



U.S. Department of  
Transportation  
**Maritime  
Administration**

*SAVANNAH* Technical Staff  
Office of Ship Disposal

1200 New Jersey Ave., SE  
Washington, DC 20590

**Ref: 10 CFR 50.75(f)(1); 50.82(a)(7) and 50.82(a)(8)(v)-(vii)**

April 1, 2013

**ATTN: Document Control Desk**

U.S. Nuclear Regulatory Commission  
Washington, DC 20555

**SUBJECT: Docket No. 50-238; License No. NS-1; N.S. *SAVANNAH***  
Submittal of Decommissioning Funds Status Report for CY 2012

The Maritime Administration (MARAD) hereby submits Revision 0 of the CY 2012 Decommissioning Funds Status Report for the Nuclear Ship *SAVANNAH* (NSS) as Enclosure 1.

This letter contains one revised commitment.

If there are any questions or concerns with any issue discussed in this report, please contact me at (202) 366-2631, and/or e-mail me at [erhard.koehler@dot.gov](mailto:erhard.koehler@dot.gov).

Respectfully,

Erhard W. Koehler  
Senior Technical Advisor, N.S. *SAVANNAH*  
Office of Ship Disposal

Enclosures

**Docket No. 50-238; License NS-1; N.S. SAVANNAH**  
**Submittal of Decommissioning Funds Status Report for CY 2011, Revision 0**  
**March 30, 2013**

Enclosures

1. Decommissioning Funds Status Report for CY 2012, STS – 173
2. List of Regulatory Commitments

**Docket No. 50-238; License NS-1; N.S. SAVANNAH**  
**Submittal of Decommissioning Funds Status Report for CY 2011, Revision 0**  
**March 30, 2013**

cc:

Electronic copy

NSS ESC

NSS SRC

MAR 610, 612, 615

Hardcopy, cover letter only

MAR-600, 640, 640.2

Hardcopy w/ all enclosures

MAR-100, 640.2 (rf)

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USNRC Regional Administrator - NRC Region I

MD Department of the Environment (Roland G. Fletcher; George S. Aburn, Jr.)

NC Department of Environment & Natural Resources (Beverly O. Hall)

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**Docket No. 50-238; License No. NS-1; N.S. *SAVANNAH***

