

AmerGen Energy Company, LLC
Three Mile Island Unit 1
Route 441 South, P.O. Box 480
Middletown, PA 17057

Telephone: 717-944-7621

December 18, 2003
5928-03-20248

10 CFR 50.73

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

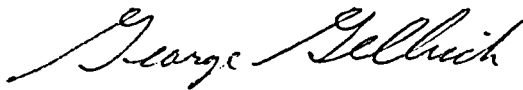
THREE MILE ISLAND NUCLEAR STATION, UNIT 1 (TMI-1)
OPERATING LICENSE NO. DPR-50
DOCKET NO. 50-289

SUBJECT: LICENSEE EVENT REPORT (LER) NO. 2003-002-00
"REACTOR BUILDING POLAR CRANE HOIST OPERATION OVER THE FUEL
TRANSFER CANAL DURING MOVEMENT OF FUEL DUE TO INADEQUATE
UNDERSTANDING OF REQUIREMENTS"

Attached please find Licensee Event Report (LER) 50-289/2003-002-00 that has been prepared and submitted pursuant to 10CFR50.73. This LER reports the discovery and corrective actions taken as a result of a Reactor Building polar crane hoist operation over the Fuel Transfer Canal during movement of a fuel assembly. The cause of this event was the lack of a process for Outage Services personnel to review and implement local station rules and restrictions. For a complete description of the evaluated condition, refer to the text of the report provided on Forms 366 and 366A.

This report is being submitted in accordance with 10 CFR 50.73 (a)(2)(i)(B), "Operation or Condition Prohibited by Technical Specifications." For this event, the overall safety significance was minimal and there was no impact on the health and safety of the public. For additional information regarding this LER contact Adam Miller of TMI Unit 1 Regulatory Assurance at (717) 948-8128.

Sincerely,



George H. Gellrich
Plant Manager

GHG/awm

ATTACHMENT: List of Regulatory Commitments

cc: TMI Senior Resident Inspector
Administrator, Region I
TMI-1 Senior Project Manager
File No. 03069

IE22

SUMMARY OF AMERGEN ENERGY CO. L.L.C. COMMITMENTS

The following table identifies commitments made in this document by AmerGen Energy Co. L.L.C. (AmerGen). Any other actions discussed in the submittal represent intended or planned actions by AmerGen. They are described to the NRC for the NRC's information and are not regulatory commitments.

COMMITMENT	COMMITTED DATE OR "OUTAGE"
Implement a process specific to Outage Services to review and implement local station rules and restrictions prior to refueling outages	April 15, 2004
Revise TMI site-specific Polar Crane training, using a performance based training approach.	May 3, 2004

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

Estimated burden per response to comply with this mandatory information collection request: 50 hrs. Reported lessons learned are incorporated into the licensing process and fed back to industry. Forward comments regarding burden estimate to the Records Management Branch (T-6 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0104), Office of Management and Budget, Washington, DC 20503. If an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

FACILITY NAME (1)

Three Mile Island, Unit 1

DOCKET NUMBER (2)

05000289

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TITLE (4)

REACTOR BUILDING POLAR CRANE HOIST OPERATION OVER THE FUEL TRANSFER CANAL DURING MOVEMENT OF FUEL DUE TO INADEQUATE UNDERSTANDING OF REQUIREMENTS

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)		
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER	
10	28	2003	2003	- 002	-- 00	12	18	2003	FACILITY NAME	DOCKET NUMBER	
OPERATING MODE (9)			THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)								
N			20.2201(b)			20.2203(a)(2)(v)	X		50.73(a)(2)(i)	50.73(a)(2)(viii)	
POWER LEVEL (10)			20.2203(a)(1)			20.2203(a)(3)(i)			50.73(a)(2)(ii)		50.73(a)(2)(x)
100			20.2203(a)(2)(i)			20.2203(a)(3)(ii)			50.73(a)(2)(iii)		73.71
			20.2203(a)(2)(ii)			20.2203(a)(4)			50.73(a)(2)(iv)		OTHER
			20.2203(a)(2)(iii)			50.36(c)(1)			50.73(a)(2)(v)		Specify in Abstract below or in NRC Form 366A
			20.2203(a)(2)(iv)			50.36(c)(2)			50.73(a)(2)(vii)		

LICENSEE CONTACT FOR THIS LER (12)

NAME
Adam W. Miller of TMI-1 Regulatory Assurance

TELEPHONE NUMBER (Include Area Code)
(717) 948-8128

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE). X NO

EXPECTED SUBMISSION DATE (15)

MONTH DAY YEAR

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On October 28, 2003, at approximately 1950 hours while TMI-1 was in the T1R15 refueling outage, the Reactor Building polar crane hoist operated over the Fuel Transfer Canal during movement of a fuel assembly. The cause of this event was a lack of a process for Outage Services personnel to review and implement local station rules and restrictions prior to refueling outages. This condition was determined to be reportable in accordance with 10 CFR 50.72 (a)(2)(i)(B), "Operation or Condition Prohibited by Technical Specifications."

Further Polar Crane operation over the Fuel Transfer Canal was stopped until the Polar Crane operators were provided specific training on the proper use of the Polar Crane over the Fuel Transfer Canal when fuel is being moved. Corrective actions include implementing a process for Outage Services to review and implement local station rules and restrictions prior to refueling outages. Additionally, the TMI site-specific Polar Crane training will be revised using a performance based training approach.

There were no adverse safety consequences associated with this event, since the Reactor Building Polar Crane hoist operation did not result in any dropped loads.

