



AGENDA REQUEST FORM
BOARD OF SUPERVISORS
COUNTY OF INYO

For Clerk's Use Only:
AGENDA NUMBER

- Consent Departmental Correspondence Action Public Hearing
 Scheduled Time for Closed Session Informational

FROM: Planning Department – Yucca Mountain Repository Assessment Office

FOR THE BOARD MEETING OF: April 9, 2013

SUBJECT: Yucca Mountain Repository Assessment Office Workshop

DEPARTMENTAL RECOMMENDATION: Receive a presentation from staff regarding the activities of the County's Yucca Mountain Repository Assessment Office.

SUMMARY DISCUSSION: The County has been participating in licensing activities for the proposed Repository for High Level Nuclear Waste at Yucca Mountain for many years. The Repository site is located just over the California-Nevada border about 17 miles from Inyo County. The County's Yucca Mountain Repository Assessment Office (YMRAO) resides in the Planning Department, with offices in the Water Department Building at 135 South Jackson Street in Independence.

Consideration of the long-term storage of nuclear waste began as early as the 1940s, and became more critical as spent nuclear materials accumulated and reprocessing was deemed inappropriate due to proliferation concerns. In 1982, the Nuclear Waste Policy Act (NWPA) was enacted, which amongst other actions, provided for planning and funding for a permanent geologic repository for high level nuclear waste, created a structure to select and license a site, and established interim storage. In 1987, the Nuclear Waste Policy Amendments Act was enacted, designating Yucca Mountain as the sole site to be considered for a permanent geologic repository. The Department of Energy (DOE) is the federal agency charged with the responsibility with constructing and operating the Yucca Mountain Repository.

Affected Units of Government

The NWPA and its amendments require DOE to provide funds to state and local governments to participate in the evaluation of the Repository. The local governments who receive such funding have been designated as "Affected Units of Local Government" (AULGs). Initially, DOE declined to designate Inyo County as an AULG; however, the County challenged DOE's decision in the U.S. Court of Appeals and was designated an AULG in 1991. Other AULGs are: Nye, Clark, Esmeralda, Lincoln, Eureka, Esmeralda, Churchill, Lander, and White Pine Counties in Nevada. The States of California and Nevada and local tribes also receive funding from DOE.

Despite the County's designation as an AULG, issues arose with the other AULGs as to the amount of the County's share of the AULG funding provided by DOE. The issue has been resolved by the annual federal legislation appropriating funding to DOE which specified Inyo County's share of the funding. The County has used its share of the funding to participate in the planning for the Repository and to conduct studies of the potential impacts of the Repository on the County and its residents.

Studies Conducted by Inyo County

Death Valley Groundwater Investigations. Central to the County's concerns about the Repository is the potential for radioactive material to be transported by groundwater from the Repository towards Death Valley

via a regional aquifer that underlies the Repository and extends into Inyo County. This aquifer is called the "Lower Carbonate Aquifer" (LCA). The County, in cooperation with the U.S. Geological Survey (USGS), the National Park Service (NPS) and Death Valley National Park (DVNP), Nye County, and other partners has drilled exploratory wells, conducted geophysical surveys and geological mapping, and collected relevant data. In addition, with the assistance of The Hydrodynamics Group, the County undertook numerous hydrogeological investigations to provide data which supports development of a regional groundwater flow model, a better understanding of groundwater flow in the region and assists in assessing the potential for radioactive materials to be carried by groundwater into the County. Under Hydrodynamics' guidance, two exploratory wells were drilled near Death Valley junction [known as Bureau of Land Management (BLM) Nos. 1 and 2], near the base of the Funeral Mountains (the Echo Canyon Well), and near springs in Death Valley (Nevaras Nos. 1 and 2 and Travertine). Analysis of the data obtained from these wells confirmed that groundwater flows in the LCA from beneath the Repository site to springs in Death Valley. These exploratory wells continue to be managed by Inyo County in cooperation with BLM, NPS, DVNP, USGS, and others.

