

BRENT RIDGE
President and CEO



March 28, 2022

In reply, please refer to LAC-14483

10 CFR 72.30(b)

DOCKET NO. 50-409 and 72-046

ATTN: Document Control Desk
Director, Division of Spent Fuel Storage and Transportation
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

SUBJECT: Dairyland Power Cooperative
La Crosse Boiling Water Reactor (LACBWR)
Possession-Only License DPR-45
Decommissioning Funding Plan for Independent Spent Fuel Storage Installation

REFERENCES: 1) 10 CFR 72.30(b)
2) 10 CFR 72.30(c)

Dairyland Power Cooperative is submitting to the NRC the enclosed Decommissioning Funding Plan for the LACBWR Independent Spent Fuel Storage Installation (ISFSI) in accordance with 10 CFR 72.30(b). Attachment 1 addresses each of the six criteria contained in 10 CFR 72.30(b). Attachment 2 provides details concerning the updated LACBWR ISFSI decommissioning cost estimate consistent with 10 CFR 72.30(c).

If you have any questions concerning this Decommissioning Funding Plan for the LACBWR ISFSI, please contact Cheryl Olson, LACBWR ISFSI Manager at (608) 689-4207. This letter identifies no new regulatory commitments and revises no existing commitments.

Sincerely,

Brent Ridge
President and CEO

BJR:CLO:tco

NM5524
NM5526
NM55

A Touchstone Energy® Cooperative

- Attachments:
- 1) Decommissioning Funding Plan for the LACBWR Independent Spent Fuel Storage Installation (ISFSI)
 - 2) Record of Revisions of the Decommissioning Funding
 - 3) WI-QA-07, Preparing the Triennial ISFSI Decommissioning Fund Status Report

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STATE OF WISCONSIN)
)
COUNTY OF LA CROSSE)

Personally came before me this 29 day of March, 2022, the above named, Brent Ridge, to me known to be the person who executed the foregoing instrument and acknowledged the same.

Courtney E. Cuta
Notary Public, La Crosse County Wisconsin

My commission expires 9/30/2025

Courtney E. Cuta
Notary Public
State of Wisconsin

Decommissioning Funding Plan for the LACBWR Independent Spent Fuel Storage Installations (ISFSI)

Dairyland Power Cooperative (DPC) is the holder of a general license under 10 CFR 72, Subpart K, for the LACBWR ISFSI in which five NAC-MPC dry cask storage systems containing all LACBWR spent fuel and fuel debris are located. The loading of the casks and associated transport operations were completed on September 19, 2012. No additional spent fuel has been stored at the LACBWR ISFSI.

DPC provides the following information required by 10 CFR 72.30(b) included in the Decommissioning Funding Plan (DFP) for the LACBWR ISFSI:

Requirement 1:

10 CFR 72.30(b)(1) Information on how reasonable assurance will be provided that funds will be available to decommission the ISFSI or MRS.

Information for Requirement 1:

Pursuant to 10 CFR 72.30(e)(5), because LACBWR was a power reactor licensed under 10 CFR 50, DPC utilizes the methods of 10 CFR 50.75(e)(1)(ii) to provide financial assurance for the LACBWR ISFSI. The DPC Nuclear Decommissioning Trust (DPC NDT) is established with a separate sub-account for the accumulation of ISFSI decommissioning funds.

Requirement 2:

10 CFR 72.30(b)(2) A detailed cost estimate for decommissioning, in an amount reflecting:

- (i) The cost of an independent contractor to perform all decommissioning activities;*
- (ii) An adequate contingency factor; and*
- (iii) The cost of meeting the § 20.1402 of this chapter criteria for unrestricted use, provided that, if the applicant or licensee can demonstrate its ability to meet the provisions of § 20.1403 of this chapter, the cost estimate may be based on meeting the § 20.1403 criteria.*

Information for Requirement 2:

Information contained in the LACBWR ISFSI Decommissioning Cost Estimate, derived from a study performed by Sargent & Lundy, LLC, is a decommissioning cost estimate (DCE) for the LACBWR ISFSI that provides an estimate for labor hours plus contingency. The labor rate is obtained from the 2022 RSMeans Building Construction Cost Data. The costs for the license termination planning and execution are based on a cost estimate provided by industry and benchmarked against other similar types of ISFSI DCE.

