**Dominion Energy Kewaunee, Inc.**
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April 25, 2014

Attention: Document Control Desk
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555-0001

Serial No. 14-115
NL&OS/CDS R4
Docket No. 50-305
License No. DPR-43

**DOMINION ENERGY KEWAUNEE, INC.**
**KEWAUNEE POWER STATION**
**UPDATE TO IRRADIATED FUEL MANAGEMENT PLAN PURSUANT TO 10 CFR 50.54(bb)**

By letter dated February 26, 2013 (Reference 1), DEK submitted an updated Irradiated Fuel Management Plan for Kewaunee Power Station (KPS), pursuant to 10 CFR 50.54(bb). In Reference 1, DEK indicated that all spent fuel would be transferred to dry storage in the Independent Spent Fuel Storage Installation (ISFSI) by the end of 2020. However, DEK recently outsourced activities associated with the transfer of spent fuel from the spent fuel pool to the ISFSI to a single qualified vendor, and compressed the schedule for completing the transfer of all spent fuel to the ISFSI. Under the new schedule, DEK expects to have all spent fuel transferred to the ISFSI by the end of 2016. DEK expects that the new outsourcing strategy for transferring spent fuel from the spent fuel pool to the ISFSI will result in cost savings.

Pursuant to 10 CFR 50.54(bb), licensees are required to notify the NRC of any significant changes in the proposed Irradiated Fuel Management Plan. Therefore, an update to the KPS Irradiated Fuel Management Plan, as required by 10 CFR 50.54(bb), is provided as Attachment 1 to this letter. The updated Irradiated Fuel Management Plan in Attachment 1 supersedes prior versions of the Plan.

Please contact Mr. Craig Sly at (804) 273-2784 if you have any questions or require additional information.

Sincerely,

Mark D. Sartain
Vice President - Nuclear Engineering
Dominion Energy Kewaunee, Inc.

A001
NRR

Attachment:

1. Kewaunee Power Station Updated Irradiated Fuel Management Plan - 10 CFR 50.54(bb)

References:

1. Letter from D. G. Stoddard (DEK) to NRC Document Control Desk, "Update to Irradiated Fuel Management Plan Pursuant to 10 CFR 50.54(bb)," dated February 26, 2013. [ADAMS Accession No. ML13059A028]

Commitments made in this letter: None

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# ATTACHMENT 1

## KEWAUNEE POWER STATION
## UPDATED IRRADIATED FUEL MANAGEMENT PLAN - 10 CFR 50.54(bb)

**KEWAUNEE POWER STATION**
**DOMINION ENERGY KEWAUNEE, INC.**

# Kewaunee Power Station
# Updated Irradiated Fuel Management Plan - 10 CFR 50.54(bb)

## I. Background and Introduction

By letter dated February 26, 2013 (Reference 1), DEK submitted an updated Irradiated Fuel Management Plan for Kewaunee Power Station (KPS), pursuant to 10 CFR 50.54(bb). In Reference 1, DEK indicated that all spent fuel would be transferred to dry storage at the Independent Spent Fuel Storage Installation (ISFSI) by the end of 2020. DEK had previously planned to self-perform activities associated with transfer of spent fuel to the ISFSI using multiple vendors, and on a schedule by which all spent fuel would be transferred to the ISFSI by the end of 2020. However, DEK recently outsourced these activities to a single qualified vendor and compressed the schedule for completing the transfer of all spent fuel to the ISFSI. Under the new schedule, DEK expects to have all spent fuel transferred to the ISFSI by the end of 2016. Therefore, the schedule for offloading the spent fuel in the spent fuel pool to the ISFSI has been compressed from the end of 2020 to the end of 2016. DEK expects that the new outsourcing strategy for transferring spent fuel from the spent fuel pool to the ISFSI will result in cost savings.

