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
90 8/11/2004	B2.1.10	Kennedy	The GALL attribute for Monitoring and Testing states that the "testing frequencies are in accordance with the utility commitments under NRC GL 89-13. Testing and inspections are done annually and during refueling outages." NMP's AMP basis document states that inspections are performed on a bi-annual basis and during refueling outages, per the commitments under GL 89-13. The reference provided that identifies NMP's commitment did not address test and inspection frequencies. Provide the proper reference.	The reference provided (Reference 15) was incorrect. By letters dated April 23, 1993, NMP1 informed the NRC that Generic Letter 89-13 required tests and activities have been implemented and that required continuing programs have been established as indicated in our letter dated December 10, 1990 (Reference 24 to the Attribute Assessment). With respect to recommended action II of GL 89-13, which addressed testing frequency, the December 10 letter states that the performance monitoring requirements were under evaluation by the Service Water Task Force, and that actions necessary to address the generic letter recommendation would be implemented prior to startup from the 1992 refueling outage. The December 10 letter did not indicate the testing interval but did indicate that the RBCLC and containment spray heat exchangers would be tested during power ascension testing; however, the cited procedure has been discontinued. (containment spray system does not credit the OCC program) The power ascension test was a one-time test only. The initial approach to ensuring thermal performance of the RBCLC heat exchangers was a combination of the one-time test with more frequent (quarterly) cleaning. Therefore, NMP never made any specific commitments for a frequency of thermal performance testing in response to GL 89-13. The current thermal performance testing frequency was established in response to INPO SOER 84-1. DER-1993-2092 documented that the recommendation of SOER 84-01 to establish thermal performance monitoring criteria had not been established. The DER indicated the following actions were in progress: • Develop New Procedure With Performance Criteria For Heat Exchangers Thermal Performance • Perform For Information Only, RBCLC Heat Exchanger Performance Procedure To Verify Testing Method And Establish Baseline. • Incorporate Lessons Learned From Baseline Testing Into RBCLC Heat Exchanger Performance Monitoring Procedure, And Establish Permanent Testing Frequency. The current performance test for the RBCLC heat exchangers is performed under procedure N1-TTP-033, which has a frequency of every two years (corresponding to one fuel cycle for NMP1). This testing frequency meets the recommendations of GL 89-13 even though this frequency was not determined in response to the generic letter. Indirect testing of the EDG cooling water heat

RBCLC

Thermal

exchangers is performed quarterly under procedures N1-ST-Q25

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
				and N1-ST-Q16A and N1-ST-Q16B. With respect to testing frequency, GL 89-13 states: “In implementing the continuing program for periodic retesting of safety-related heat exchangers cooled by service water in open-cycle systems, the initial frequency of testing should be at least once each fuel cycle, but after three tests, licensees and applicants should determine the best frequency for testing to provide assurance that the equipment will perform the intended safety functions during the intervals between tests and meet the requirements of GDC 44, 45, and 46. The minimum final testing frequency should be once every 5 years.” The wording of GALL Program X1.M20 appears to be aimed at ensuring that the applicants program meets the requirements of GL 89-13, not to meet requirements in excess of GL 89-13. The auditor’s question quotes the words from “Monitoring and Trending” in GALL X1.M20, which addresses all types of testing and inspections, some of which are done more frequently than thermal performance testing.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/8/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
91 8/11/2004	B2.1.10	Kennedy	Based upon a review of the preventive maintenance (inspection) procedure for the NMP1 EDG cooling water heat exchangers, the acceptance criteria states "clean, no silt, no zebra mussels." Clarify what is meant by "clean."	This is a duplicate. See response to Issue No. 154.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date			

92 8/11/2004	B2.1.8	Hsu	What is the source of the acceptance criteria for flaws found during reactor internals inspections? Are ASME XI acceptance criteria used, BWRVIP acceptance criteria, or are the two the same?	NMP acceptance criteria always meet ASME Section XI requirements. In some cases, BWRVIP determined more stringent or specific flaw acceptance criteria than ASME Section XI. NMP uses the BWRVIP acceptance criteria when they are more stringent or specific than the ASME Section XI requirements. Note: The AMP Basis document will be revised to relflect the above response

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/8/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
93 8/11/2004	B2.1.8	Hsu	BWRVIP-62 is not NRC approved but is cited in the GALL. What is NMP's plan with respect to BWRVIP-62? What aspects of BWRVIP-62 will NMP be using? NRC recommends NMP change the basis document to note in our program basis document where BWRVIP-62 will be applied.	BWRVIP-62 allowed inspection relief for plants using hydrogen water chemistry (HWC). NMP2 credited BWRVIP-62 in a shroud evaluation from 2000-2004, but is not currently invoking BWRVIP-62. NMP1 has never taken credit for HWC in shroud Reinspection evaluations. In the future, NMP plans to take credit for the relief allowed by BWRVIP-62 when the document is approved for license renewal by NRC (i.e., becomes a - A document). Note: The AMP Basis document will be revised to relflect the above response (Paramerters Monitored/Inspected Attribute)

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/8/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
94 8/11/2004	B2.1.8	Hsu	Is NMP committed to BWRVIP-79 or BWRVIP-29 with respect to water chemistry control? What are the differences between the two documents?	BWRVIP-79 is a revision to BWRVIP-29. Action levels in the NMP1 Technical Specifications are derived from BWRVIP-29 for certain parameters (conductivity, sulfates, chlorides). Chemistry administrative procedure GAP-CHE-01 references BWRVIP-79. NMP2 Technical Specifications do not reference the BWRVIP guidelines. Administrative limits for the major chemical parameters are the same in BWRVIP-29 and BWRVIP-79. There are some minor changes in parameters, for instance, plants using noble metal chemical addition (NMCA) and hydrogen water chemistry may subtract contributing to conductivity by soluble iron. Note: Change to Water Chemistry AMP basis document required.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/8/2004		

95 8/11/2004	B2.1.8	Hsu	In 2003, the fluence in some areas of the core shroud exceeded 5E20 n/cm2. Prior to 2003, NMP used the lower crack growth rates allowed by BWRVIP-14 for evaluation of cracking below the 5E20 n/cm2 threshold. Will NMP use higher crack growth rates for evaluations performed on welds that have exceeded 5x1020 n/cm2.	NMP is only applying the BWRVIP-14 crack growth rates for portions of the reactor vessel internals with fluence less than 5x1020 n/cm2. For evaluations of RVI areas exceeding this threshold, appropriate higher crack growth rates will be used.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/8/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
96 8/11/2004	B2.1.8	Hsu	BWRVIP-76 requires a plant specific analysis for inspection interval for core shroud cracks in regions with fluence exceeding 5x1020 n/cm2. Since NMP has areas of the internals with fluence exceeding this threshold, have plant specific analyses been performed and submitted to NRC? Provide the NRC audit team with copies of any such submittals. NRC Additional Question (9/8): Please provide the approval letter information to support above statement.	Plant-specific evaluations that determine the reinspection interval have been submitted to NRC for NMP2. The following documents are provided to NRC: NMP2L 1803, Letter from Carl D. Terry to USNRC dated July 9, 1998 re: "Generic Letter 94-03, Intergranular Stress Corrosion Cracking of Core Shrouds in Boiling Water Reactors" Letter from Darl S. Hood, NRC to Mr. John H. Mueller, Niagara Mohawk Power Corporation, dated August 24, 1998, re: "Request for Additional Information Regarding Core Shroud Evaluation from Refueling Outage 6 (RFO6) " Nine Mile Point Nuclear station Unit No. 2 (Tac No. MA2286) NMP2L 1823 Letter from John T. Conway to USNRC dated September 21, 1998, re: Request for Additional Information Regarding Nine Mile Point Unit 2 Core Shroud Evaluation (TAC No. MA2286) Letter from Darl S. Hood, NRC to Mr. John H. Mueller, Niagara Mohawk Power Corporation, dated October 15, 1998, re: "Core Shroud Inspection and Flaw Evaluation for Operation after Refeuleing Outage 6, Nine Mile Point Nuclear Station, Unit No. 2 (TAC No. MA2286)" NMP2L 1914, Letter from John T. Conway, NMPC, to USNRC dated December 2, 1999 re: "Core Shroud Reinspection Plan" Letter from Peter S. Tam, NRC to Mr. John H. Mueller, NMPC, dated April 27, 2000 re: "Nine Mile Point Nuclear Station, Unit No. 2" Core Shroud Reinspection Plan for Refueling Outage 7 (TAC No. MA7284) NMP2L 1961, Letter from Richard B. Abbott, NMPC, to USRNRC dated April 28, 2000, re: "Core Shroud Reinspection Results (TAC No. MA7284)" Letter from Peter S. Tam, NRC to Mr. John H. Mueller, NMPC, dated October 30, 2000 re: "Nine Mile Point Nuclear Station, Unit No. 2" Safety Evaluation of Core Shroud Inspection Results (TAC No. MA9057) NMP2L 2029, Letter from Richard B. Abbott, NMPC, to USNRC dated September 14, 2001, re: "Reinspection Plan for Core Shroud Weld H4" Letter from Peter S. Tam, NRC to Mr. John T. Conway, NMPC, dated

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
				January 16, 2002, re: Nine Mile Point Nuclear Station, Unit No. 2 (NMP2) " Reinspection Plan for Core Shroud Weld H4 (TAC No. MB2797)" Note: The AMP Basis document will be revised to relflect the above response Response to Additional Information: Approval Letter provided For NMP1, mechanical repairs have been installed on high-fluence cracked welds which replace the function of the cracked weld. Cracked horizontal welds H1 through H7 were repaired using mechanical tie rods; no plant specific analysis of the inspection interval was ever credited for these welds (References 1, 2). A plant-specific analysis allowing one cycle of operation has previously been credited for the V9 and V10 welds (Reference 3); however, this evaluation is no longer credited since these welds have been repaired with mechanical clamps (Reference 4, 5). Evaluations of both mechanical repairs have been approved for the remainder of plant life including a 20-year LR term (Reference 1, 4, 5, 6). Reference 4 does not explicitly indicate the design life of the repair, but refers to BWRVIP-02 which specifies the repair should last through the remainder of the original plant life plus the license renewal term. The core shroud welds that are not covered by mechanical repairs as well as the mechanical repair hardware are inspected in accordance with BWRVIP guidelines. Other core shroud welds currently have fluences below 5x1020 n/cm2 (Reference 7, 8). Therefore, no plant-specific evaluations of high-fluence cracked welds (>5x1020 n/cm2) are currently credited for NMP1. NMP1 uses RG 1.190 approved methods of fluence analysis to predict the fluence of reactor internals welds. Plant-specific analyses of cracked welds will performed if necessary for welds that exceed the 5x1020 n/cm2 fluence threshold in the future in accordance with BWRVIP guidelines. 1. Letter from Ledyard B. March, NRC, to Mr. B. Ralph Sylvia, NMPC, re: “Nine Mile Point Nuclear Station Unit No. 1 (NMP1), Evaluation of Core Shroud Stabilizer Design (TAC No. M91273),” dated March 31, 1995 2. Letter from Darl Hood, NRC to Mr. B. Ralph Sylvia, NMPC, re: “Modifications to Correct Core Shroud Repair Deviations, Nine Mile Point Nuclear Station, Unit No. 1 (TAC No. M90102),” dated March 3, 1997 3. Letter from Darl S. Hood, NRC to Mr. John H. Mueller,

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
NMPC,				Interval for Core Shroud Vertical Welds, Nine Mile Point Nuclear Station, Unit No. 1 (TAC No. M99720), dated November 2, 1998 4. Letter from S. Singh Bajwa, NRC, to Mr. John H. Mueller, re: “Alternative Repair of the Core Shroud Vertical Welds, Nine Mile Point Nuclear Station, Unit No. 1 (TAC No. MA4701),” dated April 30, 1999
NMPC,				5. Letter from S. Singh Bajwa, NRC, to Mr. John H. Mueller, re: “Supplemental Safety Evaluation Regarding Alternative Repair of the Core Shroud Vertical Welds, Nine Mile Point Nuclear Station, Unit No. 1 (TAC No. MA4701),” dated May 24, 1999
NMPC,				6. Letter from S. Singh Bajwa, NRC, to Mr. John H. Mueller, re: “Alternative Repair of the Core Shroud Tie Rod Upper Spring Assembly, Nine Mile Point Nuclear Station, Unit No. 1 (TAC No. MA5433),” dated June 7, 1999
re:				7. NMP1L 1373, Letter from Richard B. Abbott to USNRC re: Generic Letter 94-03, “Intergranular Stress Corrosion Cracking of Core Shrouds in Boiling Water Reactors,” dated October 22, 1998 (transmitting “Nine Mile Point Unit 1 Shroud Neutron Transport and Uncertainty Analysis, Report No, MPM-998676) 8. NMP1L 1708, Letter from Bruce S. Montgomery to USNRC “Nine Mile Point Unit 1 Docket No. 50-220, Transmittal of Neutron Transport Calculations Benchmarking Report TAC Nos. MB6687 and MB6703

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/17/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
97 8/11/2004	B2.1.8	Hsu	Is NDE uncertainty incorporated into flaw evaluations? BWRVIP-18, which is not yet NRC-approved, would allow NDE uncertainty to be discounted.	NMP currently considers NDE uncertainty in its flaw evaluations. If BWRVIP-18 is approved, NMP will reevaluate whether to consider NDE uncertainty in future flaw evaluations, and whether there is a benefit to revising existing evaluations to leave out NDE uncertainty.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/8/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
98 8/11/2004	B2.1.10	Kennedy	XI.M.20, OCC: The AMP basis document discusses "indirect" performance testing of the Unit 1 EDG Cooling Water Heat Exchangers. Clarify what is meant by the term "indirect" and how it is considered consistent with GALL.	The EDG quarterly performance test procedures (Reference 25 of the Attribute Assessment document for XI.M20) do not independently test the operation of the DG cooling water system. Howerver, the procedures do verify in Section 8.2.1 that the diesel generator is operating satisfactorily as its rated load. Section 8.2.1 refers to procedure N1-ST-M4A (DG 102) or N1-ST-M4B (DG 103), which require the EDG run at its rated load for an hour. Any degradation of the heat transfer capability of the heat exchanger would be self-evident through elevated coolant temperature. Also, the NMP1 EDG cooling water sysem does not have the instrumentation necessary to perform direct caloricmetric testing of the EDG cooling water heat exchangers. Flow rate testing of the EDG cooling water system, performed under procedure N1-ST-Q25, provides additional assurance that fouling of the EDG cooling water heat exchangers has not occurred. This procedure was not referenced in the Attribute Assessment document but will be. GALL XI.M20, 3.1 states: "Cleanliness and material integrity of piping, components, heat exchangers, and their internal linings or coatings (when applicable) that are part of the OCCW system or that are cooled by the OCCW system are periodically inspected, monitored, or tested to ensure heat transfer capabilities." Based on the above statement GALL does not requrie both inspection and testing. Since the EDG heat exchanger is subject to a visual internal inspection (Reference 22 of the Attribute Assessment) in addition to testing (performed indirectly due to instrumentation limitations), NMP1 meets GALL. Note: Change to AMP basis document required.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/8/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
99 8/12/2004	B3.2	Patterson	When we implemented Fatigue Pro will we analyze more locations for environmental fatigue effects than those listed in NUREG/CR-6260? Verify that the NUREG/CR-6260-equivalent locations are the most limiting with respect to environmental fatigue for NMP.	NMP will analyze a sample of critcal component locations for evirornmentally effects. The sample of critical component locations will be chosen to represent the limiting locations such that they will bound the remaining component locations. The sample will include as a minimum, the locations equivalent to those identified in NUREG/CR-6260 but may include additional locations if these locations are determined to be more limiting with respect to environmental fatigue effects.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	8/20/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
100 8/13/2004	B2.1.15	Saba	NMP monitoring and trending element states that the ISI program plan summarizes the additional requirements for sampling and/or repair, including requirements of IWB-2430 for Class 1 components. Further, it states that for those Class 1 and 2 components that are inspected per the requirements of the Alternative Risk-Informed Inservice Inspection Plan and Schedule, NMP1 and NMP2 inspection intervals comply with IWA 2432, Inspection Program B. The required examinations in each Examination Category shall be completed during each inservice inspection interval in accordance with IWB-2412-1 with exceptions as listed in the program plan. Clarify whether these requirements for additional inspection are consistent with the guidelines provided in NRC GL 88-01 for additional samples of welds to be inspected when one or more cracked welds are found in a weld category (it is described in GALL M &T attribute/element).	Requirements for sample expansion as identified in the ISI program is consistent with NRC GL 88-01 and provides the for the following. The AMP basis document will be revised to clarify that additional inspections are in accordance with GL 88-01 requirements. IGSCC Sample Expansion A. IGSCC Categories A, B or C If one or more cracked welds in IGSCC Categories A, B. or C, are found by a sample inspection during the 10 year interval, an additional sample of the welds in that category shall be inspected, approximately equal in number to the original sample. This additional sample should be similar in distribution (according to pipe size, system, and location) to the original sample, unless it is determined that there is a technical reason to select a different distribution. If any cracked welds are found in this sample, all of the welds in that IGSCC Category should be inspected. If significant crack growth, or additional cracks are found during the inspection of one or more IGSCC Category E welds, all other Category E welds should be examined. B. Significant crack growth for overlayed welds is defined as crack extension to deeper than 75% of the original wall thickness, or for cracks originally deeper than 75% of the pipe wall, evidence of crack growth into the effective weld overlay. Significant crack growth for SI mitigated Category E welds is defined as growth to a length or depth exceeding the criteria for SI mitigation. (10% of circumference or 30% in depth). Based on discussions held with the BWRVIP during the public meeting, the NRC staff requested that the criteria for sample expansion for Category E welds (resistant material) be modified such that, for the first expansion, an equal number to the original inspection population be examined; for the second expansion, fifty percent (50%) of the total population is examined; and for the third expansion, the full population (100%) is examined. C. Category D weld expansions are limited to piping systems where cracking was identified. If cracking is detected, the sample size will be expanded to a sample equal in number to the size of the initial sample. If cracking is detected in the additional sample, all remaining Category welds will be examined. Sample expansion can be limited, with technical justification, to the system or type component (i.e., safe-end to nozzle) in which flaws were detected. However, the sample size should include a number equal to the original sample or otherwise include all the welds within the system or component type that

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
				expansion is being limited. Note: The AMP basis document will be revised. 9/16/04: Draft revision to AMP basis document provided to auditor. 9/17/04: Auditor provided comments to author.

LR Contact	Petras	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Fallin	**PAA Revision Required?**	Yes
Issue Status	Additional Information Required		
NRC Closure Date			

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
101 8/13/2004	B2.1.15	Saba	Scope of Program: A) Clarify whether NMP1 and NMP2 have completed all actions required in NRC GL 89-10. B) Clarify whether any IGSCC in RWCS welds inboard of the second isolation valve is detected. DER-NM-1997-1484 identifies one IGSCC in RWCS inboard welds. C) Clarify whether any IGSCC in RWCS welds outboard of the second isolation valve is detected. D) Based on these criteria, identify the recommended IGSCC for NMP1 and NMP2.	A) All action requirements associated with USNRC Generic Letter 89-10, "Safety-Related Motor-Operated Valve Testing and Surveillances for Both Unit 1 and 2 have been completed. B) There has been no degradation mechanism associated with IGSCC identified on any RWCS welds inboard of the second isolation valve. DER NM-1997-1484 identified axial crack on weld 33-FW-22, a non-safety related, non-ASME Code bi-mettalic weld located on RWCU Regenerative Heat Exchanger inlet nozzle outside the second isolation valve. The weld was repaired by weld-overlay in 1997. C) Only one RWCS wels outboard of the second isolation valve has been identified as having had an IGSCC indication. This is documented in DER NM-1997-1484. D) For NMP1 and NMP2, the examination requirements for RWCS are as stated in GL 88-01 Note: A revision to the AMP basis doucment is required.. 9/16/04: Draft revision to AMP basis document provided to auditor. 9/17/04: Auditor provided comments to author.

LR Contact	Petras	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Fallin	**PAA Revision Required?**	Yes
Issue Status	Additional Information Required		
NRC Closure Date			

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
102 8/13/2004	B2.1.15	Saba	LRA Section B2.1.15 under NUREG-1801 Consistency states that GALL program cites ASME Section XI requirements covered in the 1995 edition through 1996 addenda. The IWB/C/D ISI program is based on the 1989 edition with no addenda. This was acceptable by the NRC. However, as it is stated in the reactor water cleanup system PAA and based on the review of PAA references 39 and 40, the NRC has accepted ASME 1989 for the Third Ten Year Interval for NMP1 and the Second Ten Year Internal Inservice Inspection Program for NMP2. Therefore, this exception to the applicable edition of Section XI of the second code for the extended period of operation for the license renewal should be reviewed and approved by the NRC staff.	The use of later Code Editions and Addenda of ASME Section XI is determined in accordance with Title 10 , Part 50, Section 55a of the Code of Federal Regulations which states in part that inservice inspections/tests of components whose function is required for safety, conducted during successive 120-month inspection intervals shall comply with the requirements of the latest Edition and Addenda of the Code incorporated by reference 10 CFR 50.55a(b), 12 months prior to the start of the 120-month inspection interval, and subject to the limitations and modifications and NRC approval. Therefore, prior to the start of the extended period of operation the requirements of 10 CFR 50.55a as stated above will assure that the Edition of Section XI shall be reviewed and approved by the NRC prior to implementation. 10/13/04: NRC requested information to be included in LRA Supplemental letter during conference call.

LR Contact	Petras	**LRA Revision Required?**	Yes
Assigned Department/ Individual	License Renewal Petras	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/8/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
103 8/13/2004	B2.1.15	Saba	All GALL attributes except Acceptance Criteria: the PAA states that "this program attribute is consistent with the corresponding GALL attribute given the differences between the code edition." The ASME code edition is not used in this GALL attribute. ASME XI code is used in the GALL acceptance criteria. Refer to Question 1, for discussion on the acceptance of the ASME Code edition.	The PAA will be revised such that the exception for the ASME code year will only apply to the Acceptance Criteria attribute. Note: A change to the AMP Basis document is required. 9/16/04: Draft revision of AMP basis document provided to auditor. 9/17/04: Auditor provided comments back to author.

LR Contact	Petras	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Fallin	**PAA Revision Required?**	Yes
Issue Status	Additional Information Required		
NRC Closure Date			

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
104 8/13/2004	B2.1.15	Saba	Parameters Inspected/monitored: Identify the applicable schedule (as defined in this GALL attribute) for NMP1 and NMP2. Explain why the applicable schedule is used. NRC Additional Request for Information (9/8): Explain why Schedule A is utilized for Unit 1 and 2. Provide justification	The applicable schedule utilized for both Unit 1 and 2 is Schedule A, no inspections required for RWCU piping welds outboard of the second isolation valves. As stated in the GALL, Section XI.M25: 'The screening criteria include: a. Satisfactory completion of all actions requested in NRC GL 89-10, b. No detection of IGSCC in RWCU welds inboard of the second isolation valves (ongoing inspection in accordance with the guidance in NRC GL 88-01), and c. No detection of IGSCC in RWCU welds outboard of the second containment isolation valves after inspecting a minimum of 10% of the susceptible piping. No IGSCC inspection is recommended for plants that meet all three criteria or that meet criterion (a) and piping is made of material that is resistant to IGSCC. Schedule A: No inspection is required for plants that meet all three criteria set forth above, or if they meet only criterion (a). Piping is made of material that is resistant to IGSCC, …' Schedule A is justifiable for Unit 1 since all the screening requirements are satisfied, as follows: 1. Criterion (a) is satisfied since all actions required for Generic Letter 89-10 have been completed as documented in NRC Inspection Report 50-220/97-09 (dated 11/4/97), 2. Criterion (b) is satisfied because no IGSCC has been identified in RWCU welds inboard of the second isolation valve, and 3. Criterion (c) is satisfied since inspections of a minimum of 10% of the susceptible piping welds outside the second containment isolation valve have yielded no indications of IGSCC For Unit 2, Schedule A is justified because: 1. Criterion (a) is satisfied since all actions required by GL 89-10 have been completed as documented in NRC Inspection Report 50-410/97-09 (dated 11/4/97), and 2. Due to the design of Unit 2, there is no IGSCC susceptible

piping

outboard of the second containment isolation valves for the RWCU system.

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID	LRA Section	NRC Inspector	Issue Description	Actions Taken
Date Identified				

LR Contact	Petras	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Brown	**PAA Revision Required?**	Yes
Issue Status	Response Complete		
NRC Closure Date			

105 8/12/2004	B3.2	Patterson	The scope of the Program Attribute Assessment document does not appear to address the preventive and mitigative measures addressed in the GALL (current program or future Fatigue Pro program)	There are currently no preventive or mitigative actions in the Fatigue Monitoring Program. As part of the design change process while implementing FatiguePro, we will review existing operations pocedures which may be revised to include preventive/mitigative actions. The AMP Assessment for the Fatigue Monitoring Program needs to be modified to state that preventive/mitigative actions, such as procedural or design changes, will be taken if it is determined that design CUF values may be exceeded. A similar change needs to be made to the fatigue monitoring program procedure NIP-REL-06 and License Renewal Application section B3.2. Note: Change to the LRA and AMP Basis Document required. 9/16/04: Draft revision to AMP basis document provided to auditor.

LR Contact	Poehler	**LRA Revision Required?**	Yes
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	Yes
Issue Status	Waiting for NRC Response		
NRC Closure Date			

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
106 9/8/2004	B2.1.9	Wen	Please provide two examples of components that have been repaired or replaced at NMP as a result of E/C program findings.	NMP1 – 1st and 2nd Stage Reheater Drain Lines (System 09 and 25), inlet nozzles to the High Pressure Feedwater Heaters (5th Stage). FAC Component Numbers 09P011, 09P025, 09N026, 09N027, 09N028, 09N029; 25N023, 25N024, 25N025, 25N026, 25N027, and 25N028; [Line # 09-4-A and 25-4-A]. Degraded pipe wall (8" NPS) noted when examined during RFO-14, refer to DER's 1-1997-0863, 0976, 1067, 1068. Replaced all 12 pup pieces of 8" piping under Design Changes N1-97-029 and N1-55-673 during RFO-15 with FAC resistance chrome-moly material (A335 Grade P5). NMP2 – 3rd Point Feedwater Heat Exchangers Vessel Shell. FAC Component Numbers AHX031, AHX032, and AHX033, [2CNM-E3A / B / C]. Degraded pressure vessel shell wall noted when examined during RFO-7, refer to DER's 2-2000-940 and 2-2000-1114. Repaired during RFO-7 via flush patch – insert replacement plates approximately 3' x 4' at 6 locations. Each side of the 3 vessel shells beneath the Extraction Steam Inlet nozzles required a replacement plate.

LR Contact	Brown	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Brown	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/16/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
107 8/12/2004	B2.1.18	Saba	LRA Appendix A, Section A2.1.20 and Appendix B, B2.1.18 need to identify the applicable ASTM standards.	LRA Sections A1.1.20, A2.1.20 and B2.1.8 will be updated appropriately. The ASTM Standards used are D 975, D 1796, D 2276 and D 4057. 10/13/04: NRC provided verbal acceptance during conference call.

LR Contact	Brown	**LRA Revision Required?**	Yes
Assigned Department/ Individual	License Renewal Brown	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	10/13/2004		

108 8/12/2004	B2.1.18	Saba	LRA Appendix B and PAA documents for NMP1 and NMP2 fuel oil chemistry, state that the existing program will be enhanced to include thickness measurement of tank bottom surfaces. A) Is there any underground tank whose aging effect is managed by this program? B) If any, identify it and explain how its bottom thickness will be measured.	All of the fuel oil tanks at NMP are buried, but implementation of this enhancement is not complete. Wall thickness will be determined using UT measurements taken from inside the tank while it is empty for routine cleaning and inspection.

LR Contact	Brown	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Brown	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	8/25/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
109 8/12/2004	B2.1.18	Saba	LRA Section B2.1.18 states that the program will be enhanced to add requirements to periodically inspect fuel oil storage tanks for evidence of significant degradation. Provide information or drawings that show that these tanks can be completely drained and ready for internal inspeciton (e.g., drain lines are located at the bottom of the tanks).	The FO storage tanks are inspected internally under site procedures N1-MPM-EGF-10Y001 and N2-MPM-EGF-10Y001. As noted therein, fuel that is below the suction of the standpipe is removed using portable pumps, obviating the need for any installed tank drainage systems.

LR Contact	Brown	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Brown	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/8/2004		

110 8/12/2004	B2.1.18	Saba	Provide a table of the parameters monitored that includes monitoring frequency, applicable ASTM standards and limits of each parameter.	Table provided to NRC auditor via e-mail

LR Contact	Brown	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Brown	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/10/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
111 8/11/2004	B2.1.2	Saba	NMP PAA for Water Chemistry program references GAP-CHE-01, Revision 8. NMP binder for Water Chemistry AMP contains both Rev. 8 and 9 of this procedure. Clarify which revision is applicable. NRC Additional Request for Information (9/8/04): The PAA should be revised to include this change. The auditor will review the revision 9 during the next site visit. NRC Auditor Feedback (9/27/04): Applicant needs to specify changes between Rev 8 and 9 and indicate whether any changes to the AMP basis document are needed.	Revision 9 is currently applicable. Revision 8 was referenced in the NMP1 and NMP2 Program Attribute Assessment documents because it was the latest approved revision at the time these documents was approved. Response to Request for Additional Information: Revisions 8 and 9 of GAP-CHE-01 provided to the auditor for review on 9/16/04. Response to Request for Additional Information: The differences between Revisions 8 and 9 of GAP-CHE-01 were mainly editorial (i.e. change Roman numeral to number, spell out complete title of reference document, correct grammatical errors) and administrative (i.e. provide additional direction on reporting of events, addition of reference document) and do not impact the evaluation performed for consistency with the GALL program. These changes would not warrant a revision to the NMP Program Attribute Assessment (PAA) document. However, there were a few technical changes (i.e. addition of Feedwater Total Zinc limits and changes to Feedwater dissolved oxygen action level values) that will require a change to the PAA document. 10/13/04: NRC provided verbal acceptance during conference call. Also, they stated that Rev 9 should be used in the PAA.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	10/13/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
112 8/11/2004	B2.1.31	Nguyen	XI.E3: AMP The attribute assessment document attribute 4 (Detection of Aging Effects) call for inspections at least once every 10 years. Provide a justification for this inspection frequency.	The attribute 4 assessment will be changed to state: 4.2 Nine Mile Point Units 1 and 2 The inaccessible medium-voltage cables installed in adverse localized environments caused by simultaneous exposure to significant moisture and significant voltage will be tested at least once every ten years. This is an adequate period to preclude failures of the conductor insulation since experience has shown that aging degradation is a slow process. The first testing for license renewal will be completed before the period of extended operation. Current plant procedures require periodic inspections of man-holes. This program attribute will be consistent with the corresponding GALL attribute upon new program development. Note: Revision to the LRA and AMP basis document required.

