

Consent-Based Siting

From: Karen Hadden [<mailto:karenhadden@gmail.com>]
Sent: Monday, August 01, 2016 12:00 AM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: Comments regarding Consent-Based Siting

SEED Coalition and No Nuclear Waste Aqui Comments – July 31, 2016

In Response to DOE Invitation for Public Comment regarding Consent-Based Siting

Dear U.S. Department of Energy,

These comments are being submitted on behalf of the Sustainable Energy and Economic Development (SEED) Coalition, a non-profit environmental organization based in Texas, with 2500 members, and the No Nuclear Waste Aqui network, which includes individuals and organizations in Texas and New Mexico. Several of our members attended the Tempe meeting, at great expense. Everyone had to fly to the meeting since it was too far to drive. It's 743 miles to Tempe from Andrews, Texas. Former State Rep. Lon Burnam from Ft. Worth, Humberto Acosta from Andrews, Rose Gardner from Eunice and Noel Marquez from Artesia, NM, and I joined others from New Mexico at the Tempe meeting. I was also able to attend the Minneapolis meeting and listened to several other meetings through internet.

Our comments address the questions that you have asked as well as some that should have been asked. They include:

- 1) How can the Department ensure that the process for selecting a site is fair?
- 2) What models and experience should the Department use in designing the process?
- 3) Who should be involved in the process for selecting a site, and what is their role?
- 4) What information and resources do you think would facilitate your participation?
- 5) What else should be considered?

Plus questions that should have been asked:

- 6) Would your state or community consider consenting to having consolidated storage or permanent disposal of high-level radioactive waste? Are there prohibitions against it?
- 7) Are citizens in your region opposed to high-level radioactive waste consolidated storage or disposal? Do political leaders voice support against the wishes of many people in the community?
- 8) Is Consent-Based Siting a valid or useful concept, or merely a way to once again base siting on political decisions instead of sound science?
- 9) Should financial incentives funded by taxpayer dollars be utilized?
- 10) Is there really such a thing as "Consent" when it comes to consolidated radioactive waste storage or permanent disposal? Is a "consent" process even advisable as opposed to scientifically researching the least risky approaches for storing and disposing of high-level radioactive waste?

General Comments

These comments apply to all of the questions listed above.

Renewable energy technologies are more than adequate to provide our future energy needs, and have begun exceeding the percentage of energy provided by nuclear power in the ERCOT grid in Texas.

The first step the Department of Energy should take is quit pursuing nuclear power as a means to produce energy. The DOE should halt planning for any future nuclear power plants and continue retiring existing reactors, instead of dangerously relicensing aging reactors. In Texas, we have already had to fight off plans for new South Texas Project and Comanche Peak reactors, even though they were not needed and the market does not support them. ERCOT studies show that new reactors would only generate about half the needed revenues in today's Texas market.

We have already witnessed too many nuclear catastrophes and their devastating aftermaths. All nuclear power plants must be shut down and decommissioned, starting with the oldest leaking ones first. Across our country, there are far too many of these aging leaking nuclear power plants posing an imminent threat of nuclear catastrophe.

Decommissioning the nuclear power plants should involve storing the waste on-site, or as close as possible, in aboveground, monitored, retrievable hardened on-site storage facilities and each site must become the repository for the waste that was produced there. The construction and monitoring of these waste storage facilities will provide a new sector of job opportunities as well as be the most cost effective option for taxpayers, both in the short and long term.

No long-term radioactive waste disposal has been found within the US, because there is no good answer. DOE has spent too many decades in denial of this enduring and obvious truth and it now must be immediately addressed head-on, honestly and logically.

The Blue Ribbon Commission on America's Nuclear Future included these important quotes:

The overall record of the U.S. nuclear waste program has been one of broken promises and unmet commitments. And yet the Commission finds reasons for confidence that we can turn this record around. To be sure, decades of failed efforts to develop a repository for spent fuel and high-level waste have produced frustration and a deep erosion of trust in the federal government. But they have also produced important insights, a clearer understanding of the technical and social issues to be resolved, and at least one significant success story – the WIPP facility in New Mexico. Moreover, many people have looked at aspects of this record and come to similar conclusions. Page xv

We have had more than a decade of successful operation of WIPP. And most recently, we have witnessed an accident that has reminded Americans that we have little physical capacity at present to do anything with spent nuclear fuel other than to leave it where it is. Page xv

Texas and New Mexico View

No soft words, no listening attitude or sympathetic voices at the DOE can make the plan to dump the nation's nuclear waste on the Texas / New Mexico border region acceptable.

We are not a wasteland. We are not a dumping ground and we DO NOT CONSENT to

having high-level radioactive waste dumped in Texas or New Mexico. We oppose transport of this waste on our railways, highways or waterways for this purpose.

The DOE's efforts to minimize opposition, to appear to be understanding and listening, and to use the guise of "consent" to gather support from other states for shipping off their radioactive waste is deplorable and deceptive. It is a thinly veiled effort to build alignment to dump it on us.

Texas and New Mexico are Radioactive Waste Targets

Everyone involved in hosting DOE Consent-Based Siting meetings knows and has known for a long time that the Texas/New Mexico region is targeted for consolidated storage of high-level radioactive waste, and that references to the region were included in the 2012 report of the Blue Ribbon Commission on America's Nuclear Future.

Yet there has been an outrageous basic pretense at the heart of all of the DOE Consent-Based Siting meetings. Statements such as "we haven't picked a site," are not really true. Transparency has been lacking about this very basic fact. Our region is definitely being targeted and this must be acknowledged by the DOE, minus claims that we want the waste. WCS' consolidated interim storage application was submitted to the NRC on April 28, 2016. Many pre-application meetings were held, yet throughout the series of Consent-Based Hearing meetings DOE officials ignored the fact that the licensing process is underway, acted as if NRC actions are none of their business (WHAT?) and tried to make a case that isn't relevant. The license application process is happening and is 100% relevant to the DOE's "Consent-Based Siting" concept.

DOE is busy sucking people into talking about how "consent" should be obtained, as if such a process would be ready in time and would actually be followed, but its already way past the point where the potential host communities should be asked for input. Getting people to talk about "consent" as if it were real and any community would ever want radioactive waste is a cover-up for the real goal of aligning communities to dump on another region.

