

Nuclear Waste Update

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DOE Releases EISs on Yucca Repository and Nevada Rail Routes

Eureka County submits comments

In October, the Department of Energy released two draft Environmental Impact Statements (EIS) on the Yucca Mountain project for public comment.

The first document, the Repository Draft Supplemental EIS, evaluates the potential environmental impacts of constructing and operating the Yucca Mountain repository under the design and operational plans that have been developed since the Yucca Mountain Final EIS was issued in 2002. DOE has redesigned the repository surface facilities to accommodate the proposed TAD, a rail-dependent transportation, aging and disposal canister system under development.

The second document relates to rail transportation of spent nuclear fuel and high-level radioactive waste in Nevada and contains two parts. The first part, the Draft Nevada Rail Corridor SEIS, considers potential impacts of transport along the Mina corridor in comparison to other rail corridors, including Carlin, Jean and Caliente.

The second part, the Rail Alignment Draft EIS, evaluates the potential environmental impacts of constructing and operating a railroad along specific alignments for both the Mina and Caliente corridors, although Caliente is the Department's preferred corridor.

In January, the Eureka County Board of Commissioners submitted comments on the EIS documents to the DOE. For highlights of Eureka County's Comments, please turn to page 2.

INSIDE THIS ISSUE:

U.S. Considering Option of Recycling Nuclear Waste	3
Nuclear News in Brief	3

What Do Other Countries Do: Spotlight on France

Is recycling nuclear fuel a viable option ?

In January 2008, Nevada Representative Jon Porter toured a nuclear fuel reprocessing plant in La Hague, France, situated in Normandy, a northern region of the country.

Upon his return, the Clark County congressman said Nevada universities should be at the forefront in researching the reprocessing of nuclear fuel. "According to the French, there is a shortage of folks in this field; and if we can become the premier state in researching the recycling of nuclear fuel and alternative energy sources, the pressure to open Yucca Mountain might be reduced," Porter said.



Spent fuel awaiting reprocessing at La Hague facility in Normandy (AP Photo/Francois Mori)

As the U.S. continues to consider the option of recycling nuclear waste (see article on GNEP on page 3), politicians are increasingly looking at France's nuclear policies. Unlike the U.S., where numerous private companies produce and distribute nuclear power, France's entire nuclear industry is managed by one government-owned corporation, Areva.

France made the decision to pursue fossil-fuel independence with nuclear power after the oil crisis of 1973. The country now gets 78% of its electricity from nuclear power plants.

Areva's commercial reprocessing facility in La Hague is the largest in the world. France reprocesses most of its uranium spent fuel here, along with spent fuel from

(Continued on page 2)

(Continued from page 1)

- Eureka County agrees with DOE that the Carlin rail corridor is an unviable alternative route for shipping nuclear waste to Yucca Mountain. This is due to complex land use, private land ownership, and mining activity in the Crescent Valley, among other issues.
- Eureka County finds that the Rail Corridor and Rail Alignment draft EISs ignored the impacts of highway transportation in Nevada. Eureka County urged DOE to analyze routes that avoid Clark County because those are the routes that will most likely be designated.
- Eureka County finds that overall the SEIS documents analyze impacts projected to occur in the far distant future – up to a million years from now – but mostly ignore foreseeable near-term events such as the explosion of population in southern Nevada. Population growth will push inhabitants and impacts closer to Yucca Mountain and will increase transportation activity and impacts.
- Eureka County is concerned that many of the deficiencies it identified in its comments to previous environmental impact statements—the 2002 Draft EIS and Final EIS— have not been corrected or addressed in these new documents. The DOE has not performed an adequate evaluation of many significant environmental impacts of high level nuclear waste transportation, including emergency response, socioeconomic impacts, soils, and grazing.
- Finally, Eureka County believes that the suite of SEISs are premature. Key rules and determinations for the Yucca Mountain Project still have not been set, including the controversial EPA radiation standard, total lifecycle cost analysis for the repository, and final waste transportation canister design. ☒

(sources: DOE press release, 10/4/07, and Eureka County comments submitted 1/7/08)

(Continued from page 1)

Japan, Switzerland, Germany, Belgium, and the Netherlands.

The facilities at La Hague reprocess spent fuel by extracting the waste's plutonium and making it into a mixed oxide fuel. The resulting fuel, called MOX, is a mixture of plutonium dioxide and depleted uranium dioxide. MOX fuel supplies 30% of the fuel for 20 of France's 58 reactors.



MOX assembly

The reprocessing of nuclear waste is often pointed to as a solution to the nuclear waste issue. Yet France's nuclear waste problem is far from solved.

While reprocessing spent fuel does reduce the volume of high-level radioactive waste, it also generates additional forms of radioactive waste:

1. It creates a highly radioactive liquid waste that the French then "vitrify", or mix with molten glass. The resulting highly toxic glass logs make up a third of the volume of the spent fuel that is reprocessed.
2. It creates new streams of solid waste, called long-lived intermediate-level waste.
3. The facility at La Hague also discharges thousands of gallons of low-level liquid radioactive waste into the English Channel each year.

In addition, reprocessing spent fuel creates plutonium. Critics point out that stockpiles of plutonium are

For more information about the EIS process, go to Eureka County's nuclear waste website: www.yuccamountain.org Click on the EIS section.

potential terrorist targets and pose risks of proliferation. If stolen, plutonium could be used to create nuclear weapons; this is why the U.S. does not reprocess its spent fuel.

