

## LICENSEE EVENT REPORT

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EVENT DESCRIPTION AND PROBABLE CONSEQUENCES 10																																																																															
2 With the unit at 100%, during research for LER 81-081/03L-0, it was found that the																																																																															
3 original containment vacuum pumps had been replaced with pumps that failed to meet																																																																															
4 the required seismic qualifications. This event is considered to constitute a																																																																															
5 loss of administrative control and is reportable per T.S.6.6.2.b.(3). The																																																																															
6 necessary containment isolation function is provided by the can enclosing each																																																																															
7 vacuum pump, not by the pump itself, therefore, the public health and safety have																																																																															
8 not been affected.																																																																															
9																																																																															
SYSTEM CODE										CAUSE CODE										COMP. SUBCODE										VALVE SUBCODE																																																	
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ACTION TAKEN										EFFECT ON PLANT										SHUTDOWN METHOD										HOURS										ATTACHMENT SUBMITTED										NPR-4 FORM SUB.										PRIME COMP. SUPPLIER										COMPONENT MANUFACTURER									
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CAUSE DESCRIPTION AND CORRECTIVE ACTIONS 27																																																																															
10 The original containment vacuum pumps were condemned for requiring excessive																																																																															
11 maintenance. They were replaced in 1975 with pumps of a different manufacturer																																																																															
12 but without the necessary accompanying documentation. An engineering study,																																																																															
13 addressing the compatibility of the present pumps has been completed and a request																																																																															
14 for further engineering assistance has been issued.																																																																															
15																																																																															
FACILITY STATUS										% POWER										OTHER STATUS										METHOD OF DISCOVERY										DISCOVERY DESCRIPTION																																							
E 28										1 0 0 29										N/A										A 31										LER documentation research																																							
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NAME OF PREPARED J. L. Wilson																																																																															
PHONE (804) 357-3184																																																																															

ATTACHMENT 1

SURRY POWER STATION, UNIT NO.1

DOCKET NO: 50-280

REPORT NO: 82-009/03L-0

EVENT DATE: 01-20-82

TITLE OF THE EVENT: LOSS OF ADMINISTRATIVE CONTROL

1. DESCRIPTION OF EVENT:

On 01-20-82, with unit 1 at 100% and unit 2 at 90%, the following sequence of events came to light.

LER 81-081/03L-0 addressed the loss of both unit 1 containment vacuum pumps, 1-CV-P-1A and 1B. It was found during the review for that LER that the containment vacuum pumps had, at sometime during station operation, been replaced with pumps from a different manufacturer.

Engineering Study 82-04, further investigated the pumps' replacement and addressed the qualification requirements and the suitability of the present pumps to meet those requirements. It was found that during original construction, the architect-engineer, Stone and Webster, issued specification NUS-313, Specification for Containment Vacuum Pumps. Among other requirements, this specification indicated that the pumps were to be designed to meet the working stresses of a seismic occurrence corresponding to a horizontal acceleration of 0.17 g and a vertical acceleration of 0.11 g (i.e Design Basis Earthquake).

The engineering study also documented that the FSAR, section 5.2, requires the containment vacuum pumps to be seismic class 1, and Administrative Procedure 73 indicates the pumps as seismic class 1 and category 1.

It subsequently was found that the containment vacuum pumps are identical to the radiation monitor sample pumps and, in fact, are used interchangeably.

The original containment vacuum pumps (Leiman Brothers, Inc., manufacturer) were purchased in 1969 to specification NUS-313. The present pumps (Cast Pumps, manufacturer) were purchased in 1975 and are apparently off the shelf pumps which have not been proven to meet the required seismic qualifications required by the station.

This event represents a loss of administrative control and is reportable per Technical Specification 6.6.2.b.(4).

2. PROBABLE CONSEQUENCES OF OCCURRENCE:

The containment vacuum system is seismically qualified from the suction inlet in the containment up to and including the metal can enclosing each vacuum pump. During accident conditions, the containment isolation valves close and the can enclosure assures isolation even if the vacuum pumps fail.

Therefore, the containment isolation function has not been degraded and the public health and safety have not been affected.

3. CAUSE OF EVENT:

The original containment vacuum pumps had proven to be a maintenance problem and it was desired to replace them.

3. Cause (continued)

However, the installation of these replacement pumps without the benefit of a design change package to address component specifications represents a loss of administrative control.

4. IMMEDIATE CORRECTIVE ACTIONS:

It has been concluded that since the metal can enclosing each containment vacuum pump is seismically qualified and will provide the containment isolation function should a pump fail, continued operation with the present pumps is justified while evaluation continues.

5. SUBSEQUENT CORRECTIVE ACTIONS:

Design Change Package, DCP 82-08, has been originated and forwarded to the Technical Analysis and Control Engineers at the corporate offices.

6. ACTIONS TAKEN TO PREVENT RECURRENCE:

Since this occurrence in 1975, many changes have taken place in the design change program and in maintenance tracking. These efforts along with increased personnel awareness and the increased staffing and responsibilities of the Quality Assurance Department will preclude events of this nature in the future.

7. GENERIC IMPLICATIONS:

None.