Through the Nuclear Door

This photo by Unknown Author

Do we let High-Level Radiation burden our Homes, Families and Empty our Pockets?

Answers about HOLTEC'S license to build "Consolidated Interim Storage" (CIS) Site in New Mexico

1.What is "CIS"?

"CIS" stands for "Consolidated Interim Storage". The proposed HOLTEC site is marketed as "temporary" storage for high- level nuclear fuel rods" from nuclear reactors. But there is no permanent disposal site, so "temporary" could be permanent.

2.What are high-level nuclear fuel rods?

Nuclear fuel rods are inserted into the reactor and create heat from the uranium, plutonium, and elements inside to produce electricity. In the process they become more highly radioactive and very hot.

3.What happens when a nuclear reactor is "decommissioned" (shut down)?

The nuclear reactor's "contents" are poisoned with radiation and need removal from contact with all organic and inorganic matter including water and soil. The concrete from buildings, motors, wiring, soil from around and below the reactor (low-level waste), and fuel rods (high-level waste) need to be isolated. The reactor and its contents are re-located to isolated licensed storage sites. High-level waste can be millions of times more radioactive than low-level waste.

4.Why is radiation removed from contact with organic life?
Radiation is like invisible darts that enter organic material. Cells are damaged, causing cancers, birth defects and deaths.

5.What is the life of the contents of the high-level nuclear fuel rods? The materials in the fuel rods are unsafe for contact with organic life, soil or water for 100,000 to 1 million years.

Figure 1- Nuclear Power Plant on-line

6.Who is responsible for public safety for the "CIS" Project?
The Nuclear Regulatory Commission (NRC) is responsible for licensing nuclear storage and developing the regulations to keep the public safe. The NRC receives 90% of its funding from the nuclear utilities through fees. Many Nuclear Safety Advocates believe this relationship results in inadequate implementation of safety requirements.

7.How much high-level nuclear waste is currently stockpiled in the US? How much waste is HOLTEC requesting to store?
There is an estimated 85,000 metric tons of nuclear fuel rods at this time, and about 2,000 metric tons are produced each year. HOLTEC plans to store 173,000 metric tons so that any future waste from operating reactors could come to New Mexico.

8. Where are the high-level nuclear rods stored at this time? Why would they be moved?
The nuclear fuel rods are currently stored at 75 operating and non-operating reactor sites in 33 states. More than 90 percent of the waste is in the eastern half of the U.S. Some Utility Companies have put their public officials under pressure to transfer waste to another area. Some residents also want to attempt remediation of the land for economic development.

9. Where is the HOLTEC storage site to be located?

Half-way between Hobbs and Carlsbad within 40 miles of WIPP, URENCO and Waste Control Specialists (on the NM/Texas border), all radiation emitting businesses.

Figure 2 – Map of Holtec site

10. If the HOLTEC "CIS" is built, how many nuclear fuel rods would be stored in New Mexico?

HOLTEC is proposing to store at least 10,000 high-level nuclear fuel rods. The rods would **be** transport**ed** by rail at the rate of 500 rods a year for at least 20 years.

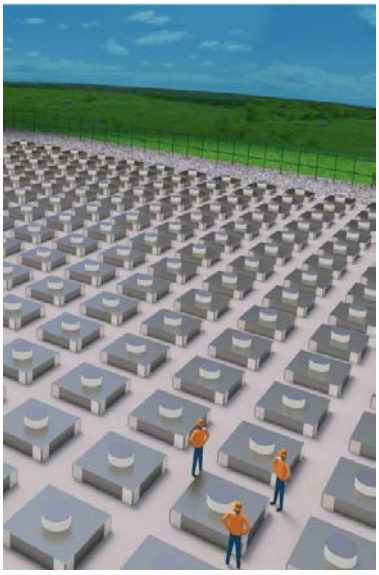

Figure 3 - Holtec's mockup of its plan to store high-level nuclear fuel rods, partially underground and partially above ground. Photo courtesy Holtec.

11.Who pays for decommissioning and storage?

Money is collected as utilities charge customers for nuclear electricity. An audit in 2018 by Callan Institute showed Investor-owned utilities were $15-24 billion short of their estimated decommissioning expenses, and public power companies were $5-7 billion short of their estimated decommissioning expenses. But the total costs could be even more than estimated. Nuclear Safety Advocates are concerned that insufficient funds create conditions for cost cutting measures and unsafe storage practices.

