

U. S. NUCLEAR REGULATORY COMMISSION

REGION I

Report No. 50-289/82-23

Docket No. 50-289

License No. DPR-50 Priority -- Category C

Licensee: GPU Nuclear Corporation

P.O. Box 480

Middletown, Pennsylvania 17057

Facility Name: Three Mile Island Nuclear Station, Unit 1

Inspection At: Middletown, Pennsylvania

Inspection Conducted: October 18 - 22, 1982

Inspectors: A. E. Finkel Nov 12, 1982
A. E. Finkel, Reactor Engineering Inspector date

Approved by: L. H. Bettenhausen 11/12/82
L. H. Bettenhausen, Acting Chief, Plant date
Systems Section, DETP

Inspection Summary:

Inspection conducted on October 18 - 22, 1982 (Inspection Report No. 50-289/ 82-23)

Areas Inspected: Routine, unannounced inspection of the plant Fire Protection/Prevention Program, including: implementation of administrative procedures; fire brigade training; observation of ignition source and combustible material control; review and observation of critical plant fire areas. The inspection involved 40 hours on site by one NRC region-based inspector.

Results: No violations were identified.

Details

1. Persons Contacted

GPU Nuclear Corporation

- *C. Adams, ISORG
- *R. Barth, Fire Protection Engineer II, TMI-1
- *T. O'Connor, Lead Fire Protection Engineer, TMI-1/2
- *S. Mervine, Fire Brigade Training Coordinator
- *C. Rowe, OQA Lead Monitor
- *O. Shali, TMI Support Training Manager
- *C. Stephenson, Licensing Engineer
- *R. Toole, O and M Director

United States Nuclear Regulatory Commission

- *R. Conte, Senior Resident Inspector

*Denotes those present at exit meeting.

Other licensee and contractor personnel were also interviewed during the course of the inspection.

2. Action on Previous Inspection Findings

(Closed) Unresolved Item (289/80-28-01) - The fire detection device above the emergency feedwater pump A in the Intermediate Building is located near the ventilation system diffuses. The licensee relocated the fire detection device within the feedwater pump A area so that the air from the diffuses system would not interfere with the function of the fire system. The inspector verified that the detector was moved and that the test data and installation met the intent of The National Fire Protection Association (NFPA) Code 72E, Section 4.4.

This item is considered closed.

3. Facility Tour

During a facility tour, the inspector examined the fire protection systems, including the fire protection water system; yard fire protection equipment, including yard indicator valves, hydrants, and the content of hose houses. The equipment of hose houses Nos. 5, 6, and 9 were verified by the inspector as being complete with equipment in good working condition. The inspector toured the accessible areas, which included the control room; switch gear room; cable spreading rooms; diesel generator rooms; battery rooms; fire brigade equipment storage areas and examined fire detection and alarm systems; automatic and manual, fixed suppression systems; internal hose stations; fire barrier penetration seals; fire doors; and fire dampers. The inspector noted throughout the tour that the plant was clean and equipment appeared to be well kept.

No violations were identified.

4. Fire Protection/Prevention Program

a. Administrative Controls

The inspector reviewed the licensee's Fire Protection Plan (FPP) and the following Administrative Procedures (APs) for compliance with the FPP and Technical Specifications.

- AP 1038 Fire Protection Program Plan, Revision 6, August 16, 1982,
- AP 1026 Corrective Maintenance and Machinery History, Revision 12, September 22, 1981,
- AP 1035 Control of Transient Combustible Materials, Revision 6, August 11, 1981, and
- AP 1008 Good Housekeeping, Revision 12, August 20, 1982.

b. Surveillance Procedures

The requirements of the fire protection program plan and the Unit 1 Technical Specifications are implemented by operating procedures, emergency procedures, and maintenance procedures which are listed on the Procedure Ownership List. The inspector verified by a random selection of the following procedures that the fire protection program plan and Unit 1 Technical Specification requirements were identified and tested as required.

- Procedure 1301-12.2 - Hose Station Inspection,
- Procedure 1303-12.5 - CO₂ Fire Protection System Test,
- Procedure 1303-12.8H - Fire Protection Instrumentation Function,
- Procedure 1420-FB-1 - Fire Barrier Penetration Seal Repair, and
- Procedure 1303-12.11 - Halon System Pressure and Weight Checks.

The inspector, in addition to the above procedure listings, verified that the requirements of Unit 1 Technical Specification 4.18 Fire Protection Systems were being performed as required.

No violations were identified.

5. Control of Combustibles and Ignition Sources

a. Control of Combustibles

The control of combustibles is listed in the following licensee documentation:

- AP 1008, Good Housekeeping;
- AP 1035, Control of Transient Combustibles; and,
- OP 1101-2.2, Transient Combustible List.

To establish the acceptable combustible level of material in any given area requires fire loading calculation to be performed by the supervisor of the area before material is allowed to be moved or used in the area. The inspector informed the licensee that the level of calculation required by the procedure may be beyond the supervisor's capability. The licensee agreed with this and it is planned to revise procedures so that a simpler method can be used to calculate the fire loading area values.

