AREVA

January 23, 2009
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U.S. Nuclear Regulatory Commission
Director, Office of Nuclear Material
Safety and Safeguards
Attn: Document Control Desk
Washington, D.C. 20555-0001

Gentlemen:

Subject: Updated Decommissioning Funding Plan (DFP) for AREVA NP Inc.'s (AREVA's) Richland Fuel Fabrication Facility (License No. SNM-1227; Docket No. 70-1257)

Ref.: 1. Letter, R.E. Link to U.S. NRC, "Updated Decommissioning Funding Plan (DFP) for Framatome ANP, Inc. (FANP) Richland Fuel Fabrication Facility (License No. SNM-1227; Docket No. 70-1257); December 19, 2005.

Ref.: 2. Letter, R.L. Rodriguez to R.E. Link, "Approval of AREVA NP Inc's Letter of Credit and Standby Trust Agreement in Support of Decommissioning Financial Assurance (TAC L32682)," December 18, 2008.

The purpose of this correspondence is to convey an updated DFP for AREVA's Richland fuel fabrication facility. The last such update was provided to the NRC in December of 2005 via Reference 1. The present submittal, which includes an updated decommissioning cost estimate effective as of December 2008, is responsive to the 10 CFR 70.25(e) requirement for adjustment of the cost estimate at an interval not to exceed three years. The financial assurance instruments provided in Section 8 are the Letter of Credit and Standby Trust Agreement recently approved by the NRC via Reference 2. The revised cost estimate continues to be bounded by the recently approved Letter of Credit.

This most recent revision to the DFP and associated cost estimate reflects a number of key changes/updates, most notably:

- updated volumes of contaminated equipment destined for disposal;
- transition from independent third party labor rates derived from nationally-based R.S. Means publications to equivalent but more representative and conservative, fully burdened billing rates from State of Washington-based third party contractors;
- adjustment of various non-labor costs for inflation, as applicable;

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NMSS01
SUNSI Review Completed
Per Rafael Rodriguez

- updated volumes of onsite stored containerized wastes, including accounting for disposal liabilities based on maximum postulated inventories, which may now exceed current inventories (this is based on significant progress in reducing stored waste inventory since the last DFP update);

- updated solid low-level radioactive waste disposal costs;

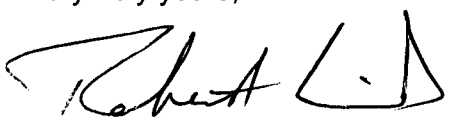
- removal of legacy surface impoundment remediation costs reflective of removal and remediation of this system and its associated environmental contamination in accordance with a State of Washington-approved closure operation (final decommissioning survey-related costs have been retained);

- addition of information and costs relative to the characterization and remediation, as required, of environmental media potentially impacted by historic spills and releases recorded in decommissioning-related records [maintained in accordance with 10 CFR 70.25(g)(3)]; and

- transition in financial assurance mechanism from an AREVA parent company guarantee to a letter of credit and associated standby trust agreement.

If you have questions regarding this submittal, please feel free to contact me at 509-375-8409.

Very truly yours,



R. E. Link, Manager
Environmental, Health, Safety & Licensing

cc: Rafael L. Rodriguez
U.S. Nuclear Regulatory Commission
Fuel Manufacturing Branch, Mail Stop EBB-2-C-40
Division of Fuel Cycle Safety and Safeguards
Office of Nuclear Material Safety and Safeguards
Washington, D.C. 20555-0001

An AREVA and Siemens company

E06-04-007
Version 3.0

Decommissioning Funding Plan

January 2009

AREVA

EHS&L Document

Decommissioning Funding Plan

Nature of Changes

Item	Paragraph	Description	Justification
1.	Entire Document	Complete Revision	To provide the basis for a triennial adjustment to the decommissioning cost estimate as required by 10 CFR 70.25(e).
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
List Below any Documents, including Forms & Operator Aids which must be issued concurrently with this document revision:			

This Document contains a total of 61 pages excluding the signature page generated by Documentum, the document control application software.

DOCUMENT REVIEW/APPROVAL/DELETION CHECKLIST

All new and/or revised procedures shall be approved by the change author, cognizant manager(s) of areas affected by the changes, and by applicable manager(s) of any function that approved the previous revision of the document unless responsibility for such approval has been transferred to another organization. Also, the procedure shall be approved by manager(s) of functional organizations that provide technical reviews with the exception of the Training Department. Finally, Document Control shall verify that the required approvals have been properly obtained and that any documents that must be issued concurrently are ready to be issued.

Minor Changes: If the proposed changes are limited to editorial and/or administrative changes check the box at the right. The document will be routed directly for review by EHS&L without technical review. All applicable approvals must still be obtained. ☐

Document Reviews			Document Approvals	
Purpose/Function of Review	Specify Reviewer(s) (Optional except for change author)	(Check all that apply)	Title of Approver	(Check all that Apply)
Document Control (Automatic)		☒	Document Control (Automatic)	☒
Change Author	LJ Maas	☒	Author	☒
Independent Technical Review	SS Koegler	☒		
Operability Review(s)			Mgr, Richland Operations[1]	☐
Conversion		☐	Mgr, Uranium Conversion & Recovery Operations[1]	☐
Recovery		☐		
Ceramics		☐	Mgr, Ceramic Operations[1]	☐
Rods		☐	Mgr, Rods & Bundles[1]	☐
Bundles		☐		
Transportation		☐		
Components		☐	Mgr, Component Fabrication[1]	☐
Maintenance Review		☐	Mgr, Maintenance[1]	☐
Lab Review		☐	Mgr, Analytical Services[1]	☐
EHS&L Review(s)			Mgr, EHS&L[2]	☒
Criticality		☐	Mgr, Criticality Safety[2]	☐
Radiation Protection	RK Burklin	☒	Mgr, Safety, Security & Emergency Preparedness[2]	☐
Safety/Security		☐		
Emergency Preparedness		☐		
MC&A		☐	Mgr, Licensing & Compliance[2]	☐
Transportation		☐		
Environmental	LJ Maas	☒		
BWR Product Eng. Review		☐	Mgr, BWR Product Engineering	☐
BWR Core Engineering Review		☐	Mgr, BWR Core Engineering	☐
Codes and Methods Review		☐	Mgr, Codes and Methods	☐
Proj. Eng. & Design Support Review		☐	Mgr, Proj. Eng. & Design Support	☐
Quality Review		☐	Mgr, Quality	☐
Project & Plant Eng. Review		☐	Mgr, Project & Plant Eng.	☒
Purchasing Review		☐	Mgr, Purchasing	☐
Others:		☐	Mgr, Richland Site/Other	☐
Training & Employee Dev.:[3]		☐	Training & Employee Dev.	☐

[1]Note: If approvals include 2 or more product center managers, the Operations manager can be substituted for the applicable product center managers.

[2]Note: If approvals include 2 or more EHS&L functional managers, the EHS&L manager can be substituted for the applicable EHS&L functional managers.

[3]Note: Training department review is required for all procedures that require or affect a Learning Plan and if additional training materials or curriculum must be revised before issuing procedure.

EHS&L Change Impact Evaluation Form		
Document / ECN No*.: E06-04-007	Change Evaluator: LJ Maas	
Does the change potentially impact Criticality Alarm System (CAS) coverage?	☐ Yes ☒ No	If yes, explain:
NRC Pre-Approval Evaluation:		
Is NRC Pre-approval (License Amendment) Needed? (Based on "Yes" answer to any of five questions below). (Based on "No" answer to all five questions below).	☐ Yes ☒ No	
1. Does the change create new types of accident sequences that, unless mitigated or prevented, would exceed the performance requirements of 10 CFR 70.61 (create high or intermediate consequence events) and that have not previously been described in AREVA NP Inc's ISA Summary?	☐ Yes ☒ No	If yes, explain:
2. Does the change use new processes, technologies, or control systems for which AREVA NP Inc. has no prior experience?	☐ Yes ☒ No	If yes, explain:
3. Does the change remove, without at least an equivalent replacement of the safety function, an item relied on for safety that is listed in the ISA Summary?	☐ Yes ☒ No	If yes, explain:
4. Does the change alter any item relied on for safety, listed in the ISA Summary, that is the sole item preventing or mitigating an accident sequence of high or intermediate consequences?	☐ Yes ☒ No	If yes, explain:
5. Does the change qualify as a change specifically prohibited by NRC regulation, order or license condition?	☐ Yes ☒ No	If yes, explain:
Actions Required Prior to or Concurrent with Change Implementation Evaluation:		
Action		**Explanation**
6. Modification / Addition to CAS system or system coverage documentation	☐ Yes ☒ No	If yes, explain:
7. Acquire NRC pre-approval (license amendment)	☐ Yes ☒ No	If yes, explain:
8. Conduct/modify ISA	☐ Yes ☒ No	If yes, explain:
9. ISA Database Modification	☐ Yes ☒ No	If yes, explain:
10. Modification of other safety program information / underlying analyses (PHA, RHA, FHA, NCSA, etc.)	☐ Yes ☒ No	If yes, explain:
Actions required subsequent to Change Implementation Evaluation:		
11. Update safety program information (PHA,RHA,FHA,NCSA, P&ID)	☐ Yes ☒ No	If yes, explain:

* **If this form exists as a part of a document, the document number is not required.**

Table of Contents

List of Tables

List of Exhibits

1.0 Introduction and Summary

This Decommissioning Funding Plan (DFP) is submitted by AREVA NP Inc. (AREVA) in compliance with 10 CFR 70.25(c) (2) and contains the information required by 10 CFR 70.25(e). Furthermore it provides the required [10 CFR 70.25(e)] triennial adjustment of the decommissioning cost estimate, last conveyed to the NRC via Version 2.0 of this plan (December 2005). The DFP was developed using the guidance provided in NUREG-1757, Volume 3, "Consolidated NMSS Decommissioning Guidance".

The DFP establishes decommissioning criteria and key assumptions and outlines the major technical approaches in the decommissioning of all facilities on the AREVA Richland site with a potential for radioactive contamination. This includes the major production facilities, production support facilities, containerized waste storage areas, and contaminated environmental media (soil). Certain portions of the containerized waste storage areas manage wastes that are classified as mixed wastes, i.e., wastes that are radiologically contaminated and also contain chemical constituents that cause them to be designated as dangerous wastes under the State of Washington Dangerous Waste Regulations. The decommissioning/closure procedures and provision of financial assurance for these mixed waste areas are, therefore, intended to meet the pertinent requirements of both the NRC and the Washington State Department of Ecology (Ecology).

