

U.S. NUCLEAR REGULATORY COMMISSION  
OFFICE OF INSPECTION AND ENFORCEMENT

Region I

Report No. 50-320/79-17

Docket No. 50-320

License No. DPR-73 Priority -- Category C

Licensee: Metropolitan Edison Company

P. O. Box 542

Reading, Pennsylvania 19640

Facility Name: Three Mile Island Nuclear Station, Unit 2

Inspection at: Middletown, Pennsylvania

Inspection conducted: June 14 - July 17, 1979

Inspectors: *H.B. Kister*  
for D. R. Haverkamp, Lead Reactor Operations  
Inspector

8/23/79  
date signed

*D. R. Neely*  
D. R. Neely, Lead Radiation Specialist

8/20/79  
date signed

Approved by: *H.B. Kister*  
H. B. Kister, Chief, IE Resident  
Office-TMI 2

date signed  
8/23/79  
date signed

Inspection Summary:

Inspection on June 14 - July 17, 1979 (Report No. 50-320/79-17)

Areas Inspected: Special inspection by IE Resident Office Staff and shift inspectors of: licensee action on previous inspection findings; new and revised procedures; plant operations including records; performance of tests and general plant tours; in-plant health physics including documentation, posting and labeling reviews, witnessing of activities, and area tours. The inspection included continuous shift coverage by both reactor operations and radiation specialist inspectors.

Results: Of the 9 areas reviewed, Significant Inspection Findings were identified and were brought to the attention of licensee management. Corrective Actions are documented with the specific findings.

## DETAILS

### 1. Persons Contacted

Licensee and contractor personnel contacted during this inspection are identified in the appropriate report sections.

### 2. IE Inspection Participants

The following tabulation identifies the TMI-2 IE Resident Office professional personnel participating in this inspection.

#### a. Resident Office Staff

N. Blumberg, Reactor Operations Inspector, IE:RI, June 25-June 29, 1979  
R. Conte, Reactor Operations Inspector, IE:RI, June 13-June 24, 1979, July 1-July 17, 1979  
D. Haverkamp, Lead Reactor Operations Inspector, IE:RI, June 13-July 17, 1979  
J. Kinneman, Radiation Specialist, IE:RI, June 13-15, 18-19, 25-28, 1979 and July 2, 5-6, 9-12, 1979  
H. Kister, Chief, IE Resident Office, IE:RI, July 3-July 17, 1979  
E. McCabe, Chief, IE Resident Office, IE:RI, June 13-July 2, 1979  
D. Neely, Lead Radiation Specialist, IE:RI, June 13-July 17, 1979  
W. Raymond, Reactor Operations Inspector, IE:RI, June 13-July 17, 1979  
W. Rekito, Reactor Operations Inspector, IE:RI, June 13-June 29, 1979

#### b. Shift Reactor Operations Inspectors

M. Ashenden, IE:RII, June 13-June 17, 1979 and June 19-June 27, 1979  
C. Brown, IE:RIII, July 16-July 17, 1979  
P. Burnett, IE:RII, July 3-July 11, 1979  
J. Carlson, IE:RV, July 10-July 15, 1979 and July 17, 1979  
W. Choules, IE:RIII, July 2-July 6, 1979 and July 8-July 13, 1979 and July 15-July 17, 1979  
T. Daniels, IE:RIII, July 16-July 17, 1979  
T. Donat, IE:RII, June 13-June 20, 1979  
E. Johnson, IE:RIV, June 13-June 15, 1979  
C. Julian, IE:RII, June 19-June 23, 1979 and June 25-June 29, 1979 and July 1-July 3, 1979

D. Kelley, IE:RIV, June 15-June 22, 1979 and June 24-June 28, 1979 and June 30-July 3, 1979  
 B. Messitt, IE:RII, June 26-July 9, 1979  
 K. Ridgway, IE:RIII, June 18-June 24, 1979 and June 26-June 30, 1979 and July 2-July 3, 1979  
 J. Smith, IE:RIII, July 2-July 7, 1979 and July 9-July 16, 1979  
 A. Wagner, IE:RII, July 11-July 14, 1979 and July 16-July 17, 1979

c. Shift Radiation Specialists

B. Baird, IE:RV, July 1-July 10, 1979  
 N. Dubry, IE:RIII, June 13-July 14, 1979  
 J. Everett, IE:RIV, July 10-July 17, 1979  
 S. Ewald, IE:RII, June 22-June 30, 1979  
 R. Fish, IE:RV, June 14-June 21, 1979  
 R. Greger, IE:RIII, June 15-June 20, 1979  
 J. Hiatt, IE:RIII, June 30-July 15, 1979  
 C. Hosey, IE:RII, June 30-July 9, 1979  
 L. Heuter, IE:RIII, June 21-June 29, 1979  
 D. Miller, IE:RIII, June 21-June 30, 1979 and July 16-July 17, 1979  
 W. Millsap, IE:RII, June 13-June 22, 1979 and July 10-July 17, 1979  
 R. Nimitz, IE:RI, June 30-July 10, 1979  
 M. Schumacher, IE:RIII, June 13-June 20, 1979  
 R. Thomas, IE:RV, June 22-July 1, 1979  
 J. White, IE:RI, June 13-June 14, 1979  
 J. Wray, IE:RII, July 10-July 17, 1979

3. Licensee Action on Previous Inspection Findings

(Open) Inspection Finding (320/79-13-01): Qualification of Licensee Contractor Health Physics (H.P.) Personnel. The Radiation Protection Plan required by the proposed technical specifications contains specific requirements in the area of qualifications. This item will remain open pending final approval of the plant and subsequent review by the IE Resident Office.

(Open) Inspection findings (320/79-13-02): High Radiation Area Posting, Barricading and Access Control. Inspector tours identified High Radiation areas which were not posted, barricaded and/or controlled as required. (Details paragraph 8.c.).

(Open) Inspection Finding (320/79-13-03): Dosimetry QA Irregularities. Additional areas requiring corrective action have been identified in the licensee's dosimetry program. (Details paragraph 8.f.1).

(Open) Inspection Finding (32/79-13-04): Failure to perform job specific airborne radioactivity determinations. Additional air sampling irregularities have been identified. (Details paragraph 8.f.2).

(Open) Inspection Finding (320/79-13-05): Portable Instrument Calibration. Inspector tours of licensee controlled areas identified instances of survey meters not being calibrated at specified frequencies (details paragraph 8.d.2).

(Open) Inspection Finding (320/79-13-06): RWP adherence. Observation of selected work activities performed under RWP's continued on a 24 hour basis. (Details paragraph 8.g).

(Open) Inspection Finding (320/79-13-08): Establishment and Implementation of Controlling Document for Containment Integrity Verification. Revision 8 and Temporary Change Notice 2-79-97 to Surveillance Procedure 2301-M8, Containment Integrity Verification-Mode 7 have been issued to control the Containment Integrity Verification Program. This procedure addresses the use of such measures as valve locking, tagging, etc. The licensee is presently consolidating the list of penetrations into similar areas to minimize radiation exposure during the conduct of the procedure. This item remains open pending further NRC:RI review of licensee progress in implementing this procedure.

(Open) Inspection Finding (320/79-13-09): Review of Facility Procedures for consistency with Current Recovery Operations. The licensee has identified those system procedures that should remain applicable for current plant operations. A schedule/list for review of these applicable procedures with respect to post accident modifications, and "Z" and "EP" procedures issued is being developed along with personnel assignments for review. It was noted that approximately fifty percent of the "Z" and "EP" procedures issued have been deleted or incorporated into the established facility procedures. NRC:RI monitoring of this area continues.

(Closed) Inspection Finding (320/79-13-10): Control of Post-Accident Lifted Leads and Jumpers. The licensee has reviewed control cabinets and consoles (on a selective basis) in conjunction with the Lifted Lead and Jumper Log. No discrepancies were identified.



#### 4. Facility Procedure Review

Operating Procedures (OP), Emergency Procedures (EP), and Special Operating Procedures (SOP), including subsequent revisions, were reviewed by the Resident Office during this inspection. The SOP's are temporary procedures written for the TMI-2 Recovery Program which govern special evolutions and/or use of off-normal plant systems and are designated "Z" or "R" procedure depending on date of generation.

Procedure review included both Health Physics and Operations aspects with consideration of the following; (1) the procedure, when implemented, would not degrade the containment of radioactive material, jeopardize core cooling, or result in excessive personnel exposure; (2) the procedure conforms to the general criteria of TS 6.8, "Procedures", TS 6.11, Radiation Protection Program; ANSI 18.7, 1972; (3) the technical content of the procedure is adequate to perform the intended evolution.

Procedures reviewed during this report period are listed below together with dates (in parenthesis) on which IE comments were completed.

- Fuel Pool Waste Storage System Operating Procedure, Revision 0, (June 21, 1979)
- Chemical Cleaning Building Ventilation System, Revision 0, (June 19, 1979)
- R-2-79-4, Operation and Supplemental Fans and Filters, Revision 2, (June 19, 1979)
- Auxiliary Building Emergency Liquid Cleanup System, Revision 0, (June 19, 1979)
- Alarm Setpoints for TMI Unit 2 Alternate Vent Air Radiation Monitors (AM) 1, 2, 3, 4 and 5, (June 19, 1979)
- U-2 Sample Sink Modification Sample Line Flushes, (June 22, 1979)
- OP 2104-4-8, U-2 Transfer of Water from Auxiliary Building Sump to WDL-T-2 (MWHT), Without Pumping WDL-T-5 (Auxiliary Building Sump Tank) (June 21, 1979)
- Z-39, U-2 Natural Circulation Operation, Revision 1, (June 21, 1979)

