Constellation Energy
Nine Mile Point Nuclear Station

P.O. Box 63
Lycoming, New York 13093

January 31, 2005
NMP1L 1922

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 Sections 2.2, 2.3.3, and 2.3.4, and Scoping and Screening Methodology (TAC Nos. MC3272 and MC3273)

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 19, 2004, the NRC requested additional information regarding Sections 2.2, 2.3.3, and 2.3.4 of the License Renewal Application. The NMPNS responses to those requests for additional information (RAIs) were provided in NMPNS letter NMP1L 1905 dated December 22, 2004; however, only partial responses were provided for four (4) of the RAIs. Additional information is provided in Attachment 1 to complete the NMPNS responses for those four RAIs. A copy of the license renewal boundary drawings associated with one of the RAI responses is provided in Attachment 3 to aid the NRC staff in their review. These drawings are for information only and are not considered part of the application.

In a letter dated November 22, 2004, the NRC requested additional information regarding the scoping and screening methodology utilized to prepare the License Renewal Application. The NMPNS responses to six (6) of those eight (8) RAIs were provided in NMPNS letter NMP1L 1904 dated December 22, 2004. Responses to the two remaining scoping and screening methodology RAIs are provided in Attachment 2.

A107

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,

Timothy J. O'Connor
Plant General Manager

TJO/DEV/jm

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

I, Timothy J. O'Connor, being duly sworn, state that I am Nine Mile Point Plant General Manager, 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 31st day of January, 2005.

WITNESS my Hand and Notarial Seal:

Sandra A. Oswald
Notary Public

My Commission Expires: 1/31/05
Date

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

Attachments:

1. Responses to Four (4) NRC Requests for Additional Information (RAI) Regarding Sections 2.2, 2.3.3, and 2.3.4 of the License Renewal Application
2. Responses to Two (2) NRC Requests for Additional Information (RAI) Regarding Scoping and Screening Methodology
3. License Renewal Boundary Drawings Associated with the Response to RAI 2.3.3.B.22-1 Regarding the NMP2 Radiation Monitoring System

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 Four (4) NRC Requests for Additional Information (RAI)

Regarding Sections 2.2, 2.3.3, and 2.3.4 of the License Renewal Application

In letter NMP1L 1905 dated December 22, 2004, Nine Mile Point Nuclear Station, LLC (NMPNS) provided responses to the requests for additional information (RAIs) contained in the NRC letter dated November 19, 2004; however, only partial responses were provided for four (4) of the RAIs. This attachment provides additional information to complete the NMPNS responses to those four RAIs. Each NRC RAI is repeated, followed by the revised NMPNS response for Nine Mile Point Unit 1 (NMP1) and/or Nine Mile Point Unit 2 (NMP2), as applicable. Revisions to the License Renewal Application (LRA) are described where appropriate. The revisions are highlighted by shading unless otherwise noted.

RAI 2.3.3.A.4-2

The LR drawings do not show air cylinders that are the actuators for valves, as being subject for AMR. This is based on the assumption that the valves will go to their fail-safe position on loss of air pressure. This would be true for single acting air cylinders with springs. But for double acting cylinders, one of the cylinders requires air pressure to effect valve repositioning to its fail-safe position. Therefore the double acting cylinders have a pressure boundary function. Provide the basis for excluding the double acting cylinders from AMR.

Response (Revised)

NMPNS has performed a reevaluation of the functions of valve actuators with double acting cylinders for NMP1 and has concluded that one actuator requires an aging management review while six others do not. The results of this review are described below.

NMP1 has valve actuators with double acting cylinders in the Containment Spray, Reactor Building Closed Loop Cooling (RBCLC), and Spent Fuel Pool Cooling (SFP) Systems.

1. There are four subject valves in the Containment Spray System. These are the containment spray drywell inlet isolation valves whose safety function is in the open position to provide water to the primary and secondary loops of the Containment Spray System for containment cooling. These valves do not have a safety function in the closed position since the containment isolation function of the Containment Spray System is met via a water seal (see NMP1 UFSAR Section VII.B). License Renewal (LR) drawing LR-18012-C, Sheet 2, shows these valves (IV-80-15, 80-16, 80-35, and 80-36) in their normally open position and

indicates that Note 8 is applicable. Note 8 is located on LR drawing LR-18012-C, Sheet 1, and states these valves "fail open on loss of electrical (DC) power and fail as is on loss of air." Since these valves are normally in the open position, fail "as is" on loss of air, and are not required to change position to perform their safety function, the double acting cylinder actuators do not require an aging management review.

2. The RBCLC System contains one valve with a double acting cylinder actuator. This valve is the temperature control valve for the system and regulates the amount of cooling provided to the RBCLC System from the Service Water System. This is one of the system and component safety functions. LR drawing LR-18022-C, Sheet 2, shows this valve (TCV-70-137). This valve has a fail safe position of "as is," so as to continue to provide the same amount of cooling to the RBCLC System loads in the event of a loss of air pressure to the actuator. Since the RBCLC temperature control valve requires air pressure to perform its safety function (i.e., to throttle to regulate system temperature), its associated double acting cylinder actuator requires an aging management review. The associated LRA changes are provided below.

3. There are two valves in the SFP System whose actuators have double acting cylinders. They are both shown on LR drawing LR-18008-C. One (BV-54-17) is the normally open pump suction valve from the spent fuel pool surge tanks. This valve has a fail safe position of "as is" to maintain cooling of the spent fuel pool water. The second valve (BV-54-18) is the normally closed pump suction valve from the reactor internals storage cavity. The safety function of this valve is in the closed position to form part of the pressure boundary for the spent fuel pool cooling system. This valve is only used during refueling operations when the water level is raised to support refueling operations. The open position for this valve does not perform a safety function. The fail safe position of this valve is "as is." Therefore, since both valves are normally in their required safe position and do not require a change in position to perform their safety function, their associated double acting cylinder actuators do not require an aging management review.

Based upon the above-described component safety functions and the fail safe position required for the subject valves, NMP1 has one double acting cylinder actuator (RBCLC System valve TCV-70-137) that requires an aging management review.

LRA Revisions

LRA Table 2.3.3.A.17-1 (page 2.3-98) is revised to add a new component type of "Actuator" with an intended function of "Pressure Boundary," as follows:

Table 2.3.3.A.17-1
NMP1 Reactor Building Closed Loop Cooling Water System

Component Type	Intended Functions
Actuator	Pressure Boundary

In LRA Section 3.3.2.A.15 (page 3.3-28), under the "Environments" heading, "Dried Air or Gas" is added.

