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June 6, 1984  
5211-84-2124

Mr. Richard W. Starostecki, Director  
Division of Project and Resident Programs  
U. S. Nuclear Regulatory Commission  
Region I  
631 Park Avenue  
King of Prussia, PA 19406

Dear Sir:

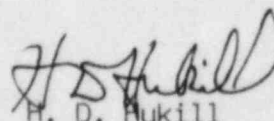
Three Mile Island Nuclear Station, Unit 1 (TMI-1)  
Operating License No. DPR-50  
Docket No. 50-289  
Inspection Report 84-03 (Post Accident Sampling and Monitoring)

Our letter of March 8, 1984 provided the list of actions GPUN is pursuing in regard to post accident sampling along with commitment dates targeted for completion of each item. Responses to certain of those items were shown to require additional submittals.

This letter transmits GPUN's response to several outstanding items and indicates those items which have been completed since our last submittal of May 11, 1984.

Attachment 1 is an update to our list of outstanding items. Attachment 2 (GPUN Response) and Attachment 3 (TDR-529) provide responses to several of these items as indicated in Attachment 1. Those items for which responses have been provided are not included in this submittal.

Sincerely,

  
H. D. Hukill  
Director, TMI-1

HDH:RK/res  
attachments

cc: R. Conte

RECEIVED  
JUN 11 1984  
TMI-1

POST ACCIDENT SAMPLING AND MONITORING (IR 84-03)  
OUTSTANDING ITEMS (NOTE 3)

IR Item No.	Inspection Report Item	GPUN Action No.	GPUN Action	Targeted Completion Date (Note 1)
84-03-01	RCS SAMPLING			
1.a	Provide the capability to obtain an RCS sample under all accident conditions and modes of operation.	1.a.3	Complete modification of post accident sampling system to tie in decay heat sample lines with the shielded reactor coolant sample line in the nuclear sampling room.	(Note 6)
84-03-02	CAS			
2.a	Modify CAS to permit sampling after containment isolation. Provide temperature and pressure indications at the gas sample bomb. Develop procedures to quantify the sample including temperature and pressure corrections.	2.a.4	Modify procedures to quantify the sample including temperature and pressure corrections.	Complete (Note 2)
		2.a.5	Complete modification of Containment Atmosphere Sampling System as described in GPUN response to item 2.a.2 which was provided to NRC on May 11, 1984 (5211-84-2105).	(Note 6)
84-03-03	OTHER			
3.d	Address the dose received by personnel transporting the sample to the counting room.	3.d.2	Revise TDR 529 to include the dose received by personnel transporting the sample to the counting room (See 4.2.1). Consider dose contribution from hydrogen recombiners.	Complete See Attachment 3
84-03-04	SHIELDING			
4.1	Revise shielding study (RCS sampling) to include the following contributors: a - Sink drain trap and drain line. b - Undiluted coolant in the sink. c - Scattered radiation. d - Unshielded auxiliary lines. e - Residual contamination during subsequent sample attempts. f - Airborne radioactivity originating from sink.	4.1.e	Provide temporary shielding for the sample sink drain line and revise procedure to verify shielding is in place prior to initiation of RCS sample flow.	(Note 4)
4.2	Conduct a shielding study on the as-built system for collecting and transporting the CAS.	4.2.1	Revision to TDR 529 described in 3.d.2 will include shielding studies for collecting and transporting the Containment Atmosphere Sample (see 3.d.2).	Complete See Attachment 3
84-03-05	ANALYTICAL CAPABILITY			
5.a	Develop procedures for use of fluoroborate probe and pH miniprobe.	5.a.3	Resolve the problem regarding fluoroborate analysis for Boron concentrations below 500 ppm or justify a lower minimum range for Boron analysis of 500 ppm.	Complete See Attachment 2
5.c	Revise procedures to address analysis of fission gases stripped from the RCS sample for determining gross activity.	5.c.2	Provide a complete response to 5.c.	Complete See Attachment 2

POST ACCIDENT SAMPLING AND MONITORING (IR 84-03)  
OUTSTANDING ITEMS (NOTE 3)

IR Item No.	Inspection Report Item	GPUN Action No.	GPUN Action	Targeted Completion Date (Note 1)
84-03-06	NOBLE GAS EFFLUENT MONITOR			
6.a	Provide conversion factors from CPM to $\mu\text{Ci/cc}$ for monitor readouts.	6.a.2	Complete the modifications to the computer program for offsite dose calculations as described in GPUN response of March 8, 1984.	Complete
84-03-07	SAMPLING AND ANALYSIS OF PLANT EFFLUENTS (MAP-5)			
7.a	Develop procedures for collection of representative plant effluent samples including provisions for handling and analyzing high dose rate samples.	7.a.1	Investigate the collection, handling, and analysis of high dose rate samples as described in 7.a, make the necessary procedural modifications, and perform time and motion studies for the resultant process.	07/01/84
		7.a.2	Provide dose calculations based on the time and motion studies for the process which results from 7.a.1.	07/01/84*
84-03-08	SAMPLING AND ANALYSIS OF PLANT EFFLUENTS (MAP-5)			
8.a	Install shields around all MAP-5 cartridges.	8.a.1	Complete installation of shields described in 8.a.	Complete
8.b	Document followup action taken on IEN-82-49.	8.b.1	Document followup action taken on IEN-82-49 in regard to MAP-5, e.g., provide flow meter correction curves and complete the necessary procedural modifications.	Complete (Note 2)
	Other PASS Commitments			
		9.a	Complete installation of seismic rack for bottled air to serve as backup air for eductor in the Containment Atmosphere Sampling System.	(Note 5)

NOTE 1 - Completion dates which show an asterisk indicate that an additional submittal to NRC is required.

NOTE 2 - This procedure is available at the site for inspection.

NOTE 3 - Items which were reported complete in previous transmittals have been deleted.

NOTE 4 - Completion of this item has been delayed awaiting the results of an engineering evaluation to determine if the recommended shielding would be prohibited due to floor loading restrictions. GPUN will continue to track this item until resolved.

NOTE 5 - Installation of the seismic rack for bottled air has been completed except for receipt and installation of qualified tubing connectors. GPUN will continue to track this item until complete.

NOTE 6 - This modification is scheduled to be installed during the eddy current outage which will begin 120 days after obtaining 50% power.

POST ACCIDENT SAMPLING AND MONITORING (IR 84-03)  
OUTSTANDING ITEMS\*

GPUN  
ACTION  
NO.

GPUN RESPONSE

- 5.a.3 Boron would be analyzed in the post accident condition using the manitol method (procedure N1904 - Boron by Titration) for concentrations between 500 to 6000 ppm boron using a 1:100 dilution. If the boron concentration is less than 500 ppm, procedure N1904.1 (Boron by Fluoroborate Specific Ion Electrode) will be used as a backup.
- 5.c.2 GPUN will be incorporating the use of stripped gas activity into the procedure for estimating core damage following an accident. This procedure is required to be upgraded by August 31, 1984 in accordance with the NRC Safety Evaluation Report for NUREG-0737, action item II.B.3, dated March 22, 1984. Procedures for analysis of stripped gas activity will be completed by August 31, 1984.

\* Responses which were provided in previous transmittals have been deleted.