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10CFR50.73

May 16, 2002

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Limerick Generating Station, Unit 1
Facility Operating License No. NPF-39
NRC Docket No. 50-352

Subject: LER 1-02-001, Unit 1 Inoperable Safeguard Battery Charger Resulted in a
Condition Prohibited By Technical Specifications

This Licensee Event Report (LER) addresses the inoperability of a Safeguard Battery Charger following maintenance and testing that resulted in a noncompliance with Technical Specification requirements for operable direct current (DC) sources.

Report Number: 1-02-001
Revision: 00
Event Date: March 9, 2002
Discovered Date: March 19, 2002
Report Date: May 16, 2002

This LER is being submitted pursuant to the requirements of 10CFR50.73(a)(2)(i)(B).

If you have any questions or require additional information, please do not hesitate to contact us.

Sincerely,



William Levis
Vice President - Limerick

cc: H. J. Miller, Administrator Region I, USNRC
A. L. Burritt, USNRC Senior Resident Inspector, LGS

IE22

Estimated burden per response to comply with this mandatory information collection request: 50 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records Management Branch (T-6 E6), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to bjs1@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202 (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose 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.

LICENSEE EVENT REPORT (LER)

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

FACILITY NAME (1) Limerick Generating Station, Unit 1	DOCKET NUMBER (2) 05000 352	PAGE (3) 1 OF 4
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TITLE (4)
Inoperable Safeguard Battery Charger Discovered During Review of Completed Surveillance Test.

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MO	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO	MO	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
03	09	2002	2002	001	00	05	16	2002		05000
										05000

OPERATING MODE (9) 2	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply) (11)				
	20.2201(b)		20.2203(a)(3)(ii)	50.73(a)(2)(ii)(B)	50.73(a)(2)(ix)(A)
POWER LEVEL (10) 001	20.2201(d)		20.2203(a)(4)	50.73(a)(2)(iii)	50.73(a)(2)(x)
	20.2203(a)(1)		50.36(c)(1)(i)(A)	50.73(a)(2)(iv)(A)	73.71(a)(4)
	20.2203(a)(2)(i)		50.36(c)(1)(ii)(A)	50.73(a)(2)(v)(A)	73.71(a)(5)
	20.2203(a)(2)(ii)		50.36(c)(2)	50.73(a)(2)(v)(B)	OTHER
	20.2203(a)(2)(iii)		50.46(a)(3)(ii)	50.73(a)(2)(v)(C)	Specify in Abstract below or in NRC Form 366A
	20.2203(a)(2)(iv)		50.73(a)(2)(i)(A)	50.73(a)(2)(v)(D)	
	20.2203(a)(2)(v)	x	50.73(a)(2)(i)(B)	50.73(a)(2)(vii)	
	20.2203(a)(2)(vi)		50.73(a)(2)(i)(C)	50.73(a)(2)(viii)(A)	
		20.2203(a)(3)(i)	50.73(a)(2)(ii)(A)	50.73(a)(2)(viii)(B)	

LICENSEE CONTACT FOR THIS LER (12)

NAME Marino C. Kaminski, Manager – Experience Assessment	TELEPHONE NUMBER (Include Area Code) (610) 718-3400
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COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX
A	EJ	BYC	C173	No					

SUPPLEMENTAL REPORT EXPECTED (14)				EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE).	X	NO					

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

Maintenance was performed on a Safeguard Battery Charger during a plant refueling outage. The Safeguard Battery Charger was declared operable following post-maintenance testing. During plant restart, a followup review of the test data determined that the acceptance criteria had not been satisfied. The Safeguard Battery Charger was subsequently repaired, re-tested successfully and returned to service.

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Limerick Generating Station, Unit 1	05000352	2002	-- 001	-- 00	2 OF 4

NARRATIVE (If more space is required, use additional copies of NRC Form 366A) (17)

Unit Conditions Prior to the Event

Unit 1 was in Operational Condition (OPCON) 2 (Startup) at approximately 1% power performing reactor pressure vessel (RPV) heatup. There were no structures, systems or components out of service that contributed to this event.

Description of the Event

On March 19, 2002, a Unit 1 plant startup following a refueling outage was in progress. The surveillance test coordinator identified that a completed surveillance test for the Division 2 Safeguard Battery Charger (EHS: BYC) had not satisfied the test acceptance criteria prior to the equipment being declared operable on March 9, 2002. As a result, the Safeguard Battery Charger was declared inoperable at 18:00 hours on March 19, 2002.

