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## I. INTRODUCTION

The LaSalle County Nuclear Power Station is a two-unit facility owned by Commonwealth Edison Company and located near Marseilles, Illinois. Units 1 and 2 are boiling water reactors with a designed net electrical output of 1078 meggawatts. Waste heat is rejected to a man-made cooling pond using the Illinois River for make-up and blowdown. The architect-engineer was Sargent and Lundy and the primary construction contractor was Commonwealth Edison Company.

Unit 1 was issued operating license number NPF-11 on April 17, 1982. Initial criticality was achieved on June 21, 1982 and commercial operation was commenced on January 1, 1984.

Unit 2 was issued operating license number NPF-18 on December 16, 1983. Initial criticality was achieved on March 10, 1984 and commercial operation was commenced on June 19, 1984.

The primary purpose of the annual operating report is to permit annual evaluation by the NRC staff of operating and maintenance experience throughout the Nuclear Power Industry. This report should provide a comprehensive summary of operating experience, even though some repetition of previously reported information may be involved. References in the annual operating report of previous submitted reports should be clear and concise.

This report was compiled by James P. Peters, telephone number (815)357-6761, extension 325.

## II. Annual Reportable Documentation for Units 1 and 2

### A. Summary of Operating Experience

This section has been reported monthly in LaSalle's NRC Monthly Reports (Section II.A) dated January 1985 through December 1985.

### B. Unit Outage or Power Reductions

This section has been reported monthly in LaSalle's NRC Monthly Reports (Sections II.B.4/II.C/II.D.3) Dated January 1985 through December 1985.

### C. Radiation Exposure

This information is reported annually in the respective sections relating to numbers compiled for LaSalle Units 1 and 2, in the 10 CFR 20.407 annual report submitted under a different cover.

### D. Indications of Failed Fuel Elements

During the reporting period January 1985 through December 1985, there was no indication of failed fuel elements in Units 1 and 2.

### E. Tests and Experiments Requiring NRC Approval

During the reporting period January 1985, through December 1985 there were no tests and experiments requiring NRC approval on Units 1 and 2.

### F. Summary of ECCS Outages

This section has been reported monthly in LaSalle NRC Monthly Reports (Section II.E.2) dated January 1985 through December 1985.

### G. Safety Related Modifications completed in 1985.

#### M-1-0-82-010

Replace existing flow and pressure transmitters with Rosemount transmitters on Post-Loca Hydrogen recombiners. The original transmitters were susceptible to radio frequency interference causing erratic operation and damage to the transmitters. There was no unreviewed safety question.

#### M-1-0-82-053

Install attached log and expansion anchor to housing where embedded anchor has broken off. This is a functionally similar to replacement of a damaged part. There was no unreviewed safety question.

#### M-1-0-83-014

Separate the electronics from SQRT converter to a less radiated area. Relocation of the SQRT converter to a milder zone is necessary to assure performance and safety objectives. There was no unreviewed safety question.

M-1-1-80-007

This modification consists of reducing the water rod lower end plug shank length and replacing upper expansion spring with a modified design spring. The new end plug configuration will be consistent with the previous lower end plug design for 8 x 8 bundles. There was no unreviewed safety question.

M-1-1-82-009

Reduce battery size to 58 cells, replaced a three cell battery to one-one cell battery (Two dummy cells) component. The new float voltage will be 130.5 VDC and new equalizer voltage will be 135.1 VDC. There was no unreviewed safety question.

M-1-1-82-018

Aluminium rivets attaching nylon bearings to fuel grapple need replaced with stainless steel rivets. This is a result of SIL-334 which described the shearing off of bearings attached by aluminium rivets. There was no unreviewed safety question.

M-1-2-82-056

Replace existing valves on containment monitoring system with nuclear grade non-leaking valves. This was a parts upgrade due to excessive leakage. There was no unreviewed safety question.

M-1-1-82-091

Install safety parameter display system (SPDS) and all wiring needed for operation for SPDS parameter inputs to computer. There was no unreviewed safety question.

M-1-1-82-134

Resize the RCIC restricting flow orifice to allow for rated flow. This was done to accomplish the 600 gpm required flow. There was no unreviewed safety question.

M-1-1-82-234

Install operation counters for the air start motors on "1A" DG. This provides indication of total number of air starts, to be used for preventative maintenance. There was no unreviewed safety question.

M-1-1-82-235

Install operation counters for the air start motors on "1B" DG. This provides indication of total number of air starts, to be used for preventative maintenance. There was no unreviewed safety question.

M-1-1-82-309

This modification meets license condition 2.c.(21)(c) that requires all control and monitoring instruments be removed from the engine skid, except those instruments that are qualified for this location. There was no unreviewed safety question.

M-1-1-83-066

Add steel plate doors to close existing openings in the sacrificial shield. The doors improve the airflow to the annulus region per the original design, while closing the original openings. There was no unreviewed safety question.