The DFP also provides associated decommissioning/closure cost estimates, a commitment for periodic (minimum triennial) cost estimate adjustments, and appropriate evidence of financial assurance via a Financial Assurance Instruments section. The total consolidated decommissioning/closure cost estimate addresses all required costs relative to NRC licensed materials for both the NRC and Ecology and is summarized in Table 1. The Table 1 costs are effective as of December 2008.

The major components of the cost estimate are described in Sections 5.1, Production and Production Support Facilities; 5.2, Containerized Waste Storage Pads, and 5.3, Environmental Remediation. Section 5.1 is further broken down into the major production facilities and production support (ancillary) facilities. Decommissioning the waste storage pads involves decommissioning the pad structures and disposing of the containerized mixed and low level radioactive wastes stored on the pads. Environmental remediation will entail any activities and associated costs to address any environmental contamination that will require remediation during decommissioning to meet the unrestricted use criteria of 10 CFR 20.1402.

Each of the major cost estimate components is presented via a set of tables, as similar as practicable to those in NUREG-1757, which support the estimates. In some cases, e.g., dispositioning of the containerized waste inventories, the NUREG-1757 tables are not easily applied; in those cases alternate or modified tables better suited to communicate the pertinent cost data have been used.

A certification that AREVA has obtained financial assurance in an amount sufficient to meet the decommissioning cost estimate is provided in Section 7.0. Evidence of that financial assurance utilizing the letter of credit/standby trust method is provided in Section 8.0.

Table 1 Decommissioning Cost Estimate Summary

Category	Cost Estimate, $
1. Production and Production Support Facilities (Table 13)	24,428,572
2. Containerized Waste Storage Pads and Inventories	
A. Storage Area (Pad) Structures (Table 25)	90,821
B. LLRW Inventory Disposal (Table 26)	2,329,239
C. Mixed Waste Inventory Disposal (Table 26)	539,363
3. Environmental Remediation	
A. Legacy Surface Impoundment Area (Table 30)	234,737
B. Historic Spills/Releases (Table 34)	8,935
Subtotal	27,631,667
25% Contingency	6,907,917
TOTAL	34,539,584

2.0 Decommissioning Criteria

This DFP and associated decommissioning cost estimate for AREVA's Richland Facility, located at 2101 Horn Rapids Road, Richland, Washington (License SNM-1227, Docket 70-1257) have been prepared per the requirements of 10 CFR 70.25 and guidance provided in NUREG-1757, "Consolidated NMSS Decommissioning Guidance, Volume 3", September 2003.

2.1 *Uncontaminated Facilities*

The disposition of uncontaminated equipment and facilities is not within the scope of this plan, provided that such facilities are verified to be uncontaminated in accordance with approved radiation survey procedures.

2.2 *Residual Radiation Levels*

In accordance with 10 CFR 20.1402, the residual radioactive contamination distinguishable from background radiation for the decontaminated Richland facility will result in dose levels of less than 25 mrem/yr to the average member of the critical group. Any equipment or facility which cannot be decontaminated to acceptable levels will be demolished, packaged, and disposed of at a licensed low-level radioactive waste (LLRW) or mixed waste disposal site, or alternatively, could be transferred to another licensed facility. Residual environmental contamination will be remediated to levels consistent with the 25 mrem/yr unrestricted use criterion.

2.3 *Records*

Records of the decommissioning procedures and results will be preserved for at least five years, or as required by then-current regulations.

2.4 *Financial Provisions*

Decommissioning of the AREVA Richland facility will be conducted at no cost to the public beyond that of ordinary regulatory activities.

3.0 Key Assumptions

The following key assumptions were used in the preparation of the DFP and cost estimate for the decommissioning of the licensed facilities at AREVA's Richland Facility.

1. This DFP assumes the availability of LLRW and mixed waste disposal facilities at reasonable cost and the application of packaging and transportation requirements consistent with existing regulations.
2. Prior to the start of final site decommissioning, a detailed decommissioning plan consistent with NRC guidance, including a proposed closeout survey plan, will be submitted to the NRC for approval. The results of the closeout survey shall be approved by the NRC prior to release of equipment or grounds to unrestricted use.
3. All work will be performed in compliance with procedures written specifically for the decommissioning activity in conjunction with the detailed decommissioning plan.
4. All work inside contaminated areas will be performed using approved radiation work procedures.
5. The typical costs associated with decontamination of process equipment and ventilation ductwork for free release are expected to be greater than their salvage value, as well as in excess of the cost savings realized by disposal at a non-radioactive waste disposal site. In general, therefore, no attempt at decontamination for this purpose will be made except in

special cases when it may be warranted. Contaminated process equipment and ductwork along with other decommissioning-related wastes will typically be disposed of by burial in LLRW disposal sites, and only the facility will be decontaminated.

6. All LLRW generated in the decontamination and/or dismantling of site facilities will be containerized and staged to allow shipment to the U.S. Ecology-operated Northwest Compact LLRW Disposal Site over a two calendar year period. The site operator is limited to a maximum allowable total revenue collection from all facility users over a one year period; this limit is currently at $5.33M as set by the Washington Utilities and Transportation Commission. The disposal cost estimate [(see Table 9b)] conservatively assumes application of the entire disposal site fee for the two year period to AREVA.
7. The cost estimate does not take credit for any salvage value that may be realized from the sale of potential assets (e.g., recovered materials or decontaminated equipment) during or after decommissioning.
8. For the sake of this DFP and associated cost estimate, the limit for free release of materials, e.g., soil, in which the radioactive contamination is distributed throughout the material matrix, is assumed to be 30 pCi/gram.
9. The DFP assumes that the site and associated facilities will be decommissioned via decontamination activities and materials removal/disposal in a manner that will not necessitate stabilization and long-term surveillance programs.

4.0 Facility Description Summary

This section provides a facility description as called for in the Facility Description section of Volume 3 of NUREG-1757. The information supplements the facility description on record (Docket 70-1257) as part of AREVA's NRC special nuclear materials license (SNM-1227) for the Richland site.

4.1 *NRC License*

The AREVA Richland nuclear fuel fabrication facility is operated in accordance with an NRC special materials license issued under 10 CFR Part 70. The license, SNM-1227, is docketed under NRC Docket No. 70-1257 for the Richland site.

4.2 *Authorized Radioactive Materials*

NRC License SNM-1227 authorizes AREVA to possess up to 75,000 kgs (75 metric tons) of U-235 present in uranium enriched up to 5 wt. % U-235; only 350 g U-235 may be possessed in uranium U-235 enrichments exceeding 5 wt. %.

4.3 *Usage of Licensed Materials*

The AREVA Richland nuclear fuel fabrication facility utilizes enriched uranium (≤5 wt. % U-235) for the production of enriched uranium nuclear fuel for use in commercial light water reactors. Finished fuel assemblies (bundles) are supplied to nuclear utilities for direct usage as fuel in their nuclear power reactors; however intermediate products such as enriched uranium powder or pellets are also produced in behalf of other nuclear fuel cycle facilities.

The typical feed material to the plant is uranium hexafluoride (UF_6) received in 30-inch diameter steel cylinders, each containing approximately 1500 kilograms of enriched uranium. The UF_6 is chemically converted to uranium dioxide (UO_2) powder, which is pressed into fuel pellets, which in turn are loaded into fuel rods. These loaded fuel rods, in conjunction with other supporting

hardware (tie plates and grid spacers), are assembled into a variety of fuel bundle designs, depending on customer-specific requirements. The fuel products - powder, pellets, or fuel bundles (assemblies) - are loaded for shipment into specially designed shipping containers licensed by the NRC and/or the U.S. Department of Transportation.

4.4 *Description of Facilities Utilizing Special Nuclear Material*

The AREVA Richland nuclear fuel fabrication plant is located at 2101 Horn Rapids Road just within the northern limits of the City of Richland in Benton County, Washington. More specifically, the facility is located in the approximate center of the more easterly of two adjacent quarter sections (160 acres each) of land owned by AREVA. All facilities storing or processing special nuclear material are located within an approximately 53 acre fenced, secured area; the remainder of the surrounding AREVA property is either devoted to vehicle parking areas, is undeveloped, or is leased for agricultural usage.

The primary production activities involving special nuclear material are conducted in three major facilities - the Dry Conversion Facility; the Uranium Dioxide (UO_2) Building, which includes the Blended Low-Enriched Uranium (BLEU) addition; and the Specialty Fuels (SF) Building. The specific functions of these facilities, the general approach to their decommissioning, and the associated decommissioning cost tables are provided in Section 5.1, Production and Production Support Facilities, of this DFP.

The primary production facilities are supported by a number of ancillary support facilities that also entail the storage or handling of SNM or SNM-containing materials. These facilities are most typically involved with materials storage (feed materials, product intermediates, or finished product) or waste processing functions but also provide a number of other miscellaneous production support functions, e.g., purification of contaminated fuel scrap, laundering of contaminated clothing, and recertification of UF_6 shipping cylinders. A listing of these facilities and their functions, the general assumptions/approach pertinent to their decommissioning, and the associated decommissioning cost tables are also provided in Section 5.1 of this DFP.

The major containerized solid waste storage pads consist of two asphalted areas managing currently generated and legacy containerized (barreled or boxed) wastes. These facilities are distinguished by their large spatial size and the fact that they may manage mixed wastes, i.e., wastes that are both radiologically contaminated and chemically hazardous. These facilities are therefore simultaneously subject to the decommissioning requirements of the NRC and, for those portions managing chemically hazardous wastes, the closure requirements of the Washington State Department of Ecology. The inventory disposition and closure approach pertinent to the containerized waste pads are addressed in Section 5.2 of this DFP.

In addition to the facilities themselves as discussed above, operation of the site offers the potential for contamination of the land (soil) below and/or around those facilities. That contamination may have resulted from releases from the facilities or from releases/spills associated with the transfer of licensed materials between facilities, e.g., piping leaks, container spills, etc.

The most significant area of known soil contamination on the AREVA Richland site was the area associated with operation of the legacy surface impoundment system. Known liquid releases from at least three of the six impoundments in the 1970s - early 1980s resulted in contamination of the soils underlying these units with uranium as well as certain chemicals (fluorides, nitrates, ammonia). The surface impoundment system has been removed and associated radiological and non-radiological soil contamination remediated to meet Washington Department of Ecology (Ecology) soil cleanup levels for uranium and regulated chemical constituents. Additional soil remediation to meet NRC radiological decommissioning criteria is not anticipated to be necessary.

Less significant instances of soil contamination with licensed materials have occurred from spills/releases over the course of the plant's operating history. These contamination incidents have typically been small and remediated at the time of occurrence but in some cases the potential for residual contamination (detected or undetected) remains. These areas are documented in decommissioning records maintained by AREVA in accordance with 10 CFR 70.25(g).

Decommissioning obligations and associated costs relative to environmental remediation are discussed in Section 5.3. These include residual decommissioning-related final survey costs associated with the remediated surface impoundment area and potential characterization/ remediation costs associated with certain other areas as documented in required decommissioning records.