12. How do other interim storage sites look? Are they partially above ground like the HOLTEC Site?

This is an example of an interim storage site in Switzerland. It is below ground. The surface has minimal markings to identify it as a storage site for high-level nuclear waste.

Figure 4- Swiss Interim Storage Site

The waste containers holding the rods are encased in steel, standing independently, attached to the floor. There is space for workers to inspect the casks and remove them for repairs. Waste containers **are d**esigned for 1000 years.

The proposed HOLTEC facility is partially above ground, the canisters are placed in concrete molds and some cannot be inspected, and there is no facility to repackage the waste, if necessary.

13. Are the present containers safe for travel? How would the fuel rods be transported to the proposed HOLTEC Site?

Figure 5. Truck Transporting a Rod

No, containers will need to be built to hold the fuel rods and be able to withstand transport no matter where they are located. HOLTEC'S Plan would require fuel rods located near water to be transported by barge over water; then transferred to a truck traveling on a highway or bridge before being loaded onto a rail car and then delivered to the proposed HOLTEC Storage Site.

Nuclear Safety Advocates are concerned about the strength of the waste containers as well as the ability to monitor and repair the waste containers, especially the 5/8" thick HOLTEC containers which will be put into concrete silos. HOLTEC containers are already gouged along the side from loading which could cause cracks through the container wall. The US Navy uses 9" thick containers, Germany uses 14-19" thick steel containers, and Japan uses 10" thick steel containers. Storage is required for 1 million years so detecting leaks and repairs will be needed for multiple generations.

14. Who is responsible for Transporting the rods as well as accident costs?

HOLTEC is proposing that transport be provided by the regular railroad system. The Utilities are expecting the Department of Energy, using taxpayer money, to take title to their waste and pay all costs related to transport. There is no known provision for payment for property damage (including storage at a hazardous waste site if contaminated with radiation) or medical costs from an accident. Standard insurance policies do not cover accidents involving radiation. Even the Price-Anderson Act is not insurance coverage, rather compensation requires court action.

15. How many rail accidents occur yearly?

The U.S. Department of Transportation found that in the 10 years ending in 2018, there was an average of 1,955 accidents per year. Transport of the high-level nuclear waste will subject families, businesses and agricultural lands along the rail lines to at least 20 years of high-level radiation risks.

16. What are other ways for storing the high-level nuclear waste?

High-level nuclear waste can be stored near the reactor site until a permanent repository can be constructed, however, storage designs need to be improved no matter where high-level nuclear waste is stored.

17. Do New Mexico Public Officials, government bodies oppose the "temporary" storage of Nuclear Fuel Rods in New Mexico?

Yes. The NRC has not fairly evaluated the impacts of HOLTEC and has ignored input from the Governor, NM Environment Department, the State Land Commissioner, Tribal Governments, and NM cities. Different Nuclear Safety Advocates in New Mexico are opposed to transporting all the high-level nuclear fuel rods to one site.

The Governor of New Mexico sent a letter to the **NRC** calling the project "economic malpractice" and also cite**d** health risks; the New Mexico Land Commissioner opposed the project because of the risk of losing state revenues from a potash mine located under the proposed storage site and the New Mexico Environment Department strongly disputed NRC environmental impact findings.

18. Do the Tribal Nations in New Mexico oppose the Project?

Yes. The following Tribal Nations in New Mexico have passed resolutions against the Project because of health risks from transportation through their lands:

Navajo Nation Churchrock Chapter, Diné Uranium Remediation Advisory Committee, and the All Pueblo Council of Governors which includes Acoma, Cochiti, Isleta, Jemez, Laguna, Nambe, Ohkay Owingeh, Picuris, Pojoaque, Sandia, San Felipe, San Ildefonso, Santa Ana, Santa Clara, Santo Domingo, Taos, Tesuque, Ysleta del Sur, Zia and Zuni Pueblos.

19. Do New Mexico government Councils and Commissions oppose the project?

Yes. The following government councils and commissions have passed resolutions opposing the Project: Lake Arthur, Jal, Albuquerque, McKinley County, Santa Fe County, Gallup, Bernalillo County, Las Cruces, Artesia, and The Uranium Remediation Advisory Commission.

20. Do agricultural groups oppose the project?

Yes. The following agricultural groups oppose the project by resolution and letters: The New Mexico Cattle Growers Association, the New Mexico Farm and Livestock Bureau.