This item is unresolved pending NRC review of the licensee's action. (289/82-23-01)

b. Control of Ignition Sources and Housekeeping

The licensee has established and implemented procedures for controlling the following types of ignition sources and housekeeping areas.

- AP 1026, Corrective Maintenance and Machinery History procedures and Station Maintenance Procedure 1410-Y-26, Welding, Cutting, Grinding and Open Flamework are controlled by work permits with specific requirements to protect safety related equipment and components.
- AP 1008, Good Housekeeping Procedure defines the methods for maintaining plant areas clean with specific requirements for smoking areas and trash build-ups. This procedure is supplemented with additional requirements referenced to in AP 1038, Fire Protection Program Plan.

No violations were identified.

6. Fire Brigade Training and Drill Program

The inspector reviewed the licensee's fire training program for general plant personnel and the fire brigade, including general and specific lesson plans, brigade training sessions, and fire drill and training

records. The training records for 1982 were reviewed by the inspector and determined to be in compliance with the Fire Protection Program Plan and Technical Specification Requirements for Unit 1.

a. Fire Protection Training Program

The inspector's review included the following areas of the licensee's program:

- Initial Fire Brigade Training and Retraining,
- Firefighting Practice,
- Fire Drills,
- Fire Brigade Leadership Training, and
- Indoctrination and Training for Outside Fire Support Agencies.

The above lesson plans are reviewed and up-dated as additional data becomes available by the fire training coordinator.

No violations were identified.

b. Fire Brigade Training

The licensee conducted their 1982 brigade members' practice sessions at a facility located on the TMI site grounds. It appears that the overall training program complies with the requirements of 10 CFR 50, Appendix R, Section III.I.2.

No violations were identified.

c. Drill Program

The inspector reviewed the drill program and records for 1982, confirming that the fire brigade members were participating in drills at intervals not to exceed three months for each shift fire brigade member and that each participant had at least two drills per year, as defined in 10 CFR 50, Appendix R, Section III.I.3.b.

Assessment of drills' effectiveness are made by the Unit 1 Fire Protection Engineer; Fire Brigade Training Coordinator; Lead Fire Protection Engineer, TMI-1/2; and other qualified management personnel. Fire drill scenarios and critiques are part of AP 1038 Enclosure 2. These forms are filled out before and after each drill, with fire brigade meetings held after each drill to discuss the results of the critique.

The inspector witnessed a brigade fire drill, which was identified as a hypothetical Class C fire in 4160 Switchgear 10 area (CB-3a). The brigade responded within three minutes of the fire announcement; and, within 20 minutes, the drill was concluded. The drill was critiqued by the drill observers with comments from the fire brigade members. The Lead Fire Protection Engineer, TMI-1/2, has specific items of concern which he will identify and discuss with TMI management.

No violations were identified.

7. Fire Brigade Equipment and Breathing Apparatus

The inspector performed a visual inspection of the fire brigade equipment and breathing apparatus stored in the control room area and in cabinets. The Scott Air Packs in the Control Room were inspected on a monthly basis, with 10 spare air bottles stored in the area. The equipment stored in the cabinets appeared in good condition, with all safety lights in working condition. During the fire drill, the fire brigade used the equipment from the cabinets that were inspected by the NRC inspector. All brigade equipment appeared in good condition, with safety lights and Scott Air Packs working during the hypothetical Class C fire drill.

No violations were identified.

8. Audits

A TMI-1 and 2 Fire Protection Audit was performed by the licensee from April 20 - May 13, 1982. The licensee's management was informed of the audit with pre and post meetings. The Fire Audit Report No. S-TMI-82-03 identified findings on their Audit Finding Nonconformance Form (AFNF). The bottom half of the AFNF is the corrective action that is prepared when answering the finding. The inspector verified that the audit findings were documented with assignments made for corrective action responses. The report nos. are logged as part of a TMI tracking system.

A Technical Specification requirement that an audit and inspection by an outside fire consultant be performed at intervals no greater than every three years was performed by EDS Nuclear from July 13 - 17, 1981. The inspector reviewed the report and determined that items and findings were reviewed and dispositioned by the licensee management. The licensee's audit S-TMI-82-03 also discusses the EDS audit report and the resolution of items identified in the report.

No violations were identified.

9. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain if they are acceptable violations, or deviations. An unresolved item is discussed in paragraph 5.

10. Exit Meeting

The inspector met with the licensee representatives denoted in paragraph 1 on October 22, 1982, and summarized the purpose, scope, and findings of the inspection. The attendees also discussed the licensee's position with respect to 10 CFR 50, Appendix R, III.I.3.a, requirement that fire brigade drills are performed so that the fire brigade can practice as a team. The fire brigade practice as a team concept will be reviewed in light of the shift conditions that occur when you have 24 hour-a-day, seven-day-a-week schedules.