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1. REPORTING REQUIREMENT(S):

This LER is being submitted pursuant to 10CFR50.73 (a)(2)(i)(B), "Operation or Condition Prohibited by Technical Specifications."

Specifically, on October 28, 2003, at approximately 1950, while TMI-1 was in the T1R15 refueling outage, the Reactor Building polar crane hoist *[HOI] operated over the Fuel Transfer Canal during movement of a fuel assembly. TMI-1 Technical Specification 3.12.1 states: "The reactor building polar crane hoists shall not be operated over the fuel transfer canal when any fuel assembly is being moved."

2. DESCRIPTION of STRUCTURE(S), SYSTEM(S), and COMPONENT(S):

The polar crane hoist is used to move material within the Reactor Building. Procedure 1507-1, "Polar Crane Operation," provides direction for use of the polar crane hoist.

3. INITIAL PLANT CONDITIONS:

On October 28, 2003, at approximately 1950, TMI Unit 1 was in Refueling Shutdown (T1R15) and a fuel assembly was being moved. There were no structures, systems, or components that were inoperable at the time of discovery that contributed to this condition.

4. EVENT DESCRIPTION:

On October 28, 2003 at approximately 1950 hours, Reactor Building Crane operations were temporarily suspended when the Refueling Senior Reactor Operator (SRO) on the refuel bridge identified the hoist/trolley over the fuel transfer canal.

The following provides a timeline of the event:

On October 28, 2003 at approximately 1930 hours, the relief crane operator and rigger/load director conducted turnover on station in the reactor building.

Lifts to be made included movement of three (3) 55-gallon drums from the 'A' D-Ring to the north end of the 'B' D-Ring utilizing the auxiliary hook with a barrel rig attached.

The auxiliary hook was moved to the north end of the 'A' D-Ring and lowered to connect to one of the 55-gallon drums. The first 55-gallon drum was lifted from the 'A' D-Ring and transported to the north end of the 'B' D-Ring over the Fuel Transfer Canal. After unhooking the first drum, the auxiliary hook was returned to the north end of the 'A' D-Ring using the same path. The hook was lowered and connected to a second 55-gallon drum. The second drum was then transported to the north end of the 'B' D-Ring using the same path and disconnected from the auxiliary hook. These moves constituted operations over the Fuel Transfer Canal.

The next lift involved the movement of the third 55-gallon drum located at the south end of the 'A' D-Ring to the north end of the 'B' D-Ring. The crane operator decided to traverse the fuel transfer canal at the north end between the auxiliary fuel handling bridge and the open reactor vessel. After rotating the polar crane bridge such that the empty hook and rigging were at the north end of the 'B' D-Ring, the operator began to trolley the hoists until stopped by the SRO on the refuel bridge. At no time was the crane hook or any load over the open reactor vessel or near any fuel.

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5. ASSESSMENT OF SAFETY CONSEQUENCES

There were no adverse safety consequences associated with this event, since the Reactor Building Polar Crane hoist operation did not result in any dropped loads.

The bases for the restriction of operation of the reactor building polar crane hoists over the fuel transfer canal with the head removed, is to preclude the dropping of materials or equipment into the reactor vessel and possibly damaging the fuel to the extent that any escape of fission products would result.

There was no risk of fuel damage from the hoist moving over the transfer canal in this event.

- The crane was positioned at the north end of the canal between the auxiliary fuel handling bridge and the reactor vessel. There is no fuel or fuel movement in this area of the canal.
- Since the hook was not hoisted (up and down movement) while at the end of the canal, the possibility of dropping the hook into the canal is minimized.

An additional considered risk is the drop of a load from the crane into the fuel transfer canal during fuel movement, which could damage the transfer canal liner. The result of draining the canal has the potential to uncover the irradiated fuel in the spent fuel bridge mast and expose personnel to excessive amounts of radiation.

The following minimized the probability of this event from occurring:

- The load (55-gallon drum) including rigging did not exceed 1000 lbs.
- The 55-gallon drum, while over the fuel transfer canal, was carried within 10ft. above the auxiliary fuel handling bridge, which created a barrier between the fuel transfer canal and the carried load.

6. CAUSE OF THE EVENT:

An investigation of this event was conducted in accordance with the TMI-1 Condition Reporting program. The root cause of this event was determined to be a lack of a process for Outage Services to review and implement local station rules and restrictions prior to refueling outages.

The crane operations were performed by the Exelon Outage Services personnel that are experienced at several facilities. Outage Services has no consistent process to ensure adherence to Technical Specifications during crane operations in the TMI Reactor Building. This process would be expected to provide direct supervision, monitoring of crew turnovers or direct management observation to ensure adherence to TMI specific rules and restrictions. In addition, weakness in the TMI site-specific Polar Crane training program contributed to this event.

7. CORRECTIVE ACTIONS:

The following two corrective actions to prevent recurrence have been established:

- 1) Implement a process specific to Outage Services to review and implement local station rules and restrictions prior to refueling outages. This action will be completed by April 15, 2004.
- 2) The TMI site-specific Polar Crane training will be revised using a performance based training approach. The revision will include specific evaluation of the trainee's knowledge of the polar crane operational restrictions during various plant conditions. This action will be completed by May 3, 2004.

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8. PREVIOUS SIMILAR EVENTS:

There have been no previous similar events at TMI-1.

* Energy Industry Identification System (EIS), System Identification (SI) and Component Function Identification (CFI) Codes are included in brackets, [SI/CFI] where applicable, as required by 10 CFR 50.73 (b)(2)(ii)(F).