



GPU Nuclear Corporation
Route 441 South
P.O. Box 480
Middletown, Pennsylvania 17057-0480
(717) 944-7621
Writer's Direct Dial Number:
(717) 948-8005

June 1, 1995
C311-95-2071

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

Dear Sir:

Subject: Three Mile Island Nuclear Station, Unit 1 (TMI-1)
Operating License No. DPR-50
Docket No. 50-289
Technical Specification Change Request No. 223

In accordance with 10 CFR 50.4(b)(1), enclosed is Technical Specification Change Request (TSCR) No. 223.

Also enclosed is a Certificate of Service for this request certifying service to the chief executives of the township and county in which the facility is located, as well as the designated official of the Commonwealth of Pennsylvania, Bureau of Radiation Protection.

The purpose of this TSCR is to request that the TMI-1 Technical Specifications be revised to delete the remaining portions of the TMI-1 Radiological Effluent Technical Specifications and relocate them in accordance with the guidance contained in NRC Generic Letter 89-01 and NUREG-1430. In addition, the Radiation Monitoring Systems surveillance requirement contained in Table 4.1-1 is modified to specify only those radiation monitors that have Limiting Conditions for Operation and revises some of the calibration frequencies.

GPU Nuclear considers this TSCR to be a Cost Beneficial Licensing Action (CBLA). It is estimated that implementation of this change could result in a savings of greater than \$100K for the duration of the current license.

Sincerely,

T. G. Broughton
Vice President and Director, TMI

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P PDR

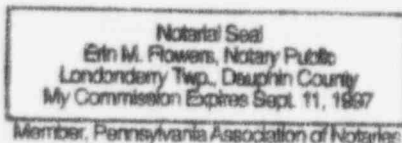
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Enclosure: 1) Technical Specifications Change Request No. 223
2) Certificate of Service for Technical Specification Change Request No. 223
070089 3) Offsite Dose Calculation Manual, Revision

cc: Region I Administrator
TMI-1 Senior Project Manager
TMI Senior Resident Inspector

ADD1

Operating License No. DPR-50
Docket No. 50-289
Technical Specification Change Request No. 223



UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

IN THE MATTER OF
GPU NUCLEAR CORPORATION

DOCKET NO. 50-289
LICENSE NO. DPR-50

CERTIFICATE OF SERVICE

This is to certify that a copy of Technical Specification Change Request No. 223 to Appendix A of the Operating License for Three Mile Island Nuclear Station Unit 1, has, on the date given below, been filed with executives of Londonderry Township, Dauphin County, Pennsylvania; Dauphin County, Pennsylvania; and the Pennsylvania Department of Environmental Resources, Bureau of Radiation Protection, by deposit in the United States mail, addressed as follows:

Mr. Jay H. Kopp, Chairman
Board of Supervisors of
Londonderry Township
R.D. #1, Geyers Church Road
Middletown, PA 17057

Mr. Russell L. Sheaffer, Chairman
Board of County Commissioners
of Dauphin County
P.O. Box 1295
Harrisburg, PA 17108

Director, Bureau of Radiation Protection
PA Department of Environmental Resources
P.O. Box 2063
Harrisburg, PA 17120
ATTN: Mr. Robert J. Barkanic

GPU NUCLEAR CORPORATION

BY: J. Broughton
Vice President and Director, TMI

DATE: June 1, 1995

1.0 TECHNICAL SPECIFICATION CHANGE REQUEST (TSCR) NO. 223

GPU Nuclear requests that the following pages of the TMI-1 Technical Specifications (T.S.) be replaced as indicated below:

Replace the existing pages iii, iv, vi, 1-6, 3-96, 4-5a, 4-87, 6-11a, and 6-24.

Add new page: 6-11b.

Delete pages: 3-97 through 3-127, and 4-88 through 4-122.