One license application process is underway, and another will be soon. Discussion of "consent" is already a farce for these targeted communities. Licensing could potentially be completed before the "consent" process is finalized, eliminating any real local opportunity to give or deny consent. The DOE will soon be using pressure tactics based on the DOE Consent-Based Siting effort to generate national pressure.

Comments solicited throughout the country during meeting process have been generated under the pretense that there is no targeted region and that an inclusive process would actually be followed, when in fact the exact opposite of these supposed goals is already happening. Comments generated under this pretense must not be used for the purpose of siting a consolidated waste site in our backyard.

A videotape of Secretary Moniz played at Consent-Based Siting meetings featured him saying that no site had been selected. No site has been licensed, but Secretary Moniz

failed to acknowledge that the Southwest region has been targeted, that a license application has been submitted to the NRC by WCS, and that an application by Eddy Lea Energy Alliance for a New Mexico site is anticipated soon. For the sake of honesty and transparency, DOE officials at the meetings should have clarified or updated Moniz' statements at the start of each meeting, so people would know what is really at stake. It took citizen participation to even raise the issue of the WCS application, as if the situation didn't even exist.

Statements made at some meetings gave the false impression that Texans wants radioactive waste, to which we strongly object. There was a resolution passed by Andrews County in 2015 supporting WCS' efforts for consolidated storage, but this single vote does not necessarily represent the voice of the local people, many of whom had no idea such a vote was to take place.

Had DOE held even a single public meeting in Texas or New Mexico, they might have learned that many people do not agree with the County Commissioners and are opposed to radioactive waste storage or transport for the purpose of storage. They would have heard many voices saying that we DO NOT CONSENT in the states most targeted for nuclear dumping.

A number of speakers at various DOE meetings made great statements about justice and inclusiveness, and bringing all stakeholders in from the very start. If their advice had been followed in any real way, Texas and New Mexico would have been the first asked about "consent," about what it means and who should be included. Instead those most at risk for impacts have been disregarded. There was no inclusiveness and no conversations with the community here at ground zero, making a mockery of the so-called "consent process."

Based on the "Near-term steps for the consent-based siting initiative" the DOE plans to use input from these non-Texas/ New Mexico meetings for "engaging with potential host communities" and "working with "potential host communities." It appears that only conversations with Texas and New Mexico will be those yet to come when DOE tries to stuff consent to radioactive waste dumping down the throats of those who never had a voice in the first place and were never asked for input.

DOE's failure to schedule even a single meeting in either state shows contempt and utter disregard for those most likely to get dumped on. After a meeting in Washington, D.C., eight meetings were held elsewhere around the country, in in Boston, Denver, Sacramento, Atlanta, Chicago, Boise, Minneapolis and Tempe. Is the DOE's meeting process an effort to get people elsewhere to gang up against our region and then feel good about sending their waste our way because there is supposedly consent? While extensive lip service has been given to being inclusive and involving people early on in the process, the exact opposite is already happening. Rules and policies based on this "consent-based siting" process and the meetings held are likely to be unfair, inappropriate and designed to lead to radioactive waste dumping in our region.

This map of locations for DOE meetings tells the whole story. The big gaping hole

where no meetings were held includes Texas and New Mexico. We are willing to provide a better map as perhaps the agency had a hard time finding us. There was no good answer when Mr. Kotec was asked at the Tempe meeting why these locations were chosen, and why no meeting was held in Texas or New Mexico.



No “Consent” to Radioactive Waste / Environmental Injustice

One speaker at the Tempe meeting pointed out that no one wants radioactive waste in their backyard. The federal government knows this. In 2012, the Blue Ribbon Commission on America’s Nuclear Future came out with a plan to get communities to “volunteer” to take dangerous radioactive waste from around the country.

There is really no such thing as “consent” when it comes to radioactive waste storage. No one wants it. “Consent” can only be forced and coerced, obtained through bribes and political pressure. Manufactured consent is not real consent and no community should be conned into needlessly taking on this deadly legacy.

We agree with Fairewinds Energy Education comments "that such a process (DOE's) is biased against communities struggling financially due to factory closings and the global economy. Choosing an atomic waste dump is tempting to towns and villages so anxious to increase short-term income and economic survival that they are willing to sacrifice long-term environmental damage in return for that income. At its heart, the *consent based process* is an environmental justice violation as well as a DOE method to avoid finding an appropriate scientifically viable site to dump by foisting it on impoverished citizens who will not mount a protest."

Dumping radioactive waste on largely Hispanic communities with few resources to fight back would be extreme environmental injustice. Many local people have only recently become aware of the plans to dump radioactive waste on them and are beginning to fight back.

The largely Hispanic communities in the region, such as Andrews, Texas and Eunice, New Mexico, don't benefit from nuclear energy produced around the country. There is no justice in burdening them with having cancer-causing radioactive waste stored in their backyard, posing threats to their health and safety. Some attendees at the Tempe meeting were quite unhappy about comments to the effect that it is their patriotic duty to do so. It is not.

Over 2,000 people in Texas and New Mexico have signed petitions saying that they DO NOT CONSENT to having radioactive waste from the nation's nuclear reactors stored in their backyard.

We ask that DOE refrain from portraying people in Texas or New Mexico as wanting to accept radioactive waste. There has been no vote in any public election in any potential host county.

Eunice, New Mexico is the city closest to the site where WCS wants to consolidate high-level radioactive waste. Rose Gardner lives in Eunice, and had the following to say; "On July 4, 2016 I went and collected nearly 80 signatures at the Eunice NM Park 4th of July event. It was very easy, my petition was for a NO CONSENT to high-level waste in Texas and NM. I collected these signatures in less than 2 hours. Would you like me to continue and collect signatures or will you come to Eunice NM and see how the community feels about your siting program. We oppose the transportation of high-level nuclear waste and the interim storage of this waste. It is senseless, people do not want it here."

A "No Consent to High-Level Radioactive Waste" resolution passed this spring in 29 Democratic County and District Conventions, becoming the number one resolution in the state.

The 2016 Democratic Party Platform now calls for a halt to the misguided plan for consolidated storage of high-level radioactive waste in Texas.

It reads: "**We support... halting the plan to import high-level radioactive waste for consolidated storage in Texas due to risks of water contamination, security concerns and transportation accidents, and we oppose transport of high-level radioactive waste on our highways or railways.**"

The number of voters in the Democratic Primary in 2016 was 1,435,895, so over a million people are represented by this party platform, people from throughout the state and not just in Andrews County, where five people whose county stood to make a profit signed a resolution.

