Jersey Central Power & Light Company

MADISON AVENUE AT PUNCH BOWL ROAD • MORRISTOWN, N.J. 07960 • 539-6111

July 21, 1971

Dr. Peter A. Morris, Director
Division of Reactor Licensing
United States Atomic Energy Commission
Washington D.C. 20545

Dear Dr. Morris:

Subject: Oyster Creek Station
Docket No. 50-219
Surveillance Testing Failures

The purpose of this letter is to report to you as a matter of interest, several failures that were observed during surveillance testing at the Oyster Creek Station.

Absorption Chamber Spray Header Valve, V-21-15, Tripped on Overload While Opening

During a surveillance test on June 3, 1971 of Containment Spray System II in which valve V-21-15 absorption chamber spray header shutoff valve should have opened, its motor operator breaker tripped as evidenced by a loss of indicating lights. The valve had started to open but did not complete the opening cycle. The valve breaker was reset and the valve opened satisfactorily.

The breaker tripping was found to have been caused by two conditions:

1. The overload setting was found to be tripping the valve before the torque switch.

2. The valve packing was found to have been adjusted causing motor current to be higher than normal load current during valve opening and closing.

/S/ DR/Staff 8/16/71
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The torque switch was checked and set according to manufacturer's procedures. The overloads were reset from their original setting of 85% to 115% of motor full load amps and the valve packing was adjusted.

If the Containment Spray System had been called upon to operate and this valve failed as noted, there would have been only partial pressure supplied to the spray header in the absorption chamber from this system. The second Containment Spray System has a similar valve which did function properly and as only one system is required for any design basis accident no safety related problems were involved.

A check of all torque switches and overload settings was made on the Containment Spray System valves. A check will also be made of the settings on other safeguard system motor operated valves.

A memorandum has been written to all station personnel cautioning them that if adjustments to valve packings on safeguard system motor operated valves is required, a measure of motor current will have to be made after the packing is adjusted to insure the valve will open when required.

Isolation Condenser System Time Delay Relay Failure

On June 11, 1971, while conducting a surveillance test to insure isolation of one of the two redundant isolation condensers upon detection of a line break, the time delay feature of relay 6K7A failed to function, causing the logic circuit to remain energized, preventing valve closure from two of the four line break sensors.

Investigation did not reveal the primary cause for the failure but it is felt that the bellows actuating spring, normally compressed, could not exert enough force to return the time delay portion of the relay to a deenergized state.

The relay was replaced with one of a different manufacturer and tested satisfactorily.

Each isolation condenser is provided with redundant condensate and steam line break d/p sensors, any one of which will initiate condenser isolation upon a sustained (five second) high d/p signal of twenty psid (steam) or twenty-seven inches H_2O (condensate). Although the five-second time delay feature was not a part of the original logic circuit, it was later added during the startup program to prevent condenser isolation due to the flow transient spike which occurs upon initiation.

In this particular case, a simulated trip signal was applied to sensor IB05-A1, one of the two steam line break sensors associated with isolation condenser NZ01-A; however, after the preset time delay, a closing signal was not applied to the condenser valves. This condition

would also have occurred if 1B11-A1, one of the two condensate line break sensors associated with NZ01A had been tripped. The relay which is actuated by the remaining two sensors for NZ01A was checked and found to perform satisfactorily; therefore, single failure criteria was met. In addition, both of the redundant circuits for isolating Isolation Condenser NZ01B were checked and found to function properly.

Following a previous failure, a decision was made to replace all relays of this type with ones of a different manufacturer. The relays have been ordered and will be installed upon their arrival at the station.

Standby Gas Treatment System Train #2 Inlet Valve Failure to Open

On June 15, 1971, while conducting a surveillance test to check the trip set points of various Area Radiation Monitors in the plant which initiate the Standby Gas Treatment System and to check for proper operation of that system, the inlet valve for Train #2, V-28-27, failed to open.

The solenoid valve which ports air to and from the valve operating cylinder was disassembled and the spring which causes the plunger to reposition, venting the cylinder and allowing the valve to open, was found broken.

The spring was replaced, the solenoid valve reassembled, and operation of the inlet valve to Train #2 was checked and found to operate satisfactorily.

Reactor Building ventilation isolation and Standby Gas Treatment System initiation occurs whenever one of four selected Area Radiation Monitors reaches its upscale trip set point. Under normal conditions, both Standby Gas Treatment Trains are initiated and if proper flow exists in the "selected" train, the other train is automatically secured in a time delay sequence. Should the "selected" train fail to operate properly after the sequence shutdown of the second train, the second train would then be automatically started. During this test, the inlet valve for the "non-selected" train failed to open; however, since proper flow conditions were met in Train #1, Train #2 was secured.

In view of the fact that this is the first failure with the subject solenoid valves, no further action is recommended. Close

attention to operation of the Standby Gas Treatment System valves will continue during surveillance testing.

We are enclosing twenty-five copies of this report.

Very truly yours,

Ivan R. Finfrock, Jr.
Manager, Nuclear Generating Stations

IRF/pk

Enclosures

cc: Mr. J. P. O'Reilly, Regional Director
Division of Compliance, Region 1