**Enclosure 1 to Submittal of Decommissioning Funds Status Report for CY 2012**

**DECOMMISSIONING FUNDS STATUS REPORT FOR CY 2012, STS - 173**



**Docket No. 50-238; License No. NS-1; N.S. SAVANNAH**

**Enclosure 2 to Submittal of Decommissioning Funds Status Update for CY 2011**

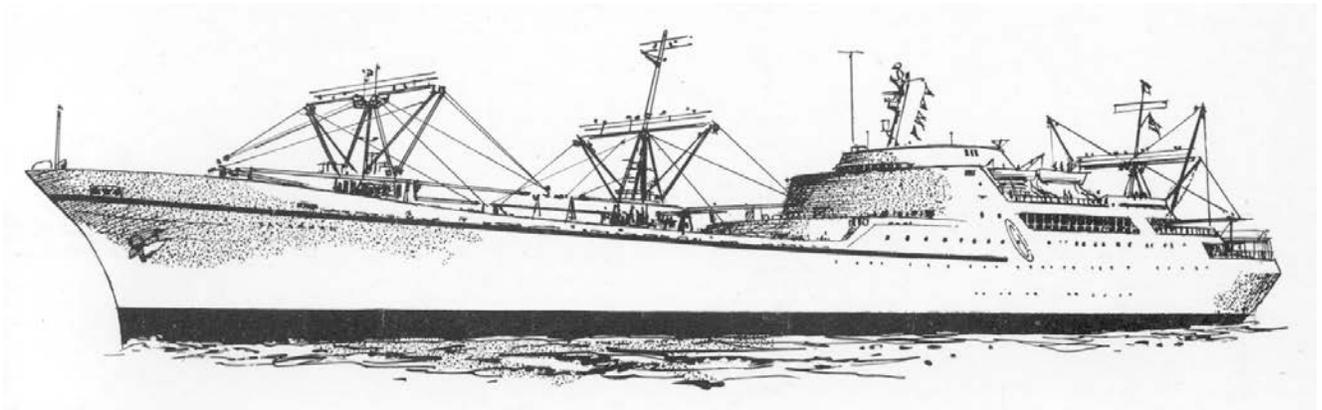
**LIST OF REGULATORY COMMITMENTS**

The following table identifies those actions committed to by MARAD in this document. Any other statements in this submittal are provided for information purposes and are not considered to be regulatory commitments. Please direct questions regarding these commitments to Erhard Koehler (202) 366-2631, and/or [erhard.koehler@dot.gov](mailto:erhard.koehler@dot.gov).

REGULATORY COMMITMENT	TYPE (Check One)		DUE DATE
	One Time Action	Continuing Action	
Details regarding the FY 2014 President's Budget Request, and any potential 10 CFR 50.82(a)(7) impacts will be provided in Revision 1 to this report.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	60 days after the FY 2014 President's Budget Request is publically available.



**U.S. Department of Transportation  
Maritime Administration  
Office of Ship Disposal**



***N.S. SAVANNAH***

**DECOMMISSIONING FUNDS STATUS REPORT  
FOR CY 2012**

**STS - 173**

Revision 0

Approved: \_\_\_\_\_

Manager, N.S. SAVANNAH Programs

Date

Prepared by:  
SAVANNAH Technical Staff

**Record of Revisions**

Revision	Summary of Revisions
0	The original version of the Decommissioning Funds Status Report for CY 2012

**List of Effective Pages**

<b>Page No.</b>	<b>Rev. No.</b>	<b>Page No.</b>	<b>Rev. No.</b>	<b>Page No.</b>	<b>Rev. No.</b>
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4	0	5	0	6	0
7	0	8	0	9	0
10	0	11	0		

**SAVANNAH Technical Staff**  
**STS - 173, Decommissioning Funds Status Report For CY 2012, Revision 0**

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## **1.0 INTRODUCTION**

This Decommissioning Funds Status Report is submitted by the Maritime Administration (MARAD) as licensee for the Nuclear Ship *SAVANNAH* (NSS) and covers the CY 2012 reporting period. This report incorporates the guidance contained in Regulatory Guide (RG) 1.159-1, “Assuring the Availability of Funds for Decommissioning Nuclear Reactors,” Rev 1, Reference (a).

In accordance with the requirements of 10 CFR 50.75(f)(1), each power reactor that has already closed is required to report annually the status of its decommissioning funds to the Nuclear Regulatory Commission (NRC) on a calendar year (CY) basis. Section 2.0 of this Decommissioning Funds Status Report includes the seven (7) reports required by 10 CFR 50.75(f)(1).

In accordance with the requirements of 10 CFR 50.82(a)(8)(v)-(vii), each power reactor that has already submitted its site-specific Decommissioning Cost Estimate (DCE) is required to provide a financial assurance status report annually to the NRC on a calendar year (CY) basis. MARAD submitted its DCE with its Post Shutdown Decommissioning Activities Report (PSDAR), Rev 1, Reference (b). Section 3.0 of this Decommissioning Funds Status Report includes the reports required by 10 CFR 50.82(a)(8)(v)-(vii).

Section 4.0 of this report provides specific information regarding the funds made available to and expended by MARAD during the reporting period.

Finally, Section 5.0 of this report provides information on regulatory commitments made by MARAD that are germane to decommissioning funding.

Because the federal fiscal year (FY) does not align with the CY, each annual decommissioning funds status report will include information from at least the two FYs that directly provide funds for expenditure during the reporting period. Prior to the submission of the report on (or about) March 31, the President will submit a budget request to the Congress for the upcoming FY. Because NSS activities are funded on an annual basis, the President’s budget request is an early, although not definitive, indicator of future NSS decommissioning funding. Because that future funding can impact the decommissioning schedule described in the PSDAR, MARAD includes this public information for context, and in partial satisfaction of the 10 CFR 50.82(a)(7) requirement to notify the NRC of expected changes to content in the PSDAR.

