Memorandum of Agreement
for
Acceptance of Department of Energy
Spent Nuclear Fuel and High-Level Radioactive Waste

between the
Assistant Secretary
for Environmental Management (EM)
U.S. Department of Energy (DOE), Washington, DC
and the
Director
Office of Civilian Radioactive Waste Management (RW)
U.S. DOE, Washington, DC

Revision 1
January 1999

REVISION/CHANGE RECORD
for the
Memorandum of Agreement for Acceptance of DOE Spent Nuclear Fuel and High-Level Waste between the Assistant Secretary for Environmental Management (EM) and the Office of Civilian Radioactive Waste Management (RW)

Rev/DCN Number & Date	Revision/Change Description	Pages Affected
Rev. 01 January 1999	Added Title Page, Revision/Change Record, and Quality Assurance Subagreement between the Deputy Assistant Secretary, Office of Waste Management, EM and the Director, Office of Quality Assurance, RW	Appendix E

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U.S. DOE, Washington, DC

I. Introduction

A. Background

This Memorandum of Agreement (MOA) furthers section 302(b)(4) of the Nuclear Waste Policy Act of 1982, as amended (NWPA), and the regulations setting forth the Standard Contract for Disposal of Spent Nuclear Fuel (SNF) and/or High-Level Radioactive Waste (HLW) (Standard Contract), 10 CFR Part 961, which provide that federal agencies requiring disposal services for SNF and/or HLW must transfer amounts equivalent to the fees that would be paid under the Standard Contract by any other person. This MOA includes, as appropriate, terms and conditions equivalent to those set forth in the NWPA and the Standard Contract for persons other than Federal agencies. A cross-reference between the MOA and the articles of the Standard Contract is provided in Appendix A.

Through this MOA, RW and EM seek to achieve safe and timely disposal of DOE SNF and HLW by identifying data needs, interfaces and acceptance criteria and developing compliance procedures needed to support both the geologic repository construction authorization and license application to the Nuclear Regulatory Commission (NRC) and the transportation system necessary to transfer DOE SNF and HLW to an RW facility.

B. Authorities

Authorities for this MOA are the NWPA and the Atomic Energy Act of 1954.

C. Documents required for Implementation

Other documents (including amendments and revisions thereto) required for implementation of this MOA are:

1. The *Memorandum of Agreement for Acceptance of Naval Spent Nuclear Fuel* between the Director, Naval Nuclear Propulsion Program (NNPP) and the Director, Office of Civilian Radioactive Waste Management (OCRWM);
2. The *Standard Contract for Disposal of Spent Nuclear Fuel and/or High-Level Radioactive Waste*, 10 CFR Part 961;
3. The *OCRWM Quality Assurance Requirements and Description* document (QARD) (DOE/RW-0333P);
4. The *Civilian Radioactive Waste Management System Requirements Document* (CRD) (DOE/RW-0406);
5. The Federal Register: Volume 52, page 31513 (August 20, 1987), *Civilian Radioactive Waste Management; Calculating Nuclear Waste Fund Disposal Fees for Department of Energy Defense Program Waste*.

D. Policy on Cooperation and Joint Activities

EM and RW will cooperate to ensure that all current and future activities relating to acceptance of DOE SNF and HLW continue to be performed in a safe, secure, cost-effective manner, in accordance with applicable requirements, and in a manner that contributes toward a public understanding and acceptance of DOE goals and activities. EM and RW will provide mutual support for budget justification to the Office of Management and Budget, and hearings before Congress to implement this MOA, to the extent consistent with their individual missions.

II. Definitions

Definitions of terms articulated in section 2 of the NWPA, Article I of the Standard Contract, and the CRD, Appendix B, *Definitions*, are incorporated by reference into this MOA. The following additional definitions are specific to this MOA:

1. Acceptance - the transfer of responsibility, custody, and physical possession of DOE SNF or HLW from EM to RW at EM's site.
2. Acceptance criteria - all technical and programmatic requirements which must be satisfied by DOE SNF and HLW for the Civilian Radioactive Waste Management System (CRWMS) to meet regulatory requirements, as delineated in Appendix C.
3. Administrators - the EM and RW staff, designated in writing by the Assistant Secretary for Environmental Management (EM-1) and the Director, Office of Civilian Radioactive Waste Management (RW-1), respectively, responsible for executing the terms of this MOA, and for resolving or elevating associated issues and disputes.
4. DOE SNF and HLW Characterization - performance of all the activities (e.g., data collection, testing, inspections, document preparation, analyses) necessary to describe DOE SNF and HLW adequately for acceptance, storage (if needed), transportation, and disposal (this includes preclosure and postclosure performance in the repository).
5. Conditioning - any process which prepares or treats DOE SNF or HLW for storage, transportation, or disposal in accordance with regulatory requirements and CRWMS acceptance criteria. This includes processing (e.g., vitrification of HLW) and passivation of SNF.

6. Conformance Verification - the process used to demonstrate that DOE SNF and~~/or~~ HLW are in accordance with CRWMS acceptance criteria.
7. DOE SNF - SNF that is currently managed by DOE, and includes fuel that has been withdrawn from a nuclear reactor following irradiation, the constituent elements of which have not been separated.
8. DOE SNF canister - the outermost, sealed, metallic container maintaining multiple SNF assemblies or intermediate canisters in a dry, inert environment and overpacked separately and uniquely for storage or transportation.
9. HLW pour canister - sealed, metallic receptacle providing structural support for vitrified HLW.
10. Incidental maintenance - cask maintenance activities not associated with routine maintenance, to be performed to ensure that cask certification requirements are satisfied. These include correction of problems, including those identified during acceptance, preparation for use, loading or preparation for shipment. Incidental maintenance is limited to those corrections that are necessary to meet a test or inspection requirement or to perform a step or activity described in the handling procedures.
11. Integrated Acceptance Schedule - the document to be provided by EM, in coordination with the NNPP, to RW for approval, that defines the schedule under which RW shall accept DOE SNF, HLW and naval SNF.
12. Naval SNF - SNF that is generated and managed by NNPP.
13. Nonconforming DOE SNF or HLW - DOE SNF or HLW that does not meet the applicable CRWMS acceptance criteria outlined in accordance with Appendix C.
14. Nonstandard DOE SNF or HLW - nonconforming DOE SNF or HLW that has been reviewed by RW and deemed acceptable for entry into the CRWMS. (This is different from the definition of nonstandard SNF in the Standard Contract.)
15. Routine maintenance - scheduled cask maintenance activities necessary to maintain transportation casks in serviceable condition and in compliance with the Certificate of Compliance.
16. RW facility - a facility operated by or on behalf of RW for the purpose of storing (if needed) or disposing of DOE SNF and HLW in accordance with the NWPA.
17. Safeguards Verification - the process used to demonstrate that appropriate safeguards are in place for all special nuclear material (as defined in 10 CFR Part 70).

III. Purpose, Scope and Term

A. Purpose/Scope

This MOA establishes the terms and conditions under which RW will make available disposal services to EM for all DOE SNF and HLW. This MOA does not apply to SNF owned by the commercial industry, HLW vitrified at the West Valley Demonstration Project, or naval SNF. Coordination between EM and NNPP is addressed in Sections V and VI of this MOA. DOE SNF irradiated at civilian facilities for which fees have been paid under a standard contract shall be disposed of by RW in accordance with the terms and conditions of the Standard Contract.

This MOA applies to the acceptance of DOE SNF and HLW from EM by RW, and the responsibilities of EM and RW relative to the transportation, storage (if needed), and disposal of these materials. This MOA also provides for the recoupment by RW, through appropriations, of all direct costs, indirect costs, and all allocable overhead for the services to be rendered hereunder by RW.

This MOA supersedes all previous agreements concerning the establishment of terms and conditions for acceptance and transportation of DOE SNF and HLW between RW and EM, or its predecessors. The MOAs between EM and RW entitled the *Subagreement on the DOE SNF and HLW Technical Baseline* and the *Subagreement on Credits for Taxpayer-funded Expenditures which Benefit the High-Level Radioactive Waste Disposal Program* are made a part of this MOA and included as Appendices C and D. The MOA between the Office of Waste Management and RW for *Coordination of Quality Assurance Activities Associated with High-Level Waste and Spent Nuclear Fuel* and the MOA between the Office of Nuclear Material and Facility Stabilization and RW for *Coordination and Implementation of Quality Assurance Activities Associated with DOE-Owned Spent Nuclear Fuel* are incorporated as Appendices E and F, respectively.

B. Term

This MOA shall remain in effect from the date of the last signature until all EM and RW responsibilities and requirements are satisfied, or until this MOA is superseded by other appropriate documents or rescinded by EM-1 and RW-1.