Four Texas Senators are sending comments to you regarding this important issue as well, including Senators Whitmire, Menendez, Watson and Rodriguez. They represent Houston, San Antonio, Austin and El Paso.

No Financial Bribes to influence “Volunteer” Communities

The financial incentives discussed by DOE for “volunteer host communities” should not be sought from Congress or utilized at all. It is inappropriate to use public funds to “help people understand” the risks. Such funding would no doubt end up being used for propaganda minimizing the reasonable and justifiable concerns people that people should have regarding the dangers of radioactive waste, health risks and risks of contamination to their land and water, and would not be a source of reliable information.

In short, these incentives would be nothing but a bribe. Statements made by various people at DOE meetings that local people would need resources to help them “understand” radioactive waste issues and not be afraid. This is insulting and degrading. The communities most likely to get dumped on are largely Hispanic and not wealthy. They are plenty smart and increasingly aware that the radioactive waste that could soon be dumped on their community can cause cancer, genetic damage and deaths. They know that accidents, leaks or terrorist actions could lead to contamination of the homes, land and water. They are also smart enough to know when they are being lied to and bullied. They do understand that they’re being targeted and are asking questions such as, “If this radioactive waste is so safe, why not keep it right where it is? And since when is it the patriotic duty of people here in Texas/ and New Mexico to be the nation’s nuclear waste dumping ground?”

Consolidated Storage is Not Necessary

There is no need to consolidate radioactive waste for the purpose of storage. Any shipment of this cancer-causing waste should happen only once, and only to a permanent repository, if sound science can identify a site that might be able to isolate waste safely for over 250,000 years. The Nuclear Regulatory Commission has previously said that the least risky option is to keep the waste stored securely at or close to the site of generation, and most nuclear reactor sites now have ISFSI licenses that allow dry cask storage onsite.

Additional specific answers

1) How can the Department ensure that the process for selecting a site is fair?

There has been nothing fair so far about the Consent-Based Siting meetings, so it is hard to conceive of any way that the process can become fair. There might have been a shot at fairness if DOE had hosted the first meetings in Texas or New Mexico, but the targeted states were completely disregarded.

Consent-based” siting makes no sense to begin with. The decision of a site for high-level radioactive waste should not be based on political will in the first place, but on years of scientific research. The decision should be based on sound science, not on a political determination regarding which community can be most easily coerced into “volunteering.” The necessary scientific research has not been done. \$15 billion was spent on Yucca Mountain but the site was still not adequate to isolate waste effectively for millions of years.

The decision to locate a repository in Nevada was a political one, not a science-based decision.

DOE is currently making a huge and potentially expensive mistake by following the same path once again, pursuing a political approach instead of one that is science-based.

2) What models and experience should the Department use in designing the process?

The 2012 report of the Blue Ribbon Commission on America's Nuclear Future suggested using the successful approaches used in Texas and New Mexico, where WCS has a low-level radioactive waste site and the WIPP site has been accepting TRU waste for 15 years.

The WIPP site accident with exploding waste barrels was much more serious than speakers at DOE meetings relayed, and 23 workers were exposed to radiation. Plutonium and Americium were tracked 26 miles away. This site was supposed to be the gold-star standard where nothing could go wrong. Until it did. Then everything seemed to go wrong all at once and reports found that the WIPP safety culture had eroded. It became worse during the time when the site was seeking to expand to take the high-level radioactive waste from commercial reactors around the country.

The BRC report references broad local and state support for the WIPP site. Janet Greenwald asked panelists at the Tempe meeting if they'd ever asked themselves why there didn't appear to be opposition to the WIPP site. No one responded, so she continued, letting panelists know that a lead opponent to the site was extensively harassed. Then her beloved horse was shot in the head.

Bill Addington was also harassed and had his lumberyard burned down when he opposed a low-level radioactive waste dump proposed for Sierra Blanca, Texas. We do not recommend the approach of forcing "consent" by attacking opponents.

3) Who should be involved in the process for selecting a site, and what is their role?

If the plan to transport radioactive waste for consolidated storage does move forward, **people in any host county or in any county through which radioactive waste would be transported should be able to vote on whether or not to "consent," and not have state or local political leaders speak for them on this crucial health and safety issue. These are the people most at risk.**

Those living near aquifers that could become contaminated should be able to vote as well.

Interests that stand to benefit from high-level radioactive waste storage, such as the license applicant, contractors and utilities, should be prohibited from expending funds to influence the elections.

Consent should never be given based on the vote of County Commissioners in a single county, especially one that has the potential to profit from importing high-level radioactive waste.

Public officials should not speak for the people regarding this issue. They should speak for themselves through elections. This decision will have impacts for nearly all of eternity. Too often people feel that their government does not represent their views. Campaign contributions and corporate deals should not outweigh the voice of the people.

4) What information and resources do you think would facilitate your participation?

Is this a serious question? How about reimbursement for the several thousand dollars spent so far by concerned citizens in Texas and New Mexico who had to travel to Tempe, Arizona to have their voices heard in person with the DOE since no meeting was held in either of our states.

5) What else should be considered? This question is addressed thoroughly in our General Comments.

As mentioned previously, the questions that should have been asked are as follows:

- Would your state or community consider consenting to having consolidated storage or permanent disposal of high-level radioactive waste? Are there prohibitions against it?
- Are citizens in your region opposed to high-level radioactive waste consolidated storage or disposal? Do political leaders voice support against the wishes of many people in the community?
- Is a Consent-Based Siting a valid or useful concept, or merely a way to once again base siting on political decisions instead of sound science?
- Should financial incentives funded by taxpayer dollars be utilized?
- Is there really such a thing as “Consent” when it comes to consolidated radioactive waste storage or permanent disposal? Is a “consent” process even advisable as opposed to scientifically researching the least risky approaches for storing and disposing of high-level radioactive waste?

In summation, we do not want high-level radioactive waste in Texas or New Mexico. We do not consent. DOE failed to come to Texas or New Mexico, showing utter disregard for the voices of people here and for the thousands of lives that may be impacted.