### ***1.1 N.S. SAVANNAH Decommissioning Status***

The NSS is presently in protective storage. This phase of decommissioning activities is characterized by active surveillance, monitoring and maintenance of the nuclear facilities housed onboard the ship, and custody and maintenance of the ship as the primary physical boundary and protective barrier of the licensed site. Collectively, these are referred to as MARAD’s licensed activities, and are reported annually to the NRC.

As described in Reference (b), and elsewhere, the license termination deadline for the NSS is December 3, 2031.<sup>1</sup> Final decommissioning of the NSS nuclear facilities will be performed by the DECON method. In the interim, a project to bring the NSS into conformance with contemporary NRC SAFSTOR criteria (known as “SAFSTOR Preparations”) has been described and committed to in Reference (b).

This report addresses the funding status for all three of these decommissioning phases – licensed activities, SAFSTOR Preparations, and DECON.

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<sup>1</sup> December 3, 1971 is the de facto date of permanent cessation of operations date based on completing the reactor defueling that date by tensioning the reactor vessel head with six studs.

## ***1.2 N.S. SAVANNAH Decommissioning Funding Sources***

The Maritime Administration is a modal agency of the United States Department of Transportation (DOT). It is a federal licensee as defined by the NRC. As such, funds for decommissioning and termination of the NSS license will be provided by federal appropriations. The budget process by which such appropriations are requested is deliberative and privileged, and is subject to Executive Branch priorities and direction. Furthermore, the legislative review and authorization / appropriation actions taken on such requests are fully within the purview of the Congress. MARAD by itself cannot guarantee that decommissioning funds will be requested by the President or authorized and appropriated by the Congress in any given fiscal year.

## **2.0 10 CFR 50.75(f)(1) STATUS OF DECOMMISSIONING FUNDS ANNUAL REPORT**

This section provides a discussion of the seven items required by 10 CFR 50.75(f)(1), and incorporates the guidance contained in Reference (a). The reporting requirements and corresponding MARAD information are provided below.

2.1 The amount of decommissioning funds estimated to be required.

- a) *Current licensed activities require approximately \$3 million annually. The NSS is scheduled to be drydocked for regular maintenance once (2018) during the protective storage period, at an estimated cost of \$6.8 million.<sup>2</sup>*
- b) *The December 2012 revised SAFSTOR project cost estimate is \$11.21 million.*
- c) *The December 2012 revised site-specific DECON-License Termination cost estimate is \$100.652 million.*

2.2 The amount accumulated to the end of the calendar year preceding the date of the report.

*Accumulation of funds is not applicable to the NSS. As a federal licensee, 10 CFR 50.75(e)(1)(iv) allows funding for decommissioning activities to be obtained by appropriations when necessary.*

2.3 A schedule of the annual amounts remaining to be collected.

*Annual collection of funds is not applicable to the NSS. As a federal licensee, 10 CFR 50.75(e)(1)(iv) allows funding for decommissioning activities to be obtained by appropriations when necessary.*

2.4 The assumptions used regarding rates of escalation in decommissioning costs, rates of earnings on decommissioning funds, and rates of other factors used in funding projections.

*The 2012 revised site-specific DECON-License Termination cost estimate used 4.39% escalation for disposal of low level radioactive waste (LLRW). Transportation costs were escalated at 0.35%. Electric costs were escalated at 4.21%. All other industrial task costs were escalated at 1.64%. Escalation factors were developed from NUREG 1307 R15 (Waste Disposal costs) and Bureau of Labor Statistics from <http://www.bls.gov/data/>, Series ID:*

1. *Wpu0543 (Industrial electric power)*
2. *Wpu0573 (Light fuel oils)*
3. *CIU2010000002101 (Total compensation, private industry, Northeast region)*

*for the latest 2012 values available at the time of the calculation.*

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<sup>2</sup> The drydocking cost estimate is escalated to a 2018 basis from the \$4.1 million contract cost for drydocking the NSS in CY 2008.

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Based on the above factors, the simple escalation rate from 2011 to 2012 was 2.08%. The SAFSTOR project cost estimate was revised by escalating the 2011 estimate at 2.08%.

There are no rates of earnings on decommissioning funds.

