

CATEGORY 1

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 9710240182 DOC.DATE: 97/10/15 NOTARIZED: NO DOCKET #
 FACIL: 50-220 Nine Mile Point Nuclear Station, Unit 1, Niagara Powe 05000220
 AUTH.NAME AUTHOR AFFILIATION
 MAZZAFERRO, P.A. Niagara Mohawk Power Corp.
 ABBOTT, R.B. Niagara Mohawk Power Corp.
 RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 97-010-00: on 970916, TS required shutdown due to emergency cooling condenser tube leak, was initiated. Cause cannot be determined until metallurgical exams have been completed. EC loop 12 manually isolated. W/971015 ltr.

DISTRIBUTION CODE: IE22T COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 5
 TITLE: 50.73/50.9 Licensee Event Report (LER), Incident Rpt, etc.

NOTES:

	RECIPIENT ID CODE/NAME	COPIES LTR ENCL	RECIPIENT ID CODE/NAME	COPIES LTR ENCL
	PDI-1 PD	1 1	HOOD, D	1 1
INTERNAL:	ACRS	1 1	AEOD/SPD/RAB	2 2
	AEOD/SPD/RRAB	1 1	FILE CENTER	1 1
	NRR/DE/ECGB	1 1	NRR/DE/EELB	1 1
	NRR/DE/EMEB	1 1	NRR/DRCH/HHFB	1 1
	NRR/DRCH/HICB	1 1	NRR/DRCH/HOLB	1 1
	NRR/DRCH/HQMB	1 1	NRR/DRPM/PECB	1 1
	NRR/DSSA/SPLB	1 1	NRR/DSSA/SRXB	1 1
	RES/DET/EIB	1 1	RGNI FILE 01	1 1
EXTERNAL:	L ST LOBBY WARD	1 1	LITCO BRYCE, J H	1 1
	NOAC POORE, W.	1 1	NOAC QUEENER, DS	1 1
	NRC PDR	1 1	NUDOCS FULL TXT	1 1

NOTE TO ALL "RIDS" RECIPIENTS:
 PLEASE HELP US TO REDUCE WASTE. TO HAVE YOUR NAME OR ORGANIZATION REMOVED FROM DISTRIBUTION LISTS OR REDUCE THE NUMBER OF COPIES RECEIVED BY YOU OR YOUR ORGANIZATION, CONTACT THE DOCUMENT CONTROL DESK (DCD) ON EXTENSION 415-2083

FULL TEXT CONVERSION REQUIRED
 TOTAL NUMBER OF COPIES REQUIRED: LTR 25 ENCL 25

C
A
T
E
G
O
R
Y

1

D
O
C
U
M
E
N
T





NIAGARA MOHAWK

GENERATION
BUSINESS GROUP

NINE MILE POINT NUCLEAR STATION/LAKE ROAD, P.O. BOX 63, LYCOMING, NEW YORK 13093

October 15, 1997
NMP1L 1259

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

RE: LER 97-10
Docket No. 50-220

Gentlemen:

In accordance with 10CFR50.73(a)(2)(i)(A) and 10CFR50.73(a)(2)(v)(D), we are submitting LER 97-010, "Technical Specification Required Shutdown Due to Emergency Cooling Condenser Tube Leak."