Pursuant to 10 CFR 50.54(bb), licensees are required to notify the NRC of any significant changes in the proposed Irradiated Fuel Management Plan. Therefore, an update to the Irradiated Fuel Management Plan, as required by 10 CFR 50.54(bb), is provided below. This updated Irradiated Fuel Management Plan supersedes prior versions of the Plan.

Updated site-specific decommissioning cost and schedule tables for KPS incorporate the outsourcing of activities associated with transfer of spent fuel from the spent fuel pool to the ISFSI by a single qualified vendor. The scope of activities includes; 1) engineering and construction associated with completion of Pad 2 at the ISFSI, 2) fabrication and delivery of spent fuel dry storage systems, and 3) loading of the storage systems and transport to the ISFSI. These updated decommissioning cost and schedule tables are provided in Attachment 1 of Revision 1 to the Kewaunee Post-Shutdown Decommissioning Activities Report (PSDAR) (Reference 2).

## II. Irradiated Fuel Management Strategy

Spent fuel will be stored in the spent fuel pool until transferred to the KPS ISFSI. While spent fuel is stored in the spent fuel pool, spent fuel storage and handling systems will be maintained in service. Following transfer of all spent fuel from the spent fuel pool to the ISFSI, spent fuel storage and handling systems will be removed from service. Following transfer of all spent fuel from the spent fuel pool to the ISFSI, all spent fuel will be stored at the ISFSI until transferred to the Department of Energy (DOE).

The Irradiated Fuel Management Plan major periods, including start and end dates and associated costs for each period are identified in Table 1 below. These Spent Nuclear Fuel (SNF) Periods align with the decommissioning cost and schedule tables being provided in Reference 2.

**Table 1**

**Irradiated Fuel Management Plan - Summary Schedule**

| Cost and Schedule Summary (2012 Dollars in millions) | | | | | |
|---|---|---|---|---|---|
| **Spent Fuel - 50.54 (bb)** | | | | | |
| **Period No.** | **Period Description** | **Start** | **End** | **Years** | **Total Cost** |
| SNF Pd 1 | Spent Fuel Planning, Cooling and Transfer to Dry Storage | 7/1/2013 | 11/15/2016 | 3.37 | $ 103.2 |
| SNF Pd 2 | Dry Storage During Completion SAFSTOR Preparations | 11/15/2016 | 5/15/2017 | 0.49 | $ 2.7 |
| SNF Pd 3 | Dry Storage During Dormancy | 5/15/2017 | 10/19/2048 | 31.43 | $ 170.4 |
| SNF Pd 4 | ISFSI Demolition | 3/30/2073 | 7/31/2073 | 0.33 | $ 2.1 |
| | **Category Total** | | | **35.62** | **$ 278.4** |

## A. Spent Fuel Planning, Cooling, and Transfer to Dry Storage (SNF Period 1)

This period begins after all spent fuel is off-loaded from the reactor vessel into the spent fuel pool. During this period, measures are planned, designed and implemented to ensure spent fuel storage and handling systems are capable of functioning to support fuel storage in the spent fuel pool, and to facilitate transfer of the spent fuel to the ISFSI.

Systems, structures, and programs needed to support the safe storage and transfer of spent fuel such as security, fire protection, and environmental and radiological monitoring, will be maintained in accordance with applicable requirements. Equipment maintenance, inspection, and operations will be performed on these systems and structures as appropriate. During this period, Pad 2 at the ISFSI will be constructed to accommodate transfer of all spent fuel in the spent fuel pool to the ISFSI.

Immediately following full core offload into the spent fuel pool in May 2013, 1079 fuel assemblies were stored in the spent fuel pool, and an additional 256 spent fuel assemblies were stored at the ISFSI. During this period, sufficient spent fuel dry storage systems will be procured as required to support the transfer of all spent fuel in the spent fuel pool to the ISFSI in accordance with the fuel movement schedule as outlined below in Table 2, "Spent Fuel Shipping Schedule."