Socioeconomic Studies. Socioeconomic studies conducted by the DOE concluded that the Repository would have no socioeconomic impact in Inyo County. Because the County was concerned that such impacts would occur, the County contracted with Gruen and Gruen +Associates to investigate the potential for such impacts. Gruen and Gruen prepared a report entitled "A County at Risk: The Socio-economic Impacts of the Proposed Yucca Mountain High-level Nuclear Waste Repository on Inyo County." According to the Report, if the Repository were to become operational, its impacts on Inyo County's people, economy, and local public sector fiscal base would all be negative. Upon initial announcement of the Repository's operation, the Report estimates a drop in tourist visitation to the County of between 17.3 and 26.3 percent. If the Repository operates for ten years with no incident of radiation leakage, the Report estimates a drop in visitation of between five and 14.7 percent. If a minor radiation release occurs while high level waste is in transport to the Repository, the drop in visitation is estimated to increase to between 29 and 57 percent. With regard to visits to Death Valley National Park, the report finds that the drop in visitation would be especially high in visitors from Western Europe, most of who have relatively high incomes. Overall, if the Repository were to be constructed, the report projects a loss of expenditures of between \$16,141,000 and \$184,009,000, with estimated impacts to the County treasury ranging from \$343,497 to \$4,002,388.

Volcanology Studies. The Repository is located in a volcanic tuff formation and there are volcanos in the vicinity of the Repository site. An explosive volcanic event at the Repository would have catastrophic consequences. DOE concluded that volcanism in the region of the Repository has largely ended and that any volcanic activity is expected to be relatively non-explosive. In cooperation with the State of Nevada and Clark County, Nevada, the County funded a volcanism study by Gene Smith of the University of Nevada Las Vegas. Dr. Smith prepared a Report entitled "A Bimodal Volcanic Field in the Greenwater Range, California: Implications for Volcanic Hazard Studies at Yucca Mountain." The Greenwater Mountain Range is located just 35 kilometers south of Yucca Mountain. The study reveals that explosive volcanic activity occurred in Greenwater Range within the time period of interest for studies of investigating the probability of a volcanic event disrupting the Repository. Further, the report finds that the volcanism in the Greenwater Range may be an expression of regional volcanism and is connected with volcanism near the Repository. The study concludes that contrary to DOE's conclusions, explosive rhyolitic volcanism cannot be eliminated from consideration as a possible hazard for Yucca Mountain.

Licensing Proceedings

In June 2008, the DOE submitted a License Application (LA) to construct the Repository to the Nuclear Regulatory Commission (NRC). With regard to the LA, the NRC must conduct an adjudicatory process to determine whether the construction of the Repository conforms to the applicable federal laws and regulations.

The law provides that concerned parties make seek to intervene in the adjudicatory process by filing contentions setting forth the positions as to whether the LA conforms with the applicable laws and regulations.

The LA concluded, based on numerous earlier DOE studies, that the County's concerns over groundwater contamination, volcanic events, socioeconomics, and transportation of high level nuclear waste through the County were without basis. Consequently, in December 2008, the County filed a petition to intervene as a party in the licensing proceedings before the NRC. The County's petition contains 12 contentions; five allege that DOE's license application does not satisfy the applicable safety, security, and technical standards, and seven allege that the applicable requirements of the National Environmental Policy Act (NEPA) have not been met. Two of the County's contentions are "joint" contentions filed together with Nye, Churchill, Esmeralda, Lander, and Mineral Counties in Nevada. Nye County is the "sponsor" of these two contentions.

Eleven other petitions to intervene consisting of 318 contentions were filed by other entities, including the States of Nevada and California, several Nevada counties, and the Timbisha Shoshone Tribe. The contentions allege that DOE's license application is not in compliance with applicable safety laws and regulations or they challenge the legal adequacy of studies prepared by DOE. DOE challenged the admissibility of all 318 contentions on procedural grounds and asked the NRC to dismiss all of the petitions to intervene.

The NRC established three construction authorization boards (CAB) each comprised of three individuals to determine the admissibility of the contentions. In May 2009, the CABs granted eight of the 11 petitions to intervene (including Inyo County's petition). Except for a joint contention sponsored by Nye County, all of the County's contentions were deemed admissible. Overall, the CAB found a total of 299 contentions admissible. Under the CAB's order, Nevada, California, the Nuclear Energy Institute, Clark, Nye, White Pine and Inyo Counties became parties to the licensing proceeding, and Churchill, Esmeralda, Lander and Mineral counties as a group are collectively a party. Eureka and Lincoln counties in Nevada were named interested governmental participants.