LR Contact	D. Taormina	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal D. Taormina	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	8/13/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
113 8/12/2004	B2.1.14	Wen	Does guidelines provided in EPRI NP-7079 (EPRI TR-108147), and ASME OM-S/G-1998, Part 17 for ensuring timely detection of degradation of the compressed air system function being incorporated in the NMP programs? NRC Request for Additional Information 9/8: Since NMP's Compressed Air Program is not based on all the references included in GALL, specifically, EPRI-108147 and ASME OM-S/G-1998, Part 17, explain which portions of these guidelines were not included in the development of the applicant's program and address why without including them, the applicant's program still can be considered to be consistent with the GALL.	The current program includes good practice elements of the general maintenance and inspection activities for the compressor, receiver, and drier discussed in TR-108147 (revision to EPRI NP-7079) and ASME OM-S/G-1998, Part 17. However, there are currently no plans to explicitly commit to incorporating EPRI TR-108147 or ASME OM-S/G-1998 into the NMP Compressed Air Monitoring Program. The Compressed Air Monitoring Program Attribute Assessment and the LRA will be revised to indicate an exception to the GALL with regards to compliance with the EPRI and ASME guidelines. Response to Request for Additional Information: NMP1 will revise the LRA to reflect that the Compressed Air Monitoring Program is consistent with the GALL, with exceptions. Regarding EPRI TR-108147, NMP1 will take exception to any maintenance recommendations that are not also endorsed by the manufacturer. NMP1 will also take exception to the preservice and inservice testing guidelines in ASME OM-S/G-1998, Part 17, in their entirety. Notably, under the current program, NMP1 has not experienced a failure of a pneumatic component within the scope of license renewal due to corrosion, corrosion product buildup, or dirt buildup. Therefore, NMP considers the current program acceptable for ensuring no loss of intended function. 10/14/04: Revision to Unit 1 Compressed Air Monitoring PAA approved which incorporates this change.

LR Contact	Nold	**LRA Revision Required?**	Yes
Assigned Department/ Individual	License Renewal Nold	**PAA Revision Required?**	Complete
Issue Status	Closed		
NRC Closure Date	9/17/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
114 8/12/2004	B2.1.14	Wen	The applicant indicates that the compressed air monitoring program is based on GL 88-14 and recommendations presented in INPO SOER 88-01. How is the INPO recommendations incorporated in the NMP programs?	The following INPO 88-01 recommendations have been incorporated into the NMP1 Compressed Air Monitoring Program: • Rec. #4 - Monitor air quality at several points throughout the instrument air system periodically. Take actions to improve the air quality and perform inspections to ensure the continued operability of equipment exposed to these conditions (Maintenance). • Rec. #5 - Ensure the station's preventive maintenance for the instrument air system provides for replacing filters and desiccant material, and performing air dryer maintenance on a regularly scheduled basis (Maintenance). These INPO recommendations have been incorporated into the following procedures (reference number in parentheses correlates to reference number in the AMP assessment document): • N1-CTP-Q921, Instrument Air Sampling and Analysis (Ref. • N1-MMP-094-601, Maintenance of IA Compressors CMPR- 01/02 (Ref. 3) • N1-MPM-094-020, IA Dryer DEH-168 & DEH-169 Cleaning Inspection (Ref. 4) • N1-MPM-094-604, Instrument Air Compressor PM CMPR- (Ref. 5)

program

6)

94-

and

94-01/02

LR Contact	Nold	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Nold	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/8/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
115 8/12/2004	B2.1.14	Wen	The Compressed Air Monitoring Program is only applicable to NMP1. What program will be used for NMP2 to manage aging effects for portions of the compressed air systems WSLR? The applicant indicated that the components requiring AMR for NMP2 compressed air systems are addressed by Appendix J Program. However, the applicant's AMP B2.1.26, "10 CFR 50 Appendix J Program" did not specifically address this point. Please elaborate it in detail, specially, how the 10 elements are being addressed? NRC Request for Additional Information 9/8: As stated in NRC GL 88-14, also echoed in INPO SOER 88-01, the effects of corrosion and the presence of unacceptable levels of contaminants on the intended function of the compressed air system are safety concerns. From your response to Question #104, it is unclear whether NMP2 instrument air system (IAS) contains components such as air compressors, pre-filters, dryers, after-filters, receiver, and distribution piping network (including piping, fittings, and valves) that are made of carbon steel and are subject to AMR. If there exist such components, explain why relying on Appendix J alone is sufficient to manage the aging effect for those components, especially, the concern of "the effects of corrosion and presence of unacceptable levels of contaminants on the intended function of the compressed air system," as stated in the GALL Scope of Program Section. NRC Comment 9/17/04: NMP response to be sent to NRC Scoping and Screening auditor for further discussion.	To properly answer the question requires discussion of the portions of the NMP2 compressed air system within the scope of license renewal. The NMP2 compressed air systems (CAS) consist of the instrument air system (IAS), the service air system (SAS), the breathing air system (AAS), and the instrument nitrogen system (GSN). The SAS and AAS are used only for nonsafety-related equipment and components during normal plant operation. The IAS system supplies air to both safety-related and nonsafety-related equipment and components. However, the system is not considered a safety-related control air system since the safety-related components that it supplies all perform their safety functions without or upon loss of air, or are provided with safety-related accumulators capable of supplying the required quantities of air. All instrumentation and control systems located inside the reactor primary containment, including the safety-related equipment and components of the automatic depressurization system (ADS) and the four inboard MSIV actuator accumulators, are independently supplied with nitrogen gas from the GSN. Also within the scope of license renewal for the NMP2 CAS are components used for containment isolation. The components subject to an AMR include main steam safety relief valve accumulators, Automatic Depressurization System valve accumulators, Automatic Depressurization System air receivers, main steam isolation valve accumulaors, and the interconnecting piping, fittiings, and valves for those components as well as the supply piping, fittings and valves for safety-related components. These components ar all constructed of stainless steel, copper alloy, or aluminum alloy with an internal environment of dried air or nitrogen gas. The corresponding material environment combinations do not result in aging effects requiring management. Also subject to AMR are piping, fittings, and valves used for containment isolation. These components are constructed of carbon steel with an internal environment of air which results in loss of material. The loss of material will be managed by the 10 CFR 50 Appendix J Program for these components. Response to Request for Additional Information: The Instrument Air System (IAS) is tested and maintained in accordance with the NMP2 commitment to GL 88-14 under the current licensing basis. The Compressed Air Monitoring Program is not credited for the NMP2 IAS because the system is not in scope for license renewal.

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken

LR Contact	Nold	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Nold	**PAA Revision Required?**	No
Issue Status	Waiting for NRC Response		
NRC Closure Date			

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
116 8/12/2004	B2.1.11	Kennedy	Please provide documentation for the testing for the HVK water chemistry including frequency, parameters monitored and acceptance criteria. (Acceptance Criteria)	Currently, the effects of aging on the intended functions of the HVK System are determined by surveillance testing and not by sampling of the water chemistry. This system is often in continuous operation; therefore, performance adequacy is determined by the performance tests which trend key performance data that indicates loss of heat transfer capability, pump wear and/or flow changes (Reference N2-TSP-HVK-2Y001, "Performance Evaluation Test for Control Room Chiller 2HVK*CHL1A," Revision 3 and N2-TSP-HVK-2Y002, "Performance Evaluation Test for Control Room Chiller 2HVK*CHL1B," Revision 3). The water used in the HVK system is sourced from the make-up water system (MWS). The MWS is sampled in accordance with site procedure S-CTP-V666 on a monthly basis for the following parameters: Parameter / Action Level PH / <5.5 or > 8.0 Conductivity / 1.0 µS/cm Chloride / Sulfate / 10 ppb TOC / 200 ppb Silica / 200 ppb Sodium / 20 ppb Suspended Solids / 0.3 ppm NMP has committed to a program enhancement to be incorporated prior to the period of extended operation to include sampling frequency, parameters monitored and acceptance criteria for the HVK system.

LR Contact	Stuard	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Stuard	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/8/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
117 8/12/2004	B2.1.11	Kennedy	Please provide a reference for the vendor recommended limits – the acceptance criteria are not listed in Ref 27 for the Diesel Jacket Cooling Water – Sampling and Analysis. How these limits are used in the test program?	The acceptance criteria for the Unit 1 Diesel Jacket Cooling Water is contained in Attachment 10 of the Chemistry Manual, Revision 4, and is as follows: Parameter Units Run/Startup Shutdown/Refuel Level 1 Level 2 Level 1 Level 2 Chromate ppm <1500 or >2250 <1300 or >2500 <1500 or >2250 <1300 or >2500 Isotopic µCi/ml (1) (1) (1) (1) pH pH units 7.5 – 9 7-10 7.5 – 9 7 - 10 Table Notes Note Description (1) LLD for all isotopics <10CFR20, Appendix B, Table II, values. The reference for the vendor recommended limits for corrosion inhibitor concentration is Maintenance Instruction MI-1748, Electro-Motive Division of GM Corp., Rev. D. The diesel jacket cooling water is sampled and analyzed for chromate content quarterly or more often as required. The diesel jacket cooling water is also sampled for insoluble Iron and Copper metals to monitor the effectiveness of the corrosion inhibitor. (Note: this response was e-mailed to the auditor)

Column 2

LR Contact	Stuard	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Stuard	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/8/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
118 8/12/2004	B2.1.11	Kennedy	Have any DERs been written against the water chemistry program used in the diesel jacket cooling water system?	With respect to the NMP Unit 1 Diesel Jacket Cooling Water System there has been one DER found that documents chemistry parameters that deviate from control levels: DER U1-2000-3894 - Diesel jacket cooling water was outside its limit for pH and chromate concentration. Action request was initiated to correct out-of-spec situation. Corrective action taken in accordance with N1-CTP-V551, “Diesel Jacket Cooling Water – Corrective Actions.” There were also DER’s written to document corrosion or leaks associated with the Unit 1 diesel jacket water coolers: DER U1-1997-710 – During the performance of preventive maintenance (N1-MPM-079-412) a significant amount of corrosion products and MIC where observed when removing the end bells from the tube side (raw water) of diesel jacket cooling water heat exchangers HTX-79-02 and HTX-79-04, Emergency Diesel Generator DG-102. Following mechanical cleaning and restoration to service it was discovered that three tubes in HTX-79-04 were leaking and were plugged in accordance with the maintenance procedure (N1-MPM-079-412). The preventive maintenance procedure was revised to increase the frequency for performing cleaning and inspection of the heat exchangers. The heat exchangers were subsequently replaced in May 1997. The root cause for the tube failures was not determined prior to the replacement of the heat exchangers but was thought to be pitting of the tubes caused by mechanical removal of biological fouling. Further analysis for the premature tube failures was dispositioned to DER U1-1998-1962. DER U1-1998-1962 - During Eddy Current Testing of DG102 diesel jacket cooling water heat exchanger HTX 79-04 it was determined that 9 tubes indicated I.D. pitting of greater than 60% thru wall. Further Eddy Current Tests determined that HTX 79-03 has degraded tubes as well with ID pitting greater than 70% thru wall. These degraded tubes are not considered a failure but it is a degrading trend. Heat exchangers HTX-79-03 and HTX-79-04 were replaced in December 1998. One of the replaced heat exchangers was sent to the original equipment manufacturer (Young Radiator) for failure analysis. The root cause was determined to be pitting corrosion initiated at the ID surface. Chlorine in the stagnant water was the ion primarily associated with the corrosion failure. Replacement of the tubes with a “corrosion resistant” material will be assessed and tracked under DER U1-1999-1478. DER U1-1999-1478 – An increase in level of the chromate tank for

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
				diesel generator 103 was discovered during routine operator rounds. The cause of the increasing tank level was determined to be tube leaks in diesel jacket cooling water heat exchanger HTX-79-05. A work order was implemented to perform a maintenance repair for HTX-79-05 which entailed plugging three tubes. The apparent cause was deficiencies in construction materials. Evidently raw water lying stagnant in the heat exchanger tubes induced pitting corrosion. A modification (N1-99-013) was initiated to replace the current heat exchangers with admiralty brass tubes with heat exchangers with tubes constructed of stainless steel. DER U1-1999-1501 – Eddy current testing revealed indications >50% wall loss on three tubes for diesel jacket cooling water heat exchanger HTX-79-05. The unacceptable tubes were plugged. The cause was determined to be “normal aging.” No further preventive/corrective actions taken. DER U1-2001-1355 - Eddy current testing revealed indications >50% wall loss on one tube for diesel jacket cooling water heat exchanger HTX-79-04. The unacceptable tube was plugged. Previous studies under DER U1-1999-1478 indicate that the admiralty brass tubes are subject to pitting. A modification (N1-99-013) was initiated to replace the current heat exchangers with admiralty brass tubes with heat exchangers with tubes constructed of stainless steel.

LR Contact	Stuard	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Stuard	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/8/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
119 8/12/2004	B2.1.11	Kennedy	Please provide the following references: N1-ST-M4A and M4B, N1-IPM-210-004, PCE 65680	The reference requested in the issue description have been provided to the auditor.

LR Contact	Stuard	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Stuard	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/8/2004		

120 8/12/2004	B2.1.11	Kennedy	Reference 24, Attachment 10, does not appear to have a section for "Closed Loop Cooling" please provide the appropriate reference.	The acceptance criteria for the various monitored parameters for RBCLC, TBCLC, and CRAC are contained in Attachment 2 of NMP site procedure S-CTP-V666, Rev. 01 (reference 14 of the AMP assessment document). The acceptance criteria for the above mentioned systems were formerly contained in Attachment 10 of the NMP1 Chemistry Manual (reference 24 of the AMP assessment document) under “Closed Loop Cooling.” The AMP assessment document will be revised to reflect this change. The acceptance criteria for the diesel jacket cooling water are, however, still contained in Attachment 10 of the NMP1 Chemistry Manual.

LR Contact	Stuard	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Stuard	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/8/2004		

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Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
121 8/12/2004	B2.1.11	Kennedy	Please provide copies of the following references N2-OSP-EGS-M@001, N2-OSP-EGS-M@002, N2-OSP-EGS-R001	The references requested in the issue description have been provided to the auditor.

LR Contact	Stuard	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Stuard	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/8/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
122 8/12/2004	B2.1.11	Kennedy	What water chemistry is being used for the EGS? How long has it been in use and has there been any DERs writen against this system which are attributed to the water chemistry?	The NMP2 diesel jacket cooling water systems utilize demineralized water with silicate nitrite added as a corrosion inhibitor. The silicate nitrite chemistry has been used since initial commercial operation of NMP2 in October 1986. With respect to the NMP Unit 2 Diesel Jacket Cooling Water System, there have been nine (9) DER's written to document water chemistry parameters that deviate from control levels as follows: DER U2-1992-2936 – Diesel jacket cooling water silica found below the minimum level of 50 ppm on EDG 1, 2, and 3. Previous silica additions have been made to get levels within specification; however, levels have since dropped below minimum. The use of a commercially available corrosion inhibitor vice the current formulation made in-house is being investigated. The in-house formulation is known to be unstable and difficult to maintain. This issue will be tracked under DER 2-92-Q-0762. Corr-Shield K-7 was subsequently chosen as a commercially available corrosion inhibitor product. DER U2-1994-797 - Diesel jacket cooling water silica found below the minimum level of 50 ppm on EDG 3. Silica added to return levels to within specification. DER U2-1995-1685 - During the performance of the 10 year inspection (N2-MSP-EGS-10Y001) for Division 1 and 2 diesel generators evidence of lube oil was found on the jacket water side of the EDG 3 lube oil coolers. A chemical analysis established a Total Organic Content (TOC) on 191 ppm. Subsequent testing indicated TOC concentrations ranging from 150 to 191 ppm. Discussions with the OEM (Cooper-Bessemer) concluded the as-found levels of TOC would not affect engine operation provided baseline trending data was established to verify no rapid increasing trend in the TOC concentration. A monthly TOC sampling was established in N2-CTP-EGS-M521, "Diesel Jacket Cooling Water Chemical Surveillance." The most recent results (5/19/95) indicate a decreasing trend in TOC concentration. DER U2-1999-1894 - During review of 2 years of diesel jacket cooling water chemistry data, an increasing trend was noted for nitrate levels for the Division 1 and 2 diesels and an increase in copper and iron levels for the Division 3 diesel. No maximum limits have been established for these parameters and the noted increasing trends have no impact on operability. Although nitrate levels are increasing, a review of the nitrite levels for the Division 1 and 2 diesels indicates levels have remained within acceptable limits with no indication of bacteria. The bacteria analysis methodology was reviewed and it was determined no change was required. For

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Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
				the Division 3 diesel further analysis indicates no real increasing trend in iron concentration with analytical error attributed as the apparent cause for the increasing trend indication; however, a slight increasing trend is indicated for copper levels. The Division 3 diesel jacket cooling water was changed out during RFO7. The source of copper to be evaluated by Tech. Support. The source of copper was identified under resolution to DER U2-2000-111 described below. DER U2-2000-111 - An increasing trend for copper content is indicated for the Division 3 diesel jacket cooling water. Since RFO6 the concentration of copper has increased from 2 ppm to 20.8 ppm as of the January 5, 2000 sample. The acceptance criterion for copper content per N2-CTP-EGS-M521 is no increasing trend. Discussion with members of the EMD owners group and the vendor indicate that the most probable cause of the increase in copper content in the jacket water can be traced to the AMOT thermostatic control valves. These valve inserts are replaced each refuel outage as part of the preventive maintenance activities. These valves utilize a copper powder in the bulb area to regulate the amount of opening of the valve. It is believed that the increase in the copper content is being caused by a small leak in one of the 9 inserts installed in the valve. During RF07 these inserts will be replaced as part of the normal maintenance activities, at this time they will be inspected to substantiate this conclusion. DER U2-2000-1603 - Samples of the Division 1 diesel jacket cooling water indicate chloride levels of 7 ppm which exceeds the control limit of < 6 ppm per N2-CTP-EGS-M521. Three (3) samples were taken to confirm that chlorides are stable which would indicate tube leakage in the jacket water heat exchangers is not the probable cause. The most likely cause of the increased chloride levels is cross contamination of the jacket cooling water with service water during work associated with RFO7 to support inspection of the diesel engine. The chloride was brought back to within specification by draining a portion of the jacket cooling water as calculated by the Chemistry department and refilling with demineralized water and the proper proportion of corrosion inhibitor (Corr-Shield). DER U2-2001-4768 - Diesel jacket cooling water silica levels found to be below control levels. Corr-Shield was added to the Division 1 diesel jacket cooling water per action request on 08/27/01. The subsequent sample on 08/31/01 indicated silica was in specification at 68 ppm. The next sample on 09/28/01 indicated silica levels had dropped to 28 ppm which is below control levels. Based on data provided by NMP, an independent analysis performed by the OEM confirmed no degradation of the jacket cooling water is indicated.

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Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
				The current specifications for diesel jacket cooling water were reviewed with the vendor of the Corr-Shield corrosion inhibitor additive. This review has determined that the specification for silica is unnecessary. Any increases in corrosion rate will be noted by an increasing trend in iron and copper. The silica specification has been removed from N2-CTP-EGS-M521. DER U2-2002-19 - During monthly surveillance of the diesel jacket cooling water the nitrite analysis resulted in 491 ppm which is below the acceptance criteria of 500 ppm. Investigation and discussions with the system engineer indicate there are known leaks in two (2) cylinders of the diesel engine. The addition of demineralized make-up water is causing dilution of the corrosion inhibitor concentration. Corrosion inhibitor was added to return the concentration to within acceptable limits. DER U2-2002-225 was written to address the system leaks. DER U2-2004-2038 - During surveillance of the Division 1 diesel jacket cooling water on 04/18/04, pH and iron content were found to exceed the acceptance criteria of N2-CTP-EGS-M521. This surveillance occurred after the system was completely drained to repair a ruptured heat exchanger tube. The system was refilled with demineralized water and Corr-Shield corrosion inhibitor. The cause of the out-of-specification results is the heat exchanger tube failure and subsequent refilling of the diesel jacket cooling water system. The estimated Corr-Shield addition requirements resulted in a higher pH. The initial high pH disrupted the protective corrosion layer causing the iron to increase. The diesel jacket cooling water will continue to be monitored and trended in accordance with N2-CTP-EGS-M521. There were also four (4) DER's written to document corrosion or leaks associated with the diesel jacket water coolers as follows: DER U2-1998-1267 - Eddy current testing of the Division 3 diesel jacket cooling water heat exchanger resulted in one indication that is greater than 50% of the tube wall thickness. This indication is on the tube outside diameter (jacket cooling water side) and is 52% of wall thickness. A minimum wall thickness evaluation confirmed sufficient wall thickness existed such that tube wall integrity was not adversely impacted. With only one localized indication on the jacket cooling water side of the tube it was concluded the indication was a result of the fabrication process and not aging related. DER U2-2002-1152 - Eddy current testing of the Division 2 diesel jacket cooling water heat exchanger resulted in one tube with an outside diameter (OD) indication of 84% through wall. The tube

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Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
				indication exceeded criteria established in NER-2M-029, “Heat Exchanger Tube Information,” Revision1, and was subsequently plugged. DER U2-2004-1271 - During periodic cleaning of the Division 1 diesel jacket cooling water heat exchangers, in RFO9, severe pitting and crevice corrosion was found on the end bells and flanges. The pitting is on the end plate and heat exchanger shell. Following cleaning, the heat exchangers were re-assembled using black RTV to aid in gasket and flange sealing under engineering approval. The diesel generator was subsequently run with no leaks. Approximately two (2) weeks later a leaking heat exchanger tube was discovered (reference DER U2-2004-1948 below). Twelve (12) tubes were ultimately plugged in 2EGS*E1A. DER U2-2004-1948 - During RFO9 the Division 1 diesel jacket cooling water was found leaking from the standpipe overflow. Chemical analysis determined that the jacket cooling water was diluted, indicative of a Service Water leak into the jacket cooling water system. Investigation found 2EGS*E1A had one (1) tube leak. A boroscope video of the heat exchanger indicated the tube failure was the result of a smaller secondary pit within a larger primary pit, which is not detectable with eddy current testing. Ultimately twelve (12) tubes were plugged in 2EGS*E1A. Per NER-2M-029, Rev. 2, up to 39 tubes in the Division 1 diesel jacket cooling water heat exchangers may be plugged. Action requests to facilitate replacement of the diesel jacket cooling water heat exchangers have been initiated.

LR Contact	Stuard	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Stuard	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/8/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
123 8/12/2004	B2.1.11	Kennedy	For the EGS water chemistry what are the acceptance criteria used for the testing program and what is it based on?	The following are the NMP2 Diesel Jacket Cooling Water Chemistry Acceptance Criteria: Parameter Acceptance Limits Sample Date/Time N/A pH 9.0 to 10.5 Nitrite > 500 ppm Copper No increasing trend Iron No increasing trend Total Bacteria < 1000 bacteria Conductivity No increasing trend Total Suspended Solids < 15 ppm(EDG1,EDG3), No trend (EDG2) Total Organic Carbons (TOC) No increasing trend Chloride < 6 ppm Nitrate No increasing trend Cond. To Nitrite Ratio No increasing trend (Reference: N2-CTP-EGS-M521, Rev. 1 (reference 22 in the AMP assessment document)) The chemistry controls limits are designed to preclude long-term corrosion and maintain water quality consistent with vendor recommendations. Self assessments are also performed to compare sampling frequencies, parameters analyzed, and analytical methods with those recommended by EPRI, INPO and industry best practices. The NMP program is adjusted as appropriate based on the results of the self-assessment. (Note: this response was e-mailed to the auditor)

count / ml

increasing

LR Contact	Stuard	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Stuard	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/8/2004		

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Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
124 8/12/2004	B2.1.11	Kennedy	What is the appropriate reference citation for the Attribute Assessment document for the NMP1 Closed-Cycle Cooling Water System Program? A revised version was provided on 8/12/04.	The current version of the NMP Unit 1 Closed-Cycle Cooling Water System Program Attribute Assessment is revision 1. (A complete copy of revision 1 was provided to the auditor.)

LR Contact	Stuard	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Stuard	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/8/2004		

125 8/11/2004	B2.1.30	Nguyen	XI.E2 AMP Suggestion: In Section 1.2, Scope of Program, suggest adding "as required by Aging Management Review" to the end of the first sentence	The assessment of attribute 1.0 (scope of program) will be amended to include the suggested phrase. The first sentence of 1.2 will state; The Non-EQ Electrical Cables used in Instrumentation Circuits Progam applies to accessible and inaccessible electrical cables that are not in the EQ Program and are used in circuits with sensitive, high-voltage, low-level signals. These cables are used for radiation monitoring nuclear instrumentation (source, inermediate, local and average power ranges) and other instrument that are subject to Aging Management Review. Note: the AMP basis document will be revised

LR Contact	D. Taormina	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal D. Taormina	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/8/2004		

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Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
126 8/11/2004	B2.1.30	Nguyen	XI.E2 AMP. Confirm that the test of the electrical cables also includes the connections. (Note: this issues is currently being discussed between the License Renewal Electrical Group and the NRC) NRC Request for Additional Information 9/8: The NRC is looking for a firm commitment of what the applicant is going to do once finalized ISG-15 is issued. Evaluating/modifying the AMP as appropriate when ISG-15 is formally issued is not acceptable to the NRC.	ISG-15 is currently under review between the NRC and NEI. The process for conducting cable testing is not resolved. Nine Mile Point will evaluate modifying the program as appropriate when ISG-15 is formally issued. Response to Request for Additional Information: When the NRC and the industry have reached an agreement on ISG-15 and it is issued by the NRC, NMP will incorporate it into the Non-EQ Instrumentation Cables Aging Management Program.

LR Contact	D. Taormina	**LRA Revision Required?**	Yes
Assigned Department/ Individual	License Renewal D. Taormina	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/28/2004		

127 8/11/2004	B2.1.30	Nguyen	XI.E2 AMP: Provide the justification for why the test frequency of 10 years is acceptable. (Note: this was justified in Section 3.6 of the V.C. Summer SER)	The assessment of attribute 4 (detection of aging effects) shall be amended. The phrase “and every 10 years thereafter” will be removed from the end of the third paragraph. The sentence below will be added to the end of the third paragraph. “The test frequency of these cables shall be determined based on engineering evaluation not to exceed ten years.” This statement is taken from ISG-15 attribute 4 Note: the AMP basis document will be revised

LR Contact	D. Taormina	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal D. Taormina	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	8/13/2004		

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Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
128 8/11/2004	B2.1.30	Nguyen	XI.E2 AMP: What is the acceptance criteria for cable testing results?	The assessment of attribute 6 (acceptance criteria) will be modified to state: 6.2 Nine Mile Point Units 1 and 2 "Surveillance test procedures and other calibration procedures provide the specific acceptance criteria for the loop calibration being performed. Where cable testing is conducted as an alternate to surveillance testing the acceptance criteria for each test will be defined by the specific type of test performed and the specific cable tested. This program attribute will be consistent with the corresponding GALL attribute." Note: the AMP basis document will be revised

LR Contact	D. Taormina	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal D. Taormina	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	8/13/2004		

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Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
129 8/11/2004	B2.1.31	Nguyen	XI.E3 AMP: The Attribute assessment for attribute 3 (Parameters Monitored) does not provide enough detail of the type of testing to be conducted. The GALL provides specific examples of the types of testing. Provide additional details in the attribute assessment.	The attribute assessment for attribute 3 shall be amended to state: 3.2 Nine Mile Point Units 1 and 2 "The new Non-EQ Inaccessible Medium-Voltage Cable Inspection Program will include provisions to test in scope medium-voltage cables exposed to the adverse localized environments caused by significant moisture and significant voltage for testing. The specific type of test performed will be determined prior to the initial test, and is to be a proven test for detecting deterioration of the insulation system due to wetting, such as power factor, partial discharge, or polarization index, as described in EPRI TR-103834-P1-2, or other proven test at the time the test is performed. This program attribute will be consistent with the corresponding GALL attribute upon development of the new program." Note: The AMP basis document will be revised.

LR Contact	D. Taormina	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal D. Taormina	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	8/13/2004		

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Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
130 8/11/2004	B2.1.31	Nguyen	XI.E3 AMP: The GALL program attribute 1 (scope) provides an exception for cables that are made for continuous wetting and continuous energization (i.e., submarine calbes). Include this exception statement in the attribute assessment statement.	The AMP basis document will be revised as follows: 1.2 Nine Mile Point Units 1 and 2 "The non-EQ Inaccessible Medium-Voltage Cable Inspection Program is a new program at NMP that applies to inaccessible medium-voltage cables within the scope of license renewal. The potential for the adverse localized environments caused by significant moisture simultaneously with significant voltage exists at NMP. Significant moisture is defined as periodic exposures to moisture that lasts more than a few days (e.g., cable in standing water). Periodic exposure to moisture that last less than a few days (i.e., normal rain and drain) are not significant. Significant voltage exposure is defined as being subjected to system voltage for more than twenty-five percent of the time. The moisture and voltage exposures described as significant in these definitions, which are based on operating experience and engineering judgment, are not significant for medium-voltage cables that are designed for these conditions (e.g., continuous wetting and continuous energization is not significant for submarine cables.)NMP procedures, and the design of such components as buried duct banks and junction boxes, are meant to prevent this environment from occurring. This program attribute will be consistent with the corresponding GALL attribute upon new program development."

LR Contact	D. Taormina	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal D. Taormina	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	8/13/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
131 8/11/2004	B2.1.31	Nguyen	XI.E3 AMP: The attribute assessment of the GALL Program Description makes the statement that “cable testing if warranted by an engineering evaluation.” What is meant by if warranted by an engineering evaluation?	The phrase “if warranted by an engineering evaluation” is intended to mean that the type of test conducted will be determined by an engineering evaluation. The phrase will be changed in the AMP basis document to state “Non-EQ inaccessible medium voltage cables in scope for license renewal that are exposed to significant moisture simultaneously with significant voltage will be tested to provide an indication of the condition of the conductor insulation.”

LR Contact	D. Taormina	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal D. Taormina	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	8/13/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
132 8/11/2004	B2.1.31	Nguyen	XI.E3 AMP: The GALL provides a definition for significant voltage and significant moisture. The AMP does not provide a definition for significant voltage and significant moisture, although the terms are used in the Program Description and attribute 1 (scope). Provide a definition for these terms.	Modify the attribute 1 – attribute assessment statement as follows: 1.2 Nine Mile Point Units 1 and 2 "The non-EQ Inaccessible Medium-Voltage Cable Inspection Program is a new program at NMP that applies to inaccessible medium-voltage cables within the scope of license renewal. The potential for the adverse localized environments caused by significant moisture simultaneously with significant voltage exists at NMP. Significant moisture is defined as periodic exposures to moisture that lasts more than a few days (e.g., cable in standing water). Periodic exposure to moisture that last less than a few days (i.e., normal rain and drain) are not significant. Significant voltage exposure is defined as being subjected to system voltage for more than twenty-five percent of the time. The moisture and voltage exposures described as significant in these definitions, which are based on operating experience and engineering judgment, are not significant for medium-voltage cables that are designed for these conditions (e.g., continuous wetting and continuous energization is not significant for submarine cables.)NMP procedures, and the design of such components as buried duct banks and junction boxes, are meant to prevent this environment from occurring. This program attribute will be consistent with the corresponding GALL attribute upon new program development."