During this period, spent fuel pool modifications, as discussed in DEK's request to rescind NRC Order EA-12-051, "Order to Modify Licenses with Regard to

Requirements for Reliable Spent Fuel Pool Instrumentation," (Reference 4) will be implemented. All spent fuel will be in storage at the ISFSI by the completion of SNF Period 1.

**B. Dry Storage during Completion of SAFSTOR Preparations (SNF Period 2)**

During this period, all spent fuel will have been transferred to the ISFSI while SAFSTOR preparations are completed. Programs and procedures needed to support safe operation of the ISFSI will be maintained in accordance with applicable requirements. Equipment maintenance, monitoring, inspection, and operations will be performed as necessary.

**C. Dry Storage during Dormancy (SNF Period 3)**

This period begins when the plant is in SAFSTOR. The spent fuel remains stored at the ISFSI while the plant is in a dormant SAFSTOR condition. Programs and procedures required to support safe operation of the ISFSI will be maintained in accordance with applicable requirements. Equipment maintenance, monitoring, inspection, and operations will be performed as necessary.

DEK assumes that the DOE will begin accepting spent fuel during this period. Shipments of fuel to the DOE will be from the ISFSI as outlined below in Table 2, "Spent Fuel Shipping Schedule." Upon completion of this period, all spent fuel will have been transferred to the DOE.