21. Do community organizations oppose the project?

Yes. Alternatives for Environmental Strategies, Sierra Club Rio Grande Chapter, New Mexico Nuclear Issues Study Group, NE New Mexicans United Against Nuclear Waste, Nuke Watch New Mexico.

22. What Jobs and State Revenue in Eddy and Lea County are at Risk from Holtec?

The following sourced information provides an estimate of the amounts of State Revenue and Jobs that are at risk:

1. Tourism: (Source: New Mexico Tourism Department, Economic Impact of Tourism in NM, 2017)

Total Jobs:	12,221
Revenue:	$416,600,000/year

2. Agriculture/Crops (Source: Study by New Mexico State University 2013 Study)

Total Jobs:	4,042
Revenue:	$840,845,110/year

3.Agriculture/ Food Processing (Source: Study by New Mexico State University 2013 Study)

Total Jobs:	1,697
Revenue:	$662,629,530/year

4. Potash Mining (excludes Federal Lands portion) (Department of Energy, Minerals and Natural Resources, 2018)

Direct Jobs	724
State Revenue:	$283,353,622/year

5. Oil and Gas (Eddy) (Source: Eddy County Finance Director 2018)

Eddy County

Direct Jobs:	1,438
Revenue:	$1,443,038,911/year

Lea County (Lea County Economic Development Corporation 2018)

Direct Jobs:	980
Revenue:	$1,938,140,772/year

Total Jobs at Risk	21,102
Total State Revenue	$ 5,584,607,991/year

23. What is HOLTEC offering New Mexico for storing high-level nuclear waste?

Permanent Jobs	50
Temporary Jobs	100-200
Revenue for Eddy-Lea Alliance	$15-20 million
Compensation on Lost Jobs	Nothing
Compensation for Lost State Revenue	Nothing
Funds for Cleanup	None

How can we "Halt Holtec"? What Can I Do?

Contact your Congressional Representatives and Senators and let them know:

- HOLTEC's proposal is illegal. Under the Nuclear Waste Policy Act, a permanent repository must be licensed before the federal government can pay for a temporary storage site and for transport of high-level nuclear waste. This restriction should be retained in federal legislation.
- Transporting "high-level waste" should occur only once to a site designed for permanent disposal.
- The legislators should oppose changes in the law to allow the federal government to pay for "Consolidated Interim Storage."
- There are unfair economic and cumulative health impacts in locating the site in NM since we already have three radiation emitting businesses within 40 miles of the proposed storage site: WIPP, URENCO, and WCS.
- Historically, NM has already done more than its fair share of bearing the burden of nuclear waste.
- The first testing of the atom bomb in Southern NM (Trinity Site) was done on July 16, 1945. The area is 10 times above natural radiation levels.

- We have abandoned nuclear waste left from radioactive tailings from the 1950's in Northern New Mexico.
- WIPP stores nuclear military waste and may be the repository for 6 metric tons of surplus plutonium that would come from South Carolina.
- Adequate utility funds should be available to decommission, and redesign casks and facilities for long term storage at or near the reactor site.
- The ability to inspect and repair leaks at any storage site should be required.

Ask public officials "Who will pay for losses?"

- Who will reimburse New Mexico for loss of jobs and revenue due to the storage site?
- Who will pay for businesses' lost revenues and workers' lost jobs?
- Who would guarantee immediate medical coverage for personal injury in an accident?

Tell your Governor, state legislators (nmlegis.gov), Congressional Representatives and U.S. Senators to oppose "Consolidated Interim Storage" and protect New Mexican families from the burden of job losses, revenue loss, and health impacts, and should not bear these all of these risks for the rest of the nation. NM is already doing more than its fair share in bearing the burden of above normal radiation. Protect New Mexico Families.

Governor Michelle Lujan Grisham governor.state.nm.us

House of Representatives

- Melanie Stansbury (Albuquerque) stansbury. house.gov/contact
- Yvette Herrell (Southern NM) herrell.house.gov/contact
- Teresa Leger Fernandez (Northern NM) fernandez. house.gov/contact

New Mexico Senators

- Ben Ray Lujan www.lujan.senate.gov/contact
- Martin Heinrich www.heinrich.senate.gov/contact

For more information: SW Alliance for Our Future www.swalliance.orgl

Information by: Patricia Cardona e-mail patriciacardona24@yahoo.com and Patty Hughs email pattyhughs@yahoo.com

9/21/20 – updated 6/18/21