2.0 DESCRIPTION OF CHANGE

The following changes relocate the remaining portions of the TMI-1 Radiological Effluent Technical Specifications (RETS) to the Offsite Dose Calculation Manual (ODCM) according to Generic Letter (GL) 89-01. The RETS that GL 89-01 suggested be retained are also being relocated to the ODCM in accordance with the criteria used to develop NUREG-1430, "Standard Technical Specifications, Babcock & Wilcox Plants." Pursuant to GL 89-01 and NUREG-1301, "Offsite Dose Calculation Manual Guidance: Standard Radiological Effluent Controls for Pressurized Water Reactor," an approved revision of the ODCM is included for reference.

In addition, the Radiation Monitoring System surveillance requirements contained in Table 4.1-1 are modified to specify only those radiation monitors that have Limiting Conditions for Operation. The calibration frequency for some of the radiation monitors is changed from a quarterly interval to an 18 month interval.

1. pp. iii, iv, vi: The Table of Contents pages have been updated to reflect the administrative corrections necessary for deletions and page numbering changes.
2. p. 1-6: T.S. Definition 1.15, " Offsite Dose Calculation Manual (ODCM)" has been revised pursuant to GL 89-01.
3. p. 3-96: T.S. 3.2.1.1, "Radioactive Liquid Effluent Instrumentation." has been deleted and relocated to the ODCM. This page now documents the deletions associated with this section of the T.S.
4. pp. 3-97, 3-98, 3-99: T.S. Table 3.21-1 has been deleted and relocated to the ODCM.
5. p. 3-100: T.S. 3.21.2, "Radioactive Gaseous Process and Effluent Monitoring Instrumentation," has been deleted and relocated to the ODCM.
6. pp. 3-101, 3-102, 3-103, 3-104, 3-105, 3-105a: T.S. Table 3.21-2 has been deleted and relocated to the ODCM.
7. p. 3-106: T.S. 3.22.1.1, "Liquid Effluent Concentration," has been deleted and relocated to the ODCM.

8. pp. 3-107, 3-108: T.S. 3.22.1.2, "Liquid Effluent Dose," has been deleted and relocated to the ODCM.
9. p. 3-109: T.S. 3.22.1.3, "Liquid Radwaste Treatment System," has been deleted and relocated to the ODCM.
10. p. 3-110: T.S. 3.22.1.4, "Liquid Holdup Tanks," has been deleted and relocated to the ODCM.
11. p. 3-111: T.S. 3.22.2.1, "Gaseous Effluent Dose Rate," has been deleted and relocated to the ODCM.
12. pp. 3-112, 3-112a: T.S. 3.22.2.2, "Gaseous Effluents Dose-Noble Gases," has been deleted and relocated to the ODCM.
13. pp. 3-113, 3-114: T.S. 3.22.2.3, "Gaseous Effluents Dose - Iodine-131, Iodine-133, Tritium, and Radionuclides in Particulate Form," has been deleted and relocated to the ODCM.
14. p. 3-115: T.S. 3.22.2.4, "Gases Radwaste Treatment System," has been deleted and relocated to the ODCM.
15. p. 3-116: T.S. 3.22.2.5, "Explosive Gas Mixture," has been deleted and relocated to the ODCM.
16. p. 3-117: T.S. 3.22.2.6, "Waste Gas Decay Tanks," has been deleted and relocated to the ODCM.
17. p. 3-118: The information on this page was deleted via Amendment No. 173, thus, this page is being deleted.
18. pp. 3-119, 3-119a: T.S. 3.22.4, "Radioactive Effluents Total Dose," has been deleted and relocated to the ODCM.
19. pp. 3-120, 3-122, 3-125, 3-126, 3-127: The information on these pages was deleted via Amendment No. 173, thus, these pages are being deleted.
20. p. 4-5a: T.S. Table 4.1-1 item 28, "Radiation Monitoring Systems*," has been revised to make it specifically apply only to those radiation monitors that have an associated Limiting Condition for Operation. Those radiation monitors are as follows: RM-G6 (FH Bridge #1 Aux), RM-G7 (FH Bridge #2 Main), RM-G9 (FH Bridge - FH Bldg), RM-A2P (RB Atmosphere particulate), RM-A2I (RB Atmosphere iodine), and RM-A2G (RB Atmosphere gas).