IV. Quality Assurance

RW and EM shall abide by requirements of the *OCRWM QARD* (DOE/RW-0333P) and the Quality Assurance MOAs between EM and RW, i.e., the MOA between the Office of Waste Management and RW for *Coordination of Quality Assurance Activities Associated with High-Level Waste and Spent Nuclear Fuel* (Appendix E) and the MOA between the Office of Nuclear Material and Facility Stabilization and RW for *Coordination and Implementation of Quality Assurance Activities Associated with DOE-Owned Spent Nuclear Fuel* (Appendix F), as applicable. Specific activities subject to Quality Assurance controls are defined in the *QARD*.

This MOA shall meet the requirements for lifetime records in accordance with OCRWM Administrative Procedure-17.1Q.

V. Responsibilities

A. Data Needs

1. DOE SNF
    a. RW shall identify and document, in coordination with EM and NNPP, the OCRWM Data Needs for DOE SNF (including naval SNF). Data shall be consistent with Appendix F of the Standard Contract, or revisions thereto. This document shall identify data needed on a prioritized basis by RW for accepting, transporting, storing (if needed) and disposing of DOE SNF (e.g., characterization data, physical and chemical characteristics, canister characteristics, radionuclide concentrations, criticality safety, safeguards, and material control and accountability). As a part this data needs assessment, RW, in coordination with EM and NNPP, shall define the content of the data records package. Any changes to the OCRWM Data Needs for DOE SNF or the data records package shall be coordinated between RW, EM and NNPP.
    b. RW shall develop and issue, in coordination with EM, a Data Needs Schedule documenting when specific DOE SNF data are needed, so that the data may be provided by EM in a timely manner. Revisions to the Data Needs Schedule shall be coordinated with EM.
    c. EM shall provide DOE SNF data, qualified for their intended use in accordance with the Data Needs Schedule.
    d. RW shall review the data provided by EM for completeness and consistency with the OCRWM Data Needs for DOE SNF, and advise EM of any deficiencies.
2. HLW
    a. The Waste Form Compliance Plan (WCP), Waste Form Qualification Report (WQR), Production Records and the Storage and Shipping Records presently meet the RW data needs for HLW. Any changes to these documents shall be coordinated between RW and EM.
    b. EM shall provide annual reports of waste generation and projections of quantities of vitrified HLW requiring disposal.

B. Design, Certification and Fabrication of Transportation and Storage Systems for DOE SNF and HLW

1. EM shall design and fabricate HLW pour canisters and DOE SNF canisters for shipment to RW.
2. EM shall be responsible for the design, NRC certification and fabrication of the transportation cask system for DOE SNF canisters or bare DOE SNF in accordance with 10 CFR Part 71. Acceptance of bare DOE SNF by RW requires prior written agreement between EM and RW.
3. RW shall be responsible for the design, NRC certification and fabrication of the transportation cask system for HLW in accordance with 10 CFR Part 71.
4. EM shall be responsible for storage of HLW pour canisters, DOE SNF canisters and bare DOE SNF until acceptance by RW.

5. EM shall be responsible for NRC certification of the DOE SNF canister and associated storage equipment for use at an RW storage facility, as necessary. RW shall provide to EM the appropriate requirements in a timely manner to facilitate any necessary changes to designs and Certificates of Compliance. EM shall provide data and design information as necessary. RW shall be responsible for the fabrication of storage modules and equipment. EM and RW responsibilities for storage at an RW storage facility shall only apply if such a facility is available.
6. RW and EM shall make the most efficient use of transportation casks and equipment to maximize use of existing DOE resources. For example, EM could make available to RW HLW transportation casks previously used for inter-site transfer.
7. EM shall comply with 10 CFR Part 21, *Reporting of Defects and Noncompliance,* for those basic components to be used or accepted at an RW facility.

C. Transportation and Loading Operations

1. EM shall designate the sites for DOE SNF and HLW loading and RW acceptance in the Integrated Acceptance Schedule (as described in Section VI.A.2).
2. EM shall be responsible for construction and maintenance of EM site infrastructure (e.g., access to rail, loading facility) to support RW acceptance.
3. EM shall load the bare SNF into intermediate canisters or DOE SNF canisters, and the intermediate canisters into DOE SNF canisters. EM shall notify RW thirty (30) days in advance of the start of any loading activities. If requested by RW, EM shall provide access for RW representatives to observe preparatory and loading activities. RW shall notify EM fifteen (15) days before the start of loading whether RW will observe the activities.
4. EM shall arrange for and provide all preparation, assembly of the packaging for shipment, required inspections, and other activities necessary for the loading of DOE SNF canisters, bare DOE SNF and HLW pour canisters into the transportation casks and for the transportation of DOE SNF and HLW to the RW facility.
5. EM shall load the bare SNF or DOE SNF canisters into transportation casks and HLW pour canisters into transportation casks. EM shall notify RW thirty (30) days in advance of the start of loading activities. If requested by RW, EM shall provide access for RW representatives to observe preparatory and loading activities. RW shall notify EM fifteen (15) days before the start of loading whether RW will observe the activities.
6. For the loading of the HLW pour canisters into the transportation casks, RW shall provide the following at least six (6) months in advance, or as requested by EM, to accommodate scheduled deliveries:
   a. Written procedures for cask handling and loading;
   b. Training for EM personnel in cask handling and loading, as may be necessary for RW-supplied casks, and
   c. Technical information, special tools, equipment, lifting trunnions, spare parts and consumables needed to use and perform incidental maintenance on the cask(s).

7. RW shall be responsible for all transportation operations outside of the EM site boundary and after acceptance inside the EM site boundary for DOE SNF and HLW covered under this MOA.
8. EM shall be responsible for routine maintenance of DOE SNF transportation casks and equipment managed by EM. RW shall be responsible for routine maintenance of HLW transportation casks and equipment managed by RW.
9. EM shall be responsible for incidental maintenance of the DOE SNF and HLW transportation casks and equipment, while in EM's possession and control. Any necessary expenditures for incidental maintenance shall be funded by EM appropriations.
10. RW shall be responsible for incidental maintenance, protection and preservation of any and all transportation casks and equipment, while in RW's possession and control and any necessary expenditures for such incidental maintenance shall be funded by RW from the Defense Nuclear Waste Disposal appropriation.
11. Routine and incidental maintenance performed by RW and EM shall be performed to the same standards and with similar procedures.
12. For the handling of DOE SNF and HLW at an RW facility, EM shall provide RW the following at least six (6) months in advance, or as requested by RW, to accommodate handling:
    a. Written procedures for handling and loading/unloading for all DOE SNF and HLW;
    b. Training for RW's personnel in handling and loading/unloading for all DOE SNF and HLW, and
    c. Technical information, special tools, equipment, lifting trunnions, spare parts and consumables needed for maintenance of the HLW pour canisters and DOE SNF canisters.

D. Repackaging Prior to RW Acceptance - If, prior to acceptance by RW, it is determined through the formal baseline control process set forth in Appendix C, and with concurrence by EM and RW, that any DOE SNF canisters need modification to meet requirements of an NRC-licensed RW storage or disposal facility (e.g., repackaging), EM shall perform these changes/upgrades.

E. Conformance and Safeguards Verification of DOE SNF and HLW

1. RW shall perform conformance verification of all DOE SNF and HLW delivered to RW, in accordance with Appendix C. The authorized RW representative shall agree to accept such DOE SNF and HLW (which meets all CRWMS acceptance criteria) for disposal when RW has completed safeguards verification of the DOE SNF and HLW description, determined that the material is properly loaded, packaged, marked, labeled and ready for transportation, and has taken custody, as evidenced in writing, of the material at EM's site. This safeguards verification shall rely on records provided by EM, i.e., EM shall be responsible for the accuracy and content of the records sufficient to satisfy NRC regulations. A properly executed off-site radioactive shipment record (in accordance with 49 CFR Part 172) describing cask contents must be prepared by the authorized EM representative.