4.5 *Pre-Shipment/Disposal Waste Accumulations*

With the elimination of the site's historic surface impoundment system, current liquid waste processing is very closely coupled to production, using relatively small volume tanks. Accumulation of liquid SNM-containing wastes is minimal and an insignificant contributor to the overall plant decommissioning liability.

Current inventories of containerized solid wastes (low-level radioactive and mixed) and their associated disposition costs are provided in Table 26. Based on the site's continued progress in working down its legacy backlog of stored wastes, current inventories are no longer necessarily higher than possible maximum foreseeable inventories in the future. Therefore in addition to current inventories, Table 26 provides estimates of maximum anticipated volumes in each solid waste category. These higher inventory volumes have been conservatively utilized to estimate disposal cost liabilities.

5.0 Closure Procedures and Cost Estimates

This section outlines the major technical approaches involved in the decontamination and decommissioning of each major facility with a significant potential for radiological contamination. In the case of the containerized waste storage areas, the DFP also extends to the onsite waste inventory associated with these units. Minor ancillary facilities such as external docks, grounds, and warehouses, where contamination is not anticipated but may be found, will be decontaminated in a similar fashion as the known-contaminated facilities described herein.

Certain portions of the containerized waste storage areas may manage mixed wastes, i.e., wastes that are radiologically contaminated and also contain chemical constituents that cause them to be designated as dangerous wastes under the State of Washington Dangerous Waste Regulations. These wastes are dually regulated by the NRC and Ecology and the units are subject to the decommissioning requirements of the NRC (10 CFR 70.25) and the closure requirements of Ecology (WAC 173-303-610 and 650). Detailed decommissioning procedures written pursuant to this DFP and closure plans/procedures developed pursuant to Ecology's regulations will jointly address the requirements of both regulatory agencies with respect to the mixed waste areas.

Environmental remediation costs apart from costs associated with the decommissioning of site structures are not anticipated to be significant by comparison. Environmental remediation-related approaches and costs are discussed in Section 5.3.

5.1 *Production and Production Support Facilities*

The production activities at the AREVA Richland facility encompass the full scale of nuclear fuel fabrication, i.e., chemical conversion of UF_6 to UO_2 powder, UO_2 pellet production, rod loading, and fuel bundle assembly. These activities occur in three major production facilities, namely the Dry Conversion Facility; the UO_2 Building, including the Blended Low Enriched Uranium (BLEU) addition; and the Specialty Fuels Building. The major production activities are supported by a number of production support, or ancillary, facilities. The general approach to decommissioning these facilities, along with the associated costs, is described below. The associated cost estimates are shown in Tables 2 through 13.

5.1.1 Dry Conversion Facility

The Dry Conversion Facility (DCF) houses the head-end processes for the Richland plant's nuclear fuel fabrication activities, namely the vaporization of UF_6 out of Model 30-B shipping cylinders using electrically-heated autoclaves, the conversion of the UF_6 vapor to dry UO_2 powder in fluidized bed reactors, final defluoridation of the powder in calciners, and the physical preparation (milling, compacting, etc.) of the powder for subsequent pellet pressing. Major aspects of the decommissioning of the DCF are as follows:

1. All process equipment in the various contaminated areas of the building will be surveyed to determine the degree of contamination. Equipment with contamination which is below acceptable release levels will be disposed of on a commercial basis. Equipment which is contaminated to levels above such release levels will be decontaminated if warranted, and packaged for shipment. Such equipment contaminated above free release levels will be shipped to an appropriate low-level radioactive waste disposal site or alternatively, could be transferred to another licensed facility.

   Liquid effluent systems exiting radiation zones will be treated in the same manner as process equipment in the contaminated areas.

   Sufficient radiation surveys of process equipment outside the contaminated areas will be made to assure that no contamination has spread outside the contaminated operating areas. Non-contaminated process equipment outside the contaminated areas will be disposed of on a commercial basis.

2. All contaminated exhaust ductwork will be treated in a manner similar to the contaminated process equipment as described in item 1 above. The final filter bank of the ventilation system will also be disposed of by burial.

3. After removal of all process equipment and exhaust ducting, the facility ceiling and walls will be cleaned as necessary. The cost estimate for this work is based on steam cleaning. The typical wall materials (painted concrete and painted cement block) and ceiling materials (metal panels) are amenable to decontamination via steam cleaning. Although some isolated areas may require more aggressive cleaning approaches, e.g., sand blasting, the increased resources required in these cases should be offset by larger areas that may require minimal decontamination efforts. Porous, non-durable wall coverings such as gypsum wallboard are uncommon and are present in substantial quantities primarily in a single production support facility. Costs for removal/disposal of a reasonable portion of that material are included in the cost estimate.

4. The floors of the controlled areas will be stripped of all paint and appropriately cleaned. Solvents, if used, will be selected such that they will not cause materials to be designated as dangerous wastes under the State of Washington Dangerous Waste Regulations. The cost estimates for floor decontamination assume the application of sand blasting. Due to the fact that the floors are in most cases coated with some type of sealant, it is anticipated that

significant areas will require less aggressive techniques than sand blasting, thereby offsetting the costs of technologies more aggressive than sand blasting that may be required in some areas.

5. A radiation survey described in the decommissioning plan will be completed to verify that areas are successfully decontaminated.
6. After NRC approval of the radiation survey results, the entire affected area will be resurfaced as appropriate.

5.1.2 UO_2 Building

The UO_2 Building houses the majority of AREVA's nuclear fuel fabrication process downstream of the Dry Conversion Facility, i.e., pellet pressing to final fuel bundle assembly. The building also houses the Richland plant's one remaining "wet" chemical conversion (ammonium diuranate) production line, now utilized strictly for uranium scrap recovery. The activities (excluding the ADU conversion-related activities) are broadly grouped into two categories as follows:

- Ceramics, including additive blending, pellet pressing, pellet sintering, pellet grinding and pellet inspection; and
- Rod Fabrication/Bundle Assembly, including rod loading; rod welding, leak checking, assaying, and x-raying; rod inspection; bundle assembly; and bundle inspection, cleaning, and packaging.

These ceramics and rod fabrication/bundle assembly activities include those performed in the traditional portions of the UO_2 Building as well as those more recently added (2004) to accommodate processing of BLEU material.

Other miscellaneous support facilities located within the UO_2 Building include the U_3O_8 Facility, Powder Storage Facility, UNH Facility, Scrap Recovery Facility, Miscellaneous Uranium Recovery (MURS) Facility, Powder Characterization Facility, Quality Control Analytical/Testing Laboratories, and "hot" maintenance facilities.

Decontamination and decommissioning of the UO_2 Building will be accomplished via an approach consistent with that described for the Dry Conversion Facility.

5.1.3 Specialty Fuels Building

The Specialty Fuels (SF) Building houses fuel fabrication activities related to the production of fuel containing gadolinia (Gd_2O_3) as a neutron poison. The activities include the blending of UO_2 powder, produced in the Dry Conversion Facility or UO_2 Building, with purchased Gd_2O_3; powder preparation and additive blending; pellet pressing; pellet sintering; and pellet grinding. Loading of gadolinia-containing pellets into rods occurs in the UO_2 Building. Also located in the SF Building is the Solid Waste Uranium Recovery (SWUR) Incinerator Facility.

Decontamination and decommissioning of the SF Building will be accomplished via an approach consistent with that described for the Dry Conversion Facility and UO_2 Building.

5.1.4 Production Support (Ancillary) Facilities

In addition to the Dry Conversion Facility and the UO_2 and SF Buildings, a number of other facilities are involved with enriched uranium handling and processing in varying degrees, and will, therefore, require decontamination/decommissioning efforts commensurate with those activities. The facilities, along with a brief summary of their associated enriched uranium/ radionuclide-handling activities, are as follows:

1. Engineering Laboratory Operations (ELO) Building - process development laboratories, Gadolinia Scrap Uranium Recovery (GSUR) Facility (fuel scrap dissolution and solvent extraction activities), decontamination area, and hot maintenance area.
2. Contaminated Clothing Laundry - laundering of contaminated protective clothing.
3. Fuels Storage Warehouse (Warehouse 4) - storage of packaged special nuclear material in various compounds and forms.
4. UNH Drum Storage Warehouse - storage of closed drums of uranyl nitrate liquid awaiting processing.
5. Uranium Storage Warehouse (Warehouse 6) - storage of packaged special nuclear material in various compounds and forms.
6. Operations Scrap Warehouse (Warehouse 7) - storage of closed containers of uranium-containing feed materials, product, or scrap awaiting processing.
7. Product Development Test Facility (PDTF) - LOCA heat transfer, seismic, and coolant flow testing of nuclear fuel assemblies.
8. UF_6 Receiving and Storage Facility - receipt and storage of UF_6 cylinders.
9. Lagoon Uranium Recovery (LUR) Facility - past recovery of uranium from liquid process wastes; currently devoted to non-SNM radioactive material processing.
10. Solids Processing Facility (SPF) - an addition to LUR containing equipment for recovery of uranium from contaminated sludges.
11. Silicon Removal Process (SRP) - equipment housed at LUR/SPF to remove silicon from the low-U liquid effluents before treatment in the Ammonia Recovery Facility.
12. Modular Extraction Recovery Facility (MERF) - recovery of uranium from certain solid phase low-level radioactive and mixed wastes.
13. Wastewater Treatment Facility - includes the traditional Ammonia Recovery Facility (ARF) for the recovery of ammonium hydroxide from high-ammonia-content liquid process wastes; the filtration and ion exchange (IX) systems for removal of trace levels of uranium from the plant's final sewered effluent, including equipment to flush and regenerate these systems; and wastewater tanks for interim management of the site's contaminated liquid effluents.
14. Fuel Services Facility (Building 9) - disassembly of contaminated fuel bundles; waste handling/packaging activities; miscellaneous production-support activities.
15. Cylinder Recertification Facility (CRF) - testing and recertification of UF_6 cylinders.
16. Warehouse 2/LMF Loading Warehouse - storage/loading of packaged special nuclear material in various compounds and forms.

The same basic plan as outlined above for the major production facilities will be implemented, as necessary, in the decontamination and decommissioning of these ancillary facilities.

