

MAR 15 1994

Dr. Daniel A. Dreyfus, Director
Office of Civilian Radioactive
Waste Management
U.S. Department of Energy
1000 Independence Avenue, SW
Washington, D.C. 20585

Dear Dr. Dreyfus:

SUBJECT: TRANSMITTAL OF THE QUARTERLY PROGRESS REPORT ON THE PRE-LICENSING
PHASE OF THE CIVILIAN HIGH-LEVEL RADIOACTIVE WASTE MANAGEMENT
PROGRAM

Enclosed for your information is a copy of the NRC staff's "Quarterly Progress
Report on the Pre-Licensing Phase of the U.S. Department of Energy's (DOE's)
Civilian High-Level Radioactive Waste Management Program" (SECY-94-040). The
Quarterly Progress Report provides the Commission an assessment of progress
being made on key aspects of the NRC and the DOE pre-licensing consultation
program. This report covers the period from October through December 1993.

As noted in the enclosed Quarterly Progress Report, NRC and DOE staff
continued to make progress in addressing and resolving issues at the staff
level. There were a number of interactions, particularly in regard to the
exploratory studies facility, where DOE has been responsive to NRC staff
concerns. This has included such actions as providing formal written
responses, conducting meetings which focused on specific concerns, and
scheduling future meetings and site visits to address NRC staff concerns.
Furthermore, we appreciate the comments DOE provided, during this reporting
period, on a proposed rulemaking entitled, "Clarification of Assessment
Requirements for the Siting Criteria and Performance Objectives," and the
Draft Regulatory Guide, DG-3009, "Topical Guidelines for the Licensing Support
System."

If you have any questions, please contact me at (301) 504-3352, or Mr. Ken
Hooks of my staff, at (301) 504-3387.

Sincerely,

Original signed by
Robert M. Bernero
Robert M. Bernero, Director
Office of Nuclear Material Safety
and Safeguards

Enclosure: As stated

cc: See next page

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Dr. Daniel A. Dreyfus

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POLICY ISSUE
(Information)

February 18, 1994

SECY-94-040

FOR: The Commissioners

FROM: James M. Taylor
Executive Director for Operations

SUBJECT: QUARTERLY PROGRESS REPORT ON THE PRE-LICENSING PHASE OF THE
U.S. DEPARTMENT OF ENERGY'S CIVILIAN HIGH-LEVEL RADIOACTIVE
WASTE MANAGEMENT PROGRAM

PURPOSE:

To provide the Commission with a Quarterly Progress Report (QPR) (October through December 1993) on the pre-licensing phase of the U.S. Department of Energy's (DOE's) civilian high-level radioactive waste (HLW) management program.

BACKGROUND:

In the QPR on the pre-licensing phase of DOE's program, the Nuclear Regulatory Commission staff discusses the key aspects of the NRC/DOE pre-licensing consultation program that deserve Commission attention. The previous QPR, SECY-93-332, discussed activities that occurred from July through September 1993.

EXECUTIVE SUMMARY:

The most significant activities during this period were related to the areas of "DOE Implementation of Scheduled and Systematic Consultations" and "Early Resolution of State and Tribal Concerns."

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Contact: Ken Kalman, NMSS
504-2428

SECY NOTE: TO BE MADE PUBLICLY AVAILABLE IN 10 WORKING DAYS FROM THE DATE OF THIS PAPER.

DOE Implementation of Scheduled and Systematic Consultations

- o Previous QPRs have discussed an August 20, 1993, letter to DOE, in which the NRC staff expressed its concerns with DOE's exploratory studies facility (ESF) design, design control process, and technical inputs to design decisions. Since that time, NRC and DOE staff have had several interactions regarding these concerns, and on November 18, 1993, DOE transmitted a letter of response, which is currently under review by the NRC staff. Furthermore, during this reporting period, DOE conducted the first of a series of bi-monthly meetings scheduled to keep the NRC staff informed of ESF activities. Consequently, the NRC staff believes DOE is making considerable progress toward resolution of NRC staff concerns related to the ESF.