Remarks (2) and (3) have been deleted and replaced with new remarks (2), (3), and (4).

The calibration frequency for RM-G9, RM-A2P, and RM-A2G has been designated for 18 months versus the previous quarterly interval.

The * note has been revised for clarity.

21. p. 4-87: T.S. 4.21.1, "Radioactive Liquid Effluent Instrumentation Surveillance Requirements," has been deleted and relocated to the

ODCM. This page now documents the deletions associated with this section of T.S.

22. pp. 4-88, 4-89: T.S. Table 4.21.1 has been deleted and relocated to the ODCM.
23. p. 4-90: T.S. 4.21.2, "Radioactive Gaseous Process and Effluent Monitoring Instrumentation Surveillance Requirements," has been deleted and relocated to the ODCM.
24. pp. 4-91, 4-92, 4-93, 4-94: T.S. Table 4.21-2 has been deleted and relocated to the ODCM.
25. p. 4-95: T.S. 4.22.1.1, "Liquid Effluents Concentration Surveillance Requirements," has been deleted and relocated to the ODCM.
26. pp. 4-96, 4-97, 4-98, 4-99: T.S. Table 4.22-1 has been deleted and relocated to the ODCM.
27. p. 4-100: T.S. 4.22.1.2, "Dose Calculations," has been deleted and relocated to the ODCM.
28. p. 4-100: T.S. 4.22.1.3, "Liquid Waste Treatment," has been deleted and relocated to the ODCM.
29. p. 4-100: T.S. 4.22.1.4, "Liquid Holdup Tanks," has been deleted and relocated to the ODCM.
30. p. 4-101: T.S. 4.22.2.1, "Gaseous Effluents Dose Rates," has been deleted and relocated to the ODCM.
31. pp. 4-102, 4-103, 4-104, 4-105: T.S. Table 4.22-2 has been deleted and relocated to the ODCM.
32. p. 4-106: T.S. 4.22.2.2, "Gaseous Effluents Dose, Noble Gas Surveillance Requirements," has been deleted and relocated to the ODCM.
33. p. 4-106: T.S. 4.22.2.3, "Gaseous Effluents Dose, Iodine-131, Iodine-133, Tritium, and Radionuclides in Particulate Form Surveillance Requirements," has been deleted and relocated to the ODCM.
34. p. 4-106: T.S. 4.22.2.4, "Gaseous Effluents Gaseous Waste Treatment Surveillance Requirements," has been deleted and relocated to the ODCM.
35. p. 4-106: T.S. 4.22.2.5, "Gaseous Effluents Explosive Gas Mixture Surveillance Requirements," has been deleted and relocated to the ODCM.
36. p. 4-106: T.S. 4.22.2.6, "Gaseous Effluents Waste Gas Decay Tank Surveillance Requirements," has been deleted and relocated to the ODCM.

37. p. 4-107: The information on this page was deleted via Amendment No. 173, thus, this page is being deleted.
38. p. 4-108: T.S. 4.22.4.1, "Dose Calculation Surveillance Requirements," has been deleted and relocated to the ODCM.
39. pp. 4-117, 4-118, 4-121, 4-122: The information on these pages was deleted via Amendment No. 173, thus, these pages are being deleted.
40. pp. 6-11a, 6-11b: T.S. 6.8.4, "Radiological Environmental Monitoring Program," has been renumbered to T.S. 6.8.4.a. New T.S. 6.8.4.b, "Radioactive Effluent Controls Program" has been added pursuant to GL 89-01.
41. p. 6-24: T.S. 6.14.1 has been deleted since it is no longer applicable.
42. p. 6-24: T.S. 6.14.2 has been renumbered to T.S. 6.14.1.