LRA Table 3.3.2.A-15 (page 3.3-151) is revised to add a row for the "Actuator" component type, as shown on the following page.

Table 3.3.2.A-15 Auxiliary Systems
NMP1 Reactor Building Closed Loop Cooling Water 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
Actuators	PB	Aluminum	Air	None	None			None
			Dried Air or Gas	None	None			None

RAI 2.3.3.B.5-4

The LR drawings do not show the air cylinders as part of the license renewal boundary. This is based on the assumption that the valves will go to their fail-safe position on loss of air pressure. This would be true for single acting air cylinders with springs. But for double acting cylinders, one of the cylinders requires air pressure to effect valve repositioning to its fail-safe position. Therefore the double acting cylinders have a pressure boundary function. Please provide the basis for excluding the double acting cylinders from AMR.

Response (Revised)

NMPNS has performed a reevaluation of the functions of valve actuators with double acting cylinders for NMP2 and has concluded that these components in the Standby Gas Treatment System perform a pressure boundary intended function for license renewal. Therefore, these actuators required an aging management review. The results of this review are described below and are included in a revision to the LRA, which is also described below.

NMP2 has valve actuators with double acting cylinders in the Main Steam and Standby Gas Treatment (GTS) Systems. The applicable valves in Main Steam System are the Main Steam Isolation Valves and are addressed in the response to RAI 2.3.4.B.4-2 below.

For the GTS System, one of its safety functions is to maintain a negative pressure in the Reactor Building under accident conditions. This is accomplished by recycling a portion of the GTS fan discharge through pressure control valves. These pressure control valves (one for each division of GTS) are air operated valves with actuators having double acting cylinders. During their design basis operation, the valves modulate to control pressure, which requires air pressure on both sides of the air cylinder. Therefore, for the valve to perform its safety function, the actuator has a pressure boundary function for license renewal. As such, LRA Table 3.2.2.B-6 is being revised to add an "Actuator" component type and the corresponding results from the aging management review.

LRA Revisions

LRA Table 2.3.2.B.8-1 (page 2.3-52) is revised to add a new component type of "Actuator" with an intended function of "Pressure Boundary," as follows:

Table 2.3.2.B.8-1
NMP2 Standby Gas Treatment System

Component Type	Intended Functions
Actuator	Pressure Boundary

In LRA Section 3.2.2.B.6 (page 3.2-17), under the "Environments" heading, "Dried Air or Gas" is added.

LRA Table 3.2.2.B-6 (page 3.2-107) is revised to add a row for the "Actuator" component type, as shown on the following page.

Table 3.2.2.B-6 Engineered Safety Features Systems
NMP2 Standby Gas Treatment 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
Actuator	PB	Carbon or Low Alloy Steel (Yield Strength < 100 Ksi)	Air	Loss of Material	Systems Walkdown Program	V.E.1-b	3.2.1.B-10	A
			Dried Air or Gas	None	None			None

RAI 2.3.3.B.22-1

LRA Section 2.3.3.B.22 states that:

> *"The NMP2 radiation monitoring system is designed to initiate appropriate manual or automatic protective action to limit the potential release of radioactive materials from the reactor vessel, primary and secondary containment, and fuel storage areas if predetermined radiation levels are exceeded in major/process effluent streams, and to provide main control room personnel with radiation level indication throughout the course of accident. The radiation monitoring system consists of a computer-based digital radiation monitoring system, a computer-based gaseous effluent monitoring system, and a main stem line radiation monitors."*

LRA Section 2.3.3.B.22 regarding the NMP2 radiation monitoring system states that "portions of the system consists of off-line gas and liquid monitors which consist of piping, filters, pumps, sampler/detectors, valves, and instrument." The applicant did not identify the radiation monitoring system components that are in scope of license renewal due to 10CFR54.4(a)(1) and 10CFR54.4(a)(2). Furthermore, an LR drawing for the NMP2 radiation monitoring system was not provided to show the portions of this system containing components within the scope of license renewal. Please identify the components of the radiation monitoring system that are in-scope of license renewal in accordance with the requirements of 10CFR54.4(a)(1) and 10CFR54.4(a)(2), and justify the exclusion of these components from being subject to an AMR in accordance with the requirements of 10 CFR 54.21(a)(1).

Response (Revised)

The NMP2 Radiation Monitoring System contains components that are subject to aging management review; however, they were inadvertently omitted from the original LRA. These components are the piping, pumps, filters, flow elements, and valves that allow sampling of the process system fluid for radioactivity. The process systems that are monitored for radioactivity and whose radiation monitoring function are within the scope of license renewal are the Containment Monitoring (CMS), Control Building Ventilation (HVC), Reactor Building Ventilation (HVR), and Service Water (SWP) Systems. The results of the aging management reviews conclude that for the CMS, HVC and HVR systems, there are no aging effects since the components are made of wrought austenitic stainless steel and are exposed to an Air environment. For the radiation monitoring components in the SWP system, they are also constructed of wrought austenitic stainless steel but are exposed to a Raw Water environment. As such, the applicable aging effect is Loss of Material due to pitting, crevice, and microbiologically influenced corrosion. The associated aging management program is the Preventive Maintenance Program. Corresponding LRA revisions are described below.

A copy of the license renewal (LR) boundary drawings showing the Radiation Monitoring System (i.e., those listed below) is provided in Attachment 3 to aid the NRC staff in their review. These drawings are for information only and are not considered part of the application.

LRA Revisions

In Section 2.3.3.B.22 (page 2.3-163), under the "License Renewal Drawing(s)" heading, "None (see Components Subject to an AMR below)" is deleted and replaced with the following:

"Components requiring an AMR for the Radiation Monitoring System are highlighted on the following drawings:

- LR-11, Sheet C, Service Water System
- LR-11, Sheet H, Service Water System
- LR-11, Sheet P, Service Water System
- LR-52, Sheet G, Reactor Building Ventilation
- LR-53, Sheet B, Control Building Ventilation
- LR-82, Sheet A, Containment Atmosphere Monitoring
- LR-400758, P&ID DRMS Offline Liquid Monitor Service Water System
- LR-400759, P&ID DRMS Offline Gas Particulate Monitor Reactor Building Ventilation
- LR-400762, P&ID DRMS Offline Gas Monitor Control Room Ventilation
- LR-400863, P&ID DRMS Offline Gas Particulate Monitor Containment Monitoring System"

In Section 2.3.3.B.22 (page 2.3-163), under the "Components Subject to an AMR" heading, the existing paragraph is deleted and replaced with the following:

"The component types requiring an AMR for the Radiation Monitoring System and their intended functions are shown in Table 2.3.3.B.22-1. The AMR results for these component types are provided in Table 3.3.2.B-32.

