

LICENSEE EVENT REPORT (LER)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503

FACILITY NAME (1)

Nine Mile Point Unit 2

DOCKET NUMBER (2)

05000410

PAGE (3)

1 OF 4

TITLE (4)

Opening Between Reactor Building and Reactor Building Auxiliary Bay

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 NAMES	DOCKET NUMBER(S)	
11	14	97	97	015	02	07	02	98	N/A	05000	
									N/A	05000	

OPERATING MODE (9)

1

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)

POWER LEVEL (10) 95	<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.405(c)	<input type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 73.71(b)
	<input type="checkbox"/> 20.405(a)(1)(i)	<input type="checkbox"/> 50.36(c)(1)	<input type="checkbox"/> 50.73(a)(2)(v)	<input type="checkbox"/> 73.71(c)
	<input type="checkbox"/> 20.405(a)(1)(ii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(vii)	<input type="checkbox"/> OTHER
	<input type="checkbox"/> 20.405(a)(1)(iii)	<input type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)	(Specify in Abstract below and in Text, NRC Form 366A)
	<input type="checkbox"/> 20.405(a)(1)(iv)	<input checked="" type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)	
	<input type="checkbox"/> 20.405(a)(1)(v)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME

R. J. Dean - Engineering Manager Unit 2

TELEPHONE NUMBER

(315) 349-4240

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE)

NO

EXPECTED SUBMISSION DATE (15)

MONTH

DAY

YEAR

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single space typewritten lines) (16)

On November 14, 1997, Niagara Mohawk Power Corporation (NMPC) discovered an opening in the wall between the Nine Mile Point Unit 2 (NMP2) Reactor Building stair tower and the North Auxiliary Bay (NAB). The Reactor Building and Auxiliary Bays form the Secondary Containment. This opening allowed the Reactor Building atmosphere to communicate with the NAB and therefore, safety-related equipment located in the NAB could have been exposed to High Energy Line Break (HELB) and Loss of Coolant Accident (LOCA) environment. Since the wall design was to prevent migration between the Reactor Building and the NAB atmosphere, this condition placed the plant outside of the design basis.

The cause of this opening has been determined to be improper construction when the plant was constructed.

The appropriate Technical Specification was entered for the affected electrical distribution equipment. Corrective actions were to repair the opening, and perform a preliminary inspection of similar walls to verify that there were no other openings. An analysis has been completed to determine the impact of migration through the opening on equipment.

9807140176 980702
PDR ADOCK 05000410
S PDR



LICENSEE EVENT REPORT (LER)
TEXT CONTINUATIONESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION
REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE
RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY
COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT
(3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Nine Mile Point Unit 2	05000410	97	- 15	- 02	02 OF 04

TEXT (If more space is required, use additional NRC Form 366A's) (17)

I. DESCRIPTION OF EVENT

On November 14, 1997, while installing emergency lights at Nine Mile Point Unit 2 (NMP2), plant personnel identified an opening in the wall between the Reactor Building stair tower and the North Auxiliary Bay (NAB) elevation 240 feet. The NMP2 Reactor Building contains required equipment to mitigate the consequences of an accident and is qualified to withstand the environment following a Loss of Coolant Accident (LOCA) and a High Energy Line Break (HELB). The Reactor Building and the NAB and South Auxiliary Bay (SAB) form the Secondary Containment. The NAB contains Division I equipment and the SAB contains Division II equipment. The walls between the Reactor Building and Auxiliary Bays are designed to prevent migration of Reactor Building atmosphere into the Auxiliary Bays which could possibly result in a harsh environment. Therefore, the opening at elevation 240 feet would have permitted migration which could have impacted the operability of the equipment in the NAB elevation 240 feet. The opening was located in the upper portion of the wall adjacent to a floor beam. Therefore, it was not observable from the floor, and could only be observed from a scaffold or ladder such as the one being used to install the emergency lights.