- U-2 RB Sump Level Measurement, (June 22, 1979)
- SOP-R-79-2, Procedure for Filling Steam Generator B with Water, June 18, 1979, (June 21, 1979)
- 2301-M8, Containment Integrity Verification - Mode 7, Revision 8, (June 28, 1979)
- Standby RC Pressure Control System Operating Procedure, (June 25, 1979)
- SOP-R-2-79-025, U-2 Atm. Gas Sampling Using HP-R-227, Revision 1, (July 2, 1979)
- Long Term OTSG "B" Cooldown System Operating Procedure, (June 29, 1979)
- Transfer MWHT to Unit 2 RCBT, (June 26, 1979)
- Fuel Pool Waste Storage System Operating Procedure, (June 28, 1979)
- Transfer Water in Tank Farm, (June 27, 1979)
- Transfer Liquid from Upper Tanks to Haliburton Tanks of EPICORE I, (June 27, 1979)
- EP-12, Loss of Pressure Indication, Revision 1, (June 27, 1979)
- 2104-4.10, EPICOR-2 Resin Traps Change-out ALC-F4 A, B & C, (June 29, 1979)
- SOP-R-79-2, Filling Steam Generator "B" with Water, June 26, 1979, (June 28, 1979)
- SOP-R-2-79-6, RB Normal Cooling Flush, June 27, 1979, (June 29, 1979)
- HP 1650, Routine Radiological Survey Requirements for EPICOR-2, June 25, 1979, (June 29, 1979)
- Feedwater Latch Functional Test, (June 28, 1979)
- Installing Level Indication for OTSG "B", (June 29, 1979)
- Transfer (Unit 1) WDL-T-9 to (Unit 2) RCBT "A", (July 6, 1979)

- W-DHS Tie-in Depressurization and Drain of DH System on DH Pump Side of DH-V3 and Leak Check of DH-V3, 4A, B, Revision 0, June 19, 1979, (July 12, 1979)
- W-DHS Tie-in Emergency Restoration of DHS to Operation During Installation of W-DHS, Revision 0, (July 12, 1979)
- AP 2203-1.9, Standby RCPCS Isol. on Rising RCS Pressure, July 3, 1979, (July 6, 1979)
- Panel 2204-SPC Alarm Response Procedure, (July 6, 1979)
- Panel 2204-LTB Alarm Response Procedure, (July 9, 1979)
- Tank Farm Eductor Test, (July 6, 1979)
- Removal of Tank Farm Water, (July 6, 1979)
- 2104-4.7, Auxiliary Building Emergency Liquid Cleanup System, (July 17, 1979)
- HPP-1696, Radiological Investigative Report, Revision 0, July 7, 1979, (July 11, 1979)
- Fuel Pool Waste Storage System Operating Procedure, (July 11, 1979)
- CO Polisher Resin Removal, (July 12, 1979)
- 2203-4.3, Loss of Electrical Power for EPICOR-2, (July 12, 1979)
- 2203-4.1, Loss of Demineralized Water for EPICOR-2, (July 12, 1979)
- 2203-4.2, Loss of Service Air for EPICOR-2, (July 12, 1979)
- 22024.1, Loss of System Integrity for EPICOR-2, (July 12, 1979)
- Transfer of WDL-T-8A/B in U2 to U1 MWST, Revision 0, (July 11, 1979)
- HP-1650, Routine Radiological Surveys Requirements for EPICOR-2, Revision 0, (July 11, 1979)

- Long Term OTSG B Cooldown System Operating Procedure, (July 12, 1979)
- \*Preliminary Design Criteria for Unit 2 Radiochemical/Counting Laboratory, (July 17, 1979)
- \*Criteria Document and Scope Document for the MINI Decay Heat Removal Study, (July 17, 1979)
- 2202-4.0, General Emergency Plan for EPICOR-2, (July 17, 1979)
- 2202-4.3, High Radiation Levels/High Airborne Activity in Chemical Cleaning Building, (July 17, 1979)
- Fill Procedure for Steam Generator "B" with Water, (July 17, 1979)
- R-2-79-40, Radiological Controls for B&W Chemistry Trailer Operation, CAPGUN/EPICOR Sample Analysis, Revision 0, (July 17, 1979)

\*These are design criteria also submitted by the licensee and reviewed for technical adequacy.

Composite NRC comments on procedures were forwarded to the licensee by Office of Nuclear Reactor Regulation (NRR). No instances of failure to resolve NRC comments were identified. However, review of various procedures indicated that Unit 2 Special Operating and Recovery Procedures ("Z" and "R") were not receiving adequate ALARA and Health Physics consideration. This is described in Significant Inspection Finding No. 79-17-08.

## 5. Review of Plant Operation

### a. Test Performance

The following tests were witnessed.

- R-2-79-35, Testing Standby Pressure Control System, Revision 1, July 10, 1979, on July 10, 1979
- R-2-79-15, Balance of Plant Diesel Generator DG-B-White and Auxiliaries Panel on July 13, 1979

b. Plant Tours

During the period June 14, 1979 through July 17, 1979, tours of the following areas were conducted (number of tours are indicated in parenthesis). Cleanliness/Housekeeping conditions were observed along with Radiological and Fire Protection Measures. In addition, for the specific areas listed, construction status and testing progress were noted.

- General Plant Area including the outside sections within the protected area (75)
- Fuel Handling Building including Standby Pressure Control System and/or Fuel Pool Waste Storage System (3)
- Chemical Cleaning Building including the Auxiliary Building Emergency Liquid Cleanup System EPICOR II (4)
- Turbine Building, Long Term Steam Generator B System (2)

c. Log and Records

- Operator Acknowledgement Forms for "Z" and "EP" Special Operating Procedures

d. Findings

One significant inspection finding concerning operator proficiency in the use of "Z" and "EP" Special Operating Procedures was identified and is appended to this inspection report (320/79-17-22). Proper licensee corrective action has been verified by the inspector.

The area of operator qualification and training on new recovery systems is being reviewed by the Office of Nuclear Reactor Regulation (NRR).

No other discrepancies were identified.

6. Preoperational Program of Post Accident Temporary Systems

a. Purpose

The inspection consisted of a review of the test program for the Three Mile Island Unit 2 post accident temporary recovery systems in order to verify conformance with licensee commitments.



b. References

The following references were used for this review:

- Memorandum from H. Silver to R. Vollmer dated May 21, 1979, "TMI-2 Plant Modifications for Cold Shutdown", and
- Burns and Roe, "Preliminary System Descriptions-Recovery Programs"

c. Program Review

The test program is being conducted by a three member engineering staff and is divided into two portions. During the first portion, phase I type component checkouts are performed which includes flushes and hydrostatic tests of piping, meggering checks of motors and switchgear; and continuity and connection verification of wiring.

The second portion of the test program consists of a functional checkout of the system using it's normal operating procedure. Discrepancies between the operating procedure and actual equipment operation are noted and the procedure is marked up accordingly. Any safety significant features of the system which are not checked out in operating procedure are independently verified using a Special Test Procedure. No discrepancies were identified by the inspectors.

d. Special Test Procedure Review

Thus far only one Special Test procedure has been submitted and approved by the TMI Plant Operations Review Committee (PORC). This was the automatic closure with Reactor Coolant Standby Pressure Control System valve SPC-V-71 on low level in the water flask upstream of the RCS. The procedure was reviewed for conformance with licensee commitments and several minor comments were submitted to the licensee.

e. Test Witnessing

The inspector witnessed portions of several system tests. These included:

(1) Steam Generator B Long Term Cooling System

- Operation of the Long Term Cooldown pump in the recirculation mode
- Leakage checks of the system
- Transient and steady state vibration of the temporary demineralizer system.

(2) Standby Pressure Control System

- Hydrostatic test of high pressure portion of the system, which consisted of the valves and piping between the flask isolation valve, SPC-V-71, and the plants normal charging header.
- Performance of 500 gpm flask flowrate verification test and automatic closure with flask isolation valve, SPC--V-71, on a low level (40%) in the flask upstream of of RCS.
- Performance of a 3150 PSIG Pneumatic, Soap Bubble, test of the flask's Nitrogen Supply header to the Nitrogen Banks.

(3) Fuel Pool Waste Storage System

- Operation of steam eductors to pump water from lower tanks.
- Pumping of lower tanks using a submersible pump.
- Liquid penetrant dye check of the tank Seam Welds using an Ultraviolet light source.

No discrepancies were identified during the conduct of these tests.

f. Completed Test Documentation

The licensee compiles a turnover package which consists of construction documentation, documentation of the phase I checks performed, marked-up operating procedure used to perform the functional test, List of outstanding deficiencies for the Q.C. department's

evaluation, and a narrative description by the test engineer of the testing performed on the system and how problems were resolved. Portions of the following three system packages were reviewed:

- Task TS-3C, Long Term/OTSG"B" Cooling
- Task TS-10/11, BOP Emergency Diesel Generator System
- Task WG-1, Auxiliary and Fuel Handling Building Supplementary Air Filtration System.

No discrepancies were identified for the packages reviewed.

#### 7. RCS Leakage Calculations

Surveillance procedure 2301-3D1, RCS Inventory, Revision 3, dated February 5, 1979, provides instructions for determining RCS leakage based on a mass balance of RCS, pressurizer, makeup tank and reactor coolant drain tank (RCDT) inventories over a prescribed interval of time. TCN 2-79-070 to SP 2301-3D1 was issued on March 16, 1979 to correct the computational treatment of RCDT inventory changes, which are used to obtain RCS identified leakage. Leak rate calculations completed in accordance with Data Sheet 1 of SP 2301-3D1 and TCN 2-79-070 for the period of March 22-28, 1979 were reviewed.

Using SP 2301-3D1, the RCS gross leak rate is first calculated by determining the mass change in the RCS, pressurizer, and make up tank over a one hour period with water densities adjusted to RCS nominal operating conditions of 580°F (Tave) and 2150 psig. Similarly, for the calculation of RCS identified leakage, RCDT inventory changes are adjusted from RCDT ambient conditions to the RCS condition using a ratio of specific volumes. Review of Data Sheet 1 of SP 2301-3D1 shows, however, that no density corrections are made at Line 15 of the data sheet, where water additions to the make up tank during the measurement are incorporated into the calculations. Failure to correct the make up tank additions results the computation of erroneous gross and net unidentified leak rates. A recalculation of RCS leakage using data from SP 2301-3D1 for March 22, 24, 25 and 28, 1979, with density corrections applied to the makeup tank additions, shows the unidentified RCS leakage to be in excess of 1.0 gpm.

The inspector noted that the same inconsistency in the treatment of make up tank additions occurs in SP 1303-1.1, RCS Leak Rate, Revision 7 dated May 25, 1979. Unit 2 procedure Z-63, Solid Plant Operations, Revision 4 dated June 22, 1979, which is currently in use for RCS Leakage measurements, incorporates the appropriate density corrections in the calculations.