LR Contact	D. Taormina	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal D. Taormina	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	8/13/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
133 8/12/2004	B.3.1	Nguyen	X.E1 EQ AMP: Include in the NMP Unit 1 & 2 analysis of the Program Description the EQ Component Reanalysis Attributes included in the GALL Program Description.	Agreed, the following section will be added to Nine Mile Point Units 1 & 2 Program Description assessment following the last paragraph; Important attributes for the reanalysis of an aging evaluation include analytical methods, data collection and reduction methods, underlying assumptions, acceptance criteria, and corrective actions (if acceptance criteria are not met). These attributes are discussed below. EQ Component Reanalysis Attributes The reanalysis of an aging evaluation is normally performed to extend the qualification by reducing excess conservatism incorporated in the prior evaluation. Reanalysis of an aging evaluation to extend the qualification of a component is performed on a routine basis pursuant to 10 CFR 50.49(e) as part of an EQ program. While a component life limiting condition may be due to thermal, radiation, or cyclical aging, the vast majority of component aging limits are based on thermal conditions. Conservatism may exist in aging evaluation parameters, such as the assumed ambient temperature of the component, an unrealistically low activation energy, or in the application of a component (de-energized versus energized). The reanalysis of an aging evaluation is documented according to the station's quality assurance program requirements, which requires the verification of assumptions and conclusions. As already noted, important attributes of a reanalysis include analytical methods, data collection and reduction methods, underlying assumptions, acceptance criteria, and corrective actions (if acceptance criteria are not met). These attributes are discussed below. Analytical Methods: The analytical models used in the reanalysis of an aging evaluation are the same as those previously applied during the prior evaluation. The Arrhenius methodology is an acceptable thermal model for performing a thermal aging evaluation. The analytical method used for a radiation aging evaluation is to demonstrate qualification for the total integrated dose (that is, normal radiation dose for the projected installed life plus accident radiation dose). For license renewal, one acceptable method of establishing the 60-year normal radiation dose is to multiply the 40-year normal radiation dose by 1.5 (that is, 60 years/40 years). The result is added to the accident radiation dose to obtain the total integrated dose for the component. For cyclical aging, a similar approach may be used. Other models may be justified on a case-by case basis. Data Collection and Reduction Methods: Reducing excess conservatism in the component service conditions (for example,

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
				temperature, radiation, cycles) used in the prior aging evaluation is the chief method used for a reanalysis. Temperature data used in an aging evaluation is to be conservative and based on plant design temperatures or on actual plant temperature data. When used, plant temperature data can be obtained in several ways, including monitors used for technical specification compliance, other installed monitors, measurements made by plant operators during rounds, and temperature sensors on large motors (while the motor is not running). A representative number of temperature measurements are conservatively evaluated to establish the temperatures used in an aging evaluation. Plant temperature data may be used in an aging evaluation in different ways, such as (a) directly applying the plant temperature data in the evaluation, or (b) using the plant temperature data to April 2001 X E-3 NUREG-1801 demonstrate conservatism when using plant design temperatures for an evaluation. Any changes to material activation energy values as part of a reanalysis are to be justified on a plant-specific basis. Similar methods of reducing excess conservatism in the component service conditions used in prior aging evaluations can be used for radiation and cyclical aging. Underlying Assumptions: EQ component aging evaluations contain sufficient conservatism to account for most environmental changes occurring due to plant modifications and events. When unexpected adverse conditions are identified during operational or maintenance activities that affect the normal operating environment of a qualified component, the affected EQ component is evaluated and appropriate corrective actions are taken, which may include changes to the qualification bases and conclusions. Acceptance Criteria and Corrective Actions: The reanalysis of an aging evaluation could extend the qualification of the component. If the qualification cannot be extended by reanalysis, the component is to be refurbished, replaced, or requalified prior to exceeding the period for which the current qualification remains valid. A reanalysis is to be performed in a timely manner (that is, sufficient time is available to refurbish, replace, or requalify the component if the reanalysis is unsuccessful).

LR Contact D. Taormina **LRA Revision Required?** No

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken

Assigned Department/ Individual	License Renewal D. Taormina	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/8/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
134 8/12/2004	B.3.1	Nguyen	X.E1 EQ AMP: The attribute assessment 6 (acceptance criteria) 1) Elaborate how the NMP EQ Program complies with 10 CFR 50.49 as described in GALL attribute 6 2) If question (1) cannot be answered, then explain how administrative controls and EQRM/MQRM calculations are acceptable for defining qualified life.	The Nine Mile Point assessment of the attribute 6 will be amended as noted; 6.2 Nine Mile Point Units 1 and 2 The NMP EQ Program complies with the acceptance criteria of 10 CFR 50.49 by maintaining each in-scope EQ component within its qualification basis. NMP1 and NMP2 each comply with the environmental qualification requirements of 10 CFR 50.49 in accordance with the applicable CLB. Section 3.2 of the Environmental Qualification Program procedure (OT-EDS-016) states, "The purpose of the NMP Environmental Qualification Program is to provide tangible evidence that equipment will operate on demand and to verify design perormance, thereby establishing assurance that the potential for common-mode failure under postulated normal and accident conditions is minimized". Requirements in this document apply to activities in support of the: - Identification of equipment important to safety subject to the requirements of 10CFR50.49 (EQ Equipment). - Management of the normal and accident environment conditions summary database, Enironmental Qualification Design Criteria (EQEDC). Responsibility for the determination of environmental conditions is discussed in NIP-EQP-001. - Identification of EQ design requirements, controls, and documetnation. - The EQCAP initiative (currently in progress) will establish and maintain a Generic Qualification Evaluation (GQE) and Plant Qualification Evaluation (PQE) in an electric management system database. The electronic management system will be used to verify and manage the adequacy of Environmental Qualification of components. - Establishment of EQ installation and configuration requirments. - Establishment of EQ maintenance requirements - Establishment and maintenance of EQ documentation requirments. - Establishment and maintenance of Environmental Qualification status.

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
				This program attribute is consistent with the corresponding GALL attribute.

LR Contact	D. Taormina	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal D. Taormina	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/8/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
135 8/12/2004	B.3.1	Nguyen	X.E1 EQAMP: Include in the assessment for Program Description a definition for component types (active & passive), harsh environments, and important to safety (e.g., safety related, etc.) The definitions as provided in 10 CFR 50.49	The following paragraph will be the first paragraph in the NMP assessment of the Program Description: 10 CFR 50.49 specifically requires that an EQ program be established to demonstrate that certain electrical components located in harsh plant environments (that is, those areas of the plant that could be subject to the harsh environmental effects of a loss of coolant accident [LOCA], high energy line breaks [HELBS] or post-LOCA radiation) are qualified to perform their safety function in those harsh environments after the effects of in-service aging. All operating plants must meet the requirements of 10 CFR 50.49 for certain electrical components important to safety (defined as (1) safety-related electric equipment (Class 1E), (2) non-safety-related electric equipment (non-class 1E) whose failure under postulated environmental conditions could prevent satisfactory accomplishment of safety functions by safety-related equipment, and (3) certain post-accident monitoring equipment). 10 CFR 50.49 defines the scope of components (active and passive as defined by 10 CFR 54.21) to be included.

LR Contact	D. Taormina	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal D. Taormina	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/8/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
136 8/12/2004	B.3.1	Nguyen	X.E1 EQ AMP: The attribute assessment for attribute 3 (Parameters Monitored or Inspected) does not provide adequate information to ensure components will be maintained within the qualification basis for the period of extended operation.	NMP attribute assessment will be modified to state; 3.2 Nine Mile Point Units 1 and 2 The NMP EQ Program does not require condition or performance monitoring, and these elements are not required to be part of the basis for the qualified life calculations at NMP. Design temperature limits may be supplemented by data obtained by direct measurement of ambient conditions. The administrative procedure for the Environmental Qualification Program (OT-EDS-016) states in section 3.6.1(5) “Verify applicable environmental conditions (temperature, pressure, radiation and humidity), both ambient and accident, for each component being reviewed.” Additionally, section 3.6.1(5)(b.)(2) states, “The design temperature may also be supplemented by data obtained by direct measurement from the Ambient Temperature Measuring Program.” This program attribute is consistent with the corresponding GALL attribute.

LR Contact	D. Taormina	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal D. Taormina	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/8/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
137 8/12/2004	B.3.1	Nguyen	X.E1 EQ AMP: Attribute 4 assessment: Provide additional details of the Corrective Action Program to demonstrate what is meant by "as prescribed by plant procedures for corrective action."	The Nine Mile Point attribute 4 assessment will be amended as noted; 4.2 Nine Mile Point Units 1 and 2 The NMP EQ Program does not require detection of aging effects, but does require periodic monitoring to detect "Hot Spots" or environmental conditions that were not considered during establishment of the CLB for 10 CFR 50.49. Furthermore, if site personnel identify degradation and failures of qualified equipment they will be dispositioned in accordance with and as prescribed by plant procedures for corrective action. The Nine Mile Point Nuclear Interface Procedure NIP-ECA-01 is the site administrative procedure that controls the corrective action program. Item 1.1.2 of the Applicability section states "The Corrective Action Program (CAP) and Deviation/Event Report (DER) shall be utilized to report all conditions (including Significant) Adverse to Qualtiy (CAQ) involving known failures, malfunctions, deficiencies, defective material and equipment, and non-conformance." This program attribute is consistent with the corresponding GALL Note: A change to the AMP Basis document is required.

LR Contact	D. Taormina	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal D. Taormina	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/8/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
138 8/12/2004	B2.1.25	Woodfield	The Unit 2 PAA has several errors as follows: 1. Under the PROGRAM DESCRIPTION, Nine Mile Point Unit 2 heading, the first sentence ends with the phrase "…whereas the GALL Report covers both the 1992 Edition with the 1992 Addenda and the 1995 Edition with the 1996 Addenda." This should be changed to "… whereas the GALL Report covers the 1989 through the 1995 Edition with the 1996 Addenda." 2. Under the PROGRAM DESCRIPTION, Nine Mile Point Unit 2 heading, the last sentence of the first paragraph ends with a reference to "(Ref. 2)". This should also specify the section of the referenced document for clarification. 3. Reference 30 of the Unit 2 PAA lists revision 13 of Regulatory Guide 1.147. This is incorrect. Revision 12 should be listed. The source document, NMP2-ISI-006, contains an error in Appendix H. The incorrect revision of Regulatory Guide 1.147 is referenced on Page H-4 of H-6 for code case N-491-1. The revision should be changed from 13 to 12.	The Unit 2 PAA will be revised to make corrections as described above. NMP2-ISI-006 will be revised to make the correction described above. 9/16/04: Draft revision to AMP basis document provided to auditor. Auditor accepted proposed revision. 9/20/04: Revision 3 to AMP basis document incorporated these changes and was approved.

LR Contact	Hoppe	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Hoppe	**PAA Revision Required?**	Complete
Issue Status	Closed		
NRC Closure Date	9/16/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
139 8/12/2004	B2.1.25	Woodfield	The Unit 1 PAA has several errors as follows: 1. Under the PROGRAM DESCRIPTION, Nine Mile Point Unit 1 heading, the first sentence reads in part: "The ASME Section XI Inservice Inspection, Subsection IWF is an existing program that is consistent with the NRC GALL Report, Section XI.S3, "ASME Section XI, Subsection IWF," with the exception that the current licensing basis for NMP2 is based on the 1989 Edition with no Addenda (Ref. 3, Section 4.0),". The "NMP2" should be changed to "NMP1", and the reference to "Ref. 3, Section 4.0" appears to be incorrect. 2. The third paragraph of section 1.2 begins: "The following supports are exempted from the examination requirements of IWF-2000: (Ref. 0, Section 5.1 and Ref. Error! Reference source not found., Section 3.1.2)." The reference to "Ref. Error! Reference source not found., Section 3.1.2" appears to be incorrect. Ref. 3 does not have a Section 3.1.2. 3. The last sentence of section 6.2 ends with "Regulatory Guide 1.147 (Reference 30)." This should be changed to "Regulatory Guide 1.147 (Reference 31)." 4. Reference 31 of the Unit 1 PAA lists revision 13 of Regulatory Guide 1.147. This is incorrect. Revision 12 should be listed.	The Unit 1 PAA will be revised to make corrections as described above. 9/16/04: Draft revision of AMP basis document provided to auditor. Auditor accepted proposed revision. 9/20/04: Revision 3 to AMP basis document incorporated these changes and was approved.

LR Contact	Hoppe	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Hoppe	**PAA Revision Required?**	Complete
Issue Status	Closed		
NRC Closure Date	9/16/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
140 8/12/2004	B3.2	Patterson	Does the Fatigue Monitoring Program provide for partial cycle counting? NRC Request for Additional Information: During the interview with the FM PM, the project team understood the applicant to say that each partial cycle is currently treated as a full cycle (for counting purposes). Is this the case? If not, please describe the treatment of partial cycles in greater detail	Currently the Fatigue Monitoring Program provide for partial cycle counting. Response to Request for Additional Information: Each event that is covered by the Fatigue Monitoring Program is initially counted as a full-cycle event. However, as stated is Section 3.3.4 of NIP-REL-06, when an evaluation of the event is necessary (i.e. the limit of cycles is being approached), the event is further evaluated to determine if it constituted a partial cycle or multiple cycles. Based upon preliminary information provided by the FMP Program Manager, evaluations utilizing partial cycle counting have not been performed for either NMP station.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/16/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
141 8/12/2004	B3.2	Patterson	Will Fatigue Pro also address Environmental Fatigue? What version of Fatigue Pro will be used?	Fatigue Pro does not perform environmental fatigue calculations. Environmental fatigue calculations will be performed separately from fatigue monitoring for the NUREG/CR-6260 locations prior to Year 40. The results from Fatigue Pro can be used, coupled with environmental fatigue mutlipliers obtained from location-specific environmental fatigue calculations, to continually monitor environmental fatigue in the license renewal period. Faigue Pro Version 3.01 (I.e., the latest version) will be used for Nine Mile Point.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	8/20/2004		

142 8/12/2004	B3.2	Patterson	A DER noted that the number of cycles in the SAR had been met. Has NMP had other incidents that caused them to exceed the number of cycles in the SAR?	No, there are not further similar incidents.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	8/20/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
143 8/12/2004	B3.2	Patterson	Will the SAR be revised as a result of Fatigue Pro?	NMP plans to revise the SAR as a result of Fatigue Pro implementation to eliminate the list of events as appropriate, as part of the design change process. Appropriate justification for removing the list of events will be included in the design change.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	8/20/2004		

144 8/12/2004	B3.2	Patterson	What assurance does NMP have that Fatigue Pro will work? What self-assessments (specifically of a technical nature) will be performed? What is the frequency of the self-assessments?	We have been following industry experience, both domestic and international, where FatiguePro has been successfully implemented and working well. The NMP Fatigue Monitoring Procedure will be revised to reflect FatiguePro implementation, and specify the frequency and format of the outputs expected from the use of FatiguePro. Also, with respect to FatiguePro working properly, not only is it based on world-wide experience over the past 20 years, but more importantly, the software is developed under a nuclear QA software program that meets 10 CFR 50 Appendix B requirements. The development was done to satisfy both SI's and EPRI's nuclear QA requirements, and the NMP plant-specific customization will also be done under SI's QA Program. The verification and validation (V&V) associated with the plant-specific customization demonstrates full program functionality and proper operation and calculations.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	8/20/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
145 8/12/2004	B3.2	Patterson	The scope of the Program Attribute Assessment document does not appear to address the preventive and mitigative measures addressed in the GALL (current program or future FatiguePro program)	There are currently no preventive or mitigative actions in the Fatigue Monitoring Program. As part of the design change process while implementing FatiguePro, we will review existing operations procedures which may be revised to include preventive/mitigative actions. Note: A change to LRA Section B3.2 is needed to revise the description of preventive actions to indicate what potential action may be taken if CUF design limits are approached. Also, App. A of the LRA will need to be revised accordingly. Also, the AMP Basis document needs to be revised to state that the preventive/mitigative actions, such as procedural or design changes, will be taken if it is determined that design CUF values may be exceeded. 9/16/04: Draft revision to AMP basis document provided to auditor.

LR Contact	Poehler	**LRA Revision Required?**	Yes
Assigned Department/ Individual	License Renewal Fallin	**PAA Revision Required?**	Yes
Issue Status	Waiting for NRC Response		
NRC Closure Date			

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
146 8/12/2004	B3.2	Patterson	Will NMP use online CUF calculations for the locations and where are they? Will we use FatiguePro for Environmental Fatigue using the Fen method?	Yes. Locations are to be determined. The NMP FatiguePro application will utilize online CUF calculations for all limiting components. Refer to Tables 3-1 through 3-10 in Structural Integrity Report No. SIR-03-140, Revision 1, "Report on System Review and Recommendations for a Transient and Fatigue Monitoring System at the Nine Mile Point Nuclear Station," February 2004, for identification of the locations to be monitored. FatiguePro does not perform environmental fatigue calculations. Environmental fatigue will be performed separately from fatigue monitoring for the NUREG/CR-6260 locations prior to Year 40. The committed approach to be used is the Fen Approach" documented in NUREG/CR-6583 for carbon and low alloy steel, and NUREG/CR-5704 for stainless steel. The results from FatiguePro can be used, coupled with environmental fatigue multipliers obtained from location-specific environmental fatigue calculations, to continually monitor environmental fatigue in the license renewal period.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	8/20/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
147 9/8/2004	B2.1.12	Wen	In the NMP LRA, the applicant states that the NMP1 Boraflex replacement program is underway. Is there a similar replacement program planned for NMP2? If the answer is yes, does this information impact AMP Boraflex Program description?	While the conditions in the spent fuel pool indicate that the Boraflex racks are degrading, the long term action plan has not yet been formalized and approved. If the racks are replaced with material other than Boraflex prior to the period of extended operation, then a Boraflex Monitoring Program for NMP2 would no longer be required.

LR Contact	Brown	**LRA Revision Required?**	Yes
Assigned Department/ Individual	License Renewal Brown	**PAA Revision Required?**	Yes
Issue Status	Waiting for NRC Response		
NRC Closure Date			

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
148 8/13/2004	B2.1.6	Hsu	Do BWRVIP75 and GL 88-01 have different requirements? Does the NMP program encompass both? NRC Additional Request for Information (9/8): In the LRA Basis document, Attributes 3 & 4 of BWR SCC program, the applicant states the program follows examination and inspection guidelines delineated in NUREG-0313, Rev. 2, and NRC GL 88-01 and its supplement 1. The GALL report states that the inspection guidance in approved BWRVIP-75 replaces the extent and schedule of inspection in NRC GL 88-01. The GALL report also states that the extent, method, and schedule of the inspection and test techniques delineated in NRC GL 88-01 or BWRVIP-75 are designed to maintain structural integrity and ensure that aging effects will be discovered and repaired before the loss of intended function of the component. Please clarify does NMP use BWRVIP-75 as guidance or just GL 88-01. If BWRVIP-75 is used, does NMP take advantage of the hydrogen water chemistry program as described in BWRVIP-75 to reduce the inspection sample size. In the LRA Basis document, Attribute 5 of BWR SCC program, the applicant states that for those Class 1 and 2 components that are inspected per the requirements of the Alternative Risk-Informed ISI Plan and Schedule. Please explain how could the RI-ISI and GL 88-01/BWRVIP-75 have same requirements. The GALL states that the program is applicable to all BWR piping made of austenitic SS that is 4 in. or large in nominal diameter and contains reactor coolant at a temperature above 93C (200F) during power operation, regardless of code classification. Is the scope of the NMP BWR SCC program consistent with GALL program regardless of code classification? In the LRA Basis document, Attribute 6 of BWR SCC program, the applicant states that Section 8.0,"Acceptance standards" of the ISI program plan documents, NMP1-ISI-003 and NMP2-ISI-006, provide the acceptance standards for tested components in accordance with Section XI. The class 3 components are all tested per ASME Sec. XI IWD. The GALL states that the program uses volumetric examinations to detect IGSCC. Please clarify that all the components under this program use volumetric examinations to detect IGSCC regardless of code classification.	Yes - Generic Letter GL 88-01 provides the NRC's staff positions on materials, processes, water chemistry, weld overlay reinforcement, partial replacement, stress improvement of cracked weldments, clamping devices, crack characterization and repair criteria, inspection methods and personnel, inspection schedules, sample expansion, leak detection, and reporting requirements. BWRVIP-75 proposed revisions to the extent and frequency for piping inspection contained in Generic Letter GL 88-01. Yes - Both the NMP1 and NMP2 programs encompass both GL 88-01 and BWRVIP-75 requirements. 9/16/2004: Provided copy of draft response to auditor and held phone conversation with NMP Porgram Manager. Auditor acknowledged there are no technical issues but the AMP basis document needs to be revised to clarify NMP's program.

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
			In NMP LRA A1.1.10 & A2.1.11, the applicant states that this program is based on industry guidelines approved by the NRC and augmented examinations are performed through in the Inservice inspection Program, which is based on 1989 edition of the ASME Boiler and Pressure Vessel Code with no Addenda, as approved by the NRC in plant-specific exemptions. This is an exception to the program described in NUREG-1801 (which cites ASME Section XI requirements covered in the 1995 edition through 1996 addenda). Please clarify that the components are inspected per the requirements of the alternative Risk-Informed Inservice Inspection Plan and Schedule or per ASME Section XI 1989 Edition with no addenda or GL 88-01/BWRVIP-75/NUREG-0313 Rev.2.	

LR Contact	Petras	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Fallin	**PAA Revision Required?**	Yes
Issue Status	Additional Information Required		
NRC Closure Date			

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
149 8/18/2004	B2.1.15	Saba	Clarify whether any austenitic SS piping (component) in Unit 1/Unit 2 RWCS has been replaced IGSCC resistant material. If any, provide additional information.	After discussion with the System Engineer and a search of plant records; no modifications to replace any RWCS piping or components with a more IGSCC resistant material have been done at either unit.

LR Contact	Petras	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Petras	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	8/25/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
150 8/13/2004	B2.1.15	Saba	Monitoring and Trending: Provide examples of the last ISI in RWCS for Unit 1 and Unit 2.	A summary of examples of the last ISI exam results for RWCS is provided below. The specific UT exam reports are available on-site for review. Unit Weld No. Date Results 1 33-FW-22 3/26/03 No recordable indications. 1 33-FW-35 3/26/03 No recordable indications. 1 33-FW-36 3/26/03 No recordable indications. 1 33-FW-37 3/26/03 No recordable indications. Unit Weld No. Date Results 2 2WCS-09-05-SW002 3/18/04 No recordable indications 2 2WCS-09-05-SW026 3/18/04 No recordable indications 2 2WCS-09-05-FW015 3/26/04 No recordable indications 2 2WCS-09-05-FW006 3/18/04 No recordable indications 2

LR Contact	Petras	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Petras	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/15/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
151 8/13/2004	B2.1.6	Hsu	NMP takes credit for HWC and NMCA. How do you prove their effectiveness? Provide proof of effectiveness.	GAP-CHE-03 is the generation Administrative Procedure that controls HWC and NMCA for both units. This procedure covers all aspects of the two methods including implementation and monitoring. The NMP BWRVIP guidelines issued that address noble metal chemistry lessons learned to demonstrate mitigation effectiveness. The NMP program interpretation of the generic guidelines for effectiveness is described in NER-RE-006 for unit 1, NER-RE-007 for unit 2.

LR Contact	Petras	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Petras	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/8/2004		

152 9/8/2004	B2.1.23	Woodfield	On page B-46 of the NMP LRA, the program description for the ASME Section XI Inservice Inspection (Subsection IWE) Program states that the program is an existing program that manages aging effects due to degradation of NMP1 containment pressure-retaining polymers. This implies that degradation/aging of polymers is only applicable to Unit 1. However, on page 3.5-99 of the LRA, Table two (AMR) for the NMP Unit 2 Primary Containment Structure lists Polymer in Air as a component requiring aging management by the IWE program. Explain why the LRA Appendix B program description only discusses polymers in the Unit 1 containment as requiring aging management	LRA Section B2.1.23 will be revised to state that NMP2 containment pressure retaining polymers are also included in the IWE ISI program.

LR Contact	Hoppe	**LRA Revision Required?**	Yes
Assigned Department/ Individual	License Renewal Hoppe	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/14/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
153 9/8/2004	B2.1.2	Saba	LRA Section B2.1.2 Operating Experience: NMP2 listed many DERS that reported for WCC where parameters monitored exceeded the limits. Was WCC revised as a result of these DERSs? If so, explain. (This question is similar to #22)	See response to Issue 22. It contains information for both Unit 1 and Unit 2. 10/13/04: NRC provided verbal acceptance during conference call.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	10/13/2004		

154 9/8/2004	B2.1.18	Saba	LRA B2.1.18 UFSAR Supplement: Unit 2 UFSAR supplement does not contain the information in the third bullet of the Unit 1 (Provide guidelines for the appropriate use of biocides, corrosion inhibitors, . . .). Explain why.	The Units 1 and 2 FOC programs differ in that biocides and corrosion inhibitors are not used at NMP1, so the Unit 1 FOC Program requires enhancements in this regard. But since corrosion inhibitors and biocides are already in use at NMP2, such an enhancement is not applicable.

LR Contact	Brown	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Brown	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/15/2004		

GCA AMP Issues (8/9-13) - Open and Closed

Issue ID Date Identified	LRA Section	NRC Inspector	Issue Description	Actions Taken
155 8/11/2004	B2.1.10	Kennedy	XI.M.20, OCC: Based on a review of the preventive maintenance (inspection) procedure for the NMP1 EDG cooling water HX's, the acceptance criteria states "clean, no silt, no zebra mussels." Clarify what is meant by "clean."	The procedure referred to by the auditor is the preventive maintenance procedure N1-MPM-079-412, "Diesel Generator Cooling Water Heat Exchanger and Temperature Control Valve Maintenance." The acceptance criteria for this procedure does not include any criteria for cleanness. Procedure Section 7.3.1 is a step to "Inspect service water side for flow blockages such as, but not limited to: (Clean AND Repair/Replace as Necessary) - Biofouling (I.e. Zebra Mussels) - Silt - Corrosion Products Therefore, "clean" would indicate the absence of biofouling, silt or corrosion products of sufficient volume/serverity to create a flow blockage. NMP administrative procedure GAP-HSC-02, "System Cleanness Controls," manages cleanness for NMP systems by assigning a cleanness class with corresponding acceptance criteria. For the NMP1 EDG Cooling Water System, it is assigned a cleanness class of "D" with acceptance criteria defined for particulate contaminants (none), organic contaminants (none) and rust (no removable rust). In addition, inspection for zebra mussels and MIC are specifically required. These inspections are performed whenever the EDG cooling water system is opened for maintenance.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/8/2004		

GCA AMP Issues (8/9-13) - Waiting for NRC Response

Issue ID Date Identified	NRC Inspector	Issue Description	Actions Taken
84 8/11/2004	Patterson	What basis does the applicant propose for the initial sample sizes to be used? To what degree will the population be subdivided (for purposes of sample size selection)?	Initial sample size will be based on achieving 90% confidence that 90% of the population does not have the aging effect as described in EPRI TR-107514. The sample size will be subdivided based on common characteristics of the affected components such as materials of construction, fabrication process, operating environment, and aging effects as described in EPRI TR-107514. Note: The AMP basis document (attribute 4) will be revised. 9/16/04: Draft revision to AMP basis document provided to auditor.

LR Contact	Fallin	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Fallin	**PAA Revision Required?**	Yes
Issue Status	Waiting for NRC Response		
LRA Section	B2.1.20		

GCA AMP Issues (8/9-13) - Waiting for NRC Response

Issue ID Date Identified	NRC Inspector	Issue Description	Actions Taken
85 8/11/2004	Patterson	For selective leaching the PAA states that the "population of potentially affected components will be randomly sampled for inspection to confirm the absence of this aging effect." Please clarify how the samples selected will consider other (non-random) factors. NRC Request for Additonal Information 9/8: Selecting the locations where the aging effect is most likely to occur may be acceptable, but it is not a random sample. How does the applicant propose to resolve the conflict between these statements?	The sample size will be selected from the locations where the aging effect is most likely to occur as described in EPRI TR-107514. Response to Request for Additional Information: The population of potentially affected components will be based upon common characteristics of the components and not randomly. The process for identifying the population will be consistent with the methodology described in EPRI TR-107514, Age-Related Degradation Inspection Method and Demonstration.

LR Contact	Fallin	**LRA Revision Required?**	Yes
Assigned Department/ Individual	License Renewal Fallin	**PAA Revision Required?**	Yes
Issue Status	Waiting for NRC Response		
LRA Section	B2.1.20		

GCA AMP Issues (8/9-13) - Waiting for NRC Response

Issue ID Date Identified	NRC Inspector	Issue Description	Actions Taken
86 8/11/2004	Patterson	PAA for one-time inspection (including selective leaching) states: "The population represented will be based on common characteristics of the affected components such as materials of construction, fabrication process, operating environment, and aging effects. The sample size selected for inspection will focus on the most susceptible components.". Please clarify whether the sample "size" is what was intended. NRC Request for Additonal Information 9/8: Determination of the sample size and selection of the sample are not the same. Please clarify how these will be accomplished at NMP.	The sample size will be selected from the locations where the aging effect is most likely to occur as described in EPRI TR-107514. Note: The AMP Basis document program description will be revised. Response to Request for Additional Information: The sample size will be selected to provide a 90% confidence that 90% of the population does not have the degradation mechanism present, in accordance with the EPRI TR-107514.

LR Contact	Fallin	**LRA Revision Required?**	Yes
Assigned Department/ Individual	License Renewal Fallin	**PAA Revision Required?**	Yes
Issue Status	Waiting for NRC Response		
LRA Section	B2.1.20		

GCA AMP Issues (8/9-13) - Waiting for NRC Response

Issue ID Date Identified	NRC Inspector	Issue Description	Actions Taken
87 8/11/2004	Patterson	The representative sample of < 4" NPS piping is to be conducted using "existing site NDE practices." Please explain what techniques will be considered and how they will detect degradation (especially cracking and loss of material) from interior surfaces of small bore piping and components. Request for Additional Information 9/8: In the last paragraph of the applicant's response, what is meant by the term 'boat sample'?	All Quality Group A and B, ASME Code Class 1 and 2 Austenitic and Ferritic Piping selected examination samples (including piping <4" NPS) performed under the Alternate Risk-Informed Inspection Program require ultrasonic examinations. NMPNS is required to implement Appendix VIII, "Performance Demonstration for Ultrasonic Examination Systems," to ASME Section XI, Division 1, 1995 Edition with the 1996 Addenda, as administrated by the EPRI NDE Center, Performance Demonstration Initiative (PDI). All ultrasonic examination techniques being implemented at the NMPNS must be qualified under the PDI program. Ultrasonic examinations for the detection of degradation (such as cracking) is performed in two directions, and when examination in the circumferential direction is required, the circumferential examination must be performed in two directions, provided access is available. Dissimilar metal welds must be examined axially and circumferentially. For the detection of material loss, the 0 degree ultrasonic search unit is utilized to measure wall thickness. Destructive testing of this piping and fittings may also be used where practical The UT procedures are qualified to 2"NPS. For piping less than 2", liquid penetrant tests will be performed on the ID surface boat samples. The thickness of the boat samples can be verified using micrometers. Response to Request for Additional Information: Boat samples are sections of piping that have been cut from the system and are then cut in half. The tests are performed on the two resultant "boats."

