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President and CEO

March 2, 2000

In reply, please
refer to LAC-13706

DOCKET NO. 50-409

Document Control Desk
U. S. Nuclear Regulatory Commission
Washington, DC 20555

SUBJECT: Dairyland Power Cooperative
La Crosse Boiling Water Reactor (LACBWR)
Possession-Only License DPR-45
Annual Decommissioning Plan Revision

REFERENCES:
(1) DPC Letter, Taylor to Document Control Desk, LAC-12460, dated December 21, 1987 (original submittal of LACBWR's Decommissioning Plan)
(2) NRC Letter, Erickson to Berg, dated August 7, 1991, issuing Order to Authorize Decommissioning of LACBWR
(3) NRC Letter, Brown to Berg, dated September 15, 1994, modifying Decommissioning Order

The annual update of the LACBWR Decommissioning Plan has been completed, and the pages with changes and their explanations are included with this letter. Each page with a change will have a bar in the right-hand margin to designate the location of the change. None of the changes was determined to require prior NRC approval, and they have been reviewed by both onsite and offsite review committees.

The individual pages requiring revision are attached to this letter. Please substitute these revised pages in your copy(ies) of the LACBWR Decommissioning Plan.

Reasons for the changes are as follows:

Page 5-13 Section 5.2.11, Fuel Element Storage Well System, is revised to include the new return flow path and provide the status of the bottom return line. The bottom return line series check valves had failed to seat properly during testing. The bottom return line was cut and plugged at the biological shield wall to isolate it. A new return line was installed which enters the top of the well and extends downward in the well to discharge at the 695-foot level.

Page 5-18 In the description of what the Well Water System supplies, several items contain numbers, e.g., five (5) emergency showers. These numbers are deleted because some of these components have been or will be removed because hazards associated with them are gone.

Page 5-27 System status is updated, references to resins are removed. The service tank containing resins has been emptied and none will be added in the future.

Pages 5-35 & 5-36 Section 5.2.33.3, Emergency Diesel Generators 1A and 1B.

Each Emergency Diesel Generator (EDG) had an in-ground fuel oil storage tank. The individual fuel oil day tanks have sufficient capacity to support expected demand. Required removal of the in-ground tanks has been accomplished without replacement; reference to them is being removed.

The Diesel Building 125-Volt DC Bus has been made the normal supply to the Reactor Plant 125-Volt D.C. Bus by cross-connecting the buses. The Reactor Plant Battery and Charger have been removed. The Reactor Plant Battery charger is being removed from the list of loads that 1A EDG can supply.

The test load capacity has been reduced from 300 kW to 200 kW to facilitate the repair of test load. The 200 kW load remaining is adequate to test and demonstrate general operability of the Emergency Diesel Generator.

In the last sentence of the section, the word "vital" is removed, as none of the loads supplied by the 1B EDG is considered to be vital.

Page 5-37 Section 5.2.33.5, 125-V DC Distribution. The tense of the verb is changed so that the description of the original 125-V DC distribution System remains unchanged with the removal of the Reactor Plant Battery and Charger. A statement describing the changes to the 125-V DC system is added.

Page 5-38 Section 5.2.34.3, Reactor Coolant PASS System Description. The system has been removed, and the system description is retained with the tense of the verb being changed to past tense. The System Status is updated to state that the system is removed.

Page 8-4 Line “c” which states “Routinely (annually for all plant personnel)” is deleted. Bioassay analyses of plant personnel is not required for those who receive less than 10% of the yearly radiation exposure from internal deposition. During the SAFSTOR period, no plant personnel has received an internal deposition. Routine (every six months) whole body counts are no longer performed.

If you have any questions concerning any of these changes, please contact Michael Johnsen of my staff at 608-689-4210.

Sincerely,

DAIRYLAND POWER COOPERATIVE

William L Berg

William L. Berg, President & CEO

WLB:MNJ:dh

Enclosures

cc: Paul W. Harris, NRC Project Manager

LA CROSSE BOILING WATER REACTOR

(LACBWR)

DECOMMISSIONING PLAN

Revised
February 2000

DAIRYLAND POWER COOPERATIVE
LA CROSSE BOILING WATER REACTOR (LACBWR)
4601 State Road 35
Genoa, WI 54632-8846

5.2.11 Fuel Element Storage Well System

The storage well is a stainless lined concrete structure 11 feet by 11 feet by approximately 42 feet deep. When full, it contains approximately 38,000 gallons.