# Table 2

## Spent Fuel Shipping Schedule
## Kewaunee Power Station

**2021 DOE Acceptance, Dry Storage**

| | On-Site Transfers | | | On-Site Inventory | | | Off-Site Transfers | | |
|---|---|---|---|---|---|---|---|---|---|
| Year | Fuel Assemblies Discharged | No Dry Modules | Assemblies Transfered from Pool to Dry Storage | Assemblies in Fuel Pool Storage | Assemblies in Dry Storage | Total Assemblies in On Site Storage | Total Assemblies to DOE | Assemblies Shipped to DOE From Pool | Assemblies Shipped to DOE from Dry Storage |
| 2008 | 45 | 0 | 0 | 1,081 | 0 | 1,081 | 0 | 0 | 0 |
| 2009 | 44 | 2 | 64 | 1,061 | 64 | 1,125 | 0 | 0 | 0 |
| 2010 | 0 | 2 | 64 | 997 | 128 | 1,125 | 0 | 0 | 0 |
| 2011 | 45 | 4 | 128 | 914 | 256 | 1,170 | 0 | 0 | 0 |
| 2012 | 44 | 0 | 0 | 958 | 256 | 1,214 | 0 | 0 | 0 |
| 2013 | 121 | 0 | 0 | 1,079 | 256 | 1,335 | 0 | 0 | 0 |
| 2014 | 0 | 6 | 192 | 887 | 448 | 1,335 | 0 | 0 | 0 |
| 2015 | 0 | 0 | 0 | 887 | 448 | 1,335 | 0 | 0 | 0 |
| 2016 | 0 | 24 | 887 | 0 | 1335 | 1,335 | 0 | 0 | 0 |
| 2017 | 0 | 0 | 0 | 0 | 1335 | 1,335 | 0 | 0 | 0 |
| 2018 | 0 | 0 | 0 | 0 | 1335 | 1,335 | 0 | 0 | 0 |
| 2019 | 0 | 0 | 0 | 0 | 1335 | 1,335 | 0 | 0 | 0 |
| 2020 | 0 | 0 | 0 | 0 | 1335 | 1,335 | 0 | 0 | 0 |
| 2021 | 0 | 0 | 0 | 0 | 1271 | 1,271 | 64 | 0 | 64 |
| 2022 | 0 | 0 | 0 | 0 | 1271 | 1,271 | 0 | 0 | 0 |
| 2023 | 0 | 0 | 0 | 0 | 1239 | 1,239 | 32 | 0 | 32 |
| 2024 | 0 | 0 | 0 | 0 | 1207 | 1,207 | 32 | 0 | 32 |
| 2025 | 0 | 0 | 0 | 0 | 1143 | 1,143 | 64 | 0 | 64 |
| 2026 | 0 | 0 | 0 | 0 | 1047 | 1,047 | 96 | 0 | 96 |
| 2027 | 0 | 0 | 0 | 0 | 983 | 983 | 64 | 0 | 64 |
| 2028 | 0 | 0 | 0 | 0 | 951 | 951 | 32 | 0 | 32 |
| 2029 | 0 | 0 | 0 | 0 | 887 | 887 | 64 | 0 | 64 |
| 2030 | 0 | 0 | 0 | 0 | 813 | 813 | 74 | 0 | 74 |
| 2031 | 0 | 0 | 0 | 0 | 739 | 739 | 74 | 0 | 74 |
| 2032 | 0 | 0 | 0 | 0 | 702 | 702 | 37 | 0 | 37 |
| 2033 | 0 | 0 | 0 | 0 | 665 | 665 | 37 | 0 | 37 |
| 2034 | 0 | 0 | 0 | 0 | 628 | 628 | 37 | 0 | 37 |
| 2035 | 0 | 0 | 0 | 0 | 591 | 591 | 37 | 0 | 37 |
| 2036 | 0 | 0 | 0 | 0 | 554 | 554 | 37 | 0 | 37 |
| 2037 | 0 | 0 | 0 | 0 | 517 | 517 | 37 | 0 | 37 |
| 2038 | 0 | 0 | 0 | 0 | 443 | 443 | 74 | 0 | 74 |
| 2039 | 0 | 0 | 0 | 0 | 406 | 406 | 37 | 0 | 37 |
| 2040 | 0 | 0 | 0 | 0 | 369 | 369 | 37 | 0 | 37 |
| 2041 | 0 | 0 | 0 | 0 | 369 | 369 | 0 | 0 | 0 |
| 2042 | 0 | 0 | 0 | 0 | 332 | 332 | 37 | 0 | 37 |
| 2043 | 0 | 0 | 0 | 0 | 258 | 258 | 74 | 0 | 74 |
| 2044 | 0 | 0 | 0 | 0 | 221 | 221 | 37 | 0 | 37 |
| 2045 | 0 | 0 | 0 | 0 | 184 | 184 | 37 | 0 | 37 |
| 2046 | 0 | 0 | 0 | 0 | 184 | 184 | 0 | 0 | 0 |
| 2047 | 0 | 0 | 0 | 0 | 147 | 147 | 37 | 0 | 37 |
| 2048 | 0 | 0 | 0 | 0 | 0 | 0 | 147 | 0 | 147 |
| 2049 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2050 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2051 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

No. Post S/D MPCs for fuel 30
No. Post S/D MPCs for GTCC 0

**Note:** The assumption and information in this attachment and plan should not be construed as any sort of admission or concession regarding the legal obligations of DOE.

### D. ISFSI Decommissioning (SNF Period 4)

The KPS ISFSI was designed and installed under a general license in accordance with 10 CFR Part 72, "Licensing Requirements for the Independent Storage of Spent Nuclear Fuel, High Level Radioactive Waste, and Reactor-Related Greater than Class C Waste." The spent fuel dry storage systems are used in accordance with an NRC Certificate of Compliance. After DOE acceptance of the spent fuel, any radiological decommissioning associated with the ISFSI would be accomplished as a part of site decommissioning under the Part 50 license.

## III. Financial Assurance

Revised site-specific decommissioning cost and schedule tables, which are included as Attachment 1 of Revision 1 of the Kewaunee PSDAR (Reference 2), project the total cost of Spent Fuel Management activities to be $278.4 million in 2012 dollars. A cash flow analysis provided in Table 3 below shows that the KPS decommissioning trust fund, with projected earnings, is sufficient to cover the estimated costs of license termination (radiological decommissioning), spent fuel management, and site restoration.

The revised cash flow analysis, which is based on the revised site-specific decommissioning cost and schedule tables referenced above, applies an allowed 2% real rate of return during the decommissioning period and reflects the starting balance of the KPS decommissioning trust fund as of December 31, 2013.