Assumptions specific to ancillary facilities are as follows:

1. The following facilities contain contaminated equipment to be disposed of and, based on the nature of their operations, will likely require decontamination of the facility and supporting structures prior to release.
    - ELO (process areas)

- LUR/SPF/SRP
- MERF
- Fuel Services Building (Building 9)
- WWTF (ARF process sump areas only)
- Laundry

2. The following facilities contain contaminated equipment to be disposed of, but no significant contamination of the facilities themselves is anticipated because the radioactive material was well contained in equipment or in closed containers:
   - WWTF (exclusive of ARF process sump areas)
   - Cylinder Recertification Facility
3. The following facilities contain neither contaminated equipment requiring disposal nor significant levels of structural contamination because they contain radioactive material exclusively in closed containers.
   - Operations Scrap Warehouse (Warehouse 7)
   - UNH Drum Storage Warehouse
   - Uranium Storage Warehouse (Warehouse 6)
   - PDTF
   - Fuels Storage Warehouse (Warehouse 4)
   - UF_6 Receiving and Storage Facility
   - Warehouse 2/LMF Loading Warehouse

Table 2 Total Dimensions of Facility Components - Production and Production Support Facilities

Level of Contamination: <1.7 Bq/cm^2

Production Facilities	Components	Total Dimensions
Dry Conversion Facility	• Floors • Walls • Ceilings • Equipment/Components/Wallboard (packaged for disposal)	17,818 ft^2 46,179 ft^2 20,611 ft^2 12,298 ft^3
UO_2 Building, including BLEU	• Floors • Walls • Ceilings • Equipment/Components/Wallboard (packaged for disposal)	116,269 ft^2 268,606 ft^2 135,355 ft^2 56,814 ft^3
Specialty Fuels Building	• Floors • Walls • Ceilings • Equipment/Components/Wallboard (packaged for disposal)	13,540 ft^2 52,804 ft^2 15,825 ft^2 11,074 ft^3
Production Support Facilities	Components	Total Dimensions
WWTF (ARF Sumps Only)	• Floors	527 ft^2
LUR/SPF/SRP Building	• Floors • Walls • Ceilings	6,165 ft^2 25,823 ft^2 6,673 ft^2
ELO Building	• Floors • Walls • Ceilings	8,772 ft^2 19,743 ft^2 8,770 ft^2
MERF	• Floors • Walls • Ceilings	2,045 ft^2 5,091 ft^2 2,045 ft^2
Fuel Services Building (Building 9)	• Floors • Walls • Ceilings	5,305 ft^2 10,361 ft^2 5,455 ft^2
Laundry	• Floors • Walls • Ceilings	299 ft^2 690 ft^2 299 ft^2
All Production Support Facilities	• Equipment/components/wallboard from all production support facilities (packaged for disposal)	15,730 ft^3

Table 3 Planning and Preparation - Production and Production Support Facilities (Work Days)

Estimate of the number of work days, by specific labor category, that will be required to complete planning and preparation activities.

Activity	Safety Engineer Work Days	Engineer Work Days	Health and Safety Technician Work Days	NRC Work Days	Crafts (Avg.) Work Days	Laborer - (Semi-Skilled) Work Days
Preparation of Documentation for Regulatory Agencies	181					
Submittal of Decommissioning Plan to NRC when required by 10 CFR 30.36(g)(1), 40.42(g)(1), or 70.38(g)(1)	27			25		
Development of Work Plans		22				
Procurement of Special Equipment		44				
Staff Training			50		50	150
Characterization of Radiological Condition of the Facility (including sampling, soil and tailings analysis, or groundwater analysis if applicable)			1,223			
TOTALS	208	66	1,273	25	50	150

Table 4 Decontamination or Dismantling of Radioactive Facility Components - Production and Production Support Facilities (Work Days)

Estimate of the number of workdays, by specified labor category that will be required to complete decontamination and/or dismantling activities for each facility component.

Name of room, laboratory, or area: Dry Conversion Facility
Level of Contamination: <1.7 Bq/cm^2

Component	Decon. Method	Engineer Work Days	Crafts (Avg.) Work Days	Laborer (Semi-Skilled) Work Days	Health and Safety Technician Work Days
Preparation/ Mobilization				56	
Equipment/ Component Removal			326	326	
Floors	Sand blast	Estimated @ $2.64/ft^2 (See Table 12) = $47,040			
Walls/ Ceilings	Steam Clean	Estimated @ $0.264/ft^2 (See Table 12) = $17,633			
Remedial Radiation Surveys					40
QA/QC		25			
TOTALS		25	326	382	40

Table 4 Decontamination or Dismantling of Radioactive Facility Components - Production and Production Support Facilities (Work Days) (cont.)

Estimate of the number of workdays, by specified labor category that will be required to complete decontamination and/or dismantling activities for each facility component.

Name of room, laboratory, or area: UO_2 Building, including BLEU
Level of Contamination: <1.7 Bq/cm^2

Component	Decon. Method	Engineer Work Days	Crafts (Avg). Work Days	Laborer (Semi-Skilled) Work Days	Health and Safety Technician Work Days
Preparation/ Mobilization				276	
Equipment/ Component Removal			1,626	1,626	
Floors	Sand blast	Estimated @ $2.64/ft^2 (See Table 12) = $306,951			
Walls/ Ceilings	Steam Clean	Estimated @ $0.264/ft^2 (See Table 12) = $106,646			
Remedial Radiation Surveys					211
QA/QC		129			
TOTALS		129	1,626	1,902	211

Table 4 Decontamination or Dismantling of Radioactive Facility Components - Production and Production Support Facilities (Work Days) (cont.)

Estimate of the number of workdays, by specified labor category that will be required to complete decontamination and/or dismantling activities for each facility component.

Name of room, laboratory, or area: Specialty Fuels Building
Level of Contamination: <1.7 Bq/cm^2

Component	Decon. Method	Engineer Work Days	Crafts (Avg). Work Days	Laborer (Semi-Skilled) Work Days	Health and Safety Technician Work Days
Preparation/ Mobilization				103	
Equipment/ Component Removal			1,040	1,040	
Floors	Sand blast	Estimated @ $2.64/ft^2 (See Table 12) = $35,746			
Walls/ Ceilings	Steam Clean	Estimated @ $0.264/ft^2 (See Table 12) = $18,118			
Remedial Radiation Surveys					98
QA/QC		30			
TOTALS		30	1,040	1,143	98

Table 4 Decontamination or Dismantling of Radioactive Facility Components - Production and Production Support Facilities (Work Days) (cont.)

Estimate of the number of workdays, by specified labor category that will be required to complete decontamination and/or dismantling activities for each facility component.

Name of room, laboratory, or area: Production Support (Ancillary) Facilities
Level of Contamination: <1.7 Bq/cm^2

Component	Decon. Method	Engineer Work Days	Crafts (Avg). Work Days	Laborer (Semi-Skilled) Work Days	Health and Safety Technician Work Days
Preparation/ Mobilization				157	
Equipment/ Component Removal			401	401	
Floors	Sand blast	Estimated @ $2.64/ft^2 (See Table 12) = $61,018			
Walls/ Ceilings	Steam Clean	Estimated @ $0.264/ft^2 (See Table 12) = $22,427			
Remedial Radiation Surveys					53
QA/QC		43			
TOTALS		43	401	558	53

Table 5 Final Radiation Survey - Production and Production Support Facilities (Work Days)

Estimate of the number of work days, by specific labor category that will be required to conduct a final radiation survey.

Activity	Health and Safety Technician Work Days
Final Survey	1,223
TOTAL	1,223

Table 6 Total Work Days by Labor Category - Production and Production Support Facilities

Total work days estimated for each specific labor category from the applicable tables above (i.e., from Tables 3 through 5).

Activity	Project Manager	Safety Engineer Work Days	Senior Engineer Work Days	Engineer Work Days	Health and Safety Technician Work Days	Clerical Work Days	Crafts (Avg.) Work Days	Laborer (Semi-Skilled) Work Days	NRC Work Days
Planning and Preparation (TOTALS from Table 3)		208		66	1,273		50	150	25
Decontamination and/or Dismantling of Radioactive Facility Components (Sum of TOTALS from Table 4)				227	402		3,393	3,985	
Final Radiation Survey (TOTAL from Table 5)					1,223				
Project Administration	780	780	780	780		780			

Table 7 Worker Unit Cost Schedule

Fully burdened billing rates from State of Washington-based third party contractors (with exception of NRC).

Labor Category	Labor Rate, $/hr.	Labor rate, $/day*
Project Manager	75.52	604
Senior Engineer	102.00	816
Engineer	81.60	653
Health and Safety Technician (HST)	40.80	326
Safety Engineer	69.19	554
Crafts (Avg.)	66.41	531
Equipment Operator	48.02	384
Laborer (Semi-Skilled)	43.70	350
Clerical	32.44	260
NRC	238.00	1904

* Rounded to the nearest dollar.

Table 8 Total Labor Costs by Major Decommissioning Task - Production and Production Support Facilities

Estimated work days for each specific labor category (from Table 6) multiplied by the total cost per work day for the corresponding labor category (from Table 7).

Task	Project Manager Cost, $	Safety Engineer Cost, $	Senior Engineer Cost, $	Engineer Cost, $	Health and Safety Tech. Cost, $	Clerical Cost, $	Crafts (Avg.) Cost, $	Laborer (Semi-Skilled) Cost, $	NRC Cost, $	Total Labor Cost, $
Planning and Preparation		115,232		43,098	414,998		26,550	52,500	47,600	699,978
Decontamination or Dismantling of Radioactive Facility Components				148,231	131,052		1,801,683	1,394,750		3,475,716
Final Radiation Survey					398,698					398,698
Project Administration	471,120	432,120	636,480	509,340		202,800				2,251,860

Table 9 Packaging, Shipping, and Disposal of Radioactive Wastes - Production and Production Support Facilities (Excluding Labor Costs)

(a) Packing Material Costs

Estimate of the types and volumes of waste expected to be generated, along with the number and types of containers required for packing the waste.

Waste Type	Volume (ft^3)	Number of Containers	Type of Container	Unit Cost of Container, $	Total Packaging Costs, $
Bldg. Waste	95,916	1,032	93 ft^3 Box	1,350	1,393,200
Scrap 30-B Cylinder Waste	864	10			13,500
ANF-250 Pellet Suitcases/ Cages	300 (compacted)	4			5,400
TOTAL	97,080	1,046			1,412,100

(b) Packing, Shipping, Disposal Cost

Estimate of the volume of waste to be disposed and the packing, shipping, and disposal costs.

Waste Type	Disposal Volume (ft^3)	Disposal Costs, $
Bldg. Waste	95,916	
Scrap 30-B Cylinder Waste	864	
ANF-250 Pellet Suitcases/Cages	300 (compacted)	
TOTAL	97,080	10,660,000*

* Assumes all wastes accumulated/staged for disposal over two calendar year period at maximum allowed waste site revenue collection of $5.33 M/yr. (see Section 3.0, Key Assumptions)

Table 10 Equipment/Supply Costs - Production and Production Support Facilities
(Excluding Containers)

Estimate of the quantity of equipment and supplies required for decommissioning.