LR Contact	Fallin	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Fallin	**PAA Revision Required?**	No
Issue Status	Waiting for NRC Response		
LRA Section	B2.1.20		

GCA AMP Issues (8/9-13) - Waiting for NRC Response

Issue ID Date Identified	NRC Inspector	Issue Description	Actions Taken
105 8/12/2004	Patterson	The scope of the Program Attribute Assessment document does not appear to address the preventive and mitigative measures addressed in the GALL (current program or future Fatigue Pro program)	There are currently no preventive or mitigative actions in the Fatigue Monitoring Program. As part of the design change process while implementing FatiguePro, we will review existing operations pocedures which may be revised to include preventive/mitigative actions. The AMP Assessment for the Fatigue Monitoring Program needs to be modified to state that preventive/mitigative actions, such as procedural or design changes, will be taken if it is determined that design CUF values may be exceeded. A similar change needs to be made to the fatigue monitoring program procedure NIP-REL-06 and License Renewal Application section B3.2. Note: Change to the LRA and AMP Basis Document required. 9/16/04: Draft revision to AMP basis document provided to auditor.

LR Contact	Poehler	**LRA Revision Required?**	Yes
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	Yes
Issue Status	Waiting for NRC Response		
LRA Section	B3.2		

GCA AMP Issues (8/9-13) - Waiting for NRC Response

Issue ID Date Identified	NRC Inspector	Issue Description	Actions Taken
145 8/12/2004	Patterson	The scope of the Program Attribute Assessment document does not appear to address the preventive and mitigative measures addressed in the GALL (current program or future FatiguePro program)	There are currently no preventive or mitigative actions in the Fatigue Monitoring Program. As part of the design change process while implementing FatiguePro, we will review existing operations procedures which may be revised to include preventive/mitigative actions. Note: A change to LRA Section B3.2 is needed to revise the description of preventive actions to indicate what potential action may be taken if CUF design limits are approached. Also, App. A of the LRA will need to be revised accordingly. Also, the AMP Basis document needs to be revised to state that the preventive/mitigative actions, such as procedural or design changes, will be taken if it is determined that design CUF values may be exceeded. 9/16/04: Draft revision to AMP basis document provided to auditor.

LR Contact	Poehler	**LRA Revision Required?**	Yes
Assigned Department/ Individual	License Renewal Fallin	**PAA Revision Required?**	Yes
Issue Status	Waiting for NRC Response		
LRA Section	B3.2		

GCA AMP Issues (8/9-13) - Waiting for NRC Response

Issue ID Date Identified	NRC Inspector	Issue Description	Actions Taken
18 8/11/2004	Saba	LRA Section B2.1.2 refers to the Peach Bottom SER for acceptance of the exception to GALL XI.M2 program. However, NMP technical staff says that NMP is not using past/precedent. Clarify this inconsistency. NRC Request for Additional Information 9/8: Add justification, other than referring to the approved SER by the NRC, in the LRA Section B2.1.2 for using EPRI R2 instead of 1994 version of EPRI TR-103515	The information provided in reference to the peach Bottom SER is presented for information only to aid in clarifying a previous NRC's approach to another similar applicant's position. The premise remains that NMP does not use past/precedent justifications for AMPs and AMRs on a generic basis. NRC Request for Additional Information 9/8: A detailed justification for the use of Revision 2 (2000 edition) of the EPRI Water Chemistry Guidelines will be added to the LRA. A description of each difference between the NMP1 and NMP2 Water Chemistry Control Program and the requirements of the 1994 edition of EPRI TR-103515 will be included, along with a specific justification for each difference. The document entitled “Comparison Of NMP1 And NMP2 Water Chemistry Control Program To NUREG-1801 (GALL) Program X1.M2 Requirements,” provides the basis for the information to be added to the LRA. The reference to the Peach Bottom LRA will be removed.

LR Contact	Poehler	**LRA Revision Required?**	Yes
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	Yes
Issue Status	Waiting for NRC Response		
LRA Section	B2.1.2		

GCA AMP Issues (8/9-13) - Waiting for NRC Response

Issue ID Date Identified	NRC Inspector	Issue Description	Actions Taken
20 8/11/2004	Saba	Does NMP comply with the recommendations BWRVIP-62? If yes, explain how?	As discussed in the BWRVIP Program discussion, BWRVIP-62 is not currently approved by the NRC. The report, however, is cited in Attribtue 3, “Parameters Monitored/Inspected”, of the GALL, where it offers that the applicant may use the guidelines for inspection relief for vessel internal components with H2 water chemistry. NMP2 credited the BWRVIP-62 report in a shroud evaluation from 2000-2004, but is not currently invoking the noted BWRVIP-62 inspection relief. NMP1 has never taken credit for HWC in shroud re-inspection evaluations, thus has not invoked the inspection relief for vessel internal components. When the document is approved for license renewal by NRC (i.e., becomes a ‘–A’ document), NMP plans to take credit for the inspection relief that is permitted by BWRVIP-62. At such time and as applicable to the GALL text, NMP will make the appropriate changes to the BWRVIP LR basis document to define and clarify the applicable Unit 1 and Unit 2 inspection relief details. Note: A revision to the Reactor Vessel Internals AMP basis document is required (B2.1.8) A draft of the reviesion to the Rx Vessel Internals AMP basis document was provided to the NRC auditors on 9/17/04.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	Yes
Issue Status	Waiting for NRC Response		
LRA Section	B2.1.2		

GCA AMP Issues (8/9-13) - Waiting for NRC Response

Issue ID Date Identified	NRC Inspector	Issue Description	Actions Taken
4 8/10/2004	Wen	Since late 1980, EPRI has issued many topical reports to assist utilities in managing Boraflex degradation in spent fuel racks. Which EPRI reports were adopted by NMP in developing its Boraflex Monitoring AMP If NMP Boraflex Monitoring Program deviates from EPRI recommendations, the deviation should be noted and justified. (The GALL pretty much follows the EPRI recommendations). NRC Request for Additional Information 9/8: (Note: this is consolidated question for items 4, 5, 6, 7 and 9) Consider the following facts/findings: (1) coupon surveillance is not reliable, because the method of coupon encapsulation, material, configuration, and flow condition may not accurately simulate the conditions in the racks; (2) the size of the gap but • also on flow conditions around the Boraflex racks; and (3) were degraded noticeably. • NMP2, however, has not performed any boron areal density measurement to quantify the degree to which Boraflex racks has degraded. Explain why short-length coupon results from NMP2 can be used reliably to predict that the 5 % margin to criticality requirements will be maintained for the Boraflex racks over the proposed extended operating licenses. Specifically, what is the correlation of the behavior of Boraflex in the test coupons to that in the storage racks under the most limiting conditions (flow and gamma dose considerations).	The BMP program as defined in NMP response to GL 96-04 is the basis for the AMP basis document. While elements of EPRI TR-108761 are evident in the BMP program, no commitment to its recommendations has been either expressed or implied. Inasmuch as no reference was made to the document in the GALL, no reference to it was deemed necessary in the GALL comparison. However, the same EPRI documents listed in the GALL reference list in Section XI.M22 were used as developmental references in the BMP program documents, as follows: The industry Boraflex operating experience indicates that the test • NP-6159, “An Assessment of Boraflex Performance in Spent Nuclear Fuel Storage Racks”, December 1988. The loss of boron carbide from Boraflex racks depends not only on TR-103300, “Guildlines for Boraflex Use in Spent Fuel Storage Racks”, December 1993. The silica trending data clearly shows that NMP2 Boraflex racks TR-101986, “Boraflex Test Results and Evaluation”, December 1992. Deviations from the GALL relative to in-situ rack testing have been addressed in separate open issue resolutions. Response to Request for Additional Information: For the current licensing period, the use of short and long length coupons will continue in compliance with the CLB documented in the NMP2 response to GL 96-04. NMP acknowledges that definitive action will be required to manage the aging of the Boraflex panels prior to the period of extended operation. There are two possible courses of action that will be implemented for NMP2: 1. Replace the existing Boraflex racks prior to the period of extended operation and eliminate the need for the Boraflex Monitoring Program, or 2. Institute periodic in-situ testing during the period of extended operation in the spent fuel pool in order to objectively establish correlations between the condition of the coupons, the panels, and silica levels. The LRA and PAA will be revised accordingly.

LR Contact	Brown	**LRA Revision Required?**	Yes
Assigned Department/	License Renewal	**PAA Revision Required?**	Yes

GCA AMP Issues (8/9-13) - Waiting for NRC Response

Issue ID Date Identified	NRC Inspector	Issue Description	Actions Taken

Issue Status Waiting for NRC Response

LRA Section B2.1.12

GCA AMP Issues (8/9-13) - Waiting for NRC Response

Issue ID Date Identified	NRC Inspector	Issue Description	Actions Taken
5 8/10/2004	Wen	The Boraflex operating experience indicated that the test coupon surveillance is not reliable. NMP depends on test coupon surveillance and the measurement and trending of silica concentrations in the SFP for the input data to the RACKLIFE predictive code. To demonstrate that the input data to the RACKLIFE will yield valid and reliable results, how the correlation between the degradation in the coupons and degradation in the racks is established? NRC Request for Additional Information 9/8: (see issue 4)	NMP concurs that industry operating experience with short length coupons has yielded mixed results, and their ability to accurately predict long term degradation is limited. For this reason, NMP2 has chosen more reliable full-length coupons, the construction of which closely mimics that of the Boraflex panels, to monitor their physical degradation. Moreover, the location of these coupons is such that most limiting fuel assemblies being loaded into the Boraflex racks are positioned in the eight closest storage cells adjacent to the surveillance assembly. Notably, the full-length coupons are subjected to careful inspections at five-year intervals and changes in their physical condition, the measured silica levels, and the condition of the short length coupons have been consistent with the degradation predicted by RACKLIFE. Coupon width measurements performed on the short length coupons prior to each refueling outage are used to confirm the loss rate predicted by the RACKLIFE computer model. Boron loss in the Boraflex panels is assumed to be proportional to that measured in the short length coupons exposed to the highest flux conditions in the SFP, and should any indication of unexpected degradation occur, then direct areal density testing of the racks will be performed, thereby confirming the correlation is still valid. For these reasons, NMP is confident that the observed degradation of the full-length coupons and test results of the short length coupons are conservative representations of the aging of the Boraflex panels in the Unit 2 spent fuel racks. RACKLIFE model results are consistent with coupon results and both monitoring methods are used to decide upon appropriate conservative action for maintaining the spent fuel pool subcritical. Response to Request for Additional Information: (See Issue 4)

LR Contact	Brown	**LRA Revision Required?**	Yes
Assigned Department/ Individual	License Renewal Brown	**PAA Revision Required?**	Yes
Issue Status	Waiting for NRC Response		
LRA Section	B2.1.12		

GCA AMP Issues (8/9-13) - Waiting for NRC Response

Issue ID Date Identified	NRC Inspector	Issue Description	Actions Taken
6 8/10/2004	Wen	What is the performance of the prefabricated test coupons at NMPs? (Both short-length and full-length). Any degradation observed? NRC Request for Additional Information 9/8: (See Issue 4)	Plant specific operating experience has shown that degradation is occurring in both the full and short length coupons. The extent to which this is occurring is not only consistent between the coupon types, but also with the predictions produced by the NMP RACKLIFE model. The most recent test and inspection report (NET-231-01) for Unit 2 reflects 10 years of service for the short and full-length coupon. The physical appearance of both the short and full-length coupons was considered good and consistent with documented changes noted by EPRI in NP-6159, TR-101986, TR-10330. Measurements of short length coupon #4 did not deviate from any of the established acceptance criteria used to bound that assumed in the criticality analysis for the Unit 2 spent fuel racks. Response to Request for Additional Information: (See Issue 4)

LR Contact	Brown	**LRA Revision Required?**	Yes
Assigned Department/ Individual	License Renewal Brown	**PAA Revision Required?**	Yes
Issue Status	Waiting for NRC Response		
LRA Section	B2.1.12		

GCA AMP Issues (8/9-13) - Waiting for NRC Response

Issue ID Date Identified	NRC Inspector	Issue Description	Actions Taken
7 8/10/2004	Wen	Why is the neutron attenuation testing (also called blackness testing) considered unnecessary? NRC Request for Additional Information 9/8/04:	In the context of the GALL, routine in-situ blackness testing is an important measure of gap formation in the Boraflex panels. In lieu of such testing, NMP2 has taken the precautionary measure of relying upon full-length coupons, the construction of which closely mimics that of the Boraflex panels in the Spent Fuel Racks. Every five years the full-length coupons are visually inspected and gap formation is monitored and measured. The physical measurement of the gapping in these coupons is more accurate than the use of blackness testing, eliminating the need for in-situ blackness testing. The current criticality basis of the NMP2 Boraflex Spent Fuel racks assumes a conservative amount of gapping in the Boraflex material. Full-length coupon gap measurements are compared to the amount of gapping assumed in the criticality analysis to validate the ability of the NMP2 racks to perform their design function. Response to Request for Additional Information: (See Issue 4)

LR Contact	Brown	**LRA Revision Required?**	Yes
Assigned Department/ Individual	License Renewal Brown	**PAA Revision Required?**	Yes
Issue Status	Waiting for NRC Response		
LRA Section	B2.1.12		

GCA AMP Issues (8/9-13) - Waiting for NRC Response

Issue ID Date Identified	NRC Inspector	Issue Description	Actions Taken
8 8/10/2004	Wen	Provide details regarding how the surveillance results assure that the 5% subcriticality margin will be maintained given the fact that NMP has not performed any boron areal density measurement. How the boron loss from the rack is assumed in the analysis? NRC Request for Additional Information 9/8: To compare the measured test coupon dimension changes against the bounding values (width reduction not exceeding 20.6% and gapping less than 4 % of the overall panel length), what steps have been added to consider the differences in configuration, geometry, and flow condition between the test coupons and Boraflex panels?	The predictive model used in the SFP is based upon maintaining a 5% subcriticality margin with a maximum 20% reduction in the boron in the panels. The RACKLIFE model conservatively predicts the reduction of Boraflex along with the short and long length coupon program. The predicted boron reduction rate has a consistent 100% margin relative the subcriticality analysis for the SFP. Boron areal density testing is performed on the short length coupons during each refueling outage to confirm the loss rate predicted by the RACKLIFE computer model. Boron loss in the Boraflex panels is assumed to be proportional to that measured in the short and long length coupons exposed to the highest flux conditions in the SFP, and should any indication of unexpected degradation occur, then direct areal density testing of the racks will be performed. Per NETCO calc (NET-167-01), 5 % subcriticality could be maintained if the width reduction of the panels did not exceed 20.6 % and gapping is less than 4% of the overall panel length. As part of the preparations for the calc, the BISCO batch records were reviewed and the average B4C areal density was determined to be 0.0332 ? 0.005 g B-10/cm2. The criticality analysis assumes an average width and thickness along with a 95/95 uncertainty adder on reactivity to account for the statistical variation on the as-built measurements of areal density. Response to Request for Additional Information: Unit 1: Low silica levels in the SFP, low flux levels around the Boraflex racks, and the placement of the coupons near freshly discharged fuel provide adequate justification to conclude that the coupons conservatively account for any differences in configuration, geometry, and flow conditions. Unit 2: For the current licensing period, additional analytical provisions beyond those defined in the CLB documented in the NMP2 response to GL 96-04 are neither planned nor required. To account for known degradation in the spent fuel pool, NMP2 plans to either replace the racks prior to the period of extended operation and eliminate the need for the Boraflex Monitoring Program, or institute in-situ testing of the racks as part of the BMP during the period of extended operation. The LRA and PAA will be revised accordingly.

LR Contact Brown **LRA Revision Required?** Yes

GCA AMP Issues (8/9-13) - Waiting for NRC Response

Issue ID Date Identified	NRC Inspector	Issue Description	Actions Taken

Assigned Department/ Individual	License Renewal Brown	**PAA Revision Required?**	Yes
Issue Status	Waiting for NRC Response		
LRA Section	B2.1.12		

9 8/10/2004	Wen	The silica trend clearly showed that Boraflex racks were degrading, why NMP BM program is not in 2nd level? (i.e. performing B-10 measurement) NRC Request for Additional Information 9/8: (See Issue 4)	While the historical trend in silica concentration in the SFP confirms that acknowledged degradation at a predicted rate is occurring, the current rate of increase in levels is not sufficient to warrant in-situ B-10 measurements. The action criterion is an unpredicted excursion in the rate of increase in silica levels. To date, this has not occurred to an extent that would dictate additional analysis or testing the SFP. Response to Request for Additional Information: (See Issue 4)

LR Contact	Brown	**LRA Revision Required?**	Yes
Assigned Department/ Individual	License Renewal Brown	**PAA Revision Required?**	Yes
Issue Status	Waiting for NRC Response		
LRA Section	B2.1.12		

GCA AMP Issues (8/9-13) - Waiting for NRC Response

Issue ID Date Identified	NRC Inspector	Issue Description	Actions Taken
115 8/12/2004	Wen	The Compressed Air Monitoring Program is only applicable to NMP1. What program will be used for NMP2 to manage aging effects for portions of the compressed air systems WSLR? The applicant indicated that the components requiring AMR for NMP2 compressed air systems are addressed by Appendix J Program. However, the applicant's AMP B2.1.26, "10 CFR 50 Appendix J Program" did not specifically address this point. Please elaborate it in detail, specially, how the 10 elements are being addressed? NRC Request for Additional Information 9/8: As stated in NRC GL 88-14, also echoed in INPO SOER 88-01, the effects of corrosion and the presence of unacceptable levels of contaminants on the intended function of the compressed air system are safety concerns. From your response to Question #104, it is unclear whether NMP2 instrument air system (IAS) contains components such as air compressors, pre-filters, dryers, after-filters, receiver, and distribution piping network (including piping, fittings, and valves) that are made of carbon steel and are subject to AMR. If there exist such components, explain why relying on Appendix J alone is sufficient to manage the aging effect for those components, especially, the concern of "the effects of corrosion and presence of unacceptable levels of contaminants on the intended function of the compressed air system," as stated in the GALL Scope of Program Section. NRC Comment 9/17/04: NMP response to be sent to NRC Scoping and Screening auditor for further discussion.	To properly answer the question requires discussion of the portions of the NMP2 compressed air system within the scope of license renewal. The NMP2 compressed air systems (CAS) consist of the instrument air system (IAS), the service air system (SAS), the breathing air system (AAS), and the instrument nitrogen system (GSN). The SAS and AAS are used only for nonsafety-related equipment and components during normal plant operation. The IAS system supplies air to both safety-related and nonsafety-related equipment and components. However, the system is not considered a safety-related control air system since the safety-related components that it supplies all perform their safety functions without or upon loss of air, or are provided with safety-related accumulators capable of supplying the required quantities of air. All instrumentation and control systems located inside the reactor primary containment, including the safety-related equipment and components of the automatic depressurization system (ADS) and the four inboard MSIV actuator accumulators, are independently supplied with nitrogen gas from the GSN. Also within the scope of license renewal for the NMP2 CAS are components used for containment isolation. The components subject to an AMR include main steam safety relief valve accumulators, Automatic Depressurization System valve accumulators, Automatic Depressurization System air receivers, main steam isolation valve accumulaors, and the interconnecting piping, fittiings, and valves for those components as well as the supply piping, fittings and valves for safety-related components. These components ar all constructed of stainless steel, copper alloy, or aluminum alloy with an internal environment of dried air or nitrogen gas. The corresponding material environment combinations do not result in aging effects requiring management. Also subject to AMR are piping, fittings, and valves used for containment isolation. These components are constructed of carbon steel with an internal environment of air which results in loss of material. The loss of material will be managed by the 10 CFR 50 Appendix J Program for these components. Response to Request for Additional Information: The Instrument Air System (IAS) is tested and maintained in accordance with the NMP2 commitment to GL 88-14 under the current licensing basis. The Compressed Air Monitoring Program is not credited for the NMP2 IAS because the system is not in scope for license renewal.

GCA AMP Issues (8/9-13) - Waiting for NRC Response

Issue ID Date Identified	NRC Inspector	Issue Description	Actions Taken
147 9/8/2004	Wen	In the NMP LRA, the applicant states that the NMP1 Boraflex replacement program is underway. Is there a similar replacement program planned for NMP2? If the answer is yes, does this information impact AMP Boraflex Program description?	While the conditions in the spent fuel pool indicate that the Boraflex racks are degrading, the long term action plan has not yet been formalized and approved. If the racks are replaced with material other than Boraflex prior to the period of extended operation, then a Boraflex Monitoring Program for NMP2 would no longer be required. The LRA and the PAA will be revised accordingly.

LR Contact	Nold	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Nold	**PAA Revision Required?**	No
Issue Status	Waiting for NRC Response		
LRA Section	B2.1.14		

LR Contact	Brown	**LRA Revision Required?**	Yes
Assigned Department/ Individual	License Renewal Brown	**PAA Revision Required?**	Yes
Issue Status	Waiting for NRC Response		
LRA Section	B2.1.12		

GCA AMP Issues (8/9-13) - Waiting for NRC Response

Issue ID Date Identified	NRC Inspector	Issue Description	Actions Taken
83 8/11/2004	Woodfield	Since the service water pipe tunnel is susceptible to small wall cracks allowing inleakage of ground water, discuss the results of the latest inspections for the tunnel and how often these inspections are done. Discuss if there is any rust staining in the tunnel indicating corrosion of rebar in the concrete. Explain the basis for not performing any external waterproofing repairs to the tunnel. Discuss the crack repair process and the basis for the outer rebar in the tunnel walls not being susceptible to corrosion from the groundwater. Explain the design of the service water pipe tunnel such that if inleakage of ground water occurred again and the sump pumps failed, the flood depth would not exceed 3 inches as discussed in DER NM-1998-159. Discuss the latest inspections for the normal switchgear building, service water tunnels and the radwaste building for below grade exterior walls where groundwater inleakage has also occurred. NRC Request for Additional Information 9/13: Since the water leakage was not repaired from the external side, the applicant needs to address rebar in water as an AMR.	1. The repaired areas referenced in DER NM-1998-159 were recently inspected and there continues to be no in-leakage of water in the areas repaired. The frequency of inspections following the repairs as varied. Initially it was monthly, then quarterly, then annually. It is currently scheduled for inspection every refueling outage. (Inspection reports are attached) 2. Inspections of accessible areas adjacent to inaccessible areas can give an indication of the condition of the material in the inaccessible areas. Rust stains have not been identified on the internal surface of the concrete adjacent to areas of in-leakage through the concrete walls as referenced. Therefore it is reasonable to conclude that degradation of the reinforcing steel is not occurring 3. Water proof coating of the exterior surface of the structure foundations is not required due to successful repairs to water in-leakage paths from the inside of the structure. 4. The grout injection repairs to the wall have stopped the in-leakage of ground water. Due to the absence of flowing water, localized ground water contact with rebar possibly not protected from the grout injection process is insignificant and does not impact the integrity of the structure. DDC 2S11123 (attached) addresses the crack repair. 5. The tunnel is sectioned by various curbs and elevations. If the sump failed in the subject, the water would flow over the curb and into another sump. 6. The latest inspections have not identified signification in-leakage in structures WSLR. Inspection reports are attached. Response to Request for Additional Information: Entire respnse provided in answer to same AMR question. In summary, water leakage path was repaired and no signs of corrosion products from rebar observed to date. Therefore, no additional aging management required. 9/17/04: NRC auditor to discuss with engineering branch.

LR Contact	Hoppe	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Hoppe	**PAA Revision Required?**	No
Issue Status	Waiting for NRC Response		
LRA Section	B2.1.28		

GCA AMP Issues (8/9-13) - Waiting for NRC Response

Issue ID Date Identified	NRC Inspector	Issue Description	Actions Taken

GCA AMP Issues (8/9-13) - Auditor: Saba

Issue ID Date Identified	Issue Description	Actions Taken
18 8/11/2004	LRA Section B2.1.2 refers to the Peach Bottom SER for acceptance of the exception to GALL XI.M2 program. However, NMP technical staff says that NMP is not using past/precedent. Clarify this inconsistency. NRC Request for Additional Information 9/8: Add justification, other than referring to the approved SER by the NRC, in the LRA Section B2.1.2 for using EPRI R2 instead of 1994 version of EPRI TR-103515	The information provided in reference to the peach Bottom SER is presented for information only to aid in clarifying a previous NRC's approach to another similar applicant's position. The premise remains that NMP does not use past/precedent justifications for AMPs and AMRs on a generic basis. NRC Request for Additional Information 9/8: A detailed justification for the use of Revision 2 (2000 edition) of the EPRI Water Chemistry Guidelines will be added to the LRA. A description of each difference between the NMP1 and NMP2 Water Chemistry Control Program and the requirements of the 1994 edition of EPRI TR-103515 will be included, along with a specific justification for each difference. The document entitled "Comparison Of NMP1 And NMP2 Water Chemistry Control Program To NUREG-1801 (GALL) Program X1.M2 Requirements," provides the basis for the information to be added to the LRA. The reference to the Peach Bottom LRA will be removed.

LR Contact	Poehler	**LRA Revision Required?**	Yes
Assigned Department/	License Renewal	**PAA Revision Required?**	Yes
Individual	Poehler		
Issue Status	Waiting for NRC Response		
NRC Closure Date			
LRA Section	B2.1.2		

GCA AMP Issues (8/9-13) - Auditor: Saba

Issue ID Date Identified	Issue Description	Actions Taken
19 8/11/2004	Which EPRI revision is used for Units 1 and 2 Water Chemistry Control program? If you are using both R1 and R2, explain why? Identify the differences between R1/R2 and VIP 29 revision. Where EPRI R1 and R2 are used in the implementing procedures. NRC Request for Additonal Information 9/8: Explain why NMP is using both R1 and R2 versions of the EPRI Guideline, if the latest version has the best and most current industry understanding of water chemistry issues (NMP response to Issue 25). Provide justification	Section 5.1 of the site chemistry administrative procedure GAP-CHE-01 outlines the Unit 1 TS and the Unit 2 TRM documentation. Additionally, procedure References 5.2.2 and 5.2.3 identify the two EPRI revisions as applicable to the site Chemistry program. NMP Unit 1 maintains compliance with the 1996 Revision of EPRI TR-103515-R1. references/commitments. Specifically, U-1 Technical Specifications Bases for 3.2.3 defines the CLB requirement referencing the BWRVIP-29 (EPRI TR-103515-R1) for select chemistry parameters (Conductivty, Chlorides, and Sulfates). This U-1 reference is the only applicability for the Chemistry program for the BWRVIP-29 document. Other U-1 parameters and the U-2 Chemistry program is currently aligned with EPRI TR-103515, 2000 Revision. Response to Request for Additional Information: NMP1 is referencing both the Revision 1 and Revision 2 EPRI Water Chemistry Guidelines because NMP1 Technical Specifications reference Revision 1 in the bases for Technical Specification 3.2.3 and 4.2.3. The Technical Specification Limiting Conditions for Operation (LCO) are for Action Level 2 and 3 conductivity, chloride, and sulfate during startup/shutdown, hot standby, and power operations. Action level 1 chloride, sulfate, and conductivity during power operations for NMP1 are Technical Specification bases values, but not LCO's. This technical specification requirement was added prior to the issue of the latest EPRI BWR Water Chemistry Guidelines, in response to emerging problems with IGSCC in the NMP1 reactor internals. At the time, Revision 1 of the guidelines was the best, most current version of the guidelines available. For parameters and operating conditions other than those covered by the Technical Specifications, NMP1 references EPRI TR-103515-R2, BWR Water Chemistry Guidelines – 2000 Revision.

