

CF

50-135

OEAB EVENT TRACKING SHEET

SORT> Assignment Date
QUERY> "TAPPERT" \$ Assigned To & Assigned Date >= 10/01/94

Plant: SAINT LUCIE Unit: 1 Engineer: TAPPERT J
Event: 10/23/94 Morning Report: Briefing:
50.72#: 27940 LER#: 050000009400000 PNF:
Other Notification:
System: Component:

OPERATING MODE

- 1 - Operation
- 2 - Startup
- 3 - Hot Standby
- 4 - Hot Shutdown
- 5 - Cold Shutdown
- 6 - Refueling
- 7 - Other _____

SIGNIFICANCE

- A - Reactor Protection System
- B - Safety-Related Cooling System
- C - Fuel Cladding
- D - Reactor Coolant Pressure Boundary
- ☒ E - Containment
- F - Plant Power
- G - Unexpected Plant Performance
- H - Other

CAUSE

- 1 - Equipment Failure
- ☒ 2 - Design or Installation Error
- 3 - Operating Error
- 4 - Maintenance Error
- 5 - External
- 6 - Other _____

EVENT TYPE

- SIG - Significant Event
- ☒ EOI - Event of Interest
- TBD - To Be Determined
- OTH - Other

POTENTIAL AO: Criterion: _____

Proposed By: TAPPERT J 9/17/94 12/21/94
Engineer

Approved: E. F. G. 12/21/94
Section Leader

A. Chaffee
Branch Chief

EVENTS ASSESSMENT PANEL First Screening: 11/08/94

closure 11/18/95

Significance Description:

POTENTIAL CONTAINMENT BYPASS PATH THRU LPSI/NAOH ADDITION SYSTEM.

6/10

2-1-97

JA

9501300174

4pb

XA

NEC CENTER COPY

11/10/95

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DOCUMENT LOCATION & NAME: G:\JRT\EF27940J

PSE -- YES

EVENT FOLLOW-UP ASSIGNMENT SHEET

ASSIGNMENT DATE: October 24, 1994
ASSIGNED TO: TAPPERT
PLANT & UNIT: ST. LUCIE 1
EVENT DATE: October 23, 1994
50.72 REPORT NO: 27940
DAILY REPORT DATE/NO: _____
OTHER REPORT: LER 94-06

EVENT SUMMARY AND SPECIFIC FOLLOW-UP ASSIGNMENT

POTENTIAL CONTAINMENT BYPASS PATH THRU LPSI/NAOH ADDITION SYSTEM
EXAMINE FOR SAFETY AND GENERIC SIGNIFICANCE AND FOR TECHNICAL DETAIL.

CIRCLE THE APPLICABLE CASE:

SAFETY SIGNIFICANCE CLASSIFICATION: OTH _____ EOI X SIG _____ AO _____

GENERIC CONCERN STATUS: YES IN # _____ BUL # _____ GL# _____

OR BRIEF: YES # _____

CLOSEOUT

On October 20, 1994, while performing GL 89-10 differential pressure testing of MOVs, the licensee discovered a potential containment bypass flow path at St Lucie Unit 1. Specifically, the plant has two trains of Containment Spray. The Containment Spray system uses a Sodium Hydroxide Spray Additive system to control PH and maximize radioiodine removal from the containment atmosphere. The NAOH is added using eductors that take a suction from the pump discharge and discharge to the pump suction. The design flaw discovered is that the flow paths for both trains of NAOH addition share a common leg of piping. Therefore, if one containment spray pump was running and the other was idle, the suction piping of the idle train would be pressurized from the running train and lift the idle train's suction relief valve.

In the event of a postulated Loss of Coolant Accident concurrent with a failure of one containment spray pump failure (from Loss of Offsite Power and failure of one emergency Diesel Generator or direct failure of the pump), the suction relief valve could open on the idle train, and after a Recirculation Actuation Signal would release containment sump inventory outside of containment. The relief could also lift on a small break LOCA which did not require containment spray when a containment spray pump is procedurally aligned to the High Pressure Safety Injection system for NPSH enhancement. The actual flow out of the relief would be limited by the NaOH Spray Additive system eductor to 128 gallons per minute. The FSAR assumes an Engineered Safeguards equipment external leakage rate of 2 liters per hour.

The relief valve is in the Reactor Auxiliary building and is served by the ECCS area filtered ventilation system. Despite the tremendous increase in leakage, the licensee concluded that, using MUREG 1465 source terms and operational particulate efficiencies, offsite and onsite doses would not exceed regulatory limits. The licensee has also performed a modification to make the trains physically independent. This event has been classified as an Event of Interest.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (NNSB 7714), 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.