These findings were discussed with Messrs. R. Warren and R. Barley of Met Ed. The licensee stated that the leak rate calculation would be corrected and SP 2301-3D1 revised by August 15, 1979. Significant Inspection Finding No. 320/79-17-03 has been initiated on this item and is attached to this report.

## 8. In-Plant Health Physics

### a. Solid Radioactive Waste

Shipping, handling, storage and analysis of Solid radioactive waste was reviewed for compliance with the following:

- 10 CFR 20, "Standards for Protection Against Radiation"
- 10 CFR 71, "Packaging of Radioactive in Transport and Transportation of Radioactive Material Under Certain Conditions"
- Station Health Physics Procedure 1620, Revision 4, "Radiological Controls for Processing Radioactive Solid Waste" dated February 9, 1979
- Special Operating Procedure, SOP No. R-2-79-6, Revision 1, "On-site Solid Waste Storage for TMI-2" dated May 8, 1979

Documentation, truck placarding and the performance of independent radiation intensity measurements were reviewed.

### (1) Shipments

- (a) 10 CFR 71.51(a) requires the submittal of a quality assurance program, to the Commission, satisfying each of the applicable criteria specified in 10 CFR 71, Appendix E, "Quality Assurance Criteria for Shipping Packages for Radioactive Material". A Commission approved quality assurance program satisfying the applicable criteria of 10 CFR 50, Appendix B "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants" which has been established, maintained and executed with regard to transport packages will satisfy the requirements of 71.51 (a) as specified in 10 CFR 71.51(d).

The licensee has not made a submittal to the Commission pursuant to 10 CFR 71.51(a), nor have they implemented

their Part 50 Q.A. plan with regard to transport packages. Pursuant to a NMSS decision shipments of greater than Type "A" quantities of radioactive material will be permitted under the licensee's existing quality assurance program until October 1, 1979. See Significant Finding 320/79-17-02 (attached).

- b. The following shipments of radioactive material were reviewed during the reporting period:

<u>Shipment #</u>	<u>Date</u>	<u>Item</u>	<u>Total mCi</u>
79-60	June 13, 1979	Various liquid samples	38.518
79-61	June 21, 1979	Tank bladder	1.14
79-62	June 19, 1979	RCS letdown sample	5.311
79-63	June 21, 1979	Laundry	4.6052
79-64	June 26, 1979	Various liquid samples	9.73
79-65	June 28, 1979	Laundry	11.631
79-66A	June 27, 1979	RCS letdown sample	8.283
79-66B	July 5, 1979	Laundry	11.631
79-67	July 3, 1979	Pipe sample	0.0338
79-68	July 5, 1979	RCS letdown sample	4.506
79-69	July 11, 1979	RCS letdown sample	12.733
79-70	July 12, 1979	Charcoal filter	0.136
79-71	July 12, 1979	Laundry	
79-72	July 13, 1979	Particulate filter sample	0.004
79-74	July 17, 1979	RCS letdown sample	29.696

No unacceptable conditions were identified in the above shipments. However, during review of shipment No. 79-66 on July 5, 1979, it was noted that shipping number 79-66 had been used on a previous shipment on June 27, 1979. The licensee was notified and corrective action was taken.

The licensee is currently revising Health Physics Procedure 1618, Revision 6, "Shipment of Radioactive Material, DOT Regulations." The numbering of radioactive material shipments will be reviewed with respect to implementation of the above procedure (Open Item 320/79-17-19).

(2) Storage of Solid Radioactive Waste

The licensee is currently utilizing in-plant storage and storage in the area south-east of the Unit 2 cooling towers (old paint shop and semi-trailers) for the storage of packaged radioactive



waste. The licensee has constructed concrete bunkers for long term storage.

During a review of radioactive waste storage on June 26, 1979 it was noted that posting and labeling of radioactive waste at the south-east storage area was not consistent with the requirements of 10 CFR 20.203(f), "Containers," and Station H.P. Procedure 1620, Section 5.4, "Identification of Shipping Containers." Significant Inspection Finding No. 320/79-17-09 is appended to this report.

(3) Activity Determinations

A review of determination of the curie contents of radioactive waste shipping containers was made. Station Health Physics Procedure 1620, Section 5.5 delineates methods to calculate the number of curies contained in a package by taking a radiation dose rate at a specified distance from the container and utilizing a conversion factor.

The subject method appears to be valid only for gamma emitters and does not consider beta emitters. The adequacy of the above activity determination requires additional review (Open Item 320/79-17-20).

b. Radioactive and Contaminated Material Control

Radioactive and contaminated material control was reviewed for compliance with 10 CFR 20.203, "Caution signs, labels, signals and controls," and Health Physics Procedure 1682, Revision 2, "Control of Contaminated Tools, Equipment and Material," dated April 28, 1977.

The following Significant Inspection findings were identified during this reporting period and are appended to this report:

<u>Number</u>	<u>Item</u>	<u>Date Identified</u>
320/79-17-13	Labeling of Radioactive Samples	July 5, 1979
320/79-17-16	Contaminated Material Control M-20 Area	July 7, 1979

c. Posting and Area Control

Tours of areas (both controlled and uncontrolled) were made to verify licensee compliance with 10 CFR 20.203, "Caution signs, labels, signals and controls," Technical Specification Section 6.12, "High Radiation Area" and Station Health Physics Procedure 1610, Revision 7, "Establishing and Posting Areas," dated September 30, 1977.

The area tours and the performance of independent radiation intensity measurements identified the following Significant Inspection Findings which are appended to this inspection report.

<u>Number</u>	<u>Item</u>	<u>Date Identified</u>
320/79-17-18	Failure to Control Access to High Radiation Areas (> 1 R/H)	July 8, 1979
320/79-17-06	Failure to Post Access to High Radiation Area (250 mR/hr)	July 16, 1979

The licensee has implemented a "High Radiation Area Control Check" sheet to ensure appropriate action is taken to post, barricade and control all High Radiation Areas. The following High Radiation Areas, where whole body dose rates greater than 1000 mrem/hr exist, as of July 14, 1979, have not been controlled as required by Technical Specification 6.12.

<u>Elevation</u>	<u>Area</u>	<u>Whole Body Doserates m Rem/hr</u>
281' e1	Door to FHB Annulus Area	~20,000
	Reactor Coolant Evaporator	12,000
305' e1	Area of FHB Valve Corridor	20,000
328' e1	Concentrated Waste Tank	7,000
	FHB East Corridor	20,000

d. Portable Survey Instrument

The licensee utilizes the service of a contractor to provide calibration of portable radiation survey meters and portable air sampling instrumentation.

An extensive review of contractor calibration records, procedures, calibration frequencies and certification of calibration instrumentation indicated the following:

- (1) No certification of traceability to NBS was on-site for the following calibration instrumentation:

<u>Instrument</u>	<u>Serial No.</u>	<u>Date Calibrated</u>
-Radeco Model 828 (High Flow Calibrator)	1030	April 26, 1977
-Radeco Model 312 (Low Flow Calibrator)	1026	April 26, 1977
-Fisher-Porter Flowrator Kit (Low Flow Calibrator)	10A1460	None Available

- (2) Instrumentation is not being removed from the Unit 2 Auxiliary Building for calibration at the required frequencies. Examples include Eberline RO-2A Ion Chambers, Serial Numbers 285 and 287. These particular instruments are utilized for beta and gamma radiation field measurements.
- (3) Air flow measuring instrumentation is being calibrated and operated without the use of established and approved procedures. This is described in Significant Inspection Finding No. 320/79-17-12 which is appended to this report.

The licensee's calibration contractor has implemented a "Instruments Due for Calibration" sheet, which is presented to the licensee for action. The instruments in the Unit 2 Auxiliary Building are not being removed, decontaminated and calibrated at the required frequency. Some instrumentation utilized in the Auxiliary Building has been calibrated, however, these were calibrated as a result of malfunction problems which cause instrumentation to be removed.

e. Radioactive Effluent Releases

(1) Liquid Effluent Releases

Liquid radioactive effluent releases from the site were reviewed against the following:

- 10 CFR 20.106, "Radioactivity in effluents to unrestricted areas"
- Special Operating Procedure, SOP No. Z-33, Revision 2, "Water Sump Discharges to IWTS and IWFS," dated May 18, 1979

- Special Operating Procedure, SOP No. Z-51, Revision 3, "Liquid Releases from TMI," dated May 2, 1979
- Station Health Physics Procedure 1621.2, Revision 4, "Releasing Radioactive Liquid Waste from Unit #2," dated January 5, 1979

Station Health Physics Procedure 1621.2, Section 5.10 requires a gross beta analyses be performed on each batch. Review of liquid releases indicated gross beta analysis was performed on the monthly composite, however, gross beta was not performed on each batch.

Discussion with licensee representatives indicated releases were made utilizing Station Health Physics Procedure 1621, Revision 14, "Releasing Radioactive Liquid Waste - Unit 1," dated February 8, 1979. Procedure 1621, Section 5.10.2, does not require gross beta analysis be performed.

Additional review of this area is required (Open Item 320/79-17-21).

(2) In-Plant Liquid Transfer

During review of in-plant transfers of liquid waste under Special Operating Procedure Z-33, Revision 2, "Waste Sump Discharge to IWTS and IWFS," dated May 18, 1979, it was noted that an incorrect valve line-up was made. This valve line-up resulted in radioactive contamination of a Unit 1 liquid waste system. A description of this event is appended to this inspection report as Significant Inspection Finding No. 320/79-17-07.

(3) Gaseous and Particulate Effluents Releases

- (a) The licensee maintains a Supplemental Vent Radiation Monitoring System to monitor gaseous and particulate releases from Unit 2.

A review of system operation with respect to the following was conducted:

- 10 CFR 20.106, Radioactivity in effluents to unrestricted areas.

-- Special Operating Procedure, SOP No. R-2-79-1, Revision 1, "Effluent Monitoring Data Sheet Calibrations for Auxiliary Building Roof," dated May 20, 1979.

- (b) Review of the mobile laundry facility revealed an unmonitored release path.

Significant Inspection Finding No. 320/79-17-01 describes this path and is appended to this inspection report.

f. Exposure Control

(1) Personnel Dosimetry

The licensee's personnel dosimetry program was reviewed against the following:

- 10 CFR 20, "Standards for Protection Against Radiation"
- Station Health Physics Procedure, 1640, Revision 0, "Personnel Dosimetry, Issuance, Administrative and Record Keeping," dated June 15, 1977
- Station Health Physics Procedure 1642, Revision 1, "Operation and Calibration of the Thermoluminescent Dosimetry System," dated September 28, 1977

Based on the above review, Significant Inspection Finding No. 320/79-17-04 is appended to this inspection report.

