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February 6, 1985

Dr. Thomas E. Murley
Regional Administrator, Region I
U.S. Nuclear Regulatory Commission
631 Park Avenue
King of Prussia, PA 19406

SUSQUEHANNA STEAM ELECTRIC STATION
SPECIAL REPORT - NON-VALID DIESEL FAILURE
ER 100450 FILE 841-23
PLAS-035

Docket No. 50-387
License No. NPF-14

Dear Dr. Murley:

This special report documents Diesel Generator Non-Valid Failures as required by Regulatory Guide 1.108, Section C.3.b, and Technical Specification 4.8.1.1.3.

This report is comprised of two (2) diesel generator non-valid failures. The first non-valid failure is the "C" Diesel Generator start attempt of January 8, 1985. The second non-valid failure involves the "B" Diesel Generator start attempt of January 9, 1985.

At 2239 on January 8, 1985, the "C" Diesel Generator exceeded the ten (10) second start time which is required by Technical Specifications. A successive start was made at 2308 on January 8, 1985, and the diesel started within the ten (10) second requirement.

The problem was determined to be the Safety Trip Fuel Oil Control Cylinder (USC-7) not venting. This cylinder is expanded when the diesel is shutdown, resulting in closed fuel racks. The venting problem was traced back to the sluggish response of the Safety Trip Control Valve (USCV-9). This control valve is an air operated valve and will vent the Safety Trip Control Cylinder (USC-7) immediately upon a start signal. The USCV-9 valve was replaced with a new valve on January 16, 1985.

This is a 'non-valid' failure since the Fuel Oil Control Cylinder (USC-7) is vented in the emergency mode by two (2) electrically operated solenoid valves, therefore, the Safety Trip Control Valve (USCV-9) is bypassed in the emergency mode. The degradation of the USCV-9 Control Valve was attributed to poor control air quality supplied from the starting air compressors. Air dryers are to be installed under PMR 82-761 during the first refueling outage to reduce the moisture problem.

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At 1105 on January 9, 1985, the "B" Diesel Generator was manually started from the Control Room. This start was a test mode start with a full compliment of trips armed. When the diesel start pushbutton was depressed, it tripped after approximately four (4) engine revolutions on Main Connecting Rod High Temperature and High Jacket Water Temperature. These two (2) alarms were reset and the diesel was successfully started thirty (30) minutes later. This unsuccessful start was attributed to the spurious operation of a trip that is bypassed in the emergency operating mode, therefore, this is a non-valid failure.

There is one (1) diesel failure in the last one-hundred (100) starts. The diesels are on a test interval of every thirty-one (31) days, per Regulatory Guide 1.108, Section C.2.d. Since these were non-valid failures, the test interval and number of diesel failures did not change.

H.W. Keiser
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RWS/pjg

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