It is completely lined with Type 316 stainless steel. The walls are 16-gauge sheet and the bottom a 3/8-inch plate. All joints are full penetration welds. Vertical and horizontal expansion joints in the storage well allow for thermal expansion. A three-section aluminum cover, with two viewing windows per section, has been manufactured to cover the pool.

Design values for the storage well are given below:

Well Floor: safe uniform live load . . . . 5,000 lb/ft^2

Spent fuel elements and control rods are stored in two-tiered racks in the Fuel Element Storage Well until they can be shipped. A transfer canal connects the upper portion of the well to the upper vessel cavity and is closed with a water-tight gate and a concrete shield plug. The water level in the well is normally maintained at an elevation of $\geq$ 695 feet with fuel in upper rack.

Storage well cooling is accomplished by drawing water through a 6-inch penetration at elevation 679 feet, or a 4-inch line at elevation 679 feet 11 inches, and pumping it through the fuel storage well cooler and returning it to the well, with either of two storage well pumps. The return line enters the top of the storage well and extends down to discharge at elevation 695 feet. The bottom inlet line ends at the biological shield wall and is sealed with a welded plug.

Cleanup is provided by the FESW ion exchanger. A 4-inch line from the Overhead Storage Tank is used to flood the well or pump water back to the Overhead Storage Tank. Overflow and drain pipes from the well and cavity are routed to the retention tanks.

Normal makeup to the storage well is provided by demineralized water through one of two "FESW Remote Operated Fill Valves," which are operated from Benchboard E in the Control Room.

The cooling system is conservatively designed to remove the decay heat of a full core one week after shutdown, with the storage well water at 120°F and the ultimate heat sink, the river, at 85°F.

System Status

The Fuel Storage Well contains 333 irradiated fuel elements, 10 control rods, startup sources and a number of zirconium and stainless steel shroud cans. The Fuel Element Storage Well System will remain in operation as part of the SAFSTOR Program until all fuel is sent offsite.

5.2.16 Well Water System

Water for this system is supplied from two deep wells. Well No. 4 is located 115 feet southeast of the containment vessel center, and Well No. 3 is located 205 feet northeast of this centerline. The wells are 12 inches in diameter, with 8-inch pump casings and piping. The upper 40 feet of casing is set in concrete. The pumps are sealed submersible pumps. They take suction through stainless steel strainers, and they discharge into pressure tanks.

The system supplies water to the plant and office for sanitary and drinking purposes and to the generator and radwaste washdown stations. Water supplied by the system is used at personnel and material decontamination stations, emergency showers, and eyewash stations. It is used as cooling water for the two Turbine Building air-conditioning units and in the heating boiler blowdown flash tank and sample cooler. The well water system is the source of supply to the LPSW pumps seal water system, priming water for the lube oil purifier and laundry equipment.

System Status

This system is maintained in continuous operation.

5.2.25 Full-Flow Condensate Demineralizer System

The Full-Flow Condensate Demineralizer System consists of three service tanks, each with one-half system capacity and arranged in parallel. Its purpose was to remove ionic impurities from the condensate system water before admitting it to the reactor. Each service tank is capable of delivering 700 gpm. With one of the three tanks on standby, the system is capable of delivering 1400 gpm to satisfy primary system requirements. The standby service tank was available for service whenever the effluent conductivity of the inservice tanks rose to an unacceptable level. Each of the three demineralizer tanks normally contained 45-50 ft^3 of pre-regenerated mixed resins with a cation/anion ratio of 2 to 1. The three service tanks are designed for 400 psig operation, and normal flow is supplied by the condensate pumps. A circulating pump is provided to circulate water through the standby demineralizer tank prior to placing it into service.

System Status

The regeneration portion of this system has been removed.

This system is not required to be operable.

5.2.33 Electrical Power Distribution

5.2.33.1 Normal ac Distribution

Oil Circuit Breaker 152R1 (25NB4) supplies the reserve auxiliary transformer located in the LACBWR switchyard.

Air Circuit Breakers 252R1A and 252R1B supply the 2.4-kv Bus 1A and Bus 1B from the 69/2.4-KV reserve transformer.

The 2400/480-volt Auxiliary Transformers 1A and 1B receive their power from the 2400-volt Buses 1A and 1B through Air Circuit Breaker 252AT1A from Bus 1A to Transformer 1A, and through Air Circuit Breaker 252AT1B from Bus 1B to Transformer 1B. The auxiliary transformers supply the 480-volt Buses 1A and 1B through Air Circuit Breaker 452M1A for Bus 1A and through Air Circuit Breaker 452M1B for Bus 1B.