The review of the test data determined that the Safeguard Battery Charger current had dropped below the 300 ampere test acceptance criterion for a period of at least 15 minutes during the 8 hour test. In addition, the Safeguard Battery Charger voltage had dropped below the 132 volt test acceptance criterion during the same time period.

The unsatisfactory test results were not identified during test performance due to the performer's reliance on the test equipment alarm function to identify unacceptable charger performance. The alarm did not actuate since there was no test direction for establishing a setpoint. Also, the surveillance test relied on performer observation of the test equipment and did not require a detailed review of the chart data prior to the performer signoff for a successful test.

Maintenance determined that the unsatisfactory test results were caused by the current limiter card potentiometer being set at the mechanical stop position. This resulted in greater temperature related setpoint drift than if the potentiometer had been set closer to the mid-scale position. The current limiter card was recalibrated. The Safeguard Battery Charger was tested and declared operable on March 20, 2002 at 09:13 hours.

The Safeguard Battery Charger was inoperable when the unit entered Mode 2 (STARTUP) on March 19, 2002 at 14:15 hours. Technical Specification (TS) 3.0.4 prohibits entry into an operational condition when the Limiting Condition for Operation (LCO) is not met and the associated ACTION requires a shutdown if the condition is not met within a specified time interval.

TS 3.8.2.1, DC Sources – Operating, requires restoration of the Safeguard Battery Charger within 8 hours or be in HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours. Therefore, a noncompliance with TS 3.0.4 occurred.

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Limerick Generating Station, Unit 1	05000352	2002	-- 001	-- 00	3 OF 4

NARRATIVE (If more space is required, use additional copies of NRC Form 366A) (17)

TS 4.0.4 requires that all surveillance requirements (SR) be complete prior to entry into an operational condition. TS SR 4.8.2.1.c.4 requires that once per 24 months the battery charger will supply 300 amperes at a minimum of 132 volts for at least 8 hours. This test acceptance criterion was not satisfied during the refueling outage performance of the surveillance test. Therefore, a noncompliance with TS 4.0.4 occurred.

The Safeguard Battery Charger was returned to service following refuel outage maintenance and testing and considered operable since the unsatisfactory test data had not been identified. Subsequent refuel outage maintenance was performed, as planned, on two different divisions of Safeguard Battery Chargers. This resulted in chargers in two of four divisions being inoperable due to planned maintenance and concurrently one additional division being inoperable due to the unidentified failed test. Since two divisions are required to be operable during refueling activities, a noncompliance with TS 3.8.2.2, DC Sources – Shutdown occurred.

This event involved an operation prohibited by Technical Specifications. Therefore, this LER is being submitted pursuant to the requirements of 10CFR50.73(a)(2)(i)(B).

Analysis of the Event

There were no actual safety consequences associated with this event. The potential safety consequences of this event were also minimal. The actuation of the current limiting feature caused the charger maximum capacity to be reduced to a value slightly less than the 300 ampere TS requirement. However, the charger remained capable of supplying loads near rated capacity.

The manufacturer was informed of the excessive temperature related setpoint drift and recommended that the maintenance procedure be revised to prevent leaving the current limit card potentiometer (P1) at its mechanical stop position where there is temperature related drift. The charger maintenance procedure has been revised to maintain the potentiometer (fine adjustment) at a more stable position.

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
Limerick Generating Station, Unit 1	05000352	2002	-- 001	-- 00	4	OF 4

NARRATIVE (If more space is required, use additional copies of NRC Form 366A) (17)

Cause of the Event

The test performers failed to identify the unsatisfactory test results during performance of the test because they relied on the test computer program alarm. The alarm did not actuate since there was no test direction for establishing a setpoint. Also, the surveillance test relied on performer observation of the test equipment and did not require a detailed review of the chart data prior to the performer signoff for a successful test.

A contributing cause was that the charger maintenance procedure did not ensure the current limiter card potentiometer as-left position following calibration was not near the mechanical stop.

Corrective Action Completed

The Safeguard Battery Charger current limiter card was re-calibrated and the 24-month load test surveillance was performed successfully.

The charger periodic maintenance procedure has been revised to minimize temperature-related setpoint drift by ensuring the post-calibration position of the current limiter card potentiometer is not near the mechanical stop.

Corrective Actions Planned

The charger load test surveillance procedure will be revised to verify proper setting of all alarm points during the test and ensure the chart data is reviewed prior to test acceptance and performer signoff. This action will be completed by August 15, 2002.

Previous Similar Occurrences

There were no previous occurrences of Safeguard Battery Charger failures due to maintenance procedure weaknesses.

Failed component information:

Component: Battery Charger
 Manufacturer: C&D Batteries, Eltra Corp
 Model: ARR130K300F