2.5 Any contracts upon which the licensee is relying pursuant to paragraph (e)(1)(v) of this section.

*Not applicable because MARAD, as a federal licensee, is funded per the 10 CFR 50.75(e)(1)(iv) method.*

2.6 Any modifications occurring to a licensee's current method of providing financial assurance since the last submitted report.

*There have been no modifications to MARAD's financial assurance methodology, which is limited to the use of federal appropriations. Please refer, however, to the response in section 4.1 below for more information.*

2.7 Any material changes to trust agreements.

*Not applicable because MARAD, as a federal licensee, is funded per the 10 CFR 50.75(e)(1)(iv) method. Consequently, no trust agreements exist.*

### **3.0 10 CFR 50.82(a)(8)(v)-(vii) FINANCIAL ASSURANCE STATUS ANNUAL REPORT**

This section provides a discussion of the ten items required by 10 CFR 50.82(a)(8)(v)-(vii). This is a new reporting requirement in CY 2011, and MARAD is reporting on the basis that it has already submitted its site-specific DCE. The reporting requirements and corresponding MARAD information are provided below.

#### **3.1 Report required by 10 CFR 50.82(a)(8)(v)**

(A)

1 The amount spent on decommissioning, both cumulative and over the previous calendar year,

*Within the context of protective storage as a phase of decommissioning activities, all of the funds spent by MARAD in CY 2012 and preceding years (FY 2005 - present) have been spent for decommissioning purposes. As a practical matter, no funds have been spent on discrete actions described in either the SAFSTOR Implementation Plan or the DECON Cost Estimate, other than moderate amounts for preliminary planning.*

2 The remaining balance of any decommissioning funds, and

*Not applicable because MARAD, as a federal licensee, is funded per the 10 CFR 50.75(e)(1)(iv) method. Although funds appropriated to MARAD's Ship Disposal account are "available until expended," any year-to-year carryover is applied to immediate requirements. No balance is maintained.*

3. The amount provided by other financial assurance methods being relied upon;

*None. MARAD, as a federal licensee, relies solely on the 10 CFR 50.75(e)(1)(iv) method.*

(B) An estimate of the costs to complete decommissioning, reflecting any difference between actual and estimated costs for work performed during the year, and the decommissioning criteria upon which the estimate is based;

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*MARAD's CY 2012 estimate to complete decommissioning is \$100.652 million based on escalation from the 2011 estimate (see 2.4 above for the escalation basis). This estimate is effective as of December 2012. This estimate does not credit any work performed during the reporting period. There have been no changes to the decommissioning criteria on which the 2012 estimate was based.*

- (C) Any modifications occurring to a licensee's current method of providing financial assurance since the last submitted report; and

*There have been no modifications to MARAD's financial assurance methodology, which is limited to the use of federal appropriations. Please refer, however, to the response in section 4.1 below for more information.*

- (D) Any material changes to trust agreements or financial assurance contracts.

*Not applicable because MARAD, as a federal licensee, relies solely on the 10 CFR 50.75(e)(1)(iv) method.*

**3.2 Report required by 10 CFR 50.82(a)(8)(vi)**

If the sum of the balance of any remaining decommissioning funds, plus earnings on such funds calculated at not greater than a 2 percent real rate of return, together with the amount provided by other financial assurance methods being relied upon, does not cover the estimated cost to complete the decommissioning, the financial assurance status report must include additional financial assurance to cover the estimated cost of completion.

*Not applicable to MARAD.*

**3.3 Report required by 10 CFR 50.82(a)(8)(vii)**

After submitting its site-specific DCE required by paragraph (a)(4)(i) of this section, the licensee must annually submit to the NRC, by March 31, a report on the status of its funding for managing irradiated fuel.