Equipment/Supplies	Total Equipment/Supply Cost, $
Miscellaneous Cleaning Equipment/Consumable Supplies	362,641
TOTAL	362,641

Table 11 Laboratory Costs - Production and Production Support Facilities

Estimate of costs for analyses to be performed by an independent third-party laboratory.

Activity	Total Cost, $
Sampling and analysis	10,000
TOTAL	10,000

Table 12 Miscellaneous Costs - Production and Production Support Facilities

Estimate of any other applicable costs.

Cost Item	Total Cost, $
State/Local Permit and Inspection Fees	30,000/yr. x 3 yr. = 90,000
Insurance	1.3M x 3 yr. = 3,900,000
Taxes	50,000/yr. x 3 yr. 150,000
NRC Inspections	64,000/yr. x 3 yr. = 192,000
Steam Cleaning Walls/Ceilings	164,824
Sand Blasting Floors	450,755
Certification Survey	90,000
Consultant Support (Health Physics, Decommissioning)	120,000
TOTAL	5,157,579

Table 13 Total Decommissioning Costs - Production and Production Support Facilities

Total of the reported costs in Tables 8, 9, 10, 11 and 12.

Task/Component	Cost, $
Planning and Preparation (From Table 8)	699,978
Decontamination and/or Dismantling of Radioactive Facility Components (From Table 8)	3,475,716
Final Radiation Survey (From Table 8)	398,698
Packing Material Costs (TOTAL from Table 9)	1,412,100
Packing, Shipping, Disposal Costs (TOTAL from Table 9)	10,660,000
Project Administration Costs (TOTAL from Table 8)	2,251,860
Equipment/Supply Costs (TOTAL from Table 10)	362,641
Laboratory Costs (TOTAL from Table 11)	10,000
Miscellaneous Costs (TOTAL from Table 12)	5,157,579
TOTAL - Production and Production Support Facilities	24,428,572

5.2 *Containerized Waste Storage Pads and Inventories*

Containerized (barreled or boxed) operational wastes are managed on an ongoing basis at two significant container storage areas at the Richland facility - an uncovered asphalt pad located in the central portion of the site, often referred to as the "old" or "historic" dangerous waste storage pad; and a newer, partially covered asphalt pad, located in the southeast corner of the site, and referred to as the Dangerous Waste Storage Facility (DWSF). Both pads manage containerized low-level radioactive waste (LLRW) and also manage, or have managed, LLRW that also designates as chemically dangerous per Ecology's Dangerous Waste Regulations (WAC 173-303), i.e., mixed wastes. As such, these waste management units, all or in part, are subject to both the NRC's decommissioning requirements and Ecology's closure requirements, as well as the financial assurance requirements of both agencies.

The decommissioning/closure of the containerized waste storage pads will involve disposition of the containerized inventories followed by decommissioning/closure of the physical structures. Current plans call for utilization of both pads for the management of LLRW until time of plant closure, meaning that NRC decommissioning will not occur before then. With respect to mixed waste management, nearly all of the historic dangerous waste pad has been closed per Ecology regulations now that AREVA's Modular Extraction Recovery Facility (MERF) has completed its uranium recovery processing of the large volume of legacy containerized mixed wastes once stored on the historic pad. In the event that MERF is operated in the future, any mixed waste storage in the MERF staging area will be conducted in accordance with Ecology regulations on a less-than-90-day basis. Management of LLRW and mixed wastes on the newer DWSF will continue until time of plant closure, at which time AREVA will pursue Ecology closure of the DWSF plus the small unclosed portion of the historic pad housing the MERF operational area. At that time, decommissioning of both pads will also be pursued per NRC requirements. Decommissioning of the MERF facility itself is addressed as one of the ancillary facilities in Section 5.1.4 of this plan.

5.2.1 Container Storage Pad Structures

Physical structures associated with the container storage pads (historic pad and DWSF) consist of the blacktop pads at both locations, a limited number of double containment storage pallets, and the roofed three-sided storage building at the DWSF. Contamination levels (radiological or chemical) are expected to be minimal at both locations based on the fact that the pads manage for the most part solid phase wastes in securely closed strong-tight containers. Outside surfaces of the containers have undergone appropriate radiological release surveys. Furthermore, the containers are subject to routine operational inspections. The need for remediation of surrounding or underlying soil to any significant extent is also not anticipated but soil status will be verified via appropriate screening/sampling protocols. Prior (September 2004) closure of a significant portion of the historic waste pad under Ecology regulations confirmed the lack of surface and soil contamination associated with this operation.

Major aspects of the decommissioning/closure of the container storage pads and associated equipment/facilities are as follows:

- radiological surface screening measurements at a detection sensitivity sufficient to detect past releases from containers to the blacktop or surrounding peripheral soils;
- removal of any asphalt with evidence of radiological contamination to allow similar screening of underlying soil;
- chemical constituent sampling of underlying or peripheral soils found to be radiologically contaminated;

- removal/disposal of contaminated blacktop and/or soils in accordance with NRC/Ecology cleanup criteria;
- surveying/decontamination/release of double containment pallets, and;
- replacement of removed asphalt with non-contaminated material.

Final release of the pad structures will be subject to the final release survey requirements of both the NRC and Ecology. Costs associated with closure/decommissioning of the waste storage pad structures are summarized in Tables 14-25.

Table 14 Number and Dimensions of Facility Components - Storage Areas

Name of room, laboratory, or area: Outdoor Containerized Waste Storage Areas

Component	Number of Components	Dimensions of Components	Total Dimensions, ft^2
Asphalt Pad - Old	1	72' x 133.' + 45' x 169'	17,181
Asphalt Pad - DWSF	1	120' x 170'	20,400
Double Containment Pallets	20	4' x 4'	320

Table 15 Planning and Preparation - Storage Areas (Work Days)

Estimate of the number of work days, by specific labor category, that will be required to complete planning and preparation activities.

Activity	Safety Engineer Work Days	Engineer Work Days	Health and Safety Technician Work Days	Laborer (Semi-Skilled) Work Days
Preparation and Submittal of Documentation for Regulatory Agencies	*			
Submittal of Decommissioning Plan to NRC when required by 10 CFR 30.36(g)(1), 40.42(g)(1), or 70.38(g)(1)	*			
Development of Work Plans/Safety Plans	2			
Procurement of Special Equipment		2		
Staff Training	1		1	1
Characterization of Radiological Condition of the Facility (including sampling, soil and tailings analysis, or groundwater analysis if applicable)		4	10	4
Other (specify)				
TOTALS	3	6	11	5

* Labor costs included in Decommissioning Plan for Production and Production Support Facilities.

Table 16 Decontamination or Dismantling of Radioactive Facility Components - Storage Areas (Work Days)

Estimate of the number of workdays, by specified labor category that will be required to complete decontamination and/or dismantling activities for each facility component.

Name of room, laboratory, or area: Waste Storage Areas

Component	Health and Safety Technician Work Days	Laborer (Semi-Skilled) Work Days
Asphalt Pads	1	2
Double Containment Pallets	5	
TOTALS	6	2

Table 17 Restoration of Contaminated Areas on Facility Grounds - Storage Areas (Work Days)

Estimate of the number of work days, by specific labor category that will be required to restore contaminated areas on facility grounds.

Activity	Laborer (Semi-Skilled) Work Days
Waste Storage Areas	3
TOTAL	3

Table 18 Final Radiation Survey - Storage Areas (Work Days)

Estimate of the number of work days, by specific labor category that will be required to conduct a final radiation survey.

Activity	Engineer Work Days	Health and Safety Technician Work Days	Laborer (Semi-Skilled) Work Days
Survey		30	
Sampling Labor	2		2
TOTALS	2	30	2

Table 19 Total Work Days by Labor Category - Storage Areas

Total work days estimated for each specific labor category from the applicable tables above (i.e., from Tables 15 through 18).

Activity	Safety Engineer Work Days	Engineer Work Days	Health and Safety Technician Work Days	Laborer (Semi-Skilled) Work Days
Planning and Preparation (TOTALS from Table 15)	3	6	11	5
Decontamination and/or Dismantling of Radioactive Facility Components (Sum of TOTALS from Table 16)			6	2
Restoration of Contaminated Areas on Facility Grounds (TOTAL from Table 17)				3
Final Radiation Survey (TOTALS from Table 18)		2	30	2

Table 20 Total Labor Costs by Major Decommissioning Task - Storage Areas

Estimated work days for each specific labor category (from Table 19) multiplied by the total cost per work day for the corresponding labor category (from Table 7).

Task	Safety Engineer Cost, $	Engineer Cost, $	Health and Safety Technician Cost, $	Laborer (Semi-Skilled) Cost, $	Total Labor Cost, $
Planning and Preparation	1,662	3,918	3,586	1,750	10,916
Decontamination or Dismantling of Radioactive Facility Components			1,956	700	2,656
Restoration of Contaminated Areas on Facility Grounds				1,050	1,050
Final Radiation Survey		1,306	9,780	700	11,786

Table 21 Packaging, Shipping, and Disposal of Radioactive Wastes - Storage Areas (Excluding Labor Costs)

(a) Packing Material Costs

Estimate of the types and volumes of waste expected to be generated, along with the number and types of containers required for packing the waste.

Waste Type	Volume (ft^3)	Number of Containers	Type of Container	Unit Cost of Container, $	Total Packaging Costs, $
Asphalt/Soil	40	6	55 gal. drum	33	198
TOTAL					198

(b) Processing, Packing, Shipping, Disposal Cost

Estimate of the volume of waste to be disposed and the packing, shipping, and disposal costs.

Waste Type	Disposal Volume (ft^3)	Unit Cost ($/$ft^3$)	Total Disposal Costs, $
Asphalt/Soil	45	227	10,215
TOTAL			10,215

Table 22 Equipment/Supply Costs - Storage Areas (Excluding Containers)

Estimate of the quantity of equipment and supplies required for decommissioning.

Equipment/Supplies	Total Equipment/Supply Cost, $
Radiation Screening Instruments	12,000
TOTAL	12,000

Table 23 Laboratory Costs - Storage Areas

Estimate of costs for analyses to be performed by an independent third-party laboratory.

Activity	Total Cost, $
Testing and analysis - 48 samples @ $250	12,000
TOTAL	12,000

Table 24 Miscellaneous Costs - Storage Areas

Estimate of any other applicable costs.

Cost Item	Total Cost, $
Certification of Closure (WDOE)	10,000
Final Survey (NRC)	20,000
TOTAL	30,000

Table 25 Total Decommissioning Costs - Storage Areas

Total of the reported costs in Tables 20, 21, 22, 23 and 24.