Early Resolution of State and Tribal Concerns

- o Previous QPRs have noted that the State of Nevada petitioned the United States District Court, in Nevada, to preserve the testimony of 27 individual scientists by taking their depositions relative to their findings surrounding the 1989 Szymanski report, which hypothesized possible episodic recurrence of flooding (upwelling of groundwater) at the Yucca Mountain site. The U. S. Department of Justice (DOJ) filed a Memorandum of Opposition and on October 7, 1993, the United States District Court granted the Government's motion to dismiss the State of Nevada's lawsuit. Although the State sought reconsideration, the Court, on November 24, 1993, denied the State's Motion to Reconsider.

DISCUSSION:

1. DOE Implementation of Scheduled and Systematic Consultations

During this reporting period, the NRC and DOE staff conducted nine interactions, including four technical exchanges, three meetings, and two site visits. The NRC staff reviewed and provided comments on numerous DOE documents, observed a DOE program review, and the NRC On-site Representatives (ORs) continued to observe ongoing DOE site characterization activities. There were also noteworthy changes in DOE personnel.

The first technical exchange of this reporting period was held in Las Vegas, Nevada on October 4 - 5, 1993, where representatives of NRC; DOE; the State of Nevada; Clark County, Nevada; Nye County, Nevada; and Inyo County, California, discussed issues related to the ESF at Yucca Mountain, Nevada. The DOE presentations focused on issues raised by NRC staff in its August 20, 1993, letter, in which DOE was asked to explain how it is assuring that ongoing design and construction work will not be adversely affected by problems related to the design, design inputs, and design control processes identified during DOE quality assurance (QA) audits and design reviews observed by the NRC staff. DOE described how the Management and Operating contractor (M&O)

was developing a new requirements hierarchy. It discussed the flow-down of the various applicable regulatory requirements to design requirements, the phased approach to the ESF design, and the current status of the ESF. The current modes of communication between NRC and DOE and possible avenues for improvement were also discussed at length.

On October 13, 1993, representatives of DOE; NRC; the State of Nevada; Nye County, Nevada; and Inyo County, California, met in Los Alamos, New Mexico, to participate in a technical exchange to discuss recent activities related to experimental and theoretical studies pertaining to the migration of radionuclides at Yucca Mountain. Topics discussed included methods of determining sorption, modeling issues, and strategies for modeling radionuclide migration. Presenters included representatives of DOE, consultants from Los Alamos National Laboratory (LANL), Lawrence Livermore National Laboratory, and Lawrence Berkeley Laboratory. Presentations were also made by NRC staff and staff from the Center for Nuclear Waste Regulatory Analyses (CNWRA). This interaction was followed on October 14, 1993, by a second technical exchange on near-field phenomena related to radionuclide releases from the engineered barrier system (EBS). The purpose of that technical exchange was to discuss past, current, and planned experiments, and computer simulations of near-field phenomena for the proposed Yucca Mountain repository, with emphasis on thermal hydraulics and releases of radionuclides. Discussions focused on such items as effects of heat on the saturation of the rock, circulation of air and water vapor, changes in water chemistry, and interactions of steam and water with components of the EBS.

A site visit of the LANL facilities, where Yucca Mountain studies are being conducted, was held on October 15, 1993, and was attended by representatives of DOE; NRC; the State of Nevada; Nye County, Nevada; and Inyo County, California. Participants toured locations such as the Atomic Force Microscopy Laboratory, Photoacoustic Spectroscopy Laboratory, the Underground Caisson Experiment that is being used for flow tests and water chemistry work, and the Mass Spectrometry Laboratory where dating of volcanic rocks is ongoing.

On November 17, 1993, NRC and DOE staff held a technical exchange to discuss a proposed DOE seismic hazards assessment methodology for Yucca Mountain, Nevada. The technical exchange was also attended by representatives of the State of Nevada; Nye County, Nevada; and Clark County, Nevada. The methodology is the subject of the first segment of a three-part topical report entitled "Methodology for Seismic Hazards Assessment at Yucca Mountain," that DOE will transmit to NRC in early 1994. Before the technical exchange, the staff reviewed an annotated outline on the proposed methodology and informed DOE that the topic was suitable for a topical report. The purpose of the technical exchange was to discuss the technical bases for the DOE seismic hazards assessment methodology topical report and to hear presentations on how DOE proposes to use the topical report to address 10 Site Characterization Analysis open items related to seismicity and tectonics. DOE presentations focused on elements of the methodology, including the technical data to

support seismic hazard analyses, and the use and suitability of the proposed methodology for performance assessment and seismic design.