GCA AMP Issues (8/9-13) - Auditor: Saba

Issue ID Date Identified	Issue Description	Actions Taken
		NMP2 references only EPRI TR-103515-R2, BWR Water Chemistry Guidelines – 2000 Revision.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/17/2004		
LRA Section	B2.1.2		

GCA AMP Issues (8/9-13) - Auditor: Saba

Issue ID Date Identified	Issue Description	Actions Taken
20 8/11/2004	Does NMP comply with the recommendations BWRVIP-62? If yes, explain how?	As discussed in the BWRVIP Program discussion, BWRVIP-62 is not currently approved by the NRC. The report, however, is cited in Attribtue 3, “Parameters Monitored/Inspected”, of the GALL, where it offers that the applicant may use the guidelines for inspection relief for vessel internal components with H2 water chemistry. NMP2 credited the BWRVIP-62 report in a shroud evaluation from 2000-2004, but is not currently invoking the noted BWRVIP-62 inspection relief. NMP1 has never taken credit for HWC in shroud re-inspection evaluations, thus has not invoked the inspection relief for vessel internal components. When the document is approved for license renewal by NRC (i.e., becomes a ‘–A’ document), NMP plans to take credit for the inspection relief that is permitted by BWRVIP-62. At such time and as applicable to the GALL text, NMP will make the appropriate changes to the BWRVIP LR basis document to define and clarify the applicable Unit 1 and Unit 2 inspection relief details. Note: A revision to the Reactor Vessel Internals AMP basis document is required (B2.1.8) A draft of the reviesion to the Rx Vessel Internals AMP basis document was provided to the NRC auditors on 9/17/04.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	Yes
Issue Status	Waiting for NRC Response		

GCA AMP Issues (8/9-13) - Auditor: Saba

Issue ID
Date Identified

Issue Description

Actions Taken

NRC Closure Date

LRA Section B2.1.2

GCA AMP Issues (8/9-13) - Auditor: Saba

Issue ID Date Identified	Issue Description	Actions Taken
21 8/11/2004	Provide a listing of the parameters that are monitored along with their measurement frequencies and their limits. Provide tables of parameters and frequencies for monitoring the effectiveness of HWC and EPRI water chemistry limits.	Enclosure 1 and 2 of site administrative procedure GAP-CHE-01 contain the applicable NMP1 and NMP2 parameters and action level values/limits. These are consistent with EPRI TR-103515 Rev. 1 and Rev. 2. For NMP1, the sampling frequency is daily whereas for NMP2 the frequency is 3 times per week. The Program Attribute Assessments for the NMP1 and NMP2 Water Chemistry Control Programs will be modified to include the type of tables requested in the question. These tables will document equivalency with the requirements of the GALL or provide technical justification for parameters and frequencies that are not equivalent to GALL. Tables showing comparison between EPRI TR-103515 Rev. 0, 1 & 2 and NMP procedures were developed and provided to the NRC auditor on 9/16/04. NRC Auditor accepted information on 9/17/04.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/17/2004		
LRA Section	B2.1.2		

GCA AMP Issues (8/9-13) - Auditor: Saba

Issue ID Date Identified	Issue Description	Actions Taken
22 8/11/2004	List DERs for the parameters exceeding their limits. Describe how the effect of these DER was evaluated, if any aging effect was detected. NRC Request for Additional Information 9/10 The intention of this question was to review the DERs that were issued because the measured parameters exceeded their limits and to obtain reasonable assurance that the water chemistry was effective in mitigating aging effects of the SCCs. The auditor asked to describe how the effect of these DER was evaluated, if any aging effect was detected. The NMP response does not include responses to these questions. Based on the review of the list that is provided, it appears that both Unit 1 and Unit had many DERs related to high dissolved oxygen level, higher conductivity, and metal (iron content). Explain how these issues were evaluated and corrected. In addition, explain if any aging effect due to above issues has been detected.	NEW RESPONSE PROVIDED ON 10/6: DER's from 2000-2004 were evaluated. This response covers the 2000-2004 DER's listed in the initial response to this issue plus some additional DER's found by searches of the ECAP database for NMP2 (the initial list for NMP2 does not appear to cover 2003-2004) These DER's represent more recent operating experience for NMP1 and NMP2 and are considered more representative of the plant's current performance. No aging effects were attributed to any of the instances when chemistry parameters exceeded action levels. Water Chemistry is a preventive program that manages aging by maintaining chemistry parameters within acceptable limits. It is not a condition monitoring program in which inspections are conducted to detect the effects of aging. In all cases where action levels were exceeded, the requirements of procedure GAP-CHE-01 were followed with respect to notification of Shift Supervisor (SSS), General Supervisor of Chemistry, and other management. In a few cases, when fuel warranty parameters were exceeded, the fuel vendor performed a review of possible deleterious effects on the fuel only, finding no deleterious effects in any case. Below is a summary of the major findings for both units. NMP1 Feedwater Dissolved Oxygen There are numerous DERs documenting feedwater dissolved oxygen levels exceeding Action Level 1. Action Level 1 for feedwater dissolved oxygen is <30 or >200 ppb, during power operations. This action level is based on the Fuel Warranty, rather than the EPRI Guidelines. This action level changed from Revision 8 of GAP-CHE-01 (<20 or >50 ppb) to its current value of <30 or >200 ppb in Revision 9 of GAP-CHE-01, which became

GCA AMP Issues (8/9-13) - Auditor: Saba

Issue ID Date Identified	Issue Description	Actions Taken
		effective on 4/29/2004. Most of the instances where feedwater dissolved oxygen exceeded action level 1 were brief. Durations ranged from <10 minutes to 8-1/2 hours, with most less than one hour. These incidents generally occurred during or after maintenance activities that required a portion of the system to be opened, or during condensate demineralizer evolutions such as transfer of resin to the cation tank, or ultrasonic resin cleaning (URC). When condensate or condensate spray pumps are taken out of service for maintenance, oxygen can enter the system through the pump seals. Oxygen injection, which is normally used to maintain feedwater dissolved oxygen in the desired band, is then secured. However, there were several DERs in which startup or shutdown of oxygen injection was not well coordinated with removing or returning the pumps to service, causing high or low feedwater dissolved oxygen. Since the response of dissolved oxygen to startup/shutdown or maintenance evolutions is well understood and expected, and the high or low oxygen conditions were brief and self-correcting, the DER's written for feedwater dissolved oxygen were generally for trending purposes only and required no long term corrective action. However, programmatic changes were initiated as a result of DER 2002-3075. In this case, exceeding the action level was attributed to operator use of "air assist" to move resin without subsequent venting and filling of demineralizer. Also, it was noted that the fuel warranty limit on dissolved oxygen was low compared to typical industry practice. One corrective action was to renegotiate with the fuel vendor the action level 1 for dissolved oxygen to increase from >50 ppb to >200 ppb, which is the industry standard. Another corrective action was to change the operating procedure N1-OP-22 to

GCA AMP Issues (8/9-13) - Auditor: Saba

Issue ID Date Identified	Issue Description	Actions Taken
		restrict the use of “air assist” and to direct operators to vent and fill the CND after resin bed transfers. Air assist was implicated as a cause of elevated feedwater oxygen in several other DERs. No aging effects were noted in the DERs as being associated with the oxygen exceeding action levels. Feedwater Iron and Copper There were several DERs related to feedwater iron exceeding action level 1. Two of these DERs attributed the high iron to sudden lake water temperature changes that caused corrosion products to slough off the condenser tube outer diameter. One exceedance of the iron action level was attributed to extended low power operation during startup, and another exceedance was the result of malfunctioning ultrasonic generators that went undetected for a time (ultrasonic resin cleaning, or URC, is used to remove insoluble metals from the condensate demineralizer resin). The corrective actions for iron exceeding action levels was generally to ultrasonically clean (URC) the condensate demineralizer resin beds and to sample for metals (including iron) more frequently. These incidents generally lasted only a few days. Condensate Demineralizer Influent (CDI) Conductivity There were two DERs documenting condensate demineralizer influent conductivity exceeding action level 1 of 0.10 µS/cm. One of these DERs attributed the elevated conductivity to dissolved gasses and other impurities. Both incidents occurred during a startup. Removal of dissolved gasses and other impurities is inefficient at low power because of low water temperature (solubility of gas decreases with increasing temperature) and low flows through the demineralizers. Therefore, elevated

GCA AMP Issues (8/9-13) - Auditor: Saba

Issue ID Date Identified	Issue Description	Actions Taken
		conductivity due to dissolved gasses and impurities is best remedied by continuing power ascension. Reactor Water Conductivity There were several DERs initiated when reactor water conductivity exceeded Action Level 1 (0.19 µS/cm). Most of these instances were directly attributable to hydrogen injection being secured, either for planned maintenance, or during unit startup or shutdown. Therefore, these DERs were for trending purposes only. One DER for high conductivity was attributed to use of a non-approved, high chloride solvent on the condensate pump seals during maintenance. A conductivity and chloride spike then occurred when the pump was returned to service. This DER resulted in several corrective actions that caused changes to maintenance procedures. The pump maintenance procedure was changed to specify that consumable materials meet requirements of GAP-CHE-01. All mechanical maintenance procedures were reviewed to ensure consumable materials are consistent with the requirements of GAP-CHE-01. Labeling for controlled materials was improved. The maintenance shop was briefed on importance of the chemical control program. One DER documented high conductivity due to noble metal chemical addition (NMCA). However, elevated conductivity is expected and is allowed by procedure for up to 5 months after NMCA. No aging effects were noted in any of the DERs related to high conductivity. Reactor Water Sulfate Three DERs were reviewed documenting reactor water sulfates exceeding action level 1 of 5ppb. Two of these were directly

GCA AMP Issues (8/9-13) - Auditor: Saba

Issue ID Date Identified	Issue Description	Actions Taken
		attributed to the reactor water cleanup (RWCU) system being out of service for maintenance. The other instance was attributed to power changes during startup. The duration of the elevated sulfates was 1 day or less in each instance. No aging effects were attributed to these events. Three other DERs documented an increasing trend in sulfate within action levels. This typically indicates a resin bed needs to be changed out.
		NMP2 Condensate Demineralizer Effluent/Feedwater Dissolved Oxygen There are numerous DERs for condensate demineralizer effluent (CDE) and/or feedwater dissolved oxygen exceeding action level 1, 2 or 3. For the most part, these occurrences were related to placing a demineralizer back in service after the demineralizer had been out of service (typically for resin cleaning or replacement). Usually, the action level is only exceeded for 1-2 minutes after the demineralizer is put back in service. Most of these DERs were for trending purposes only, and as such, did not require long term corrective actions. However, the total time that action levels are exceeded is tracked as required by the fuel warranty. One DER (2001-4211) documented an extensive investigation into the causes and possible corrective actions for the oxygen spikes when demineralizers are placed back inservice. The DER concluded that the design of the demineralizers does not permit all the entrapped air to be removed prior to bringing the demineralizer back in service. However, the amount of entrapped air can be minimized (see table for details). DER 2001-4211 also noted the total time exceeding Action Level 1 in the previous 6 months was only 35 minutes, or 0.0035% of the time allowed by the fuel warranty.

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Issue ID Date Identified	Issue Description	Actions Taken
		DER 2000-4675 attributed feedwater oxygen above the action level to piping upstream of the inlet AOV and downstream of the outlet AOV not being filled prior to putting the demineralizer back in service causing the oxygen spike. Changes to operations procedure N2-OP-5 were recommended, for filling the piping upstream of the inlet and downstream of the outlet AOVs after maintenance work (intrusive) has been performed on the AOV to minimize the air intrusion. DER 2004-2278 documented low feedwater oxygen due to the oxygen injection system not being put in service promptly after a condensate pump was returned to service after maintenance (normally oxygen injection can be secured when a pump is out of service due to leakage through the pump seals). A procedural change was made to remedy this. Feedwater Iron and Copper Three DER's were reviewed for feedwater iron, copper, or total metals exceeding action levels. These were attributed variously to falling behind on demineralizer ultrasonic resin cleaning (URC), extended operation at low power levels, or sudden temperature changes affecting condenser hotwell temperatures. Action levels were typically exceeded from one to several days, since iron sampling is normally done on a weekly integrated basis. Even at increased sampling frequencies, sampling is not instantaneous. Corrective action generally included condensate demineralizer resin bed cleaning and increased sampling. Condensate Demineralizer Influent (CDI) Conductivity There were five DERs in which condensate demineralizer influent (CDI) conductivity exceeded the action level 1 value of

GCA AMP Issues (8/9-13) - Auditor: Saba

Issue ID Date Identified	Issue Description	Actions Taken
		0.10µS/cm. As for NMP1, these are generally attributed to the presence of noncondensable gasses during startup that are removed as power is increased, particularly as the steam jet air ejectors are activated. One DER resulted in a preventive action of placing a note in GAP-CHE-01 stating that elevated CDI conductivity during startup is an expected response (however, action level exceedance must still be reported). One instance of elevated CDI conductivity occurred after a scram. The elevated conductivity was attributed to HPCS initiation, which injected higher conductivity water into the reactor coolant system that subsequently reached the condenser, and routing of reactor water cleanup to the condenser when that system was taken offline. Reactor Water Conductivity No DERs were found during the time frame evaluated in which the GAP-CHE-01 limit for reactor water conductivity was exceeded. Reactor Water Sulfate There were several DERs for reactor water sulfates exceeding Action Level 1 value for power operation of >5 ppb. These were typically caused by exhausted resin beds which can cause resin throw, which was remedied by changing out the resin bed. Two DERs documented a condition where a new type of resin retention element was improperly installed in the demineralizers, allowing some resin beads to escape. The corrective action included reinstalling the retention elements properly, with a follow-up inspection 3 months later. One DER in which the action level was exceeded was due to a delay in putting in service a resin bed prepared several days earlier. A longer purge-rinse time should have been applied to remove organo-sulfates before putting this bed in service (organo-sulfates can build up when a resin bed sits unused in water).

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Issue ID Date Identified	Issue Description	Actions Taken
		Several DERs documented increasing trends in sulfate above the chemistry goal of 2 ppb (not an action level). This provides a margin against exceeding the sulfate action levels and demonstrates NMP's commitment to maintaining the best possible reactor water chemistry. 10/13/04: NRC provided verbal acceptance during conference call.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	10/13/2004		
LRA Section	B2.1.2		

GCA AMP Issues (8/9-13) - Auditor: Saba

Issue ID Date Identified	Issue Description	Actions Taken
23 8/11/2004	It appears that in R2 (2000 revision), chlorides and sulfates no longer needs to be measured daily. Is this applicable to NMP? If so, justify why this is applicable to NMP Units 1 and 2. NRC Additional Request for Information 9/8: Table 4-5b, footnote c states that these frequencies can be adjusted based on site-specific resource allocation needs. Recognizing that chloride and sulfate have associated near-term operational actions for off-term conditions, relaxation of the frequencies should only be performed when conductivity values and/or chemistry trends could be used to ensure that Action Level 1 limits are not exceeded. Considering numerous DERs for both Unit 1 and Unit 2 that are issued because conductivity and water chemistry exceeded their limits (NMP response to Issue 22), justify relaxation of the frequencies for Unit 2. Note that this justification should be added to the LRA Section B2.1.2 for acceptance of the exception to the GALL program	Table 4-5b, footnote c of the EPRI water chemistry guidelines (TR-103515-R2) clarifies the EPRI allowance/relaxation to sampling frequencies. Unit 1 still adheres to daily sampling (see Section 5.0 and 8.0 of N1-CSP-D100 (TS 4.2.3)), whereas, Unit 2 monitors 3 times per week (see Section 8.7 of N2-CSP-GEN-D100) . Response to Request for Additional Information: Refer to the attached document entitled "Comparison Of NMP1 And NMP2 Water Chemistry Control Program To NUREG-1801 (GALL) Program X1.M2 Requirements," for the justification of the relaxed sampling frequency. All exceptions to the GALL, and the justification to the exceptions, are summarized in the narrative portion of the document. Also, the tables entitled "NMP2 Reactor Water – Startup/Hot Standby", "NMP 2 Reactor Water, Power Operations (Normal Water Chemistry)", and "NMP2 Reactor Water, Power Operations (Hydrogen Water Chemistry)," contained in the aforementioned document, document the detailed comparison to GALL and justification of the exceptions.

LR Contact	Poehler	**LRA Revision Required?**	Yes
Assigned Department/	License Renewal	**PAA Revision Required?**	Yes
Individual	Poehler		
Issue Status	Closed		
NRC Closure Date	9/17/2004		
LRA Section	B2.1.2		

GCA AMP Issues (8/9-13) - Auditor: Saba

Issue ID Date Identified	Issue Description	Actions Taken
24 8/11/2004	It appears that in R2 (2000 revision), hydrogen water chemistry (HWC) or HWC with noble metals chemical addition (NMCA) no longer need to measure electrochemical potential (ECP) on a continuous basis. If this is applicable for NMP. Explain why. NRC Additional Request for Information 9/8: Clarify whether NMP ECP sampling/analysis, retained from BWRVIP-29 is consistent with EPRI 1994 (which is referred to in GALL as an acceptable version). If not provide justification.	Both units have retained the ECP sampling/analysis from BWRVIP-29, and as described below. Unit 1 measures ECP on a continuous basis, and is recorded daily (printout). If the U-1 continuous monitoring ECP probe is lost, chemistry administrative procedure GAP-CHE-03 directs the alternate actions. Unit 2 evaluates the ECP through direct inline dissolved oxygen and dissolved hydrogen measurements. As Unit 1, the GAP-CHE-03 procedure outlines alternate actions for a loss of either detection probe. Both plants methods meet the criteria of Table 4-4 (footnotes a and f) of the 1996 Version and Table 4-5b of the 2000 Version. Response to Request for Additional Information: ECP sampling/analysis for NMP1 and NMP2 have some differences from BWRVIP-29 (EPRI TR-103515), BWR Water Chemistry Guidelines – 1993 Revision, Normal and Hydrogen Water Chemistry, (1994 edition, Revision 0) endorsed by GALL. These differences are described and justified in the attached document entitled "Comparison Of NMP1 And NMP2 Water Chemistry Control Program To NUREG-1801 (GALL) Program X1.M2 Requirements."

LR Contact	Poehler	**LRA Revision Required?**	Yes
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/17/2004		
LRA Section	B2.1.2		

GCA AMP Issues (8/9-13) - Auditor: Saba

Issue ID Date Identified	Issue Description	Actions Taken

GCA AMP Issues (8/9-13) - Auditor: Saba

Issue ID Date Identified	Issue Description	Actions Taken
25 8/11/2004	What are chlorides and sulfates action levels that are used in NMP Units 1 and 2. If these action levels are increased, provide justification. NRC Additional Request for Information 9/8: The project team finds the Unit 1 AL 1 values for conductivity, chloride, and sulfate acceptable (based on EPRI 1996 version), since these are reviewed and approved by the NRC (Safety Evaluation enclosed with the letter form Darl S Hood (NRC) to John H Mueller (NMPS), dated September 18, 1998). For Unit 2, although the 2000 version represents the best and most industry understanding of water chemistry, NMP2 needs to provide plant specific justification, if it is using higher action levels than those in the EPRI 1994 version.	Enclosure 1 and 2 in GAP-CHE-01 identify the applicable action level values (AL 1, 2, and 3) for chloride and sulfates, as well as other required parameters. Levels are aligned the industry guidance contained in EPRI 2000 with the exception for the Unit 1 AL 1 values for Conductivity, Chloride, and Sulfate, which are TS 3.2.3 bases requirements aligned to the 1996 (BWRVIP-29) EPRI Version. The justification for use of a different revision of the EPRI Water Chemistry Guidelines than the revision referenced in GALL is that the latest revision of the EPRI Water Chemistry Guidelines represent the best, most current industry understanding of water chemistry issues and as such, will be adopted as appropriate. A comparison of the NMP1 and NMP2 chloride and sulfate limits to the GALL requirements will be added to the Water Chemistry Program Attribute Assessments for NMP1 and NMP2. Response to Request for Additional Information: Justification for the higher chloride and sulfate levels is provided in the attached document entitled “Comparison Of NMP1 And NMP2 Water Chemistry Control Program To NUREG-1801 (GALL) Program X1.M2 Requirements,” specifically in the table entitled “NMP2 Reactor Water, Power Operations (Hydrogen Water Chemistry).” Exceptions to GALL and their justifications are also provided in the narrative summary at the beginning of the document.

LR Contact	Poehler	**LRA Revision Required?**	Yes
Assigned Department/	License Renewal	**PAA Revision Required?**	Yes
Individual	Poehler		
Issue Status	Closed		

GCA AMP Issues (8/9-13) - Auditor: Saba

Issue ID Date Identified	Issue Description	Actions Taken

NRC Closure Date 9/17/2004

LRA Section B2.1.2

GCA AMP Issues (8/9-13) - Auditor: Saba

Issue ID Date Identified	Issue Description	Actions Taken
26 8/11/2004	The 2000 revision added reactor water iron as a new diagnostic parameter. Is this parameter used for NMP Units 1 and 2. What aging effects will be detected by measuring this parameter? What are the limits? What implementing procedure is used?	Feedwater iron sampling is an EPRI requirement in both the 1996 and 2000 versions. Specifically, Table 4-5 of the 1996 version details the iron monitoring as a Control Parameter, where the 2000 version identifies it as a Diagnostic Parameter. The 2000 version also specifies iron in reactor water should be measured as a basis for mass balance but provides no numerical limit. Iron is monitored in both units in feedwater and reactor water. NMP has historically monitored, trended, and evaluated soluble and insoluble concentrations. In addition, minimizing the iron concentration is considered beneficial to crud buildup and radiation levels from both activated iron and cobalt in the vessel and RCS system. The limits for feedwater soluble iron are given below in ppb. There is no limit for reactor iron concentration in the EPRI Guidelines or NMP procedures. Action Level 1 Action Level 2 Action Level 3 EPRI (total iron) >5 - - Fuel Warranty (insoluble iron) >10 >20 >40 Fuel Warranty (soluble iron) >1.0 >2.0 >4.0 No specific aging effect is detected by measuring this parameter. The BWR Water Chemistry Guidelines are focused on prevention of IGSCC in coolant system piping and reactor internals. The technical bases for water chemistry control in the 2000 Water Chemistry Guidelines indicates iron has no effect on IGSCC crack growth in either normal water chemistry (NWC) or hydrogen water chemistry (HWC). High feedwater iron could indicate increased general corrosion rates of carbon steel feedwater system piping.

GCA AMP Issues (8/9-13) - Auditor: Saba

Issue ID Date Identified	Issue Description	Actions Taken
		Procedure GAP-CHE-01, "BWR Water Chemistry Operating Limits," Rev. 09, provides the action levels for iron. Implementing procedures are S-CTP-V640 Rev. 01, "In-Line Sampling Of Filterable Solids Cations And Anions Using RCT Model 505 Corrosion Product Sampler," and S-CTP-V645 Rev. 0, "Operation Of Centec Model 1000 Corrosion Product Sampler."

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/	License Renewal	**PAA Revision Required?**	No
Individual	Poehler		
Issue Status	Closed		
NRC Closure Date	9/8/2004		
LRA Section	B2.1.2		

GCA AMP Issues (8/9-13) - Auditor: Saba

Issue ID Date Identified	Issue Description	Actions Taken
27 8/11/2004	Similar to Issue No. 26, for continuous monitoring of dissolved oxygen concentration. Show location of these instruments, if any, on the P&ID.	For reactor water dissolved oxygen, the U-1 instrument is located on the Reactor Coolant Sentry Panel, which normally lines up the sample to the Clean-up Non-regenerative Heat Exchanger Outlet. An alternate source for the sample can be #11 Reactor Recirculation Loop (ref. Section 8.1.1 of N1-CSP-D100). Feedwater dissolved oxygen is also continuously monitored. The table below provides the P&ID numbers that show the sample points. System/Location - Reactor Water (D/S of Non-Regen HX) Valve - 110-492 P&ID - C18041C, Sheet 2, Rev. 24 LR Drawing Number - LR-18041-C, Sheet 2, Rev. 0 System/Location - Reactor Water (Reactor Recirc. Loop 11) Valve - 110-266 P&ID - C18041C, Sheet 2, Rev. 24 LR Drawing Number - LR-18041-C, Sheet 2, Rev. 0 System/Location - Feedwater P&ID - C18041, Sheet 11, Rev. 6 System/Location - Control Rod Drive (no Separate sample point, sampled via condensate demineralizer effluent P&ID - C18041C, Sheet 11, Rev. 6 The Unit 2 DO instrument for reactor water is located at the Reactor Sample Panel, which lines up the preferred sample point from the influent to the Reactor Water Clean-up Filter Demineralizer (valve 2SSR-V3). An alternate sample can be drawn from the Recirc System Loop A (valve 2SSR-V23) and residual heat removal system valves 2RHS*SOV35A, 2RHS*SOV35B, 2RHS*SOV36A, and 2RHS*SOV36B (ref. Section 8.4 of N2-CSP-GEN-D100). The P&ID drawing numbers for these valves are given below, along with the corresponding License Renewal (LR) drawing

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Issue ID Date Identified	Issue Description	Actions Taken
		number. System - Reactor Water Valve - 2SSR-V3 P&ID - 017 Sheet D, Rev. 13 System - Reactor Water Valve - 2SSR-V23 P&ID - 017 Sheet G, Rev. 20 LR Drawing Number - 017-G-0 System - Reactor Water Valve - 2RHS*SOV35A P&ID - 017 Sheet G, Rev. 20 LR Drawing Number - 017-G-0 System - Reactor Water Valve - 2RHS*SOV35B P&ID - 017 Sheet G, Rev. 20 LR Drawing Number - 017-G-0 System - Reactor Water Valve - 2RHS*SOV36A P&ID - 031 Sheet D, Rev. 19 LR Drawing Number 031-D-0 System - Reactor Water Valve - 2RHS*SOV 36B P&ID - 031 Sheet E, Rev. 20 LR Drawing Number 031-E-0 System - Feedwater P&ID - 017 Sheet A, Rev. 7 System - Control Rod Drive Valve - 2RDS-V93 P&ID 017 Sheet G, Rev. 20 LR Drawing Number 017-G-0 The NRC Audit team has access to all the License Renewal drawings because these part of the License Renewal Application. Other P&ID drawings will be available at the site for review by the audit team.

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Issue ID Date Identified	Issue Description	Actions Taken

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/8/2004		
LRA Section	B2.1.2		

GCA AMP Issues (8/9-13) - Auditor: Saba

Issue ID Date Identified	Issue Description	Actions Taken
28 8/11/2004	Elaborate on the programs that are used for verification of the WCC program for primary water, condensate and feedwater, and control rod drive mechanism cooling water.	The Water Chemistry Program, a preventive program, is typically credited in conjunction with a condition monitoring program, such as Inservice Inspection (ASME Section XI AMP - GALL XI.M1) or Flow Accelerated Corrosion (GALL X1.M17). For small-bore piping less than NPS 4, including pipe, fittings, and branch connections, this verification is noted as being accomplished by the One-Time Inspection AMP (GALL XI.M32). These programs detect, monitor and trend the effects of aging such as loss of material and cracking, which could increase if the Water Chemistry Program is ineffective. Primary water components (reactor water) are typically covered by the ASME Section XI, IWBCD Inservice Inspection Program (GALL X1.M1), supplemented by One-Time Inspection (GALL X1.M32), when the examination method required by ASME Section XI is not adequate to detect the aging effect. For inner-diameter initiated cracking and loss of material, a volumetic examination is necessary to detect these aging effects before they can cause leakage of the component. For ASME Code Class 1 and 2 piping welds a Risk-Informed Inservice Inspection (RI-ISI) Program is implemented as an alternate to the ASME Section XI piping weld examination requirements. The Alternate Risk-Informed program requires a volumetric (ultrasonic) examination of selected Code Class 1 and 2 pressure retaining welds. Exclusion from the ultrasonic examination requirements is as denoted in ASME Section XI, subsections IWB and IWC. Typically welds in pipes 1” and less for Class 1 and pipes 4” and less for Class 2 are excluded from ultrasonic examination requirement. Therefore, piping components not subject to ultrasonic examination under either the standard ISI or RI-ISI programs, but which have corrosion-related aging effects initiating on the component inside surfaces, are typically included in the One-Time Inspection Program. A sample of these components will be subject to volumetric or

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Issue ID Date Identified	Issue Description	Actions Taken
		destructive examination to detect such effects. The Flow-Accelerated Corrosion (FAC) Program (GALL X1.M17) is typically assigned for non-stagnant or non-low-flow condensate and feedwater piping components that are susceptible to flow-accelerated corrosion. The One-Time Inspection Program is used for feedwater and condensate components such as valves that are not subject to FAC inspections. One-Time Inspection is often credited for management of corrosion-related aging effects used for many Control Rod Drive Hydraulic System components that are not covered by the ASME Section XI IWBCD program.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/10/2004		
LRA Section	B2.1.2		

GCA AMP Issues (8/9-13) - Auditor: Saba

Issue ID Date Identified	Issue Description	Actions Taken
45 8/12/2004	NMP PAA for fuel oil chemistry (program description and parameters monitored/inspected) identifies ASTM Standards D 270 and 975 in addition to the standards that GALL referred to. Explain where and how these standards are used and if they are used instead of the standards identified by GALL. Then it is an exception to GALL. Justify use of these standards.	ASTM Standard D270 has been superceded by ASTM D4057, which is used at NMP in its place and is discussed in the GALL. Consequently, its discussion in the PAA is not relevant and will be deleted. The GALL discusses sampling standards, but does not address purity standards. D975 is the Standard Specification for Diesel Fuel Oils and is the appropriate ASTM standard to use for diesel fuel. It was mentioned in the PAA for completeness to round out the discussion of parameters monitored. Since neither standard conflicts with the GALL, their use in the PAA is not considered an exception. 9/15/04: Draft revision to the AMP basis document provided to auditor. Auditor accepted proposed revision. 10/13/04: Revisions to the U1 and U2 Fuel Oil Chemistry PAAs approved which incorporate this change.

LR Contact	Brown	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Brown	**PAA Revision Required?**	Complete
Issue Status	Closed		
NRC Closure Date	8/23/2004		
LRA Section	B2.1.18		

GCA AMP Issues (8/9-13) - Auditor: Saba

Issue ID Date Identified	Issue Description	Actions Taken
46 8/12/2004	NMP does not use the modified Method A of ASTM D 2276 that is recommended by GALL for the filter pore size. Although, the auditor understands that this is a conservative approach. This is an exception to GALL. Clarify	NMP does not consider the use of sampling techniques which result in more precise measurements of smaller contaminants in EDG fuel oil to be an exception to the GALL

LR Contact	Brown	**LRA Revision Required?**	No
Assigned Department/	License Renewal	**PAA Revision Required?**	No
Individual	Brown		
Issue Status	Closed		
NRC Closure Date	8/23/2004		
LRA Section	B2.1.18		

GCA AMP Issues (8/9-13) - Auditor: Saba

Issue ID Date Identified	Issue Description	Actions Taken
47 8/12/2004	GALL acceptance criteria states that the ASTM Standards D1796 and D2709 are used for determination of water and sediment contamination in diesel fuel. NMP PAA states that NMP uses ASTM D 2276 for particulate contaminates instead of D2709. However, it appears that NMP uses ASTM D 1796 instead of D2709. Clarify	NMP understands that the GALL should state that "[t]he ASTM Standards D 1796 OR D 2709 are used for guidance on the determination of water and sediment contamination in diesel fuel." It is true that D 1796, not D 2276, is used for water and sediment determination rather than D 2709 at NMP. D 2276 is used to determine particulate contaminants, which is an additional and separate test from the water and sediment tests performed under D 1796. The PAA will be revised appropriately. 9/15/04: Draft revision of AMP basis document provided to auditor. Auditor accepted proposed revision. 10/13/04: Revisions to the U1 and U2 Fuel Oil Chemistry PAAs approved which incorporate this change.

LR Contact	Brown	**LRA Revision Required?**	No
Assigned Department/	License Renewal	**PAA Revision Required?**	Complete
Individual	Brown		
Issue Status	Closed		
NRC Closure Date	8/23/2004		
LRA Section	B2.1.18		

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Issue ID Date Identified	Issue Description	Actions Taken
48 8/12/2004	Provide examples of measured parameters	Specific sample results from procedure N1-CSP-Q504 dated 6-10-04 were provided. NRC will evaluate unit 2 results at the next NMP site visit. 9/13/04 update: The DFO program at Unit 2 samples purity when it is received onsite, then monitors for water and particulates in the storage tanks. NMP previously provided diesel fuel oil sample results for incoming DFO for Unit 2. Monthly particulate/water sample results for Unit 2 have been subsequently supplied as of this date. Note that, unlike Unit 1, Unit 2 adds a preservative to the fuel oil, so there is no need to resample for ASTM 975 fuel purity standards on a periodic basis. Moreover, there is no GALL requirement to do so. Unit 2 samples for particulate and water monthly, as required by the Technical Specifications, and in excess of the quarterly sampling requirement for these contaminants in the GALL.

LR Contact	Brown	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Brown	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/15/2004		
LRA Section	B2.1.18		

GCA AMP Issues (8/9-13) - Auditor: Saba

Issue ID Date Identified	Issue Description	Actions Taken
49 8/12/2004	Provide examples of the last inspections for verification of the effectiveness of the program. Was any aging effect identified? If any, identify the DER and the related corrective actions.	The most recent EDG tank inspections performed under N1-MPM-EGF-10Y001 and N2-MPM-EGF-10Y001 generated normal results. The initial UT of the Unit 2 FO tanks yielded no degradation of the tank wall below minimums. UT of the Unit 1 tanks has not yet been implemented. Consequently, no DERs or other corrective action was required for these inspections. 9/13/04 Update: Provided tank inspection results. NRC auditor accepted with no further questions.

LR Contact	Brown	**LRA Revision Required?**	No
Assigned Department/	License Renewal	**PAA Revision Required?**	No
Individual	Brown		
Issue Status	Closed		
NRC Closure Date	9/15/2004		
LRA Section	B2.1.18		

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Issue ID Date Identified	Issue Description	Actions Taken
50 8/12/2004	Identify and describe if there are differences between Unit 1 and Unit 2 Fuel Oil Chemistry program.	While there are no major differences in the two programs, they do differ slightly in the parameters that they monitor, so the enhancements may not be applicable to both units. In summary, then: • For Unit 1, no biocides, corrosion inhibitors or stabilizers added to diesel fuel oil at NMP1, but the program will be enhanced to expand sampling requirements and, if required, additives. • Unit 2 does not currently perform inspections on the Diesel Fire Pump Storage Tank, but the program will be expanded to include it. This is not applicable to Unit 1. • The Unit 1 tank sampling procedure does not include specific instructions to remove water found in any tank, this is accomplished through the corrective action process (DER/ACR) since water is not permitted in the tanks. This will be enhanced. • Unit 2 samples the incoming fuel for general appearance, but Unit 1 does not.