Table 2.3.3.B.22-1
NMP2 Radiation Monitoring System

Component Type	Intended Functions
Filters	Pressure Boundary, Filtration
Flow Elements	Pressure Boundary, Flow Restriction
Piping and Fittings	Pressure Boundary
Pumps	Pressure Boundary
Valves	Pressure Boundary"

In Section 3.3.1 (page 3.3-3), under the "NMP2" heading, add the following:

"NMP2 Radiation Monitoring System (Section 2.3.3.B.22)"

In Section 3.3.2 (page 3.3-7), under the "NMP2" heading, add the following:

"Table 3.3.2.B-32 Auxiliary System – NMP2 Radiation Monitoring System – Summary of Aging Management Evaluation"

In Section 3.3.2 (page 3.3-10), under the "NMP2" heading, add the following:

"Section 3.3.2.B.32, NMP2 Radiation Monitoring System"

New Section 3.3.2.B.32, "NMP2 Radiation Monitoring System," is added, as follows:

"3.3.2.B.32 NMP2 Radiation Monitoring System

Material

The material of construction for the NMP2 Radiation Monitoring System components is:

- Wrought Austenitic Stainless Steel

Environments

The NMP2 Radiation Monitoring System components are exposed to the following environments:

- Air
- Raw Water

Aging Effect Requiring Management

The following aging effect, associated with the NMP2 Radiation Monitoring System, requires management:

- Loss of Material

Aging Management Program

The following aging management program manages the aging effects for the NMP2 Radiation Monitoring System:

- Preventive Maintenance Program"

In Table 3.3.1.B (page 3.3-94), the "Discussion" column for Item Number 3.3.1.B-17 is revised to address the Radiation Monitoring System, as shown on the following pages.

New Table 3.3.2.B-32 is added to incorporate the aging management evaluation summary for the NMP2 Radiation Monitoring System components, as shown on the following pages.

Table 3.3.1.B NMP2 Summary of Aging Management Programs for the Auxiliary Systems Evaluated in Chapter VII of NUREG-1801

Item Number	Component	Aging Effect/ Mechanism	Aging Management Programs	Further Evaluation Recommended	Discussion
3.3.1.B-17	Components in or serviced by open-cycle cooling water systems	Loss of material due to general, pitting, crevice, and galvanic corrosion, MIC, and biofouling; buildup of deposit due to biofouling	Open-cycle cooling water system	No	Consistent with NUREG-1801. Additionally, the following components are consistent with, but not addressed in NUREG-1801: • Flow elements • Stainless steel pumps • Temperature elements Additionally, for the NMP2 Reactor Building carbon steel floor drain lines and valves, the NMP2 Control Building HVAC carbon steel valves, and the NMP2 Floor and Equipment Drains stainless steel flow elements that are in a raw water environment, the One-Time Inspection Program (Appendix B2.1.20) is credited for managing the aging effect of loss of material. For the NMP2 Reactor Building stainless steel floor drain lines and the carbon steel Control Building HVAC piping and fittings, the Preventive Maintenance Program (Appendix B2.1.32) is credited for managing the aging effect of loss of material in raw water environment. For the NMP2 Radiation Monitoring System monitor associated with the Service Water System, the Preventive Maintenance Program is also credited for the aging management of the associated components in lieu of the Open-Cycle Cooling Water System Program.

Table 3.3.2.B-32 Auxiliary Systems
NMP2 Radiation Monitoring 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
Filters	PB FLT	Wrought Austenitic Stainless Steel	Air	None	None			None
Flow Elements	PB FR	Wrought Austenitic Stainless Steel	Raw Water	Loss of Material	Preventive Maintenance Program	VII.C1.4-a	3.3.1.B-17	E,Q
			Air	None	None			None
Piping and Fittings	PB	Wrought Austenitic Stainless Steel	Raw Water	Loss of Material	Preventive Maintenance Program	VII.C1.1-a	3.3.1.B-17	E
			Air	None	None			None
Pumps	PB	Wrought Austenitic Stainless Steel	Raw Water	Loss of Material	Preventive Maintenance Program	VII.C1.4-a	3.3.1.B-17	E, Q
			Air	None	None			None
Valves	PB	Wrought Austenitic Stainless Steel	Raw Water	Loss of Material	Preventive Maintenance Program	VII.C1.2-a	3.3.1.B-17	E
			Air	None	None			None

RAI 2.3.4.B.4-2

LR drawings LR-1E-0 and LR-1F-0 show the inboard and outboard MSIVs, respectively, for each of the four main steam lines. These valves perform a safety-related function (system isolation) and are shown as requiring AMR on the drawings. However, the pneumatic actuators for these valves are not shown to require AMR. Since the actuators are required to effect operation of the MSIVs, the staff believes they should likewise be subject to AMR. Please justify exclusion of the MSIV actuators from requiring AMR.

Response (Revised)

NMPNS has reviewed the function of the NMP2 main steam isolation valve (MSIV) actuators and has concluded that an aging management review is not required for license renewal. The eight MSIVs are air operated valves that are normally open and have a fail safe position of closed. The actuator is a double acting cylinder and air is used to move the valve in both the open and closed directions. The valves are also equipped with a closing spring. These springs will close the valves upon loss of air pressure. While valve closure following loss of air is assisted by air from an air tank accumulator directed to the top of the actuator cylinder, the closing spring forces are sufficient to meet the accident analysis time limit (3 to 10 seconds) for MSIV closure without the air assist feature. Therefore, the air pressure boundary function of the actuators is not required for the MSIVs to travel to their fail-safe (closed) position. More information regarding the design and evaluation of the MSIVs is available in NMP2 USAR Section 5.4.5.

ATTACHMENT 2

Nine Mile Point Nuclear Station

Responses to Two (2) NRC Requests for Additional Information (RAI)

Regarding Scoping and Screening Methodology

In letter NMP1L 1904 dated December 22, 2004, Nine Mile Point Nuclear Station, LLC (NMPNS) provided responses to six (6) of the eight (8) requests for additional information (RAIs) contained in the NRC letter dated November 22, 2004. This attachment provides the NMPNS responses to the two remaining RAIs. Each NRC RAI is repeated, followed by the NMPNS response for Nine Mile Point Unit 1 (NMP1) and/or Nine Mile Point Unit 2 (NMP2), as applicable.

