

Constellation Energy

Nine Mile Point Nuclear Station

P.O. Box 63
Lycoming, New York 13093

December 17, 2004
NMP1L 1901

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

License Renewal Application – Responses to NRC Requests for Additional Information Regarding the Systems Walkdown Program (TAC Nos. MC0691 and MC0692)

Gentlemen:

By letter dated May 26, 2004, Nine Mile Point Nuclear Station, LLC (NMPNS) submitted an application to renew the operating licenses for Nine Mile Point Units 1 and 2.

In a letter dated November 17, 2004, the NRC requested additional information regarding the Systems Walkdown Program that is described in Section B2.1.33 of the License Renewal Application. The NMPNS responses to these requests for additional information are provided in Attachment 1. This letter contains no new regulatory commitments.

If you have any questions about this submittal, please contact Peter Mazzaferro, NMPNS License Renewal Project Manager, at (315) 349-1019.

Very truly yours,

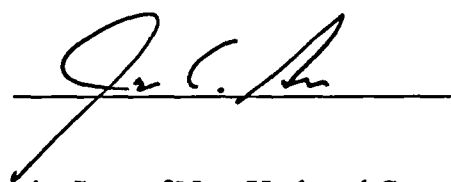
James A. Spina
Vice President Nine Mile Point

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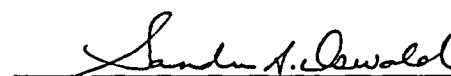
STATE OF NEW YORK :
: TO WIT:
COUNTY OF OSWEGO :

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 supplemental information on behalf of Nine Mile Point Nuclear Station, LLC. To the best of my knowledge and belief, the statements contained in this submittal 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.



Subscribed and sworn before me, a Notary Public in and for the State of New York and County of Oswego, this 17th day of December, 2004.

WITNESS my Hand and Notarial Seal:


Notary Public

My Commission Expires:

10/17/04
Date

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

Attachment:

1. Responses to NRC Requests for Additional Information (RAI) Regarding the Systems Walkdown Program Described in Section B2.1.33 of the License Renewal Application

- cc: Mr. S. J. Collins, NRC Regional Administrator, Region I
Mr. G. K. Hunegs, NRC Senior Resident Inspector
Mr. P. S. Tam, Senior Project Manager, NRR
Mr. N. B. Le, License Renewal Project Manager, NRR
Mr. J. P. Spath, NYSERDA

ATTACHMENT 1

Nine Mile Point Nuclear Station

Responses to NRC Requests for Additional Information (RAI)

Regarding the Systems Walkdown Program Described in

Section B2.1.33 of the License Renewal Application

This attachment provides Nine Mile Point Nuclear Station, LLC (NMPNS) responses to the requests for additional information contained in the NRC letter dated November 17, 2004, regarding the Systems Walkdown Program. Each NRC RAI is repeated, followed by the NMPNS response.

RAI B2.1.33-1

The applicant stated that this AMP B2.1.33, "System Walkdown Program," manages aging effects for accessible external surfaces of selected SSCs within the scope of license renewal (WSLR) at NMP. The applicant is requested to identify the systems and structures WSLR that this AMP is applicable for at NMP. It is not clear whether, in a certain system, all or just the samples of carbon steel components listed in the program are covered by this AMP. The applicant is requested to clarify the "selected SSCs" WSLR.

Furthermore, with respect to the program description paragraph of B2.1.33, the applicant is requested to clarify the definition of the phrase, "...other carbon steel components," and explain the reason why "mechanical penetrations" are excluded from a list of components mentioned in the program description.

Response

The following Nine Mile Point Unit 1 (NMP1) and Nine Mile Point Unit 2 (NMP2) systems include components that are in-scope for LR and credit the Systems Walkdown Program for managing the aging of external surfaces. Since all components in a given system may not be in-scope, the term "selected" is used to differentiate between the in-scope and out-of-scope portions. For each of the systems listed below, see the applicable aging management review section in the LRA to determine which component types are the "selected" ones.

There are no structures in-scope for LR that credit the Systems Walkdown Program for managing aging effects.

