

Constellation Energy®

Nine Mile Point Nuclear Station

P.O. Box 63
Lycoming, NY 13093

September 15, 2005
NMP1L 1985

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555-0001

SUBJECT: Nine Mile Point Units 1 and 2
Docket Nos. 50-220 and 50-410
Facility Operating License Nos. DPR-63 and NPF-69

Responses to Requests for Additional Information and Clarifications to the Nine Mile Point Nuclear Station License Renewal Application (TAC Nos. MC3272 and MC3273)

Gentlemen:

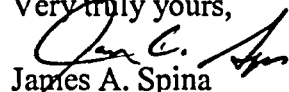
By letter NMP1L 1962 dated July 14, 2005, Nine Mile Point Nuclear Station, LLC (NMPNS) submitted an amended License Renewal Application (LRA) for Nine Mile Point Units 1 and 2.

On September 13, 2005, NMPNS received three Requests for Additional Information (RAI) via electronic mail from the NRC Staff. Attachment 1 provides the NMPNS responses to these requests.

Since submittal of the amended application, NMPNS has continued to conduct a series of activities designed to ensure the quality, technical integrity and consistency of supporting documents and implementing programs. These activities include: self-assessments, challenge boards, independent reviews by subject matter experts and industry benchmarking. As a result of these activities, some opportunities for clarification of the amended application have been identified. The table provided in Attachment 2 provides these clarifications.

Attachment 3 provides a summary description of one new commitment contained in this submittal. If you have any questions about this submittal, please contact David Dellario, Nine Mile Point License Renewal Project Manager, at (315) 349-7141.

Very truly yours,




James A. Spina
Vice President Nine Mile Point

JAS/RF/sac

21107

STATE OF NEW YORK :
: TO WIT:
COUNTY OF OSWEGO :


I, James A. Spina, being duly sworn, state that I am Vice President Nine Mile Point, and that I am duly authorized to execute and file this information on behalf of Nine Mile Point Nuclear Station, LLC. To the best of my knowledge and belief, the statements contained in this document are true and correct. To the extent that these statements are not based on my personal knowledge, they are based upon information provided by other Nine Mile Point employees and/or consultants. Such information has been reviewed in accordance with company practice and I believe it to be reliable.


James A. Spina
Vice President Nine Mile Point

Subscribed and sworn before me, a Notary Public in and for the State of New York and County of Oswego, this 15th day of September, 2005.

WITNESS my Hand and Notarial Seal:

SANDRA A. OSWALD
Notary Public, State of New York
No. 01OS6032276
Qualified in Oswego County
Commission Expires 10/25/05


Notary Public

My Commission Expires:

9/15/05
Date

- Attachments 1: RAI Responses
- 2: Corrections to the NMPNS License Renewal Application

cc: Mr. S. J. Collins, NRC Regional Administrator, Region I
Mr. G. K. Hunegs, NRC Senior Resident Inspector
Mr. T. G. Colburn, Senior Project Manager, NRR (2 copies)
Mr. John P. Spath, NYSERDA

Attachment 1

Electronic mail from Ngoc Le (NRC) identified three follow-up questions related to the response to the NRC RAI 3.3.2-2 provided in letter NMP1L 1920 dated January 26, 2005. Nine Mile Point Nuclear Station (NMPNS) responses to these three follow-up questions are provided below.

RAI 3.3.2-2 (Follow-up-1):

In the revised LRA Tables 3.3.2.A-2 and 3.3.2.A-22, submitted by letter dated January 26, 2005, in response to RAI 3.3.2-2, the applicant identified no aging effect requiring management (AERM) for non safety-related (NSR) piping, fittings, and equipment made of copper alloys (Zinc less than or equal to 15 %) exposed to demineralized untreated water. In light of the applicant's response to RAI 3.3.2-3 related to copper alloys, please explain the different evaluation results for the same material exposed to the same environment.