The DOE has previously stated that if a person is exposed to high-level radioactive waste without shielding, from a meter away, they will be immediately incapacitated and die within a week. This is from waste that has already been in spent fuel pools for ten years.

In a March 2014 report, the Texas Commission on Environmental Quality (TCEQ) acknowledged the vulnerability of radioactive waste to sabotage during transport, and that “consequences due to sabotage or accidents are also higher during transport since the waste may be near population centers.” We don’t need terrorist incidents in Dallas/ Ft. Worth, Houston, San Antonio or El Paso.

There would be accidents if this waste came to Texas. A previous DOE study calculated that the 53,000 truck shipments originally anticipated to go to Yucca Mountain (if transport was mainly by truck) would likely have resulted in 53 accidents. Train accidents were anticipated at a rate of 1 in 10,000 shipments. At least one train accident was expected to occur if transport was mainly by train. A West Texas train accident this summer involved a head-on collision of two trains that claimed three lives and it took over two weeks to clear the debris. Imagine if this train had been carrying high-level radioactive waste.

Importing high-level radioactive waste might further enrich the family of a Dallas billionaire, but millions of Texans and people along transport routes throughout the country would bear the financial and health risks of accidents or sabotage.

There is no good reason to transport this deadly waste across the country and we will fight like Texans and New Mexicans to protect our land, health and safety. Deaf Smith County was once considered a site for high-level radioactive waste before Yucca Mountain was chosen. Texans fought hard to defeat the proposal for our state and they will do so again.

I will close with one final thought about consent. Consent is a concept in many walks of life. If a young man wants to have sexual relations with a woman he loves, she would be the person to ask if she consented, not eight of his friends.

By the same token, it is not appropriate to ask people in eight other states about a consent issue that involves the targeted states of Texas and New Mexico.

Thank you for your consideration of these comments and your response would be appreciated.

Karen Hadden
Executive Director
Sustainable Energy & Economic Development (SEED) Coalition
605 Carismatic Lane, Austin, Texas 78748

512-797-8481 karenhadden@gmail.com





OFFICE OF THE GOVERNOR
AGENCY FOR NUCLEAR PROJECTS

1761 E. College Parkway, Suite 118
Carson City, NV 89706-7954
Telephone (775) 687-3744 • Fax (775) 687-5277
E-mail: nwpo@nuc.state.nv.us

July 29, 2016

U.S. Department of Energy
Office of Nuclear Energy
Response to IPC
1000 Independence Ave, SW
Washington, DC 20585

These comments are submitted by the State of Nevada, Agency for Nuclear Projects, in response to the U.S. Department of Energy (DOE) Invitation for Public Comment (IPC) to Inform the Design of a Consent-Based Process for Nuclear Waste Storage and Disposal Facilities, Published in the Federal Register, December 23, 2015.

We applaud DOE's invitation for public comments as a beginning step in implementing the recommendations of the Blue Ribbon Commission (BRC) on America's Nuclear Future. In its 2012 Report, the BRC recommended that only states that give their consent should be selected to host nuclear waste facilities.

If Yucca Mountain has taught us anything, it is that trying to force a repository on an unwilling state only gets the nation further away from a workable and safe solution to nuclear waste disposal. Nevada supports the development of a consent-based siting process for nuclear waste storage and disposal facilities, to find workable alternatives to Yucca Mountain.

DOE's new interest in consent-based siting does not change Nevada's opposition to Yucca Mountain. Governor Brian Sandoval has clearly stated that Nevada will not consent to storage or disposal of spent nuclear fuel or high-level nuclear waste at Yucca Mountain. This site is unsafe for commercial and defense high-level nuclear wastes, whether combined in one repository, or disposed separately.

Our comments today respond to your Question for Input (5) What else should be considered? The implementation of a consent-based siting process for nuclear waste facilities will require new federal legislation to replace or amend the Nuclear Waste Policy Act, as amended (NWPA, 42 U.S.C. 10101 *et seq.*). We believe that new federal legislation must at a minimum incorporate the 2012 recommendations of the BRC in three crucial areas.

First, new legislation must provide a statutory basis for binding written agreements between DOE (or any other program-managing entity) and state, local and tribal governments that consent



OFFICE OF THE GOVERNOR
AGENCY FOR NUCLEAR PROJECTS

1761 E. College Parkway, Suite 118
Carson City, NV 89706-7954
Telephone (775) 687-3744 • Fax (775) 687-5277
E-mail: nwpo@nuc.state.nv.us

to host nuclear waste storage and disposal facilities. In preparing its report on this IPC, DOE should consider the legislation introduced in the 114th Congress by Senator Harry Reid and Senator Dean Heller, S.1825, The Nuclear Waste Informed Consent Act. S.1825 would require the Secretary of Energy to obtain written consent from any potential host state and county, adjacent county impacted by transportation, and affected Indian tribe, before expending any funds from the Nuclear Waste Fund for repository construction.

Second, new legislation must affirm the regulatory basis for the siting, licensing, operation, and closure of nuclear waste storage and disposal facilities. Both the final report of the *Blue Ribbon Commission on America's Nuclear Future* (2012) and the Administration's *Strategy for Management and Disposal of Used Nuclear Fuel and High-Level Radioactive Waste* (2013) state that an important early step in the siting process is establishment of generic repository safety standards. In preparing its report on this IPC, as part of its "implementing a consent-based siting process" DOE should consult formally with the Nuclear Regulatory Commission and Environmental Protection Agency on the urgent need for safety standards and regulations to support a new repository siting process that relies on early public confidence to make informed consent possible from potential host jurisdictions and communities.

Third, new legislation must address the radiological impacts and social impacts of transporting spent nuclear fuel and high-level radioactive waste. The National Academy of Sciences (NAS) Committee on Transportation of Radioactive Waste documented these radiological and social impacts, and recommended comprehensive transportation safety and security measures to address these impacts, in their report *Going the Distance? The Safe Transportation of Spent Nuclear Fuel and High-Level Radioactive Waste in the United States* (2006). The NAS findings and recommendations were adopted and endorsed by the BRC in 2012. In preparing its report on this IPC, DOE should consider requiring implementation of the transportation safety and security measures recommended by the NAS and the BRC before the commencement of any shipments of spent nuclear fuel or high-level radioactive waste to consolidated interim storage or disposal facilities.

Respectfully,

A handwritten signature in blue ink, appearing to read "Robert Halstead".