On November 18, 1993, NRC and DOE staff held an interactions scheduling meeting to discuss and schedule interactions in the area of HLW management between the NRC staff and DOE from January through June 1994. Also in attendance were representatives from the State of Nevada; Nye County, Nevada; and Clark County, Nevada. At the meeting, NRC and DOE staff agreed to the scheduling of three technical exchanges and one site visit. The following topics for technical exchanges were agreed upon: "Evaluation of the Potentially Adverse Condition 'Evidence of Extreme Erosion during the Quaternary Period' at Yucca Mountain, Nevada;" "Status of Work Relevant to Characterization of the Saturated and Unsaturated Zone Flow"; and "Total System Performance Assessment." The topic selected for the site visit was "DOE's Approach to the Characterization of Faults and Fractures Near Yucca Mountain and the Stratigraphy, Structure, and Rock Properties Along the North Ramp of the ESF." Additionally, two ESF status update meetings were scheduled. The next interactions scheduling meeting is planned for May 17, 1994, in Washington, D.C.

On October 27-28, 1993, representatives from NRC, DOE, the State of Nevada, and others participated in a site visit at Argonne National Laboratory (ANL). The purpose of the site visit was to focus on DOE's glass and spent fuel waste form research programs, including the primary parameters affecting waste glass and spent fuel performance. During the interaction, scientists from ANL, DOE, and NRC, respectively, gave overview presentations on glass and spent fuel testing, a forthcoming DOE compendium of glass characteristics, and waste-form performance. At the conclusion of the briefings, all participants were taken on an extensive tour of ANL's waste form testing facilities. Briefings and poster board presentations were given by ANL scientists on the following topics: metal corrosion testing; effects of glass surface area to volume ratios on dissolution; sample preparation; long-term static and drip tests of radioactive glass dissolution; glass natural analogues; colloid formation; glass modeling; and drip tests of UO_2 and spent fuel dissolution. A general wrap-up and discussion period was held at the end of the lab tour.

On December 7, 1993, NRC staff observed the bi-monthly DOE Director's Program Review held in Vienna, Virginia, with video-conferencing to DOE Headquarters in Washington, D.C., and the Yucca Mountain Project Office in Las Vegas, Nevada. As discussed in the previous QPR, DOE program reviews consist of a series of presentations covering all aspects of DOE's Office of Civilian Radioactive Waste Management (OCRWM) activities, including repository site characterization, transportation, monitored retrievable storage (MRS), and related support activities.

On December 8, 1993, NRC and DOE staff met to discuss concerns related to the ESF design and design control process. Representatives from the State of Nevada and Nye County, Nevada, were also at this meeting. The ESF meeting was

the first of a series of bi-monthly meetings DOE has scheduled to keep the staff informed of the status of ESF activities. This series of meetings was initiated in response to concerns laid out in an August 20, 1993, letter to DOE, in which the NRC staff expressed concerns with DOE's ESF design, design control process, and technical inputs to design decisions. Based on DOE's November 18, 1993, letter of response and discussions at this meeting as well as DOE/NRC interactions that took place on September 17, 1993, and October 4-5, 1993, the staff believes that DOE is making considerable progress toward resolution of NRC staff concerns. The staff expects to transmit a formal response to DOE's November 18, 1993 letter in the next reporting period. In addition to the bi-monthly meetings to keep the staff informed of activities related to the ESF design and design process, DOE agreed to provide the staff with predecisional design packages two weeks in advance of any ESF design reviews. Consistent with this agreement, DOE transmitted the first of its predecisional design packages to the NRC staff in mid-December 1993, in advance of the design review scheduled for January 5 - 7, 1994.

In addition to the previously described interactions, during this reporting period, NRC staff also continued to review and comment on DOE documents. The previous QPR had noted that on September 23, 1993, the staff received DOE's, "Report on the Origin of Calcite-Silica Deposits at Trench 14 and Busted Butte and Methodologies Used to Determine Their Origin." The staff is reviewing the report and expects to complete its review during the next reporting period.