NMP1 Systems

- Compressed Air System
- Control Room Heating, Ventilating, and Air Conditioning (HVAC)
- Control Rod Drive
- Core Spray System
- Condensate System
- Containment System
- Containment Spray
- City Water System
- Reactor Water Cleanup
- Emergency Diesel Generator
- Emergency Cooling
- Fire Detection and Protection
- Spent Fuel Pool Filtering and Cooling
- Feedwater/High Pressure Coolant Injection
- Hydrogen Water Chemistry
- Main Generator and Auxiliary System
- Main Steam
- Miscellaneous Non-Contaminated Vents and Drains
- Neutron Monitoring
- Reactor Building HVAC
- Reactor Building Closed Loop Cooling
- Radwaste Building HVAC
- Radwaste System
- Reactor Vessel Instrumentation
- Shutdown Cooling
- Sampling System
- Service Water
- Turbine Building HVAC
- Turbine Building Closed Loop Cooling Water

NMP2 Systems

- Alternate Decay Heat Removal System
- Compressed Air System
- Reactor Building Closed-Loop Cooling Water
- Containment Atmosphere Monitoring
- Condensate System
- Main Condenser Air Removal
- Primary Containment Purge
- High-Pressure Core Spray
- Low-Pressure Core Spray
- Domestic Water System

- Air Startup – Standby Diesel Generator
- Standby Diesel Generator Fuel Oil Storage and Transfer
- Generator Standby Lube Oil System
- Standby Diesel Generator Protection (Generator) System
- Floor and Equipment Drains
- Engine-Driven Fire Pump – Fuel Oil
- Fire Protection Halon
- Carbox Fire Protection – Low Pressure CO2
- Fire Protection - Water
- Feedwater System
- Standby Gas Treatment
- Design Basis Accident (DBA) Hydrogen Recombiner
- Control Building Air-Conditioning
- Glycol Heating
- Hot Water Heating
- Auxiliary Service Building Air-Conditioning
- Control Building Chilled Water
- Chilled Water - Ventilation
- Diesel Generator Building Ventilation
- Reactor Building Ventilation
- Yard Structure Ventilation
- Reactor Core Isolation Cooling
- Reactor Vessel Instrumentation
- Main Steam
- Moisture Separator and Reheater System
- Makeup Water System
- Reactor Recirculation System
- Residual Heat Removal
- Reactor Pressure Vessel
- Spent Fuel Pool Cooling and Cleanup
- Process Sampling System
- Service Water
- Seal Water System
- Reactor Water Cleanup

The “Program Description” paragraph of LRA Section B2.1.33 includes the statement “The specific aging effect of concern is loss of material from external surfaces of . . . other carbon steel components.” This phrase is intended to generically capture system components or sub-components that are not specifically listed. Examples of “other carbon steel components” are flanges, tees, reducers, and pipe caps.

Mechanical penetrations at NMP1 and NMP2 are managed under the Structures Monitoring Program (LRA Section B2.1.28) and the ASME Section XI Inservice Inspection (Subsections

IWE and IWL) Programs (LRA Sections B2.1.23 and B2.1.24), rather than the Systems Walkdown Program.

LRA Revisions

For the NMP1 Reactor Vessel Instrumentation System, although the Systems Walkdown Program is correctly credited in LRA Section 3.1.2.A.3, it was inadvertently omitted from LRA Table 3.1.2.A-3 (page 3.1-54 of the revised Section 3.1 submitted by NMPNS letter NMP1L 1892 dated December 6, 2004). The correction to Table 3.1.2.A-3 is shown on the following page. The changes are highlighted by shading.

**Table 3.1.2.A-3 Reactor Vessel, Internals, and Reactor Coolant System
NMP1 Reactor Vessel Instrumentation System – Summary of Aging Management Evaluation**

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Program	NUREG-1801 Volume 2 Item	Table 1 Item	Notes
NSR piping, fittings, and equipment	PFASRE	Any	Air	Cracking; Loss of Material	Systems Walkdown Program			<u>I</u>
			Treated Water, temperature < 140°F, Low Flow	Cracking; Loss of Material	<u>Water Chemistry Control Program</u>			<u>J</u>

RAI B2.1.33-2

In the Element "Parameters Monitored/Inspected," it is not clear what the "other signs of deterioration" are. The applicant is requested to describe those other aging effects and explain how to identify them.