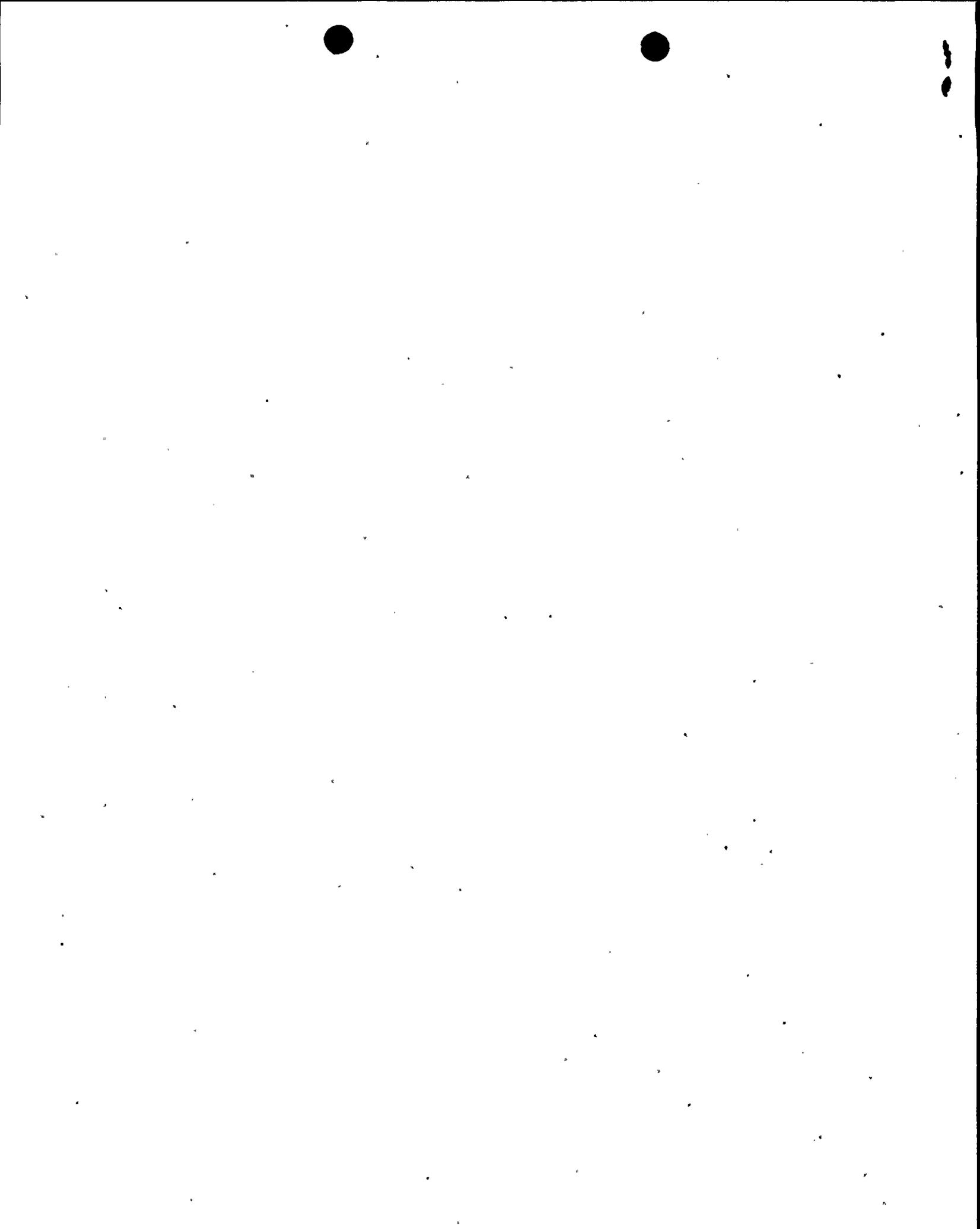
Upon discovery of this opening, operators entered Technical Specification 3.8.3.1 Action a.1, since the Division I AC electrical distribution equipment was considered inoperable. The wall was sealed to conform to the design and the Technical Specification Action was exited.

II. CAUSE OF EVENT

The cause of this opening has been determined to be improper construction when the wall was formed during plant construction. A contributing cause was inadequate quality inspection during construction.