**Table 3**

**Annual Cash Flow Analysis**

| Summary Information on Fund Status as of December 31, 2013 | | | | | |
|---|---|---|---|---|---|
| **Decommissioning Trust Fund Balances** | | | | | |
| **Fund Balance** | **Type of Trusts** | | | **Comments** | |
| $ 684.766 | Qualified fund balance | | | As of: | 12/31/2013 |
| $ - | Non-qualified fund balance | | | As of: | 12/31/2013 |
| $ 35.422 | Costs incurred in 2013 but not yet billed to Trust | | | Amount in: | 2013 Dollars |
| $ 649.343 | Total decommissioning fund balance | | | As of: | 12/31/2013 |
| **Remaining Decommissioning Estimated Cost** | | | | | |
| **Total** | **License Term** | **Spent Fuel Mgmt** | **Site Restoration** | **Comments** | |
| $ 837.992 | $ 524.670 | $ 277.217 | $ 36.104 | Estimate in : | 2014 Dollars |
| **Inputs to Remaining Cost and Funding Analysis** | | | | | |
| 2014 | Start year of analysis | | | | |
| 1.85% | Escalate study dollars from 2012$ to current year 2014$ using an average of CPI rates for 2012 to 2014 | | | | |

# Table 3 (cont'd)

## Annual Cash Flow Analysis
### (2014 Dollars in Millions)

| Annual Cash Flow Analysis starting January 1, 2014 through End of Decommissioning | | | | | | | |
|---|---|---|---|---|---|---|---|
| Year | Column 1 Beginning of Year Balance | Column 2 Earnings on Trust Funds (Reflects 2% RRoR) | Column 3 Remaining License Termination Expenditures (Reflects 0% Esc) | Column 4 Remaining Spent Fuel Mgmt Expenditures (Reflects 0% Esc) | Column 5 Remaining Site Restoration Expenditures (Reflects 0% Esc) | Column 6 Remaining SAFSTOR Expenditures (Reflects 0% Esc) | Column 7 End of Year Balance |
| 2014 | $ 649.343 | $ 11.890 | $ 75.304 | $ 34.360 | $ - | $ 109.664 | $ 551.570 |
| 2015 | $ 551.570 | $ 10.679 | $ 4.653 | $ 30.588 | $ - | $ 35.241 | $ 527.008 |
| 2016 | $ 527.008 | $ 10.183 | $ 6.278 | $ 29.453 | $ - | $ 35.731 | $ 501.460 |
| 2017 | $ 501.460 | $ 9.800 | $ 15.469 | $ 7.401 | $ - | $ 22.869 | $ 488.391 |
| 2018 | $ 488.391 | $ 9.694 | $ 1.778 | $ 5.606 | $ - | $ 7.385 | $ 490.700 |
| 2019 | $ 490.700 | $ 9.740 | $ 1.778 | $ 5.606 | $ - | $ 7.385 | $ 493.056 |
| 2020 | $ 493.056 | $ 9.787 | $ 1.778 | $ 5.606 | $ - | $ 7.385 | $ 495.458 |
| 2021 | $ 495.458 | $ 9.835 | $ 1.778 | $ 5.606 | $ - | $ 7.385 | $ 497.909 |