M-1-1-83-094

The current transmitter has a problem with the zero shift, replace current Baily 556 model with the Rosemont 1153 transmitter. The Rosemont transmitters will improve system reliability. There was no unreviewed safety question.

M-1-1-83-115

Replace the SBTG heaters with ones that are environmentally qualified. This will not affect system operations. There was no unreviewed safety question.

M-1-1-83-140

Cut and cap, off packing leak off line on the 1E12-F009 valve. This line is being removed to ease valve maintenance. Valve pressure boundary will not be effected. There was no unreviewed safety question.

M-1-1-84-002

This modification involves minor changes to the seismic supports of cable trays. No changes to the operations of any systems or equipment will take place. There was no unreviewed safety question.

M-1-1-84-043

Replace handswitch for valves 1E12-F099A/B with spring return to normal so the valves will not open after an isolation reset. The function and cycling time of the valve will remain unchanged. There was no unreviewed safety question.

M-1-1-84-071

This provides for the replacement of the SBLC pump motors with Environmentally qualified motors. The existing 40 H.P. motors were replaced with 40 H.P. reliance electric motors. There was no unreviewed safety question.

M-1-1-84-079

This provides for the environmental qualification of the Post LOCA hydrogen recombiner as per Unit 1 License condition 2.c.11. There was no unreviewed safety question.

M-1-1-84-102

Replace critical seals and O-Rings in the actuator with new seals from the manufacturer which are made of an improved material. This refurbishment is required to comply with environmental qualification criteria. There was no unreviewed safety question.

M-1-1-84-103

Upgrade the G.E. radiation detector to meet environmental qualification requirements. This criteria was imposed by 10 CFR 50.49. There was no unreviewed safety question.

M-1-1-85-029

Replace the DG Cooling water pump motor with an "H" type insulated winding in place of the existing "RH" type insulated winding. There was no unreviewed safety question.

M-1-1-85-030

Install a locking tab to prevent the FW check valves bushings from rotating. This welds the hinge pin bushings into the feedwater check valves. This is needed since these bushings have exhibited a tendency to turn in its housing during plant operations, which interferes with adequate valve seating. There was no unreviewed safety question.

M-1-1-85-048

Remove 120 VAC breaker #11 to eliminate overloading on presently installed 30 AMP Breaker. Replaced with 30 AMP three phase breaker wired in series. There was no unreviewed safety question.

M-1-2-80-001

Modify tabbed water rod end plug and expansion spring. Reduced the water rod lower end plug shank length and replacing the upper expansion spring with a modified (GE) design, for the 8x8 bundles. There was no unreviewed safety question.

M-1-2-82-013

This changes the size of two pipe supports on the hydrogen recombiner system. This will eliminate interference with the containment personnel access hatch. There was no unreviewed safety question.

M-1-2-83-009

Replace SGBT System Heater. This replaced the existing hardware with new hardware which is environmentally qualified for both the service and accident conditions. There was no unreviewed safety question.

M-1-2-84-026

Install MSIV A-D INBD/OUTBD and TSV 1-4, not full open alarms. This will give the operator information on trip relays positioning during MSIV and TSV surveillances. There was no unreviewed safety question.

M-1-2-84-053

Install snubbers in sensing lines for 854 PSIG Main Steam Isolation switches. Installed to prevent excessive fluid pulsations to prevent isolations. There was no unreviewed safety question.

M-1-2-84-068

Reroute Diesel Generator "O" and "2A" fuel oil transfer pump control cables for fire protection. This will conform to the license condition 2.c.(15).k. There was no unreviewed safety question.

M-1-2-84-084

The structural brace for snubber M09-2031S interferes with the full range of motion of SRV 2B21-F013N. This was discovered during the performance of STP-26. The brace was inverted to give proper clearance needed. There was no unreviewed safety question.

M-1-2-84-086

This provides for the replacement of interlocks in electrical contactors for the 12 DC powered valves at MCC 221Y. The original interlocks failed environmental qualification testing and needed to be replaced. There was no unreviewed safety question.

M-1-2-84-106

This installs a pull chain to enable safe operation of Diesel Storage Tank fill valve. This will provide easier and safer access to the operation of the valve. There was no unreviewed safety question.

M-1-2-84-116

This replaces the SBLC pump per environmental qualification criteria. The new motors have a higher full load current which increases the thermal overload setting. There was no unreviewed safety question.

M-1-2-84-124

This moves the Post Loca Hydrogen Recombiner power cabinet to a milder environment to meet environmental qualification requirements. There was no unreviewed safety question.

M-1-2-84-132

Performed direct replacement of valve actuator motors having "B" insulation with motors having "RH" insulation. This is to meet environmental qualification criteria. There was no unreviewed safety question.

M-1-2-84-145

Upgraded gaskets on VG damper actuator 2FZ-VG003 to meet Environmental Qualification Requirements. There was no unreviewed safety question.