Requirement 3:

10 CFR 72.30(b)(3) Identification of and justification for using the key assumptions contained in the DCE.

Information for Requirement 3:

This information is included in the cost estimate.

Requirement 4:

10 CFR 72.30(b)(4) A description of the method of assuring funds for decommissioning from paragraph (e) of this section, including means for adjusting cost estimates and associated funding levels periodically over the life of the facility.

Information for Requirement 4:

As indicated in the information for Requirement 1, DPC utilizes the methods of 10 CFR 50.75(e)(1)(ii) to provide financial assurance for the LACBWR ISFSI. The DPC NDT is established with a separate sub-account for the accumulation of ISFSI decommissioning funds. The DCE for the LACBWR ISFSI will be adjusted every three years as required by 10 CFR 72.30(c). DPC will adjust the amount of financial assurance required by the ISFSI DCE by assessing whether changes in the DCE or investment earnings performance necessitate additional collections. DPC Board policy is to provide additional funding, as necessary, through rates charged to its members or through transfers from reserve funds to ensure that the ISFSI NDT, with future investment earnings, will be sufficient to cover final decommissioning expenses.

Requirement 5:

10 CFR 72.30(b)(5) The volume of onsite subsurface material containing residual radioactivity that will require remediation to meet the criteria for license termination.

Information for Requirement 5:

There is no known subsurface material containing residual radioactivity in the proximity of the LACBWR ISFSI that will require remediation to meet the criteria for license termination.

Requirement 6:

10 CFR 72.30(b)(6) A certification that financial assurance for decommissioning has been provided in the amount of the cost estimate for decommissioning.

Information for Requirement 6:

Financial assurance for decommissioning the LACBWR ISFSI is provided in accordance with 10 CFR 50.75(e)(1)(ii) which pursuant to 10 CFR 72.30(e)(5) provides the requisite financial assurance for the ISFSI decommissioning cost. Dairyland Power Cooperative, the licensee for the La Crosse Boiling Water Reactor and ISFSI, hereby certifies that the decommissioning cost

estimate for the ISFSI is \$1,243,063.58 We further certify that the funds accumulated for ISFSI decommissioning were \$1,986,845.57 as of December 31, 2021.

DPC provides the following information required by 10 CFR 72.30(c):

At the time of license renewal and at intervals not to exceed 3 years, the decommissioning funding plan must be resubmitted with adjustments as necessary to account for changes in costs and the extent of contamination. If the amount of financial assurance will be adjusted downward, this cannot be done until the updated decommissioning funding plan is approved. The decommissioning funding plan must update the information submitted with the original or prior approved plan and must specifically consider the effect of the following events on decommissioning costs:

Requirement (c)(1):

10 CFR 72.30 (c) (1) *Spills of radioactive material producing additional residual radioactivity in onsite subsurface material.*

Information for Requirement (1)

There have not been any spills of radioactive material in DPC's LACBWR ISFSI area that is surrounded by the ISFSI controlled area boundary fence. In addition, spills of radioactive material in the LACBWR ISFSI area are not expected to occur because radioactive material that could spill will not be brought into the ISFSI area. Furthermore, the all-welded construction of the multi-purpose containers (MPCs) in conjunction with the extensive inspections and testing performed during closing operations ensures that no release of radioactive effluents will occur.

