

## [Consolidated Interim Storage \(CIS\)](#)

### Nuke firm eyes site near WIPP for temporary waste storage

By Rebecca Moss

The New Mexican | Posted: Friday, March 31, 2017 11:15 pm



#### Nuke firm eyes site near WIPP for temporary waste storage

A rendering of a temporary storage facility that would consolidate the country's spent fuel rods at a site roughly 15 miles north of the Waste Isolation Pilot Plant. The waste would be stored from 23 to three feet below the surface, and filled with as many as 87 spent fuel assemblies each, made up of thousands of fuel rods. Only the canisters' lids — heavy, 4ton steel rectangles running in perfect rows — would be visible on the surface. Courtesy Holtec International

All radioactive waste generated by the nation's nuclear power plants could be shipped to southeastern New Mexico as soon as 2022 and stored for decades just below ground, on the dry plains near Carlsbad, if a federal agency gives its approval.

On Friday, Holtec International, a nuclear fuel manufacturing and management company based in Florida, filed an application with the Nuclear Regulatory Commission to create a temporary storage facility that would consolidate spent fuel rods from across the U.S. at a single site about 15 miles north of the Waste Isolation Pilot Plant.

The project already has gained wide support from a number of state lawmakers, top state and county officials and New Mexico Gov. Susana Martinez.

In a statement issued Friday, Holtec said the state government and local communities "have provided unwavering support for the program." If the federal regulatory agency

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approves the plan, a process expected to take two years, the company could break ground on the nearly 1,000-acre parcel by 2019, with waste shipments starting in 2022. Company officials said they expect the project to generate up to 350 construction jobs and several hundred permanent jobs, including onsite security personnel, after the site opens.

The site would be licensed for 40 years by the Nuclear Regulatory Commission, and then it would be subject to a license renewal process.

Currently, there are 61 operating nuclear power plants, and 27 that are retired or in the process of being decommissioned, across 30 states, all with casks of aboveground nuclear waste. The largest of them, the Palo Verde Nuclear Generating Station in Arizona, which supplies power to New Mexico through the Public Service Company of New Mexico, has roughly 120 concrete casks of waste sitting on site.

Nuclear power plants run on nuclear fuel — composed of radioactive uranium compacted into thin rods, 15 inches long and the width of a pinky finger. The rods are stacked into a rack and used to generate nuclear power through fission. After about six years, the rods are cooled in ponds on plant property and then stored above ground in concrete casks.

But a number of states worry about the vulnerability of these materials — either from an accident that could compromise the environment or public health, or from an attack. Nuclear power plants are considered a potential security threat, in part because the radioactive materials they hold could be used to create crude nuclear bombs.

In 2012, the Blue Ribbon Commission on America's Nuclear Future identified temporary consolidated storage as a feasible solution.

The Holtec site would have the capacity for 10,000 canisters of spent nuclear fuel, more than enough to hold all the spent rods generated in the U.S. so far, according to company officials.

They said the facility would emit a radiation dose of “virtually zero.” At the site, a mile from N.M. 62, nearly equidistant from Hobbs and Carlsbad, a wide pit would be dug 30 feet into the earth and divided by hundreds of cylindrical carbon steel vessels. The waste would be stored from 3 to 23 feet below the surface. Each vessel

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would be filled with as many as 89 spent fuel assemblies, each made up of thousands of fuel rods.

The waste field would have the appearance of a graveyard. Only the canister lids — 4ton steel squares placed in perfect rows — would be visible from the surface.

Joy Russell, a spokeswoman for Holtec International, said underground storage not only protects the environment but guards the material from terrorists, missile attacks or aircraft collisions.

It would be the fourth underground facility of this nature designed by Holtec in the U.S. A second proposed site, commissioned by Dallasbased Waste Control Specialists, is a year into the application process for regulatory approval. Located in Andrews, Texas, just east of the New Mexico border, the project has generated protest and mixed support from the surrounding communities. The two sites are fewer than 50 miles apart.

Russell said community support for the proposed New Mexico facility was a key factor in its location. “The general population in the southeast New Mexico area is very knowledgeable about nuclear,” she said, “and is very welcoming to nuclearbased industry for its industry growth.”

In fact, the EddyLea Energy Alliance, a coalition of officials from the two counties and several cities in them, first approached Holtec about the project in 2012. The alliance had previously purchased the land north of WIPP in 2007, hoping to convert spent nuclear fuel into regenerated fuel, according to alliance vice chairman John Heaton.

But that project never materialized. In 2012, when the Blue Ribbon Commission recommended a consolidation site, the alliance saw another use for the land.

“We thought this was an ideal location,” Heaton said.

The area is close to a fourlane highway and a railroad line, and is 25 miles from the closest community. Although, there is a ranch home a few miles from the site, as well as potash, and oil and gas operations nearby.

“The people here have a very good and deep understanding of nuclear materials and what the risks are and what they aren’t,” Heaton said.