Very truly yours,

Richard B. Abbott
Plant Manager - NMP1

RBA/GJG/cmk
Enclosure

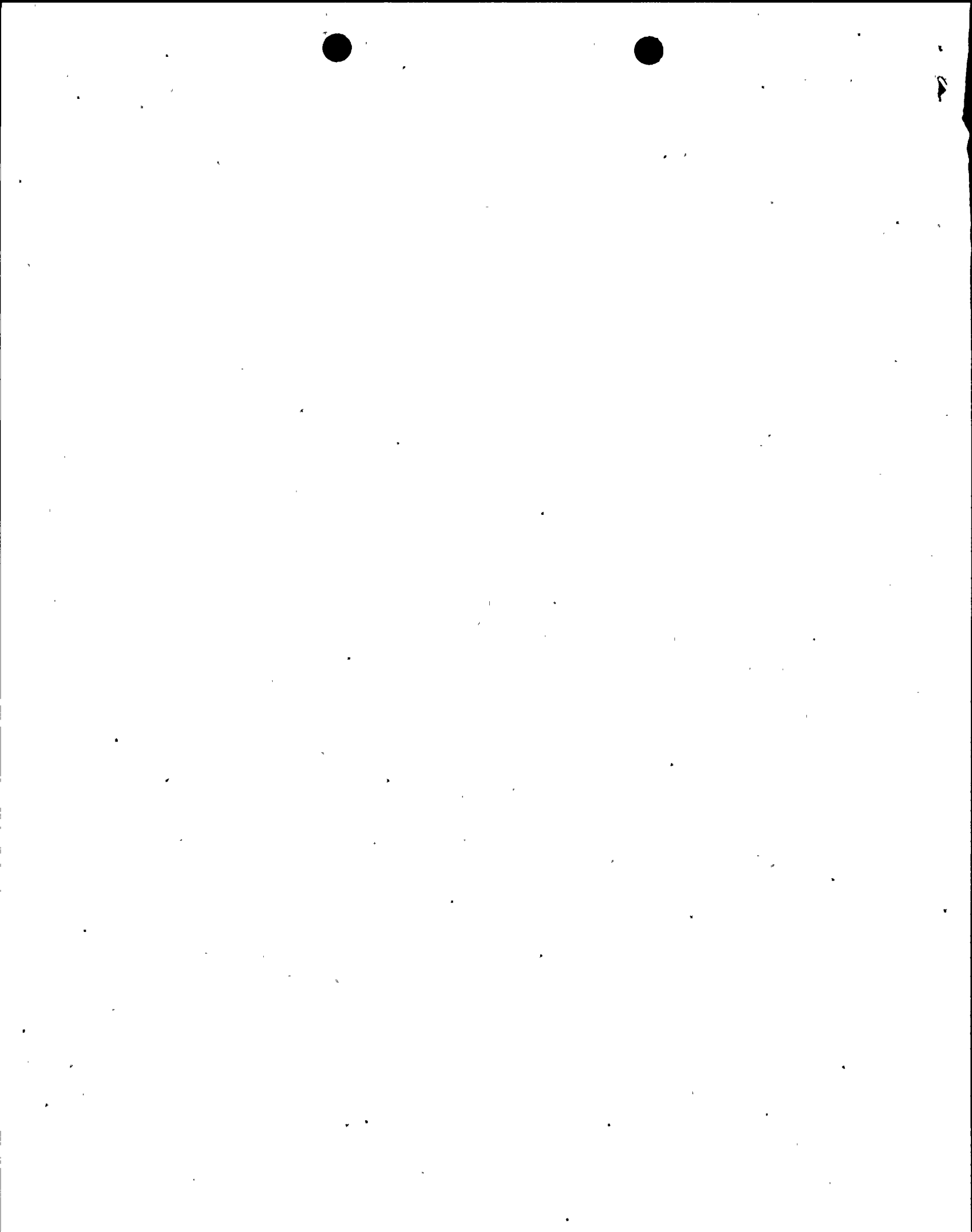
xc: Mr. H. J. Miller, Regional Administrator
Mr. B. S. Norris, Senior Resident Inspector
Records Management

IE 20/1

9710240182 971015
PDR ADOCK 05000220
S PDR

00044





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 1	DOCKET NUMBER (2) 05000220	PAGE (3) 1 OF 4
---	-------------------------------	--------------------

TITLE (4)
Technical Specification Required Shutdown Due to Emergency Cooling Condenser Tube Leak

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)
09	16	97	97	010	00	10	15	97	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) 100	<input type="checkbox"/> 20.402(b) <input type="checkbox"/> 20.405(a)(1)(i) <input type="checkbox"/> 20.405(a)(1)(ii) <input type="checkbox"/> 20.405(a)(1)(iii) <input type="checkbox"/> 20.405(a)(1)(iv) <input type="checkbox"/> 20.405(a)(1)(v)	<input type="checkbox"/> 20.405(c) <input type="checkbox"/> 50.36(c)(1) <input type="checkbox"/> 50.36(c)(2) <input checked="" type="checkbox"/> 50.73(a)(2)(i) <input type="checkbox"/> 50.73(a)(2)(ii) <input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(iv) <input checked="" type="checkbox"/> 50.73(a)(2)(v) <input type="checkbox"/> 50.73(a)(2)(vii) <input type="checkbox"/> 50.73(a)(2)(viii)(A) <input type="checkbox"/> 50.73(a)(2)(viii)(B) <input type="checkbox"/> 50.73(a)(2)(x)	<input type="checkbox"/> 73.71(b) <input type="checkbox"/> 73.71(c) <input type="checkbox"/> OTHER <i>(Specify in Abstract below and in Text, NRC Form 366A)</i>
-------------------------	--	---	--	---

LICENSEE CONTACT FOR THIS LER (12)

NAME Peter A. Mazzaferro, Manager Technical Support	TELEPHONE NUMBER (315) 349-1019
--	------------------------------------

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
X	BL	HX							

SUPPLEMENTAL REPORT EXPECTED (14)	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
<input checked="" type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE) <input type="checkbox"/> NO		01	30	98

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

On September 11, 1997, Nine Mile Point Unit 1 (NMP1) personnel observed increased steaming from the Emergency Cooling (EC) Loop 12 vent to atmosphere. On September 12, 1997, operators at NMP1, based upon elevated EC loop temperatures and vent radiation monitor readings, isolated Loop 12 and entered Technical Specification (TS) 3.1.3.b. On September 15, 1997, NMP1 initiated a shutdown to inspect and test the EC condensers. Subsequently, it was determined that the EC repairs could not have been completed within the allowed TS LCO time, and that the event was therefore reportable as a TS required shutdown. Inspection and testing has revealed that tube cracking indications are present in all four EC condensers.

The cause of the EC condenser tube failures cannot be determined until metallurgical examinations have been completed.