The LACBWR ISFSI Final Safety Analysis Report (FSAR), Section 7A indicates that the structural analyses of the TSC for off-normal and accident events of storage, presented in Appendix 11.A, demonstrates that the TSC is not breached in any of the evaluated events. Consequently, based on the welded closure TSC confinement boundary and the leakage tests described in Section 9.A.2 of Appendix 9.A, the TSC has no credible leakage and, therefore, there is no release of radioactive material during off-normal or accident events of storage.

In the NRC Safety Evaluation Report (SER) dated October 2010, 7.2 Evaluation Findings, the staff determined that the design of the confinement system of the MPC-LACBWR complies with 10 CFR Part 72 and that the applicable design and acceptance criteria have been satisfied.

The evaluation of the confinement system design provides reasonable assurance that the MPC-LACBWR will allow safe storage of spent fuel. This finding is based on a review that considered the regulation itself, appropriate regulatory guides, applicable codes and standards, the applicant's analysis and the staff's confirmatory analysis, and accepted engineering practices.

The SER states, "The confinement design of the MPCs and the passive design of the storage system, minimize the potential for radioactive contamination to occur and to spread."

Requirement (c)(2):

10 CFR 72.30 (c) (2) Facility modifications.

Information for Requirement (2):

There have been no modifications to the LACBWR ISFSI design that could impact decommissioning costs, and no modifications are expected in the future. See response to Requirement (c)(3) below for more details.

Requirement (c)(3):

10 CFR 72.30 (c) (3) Changes in authorized possession limits.

Information for Requirement 3:

The LACBWR ISFSI design consists of five storage casks containing spent fuel. The five spent fuel casks have been loaded and transferred to the ISFSI pad with all spent fuel including assemblies and pieces from the LACBWR.

LACBWR is currently being decommissioned and no more spent fuel will be generated. There is no Greater Than Class C (GTCC) waste on site and there will be no additional spent fuel casks placed in the LACBWR ISFSI beyond that of the original design.

Requirement (c)(4):

10 CFR 72.30 (c) (4) Actual remediation costs that exceed the previous cost estimate.

Information for Requirement (4):

DPC will not begin to decommission the LACBWR ISFSI until after the U.S. Department of Energy takes possession of the spent fuel. Currently, this is estimated to begin in 2024. Therefore, there have been no actual remediation costs that exceed previous cost estimates. Title 10 of the Code of Federal Regulations (10 CFR) 72.30(c) requires at the time of license renewal and at intervals not to exceed 3 years, the DFP required to be submitted by 10 CFR 72.30(b) will be resubmitted with adjustments as necessary to account for changes in costs and the extent of contamination.

RECORD OF REVISIONS OF THE DECOMMISSIONING FUNDING

- Revision 0 ISFSI Decommissioning Cost Estimate is established within the 2010 LACBWR Decommissioning & Decontamination Cost Study Update (November 2010) as System Identification No. 1100.
- Revision 1 In 2013, the ISFSI Decommissioning Cost Estimate (DCE) is established as a unique document separate from the LACBWR Decommissioning & Decontamination Cost Study Update. The ISFSI DCE uses the same assumptions for rates, costs, weight conversions, and contingency factors as applied in the LACBWR Decommissioning & Decontamination Cost Study Update. The volume of concrete to be disposed of is revised to reflect the MPC-LACBWR as-built vertical concrete cask (VCC) dimensions. These VCC dimensions differ from those documented in Reference 1 previously used to establish the ISFSI DCE. Use of the as-built VCC dimensions results in a reduction in the volume of concrete to be disposed of. Other changes include:
- All costs have been adjusted, based on 2013 dollars.
 - Labor costs for 2013 will be based on a DPC labor cost (administrative and union averages) for metal removal. Specialty contractor rate for concrete removal will be used where concrete or soil removal is required. This represents an approximate 4.92% increase over the 2010 rates based on DPC's labor cost increase.
 - DPC labor cost \$71.66/hr
 - Contractor labor cost \$87.29/hr
 - Contractor labor and equipment cost \$152.76/hr
 - Blended rate (DPC and Contractor with equipment) \$112.21/hr
 - 1. All costs for reprocessing and burial of radioactive material are based on Energy Solutions Schedule of Charges, Effective Date January 1, 2011, through December 31, 2016
- Revision 2 In 2016, the estimate was revised assuming that the waste can be disposed of as industrial waste. The burial and transportation costs associated with the removal of radioactively contaminate waste (estimated in 2013 to be approximately \$446,728) were replaced with a cost to move the waste to a local landfill (estimated in 2016 to be approximately \$113,444). This results in a savings of over \$333,284. Additionally, the cost of release of the concrete casks using the MARSAME process along with the license termination planning and execution were included using an estimate from a contractor who is doing this work for the LACBWR plant (\$560,000) vs a labor estimate used in the 2013 report

