

U. S. NUCLEAR REGULATORY COMMISSION

Region I

Report No. 50-320/83-03

Docket No. 50-320

License No. DPR-73 Priority -- Category C

Licensee: GPU Nuclear Corporation

P.O. Box 480

Middletown, Pennsylvania 17057

Facility Name: Three Mile Island Nuclear Station, Unit 2

Inspection At: Middletown, Pennsylvania

Inspection Conducted: January 30 - February 26, 1983

Inspectors:	<u>Joel S. Wiebe</u>	<u>3/7/83</u>
	J. Wiebe, Senior Resident Inspector (TMI-2)	date signed
	<u>Kimberly L. Barr</u>	<u>3/7/83</u>
	K. Barr, Radiation Specialist	date signed
	<u>Bony O'Neill</u>	<u>3/8/83</u>
	B. O'Neill, Radiation Specialist	date signed
	<u>Joel S. Wiebe, for</u>	<u>3/7/83</u>
	V. Thonus, Resident Inspector (TMI-2)	date signed
Approved by:	<u>A. Fasano</u>	<u>3/8/83</u>
	A. Fasano, Chief, Three Mile Island-2 Projects Section, Projects Branch No. 2	date signed

Inspection Summary:

Inspection conducted on January 30 - February 26, 1983 (Inspection Report Number 50-320/83-03)

Areas Inspected: Routine safety inspection conducted by site inspectors of licensee action on NRC circulars; periodic and special reports; routine plant operations; licensee event reports; polar crane; procedures; surveillance activities; health physics review; reactor building entries; and radioactive material shipments. The inspection involved 260 inspector-hours.

Results: No violations or deviations were identified.

## DETAILS

### 1. Persons Contacted

#### General Public Utilities (GPU) Nuclear Corporation

- \*B. Ballard, Sr., Manager, TMI Quality Assurance Modifications/Operations
- \*S. Chaplin, Licensing Engineer
- \*J. Chwastyk, Manager, Plant Operations
- \*W. County, Quality Assurance Auditor
  - J. Dettorre, Decontamination and Radwaste Task Leader
  - G. Eidam, Data Acquisition Manager
  - J. Flanigan, Radiological Engineering Manager
  - E. Gischel, Manager Plant Engineering
  - C. Hansen, Licensing Engineer
  - L. King, Director, Site Operations
  - E. Kellogg, Quality Assurance Auditor
- \*G. Kunder, Manager, Safety Review Group
  - B. McMullen, Command Center Coordinator
- \*J. Marsden, Quality Assurance Engineer
  - J. Quinette, Plant Engineer
  - J. Tarpinian, Decontamination and Radwaste Engineer
- \*R. Wells, Licensing Engineer

Other licensee personnel were also interviewed.

\*denotes those present at the exit interview.

### 2. Licensee Action on NRC Circulars

Closed 78-18, results of UL fire test. The licensee performed a review of sprinkler locations and actuation temperatures. The ceramic fibre blankets referred to in the circular are not used at TMI-2.

Closed 79-13, diesel fire pump starting contactors. The fire pumps at TMI are of a different model than the types which experienced the contactor problems.

### 3. Review of Periodic and Special Reports

Periodic and special reports were reviewed for information relative to the safety of the plant in its current status. The monthly operating reports for December 1978 through March 1979 and the series of three startup reports were reviewed. No conditions or occurrences adverse to current plant safety were identified.

### 4. Routine Plant Operations

Inspections of the facility were conducted to assess compliance with general operating requirements of TS 6.8.1 in the following areas:  
licensee review of selected plant parameters for abnormal trends; plant status from a maintenance/modification viewpoint including plant

cleanliness; licensee control of ongoing and special evolutions including control room personnel awareness of these evolutions; control of documents including log keeping practices; and area radiological controls.

Random inspections of the control room during regular and back shift hours were conducted at least three times per week. The selected sections of the shift foreman's log and control room operator's log were reviewed for the period January 30 - February 26, 1983. Selected sections of other control room daily logs were reviewed for the period from midnight of the day of review to the time of review. Inspections of areas outside the control room occurred on January 31, 1983 and February 2, 3, 7, 8, 9, 14, 15, 17, and 25, 1983. Selected licensee planning meetings were observed. All areas observed were acceptable.

#### 5. Licensee Event Reports

The inspector reviewed two Licensee Event Reports (LERs) required to be submitted in accordance with Technical Specifications (TS) 6.9.1.8 and 6.9.1.9 (and NUREG 0161) to verify the following: Event and cause description clearly reported event information; the required LER form was properly completed; and adequate corrective action was specified. LERs 83-01/01L-0 and 83-02/01L-0 were reviewed.

Initial screening of these events was completed to determine generic applicability, need for additional site verification, and the necessity for additional NRC management review. No additional actions were warranted for these LERs.

#### 6. Surveillance Activities

On January 31, 1983, the inspector observed selected portions of the monthly diesel generator operability test. The "B" diesel performed satisfactorily and met the acceptance criteria in procedure 4303-M16 A/B.