3.0 REASONS FOR CHANGE

- 3.1 Changes 1, 17, 19, 37, 39, 41, and 42 - Administrative - These changes are administrative in nature and are required for editorial corrections and repagination.
- 3.2 Changes 2, 3-9, 11-14, 18, 21-28, 30-34, 38, 40 - These changes are consistent with GL 89-01 and NUREG-1301.
- 3.3 Changes 6, 10, 15, 16, 24, 29, 35, 36 - These changes are consistent with the guidance provided in NUREG-1430.
- 3.4 Change 20 - This change specifies only those radiation monitors that have a Limiting Condition for Operation which is consistent with NUREG - 1430. In addition, the calibration frequency for some of the radiation monitors is changed from quarterly to longer intervals consistent with typical current industry standards.

4.0 SAFETY EVALUATION JUSTIFYING CHANGE

- 4.1 Change 2, 3-9, 11-14, 18, 21-28, 30-34, 38, 40 - These changes relocate most of the remaining TMI-1 RETS to the ODCM. This change request is a followup to Amendment No. 173 which was a partial implementation of NRC GL 89-01, and these changes constitute a complete implementation of GL 89-01. As stated in GL 89-01, the NRC staff's intent in recommending these changes to the TS and the relocation of procedural details of the remaining RETS to the ODCM is to fulfill the goal of the Commission Policy Statement for Technical Specification Improvements. The NRC staff has examined the contents of the RETS in relation to the Commission's Interim Policy Statement on TS Improvements. The staff has determined that programmatic controls can be implemented in the Administrative Controls section of the TS to satisfy existing regulatory requirements for RETS. At the same time, the procedural details of the current TS on radioactive effluents can be relocated to the ODCM. These actions simplify the

RETS, meet the regulatory requirements for radioactive effluents, and are provided as a line-item improvement of the TS, consistent with the goals of the Policy Statement.

- 4.2 Changes 6, 10, 15, 16, 24, 29, 35, 36 - These changes relocate the remaining TMI-1 RETS to the ODCM. This change is consistent with the guidance provided by NUREG-1430 and incorporates line-item improvements in T.S. The remaining RETS that GL 89-01 recommended to be retained in the T.S. (i.e. Liquid Holdup Tanks, Explosive Gas Mixture and related monitoring instrumentation, and Gas Storage Tanks) were not incorporated in NUREG 1430. NUREG 1430 utilized the selection criteria provided in the NRC Interim Policy Statement. These remaining RETS do not meet the selection criteria and thus are not included in NUREG 1430 and should be relocated to other licensee controlled documents, such as the ODCM. By implementing the programmatic controls provided by GL 89-01, the regulatory requirements for RETS can continue to be satisfied. These actions simplify the RETS, meet the regulatory requirements, and are provided as a line-item improvement of TS, consistent with the goals of the Policy Statement and NUREG 1430.

- 4.3 Change 20 - This change specifies surveillance requirements only for those radiation monitors that have a Limiting Condition for Operation (LCO) or specified operability requirements. The current surveillance requirement applies to all the plant radiation monitors that are not addressed by another specific T.S. requirement. By implementing this change, plant area radiation monitors, liquid system radiation monitors, and atmospheric radiation monitors that do not have any LCOs or T.S. operability requirements are removed from the T.S. surveillance requirements and placed, more appropriately, into the Preventive Maintenance (PM) program.

The radiation monitors specified in item 28 of Table 4.1-1 have had their calibration intervals, currently specified as quarterly, evaluated. RM-G6 and RM-G7 are area radiation monitors for the Fuel Handling Bridges located inside the reactor building. These Fuel Handling Bridges are only used during refueling operations and, it is intended to calibrate RM-G6 and RM-G7 prior to each refueling operation.

