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10 CFR 72.30(b)

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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, D.C. 20555-0001

Quad Cities Nuclear Power Station, Units 1 and 2  
Renewed Facility Operating License Nos. DPR-29 and DPR 30  
NRC Docket Nos. 50-254, 50-265, and 72-53

**Subject: Proposed Independent Spent Fuel Storage Installation (ISFSI) Decommissioning Funding Plan for Quad Cities Nuclear Power Station**

MidAmerican Energy Company (MidAmerican) owns 25% of Quad Cities Nuclear Power Station, Units 1 and 2 (QCNPS), and it provides financial assurance for the decommissioning of its share of QCNPS. Exelon Generation Company, LLC (Exelon) owns the remaining 75% of QCNPS, and it is the licensed operator for the facility. MidAmerican regrets to inform the Nuclear Regulatory Commission of its failure to recognize the new filing requirement established by recent revisions to 10 CFR 72.30, and its consequent failure to make such a filing when due on or before December 17, 2012. MidAmerican recently self-identified this omission and is submitting the attached 10 CFR 72.30 report to fulfill this requirement. MidAmerican plans to file an updated 10 CFR 72.30 report with MidAmerican's March 2015 10 CFR 50.75 biennial report and each subsequent biennial report per 10 CFR 50.75. This will assure that the required information is provided to the NRC on a timely, ongoing basis.

In accordance with 10 CFR 72.30, "Financial assurance and recordkeeping for decommissioning," MidAmerican Energy Company is submitting the proposed ISFSI Decommissioning Funding Plan for QCNPS (Attachment 1). Exelon filed a 10 CFR 72.30(b) report for its 75% ownership interest in QCNPS on December 17, 2012, and MidAmerican relies upon information provided in the Exelon report in the attached plan.

The attached ISFSI Decommissioning Funding Plan includes ISFSI decommissioning cost estimates excerpted from existing reactor decommissioning cost estimates. The QCNPS decommissioning cost estimate assumes that the ISFSI, which has a Part 72 general license, will remain in service following the decommissioning and release of the other portions of the site under Part 50. As a result, the cost estimate assumes that the Part 50 license will be maintained until the ISFSI is decommissioned and the license may be terminated. Decommissioning is defined in 10 CFR 50.2 as the removal of a site from service and reduction of residual radioactivity to a level that permits the termination of the license, so the Part 50 license cannot be

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terminated until the ISFSI meets residual radioactivity requirements. As a result, the decommissioning of an ISFSI with a Part 72 general license is necessarily a Part 50 decommissioning cost covered by 10 CFR 50.75.

MidAmerican qualifies as an "electric utility" and recovers the costs of decommissioning, including ISFSI decommissioning, through cost of service rate recovery. As such, the attached ISFSI Decommissioning Funding Plan relies on "the methods of 10 CFR 50.75(b), (e), and (h), as applicable" as allowed under new 10 CFR 72.30(e)(5), to demonstrate ISFSI decommissioning financial assurance and does not provide either a new ISFSI-specific decommissioning cost estimate or new ISFSI-specific decommissioning financial assurance methods. Specifically, the Decommissioning Funding Plan relies on MidAmerican's decommissioning funding (10 CFR 50.75) status update (as of September 30, 2014) submitted in the attached ISFSI Decommissioning Funding Plan (Attachment 1).

Please refer any questions regarding the foregoing to the undersigned, Chuck Montgomery, at (515) 281-2976 or at [CRMontgomery@midamerican.com](mailto:CRMontgomery@midamerican.com).

Sincerely,

A handwritten signature in black ink that reads "C. R. Montgomery". The signature is written in a cursive style with a large, sweeping flourish at the end.

Cc: Regional Administrator – NRC Region III  
NRC Project Manager – Quad Cities Nuclear Power Station  
NRC Senior Resident Inspector

**ATTACHMENT 1**  
Proposed ISFSI Decommissioning Funding Plan

1.0 SUMMARY DESCRIPTION

MidAmerican Energy Company (MidAmerican) is a minority owner, with a 25% ownership share, of Quad Cities Nuclear Power Station (QCNPS) Units 1 and 2. MidAmerican co-owns QCNPS with Exelon Generation Company, LLC (Exelon). Exelon owns a 75% share of Units 1 and 2 and operates both units as well. Exelon and MidAmerican maintain decommissioning cost estimates for QCNPS, which are periodically updated. Imbedded in these decommissioning cost estimates are the costs associated with decommissioning the Independent Spent Fuel Storage Installation (ISFSI) located at QCNPS. The decommissioning cost estimate for the ISFSI have been extracted from the decommissioning cost estimate and are provided herein.

As Exelon has noted in its own 10 CFR 72.30(b) filing, the radiological decommissioning costs for an ISFSI typically consist of the costs associated with removing and disposing of small volumes of neutron-activated concrete and certain structural steel components. Exelon has indicated that no impact is expected upon soil and groundwater at the QCNPS site during the storage period contemplated in the decommissioning cost estimate for the site. Exelon has also noted that induced radioactivity at the QCNPS ISFSI is not expected to result in residual radioactivity in excess of 25 mRem/yr in an unrestricted release scenario, were no action to be taken to remediate the site.

Finally, Exelon has noted that it anticipates small, but measurable amounts of induced radioactivity to be present, and release of this material from the QCNPS site will require it to be disposed of at a NRC-licensed radioactive waste disposal facility. Therefore, Exelon has included the costs of this disposal in the decommissioning cost estimates.