2. Improperly described DOE SNF or HLW:
    a. Prior to Acceptance: If prior to its acceptance EM or RW finds that DOE SNF or HLW is improperly described, the discovering party shall notify the other party within ten (10) days, in writing, of such finding. RW reserves the right to refuse to accept such DOE SNF or HLW until the DOE SNF or HLW has been properly described. EM shall not transfer such SNF or HLW to RW unless RW agrees to accept such SNF or HLW under such other arrangements as may be agreed to, in writing, by the parties.
    b. After Acceptance: If subsequent to its acceptance EM or RW finds that DOE SNF or HLW is improperly described, the discovering party shall notify the other party within ten (10) days, in writing, of such finding. In the event of such notification, EM shall provide RW with a proper designation within thirty (30) days. In the event of a failure by EM to provide proper designation, RW may hold in abeyance any and all pickups scheduled thereafter. The RW and EM Administrators shall resolve the discrepancy, or raise the issue to the appropriate authorities in accordance with Section XI. Temporary storage for the DOE SNF or HLW will be at the facility where the material resides at the time the improper designation is discovered, i.e., the DOE SNF or HLW will not be transported or disposed of until the material is correctly described. If, after proper description, the affected material still meets all CRWMS acceptance criteria, a disposition decision shall be made by the RW Administrator, in coordination with the NRC if a licensing condition has been violated, and the EM Administrator. If the material does not meet these criteria, the RW and EM Administrators shall raise the issue to the appropriate authorities in accordance with Section XI.

F. Acceptance of DOE SNF and HLW - RW shall accept DOE SNF and HLW at the EM site, for transportation, storage (if needed) and disposal, after successful conformance and safeguards verification as set forth in Section V.E.1, above. RW shall be solely responsible for control of all material upon acceptance.

G. NRC Licensing for Storage and Disposal

1. All DOE SNF and HLW bounded by CRWMS acceptance criteria will be included in the license application for the first repository. This does not guarantee that all such SNF and HLW will be disposed of in the first repository.
2. RW shall have the lead responsibility in repository and storage facility (if needed) pre-licensing and licensing interactions with the NRC.
3. EM shall support RW in repository and storage facility (if needed) pre-licensing and licensing interactions with the NRC.
4. EM and RW shall abide by the *Agreement between DOE/OCRWM and NRC/Office of Nuclear Materials Safety and Safeguards (NMSS) Regarding Prelicensing Interactions*, as adopted by the parties thereto.

H. Training - EM and RW shall each be responsible for providing or acquiring, as appropriate, training specific to their various responsibilities (e.g., observation and loading) as described in this MOA.

VI. Acceptance

A. Integrated Acceptance Schedule

1. RW shall issue a projected initial acceptance capacity and overall schedule for receipt of DOE SNF, HLW and naval SNF at RW facilities at least one hundred twenty (120) months prior to the initial acceptance date, or as agreed to by EM and RW (not later than January 1, 2000 for 2010 acceptance). This capacity will be based upon the projected total system receipt rate. RW shall issue an updated acceptance capacity and overall schedule when revised.
2. EM, in coordination with NNPP, shall submit to RW an Integrated Acceptance Schedule for DOE SNF, HLW and naval SNF at least sixty (60) months prior to the initial acceptance date specified therein (not later than January 1, 2005 for 2010 acceptance). The Integrated Acceptance Schedule shall be separate from this MOA, in the form and content set forth in Appendix B. The Integrated Acceptance Schedule shall be consistent with statutory direction and existing U.S. Government agreements or court orders. RW plans to accept DOE SNF and HLW in a manner that ensures no adverse effect on the Acceptance Priority Ranking (APR)/Annual Capacity Report (ACR).
3. RW, in coordination with EM, shall identify the list of DOE SNF irradiated at civilian facilities for which fees have not been paid under a Standard Contract. Such SNF shall be removed from the APR/ACR (DOE/RW-0457) and included in the Integrated Acceptance Schedule.
4. The DOE SNF irradiated at civilian facilities for which fees have been paid under a Standard Contract shall remain in the APR/ACR and be disposed of in accordance with applicable terms of the Standard Contract, except that it shall not be traded with DOE SNF identified in the Integrated Acceptance Schedule.
5. RW shall approve or disapprove the initial Integrated Acceptance Schedule, and any revisions thereto, submitted by EM, in coordination with NNPP, within six (6) months after receipt.
6. In the event RW disapproves the initial Integrated Acceptance Schedule proposed by EM and NNPP, or any revisions thereto, RW and EM, in coordination with NNPP, shall promptly negotiate a mutually acceptable Integrated Acceptance Schedule. Unresolved issues shall be resolved in accordance with Section XI.
7. EM, in coordination with NNPP, shall update, and submit to RW, the Integrated Acceptance Schedule at least annually, unless no change is appropriate. In coordination with EM and NNPP, RW may submit changes to the Integrated Acceptance Schedule to support management of DOE SNF and HLW at the RW facility.

B. Records Packages

1. EM shall transfer the original (or copies in accordance with requirements for Quality Assurance records packages) completed data records package to RW, at the time of acceptance. The content of the data records package shall be defined as part of the

identification of data needs addressed in Section V.A. These records shall include the following:

a. For DOE SNF, all documentation implementing this MOA (e.g., Site Specific Compliance Documents) in accordance with Quality Assurance requirements of DOE/RW-0333P, where applicable;
b. For HLW, WAPS, WCP, WQR, Production Records, Shipping and Storage Records.

2. Copies of data packages shall be made available for RW review and approval at least twelve (12) months prior to the scheduled acceptance.
3. RW shall review the copies of the data packages for completeness and accuracy, in accordance with appropriate Quality Assurance requirements, and respond to EM with the findings at least six (6) months prior to the scheduled acceptance.

C. Emergency Deliveries - Emergency acceptance of DOE SNF and HLW may be made as agreed to by RW.

VII. Acceptance Criteria

A. Characterization and Conditioning

1. EM shall condition DOE SNF and HLW, as necessary, to ensure its compliance with all CRWMS acceptance criteria as outlined in Appendix C.
2. RW shall be responsible for the long-term performance characterization of HLW, starting in Fiscal Year 1999. Technical direction was transferred from EM to RW in Fiscal Year 1998. Characterization of HLW not associated with long-term performance shall be the responsibility of EM.
3. Starting with development of the FY 2000 budget, RW and EM funding responsibilities for DOE SNF characterization may be rebalanced in consultation with other appropriate parties (e.g., Chief Financial Officer). This will ensure the most efficient allocation of DOE appropriations under existing funding caps. Until an agreement is finalized with all impacted parties, EM shall be responsible for characterization, and associated costs, of all DOE SNF, except as noted in Section VII.A.4. These costs shall be funded out of the EM appropriation and not from the Defense Nuclear Waste Disposal appropriation.
4. RW shall be responsible for characterization, and associated costs, of DOE SNF irradiated at civilian facilities for which fees have been paid under a Standard Contract. These costs shall be funded out of the Nuclear Waste Fund.

B. Acceptance Criteria Development

1. RW shall, in a timely manner, develop and update, in coordination with EM and in accordance with Appendix C, integrated acceptance criteria for acceptance, transportation, storage (if needed) and disposal. As new DOE SNF and HLW forms are identified RW shall, as needed, incorporate additional criteria into the acceptance criteria.

2. To facilitate the development of acceptance criteria, EM will separate DOE SNF into compatible categories and will further categorize DOE SNF according to characterization requirements (e.g., criticality, pyrophoricity, etc.).
3. It is anticipated that the baselined acceptance criteria will be adequate for repository licensing. However, because the NRC will make the final determination of the adequacy of acceptance criteria in conjunction with issuing the repository license amendment to emplace, these criteria are not final and changes to them may occur as the licensing process progresses. Because the acceptance criteria are not final, DOE commitments have had, and will continue to have, an element of uncertainty. Commitments made to date have been made in full cognizance of this uncertainty, and are considered by DOE (both RW and EM) to have been prudent under the circumstances. Uncertainties associated with future decisions which are dependent upon the CRWMS acceptance criteria will be carefully considered and appropriate measures will be taken to mitigate the potential consequences of a change to the criteria. In the event of a change to the criteria, RW and EM will cooperate to identify appropriate measures to ensure compliance with the regulatory requirements while minimizing the adverse impacts to DOE.

C. Acceptance Criteria Compliance

1. EM shall document that the DOE SNF and HLW is in compliance with all CRWMS acceptance criteria in accordance with Appendix C.
2. RW may conduct its own reviews, tests and analyses, as necessary, to confirm that the DOE SNF and HLW provided by EM are acceptable in accordance with all CRWMS acceptance criteria.
3. Disposition of DOE SNF or HLW that does not meet acceptance criteria shall be agreed to by RW and EM in accordance with the following:
    a. **Nonconforming DOE SNF or HLW -** To request RW acceptance of nonconforming DOE SNF or HLW, EM shall submit an action plan for correction or disposition for review and approval. The action plan must adequately identify and describe the nonconformance, any action to change or correct the nonconformance and an evaluation of how the nonconformance will impact CRWMS requirements. RW shall either approve or disapprove the action plan within four (4) months of receipt. Disapprovals shall be accompanied by an explanation. The action plan shall be approved by the EM and RW Administrators, and it shall become part of the records package to which the action plan applies.
    b. **Nonstandard DOE SNF or HLW -** After approval of the action plan, RW will advise EM within four (4) months as to the technical feasibility of accepting nonstandard DOE SNF or HLW according to the Integrated Acceptance Schedule, and any schedule adjustment for such services. EM shall implement the approved actions and document in the records package that the action plan has been completed.
    c. EM shall bear such responsibility for any costs which RW may incur in connection with acceptance of nonstandard DOE SNF or HLW.