M-1-2-84-146

Upgrade G.E. radiation detector to meet to meet Environmental Qualification Requirements. Add thermal insulation to the unprotected opening of the cored hole in which it is housed. This insulation will limit Temperature extremes to the detector such that its temperature threshold will not be exceeded. There was no unreviewed safety question.

M-1-2-84-155

Add a timing circuit to reduce voltage to coil on Valcor solenoid valves so qualified life of solenoid is extended. This modification is required in order to meet constraints of environmental qualification. There was no unreviewed safety question.

M-1-2-84-156

Replace the presently installed Barton instrumentation with environmentally qualified instrumentation. The Barton will be replaced with a Rosemount transmitter. There was no unreviewed safety question.

M-1-2-84-177

Relocate the main steam tunnel leak detection temperature elements to improve the operation of the leakage detection system by increasing system accuracy. There was no unreviewed safety question.

M-1-2-85-015

Replace MSIV-LCS flow elements with a model manufactured by FCI in order to meet Environmental Qualification Requirements. The FCI elements maintains a reliable output at high temperatures and will be more durable. There was no unreviewed safety question.

M-1-2-85-028

Installation of support hardware and 15 wire mesh bags containing passive samples of electrical material inside drywell and steam tunnel. LaSalle station will be a test site for the EPRI/VCONN cable aging study. There was no unreviewed safety question.



M-1-2-85-037

Rélocate PRM sample taps on the RHR service water lines to obtain inclusive samples from RHR service water loads. This modification will reroute the PRM piping to allow the seal cooling water to be sampled. There was no unreviewed safety question.

M-1-2-85-038

This modification consists of welding a square piece of material (22 lbs) to the Disc extension. This corrects an imbalance created during past machining on the disc bushings of the 2B21-F010A feed water check valve. This weight will increase the closing moment on the valve disc and permit proper closing. There was no unreviewed safety question.

M-1-2-85-039

This modification adds bushing locking tabs to valves 2B21-F010A/B. These tabs are to prevent relative motion between the bushing and valve disc. This work is being done following recommendations from Anchor Darling Valve Company. There was unreviewed safety question.

M-1-2-85-040

This modification will eliminate the dual seat feature on the feedwater check valves, 2B21-F010A/B. This will let all seating functions to be accomplished by the hard face seats. There was no unreviewed safety question.

M-1-2-85-042

On the RCIC injection line testable check valves (2E51-F065/66) install a mechanical stop to limit valve disc travel past the center of gravity to prevent the valve from hanging open. This modification adds a spacer block or counter weight extension to the valve disc. There was no unreviewed safety question.

M-1-2-85-047

This modification documents the rewind of the RHR C service water pump motor (2E12-C300C) with H insulation. The motor originally had type RH insulation from the manufacturer. There was no unreviewed safety question.

M-1-2-85-048

Replace existing GFD type relay with a EPD type for 2B21-HK67x17/18. These relays are for 2WR029/40, which are primary containment isolation valves. This relay was qualified siesmically for nuclear use. There was no unreviewed safety question.

M-1-2-85-051

Replace existing GDP type relay with a EPD type for SBGT initiation relays 2R5 in panel 2PA14J. This relay was qualified siesmically for nuclear use. There was no unreviewed safety question.

M-1-2-85-053

This modification relocates the inlet differential temperature sensors for the RHR corner rooms from a wall mounted location to the supply air duct from the VY System. This allows the sensors to monitor for any leaks between the supply air grill and the return air grill. There was no unreviewed safety question.

M-1-2-85-055

Relocate leak detection differential temperature sensors (2E31-N005A/B) into the duct so that they can sense the cool air temperature. This improves the differential temperature sensing accuracy without having to change the setpoint. There was no unreviewed safety questions.

M-1-2-85-065

Install an RC network across the RWCU isolation timer motor to prevent trips on the leakage detection Rileys when RWCU isolates. This network will absorb (Filter out) the energy stored and being dissipated by de-energizing the timer motor coil. There was no unreviewed safety question.

M-1-2-85-066

Remove 120VAC breaker #16 to eliminate overloading on presently installed 30 Amp. breaker. Replace with 30 AMP three-phase breaker. This configuration will provide tripping at high temperatures at a current level much closer to the normal temperature trip-point. There was no unreviewed safety question.



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Gentlemen:

Enclosed for your information is the annual report covering LaSalle County Nuclear Power Station for the period covering January, 1985 through December, 1985.

Very truly yours,

*CE Sargent*

G. J. Diederich  
 Station Manager  
 LaSalle County Station

GJD/JP/crh

Enclosure

- cc: NRC Director of Inspection  
 and Enforcement, Washington, D.C.  
 NRC Director, Office of Management  
 Information and Program Control,  
 Washington, D.C.  
 NRC Resident Inspector, LaSalle Station  
 D. L. Farrar, Director of Nuclear Licensing  
 Gary Wright, IL Dept. of Nuclear Safety  
 K. L. Grasser, Divisional Vice President

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