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Docket No. 50-461

10CFR50.73

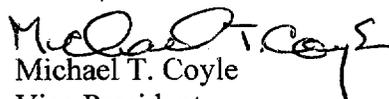
Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Subject: Clinton Power Station
Licensee Event Report No. 2000-004-00

Dear Madam or Sir:

Enclosed is Licensee Event Report (LER) No. 2000-004-00: Inability to Restore from Technical Specification Limiting Condition for Operation Due to Inadequate Surveillance Procedure. This report is being submitted in accordance with the requirements of 10CFR50.73.

Sincerely yours,


Michael T. Coyle
Vice President

JRF/blf

Enclosure

cc: NRC Clinton Licensing Project Manager
NRC Resident Office, V-690
NRC Region III, Regional Administrator

IE22

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.

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DOCKET NUMBER (2)
05000461

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TITLE (4)
Inability to Restore from Technical Specification Limiting Condition for Operation Due to Inadequate Surveillance Procedure

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
09	15	2000	2000	004	00	10	14	2000	None	05000
									None	05000

OPERATING	1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)								
		20.2201(b)		20.2203(a)(2)(v)	<input checked="" type="checkbox"/>	50.73(a)(2)(i)		50.73(a)(2)(viii)		
POWER LEVEL (10)	100	20.2203(a)(1)		20.2203(a)(3)(i)		50.73(a)(2)(ii)		50.73(a)(2)(x)		
		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 John H. Piatt, Director Maintenance	TELEPHONE NUMBER (Include Area Code) (217) 935-8881, Extension 3234
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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)				EXPECTED	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE).	<input checked="" type="checkbox"/>	NO					

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

On September 15, 2000, Clinton Power Station (CPS) requested, and the NRC granted, enforcement discretion to allow restoring the Emergency Reserve Auxiliary Transformer (ERAT) Static Var Compensator (SVC) to service without meeting the Limiting Condition for Operation for the associated SVC protection system. The ERAT SVC is provided with two redundant protection subsystems ("A" and "B"). The enforcement discretion allowed restoring the ERAT SVC to service with the ERAT SVC "A" protection subsystem inoperable. (The Technical Specifications (TS) require both protection subsystems to be operable prior to returning the ERAT SVC to service.) This enforcement discretion was requested to avoid an undesirable plant transient (i.e., shutdown). The cause for the inability to restore the ERAT SVC "A" protective subsystem to an operable status was lack of system knowledge. Corrective actions associated with this event include providing training for key personnel on SVC operation and maintenance and correcting procedure deficiencies associated with performance of SVC protection system testing.

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

DESCRIPTION OF EVENT

On September 13, 2000, at 0300 hours, Clinton Power Station (CPS) was in Mode 1, at approximately 100 percent power, when a planned outage of the Emergency Reserve Auxiliary Transformer (ERAT) began for scheduled maintenance. The ERAT is the offsite source connection for the 138-kV transmission system. (See below for system description.) When the ERAT was removed from service, the following Technical Specification (TS) 3.8.1, "AC Sources-Operating," Limiting Condition for Operation (LCO) Required Actions were entered: A.1, Perform surveillance requirement 3.8.1.1 for the Operable offsite circuit within 1 hour; and A.2, Restore the offsite circuit to an Operable status within 72 hours (i.e., by 0300 hours on September 16, 2000). In parallel with the ERAT scheduled maintenance a functional test of the ERAT Static VAR Compensator (SVC) protection system was started to satisfy TS Surveillance Requirement (SR) 3.8.11.2. This SR requires functional testing of the SVC protection system, including breaker actuation, every 18 months. Performance of this surveillance requires the SVC to be removed from service.

Two physically independent offsite source circuits at CPS are required to be operable per the requirements of TS 3.8.1. These are the 345-kV circuit through the Reserve Auxiliary Transformer (RAT) and the 138-kV circuit through the ERAT. An SVC is installed on each of the secondary sides of the RAT and ERAT to assist in maintaining acceptable voltages to the 4160 VAC distribution divisions during normal plant operating conditions and / or accident conditions. Due to this support function, CPS procedurally requires the associated offsite source to be declared inoperable whenever the SVC is not in service. To protect the onsite power distribution system from malfunctions of the SVC, each SVC is provided with a protection system. The protection system consists of two redundant subsystems ("A" and "B"), each of which can initiate a trip of two in-series SVC output breakers in the event of an abnormal overvoltage, undervoltage, phase unbalance, harmonic, or overcurrent condition. The ERAT outage provided an appropriate opportunity to perform required TS surveillance testing of the ERAT SVC protection system.