VIII. Fees and Terms of Payment

A. Implementation of the MOA - Individual activities of this MOA shall be funded as a part of annual budgeting by the responsible implementing organization, except as noted. Credits are addressed in Appendix D.

B. Determination of Fees

1. This MOA implements the NWPA provisions for full cost recovery for services outlined in this agreement. The DOE nuclear materials share (which includes DOE SNF and HLW, and naval SNF) of the total cost of the CRWMS shall be based on the fee calculation methodology published in the Federal Register.
2. The calculation of the outstanding obligation for DOE nuclear materials shall be consistent with the NWPA requirement for equity, i.e., for fees paid by federal agencies to be equivalent to those paid under the Standard Contract. This calculation shall include: previous payments, early payments, expenses for damaged equipment, interest and credits. The obligation for payments of fees for DOE SNF irradiated at civilian facilities for which fees have been paid under a Standard Contract shall be discharged in accordance with the requirements of the Standard Contract.
3. RW shall develop and issue a Fee Payment Schedule subsequent to issuance of Total System Life Cycle Cost projections. This Fee Payment Schedule shall identify projected annual fees for disposal of DOE nuclear materials. The process and criteria for evaluating DOE financial credits is documented in Appendix D.
4. RW's annual budget requests for Defense Nuclear Waste Disposal activities shall include the annual fee for DOE nuclear materials as reflected in the Fee Payment Schedule and any outstanding obligations. Defense Nuclear Waste Disposal appropriations received shall be credited towards the outstanding DOE nuclear materials disposal obligation balance. EM, in coordination with NNPP, shall determine and identify to RW, how past and current Defense Nuclear Waste Disposal appropriations are to be allocated and credited toward DOE SNF and HLW, and naval SNF obligations. RW will support development of this allocation as requested by EM and NNPP. Beginning as early as FY 2000, the RW annual budget request could include necessary costs to provide disposal of DOE SNF and HLW. Funding for CRWMS non-waste form specific activities (e.g. repository development and evaluation, total system performance assessment, scientific investigations) shall have priority.

C. Payments

1. Prior to physical acceptance of DOE-owned materials under this agreement, RW, EM and NNPP shall determine whether Defense Nuclear Waste Disposal appropriations have satisfied all prior outstanding financial obligations for the disposal of DOE SNF, HLW and naval SNF.
2. All prior outstanding financial obligations, up to the year of initial acceptance, must be paid by DOE before the acceptance by RW of any DOE SNF, HLW and naval SNF.
3. During CRWMS operations, if the Defense Nuclear Waste Disposal appropriation is less than the amounts identified in the Fee Payment Schedule for Defense Nuclear Waste Disposal activities, the receipt rate of DOE SNF, HLW and naval SNF will be adjusted consistent with the Defense Nuclear Waste Disposal appropriation.

D. Effect of Payments

Subsequent to appropriation of amounts satisfying all cumulative financial obligations for the total system life cycle cost of disposal of DOE SNF and HLW, the full cost recovery provisions of the NWPA will be considered to have been fulfilled.

E. Expenditure of Funds

Nothing in this MOA is intended to obligate the expenditure of funds in a manner inconsistent with the NWPA, the Anti-Deficiency Act and other relevant Federal statutes.

IX. Delays

In the event that circumstances (e.g., regulatory enforcement actions, *force majeure*) cause a substantial delay in SNF and HLW transfer to RW or lead to an unanticipated increase in the costs associated with handling DOE SNF and HLW, the party experiencing the delay or involved in the incident shall notify the other party as soon as practicable. EM and RW will readjust their schedules and activities, as appropriate, to accommodate such delays.

This agreement shall not be abrogated by delays resulting from programmatic, budgetary, or other causes. In the event that there is a dispute because one party must bear costs associated with the delay resulting from a fault of the other party, it shall be addressed in accordance with Section XI. Delays in Defense Nuclear Waste Disposal appropriations shall delay acceptance under this MOA.

X. Official Notices

All necessary communications to implement this MOA shall be in writing and shall be sent to the respective Administrators, as defined in Section II, *Definitions*.

XI. Issue and Dispute Resolution

The RW Administrator shall have authority to implement activities under this MOA for which RW has responsibility. These include near-term scheduling and rapid response issues, and operations that are dictated by CRWMS Certificates of Compliance or licenses. The EM Administrator shall have authority to implement activities for which EM has responsibility. Issues and disputes will be resolved through negotiations between EM and RW. The Administrators shall be responsible

for these negotiations and disposition of any issues and disputes. Discussion of issues may be delegated to staff level, as appropriate. Agreements and changes to this MOA proposed by the Administrators shall be submitted to EM-1 and RW-1 for approval. Issues or disputes shall be raised to higher authorities within DOE, namely, (1) EM-1/RW-1, and (2) the DOE UnderSecretary.

XII. Classified Information

For implementation of this MOA, exchange of classified information may be necessary. Handling, storage and dissemination of classified information shall be done in accordance with applicable security requirements. RW shall be responsible for all costs associated with safeguarding classified information regarding DOE materials at RW facilities after acceptance.

XIII. Amendments and Clarifications

The provisions of this MOA may require future modifications. Accordingly, at the request of either EM or RW, the parties shall negotiate and, to the extent mutually agreed, amend this agreement as necessary or proper to reflect their respective interest, or to reflect changing statutory or legislative direction or to accommodate new DOE SNF or HLW processing technologies/methods.

XIV. Permits

RW and EM shall procure all necessary permits or licenses (including any special nuclear material licenses) and comply with all applicable laws and regulations of the United States, States and municipalities necessary to execute their respective responsibilities and obligations under this MOA.

XV. Entire MOA

A. This MOA, which consists of Sections I through XV and Appendices A through F, contains the entire agreement between the parties with respect to this subject matter and supersedes any previously agreed to MOA relating to this subject. Any representation, promise, or condition not incorporated in this MOA shall not be binding on either party.

B. Nothing in this MOA is intended to adversely affect in any way the contractual obligations of any other persons with whom EM or RW are currently under contract.

C. Appendices

A. *Cross-reference With the Standard Contract, 10 CFR Part 961.11*
B. *Integrated Acceptance Schedule*
C. *Subagreement on the DOE SNF and HLW Technical Baseline*
D. *Subagreement on Credits for Taxpayer-funded Expenditures which Benefit the High-Level Radioactive Waste Disposal Program*
E. MOA between the Office of Waste Management and RW for *Coordination of Quality Assurance Activities Associated with High-Level Waste and Spent Nuclear Fuel*

E. MOA between the Office of Waste Management and RW for *Coordination of Quality Assurance Activities Associated with High-Level Waste and Spent Nuclear Fuel*

F. MOA between the Office of Nuclear Material and Facility Stabilization and RW for *Coordination and Implementation of Quality Assurance Activities Associated with DOE-Owned Spent Nuclear Fuel*

Acting Assistant Secretary for
Environmental Management

(Signed: September 1, 1998)

Acting Director, Office of Civilian
Radioactive Waste Management

(Signed: August 21, 1998)

Appendix A

Cross-reference With the Standard Contract, 10 CFR Part 961.11

10 CFR Part 961.11	MOA
Prologue	Sections I, III
Article I	II
II	III.A
III	III.B
IV.A.1(a)	VI.A.2, VI.A.5
A.1(b)	VI.A.2, VI.A.5
A.2(a)	V.C
A.2(b)	V.A
A.2(c)	V.C
B.1	V.F
B.2	V.B, V.C
B.3	N/A
B.4	V-VII
B.5	VI.A
V.A	V.F
B.1	VI.A, V.A
B.2	VI.A, V.A
C	VI.A, V.A
D	VI.C
E	VI.A
VI.A.1(a)	VII.B, VII.C
A.1(b)	V.A, VII.B, VII.C
A.2(a)	V.A
A.2(b)	VII.C
B.1	VI.A
B.2	V.E
B.3	V.E
VII	V.F
VIII.A	VIII.B, VIII.C
B	VIII.B, VIII.C
C	VIII.B
D	VIII.D
E	VIII.B
IX	IX
X	N/A
XI	N/A
XII	X
XIII	N/A
XIV	N/A
XV	XIII
XVI	XI
XVII	N/A
XVIII	N/A
XIX	N/A
XX	XIV
XXI	N/A
XXII	XV
Appendix A	VI.A
Appendix B	VI.A
Appendix C	VI.A
Appendix D	VI.A
Appendix E	VII.B, VII.C
Appendix F	V.A, VII.B, VII.C