2.0 DETAILED DESCRIPTION

2.1 Reasonable Assurance of Funds Availability

MidAmerican's trust fund balances for QCNPS Units 1 and 2 currently exceed the costs required for radiological decommissioning—see Tables 1 and 2, below. The excess assets will be used to decommission the on-site ISFSI. Table 1, below, shows the costs estimated for radiological decommissioning under 10 CFR 50.75(b) and (c), using the NRC Minimum formulas, and Table 2 shows MidAmerican's trust fund balances as of September 30, 2014. Both the radiological decommissioning costs and the trust fund balances are stated in 2014 dollars and are adjusted for MidAmerican's 25% ownership share.

## 2.2 Detailed Cost Estimate

Table 3, below, which is based upon the November 2013 TLG decommissioning cost estimate for QCNPS, details the costs of ISFSI decommissioning in 2014 dollars (MidAmerican escalated the 2011 dollar figures from the Nov. 2013 TLG study using a 3.5% escalation rate). Table 3 shows the costs of performing this work (discussed further in the assumptions below), with an adequate contingency factor, to meet the 10 CFR 20.1402 criteria for unrestricted use. The cost of performing this ISFSI decommissioning work is approximately \$486,000 per unit for MidAmerican's 25% share.

## 2.3 Assumptions

Consistent with the assumptions made by Exelon in its own 10 CFR 72.30(b) filing, MidAmerican has made the following assumptions with respect to ISFSI decommissioning:

1. Decommissioning costs in Table 3 are escalated at 3.5% per annum into 2014 dollars. (Exelon escalated costs into 2012 dollars since its 10 CFR 72.30(b) filing was made in late 2012.)
2. All values in Tables 1 - 4 are stated at MidAmerican's 25% ownership share for QCNPS. Costs for ISFSI decommissioning have been equally split between the two (2) units at QCNPS.
3. The costs for ISFSI decommissioning are expected to be incurred in the year in which DOE has accepted all spent fuel from the QCNPS site for disposal.

## 2.4 Method of Assurance

In accordance with 10 CFR 72.30(b)(4), Tables 1 -3 demonstrate the method of assuring funds for ISFSI decommissioning, from 10 CFR 72.30(e). Exelon and MidAmerican periodically update the decommissioning cost estimate for QCNPS, and MidAmerican adjusts the funding levels, as necessary, in accordance with 10 CFR 50.75. (MidAmerican's annual Iowa jurisdictional decommissioning cost included in the cost of service is \$1,595,964, per the Iowa Utilities Board's order in Docket No. RPU-2013-0004. The Illinois Commerce Commission has not authorized any current, ongoing collection from MidAmerican's Illinois ratepayers.)

## 2.5 Volume of Subsurface Residual Radioactivity Requiring Remediation

Per review of site-specific 10 CFR 50.75(g) logs, Exelon indicates it has not identified any onsite, subsurface material containing residual radioactivity at the ISFSI located at QCNPS.

## 2.6 Certification of Financial Assurance

In accordance with 10 CFR 72.30(b), financial assurance, for decommissioning, has been provided in an amount that meets or exceeds the requirements of 10 CFR 50.75(b). As demonstrated in Tables 1-4, this provides the requisite financial assurance for the ISFSI decommissioning costs.

**Table 1**

	NRC Minimum as of 9/30/14, in 2014 Dollars
Unit 1	\$166,138,985
Unit 2	\$166,138,985
Totals	\$332,277,970

**Table 2**

	External Trust Fund Balance (Fair Market Value) as of 9/30/14, in 2014 Dollars
Unit 1	\$204,944,254
Unit 2	\$205,068,861
Totals	\$410,013,115

**Table 3 (ISFSI Decommissioning Costs)**

MidAmerican's Ownership Share Unit 1 & Unit 2 (2014 Dollars w/3.5% Esc)	Removal Costs	Packaging Costs	Transport Cost	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	Cu.FT Class A LLRW	Burial / Processed Weight (lbs)	Craft Manhours	Utility and Contractor Manhours.
ISFSI License Termination	28	6	24	80	453	99	690	1,335	111,954	1,904	640
Small Tool Allowance	1	-	-	-	-	-	1	-	-	-	-
Property Taxes	-	-	-	-	91	9	100	-	-	-	-
Security Staff Cost	-	-	-	-	65	10	75	-	-	-	1,245
Utility Staff Cost	-	-	-	-	93	14	107	-	-	-	472
Total	29	6	24	80	702	132	972	1,335	111,954	1,904	2,356

**Table 4 (Total Decommissioning Costs per NRC Minimum Formulas)**  
 (2014 Dollars)

**MidAmerican Energy Company**  
**Quad Cities, Units 1 & 2**  
 (2,957 MWt)  
 As of 9/30/2014

**REACTOR TYPE:** BWR  
**BASE COST** \$ 130,613,000  
 (\$104 + 0.009P (in MWt))

Escalation Factors	9/30/2014	Base Factor	Base Year	Source:
Labor	120.0	2.08	2005	Bureau of Labor Statistics: Series CIU201000000230I
<b>Energy</b>				
Power	224.4	114.2	1986	Bureau of Labor Statistics: Series WPU0543
Fuel	291.3	82.0	1986	Bureau of Labor Statistics: Series WPU0573
Waste Burial	14.16			NUREG-1307, Rev 15, Table 2-1
<b>Calculation</b>				
Labor Factor (L)	2.50	x 0.65 =	1.62	Labor Formula: $CY \text{ Factor} * \text{Base Factor}$
Energy Factor (E)	2.70	x 0.13 =	0.35	Energy Formula: $E = 0.54P + 0.46F$
Waste Factor (B)	14.16	x 0.22 =	3.12	
<b>Total Escalation Factor:</b>			5.09	Total Escalation Formula: $0.65L + 0.13E + 0.22B$

**Total Minimum Assurance Unit 1 & 2 (100%):**

<b>\$1,329,111,882</b>
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**MidAmerican**  
 Minimum Assurance (25%):

\$ 332,277,971