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He said the project could be a \$2.4 billion investment in capital for the state, although company officials declined to discuss cost estimates Friday.

Carlsbad has had an intimate relationship with nuclear waste since WIPP began accepting lowlevel transuranic waste — largely contaminated soil, tools and rags — in 1999. The plant closed down for nearly three years — only reopening in January — after an underground fire and a radiation leak in 2014, caused by an improperly packaged waste drum that burst underground. Parts of the salt mine and its ventilation system were contaminated.

Still, it seems that support for nuclear waste projects has not waned in the region.

The area is also home to the Urenco USA uranium enrichment factory in Eunice, which provides the materials used at the core of fuel rods.

Holtec says it has received support from six local legislators and Mayor Dale Janway of Carlsbad, Mayor Sam Cobb of Hobbs, commissioners in Eddy and Lea counties, state Environment Secretary Butch Tongate and Energy, Minerals and Natural Resources Secretary Ken McQueen.

Gov. Martinez expressed her support for the project in 2015, writing a letter to then U.S. Energy Secretary Ernest Moniz.

“I support the [EddyLea Energy Alliance] and its member cities and counties in their effort to establish a consolidated interim storage facility in southeastern New Mexico that will be regulated by the high safety and technical standards of the Nuclear Regulatory Commission,” the governor wrote.

“We desperately need jobs,” said Rep. James Townsend, RArtesia. “There is not a single thing that would solve our fiscal situation quicker than more goods jobs. This industry provides good jobs and has a good track record.

“I don’t believe the community or the state will allow something to occur that they don’t believe is safe,” he continued. “Look at WIPP’s track record. Overall, we have had a very good track record, and I believe this facility will perform equally.”

Eddy County Commission Chairwoman Stella Davis also said the project would be an important job creator and voiced support for the nuclear industry.

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Even if the temporary consolidation project moves forward, there is currently no permanent place for the waste to go. That could leave New Mexico with the burden without an end in sight.

U.S. Sen. Tom Udall, DN. M., said in an email that he “won’t support an interim disposal site without a plan for permanent disposal — whether the site is in southeastern New Mexico or anywhere else in the country — because that nuclear waste could be orphaned there indefinitely.”

In 1987, Congress designated Yucca Mountain in Nevada as the place to permanently dispose of highlevel waste. Billions of dollars were invested in the project despite public and political outcry in the state. When former President Barack Obama took office, he halted the project and sought to withdraw its license application from the Nuclear Regulatory Commission.

But President Donald Trump appears to have other ideas. A draft budget released in March outlines \$120 million for Yucca Mountain and interim storage over the coming fiscal year, with few further details on the plan. Nevada lawmakers said in March that they would reject any restart of the Yucca Mountain waste site project.

Udall, meanwhile, said WIPP already has served as New Mexico’s contribution to the nation’s waste storage problem.

“Any future nuclear waste mission in New Mexico would need broad support throughout the state, as well as an independent scientific analysis ensuring its safety before I would consider supporting it,” he said.

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**From:** David G. Victor  
**Sent:** Thursday, March 30, 2017 6:06 PM  
**To:** Ted Quinn  
**Cc:** Manuel Camargo ; Maureen Brown ; Tom Palmisano ; Daniel Stetson ; Tim Brown  
**Subject:** (External):Re: The HI-STORE Consolidated Interim Storage (CIS) Program Reaches a Major Milestone

Manuel

With our next circular can we include this item plus an article that updates the WCS progress. The CEP will want to know that both these options are proceeding

Thx David

Sent from limited typing device

On Mar 30, 2017, at 7:53 PM, Ted Quinn wrote:

See good news from HOLTEC

Best regards,

Ted

**From:** Gene Cramer  
**Sent:** Thursday, March 30, 2017 2:03 PM  
**To:** mbrexchange  
**Subject:** The HI-STORE Consolidated Interim Storage (CIS) Program Reaches a Major Milestone

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**From:** Holtec International **On Behalf Of** Holtec International  
**Sent:** Thursday, March 30, 2017 12:49 PM  
**To:** marc832  
**Subject:** The HI-STORE Consolidated Interim Storage (CIS) Program Reaches a Major Milestone

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## The HI-STORE Consolidated Interim Storage (CIS) Program Reaches a Major Milestone