RAI 2.1-2 - 10 CFR 54.4(a)(1) Scoping of Safety-Related SSCs

10 CFR 54.4(a)(1)(iii) requires, in part, that the applicant consider within the scope of license renewal those systems, structures, and components that ensure the capability to prevent or mitigate the consequences of accidents which could result in potential offsite exposures comparable to those referred to in '50.34(a)(1), '50.67(b)(2), or '100.11. In Section 2.1.1.1, "Application of Safety-Related Scoping Criteria," of the LRA, the applicant stated that, because of plant-unique considerations or preferences, some components classified as safety-related in the facility database did not perform any of the safety-related intended functions of 10 CFR 54.4(a)(1). The applicant stated that these components may have been considered outside the scope of 10 CFR 54.4(a)(1). During the audit, the applicant described the process used to evaluate components classified as safety-related that did not perform a safety-related intended function. As part of the process, the applicant stated that the safety-classification of many safety-related components was re-evaluated in order to reconcile differences between scoping determinations and facility database information. Based on the audit, the staff requests a description of the process used during license renewal scoping activities to disposition components classified as safety-related that do not perform a safety-related intended function. In particular, the staff requests the applicant provide the following information:

a. *A description of any components or structures classified as safety-related in the facility safety-classification database that were not included within the scope of license renewal under the 10 CFR 54.4(a)(1) criteria. This description should include the basis for determining that these components do not perform a safety-related intended function. The response should also indicate if these components were included within the scope of license renewal under a different scoping criteria (e.g. '54.4(a)(2) or (a)(3)).*

b. *Describe the process used to reconcile the facility database safety classification information with scoping intended function determinations. In particular, the staff requests a description of the process including the scope of the review used to re-evaluate the safety-classification of SSCs to reconcile disparities with intended function determinations.*

Response

a. During the scoping and screening process for the Nine Mile Point (NMP) License Renewal Application (LRA) a small percentage of components were identified as being classified as safety-related but were not required to meet any intended function for compliance with 10 CFR 54.4(a)(1). These discrepancies were entered into the NMP correction action program for resolution. The following provides more information regarding the subject components identified for NMP1 and NMP2 and their resolution.

   NMP1

   Several components in non-safety related (NSR) systems were classified as safety-related (SR) in the plant component database (i.e., MEL1) when the license renewal project was started, but have since been reclassified as NSR. These components were entered into the corrective action program and reclassified in accordance with the design change process. Those components that contain liquid and are in the vicinity of SR equipment are still, however, considered within the scope of license renewal for criterion 10 CFR 54.4(a)(2).

   Also, there were instances of components identified as SR during the scoping and screening process that have been removed from the plant via the modification process. These components have been moved to the plant historical database.

   Both of the above situations represent administrative issues and did not result in properly classified SR components being excluded from the scope of license renewal.

   There are also components in MEL1 classified as SR that have been abandoned in place. These components are not within the scope of license renewal as they perform no system function and, therefore, do not perform any license renewal intended function. The reason that they have not been removed from MEL1 is that they are still installed in the plant. The reason for not reclassifying them as NSR is for historical purposes. There is, however, a comment associated with each component in the database that identifies them as being abandoned in place. This situation also represents an administrative issue and did not result in any SR components being excluded from the scope of license renewal.

   There are two SR components identified in MEL1 associated with the Main Steam System that are not within the scope of license renewal. These components are the main steam line nozzle plugs. These plugs are tools used to support maintenance activities during refueling outages. These plugs are classified in the database as SR, but are not required to accomplish any of the system intended functions and do not meet any of the license renewal scoping

criteria. Therefore, the two MSL plugs are not considered within the scope of license renewal.

NMP2

Similar to NMP1, NMP2 also had components originally classified as SR that were reclassified as NSR during the course of the license renewal project. They were resolved in accordance with the corrective action program and the design change process. However, those components that contain water and are in the vicinity of SR equipment are within the scope of license renewal for criterion 10 CFR 54.4(a)(2). This situation represents an administrative issue and did not result in any SR components being excluded from the scope of license renewal.

The NMP2 plant database (i.e., MEL2) also contains components classified as SR that are abandoned in place. The justification for this designation is the same as provided for NMP1 above. This situation also represents an administrative issue and did not result in any SR components being excluded from the scope of license renewal.

The NMP2 plant database has two additional SR pieces of equipment that fall outside of license renewal scoping criteria. The first is the Diesel Generator Building Ventilation System spare SR fan stored in the warehouse. Since it is not installed in the plant, it supports no system intended function and, therefore, does not meet any of the license renewal scoping criteria. The second piece of equipment is an uninstalled spare pump. Similarly, since it is not installed in the plant, it supports no system intended function and does not meet any of the license renewal scoping criteria. This situation represents an administrative issue and did not result in any SR components being excluded from the scope of license renewal.

b. For those situations where a SR component was identified that did not appear to meet the 10 CFR 54.4(a)(1) criterion, NMP utilized a multi-tier review process. The process began with the identification of an apparent discrepancy. The LR team member would review the situation with a system and/or design engineer to obtain more information. If it still appeared that there was a component identified as SR that did not support a SR system function, it would be elevated to license renewal project supervision. If it could not be resolved at that point or if the plant database required a revision, then the issue was entered into the corrective action program for resolution. For any resolution that required a change to a design document or the plant database, the design and/or configuration change process was used. Both of these processes require a review and approval of the change by an individual other than the preparer. The resolutions of these discrepancies were then fed back to the LR team member for proper incorporation into the scoping and screening process.

RAI 2.1-7 - Evaluation of Insulation

During the audit, the applicant was unable to adequately describe the evaluation that was performed to determine if any insulation installed in the plant was required to support any system intended functions identified during the scoping process. As a result, the staff requests that the applicant describe any intended functions performed by insulation or the basis for determining that insulation (e.g. piping insulation) did not meet the scoping criteria described in 10 CFR 54.4(a)(1), (a)(2) or (a)(3).

