SECY

STATEMENT OF

ROBERT R. LOUX, EXECUTIVE DIRECTOR

NEVADA AGENCY FOR NUCLEAR PROJECTS

NUCLEAR WASTE PROJECT OFFICE

TO THE

UNITED STATES NUCLEAR REGULATORY COMMISSION

ROCKVILLE, MARYLAND

MAY 15, 1997

The Nevada Agency for Nuclear Projects was established by the State Legislature, in 1985, to carry out the State's oversight and participation duties pursuant to the Nuclear Waste Policy Act of 1982. In the course of this work, from time to time we request a meeting with the Commission to present some of our views on current matters relevant to the Commission's pre-licensing considerations and activities associated with the Office of Civilian Radioactive Waste Management's (OCRWM) high-level nuclear waste management and disposal program. Our last presentation to the Commission was on September 9, 1994.

We appreciate the opportunity to meet with the Commission at the same time OCRWM is providing you with an update of its waste program. It is our hope that this will help broaden the perspective from which the Commission considers some of the issues which will come before it in the near term.

We will be discussing four major topics today in terms of their relation to the Commission's responsibilities: 1) the site characterization and licensing approach described in the May 1996 OCRWM Revised Program Plan; 2) the proposed OCRWM revision of the 10 CFR 960 Siting Guidelines; 3) the OCRWM Viability Assessment; and 4) NRC regulations regarding transportation of spent nuclear fuel.

Site Characterization and Licensing Approach

We discussed this topic in our 1994 presentation to the Commission relative to the OCRWM's Proposed Program Approach. With the subsequent 1996 OCRWM Revised Program Plan, the primary issue remains unchanged. It still appears that OCRWM intends to submit a less-than-complete repository license application to receive a Construction Authorization.

DF02

0/1

9705220230 970515
PDR COMMS NRCC
CORRESPONDENCE PDR

The most notable deficiency in the license application will be the lack of data to support a thermal loading design. An accelerated drift scale heater test is planned to be initiated later this calendar year, with maximum heat-up expected in late calendar year 1999. It is understood that the heat-up period may require significant extension. Even if this portion of the experiment goes as scheduled, there is little time to collect and analyze data on critical aspects of cool-down before the scheduled submission of a license application in early 2002. Also, we know of no plans for further work to confirm the representativeness of the underground location of the drift scale heater test in the context of the entire proposed repository block.

Yucca Mountain Project managers have begun to speak of the License Application as the "Initial License Application" for a Construction Authorization, with two additional "Updated License Applications" to follow, one to receive and possess, and one for repository closure. This approach was most recently revealed in an April 30, 1997, NRC/DOE Management Meeting, in which Yucca Mountain Project managers outlined their interpretation of the statutory and regulatory basis for the phased submission of a License Application. (See Attachment 1.)

OCRWM's phased approach to the development of a License Application appears to be in conflict with the regulatory approach of 10 CFR Part 60, and should be carefully studied by the Commission. In 10 CFR 60, it seems clear that the Commission's <u>disposal decision</u>, based on a finding of reasonable assurance of regulatory compliance, is made with the issuance of a Construction Authorization. That decision is then to be further confirmed with a license amendment to receive and possess. And finally, after the operational period and at the end of the retrievability period, an amendment is to be submitted for repository closure, which is intended to be the final confirmation of the Commission's initial "reasonable assurance" finding.

Conversely, the OCRWM licensing approach would have the Commission taking incremental steps toward a <u>disposal decision</u>, which would occur after its review of the License Amendment for Repository Closure. If this were the case, the Commission's determination of reasonable assurance of compliance with the EPA standard would not be made until after as much as 100 years of repository operation and all the waste had been emplaced.

"Disposal," according to 10 CFR Part 60, "means the isolation of radioactive wastes from the accessible environment." And, "retrieval means the act of intentionally removing radioactive waste from the underground location at which the waste had been previously placed for disposal." Therefore, it would be inconsistent with Part 60 to consider the repository operation and retrieval period to be a time during which new and necessary information to support a <u>disposal decision</u> is to be collected.