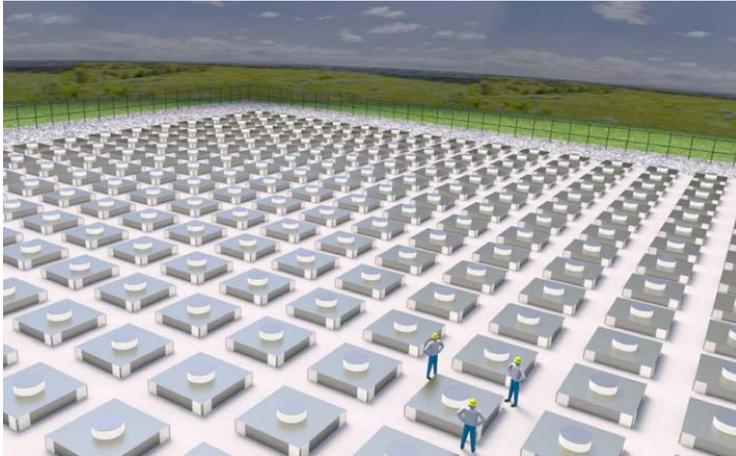
March 30, 2017

On March 31, 2017, the NRC will receive Holtec's application submittal on the HI-STORE CIS, marking a historic day for the nuclear power industry. The application comprises a complete package of documents, including the Safety Analysis Report and the Environmental report on the HI-STORE CIS. "This submittal speaks to the superb dedication, competence and commitment of our 33-specialist team, led by Program Manager, Dr. Fred Bidrawn, and Licensing Manager, Ms. Kim Manzione," announced Program Director, Ed Mayer, a decorated naval warrior who took over the HI-STORE program in 2015 after retiring from the Navy. HI-STORE CIS is the name of Holtec's self-funded consolidated interim storage facility, which is being hosted by a coalition of counties and cities incorporated as ELEA, LLC in southeastern New Mexico.

Holtec thanks the NRC for conducting a pre-submittal technical audit in late February at our Technology Campus in Camden, NJ, which helped fine tune the content of our licensing package to accord with the NRC's expectations. Our HI-STORE licensing package is also informed by our successful work on the Private Fuel Storage (PFS), LLC, initiative over a decade ago along with Pillsbury, Shaw, Pittman law firm (PFS, LLC remains the only licensed CIS in the US to this day). The exceedingly stringent criteria that emerged from the PFS's licensing process and ASLB hearings, such as the 10,000-year return earthquake, have been proactively incorporated in the HI-STORE Design Criteria, leading to a substantially more fortified construction and to facilitate expeditious licensing. The unique safety considerations germane to a CIS have also been successfully applied by Holtec in the design of the CIS for Ukraine's national nuclear company, ENERGOATOM, which has paved the way for a smooth granting of license in that country.

The HI-STORE CIS facility will utilize the subterranean storage system, HI-STORM UMAX, certified in the NRC's Docket No. 72-1040. HI-STORM UMAX, has emerged in the past decade as the breakthrough technology that provides an unprecedented level of safety, security and environmental protection to the user. The dose emitted from the HI-STORM UMAX ISFSI is virtually zero, making the accreted dose to the environment, even at the site's full capacity (10,000 loaded canisters), negligible. HI-STORE CIS is a truly universal storage system in as much as it is designed to accept *every Canister currently loaded at every US nuclear plant*. Therefore, every nuclear plant in the country, shutdown or operating, including *even those that do not currently use Holtec's storage systems*, will be able to ship their canisters to the HI-STORE site.

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The HI-STORE CIS Facility Uses Holtec’s Below Grade HI-STORM UMAX Technology

We thank the State of New Mexico and especially the local communities in the vicinity of the proposed HI-STORE CIS site that have provided unwavering support for the program.

The support and encouragement provided by the Executive Branch of the State has been equally heartening by Ken McQueen, Secretary of Energy for New Mexico, Butch Tongate, Secretary of Environment for New Mexico, and their predecessors. Holtec, also, gratefully extends its appreciation to the steadfast support of the many legislators, especially those that represent Eddy and Lea Counties including Representative Cathrynn Brown, Senator Gay Kernan, Senator Carroll Leavell, Representative Jim Townsend, Representative Larry Scott and Representative David Gallegos. We also very much appreciate the leadership of Mayor Dale Janway of Carlsbad, Mayor Sam Cobb of Hobbs, Chairman Ron Black of the Lea County Commission, and Chairman Stella Davis of the Eddy County Commission. Speaking to the economic and national benefits of the away-from-reactor facility, Governor Susanna Martinez had written in a letter to the DOE Secretary of Energy, “I support the ELEA and its member cities and counties in their effort to establish a consolidated interim storage facility in southeastern New Mexico that will be regulated by the high safety and technical standards of the Nuclear Regulatory Commission.”

The unequivocal support of the State Government and enthusiasm for the project, exhibited by the local community leaders, is best captured by Mr. John Heaton, a former legislator, respected community leader and Chairmen of the ELEA, LLC, who calls HI-STORE “a credentialed environment-friendly facility that will be a boon for the industrial health of the regional economy.”

“We are encouraged by the supportive posture exhibited by Energy Secretary Perry in his recent confirmation hearing and the DOE’s official affirmation of the private CIS initiatives by

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Deputy Assistant Secretary Andy Griffith at the Waste Management Symposium in Phoenix, AZ, on March 9,” says Holtec’s VP of Corporate Business Development, Ms. Joy Russell.