Response

LRA Section B2.1.33, Systems Walkdown Program, under the Aging Management Program Element of "Parameters Monitored/Inspected," states "System engineers conduct visual inspections of assigned SSCs and document the presence of corrosion and other signs of deterioration." The phrase "other signs of deterioration" is intended to encompass the condition of coatings (material degradation), leakage and indications of leakage, as stated under the "Enhancements" heading of LRA Section B2.1.33, as well as cracking, elastomer degradation, and weathering. As part of incorporating this enhancement into the implementing procedure, NMPNS intends to utilize the guidance provided in Electric Power Research Institute (EPRI) reports related to identification of aging as part of the training of system engineers. These industry guidelines provide the basis for the identification of the aging effects stated above, and will provide the system engineers with the necessary knowledge to identify "other signs of deterioration." (See EPRI reports 1007932, "Identification and Detection of Aging Issues;" 1007933, "Aging Assessment Field Guide;" and 1009743, "Aging Identification and Assessment Checklist – Mechanical Components.")

RAI B2.1.33-3

In the Element "Acceptance Criteria," the applicant stated that a list of walkdown attributes is available to system engineers for use in developing walkdown checklists. This implies that the checklists are not available at this time. This is not adequate. The acceptance criteria of the program for the parameters monitored/inspected and its basis should be described. The CLB procedures and/or documents should be referenced. The applicant is requested to provide more detailed information, in accordance with the guidelines delineated in Appendix A of NUREG-1800, to describe the acceptance criteria for the program.

Response

The "Acceptance Criteria" program element in LRA Section B2.1.33 states that "A list of walkdown attributes is available to system engineers for use in developing walkdown checklists." The intent of this statement was to acknowledge that system engineers conduct walkdowns for a variety of reasons; i.e., Maintenance Rule assessments, system readiness reviews, pre-outage reviews, license renewal, etc. The system engineer adapts the existing general checklist to focus on the attributes applicable to the walkdown being performed. For the license renewal walkdown, the attributes associated with aging are selected.

The current program administrative procedure (S-TDP-REL-0101, Systems Walkdown Program) states that “. . . evidence of aging shall be documented on a DER and recorded on the System Walkdown Report” (a Deviation/Event Report (DER) is the NMPNS document for entering issues into the corrective action program). Therefore, the acceptance criterion for license renewal walkdowns is any evidence of aging. As part of the enhancement to the “Acceptance Criteria” attribute described in LRA Section B2.1.33, NMPNS intends to use EPRI reports related to identification of aging issues as a basis for training system engineers to recognize the evidence of (acceptance criteria for) various aging effects. See the response to RAI B2.1.33-2 above for a listing of the applicable EPRI reports.

RAI B2.1.33-4

The program description of B2.1.33 states that the system walkdown program manages aging effects for accessible external surfaces of selected SSCs WSLR at NMP. Discuss the basic approaches and program(s) used by NMP to manage aging effects for inaccessible external surfaces of SSCs WSLR.

Response

The Systems Walkdown Program relies on visual inspections of accessible external surfaces to detect aging effects. The evidence of aging, however, may be applicable to both accessible and inaccessible component surfaces, depending on the material of the component and the environment to which it is exposed. Any evidence of aging, or the lack thereof, on accessible surfaces is generally indicative of the condition of inaccessible external surfaces and is considered an effective way to manage inaccessible surfaces. As part of the enhancement to the “Parameters Monitored/Inspected” attribute described in LRA Section B2.1.33 to “provide guidance for assessment of identified deterioration,” NMPNS will include direction to evaluate potentially susceptible inaccessible areas when evidence of aging is detected.

RAI B2.1-33-5

With respect to the “enhancements” section of B2.1.33, System Walkdown Program, provide additional information listed below:

Discuss the specific aging management attributes to be included under “Scope.”