(approximately \$472,000 in 2013 dollars). Using an escalation rate of 4%/yr for the 2013 estimate, the 2013 estimate in 2016 dollars is \$530,936. Therefore, the change in the manner in which the estimate was done resulted in a net gain of \$19,000 for the estimate.

Revision 3 It is now assumed that DPC labor will not be involved in cask demolition and disposal. Between 2016 and 2019, there was a reduction in the crew costs used from the RSMMeans Contractor Labor and Equipment Cost from \$179.75/hr. to \$168.36/hr. This resulted in the lowering of costs to move waste to a local landfill to \$106,225, which is a reduction of \$7,219. Demolition costs reported in 2016 were \$320,659; however, they should have been reported as \$418,252. In 2019, these costs increased to \$424,981, because of labor costs increases from \$220.04/hr. to \$223.58/hr. The contractor cost estimate for license termination planning and execution increased from \$560,000 to \$611,926, an increase of \$51,926. The expected decommissioning costs increased to \$1,143,162 from \$1,091,696 (revised upward from \$994,103), a net increase of \$51,436.

Revision 4 It is now assumed that DPC labor will not be involved in cask demolition and disposal. Between 2019 and 2022, there was an increase in the crew costs used from the RSMMeans Contractor Labor and Equipment Cost from \$168.36/hr to \$170.06/hr. This resulted in an increase of costs to move waste to a local landfill to \$107,328, which is an increase of \$1,073. Demolition costs reported in 2019 were \$424,981, in 2022, these costs increased to \$462,617, because of labor costs increases from \$223.58/hr. to \$243.38/hr. The contractor cost estimate from 2019 for license termination planning and execution was utilized and increased 10%, as a conservative estimate from \$611,926 to \$673,119, an increase of \$61,193 (a 2022 contractor estimate was not provided prior to issuance of this report). The expected decommissioning costs increased to \$1,243,064 from \$1,143,16, a net increase of \$99,901.

Introduction

Dairyland Power Cooperative (DPC) is the holder of a general license under 10 CFR 72, Subpart K, for the LACBWR ISFSI. Five NAC-MPC dry cask's store all LACBWR spent fuel and fuel debris. Casks were loaded, and transport operations were completed on September 19, 2012. No additional spent fuel is to be stored at the LACBWR ISFSI. The ISFSI was developed as an interim spent fuel storage option until a long-term solution is available. This document represents the decommissioning cost estimate (DCE) for the LACBWR ISFSI after title to the fuel and possession of the fuel is transferred to the U.S. Department of Energy.

The decommissioning plan for the ISFSI is based on information contained in the NAC-MPC FSAR, Section 2.A.4, "Decommissioning Considerations." The ISFSI will be decommissioned after the stored spent fuel is removed and transferred to the U.S. Department of Energy. The NAC-MPC dry cask storage systems in use at the ISFSI are designated as MPC-LACBWR.