#### 7. Polar Crane Inspection

The inspector interviewed personnel and reviewed licensee documents to evaluate the licensee's ability to resolve internal comments concerning the polar crane. The following items were noted:

- a. Internal comments are receiving adequate management attention and are being addressed.
- b. Inter-department communication problems appear to be causing some engineers to perceive that their comments are not being adequately addressed and in some cases that their comments are not welcome. This item will receive additional NRC review following Licensee development of corrective action (320/83-03-01).

- c. It is not clear how administrative procedures AP-1043, "Work Authorization Procedure" and AP-1047, "Startup and Test Normal", should be applied to the refurbishment of the polar crane. The licensee's Quality Assurance personnel are reviewing this matter. This item will receive additional NRC review following completion of the Licensee reviews (320/83-03-02).

8. Quality of Procedures Submitted for NRC Review

The inspector reviewed procedures for reactor coolant system (RCS) draindown which were submitted to the NRC for approval pursuant to Technical Specification 6.8.2. The NRC disapproved the procedures for the following reasons:

- a. Two procedures (2104-10.1, Operation of Secondary Plant System and 2104-10.2, Primary Plant Operation Procedure), allowed secondary system pressure to exceed RCS pressure. This situation would violate limits and conditions established in existing procedures and also allow plant conditions not permitted by the Safety Evaluation Reports for the RCS draindown.
- b. Procedure 2104-10.2, allowed RCS draindown to below the 328 ft. elevation. This is not permitted by the previously approved Safety Evaluation Report for the RCS draindown.
- c. Procedure 2202-5.5, "Loss of RCS Level Indicator", did not incorporate the new RCS standpipe level indicator nor properly compensate for RCS pressure on the existing level indicators.
- d. Procedure 2104-10.1, contained an incorrect valve lineup.
- e. Other errors included: omitted valve in valve lineup, inconsistencies in RCS water level elevations and required indications on water level instruments, and a demineralized water path was omitted when isolating demineralized water sources.

This item is considered unresolved pending further NRC evaluation and licensee corrective action (320/83-03-03).

9. Routine Health Physics and Environmental Review

a. Plant Tours

The NRC site radiation specialists completed routine plant inspection tours. These inspections included all radiation protection control points and selected radiologically controlled areas. Licensee performance in the following areas was satisfactory:

- Access control to radiologically controlled areas
- Adherence to Radiation Work Permit (RWP) requirements

- Proper use of respiratory protection equipment
- Adherence to radiation protection procedures
- Use of survey meters including personnel frisking techniques
- Cleanliness and housekeeping conditions
- Fire protection measures.

b. Measurement Verification

Measurements were independently made by the inspector to verify the quality of licensee performance in the areas of radioactive material shipping, radiation and contamination surveys, and onsite environmental air and water sampling and analyses.

10. Reactor Building Entries

- a. The site staff monitored reactor building (RB) entries conducted during the inspection period. The following items were verified on a sampling basis.
- The RB entry was properly planned and coordinated to assure that task implementation including adequate as low as is reasonably achievable (ALARA) review, personnel training, and equipment testing.
  - Radiological precautions were planned and implemented including the use of a Radiation Work Permit (RWP).
  - Specific procedures were developed for unique tasks and were properly implemented.
- b. The site staff reviewed selected documents, applicable procedures, and RWPs concerning reactor building entries

Entries 166 through 184 were conducted during this inspection period.

During reactor building entry 179, conducted on Thursday, February 17, 1983 command center personnel notified the NRC that two additional workers were necessary in order to support an in-progress "work package", (M037-installation of five ton electric hoist) and the work package had been changed accordingly. The NRC questioned whether the revised work package had undergone appropriate review. Based on the discussion with licensee representatives, and observation regarding other recent reactor building work activities, the NRC determined that administrative controls for changes to work packages are not well understood. The NRC will review the adequacy of the new administrative procedure 4000-ADM-3000.01, TMI-2 Unit Work Instruction, regarding current TMI-2 radiological work activities (320/83-03-04).

### 11. Radioactive Material Shipments

The NRC site radiation specialists inspected several radioactive material shipments during the inspection period to verify the items listed below.

- The licensee had complied with approved packaging and shipping procedures.
- The licensee had prepared shipping papers, which certified that the radioactive materials were properly classified, described, packaged, and marked for transport.
- The licensee had applied warning labels to all packages and had placarded vehicles.
- The licensee had controlled the radioactive contamination and dose rates below the regulatory limits.

Inspector review of this area consisted of (1) examination of shipping papers, procedures, packages, and vehicles, and (2) performance of radiation and contamination surveys of the shipments which were inspected.

### 12. Unresolved Items, and Inspector Follow Items

Unresolved items are findings about which more information is needed to ascertain whether it is a violation, a deviation, or acceptable. An unresolved item is addressed in paragraph 8.

Inspector follow items are inspector concerns or perceived weaknesses in the licensee's conduct of operation (hardware or programmatic) that could lead to violations if left uncorrected. Inspector follow items are addressed in paragraphs 7 and 10.

### 13. Exit Interview

On March 1, 1983, a meeting was held with licensee representatives (denoted in paragraph 1) to discuss the inspection scope and findings.