Task/Component	Cost, $
Planning and Preparation (From Table 20)	10,916
Decontamination and/or Dismantling of Radioactive Facility Components (From Table 20)	2,656
Restoration of Contaminated Areas on Facility Grounds (From Table 20)	1,050
Final Radiation Survey (From Table 20)	11,786
Packing Material Costs (TOTAL from Table 21)	198
Processing, Packing, Shipping, Disposal Costs (TOTAL from Table 21)	10,215
Equipment/Supply Costs (TOTAL from Table 22)	12,000
Laboratory Costs (TOTAL from Table 23)	12,000
Miscellaneous Costs (TOTAL from Table 24)	30,000
TOTAL - Storage Areas	90,821

5.2.2 Containerized LLRW Inventory

The LLRW inventory consists of barreled or boxed waste materials that are radioactively contaminated but that do not designate as chemically dangerous per Ecology regulations. They are essentially all solid-phase materials; all of the relatively few drums containing liquids, e.g., radioactively contaminated oils, are stored on double containment pallets or in drums within drums. Treatment and/or disposal options are available for each of the major containerized LLRW categories; disposition pathways vary primarily based on combustible versus non-combustible classification of the waste. Primary disposition pathways include:

- for combustible wastes, incineration in AREVA's SWUR facility, followed by uranium recovery processing of the resultant ash; and
- for non-combustible LLRW, disposal at the U.S. Ecology-operated Hanford LLRW disposal site.

Table 26 summarizes the volumes and associated disposition costs for the containerized LLRW inventory. As noted in the table, current inventories are now somewhat lower than reasonably assumed maximum inventories, due in large part to the site's significant progress in working off its historic backlog of stored wastes. The maximum expected volumes have been conservatively utilized to estimate disposal cost liabilities.

5.2.3 Containerized Mixed Waste Inventory

The containerized mixed waste inventory consists of wastes that are both radioactively contaminated and chemically dangerous (per Ecology criteria). Like the LLRW inventory, they are essentially all solid-phase; the few remaining liquid-containing drums are stored on containment pallets. Treatment and/or disposal options are available and being utilized for all of the major currently generated containerized mixed waste categories. Options for the final disposition of a relatively small volume of legacy mixed wastes and very small volume of currently generated mixed wastes have not been identified but continue to be pursued in the commercial sector.

Disposition pathways for the containerized mixed wastes depend primarily on the specific acceptance criteria of the contracted mixed waste disposal site. Primary disposition pathways, depending on the specific waste stream, include:

- direct shipment to the contracted mixed waste disposal site with or without pre-compaction; and
- offsite treatment via a permitted commercial mixed waste treatment facility followed by disposal of the treated residues at the contracted mixed waste disposal facility.

Table 26 also summarizes the volumes and associated disposition costs for the containerized mixed waste inventory. As in the case of the non-mixed LLRW, the current inventory of containerized mixed wastes is smaller than reasonably assumed maximum inventories. As such, the maximum expected inventories have been utilized to estimate disposal cost liabilities.

Table 26 Containerized Waste Inventory Costs

	Disposal Rate $/ft[3]	Current Volume ft[3]	Max Expected Volume ft[3]	Max Total Cost, $[1]
LLRW[2] - Incinerate in SWUR	$163.20	4,522	10,890	$1,777,248
LLRW - Direct disposal at LLRW burial site	$222.01	1,860	1,953	$433,586
LLRW - On hold for further processing	$222.01	1,522	1,600	$118,405*
	LLRW - Total	**7,904**	**14,443**	**$2,329,239**
MW[3] - Disposal at contracted mixed waste disposal site	$268.36	963	1,200	$322,032
MW - No disposal option	$666.66	266	326	$217,331
	MW - Total	**1,229**	**1,526**	**$539,363**

* Takes credit for 3:1 compaction prior to disposal.

[1] Because this waste is containerized, the cost of containers is not included.
[2] Low-level radioactive waste
[3] Mixed waste

5.3 *Environmental Remediation*

Decommissioning financial liability can be associated with environmental contamination with licensed materials to the extent that the contamination requires remediation during decommissioning to meet the unrestricted use criteria of 10 CFR 20.1402. At the Richland facility the most significant area of known soil contamination was the area associated with the legacy surface impoundment system. This historically contaminated area and its residual decommissioning liability are discussed below in Section 5.3.1. Similar discussion relative to other historic site spills/releases of licensed materials to the environment is provided in Section 5.3.2.

5.3.1 Legacy Surface Impoundment System

The Richland site maintained and operated a surface impoundment system over the time period of 1971-2004 for the management of the plant's radioactively-contaminated (low-level uranium) liquid effluents. Certain of those impoundments initially installed with single liner systems developed leaks, resulting in contamination of the underlying soil. The leaks also resulted in uranium contamination within the shallow confined groundwater aquifer underlying the site. From 1983 until their last usage in 2004, all of the impoundments were operated with multi-linered containment systems with inter-liner leak detection/leachate collection; no additional leaks were documented over that period.

The surface impoundment system has been removed from service in accordance with a consent decree and formal closure plan under Washington State Department of Ecology (Ecology) Dangerous Waste Regulations. The work involved processing of the stored waste inventory, removal/disposal of lagoon structural components, characterization of contamination levels in underlying soil, and remediation (removal and offsite disposal) of contaminated soil to meet Ecology cleanup levels for uranium and regulated non-radiological chemicals. Certification of completion of the work in accordance with the approved closure plan and associated soil cleanup levels was submitted to Ecology in September 2006; Ecology concurrence was received on November 14, 2006.

AREVA believes that the surface impoundment area now conservatively meets NRC requirements for unrestricted release and that no additional remediation will be required at the time of final plant decommissioning. The Ecology-imposed uranium cleanup level of 12.1 mg/kg translates to an activity level of 29 pCi/g for uranium at a U-235 enrichment of 3.5%. In reality the residual soil uranium concentrations present upon completion of the Ecology-mandated closure work were generally well below the 29 pCi/g limit in that cleanup to a very conservative fluoride soil cleanup limit typically drove soil removal/disposal to an extent well beyond that required to meet the uranium cleanup limit. AREVA has calculated DCGLs of 63 pCi/g for U-234 and 66 pCi/g for U-235, U-236, and U-238 based on RESRAD 6.3 and ICRP 30 (using more up-to-date ICRP models would yield even higher DCGLs). While realizing the final NRC release of the former surface impoundment area will be based on NRC-approved DCGLs and final status and confirmatory surveys, it is not anticipated that such DCGLs will necessitate cleanup beyond that already conducted.

Groundwater levels of uranium are in the general range of, or below, the Ecology groundwater cleanup level for uranium of 30 ug/l (ppb), corresponding to the current federal (EPA) uranium drinking water limit. Groundwater levels of uranium are declining and are expected to continue to decline via natural attenuation in that the Ecology uranium soil cleanup level was calculated to be protective of groundwater at the 30 ppb groundwater limit. Uranium has not been detected at levels exceeding the drinking water standard in any monitored offsite downgradient

wells. Those wells are located on the immediately downgradient U.S. Department of Energy Hanford Site, where groundwater is not extracted for any practical usage (consumption, irrigation, etc.).

Residual decommissioning cost liabilities related to the legacy surface impoundment area are limited to the costs associated with the planning for, and the conduct of, a technically compliant final survey, including anticipated NRC regulatory oversight and the conduct of an NRC-required third party certification survey. These residual costs are provided in Tables 27-30. These costs will be incurred at the time of final plant decommissioning in that the NRC has granted AREVA an alternate schedule for official decommissioning of the remediated surface impoundment area in accordance with 10 CFR 70.38(f) (November 15, 2006; TAC L31973).

5.3.2 Other Historic Spills and Releases

As required by 10 CFR 70.25(g)(3), AREVA maintains records of information important to the decommissioning of the Richland site, which includes areas of known or suspect environmental contamination that will require additional characterization and, if needs be, remediation at the time of plant decommissioning. These potential environmental remediation areas are a subset of the areas listed per 10 CFR 70.25(g)(3)(ii), i.e., records of spills or other unusual occurrences involving the spread of contamination in and around the facility, equipment, or site. Information in this regard has been derived from two major sources, namely (1) a major site-wide remedial investigation/feasibility study (RI/FS) conducted in the early 1990s which included a formal hazardous substance source review (the RI/FS was in response to surface impoundment-related issues and included both radiological and non-radiological constituents), and (2) the site's ongoing hazardous spill/release reporting procedure and associated spill reports/log.

Records of these past spills/releases typically reveal residual contamination levels below 30 pCi/g uranium-based activity; furthermore most of the areas are highly localized and typically were remediated at the time of occurrence. Extensive environmental remediation efforts are not anticipated for these areas to meet decommissioning radiological release criteria. Costs will primarily be related to characterization (investigation, sampling, analysis) with the potential for limited soil removal costs. Any limited soil removal required will not result in incremental disposal costs in that the soil can be easily accommodated within the void spaces in the over 1000 93 ft^3 burial boxes that will be utilized to contain removed facility equipment (see Table 9). Estimated decommissioning costs related to environmental remediation of historic spills/releases (unrelated to the surface impoundments) are provided in Tables 31-34.

Table 27 Residual Labor Requirements for Final Release of Former Surface Impoundment Area (Work Days)

Estimated number of work days by specific labor category that will be required to complete the planning and preparation for, and the conduct of, a final release survey for the former surface impoundment area.

Activity	Senior Engineer Work Days	Engineer Work Days	NRC Work Days	Laborer (Semi-Skilled) Work Days	Equipment Operator (Light) Work Days
Planning and Preparation					
Preparation of Documentation for Regulatory Agencies	6				
Submittal of Decommissioning Plan to NRC when Required by 70.38(g)(1)	5		10		
Development of Work Plans		5			
Procurement of Special Equipment		4			
Staff Training		4		4	4
Conduct of Survey					
Final Radiation Survey (gridding, sampling, sample preparation)				44	44
TOTALS	11	13	10	48	48

Table 28 Total Labor Costs for Final Release of Former Surface Impoundment Area

Estimated work days for each specific labor category (from Table 27) multiplied by the total cost per work day for the corresponding labor category (from Table 7).

Task	Senior Engineer Cost, $	Engineer Cost, $	Equipment Operator (Light) Cost, $	Laborer (Semi-Skilled) Cost, $	NRC Cost, $	Total Labor Cost, $
Planning and Preparation	8,976	8,489	1,536	1,400	19,040	39,441
Conduct of Final Radiation Survey			16,896	15,400		32,296

Table 29 Laboratory and Miscellaneous Costs - Final Release of Former Surface Impoundment Area

Estimate of costs for analyses to be performed by an independent third-party laboratory as well as other third party support costs.