RM-G9 is the area radiation monitor for the Fuel Handling Bridge located in the Fuel Handling Building. This Fuel Handling Bridge may be used throughout the operating cycle to move irradiated fuel. RM-G9 provides a high alarm to initiate immediate evacuation for a potential accidental criticality. The purpose of the surveillance on RM-G9 is to verify proper detector response and alarm setpoint. The proposed change will extend the interval between successive calibrations to once every 18 months (with an allowable 25% extension). An evaluation (contained in GPUN calculation C1101-661-5350-031) of historical calibration data from January 1987 to October 1994 was performed using regression techniques to predict the instrument drift rate and expected error at 22.5 months. The error prediction at 22.5 months to a 95% confidence level for RM-G9 is +5.3% to -12.1%, which is within the current acceptable calibration tolerance of +/- 15%.

The basis for the high alarm setpoint of 20 mR/hr is to detect a potential accidental criticality in accordance with 10CFR70.24(a)(2). Since the predicted detector response over the 22.5 month period is within the acceptable tolerance, the protective function has not been impacted. Design basis accident analyses take no credit for the function of this detector. The proposed calibration surveillance interval change will have no adverse effect on component availability since the instrumentation has demonstrated reliable operation, and expected calibration drift over the extended interval is acceptable. Additionally, T.S. required weekly channel checks and monthly tests will allow operator verification of instrument channel function. Therefore, the proposed change has no effect on the safety function of the Fuel Handling Building Bridge radiation monitor.

RM-A2P monitors the reactor building atmosphere for radioactive particulates. This radiation monitor provides a high alarm to indicate a reactor coolant leak in the Reactor Building. The purpose of this surveillance is to verify proper detector response and alarm setpoint. The proposed change will extend the interval between successive calibrations to once every 18 months (with an allowable 25% extension). An evaluation (contained in GPUN calculation C1101-661-5350-031) of historical calibration data from January 1987 to October 1994 was performed using regression techniques to predict the instrument drift rate and expected error at 22.5 months. The error prediction at 22.5 months to a 95% confidence level for RM-A2P is +9.2% to -8.5%, which is well within the currently acceptable calibration tolerance of +/- 15%.

The basis for the high alarm setpoint is to detect a leak of reactor coolant in the Reactor Building of one gallon per minute over a one hour period. Since the predicted detector response over a 22.5 month period varies within an acceptable range, the protective function has not been impacted. Design basis accident analyses take no credit for the function of this detector. The proposed calibration surveillance interval change will have no adverse effect on component availability since the instrumentation has demonstrated reliable operation and expected calibration drift over the extended interval is acceptable. Additionally, T.S. required weekly channel checks and monthly tests will allow operator verification of instrument channel function. Therefore, the proposed change has no effect on the safety function of the reactor building atmospheric particulate channel radiation monitor.

RM-A2I monitors the reactor building atmosphere for radioactive iodine. This radiation monitor provides a high alarm to indicate a reactor coolant leak in the reactor building. The purpose of this surveillance is to verify proper detector response and alarm setpoint. No change to the surveillance interval is being requested for this monitor.

RM-A2G monitors the reactor building atmosphere for radioactive gas. This radiation monitor provides a high alarm to indicate a reactor coolant leak in the reactor building. The purpose of this surveillance is to verify proper detector response and alarm setpoint. The proposed change will extend the interval between successive calibrations to once every 18 months (with an allowable

25% extension). An evaluation (contained in GPUN calculation C1101-661-5350-031) of historical calibration data from January 1987 to October 1994 was performed using regression techniques to predict the instrument drift rate and expected error at 22.5 months. The error prediction at 22.5 months to a 95% confidence level for RM-A2G is +14.97% to -5.0%, which is within the current acceptable calibration tolerance of +/- 15%.