OCRWM has incorrectly interpreted the Commission's requirement for a "performance confirmation" program to be a continuation of site characterization, for example, establishing the scientific basis for an effective thermal design, when instead, the intent of the requirement is to assure evaluation of the "accuracy and adequacy" of the information used to support the original disposal decision, which was made at the time of issuance of a Construction Authorization.

Further confirmation of the Commission's intent that the disposal decision be made based on the original License Application is found in the Commission's 1990 Waste Confidence Decision, which states in part:

> "The Commission finds reasonable assurance that at least one mined geologic repository will be available within the first quarter of the twenty-first century...to dispose of commercial high-level radioactive waste and spent fuel..." (emphasis added).

Accepting the OCRWM's incremental licensing approach, which defers the disposal decision for up to 100 years into the future - long after the Commission's 2025 date - would invalidate this crucial finding of the Commission's Waste Confidence Decision.

Since passage of the Nuclear Waste Policy Act, nearly 15 years ago, the Commission has repeatedly reminded OCRWM that it must submit a complete and high-quality license application in order for it to be reviewed in the short time mandated by the Act. Throughout those years, we have periodically raised the question of the acceptability of a phased licensing approach with Commission staff. It appears that the time is rapidly approaching for the Commission to clarify its meaning of a "complete and high-quality License Application."

Proposed Revision of OCRWM Siting Guidelines

As you are aware, on December 26, 1996, the Department of Energy published in the Federal Register proposed amendments to its 10 CFR Part 960 "General Siting Guidelines for the Recommendation of Sites for Nuclear Waste Repositories." In order for the Guidelines or any subsequent amendments to be finally promulgated, the concurrence of the Commission is required.

In the Commission's previous concurrence proceedings, a guiding principle was that, in order to gain concurrence, the guidelines should be consistent with, or at least not in conflict with the Commission's repository licensing rule, 10 CFR Part 60. Also, implicit in the consideration was whether the guidelines were consistent with the requirements of the Nuclear Waste Policy Act.

By incorporating the requirement that the repository be found to perform in accordance with the EPA standard and the relevant regulations of the Commission, the Proposed Guidelines (assuming the NRC Staff's April 17, 1997, recommended language change is adopted) may meet the consistency test for the Commission's regulations. The Staff recommendation correctly clarifies that, contrary to OCRWM's interpretation, 10 CFR Part 60 has a broader scope than simply the implementation of the EPA standard. For example, if Part 60 was intended only to implement the EPA standard, the subsystem performance requirements of 60.113 would not be applicable in the Commission's licensing decision. The OCRWM interpretation in the proposed guideline amendment may be a suggestion to the Commission that, in its planned amendment of Part 60, the scope should be limited only to implementation of the EPA standard. If this is being suggested, we strongly disagree with OCRWM's position.

The Commission's concurrence in the guidelines prior to a new site-specific EPA standard for a Yucca Mountain repository and conforming amendments to Part 60 poses a problem. But, according to OCRWM's schedule, there is no immediate need for final guidelines. The current schedule calls for finalization of the guidelines in February 1998, with a draft site recommendation based on the guidelines scheduled for late calendar year 2000. During that nearly three year period, it is expected that both EPA and NRC will have revised regulations for Yucca Mountain in place For this reason, it is our recommendation that the Commission withhold its concurrence decision until revisions to the EPA standard and Part 60 are promulgated. This will not delay or disrupt OCRWM's performance-based evaluation of the Yucca Mountain site.

The matter of whether the proposed guidelines comply with Section 112(a) of the Nuclear Waste Policy Act should be taken up at the time the Commission considers its concurrence. The Attorney General of Nevada, in commenting on the proposed guidelines on January 23, 1997, said that the proposed guidelines violated the requirements of the Act, primarily because they do not specify, as required, factors that qualify or disqualify the site. Nevada will challenge the guidelines if promulgated as proposed.

If the Commission withholds its concurrence and defers it until appropriate EPA and NRC regulations are in place, the litigation, if necessary, is likely to have been resolved, and the Commission can then evaluate whether it believes the guidelines for which concurrence is sought comply with the requirements of the Act.