Robert Halstead
Executive Director

Consent-Based Siting

From: Jennifer Haney [<mailto:jenpatchjam@gmail.com>]
Sent: Sunday, July 31, 2016 1:20 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: send it away

Is it possible to send all of the waste into the sun?

Jennifer Haney

24540

Consent-Based Siting

From: Hardesty, Becky [<mailto:Becky.Hardesty@itron.com>]
Sent: Tuesday, July 12, 2016 8:23 AM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: Response to IPC

First, I would like to thank you for holding the meeting in Atlanta.

Here's my opinions on the Consent-based siting approach.

1. If I had not been friends with one of the individuals involved, I would have never had known about the meeting. You need a communications person who knows how to get the message out to millions, not just friends of individuals involved. The group of people I saw in the meeting was a group of individuals involved week-to-week, but with a few new ones thrown in for new opinions. Hold community events to educate people.
2. It appears that you're not reaching the people who actually have to give consent. The individuals who own property around the areas where you want to deploy include middle-aged or older individuals. This is a group of individuals whose worlds do not revolve around technology. Some do, but a majority of those individuals do not. Many do not have computers let alone internet connectivity. Nor do they subscribe to twitter or other means of public communication through technology. Your approach needs to be more grass roots. Your marketing needs to communicate at the level of these individuals. Get into the churches, schools, senior centers, grocery stores, etc., where these people congregate and talk. Hit the local breakfast hang-out, the water aerobics class, etc. where the older generations who actually own the land pursue their activities. Your marketing is out of touch with the messaging you're trying to deliver. I have 3 sisters who were all land-owners. The oldest was an IT manager, but hated the internet social media. The next has never owned a computer and owns a significant amount of land/property. The third is an executive assistant who struggles with attachments. They are all 67-70 years of age. None of them have heard of you.
3. You've got a list of questions people are going to ask. Have a steadfast answer to those questions. For example, the group from Savannah wants to know when and where they can dump their waste? What is to become of Yucca Mountain? What oversight is going to be put into place to make sure something like Yucca Mountain doesn't happen again?
4. Come in with a plan on what it is going to provide to the community. What problems might they face and how are you going to address those problems. For example, more jobs with wages above minimum wage, additional traffic of hazardous materials, additional business opportunities in the area, increased revenue in existing businesses, a new by-pass that will prevent the movement of that material through the downtown/residential areas, increased/decreased property values, etc. etc. People want to know how it's going to affect them directly.
5. Explain the operations and how they will be affected. What type of warning systems will be put into place? What type of evacuation processes will be put into place? What type of insurance changes are needed?
6. People reject what they don't understand, educate first, then ask their opinions/ask for consent. AEP put a customer education package together before deploying their deregulated market. That allowed customers to either go into the internet and follow the process end-to-end, or pick up a booklet, much like a comic book, and read through the details at a level they could understand. In my business dealings, we typically shy away from

legalese and talk at the 3rd grade level. Not because people are uneducated or stupid, but because it leaves no room for misunderstanding. <https://www.appalachianpower.com/info/community/> Here's an example of one of their sites.

Becky Hardesty
Consultant – Utilities Industry

Consent-Based Siting

From: Lisa Harrison [mailto:harrison333@gmail.com]
Sent: Friday, July 29, 2016 12:22 PM
To: Consent Based Siting
Subject: Response to IPC

Nuclear energy is grotesquely dangerous and exorbitantly expensive, from the uranium mining to the radioactive waste that is produced. The best available solution for storing the waste is in Hardened On-Site Storage (HOSS) dry casks as close to the point of generation as possible. Although this is the safest known method of storage, it is still not adequate for the time span during which the waste poses a threat. Therefore it must be monitored and inspected on a regular basis, and it must be retrievable.

Nuclear waste should NOT be transported across our country. It should NOT be shipped across bodies of water, or carried by trucks or railroad, putting millions of people at risk. It should not be forced onto vulnerable communities such as Native American lands or minority areas where people are desperate for jobs.

At the same time, we must see the error of our ways and stop producing more waste, i.e., STOP all production of nuclear energy. Begin immediately to decommission all nuclear facilities and aggressively develop clean, renewable energy.

For the reasons stated above, I DO NOT consent to the DOE "Consent-Based Siting" of radioactive waste dumps. This would only continue our sorry history of irresponsible development that has caused so much damage and hardship already.

Sincerely,
Lisa Harrison
New York, NY

Consent-Based Siting

From: Daniel Hauck [mailto:daniel.p.hauck@gmail.com]
Sent: Thursday, July 28, 2016 4:30 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: Consent-based siting public comment

I support the Blue Ribbon Commission on America's Nuclear Future's recommendation to implement an explicitly adaptive, staged and consent-based approach to nuclear waste disposal. And I welcome the opportunity provided by the U.S. Department of Energy to submit comments on the agency's nascent effort to design a consent-based siting process.

Achieving consent-based siting, if done right, could lay the foundation for a fair and just process for siting a nuclear waste management facility that will well position the federal government – after decades of failure – to meet its nuclear waste management commitments and begin to restore the loss of trust and confidence in its ability to find a viable and permanent solution to our waste crisis.

I support and urge the DOE to apply the following 10 Criteria for Community Consent:

- 1) **Informed** - Communities must know what they are consenting to at each stage of the process. Early and often public engagement activities should offer the public, community leaders, experts and agency representatives frequent opportunities to exchange information. Information must be accessible and offered through a variety of platforms. The full range of cost and risks associated with the project must be disclosed and verified, as well as alternatives being considered. Achieving informed consent is not an end, but an ongoing exercise that responds to new information and findings as well as new generations.
- 2) **Inclusive** - Consent should be granted by those most impacted, including states, tribes and communities. A broad range of state, tribal and local stakeholders should be included in the decision-making process, and efforts must be made to increase the number of community members who recognize themselves and their communities as stakeholders in the siting process. People and entities that would financially benefit from the siting process should be clearly disclosed.
- 3) **Collaborative** - Consent can't be achieved through a top-down process. Activities related to outreach, engagement and education must be planned in coordination with appropriate stakeholders. Any agreements or decision-making must result from mutual input and understanding, and must be responsive to the concerns of citizens.
- 4) **Just** - Consent should not be bought. Financial compensation and other incentives must be reasonable, not used as coercion, and negotiated with full public disclosure.