EXAMPLE *(e.g., alternating between 40 MTHM Naval SNF (from Idaho) and 40 MTHM N-reactor SNF (from Hanford))*

Delivery Year	Total MTHM	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
					(MTHM/Site/Type)								
2010	TBD												
2011	TBD												
2012	TBD												
2013	TBD												
2014	TBD												
2015	400	40/ID/Nav	40/Hanf/NRx		40/ID/Nav40/Hanf/NRx40/ID/Nav			40/Hanf/NRx40/ID/Nav40/Hanf/NRx		40/ID/Nav40/Hanf/NRx			
2016	400												
2017	400												
2018	400												
2019	400												
2020	400												
2021	400												
2022	400												
2023	400												
2024	400												
2025	400												
2026	400												
2027	400												
2028	400												
2029	400												
2030	400												
2031	400												
2032	200												
2033	0												

Integrated Acceptance Schedule - Material Description
Revision _____
Page _____ of _____

Acceptance Year _____
Total MTHM for Acceptance Year _____

1. Acceptance Date (Month/Year) _____

2. EM Site Name _____

3. a. Description of DOE SNF
   - Type of Fuel _____
   - Cladding Material _____
   - Initial Enrichment _____
   - MTHM - Discharged _____
   - Number of assemblies _____
   - Burnup _____
   - Condition _____
   - Age _____
   - Thermal Output _____

   b. Description of HLW
   - MTHM Equivalent _____
   - Thermal Output _____
   - Year Produced _____

4. Type of Transportation Cask Required:
   - Truck _____
   - Rail _____
   - Barge _____

Appendix C

Subagreement on the DOE SNF and HLW Technical Baseline

Purpose

This Subagreement defines the responsibilities for the development and control of the acceptance technical baseline that supports the acceptance of canistered HLW and DOE SNF produced or stored by EM-managed facilities into the CRWMS.

Scope

This Subagreement is limited to issues related to the development, concurrence, distribution, compliance and conformance verification of acceptance criteria relative to canistered HLW and DOE SNF, and coordination of associated issues. NNPP SNF is addressed in a separate agreement. For the purposes of this Subagreement, the technical baseline shall only include the documents identified in Figures 1 and 2. Figure 1 identifies the technical baseline for HLW and Figure 2 establishes the technical baseline for DOE SNF.

This Subagreement supersedes all previous agreements between RW and EM to accomplish technical documentation of the acceptance process. In particular, this Subagreement replaces the April 4, 1994 *Subagreement between EM and RW on the Waste Acceptance Technical Baseline*.

Definitions

CRWMS Acceptance Criteria - All technical and programmatic requirements which must be satisfied by DOE SNF and HLW for the CRWMS to meet regulatory requirements, as documented in the Waste Acceptance System Requirements Document.

National Spent Nuclear Fuel Program (NSNFP) Guidance Document - The NSNFP guidance document that interprets CRWMS requirements applicable to DOE SNF and establishes EM policy for DOE SNF. The document identifies compliance approaches for DOE sites to meet CRWMS acceptance criteria and presents a process by which present owners/custodians of DOE SNF can package it for acceptance and transportation to the RW facility. As the CRWMS Acceptance Criteria are finalized, this guidance document will be phased out, as appropriate.

Production Record - The documentation, provided by the Producer, that describes the actual canistered waste form.

RW/EM interface documents - The documentation defining detailed design solutions needed for design, development and operation of the CRWMS (developed by the RW Yucca Mountain Site Characterization Office (YMSCO) and the Office of Waste Acceptance, Storage and Transportation (OWAST), as needed). This includes Interface Control Documents.

Site Specific Compliance Document - The documentation that describes the plan for demonstrating compliance with each requirement in the CRWMS acceptance criteria for a specific EM site. This document includes descriptions of the tests, analyses, and process controls to be performed by EM, including the identification of records to be provided to demonstrate compliance with the specifications. For the Defense Waste Processing Facility the WCP meets the intent of this document. For DOE SNF, a compliance document will be developed for each DOE SNF management site.

Storage and Shipping Records - The documentation that describes the physical attributes of the canistered waste forms. The records identify any unexpected events, such as thermal excursions, which have occurred during storage. The Shipping Records provide written documentation and certification: (a) of cask conditions and contents prior to transfer to the receiving party, (b) that the transportation cask subsystem has been packaged to meet DOE, Department of Transportation (DOT), and Nuclear Regulatory Commission (NRC) requirements, and to transfer care, custody and control of the shipment, (c) of the activity in terms of the appropriate the International System of Units (SI) (e.g. Becquerel, Terabecquerel, etc.) contained in each shipping package and the name of each radionuclide in each shipping package in accordance with 49 CFR Part 172, and (d) that the standard HLW did not exceed 400°C to ensure the glass transition temperature was not exceeded.

Waste Acceptance Product Specification (WAPS) - The documentation that identifies the technical specifications for the high-level waste forms.

Waste Form Compliance Plan (WCP) - The documentation prepared by a HLW Producer describing planned analyses, tests, and engineering development work to be undertaken and information to be included in individual waste form production records to demonstrate compliance of a proposed waste form with waste acceptance specifications.

Waste Form Qualification Report (WQR) - The documentation prepared by a HLW Producer which describes results of analyses, tests, and engineering development work actually performed to demonstrate waste form compliance with acceptance specifications.

RW Responsibilities

a. Development of CRWMS Acceptance Criteria and RW/EM interface documents - RW shall, in collaboration with EM, develop acceptance criteria and RW/EM interface documents, as needed, for HLW and DOE SNF. These requirements shall be documented in accordance with Figures 1 and 2, respectively. RW shall include EM in technical reviews of the these documents within the scope of this Subagreement.

b. EM Concurrence with CRWMS Acceptance Criteria and RW/EM interface documents - RW shall include EM as an ad hoc member of the RW Baseline Change Control Board for

changes to the CRWMS acceptance criteria. Initial issuance and changes to detailed acceptance criteria (if needed) and RW/EM interface documents, shall be concurred in as an ad hoc member of the YMSCO and OWAST Change Control Boards by EM management. This does not include revisions that do not impact EM, and typographical, clerical or administrative changes.

c. Development of EM Technical Baseline Documents - RW shall provide qualified reviewers to support technical reviews of EM's documents related to acceptance of HLW and DOE SNF.

d. RW Concurrence with EM Technical Baseline Documents - RW shall provide concurrence to initial issuances of the EM National Spent Nuclear Fuel Program Guidance Document, Site Specific Compliance Documents, and the WAPS. Concurrence is a statement that an EM technical baseline document has been reviewed, resolution of all identified comments has been accepted and that no identified outstanding issues remain, in accordance with EM's document review procedure. Concurrence by RW does not relieve EM of the responsibility to meet all applicable requirements contained in the CRWMS acceptance criteria.

e. Distribution of CRWMS Acceptance Criteria and RW/EM interface documents - RW shall provide EM controlled copies of all CRWMS acceptance criteria and RW/EM interface documents.

f. Coordination - RW shall meet with EM periodically, as needed, to discuss issues related to acceptance of HLW and DOE SNF. In addition, RW shall request EM participation at all meetings which address related issues.

g. Conformance Verification of CRWMS Acceptance Criteria and RW/EM interface documents - RW may perform conformance verification reviews to ensure CRWMS requirements have been met. This may include review of documentation, or performance of tests and analyses where necessary, to provide demonstration that the DOE SNF and HLW forms provided by EM are acceptable in accordance with CRWMS acceptance criteria.