| 2022 | $ 497.909 | $ 9.884 | $ 1.778 | $ 5.606 | $ - | $ 7.385 | $ 500.409 |
| 2023 | $ 500.409 | $ 9.934 | $ 1.778 | $ 5.606 | $ - | $ 7.385 | $ 502.959 |
| 2024 | $ 502.959 | $ 9.985 | $ 1.778 | $ 5.606 | $ - | $ 7.385 | $ 505.559 |
| 2025 | $ 505.559 | $ 10.037 | $ 1.778 | $ 5.606 | $ - | $ 7.385 | $ 508.212 |
| 2026 | $ 508.212 | $ 10.090 | $ 1.778 | $ 5.606 | $ - | $ 7.385 | $ 510.918 |
| 2027 | $ 510.918 | $ 10.145 | $ 1.778 | $ 5.606 | $ - | $ 7.385 | $ 513.678 |
| 2028 | $ 513.678 | $ 10.200 | $ 1.778 | $ 5.606 | $ - | $ 7.385 | $ 516.493 |
| 2029 | $ 516.493 | $ 10.256 | $ 1.778 | $ 5.606 | $ - | $ 7.385 | $ 519.365 |
| 2030 | $ 519.365 | $ 10.313 | $ 1.778 | $ 5.606 | $ - | $ 7.385 | $ 522.294 |
| 2031 | $ 522.294 | $ 10.372 | $ 1.778 | $ 5.606 | $ - | $ 7.385 | $ 525.281 |
| 2032 | $ 525.281 | $ 10.432 | $ 1.778 | $ 5.606 | $ - | $ 7.385 | $ 528.328 |
| 2033 | $ 528.328 | $ 10.484 | $ 2.611 | $ 5.606 | $ - | $ 8.218 | $ 530.595 |
| 2034 | $ 530.595 | $ 10.538 | $ 1.778 | $ 5.606 | $ - | $ 7.385 | $ 533.748 |
| 2035 | $ 533.748 | $ 10.601 | $ 1.778 | $ 5.606 | $ - | $ 7.385 | $ 536.965 |
| 2036 | $ 536.965 | $ 10.665 | $ 1.778 | $ 5.606 | $ - | $ 7.385 | $ 540.246 |
| 2037 | $ 540.246 | $ 10.731 | $ 1.778 | $ 5.606 | $ - | $ 7.385 | $ 543.592 |
| 2038 | $ 543.592 | $ 10.798 | $ 1.778 | $ 5.606 | $ - | $ 7.385 | $ 547.006 |
| 2039 | $ 547.006 | $ 10.866 | $ 1.778 | $ 5.606 | $ - | $ 7.385 | $ 550.488 |
| 2040 | $ 550.488 | $ 10.936 | $ 1.778 | $ 5.606 | $ - | $ 7.385 | $ 554.039 |
| 2041 | $ 554.039 | $ 11.007 | $ 1.778 | $ 5.606 | $ - | $ 7.385 | $ 557.661 |
| 2042 | $ 557.661 | $ 11.079 | $ 1.778 | $ 5.606 | $ - | $ 7.385 | $ 561.356 |
| 2043 | $ 561.356 | $ 11.153 | $ 1.778 | $ 5.606 | $ - | $ 7.385 | $ 565.125 |
| 2044 | $ 565.125 | $ 11.229 | $ 1.778 | $ 5.606 | $ - | $ 7.385 | $ 568.969 |
| 2045 | $ 568.969 | $ 11.306 | $ 1.778 | $ 5.606 | $ - | $ 7.385 | $ 572.890 |
| 2046 | $ 572.890 | $ 11.384 | $ 1.778 | $ 5.606 | $ - | $ 7.385 | $ 576.889 |
| 2047 | $ 576.889 | $ 11.463 | $ 1.778 | $ 5.738 | $ - | $ 7.517 | $ 580.835 |
| 2048 | $ 580.835 | $ 11.549 | $ 1.791 | $ 4.951 | $ - | $ 6.742 | $ 585.643 |
| 2049 | $ 585.643 | $ 11.695 | $ 1.795 | $ - | $ - | $ 1.795 | $ 595.542 |
| 2050 | $ 595.542 | $ 11.893 | $ 1.795 | $ - | $ - | $ 1.795 | $ 605.640 |