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**Press Conference Announcement**

Holtec International is pleased to announce a press conference to discuss the submittal of Site-Specific License Submittal for Holtec International HI-STORE Consolidated Interim Storage (CIS) Facility to the U.S. Nuclear Regulatory Commission pursuant to 10CFR72 for the proposed CIS facility known as HI-STORE.

Press Conference Details:

Date: Wednesday, April 5, 2017

Time: 4:00 p.m.

Location: Room 2220, Rayburn House Office Building, Washington, DC

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**Legislation**

*Attachments:*

*1 – Letter to Rep Scott Peters from David Victor, March 2017*

*1a – Cep Letter to Dr. Weisenmiller CEC, Dec 12, 2016*

*1b – List of Shutdown Nuclear Power Plants 2017*

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Used Fuel Management

**From:** David G. Victor  
**Sent:** Monday, March 20, 2017 1:27 PM  
**To:** Manuel Camargo  
**Cc:** Tom Palmisano ; Ted Quinn ; Dan Stetson ; Tim Brown  
**Subject:** (External):FW: From E&E News PM -- YUCCA MOUNTAIN: Walden, Shimkus offer advice to DOE chief

Manuel

And here is one more article to share with the CEP—along with useful links to today’s letter from the Hill to Secretary Perry and other items.

Thanks

David

**From:** "david.victor"  
**Reply-To:** "David G. Victor"  
**Date:** Monday, March 20, 2017 at 1:24 PM  
**To:** "David G. Victor"  
**Subject:** From E&E News PM -- YUCCA MOUNTAIN: Walden, Shimkus offer advice to DOE chief



AN E&E NEWS PUBLICATION

**YUCCA MOUNTAIN**  
**Walden, Shimkus offer advice to DOE chief**

Geof Koss, E&E News reporter

*Published: Monday, March 20, 2017*

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House Energy and Commerce Chairman Greg Walden (left) and Environment Subcommittee Chairman John Shimkus pressed Energy Secretary Rick Perry on the Yucca Mountain nuclear waste site. Photos courtesy of Wikipedia

A pair of key House lawmakers have outlined a series of administrative steps for Energy Secretary Rick Perry to take while they draft legislation intended to facilitate the disposal of radioactive waste at Yucca Mountain, Nev.

House Energy and Commerce Chairman Greg Walden (R-Ore.) and Subcommittee on Environment Chairman John Shimkus (R-Ill.) laid out the recommendations in a **letter** today that identifies a series of obstacles that have "impeded" the Nuclear Regulatory Commission from completing the license review for Yucca.

"While Congress considers legislation associated with managing [spent nuclear fuel] and [high-level radioactive waste], we ask you to take certain actions that could help facilitate implementation of the law," the duo wrote.

The letter applauds the Trump administration's budget request of \$120 million to restart the licensing process for Yucca, which Shimkus on Friday said was "like a gift that I've been waiting for for eight years" (*E&E Daily*, March 17).

The budget request did not delve into specifics. Still, it signaled plans to initiate a "robust interim storage program" to house waste until a permanent repository is ready.

Should Perry decide an interim facility is needed, Walden and Shimkus said, they "expect you will work with us to amend the [Nuclear Waste Policy Act] to allow a program to move forward in a way that protects national interests, protects taxpayers and does not interfere with the longstanding policy that [spent nuclear fuel] and [high-level radioactive waste] must be permanently disposed of in a repository."

They called on DOE to reconstitute the Office of Civilian Radioactive Waste Management, established by the NWPA but ended by the Obama administration after the former president decided to pull the plug on Yucca Mountain.

The challenges of disposing of radioactive waste "require the dedicated attention of the office specifically established in law to implement nuclear waste policy, not the current structure, in which the nuclear waste program competes with other important nuclear priorities within the Office of Nuclear Energy," they wrote.

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Walden and Shimkus also called on Perry to "reassess" the Obama administration's 2015 decision to pursue a separate repository just for defense waste, which reversed a 1985 decision by President Reagan that determined waste from nuclear weapons should be combined with commercial spent fuel.

"We are concerned about the fiscal implications of departing from the longstanding policy," they wrote, urging a re-examination of the cost and schedule estimates that were the basis of the 2015 decision.

Walden and Shimkus, additionally, urged that funds be steered to the state of Nevada — which opposes Yucca Mountain as a repository — as well as to the Nye County Commission, which supports the project.

The lawmakers noted that \$20 million in unobligated funds from previously appropriated monies exists in DOE's nuclear waste accounts.

The letter invites Perry to participate in an upcoming tour of Yucca Mountain that it plans to schedule for members of Congress.

DOE did not respond to a request for comment, but the letter comes as lawmakers are working toward an appropriations package to keep the federal government operating past the end of April, when the current funding resolution expires.

There's interest among key House and Senate appropriators in including funding for Yucca and an interim storage pilot program in fiscal 2017 legislation, although the issue may have to wait until the debate over fiscal 2018 appropriations (*E&E Daily*, March 14).