On November 23, 1993, the staff received the "Mined Geologic Disposal System Annotated Outline Skeleton Text for the Preparation of a License Application, Revision 3" (AO). This represents DOE's change from semi-annual to annual revisions to this document. Revision 3 of the AO focuses on the Natural System descriptions. The NRC staff will review the material presented to ensure that DOE is continuing to follow the guidance provided in DG-3003, "Format and Content of the License Application for the High-Level Waste Repository" and to determine how DOE is interpreting the regulatory requirements in 10 CFR Part 60.

As noted in the previous QPR, during the last reporting period, NRC staff had completed its acceptance review of the DOE topical report, "Evidence of Extreme Erosion during the Quaternary Period". On December 30, 1993, the staff transmitted a letter to DOE stating that, based upon its preliminary evaluation of the topical report, it had identified four concerns that must be resolved in order for the staff to complete its review and prepare a preliminary safety evaluation. These concerns focused on: (1) scope of the topical report; (2) reliance upon a single controversial dating method; (3) the qualification of existing data on erosion; and (4) comprehensiveness of the data submitted. In an effort to resolve some of the staff's concerns, a site visit has been scheduled for February 1, 1994.

DOE transmitted one new and two revised site characterization study plans for NRC staff's review. The staff completed its review of three new study plans during this reporting period. Reviews of 16 study plans, 9 of which are

revisions to previous DOE submittals, are currently underway by the staff, and are scheduled to be completed during the next two reporting periods.

During this reporting period, the ORs continued to observe ongoing DOE site characterization activities. On October 27, 1993, they conducted an onsite review of the starter tunnel activities at the ESF North Portal and observed two kinds of construction activities in the starter tunnel that will continue through the first quarter of FY94: (1) construction of the first test alcove, and (2) installation of instruments for monitoring and recording effects of construction. The test alcove is advancing by the drill and blast method and had reached a penetration depth of about 90 feet by the end of December 1993.

The ORs also were briefed in the field on the implementation of DOE's construction monitoring program for ESF operations that are being installed to detect rock instabilities. The principal investigator for the construction monitoring program and crew from Sandia National Laboratories demonstrated calibration tools and methods for performing and documenting their scientific investigations. The ORs observed the program to be using generally sound QA practices.

During this reporting period, there were noteworthy changes in personnel at DOE. On November 8, 1993, DOE announced that Robert M. Nelson, Jr., Deputy Manager of DOE's Nevada Operations Office, had accepted dual assignments as Acting Associate Director of the Office of Geologic Disposal (replacing Linda M. Smith) and Acting Project Manager for the Yucca Mountain Site Characterization Project Office (replacing Russ Dyer). Russ Dyer began acting in the Project Manager position on October 6, 1993, when the former Project Manager, Carl Gertz, was detailed to Hanford, Washington. Mr. Nelson will report directly to Dr. Daniel Dreyfus, Director of DOE's OCRWM.

There were no interactions between DOE and the U.S. Environmental Protection Agency (EPA), or significant developments on issues concerning mixed HLW or the Resource Conservation and Recovery Act, to note for this reporting period.

2. Early Implementation of a QA Program

During this reporting period, NRC QA staff, supported by CNWRA staff, observed DOE audits of the West Valley Demonstration Project and Reynolds Electrical & Engineering Company, Inc., and a DOE surveillance of the M&O. No deficiencies were identified, during the audits and surveillance, that would preclude the auditing/audited/surveilled organizations from continuing their quality-affecting activities.

A periodic NRC/DOE QA meeting was held on November 16, 1993, to discuss items of mutual interest. Representatives of the State of Nevada; Clark County, Nevada; Nye County, Nevada; and the Edison Electric Institute attended the meeting. Topics discussed included the "M&O Design Improvement Plan," DOE's QA overview of site characterization field activities, and the Site

Characterization Plan issues hierarchy. The Nye County representatives discussed QA plans for a drilling program independent of DOE's program.