The 480-volt buses supply larger equipment directly. They also supply motor control centers which furnish power to motors and other associated equipment connected to them through their respective breakers, including Motor Control Center (MCC) 120-volt ac Distribution Panels which supply 120-volt ac to equipment and instrumentation, excluding that required from a non-interruptible source.

The regular lighting cabinets are supplied from 480-volt buses 1A and 1B.

5.2.33.2 480-V Essential Buses 1A and 1B

The 480-v Essential Bus 1A Switchgear is normally supplied with electrical power from the 480-v Bus 1A through Breaker 452-52A. In the event of a loss of station power, the 480-v Essential Bus 1A is supplied with electrical power from Emergency Diesel Generator 1A through Breaker 452 EGA. Breakers 452-52A and 452 EGA are electrically interlocked to prevent both sources from supplying the bus.

The 480-v Essential Bus 1B Switchgear is normally supplied with electrical power from 480-v Bus 1B through Breaker 452-52B. In the event of a loss of station power, the 480-v Essential Bus 1B is supplied with electrical power from Diesel Generator 1B through Breaker 452 EGB. Breakers 452-52B and 452 EGB are electrically interlocked to prevent both from supplying the bus.

The 480-v Essential Buses 1A and 1B may be cross-connected through the 480-v Essential Bus Tie Breakers 452 TBA and 452 TBB.

5.2.33.3 Emergency Diesel Generators 1A and 1B

The 1A Diesel Generator set system consists of a 250-kw diesel generator, a day tank fuel supply, a fuel transfer pump, a remote radiator and fan, a 100-kw test load, a local engine instrument panel, a local generator panel, and a remote selector switch and alarms in the Control Room. The Diesel Generator set is located in the emergency generator cubicle which is on the grade floor level adjacent to the Machine Shop.

The function of the 1A Diesel Generator is to supply emergency power to the 480-v Essential Bus 1A which, in turn, supplies power to the Turbine Building MCC 1A, the Turbine Building 120-v Bus, the Turbine Building 120-v Regulated Bus and the feed to the Regulated Bus Auxiliary Panel.

The 1B Diesel Generator System consists of a 400 kw diesel driven generator, a 300-gallon fuel oil day tank, fuel oil transfer system and external remote radiator and fan, a 200 kw fan-cooled test load, a local engine control and instrument cabinet, and remote instrumentation and controls in the Control Room. The diesel generator set is located in the Generator Room of the Diesel Building which is south of the Electrical Penetration Room at elevation 641 feet.

The function of the 1B Diesel Generator is to supply emergency power to the 480-v 1B Essential Bus, which in turn supplies power to the Reactor MCC 1A 480-v Bus, Diesel Building MCC 480-v Bus, and the loads supplied by these MCC.

5.2.33.4 <u>120-V Non-Interruptible Buses</u>

The 120-v Non-Interruptible Buses maintain a continuous non-interruptible power supply to a portion of the essential plant control circuitry, communications equipment and radiological monitoring equipment.

The 120-v Inverter 1A is designed for 3 KVA output and is powered by 125-v dc from the Reactor Plant Battery Bank through the Reactor Plant dc Distribution Panel. An automatic transfer switch is provided which will transfer the output to an alternate 120-v ac source in the event the inverter or its dc source fails. The alternate source for Inverter 1A is the Turbine Building 120-v Regulated Bus. The Inverter 1A is located in the Electrical Equipment Room.

The 120-v Non-Interruptible Bus 1B had the capability of being supplied with power from three sources. The normal main feed power source was supplied by Static Inverter 1B. The 5 KVA 1B Static Inverter was powered by 125-v dc from the Diesel Building Battery Bank through the Diesel Building 125-v dc Distribution Panel. Its alternate source was the Diesel Building MCC 480-v Bus through a static switch. The reserve feed power source was supplied by the Turbine Building 120-v Regulated Bus, through a breaker on TB MCC 1A, that was used when the Static Inverter 1B was out of service. Static Inverter 1B has been removed from service. The Non-Interruptible Bus 1B is now supplied from the Turbine Building 120-v Regulated Bus and has been renamed the Regulated Bus Auxiliary panel.

The 120-v Inverter 1C is powered by 125-v dc from the Generator Battery Bank through the Generator Plant dc Distribution Auxiliary Panel. An alternate 120-v ac source is supplied through a breaker on Turbine Building MCC 1A through a static switch in the inverter.

5.2.33.5 125-V dc Distribution

The 125-v dc Distribution Systems supply dc power to all Generator Plant, Reactor Plant, and Diesel Building equipment requiring it.

The 125-v dc Distribution Systems were divided into three separate and independent systems each with its own battery, battery charger, and distribution buses. The buses could be cross-connected but were normally isolated from each other.