III. ANALYSIS OF EVENT

This event is reportable in accordance with 10CFR50.73 (a)(2)(ii), "any event or condition that resulted in the condition of the nuclear power plant, including its principal safety barriers, being seriously degraded; or that resulted in the nuclear power plant being (B) in a condition that was outside the design basis of the plant." NMPC has completed an analysis of the impact of migration through the opening on equipment in the NAB elevation 240 feet.



LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)				PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
Nine Mile Point Unit 2	05000410	97	- 15	- 02	03 OF 04	

TEXT (If more space is required, use additional NRC Form 366A's) (17)

III. ANALYSIS OF EVENT (cont'd)

For a HELB the results showed a rapid rise to a peak temperature of 110°F, and then falls rapidly. The environmental design basis of the equipment is 104°F. The effect of the 6°F difference is judged to have a minimal effect on equipment functionality. This judgement is based on the short duration (approximately one minute) of the postulated temperature above 104°F, and the fact that most of the equipment is located within an enclosure, where thermal lag would reduce the actual temperature at the equipment location. In addition, other industrial applications of similar/same electrical devices operate above the NMPC maximum design (104°F) for extended periods. Qualification temperatures for similar electrical devices used in nuclear power facilities exceed 104°F.

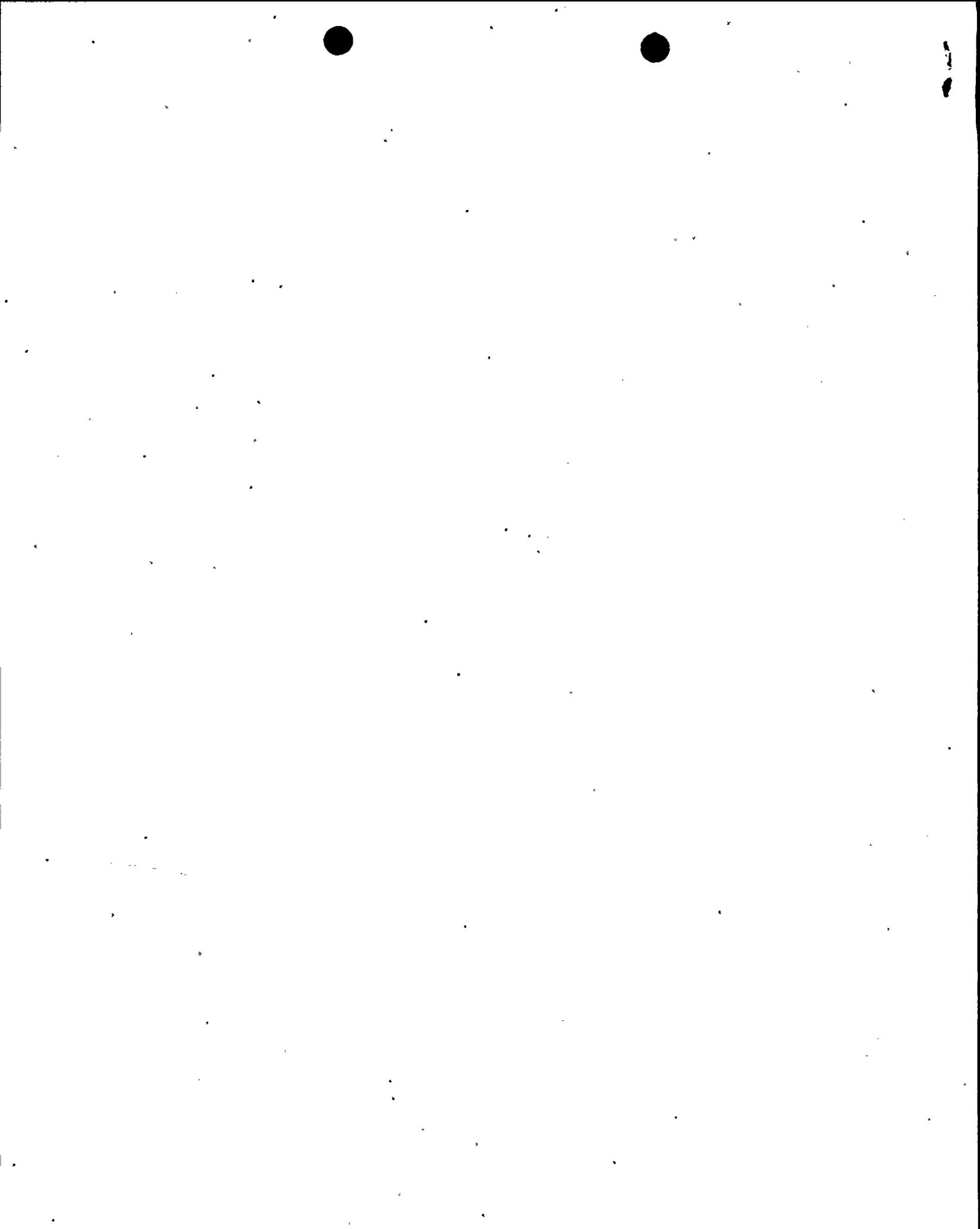
For a LOCA it was determined that a constant diffusion rate equivalent to 0.1 cfm would yield 1.8E2 rad gamma dose and 5.3E3 rad Beta dose in 100 days. The assumed flow rate is reasonable since there is no forced or passive ventilation path which could have drawn air into the NAB. Using a conservative beta reduction factor of 0.1 cfm, the total additional dose to the area would have been 7.1E2 rads (beta plus gamma). Since the unit has only operated for approximately 25 percent of its design life, only 25 percent of the normal design radiation dose has been experienced. Design LOCA doses for the NAB zone, using the partial exposure of the 40-year design dose, were added to the calculated diffusion dose to obtain a postulated total LOCA dose for the breach. This total postulated dose (8.75E3 rads), which includes the effects of the breach, is less than the design accident plus 40-year normal dose (9.39E3 rads total), therefore, all equipment in the NAB elevation 240 area would have been expected to remain operable.