*The final disposition and status of the Atomic Energy Commission's nuclear fuel utilized by the NSS is described in the September 21, 1973, Operations Report and also in Section 1.3.1 of the Final Safety Analysis Report as follows:*

*Thirty six spent fuel elements (Core I and Ia) were shipped from Galveston, TX to the US Atomic Energy Commission (AEC) - Savannah River Plant, Aiken, SC in nine shipments from October 4 through December 21, 1972 via a lowboy trailer using the Piqua/Elk River Shipping cask.*

The 10 CFR 50.82(a)(8)(vii) report must include the following information, current through the end of the previous calendar year:

- (A) The amount of funds accumulated to cover the cost of managing the irradiated fuel;

*MARAD is storing no irradiated nuclear fuel and, therefore, has no accumulated funds to cover the costs associated with managing irradiated fuel.*

- (B) The projected cost of managing irradiated fuel until title to the fuel and possession of the fuel is transferred to the Secretary of Energy; and

*MARAD is storing no irradiated nuclear fuel and, therefore, has no need to project the costs associated with managing irradiated fuel.*

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(C) If the funds accumulated do not cover the projected cost, a plan to obtain additional funds to cover the cost.

*MARAD is storing no irradiated nuclear fuel and, therefore, has no need to obtain additional funds to cover the costs associated with managing irradiated fuel.*

#### **4.0 N.S. SAVANNAH CY 2012 FUNDING**

The NSS was maintained in mothballed protective storage throughout CY 2012. Approximately \$3 million in appropriated funds were available to MARAD to maintain the NSS during the period. Funds were sourced from within MARAD's Ship Disposal appropriations for FY 2012 (January 1 – September 30, 2012) and 2013 (October 1 – December 31, 2012).

In previous CY reports, MARAD has provided publicly available information regarding the President's Budget Request for the FY that begins on October 1 of the year in which the report is submitted. At the time that this CY 2012 report was prepared, the outcome of the current FY (2013) was unresolved<sup>3</sup>, and the FY 2014 Budget Request was not finalized. In the face of this uncertainty, MARAD has determined it is appropriate to submit a future Revision 1 to the CY 2012 report after the final details of FY 2013 are known, and the FY 2014 Budget Request is submitted to the Congress. The revision will be submitted within 60 days of whichever event is the last to occur.

##### **4.1 FY 2012**

FY 2012 began on October 1, 2011 and ended on September 30, 2012. The President's FY 2012 Budget Request for the Department of Transportation (DOT), including MARAD, was submitted to the Congress on February 14, 2011. No funds were specifically requested for either SAFSTOR Preparations or DECON. The DOT appropriation was passed on November 18, 2011, and provided \$3.0 million for all NSS activities.

##### **4.2 FY 2013**

FY 2013 began on October 1, 2012, and will end on September 30, 2013. The President's FY 2013 Budget Request for the Maritime Administration was submitted to the Congress on February 13, 2012. The request for NSS activities was \$3.018 million. No specific dollar amount was requested for either SAFSTOR Preparations or DECON; however, the budget request narrative noted that these funding requirements exist (DECON is noted as requiring \$98.6M in current year dollars) and that MARAD is prepared to execute them when resources become available.

Funding for FY 2013 was initially provided by a Continuing Resolution (CR) that was effective to March 27, 2013. The Consolidated and Furthering Continuing Appropriations Act of 2013 provided funding for the balance of the fiscal year, and took into account the sequestration imposed by the Budget Control Act of 2011. The total funding appropriated for the NSS for FY 2013 is \$2,843,082. Early in the fiscal year, MARAD took cost control measures in anticipation of possible sequestration, and consequently does not expect any impact to nuclear safety as a result of the reduction in appropriated funding compared to its original request.

Based on the revised decommissioning schedule submitted in Reference (c), the projected funding for FY 2013 will not result in a change to the content of the PSDAR, and consequently no 10 CFR 50.82(a)(7) notification is required.

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<sup>3</sup> MARAD is operating on a Continuing Resolution that expires on March 27, 2013; Sequestration under the Budget Control Act may take effect on March 1, 2013.

#### 4.3 *FY 2014 Request*

Details regarding the FY 2014 President's Budget Request, and any potential 10 CFR 50.82(a)(7) impacts will be provided in Revision 1 to this report.

### 5.0 **REGULATORY COMMITMENTS REGARDING DECOMMISSIONING FUNDING**

There are four (4) recurring commitments regarding decommissioning funding that are reported on in each annual Decommissioning Funds Status Report. The resolution of any one-time commitments will be described as required. The recurring commitments are described in the following sections.