*Reporter Hannah Northey contributed.*

*Attachment:*

*2 – Reps. Walden & Shimkus recommendations on Yucca Mountain to Perry letter, March 20, 2017*

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*Attachment:*

*3 – High Burnup Dry Storage Cask Research and Development Project – Final Test Plan, Prepared by: the Electric Power Research Institute*

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**Decommissioning Rule Making**

**From:** opa administrators

**Sent:** Friday, March 10, 2017 12:06 PM

**To:** Maureen Brown

**Subject:** (External):NRC Releases Draft Regulatory Basis for Decommissioning Rule

**Nuclear Regulatory Commission - Press Release**

No: 17-010 March 10, 2017

Contact: David McIntyre

**NRC Releases Draft Regulatory Basis for Decommissioning Rule**

The Nuclear Regulatory Commission is making publicly available a pre-publication draft regulatory basis for a future power reactor decommissioning rule.

A notice regarding the draft regulatory basis will be published in the *Federal Register* later this month, initiating a 90-day public comment period. The preliminary draft document is now publicly available on the NRC website to facilitate discussion during the agency's annual Regulatory Information Conference, scheduled for March 14-16. The conference includes a March 15 technical session on power reactor decommissioning.

The NRC published an "advance notice of proposed rulemaking" on this matter in November 2015, seeking public comment on a number of areas to be considered during the rulemaking process. The rule would establish clear requirements for commercial power reactors transitioning to decommissioning. The draft regulatory basis draws upon comments submitted in response to the ANPR.

In the draft regulatory basis, the NRC staff concludes there is sufficient justification to proceed with rulemaking in the areas of emergency preparedness, physical security, decommissioning trust funds, offsite and onsite financial protection requirements and indemnity agreements, and application of the backfit rule. The staff suggests guidance, rather than rulemaking, should be used to address the role of state and local governments in the decommissioning process, the level of NRC review and approval of a licensee's post-shutdown decommissioning activities report, and whether to revise the 60-year limit for power reactor decommissioning.

The NRC staff is seeking additional public input before making recommendations on cyber security, drug and alcohol testing, minimum staffing and training requirements for certified fuel handlers, aging management, and fatigue management. That additional input, as

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well as comments received on the draft document, will be considered as the staff develops the final regulatory basis, expected to be published in late 2017. That document will be used in developing a proposed rule to be provided to the Commission in the spring of 2018. The NRC staff expects to provide a draft final rule to the Commission in fall 2019.

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**Safety**

**From:** David G. Victor  
**Sent:** Tuesday, March 21, 2017 11:04 AM  
**To:** Manuel Camargo  
**Cc:** Ted Quinn ; Maureen Brown ; 'Daniel Stetson' ; 'Tim Brown' ; Tom Palmisano  
**Subject:** (External):circulate to CEP

Dear Manuel

Could you please include this in the next CEP circular.

Thx David

Dear CEP members

There has been a lot of attention to the radiation dose-effect relationships, especially after the cancellation of a National Academy of Sciences study that would have examined these relationships with respect to US nuclear reactors. The CEP has discussed the Academy study in the past and we have had inputs related to the extreme difficulty of making robust scientific conclusions about effects from low radiation doses.

EPRI has recently convened a workshop to create an alliance of experts working on these topics, and I commend that report:

<http://www.epri.com/abstracts/Pages/ProductAbstract.aspx?ProductId=000000003002009919>

The science is global and thus it is important to note that this effort has engaged leading global thinkers and institutions.

Related to all this has been a spate of mis-information about the radiation effects and migration of contaminated materials from Fukushima. In this circular of emails to the CEP please see an article on that topic.

Thanks to Ted Quinn for helping organize and focus us on these materials.

All best wishes

David

*Attachment:*

*4 – EPRI Executive Summary*

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**From:** Ted Quinn  
**Sent:** Monday, March 20, 2017 8:20 AM  
**To:** 'David G. Victor' ; Manuel Camargo ; Maureen Brown ; Tom Palmisano ; 'Daniel Stetson' ; 'Tim Brown'  
**Cc:** 'Ted Quinn'  
**Subject:** (External):RE: Fukushima radiation not cause for alarm in U.S.

I do recommend this.

Best regards,

Ted

**From:** David G. Victor  
**Sent:** Monday, March 20, 2017 7:51 AM  
**To:** Ted Quinn ; 'Manuel Camargo' ; 'Maureen Brown' ; 'Tom Palmisano' ; 'Daniel Stetson' ; 'Tim Brown'  
**Subject:** Re: Fukushima radiation not cause for alarm in U.S.

Ted

Thanks so much. would you like us to share these notes and attachments with the full CEP?

All best

David

**From:** Ted Quinn  
**Date:** Monday, March 20, 2017 at 7:21 AM  
**To:** "David G. Victor" , Manuel Camargo , Maureen Brown , Tom Palmisano , 'Daniel Stetson' , Tim Brown  
**Cc:** 'Ted Quinn'  
**Subject:** FW: Fukushima radiation not cause for alarm in U.S.