NMPNS Response to RAI 3.3.2-2 (Follow-up-1):

NMPNS will revise the LRA (as shown in Attachment 2) for components made from copper alloys (zinc \leq 15%) that are exposed to demineralized untreated water to change the aging effect requiring management (AERM) from "None" to "Loss of Material." For components in the Reactor Building Closed Loop Cooling Water System, the Closed Cycle Cooling Water System (CCCWS) Program will be identified as the applicable aging management program. For components in the NMP1 Turbine Building Closed Loop Cooling Water System (Table 3.3.2.A-22), NMP1 City Water System (Table 3.3.2.A-2), NMP1 Reactor Water Cleanup System (Table 3.3.2.A-17), NMP2 Domestic Water System (Table 3.3.2.B-11), and NMP2 Sanitary Drains and Disposal System (Table 3.3.2.B-38), the One-Time Inspection Program will be identified as the applicable aging management program. See the LRA changes relative to this response in Attachment 2 of this letter.

RAI 3.3.2-2 (Follow-up-2):

In the revised LRA Table 3.3.2.A-19, for NMP1 service water system, submitted by letter dated January 26, 2005, in response to RAI 3.3.2-2, the applicant did not explain why "cracking" is not an AERM for wrought austenitic stainless steel NSR piping exposed to raw water, while in the original LRA Table 3.3.2.A-19, the applicant indicated that "cracking" is an AERM for piping and fittings, and valves of the same material exposed to the same environment. Please provide information to explain the different evaluation results for the same material exposed to the same environment.

NMPNS Response to RAI 3.3.2-2 (Follow-up-2):

NMPNS does not list "Cracking" as an AERM for either piping and fittings or valves fabricated of wrought austenitic stainless steel that are exposed to a raw water environment in the NMP1

Service Water System. Listing "Loss of Material" but not "Cracking" as the AERM for these components is consistent with NUREG-1801, Generic Aging Lessons Learned (GALL) Report, Items VII.C1.1-a and VII.C1.2-a, which specify "Loss of Material" as the AERM for stainless steel in a raw water environment for open cycle cooling water systems. NUREG-1801 specifies that no further evaluation is required when the Open Cycle Cooling Water System Program is credited for aging management of this material, AERM, and environment combination.

RAI 3.3.2-2 (Follow-up-3):

In the revised LRA Table 3.3.2.B-17, for NMP2 hot water heating system, submitted by letter dated January 26, 2005, in response to RAI 3.3.2-2, the applicant did not explain why "cracking" is not an AERM for carbon or low alloy steel (yield less than 100 Ksi) NSR piping, fittings and equipment exposed to treated water (greater or equal to 140 degree F, but less than 212 degree F), or exposed to treated water or steam (greater or equal to 212 degree F, but less than 482 degree F), while in the revised LRA Table 3.3.2.B-21, the applicant identified that "cracking" is an AERM for the same components with the same material and exposed to the same environment. Please provide information to explain the different evaluation results for the same material exposed to the same environment.)

NMPNS Response to RAI 3.3.2-2 (Follow-up-3):

In Table 3.3.2.B-17 of the amended LRA, NMPNS does not list "Cracking" as an AERM for carbon or low alloy steel (yield strength less than 100 Ksi) piping and fittings or valves in the NMP2 Hot Water Heating System that are exposed to either treated water (greater than or equal to 140 °F, but less than 212 °F), or to treated water or steam (greater than or equal to 212 °F, but less than 482 °F). For the Component Types "Piping and Fittings" and "Valves" line items of Table 3.3.2.B-17, the last three columns are being revised to indicate conformance with NUREG-1801 as follows: (1) for the Component Type "Piping and Fittings," the entries for the last three columns are VIII.E.1-b, 3.4.1.B-02, and B, respectively, and (2) for the Component Type "Valves," the entries for the last three columns are VIII.E.2-b, 3.4.1.B-02, and B, respectively.

In Table 3.3.2.B-21 of the amended LRA, NMPNS no longer includes the Component Type "NSR piping, fittings, and equipment" because of the re-scoping effort described in the response to RAI 2.2-3 in Letter NMP1L 1958 dated July 14, 2005. Additionally, consistent with Table 3.3.2.B-17 of the amended LRA, Table 3.3.2.B-21 of the amended LRA does not list "Cracking" as an AERM for the material and environments cited in this RAI.