- 5) Transparent - Consent must be pursued through an open process. Consent can be achieved and maintained through trust. Open access to information includes disclosure of funding and any conflicts of interest with the sources of information. All meetings, hearings and communications must be open to the public and on record.
- 6) Legitimate - A consent-based siting process must not just be the policy of the Department of Energy, but the law of the land.
- 7) Balanced- Consent will require sharing of power among federal executive and legislative branches, and state and local governments and communities. Negotiating and decision-making power must be shared among affected federal, state and local entities, including those in the transportation sector. States also should be granted some authority over regulation of the facility.
- 8) Flexible - Consent can be withdrawn. The consent-based siting process must provide ample opportunity and defined moments to correct course or completely withdrawal from the siting process.
- 9) Contractual - States, tribes and communities must have clear recourse if the terms of consent are breached.
- 10) Tailored – The consent process must be responsive to each situation. While these common elements should be applied to any consent-based process, any approach must be tailored to the specific, unique needs of the particular state, tribe and communities where a waste dump is being considered.

Thank you for your consideration.

Sincerely,

Daniel Hauck

33948

Consent-Based Siting

From: Arlene Hickory [<mailto:a23h23@yahoo.com>]
Sent: Saturday, July 30, 2016 7:40 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: Consent -bases siting of radioactive waste dump and mobile chernobyls

As a resident of Lake County Illinois, who lives within 15 miles of the nuclear power plant in the process of being decommissioned I consider myself highly qualified to speak to the issue of "radioactive waste dumping/storage/disposal" It is evident to any conscious human being that this problem is of the same magnitude as our international inability to control,contain,eliminate Nuclear Arms. In fact we need to admit (meaning the DOE, DOD ,POTUS in particular) have responsibility for the endangerment of humanity, the POTUS's recent action for nuclear arms trillion dollar weapon enhancement program, for one. This will no doubt greatly increase our already unmanageable store of radioactive waste. Then there is the ongoing production of nuclear wastethe largest number of nuclear reactor sites are sited around the Great Lakes...poisoning our water and our land. This in no way creates a National status of safety and security. Again, a conscious HUMAN being would be aware of this great False and Fraudulent (how many lies were told?...) governance. How does one stay Conscious and Human in the face of such depraved governance? There is "this", this little invitation to speak Truth to Power. If I ever wanted/needed to know what this means.....I know it now. I am sane, I am Human, I am caring, I am conscious, I am Knowing. Lift up to MY standard.....you will be glad you did.
Sent from my iPad

Consent-Based Siting

From: Barbara Hill [<mailto:elastigirl.barb@gmail.com>]
Sent: Sunday, July 31, 2016 9:17 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: Consent-based siting public comment from Texas

I oppose shipping high level radioactive waste from other states to Texas for storage or disposal.

I just got a email telling me I have until midnight tonight to object.

There is no solution to this problem, no solution even in sight. Dumping all this radioactive waste on all these people, on all this land, to leak out and migrate out (tritium's really good at migrating I hear) this way and that, sounds too much like Hitler's "final solution" to the Jewish problem.

Those most affected by the pretend solution have not been adequately informed. Well of course not. Because if you adequately inform everyone before you implement the pretend solution no one would agree to it and the waste would just have to be maintained where they were produced. But that would just be a pretend solution as well. So just let the people find out on their own on down the road as they try to figure out why so many of them and their animals are getting sick in ways associated with radiation. But the Internet information highway and activists are leaking information, spreading information. Just look at the email I just got. And these information leaks and activists are fermenting revolution, refusals to just accept such injustices. So imposing the pretend solution on the uninformed is just a pretend solution as well.

Look at my husband's and my small part of the world where LNG export operations started heading our way in 2012 but we didn't hear anything about any of this until 2014 and after the DOE comment periods on the proposed operations had all closed. When we were finally told, we were told LNG would be good, all good for us, no bad. We learned different. DOE decided in 2012 that LNG exports were in the Public Interest.

No current appraisal of the facts would support that conclusion. We've learned that methane is a bigger problem than previously thought and that the methane leakage from cradle to grave, from extraction to end use, is far greater than we thought. But FERC is continuing to approve LNG export operations on the basis of the DOE's 2012 judgement that LNG exports are in the Public Interest. Four local communities have passed resolutions against LNG (Port Isabel, Laguna Vista, South Padre Island, and Long Island Village, TX).

And we've learned these LNG export operations will put stuff into our air that will increase our rate of medical problems (asthma, COPD, etc) even below "permitted" levels. And there are permitted levels only for a limited number of "criteria pollutants." And there is limited monitoring of some of these criteria pollutants and no monitoring of others. So FERC will probably just keep rubber stamping approval for these LNG export operations.

This way of permitting pretend solutions to keep nuclear and fossil energy going has to stop. It's undermining our health, our system of government, and our sense of morality.

Thank you for considering my comments.

Barbara Hill

78586

Consent-Based Siting

From: karen hirsch [mailto:clearingaway@gmail.com]

Sent: Sunday, July 31, 2016 10:02 PM

To: Consent Based Siting <consentbasedsiting@hq.doe.gov>

Subject: Response to IPC: 1) Extend to full 45-days for Filing Comments - 2) to Reconsider Staff's Proposal re Mandatory Nuclear Subsidy in NY State

Dear Secretary Burgess:

I implore you to extend the time for Pubic Comments on the above to the allowable 45 days:

NY State's Public Service Commission recommendations of the Staff's Responsive Proposal for Preserving Zero-Emissions Attributes in Case 15-E-03 for a Mandatory Nuclear Subsidy.

My reasons are that:

1. The proposed plan could cost NY State and citizens a Shocking \$7 billion over the course of the next 12 years.

And

2. An unintended accident - especially near Indian Point Reactor (which even Gov. Cuomo said is unstable):

. would contaminate healthy water supplies and possibly have catastrophic results (like Fukushima in Japan) in a highly populated region.

NY citizens have a right to consider California's alternative plan. It is intended to:

1. Protect the public from enormous nuclear-waste accidents and risks, and
2. Save enormous amounts of money for the state and citizens.

Specifically, California plans to:

. phase out their last nuclear power plant, by facilitating a joint agreement between Pacific Gas & Electric, the unions representing the plant workers, environmental groups and municipal officials to...