3. Performance Assessment

On October 21, 1993, the NRC staff provided written comments to DOE on Sandia National Laboratories' (SNL) report, SAND91-2795, "TSPA 1991: An Initial Total-System Performance Assessment for Yucca Mountain." The NRC staff believes that SAND91-2795 provides the first step in demonstrating DOE's progress toward resolving the NRC staff's concerns, in Comment 1 of the Site Characterization Analysis, for DOE to conduct total system performance assessments on an iterative basis. The staff also found the report to be reasonably comprehensive in addressing issues and explaining methodologies and conceptual models.

On November 9-10, 1993, NRC and CNWRA staff participated with EPA and DOE staff in the Third Meeting of the National Academy of Sciences Committee on the Technical Bases for Yucca Mountain Standards (TYMS Committee), held in Las Vegas, Nevada. Representatives of the State of Nevada, Clark County, Nevada, and Nye County, Nevada, were also in attendance. The TYMS was formed to conduct a study to provide findings and recommendations to EPA on reasonable standards for protection of public health and safety. Technical presentations were given by the following organizations: (1) University of Nevada, Reno and Las Vegas; (2) Los Alamos National Laboratory; (3) EPA; (4) State University of New York, Buffalo; (5) NUS Corporation; (6) Stanford University; (7) University of California, Los Angeles; (8) NRC; (9) SNL; (10) Yale University; (11) GEOMATRIX; (12) American Anthropological Association; and (13) independent consultants.

This meeting of the TYMS was held to discuss the following four topics: (1) Yucca Mountain geology and natural resources; (2) disruption of Yucca Mountain due to volcanism, earthquakes, and human intrusion; (3) preventing human intrusion; and (4) uncertainties relating to predicting the likelihood and consequence of human intrusion. The various technical presentations provided general information on natural and human disruptive events at a geologic repository.

On December 16-17, 1993, the TYMS Committee held its fourth meeting on issues raised in the Energy Policy Act of 1992. The NRC staff participated in this meeting along with representatives of DOE; EPA; the State of Nevada; Nye County, Nevada; Clark County, Nevada; and other interested parties. This meeting completed a series of scientific tutorials for the Committee in areas related to issues raised by the Act. Topics addressed at this meeting included: the engineered barrier system, thermal effects and radionuclide transport, the geologic system and radionuclide transport, the system model and total system performance assessments, translating releases into measures of dose and risk, and additional considerations for a health-based standard. The Director of the NRC's Office of Nuclear Material Safety and Safeguards

presented NRC staff views on the use of performance assessment in the evaluation and licensing of high-level waste disposal.

4. Early Resolution of State and Tribal Concerns

As reported in the previous QPRs, on June 14, 1993, the State of Nevada petitioned the United States District Court, in Nevada, to preserve the testimony of 27 individual scientists by taking their depositions relative to their findings surrounding the 1989 Szymanski report, which hypothesized possible episodic recurrence of flooding (upwelling of groundwater) at the Yucca Mountain site. DOJ filed a Memorandum of Opposition and on October 7, 1993, the United States District Court granted the Government's motion to dismiss the State of Nevada's lawsuit. The State sought reconsideration. However, on November 24, 1993, the Court denied the State's Motion to Reconsider. The Court specifically noted that "There are numerous safeguards and record keeping procedures that assure that the relevant information will be available should Nevada feel compelled to bring suit in the future and that Nevada is not entitled to take depositions for future administrative proceedings."

During this reporting period, the staff continued to maintain an open and cooperative relationship with those parties deemed affected under the NWPA provisions. On November 12, 1993, the ORs, representatives of DOE, the State of Nevada, and affected units of local government met with the Nevada Legislature's Committee on HLW, in Las Vegas, Nevada, to discuss their respective views on DOE's scientific and technical studies and any areas of concern or dispute. In addition, for the benefit of four new members on his Committee, the Committee Chairman had the ORs describe the role of NRC and how it is implementing its responsibilities in the HLW program.