News story about fake news on radiation claims – goes along with the peer-reviewed reports I sent you yesterday from NRC and NOAA.

Best regards,

Ted Quinn  
ANS Past President  
The OSU NEP Advisory Board Chair  
IEC SC45A WGA9 Convenor  
President, Technology Resources

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**From:** Gene Cramer  
**Sent:** Sunday, March 19, 2017 11:38 PM  
**To:** mbrexchange  
**Subject:** Fukushima radiation not cause for alarm in U.S.

Fukushima radiation not cause for alarm in U.S.

Published: Friday, March 17, 2017 9:27 p.m. CDT

By Associated Press By PATRICK MAIRS (AP)

<http://www.saukvalley.com/2017/03/17/fukushima-radiation-not-cause-for-alarm-in-u-s/ax36npl/>

**This story is part of an ongoing Associated Press effort to fact-check claims in suspected false news stories.**

Radiation from the Fukushima nuclear reactor disaster in Japan has reached North American shores, but – **despite a number of reports shared on social media**– scientists say the levels of radiation are so low that it poses no risk to public health.

Late last year, researchers announced that Cesium-134 was discovered in waters off the coast of Oregon and in one sockeye salmon in a British Columbia lake. Cesium-134 is considered the fingerprint radiation of the Fukushima disaster, because its short half-life means it could only come from the plant that suffered meltdowns following the 2011 Japanese tsunami.

The news reports have been used as the basis for viral stories about the radiation. One story from alternativemedia-syndicate.com carried the headline: **“Fukushima Radiation: Your Days of Eating Pacific Ocean Fish Are Over, Or Worse.”** Another story from organicandhealthy.org labeled the discovery of the salmon as **“bad news for everyone”** and described the U.S. West Coast as “contaminated.”

It’s fair to be concerned about radiation, said Ken Buesseler, a senior scientist at Massachusetts’ Woods Hole Oceanographic Institution, **but the levels detected are far too small to make anyone sick: They are 1,000 times less than what a person would be exposed to during a routine dental X-ray.**

“It’s even less than things like CT scans or flying in a plane or even living at high altitude. Personally I’m not concerned about those levels,” he said.

The U.S. Nuclear Regulatory Commission said in a 2015 report on the impact of seaborne Fukushima radiation on the U.S. that evidence showed the levels “fall well short of posing any U.S. health or environmental risk.”

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**In January, state officials in Alaska announced that tests of seafood in the state's waters found no detectable amounts of radiation from the plant.**

"This has been going on since the beginning of the Fukushima accident," adds Smith of some reports that have surfaced online since the disaster. "All this kind of fake news and scary news." \_

**This story is part of an ongoing Associated Press effort to fact-check claims in suspected false news stories.**

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**Seismic**

-----Original Message-----

From: David G. Victor  
Sent: Thursday, March 02, 2017 5:08 AM  
To: Manuel Camargo  
Cc: Ray Lutz  
Subject: (External):FW: PDF of the paper...

Manuel

Pls circulate attached with the next email circular to the CEP.

Thanks

David

On 3/1/17, 8:20 PM, "Ray Lutz" wrote:

Hi David:

I just realized you may prefer a PDF of the paper, "A PRUDENT VIEW OF EARTHQUAKE RISKS, NUCLEAR PLANTS AND NUCLEAR WASTE ALONG THE CALIFORNIA COAST" so it is attached here.

Again, please accept this as a formal submission to the CEP and distribute accordingly.

--Ray

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Ray Lutz  
Citizens' Oversight Projects (COPs)

*Attachment:*

*5 – A Prudent View of Earthquake Risks rev5*

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**Transportation**

**From:** David G. Victor  
**Sent:** Monday, March 20, 2017 8:20 AM  
**To:** Tom Palmisano ; Manuel Camargo ; Ted Quinn  
**Subject:** (External):Re: Editorial on transporting nuclear waste

Thanks. this should be shared with the CEP with our next circular. D

**From:** Tom Palmisano  
**Sent:** Monday, March 20, 2017 8:18 AM  
**To:** Manuel Camargo ; David Victor ; Ted Quinn  
**Subject:** Editorial on transporting nuclear waste

Attached is an editorial from a San Antonio newspaper about transporting nuclear waste, including spent fuel.

Tom

*Attachment:*

*6 – Nuke waste can be safely transported, Express-News Editorial Board, March 18, 2017*

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**Decommissioning General News – San Onofre Community Engagement Panel**

**From:** Gary Headrick **On Behalf Of** Gary Headrick

**Sent:** Wednesday, March 01, 2017 5:43 PM

**To:** David G. Victor

**Cc:** fosters ; Dan Stetson ; Driscoll, Neal ; Manuel Camargo ; Tim Brown ; Donchak, Lori ; Ferencz, Veronica ; Makshanoff, James ; Joe Anderson

**Subject:** (External):Re: Nuclear Waste at San Onofre

David and All:

The fact that the public's questions are often put off and seemingly forgotten is an unfortunate reality that I am trying to address directly. As you may recall, I shared an anonymous letter with you and many other officials from a high ranking employee at SONGS who had revealed some serious concerns that needed to be investigated, (see attached).