For each system, the battery charger provides the normal dc supply with the battery as the reserve supply. The battery floats on the line maintaining a full charge, and provides emergency dc power in the event of a loss of ac power to the battery charger or failure of the charger.

The Reactor Plant Battery and Charger have been removed. The Diesel Building 125-v dc bus is supplying the Reactor Plant 125-v dc bus.

System Status

The Electrical Power Distribution System is maintained operational and required surveillance tests are performed on the Emergency Diesel Generators and 125-v batteries.

Systems will be evaluated in the future to combine or reduce redundancy of various loads, thereby reducing the number of buses, batteries, battery chargers, inverters, etc.

5.2.34 Post-Accident Sampling Systems

The Post-Accident Sampling Systems (PASS) are designed to permit the removal for analysis of small samples of either Containment Building atmosphere, reactor coolant, or stack gas when normal sample points are inaccessible following an accident. These samples will aid in determining the amount of fuel degradation and the amount of hydrogen buildup in containment. Samples will be removed to the laboratory for analysis.

5.2.34.1 Containment Atmosphere PASS System Description

The Containment Atmosphere Post-Accident Sampling System consists of a vacuum pump which takes a suction on the containment atmosphere at the 714' level. The atmosphere sample is drawn through two solenoid operated isolation valves, a heat exchanger, and moisture trap. Then the sample is discharged to the two in-parallel hydrogen analyzers with preset flowmeters; then either through a bypass line or a remote sample cylinder and back to the containment atmosphere at the 676' level through two solenoid operated isolation valves.

5.2.34.2 Stack Gas PASS System Description

The Stack Gas Post-Accident Sampling System makes use of the same equipment that provides the normal stack gas sample flow. The vacuum pump for stack gas sampling draws the extra flow, above what the stack monitors draw, to make the total flow isokinetic to the stack discharge. This flow can be diverted through the post-accident sample canister by opening manual isolation valves. The sample canister is connected to the system by two quick disconnects, and, therefore, can be easily removed from the system and taken to the laboratory for analysis. The sample canister diversion valve is controlled from the local control panel in the No. 3 Feedwater Heater area.

5.2.34.3 Reactor Coolant PASS System Description

The Reactor Coolant Post-Accident Sampling System took primary coolant from an incore flux monitoring flushing connection, through 2 solenoid-operated isolation valves with a heat exchanger between them, to a motor-operated pressure reducing valve. Downstream of the pressure reducing valve, the coolant sample could be diluted with demineralized water which then flowed through the sample cylinder or its bypass valve, through another solenoid isolation valve, and back to the Containment Building basement or to the waste water tanks.

System Status

The Stack Gas PASS System is maintained in continuous operation. The Reactor Coolant PASS System has been removed. The Containment Atmosphere PASS System is retained in place.

5.2.35 Containment Integrity Systems

With the plant in the SAFSTOR condition, there is no longer a postulated accident that would result in containment pressurization or that takes credit for Containment integrity.

System Status

Containment integrity systems are not required to be operable.

The LACBWR whole body counter will be used to detect any internal contamination for:

a) All new employees who will routinely work with radioactive material.

b) Any individual suspected of having received any internal deposition.

c) Upon termination of any employee who worked with radioactive material.

If it is determined that any employee has a significant internal deposition of any isotope, he may be required to submit a urine and/or fecal specimen.

All personnel leaving a restricted area will be required to conduct a personnel contamination survey using the contamination detection instrument provided at the exit.

8.3.2 Respiratory Protection Program

A respiratory protection program will be maintained during the SAFSTOR period.

The Health and Safety Supervisor is responsible for the Respiratory Program at LACBWR. The Health and Safety Supervisor or designated alternate will evaluate the total job hazard, recommend engineering controls if appropriate, specify respiratory protection if control cannot be otherwise obtained and forbid the use of respirators if conditions warrant. The Health and Safety Department is responsible for the selection, care, and maintenance of all respiratory protection equipment that falls under the scope of the respiratory protection program.

The acceptable manner for limiting the internal exposure of personnel is to control radioactivity concentration in the air breathing zones. Whenever possible, this will be accomplished by the application of engineering control measures such as containment, decontamination, special ventilation equipment and design. The use of personal respiratory protective equipment as a primary control is undesirable and is acceptable only on a non-routine basis or in an emergency situation.

Equipment such as hoods, blowers, and filtered exhaust systems will be used to provide controls for routine operations and, whenever possible, for non-routine operations. In some cases, such controls may be inadequate or impractical and the use of protective breathing apparatus will be approved on a short-term basis.