February 16, 1983

UNITED STATES OF AMERICA NUCLEAR REGULATORY COMMISSION

## BEFORE THE ATOMIC SAFETY AND LICENSING APPEAL BOARD

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In the Matter of

METROPOLITAN EDISON COMPANY

(Three Mile Island Nuclear Station, Unit No. 1) Docket No. 50-289 (Restart)

LICENSEE'S TESTIMONY OF

FRANCIS F. MANGANARO

IN RESPONSE TO ALAB-708 ISSUE NO. 3

(HOT LEG VENT INSTALLATION STATUS)

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## SUMMARY

This testimony responds to the Appeal Board's question regarding the status of installation of the hot leg high point vents at TMI-1. All basic preparatory work for the vent installation has been concluded and the majority of the required materials for completing this modification have been received on site. The remaining work items, consisting mainly of electrical and piping installation, are now underway. The earliest date for completion of this modification is currently estimated to be May 21, 1983.

## INTRODUCTION

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2	This testimony, by Francis F. Manganaro, Vice President
3	and Director of the Maintenance and Construction Division of
4	the GPU Nuclear Corporation, is addressed to Issue No. 3 of the
5	Appeal Board's Memorandum and Order of December 29, 1982
6	(ALAB-708), which asks:
7	<ol> <li>The current status of the hot leg vent installation (from the licensee).</li> </ol>
9	BY WITNESS MANGANARO:
10	The modification at TMI-1 which will provide venting
11	capability for the two steam generator hot legs is being
12	accomplished under my direction. This is part of a modifica-
13	tion which will provide reactor coolant system remote, high
14	point venting capability not only for the steam generator hot
15	legs but also for the pressurizer and reactor vessel head.
16	Installation of a high point vent on the pressurizer has been
17	completed. A vent on the reactor vessel head is scheduled to
18	be completed during the next refueling cutage. Installation of
19	the hot leg vents is now underway.
20	Preparations for the installation of hot leg vents have
21	been ongoing for some time. Constructability reviews in both
22	piping and electrical areas have been completed and the results
23	provided to engineering. Although some of the engineering
24	which has been provided to date is preliminary, sufficient
25	progress has been made to accomplish virtually all the planning
26	for the work and the development of a schedule to complete the
	work. Installation of required switches, indicating lights and

1	internal wiring in the PC Panel in the Control Room was
2	completed in 1982 as part of the pressurizer vent modification.
3	Sandblasting and painting of related electrical conduit
4	commenced the third week in January. Most of the Job Orders to
5	perform the work were issued by mid-February. Orders for
6	construction of scaffolding and painting of raw material have
7	been released and that work is ongoing. All material required
8	to perform the rest of the work has been identified and most of
9	the material is on hand at the present time.
10	The total remaining work scope has been divided into three
11	major activities:
12	A. Electrical installation outside Reactor Building;
13	B. Electrical installation inside Reactor Building; and
15	C. Piping installation inside Reactor Building.
16	All three activities were started in mid-February. The present
17	schedule indicates an earliest system operable date of May 21,
18	1983, and the critical path is through the electrical installa-
19	tion inside the Reactor Building.
20	Manpower application has been maximized with due regard to
21	efficiency and productivity. All activities which can be
22	worked in parallel with one another have been scheduled in that
23	manner. The schedule is based upon a six-day, ten-hour-per-day
24	work week. Manpower required to accomplish the work will vary.
25	It was approximately eighteen (18) men per day at the beginning
26	and is expected to peak to approximately thirty (30) during the
	March-April period and taper down to approximately eight (8) as

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1	the work nears completion. Support manpower during the first
2	and last months of the job, mostly involved in the installation
3	and removal of scaffolding, will average approximately fifteen
4	(15) men per day.
5	The present schedule necessarily is adjusted as engi-
6	neering is completed, materials receipt is finalized and as
7	work progresses. It is not expected that the final schedule,
8	however, will result in any significant change in the presently
9	projected May 21, 1983 system operable date.
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## FRANCIS F. MANGANARO

Business Address: GPU Nuclear Corporation 100 Interpace Parkway Parsippany, New Jersey 07054

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Education: Bachelor of Science, Electrical Engineering, U.S. Naval Academy, 1947.

> Post-Masters Degree, Naval Architecture and Marine Engineering, Massachusetts Institute of Technology, 1956.

> Post-graduate course work in management, University of Minnesota (1956) and Harvard University (1972).

Experience: Vice President and Director of Maintenance and Construction, GPU Nuclear Corporation, July 1980 to present. Responsible for the performance of maintenance and construction activities at all GPU system nuclear power plants, including the development and coordination of uniform policies and procedures for all routine power plant maintenance.

> U.S. Navy, 1947 to 1980. Naval service included a variety of shipboard assignments and 16 years in various engineering, design and repair facilities assignments associated with construction, maintenance, overhaul and refueling of nuclear ships. Mr. Manganaro's most recent assignments include: Vice-Commander, Naval Sea Systems Command, 1978-1980 (retired at the rank of Rear Admiral); Chairman and Contracting Officer, Navy Claims Settlement Board, Navy Materials Command, 1976-1978; Commander, Puget Sound Naval Shipyard, 1972-1976; and Production Officer, Portsmouth Naval Shipyard, 1968-1972.