EM Responsibilities

a. Development of CRWMS Acceptance Criteria and RW/EM interface documents - EM shall provide qualified reviewers for technical reviews of CRWMS acceptance criteria and RW/EM interface documents, as needed, if acceptance of HLW or DOE SNF, is impacted.

b. EM Concurrence with CRWMS Acceptance Criteria and RW/EM interface documents - EM shall participate as an ad hoc member of the RW Baseline Change Control Board for

changes to the CRWMS acceptance criteria, and shall concur as an ad hoc member of the YMSCO and OWAST Change Control Boards for initial issuance and changes to detailed acceptance criteria and RW/EM interface documents, within the scope of this Subagreement. This does not include revisions that do not impact EM, and typographical, clerical or administrative changes.

c. Development of EM Technical Baseline Documents - Using the baselined CRWMS acceptance criteria, EM shall prepare and update, as necessary, design-level technical specifications, technical design and development plans, and documentation of data gathering, analysis and testing activities for HLW and DOE SNF, which comply with CRWMS acceptance criteria. These documents, defined in the Definitions section, shall be documented in accordance with Figures 1 and 2, respectively. EM shall include RW in technical reviews of EM's technical baseline documents.

d. RW Concurrence with EM Technical Baseline Documents - EM shall include RW in the change control process of initial issuances of EM technical baseline documents (specific documents affecting acceptance of DOE SNF and HLW are included in the Definitions section), by means of concurrence. Concurrence by RW does not relieve EM of the responsibility to meet all applicable CRWMS acceptance criteria.

e. Distribution of EM Technical Baseline Documents - EM shall provide RW controlled copies of EM technical baseline documents (specific documents affecting acceptance of DOE SNF and HLW are included in the Definitions section). In addition, EM shall provide RW with copies of other technical documentation, for information, upon request (e.g., Borosilicate Waste Glass Compendium).

f. Coordination - EM shall meet with RW periodically, as needed, to discuss issues related to acceptance of HLW and DOE SNF. In addition, EM shall request RW participation at all meetings which address related issues.

g. Conformance Verification of CRWMS Acceptance Criteria and RW/EM interface documents - EM shall provide the necessary documentation for RW to perform conformance verification reviews to ensure CRWMS requirements have been met.

RELATIONSHIP BETWEEN EM - RW TECHNICAL BASELINES FOR HLW

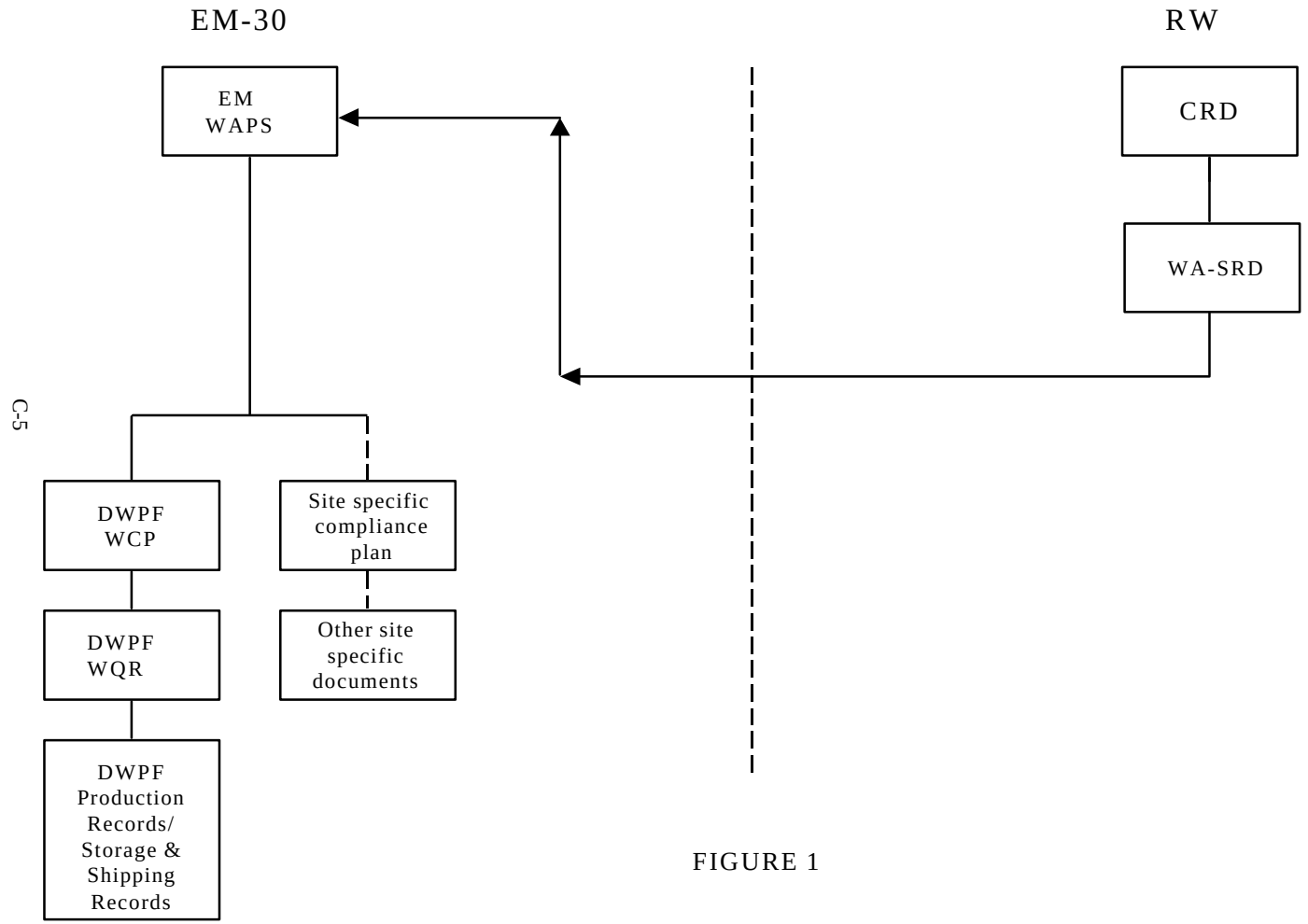

FIGURE 1

C-5

RELATIONSHIP BETWEEN EM - RW TECHNICAL BASELINES FOR DOE SNF

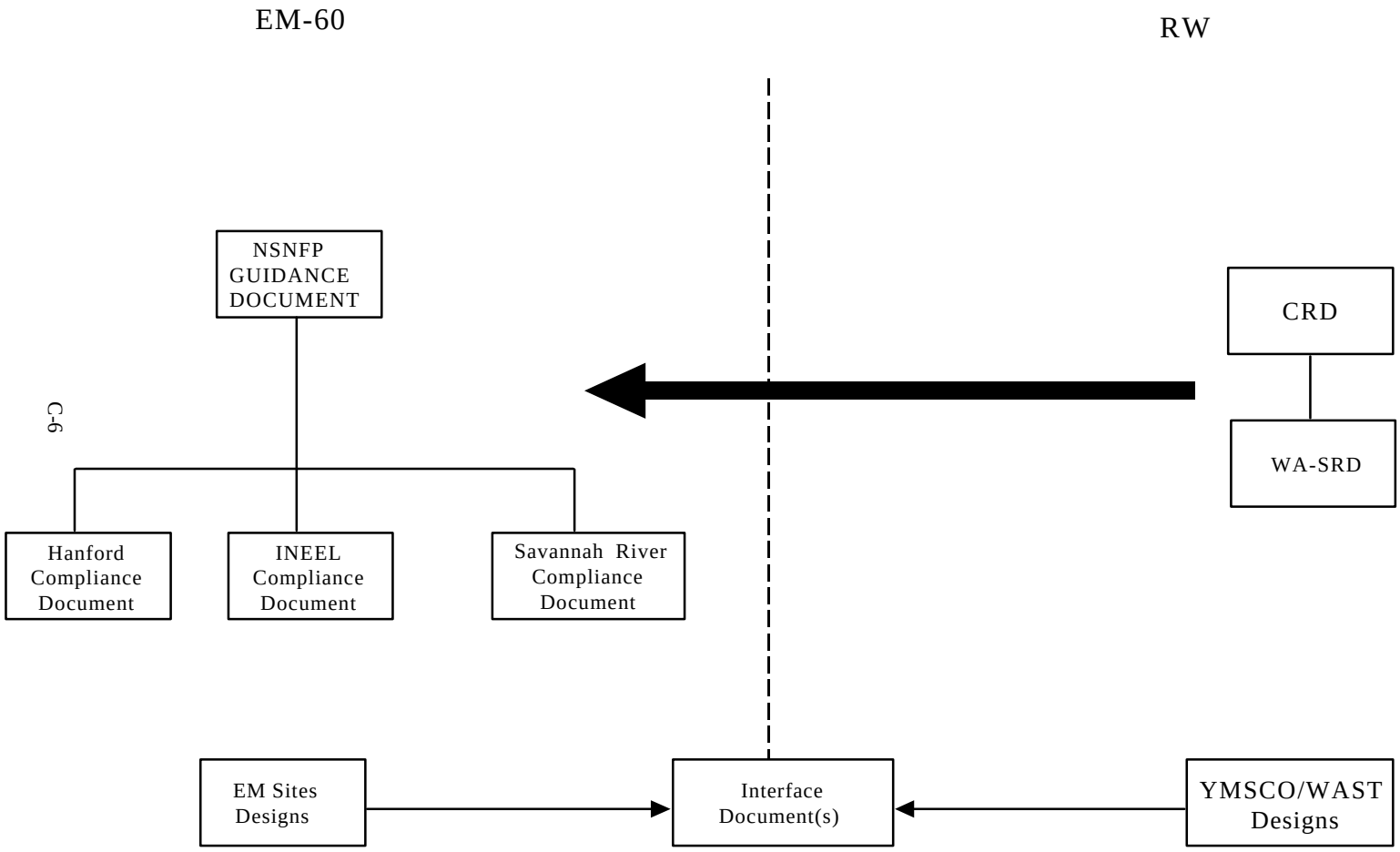

FIGURE 2

APPENDIX D

Memorandum of Agreement

between the
Assistant Secretary
Office of Environmental Management (EM)
U.S. Department of Energy, Washington, DC
and the
Director
Office of Civilian Radioactive Waste Management (RW)
U.S. Department of Energy, Washington, DC