(2) Air Sampling

The licensee's airborne radioactivity sampling program was reviewed against the requirements of 10 CFR 20.201, "Surveys" and 10 CFR 20.103, "Exposure of individuals to concentrations of radioactive materials in air in restricted areas" and Regulatory Guide 8.15, "Acceptable Programs for Respiratory Protection."

During review of air sampling results for the period June 30 through July 1, 1979, it was noted that air samples reading as high as 1000 millrad/hr beta on contact were obtained from the east corridor areas of the Fuel Handling Building. The samples were analyzed using a gamma spectrometer. The licensee utilized



the results of the gamma scans to allow personnel entry into the areas. Review of the air samples indicated the presence of significant beta emitters. Independent analysis by the licensee's contracted labs indicated the presence of Strontium 89 and 90 on the samples.

Preliminary review by the resident staff indicated no individuals received exposures in excess of 10 CFR 20.103 limits. The licensee did, however, utilize respiratory protective equipment that did not provide a protection factor greater than the multiple by which peak concentrations of radioactive materials were expected to exceed the values specified in Table 1, Column 1 of Appendix B to 10 CFR 20 as specified in Regulatory Guide 8.15, Regulatory Position C2.

Independent samples, and samples collected by the licensee were sent to NRC contracted labs. The labs will perform gamma isotopic analyses and chemical separations as necessary to verify licensee results.

The above item is considered a Significant Inspection Finding and is appended to the report as No. 320/79-17-17.

Additionally, Significant Inspection Findings Nos. 320/79-17-10 and 320/79-17-15 were identified with respect to air sampling and are also appended to this report.

g. Plant Tours

Daily tours of the various areas in the plant, including all control points, the Auxiliary Buildings and the Fuel Handling Buildings were made to examine: access control; personnel frisking; use of survey meters; adherence to Radiation Work Permit (RWP) requirements and proper use of respiratory protection equipment. The following Significant Inspection Findings were identified during routine tours and are appended to this report:

<u>Number</u>	<u>Item</u>	<u>Date Identified</u>
79-17-14	Failure of Individuals to Frisk	July 6, 1979
79-17-05	Failure to Post M-20 Area	June 15, 1979

h. Radwaste Processing

The licensee has constructed and has planned operation of intermediate activity radioactive liquid waste treatment facility (Epicor II). A review of design, air sampling procedures and training has begun.

Based on preliminary review, on Significant Inspection Finding, No. 79-17-11, was identified. The item, non-representative sampling of treatment system ventilation, is appended to this report.

9. Exit Interviews

Meetings were held with licensee management to discuss inspection findings and concerns as discussed below.

a. Exit Meeting on June 15, 1979

The TMI-2 IE Resident Office Chief, Lead Reactor Operations Inspector and Lead Radiation Specialist met with the following licensee representatives on June 15, 1979:

- R. BenseI, Unit 2 Lead Electrical Engineer
- M. Bezilla, Unit 2 PORC Secretary
- J. Floyd, Unit 2 Supervisor of Operations
- D. Hetrick, GPUSC Supervisor of Health Physics
- G. Kunder, Unit 2 Superintendent - Technical Support
- D. Limroth, Superintendent, Administrative/Technical Support
- J. Logan, Unit 2 Superintendent
- T. Mulleavy, Radiation Protection Supervisor
- E. Murri, NUS Supervisor of Health Physics

The Significant Findings of the Inspection 50-320/79-13 and of this inspection and licensee corrective actions were discussed as described below.

(1) Health Physics Findings

- (a) Unmonitored Release Path to the Environment  
(Significant Inspection Finding No. 79-17-01)
- (b) QA Program Description for Shipping Radioactive Material  
(Significant Inspection Finding No. 79-17-02)

(2) Recovery Operations Findings(a) Operator Proficiency in Use of Special (Z) and Emergency (EP) Procedures (Significant Inspection Finding 79-17-03)b. Onsite Corporate Management Meeting on July 2, 1979(1) Licensee Attendees

R. Arnold, Vice President - Generation, General Public Utilities Service Corporation/Manager, TMI Site Operations  
 J. Barton, Manager, TMI-2 Recovery Construction Projects  
 J. Herbein, Vice President - Generation, Metropolitan Edison Company

(2) NRC Attendees

J. Collins, Deputy Director, NRR TMI-2 Support Team  
 S. Ebnetter, Chief, Engineering Support Section No. 2, RC&ES Branch, IE:RI  
 B. Grier, Director, IE:RI  
 A. Gibson, IE Investigation Team Group Leader  
 H. Kister, Chief, IE Resident Office, TMI-2 (oncoming)  
 E. McCabe, Chief, IE Resident Office, TMI-2  
 T. Murphy, Member, NRR TMI-2 Support Team  
 D. Neely, Lead Radiation Specialist, IE Resident Office - TMI  
 M. Slobodien, Member, IE Investigation Team  
 G. Smith, Chief, Fuel Facilities and Materials Safety Branch, IE:RI

(3) Items Discussed

Areas in need of corrective action were discussed with the following items emphasized.

- (a) Personnel Radiation Monitoring (Dosimetry).
- (b) Definition of HP Organizational Responsibilities.
- (c) HP Staff Training.

- (d) High Radiation Area control.
- (e) Onsite Control of Radioactive Materials.
- (f) Onsite Work Area Air Sampling and Correlation to Dose Rates.
- (g) HP and Operating Staff Review of Procedures.
- (h) Communications Within and Between Onsite Organizations.
- (i) Independent Audits of Activities, Especially HP Activities.
- (j) Emergency Kit Restoration.
- (k) Skin and Extremity Dose Evaluations.
- (l) Timeliness of Corrective Actions.
- (m) Management Control of HP Subcontractors.
- (n) HP Controls for In-Service-Inspection Activities.
- (o) QA Controls for In-Service-Inspection Activities.
- (p) Validity of In-Service-Inspection Data in Regard to ASME Section XI Requirements.

Acceptable licensee corrective actions were identified as having been initiated on many of the listed items. It was stated, however, that a written response to the NRC concerns would nonetheless be requested from the licensee on a number of items.

c. Exit Meeting on July 12, 1979

The TMI-2 IE Resident Office Chief, Lead Reactor Operations Inspector, Lead Radiation Specialist and Fuel Facilities and Materials Safety Branch Chief (Region I) met with the following licensee representatives on July 13, 1979:

- R. Dubiel, Supervisor of Radiation Protection and Chemistry
- D. Hetrick, Manager, Generation Operations Support/GPUSC
- D. Limroth, Superintendent, Administrative/Technical Support
- J. Logan, Unit 2 Superintendent

G. Miller, Manager, Generating Station - Nuclear  
 T. Mulleavy, Radiation Protection Supervisor

The Findings of the inspection and licensee corrective actions were discussed as described below.

(1) Health Physics Findings

- (a) High Radiation Area Key Control (Significant Inspection Finding No. 79-17-18)
- (b) Health Physics Organization (Significant Inspection Finding No. 79-13-12)
- (c) Operational HP Program in Unit 2/Waste Management
- (d) Contamination Control in M-20 Area (Significant Inspection Finding No. 79-17-05)
- (e) Air/Liquid Sample Control and Sample Trailer Surveys (Significant Inspection Finding No. 79-17-15)

(2) Recovery Operations Findings

- (a) Alarm Response Procedures - Immediate and follow-up responses not receiving adequate review.
- (b) Cleanliness of Plant - Cleanliness standards in areas of turbine building and M-20 area are deteriorating.
- (c) Marking of Recorder Charts - Recorder charts are not being periodically marked.

d. Significant Onsite Corporate Management Meetings on July 13 and July 18, 1979

(1) Licensee Attendees

- R. Arnold, Vice President - Generation, GPUASC/Manager, TMI Site Operations
- R. Dubiel, Supervisor of Radiation Protection and Chemistry (July 13, 1979 only)



- D. Limroth, Superintendent. Administrative/Technical Support  
(July 13, 1979 only)
- J. Herbein, Vice President - Generation, Metropolitan Edison  
Company

(2) NRC Attendees

- J. Collins, Deputy Director, NRR TMI-2 Support Team (July 13  
only)
- B. Grier, Director, IE Region I (July 18, 1979 only)
- H. Kister, Chief, IE Resident Office, TMI-2
- D. Neely, Lead Radiation Specialist (July 18, 1979 only)
- G. Smith, Chief, Fuel Facilities and Materials Safety Branch,  
IE Region I (July 13, 1979 only)

(3) Items Discussed

As a result of continuing inadequacies with the TMI radiation protection program, the licensee committed to take prompt and extensive corrective actions as described in MEC letter serial GQP 0909 dated July 18, 1979. The IE Resident Office-TMI staff will verify that the licensee's actions are completed as stated in the above letter.

SIGNIFICANT INSPECTION FINDING NO 79-17-01

SHORT TITLE: UNMONITORED RELEASE PATH TO THE ENVIRONMENT

DESCRIPTION

The Tri-State Laundry mobile unit used for decontamination of protective clothing (up to 40 mr/hr contact readings) has a HEPA filtered ventilation exhaust which is not monitored and which discharges directly to the environment. No safety analysis appears to have been accomplished for this condition.