- § Taking (a) “mechanical penetrations,” if applicable, and (b) NSR piping, fittings, and equipment in the NMP1 Hydrogen Water Chemistry System as examples, elaborate on typical parameters to be monitored or inspected and discuss typical guidance for assessment of identified degradation to be included under “parameters monitored/inspected.”*
- § Discuss typical items to be included in the “upgraded program documentation” under “Administrative Controls.”*

§ For the same examples as indicated in Item (2) above, explain the contents of a methodology that specifies consistent criteria for program data collection under "Detection of Aging Effects."

§ For the same examples as indicated in Item (2) above, explain the contents of acceptance criteria for visual inspections that will ensure intended function(s) are maintained under CLB design conditions.

Response

The following responses correspond to the specific requests listed in the RAI.

First Sentence of RAI

LRA Section B2.1.33, under "Enhancements" heading, states the following:

"Scope - explicitly state the aging management attributes, including the systems and component types/commodities included in the program."

The word "attributes" specifically refers to the aging effects that system engineers will be looking for during their walkdowns. The aging effects associated with this program include loss of material (due to corrosion), material degradation (such as cracking, elastomer degradation, and weathering), and leakage.

First Bullet Item of RAI

- (a) For mechanical penetrations, the Systems Walkdown Program is not credited for aging management. Mechanical penetrations are managed under the Structures Monitoring Program (LRA Section B2.1.28) and the ASME Section XI Inservice Inspection (Subsections IWE and IWL) Programs (LRA Sections B2.1.23 and B2.1.24).
- (b) For the non-safety-related (NSR) piping, fittings, and equipment in the NMP1 Hydrogen Water Chemistry System (i.e., the reactor water monitoring loop), the aging effects to be managed are loss of material and cracking. Therefore, the parameters to be inspected for are corrosion, surface cracks, leakage, and indications of leakage (i.e., wet spots on floors).

With respect to typical guidance for assessing identified degradation, NMPNS intends to use the guidance provided in EPRI reports related to aging management issues as part of implementing the enhancements described in LRA Section B2.1.33. For example, EPRI Report 1009743, "Aging Identification and Assessment Checklist – Mechanical Components," includes information on potential consequences if no corrective action is taken to address identified degradation. This information would be used as part of the assessment performed under the NMPNS corrective action program to evaluate the impact on the specific component.

Second Bullet Item of RAI

At the time of submittal of the LRA, the NMPNS Systems Walkdown Program was implemented through department administrative instructions that were not subject to the 10 CFR 50, Appendix B administrative controls. The program enhancement identified in the LRA was for the implementing documents to be upgraded to a department procedure, which would be subject to site administrative procedural controls in accordance with 10 CFR 50, Appendix B. Presently, the department implementing document has been converted to a procedure that has been processed in accordance with the administrative controls of the NMPNS 10 CFR 50, Appendix B program.

Third Bullet Item of RAI

As stated in LRA Section B2.1.33 under the "Detection of Aging Effects" enhancement, NMPNS will "define a methodology that specifies consistent criteria for program data collection." For the NMP1 Hydrogen Water Chemistry System NSR piping, fittings, and equipment, this means that the system engineer will utilize a checklist that ensures the same components are inspected each time and the parameters inspected (i.e., corrosion, cracking, leakage) will be the same. Additionally, since NMPNS intends to use the EPRI reports related to aging management issues as a basis for the inspections, the system engineers will be trained to a consistent base of knowledge. Therefore, the combination of consistent procedural controls and training will ensure that the program data collection will be consistent.

Fourth Bullet Item of RAI

The acceptance criterion for visual inspections under the Systems Walkdown Program is any evidence of aging. For the NSR piping, fittings, and equipment associated with the NMP1 Hydrogen Water Chemistry System, this would translate to any signs of corrosion, water leaking from valve bodies or pipe joints, any indications of water pooling on the floor, or any visual surface cracks in the piping. Since the intended function for these components is "NSR Functional Support," the identification of any evidence of aging would ensure that corrective actions would be taken prior to any degradation that could ultimately result in a component failure with the potential to adversely affect safety-related components.