Subagreement on Credits for Taxpayer-funded Expenditures which Benefit the High-Level Radioactive Waste Disposal Program

Purpose

It is recognized that in the past, DOE has performed research and development supported by appropriated funds which may have produced benefits to the RW program. The parties agree that such taxpayer-funded work may represent avoided cost to the RW program and may further the disposal of commercial spent nuclear fuel. If so, some or all of the cost of such work should be credited against DOE's Nuclear Waste Fund fee obligation. Such credits would eliminate inappropriate taxpayer subsidization of utility ratepayers.

The purpose of this memorandum of agreement is to establish the process and criteria against which taxpayer-funded work identified by EM will be evaluated by RW for credits offsetting DOE's financial obligation to the Nuclear Waste Fund.

Scope

This MOA covers the process by which taxpayer-funded work identified by EM will be evaluated by RW for credits. Such credits will be evaluated only in those cases where it is believed that taxpayer funds have been expended such that benefit accrues to utility ratepayers, thereby inappropriately subsidizing the commercial waste disposal program.

Authorities

Authorities of this MOA are the Nuclear Waste Policy Act, Sections 8 and 302.

Terms

A. Criteria for determination of eligibility of specific work for credits:

1. Work must fall within the scope of RW responsibilities as it executes the provisions of the Nuclear Waste Policy Act of 1982 and Amendments Act of 1987. The Act authorized the Department of Energy, through the Office of Civilian Radioactive Waste Management (established by the Act), to site,

construct and operate a system of geologic repositories to permanently dispose of spent nuclear fuel and high-level radioactive waste. Work conducted prior to the passage of the Nuclear Waste Policy Act of 1982 will not be evaluated for credits.

2. Work must be necessary for the development and operation of the RW waste management system. Work products and activities must represent an avoided cost to the RW program.

3. Work must have been conducted in a manner that allows for use of the results by the RW program without substantive rework.

4. Work must have been conducted under a quality assurance program which either meets current RW QA program requirements, the RW QA program requirements in effect at the time the work was accomplished, or can be qualified for use under RW QA program requirements without extensive rework or validation.

5. Work must benefit the disposal of commercial spent nuclear fuel. Activities which exclusively benefit the acceptance and disposal of Department-owned materials (e.g., spent nuclear fuel or high level waste) will not be evaluated for credits.

B. Application of credits and interest to offset Federal obligations to the NWF:

Credits and interest from the year of expenditure to the date of credit shall be applied against the Federal obligation to the Nuclear Waste Fund. Costs of work for which credits are received will be included in the actual program costs.

C. RW direction of work under NWF:

All work to be funded under the NWF will be directed and managed by RW. No future work within the scope of RW's responsibilities is to be undertaken by other DOE organizations using appropriated funds with the intention of obtaining credits at a later date against DOE's NWF fee obligations without prior RW concurrence.

D. Joint Committee on Credits:

In light of the attendant complexity of reconstructing the relevant history, and both proposing and evaluating work potentially eligible for credits, RW and EM shall jointly establish a Committee on Credits. This Committee shall, no later than twelve (12) calendar months subsequent to the signing of this MOA subagreement, publish detailed guidelines for evaluation of credit proposals. These detailed guidelines shall further

elaborate on and be consistent with the principles contained in the criteria of Section A, paragraphs 1 through 5.

E. Procedure for Credits:

EM shall identify specific work for consideration for NWF credits and shall develop a detailed justification for credit against the criteria in Section A. The Joint Committee on Credits shall evaluate the work identified by EM for credits using the criteria in Section A and the detailed guidelines and provide written recommendations to RW. RW shall provide a written approval or disapproval with reasons therefore within 120 days of receipt. If EM disagrees with the RW response, the matter will be elevated through Departmental management for resolution.

F. RW use of DOE Services:

Use by RW of DOE provided services shall be funded from appropriations from the NWF, or other funding source as appropriate, and will not be treated as credits against DOE waste fund obligations.

Commencement, Amendment and Termination

This MOA shall be effective upon signature of both parties and shall remain in effect until modified or terminated by mutual agreement. This MOA shall be terminated when it is formally incorporated into the comprehensive MOA between EM and RW, unless specifically indicated to the contrary in the comprehensive MOA.

Alvin L. Alm, Assistant Secretary
Office of Environmental Management

10/3/96
Date

Daniel A. Dreyfus, Director
Office of Civilian Radioactive
Waste Management

9.27.96
Date

DOE/HLW/MOA-001
REV. 1

Memorandum of Agreement

Between the

Deputy Assistant Secretary
Office of Waste Management (EM-30)
Office of Environmental Management,
Headquarters, Washington, D.C.

And the

Director, Office of Quality Assurance (RW-3)
Office of Civilian Radioactive Waste Management,
Las Vegas, Nevada

for

Coordination and Implementation of Quality Assurance Activities
Associated with High-Level Waste

Purpose

This Memorandum of Agreement (MOA) delineates the coordination and implementation of quality assurance (QA) activities for the High-Level Waste (HLW) Program between the Office of Waste Management (EM-30) and the Office of Quality Assurance (RW-3) associated with the preparation of the Department of Energy (DOE)-managed HLW for acceptance in an RW-managed, Nuclear Regulatory Commission (NRC)-licensed storage or disposal facility. This MOA further defines the roles and responsibilities in coordinating and implementing the HLW QA Program and supersedes the previous Agreement dated May 23, 1995.

Background

A MOA was established on October 30, 1991, between EM-30 and RW-3 to specify the working relationships for HLW QA activities. On April 21, 1994, the Office of Environmental Restoration and Waste Management became the Office of Environmental Management, and the EM-30 organization was restructured. Another EM-30 reorganization occurred in early 1996. As part of this reorganization, responsibility for management of Spent

Nuclear Fuel was transferred to the Office of Nuclear Materials and Facility Stabilization (EM-60).

The 1996 reorganization has necessitated canceling the previous MOA and establishing a new MOA to specify the continued working relationship between RW-3 and EM-30 for QA activities.

The objective of the EM HLW QA Program is to satisfy RW requirements for the HLW QA Program and ensure RW acceptance of the qualified HLW form. In order to attain these objectives, the HLW QA Program committed to complying with the Office of Civilian Radioactive Waste Management (OCRWM) Quality Assurance Requirements and Description (QARD), DOE/RW 0333P. To satisfy the organizational and independence requirements of the QARD, EM-30 designated a HLW QA Program Manager (QAPM) who is currently assigned to the Office of Technical Services (EM-37).

To implement the QARD requirements, EM-30 has developed, approved, and implemented HLW Standard Practice Procedures (SPPs). SPPs specify how applicable QA requirements are accomplished. Concurrently, the HLW QARD Requirements Matrix, which is a cross-walk between the SPPs and QARD requirements, was submitted and accepted by RW. The matrix also facilitates discussion with RW on exceptions to the QARD requirements not applicable to the HLW QA Program.

QA activities for the HLW program will be conducted under EM-37, the Office of Eastern Operations (EM-32), and the Office of Hanford Operations (EM-38). EM-32 is responsible for HLW activities at the Savannah River and West Valley sites. EM-38 is responsible for HLW activities at the Hanford site. The QAPM is responsible for developing and managing the HLW QA Program.