	IDENTIFYING NRC OFFICIAL	LICENSEE REP. NOTIFIED	NOTIFICATION ACCOMPLISHED BY
SIGNATURE	<i>Donald R. Neely</i>		<i>J. White</i>
NAME	Donald R. Neely	B. Rusche	J. White
TITLE	Lead Radiation Specialist	Radwaste Recovery OPS MGR	Radiation Specialist
DATE/TIME	June 13, 1979/0800		June 13, 1979: 0915

RI

LICENSEE ACTION TAKEN: Laundry to remain shutdown until safety evaluation completed and need for ventilation monitoring resolved. VERIFICATION DATE/TIME June 13, 1979:0930

Verified by: John R. White, Radiation Specialist  
Name/Title and Signature

Disposition Recommendation

- Document in Inspection Report.
- Additional Enforcement Action because of inadequate licensee action.
- Cancel. Does not warrant inspection documentation.
- Carry as outstanding item for further inspection.
- 

Donald R. Neely  
Lead Ops or HP Inspector

Disposition  
As Recommended

*Ebe C. McCabe, Jr.*  
Ebe C. McCabe, Jr.  
Chief, IE Resident Office, TMI-2

June 14, 1979  
Date

SIGNIFICANT INSPECTION FINDING NO 79-17-02

SHORT TITLE: QUALITY ASSURANCE PROGRAM DESCRIPTION NOT FILED IN ACCORDANCE WITH 10 CFR 71.51, BY JANUARY 1, 1979

DESCRIPTION

The description of the quality assurance program established to satisfy the applicable criteria specified in Appendix E "Quality Assurances Criteria for Packages for Radioactive Material," was not filed in accordance with 10 CFR 71.51 by January 1, 1979. Since this was not done, greater than Type A shipment of radioactive material cannot be shipped by the licensee (Met-Ed).

	IDENTIFYING NRC OFFICIAL	LICENSEE REP. NOTIFIED	NOTIFICATION ACCOMPLISHED BY
SIGNATURE	<i>Donald R. Neely</i>		<i>J. R. White</i>
NAME	Donald R. Neely	Ron Stevens	J. R. White
TITLE	Ld. Radiation Specialist	Licensing Engr.	Radiation Specialist
DATE/TIME	June 13, 1979 1:00 PM		June 13, 1979/3:00 PM

LICENSEE ACTION TAKEN: VERIFICATION DATE/TIME June 13, 1979/5:30PM  
 Licensee has suspended all preparations for shipping possible greater than type A quantities of radioactive material (Chem-Nuclear cask being loaded with spent powdex) until they have an approved quality assurance plan. The licensee is drafting a letter to be sent to NMSS, Washington D. C. requesting approval of their quality assurance plan.

Verified by: D. R. Neely, Lead Radiation Specialist  
 Name/Title and Signature *Donald R. Neely*

Disposition Recommendation

- Document in Inspection Report.
- Additional Enforcement Action because of inadequate licensee action.
- Cancel. Does not warrant inspection documentation.
- Carry as outstanding item for further inspection.
- 

Donald R. Neely  
 Lead Ops or HP Inspector

Disposition  
 As recommended

*EC McCabe*  
E. C. McCabe, Jr.  
 Chief, IE Resident Office, TMI-2

June 14, 1979  
 Date

SIGNIFICANT INSPECTION FINDING NO 79-17-03

SHORT TITLE: RCS Leak Rate Calculation

DESCRIPTION

Unit 2 Surveillance Procedure 2301-3D1 and results for period March 22-28, 1979 were reviewed. Noted that calculational treatment of water additions to make up tank during measurement was done improperly by not normalizing to RCS temperature, pressure conditions. Calculational errors significant enough to result in operation with greater than 1.0 gpm unidentified leakage, which was found to be in the case when a recalculation of data from March 22, 24, 25 and 28, 1979 was performed. Same error identified in Unit 1 procedure SP 1303-1.1.

\*Finding first identified by IE Investigation team.

	IDENTIFYING * NRC OFFICIAL	LICENSEE REP. NOTIFIED	NOTIFICATION ACCOMPLISHED BY
SIGNATURE	William J. Raymond		
NAME	William J. Raymond	R. Barley R. Warren	meeting
TITLE	Reactor Inspector	Engineer	
DATE/TIME	8/10/79		

LICENSEE ACTION TAKEN:

VERIFICATION DATE/TIME

Calculation methodology was reviewed with representative of Unit 1 and Unit 2. Licensee concurred with finding and committed to revise surveillance procedures by 8/15/79. Noted that procedural inaccuracies have no impact on present operation of either unit. Item will be followed.

Verified by: \_\_\_\_\_

Name/Title and Signature

Disposition Recommendation

- Document in Inspection Report.
- Additional Enforcement Action because of inadequate licensee action.
- Cancel. Does not warrant inspection documentation.
- Carry as outstanding item for further inspection.
- \_\_\_\_\_

William J. Raymond for DRH

Lead Ops or HP Inspector

Disposition

H/B Kester  
Chief, IE Resident Office, TMI-2

8/23/79  
Date

SIGNIFICANT INSPECTION FINDING NO 79-17-04

SHORT TITLE: Concerns regarding TMI personnel dosimetry

DESCRIPTION See Attached

	IDENTIFYING NRC OFFICIAL	LICENSEE REP. NOTIFIED	NOTIFICATION ACCOMPLISHED BY
SIGNATURE	<i>J.D. Kinneman / D. Neely</i>		<i>J.D. Kinneman / D. Neely</i>
NAME	J.D. Kinneman/D. Neely	See attached June 15, 1979	J.D. Kinneman/D. Neely
TITLE	Lead HP Inspector		Lead HP Inspector
DATE/TIME	May 15 - June 15		June 15, 1979

LICENSEE ACTION TAKEN: \_\_\_\_\_ VERIFICATION DATE/TIME \_\_\_\_\_

Corrective Actions were begun June 19, 1979.

Verified by: *John D. Kinneman*  
Name/Title and Signature

Disposition Recommendation

- Document in Inspection Report.
- Additional Enforcement Action because of inadequate licensee action.
- Cancel. Does not warrant inspection documentation.
- Carry as outstanding item for further inspection.
- \_\_\_\_\_

Don Neely  
Lead Ops or HP Inspector

Disposition

*N.B. Kister*  
Chief, IE Resident Office, TMI-2  
8/23/79  
Date



Significant findings with regard to TMI personnel security dosimetry system.

1. From discussions with appropriate licensee personnel, it appears that the licensee personnel dosimetry system is not adequately supervised by an individual with the qualifications required by ANSI N18.1-1971 as required by Technical Specification 6.3. The present supervisor of this operation has minimal health physics experience. While he does report to the RPM there has been little technical review of activities in this area.
2. By direct questioning of the individuals involved it has established that personnel running the TLD reader and prepared monitoring badges for use have not seen or been trained in Station Procedures covering that operation (1640, 1642, 1643) as required by 10 CFR 19.12.
3. Through discussion with personnel, review of records, and observation of various operations it was determined that the following procedures have not been followed as required by Technical Specification 6.3
  - a. 1642 item 5.4 - calibration
  - b. 1642 item 5.8 standards
  - c. 1643 - Annual calibration has not been completed since October 1977. Monthly quality assurance has not been completed since January, 1979.
4. Station procedure 1642 - Operation and Calibration of the TLD System should be reviewed since:
  - a. it does not reflect present operations (for example a Sr<sup>90</sup> source is used for constancy checks; the standard calls for the use of Cs<sup>137</sup>.)
  - b. it does not provide for a method of handling daily readout of TLD's.
  - c. it does not provide for multiple badging.
5. Observaton of the handling of data from read-out of TLD's and input cards revealed there are no administrative controls to account for all data outputs and changes to ensure that each receives appropriate supervisory review.
6. The present system does not provide for comparison of TLD and pocket dosimeter data as required by 10 CFR 20,201 (b).
7. The present system does not properly record previous exposure and exposure received elsewhere in the present quarter.
8. Review of the Form 5 computer output reveals:
  - a. periods for which no exposure data exist.
  - b. there is no way to identify changes to data.



9. Review of the Form 5 indicates that a number of individuals are carried as active several weeks after they have left the site.

10. The TLD system has been moved several times since the end of March. Since the calibration and quality assurance requirements have not been met since that time there is a need to review available data and establish the accuracy and constancy of the system for this time period.

These items were brought to the attention of the following licensee representations at a meeting on June 15, 1979:

E. Murri	NRC:
D. Hetrick	D. Neely
R. Macintosh	J. Kinneman
B. Lavimoniere	
R. Milford	

It was agreed that they would review these concerns and respond to them on June 19, 1979. At this meeting it was confirmed that R. Lavimoniere was charged with reviewing the dosimetry program, providing technical supervision and recommendations for improvements.

A meeting was held on June 19, 1979. The following licensee personnel were present:

J. Logan	E. Murri
D. Dubiel	B. Lavimoniere
T. Mullavery	D. Lessig
B. Jones	
D. Limroth	

NRC

D. Neely  
J. Kinneman

Following commitments or comments:  
(item number are as above).

1. For present B. Lavimoniere will continue to supervise program. A decision on more permanent staffing will be made shortly.
2. Training of dosimetry technicians will be completed by July 15, 1979. There will be training in any subsequent procedural changes. After the administrative staff is stabilized, training in computer procedures will be given. This is expected to be complete by late July.
3. Monthly Q.A. badges will be sent to a contractor for exposure by June 23, 1979 and returned by June 25, 1979. Annual Q.A. badges have been sent

to University of Michigan for exposure. Licensee personnel plan to followup in order to get rapid turn around. The yearly Q.A. badges previously exposed by RMC will be readout following completion of monthly Q.A.

4. A review and possible rewrite of station procedure 1642 will be completed by July 15, 1979.

5. The licensee plans to review entire dosimetry system and up grade administrative controls. First priority will be additional control of badges by assigning different colors of holders for each month. This review will begin immediately with corrective actions taken as soon as possible.

6. A computer program is under development to allow comparison of TLD and self reader data. This will be complete by July 27, 1979.

7. The licensee plans to modify Station procedure 1684 so each individual reporting for work will be asked regarding exposures at other locations during the present quarter when their TLD is issued. In addition, each individual approaching 1000 millirem for one quarter will be required to review their Form 4 to insure it is up-to-date.

8. Computer Programs are under development to:

- a. identify all individuals who have missing periods in TLD data.
- b. provide an audit trail for TLD data changes. This will be complete by August 19, 1979.

9. An improved procedure for identifying terminated individuals is under development. This will be distributed to Contractors by July 9, 1979.

10. To ensure that the TLD system has been reliable since the end of March, a Harshaw representative will visit the site to assemble a data package which will be reviewed by an independent auditor. This will be complete by mid-July.

In addition, the licensee plans to develop computer program to bring as many elements as possible (respiratory qualifications, training, MPC hours, etc)

Attached is the licensee's bar chart for completion of these tasks.