The NAB is considered a mild environment and the equipment in the area was procured and certified to meet the specification requirements. A review of several specifications which apply to the majority of the equipment in the area shows that the specified radiation doses are in excess of the design basis doses. Typical specification required certification to 2.2E4 rads, combined beta/gamma. For the balance of equipment within the area, a definitive margin was not identified by this review. However, it can be concluded that this equipment would also be unaffected since the original radiological design basis would not have been exceeded during this period. Therefore, it is concluded that the total doses due to a LOCA with the breached wall and a flow rate of 0.1 cfm would not have had an impact on equipment operability. The assumed flow rate is reasonable since there is no forced or passive ventilation path which could have drawn air into the NAB.

Inspections did not identify any other openings in the NAB and no openings were found in the SAB. Therefore, Division II equipment would have been available to mitigate the consequences of a HELB or LOCA. Based upon the preceding, this event did not pose a threat to public or plant personnel.

IV. CORRECTIVE ACTIONS

1. Technical Specification 3.8.3.1 Action a.1 was entered, the wall was repaired and the Technical Specification Action was exited on November 15, 1997.



LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) Nine Mile Point Unit 2	DOCKET NUMBER (2) 05000410	LER NUMBER (6)			PAGE (3) 04 OF 04
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
		97	15	02	

TEXT (If more space is required, use additional NRC Form 366A's) (17)

IV. CORRECTIVE ACTIONS (Cont'd)

2. A preliminary walkdown which included similar walls in the SAB has been completed to verify that there are no other openings.
3. A comprehensive inspection of HELB barriers was completed on February 10, 1998. There were no additional deficiencies observed.
4. An analysis has been completed to determine the impact of migration through the opening on equipment as discussed in Section III above.

V. ADDITIONAL INFORMATION

- A. Failed components: none.
- B. Previous similar events: none.
- C. Identification of components referred to in this LER:

COMPONENT	IEEE 803 FUNCTION	IEEE 805 SYSTEM ID
Wall (bulkhead)	BHD	NG