#### 5.1 *Annual Request for Funds*

In Reference (c), MARAD made the following regulatory commitment:

*Annually, MARAD will request funds specifically for decommissioning. The NRC will be informed of these decommissioning funding requests annually by March 31. [Continuing action]*

Beginning in Reference (b), and in periodic correspondence thereafter, MARAD has reiterated its understanding of its responsibility to request and obtain decommissioning funds in sufficient quantity and time to meet the NS-1 license termination deadline of December 3, 2031. Given the inherent nature of the budget process, MARAD defines its commitment to be satisfied annually when it makes a request for decommissioning funds to the Office of the Secretary of Transportation. MARAD has no independent authority to seek decommissioning funds if the request is not made part of the President's Budget Request for the Department of Transportation. Documentation regarding the annual request is maintained by the licensee, and is available for inspection.

Beginning with the CY 2011 Decommissioning Funds Status Report, MARAD includes a statement regarding the annual request for funds. For CY 2012 (FY 2014 request):

MARAD did not formally request decommissioning funds in FY 2014 because there was no room within the Agency's fiscal budget based on funding level guidance from OMB. However, MARAD remains cognizant of the responsibilities and funding commitment requirements for SAFSTOR and eventual DECON, and has communicated the same to the responsible OST and OMB budget officials as an element to the formal budget request justification. Internal budget deliberations within MARAD and OST have recognized that these obligations remain to be funded and will continue to be examined and balanced during the annual budget development processes.

#### 5.2 *Annual Submittal of New Estimate*

In Reference (d), MARAD made a regulatory commitment that was subsequently revised as follows:

*Submit a new estimate annually by either revising the site specific estimate based on circumstances that affect its underlying assumptions, or by using cost escalation factors no smaller than those in the most recent revision to NUREG 1307.*

MARAD's CY 2012 estimate is \$100.652 million based on escalation from the 2010 basis estimate. This estimate is effective as of December 2012.

#### 5.3 *Revised Decommissioning Cost Estimate*

In Reference (d), MARAD made the following regulatory commitment:

*The site specific Decommissioning Cost Estimate will be revised at least every five (5) years.*

The site specific Decommissioning Cost Estimate is scheduled for full revision in CY 2015.

#### **5.4 Content of MARAD Budget Requests**

In Reference (e), MARAD made the following regulatory commitment:

*Because the privity of the federal budgeting process precludes public notification of the content of agency budget requests prior to their submittal to the Congress, MARAD has determined that future 10 CFR 50.82(a)(7) notifications will be submitted under a 10 CFR 2.390 request for withholding.*

Based on the revised Decommissioning Activities Schedule submitted to the NRC in reference (f), MARAD determined that no 10 CFR 50.82(a)(7) notification was required during CY 2011.

### **6.0 TIME REMAINING TO COMPLETE DECOMMISSIONING**

As of December 3, 2012, nineteen years remain to complete decommissioning (i.e. over two thirds of the sixty years allowed by 10 CFR 50.82 have passed).

### **7.0 REFERENCES**

- a. Regulatory Guide 1.159, Assuring the Availability of Funds for Decommissioning Nuclear Reactors, Rev. 1, October 2003
- b. Letter from Mr. Erhard W. Koehler (MARAD) to U.S. Nuclear Regulatory Commission (NRC), dated December 11, 2008, Submittal of Post Shutdown Decommissioning Activities Report, Revision 1
- c. Letter from Mr. Erhard W. Koehler (MARAD) to U.S. Nuclear Regulatory Commission, dated March 9, 2011, Response to Receipt of Decommissioning Funds Status Update (CY 2009) for N.S. SAVANNAH
- d. Letter from Mr. Erhard W. Koehler (MARAD) to U.S. Nuclear Regulatory Commission, dated March 31, 2011, Submittal of Decommissioning Funds Status Report for CY 2010 and updated Governmental Statement of Intent for Decommissioning Financial Assurance
- e. Letter from Mr. Erhard W. Koehler (MARAD) to U.S. Nuclear Regulatory Commission, dated June 04, 2010, Submittal of Decommissioning Funds Status Update for CY 2009 and Governmental Statement of Intent for Decommissioning Financial Assurance

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