Activity/Item	Total Cost, $
Testing and analysis: 480 samples @ $50 ea.	24,000
Sample borehole drilling 40 @ $850	34,000
NRC Inspections $30,000/yr.	30,000
Certification Survey	75,000
TOTAL	163,000

Table 30 Total Decommissioning Costs - Final Release of Former Surface Impoundment Area

Total of the reported costs in Tables 28 and 29.

Task/Component	Cost, $
Planning and Preparation (From Table 28)	39,441
Conduct of Final Radiation Survey (From Table 28)	32,296
Laboratory and Miscellaneous Costs (TOTAL from Table 29)	163,000
TOTAL – Former Surface Impoundment Area	234,737

Table 31 Labor Requirements - Environmental Remediation (Work Days)

Estimated number of work days by specific labor category that will be required to investigate, characterize and remediate pertinent environmental releases/spills recorded in accordance with 10 CFR 70.25(g)(3)

Activity	Engineer Work days	Equipment Operator (Light) Work Days	Laborer (Semi-Skilled) Work Days
Work plans/procedures	3		
Pre-characterization dismantlement and/or excavation		2	2
Soil sample collection (characterization and confirmation)	2		
Soil removal/packaging (if required)		3	3

Table 32 Total Labor Costs for Environmental Remediation

Estimated number of work days for each specific labor category (from Table 31) multiplied by the total cost per work day for the corresponding labor category (from Table 7)

Activity	Engineer Cost, $	Equipment Operator (Light) Cost, $	Laborer (Semi-Skilled) Cost, $	Total Labor Cost, $
Work plans/procedures	1,959			1,959
Pre-characterization dismantlement and/or excavation		768	700	1,468
Soil sample collection (characterization and confirmation)	1,306			1,306
Soil removal/packaging (if required)		1,152	1,050	2,202

Table 33 Laboratory and Miscellaneous Costs - Environmental Remediation

Estimate of costs for analyses to be performed by an independent third-party laboratory.

Activity/Item*	Total Cost, $
Testing and analysis: 40 samples @ $50 ea.	2,000
NRC Inspections, certification survey	Covered in Table 12 and 29 costs

* No incremental soil disposal costs. Anticipated soil volumes accommodated in void spaces of equipment disposal boxes (see Section 5.3.2).

Table 34 Total Costs - Environmental Remediation (Exclusive of Former Surface Impoundment Area)

Total of reported costs in Tables 32 and 33.

Task/Component	Cost, $
Work plans/procedures (from Table 32)	1,959
Pre-characterization dismantlement and/or excavation (from Table 32)	1,468
Soil sample collection (from Table 32)	1,306
Soil removal/packaging (from Table 32)	2,202
Laboratory testing and analysis (from Table 33)	2,000
TOTAL - Environmental Remediation	8,935

6.0 Adjustment of Cost Estimates and Funding Level

As required in 10 CFR 70.25(e), AREVA will adjust these cost estimates at intervals not to exceed three years. Associated funding levels will be adjusted as needed. Consistent with guidance in NUREG-1757, the review will consider changes in costs of goods and services, including inflation; changes in facility conditions or operations; and changes in expected decommissioning procedures.

7.0 Certification of Financial Assurance

Principal: AREVA NP Inc., 2101 Horn Rapids Road, Richland, WA 99354

NRC License Number SNM-1227 for AREVA NP Inc. (same address)

Issued to: U.S. Nuclear Regulatory Commission

I certify that AREVA NP Inc. is licensed to possess the following types of unsealed special nuclear material licensed under 10 CFR Part 70 in the following amounts:

Type of Material	Amount of Material
Uranium compounds in any chemical/physical form enriched up to 5.00 wt. % U-235 (uranium compounds)	75,000 kg U-235
Uranium enriched in U-235 (any enrichment or chemical/physical form)	350 g U-235

I also certify that financial assurance in the amount of $37.4M has been obtained for the purpose of decommissioning as prescribed by 10 CFR Part 70.

Robert A. Dutton, Assistant Secretary

20 January 2009
Date

8.0 Financial Assurance Instruments

This section provides copies of financial assurance instruments (Exhibits 1 and 2) to demonstrate financial assurance for all of the estimated decommissioning costs. The mechanism utilized by AREVA is the letter of credit/standby trust agreement provided for in 10 CFR 70.25 (f)(2).

Exhibit 1 - Irrevocable Standby Letter of Credit

Crédit Industriel et Commercial
520 Madison Avenue
New York, NY 10022
Phone (212) 715-4400
Cables: CICINUSA New York
Telex: 62160 CICNY
Rapifax: (212) 715-4477

IRREVOCABLE STANDBY LETTER OF CREDIT NO. SB22.802

Date: March 27, 2008
Our Ref.: SB22.802
Amount: US$37,400,000.00
Expiry: March 27, 2009

U.S. Nuclear Regulatory Commission
Washington, DC 20555

Dear Sir or Madam:

We, Credit Industriel et Commercial, 520 Madison Avenue, New York, NY 10022 ("Bank"), hereby establish our Irrevocable Standby Letter of Credit No. SB22.802 in your favor, at the request and for the account of Areva NP Inc., 3315 Old Forest Road, P.O. 10935, Lynchburg, VA 24506-0935 up to the aggregate amount of US$37,400,000.00 (United States Dollars Thirty Seven Million Four Hundred Thousand and 00/100), available upon presentation of:

1) Your sight draft, bearing reference to this Letter of Credit No. SB22.802 and

2) Your statement purportedly signed by yourselves reading as follows:

"I certify that the amount of the draft is payable pursuant to regulations issued under authority of U.S. Nuclear Regulatory Commission."

This Letter of Credit is issued in accordance with the regulations issued under the authority of the U.S. Nuclear Regulatory Commission (NRC), an agency of the U.S. Government, pursuant to the Atomic Energy Act of 1954, as amended, and the Energy Reorganization Act of 1974. The NRC has promulgated regulations in Title 10, Chapter I of the Code of Federal Regulations, Part 70, which require that a holder of, or an applicant for, a license issued under 10 CFR Part 70 provide assurance that funds will be available when needed for decommissioning.

This Letter of Credit is effective as of March 27, 2008 and shall expire on March 27, 2009, but such expiration date shall be automatically extended for a period of one year on March 27, 2009 and on each successive expiration date, unless, at least 90 days before the current expiration date, we notify both you and Areva NP Inc., by certified mail, as shown on the signed return receipts. If Areva NP Inc. is unable to secure alternative financial assurance to replace this Letter of Credit within 30 days of our notification of cancellation, the NRC may draw upon the full value of this Letter of Credit prior to cancellation. The bank shall give immediate notice to Areva NP Inc. and NRC of any notice received or action filed alleging (1) the insolvency or bankruptcy of the Bank or (2) any violation of regulatory requirements that could result in suspension or revocation of the Bank's charter or license to do business. The Bank also shall give immediate notice if the Bank for any reason, becomes unable to fulfill its obligation under this Letter of Credit.

Continued on page 2, which forms an integral part of this Standby Letter of Credit

Crédit Industriel et Commercial
520 Madison Avenue
New York, NY 10022
Phone (212) 715-4400
Cables: CICINUSA New York
Telex: 62160 CICNY
Rapifax: (212) 715-4477

Our SB22.802 for US$37,400,000.00 Page 2

Whenever this Letter of Credit is drawn on under and in compliance with the terms of this Letter of Credit, we shall duly honor such draft upon its presentation to us within 30 days, and we shall deposit the amount of the draft directly into the standby trust fund of Areva NP Inc. in accordance with your instructions.

Each draft must bear on its face the clause: "Drawn under Letter of Credit No. SB22.802, dated March 27, 2008 and the total of this draft and all other drafts previously drawn under this Letter of Credit does not exceed US$37,400,000.00."

This Letter of Credit is subject to the Uniform Customs and Practice for Documentary Credits, 2007 Revision, published by the International Chamber of Commerce, Publication No. 600.

Please address all correspondence regarding this Letter of Credit to the attention of the Standby Letter of Credit Department located at 520 Madison Avenue, New York, NY 10022, referring to our Standby Letter of Credit No. SB22.802. For telephone assistance, please contact the Standby Letter of Credit Department at (212) 715-4690 and have this Letter of Credit number available.

Leon Lalite
Vice President

Judith Dixon
Vice President

Except as otherwise expressly stated, this documentary credit is subject to the "Uniform Customs and Practice for Documentary Credits" issued by the International Chamber of Commerce (Publication No. 500)

LC-0406 (10/93)

ORIGINAL

Exhibit 2 - Standby Trust Agreement

AMENDED AND RESTATED STANDBY TRUST AGREEMENT

AGREEMENT made April 28, 2008 as amended and restated as of the 1st day of November, 2008, by and between AREVA NP Inc., a Delaware corporation, the "Grantor," and State Street Bank and Trust Company, 125 Sunnynoll Ct., Suite 200, Winston-Salem, NC 27106, the "Trustee."

WHEREAS, the U. S Nuclear Regulatory Commission (NRC), an agency of the U.S. Government, pursuant to the Atomic Energy Act of 1954, as amended, and the Energy Reorganization Act of 1974 has promulgated regulations in Title 10, Chapter I of the Code of Federal Regulations, Part 70. These regulations, applicable to the Grantor, require that a holder of, or an applicant for, a materials license issued pursuant to 10 CFR Part 70 provide assurance that funds will be available when needed for required decommissioning activities.

WHEREAS, the Grantor has elected to use a letter of credit to provide all of such financial assurance for the facilities identified herein; and

WHEREAS, when payment is made under the letter of credit, this standby trust shall be used for the receipt of such payment; and

WHEREAS, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this Agreement, and the Trustee is willing to act as trustee.

NOW, THEREFORE, the Grantor and the Trustee agree as follows:

Section 1. Definitions. As used in this Agreement:

(a) The term "Grantor" means the NRC Licensee who enters into this Agreement and any successors or assigns of the Grantor.

(b) The term "Trustee" means the Trustee who enters into this Agreement and any successor Trustee.

Section 2. Costs of Decommissioning. This Agreement pertains to the costs of decommissioning the materials and activities identified in License Number SNM 1227 issued pursuant to 10 CFR part 70 as shown in Schedule A.

Section 3. Establishment of Fund. The Grantor and the Trustee hereby establish a standby trust fund, (the Fund), for the benefit of the NRC. The Grantor and the Trustee intend that no third party have access to the Fund except as provided herein

Section 4. Payments Constituting the Fund. Payments made to the Trustee for the Fund shall consist of cash, securities, or other liquid assets acceptable to the Trustee. The Fund is established initially as consisting of the property, which is acceptable to the

Trustee, described in Schedule B attached hereto. Such property and any other property subsequently transferred to the Trustee are referred to as the "Fund", together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be held by the Trustee, IN TRUST, as hereinafter provided. The Trustee shall not be responsible nor shall it undertake any responsibility for the amount of, or adequacy of the Fund, nor any duty to collect from the Grantor, any payments necessary to discharge any liabilities of the Grantor established by the NRC.