The basis for the high alarm setpoint is to detect an adverse radiological trend in containment atmosphere that should be evaluated for an increase in Reactor Coolant System leakage. Since the predicted detector response over a 22.5 month period varies over an acceptable range, the protective function has not been impacted. Design basis accident analyses take no credit for the function of this detector. The proposed calibration surveillance interval change will have no adverse effect on component availability since the instrumentation has demonstrated reliable operation, and expected calibration drift over the extended calibration interval is acceptable. Additionally, T.S. required weekly channel checks and monthly tests will allow operator verification of instrument channel function. Therefore, the proposed change has no adverse effect on the safety function of the reactor building atmospheric gas channel radiation monitor.

5.0 NO SIGNIFICANT HAZARDS CONSIDERATIONS

- 5.1 Operation of the facility in accordance with the proposed amendment would not involve a significant increase in the probability of occurrence or the consequences of an accident previously evaluated.

The proposed amendment allows relocation of the remaining RETS to the ODCM according to the guidance contained in GL 89-01 and NUREG-1430. This proposal simplifies the RETS, meets the regulatory requirements for radioactive effluent controls and radiological environmental monitoring, and is provided as a line-item improvement of the T.S.

In addition, this proposed amendment specifies surveillance requirements only for those radiation monitors that have an LCO or specified operability requirements. The radiation monitors that are currently included in the T.S. surveillance program but have no associated LCO or specified operability requirement will be placed in the PM program.

Finally, the proposed amendment extends the interval between successive calibration surveillances for those radiation monitors evaluated herein. This change does not involve any change to the actual surveillance requirements, nor does it involve any change to the limits or restrictions on plant operations. The reliability of systems and components relied upon to prevent or mitigate the consequences of accidents previously evaluated is not degraded beyond that obtained from the currently defined quarterly interval. Assurance of system and equipment availability is maintained.

This change does not involve any change to system or equipment configuration. Therefore, this change does not significantly

increase the probability of occurrence or the consequences of an accident previously evaluated.

- 5.2 Operation of the facility in accordance with the proposed amendment would not create the possibility of a new or different kind of accident from any accident previously evaluated.

The proposal in part relocates procedural details, currently included in the T.S., on radioactive effluents to the ODCM. Future changes to these procedural details in the ODCM will be handled under the administrative controls for changes to the ODCM.

In addition, this proposed amendment specifies surveillance requirements only for those radiation monitors that have an LCO or specified operability requirements. The radiation monitors that are currently included in the T.S. surveillance program but have no associated LCO or specified operability requirement will be placed in the PM program.

Finally, the proposed amendment extends the interval between successive calibration surveillances for those radiation monitors evaluated herein. This change does not involve any change to the actual surveillance requirements, nor does it involve any change to the limits and restrictions on plant operations. This change does not involve any change to system or equipment configuration.

Therefore, this change is unrelated to the possibility of creating a new or different kind of accident from any previously evaluated.

- 5.3 Operation of the facility in accordance with the proposed amendment would not involve a significant reduction in a margin of safety.

The procedural details being relocated to the ODCM are consistent with the guidance provided in GL 89-01 and NUREG-1430.

In addition, this proposed amendment specifies surveillance requirements only for those radiation monitors that have an LCO or specified operability requirements. The radiation monitors that are currently included in the T.S. surveillance program but have no associated LCO or specified operability requirement will be placed in the PM program.

Finally, the proposed amendment extends the interval between successive calibration surveillances for those radiation monitors evaluated herein. This change does not involve any change to the actual surveillance requirements, nor does it involve any change to the limits and restrictions on plant operations. The reliability of the radiation monitors is not significantly degraded beyond that obtained from the currently defined surveillance interval. Assurance of system availability is maintained.

Therefore, it is concluded that operation of the facility in accordance with the proposed amendment does not involve a significant reduction in a margin of safety.

6.0 IMPLEMENTATION

It is requested that the amendment authorizing this change become effective within 60 days upon issuance to allow time for implementation of affected procedure changes.