Viability Assessment

OCRWM will be issuing a Viability Assessment for the Yucca Mountain site in September, 1998. As you have been told, the

Viability Assessment will consist of four reports to be delivered to the President and Congress: 1) the critical elemenes of repository and waste package design; 2) a total system performance assessment for the repository system based on current designs; 3) a plan, schedule and cost estimate to develop a license application; and 4) a total waste management and disposal system cost evaluation.

The Viability Assessment is defined only by the four reports, and OCRWM does not intend to make a statement on its view of the viability of the site. Instead, "viability" is expected to be in the eye of the beholder - in this case, the decision-makers who may determine whether to continue work toward a repository license application at Yucca Mountain.

The term and meaning of Viability Assessment was invented by OCRWM and only later included in legislation. The Commission has no role in assessing the "viability" of the site since the intent of the exercise is to inform an investment decision on whether to continue to pursue repository development at Yucca Mountain, and according to OCRWM, the Viability Assessment is "independent of regulation."

The Commission's sole responsibility regarding the Viability Assessment should be to decide the extent to which it wants to review and comment on the design and performance assessment reports, as it does with all other prelicensing documents when its participation is not required by law.

The Viability Assessment has been, and will continue to be misconstrued by many as a statement of the site's suitability for development as a repository. But, suitability, in the context of the Nuclear Waste Policy Act, includes a determination of whether the site is qualified under the DOE 10 CFR Part 960 siting guidelines. This determination, which supports a recommendation to the President to proceed with a repository license application, is scheduled to be made by the Secretary of Energy in 2001, after additional site characterization work has been completed. Therefore, any inference of the suitability of Yucca Mountain for development of a repository at the time of the Viability Assessment would be incorrect and prejudicial.

Section 114 of the Nuclear Waste Policy Act requires that the Commission provide, at the time of the Secretary's recommendation of the site to the President: "preliminary comments...concerning the extent to which the at-depth site characterization analysis and the waste form proposal for such a site seem to be sufficient for inclusion in any application to be submitted by the Secretary for licensing of such site as a repository."

In response to the Viability Assessment, the Commission need not, and should not, provide a draft or early "preliminary

comments" on "sufficiency" of the site characterization information. There are two important reasons for this: 1) OCRWM, by including the license application plan as part of the Viability Assessment, is indicating its own belief that the information is insufficient for a license application or a suitability determination; and 2) the Commission making an early statement regarding sufficiency of information for a license application will only reinforce the wide-spread misrepresentation that the Viability Assessment is somehow a statement of the suitability of the Yucca Mountain site.

Regulations Regarding Transportation of Spent Fuel

Because of proposed legislation that would begin transport of spent fuel to an interim storage site adjacent to Yucca Mountain, on the Nevada Test Site, there is growing nation-wide interest in the safety of nuclear waste transportation. Transportation cask certification standards and criteria and safeguards during transport are two elements that are consistently raised as safety concerns, both by oversight groups and the public.

Rail and highway conditions and technologies, cask designs, and the ability to willfully disrupt transport have changed greatly in the many years since the Commission's regulations regarding these two areas were promulgated. Casks are being designed for larger payloads with lighter fabrication materials than were originally contemplated when the regulations were written. And, there has been an enormous increase in the power and sophistication of weapons available to would-be terrorists since the issue of transportation safeguards was last considered.

To promote public confidence, we recommend that the Commission hold a broad-based public review and dialogue regarding spent fuel transportation risk for both normal and off-normal conditions and events. The existing cask certification standards and criteria and safeguard regulations should be reviewed and revised as necessary, in the context of the outcome of this public dialogue. Included in the review should be an analysis of the radiological risk from routine transportation operations, severe accident conditions, and disruption by terrorist activity.

Such a review is timely in that large numbers of spent fuel shipments could begin in the near future if new legislation is adopted. Also, it is reasonable to expect that a number of new designs for transportation casks will be submitted to the Commission for certification in the next few years, since the demand for a new generation of transport and dual-purpose transport and storage casks is expected to grow in the near term.