LR Contact	Brown	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Brown	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/13/2004		
LRA Section	B2.1.18		

GCA AMP Issues (8/9-13) - Auditor: Saba

Issue ID Date Identified	Issue Description	Actions Taken
51 8/12/2004	Identify tanks and piping that protective coating is used. (The project team understands that preventive coating is not credited for NMP1.) Has any aging effects been detected with the components that were coated (related to coating, e.g., peeling)? Please describe.	Protective coatings are neither credited nor used on any fuel oil tanks at NMP, Units 1 or 2.
	NRC Request for Additional Information 9/8: This response differs from the Unit 1 and 2 PAA, Section 2.2 which states that protective coatings are not credited with protecting of the diesel fuel tanks. Clarify.	Response to Request for Additional Information: Coatings are not credited on any fuel oil tanks at NMP, Units 1 or 2, since they simply do not exist. The PAA will be revised accordingly to clarify this point. 10/13/04: Revisions to the U1 and U2 Fuel Oil Chemistry PAAs approved which incorporate this change.

LR Contact	Brown	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Brown	**PAA Revision Required?**	Complete
Issue Status	Closed		
NRC Closure Date	9/15/2004		
LRA Section	B2.1.18		

GCA AMP Issues (8/9-13) - Auditor: Saba

Issue ID Date Identified	Issue Description	Actions Taken
53 8/11/2004	Similar to the above question, identify programs for detecting aging effect in low flow and stagnant flow areas. Describe how these areas will be selected and detected. The program attributes assessment document states that these areas are discussed in the ASME XI inservice inspection or one-time inspection program. Provide examples of inspections of these areas.	The ISI Program (GALL X1.M1) and One-Time Inspection programs are typically credited for management of aging of components. Components Classified as ASME Code Class 1, 2 or 3 (including their supports) subject to examination are included in the ISI program. For ASME Code Class 1 and 2 piping welds a Risk-Informed Inservice Inspection Program is implemented as an alternate to the ASME Section XI piping weld examination requirements. The Alternate Risk-Informed program requires a volumetric (ultrasonic) examination of selected Code Class 1 and 2 pressure retaining welds. Exclusion from the ultrasonic examination requirements are as denoted in ASME Section XI, subsections IWB and IWC. (Typically 1" and less for Class1 and 4" and less for Class 2). Additionally, all ASME Code Class 1, 2 and 3 components are subject to visual (VT-2) examination performed in conjunction with the system pressure tests as required by ASME Section XI. Because surface or visual examination methods on the out side diameter of the pipe cannot detect cracking initiating on the inner-diameter of a pipe, surface and visual examinations are not very useful for early detection of an aging effect causing cracking. Therefore, for small-bore pipe, the One-Time Inspection Program is also assigned which requires volumetric or destructive examinations of a sample of pipe with nominal size less than 4 inches. The One-Time Inspection Program is also credited for management of aging for components. An example is piping component LP-PIPE04-SS. This is a generic piping component created for license renewal purposes to represent liquid poison system piping from the reactor to the external isolation valve (NMP1 does not have unique component ID's for each segment of pipe). This piping is austenitic stainless steel and was determined to have a high-temperature water, low flow

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Issue ID Date Identified	Issue Description	Actions Taken
		environment. In addition to the Water Chemistry Program, this component credits a visual examination conducted under the ASME Section XI (Program X1.M1) pressure testing program (NMP1-PT-003), and an inspection conducted under the One-Time Inspection Program (GALL X1.M32). Because the One-Time Inspection Program is a new program, the specific inspection method has not been determined yet but would be either a volumetric examination or destructive examination of a sample of piping. Another example is valve 2CSH*V84, a carbon steel globe valve in the NMP2 High-Pressure Core Spray System. The Aging Management Review for that system determined the environment was high-temperature, low-flow water. The aging effect of loss of material due to the mechanism general corrosion is managed by the Water Chemistry Program, and an inspection conducted under the One-Time Inspection Program. The One-time Inspection method is to be determined since this is a new program but would probably consist either of an ultrasonic examination or internal visual examination of the valve.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/	License Renewal	**PAA Revision Required?**	No
Individual	Poehler		
Issue Status	Closed		
NRC Closure Date	9/10/2004		
LRA Section	B2.1.2		

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Issue ID Date Identified	Issue Description	Actions Taken

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Issue ID Date Identified	Issue Description	Actions Taken
54 8/11/2004	Identify and describe differences between Unit 1 and Unit 2 Water Chemistry Control programs. NRC Request for Additional Information 9/8: Explain why Unit 2 chloride, sulfate and conductivity limits for Unit 2 are higher (more restrictive for Unit 1) than Unit 1's parameters. In another words, why R1 does not apply to Unit 2 as well?	The most significant difference is that the NMP1 reactor water chloride, sulfate, and conductivity limits for Reactor water bulk temperature = 200 degrees Farenheit and reactor thermal power = 10% (startup/Hot standby), and reactor thermal power >10% (power operation) are based on the 1996 EPRI guidelines referenced in Technical Specification 3.2.3. NMP2 has no such Technical Specification basis for any water chemistry control parameters. Other parameters for both NMP1 and NMP2 are based on the 2000 EPRI Water Chemistry Guidelines. Response to Request for Additional Information: Justification for the higher chloride and sulfate levels is provided in the attached document entitled "Comparison Of NMP1 And NMP2 Water Chemistry Control Program To NUREG-1801 (GALL) Program X1.M2 Requirements," specifically in the table entitled "NMP2 Reactor Water, Power Operations (Hydrogen Water Chemistry)." Exceptions to GALL and their justifications are also provided in the narrative summary at the beginning of the document. The higher conductivity action level 1 for NMP2 (>0.30 µS/cm) is still consistent with the requirements of the Revision 0 EPRI Water Chemistry Guidelines and therefore consistent with GALL. The bases for the lower action level 1 conductivity of >0.19 µS/cm for NMP1 is the discussion in the bases for NMP1 Technical Specifications 3.2.3 and 4.2.3, which indicates that maintaining conductivity 0.19 µS/cm ensures that IGSCC crack growth rates are bounded by core shroud analysis assumptions.

LR Contact Poehler **LRA Revision Required?** Yes

GCA AMP Issues (8/9-13) - Auditor: Saba

Issue ID Date Identified	Issue Description	Actions Taken

Assigned Department/	License Renewal	**PAA Revision Required?**	Yes
Individual	Poehler		
Issue Status	Closed		
NRC Closure Date	9/17/2004		
LRA Section	B2.1.2		

55	Provide a sample of monitored parameters for the primary water, condensate and feedwater, and CRD.	Response was e-mailed to NRC auditor with information containing parameter values
8/11/2004		9/17/04: Auditor provided feedback that the information provided was satisfactory and had no further questions at this time.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/	License Renewal	**PAA Revision Required?**	No
Individual	Poehler		
Issue Status	Closed		
NRC Closure Date	9/17/2004		
LRA Section	B2.1.2		

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Issue ID Date Identified	Issue Description	Actions Taken
56 8/11/2004	LRA B2.1.2, Program description and Section A1.37 state that the aging mechanism/effects of concerns include 1) SCC, 2) loss of material, and 3) fouling. However, neither LRA nor PAA explains what is causing fouling aging effects, what SCCs are identified with this aging effect, and how fouling is controlled or mitigated.	For the aging management review process at NMP, loss of heat transfer due to fouling is an aging effect requiring management for components having an intended function of heat transfer, for certain material/environment combinations only. There are two causes of fouling. In non-open cycle cooling water systems, fouling can result from corrosion product transport and deposition on heat transfer surfaces, generally heat exchanger tube surfaces. In open-cycle cooling water systems, fouling is mainly caused by clogging of tubesheets by biological organisms and debris. Open-cycle cooling water systems are not addressed by the Water Chemistry Control (GALL X1.M2) Program. Note The AMP basis document and the LRA will be revised. LRA Sections B2.1.2 and A1.37 will be revised to remove fouling as an aging mechanism. For the material-environment combinations assigned to heat exchanger tubes in systems crediting the Water Chemistry Program for management of aging, typically stainless steel in some form of treated water, fouling was determined not to be an aging effect requiring management. A search of the Aging Management Review results for NMP1 and NMP2 revealed that the X1.M2 Water Chemistry Control Program was not assigned to manage loss of heat transfer due to fouling for any component. Components susceptible to loss of heat transfer due to fouling credited either the Open-Cycle Cooling Water Program or Closed-Cycle Cooling Water Programs.

LR Contact	Poehler	**LRA Revision Required?**	Yes
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	Yes

GCA AMP Issues (8/9-13) - Auditor: Saba

Issue ID Date Identified	Issue Description	Actions Taken
Issue Status	Closed	
NRC Closure Date	8/25/2004	
LRA Section	B2.1.2	
57 8/11/2004	UFSAR supplement, recommend to be consistent in referring to EPRI revisions.	USAR supplement section A1.1.37 (NMP1) is consistent in that it refers to EPRI TR-103515-R1 and TR-103515-R2. USAR supplement section A2.1.36 (NMP2) will be revised to reference TR-103515-R2 only. The response to item 19 in the database addresses the differences between these two revisions.

LR Contact	Poehler	**LRA Revision Required?**	Yes
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/8/2004		
LRA Section	B2.1.2		

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Issue ID Date Identified	Issue Description	Actions Taken
58 8/11/2004	Provide ISI report for verification of effectiveness of WCC program.	NMP submittals of Owner's Activity Reports for Inservice Inspection are docketed with the NRC. These summarize the results of examinations performed during the most recent period of the current 10-year inspection interval for each unit, including examinations performed during the last two refueling outages. The two most recent such submittals are: Letter from W. C. Holston to USNRC, re: "Nine Mile Point Unit 2, Docket No. 50-410, License No. NPF-49, 2004 Owner's Activity Report for Inservice Inspections," dated July 20, 2004. (Accession #ML042120307) Letter from B. S. Montgomery to USNRC re: "Nine Mile Point Unit 1 Docket No. 50-220, Facility Operating License No. DPR-63, Submittal of Inservice Inspection Activity Reports," dated July 23, 2003. (Accession #ML032110132) These submittals are available in the NRC ADAMS system and also are available for NRC review during the next audit. 10/13/04: NRC provided verbal acceptance during conference call.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	10/13/2004		
LRA Section	B2.1.2		

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Issue ID Date Identified	Issue Description	Actions Taken
59 8/11/2004	Unit 2 PAA, page 11, states that NMP performed self-assessments of SCC. Provide the last two SA's	Self-assessments have been performed and will be made available for onsite review by the NRC Audit Team. 9/17/04: Copy of self-assessment provided to auditor. Auditor had no further questions.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/17/2004		
LRA Section	B2.1.2		

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Issue ID Date Identified	Issue Description	Actions Taken
60 8/11/2004	PAA states that scope of program is consistent with GALL. NMP uses EPRI R1/R2, this is an exception to GALL.	The Program Attribute Assessment will be changed to identify the use of a different revision of the EPRI Guidelines as an exception to GALL. This exception is justified on the basis that the latest revision of the EPRI Water Chemistry Guidelines represent the latest industry understanding of water chemistry issues. Note: The LRA already identifies this exception. NRC requests this issue be included in LRA Supplemental letter (10/13/04) Note: Change to the AMP Basis Document is required.

LR Contact	Poehler	**LRA Revision Required?**	Yes
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date			
LRA Section	B2.1.2		

GCA AMP Issues (8/9-13) - Auditor: Saba

Issue ID Date Identified	Issue Description	Actions Taken
61 8/11/2004	Unit 1 Parameters Monitored/Inspected: For feedwater, condensate, and CRD, GALL recommends to measure conductivity, dissolved oxygen and concentrations of iron and copper (feedwater only) to monitored. NMP1 does not monitor iron and copper for feed water. NMP1 PAA does not include any discussion on the measurement of conductivity, dissolved oxygen and concentration of iron for condensate and CRD. These are exceptions to GALL. Justify! Identify what revision of the EPRI document is used.	NMP1 measures iron, copper, dissolved oxygen and conductivity in feedwater during startup/hot standy and power operations. The Action Level values are consistent with the 2000 EPRI Guidelines (TR-103515-R2) as given by GAP-CHE–01 Enclosure 1. For condensate, NMP measures influent conductivity during both startup and power operations with limits consistent with the 2000 EPRI Guidelines. For startup/hot standby, NMP1 meets the EPRI 2000 Guidelines by measuring feedwater dissolved oxygen (2000 revision requires DO be measured in either feedwater or polished condensate). Dissolved oxygen is measured during power operations for condensate and feedwater. The action levels are consistent with the 2000 EPRI Guidelines but are listed under Fuel Warranty Requirements. For CRD water, NMP1 monitors parameters in accordance with the EPRI 2000 Guidelines per GAP-CHE-01. In the NMP1 program attribute assessment, Parameters Monitored/Inspected will be revised to describe CRD water requirements. Also, compliance with the EPRI 2000 Guidelines will be noted as an exception. The latest revision of the EPRI Water Chemistry Guidelines represent the latest industry understanding of water chemistry issues and as such, will be adopted as appropriate.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/8/2004		

GCA AMP Issues (8/9-13) - Auditor: Saba

Issue ID Date Identified	Issue Description	Actions Taken

LRA Section B2.1.2

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Issue ID Date Identified	Issue Description	Actions Taken
62 8/11/2004	Unit 1 Parameters Monitored/Inspected: NMP1 PAA states that WCC program does not monitor hydrogen peroxide as recommended by GALL. This is an exception. Justify. NRC Request for Additional Information 9/8: GALL Report XI.M2, parameters monitored/inspected, 1st paragraph requires hydrogen peroxide to be monitored. In addition, both NMP Unit 1 and Unit 2 PAA for water chemistry (last paragraph under parameters monitored/inspected) state that NMP does not directly monitor for hydrogen peroxide. This differs from the above response. Clarify.	GALL does not actually require hydrogen peroxide to be monitored directly. GALL text indicates hydrogen peroxide is a contributor to the Electrochemical Potential (ECP). NMP1 measures ECP which is a measure of the electrochemical potential of the water which includes hydrogen peroxide. Response to Request for Additional Information: EPRI Rev. 2 Guidelines, Section 5.2.1.13, indicates that accurate measurement of hydrogen peroxide (H_2O_2) is extremely difficult due to rapid decomposition to water and oxygen in sample lines. Recombination with hydrogen in sample lines at NMCA plants can also occur. Per GAP-CHE-03, "BWR vessel and Internals Program (BWRVIP) Mitigation Systems Operating Limits and Goals," NMP1 and NMP2 both determine the hydrogen/oxidant molar ratio using the radiolysis/ECP model described in BWRVIP-62, "Technical Basis for Inspection Relief for BWR Internals Components with Hydrogen Injection." The hydrogen/oxidant molar ratio is $[H_2]/[O_2 + 0.5H_2O_2]$. The EPRI Rev. 2 Guidelines Section 5.4.1 indicate that an ECP of <-0.23 (V, SHE) can be achieved when the hydrogen/oxidant molar ratio is > 2. NMP1 measures ECP directly which ensures that excessive hydrogen peroxide is not present. The molar ratio calculated by the model described above is used as a secondary parameter to assess the effectiveness of HWC, while ECP is used as the primary parameter. For NMP2, the molar ratio calculated by the model is used as a secondary measure of the effectiveness of HWC, while the measured hydrogen to oxygen molar ratio provide a primary measure of the effectiveness of HWC.

LR Contact Poehler **LRA Revision Required?** Yes

GCA AMP Issues (8/9-13) - Auditor: Saba

Issue ID Date Identified	Issue Description	Actions Taken

Assigned Department/	License Renewal	**PAA Revision Required?**	Yes
Individual	Poehler		
Issue Status	Closed		
NRC Closure Date	9/17/2004		
LRA Section	B2.1.2		

GCA AMP Issues (8/9-13) - Auditor: Saba

Issue ID Date Identified	Issue Description	Actions Taken
63 8/11/2004	Unit 2 Parameters Monitored/Inspected: Identify EPRI revision is used and provide justification. GALL recommends monitoring hydrogen concentration to determine ECP. NMP2 uses molar ratio of H2 to O2 to determine ECP. This is an exception. Justify this exception. NRC Request for Additional Information 9/8: Auditor agrees that this exception can be covered under the exception for the use of a version of EPRI Guideline other than the one recommended. However, justification for use of H2 to O2 ratio for ECP determination should be included in the justification for acceptance to the EPRI version.	GALL text and EPRI Guidelines do not require hydrogen to be monitored as a control parameter. The statement in section 3.2 of the Program Attribute Assessment is incorrect. EPRI 2000 Guidelines (TR-103515-R2) allow use of H2 / O2 molar ratio as an alternate ECP estimation technique. In response to another NRC auidit question (see issue 65 of the database), the Program Attribute assessment will be changed to indicate an exception for the use of an alternate revision to the EPRI Guidelines than that referenced by GALL. A separate exception will not be identified for use of H2 to 02 molar ratio for ECP estimation. The latest revision of the EPRI Water Chemistry Guidelines represent the latest industry understanding of water chemistry issues and as such, will be adopted as appropriate. Response to Request for Additional Information: Justification for the use of H2 / O2 molar ratio in lieu as an alternate method to estimate ECP is included in the document entitled "Comparison Of NMP1 And NMP2 Water Chemistry Control Program To NUREG-1801 (GALL) Program X1.M2 Requirements," specifically in the table entitled "NMP2 Reactor Water, Power Operations (Hydrogen Water Chemistry)."

LR Contact	Poehler	**LRA Revision Required?**	Yes
Assigned Department/	License Renewal	**PAA Revision Required?**	Yes
Individual	Poehler		
Issue Status	Closed		
NRC Closure Date	9/17/2004		

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Issue ID Date Identified	Issue Description	Actions Taken

LRA Section B2.1.2

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Issue ID Date Identified	Issue Description	Actions Taken
64 8/11/2004	Unit 2 Parameters Monitored/Inspected: For auxiliary systems, NMP2 measures silica, total organic carbon, and suspended solids. What aging effect is being mitigated by monitoring these parameters.	As identified in the Unit 2 basis document, the auxiliary system listed for silica, total organic carbon, and suspended solids is the Spent Fuel Pool system/Supression Pool. These three parameters are monitored for varying reasons that do not necessarily mitigate an aging affect. Specifically, silica is measured as an indicator to assess the level of degradation of the bora-silica reactivity control system (Boraflex). Total organic carbon (TOC) is monitored to indicate the presence of organic matter, which can further lead to contaminants that can cause various corrosion mechanisms, particularly if these contaminants found there way into the reactor coolant system. The EPRI 2000 Water Chemistry Guidelines recommend all auxiliary systems with a potential crosstie to the reactor be maintained as free of chemical impurities as possible in order to aid in maintaining reactor water parameters within recommended values and maximize run times of reactor water cleanup and condensate polishing systems. Limits for suspended solids are based on fuel vendor recommendations, according to the NMP2 USAR. No specific reason is given.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/	License Renewal	**PAA Revision Required?**	No
Individual	Poehler		
Issue Status	Closed		
NRC Closure Date	8/25/2004		
LRA Section	B2.1.2		

GCA AMP Issues (8/9-13) - Auditor: Saba

Issue ID Date Identified	Issue Description	Actions Taken
65 8/11/2004	Monitoring and Trending: Identify what revision of EPRI guideline is used. If different from the revision identified by GALL, explain why. NRC Request for Additional Information: NMP1- The referenced NRC commitment document is for chloride, sulfate, and conductivity monitoring and limits. Other parameters are included in that document. Based on the review of the NMP responses to other related questions, the other parameters are being monitored/trended using EPRI R2. Provide justification if their sampling frequencies are different from those in the 1994 version of EPRI Guidelines. NMP2- Provide justification if the sampling frequency of any monitored parameter is different from that specified in the 1994 version of EPRI Guidelines	NMP1- Sampling frequencies are given in procedure N1-CSP-D100, “Reactor Coolant Chemistry.” This procedure references EPRI TR-103515 Rev.1, BWR Water Chemistry Guidelines. Use of Revision 1 of the BWR Water Chemistry Guidelines is the result of an NRC commitment documented in Technical Specification Basis for Technical Specification 3.2.3 and 4.2.3. NMP2 – Sampling frequencies are given in procedure N2-CSP-GEN-D100, “Reactor Water/Auxiliary Water Chemistry Surveillance.” This procedure references the 2000 EPRI Guidelines although the number is given as TR-103515 Rev. 1. However, NMP2 follows the 2000 EPRI BWR Water Chemistry Guidelines (TR-103515-R2) because these are more recent than the edition referenced in GALL and provide guidelines for hydrogen water chemistry/noble metal chemical addition (HWC/NMCA) which Revision 1 does not. HWC/NMCA is used for mitigation of intergranular stress corrosion cracking of reactor internals and coolant piping. The Program Attribute Assessment is to be modified to identify use of a different EPRI Water Chemistry Guidelines revision as an exception to the “Monitoring and Trending” attribute. The latest revision of the EPRI Water Chemistry Guidelines represent the latest industry understanding of water chemistry issues and as such, will be adopted as appropriate. Response to Request for Additional Information: The attached document entitled “Comparison Of NMP1 And NMP2 Water Chemistry Control Program To NUREG-1801 (GALL) Program X1.M2 Requirements,” provides a summary of all differences between NMP’s Water Chemistry Control Program and the requirements of GALL, including sampling frequencies. Justification is provided if these sampling frequencies are less conservative

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Issue ID Date Identified	Issue Description	Actions Taken
		than those specified by the 1994 (R0) EPRI Guidelines.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/17/2004		
LRA Section	B2.1.2		

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Issue ID Date Identified	Issue Description	Actions Taken
66 8/11/2004	Acceptance Criteria: Identify what revision of EPRI guideline is used. If different from the revision identified by GALL, explain why.	NMP1 – Acceptance criteria are derived from the 2000 EPRI BWR Water Chemistry Guidelines (TR-103515-R2), with the exception of NMP1 Action Level 1 values for Conductivity, Chloride, and Sulfate, which are TS 3.2.3 bases requirements. These values are aligned to the 1996 EPRI BWR Water Chemistry Guidelines (TR-103515-R1, BWRVIP-29). With the exception noted above, NMP1 and NMP2 are following the 2000 EPRI BWR Water Chemistry Guidelines (TR-103515-R2) because these are more recent than the edition referenced in GALL and provide guidelines for hydrogen water chemistry/noble metal chemical addition (HWC/NMCA) which Revision 1 does not. HWC/NMCA is used for mitigation of intergranular stress corrosion cracking of reactor internals and coolant piping. The NMP1 and NMP2 Water Chemistry Control Attribute Assessment documents will be changed. Use of a different revision to the EPRI Guidelines than that referenced in GALL will be noted as an exception to the Acceptance Criteria attribute. Appropriate technical justification will be provided in the document for this exception. The latest revision of the EPRI Water Chemistry Guidelines represent the latest industry understanding of water chemistry issues and as such, will be adopted by NMP as appropriate. Note: The LRA and AMP basis document will be revised. The LRA identifies use of different revisions of EPRI Water Chemistry Guidelines than that referenced in GALL as an exception to the attributes “Scope” and “Parameters Monitored/Inspected,” but not acceptance criteria. This is also an exception for the “Acceptance Criteria” attribute.

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Issue ID Date Identified	Issue Description	Actions Taken

LR Contact	Poehler	**LRA Revision Required?**	Yes
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/8/2004		
LRA Section	B2.1.2		

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Issue ID Date Identified	Issue Description	Actions Taken
67 8/11/2004	Operating Experience: NMP1 listed many DERs that reported for WCC where parameters monitored exceeded the limits. Was WCC revised as a result of these DERs? If so, provide information. PAA states that this element is consistent with GALL, explain how.	The assessment basis document identifies many DER's that involve instances where the action level values were exceeded for brief periods of time. Many of these instances were short term events caused by maintenance activities or off-normal plant operation. Corrective measures implemented in accordance with existing station procedures were sufficient to correct the deviation. Some DER's only documented an increasing trend, not an actual exceedance of action levels, and therefore are for trending purposes only. Of the DER's listed in the NMP1 Water Chemistry Control Program Attribute Assessment Section 10.2, two resulted in changes to the program. DER-2001-4066 was initiated for high sulfate concentration in the reactor coolant system. The root cause was exhaustion of the precoat resin as a result of an increase in hydrogen peroxide, during plant shutdown after hydrogen injection was shut off. A contributor to this event was use of a new type of resin. The corrective action affecting the Water Chemistry Control Program was: "Unit 1 Chemistry to place steps in the chemistry shutdown guidelines for chemistry monitoring of the new filter media to evaluate performance during an extended outage. This will provide documentation when to change a filter during extended outages." The action taken was: Steps added to shutdown guidelines for monitoring of RWCU system (Note, the shutdown guidelines are contained in procedure N1-CTP-GEN-@621, "Chemistry Shutdown/Startup Action Guidelines.") DER-2002-4989 was initiated as a result of soluble zinc levels exceeding fuel warranty limits. Zinc injection had just been started for the first time. The deviation was the result of the zinc injection system not functioning as designed.

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Issue ID Date Identified	Issue Description	Actions Taken
		The corrective action resulting in changes to the Water Chemistry Control Program was: “The disposition is to work with GE to revise the operating procedure for the skid to require timely monitoring of zinc levels when flows are changed.” The action taken was: Changes have been made to N1-CTP-V727, “Depleted Zinc Oxide (DZO) Skid Operation,” to incorporate recommendations of this DER. Included in the change to the procedure is a requirement to sample feedwater an hour after changing zinc flow above 50 gpm. No further action required Therefore, the Water Chemistry Control Program has been modified when warranted by plant operating experience. With respect to GALL conformance, the GALL Operating Experience Attribute for Water Chemistry Control discusses many IGSCC-related generic communications. NMP has fully implemented all industry guidance from the BWRVIP which has been developed principally to address IGSCC in the reactor internals and coolant piping, including the latest BWR Water Chemistry Guidelines. The latest BWR Water Chemistry Guidelines are developed based on industry operating experience and as such, represent the best, most current understanding of water chemistry issues.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	No

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Issue ID Date Identified	Issue Description	Actions Taken

Issue Status	Closed
NRC Closure Date	9/8/2004
LRA Section	B2.1.2

GCA AMP Issues (8/9-13) - Auditor: Saba

Issue ID Date Identified	Issue Description	Actions Taken
75 8/11/2004	NMP AMP scope of program includes low alloy steel and cast iron material (piping) in addition to the GALL carbon steel. Explain how cast iron and low alloy steel components aging effect will be managed. For example, how selective leaching, if any, for cast iron will be detected and managed.	The Buried Pipe and tank inspection program will be consistent with NUREG 1801. The program is based on the design and installation of buried components to industry standards. The buried systems and materials within the scope of license renewal subject to aging management are identified in the scoping, screening and AMR reports. The aging effects requiring management (AERM) for malleable cast iron and low alloy steel are managed with this program also. Although the program specifies carbon steel, low alloy steel and malleable cast iron are in the same material group as carbon steel with similar AERM. This AMP supports materials for systems WSLR subject to AERM and the program will be consistent will GALL. Selective leaching is an AERM for gray cast iron and it will be discovered by hardness testing.

LR Contact	Hoppe	**LRA Revision Required?**	No
Assigned Department/	License Renewal	**PAA Revision Required?**	No
Individual	Hoppe		
Issue Status	Closed		
NRC Closure Date	8/25/2004		
LRA Section	B2.1.22		

GCA AMP Issues (8/9-13) - Auditor: Saba

Issue ID Date Identified	Issue Description	Actions Taken
100 8/13/2004	NMP monitoring and trending element states that the ISI program plan summarizes the additional requirements for sampling and/or repair, including requirements of IWB-2430 for Class 1 components. Further, it states that for those Class 1 and 2 components that are inspected per the requirements of the Alternative Risk-Informed Inservice Inspection Plan and Schedule, NMP1 and NMP2 inspection intervals comply with IWA 2432, Inspection Program B. The required examinations in each Examination Category shall be completed during each inservice inspection interval in accordance with IWB-2412-1 with exceptions as listed in the program plan. Clarify whether these requirements for additional inspection are consistent with the guidelines provided in NRC GL 88-01 for additional samples of welds to be inspected when one or more cracked welds are found in a weld category (it is described in GALL M &T attribute/element).	Requirements for sample expansion as identified in the ISI program is consistent with NRC GL 88-01 and provides the for the following. The AMP basis document will be revised to clarify that additional inspections are in accordance with GL 88-01 requirements. IGSCC Sample Expansion A. IGSCC Categories A, B or C If one or more cracked welds in IGSCC Categories A, B. or C, are found by a sample inspection during the 10 year interval, an additional sample of the welds in that category shall be inspected, approximately equal in number to the original sample. This additional sample should be similar in distribution (according to pipe size, system, and location) to the original sample, unless it is determined that there is a technical reason to select a different distribution. If any cracked welds are found in this sample, all of the welds in that IGSCC Category should be inspected. If significant crack growth, or additional cracks are found during the inspection of one or more IGSCC Category E welds, all other Category E welds should be examined. B. Significant crack growth for overlayed welds is defined as crack extension to deeper than 75% of the original wall thickness, or for cracks originally deeper than 75% of the pipe wall, evidence of crack growth into the effective weld overlay. Significant crack growth for SI mitigated Category E welds is defined as growth to a length or depth exceeding the criteria for SI mitigation. (10% of circumference or 30% in depth). Based on discussions held with the BWRVIP during the public meeting, the NRC staff requested that the criteria for sample expansion for Category E welds (resistant material) be modified such that, for the first expansion, an equal number to the original

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Issue ID Date Identified	Issue Description	Actions Taken
		inspection population be examined; for the second expansion, fifty percent (50%) of the total population is examined; and for the third expansion, the full population (100%) is examined. C. Category D weld expansions are limited to piping systems where cracking was identified. If cracking is detected, the sample size will be expanded to a sample equal in number to the size of the initial sample. If cracking is detected in the additional sample, all remaining Category welds will be examined. Sample expansion can be limited, with technical justification, to the system or type component (i.e., safe-end to nozzle) in which flaws were detected. However, the sample size should include a number equal to the original sample or otherwise include all the welds within the system or component type that expansion is being limited. Note: The AMP basis document will be revised. 9/16/04: Draft revision to AMP basis document provided to auditor. 9/17/04: Auditor provided comments to author.