On December 15, 1993, the NRC staff met with representatives of Nye County, Nevada, to discuss the county's scientific investigations program and proposed drilling initiative at the Yucca Mountain candidate HLW repository site. The staff was provided information relative to the county's overall technical program and areas of interest, which include age-dating techniques, Quaternary stratigraphy, and unsaturated zone hydrology. The county proposes to drill four boreholes for geologic and hydrologic data, beginning in late spring 1994. By agreement with DOE's Yucca Mountain Site Characterization Project Office, the sites of the Nye County holes will be selected by DOE and will be located near existing DOE holes for purposes of cross-hole testing. The Nye County Nuclear Waste Repository Project Office will develop a QA program and will use procedures mutually agreed to by DOE and the county. NRC will be requested to review the QA plan when it is available.

5. Rulemaking and Regulatory Guidance Development

During this reporting period, the public comment period on the proposed 10 CFR Part 60 Rulemaking "Clarification of Assessment Requirements for the Siting Criteria and Performance Objectives" ended and the staff began its review of

the public comments received. Those providing comments included: DOE; the State of Nevada; Nye County, Nevada; the Edison Electric Institute; and one individual. The most extensive comments were provided by DOE, which had several concerns relating to implementing the proposed rule, particularly with the requirement for determining whether a siting condition is present or absent. The staff is in the process of preparing a comment response document. The staff believes that all of the comments can be readily resolved, most likely, with only minor changes to the language of the proposed rule.

During this reporting period, the public comment period on the Draft Regulatory Guide DG-3009, "Topical Guidelines for the Licensing Support System" also ended. Comments were received from: DOE; State of Nevada; Nye County, Nevada; Clark County, Nevada; and Lincoln County, Nevada. The staff is in the process of completing a comment response document. As with the proposed rulemaking discussed above, the most extensive comments came from DOE. A concern addressed by several of the commenters was a perceived need to clearly specify how and where environmental, socio-economic, and transportation information would be included.

6. MRS

As noted in previous QPRs, a number of groups have expressed interest in hosting an MRS site and have applied for and received grants, from DOE, to study the feasibility of hosting an MRS, but, some of these applications were denied or withdrawn. The following list provides the current status of the remaining Phase II grant applicants. However, it should also be noted that the Bingaman Amendment to the 1994 Energy and Water Development Appropriations Act (P.L. 103-126) precludes the funding thereunder of any Phase II-B grants. Accordingly, it appears that the Phase II-B applications that have been received may not be funded.

1. Mescalero Apache Tribe, New Mexico
Applied March 13, 1992.
Phase IIA Awarded April 21, 1992.
Letter to Acting Negotiator requesting to enter into negotiations, August 4, 1993.
Phase IIB application received October 1, 1993.
2. Skull Valley Band of Goshute Indians, Utah
Applied October 28, 1992.
Phase IIA Awarded on January 27, 1993.
Letter to Acting Negotiator requesting to enter into negotiations, August 9, 1993.
Phase IIB application received September 24, 1993.
3. Ft. McDermitt Paiute Shoshone Tribe, Nevada
Applied on February 19, 1993.
Phase IIA Grant awarded June 1, 1993, and studies are underway.

4. Tonkawa Tribe of Oklahoma
Applied on March 31, 1993.

Phase IIA Grant awarded September 30, 1993, and studies are underway.

7. Spent Fuel Storage and Transportation System Compatibility

During this reporting period, the staff had three interactions with DOE on storage and transportation issues. NRC and DOE staff met on November 9, 1993, for a presentation by DOE and DOE contractors on Multi-Purpose Canister (MPC) system conceptual design reports and associated studies. State of Nevada representatives were also in attendance, however, there were no representatives from affected units of local government. The purpose of the meeting was to initiate a process of early and frequent interactions between NRC and DOE staff on issues related to the MPC, and to provide an opportunity for informal and preliminary NRC technical input on the storage, disposal, and transportation aspects of the MPC concept. DOE representatives indicated that DOE has made no decision to proceed with the MPC concept. The meeting focused on DOE and DOE contractor descriptions of the MPC concept and operating strategy, including conceptual design bases, identification of technical and programmatic issues, and a tentative schedule for MPC development. NRC staff made several comments, including a suggestion that scale testing of the MPC basket design could expedite the licensing review process. The meeting concluded with no action items being taken.