Section 5. Payments for Required Activities Specified in the Plan. The Trustee shall make payments from the Fund to the Grantor upon representation to the Trustee of the following:

a. A certificate duly executed by the Secretary of the Grantor attesting to the occurrence of the events, and in the form set forth in the attached Certificate of Events, and

b. A certificate attesting to the following conditions:

(1) that decommissioning is proceeding pursuant to an NRC-approved plan;

(2) that the funds withdrawn will be expended for the activities undertaken pursuant to that plan; and

(3) that the NRC has been given 30 days prior notice of AREVA NP Inc.'s intent to withdraw funds from the trust fund.

No withdrawal from the Fund for a particular license can exceed 10 percent of the remaining funds available for that license unless NRC written approval is attached.

In addition, the Trustee shall make payments from the Fund as the NRC shall direct, in writing, to provide for the payment of the costs of required activities covered by this Agreement. The Trustee shall reimburse the Grantor or other persons as specified by the NRC from the Fund for expenditures for required activities in such amounts as the NRC shall direct in writing. In addition, the Trustee shall refund to the Grantor such amounts as the NRC specifies in writing. Upon refund, such funds shall no longer constitute part of the Fund as defined herein.

Section 6. Trust Management. The Trustee shall invest and reinvest the principal and income of the Fund and keep the Fund invested as a single fund, without distinction between principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions of this section. In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge his duties with respect to the Fund solely in the interest of the beneficiary and with the care, skill,

prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

(i) Securities or other obligations of the Grantor, or any other owner or operator of the facilities, or any of their affiliates as defined in the Investment Company Act of 1940, as amended, 15 U.S.C. 80a-2.(a), shall not be acquired or held, unless they are securities or other obligations of the Federal or a State government.

(ii) The Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the Federal or State government and in obligations of the Federal government such as GNMA, FNMA and FHLM bonds and certificates or State and Municipal bonds rated BBB or higher by Standard & Poor's or Baa or higher by Moody's Investment Services; and

(iii) For a reasonable time, not to exceed 60 days, the Trustee is authorized to hold uninvested cash awaiting investment or distribution without liability for the payment of interest thereon.

Section 7. Commingling and Investment. The Trustee is expressly authorized in its discretion:

(a) To transfer from time to time any or all of the assets of the Fund to any common, commingled, or collective trust fund created by the Trustee in which the Fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and

(b) To purchase shares in any investment company registered under the Investment Company Act of 1940, 15 U.S.C. 80(a)-1, et seq., including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

Section 8. Express Powers of Trustee. Without in any way limiting the powers and discretions conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

(a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale, as necessary to allow duly authorized withdrawals at the joint request of the Grantor and NRC or to reinvest in securities at the direction of the Grantor;

(b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;

(c) To register any securities held in the Fund in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the Trustee in other fiduciary capacities, to reinvest interest payments and funds from matured and redeemed instruments, to file proper forms concerning securities held in the Fund in a timely fashion with appropriate government agencies, or to deposit or arrange for the deposit of such securities in a qualified central depositary even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee or such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States Government, or any agency or instrumentality thereof, with a Federal Reserve bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund;

(d) To deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the Federal or State government; and

(e) To compromise or otherwise adjust all claims in favor of or against the Fund.

Section 9. Taxes and Expenses. All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all other proper charges and disbursements of the Trustee shall be paid from the Fund.

Section 10. Annual Valuation . After payment has been made into this standby trust fund, the Trustee shall annually, at least 30 days before the anniversary date of receipt of payment into the standby trust fund, furnish to the Grantor and to the NRC a statement confirming the value of the Trust. Any securities in the Fund shall be valued at market value as of no more than 60 days before the anniversary date of the establishment of the Fund. The failure of the Grantor to object in writing to the Trustee within 90 days after the statement has been furnished to the Grantor and the NRC shall constitute a conclusively binding assent by the Grantor, barring the Grantor from asserting any claim or liability against the Trustee with respect to the matters disclosed in the statement.

Section 11. Advice of Counsel. The Trustee may from time to time consult with counsel, who may be counsel to the Grantor, with respect to any question arising as to the construction of this Agreement or any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting upon the advice of counsel.

Section 12. Trustee Compensation. The Trustee shall be entitled to reasonable compensation for its services as agreed upon in writing with the Grantor. (See Schedule C)

Section 13. Successor Trustee. Upon 90 days notice to the Grantor, the Trustee may resign; upon 90 days notice to the NRC and the Trustee, the Grantor may replace the Trustee, but such resignation or replacement shall not be effective until the Grantor has appointed a successor Trustee, the successor accepts the appointment, the successor is ready to assume its duties as trustee, and the NRC has agreed, in writing, that the successor is an appropriate State or Federal government agency or an entity that has the authority to act as a trustee and whose trust operations are regulated and examined by a Federal or State agency. The successor Trustee shall have the same powers and duties as those conferred upon the Trustee hereunder. When the resignation or replacement is effective, the Trustee shall assign, transfer, and pay over to the successor Trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor Trustee or for instructions. The successor Trustee shall specify the date on which it assumes administration of the trust in a writing sent to the Grantor, the NRC, and the present Trustee by certified mail 10 days before such change becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this section shall be paid as provided in Section 9.

Section 14. Instructions to the Trustee. All orders, requests, and instructions by the Grantor to the Trustee shall be in writing, signed by such persons as are signatories to this Agreement or such other designees as the Grantor may designate in writing. The Trustee shall be fully protected in acting without inquiry in accordance with the Grantor's orders, requests and instructions. If NRC issues orders, requests or instructions to the Trustee these shall be in writing, signed by the NRC or its designees, and the Trustee shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Grantor or NRC hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instructions from the Grantor and/or NRC, except as provided for herein.

Section 15. Amendment of Agreement. This Agreement may be amended by an instrument in writing executed by the Grantor, the Trustee, and the NRC, or by the Trustee and the NRC if the Grantor ceases to exist. All amendments shall meet the relevant regulatory requirements of the NRC.

Section 16. Irrevocability and Termination. Subject to the right of the parties to amend this Agreement as provided in Section 15, this trust shall be irrevocable and shall continue until terminated at the written agreement of the Grantor, the Trustee, and the NRC, or by the Trustee and the NRC, if the Grantor ceases to exist. Upon termination of

the trust, all remaining trust property, less final trust administration expenses, shall be delivered to the Grantor or its successor.

Section 17. Immunity and Indemnification. The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this trust, or in carrying out any directions by the Grantor or the NRC issued in accordance with this Agreement. The Trustee shall be indemnified and saved harmless by the Grantor or from the trust fund, or both, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the Grantor fails to provide such defense.

Section 18. Choice of Law. This Agreement shall be administered, construed, and enforced according to the laws of The Commonwealth of Massachusetts.

Section 19. Interpretation and Severability. As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each Section of this Agreement shall not affect the interpretation or the legal efficacy of this Agreement. If any part of this Agreement is invalid, it shall not affect the remaining provisions which will remain valid and enforceable.

In Witness Whereof the parties have caused this Agreement to be executed by their respective officers duly authorized and their corporate seals to be hereunto affixed and attested as of the date first written above.

AREVA NP Inc.

By: _____
Title: VP + CFO

Attest:

By: _____

STATE STREET BANK AND TRUST COMPANY

By: _____
Title: VICE PRESIDENT

Attest: _____

Schedule A

This Agreement demonstrates financial assurance for the following cost estimates or certification amounts for the following licensed activities:

U. S. Nuclear Regulatory Commission License Numbers

SNM - 1227

Name and Address of Licensee

AREVA NP Inc.
2101 Horn Rapids Rd.
Richland, WA 99354

Address of Licensed activity
2101 Horn Rapids Rd.
Richland, WA 99354

The cost estimates listed here were last adjusted and approved by the NRC on June 1, 2006

Schedule B

Dollar Amount 37.4M

As Evidenced By Letter of Credit - SB 22.802

Schedule C

State Street Bank and Trust Company
125 Sunnynoll Ct. Suite 200
Winston-Salem, NC 27106
Ph: 336-747-7638

Trustee's fees shall be $1,000 per year

Certificate of Events

State Street Bank and Trust Company
125 Sunnynoll Ct. Suite 200
Winston-Salem, NC 27106

Attention Trust Division

Gentlemen:

In accordance with the terms of the Agreement with you dated April 28, 2008, I _____ Secretary of AREVA NP Inc., hereby certify that the following events have occurred:

1. AREVA NP Inc. is required to commence the decommissioning of its facility located at Richland, Washington (hereinafter called the decommissioning).

2. The plans and procedures for the commencement and conduct of the decommissioning have been approved by the United States Nuclear Regulatory Commission, or its successor, on_____(copy of approval attached).
3. The Board of Directors of AREVA NP Inc. has adopted the attached resolution authorizing the commencement of the decommissioning.

_____
Secretary of AREVA NP Inc.

_____
Date

Certificate of Resolution

I, _____, do hereby certify that I am the Secretary of AREVA NP Inc., a Delaware corporation, and that the resolution listed below was duly adopted at a meeting of this Corporation's Board of Directors on _____, 20__.

IN WITNESS WHEREOF, I have hereunto signed my name and affixed the seal of this Corporation this _____ day of _____, 20__.

_____
Secretary

Resolved, that this Board of Directors hereby authorizes the President, or such other employee of the Company as he may designate, to commence decommissioning activities at AREVA NP Inc.'s Richland, Washington facility in accordance with the terms and conditions described to the Board of Directors at this meeting and with such other terms and conditions as the President shall approve with and upon the advice of Counsel.

Letter of Acknowledgement

State of North Carolina

~~To Wit:~~

County ~~City~~ of Forsyth

On this 13th day of November, 2008, before me, a notary public in and for the city and State aforesaid, personally appeared Ryan Peterson, and she/he did depose and say that she/he is the Vice President of State Street Bank & Tr. Trustee, which executed the above instrument; that she/he knows the seal of said association; that the seal affixed to such instrument is such corporate seal; that it was so affixed by order of the association; and that she/he signed her/his name thereto by like order.

JILL E. WHEELER
NOTARY PUBLIC
FORSYTH COUNTY, NC

Jill E Wheeler
Signature of the Notary Public

My Commission Expires: October 12, 2013

AREVA NP Inc.

E06 Environmental Protection
E06-04 Miscellaneous Reports

E06-04-007
Version 3.0

Decommissioning Funding Plan

Date (GMT)	Signed by
01/23/2009 19:17:04	Maas, Loren
Authorization/Title	Document Author

01/23/2009 21:56:03	Link, Robert
Authorization/Title	Richland EHS&L Manager

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