LR Contact	Petras	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Fallin	**PAA Revision Required?**	Yes
Issue Status	Additional Information Required		
NRC Closure Date			
LRA Section	B2.1.15		

GCA AMP Issues (8/9-13) - Auditor: Saba

Issue ID Date Identified	Issue Description	Actions Taken

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Issue ID Date Identified	Issue Description	Actions Taken
101 8/13/2004	Scope of Program: A) Clarify whether NMP1 and NMP2 have completed all actions required in NRC GL 89-10. B) Clarify whether any IGSCC in RWCS welds inboard of the second isolation valve is detected. DER-NM-1997-1484 identifies one IGSCC in RWCS inboard welds. C) Clarify whether any IGSCC in RWCS welds outboard of the second isolation valve is detected. D) Based on these criteria, identify the recommended IGSCC for NMP1 and NMP2.	A) All action requirements associated with USNRC Generic Letter 89-10, "Safety-Related Motor-Operated Valve Testing and Surveillances for Both Unit 1 and 2 have been completed. B) There has been no degradation mechanism associated with IGSCC identified on any RWCS welds inboard of the second isolation valve. DER NM-1997-1484 identified axial crack on weld 33-FW-22, a non-safety related, non-ASME Code bi-mettalic weld located on RWCU Regenerative Heat Exchanger inlet nozzle outside the second isolation valve. The weld was repaired by weld-overlay in 1997. C) Only one RWCS wels outboard of the second isolation valve has been identified as having had an IGSCC indication. This is documented in DER NM-1997-1484. D) For NMP1 and NMP2, the examination requirements for RWCS are as stated in GL 88-01 Note: A revision to the AMP basis doucment is required.. 9/16/04: Draft revision to AMP basis document provided to auditor. 9/17/04: Auditor provided comments to author.

LR Contact	Petras	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Fallin	**PAA Revision Required?**	Yes
Issue Status	Additional Information Required		
NRC Closure Date			
LRA Section	B2.1.15		

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Issue ID Date Identified	Issue Description	Actions Taken
102 8/13/2004	LRA Section B2.1.15 under NUREG-1801 Consistency states that GALL program cites ASME Section XI requirements covered in the 1995 edition through 1996 addenda. The IWB/C/D ISI program is based on the 1989 edition with no addenda. This was acceptable by the NRC. However, as it is stated in the reactor water cleanup system PAA and based on the review of PAA references 39 and 40, the NRC has accepted ASME 1989 for the Third Ten Year Interval for NMP1 and the Second Ten Year Internal Inservice Inspection Program for NMP2. Therefore, this exception to the applicable edition of Section XI of the second code for the extended period of operation for the license renewal should be reviewed and approved by the NRC staff.	The use of later Code Editions and Addenda of ASME Section XI is determined in accordance with Title 10 , Part 50, Section 55a of the Code of Federal Regulations which states in part that inservice inspections/tests of components whose function is required for safety, conducted during successive 120-month inspection intervals shall comply with the requirements of the latest Edition and Addenda of the Code incorporated by reference 10 CFR 50.55a(b), 12 months prior to the start of the 120-month inspection interval, and subject to the limitations and modifications and NRC approval. Therefore, prior to the start of the extended period of operation the requirements of 10 CFR 50.55a as stated above will assure that the Edition of Section XI shall be reviewed and approved by the NRC prior to implementation. 10/13/04: NRC requested information to be included in LRA Supplemental letter during conference call.

LR Contact	Petras	**LRA Revision Required?**	Yes
Assigned Department/ Individual	License Renewal Petras	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/8/2004		
LRA Section	B2.1.15		

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Issue ID Date Identified	Issue Description	Actions Taken
103 8/13/2004	All GALL attributes except Acceptance Criteria: the PAA states that “this program attribute is consistent with the corresponding GALL attribute given the differences between the code edition.” The ASME code edition is not used in this GALL attribute. ASME XI code is used in the GALL acceptance criteria. Refer to Question 1, for discussion on the acceptance of the ASME Code edition.	The PAA will be revised such that the exception for the ASME code year will only apply to the Acceptance Criteria attribute. Note: A change to the AMP Basis document is required. 9/16/04: Draft revision of AMP basis document provided to auditor. 9/17/04: Auditor provided comments back to author.

LR Contact	Petras	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Fallin	**PAA Revision Required?**	Yes
Issue Status	Additional Information Required		
NRC Closure Date			
LRA Section	B2.1.15		

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Issue ID Date Identified	Issue Description	Actions Taken
104 8/13/2004	Parameters Inspected/monitored: Identify the applicable schedule (as defined in this GALL attribute) for NMP1 and NMP2. Explain why the applicable schedule is used. NRC Additional Request for Information (9/8): Explain why Schedule A is utilized for Unit 1 and 2. Provide justification	The applicable schedule utilized for both Unit 1 and 2 is Schedule A, no inspections required for RWCU piping welds outboard of the second isolation valves. As stated in the GALL, Section XI.M25: 'The screening criteria include: a. Satisfactory completion of all actions requested in NRC GL 89-10, b. No detection of IGSCC in RWCU welds inboard of the second isolation valves (ongoing inspection in accordance with the guidance in NRC GL 88-01), and c. No detection of IGSCC in RWCU welds outboard of the second containment isolation valves after inspecting a minimum of 10% of the susceptible piping. No IGSCC inspection is recommended for plants that meet all three criteria or that meet criterion (a) and piping is made of material that is resistant to IGSCC. Schedule A: No inspection is required for plants that meet all three criteria set forth above, or if they meet only criterion (a). Piping is made of material that is resistant to IGSCC, …' Schedule A is justifiable for Unit 1 since all the screening requirements are satisfied, as follows: 1. Criterion (a) is satisfied since all actions required for Generic Letter 89-10 have been completed as documented in NRC Inspection Report 50-220/97-09 (dated 11/4/97), 2. Criterion (b) is satisfied because no IGSCC has been identified in RWCU welds inboard of the second isolation valve, and 3. Criterion (c) is satisfied since inspections of a minimum of 10% of the susceptible piping welds outside the second containment isolation valve have yielded no indications of IGSCC

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Issue ID Date Identified	Issue Description	Actions Taken
		For Unit 2, Schedule A is justified because: 1. Criterion (a) is satisfied since all actions required by GL 89-10 have been completed as documented in NRC Inspection Report 50-410/97-09 (dated 11/4/97), and 2. Due to the design of Unit 2, there is no IGSCC susceptible piping outboard of the second containment isolation valves for the RWCU system.

LR Contact	Petras	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Brown	**PAA Revision Required?**	Yes
Issue Status	Response Complete		
NRC Closure Date			
LRA Section	B2.1.15		

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Issue ID Date Identified	Issue Description	Actions Taken
107 8/12/2004	LRA Appendix A, Section A2.1.20 and Appendix B, B2.1.18 need to identify the applicable ASTM standards.	LRA Sections A1.1.20, A2.1.20 and B2.1.8 will be updated appropriately. The ASTM Standards used are D 975, D 1796, D 2276 and D 4057. 10/13/04: NRC provided verbal acceptance during conference call.

LR Contact	Brown	**LRA Revision Required?**	Yes
Assigned Department/ Individual	License Renewal Brown	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	10/13/2004		
LRA Section	B2.1.18		

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Issue ID Date Identified	Issue Description	Actions Taken
108 8/12/2004	LRA Appendix B and PAA documents for NMP1 and NMP2 fuel oil chemistry, state that the existing program will be enhanced to include thickness measurement of tank bottom surfaces. A) Is there any underground tank whose aging effect is managed by this program? B) If any, identify it and explain how its bottom thickness will be measured.	All of the fuel oil tanks at NMP are buried, but implementation of this enhancement is not complete. Wall thickness will be determined using UT measurements taken from inside the tank while it is empty for routine cleaning and inspection.

LR Contact	Brown	**LRA Revision Required?**	No
Assigned Department/	License Renewal	**PAA Revision Required?**	No
Individual	Brown		
Issue Status	Closed		
NRC Closure Date	8/25/2004		
LRA Section	B2.1.18		

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Issue ID Date Identified	Issue Description	Actions Taken
109 8/12/2004	LRA Section B2.1.18 states that the program will be enhanced to add requirements to periodically inspect fuel oil storage tanks for evidence of significant degradation. Provide information or drawings that show that these tanks can be completely drained and ready for internal inspeciton (e.g., drain lines are located at the bottom of the tanks).	The FO storage tanks are inspected internally under site procedures N1-MPM-EGF-10Y001 and N2-MPM-EGF-10Y001. As noted therein, fuel that is below the suction of the standpipe is removed using portable pumps, obviating the need for any installed tank drainage systems.

LR Contact	Brown	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Brown	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/8/2004		
LRA Section	B2.1.18		

110 8/12/2004	Provide a table of the parameters monitored that includes monitoring frequency, applicable ASTM standards and limits of each parameter.	Table provided to NRC auditor via e-mail

LR Contact	Brown	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Brown	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/10/2004		
LRA Section	B2.1.18		

GCA AMP Issues (8/9-13) - Auditor: Saba

Issue ID Date Identified	Issue Description	Actions Taken
111 8/11/2004	NMP PAA for Water Chemistry program references GAP-CHE-01, Revision 8. NMP binder for Water Chemistry AMP contains both Rev. 8 and 9 of this procedure. Clarify which revision is applicable. NRC Additional Request for Information (9/8/04): The PAA should be revised to include this change. The auditor will review the revision 9 during the next site visit. NRC Auditor Feedback (9/27/04): Applicant needs to specify changes between Rev 8 and 9 and indicate whether any changes to the AMP basis document are needed.	Revision 9 is currently applicable. Revision 8 was referenced in the NMP1 and NMP2 Program Attribute Assessment documents because it was the latest approved revision at the time these documents was approved. Response to Request for Additional Information: Revisions 8 and 9 of GAP-CHE-01 provided to the auditor for review on 9/16/04. Response to Request for Additional Information: The differences between Revisions 8 and 9 of GAP-CHE-01 were mainly editorial (i.e. change Roman numeral to number, spell out complete title of reference document, correct grammatical errors) and administrative (i.e. provide additional direction on reporting of events, addition of reference document) and do not impact the evaluation performed for consistency with the GALL program. These changes would not warrant a revision to the NMP Program Attribute Assessment (PAA) document. However, there were a few technical changes (i.e. addition of Feedwater Total Zinc limits and changes to Feedwater dissolved oxygen action level values) that will require a change to the PAA document. 10/13/04: NRC provided verbal acceptance during conference call. Also, they stated that Rev 9 should be used in the PAA.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	Yes
Issue Status	Closed		

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Issue ID Date Identified	Issue Description	Actions Taken
NRC Closure Date	10/13/2004	
LRA Section	B2.1.2	
149 8/18/2004	Clarify whether any austenitic SS piping (component) in Unit 1/Unit 2 RWCS has been replaced IGSCC resistant material. If any, provide additional information.	After discussion with the System Engineer and a search of plant records; no modifications to replace any RWCS piping or components with a more IGSCC resistant material have been done at either unit.

LR Contact	Petras	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Petras	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	8/25/2004		
LRA Section	B2.1.15		

GCA AMP Issues (8/9-13) - Auditor: Saba

Issue ID Date Identified	Issue Description	Actions Taken
150 8/13/2004	Monitoring and Trending: Provide examples of the last ISI in RWCS for Unit 1 and Unit 2.	A summary of examples of the last ISI exam results for RWCS is provided below. The specific UT exam reports are available on-site for review. Unit Weld No. Date Results 1 33-FW-22 3/26/03 No recordable indications. 1 33-FW-35 3/26/03 No recordable indications. 1 33-FW-36 3/26/03 No recordable indications. 1 33-FW-37 3/26/03 No recordable indications. Unit Weld No. Date Results 2 2WCS-09-05-SW002 3/18/04 No recordable indications 2 2WCS-09-05-SW026 3/18/04 No recordable indications 2 2WCS-09-05-FW015 3/26/04 No recordable indications 2 2WCS-09-05-FW006 3/18/04 No recordable indications 2

LR Contact	Petras	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Petras	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/15/2004		
LRA Section	B2.1.15		

GCA AMP Issues (8/9-13) - Auditor: Saba

Issue ID Date Identified	Issue Description	Actions Taken
153 9/8/2004	LRA Section B2.1.2 Operating Experience: NMP2 listed many DERS that reported for WCC where parameters monitored exceeded the limits. Was WCC revised as a result of these DERSs? If so, explain. (This question is similar to #22)	See response to Issue 22. It contains information for both Unit 1 and Unit 2. 10/13/04: NRC provided verbal acceptance during conference call.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	10/13/2004		
LRA Section	B2.1.2		

GCA AMP Issues (8/9-13) - Auditor: Saba

Issue ID Date Identified	Issue Description	Actions Taken
154 9/8/2004	LRA B2.1.18 UFSAR Supplement: Unit 2 UFSAR supplement does not contain the information in the third bullet of the Unit 1 (Provide guidelines for the appropriate use of biocides, corrosion inhibitors, . . .). Explain why.	The Units 1 and 2 FOC programs differ in that biocides and corrosion inhibitors are not used at NMP1, so the Unit 1 FOC Program requires enhancements in this regard. But since corrosion inhibitors and biocides are already in use at NMP2, such an enhancement is not applicable.

LR Contact	Brown	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Brown	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/15/2004		
LRA Section	B2.1.18		

GCA AMP Issues (8/9-13) - Auditor: Wen

Issue ID Date Identified	Issue Description	Actions Taken
3 8/10/2004	What is the status of NMP-1 Boraflex replacement program? How many have been replaced? Any examination made to the replaced Boraflex racks? If the answer is yes, what is the examination outcome? NRC Request for Additional Information 9/8: In its license renewal application, NMP1 plans to rely mainly on the short-length test coupons to monitor Boraflex panel conditions. However, in response to Question #3, the applicant stated that "no physical inspections of any kind are scheduled for the racks once they are removed." Also, NMP1 has not performed any boron areal density measurement on the Boraflex panels. To monitor the conditions of the remaining two Boraflex panles, what information does NMP have that could justify that the test coupons and the Boraflex panels would have the same data reference (in light of 34 years NMP1 operation) to be used for the next 20 year license renewal prediction?	Replacement of 6 of the 8 Unit 1 Boraflex racks is underway and is planned for completion by the end of 2004. No physical inspections of any kind are scheduled for the racks once they are removed. Response to Request for Additional Information: The Boraflex panels which will remain in the fuel pool at NMP1 are used only in low flux areas and will not be in the vicinity of freshly discharged fuel. The short length coupons, however, will continue to be exposed to the worse case conditions so that their observed degradation will be conservative relative to that of the panels. The low historical silica levels in the pool, coupon surveillance results, and relatively low flux levels near the remaining panels are the key factors used by NMP1 to justify the continued use of the program to manage aging during the period of extended operation. They confirm that current and future environment to which the panels will be exposed is, and will be, relatively benign and that any degradation will be detected early, prompting additional testing in the pool and appropriate corrective action.

LR Contact	Brown	**LRA Revision Required?**	No
Assigned Department/	License Renewal	**PAA Revision Required?**	No
Individual	Brown		
Issue Status	Closed		
NRC Closure Date	9/16/2004		
LRA Section	B2.1.12		

GCA AMP Issues (8/9-13) - Auditor: Wen

Issue ID Date Identified	Issue Description	Actions Taken

GCA AMP Issues (8/9-13) - Auditor: Wen

Issue ID Date Identified	Issue Description	Actions Taken
4 8/10/2004	Since late 1980, EPRI has issued many topical reports to assist utilities in managing Boraflex degradation in spent fuel racks. Which EPRI reports were adopted by NMP in developing its Boraflex Monitoring AMP If NMP Boraflex Monitoring Program deviates from EPRI recommendations, the deviation should be noted and justified. (The GALL pretty much follows the EPRI recommendations). NRC Request for Additional Information 9/8: (Note: this is consolidated question for items 4, 5, 6, 7 and 9) Consider the following facts/findings: (1) coupon surveillance is not reliable, because the method of coupon encapsulation, material, configuration, and flow condition may not accurately simulate the conditions in the racks; (2) the size of the gap but also on flow conditions around the Boraflex racks; and (3) were degraded noticeably. NMP2, however, has not performed any boron areal density measurement to quantify the degree to which Boraflex racks has degraded. Explain why short-length coupon results from NMP2 can be used reliably to predict that the 5 % margin to criticality requirements will be maintained for the Boraflex racks over the proposed extended operating licenses. Specifically, what is the correlation of the behavior of Boraflex in the test coupons to that in the storage racks under the most limiting conditions (flow and gamma dose considerations).	The BMP program as defined in NMP response to GL 96-04 is the basis for the AMP basis document. While elements of EPRI TR-108761 are evident in the BMP program, no commitment to its recommendations has been either expressed or implied. Inasmuch as no reference was made to the document in the GALL, no reference to it was deemed necessary in the GALL comparison. The industry Boraflex operating experience indicates that the test However, the same EPRI documents listed in the GALL reference list in Section XI.M22 were used as developmental references in the The loss of boron carbide from Boraflex racks depends not only on BMP program documents, as follows: The silica trending data clearly shows that NMP2 Boraflex racks • NP-6159, “An Assessment of Boraflex Performance in Spent Nuclear Fuel Storage Racks”, December 1988. • TR-103300, “Guildlines for Boraflex Use in Spent Fuel Storage Racks”, December 1993. • TR-101986, “Boraflex Test Results and Evaluation”, December 1992. Deviations from the GALL relative to in-situ rack testing have been addressed in separate open issue resolutions. Response to Request for Additional Information: For the current licensing period, the use of short and long length coupons will continue in compliance with the CLB documented in the NMP2 response to GL 96-04. NMP acknowledges that definitive action will be required to manage the aging of the Boraflex panels prior to the period of extended operation. There are two possible courses of action that will be implemented for NMP2: 1. Replace the existing Boraflex racks prior to the period of extended operation and eliminate the need for the Boraflex Monitoring Program, or

GCA AMP Issues (8/9-13) - Auditor: Wen

Issue ID Date Identified	Issue Description	Actions Taken
		2. Institute periodic in-situ testing during the period of extended operation in the spent fuel pool in order to objectively establish correlations between the condition of the coupons, the panels, and silica levels. The LRA and PAA will be revised accordingly.

LR Contact	Brown	**LRA Revision Required?**	Yes
Assigned Department/ Individual	License Renewal Brown	**PAA Revision Required?**	Yes
Issue Status	Waiting for NRC Response		
NRC Closure Date			
LRA Section	B2.1.12		

GCA AMP Issues (8/9-13) - Auditor: Wen

Issue ID Date Identified	Issue Description	Actions Taken
5 8/10/2004	The Boraflex operating experience indicated that the test coupon surveillance is not reliable. NMP depends on test coupon surveillance and the measurement and trending of silica concentrations in the SFP for the input data to the RACKLIFE predictive code. To demonstrate that the input data to the RACKLIFE will yield valid and reliable results, how the correlation between the degradation in the coupons and degradation in the racks is established? NRC Request for Additional Information 9/8: (see issue 4)	NMP concurs that industry operating experience with short length coupons has yielded mixed results, and their ability to accurately predict long term degradation is limited. For this reason, NMP2 has chosen more reliable full-length coupons, the construction of which closely mimics that of the Boraflex panels, to monitor their physical degradation. Moreover, the location of these coupons is such that most limiting fuel assemblies being loaded into the Boraflex racks are positioned in the eight closest storage cells adjacent to the surveillance assembly. Notably, the full-length coupons are subjected to careful inspections at five-year intervals and changes in their physical condition, the measured silica levels, and the condition of the short length coupons have been consistent with the degradation predicted by RACKLIFE. Coupon width measurements performed on the short length coupons prior to each refueling outage are used to confirm the loss rate predicted by the RACKLIFE computer model. Boron loss in the Boraflex panels is assumed to be proportional to that measured in the short length coupons exposed to the highest flux conditions in the SFP, and should any indication of unexpected degradation occur, then direct areal density testing of the racks will be performed, thereby confirming the correlation is still valid. For these reasons, NMP is confident that the observed degradation of the full-length coupons and test results of the short length coupons are conservative representations of the aging of the Boraflex panels in the Unit 2 spent fuel racks. RACKLIFE model results are consistent with coupon results and both monitoring methods are used to decide upon appropriate conservative action for maintaining the spent fuel pool subcritical. Response to Request for Additional Information: (See Issue 4)

GCA AMP Issues (8/9-13) - Auditor: Wen

Issue ID Date Identified	Issue Description	Actions Taken

LR Contact	Brown	**LRA Revision Required?**	Yes
Assigned Department/ Individual	License Renewal Brown	**PAA Revision Required?**	Yes
Issue Status	Waiting for NRC Response		
NRC Closure Date			
LRA Section	B2.1.12		

GCA AMP Issues (8/9-13) - Auditor: Wen

Issue ID Date Identified	Issue Description	Actions Taken
6 8/10/2004	What is the performance of the prefabricated test coupons at NMPs? (Both short-length and full-length). Any degradation observed? NRC Request for Additional Information 9/8: (See Issue 4)	Plant specific operating experience has shown that degradation is occurring in both the full and short length coupons. The extent to which this is occurring is not only consistent between the coupon types, but also with the predictions produced by the NMP RACKLIFE model. The most recent test and inspection report (NET-231-01) for Unit 2 reflects 10 years of service for the short and full-length coupon. The physical appearance of both the short and full-length coupons was considered good and consistent with documented changes noted by EPRI in NP-6159, TR-101986, TR-10330. Measurements of short length coupon #4 did not deviate from any of the established acceptance criteria used to bound that assumed in the criticality analysis for the Unit 2 spent fuel racks. Response to Request for Additional Information: (See Issue 4)

LR Contact	Brown	**LRA Revision Required?**	Yes
Assigned Department/	License Renewal	**PAA Revision Required?**	Yes
Individual	Brown		
Issue Status	Waiting for NRC Response		
NRC Closure Date			
LRA Section	B2.1.12		

GCA AMP Issues (8/9-13) - Auditor: Wen

Issue ID Date Identified	Issue Description	Actions Taken
7 8/10/2004	Why is the neutron attenuation testing (also called blackness testing) considered unnecessary? NRC Request for Additional Information 9/8/04: (See Issue 4)	In the context of the GALL, routine in-situ blackness testing is an important measure of gap formation in the Boraflex panels. In lieu of such testing, NMP2 has taken the precautionary measure of relying upon full-length coupons, the construction of which closely mimics that of the Boraflex panels in the Spent Fuel Racks. Every five years the full-length coupons are visually inspected and gap formation is monitored and measured. The physical measurement of the gapping in these coupons is more accurate than the use of blackness testing, eliminating the need for in-situ blackness testing. The current criticality basis of the NMP2 Boraflex Spent Fuel racks assumes a conservative amount of gapping in the Boraflex material. Full-length coupon gap measurements are compared to the amount of gapping assumed in the criticality analysis to validate the ability of the NMP2 racks to perform their design function. Response to Request for Additional Information: (See Issue 4)

LR Contact	Brown	**LRA Revision Required?**	Yes
Assigned Department/ Individual	License Renewal Brown	**PAA Revision Required?**	Yes
Issue Status	Waiting for NRC Response		
NRC Closure Date			
LRA Section	B2.1.12		

GCA AMP Issues (8/9-13) - Auditor: Wen

Issue ID Date Identified	Issue Description	Actions Taken

GCA AMP Issues (8/9-13) - Auditor: Wen

Issue ID Date Identified	Issue Description	Actions Taken
8 8/10/2004	Provide details regarding how the surveillance results assure that the 5% subcriticality margin will be maintained given the fact that NMP has not performed any boron areal density measurement. How the boron loss from the rack is assumed in the analysis? NRC Request for Additional Information 9/8: To compare the measured test coupon dimension changes against the bounding values (width reduction not exceeding 20.6% and gapping less than 4 % of the overall panel length), what steps have been added to consider the differences in configuration, geometry, and flow condition between the test coupons and Boraflex panels?	The predictive model used in the SFP is based upon maintaining a 5% subcriticality margin with a maximum 20% reduction in the boron in the panels. The RACKLIFE model conservatively predicts the reduction of Boraflex along with the short and long length coupon program. The predicted boron reduction rate has a consistent 100% margin relative the subcriticality analysis for the SFP. Boron areal density testing is performed on the short length coupons during each refueling outage to confirm the loss rate predicted by the RACKLIFE computer model. Boron loss in the Boraflex panels is assumed to be proportional to that measured in the short and long length coupons exposed to the highest flux conditions in the SFP, and should any indication of unexpected degradation occur, then direct areal density testing of the racks will be performed. Per NETCO calc (NET-167-01), 5 % subcriticality could be maintained if the width reduction of the panels did not exceed 20.6 % and gapping is less than 4% of the overall panel length. As part of the preparations for the calc, the BISCO batch records were reviewed and the average B4C areal density was determined to be 0.0332 ? 0.005 g B-10/cm2. The criticality analysis assumes an average width and thickness along with a 95/95 uncertainty adder on reactivity to account for the statistical variation on the as-built measurements of areal density. Response to Request for Additional Information: Unit 1: Low silica levels in the SFP, low flux levels around the Boraflex racks, and the placement of the coupons near freshly discharged fuel provide adequate justification to conclude that the coupons conservatively account for any differences in configuration, geometry, and flow conditions. Unit 2: For the current licensing period,

GCA AMP Issues (8/9-13) - Auditor: Wen

Issue ID Date Identified	Issue Description	Actions Taken
		additional analytical provisions beyond those defined in the CLB documented in the NMP2 response to GL 96-04 are neither planned nor required. To account for known degradation in the spent fuel pool, NMP2 plans to either replace the racks prior to the period of extended operation and eliminate the need for the Boraflex Monitoring Program, or institute in-situ testing of the racks as part of the BMP during the period of extended operation. The LRA and PAA will be revised accordingly.

LR Contact	Brown	**LRA Revision Required?**	Yes
Assigned Department/	License Renewal	**PAA Revision Required?**	Yes
Individual	Brown		
Issue Status	Waiting for NRC Response		
NRC Closure Date			
LRA Section	B2.1.12		

GCA AMP Issues (8/9-13) - Auditor: Wen

Issue ID Date Identified	Issue Description	Actions Taken
9 8/10/2004	The silica trend clearly showed that Boraflex racks were degrading, why NMP BM program is not in 2nd level? (i.e. performing B-10 measurement) NRC Request for Additional Information 9/8: (See Issue 4)	While the historical trend in silica concentration in the SFP confirms that acknowledged degradation at a predicted rate is occurring, the current rate of increase in levels is not sufficient to warrant in-situ B-10 measurements. The action criterion is an unpredicted excursion in the rate of increase in silica levels. To date, this has not occurred to an extent that would dictate additional analysis or testing the SFP. Response to Request for Additional Information: (See Issue 4)

LR Contact	Brown	**LRA Revision Required?**	Yes
Assigned Department/ Individual	License Renewal Brown	**PAA Revision Required?**	Yes
Issue Status	Waiting for NRC Response		
NRC Closure Date			
LRA Section	B2.1.12		

GCA AMP Issues (8/9-13) - Auditor: Wen

Issue ID Date Identified	Issue Description	Actions Taken
10 8/10/2004	DER-NM-2002-1711 "In Situ Blackness Testing of Boraflex in Spent Fuel Storage Racks" (Ref 21 for NMP1 and Ref 22 for NMP2 base document) was used for the conclusion that the indicators of Boraflex degradation used in NMP (i.e., RACKLIFE modeling and coupon surveillance) are sufficient to gauge the ability of the Boraflex racks in the spent fuel pool to meet their design basis. The argument used in the DER is weak [PWR corrective actions....PWR degradation], because it did not address the main message that the blackness testing is capable of finding significant boraflex problems.	It is agreed that the argument in the DER is not persuasive in the context of the GALL attribute assessment and will be deleted from the BMP basis document (AMP attribute assessment). Note: A change to the AMP basis document is required.

LR Contact	Brown	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Brown	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/8/2004		
LRA Section	B2.1.12		

GCA AMP Issues (8/9-13) - Auditor: Wen

Issue ID Date Identified	Issue Description	Actions Taken
52 8/13/2004	Provide examples of the CHECKWORKS model predictions for the feedwater heater drains compare to actual field measurements. Have the predictions produced by the software been conservative or non-conservative?	Recent changes in plant chemistry have substantially increased the wear rate predictions provided by the CHECWORKS model. In general the inspections confirmed that the model predictions are fairly accurate from a line perspective and have been conservative. The inspection data is included in revisions to the model per modeling guidelines, which improves the accuracy of the line runs. In those cases where observed wear rates exceeded predictions, revisions to the model were made which improved the accuracy of the model. Further improvements are expected as the iterative process continues during the time preceding the period of extended operation. As this relates to the feedwater heater drains, when the CHECWORKS model was updated for the change in chemistry from NWC to HWC, there was an increase in their predicted wear rate. In response, additional components were selected within the feedwater heater drain system for inspection. While minor changes in wall thickness were detected, the measurements confirmed that, overall, the model was conservative. Future measurements of wear will be used to update, refine, and calibrate the accuracy the model with each inspection cycle.

LR Contact	Brown	**LRA Revision Required?**	No
Assigned Department/	License Renewal	**PAA Revision Required?**	No
Individual	Brown		
Issue Status	Closed		
NRC Closure Date	9/8/2004		
LRA Section	B2.1.9		

GCA AMP Issues (8/9-13) - Auditor: Wen

Issue ID Date Identified	Issue Description	Actions Taken

GCA AMP Issues (8/9-13) - Auditor: Wen

Issue ID Date Identified	Issue Description	Actions Taken
70 8/11/2004	Both NMP1 and NMP2 are under Appendix J Option B testing requirements, what are the current test intervals for Type A, Type B, and Type C test? How were these intervals slected?	Type A test: For both NMP1 and 2 the Type A leakage test s presently on a 10 year test interval. The next NMP1 Type A test will be due on 2009/RFO20, and 2010/RFO12 for unit 2. Type B tests: In accordance with App. J Option B, Type B tests based on performance can be extended out to 120 months (10 year) frequency. After two consecutive successful as-found tests frequency can be extended to 60 months and can go to 120 month frequency after completion of three successful as-found tests. Air-lock leak rate testing is not allowed to be placed on an extended frequency, tested at least every 30 months. Type C tests: Tests performed on a 30 month frequency until successful performance is established. Frequency may be extended to 60 months after two consecutive successful as-found tests. Some Type C components such as MSIVs, FW IVs, and Vent and Purge valves per Reg. Guide 1.163 are limited to a 30 month test frequency. The frequencies described above are reflected in App. J Program documents NMP1-APPJ-001 and NMP2-APPJ-001. Note: A change to the AMP basis document is required (attribute 5)

LR Contact	E. Taormina	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal E. Taormina	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/8/2004		

GCA AMP Issues (8/9-13) - Auditor: Wen

Issue ID Date Identified	Issue Description	Actions Taken
LRA Section	B2.1.26	
71 8/11/2004	A visual examination of accessible interior and exterior surface of the containment for evidence of structural degradation that might affect either the primary containment structural integrity or leak tightness is required prior to each Type A test. In selecting Appendix J Option B, there are additional requirements associated with this selection (3 visual examinations in each 10-year period). How are these visual examinations scheduled and controlled in NMP operating procedures?	The containment visual inspections are captured in each Appendix J Unit Program Plan, Section II step 1.6 of NMP2-APPJ-001 and Section I step 9.2 and Section II step 1.6 of NMP1-APPJ-01. The site PMST program is used for scheduling inspection activities.

LR Contact	E. Taormina	**LRA Revision Required?**	No
Assigned Department/	License Renewal	**PAA Revision Required?**	No
Individual	E. Taormina		
Issue Status	Closed		
NRC Closure Date	9/8/2004		
LRA Section	B2.1.26		

GCA AMP Issues (8/9-13) - Auditor: Wen

Issue ID Date Identified	Issue Description	Actions Taken
72 8/11/2004	Some containment isolation valves are governed under both Appendix J Type C test and containment isolation valve inservice testing programs. If there is conflict in test interval between these two programs, which program prevails?	The more restrictive test interval would prevail. If the Appendix J test interval was on an extended frequency and not due, however IST testing was required; testing to meet the IST test requirements would be performed.