Agreement

Interface for the EM HLW QA Program will be between the RW-3 Director of Quality Assurance and the EM-30 HLW QAPM. This interface will continue to provide coordination and clarification of:

a. RW QA requirements and the EM-30 HLW QA Program;

b. Information, documentation, and exchange;

c. Plans and schedules for RW overview of EM implementation of QARD requirements;

d. Resolution of any apparent inconsistencies, including clarification and interpretation of QA requirements; and

The HLW QAPM shall be the single point of contact between RW-3 and EM-30 for HLW QA related activities and is responsible for providing RW the information concerning planning, coordinating, and maintaining the HLW QA Programs and verification of implementation.

The overall goal and objective of this Agreement is to ensure that the EM HLW QA Program meets RW requirements.

EM-30 Responsibilities

a. Develop and implement a HLW QA Program that meets the requirements of DOE/RW-0333P and defines the EM-30 QA Program as it affects waste acceptance process activities of HLW for disposal.

b. Delineate the interface and functional responsibilities within EM-30 for those organizations involved in implementing the requirements of the EM HLW QA Program.

c. Perform oversight of the EM-30 organizations implementing the EM-30 QA Program at DWPF, WVDP, and DOE/Hanford.

d. Provide a copy of the oversight reports to RW.

RW-3 Responsibilities

a. Perform audits/surveillances of EM-30 headquarters activities and observe perodic EM-30 headquarters audits/surveillances of HLW sites.

b. Provide Program interpretation, clarification, and implementation guidance.

c. Assist with coordination of efforts to the Nuclear Regulatory Commission for the disposition of DOE-managed HLW.

These actions, along with ongoing overview/evaluation activities, will provide a high degree of confidence that the DOE-managed HLW will meet the established technical requirements for the acceptance in a RW-managed, NRC-licensed storage or disposal facility.

Observers

All parties agree that the NRC staff, as well as representatives from affected units of state and local government and Native American tribes, will be permitted, consistent with security access and safety rules, to observe the EM HLW QA Program evaluation activities.

Commencement, Amendment, and Termination

This Agreement shall be deemed effective upon signature of the affected parties and shall remain in affect until modified or terminated by mutual agreement or until its provisions are superseded by a comprehensive agreement between EM-30 and RW regarding the HLW program for the acceptance and disposal of DOE-managed HLW. This agreement will be reviewed annually by all parties to assure the conditions described herein are still appropriate to the Agreement.

Mark W. Frei 11/23/98

Mark W. Frei (Date)
Acting Deputy Assistant Secretary
Office of Waste Management
Office of Environmental Management

R.W. Clark 11/4/98

Robert W. Clark (Date)
Acting Director, Quality Assurance
Office of Civilian Radioactive Waste Management

Memorandum of Agreement

Between the

Deputy Assistant Secretary
Office of Nuclear Material and Facility Stabilization (EM-60)
Office of Environmental Management
Headquarters, Washington, D.C.

and

Director, Office of Quality Assurance (RW-3)
Office of Civilian Radioactive Waste Management
Las Vegas, NV

for

Coordination and Implementation of Quality Assurance Activities Associated with DOE-Owned Spent Nuclear Fuel

Purpose

This Agreement delineates the coordination and implementation of quality assurance (QA) activities for the National Spent Nuclear Fuel (NSNF) Program between the Office of Nuclear Material and Facility Stabilization (EM-60) and the Office of Quality Assurance (RW-3) associated with preparation of the Department of Energy (DOE)-owned Spent Nuclear Fuel (SNF) for acceptance in an RW-managed, Nuclear Regulatory Commission (NRC)-licensed storage or disposal facility. This Agreement further defines the roles and responsibilities in coordinating and implementing the NSNF QA Program and supersedes the previous Agreement dated July 10, 1996.

Background

Management of DOE-owned spent nuclear fuel was realigned in December 1995 under the Office of Nuclear Material and Facility Stabilization (EM-60) as the Office of Spent Fuel Management (EM-67). EM-60 is responsible for overall program policy, guidance, and approval of major policy and budget formulations. In addition, the Headquarters program

ENCLOSURE

management functions for the specific SNF sites were delegated to the Savannah River Office (EM-63) and the Northwestern Office (EM-65). EM-63 and EM-65 are responsible for working with the specific SNF sites on program activities and basic program execution. EM-67 provides overall guidance and direction for managing the NSNF Program.

As a result of the implementation plan for redeployment to field operations, the Idaho National Engineering and Environmental Laboratory (INEEL) was designated as the lead site laboratory for management of DOE-owned SNF, receiving overall program policy and guidance from EM-67. INEEL is responsible for providing coordination and integration of all noncommercial spent nuclear fuel activities for the Department of Energy. The DOE Spent Fuel Program in Idaho is responsible for implementation, and reports to the Director, Office of Spent Fuel Management (EM-67).

The DOE SNF Program Manager, located in DOE Idaho Operations Office, is responsible for implementing and managing cross-cutting, complex-wide spent fuel issues and coordinating with SNF sites. The NSNF Program Manager, acting as deputy to the DOE SNF Manager, coordinates and integrates the implementation of DOE SNF Program policies and guidance regarding the disposal of DOE-owned SNF. The NSNF Program designated an NSNF QA Program Manager (QAPM), located in the DOE Idaho Operations Office, responsible for coordinating the development, implementation, and maintenance of the Program and qualifying the sites' SNF QA programs. To satisfy the organizational and independence requirements of the DOE/RW-0333P, the QAPM reports to the EM-67 Director.

The objectives of the NSNF QA Program are twofold: to obtain RW acceptance of the NSNF QA Program and to qualify/accept the SNF site QA programs. In order to attain these objectives, the NSNF Program committed to complying with the Office of Civilian Radioactive Waste Management (RW) Quality Assurance Requirements and Description (QARD; DOE/RW-0333P).

Although not required by RW, the NSNF Quality Management Plan (QMP) was developed and approved in August 1996. This Plan identifies the programmatic requirements and responsibilities for quality assurance activities required for the management of the NSNF Program. It also describes how the various QA standards, primarily DOE/RW-0333P requirements, are applied, and the transfer of appropriate RW QA and technical requirements to the SNF sites. To implement the QMP, the NSNF Program Management Procedures (PMPs) were developed and approved in August 1996. These procedures specify how applicable QA requirements are accomplished. Concurrently, the NSNF RW Requirements Matrix, which identifies the PMPs that address the DOE/RW-0333P requirements, was submitted and accepted by RW in November 1996. The matrix also facilitated discussion with RW on exceptions to QARD requirements not applicable to the NSNF Program.

Agreement

Formal interface for the NSNF QA Program will be between the EM-67 Director and the RW-3 Director. Routine communications and interfacing activities are between the Deputy Director, RW-3; NSNF Program Manager; and the NSNF QAPM. This interface will provide for coordination of:

a. Evaluation and acceptance of the NSNF QA Program by RW.

b. Evaluation and assessment of the SNF sites by the NSNF QAPM.

c. Review and acceptance of site-specific QA Program and its QARD Requirements Matrices by NSNF QAPM.

d. QA activities performed to support the development of DOE-owned SNF technical requirements.

e. Clarification and interpretation of QA requirements.

f. Oversight of licensing activities of the DOE-owned and NRC-licensed facilities.

The overall goal and objective of this Agreement is to maintain acceptance of the NSNF QA Program by RW, and thereby facilitate acceptance of the SNF sites' QA programs. To maintain acceptance of the NSNF QA Program, RW-3 will:

a. conduct periodic reviews of the Program.

b. provide Program implementation guidance.

c. assist with coordination of efforts to the Nuclear Regulatory Commission (NRC) for disposition of DOE-owned SNF.

These actions, along with ongoing overview/evaluation activities will provide a high degree of confidence that the DOE-owned SNF will meet the established technical requirements for acceptance in an RW-managed, NRC-licensed storage or disposal facility.

Observers

All parties agree that the NRC staff, as well as representatives from affected units of state and local government and Indian tribes, will be permitted, consistent with security access and safety rules, to observe the NSNF QA Program evaluation activities. In addition, the NRC may perform audits of RW and NSNF programs.

Commencement, Amendment, and Termination

This Agreement shall be deemed effective upon signature of the affected parties and shall remain in effect until modified or terminated by mutual agreement or until its provisions are superseded by a comprehensive agreement between EM-60 and RW regarding the NSNF Program for the acceptance and disposal of DOE-owned spent nuclear fuel. This Agreement will be reviewed annually by all parties to assure the conditions described herein are still appropriate to the Agreement.

Ronald A. Scott 6/16/97

for David G. Huizenga, Acting (Date)
Deputy Assistant Secretary
Office of Nuclear Material and
Facility Stabilization
Office of Environmental Management

7/24/97

Donald G. Horton (Date)
Director, Office of Quality Assurance
Office of Civilian Radioactive
Waste Management