ATTACHMENT 1

QA: N/A

FINAL AGENDA
NRC/DOE MANAGEMENT MEETING

Video Conference
April 30, 1997
Hillshire Blue Room; NRC Headquarters, T2B5; DOE Headquarters, GF-277

10:00 AM PST (1:00 EST)

● **OPENING REMARKS**	ALL
● **PROGRAM STATUS**	
- Update on DOE/NRC briefing to Commission	ALL
- Legislative/FY-98 budget update	DOE/NRC
- Status of Licensing Strategy	DOE
- Early Feedback to DOE Prior to VA	NRC
- Additional Work for VA Risk Mid-year Course Correction	DOE
- Discussion of NRC's Annual Report	NRC/DOE
- Status of DOE's Waste Containment and Isolation Strategy	DOE
- Status of Project Integrated Safety Assessment (PISA)	DOE
- Management Issues Raised by State	NRC
- Interim Storage Topical Report	DOE/NRC
- Tribal Pre-notification of Shipment	DOE
- Strategic Plans	
● **CLOSING REMARKS**	ALL
● **ADJOURN**	

2:00 PM PST (5:00 PM EST)

Annotated with actual language

Level of Detail for Information in the Initial LA

Overview

- DOE will submit a complete, docketable LA by 2002
  - This LA will allow NRC to make its reasonable assurance determination for the Construction Authorization
- It is important for DOE and NRC to have a common understanding of what is needed for the initial LA
  - How much is enough?

How Much is Enough?

- Enough = When uncertainties have been sufficiently understood and bounded
  - Further testing and analysis will not add significantly to this understanding
- Sufficiency depends on what the information will be used for
- Three levels of sufficiency
  - ~~Initial~~ LA (for Construction Authorization) 60.31
  - ~~Updated LA~~ (for License to Receive and Possess) 60.33
  - ~~Updated LA~~ (for Closure) 60.51

Amendment of Construction Authorization

Amendment

- This step-wise process was contemplated by both the Nuclear Waste Policy Act and 10 CFR 60

Sufficiency for Initial LA

Nuclear Waste Policy Act (NWPA)

- The NWPA restricts site characterization to what the Secretary decides is necessary for the ~~initial~~ LA and for compliance with NEPA (§ 113(c))

For a construction authorization

- House Report 97-491 (accompanying H.R. 3809, ultimately enacted as the NWPA):

  "Site characterization activities are intended to be kept to the reasonable minimum expense and impact and are intended not to be so extensive as to result, through physical impact or through economic commitment, in the prejudicing of decisions regarding further development of the site."

Sufficiency for Initial LA

(continued)

NWPA (cont'd)

- The Site Recommendation is to be based, among other things, on limited site characterization information and preliminary engineering ~~specifications~~ specifications for the facility (§ 114)
- The NWPA requires DOE to submit the LA shortly after the Site Recommendation becomes effective
  - As a practical matter, there would be little new information between the Site Recommendation and LA
- Therefore, the ~~initial~~ LA for construction authorization would also be based on limited site characterization information and ~~a~~ preliminary ~~design~~ engineering specifications for the facility

Sufficiency for Initial LA

(continued)

10 CFR 60

- Part 60 requires the initial LA to be as complete as possible in light of information that is reasonably available at the time of docketing (§ 60.24(a))
- The Commission ~~contemplates that there will be~~ may take "uncertainties and gaps in knowledge" into account, provided that the Commission can make the specified finding of reasonable assurance as specified in paragraph (a) of this section. (§ 60.101)

Sufficiency for Initial LA

(continued)

10 CFR 60 (cont'd)

- The Commission recognized that it would be unable to make definitive findings on some issues at the early stages of repository licensing
- Consequently, Part 60 requires DOE to identify issues requiring further ~~study~~, including a schedule for their resolution (§ 60.21(c)(14))

research and development

Sufficiency for Initial LA

(continued)

- In summary, DOE will provide in the initial LA the information sufficient for the decision being made
  - To authorize construction of the repository
- Consistent with the NWPA and Part 60, additional information will be provided in subsequent LA amendments ~~updates~~ to support future decisions
  - To grant a license to receive and possess
  - To amend the license to close the repository
- This is also consistent with the step-wise information provided to support reactor licensing