



- I. LER NUMBER: 82-178/03L-0
- II. LASALLE COUNTY STATION: Unit 1
- III. DOCKET NUMBER: 050-373
- IV. EVENT DESCRIPTION:

At 2211 on December 30, 1982 a low pressure alarm was received for automatic depressurization system "S" valve. On December 31, 1982 low pressure alarms were received for automatic depressurization system "C" valve at 0051 and "U" valve at 0114. This is a violation of Technical Specifications 3.5.1 which states that there must be at least 6 automatic depressurization system valves operable when steam dome pressure is greater than 122 P.S.I. This problem was immediately investigated and it was found that both instrument nitrogen compressors were running. In an attempt to correct this situation the instrument air system was cross-tied to the instrument nitrogen system for assistance in maintaining instrument nitrogen pressure. Secondly, increasing the pressure from the back-up nitrogen supply bottles in turn cleared the 3 low pressure alarms.

V. PROBABLE CONSEQUENCES OF THE OCCURRENCE:

At the time of this event, LaSalle Unit One was at 927 MW thermal and 205 MW electric undergoing a unit shutdown. The required action of shutting down for 2 or more inoperable automatic depressurization system valves was in the process of being performed since Unit #1 was shutting down for the Residual Heat Removal "1B" pump problem. Sufficient air pressure was still available to cycle these automatic depressurization system valves. In addition the high pressure core spray system was still available to cool the reactor core in the event of an accident. Therefore the health and safety of the public was not affected.

VI. CAUSE:

The cause of this event was due to the drywell pneumatic air dryer 1B blowing back to the drywell, and the instrument nitrogen supply check valve to the north nitrogen ADS bank was leaking back into the 100 PSIG header.

The air dryer blowing down to the drywell was due to the unit's solenoid valves stuck in the open position. This resulted from the repressurization and purge within the unit, causing a blowdown path from the after-cooler outlet to the drywell. Thus the compressors were not able to keep the receiver pressurized to greater than 160 pounds and the standby nitrogen bottles back feed to the receiver and the ADS supply header decreased to approximately 147 pounds.

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The compressor discharge check valve leak was verified by isolating the automatic depressurization system header 11N100 and discovering the nitrogen bottle back-up supply depressurizes. This was further proven by testing the nitrogen bottle supply itself, showing that the nitrogen bottles did not leak.

VII. CORRECTIVE ACTION:

Work Request L21420 was initiated to investigate the solenoid valves located with dryer unit 1B. The solenoid valves were found to be gummed up and stuck in the open position. These solenoid valves were disassembled, cleaned and all the necessary parts changed, resulting in the valves being returned to an operable condition. Work Request L22033 was initiated to do the same work on dryer Unit 1A.

Work Request L21560 was initiated to disassemble and repair the 11N044 check valve. As the valve was being disassembled, the bonnet threads became galled and the bonnet could not be removed. The valve was cut out of the system and a new check valve was installed. The replacement valve internals had been redesigned by the manufacturer, therefore Modification 1-1-83-008 was initiated for installing the check valve to the south nitrogen supply bank. Secondly, all the check valves in the air supply lines to the drywell accumulators and check valve 11N043 to the north nitrogen supply bank had their internals changed by Modification 1-1-82-277.

Modifications 1-1-83-008 and 1-1-82-277 were installed because the subject check valves, 1" Anderson Greenwood piston check valves, were found to have a seating problem when the reverse differential pressure was small. That is to say that when a slow depressurization test was conducted the round piston on the disk had a tendency to cock in the guide and the disk would not contact the seat properly. Test after the modification indicates that the new hex piston corrected the cocking problem.

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