. replace the power generated by Diablo Canyon with 100% renewable energy without mandating any subsidy that ratepayers would fund.

For all our sakes, I implore you to extend the period for Public Comments to the allowable 45 days.

I would really appreciate a response to my request.

With gratitude and respect,

Karen Hirsch
55 Perry St. - Apt. 4D
New York, NY 10014

(917) 734-1329

Consent-Based Siting

From: Ace Hoffman [mailto:rhoffman@animatedsoftware.com]
Sent: Sunday, July 31, 2016 6:04 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: Consent-based siting public comment

July 29th, 2016

To Whom It May Concern, Department of Energy

The idea that future generations, 500,000 years or more from now, can "consent" to having nuclear waste placed in their midst is ludicrous. And at the rate we are generating nuclear waste (about 10 tons per day in the U.S.A.; 50 tons per day globally) there isn't enough space on this planet to store all the waste that already exists, let alone what will be produced over the next few decades, centuries, and millennia.

Transporting all that waste represents yet another hazard that the public should have a right to consent -- or not -- to, but who in their right mind will want hundreds or even thousands of shipments of nuclear waste going through their community -- especially since there is zero likelihood that those communities will be reimbursed for the risk they take of having their neighborhoods permanently contaminated if there is an accident along the way?

And speaking of reimbursement, how far into the future does the DOE expect to compensate a community for taking the waste for "interim" storage? America has tried for more than 50 years to find a permanent repository, and Yucca Mountain was a scientific failure, not just a political one. There were groundwater seepage issues, rainwater leakage issues, volcanic activity nearby, earthquakes, and metallurgical issues that could not be dealt with for the time frames necessary to store the waste.

The Yucca Mountain project was strongly opposed in Nevada, and no other community in the country has ever stepped up to willingly become a permanent nuclear waste repository -- and only a few locations could even be considered because of the incredible difficulty -- no, impossibility -- in predicting how the earth will behave for the many millennia the waste will remain toxic. And all locations are susceptible to asteroid impacts and earthquakes, so really there is no safe place for nuclear waste.

And everybody knows it.

There are two broad categories of radioactive hazards in spent nuclear fuel. One is the fissionable isotopes, and the other is the fission products themselves.

Regarding the fissionable isotopes, there are two main concerns. One is the proliferation risk that the waste will be stolen, the fissionable isotopes isolated (possibly by a newly-developed laser separation process, which does not require hundreds of centrifuges and massive industrial installations to accomplish). A nuclear bomb can then be made from the enriched product of the separation process.

The other problem with the fissionable isotopes is that if nothing is done about the Uranium-235 and Plutonium-239 in the spent fuel, the proliferation risk will continue for thousands of years, since the half-life of U-235 is about 700 million years, and the half life of Pu-239 is about 24,100 years. But something CAN be done: Using a laser which is emitting photons in the 10 to 15 MeV range, these two isotopes can be safely fissioned in a controlled manner, while the spent fuel is still in the fuel rods.

Although such lasers do not currently exist, there is little doubt they could be developed, and there is no doubt the process would work because the breakdown of these isotopes has been proven with other methods such as with a linear accelerator. The process does not even take very long and can produce waste energy which can be harnessed to mitigate some or all of the cost.

By eliminating these two isotopes using the method described above, which has a patent pending filed by Peter M. Livingston, a scientist who witnessed a number of bomb tests at the Nevada Test Site and has studied the problem for many years, the two greatest difficulties with spent fuel are almost completely eliminated: The long term storage problem, and the proliferation risk.

What is left are the fission products. Most of these have half-lives of three decades or less (there are a few, which I call the ignoble seven, with half-lives of many millennia or even a million years or more, but these are present in only trace amounts).

Within about six centuries, almost all of the fission products will have decayed to stable elements. Thus, the longest that an interim OR permanent waste repository would need to be carefully monitored would be about 600 years. Granted, that's no piece of cake, considering our nation is only about 240 years old and most of our buildings, roads, dams, bridges and other infrastructure, much of which is well under 50 years old, is already crumbling -- but it's much more manageable than 500,000 years, a length of time so enormous that nobody can predict the consequences of trying to store hazardous waste that long.

Below is a link to Peter Livingston's patent for a process to neutralize the fissionable isotopes in spent fuel.

Under no circumstances should this suggestion encourage the production of more nuclear waste. During reactor operation, nothing is more dangerous than a superheated 150-ton pile of super-critical nuclear fuel, and when the fuel is first removed from the reactor, the remaining short-lived fission products keep the fuel assemblies so thermally hot that a spent fuel fire could occur at any time unless the fuel is safely stored deep under water. Such an event would be catastrophic, as we have seen in Chernobyl, Fukushima, Three Mile Island and elsewhere. A spent fuel pool or dry cask storage facility fire could be worse than all of those events combined. Dry casks and spent fuel pools are subject to risks from airplane strikes, earthquakes, tsunamis, terrorism, and even just manufacturing errors.

There are numerous cleaner, cheaper, more manageable methods for generating electricity -- even for propulsion on aircraft carriers and submarines. With some 600 military bases around the globe, our aircraft can already quickly reach any point on the planet without the need of aircraft carriers at all, and for stealth operation, a nuclear submarine has to shut off its nuclear reactor anyway, and operate on batteries. Both ships and subs normally have to stay with a large fleet of non-nuclear ships such as landing craft transporters, oilers, mine sweepers, frigates, destroyers, etc.. And even though they are considered "robust," a nuclear reactor on board a ship or sub can melt down, causing a catastrophic release of radiation which will spread throughout the oceans. This has probably already happened, although the evidence is impossible to accurately obtain, but more than half a dozen nuclear subs have been lost at sea, including two U.S. submarines, and in all cases, the exact cause of the catastrophe has not been positively ascertained.

Iran doesn't need nuclear power, China doesn't need nuclear power, Russia doesn't need nuclear power. Most people in Japan probably wish they never had nuclear power. Nobody else needs it, and we certainly don't need it.

The Department of Energy has been unable to solve the problem of nuclear waste, despite more than half a century and tens of billions of dollars of prior effort. This is because nuclear radiation destroys any molecular or chemical bond in the universe. DoE made a hollow promise to take back the nuclear waste from commercial reactors, a promise they have never kept and are now paying hundreds of millions of dollars per reactor for. It is time to eliminate that promise because nuclear waste cannot be safely kept -- and eliminating that promise would IMMEDIATELY cause the shut down all remaining commercial reactors. That would be a good thing.