The following is a summary of Inyo County's contentions:

- Contentions 1 and 2 (both license contentions and NEPA contentions) concern the failure of the LA and the Environmental Impact Statements (EIS) to adequately address the potential transport of radionuclides through the LCA that underlies the proposed Repository and that discharges water at springs in Inyo County in Death Valley National Park.
- Contentions 3 and 4 (both license contentions and NEPA contentions) concern the failure of the LA and the EIS to adequately address the cumulative impacts of groundwater pumping in the region of the proposed Repository on the upward hydraulic gradient in aquifers that underlie the proposed Repository. (DOE acknowledges that the upward gradient acts as a barrier to radionuclides entering the LCA. A loss of the upward gradient could facilitate radioactive materials entering the regional aquifer system and into Inyo County.)
- Contention 5 (a NEPA contention) focuses on the EIS's failure to adequately address the Repository's potential impact on the volcanic/alluvial aquifer that extends from under the proposed Repository to Franklin Lake Playa and other areas within Inyo County.
- Contentions 6 and 7 (both NEPA contentions) concern the failure of the EIS to adequately address the potential for radionuclides from the Repository to travel through groundwater and to surface at Franklin Lake Playa and other locations and the EIS's failure to assess the nature and extent of mitigation and remediation measures that will be necessary if radionuclides surface at Franklin Lake Playa.
- Contentions 8 and 9 (a license contention and a NEPA contention) concern the failure of the LA and the EIS to adequately describe the volcanic field in the Greenwater Mountain Range in Inyo County and to adequately assess the potential for explosive volcanic activity at the Repository.

- Contention 10 (a NEPA contention) focuses on the EIS’s failure to analyze the socioeconomic impacts of the Repository in Inyo County.
- Contention 11 is a joint license contention with the Nevada counties, which focuses on the failure of the LA to include the National Incident Management System in the SAR. (This contention was deemed inadmissible.)
- Contention 12 is a joint license contention with the Nevada counties, which contends that the LA lacks any basis for excluding the possibility of aircraft crashes into the Repository site during the pre-closure period.

Suspension of Licensing Proceedings

On February 1, 2010, the President directed that the Department of Energy “discontinue its application to the U.S. Nuclear Regulatory Commission for a license to construct a high-level waste geologic repository at Yucca Mountain.” In accordance with the Presidential directive, DOE filed a motion with the NRC to withdraw the LA. On September 9, 2011 the NRC suspended the licensing proceedings. Thereafter, two states – South Carolina and Washington – and Aikin County, South Carolina (all with significant high level nuclear waste stored within their boundaries) challenged the NRC’s legal authority under NWPA to discontinue the project. It seems reasonably likely that the project will be discontinued; however, future rulings in the ongoing litigation by the District of Columbia Court of Appeals, by Congress and by future Administrations will determine the fate of the Repository. In the meanwhile, the County has been working on putting its programs into stasis and archiving the significant investments made in its participation in planning for the Repository.

OTHER AGENCY INVOLVEMENT: Numerous federal, State, and local agencies, including DOE, USGS, NPS, DVNP, BLM, the States of California and Nevada, and the Nevada Counties of Nye, Clark, Esmeralda, Lincoln, Eureka, Esmeralda, Churchill, Lander, and White Pine.

FINANCING: Resources for the YMRAO activities are budgeted within Yucca Mountain Oversight Budget No. 620605. Approximately \$1.17 million in fund balance remains from previous federal allocations.

<u>APPROVALS</u>	
COUNTY COUNSEL:	<p>AGREEMENTS, CONTRACTS AND ORDINANCES AND CLOSED SESSION AND RELATED ITEMS <i>(Must be reviewed and approved by county counsel prior to submission to the board clerk.)</i></p> <p style="text-align: right;">Approved: _____ Date _____</p>
AUDITOR/CONTROLLER:	<p>ACCOUNTING/FINANCE AND RELATED ITEMS <i>(Must be reviewed and approved by the auditor-controller prior to submission to the board clerk.)</i></p> <p style="text-align: right;">Approved: _____ Date _____</p>
PERSONNEL DIRECTOR:	<p>PERSONNEL AND RELATED ITEMS <i>(Must be reviewed and approved by the director of personnel services prior to submission to the board clerk.)</i></p> <p style="text-align: right;">Approved: _____ Date _____</p>

DEPARTMENT HEAD SIGNATURE: _____ Date: 4/3/13
 (Not to be signed until all approvals are received)