The principal elements of the MPC-LACBWR storage system are the vertical concrete cask (VCC) and the transportable storage canister (TSC). The VCC provides biological shielding and physical protection for the contents of the TSC during long-term storage. The VCC is not expected to become surface contaminated during use, except through incidental contact with other contaminated surfaces. Incidental contact could occur at the interior liner surface of the VCC, the top surface that supports the transfer cask during loading and unloading operations, and the pedestal of the VCC that supports the TSC. These surfaces are carbon steel and could be decontaminated as necessary for decommissioning. A ¼-inch stainless steel plate is placed on the carbon steel pedestal of the MPC-LACBWR VCC to separate it from the stainless steel TSC bottom. Contamination of these surfaces is expected to be minimal, since the TSC is isolated from spent fuel pool water during loading in the pool and the transfer cask is decontaminated prior to transfer of the TSC to the VCC. Activation of the VCC carbon steel liner, concrete, support plates, and reinforcing bar could occur due to neutron flux from the stored fuel. Since the neutron flux rate is low, only minimal activation of carbon steel in the VCC is expected to occur.

Decommissioning of the VCC would involve the removal of the TSC and the subsequent disassembly of the VCC. It is expected that the concrete would be broken up, and steel components segmented to reduce volume. It is anticipated that the debris resulting from the decommissioning will be disposed of as clean waste using the MARSAME process.

Assumptions

- 1) The five vertical concrete casks and lids, concrete pad and equipment are not radioactively contaminated.
- 2) The concrete pad (48' x 32' x 3') and ramp (30' x 16' x 3') will be left in place.
- 3) The five vertical concrete casks (VCCs, 10'-8" diameter, 22" thick walls, 13'-4" tall) and lids (6'-6" diameter, 8.25" thick) will be disposed of as industrial waste.
- 4) All fencing, lighting, security systems, and building will be left as is.

- 5) Costs are based on the Sargent & Lundy Report, "Independent Review of Decommissioning Cost Study for LACBWR," SL-010039, April 15, 2010 and 2022 RSMMeans Building Construction Cost Data
- 6) All material removed will be released and will be disposed of at an approved disposal site.

Reference Materials

- (1) Sargent & Lundy Report, "Independent Review of Decommissioning Cost Study for LACBWR," SL-010039, April 15, 2010
- (2) 2022 RSMMeans Building Construction Cost Data
- (3) WI-QA-07, Preparing the Triennial ISFSI Decommission Fund Status Report, Revision 2

System Classification

Concrete will be released as non-contaminated rubble using MARSAME release methods.

Expected ISFSI Decommissioning Costs

WI-QA-07
Preparing the Triennial ISFSI Decommissioning Fund Status Report

Revision 3

ATTACHMENT 5.1

DECOMMISSIONING COST WORKSHEET

Line 1	243.38		
	243.38*528		
Line 2		128,504.64	
	128,504.64*1.2		
Line 3		154,205.57	
	154,205.57*3	462,616.71	
Line 4 Demolition Cost			462,616.71
Line 5		170.06	
	170.06*19.6		
Line 6		3,333.176	
	3,333.176*28		
Line 7		93,328.93	
	93,328.93*1.15	107,328.27	
Line 8 Disposal Cost			107,328.27
Line 9 LTP Cost			576,958.80
Line 10 FSS Cost			96,159.80
Total Cost			1,243,063.58

License Termination Planning (LTP) and Execution

Based on an estimate from a contractor who will provide this service for the LACBWR LTP and execution:

License termination plan development - \$576,958.80 (\$52,450.80 increase from 2019)

Final Site Survey and Final Report - \$96,159.80 (\$8,741.80 increase from 2019)

WORK INSTRUCTION

WI-QA-07

PREPARING THE TRIENNIAL ISFSI DECOMMISSIONING FUND STATUS REPORT

1.0 PURPOSE

10 CFR 72.30(c) requires at intervals not to exceed 3 years, the decommissioning funding plan must be resubmitted with adjustments as necessary to account for changes in costs and the extent of contamination. **If the amount of financial assurance will be adjusted downward, this CANNOT be done until the updated decommissioning funding plan is approved.**