Attachment 2

Identified Changes to the LRA	
Section (S) or Table (T)	LRA Change
T 2.4.A.04-1	For the Spent Fuel Racks, add the Component Types Boraflex in Treated Water and Boral in Treated Water, each with the Intended Function of Absorbs Neutrons.
T 2.4.B.07-1	For the Spent Fuel Racks, add the Component Type Boral in Treated Water with the Intended Function of Absorbs Neutrons.
S 3.2.2.A.01	Remove the Preventive Maintenance (PM) Program from the AMP Section.
T 3.2.2.A-01	Change the AMP for Heat Exchangers, Piping and Fittings, Pumps, and Valves from the PM Program to the Open Cycle Cooling Water (OCCW) Program. Change the Notes accordingly (no exceptions for this program).
T 3.2.2.A-03	For Wrought Austenitic Stainless Steel (WASS) Piping and Fittings in Treated Water or Steam (TWS) $\geq 212^{\circ}\text{F}$ and $< 482^{\circ}\text{F}$, delete the line crediting the One Time Inspection (OTI) Program.
	For WASS Valves in TWS $\geq 482^{\circ}\text{F}$ that reference GALL Item V.D2.3-c, change the AMP from ASME Section XI IWB/C/D to the BWR Stress Corrosion Cracking (SCC) Program.
S 3.2.2.B.05	In the Environments Section, replace Raw Water, Low Flow with Demineralized Untreated Water. In the AMP Section, replace the OCCW Program with the CCCW Program.
T 3.2.2.B-05	For the Heat Exchangers line items with the environment of Raw Water, Low Flow, change the environment to Demineralized Untreated Water and change the AMP from the OCCW Program to the CCCW Program. For the line items with a Loss of Material (LOM) AERM, change the GALL Item from V.D2.4-a to V.D2.4-c and change the Table 1 Item from 3.2.1.B-12 to 3.2.1.B-13. The Note remains A. For the line item with the Loss of Heat Transfer AERM, delete the GALL Item and the Table 1 Item and change the Note to H.
T 3.3.1.A	Item 3.3.1.A-10 - Replace the Discussion with the following: "Consistent with NUREG-1801 for Component, Material, Environment, and Aging Effects; however, the Water Chemistry Control Program and the One Time Inspection Program are credited for aging management."
T 3.3.1.B	Item 3.3.1.B-10 - Replace the Discussion with the following: "Consistent with NUREG-1801 for Component, Material, Environment, and Aging Effects; however, the Water Chemistry Control Program and the One Time Inspection Program are credited for aging management."
	Item 3.3.1.B-12 – Replace the Discussion with the following: "Prior to entry into the Period of Extended Operation, the current NMP2 spent fuel rack design that utilizes Boraflex for reactivity control will be replaced by a design that utilizes Boral for that function. Therefore, Boraflex is not within scope of license renewal

Identified Changes to the LRA

Section (S) or Table (T)	LRA Change
	and the Boraflex Monitoring Program is not credited for NMP2.”
	Item 3.3.1.B-15 - In the Discussion, delete the last bullet referring to Turbine Building Closed Loop Cooling System Heat Exchangers.
S 3.3.2.A.01	Add the OCCW Program to the AMP Section.
S 3.3.2.A.08	Add the Buried Piping and Tanks Inspection Program to the AMP Section.
S 3.3.2.A.14	Delete the Flow Accelerated Corrosion (FAC) Program from the AMP Listing.
S 3.3.2.A.22	Change AMP listing from Closed Cycle Cooling Water (CCCW) Program to the PM Program.
	Add the OTI Program to the AMP Section.
S 3.3.2.A.24	Delete the FAC Program from the AMP Section.
T 3.3.2.A-01	Delete the PM Program AMP for Carbon Steel (CS) External Surfaces.
	Change the AMP for Traveling Screens and Rakes to the OCCW Program from the PM Program and change Note E for CS and WASS to Note C
	Change AMP for the Circ Water Gates to the OCCW Program from the PM Program and change Note to C.
	Remove the BWR Feedwater (FW) Nozzle Program for Cracking of the FW Nozzle Thermal Sleeves.
	Remove the BWR Control Rod Drive Return Line (CRDRL) Nozzle Program for Cracking of the CRDRL Nozzle Thermal Sleeves.
T 3.3.2.A-02	For the Copper Alloy ($\leq 15\%$ Zn) Valve in a Demineralized, Untreated Water (DUW) environment, change the AERM from None to Loss of Material (LOM), the AMP from None to OTI Program, and the Note from None to H.
T 3.3.2.A-03	Change the AMP for the Cold Worked Red Brass External Surfaces to the Compressed Air Monitoring Program.
T 3.3.2.A-07	For WASS Heat Exchangers and Valves in TW<140°F, change the OTI Program to the CCCW Program.
T 3.3.2.A-08	Add a Gray Cast Iron (GCI) External Surfaces Item having a Soil, Above the Water Table environment with the AERM of Loss of Material (LOM), the AMP of Buried Piping and Tanks Inspection Program, the GALL Item of VII.C2.1-b, the Type 1 Table Item of 3.3.1.A-18, and Note F.
T 3.3.2.A-14	Remove the FAC Program AMP line items for LOM of Piping and Fittings and Valves. The stated environment occurs < 2% of the time.