Response

NMPNS evaluated thermal insulation used at NMP1 and NMP2 to determine if any license renewal functions per 10 CFR 54.4(a)(1), (a)(2), or (a)(3) were performed. The only intended function to meet the license renewal scoping criteria was fire wrap, used for fire protection, which meets criterion (a)(3). The following provides the results of the review performed for thermal insulation for each of the license renewal scoping criteria.

10 CFR 54.4(a)(1): Insulation is not relied upon to remain functional during and following design-basis events (as defined in 10 CFR 50.49 (b)(1)) to ensure any of the following functions:

(i) The integrity of the reactor coolant pressure boundary;
(ii) The capability to shut down the reactor and maintain it in a safe shutdown condition; or
(iii) The capability to prevent or mitigate the consequences of accidents which could result in potential offsite exposures comparable to those referred to in § 50.34(a)(1), § 50.67(b)(2), or § 100.11.

To meet criterion (a)(1), the insulation function must provide for maintaining safety-related structures, systems, or components (SSCs) within their accident design limits following a design basis accident, such that the SSC safety-related intended function could be performed. Thermal insulation, other than the fire wrap, is used only to maintain SSCs in a state of operational readiness. Normal station actions, such as operator rounds, surveillances, and temperature monitoring, provide confidence that appropriate operating parameters are met. Corrective actions are taken as needed when deviations are encountered. However, maintenance of SSCs in a state of readiness does not meet the three functions covered under criterion 10 CFR 54.4(a)(1).

10 CFR 54.4(a)(2): No credible failure of insulation was discovered that could prevent satisfactory accomplishment of any of the functions identified in § 54.4(a)(1). To meet criterion (a)(2), the insulation would have to fail so as to prevent the fulfillment of a system intended function. Insulation was evaluated to that end in the early 1990s, relative to engineered safety systems taking suction from suppression pools, and significant changes were made to the suction strainer systems so that unacceptable consequences would not occur. Thus, insulation does not come into scope under the (a)(2) criterion.

10 CFR 54.4(a)(3): Insulation is not relied upon in safety analyses or plant evaluations to perform a function that demonstrates compliance with the Commission's regulations for fire protection (10 CFR 50.48), environmental qualification (10 CFR 50.49), pressurized thermal shock (10 CFR 50.61), anticipated transients without scram (10 CFR 50.62), or station blackout (10 CFR 50.63).

As stated above, the only intended function to meet the license renewal scoping criteria was fire wrap, used for fire protection and meeting criterion (a)(3). These structural steel fire protection coatings are in scope and subject to aging management review (AMR). They are included as Component Type "Fire Wrap in Air" in LRA Table 2.4.C.2-1. The AMR of the fire wrap is addressed in LRA Section 3.5.2.C.2 and in Table 3.5.2.C-2. Therefore, other than fire wrap, insulation is not in scope for license renewal for either NMP1 or NMP2.

ATTACHMENT 3

Nine Mile Point Nuclear Station

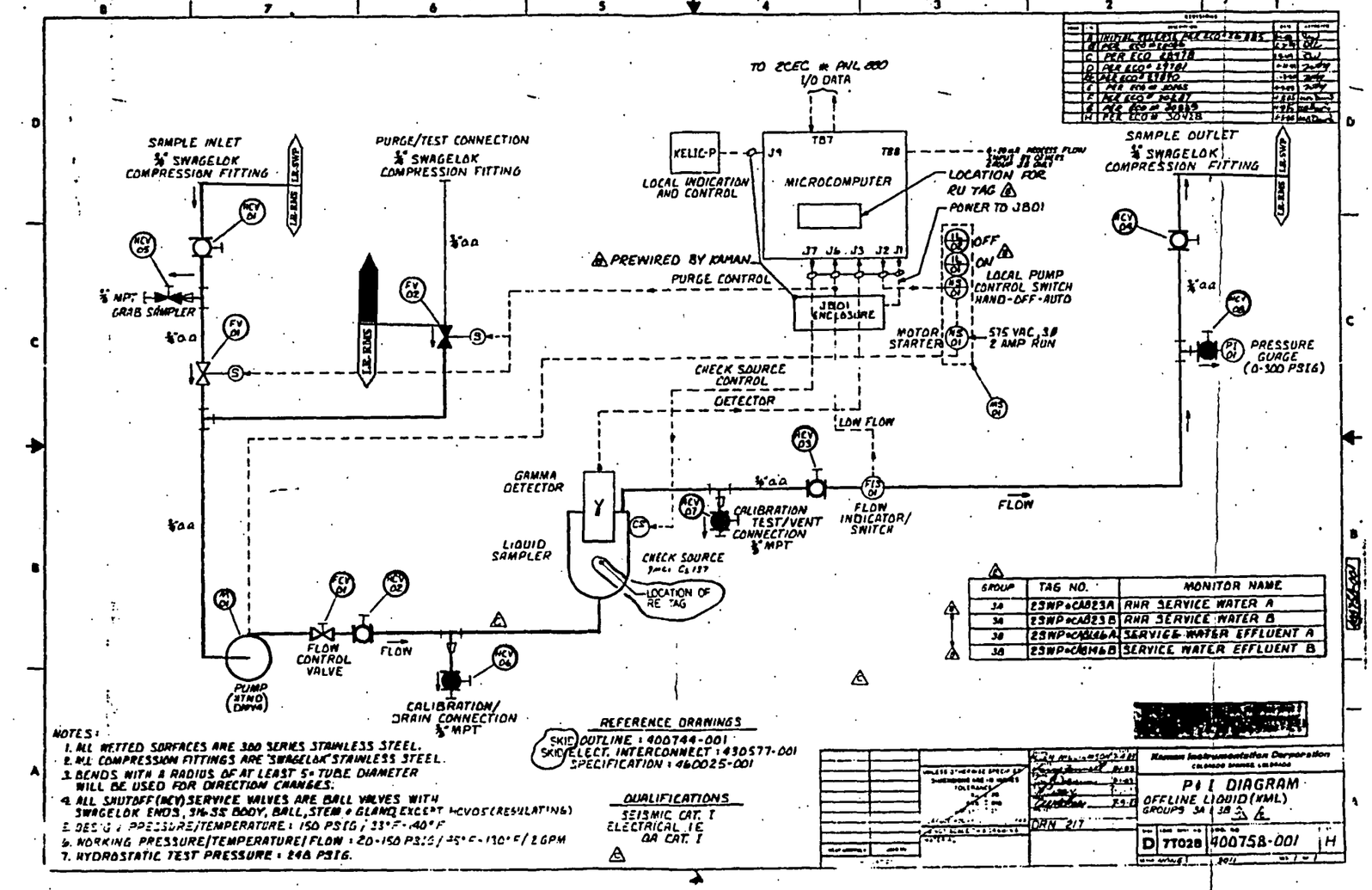
License Renewal Boundary Drawings Associated with the Response to RAI 2.3.3.B.22-1