| 2051 | $ 605.640 | $ 12.095 | $ 1.795 | $ - | $ - | $ 1.795 | $ 615.939 |
| 2052 | $ 615.939 | $ 12.301 | $ 1.795 | $ - | $ - | $ 1.795 | $ 626.444 |
| 2053 | $ 626.444 | $ 12.511 | $ 1.795 | $ - | $ - | $ 1.795 | $ 637.160 |
| 2054 | $ 637.160 | $ 12.725 | $ 1.795 | $ - | $ - | $ 1.795 | $ 648.090 |
| 2055 | $ 648.090 | $ 12.944 | $ 1.795 | $ - | $ - | $ 1.795 | $ 659.238 |
| 2056 | $ 659.238 | $ 13.167 | $ 1.795 | $ - | $ - | $ 1.795 | $ 670.609 |
| 2057 | $ 670.609 | $ 13.394 | $ 1.795 | $ - | $ - | $ 1.795 | $ 682.208 |
| 2058 | $ 682.208 | $ 13.626 | $ 1.795 | $ - | $ - | $ 1.795 | $ 694.039 |
| 2059 | $ 694.039 | $ 13.863 | $ 1.795 | $ - | $ - | $ 1.795 | $ 706.106 |
| 2060 | $ 706.106 | $ 14.104 | $ 1.795 | $ - | $ - | $ 1.795 | $ 718.415 |
| 2061 | $ 718.415 | $ 14.350 | $ 1.795 | $ - | $ - | $ 1.795 | $ 730.970 |
| 2062 | $ 730.970 | $ 14.601 | $ 1.795 | $ - | $ - | $ 1.795 | $ 743.776 |
| 2063 | $ 743.776 | $ 14.858 | $ 1.795 | $ - | $ - | $ 1.795 | $ 756.838 |
| 2064 | $ 756.838 | $ 15.119 | $ 1.795 | $ - | $ - | $ 1.795 | $ 770.161 |
| 2065 | $ 770.161 | $ 15.385 | $ 1.795 | $ - | $ - | $ 1.795 | $ 783.751 |
| 2066 | $ 783.751 | $ 15.657 | $ 1.795 | $ - | $ - | $ 1.795 | $ 797.613 |
| 2067 | $ 797.613 | $ 15.821 | $ 13.172 | $ - | $ - | $ 13.172 | $ 800.262 |
| 2068 | $ 800.262 | $ 15.768 | $ 23.702 | $ - | $ - | $ 23.702 | $ 792.328 |
| 2069 | $ 792.328 | $ 15.387 | $ 45.968 | $ - | $ - | $ 45.968 | $ 761.746 |
| 2070 | $ 761.746 | $ 14.184 | $ 105.048 | $ - | $ - | $ 105.048 | $ 670.883 |
| 2071 | $ 670.883 | $ 12.459 | $ 95.862 | $ - | $ - | $ 95.862 | $ 587.481 |
| 2072 | $ 587.481 | $ 11.126 | $ 50.806 | $ - | $ 11.576 | $ 62.382 | $ 536.224 |
| 2073 | $ 536.224 | $ 10.457 | $ 0.113 | $ 2.149 | $ 24.528 | $ 26.791 | $ 519.890 |
| 2074 | $ 519.890 | $ 10.398 | $ - | $ - | $ - | $ - | $ 530.288 |
| 2075 | $ 530.288 | $ 10.606 | $ - | $ - | $ - | $ - | $ 540.893 |
| Remaining Expenditures (in 2014 $) | | | $ 524.670 | $ 277.217 | $ 36.104 | $ 837.992 | |
| Estimated Fund Balance - end of Decommissioning (in Future $ escalated at 0.0% & 2.0% Real Rate of Return Fund Growth Rate) | | | | | | | $ 519.890 |
| Estimated Fund Balance - end of Decommissioning (Discounted to 2014 $) | | | | | Discount Rate = 2.00% | | $ 161.622 |