Identified Changes to the LRA

Section (S) or Table (T)	LRA Change
T 3.3.2.A-15	Change AMP for WASS components in a DUW environment from the Water Chemistry Control and OTI Programs to the CCCW Program. Change Notes to G.
	Delete the OTI Program for Loss of Heat Transfer for WASS Heat Exchangers since the CCCW Program is already credited.
	For the Copper Alloy ($\leq 15\%$ Zn) Filter/Strainers and Valves in a DUW environment, change the AERM from None to LOM, the AMP from None to the CCCW Program, and the Note from None to H.
T 3.3.2.A-17	For the Copper Alloy ($\leq 15\%$ Zn) Heat Exchanger in a DUW environment, change the AERM from None to LOM, the AMP from None to the OTI Program, and the Note from None to H
T 3.3.2.A-22	Change the AMP for all applicable Turbine Building CCCW System components from the CCCW Program to the PM Program and the WCC Program.
	For the Copper Alloy ($\leq 15\%$ Zn) Valve in a TW $<140^{\circ}\text{F}$ environment, change to a DUW environment, change the AERM from None to LOM, the AMP from None to the OTI Program, and the Note from None to H
T 3.3.2.A-23	For Tables 3.3.2.A-23 and 3.3.2.B-23, change the AERM for Fiberglass External Surfaces from None to Cracking and Loss of Strength. Apply the same AMP as is used for internal aging management.
T 3.3.2.A-24	Delete line items for LOM credited by the FAC Program for Piping and Fittings and Valves.
S 3.3.2.B.08	Remove the OTI Program and the WCC Program from the AMP Section.
S 3.3.2.B.40	Change the AMP listing of OCCW Program to the PM Program
T 3.3.2.B-08	For WASS Flow Elements and Valves in TW $<140^{\circ}\text{F}$, change the OTI and WCC Programs to the CCCW Program
T 3.3.2.B-11	For the Copper Alloy ($\leq 15\%$ Zn) Piping and Fittings and Valves in a DUW environment, change the AERM from None to LOM, the AMP from None to the OTI Program, and the Note from None to H
T 3.3.2.B-13	Add an External Surfaces item for GCI in a Soil, Above the Water Table environment with LOM, the AMP of Buried Piping and Tanks Inspection Program, GALL Item VII.C1.1-b, Type 1 Table Item of 3.3.1.B-18, and Note F.
	Change the AMP for Sprinklers from the Fire Protection Program to the Fire Water Program

