BARBARA NICK
President and CEO

DAIRYLAND POWER
COOPERATIVE

March 14, 2016

In reply, please refer to LAC-14375 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)

Dairyland Power Cooperative is submitting to the NRC for review and approval 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) and references Attachment 2 which provides details concerning the LACBWR ISFSI decommissioning cost estimate.

This letter identifies no new commitments and revises no existing commitments.

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.

Sincerely,

Barbara Nick, President and CEO

BAN:CLO:tco

NM5520
NM5526

Attachments: 1) Decommissioning Funding Plan for the LACBWR Independent Spent Fuel Storage Installation (ISFSI)

2) LACBWR ISFSI Decommissioning Cost Estimate, March 2016

cc w/Attachments: Marlayna Vaaler
Project Manager
U.S. Nuclear Regulatory Commission

Cynthia Pederson
Regional Administrator, Region III
U.S. Nuclear Regulatory Commission

STATE OF WISCONSIN)
)
COUNTY OF LA CROSSE)

Personally came before me this 16th day of March, 2016, the above named, Barbara Nick, to me known to be the person who executed the foregoing instrument and acknowledged the same.

Laurie A. Engen
Notary Public, La Crosse County Wisconsin

My commission expires 5-25-18

LAURIE A. ENGEN
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. Cask loading and transport operations were completed September 19, 2012. No additional spent fuel shall be stored at the LACBWR ISFSI.

DPC provides the following information required by 10 CFR 72.30(b) included in the Decommissioning Funding Plan 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 2016 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 $994,103. We further certify that the funds accumulated for ISFSI decommissioning were $1,894,926 as of December 31, 2015.

Document Control Desk
LAC-14375
ATTACHMENT 2

ISFSI Decommissioning
Trust Fund Status Report
Revision 2

March 2016

Prepared by: _____ **Date:** 3/14/16

Reviewed by: _____ **Date:** 3/14/16

Approved by: _____ **Date:** 3/14/16

RECORD OF REVISIONS

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 manner in which the estimate was done resulted in a net gain of $19,000 for the estimate.

Introduction

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. Cask loading and transport operations were completed September 19, 2012. No additional spent fuel shall 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 Secretary 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 Department of Energy. 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. All of 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 all of 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 S&L Report, "Independent Review of Decommissioning Cost Study for LACBWR," SL-010039, April 15, 2010 and 2016 RSMeans 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) 2016 RSMeans Building Construction Cost Data

System Classification

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

Costs to remove Vertical Concrete Casks

Labor rates

Costs per labor hour for B-13L crew and one excavator [2] - $220.04/hr

1) Multiplier for 22" concrete[2] – 2
2) Up charge for heavy reinforcing[2] – 20%
3) Up charge for small quantity[2] – 200%
4) Labor hours for demolition[1] – 264 man-hours
5) Cost per labor hour for disposal crew B-30 and 2 dump trucks[2] - $179.75/hr
6) Multiplier for transportation to disposal site and disposal cost[2] – 19.6
7) Labor hours for disposal[1] – 28 man-hours
8) Contingency 15%[1]

Cost of demolition: $320,659

$220.04/hr × 2 × 264 man-hours = $116,181

Add up charge for heavy reinforced concrete

$116,181 × 0.2 + $161,181 = $139,417

Add up charge for small quantity

$139,417 × 2 = $278,834

Add 15% contingency

$278,834 × 0.15 + $278,834 = $320,659

Cost of disposal: $113,444

$179.75 ×28 man-hours = $5,033

Add multiplier for transportation to disposal site and disposal costs

$5,033 × 19.6 = $98,647

Add 15% contingency

$98,647 × 0.105 + $98,647 = 113,444

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 - $480,000
Final Site Survey and Final Report - $80,000