On November 30 - December 1, 1993, staff held a technical exchange with DOE to discuss issues associated with burnup credit in the criticality analysis for spent fuel casks and, in particular, the MPC. DOE is currently planning to prepare three topical reports concerning burnup credit. The first report is currently being developed for pressurized water reactor (PWR) fuel for storage and transportation, and is expected to be submitted by the end of FY94. The second report will discuss burnup credit for both PWR and boiling water reactor (BWR) fuel for disposal and is expected to follow the first report by about a year. The third report is tentatively planned for BWR fuel in storage and transportation.

On November 11-12, 1993, staff participated in an MPC stakeholder workshop conducted by DOE. This workshop was a follow-up to one held in July 1993. The primary purpose of the workshop was to ensure that all issues and alternatives have been identified before DOE decides to implement an MPC system.

The previous QPR noted that the Sacramento Municipal Utility District (SMUD) has selected the standardized NUHOMS-24P spent fuel storage design as part of a DOE cooperative program to demonstrate the licensing of a dual-purpose storage/transport system for its Rancho Seco independent spent fuel storage installation. Pacific Nuclear (NUHOMS-24P vendor) submitted an application for 10 CFR Part 71 certification, for its MP-187 transportation cask, on October 8, 1993. The design includes a canister for the spent fuel that can

be removed and used for storage. The staff expects to finish its review by July 1995.

On October 27, 1993, SMUD submitted a revised Part 10 CFR Part 72 spent fuel storage license application and safety analysis report using the MP-187 transportation cask for onsite spent fuel transfer operations and the canisters for storage in Standardized NUHOMS-24P Horizontal Storage Modules. This system would accommodate the removal of spent fuel for further processing or disposal without having to return the fuel to the spent fuel pool for transfer to a shipping cask. The staff is currently reviewing this revised application.

During this reporting period, the NRC staff continued its review of the revised Part 71 application for certification from Nuclear Assurance Corporation (NAC) for its Storable Transport Cask (NAC-STC). NAC submitted a revised NAC-STC topical safety analysis report for storage under Part 72, on November 5, 1993. The revised application includes a design change to the cask basket.

8. Transportation

In addition to the NRC/DOE meetings discussed in detail in Section 7 of this QPR, during this reporting period, the NRC staff also observed a DOE QA audit of SNL. The audit took place on November 8 - 12, 1993, in Albuquerque, New Mexico, and consisted of an examination of procedures and supporting records related to SNL's Cask System Development Program.

9. Research

On December 16 and 17, 1993, at the CNWRA's offices in San Antonio, members of the Waste Management Subcommittee of the Office of Nuclear Regulatory Research's Nuclear Safety Research Review Committee (NSRRC) reviewed the NRC HLW research program. The review covered research done by CNWRA and NRC HLW research contractors from the University of Arizona and the California Institute of Technology. On January 13, 1994, the Subcommittee briefed the full NSRRC about the NRC HLW research program and discussed a draft report on the program that the full committee will issue after some modification.

10. Nuclear Waste Negotiator

The NRC staff has continued its relationship with the Office of the U.S. Nuclear Waste Negotiator. On October 4, 1993, pursuant to a request from the Negotiator's staff, NRC staff briefed several representatives from Oregon on spent fuel storage and transportation licensing requirements. The briefing came at the conclusion of their tours of onsite storage facilities at Surry, Calvert Cliffs, and Oconee.

On November 10, 1993, the U.S. Senate confirmed the nomination of Richard H. Stallings as Nuclear Waste Negotiator thereby replacing David Leroy as head of

the Office of the Nuclear Waste Negotiator. President Clinton had nominated Mr. Stallings to this position on October 5, 1993.

CONCLUSIONS:

During this reporting period, NRC and DOE staff continued to make progress in their work toward addressing and resolving issues at the staff level. There were a number of interactions, particularly in regard to the ESF, where DOE has been responsive to NRC staff concerns. This has included such actions as providing formal written responses, conducting meetings which focused on specific concerns, and scheduling future meetings and site visits to address NRC staff concerns. Furthermore, DOE, along with representatives from the State of Nevada, affected units of local government and other interested parties were also responsive, during this reporting period, in providing comments on a proposed rulemaking and a Draft Regulatory Guide.

COORDINATION:

The Office of the General Counsel has reviewed this paper and has no legal objection.


James M. Taylor
Executive Director
for Operations

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