TLDD Recovery Plan

June 22 | June 30 | July 6 | July 13 | July 20 | July 27 | Aug 3 | Aug 10

MONTHLY QA OF TLDD'S  
ANNUAL QA OF TLDD'S

CHANGE TO ILBY  
(update of Formy)

Review of 1642

TRAINING OF PERSONNEL  
(Issuing, Editing Reading)

Verify Validity of March → June Readings

Provide improved termination system

Computer Schedule

Form-5  
(include previous exposure  
on Form 5 VR/ATA Reading)

include MPC-Hours; Resp. Qual; Training Status; etc on SR Exposure Form

Provide Audit Trail

TLDD vs. SR Comparison Report

Allow for multiple extremity badges / Multiple Whole Body Badges - one day

Administration

Account for "Holes" in Form-5 exposure periods

Provide program for evaluating  
"lost" exposure due to mid-month reading

Identify TLDD  
Supervisor

SIGNIFICANT INSPECTION FINDING NO 79-17-05

SHORT TITLE: Radiological Posting Deficiency

DESCRIPTION

During a tour of the 281' elevation control building area (M-20 area) on 6/15/79 it was noted that the access hatch to the tendon gallery was not posted. Coste, NSS Senior Tech assigned as RWP reviewer, was unable to produce survey records to substantiate the radiological conditions in the tendon gallery and further, was unaware of the RWP requirements for the tendon gallery. After conferring with other NSS technicians, Coste stated that a survey would be conducted and the area appropriately posted.

	IDENTIFYING NRC OFFICIAL	LICENSEE REP. NOTIFIED	NOTIFICATION ACCOMPLISHED BY
SIGNATURE			
NAME	L. R. Greger	Coste 6/15; Schaale 6/18	L. R. Greger
LE	Radiation Specialist	NSS RWP Revr./NSS HP Foreman	Radiation Specialist
DATE/TIME	6/15/79 ~1200		~1500 6/15/~1500 6/18

LICENSEE ACTION TAKEN:

VERIFICATION DATE/TIME 6/16/79 ~1300

It was noted during a tour of the M-20 area on 6/16/79, that the access hatch to the tendon gallery had been posted as an RWP controlled area. According to Coste, a survey of the area would be conducted before the next entry.

Verified by: L. R. Greger, Radiation Specialist  
Name/Title and Signature

Disposition Recommendation

- Document in Inspection Report.
- Additional Enforcement Action because of inadequate licensee action.
- Cancel. Does not warrant inspection documentation.
- Carry as outstanding item for further inspection.
- \_\_\_\_\_

Donald R. Neely  
Lead Ops or HP Inspector

Disposition

As recommended

Ebe C. McCabe, Jr.  
Chief, IE Resident Office, TMI-2

Date

SIGNIFICANT INSPECTION FINDING NO 79-17-06SHORT TITLE: Radiological Posting Deficiency

## DESCRIPTION

During a tour of the 281' elevation of the control building (M-20 area) on 6/16/79, it was noted that an installed ladder allowed access to an area with radiation levels greater than 100 mR/hr (250 mR/hr with Xetex 305A serial #2950) at the outer of two doors leading to the fuel handling building. The major contributor to the radiation appeared to be from floor contamination. The ladders were not posted as required by 10 CFR 20.203(b) and (c), although a separate entrance to the same area was posted indicating that the area was a high radiation and contaminated area requiring an RWP for entry. Contamination problems in the M-20 area are exacerbated in that no frisker is located in the area and

	IDENTIFYING NRC OFFICIAL	LICENSEE REP. NOTIFIED	NOTIFICATION ACCOMPLISHED BY
SIGNATURE			
NAME	L. R. Gregor	Schaale (NSS)	L. R. Gregor
TITLE	Radiation Specialist	H. P. Foreman	Radiation Specialist
DATE/TIME	6/16/79 ~1500		6/18/79 ~1500

## LICENSEE ACTION TAKEN:

VERIFICATION DATE/TIME 6/19/79 ~1600

The radiation barricade and posting was moved slightly to include the ladder within the posted area. Although the current posting meets the posting requirements, it would be preferable to move the high radiation area posting closer to the actual HRA and more clearly define the ladder down near the door to the fuel handling building as a HRA. This was discussed with D. Ferguson, NSS Supervisor, on 6/19/79.

Verified by: L. R. Gregor, Radiation Specialist

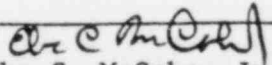
Name/Title and Signature

Disposition Recommendation

- Document in Inspection Report.
- Additional Enforcement Action because of inadequate licensee action.
- Cancel. Does not warrant inspection documentation.
- Carry as outstanding item for further inspection.
- 

Donald R. Neely

Lead Ops or HP Inspector

DispositionAs recommended.
  
 Ebe C. McCabe, Jr.

Chief, IE Resident Office, TMI-2

Date

DESCRIPTION: (Continued)

egress is through noncontrolled plant areas.

D. Neely had discussed posting and contamination cleanup needs in the vicinity of this door which Hornbeck (NSS) approximately two weeks earlier. Neely was under the impression that the area would be cleaned up.



SIGNIFICANT INSPECTION FINDING NO 79-17-07

SHORT TITLE: High Activity Water Transfer to Unit 1 From Unit 2.

DESCRIPTION

During simultaneous water transfers (Unit-1 Neut Feed Tk to CAPGUN-1; Unit-2 Aux. Sump to Unit-2 Misc Waste Hold Tk) water having activity in excess of 1 uCi/ml was inadvertently pump to CAPGUN 1 from Unit-2 Aux. Sump. A common line between the two transfer systems was found due to the fact that Check Valve WDL-V-1067 internals were removed and WDL-V-371 and WDL-V-372 were left open following a previous evolution. The system design criteria for CAPGUN 1 limit influent activity to 1 uCi/ml. It was also learned that caution tags on the Aux. Sump Tk Pump Controller required that WDL-V-371 and 372 be shut before pump operation.

	IDENTIFYING NRC OFFICIAL	LICENSEE REP. NOTIFIED *	NOTIFICATION ACCOMPLISHED BY
SIGNATURE			
NAME	M. Schumacker	W. Conway	M. Schumacker
TITLE	Radiation Specialist	Shift Supv. Unit-2	Radiation Specialist
DATE/TIME	6/17/79 2100		6/17/79 2200

LICENSEE ACTION TAKEN:

VERIFICATION DATE/TIME

- (1) All simultaneous transfers to be stopped until resolution was achieved.
- (2) Development of procedure to pump Aux Sump w/o going thru Aux. Sump Tk
- (3) Develop plan for dewatering CAPGUN 1 back to Unit-2.

Verified by:

Name/Title and Signature

\*R. McGory, Group Leader  
Liquid Waste Management Systems

Disposition Recommendation

- Document in Inspection Report.
- Additional Enforcement Action because of inadequate licensee action.
- Cancel. Does not warrant inspection documentation.
- Carry as outstanding item for further inspection.
- 

NBK for D. Neely  
Lead Ops or HP Inspector

Disposition

As recommended

NB Foster  
Chief, IE Resident Office, TMI-2

8/23/79  
Date

SIGNIFICANT INSPECTION FINDING NO 79-17-08

SHORT TITLE: ALARA (Health Physics) Review of Unit-2 Special Operating and Recovery Procedures "Z" and "R" Procedures; and associated Operating Procedures

DESCRIPTION

"Z" and "R" procedures (and associated operating procedures) are receiving little or no review to assure that adequate ALARA and Health Physics consideration are incorporated. For example, the following procedures were reviewed by PORC and sent to NRC for concurrence but had not been subjected to any ALARA or Health Physics review; and consequently were lacking adequate ALARA precautions and instructions: (1) Fuel Pool Waste Storage System Operating Procedures; (2) Auxiliary Building Emergency Liquid Clean-Up System Operating Procedure; (3) R.B. Sump Level Measurement.

	IDENTIFYING NRC OFFICIAL	LICENSEE REP. NOTIFIED *	NOTIFICATION ACCOMPLISHED BY
SIGNATURE			
NAME	J. R. White	T. Muleavy/E. Murri	J. White/D. Havercamp
TITLE	Radiation Specialist	Rad Prot Supv/Rad Prot Mngt.	Rad Spec/Resident Insp
DATE/TIME	6/21/79 1200		6/21/79 1400

LICENSEE ACTION TAKEN:

VERIFICATION DATE/TIME

- The licensee will:
- (1) Identify criteria for determining when ALARA review is required. (Target - 1 week)
  - (2) Personnel will be designated to conduct ALARA reviews. In the interim period until a procedure is issued, Electric Boat Radiological Engineering will provide ALARA review.
  - (3) An ALARA review procedure will be developed as implemented to include ALARA sign-off on applicable procedures. (Target 2 weeks).

Verified by:

Name/Title and Signature

\*Mark Bezilla, PORC Secretary  
D. Limroth, Supt. Tech. Services

Disposition Recommendation

- Document in Inspection Report.
- Additional Enforcement Action because of inadequate licensee action.
- Cancel. Does not warrant inspection documentation.
- Carry as outstanding item for further inspection.
- 

*HB for D. Fisher*  
Lead Ops or HP Inspector

Disposition

*As recommended*

*HB Kister*  
Chief, IE Resident Office, TMI-2

*8/23/79*  
Date

SIGNIFICANT INSPECTION FINDING NO 79-17-09

SHORT TITLE: Improper Posting of Containers of Radioactive Material

DESCRIPTION

At radwaste storage area - SE of Unit 2 cooling towers:

- (1) Tank trucks reading up to 80 mr/hr with only Rad Matl posting or with only empty signs.
  - (2) Casks with ~50 mr/hr contact readings with only Rad Matl signs
  - (3) One cask with tilted lid and localized 1.5 R/hr reading. Only Rad Matl sign
  - (4) No cask, trailer, or building has any information signs describing contents
- The above items are contrary to 10 CFR 20.203(F)(2)

	IDENTIFYING NRC OFFICIAL	LICENSEE REP. NOTIFIED	NOTIFICATION ACCOMPLISHED BY
SIGNATURE			
NAME	Donald Miller		NOTIFICATION AT EXIT ON 7-12-79
TITLE	Radiation Specialist		
DATE/TIME	6/26/79 1900 hrs		

LICENSEE ACTION TAKEN:

VERIFICATION DATE/TIME

Remains to be reviewed. Action in progress as of 6/29/79.