Most concerning of all is that he suspected that damaged fuel assemblies may have been loaded into dry cask storage without being "canned", as would be any other damaged fuel. This letter was from May, 2016. I still have not heard back about the potential disaster a nuclear reaction in a dry cask poses to our community. You agreed that this was the kind of tangible and focused question that the CEP could address and you said you would look into it for me. I still have not heard back on this seemingly significant and rational concern.

When our questions are answered, they are always of a reassuring tone, backed by some of Edison's best experts, but not peer reviewed. That is the point of my research into the possibility of a submarine landslide. I'm not trying to say that an earthquake and tsunami are eminent. I am trying to make the point that an expert that is given the task to prove something is reasonably safe might come to different conclusions than someone trying to prove that there is reason for precautionary steps to be taken.

We can't trust Edison to put our safety first based on past performance as well as the present plan they are forcing upon our community. Most people would agree that a plan to bury nuclear waste inches above a rising watertable, 100 feet from the ocean in containers that are known to have cracking issues and can't be monitored or repaired, is a plan in need of much improvement. Until our concerns are adequately addressed the goal of reaching a consensus will be unattainable. There may not be the perfect answer, but we have to do a lot better than this. That is my goal, and I have nothing to gain from this effort other than knowing it is the right thing to do.

Gary

**Compilation of Recent CEP Communications**  
**2/27/2017 to 4/3/2017**

On Mon, Feb 27, 2017 at 7:49 PM, David G. Victor wrote:

Dear Gary

Thank you for your note to the San Clemente city council. I write to clarify the procedure that we are trying to follow here—since this has been discussed in detail in the Community Engagement Panel (CEP) and I see from your note that you are asking, now, another group to get involved with the implication that the CEP has somehow been stonewalling the process. Nothing could be further from the truth.

I am very keen to help members of the community ask and get answered as many pertinent questions about the current and future risks and operations of the SONGS site—especially questions that relate to ongoing earthquake and tsunami risks as well as questions about the management of the spent fuel until we all find an expeditious way to get the spent fuel out of here. We have the advantage here in our communities of access to some of the world's leading experts on these issues, but to get useful information from these experts we need to get organized. I have asked you and your colleagues to help us do that—to prepare lists of questions that are relevant and reflective of community concerns and put them into categories. Some questions will go to the earthquake and tsunami experts we can tap. Some will go to Edison. Some will go to the makers of the pad and canisters where the spent fuel is stored. Some will go to the general contractor that Edison has recently hired.

As testament to the seriousness with which the CEP has treated these issues, at the last CEP meeting we had more than hour presentation and discussion led by Dr. Neal Driscoll, one of the world's leading experts on seismic risk and the leader of a team that has done a massive new assessment of the seismic risks for all of coastal southern California—including at SONGS.

Just a day before the last CEP meeting you sent me a four paged singled spaced list that was a good first draft of questions. But this list does not, as far as I can tell, reflect any broader public process. Nor is it organized in a way that can elicit efficient, factual answers from these different groups. So I have asked you to help us all in organizing a transparent, public process that would solicit as many questions as possible and get them organized so that we can get answers. I, along with the rest of the CEP leadership, are VERY KEEN that this process be as inclusive and responsive as possible because that will help provide even deeper community engagement and richer information. So please help us get that done—starting with your first draft but then getting broader public input—rather than rushing to get responses to an incomplete first draft. There is no practical way for all these different experts to react to four single-spaced pages of questions—some of which have already been answered—from every member of the community. We are seeking YOUR HELP in enlisting a deeper, fair and transparent process of seeking out the full gamut of appropriate questions that people want answered. And with that list in hand I will make sure that we have a similar, serious process of getting answers—with the best technical input.

**Compilation of Recent CEP Communications**  
**2/27/2017 to 4/3/2017**

Let me reiterate that Neal Driscoll has also offered to sit down with folks and discuss the technical literature and assessments some time soon, and having a well-reasoned and broadly representative list of questions would help focus that discussion enormously. I copy Neal for awareness. I also copy Manuel Camargo at Edison so that he can make sure that a copy of this email thread is part of the next circular of correspondence that we share with the CEP in the spirit of complete transparency. Finally, I copy the rest of the CEP leadership—Dan Stetson and Tim Brown—for awareness.

All best wishes

David

**From:** Gary Headrick on behalf of Gary Headrick  
**Date:** Monday, February 27, 2017 at 4:54 PM  
**To:** City Council  
**Cc:** "FosterS" , "David G. Victor"  
**Subject:** Nuclear Waste at San Onofre

Dear City Councilmembers,

At the last Community Engagement Panel meeting regarding the decommissioning of SONGS I presented a list of questions and concerns that I had gathered from the community. I did so at the request of the CEP Chairman, David Victor.