Regarding the NMP2 Radiation Monitoring System

The following "for information only" license renewal drawings are provided in this attachment:

- LR-400758, P&ID DRMS Offline Liquid Monitor Service Water System
- LR-400759, P&ID DRMS Offline Gas Particulate Monitor Reactor Building Ventilation
- LR-400762, P&ID DRMS Offline Gas Monitor Control Room Ventilation
- LR-400863, P&ID DRMS Offline Gas Particulate Monitor Containment Monitoring System

LR NOTE:
PLEASE REFER TO DRAWING LR-000 SHEETS 2A THROUGH 2F FOR LR BOUNDARY DRAWING NOTES, SYMBOLS, AND ACRONYMS.



GROUP	TAG NO.	MONITOR NAME
3A	23WP*CAB23A	RHR SERVICE WATER A
3A	23WP*CAB23B	RHR SERVICE WATER B
3B	23WP*CAB146A	SERVICE WATER EFFLUENT A
3B	23WP*CAB146B	SERVICE WATER EFFLUENT B

NOTES:
1. ALL WETTED SURFACES ARE 300 SERIES STAINLESS STEEL.
2. ALL COMPRESSION FITTINGS ARE "SWAGELOK" STAINLESS STEEL.
3. BENDS WITH A RADIUS OF AT LEAST 5* TUBE DIAMETER WILL BE USED FOR DIRECTION CHANGES.
4. ALL SHUTOFF (HCV) SERVICE VALVES ARE BALL VALVES WITH SWAGELOK ENDS, 316 SS BODY, BALL, STEM & GLAND EXCEPT HCV05 (REGULATING)
5. DESIGN PRESSURE/TEMPERATURE: 150 PSIG / 33°F - 140°F
6. WORKING PRESSURE/TEMPERATURE/FLOW: 20-150 PSIG / 45°F - 130°F / 2 GPM
7. HYDROSTATIC TEST PRESSURE: 248 PSIG.

REFERENCE DRAWINGS
SKID OUTLINE: 400744-001
SKID ELECT. INTERCONNECT: 430577-001
SPECIFICATION: 460025-001

QUALIFICATIONS
SEISMIC CAT. I
ELECTRICAL IE
QA CAT. I

[redacted]

Kaman Instrumentation Corporation
COLORADO SPRINGS, COLORADO

P & I DIAGRAM
OFFLINE LIQUID (KML)
GROUPS 3A & 3B

DRN 217

D 77028 400758-001 H

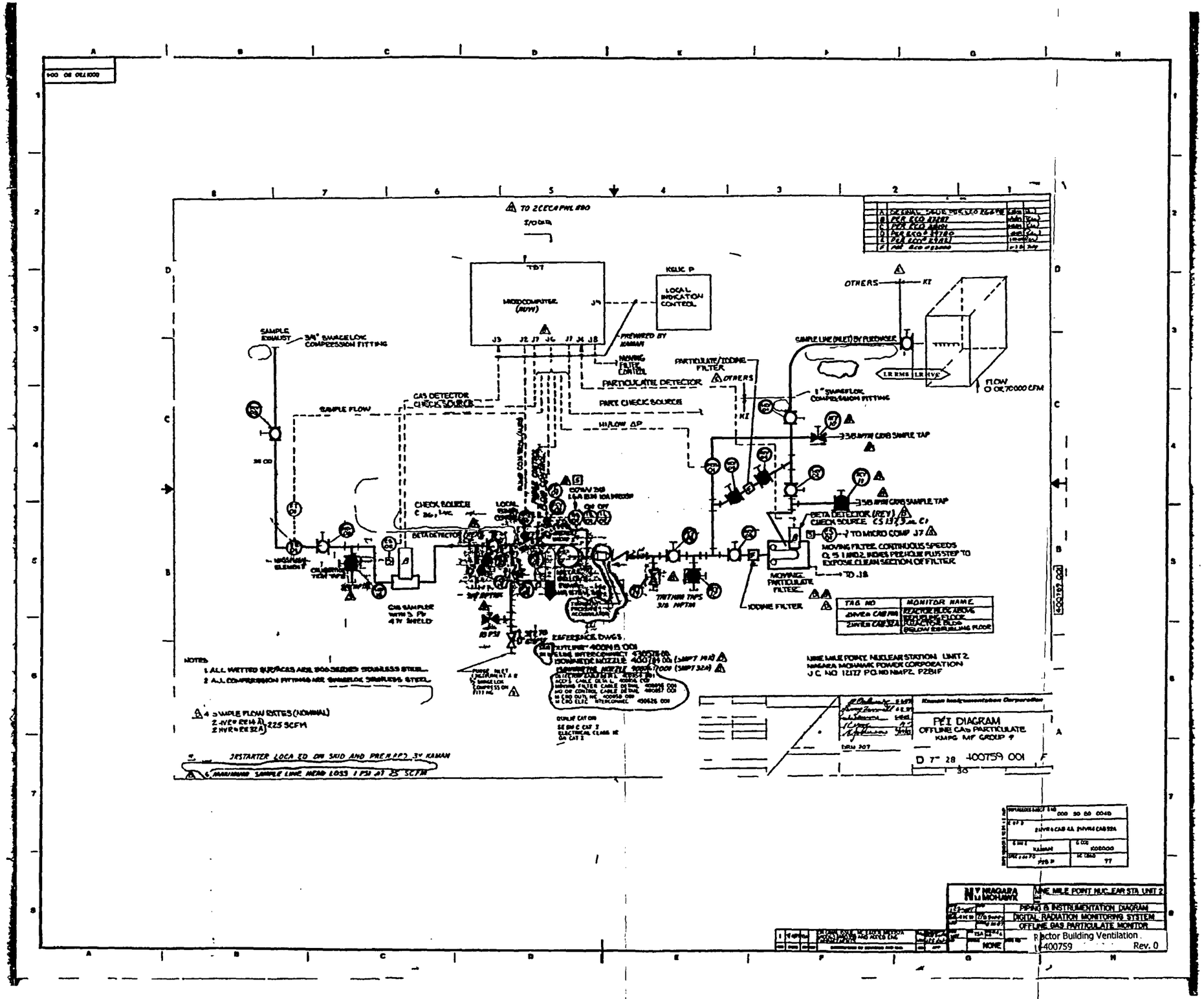
SUPERSEDES SHEET FILE NO. 0001-731-801-0164
GROUP ID 23WP*CAB23A, 23WP*CAB23B, 23WP*CAB146A, 23WP*CAB146B
MFG NAME KAMAN
MFG CODE K02000
SPEC NO P26F
SHEET NO 12177