Verified by:

Name/Title and Signature

Disposition Recommendation

- Document in Inspection Report.
- Additional Enforcement Action because of inadequate licensee action.
- Cancel. Does not warrant inspection documentation.
- Carry as outstanding item for further inspection.
- 

*H. D. Nealey*

Lead Ops or HP Inspector

Disposition

*as recommended*

*NB Kister*

Chief, IE Resident Office, TMI-2

*8/23/79*

Date

SIGNIFICANT INSPECTION FINDING NO 79-17-10

SHORT TITLE: Inadequate Airborne Radioactivity Samples in Work Area

DESCRIPTION

Work being performed under RWP 15208, dated 6/27/79, involved the working in the 281' level elevator pit. This area had measurable levels of airborne radioactivity as determined by NRC lapel air samplers. The licensee did not perform an evaluation of the airborne activity in the work area. This would not be in accordance with 20.103(a)(3) and 20.201(b).

	IDENTIFYING NRC OFFICIAL	LICENSEE REP. NOTIFIED	NOTIFICATION ACCOMPLISHED BY
SIGNATURE			
NAME	R. D. Thomas	E. Clements (NSS)	R. D. Thomas
TITLE	Radiation Specialist	Survey Group Supervisor	Radiation Specialist
DATE/TIME	6/28/79 1400		6/29/79 1100

LICENSEE ACTION TAKEN:

VERIFICATION DATE/TIME

Verified by:

Name/Title and Signature

Disposition Recommendation

- Document in Inspection Report.
- Additional Enforcement Action because of inadequate licensee action.
- Cancel. Does not warrant inspection documentation.
- Carry as outstanding item for further inspection.
- 

AK for D. Neely  
Lead Ops or HP Inspector

Disposition

as recommended

NS Kester  
Chief, IE Resident Office, TMI-2

8/23/79  
Date



SIGNIFICANT INSPECTION FINDING NO 79-17-11

SHORT TITLE: Non-representative Sampling of Epicore-2 Building Ventilation

**DESCRIPTION**

The exhaust duct monitoring system involves approximately 100 ft. from sample line (60-70 feet outside and not insulated) with 8 90° bends. The sample point is 3-4 feet from a 90° bend in the exhaust ductwork so the air flow at the sample point will be quite turbulent. The monitor exhaust runs thru the wall at ground level and discharges outside. System draining DWG M013, Rev 4, shows the monitor sample point and line inside the building and the monitor discharge returning to the stack.

	IDENTIFYING NRC OFFICIAL	LICENSEE REP. NOTIFIED	NOTIFICATION ACCOMPLISHED BY
SIGNATURE			
NAME	Steven C. Ewald	G. Lodde	J. R. White
TITLE	HP Inspector	Environmental Assessm't.	Radiation Specialist
DATE/TIME	6/29 0400		7/10/79 1500

**LICENSEE ACTION TAKEN:**

**VERIFICATION DATE/TIME**

Licensee representatives agreed to review the problem and take corrective action.

Verified by: \_\_\_\_\_

Name/Title and Signature

Disposition Recommendation

- Document in Inspection Report.
- Additional Enforcement Action because of inadequate licensee action.
- Cancel. Does not warrant inspection documentation.
- Carry as outstanding item for further inspection.
- \_\_\_\_\_

Mc for D. Neely  
Lead Ops or HP Inspector

Disposition

as recommended

HB Kister  
Chief, IE Resident Office, TMI-2

8/23/79  
Date

SIGNIFICANT INSPECTION FINDING NO 79-17-12

SHORT TITLE: Failure to use approved procedures and certified calibration equipment for calibration of portable air samplers.

DESCRIPTION

A review of the instrument calibration program indicated that no approved calibration or operation procedures are being used for calibration/use of five (5) portable and two (2) personal air samplers. Additionally the flow calibration is in question due to lack of certification of flow calibration instrumentation. The above represents failure to fulfill the requirements of Technical Specification 6.8.1 paragraph a. (Reference Regulatory Guide 1.33, 1972, Section G.5c.)

	IDENTIFYING NRC OFFICIAL	LICENSEE REP. NOTIFIED	NOTIFICATION ACCOMPLISHED BY
SIGNATURE	<i>R. L. Nimitz</i>		<i>R. L. Nimitz</i>
NAME	R. L. Nimitz	T. Mulleavy/R. Jacobs*	R. L. Nimitz
TITLE	Radiation Specialist	Unit H.P. Supervisor	Radiation Specialist
DATE/TIME	7/3/79 @0800		7/3/79 @1000

\* Rad Services Supervisor

LICENSEE ACTION TAKEN: VERIFICATION DATE/TIME 1000 7/3/79  
R. Jacobs, licensee contractor calibration supervisor, is to draft and submit for approval operation and calibration procedures. Date of Resolution pending T. Mulleavy's response to above.

Verified by: \_\_\_\_\_  
Name/Title and Signature

Disposition Recommendation

- Document in Inspection Report.
- Additional Enforcement Action because of inadequate licensee action.
- Cancel. Does not warrant inspection documentation.
- Carry as outstanding item for further inspection.
- \_\_\_\_\_

*Donald R. Misch*  
Lead Ops or HP Inspector

Disposition a recommended

*W.B. Kester*  
Chief, IE Resident Office, TMI-2

8/23/79  
Date



SIGNIFICANT INSPECTION FINDING NO 79-17-13

SHORT TITLE: Failure to Label Radioactive Material (Samples) Removed from Restricted Area for Analysis and Failure to Label Drums of Radioactive Samples Brought Back from Analysis

DESCRIPTION

An air sample was removed from the Unit 2 HP checkpoint brought to the sample coordinator (Unit 2 Control Room) and subsequently removed to south gate area for counting by RMC. The sample indicated 1.2 Rad/hr contact and 0.1 mRem/hr contact (per licensee survey through a plastic bag). The sample was not marked in any manner indicating radioactive material. Additionally, a truck load (two 55 gallon drums) of samples was observed being transported to the restricted area from the counting trailers on 7/3/79. The drums did not have any labels indicating radioactive material in same as required per 20.203(f).

	IDENTIFYING NRC OFFICIAL	LICENSEE REP. NOTIFIED	NOTIFICATION ACCOMPLISHED BY
SIGNATURE			
NAME	R. L. Nimitz	A. Tate	C. Hosey
TITLE	Radiation Specialist	Assis. Manager, NSS	Radiation Specialist
DATE/TIME	7/3/79 ~ 1700		7/4/79

LICENSEE ACTION TAKEN:

VERIFICATION DATE/TIME

Tate to instruct his personnel to observe all posting and labeling requirement of 10 CFR 20.203

Verified by: \_\_\_\_\_

Name/Title and Signature

Disposition Recommendation

- Document in Inspection Report.
- Additional Enforcement Action because of inadequate licensee action.
- Cancel. Does not warrant inspection documentation.
- Carry as outstanding item for further inspection.
- \_\_\_\_\_

Donald R. Neely  
Lead Ops or HP Inspector

Disposition

as recommended

HB Kester  
Chief, IE Resident Office, TMI-2

8/23/79  
Date

SIGNIFICANT INSPECTION FINDING NO 79-17-14

SHORT TITLE: Failure of two individuals to frisk or be frisked after having entered Unit 1 controlled area and prior to exiting protected area at gate 10 on July 6, 1979.

DESCRIPTION  
At 1300 on July 6, 1979 two individuals were observed carrying barrels into the Unit 1 Aux. Bldg. from the loading dock area. The individuals had to take down a rope barrier delineating a controlled area. After completion of job, individuals boarded truck and drove to Gate 10 for frisking out. The truck was frisked out by two rovers, however the two individuals who had crossed the rope barrier were not frisked out and subsequently departed the protected area.

	IDENTIFYING NRC OFFICIAL	LICENSEE REP. NOTIFIED	NOTIFICATION ACCOMPLISHED BY
SIGNATURE			
NAME	R.L. Nimitz		R.L. Nimitz
TITLE	Radiation Specialist		Radiation Specialist
DATE/TIME	July 6, 1979/1300		July 7, 1979/1000

LICENSEE ACTION TAKEN: Shift Foreman for operations, who supervise personnel performing frisking, were notified. Per shift foreman all personnel exiting in vehicles to be frisked out will be challenged to verify they had frisked out. If not the individual will frisk out with Rover's survey instruments.

VERIFICATION DATE/TIME 7/9/79/1030

Verified by: R. L. Nimitz/Radiation Specialist  
 Name/Title and Signature

Disposition Recommendation

- Document in Inspection Report.
- Additional Enforcement Action because of inadequate licensee action.
- Cancel. Does not warrant inspection documentation.
- Carry as outstanding item for further inspection.
- 

Donald R. Hooley  
 Lead Ops or HF Inspector

Disposition as recommended

HB Kister  
 Chief, IE Resident Office, TMI-2

8/23/79  
 Date

SIGNIFICANT INSPECTION FINDING NO 79-17-15

SHORT TITLE: Deficiencies in Air Sampling Program for Unit 1

DESCRIPTION

Air samples are not being performed at a frequency adequate to demonstrate compliance with regulations in 10 CFR 20. Work was performed on the following RWP's 34561 (7/6/79); 34544 (7/6/79); 34537 (7/6/79); 34504 (7/6/79). RWP's were written based on air sample as much as 4 days old. Also, Reactor Building vent monitor (RM-A2) results are used to represent air activity in entire Unit 1 Reactor Building. Specific air samples should be taken in actual work area.

	IDENTIFYING NRC OFFICIAL	LICENSEE REP. NOTIFIED	NOTIFICATION ACCOMPLISHED BY
SIGNATURE			
NAME	C. M. Hosey	Brenner, Met-Ed	C. M. Hosey
ROLE	Radiation Specialist	Tech in Charge Unit 1 HP	Radiation Specialist
DATE/TIME	7/6/79 1900		7/6/79 1930

LICENSEE ACTION TAKEN: \_\_\_\_\_ VERIFICATION DATE/TIME \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Verified by: \_\_\_\_\_  
Name/Title and Signature

Disposition Recommendation

- Document in Inspection Report.
- Additional Enforcement Action because of inadequate licensee action.
- Cancel. Does not warrant inspection documentation.
- Carry as outstanding item for further inspection.
- \_\_\_\_\_

Donald R. Neely  
Lead Ops or HP Inspector

Disposition *as recommended*

*NR Keenan*  
Chief, IE Resident Office, TMI-2  
8/23/79  
Date

SIGNIFICANT INSPECTION FINDING NO 79-17-16SHORT TITLE: Contamination ControlDESCRIPTION

During tour of Unit 2 Control Building (M-20 area) on 7/7/79, independent contamination surveys were performed. The following contaminated equipment/areas were found. The equipment/areas were not tagged, bagged or otherwise marked to indicate they were radioactively contaminated.