However, supporters of reprocessing note that the French have reprocessed spent nuclear fuel for 30 years without incident— no accidental explosions, no terrorist attacks, no contribution to nuclear proliferation.

One problem that remains, however, is how to dispose of the radioactive glass logs and solid intermediate-level waste generated by reprocessing. Currently, such waste remains in interim storage at La Hague.

Like the U.S., France is exploring the option deep geologic repository disposal. France has chosen one site to characterize for a nuclear waste repository, Bure, in the northeastern Lorraine region. But the site continues to face significant technical and political challenges.

Geologic burial has met with resistance from the French population. The French government has tried to increase public acceptance by passing a nuclear waste law that allows for other means of disposal if a new technology comes along. The law stipulates that future generations must be able to exhume any waste buried in a geologic repository.

For more information on France's nuclear industry, visit www.aveva.com or www.nea.fr. ☒

(Sources: Las Vegas Review Journal 1/18; New York Times 11/7/07; Science for Democratic Action, 1/08).

Nuclear News... In Brief

Yucca budget cuts to result in layoffs and possible application delay...

Ward Sproat, director of the Department of Energy's Office of Civilian Radioactive Waste Management, said this year's budget cut of \$108 million to the Yucca Mountain project will result in at least 500 layoffs from the program and will probably push back DOE's self-imposed June 30 license application deadline.



"I cannot stand behind the June 30, 2008, date," Sproat said about the deadline he had set for submitting a license application to the Nuclear Regulatory Commission. Sproat expects to announce a new schedule after evaluating the impacts of the budget cuts on the license application process.

The Bush administration requested \$494.5 million for the Yucca budget for the fiscal year that began on Oct. 1. Congress in December approved \$386.5 million. (*Las Vegas Review-Journal 1/16/08*)

NRC rejects Nevada's Yucca Mountain challenge...

In December, a Nuclear Regulatory Commission panel rejected Nevada's challenge to the Energy Department's document database required for the Yucca Mountain repository license application.



Nevada had argued the Energy Department's digital library of millions of documents was incomplete, even though DOE certified it in October.

The NRC's Pre-License Application Presiding Officer Board rejected that argument, ruling that "the regulations do not specify that DOE, or any other potential party, must finalize all documentary material before it can certify."

The document library, or Licensing Support Network, must be certified as complete at least six months before the Energy Department can submit a license application to the Nuclear Regulatory Commission. (*Associated Press 12/13/07*)

U.S. Considering Option of Recycling Nuclear Waste

The Bush administration is continuing with plans to recycle spent nuclear fuel in the United States and supply nuclear fuel to other countries that do not make their own, but Congress is reducing funding for the ambitious program.

Under the Global Nuclear Energy Partnership Initiative (GNEP), the Energy Department (DOE) proposes to design, build, and operate three facilities in the United States:

1. A nuclear fuel recycling center would be constructed to separate spent nuclear fuel into reusable and waste components and then manufacture new nuclear fast reactor fuel using the reusable components.
2. An advanced recycling reactor would be built to destroy long-lived radioactive elements in the new fuel while generating electricity.
3. An advanced research facility would be built to explore spent nuclear fuel recycling processes and other advanced nuclear fuel cycles.

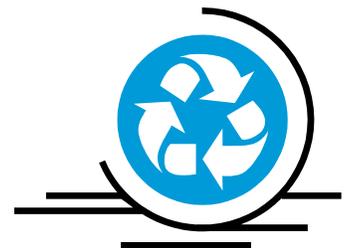
The GNEP also includes two international initiatives. First, the United States would supply nuclear fuel services to other countries that decide not to build their own nuclear enrichment or recycling facilities to make nuclear fuel.

The program also would develop proliferation-resistant nuclear power reactors for use in developing economies.

DOE announced in January that it intends to prepare a Programmatic Environmental Impact Statement to assess GNEP. Several sites are under consideration for the location of the nuclear fuel recycling and/or research centers, including the Idaho National Laboratory in Idaho Falls, the Oak Ridge National Laboratory in Tennessee, and the Hanford nuclear site in Richland, Washington. No sites in Nevada are being considered for GNEP.

Opponents of GNEP fear that site(s) chosen for the facilities will end up hosting high-level nuclear waste for much longer than anticipated because Yucca Mountain is behind schedule. ☒

Sources: *Environment News Service, 1/8/07; Nuclear Waste News 4/23/07*



Nuclear Waste Update

Eureka County Nuclear Waste Repository Program

The Eureka County Nuclear Waste Update is published by the Eureka County Yucca Mountain Information Office, P.O. Box 990, Eureka, NV 89316, (775) 237-5707. The purpose of the *Update* is to provide information to the public about issues related to the proposed nuclear waste repository at Yucca Mountain.

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For more information on the Yucca Mountain project, contact the county's Yucca Mountain Information Office: (775) 237-5707.

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In this issue of the *Update*:

DOE releases EISs on Yucca repository and Nevada rail routes **Page 1**

What Do Other Countries Do:
Spotlight on France **Page 1**

U.S. Considering Option of
Recycling Nuclear Waste. **Page 3**

Nuclear News in Brief **Page 3**



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