

**LAST GASP AT YUCCA
STATE OF NEVADA'S PERSPECTIVE
ON CURRENT YUCCA MOUNTAIN
DEVELOPMENTS**

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CURRENT STATUS

- EPA rule responding to court remand (40 CFR Part 197): April 2007?
- NRC conforming rule (10 CFR Part 63): April 2007?
- Nevada petition for judicial review of EPA/NRC Rules: May 2007?
- DOE's LSN certification: December 2007 (DOE Schedule)
- DOE construction authorization (license) application: June 2008 (DOE Schedule)
- Court decision on Nevada petition for review: June 2008?
- NRC Staff decision whether DOE application will be docketed: September 2008

EPA AND NRC RULE

- In *Nuclear Energy Institute v. EPA*, the U.S. Court of Appeals for the District of Columbia Circuit invalidated EPA's and NRC's Yucca rules (10 CFR Part 63 and 40 CFR Part 197) because they truncated the compliance period at 10,000 years contrary to the explicit recommendation of the National Academy of Sciences
- The Court decision was in July 2004; EPA and NRC proposed new rules in August 2005
 - EPA Rule: two-tiered dose standard (15 mrem/yr for 10,000 years and 350 (1000) mrem thereafter) to RMEI
- Nevada and others filed extensive comments objecting to proposal:

EPA AND NRC RULE (CONTINUED)

- Unjustified departure from long established principles of radiation protection
- Bizarre treatment of uncertainty
- Most lax repository standard in the world (an “outlier” according to a recent NEA symposium)
- Inconsistent with NAS recommendation
- Unlawful usurpation of NRC licensing authority
- Improper use of rule making to resolve contested site-specific factual issues

EPA AND NRC RULE (CONTINUED)

- Is it ridiculous to worry about what happens thousands of years into the future?
- Yes, if you are actually trying to predict the future
- No, if you are trying to develop a licensing standard that will allow a good geologic repository to be licensed and require a bad one to be rejected

EPA AND NRC RULE (CONTINUED)

- Permanent geologic disposal concept: for very long time frames, measured by the thousands of years the radionuclides in the spent nuclear fuel will be dangerous, surface storage of spent nuclear fuel will be riskier than permanent emplacement in a stable, geologic formation that will prevent the release of dangerous radionuclides to the environment without active maintenance.
- A standard that fails to require the proposed natural geologic system to do what it is supposed to do defeats the whole purpose of permanent, geologic disposal

EPA AND NRC RULE (CONTINUED)

- This is why the previous EPA rule was wrong: it precluded adequate consideration of the geologic system as a barrier to radionuclide release, defeating the whole purpose of permanent, geologic disposal
- The post-10,000 year performance assessment requirement is an artifact of the NRC licensing framework in 10 CFR Part 63; other frameworks are possible (like WIPP) that could have avoided this but NRC rejected them

SOME CURRENT NRC REGULATORY CONCEPTS

- Some indications of effective and independent NRC regulation of Yucca
 - Separating the future of Yucca from the future of nuclear power
 - NRC Chairman Klein: “And as I see it, the current lack of a permanent repository or recycling option will not be barriers to the licensing of new reactors.”
 - Insisting on adequate QA
 - Recognizing the distinction between bounding estimates, conservatism, and realism
 - Independent Atomic Safety and Licensing Boards

SOME CURRENT NRC REGULATORY CONCEPTS (CONTINUED)

- Some continuing indications of inadequate and deferential NRC regulation of Yucca
 - Failure to object to proposed EPA rule that usurped NRC licensing authority
 - Failure to offer public notice and respond on a timely basis to Nevada rule making petitions
 - Refusal to apply *ex-parte* and separation of function rules designed to protect independence of Chairman and Commissioners
 - Failure to pay sufficient attention to scientific views that depart from orthodoxy
 - Possible docketing of an incomplete application
 - Publication of TPA results

NEVADA WILL CONTINUE THE FIGHT

- Legal team is still in place
- Team of experts (more than 20) is still in place
- Nevada is ready, willing, and able to meet challenges

LAST GASP AT YUCCA

- Concept of geologic disposal is sound, but its implementation to date has been a governmental debacle that wasted billions of ratepayer and taxpayer money.
- A geologic repository program has gone tragically off-track if \$ billions and years of scientific effort must be devoted to assuring protection of the waste from the mountain rather than assuring the mountain will protect us from the waste
- Likelihood of Yucca program failure is high. Near-term success requires

LAST GASP AT YUCCA (CONTINUED)

- Forging EPA and NRC regulation
- No further successful court challenges
- Conquering QA problems notwithstanding prior failed get-well programs
- Successfully assessing a mountain that has been inadequately characterized and is exceptionally complex
- Continuing Congressional budget support

LAST GASP AT YUCCA (CONTINUED)

- Meeting strict deadlines without sacrifice in quality in a program that has been unable to do so
- Filing an adequate application by June 2008 will require an extraordinary effort and everything must go right
- This is the last gasp for DOE

REASSESSING GEOLOGIC DISPOSAL

- Would the lack of a permanent repository be a problem?
- On-sites storage of spent nuclear fuel is safe for hundreds of years
 - NRC Waste Confidence decisions support this conclusion
 - NRC Chairman Klein: “The past half century has shown that spent fuel can be safely and securely maintained onsite at nuclear power plants.”
 - If Yucca opened tomorrow, spent nuclear fuel would still remain on most reactor sites for decades if not longer
 - DOE can accept responsibility for on-site storage
- There is time to reconstitute the program and get it right