The decommissioning funding plan must update the information submitted with the original or prior approved plan and must specifically consider the effect of the following on decommissioning costs:

- (1) Spills of radioactive material producing additional residual radioactivity in onsite subsurface material
- (2) Facility modifications
- (3) Changes in authorized possession limits
- (4) Actual remediation costs that exceed the previous cost estimate

In accordance with NUREG 1757, Licensees under 10 CFR Part 72 must submit a decommissioning funding plan and are NOT required to submit the originals of the financial instruments but are required to submit financial assurance documents.

2.0 REFERENCES

- 2.1 10 CFR 72.30, "Financial assurance and recordkeeping for decommissioning"
- 2.2 NUREG-1757, "Consolidated Decommissioning Guidance, Financial Assurance, Recordkeeping, and Timeliness"
- 2.3 ACP 20-06.02, "Routine Reporting and Submittals to NRC"
- 2.4 Sargent & Lundy Report, "Independent Review of Decommissioning Cost Study for LACBWR," SL-010039, April 15, 2010

2.5 2022 RSMeans Building Construction Cost Data

3.0 RESPONSIBILITIES

3.1 ISFSI Manager – prepare the report and submit to CEO for approval.

4.0 PROCEDURE

4.1 Obtain the current copy of the RSMeans Building Construction Cost Data from the DPC library. It may be necessary to order the book.

4.1.1 Using table 02 41 16 – Structure Demolition, identify the crew type for demolition of concrete. (crew B-13L).

4.1.2 Apply a factor of 2 multiplier for 22" concrete, 20% upcharge for heavy reinforcement, and a 200% upcharge for congested site. This constitutes a contingency factor of approximately 400% for the labor.

4.2 Using information found in 4.1 enter the following into Attachment 5.1 as follows:

4.2.1 In the crew-standard table find the costs per labor hour for the crew. Include the equipment in the table for the crew in the total costs.

Enter line 1 of Table.

4.2.2 Using the man-hour estimate of 264 man-hours from the 2010 S&L Report, multiply the cost per labor hour by the 264-man hours by 2

Multiply line 1 * 528 and insert number line 2 of Table

4.2.3 Multiply the amount in line 2 by 1.2 and insert number into line 3 of Table.

4.2.4 Multiply the amount in Line 3 by 3 and insert into line 4. This is the cost for demolition of the vertical concrete casks.

4.3 Using table 02 41 16 – Structure Demolition, identify the crew type for disposal of the concrete. (crew B-30)

4.3.1 In the crew-standard table find the costs per labor hour for the crew. Include the equipment in the table for the crew in the total costs.

Insert this number into line 5

4.3.2 Apply a multiplier of 19.6 to haul the concrete 5 miles from site.

Multiply line 5 by 19.6 and insert result into Line 6 (This is the cost of labor)

4.3.3 Using the man-hour estimate of 28 man-hours from the 2010 S&L Report, multiply the cost per labor hour by 28 man-hours. This is the cost for shipping of the waste from the site.

Enter the results into Line 7

4.3.4 Apply a contingency factor of 0.15 by multiplying the Line 7 by 1.15.

Enter the results in line 8, this is the disposal cost.

4.4 Obtain from a vendor an estimate to develop a License Termination Plan cost and surveys of the vertical concrete casks to release as clean material as well as a Final Site Status (FSS) survey.

Enter the LTP cost into line 9

Enter the FSS cost into line 10.

4.5 Add lines 4, 8, 9 and 10. This is the Total cost for decommissioning.

4.6 Obtain from DPC Finance Dept the amount of money in the ISFSI trust fund.

5.0 ATTACHMENTS/RECORDS

Attachment	Document Title	Location	Retention
5.1	Decommissioning Cost Worksheet		
N/A	Triennial Report	ACP-20-06.02 file	LT