EC Loop 12 was manually isolated to secure the steaming from the loop vent to atmosphere and NMP1 was subsequently shutdown to determine the cause of the steaming and to affect repairs. The tube bundles for each of the EC condensers will be replaced prior to returning NMP1 to service.



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-330), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (0150-0104), 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 1	05000220	97	10	00	02 OF 04	

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

I. DESCRIPTION OF EVENT

On the afternoon of September 11, 1997, while operating at approximately 100 percent thermal power, Nine Mile Point Unit 1 (NMP1) personnel observed increased steaming from the Emergency Cooling (EC) Loop 12 vent to atmosphere. Monitoring of system parameters was immediately begun and a chemistry sample of the EC cooling water was taken. Based upon elevated EC loop temperatures and vent radiation monitor readings, EC Loop 12 was isolated on September 12, 1997 at 0130 hours and Technical Specification (TS) 3.1.3.b was entered. This Limiting Condition for Operation (LCO) allows seven days to repair the isolated train or proceed to cold shutdown. Chemistry analysis showed the presence of short-lived fission products and confirmed the indication of leaking tubes. After initial investigation to determine the cause of the increased steaming, it was decided on September 15, 1997, to shutdown NMP1 to clearly determine the cause and to make repairs. Subsequently, it was determined that repairs could not have been accomplished within the allowed TS LCO time and that the event was therefore reportable.

After NMP1 reached cold shutdown (September 16, 1997), a pressure test and visual examination of EC condenser #122 (one of the two Loop 12 condensers) tube bundles revealed one ruptured tube (out of 36). The inlet and outlet piping was subsequently removed to perform a thorough examination of all the tubes and tube sheet on EC condenser #122. Based upon indications discovered in the tubes and tube sheet, a pressure test was performed on the Loop 11 condensers (#111 and 112). The results of that testing indicated leakage in both Loop 11 EC condensers. Therefore a decision was made to remove the inlet piping from the remaining three condensers (i.e., #111, 112, and 121) and perform Non-Destructive Examinations (NDE). Initial results have identified indications in tubes and tube sheets in each condenser. NRC notification of these leaks was made on September 22, 1997 and October 3, 1997. At the time of submittal of this LER, additional testing and analyses are being conducted. The tube bundles in each EC condenser will be replaced prior to returning NMP1 to service.

II. CAUSE OF EVENT

The cause of the EC condenser tube failures has not been determined at this time. Metallurgical evaluations are being performed. Following completion of the metallurgical evaluations, a supplement to this LER will be submitted.

III. ANALYSIS OF EVENT

This event is reportable in accordance with 10CFR50.73(a)(2)(i)(A), "the completion of any nuclear plant shutdown required by the plant's Technical Specifications," and 10CFR50.73(a)(2)(v)(D) "any event or condition that alone could have prevented the fulfillment of the safety function of structures or systems that are needed to: D) Mitigate the consequences of an accident."



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
0150-0104, 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 1	05000220	97	- 10	- 00	03 OF 04	

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

I. ANALYSIS OF EVENT (cont'd)

Section V-E of the NMP1 Updated Final Safety Analysis Report (UFSAR) Subsection V-E 3.3, System Leaks, describes the function of the radiation monitors in the vent lines which provide alarm indication in the control room. This subsection further states that closure of the inlet and outlet valves to the offending half of the system is initiated manually. NMP1 personnel thoroughly assessed the increased steaming by evaluating the available parameters, and took actions to manually isolate EC Loop 12. The increases in loop temperatures and vent radiation monitor readings were very small (approximately two degree increase in temperatures and 0.3 mRem/hr increase in radiation readings). The total dose from the EC vents for the month of September was calculated to be <.02% of the NMP1 quarterly TS limits. Therefore, the consequences of the EC condensers being in standby with the associated leaking tubes was minimal, and therefore, this event posed no threat to the health and safety of the public.

Additional analysis will be provided in the supplement to this LER after the extent of tube degradation has been determined and engineering evaluations have been completed.

IV. CORRECTIVE ACTIONS

1. EC Loop 12 was manually isolated to secure the increased steaming to the atmosphere and TS 3.1.3.b was entered.
2. NMP1 was subsequently shutdown to further inspect and test all four EC condensers.
3. Based on the number of leaking tubes and indications found, the tube bundles in each EC condenser will be replaced prior to returning NMP1 to service.
4. If additional actions are warranted based upon the metallurgical evaluations, these actions will be included in the supplement to this LER.



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 (0150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
		97	- 10	- 00	

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

V. ADDITIONAL INFORMATION

A. Failed components:

Component Description: EC Condensers HTX-60-42 (EC 122), HTX-60-44 (EC 121), HTX-60-45 (EC 112), and HTX-60-46 (EC 111)

Manufacturer: Foster and Wheeler Co.

Model Number: Foster and Wheeler Diag. # (1692-655-21)

Serial Number: Contract No. 2-33-116-119

B. Previous similar events: none

C. Identification of components referred to in this LER:

COMPONENT	IEEE 803 FUNCTION	IEEE 805 SYSTEM ID
EC Condensers (Heat Exchangers)	HX	BL