Identified Changes to the LRA	
Section (S) or Table (T)	LRA Change
T 3.3.2.B-17	For the "Piping and Fittings" and "Valves" line items, the last three columns are being revised to indicate conformance with NUREG-1801 as follows: (1) for the Component Type "Piping and Fittings," the entries for the last three columns are VIII.E.1-b, 3.4.1.B-02, and B, respectively, and (2) for the Component Type "Valves," the entries for the last three columns are VIII.E.2-b, 3.4.1.B-02, and B, respectively.
T 3.3.2.B-23	For Tables 3.3.2.A-23 and 3.3.2.B-23, change the AERM for Fiberglass External Surfaces from None to Cracking and Loss of Strength. Apply the same AMP as is used for internal aging management.
T 3.3.2.B-34	Add a line for a WASS Flow Element with the AERM of LOM, the OCCW Program, the GALL Item of VII.C1.4-a, the Type 1 Table Item of 3.3.1.B-17, and Note A.
T 3.3.2.B-38	For the Copper Alloy ($\leq 15\%$ Zn) Piping and Fittings in a DUW environment, change the AERM from None to LOM, the AMP from None to the OTI Program, and the Note from None to H
T 3.3.2.B-40	Change the AMP for all applicable Turbine Building CCCW System components from the CCCW Program to the PM Program and the WCC Program.
S 3.5.2.A.04	Add the OTI Program to the AMP Section.
T 3.5.2.A-04	For Boral in Treated Water, revise this line item to add the AERMs of LOM and Reduction of Neutron Absorbing Capacity, the AMPs of OTI and WCC, the GALL Item of VII.A2.1-b, the Type 1 Table Item of 3.3.1.A-10, and a Note of E.
S 3.5.2.B.07	Replace Boraflex with Boral in the Materials Section. Remove the Boraflex Monitoring Program from the AMP Section.
T 3.5.2.B-07	Remove the Boraflex in Treated Water line items from NMP2 Table 3.5.2.B-7. There will be no Boraflex within the scope of license renewal (WSLR) in the NMP2 Fuel Pool during the Period of Extended Operation (PEO). Add a new line item for Boral in Treated Water with the Intended Function of AN, the Material of Boral, the environment of TW<140F, Gamma Irradiation, the AERMs of LOM and Reduction of Neutron Absorbing Capacity, the AMPs of OTI and WCC, the GALL Item of VII.A2.1-b, the Type 1 Table Item of 3.3.1.B-10, and a Note of E, 8. Add new Note 8 to the end of the 3.5.2 Tables as follows: "The current NMP2 Spent Fuel Rack design utilizes Boraflex for neutron absorption; however, prior to entry into the PEO, these racks will be replaced with a new design that utilizes Boral for this function."
S A1.1.05	Add an additional enhancement to establish monitoring and trending instructions

Identified Changes to the LRA

Section (S) or Table (T)	LRA Change
	for in-situ test results, silica levels, and coupon results.
S A1.1.12	(1) Clarify that the program activities include effects on fracture toughness due to neutron fluence and thermal embrittlement. and (2) enhance the program to evaluate component susceptibility to loss of fracture toughness. Assessments and inspections will be performed, as necessary to ensure that intended functions are not impacted by the aging.
S A1.1.17	Add an additional enhancement to change Halon and Carbon Dioxide functional test frequencies to semi-annual.
S A1.1.18	Add an enhancement to develop new procedures and preventive maintenance tasks to implement sprinkler head replacement and/or inspections.
S A1.1.20	<p>Delete an extraneous enhancement for microbiological organism tests. Activity was already included in the program before July 15, 2005.</p> <p>Remove the diesel fire pump fuel oil day tank from enhancement for periodic inspection.</p> <p>Add an enhancement for quarterly trending of water and sediment.</p> <p>Add an enhancement for periodic opening of the diesel fire pump fuel oil day tank drain.</p> <p>Add an enhancement for removal of water, if found.</p> <p>In the enhancements under "Program Elements Affected" add "Program Description" and "Parameters Monitored and Inspected" to the enhancement listing for "Monitoring and Trending".</p>
S A1.1.22	Expand the existing enhancement to cover all inspections, rather than just "pre-lift".
S A1.1.27	Added an enhancement to develop acceptance criteria for inspections and testing.
S A1.1.29	<p>Expand the scope discussion of the program to clarify that it includes non-safety-related portions of the circulating water and service water systems.</p> <p>In the enhancements under "Program Elements Affected" add "Parameters Monitored and Inspected", "Detection of Aging Effects", and "Monitoring and Trending" to the enhancement listing for "Scope of Program".</p>
S A1.1.38	Add an exception to GALL Report Program XI.M18 for its reference to the 95-96 Addenda of the ASME Code.