Constellation Energy
Nine Mile Point Nuclear Station

NINE MILE POINT NUCLEAR STA-UNIT 2
PIPING & INSTRUMENTATION DIAGRAM
DIGITAL RADIATION MONITORING SYSTEM
OFFLINE LIQUID MONITOR
Service Water System

NONE
LR-400758
Rev. 0

ORIGINAL ISSUE, ADDED ENGINEERING ENHANCEMENTS


TO 2CEC-PNL 880
I/O DATA
TDT
MICROCOMPUTER (MDM)
KSUC P
LOCAL INDICATION CONTROL
SAMPLE EXHAUST
3/8" SWAGELOK COMPRESSION FITTING
PROVIDED BY KAMAN
MOVING FILTER CONTROL
PARTICULATE/IODINE FILTER
OTHERS
PARTICULATE DETECTOR
SAMPLE LINE (INLET) BY PURCHASER
LR RMS
LR HVE
FLOW 0 OR 70000 CFM
1" SWAGELOK COMPRESSION FITTING
SAMPLE FLOW
GAS DETECTOR CHECK SOURCE
PART CHECK SOURCE
HI/LOW ΔP
3/8 OD
3/8 SWAGELOK SAMPLE TAP
BETA DETECTOR (REV) CHECK SOURCE
TO MICRO COMP J7
MOVING FILTER. CONTINUOUS SPEEDS 0, 5, 1 AND 2 INCHES PER HOUR PLUS STEP TO EXPOSE CLEAN SECTION OF FILTER
TO J8
MOVING PARTICULATE FILTER
IODINE FILTER
CHECK SOURCE
GAS SAMPLER WITH 3 Pb 4 W SHIELD
3/8 NPTM
TRITIUM TAPS 3/8 NPTM
BACKBOARD DWG'S
OUTLINE 400118 001
INTERCONNECT 400759 001
NOZZLE 400759 001 (SHEET 1 OF 3)
CONNECTING CABLE 400759 001 (SHEET 3 OF 3)
DUPLEX CAT DIA
SEISMIC CAT I
ELECTRICAL CLASS 1E
QA CAT I
TAG NO | MONITOR NAME
2HVR-CAB 4A | REACTOR BLDG ABOVE REFUELING FLOOR
2HVR-CAB 32A | REACTOR BLDG (BELOW REFUELING FLOOR
NOTES:
1. ALL WETTED SURFACES ARE 300 SERIES STAINLESS STEEL.
2. ALL COMPRESSION FITTINGS ARE SWAGELOK STAINLESS STEEL.
3 SAMPLE FLOW RATES (NOMINAL)
2-HVR-CAB 4A 225 SCFM
2-HVR-CAB 32A
4. RESTARTER LOCATED ON SKID AND PREWIRED BY KAMAN
5. MAXIMUM SAMPLE LINE HEAD LOSS 1 PSI AT 25 SCFM
NINE MILE POINT NUCLEAR STATION UNIT 2
NIAGARA MOHAWK POWER CORPORATION
J.C. NO. 12117 P.O. NO. NMPZ. P2841F
P&I DIAGRAM
OFFLINE GAS PARTICULATE
KAMAN MF GROUP 7
D 7 28 400759 001 F
NIAGARA MOHAWK
NINE MILE POINT NUCLEAR STA UNIT 2
PIPING & INSTRUMENTATION DIAGRAM
DIGITAL RADIATION MONITORING SYSTEM
OFFLINE GAS PARTICULATE MONITOR
NONE
Reactor Building Ventilation
D-400759
Rev. 0

LR NOTE:
PLEASE REFER TO DRAWING LR-000 SHEETS 2A THROUGH 2F FOR LR BOUNDARY DRAWING NOTES, SYMBOLS, AND ACRONYMS.

LTR	REVISIONS		
—	A	ORIGINAL ISSUE PER ECO 20692	
—	B	PER ECO 21112	
—	C	PER ECO 20137	
—	D	PER ECO 20169	
—	E	PER ECO# 20170	
—	F	PER ECO# 21021	

TO ECEC & PNL 880

I/O DATA

TB7

MICROCOMPUTRE (RUN)

J4

J3 J2 J6

KELC-P

LOCAL INDICATION CONTROL

PRE WIRED BY KAMAN

SAMPLE EXHAUST

3/4" SWAGELOK COMPRESSION FITTING

3 B

GAS DETECTOR (1 PER UNIT SHARED)

SAMPLE FLOW

3/4" OD

HI/LOW ΔP

PURGE CONTROL

PUMP CONTROL (AUTO)

PUMP CONTROL

LOCAL PUMP CONTROL

E7&V 3Ø 1.4A FLA, 10A INTERUPT

ON OFF

CHECK SOURCE

Cs137, 1MC

BETA DETECTOR

METAL BELLOWS PUMP 1.5HP 575V, 3Ø, 1.5 HP

SET TO 6 8 & PSI PURGE INLET (INSTRUMENT AIR) 150 PSI MAX

3/4" SWAGELOK COMPRESSION FITTING

REFERENCE DWGS

OUTLINE: 400788-001

ELEC. INTERCONNECT: 430576-001

ISOKINETIC NOZZLE: 400764-002 (3 NPT 18A-D)

QUALIFICATION

SEISMIC CAT I

ELECTRICAL CLASS 1E

QA CAT I

OTHERS — KT

SAMPLE LINE (INLET) BY PURCHASER

HEAT TRACED BY PURCHASER (150°F MAX) 3/4" IT IS THE PURCHASER'S RESPONSIBILITY TO HEAT SAMPLE TO GREATER THAN 32°F BY POINT A (MONITOR INLET).