FACILITY NAME (1)		DOCKET NUMBER (2)		LER NUMBER (6)			PAGE (3)
St. Lucie Unit 1		05000335		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	7 OF 8
				94	--006--	1	

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

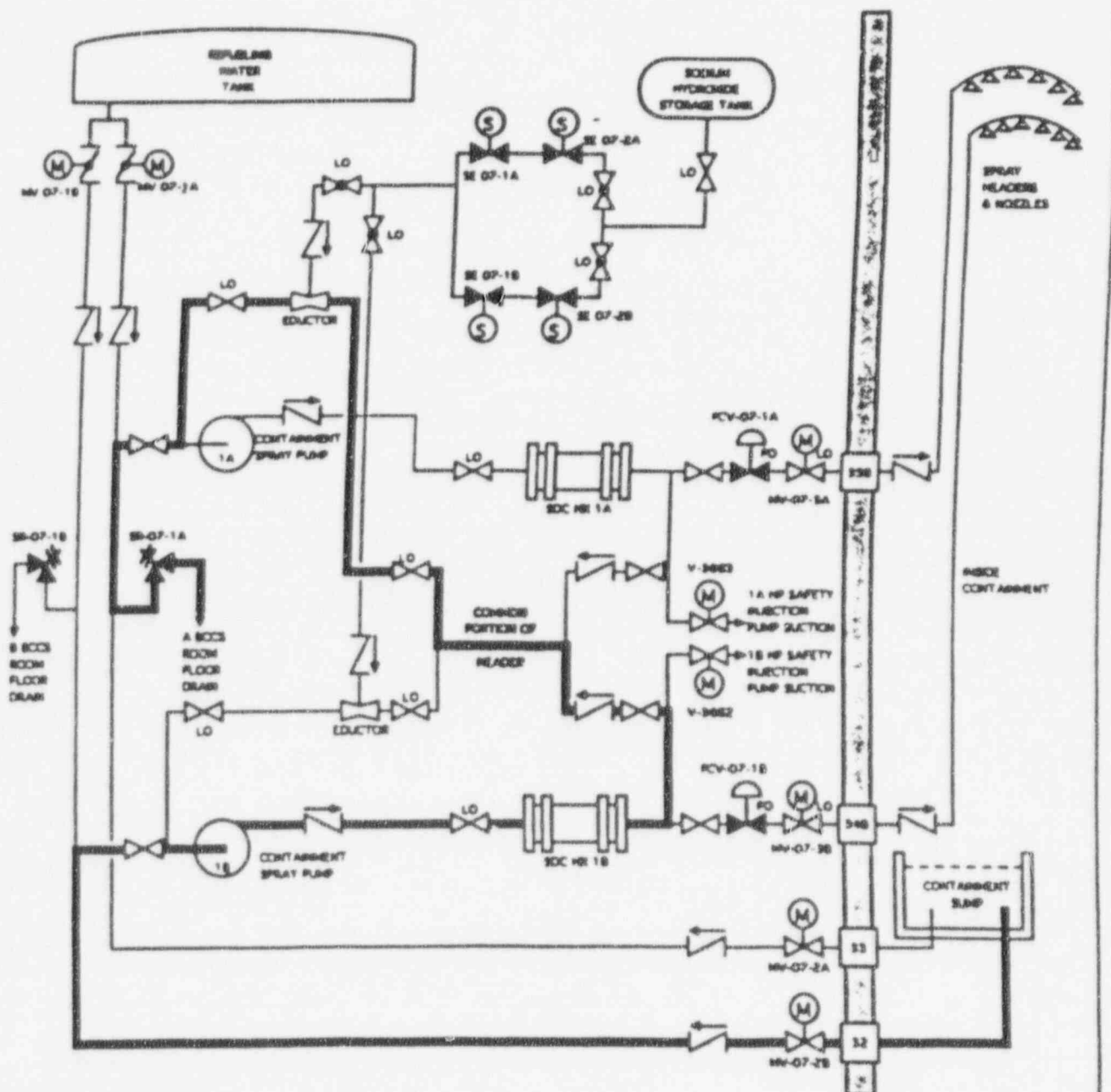


FIGURE ONE - CONTAINMENT SPRAY SYSTEM (ORIGINAL NaOH ADDITION DESIGN)