## Table 3 Definitions:

**Column 1: Beginning of Year Balance**

Reflects the beginning-of-year Trust Fund balance at a 0.0% cost escalation rate and 2.0% Real Rate of Return (RRoR) on fund growth.

**Column 2: Earnings on Trust Funds**

Reflects earnings on funds remaining in the Trust Fund. A 2.0% RRoR Trust Fund growth rate is used for 2014 through 2073 which reflects the allowed 2.0% real rate of return over a 0.0% cost escalation rate. The annual 2.0% RRoR earnings are calculated on the beginning balance plus 50% of the projected annual expenditure for each year.

**Column 3: Remaining License Termination Expenditures**

Reflects the annual License Termination Plan cost portion at a 0.0% cost escalation rate from the Site-Specific Cost Estimate.

**Column 4: Remaining Spent Fuel Management Expenditures**

Reflects the annual Irradiated Fuel Management Plan cost portion at a 0.0% cost escalation rate from the Site-Specific Cost Estimate.

**Column 5: Remaining Site Restoration Expenditures**

Reflects the annual Site Restoration Plan cost portion at a 0.0% cost escalation rate from the Site-Specific Cost Estimate.

**Column 6: Remaining SAFSTOR Expenditures**

Reflects the annual SAFSTOR Decommissioning Plan cost at a 0.0% cost escalation rate from the Site-Specific Cost Estimate.

**Column 7: End of Year Balance**

Reflects the end of year Trust Fund Balance after all projected earnings are added and all projected expenditures are deducted for the year specified at a 0.0% cost escalation rate and 2.0% RRoR on fund growth.

This cash flow analysis indicates that ample funds will remain in the KPS decommissioning trust fund after all decommissioning activities including radiological decommissioning, spent fuel management, and site restoration are completed based on a 0.0% cost escalation rate and a 2.0% RRoR on Trust Funds.

A parent Support Agreement in the amount of $60 million is presently in place for the purposes of supplementing DEK in the event of an operational outage lasting six months or more and for decommissioning of the plant. Unless terminated with the approval of the NRC, this Support Agreement will remain in place and provides additional financial assurance for decommissioning and spent fuel management.

## IV. NRC Approvals

This spent fuel management plan assumes withdrawals from the decommissioning trust for spent fuel management purposes. DEK filed an exemption request with the NRC to allow the use of decommissioning funds for spent fuel management (Reference 3).

In accordance with 10 CFR 50.82(a)(8)(vii), DEK will annually submit to the NRC by March 31 a report on the status of the funding for managing spent fuel. The report will include, current through the end of the previous calendar year, the amount of funds accumulated to cover the cost of managing the spent fuel, the projected cost of managing spent fuel until title to the fuel and possession of the fuel is transferred to the Secretary of Energy, and if the funds accumulated do not cover the projected cost, a plan to provide additional funding assurance using one of the methods allowed by NRC regulations.

## V. Summary

The spent fuel management activities described in this updated Irradiated Fuel Management Plan must be performed in conjunction with license termination activities. The annual cash flow analysis in this plan demonstrates that the KPS decommissioning Trust Fund with projected earnings is sufficient to cover the estimated costs of license termination (radiological decommissioning), spent fuel management, and site restoration.

## References:

1. Letter from D. G. Stoddard (DEK) to NRC Document Control Desk, "Update to Irradiated Fuel Management Plan Pursuant to 10 CFR 50.54(bb)," dated February 26, 2013. [ADAMS Accession No. ML13059A028]
2. Letter from M. D. Sartain (DEK) to NRC Document Control Desk, "Revision 1 Post-Shutdown Decommissioning Activities Report," dated April 25, 2014.
3. Letter from D. G. Stoddard (DEK) to NRC Document Control Desk, "Request for Exemptions from 10 CFR 50.82(a)(8)(i)(A) and 50.75 (h)(1)(iv)," dated April 4, 2013. [ADAMS Accession No. ML13098A031]
4. Letter from E. S. Grecheck to NRC Document Control Desk, "Request to Rescind Order Modifying Licenses with Regard to Requirements for Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051)," dated August 23, 2013. [ADAMS Accession No. ML13242A018]