3/4" SWAGELOK COMPRESSION FITTING

OTHERS — KT

3 A

LR-RMS LR-HVC

FLOW 0/2250 CFM

1HVC-SMPT15A
1HVC-SMPT15B
1WR-SMPT15C
2HVC-SMPT15D

3/4" OD

3/8" NPTM GRAB SAMPLE TAP

PARTICULATE AND IODINE FILTERS

3/4" OD

3/8" NPTM GRAB SAMPLE TAP

120 V

HEAT TRACE

3

TAG NO	MONITOR NAME
2HVC-CAB18A	CONTROL ROOM AIR INTAKE A
2HVC-CAB18B	CONTROL ROOM AIR INTAKE B
2HVC-CAB18C	CONTROL ROOM AIR INTAKE C
2HVC-CAB18D	CONTROL ROOM AIR INTAKE D

NOTES:
1. ALL WETTED SURFACES 300 SERIES STAINLESS STEEL.
2. ALL COMPRESSION FITTINGS PER SWAGELOK STAINLESS STEEL.
3. SAMPLE LINE IS HEAT TRACED AND INSULATED FROM POINT A TO POINT B, PRE WIRED BY KAMAN.
4. SAMPLE FLOW RATES (NOMINAL) 2.25 SCFM.
5. MOTOR STARTER LOCATED ON SKID AND PRE WIRED BY KAMAN.
6. FOR DETAILS ON CONFIGURATION AND MOUNTING REFER TO ISOKINETIC NOZZLE OUTLINES.

NINE MILE POINT NUCLEAR STATION-UNIT 2
NIAGARA MOHAWK POWER CORPORATION
U.O. No. 13777 P.O. No. NMPS-P2019

Kaman Instrumentation Corporation
COLORADO SPRINGS, COLORADO

P&I DIAGRAM
OFFLINE GAS (KAG) GROUP 7

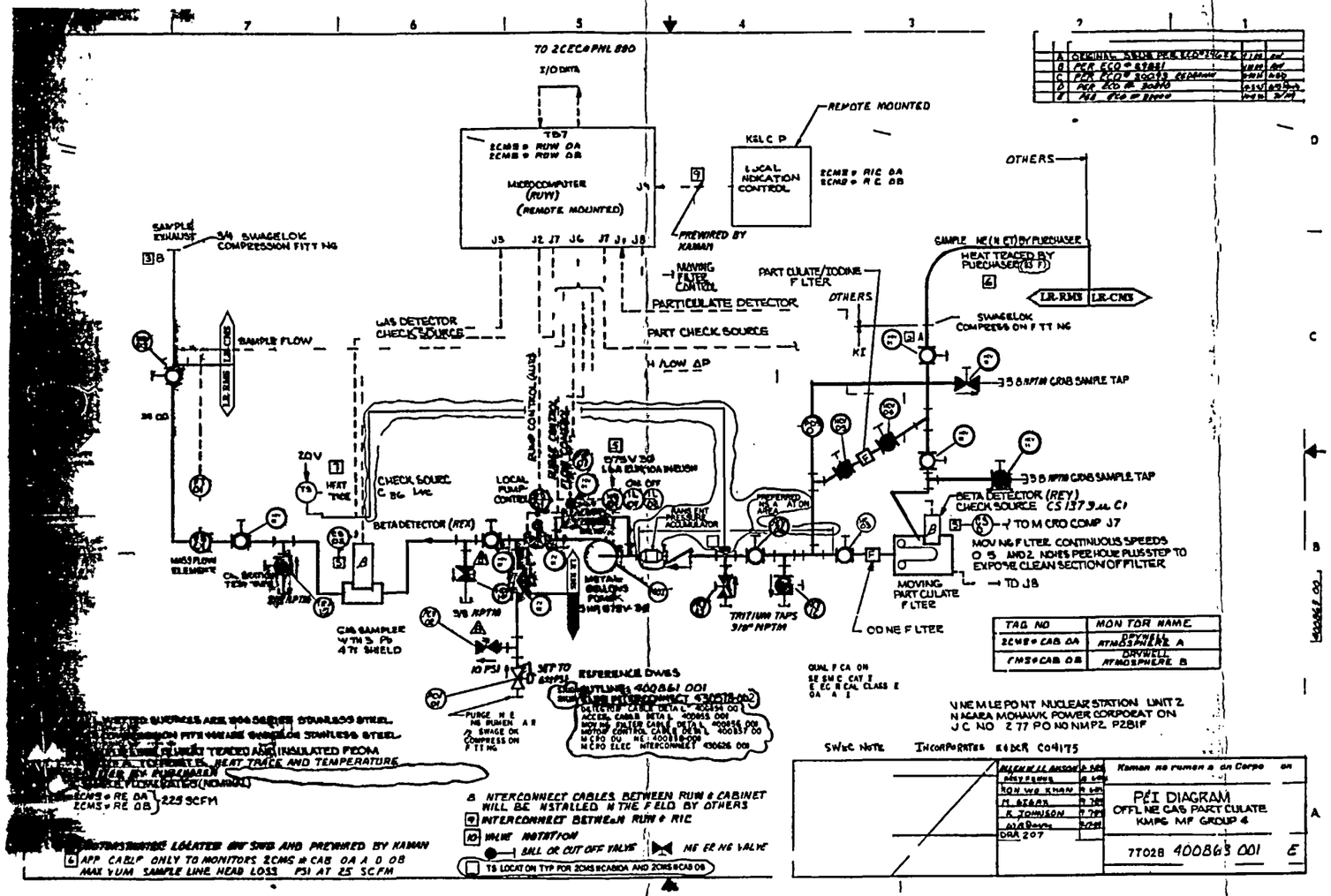
DRN 707

D | 7T028 | 400762-001 | F

1	M-487	ORIGINAL ISSUE, ADDED ENGINEERING ENHANCEMENTS

Constellation Energy — Nine Mile Point Nuclear Station

NINE MILE POINT NUCLEAR STA-UNIT 2
PIPING & INSTRUMENTATION DIAGRAM
DIGITAL RADIATION MONITORING SYSTEM
OFFLINE GAS MONITOR
Control Room Ventilation
LR-400762 Rev. 0

SUPERSEDES SHEC FILE NO	0001.780-801-0058
SCOPE	2HVC-CAB18A, 2HVC-CAB18B, 2HVC-CAB18C, 2HVC-CAB18D
SPEC SHEET NO	P8918
SPEC CODE	KAMAN
DRAWING NO	KOE000
	12177

LR NOTE:
PLEASE REFER TO DRAWING LR-000 SHEETS 2A THROUGH 2F FOR
LR BOUNDARY DRAWING NOTES, SYMBOLS, AND ACRONYMS.