LR Contact	E. Taormina	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal E. Taormina	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/8/2004		
LRA Section	B2.1.26		

GCA AMP Issues (8/9-13) - Auditor: Wen

Issue ID Date Identified	Issue Description	Actions Taken
73 8/11/2004	Have NMP ever conducted a self-assessment of the containment leak rate program to confirm the compliance with regulatory criteria and evaluate the need for improvements to the program?	Yes, provided below is a listing of recent assessments, both internal and external that have performed, which have assessed various aspects of the Appendix J program: 1993: Vendor used to perform a review of the Unit 2 App. J program implementation 2004: May of 2004 INPO Assist visit performed to compare selected site programs against best industry practices. The App. J program was included in the programs reviewed. The program scope and implementation was found to be sound, with high experience level of the program owners and an awareness of improvement opportunities. Health Reports: The Program Health Report is updated regularly. The report evaluates program performance and tracks status of program related actions and issues.

LR Contact	E. Taormina	**LRA Revision Required?**	No
Assigned Department/	License Renewal	**PAA Revision Required?**	No
Individual	E. Taormina		
Issue Status	Closed		
NRC Closure Date	9/8/2004		
LRA Section	B2.1.26		

GCA AMP Issues (8/9-13) - Auditor: Wen

Issue ID Date Identified	Issue Description	Actions Taken
74 8/13/2004	Describe how the CHECKWORKS software was validated for use at NMP.	CHECWORKS software was installed and is maintained using site procedural controls for non-safety related software. This Code is used at NMP as an engineering aid / tool in a manner consistent with the industry. While credit was taken for the basic software verification performed by EPRI Solutions, the specific installation test case provided with the software was run satisfactorily after it was installed. CHECWORKS model runs are reviewed and documented in engineering technical reports with originator and reviewer. The key aspects of the review process include an independent verification that all site specific inputs to the code are proper, and that the results are reasonable. Further assurance is provided by the cyclic updates that provide for the comparison of inspection data with predicted wear rates.

LR Contact	Brown	**LRA Revision Required?**	No
Assigned Department/	License Renewal	**PAA Revision Required?**	No
Individual	Brown		
Issue Status	Closed		
NRC Closure Date	9/8/2004		
LRA Section	B2.1.9		

GCA AMP Issues (8/9-13) - Auditor: Wen

Issue ID Date Identified	Issue Description	Actions Taken
106 9/8/2004	Please provide two examples of components that have been repaired or replaced at NMP as a result of E/C program findings.	NMP1 – 1st and 2nd Stage Reheater Drain Lines (System 09 and 25), inlet nozzles to the High Pressure Feedwater Heaters (5th Stage). FAC Component Numbers 09P011, 09P025, 09N026, 09N027, 09N028, 09N029; 25N023, 25N024, 25N025, 25N026, 25N027, and 25N028; [Line # 09-4-A and 25-4-A]. Degraded pipe wall (8" NPS) noted when examined during RFO-14, refer to DER's 1-1997-0863, 0976, 1067, 1068. Replaced all 12 pup pieces of 8" piping under Design Changes N1-97-029 and N1-55-673 during RFO-15 with FAC resistance chrome-moly material (A335 Grade P5). NMP2 – 3rd Point Feedwater Heat Exchangers Vessel Shell. FAC Component Numbers AHX031, AHX032, and AHX033, [2CNM-E3A / B / C]. Degraded pressure vessel shell wall noted when examined during RFO-7, refer to DER's 2-2000-940 and 2-2000-1114. Repaired during RFO-7 via flush patch – insert replacement plates approximately 3' x 4' at 6 locations. Each side of the 3 vessel shells beneath the Extraction Steam Inlet nozzles required a replacement plate.

LR Contact	Brown	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Brown	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/16/2004		
LRA Section	B2.1.9		

GCA AMP Issues (8/9-13) - Auditor: Wen

Issue ID Date Identified	Issue Description	Actions Taken
113 8/12/2004	Does guidelines provided in EPRI NP-7079 (EPRI TR-108147), and ASME OM-S/G-1998, Part 17 for ensuring timely detection of degradation of the compressed air system function being incorporated in the NMP programs? NRC Request for Additional Information 9/8: Since NMP's Compressed Air Program is not based on all the references included in GALL, specifically, EPRI-108147 and ASME OM-S/G-1998, Part 17, explain which portions of these guidelines were not included in the development of the applicant's program and address why without including them, the applicant's program still	The current program includes good practice elements of the general maintenance and inspection activities for the compressor, receiver, and drier discussed in TR-108147 (revision to EPRI NP-7079) and ASME OM-S/G-1998, Part 17. However, there are currently no plans to explicitly commit to incorporating EPRI TR-108147 or ASME OM-S/G-1998 into the NMP Compressed Air Monitoring Program. The Compressed Air Monitoring Program Attribute Assessment and the LRA will be revised to indicate an exception to the GALL with regards to compliance with the EPRI and ASME guidelines. Response to Request for Additional Information: NMP1 will revise the LRA to reflect that the Compressed Air Monitoring Program is consistent with the GALL, with exceptions. Regarding EPRI TR-108147, NMP1 will take exception to any maintenance recommendations that are not also endorsed by the manufacturer. NMP1 will also take exception to the preservice and inservice testing guidelines in ASME OM-S/G-1998, Part 17, in their entirety. Notably, under the current program, NMP1 has not experienced a failure of a pneumatic component within the scope of license renewal due to corrosion, corrosion product buildup, or dirt buildup. Therefore, NMP considers the current program acceptable for ensuring no loss of intended function. 10/14/04: Revision to Unit 1 Compressed Air Monitoring PAA approved which incorporates this change.

LR Contact Nold **LRA Revision Required?** Yes

GCA AMP Issues (8/9-13) - Auditor: Wen

Issue ID Date Identified	Issue Description		Actions Taken	
Assigned Department/	can be considered to be consistent with the GALL.	License Renewal	**PAA Revision Required?**	Complete
Individual	Nold			
Issue Status	Closed			
NRC Closure Date	9/17/2004			
LRA Section	B2.1.14			

GCA AMP Issues (8/9-13) - Auditor: Wen

Issue ID Date Identified	Issue Description	Actions Taken
114 8/12/2004	The applicant indicates that the compressed air monitoring program is based on GL 88-14 and recommendations presented in INPO SOER 88-01. How is the INPO recommendations incorporated in the NMP programs?	The following INPO 88-01 recommendations have been incorporated into the NMP1 Compressed Air Monitoring Program: • Rec. #4 - Monitor air quality at several points throughout the instrument air system periodically. Take actions to improve the air quality and perform inspections to ensure the continued operability of equipment exposed to these conditions (Maintenance). • Rec. #5 - Ensure the station's preventive maintenance program for the instrument air system provides for replacing filters and desiccant material, and performing air dryer maintenance on a regularly scheduled basis (Maintenance). These INPO recommendations have been incorporated into the following procedures (reference number in parentheses correlates to reference number in the AMP assessment document): • N1-CTP-Q921, Instrument Air Sampling and Analysis (Ref. 6) • N1-MMP-094-601, Maintenance of IA Compressors CMPR-94-01/02 (Ref. 3) • N1-MPM-094-020, IA Dryer DEH-168 & DEH-169 Cleaning and Inspection (Ref. 4) • N1-MPM-094-604, Instrument Air Compressor PM CMPR-94-01/02 (Ref. 5)

LR Contact	Nold	**LRA Revision Required?**	No
Assigned Department/	License Renewal	**PAA Revision Required?**	No
Individual	Nold		
Issue Status	Closed		
NRC Closure Date	9/8/2004		

GCA AMP Issues (8/9-13) - Auditor: Wen

Issue ID Date Identified	Issue Description	Actions Taken

LRA Section B2.1.14

GCA AMP Issues (8/9-13) - Auditor: Wen

Issue ID Date Identified	Issue Description	Actions Taken
115 8/12/2004	The Compressed Air Monitoring Program is only applicable to NMP1. What program will be used for NMP2 to manage aging effects for portions of the compressed air systems WSLR? The applicant indicated that the components requiring AMR for NMP2 compressed air systems are addressed by Appendix J Program. However, the applicant's AMP B2.1.26, "10 CFR 50 Appendix J Program" did not specifically address this point. Please elaborate it in detail, specially, how the 10 elements are being addressed? NRC Request for Additional Information 9/8: As stated in NRC GL 88-14, also echoed in INPO SOER 88-01, the effects of corrosion and the presence of unacceptable levels of contaminants on the intended function of the compressed air system are safety concerns. From your response to Question #104, it is unclear whether NMP2 instrument air system (IAS) contains components such as air compressors, pre-filters, dryers, after-filters, receiver, and distribution piping network (including piping, fittings, and valves) that are made of carbon steel and are subject to AMR. If there exist such components, explain why relying on Appendix J alone is sufficient to manage the aging effect for those components, especially, the concern of "the effects of corrosion and presence of unacceptable levels of contaminants on the intended function of the compressed air system," as stated in the GALL Scope of Program Section. NRC Comment 9/17/04: NMP response to be sent to NRC Scoping and Screening auditor for further discussion.	To properly answer the question requires discussion of the portions of the NMP2 compressed air system within the scope of license renewal. The NMP2 compressed air systems (CAS) consist of the instrument air system (IAS), the service air system (SAS), the breathing air system (AAS), and the instrument nitrogen system (GSN). The SAS and AAS are used only for nonsafety-related equipment and components during normal plant operation. The IAS system supplies air to both safety-related and nonsafety-related equipment and components. However, the system is not considered a safety-related control air system since the safety-related components that it supplies all perform their safety functions without or upon loss of air, or are provided with safety-related accumulators capable of supplying the required quantities of air. All instrumentation and control systems located inside the reactor primary containment, including the safety-related equipment and components of the automatic depressurization system (ADS) and the four inboard MSIV actuator accumulators, are independently supplied with nitrogen gas from the GSN. Also within the scope of license renewal for the NMP2 CAS are components used for containment isolation. The components subject to an AMR include main steam safety relief valve accumulators, Automatic Depressurization System valve accumulators, Automatic Depressurization System air receivers, main steam isolation valve accumulaors, and the interconnecting piping, fittiings, and valves for those components as well as the supply piping, fittings and valves for safety-related components. These components ar all constructed of stainless steel, copper alloy, or aluminum alloy with an internal environment of dried air or nitrogen gas. The corresponding material environment combinations do not result in aging effects requiring management. Also subject to AMR are piping, fittings, and

GCA AMP Issues (8/9-13) - Auditor: Wen

Issue ID Date Identified	Issue Description	Actions Taken
		valves used for containment isolation. These components are constructed of carbon steel with an internal environment of air which results in loss of material. The loss of material will be managed by the 10 CFR 50 Appendix J Program for these components. Response to Request for Additional Information: The Instrument Air System (IAS) is tested and maintained in accordance with the NMP2 commitment to GL 88-14 under the current licensing basis. The Compressed Air Monitoring Program is not credited for the NMP2 IAS because the system is not in scope for license renewal.

LR Contact	Nold	**LRA Revision Required?**	No
Assigned Department/	License Renewal	**PAA Revision Required?**	No
Individual	Nold		
Issue Status	Waiting for NRC Response		
NRC Closure Date			
LRA Section	B2.1.14		

GCA AMP Issues (8/9-13) - Auditor: Wen

Issue ID Date Identified	Issue Description	Actions Taken
147 9/8/2004	In the NMP LRA, the applicant states that the NMP1 Boraflex replacement program is underway. Is there a similar replacement program planned for NMP2? If the answer is yes, does this information impact AMP Boraflex Program description?	While the conditions in the spent fuel pool indicate that the Boraflex racks are degrading, the long term action plan has not yet been formalized and approved. If the racks are replaced with material other than Boraflex prior to the period of extended operation, then a Boraflex Monitoring Program for NMP2 would no longer be required. The LRA and the PAA will be revised accordingly.

LR Contact	Brown	**LRA Revision Required?**	Yes
Assigned Department/	License Renewal	**PAA Revision Required?**	Yes
Individual	Brown		
Issue Status	Waiting for NRC Response		
NRC Closure Date			
LRA Section	B2.1.12		

GCA AMP Issues (8/9-13) - Auditor: Hsu

Issue ID Date Identified	Issue Description	Actions Taken
41 8/11/2004	Regarding BWRVIP-27, is UT technology available to use on NMP's inspection of the SLC penetration? If so, does NMP use it?	No, the UT inspection technology is not available yet. NMP follows the guidance of BWRVIP-27 and performs a bare-metal visual inspection during each outage.

LR Contact	Petras	**LRA Revision Required?**	No
Assigned Department/	License Renewal	**PAA Revision Required?**	No
Individual	Petras		
Issue Status	Closed		
NRC Closure Date	9/8/2004		
LRA Section	B2.1.7		

GCA AMP Issues (8/9-13) - Auditor: Hsu

Issue ID Date Identified	Issue Description	Actions Taken
42 8/11/2004	How do you detect flaw intrusions from an attachment weld into the RPV material?	NMP follows the guidelines of BWRVIP 48 in the detection of flaws in Vessel Attachment Welds. According to BWRVIP 48 NMP uses EVT-1 inspection method to find surface flaws. If any surface flaws are found the flaw is analyzed for intrusion following the guidelines of IWB-3600 which may include volumetric examination of the flaw for intrusion into the RPV base material.

LR Contact	Petras	**LRA Revision Required?**	No
Assigned Department/	License Renewal	**PAA Revision Required?**	No
Individual	Petras		
Issue Status	Closed		
NRC Closure Date	9/8/2004		
LRA Section	B2.1.4		

GCA AMP Issues (8/9-13) - Auditor: Hsu

Issue ID Date Identified	Issue Description	Actions Taken
43 8/11/2004	Is there any Low Alloy Steel in the RPV Internals?	No. The only Low Alloy Steel is in the RPV base material. The mention of BWRVIP-60 is there for evaluation of crack growth from attachment weld into the RPV base material (if necessary.)

LR Contact	Petras	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Petras	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/8/2004		
LRA Section	B2.1.4		

GCA AMP Issues (8/9-13) - Auditor: Hsu

Issue ID Date Identified	Issue Description	Actions Taken
92 8/11/2004	What is the source of the acceptance criteria for flaws found during reactor internals inspections? Are ASME XI acceptance criteria used, BWRVIP acceptance criteria, or are the two the same?	NMP acceptance criteria always meet ASME Section XI requirements. In some cases, BWRVIP determined more stringent or specific flaw acceptance criteria than ASME Section XI. NMP uses the BWRVIP acceptance criteria when they are more stringent or specific than the ASME Section XI requirements. Note: The AMP Basis document will be revised to relflect the above response

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/	License Renewal	**PAA Revision Required?**	Yes
Individual	Poehler		
Issue Status	Closed		
NRC Closure Date	9/8/2004		
LRA Section	B2.1.8		

GCA AMP Issues (8/9-13) - Auditor: Hsu

Issue ID Date Identified	Issue Description	Actions Taken
93 8/11/2004	BWRVIP-62 is not NRC approved but is cited in the GALL. What is NMP's plan with respect to BWRVIP-62? What aspects of BWRVIP-62 will NMP be using? NRC recommends NMP change the basis document to note in our program basis document where BWRVIP-62 will be applied.	BWRVIP-62 allowed inspection relief for plants using hydrogen water chemistry (HWC). NMP2 credited BWRVIP-62 in a shroud evaluation from 2000-2004, but is not currently invoking BWRVIP-62. NMP1 has never taken credit for HWC in shroud Reinspection evaluations. In the future, NMP plans to take credit for the relief allowed by BWRVIP-62 when the document is approved for license renewal by NRC (i.e., becomes a - A document). Note: The AMP Basis document will be revised to relflect the above response (Paramerters Monitored/Inspected Attribute)

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	Yes
Issue Status	Closed		
NRC Closure Date	9/8/2004		
LRA Section	B2.1.8		

GCA AMP Issues (8/9-13) - Auditor: Hsu

Issue ID Date Identified	Issue Description	Actions Taken
94 8/11/2004	Is NMP committed to BWRVIP-79 or BWRVIP-29 with respect to water chemistry control? What are the differences between the two documents?	BWRVIP-79 is a revision to BWRVIP-29. Action levels in the NMP1 Technical Specifications are derived from BWRVIP-29 for certain parameters (conductivity, sulfates, chlorides). Chemistry administrative procedure GAP-CHE-01 references BWRVIP-79. NMP2 Technical Specifications do not reference the BWRVIP guidelines. Administrative limits for the major chemical parameters are the same in BWRVIP-29 and BWRVIP-79. There are some minor changes in parameters, for instance, plants using noble metal chemical addition (NMCA) and hydrogen water chemistry may subtract contributing to conductivity by soluble iron. Note: Change to Water Chemistry AMP basis document required.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/	License Renewal	**PAA Revision Required?**	Yes
Individual	Poehler		
Issue Status	Closed		
NRC Closure Date	9/8/2004		
LRA Section	B2.1.8		

GCA AMP Issues (8/9-13) - Auditor: Hsu

Issue ID Date Identified	Issue Description	Actions Taken
95 8/11/2004	In 2003, the fluence in some areas of the core shroud exceeded 5E20 n/cm2. Prior to 2003, NMP used the lower crack growth rates allowed by BWRVIP-14 for evaluation of cracking below the 5E20 n/cm2 threshold. Will NMP use higher crack growth rates for evaluations performed on welds that have exceeded 5x1020	NMP is only applying the BWRVIP-14 crack growth rates for portions of the reactor vessel internals with fluence less than 5x1020 n/cm2. For evaluations of RVI areas exceeding this threshold, appropriate higher crack growth rates will be used.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/8/2004		
LRA Section	B2.1.8		

GCA AMP Issues (8/9-13) - Auditor: Hsu

Issue ID Date Identified	Issue Description	Actions Taken
96 8/11/2004	BWRVIP-76 requires a plant specific analysis for inspection interval for core shroud cracks in regions with fluence exceeding 5x1020 n/cm2. Since NMP has areas of the internals with fluence exceeding this threshold, have plant specific analyses been performed and submitted to NRC? Provide the NRC audit team with copies of any such submittals. NRC Additional Question (9/8): Please provide the approval letter information to support above statement.	Plant-specific evaluations that determine the reinspection interval have been submitted to NRC for NMP2. The following documents are provided to NRC: NMP2L 1803, Letter from Carl D. Terry to USNRC dated July 9, 1998 re: "Generic Letter 94-03, Intergranular Stress Corrosion Cracking of Core Shrouds in Boiling Water Reactors" Letter from Darl S. Hood, NRC to Mr. John H. Mueller, Niagara Mohawk Power Corporation, dated August 24, 1998, re: "Request for Additional Information Regarding Core Shroud Evaluation from Refueling Outage 6 (RFO6) " Nine Mile Point Nuclear station Unit No. 2 (Tac No. MA2286) NMP2L 1823 Letter from John T. Conway to USNRC dated September 21, 1998, re: Request for Additional Information Regarding Nine Mile Point Unit 2 Core Shroud Evaluation (TAC No. MA2286) Letter from Darl S. Hood, NRC to Mr. John H. Mueller, Niagara Mohawk Power Corporation, dated October 15, 1998, re: "Core Shroud Inspection and Flaw Evaluation for Operation after Refeuleing Outage 6, Nine Mile Point Nuclear Station, Unit No. 2 (TAC No. MA2286)" NMP2L 1914, Letter from John T. Conway, NMPC, to USNRC dated December 2, 1999 re: "Core Shroud Reinspection Plan" Letter from Peter S. Tam, NRC to Mr. John H. Mueller, NMPC, dated April 27, 2000 re: "Nine Mile Point Nuclear Station, Unit No. 2" Core Shroud Reinspection Plan for Refueling Outage 7 (TAC No. MA7284) NMP2L 1961, Letter from Richard B. Abbott, NMPC, to USRNRC dated April 28, 2000, re: "Core Shroud Reinspection Results (TAC No. MA7284)"

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Issue ID Date Identified	Issue Description	Actions Taken
		Letter from Peter S. Tam, NRC to Mr. John H. Mueller, NMPC, dated October 30, 2000 re: "Nine Mile Point Nuclear Station, Unit No. 2" Safety Evaluation of Core Shroud Inspection Results (TAC No. MA9057) NMP2L 2029, Letter from Richard B. Abbott, NMPC, to USNRC dated September 14, 2001, re: "Reinspection Plan for Core Shroud Weld H4" Letter from Peter S. Tam, NRC to Mr. John T. Conway, NMPC, dated January 16, 2002, re: Nine Mile Point Nuclear Station, Unit No. 2 (NMP2) " Reinspection Plan for Core Shroud Weld H4 (TAC No. MB2797)" Note: The AMP Basis document will be revised to relflect the above response Response to Additional Information: Approval Letter provided For NMP1, mechanical repairs have been installed on high-fluence cracked welds which replace the function of the cracked weld. Cracked horizontal welds H1 through H7 were repaired using mechanical tie rods; no plant specific analysis of the inspection interval was ever credited for these welds (References 1, 2). A plant-specific analysis allowing one cycle of operation has previously been credited for the V9 and V10 welds (Reference 3); however, this evaluation is no longer credited since these welds have been repaired with mechanical clamps (Reference 4, 5). Evaluations of both mechanical repairs have been approved for the remainder of plant life including a 20-year LR term (Reference 1, 4, 5, 6). Reference 4 does not explicitly indicate the design life of the repair, but refers to BWRVIP-02 which specifies the repair should last through the remainder of the original plant life plus the license renewal term. The core shroud welds that are not covered by mechanical repairs as well as the mechanical repair hardware are inspected in accordance with BWRVIP guidelines. Other

GCA AMP Issues (8/9-13) - Auditor: Hsu

Issue ID Date Identified	Issue Description	Actions Taken
		core shroud welds currently have fluences below 5x1020 n/cm2 (Reference 7, 8). Therefore, no plant-specific evaluations of high-fluence cracked welds (>5x1020 n/cm2) are currently credited for NMP1. NMP1 uses RG 1.190 approved methods of fluence analysis to predict the fluence of reactor internals welds. Plant-specific analyses of cracked welds will performed if necessary for welds that exceed the 5x1020 n/cm2 fluence threshold in the future in accordance with BWRVIP guidelines. 1. Letter from Ledyard B. March, NRC, to Mr. B. Ralph Sylvia, NMPC, re: “Nine Mile Point Nuclear Station Unit No. 1 (NMP1), Evaluation of Core Shroud Stabilizer Design (TAC No. M91273),” dated March 31, 1995 2. Letter from Darl Hood, NRC to Mr. B. Ralph Sylvia, NMPC, re: “Modifications to Correct Core Shroud Repair Deviations, Nine Mile Point Nuclear Station, Unit No. 1 (TAC No. M90102),” dated March 3, 1997 3. Letter from Darl S. Hood, NRC to Mr. John H. Mueller, NMPC, re: NRC Staff Safety Evaluation of Request to Extend Reinspection Interval for Core Shroud Vertical Welds, Nine Mile Point Nuclear Station, Unit No. 1 (TAC No. M99720), dated November 2, 1998 4. Letter from S. Singh Bajwa, NRC, to Mr. John H. Mueller, NMPC, re: “Alternative Repair of the Core Shroud Vertical Welds, Nine Mile Point Nuclear Station, Unit No. 1 (TAC No. MA4701),” dated April 30, 1999 5. Letter from S. Singh Bajwa, NRC, to Mr. John H. Mueller, NMPC, re: “Supplemental Safety Evaluation Regarding Alternative Repair of the Core Shroud Vertical Welds, Nine Mile Point Nuclear Station, Unit No. 1 (TAC No. MA4701),” dated May 24, 1999 6. Letter from S. Singh Bajwa, NRC, to Mr. John H. Mueller, NMPC, re: “Alternative Repair

GCA AMP Issues (8/9-13) - Auditor: Hsu

Issue ID Date Identified	Issue Description	Actions Taken
		of the Core Shroud Tie Rod Upper Spring Assembly, Nine Mile Point Nuclear Station, Unit No. 1 (TAC No. MA5433)," dated June 7, 1999 7. NMP1L 1373, Letter from Richard B. Abbott to USNRC re: Generic Letter 94-03, "Intergranular Stress Corrosion Cracking of Core Shrouds in Boiling Water Reactors," dated October 22, 1998 (transmitting "Nine Mile Point Unit 1 Shroud Neutron Transport and Uncertainty Analysis, Report No, MPM-998676) 8. NMP1L 1708, Letter from Bruce S. Montgomery to USNRC re: "Nine Mile Point Unit 1 Docket No. 50-220, Transmittal of Neutron Transport Calculations Benchmarking Report TAC Nos. MB6687 and MB6703

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/	License Renewal	**PAA Revision Required?**	Yes
Individual	Poehler		
Issue Status	Closed		
NRC Closure Date	9/17/2004		
LRA Section	B2.1.8		

GCA AMP Issues (8/9-13) - Auditor: Hsu

Issue ID Date Identified	Issue Description	Actions Taken
97 8/11/2004	Is NDE uncertainty incorporated into flaw evaluations? BWRVIP-18, which is not yet NRC-approved, would allow NDE uncertainty to be discounted.	NMP currently considers NDE uncertainty in its flaw evaluations. If BWRVIP-18 is approved, NMP will reevaluate whether to consider NDE uncertainty in future flaw evaluations, and whether there is a benefit to revising existing evaluations to leave out NDE uncertainty.

LR Contact	Poehler	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Poehler	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/8/2004		
LRA Section	B2.1.8		

GCA AMP Issues (8/9-13) - Auditor: Hsu

Issue ID Date Identified	Issue Description	Actions Taken
148 8/13/2004	Do BWRVIP75 and GL 88-01 have different requirements? Does the NMP program encompass both? NRC Additional Request for Information (9/8): In the LRA Basis document, Attributes 3 & 4 of BWR SCC program, the applicant states the program follows examination and inspection guidelines delineated in NUREG-0313, Rev. 2, and NRC GL 88-01 and its supplement 1. The GALL report states that the inspection guidance in approved BWRVIP-75 replaces the extent and schedule of inspection in NRC GL 88-01. The GALL report also states that the extent, method, and schedule of the inspection and test techniques delineated in NRC GL 88-01 or BWRVIP-75 are designed to maintain structural integrity and ensure that aging effects will be discovered and repaired before the loss of intended function of the component. Please clarify does NMP use BWRVIP-75 as guidance or just GL 88-01. If BWRVIP-75 is used, does NMP take advantage of the hydrogen water chemistry program as described in BWRVIP-75 to reduce the inspection sample size. In the LRA Basis document, Attribute 5 of BWR SCC program, the applicant states that for those Class 1 and 2 components that are inspected per the requirements of the Alternative Risk-Informed ISI Plan and Schedule. Please explain how could the RI-ISI and GL 88-01/BWRVIP-75 have same requirements. The GALL states that the program is applicable to all BWR piping made of austenitic SS that is 4 in. or large in nominal diameter and contains reactor coolant at a temperature above 93C (200F) during power operation, regardless of code classification. Is the scope of the NMP BWR SCC program consistent with GALL program regardless of code classification? In the LRA Basis document, Attribute 6 of BWR SCC program, the applicant states that Section 8.0,"Acceptance standards" of the ISI program plan documents, NMP1-ISI-003 and NMP2-ISI-006, provide the acceptance standards for tested components in accordance with Section XI. The class 3 components are all tested per ASME Sec. XI IWD. The GALL states that the program uses volumetric examinations to detect IGSCC. Please clarify that all the components under this program use volumetric examinations to detect IGSCC regardless of code classification. In NMP LRA A1.1.10 & A2.1.11, the applicant states that this program is based on industry guidelines approved by the NRC and augmented examinations are performed through in the Inservice inspection Program, which is based on 1989 edition of the ASME Boiler and Pressure Vessel Code with no Addenda, as approved by the NRC in plant-specific exemptions. This is an exception to the program described in NUREG-1801 (which cites ASME Section XI requirements covered in the 1995 edition through 1996 addenda). Please clarify that the components are inspected per the requirements of the alternative Risk-Informed Inservice Inspection Plan and Schedule or per ASME Section XI 1989 Edition with no addenda or GL 88-01/BWRVIP-75/NUREG-0313 Rev.2.	Yes - Generic Letter GL 88-01 provides the NRC's staff positions on materials, processes, water chemistry, weld overlay reinforcement, partial replacement, stress improvement of cracked weldments, clamping devices, crack characterization and repair criteria, inspection methods and personnel, inspection schedules, sample expansion, leak detection, and reporting requirements. BWRVIP-75 proposed revisions to the extent and frequency for piping inspection contained in Generic Letter GL 88-01. Yes - Both the NMP1 and NMP2 programs encompass both GL 88-01 and BWRVIP-75 requirements. 9/16/2004: Provided copy of draft response to auditor and held phone conversation with NMP Porgram Manager. Auditor acknowledged there are no technical issues but the AMP basis document needs to be revised to clarify NMP's program.

GCA AMP Issues (8/9-13) - Auditor: Hsu

Issue ID Date Identified	Issue Description	Actions Taken

LR Contact	Petras	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Fallin	**PAA Revision Required?**	Yes
Issue Status	Additional Information Required		
NRC Closure Date			
LRA Section	B2.1.6		

GCA AMP Issues (8/9-13) - Auditor: Hsu

Issue ID Date Identified	Issue Description	Actions Taken
151 8/13/2004	NMP takes credit for HWC and NMCA. How do you prove their effectiveness? Provide proof of effectiveness.	GAP-CHE-03 is the generation Administrative Procedure that controls HWC and NMCA for both units. This procedure covers all aspects of the two methods including implementation and monitoring. The NMP BWRVIP guidelines issued that address noble metal chemistry lessons learned to demonstrate mitigation effectiveness. The NMP program interpretation of the generic guidelines for effectiveness is described in NER-RE-006 for unit 1, NER-RE-007 for unit 2.

LR Contact	Petras	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Petras	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/8/2004		
LRA Section	B2.1.6		

GCA AMP Issues (8/9-13) - Auditor: Chang

Issue ID Date Identified	Issue Description	Actions Taken
30 8/10/2004	For the new AMP's that NMP has committed to develop and implement prior to the period of extended operation, what is NMP's intention with respect to informing or submitting and requesting approval from the NRC when the new programs are developed and implemented?	As with any commitment NMP makes to the NRC, the resolution and/or implementation is subject to review by the NRC. Specifically for new AMPs, the NRC can utilize Inspection Procedure 71003 Post-Approval Site Inspection for License Renewal, to verify that outstanding commitments have been met. This procedure also includes specific wording whereby the assistance of NRR/DRIP/RLEP can be utilized to ensure the licensee commitments have been met. Currently there is no specific notification to the NRC required when a commitment has been satisfied. Consistent with the industry, NMP would prefer that any review of new AMPs be conducted as part of the inspection process.

LR Contact	Mazzaferro	**LRA Revision Required?**	No
Assigned Department/ Individual	License Renewal Mazzaferro	**PAA Revision Required?**	No
Issue Status	Closed		
NRC Closure Date	9/13/2004		
LRA Section	Appx. B		