Identified Changes to the LRA

Section (S) or Table (T)	LRA Change
A2.1.12	(1) Clarify that the program activities include effects on fracture toughness due to neutron fluence and thermal embrittlement, and(2) enhance the program to evaluate component susceptibility to loss of fracture toughness. Assessments and inspections will be performed, as necessary to ensure that intended functions are not impacted by the aging.
S A2.1.17	Add an additional enhancement to change Halon and Carbon Dioxide functional test frequencies to semi-annual.
S A2.1.18	Add an enhancement to develop new procedures and preventive maintenance tasks to implement sprinkler head replacement and/or inspections.
S A2.1.20	Add an enhancement for quarterly trending of water and sediment. Add an enhancement for removal of water, if found. In the enhancements under "Program Elements Affected" add "Parameters Monitored and Inspected" to the enhancement listing for "Monitoring and Trending".
S A2.1.22	Expand the existing enhancement to cover all inspections, rather than just "pre-lift".
S A2.1.27	Added an enhancement to develop acceptance criteria for inspections and testing.
S A2.1.29	Expand the scope discussion of the program to clarify that it includes non-safety related portions of the circulating water and service water systems. In the enhancements under "Program Elements Affected" add "Parameters Monitored and Inspected", "Detection of Aging Effects", and "Monitoring and Trending" to the enhancement listing for "Scope of Program".
S A2.1.37	Add an exception to GALL Report Program XI.M18 for its reference to the 95-96 Addenda of the ASME Code.
S A2.4	Replace the Commitment in Item 35 with the following (the Source and Schedule remain the same): Enhance the program to evaluate component susceptibility to loss of fracture toughness. Assessments and inspections will be performed, as necessary, to ensure that intended functions are not impacted by the aging. Add a new commitment as follows: Prior to the Period of Extended Operation for NMP2, the spent fuel rack design that currently utilizes Boraflex for reactivity control in the Spent Fuel Pool will be replaced by a design that utilizes Boral for this function. Source: LRA Table 3.3.1.B, Item 3.3.1.B-12 and LRA Table 3.5.2.B-07. Schedule: Prior to Period of Extended Operation

Identified Changes to the LRA	
Section (S) or Table (T)	LRA Change
S B2.1.8	Under the "Parameters Monitored/Inspected" Program Element, replace the text of the current bullet with the following: Enhance the program to evaluate component susceptibility to loss of fracture toughness. Assessments and inspections will be performed, as necessary to ensure that intended functions are not impacted by the aging.
S B2.1.10	Expand the scope discussion of the program to clarify that it includes non-safety related portions of the circulating water and service water systems. In the enhancements under "Program Elements Affected" add "Parameters Monitored and Inspected", "Detection of Aging Effects", and "Monitoring and Trending" to the enhancement listing for "Scope of Program".
S B2.1.12	Add an additional enhancement to establish monitoring and trending instructions for in-situ test results, silica levels, and coupon results.
S B2.1.13	Expand the existing enhancement to cover all inspections, rather than just "pre-lift".
S B2.1.16	Add an additional enhancement to change Halon and Carbon Dioxide functional test frequencies to semi-annual.
S B2.1.17	Add an enhancement to develop new procedures and preventive maintenance tasks to implement sprinkler head replacement and/or inspections.
S B2.1.18	Delete an extraneous enhancement for microbiological organism tests. Activity was already included in the program before July 15, 2005 (NMP1). Remove diesel fire pump fuel oil day tank from enhancement for periodic inspection (NMP1). Add an enhancement for quarterly trending of water and sediment (NMP1&2). Add an enhancement for periodic opening of the diesel fire pump fuel oil day tank drain (NMP1). Add an enhancement for removal of water, if found (NMP1&2). In the enhancements under "Program Elements Affected" add "Parameters Monitored and Inspected" to the enhancement listing for "Monitoring and Trending" (NMP1&2).
S B2.1.34	Add an enhancement to develop acceptance criteria for inspections and testing.
S B2.1.36	Add an exception to GALL Report Program XI.M18 for its reference to the 95-96

Identified Changes to the LRA	
Section (S) or Table (T)	LRA Change
	Addenda of the ASME Code.
S B2.1.38	Add "Detection of Aging Effects" and "Monitoring and Trending" as program attributes that are affected by the exceptions taken to NUREG-1801.

Attachment 3

List of Regulatory Commitments

The following table identifies those actions committed to by NMPNS in this submittal. Any other statements in this submittal are provided for information purposes and are not considered to be regulatory commitments.

REGULATORY COMMITMENT	DUE DATE
Prior to the Period of Extended Operation for NMP2, the spent fuel rack design that currently utilizes Boraflex for reactivity control in the Spent Fuel Pool will be replaced by a design that utilizes Boral for this function.	October 31, 2026