- 1) Vacuum cleaner hose reading 0.5 mR/hr (RO-2) > 50,000 dpm (with PRS-18 HP-210 probe)
- 2) Face of air conditioning filter (duct from tendon access gallery terminates at the face of the filter) > 1000 dpm (wide PRS-18 HP-210 probe)
- 3) Deck in passageway around reactor building contaminated > 50,000 dpm

	IDENTIFYING NRC OFFICIAL	LICENSEE REP. NOTIFIED	NOTIFICATION ACCOMPLISHED BY
SIGNATURE			
NAME	C. M. Hosey	Craft	C. M. Hosey
TITLE	Radiation Specialist	NSS Foreman	Radiation Specialist
DATE/TIME	7/7/79 2200		7/7/79 2230

LICENSEE ACTION TAKEN:VERIFICATION DATE/TIME 7/8/79 1900

- 1) Vacuum cleaner hose removed & disposed of as radwaste
- 2) Air conditioning filter unit posted as "Contaminated Area"
- 3) Detailed contamination survey performed. No means > 1000 dpm/100 m<sup>2</sup> found in area. I request that another survey be performed with special attention paid to large indentation in floor.

Verified by: C. M. Hosey, Radiation Specialist  
Name/Title and Signature

Disposition Recommendation

- Document in Inspection Report.
- Additional Enforcement Action because of inadequate licensee action.
- Cancel. Does not warrant inspection documentation.
- Carry as outstanding item for further inspection.
- 

Donald R. Neely

Lead Ops or HP Inspector

Dispositionas recommendedHB Kester  
Chief, IE Resident Office, TMI-28/23/79  
Date



SIGNIFICANT INSPECTION FINDING NO 79-17-17

SHORT TITLE: Significant Airborne Concentrations of Beta Emitters in Unit 2 Auxiliary/Fuel Handling Buildings

DESCRIPTION

Air samples collected in the Unit 2 Auxiliary/Fuel Handling Building from June 30 to July 2, 1979 revealed the presence of much higher concentrations of airborne beta emitters than previously seen. Preliminary analysis indicated that, while no exposures in excess of regulatory limits are likely to have occurred, approximately 100 individuals entered these areas while these conditions existed. Appropriate bioassays are necessary to demonstrate that no internal dispositions occurred.

	IDENTIFYING NRC OFFICIAL	LICENSEE REP. NOTIFIED	NOTIFICATION ACCOMPLISHED BY
SIGNATURE			
NAME	Donald R. Neely		Donald R. Neely
LE	Lead Radiation Specialist		Lead Radiation Spec.
DATE/TIME	7/5/79 2:00 p.m.		7/9/79 3:00 p.m.

LICENSEE ACTION TAKEN:

VERIFICATION DATE/TIME \_\_\_\_\_

Licensee plans to:

- 1) Establish comprehensive bioassay program
- 2) Perform bioassays (urine) on selected individuals who entered the Auxiliary/Fuel Handling Buildings during this time
- 3) Develop a procedure for determination of air concentrations of beta emitters

Verified by: \_\_\_\_\_

Name/Title and Signature

Disposition Recommendation

- Document in Inspection Report.
- Additional Enforcement Action because of inadequate licensee action.
- Cancel. Does not warrant inspection documentation.
- Carry as outstanding item for further inspection.
- \_\_\_\_\_

DK D. Neely  
Lead Ops or HP Inspector

Disposition

as recommended

HB Kister  
Chief, IE Resident Office, TMI-2

8/23/79  
Date

SIGNIFICANT INSPECTION FINDING NO 79-17-18

SHORT TITLE: Control of High Radiation Area

DESCRIPTION

During tour of fuel handling building, Unit 2 (area of tank farm) observed that door on 347' el in southwest corner of building that leads to tendon access gallery and door on 347' el, east wall connecting FHB with Unit 2 Aux Bldg were unlocked, providing direct access where the radiation levels are greater than 1 R/hr. This condition was also identified to licensee (Tate, NSS) on 7/2/79. At that time, the licensee stated that control of the high radiation area doors was maintained by HP technician in area and that a technician would be continually present. However, the doors were unlocked on 7/8/79. No HP technician was in the area during the 30 minutes I was on the 347' el.

	IDENTIFYING NRC OFFICIAL	LICENSEE REP. NOTIFIED	NOTIFICATION ACCOMPLISHED BY
SIGNATURE			
NAME	C. M. Hosey	Craft	C. M. Hosey
LE	Radiation Specialist	NSS Foreman	Radiation Specialist
DATE/TIME	7/8/79 1800		7/8/79 1900

VERIFICATION DATE/TIME 7/9/79 1845

LICENSEE ACTION TAKEN:

HP technician was in position at 1845. Craft, NSS, stated that word would be passed to all technicians that they will not leave area until relief arrives.

Verified by: C. M. Hosey, Radiation Specialist  
Name/Title and Signature

Disposition Recommendation

- Document in Inspection Report.
- Additional Enforcement Action because of inadequate licensee action.
- Cancel. Does not warrant inspection documentation.
- Carry as outstanding item for further inspection.
- 

Donald R. Neely

Lead Ops or HP Inspector

Disposition

as recommended

H.B. Kester  
Chief, IE Resident Office, TMI-2

8/23/79  
Date



SIGNIFICANT INSPECTION FINDING NO 79-17-~~0~~ 22

SHORT TITLE: Operator Proficiency in use of Special (Z) and Emergency (EP) Procedures


DESCRIPTION

Operator training in Z and "EP series procedures appears deficient. Of 28 procedures examined, 518 of the 840 acknowledgement signatures (61.7%) were missing. No formal training in these procedures was identified as having been conducted. Conformance with the requirement for training of personnel to assure that suitable proficiency is achieved and maintained is in question. (Appendix B, 10 CRF 50 Criterion II

	IDENTIFYING NRC OFFICIAL	LICENSEE REP. NOTIFIED	NOTIFICATION ACCOMPLISHED BY
SIGNATURE			
NAME	E. H. Johnson	J. Floyd	E. H. Johnson
TITLE	Reactor Inspector	TMI-2 Operations Supervisor	Reactor Inspector
DATE/TIME	6/13/79: 1800		6/13/79: 1800

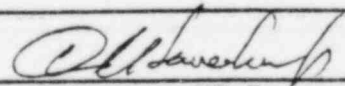
LICENSEE ACTION TAKEN: Monitored "Acknowledgement Signature" status by incorporation into morning status reports and required signatures were obtained in a more timely manner. The inspector verified proper action was completed.

VERIFICATION DATE/TIME 7/26/79: 7:30 a.m.

Verified by: R. Conte, Reactor Operations Inspector  
Name/Title and Signature 

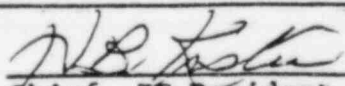
Disposition Recommendation

- Document in Inspection Report.
- Additional Enforcement Action because of inadequate licensee action.
- Cancel. Does not warrant inspection documentation.
- Carry as outstanding item for further inspection.
- 

  
Lead Ops or HP Inspector

Disposition

as recommended

  
Chief, IE Resident Office, TMI-2

7/31/79  
Date

ENCLOSURE B

SUMMARY OF INSPECTION FINDINGS AND OPEN ITEMS

- 320/79-17-01 (Significant Finding): Unmonitored Release Path to the Environment (paragraph 8.3.b)
- 320/79-17-02 (Significant Finding): No Quality Assurance Program for transport packages (paragraph 8.a.1.a)
- 320/79-17-03 (Significant Finding): RCS Leakage Calculations (paragraph 7)
- 320/79-17-04) (Significant Finding): Concerns regarding personnel Dosimetry System (paragraph 8.f)
- 320/79-17-05 (Significant Finding): Radiological Posting Deficiency - Failure to post M-20 area as RWP area (paragraph 8.g)
- 320/79-17-06 (Significant Finding): Radiological Posting Deficiency - Failure to Post access to High Radiation area (paragraph 8.c)
- 320/79-17-07 (Significant Finding): Unintended intermediate activity water transfer from Unit 2 to Unit 1 (paragraph 8.e.2)
- 320/79-17-08 (Significant Finding): Insufficient ALARA and health physics consideration in Unit 2 Special Operating Procedures (paragraph 4)
- 320/79-17-09 (Significant Finding): Improper posting of containers of radioactive material (paragraph 8.a.2)
- 320/79-17-10 (Significant Finding): Inadequate Airborne Radioactivity Sampling in Work Area (paragraph 8.f.2)
- 320/79-17-11 (Significant Finding): Non-representative sampling of Epicor-2 Ventilation System (paragraph 8.h)
- 320/79-17-12 (Significant Finding): Failure to use approved procedures and certified calibration equipment for calibration of portable air samples (paragraph 8.d.1 and 8.d.2)

- 320/79-17-13 (Significant Finding): Failure to label containers of Radioactive Material (paragraph 8.b)
- 320/79-17-14 (Significant Finding): Failure of Individuals to Frisk when leaving the controlled area (paragraph 8.g)
- 320/79-17-15 (Significant Finding): Deficiencies in Unit 1 Air Sampling Program (paragraph 8.f.2)
- 320/79-17-16 (Significant Finding): Contamination Control
- 320/79-17-17 (Significant Finding): Significant airborne concentrations of beta emitters in Unit 2 Auxiliary/Fuel Handling Building (paragraph 8.f.2)
- 320/79-17-18 (Significant Finding): Control of High Radiation Area (paragraph 8.c)
- 320/79-17-19 (Open Item): Review of numbering system for Radioactive Material Shipments (paragraph 8.a.1.b)
- 320/79-17-20 (Open Item): Review of Method for determining activity in waste drums (paragraph 8.a.3)
- 320/79-17-21 (Open Item): Review of beta analysis of liquid discharges (paragraph 8.e.1)
- 320/79-17-22 (Significant Finding): Operator Proficiency in use of Special (Z) and Emergency (EP) Procedures