Testing of the ERAT SVC protection system was performed using CPS Surveillance Procedure 9384.01, "ERAT SVC Protective Relays Functional Test." This was the first time that this procedure was used for SVC protection system testing. During functional testing of the ERAT SVC "A" protection subsystem in accordance with procedure 9384.01, numerous unexpected responses occurred. Due to difficulties in determining the reason for the unexpected responses it became necessary to restore the ERAT SVC to service with only the "B" protection subsystem operable. The requirements of TS 3.8.11 allow SVC operation to continue for up to 30 days when an SVC protection subsystem is declared or determined to be inoperable during SVC operation; however, as explained further below, the requirements of LCO 3.0.4 in the CPS TS prevent placing the ERAT SVC in service with less than both required protection subsystems operable. This restriction prevented restoring the 138-kV offsite power system to an operable status within the Completion Time of LCO 3.8.1 (Required Action A.2) which, as noted above, was due to expire at 0300 on September 16, 2000.

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LCO 3.0.4 states, "When an LCO is not met, entry into a Mode or other specified condition in the Applicability shall not be made except when the associated Actions to be entered permit continued operation in the Mode or other specified condition in the Applicability for an unlimited period of time." With the ERAT SVC removed from service, and with one of the required ERAT SVC protection subsystems inoperable, LCO 3.0.4 prohibits placing the ERAT SVC into service. This is because placing the SVC back into service constitutes re-entry into a condition specified in the Applicability of the LCO (i.e., "during SVC operation"), and the Actions of TS 3.8.11 do not permit continued operation for an unlimited period of time in this condition. (Required Action C.1 of TS 3.8.11 requires removing the SVC from service within one hour if the inoperable protection subsystem is not restored to an operable status within 30 days.)

On September 15, 2000, in accordance with NRC Inspection Manual Part 9900, "Technical Guidance," CPS requested, and the NRC granted, enforcement discretion to allow restoring the ERAT SVC to service without meeting the LCO requirements for the SVC protection system (i.e., TS LCO 3.8.11). This enforcement discretion was requested to avoid an undesirable plant transient (i.e., shutdown). The enforcement discretion allowed a "3.0.4 exception" to be applied to TS LCO 3.8.11, thus permitting the SVC to be restored to service with the "A" protection subsystem inoperable. This in turn allowed the 138-kV offsite source to be restored to an operable status within the required Completion Time of TS LCO 3.8.1 (Required Action A.2). At 2100 hours on September 15, 2000, the ERAT was declared operable and the Required Actions of TS LCO 3.8.1 were exited.

There were no other systems or components inoperable at the time of this event that affected the severity of this event.

CAUSE

The cause for the inability to restore the ERAT SVC "A" protection subsystem to an operable status was lack of system knowledge. The RAT and ERAT SVCs were recently installed at CPS (1998) to address degraded voltage concerns. Maintenance personnel at CPS did not receive adequate training on SVC operation and maintenance after installation of the SVCs. As a result, the personnel responsible for the development and validation of CPS procedure 9384.01 did not have sufficient technical expertise to ensure the procedure was adequate.

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

CORRECTIVE ACTIONS

On September 20, 2000, an engineering evaluation was performed to identify and resolve outstanding issues associated with the results received during testing of the ERAT SVC "A" protection subsystem. The engineering evaluation resolved all outstanding issues and at 1433 hours on September 20, 2000, the ERAT SVC "A" protection subsystem was declared operable.

Prior to the next performance of SVC protective system testing, the associated surveillance procedures (9384.01, "ERAT SVC Protective Relays Functional Test," and 9384.02, "RAT SVC Protective Relays Functional Test") will be revised using additional expertise to correct deficiencies and incorporate lessons learned from this event.

In-depth training on SVC operation and maintenance will be provided to key maintenance and engineering personnel.

Other recently installed plant modifications will be identified and a review performed to ensure maintenance personnel have sufficient expertise on the operation and maintenance associated with the changes.

CPS has prepared and submitted a license amendment request to permanently incorporate a 3.0.4 exception into Required Action A.1 of TS 3.8.11. This amendment application was submitted as a follow-up action to the request for enforcement discretion.

ANALYSIS OF EVENT

This event is reportable under the provisions of 10CFR50.73(a)(2)(i)(B) as an operation or condition prohibited by the Technical Specifications. Notwithstanding the enforcement discretion that was granted to temporarily allow application of an exception to TS LCO 3.0.4 for TS 3.8.11, the requirements of LCO 3.0.4 and LCO 3.8.11 in the existing CPS TS do not allow placing the ERAT SVC in service with less than both required protection subsystems operable.

An assessment of the safety consequences and implications of this event identified that this event was not nuclear safety significant. An evaluation of the results that were received during testing of the ERAT SVC "A" protection subsystem determined that the "A" protection subsystem was operable prior to restoring from the LCO.

ADDITIONAL INFORMATION

CPS has not had any other reportable events involving testing of the RAT or ERAT SVCs.

For further information on this event, contact J. H. Piatt, Director-Maintenance, (217) 935-8881, extension 3234.