Unfortunately, there was not time for a satisfactory response, but typically, our questions often go unanswered. I'm writing to you now to ask you to encourage Dr. Victor (copied here) to get answers from the appropriate parties and report back to you and the public at large.

I've attached the list and some images for you to review and better understand the fears being expressed by your constituents. While it may not be possible to find a perfect solution to this situation, it is important to try to improve the current plan.

Tim Brown and David Victor, both deserve a lot of credit for dedicating many hours to the CEP, and I believe they truly want to bring the community together over this complex issue, but these kinds of questions need to be addressed before that can happen.

Gary Headrick

Co-founder of San Clemente Green

*Attachment:*

*7 – SONGS Document*

## **Additonal Communications**

**From:** David G. Victor  
**Sent:** Sunday, March 19, 2017 10:45 AM  
**To:** Manuel Camargo  
**Cc:** Quinn, Ted  
**Subject:** (External):FW: Hi Steve --- is there a program by DOE on R&D of spent nuclear fuel at ORNL?

Manuel

Could you please include this email in the next CEP circular. And put this topic on the agenda for update at next CEP

Thx  
D

**From:** "Maheras, Steven J"  
**Date:** Sunday, March 19, 2017 at 10:03 AM  
**To:** "David G. Victor"  
**Cc:** "Quinn, Ted"  
**Subject:** RE: Hi Steve --- is there a program by DOE on R&D of spent nuclear fuel at ORNL?

David—

I believe that everything in the note below is public knowledge, so you can share with the CEP. One caveat—the discussion below is not a comprehensive overview of all the spent nuclear fuel R&D being done through NE-8/NE-81—Andy Griffith and Bill Boyle can provide much more complete information, including information on the R&D that is being done at universities through the Nuclear Energy University Program (NEUP).

Steve Maheras

**From:** David G. Victor  
**Sent:** Sunday, March 19, 2017 11:29 AM  
**To:** Maheras, Steven J ; Ted Quinn  
**Subject:** Re: Hi Steve --- is there a program by DOE on R&D of spent nuclear fuel at ORNL?

Steve

Thanks for your note. May I share this thread with the CEP (which will make it a public document)? I think it will be helpful for folks to understand what kind of research is under way related to the assessment of actual fuel assemblies under real world conditions—and the implications of that research for stewardship, safety and aging management at the SONGS site.

I will ask Andrew Griffith to help us with an overview of that research (and possibly a briefing) but first I want to help bring the CEP up to speed on this work and understand where they would like more detail.

All best  
David

**From:** "Maheras, Steven J"

**Date:** Saturday, March 18, 2017 at 5:58 PM

**To:** Ted Quinn, "David G. Victor"

**Subject:** RE: Hi Steve --- is there a program by DOE on R&D of spent nuclear fuel at ORNL?

Ted—

There is an R&D program within NE-8 (Spent Fuel and Waste Disposition), the Office of Spent Fuel and Waste Science and Technology (NE-81). NE-81 is headed by Bill Boyle. The spent nuclear fuel R&D program is a multi-laboratory effort involving ANL, ORNL, PNNL, SNL, SRNL, etc. One of their major and better known efforts is the high burnup fuel demonstration, being conducted in conjunction with EPRI, where high burnup fuel will be placed in a dry storage cask at North Anna and stored for 10 or so years, after which the cask will be opened and the fuel examined. As part of this effort, comparable rods (called "sister rods") are being examined now at ORNL, PNNL, ANL (just clad), etc. These sister rods were shipped from North Anna to ORNL last year and will shipped to the other sites for examination. Another high profile project is the shock and vibration measurements/testing that will be performed on the Spanish ENSA cask later on this year. This is primarily an PNNL-SNL-SRNL effort.

ORNL also hosts the Cyclic Integrated Reversible Bending Fatigue Tester (CIRFT), which performs mechanical testing of high burnup SNF and determines the flexural stiffness of the cladding/fuel "system". The stiffness provides a measure of fuel/cladding strength under mechanical loads, and provides insights regarding pellet-clad interactions and pellet-pellet interactions.

If the San Onofre CEP is interested in having a speaker come to discuss spent nuclear fuel R&D within DOE, I would suggest contacting Andy Griffith, who is the Deputy Assistant Secretary for Spent Fuel and Waste Disposition (NE-8). Bill Boyle (NE-81) reports to Andy. There is lots of other R&D going on besides what I have mentioned above.

Steve Maheras

**From:** Ted Quinn

**Sent:** Saturday, March 18, 2017 6:00 PM

**To:** Maheras, Steven J

**Cc:** 'David G. Victor' ; 'Ted Quinn'

**Subject:** Hi Steve --- is there a program by DOE on R&D of spent nuclear fuel at ORNL?

Can you please advise when you get the chance? We would like to understand better if possible.

Best regards and thanks,

Ted Quinn

ANS Past President

The OSU NEP Advisory Board Chair

President, Technology Resources