No community will ever want nuclear waste. No consent can ever be given by people as yet unborn. No one can predict the consequences of storing anything anywhere for 500,000 years.

Ace Hoffman
Carlsbad, CA

URL for Dr. Peter M. Livingston's patent application for reducing the storage time of spent nuclear fuel:
<http://goo.gl/7ro0tZ> (goes to the USPTO).

Ace Hoffman

92018

Consent-Based Siting

From: Teresa Holt [mailto:tjholt2@frontier.com]
Sent: Friday, July 29, 2016 12:35 PM
To: Consent Based Siting
Subject: Response to IPC

Dear Dept. of Energy officials & employees,

I am writing to respond to your request for feedback on disposing of nuclear waste. I refuse to accept nuclear waste in my community, my state and my nation. I also express permanent non-consent of acceptance of nuclear waste. I have two children who are minors and expressly and permanently refuse to accept nuclear waste on their behalf as well.

Do you remember the book, Everything I Need to Know, I Learned in Kindergarten? Like the book mentions, I try to teach my children and the students I teach to avoid making messes. If we do make messes, we clean them up ourselves and apologize if we need to. Do you have children? If so, what do you tell them about this nuclear mess?

May also suggest some alternatives, the simplest being

to **stop making nuclear waste**. We can make clean, safe and affordable energy such as wind and solar. By making these energies more affordable, people can have them in their communities and even their houses and reduce the need for transport of energy too.

Speed up the process of transferring nuclear waste from wet to hardened and store it on site. If folks in the industry have to live with the waste where they work, perhaps they will speed up its safe disposal.

Store irradiated nuclear fuel in HOSS dry casks, as safely and securely as possible, as close to the point of generation as possible, in a monitored, inspectable, retrievable manner.

Given the inherent risks of transporting high-level radioactive waste truck, train, and/or barge shipments on roads, rails, and/or waterways, **transport irradiated nuclear fuel only once**, such as straight to a suitable, acceptable, just geological repository, not to so-called centralized interim storage nor to Native American reservations or poor communities.

Assure that geological repositories are scientifically suitable, socially acceptable, and environmentally just. Note that no such suitable/acceptable/just geologic repository has yet been found, in more than half a century of looking. DOE has admitted it can't open *any* repository (even an unsuitable/unacceptable/unjust one) till 2048 at the earliest. That will be over a century after [Enrico Fermi, in 1942, generated the first high-level radioactive waste](#), in the world's first reactor, as part of the Manhattan Project to build atomic bombs; and more than 90 years after the first "civilian" atomic reactor began generating waste at Shippingport, PA. So PLEASE just stop. It is not an economically feasible form of energy.

[Do not reprocess \(extract fissile plutonium and/or uranium from\) irradiated nuclear fuel](#). Not only would this risk nuclear weapons proliferation, and be astronomically expensive; it would also very likely cause environmental hazards downwind and downstream of the reprocessing site, as has been shown at such places as Hanford Nuclear Reservation in Washington.

Preserve and maintain "wet" storage pools after

emptying them, as an emergency back-up location for cask-to-cask HOSS transfers. Do not dismantle pools as part of nuclear power plant decommissioning, post-reactor shutdown.

Address the shortfall in funding for forevermore storage of high-level radioactive waste. Reinstitute the now-terminated Nuclear Waste Fund and collect money from nuclear power ratepayers

Environmental justice, in keeping with President Bill Clinton's 1994 Executive Order 12898, demands that Native American communities and lands, as well as those of other low income and/or people of color communities, never again be targeted for high-level radioactive waste parking lot dumps or permanent burial sites, a shameful form of radioactive racism dating back decades in the U.S.

Thanks for your taking time to read my feedback.

Sincerely,

Teresa Holt

Edmonds, WA



July 28, 2016

Andrew Griffith
Associate Deputy Assistant Secretary for
Fuel Cycle Technologies
U.S. Department of Energy
Office of Nuclear Energy
Response to IPC
1000 Independence Avenue, SW
Washington, DC 20585

Dear Mr. Griffith:

On behalf of the Council of State Governments' Midwestern Radioactive Materials Transportation Committee, we are writing to submit the Committee's comments in response to the Invitation for Public Comment (IPC) to Inform the Design of a Consent-Based Siting Process for Nuclear Waste Storage and Disposal Facilities, published by the U.S. Department of Energy in the *Federal Register* on December 23, 2015 (Vol. 80, No. 246, pp. 79872-79874). We appreciate the extension of the public comment period to allow comments to be submitted after the conclusion of the eight public meetings DOE held across the country.

We also appreciate the fact that the first and final meetings were located in the Midwest. Representatives of the Committee attended the March 29 meeting in Chicago and the July 21 meeting in Minneapolis. We also had representatives participate via webcast in the other meetings. Because the Committee's focus is the transportation of spent fuel and other highly radioactive waste, we are likewise focusing our comments on transportation. We do feel it appropriate, however, to relay a few observations regarding the consent-based siting initiative.

With these eight public meetings, DOE made an admirable first attempt to engage the public and solicit input from people across the country. We hope the experience will help DOE develop new tools and approaches for engaging a broad cross-section of Americans beyond those who already have a well-established position on issues related to nuclear waste. As we have discussed many times at our meetings, it is critical to reach people before their minds are made up. Our observation is that a coordinated, concerted public information effort is needed to provide fact-based information on the risks and benefits of hosting facilities as well as transporting nuclear waste. Such an effort would be most effective if it were targeted at multiple audiences, using multiple media to reach people of all ages and from all different walks of life. In addition, it is important to design the public information campaign to be a sustained conversation rather than a one-time information push.

It would also be advantageous to focus the conversation on solving a single problem – namely, dealing with existing waste to avoid placing the burden on future generations. The role of nuclear energy or the economics of electricity are valid public policy issues; bringing these issues into the conversation about how to manage the waste, however, unnecessarily adds to the complexity of the problem, thereby making it much more difficult to solve.

701 East 22nd Street
Suite 110
Lombard, Illinois 60148
Tel: 630.925.1922
Fax: 630.925.1930
E-mail: csgm@csg.org
www.csgmidwest.org

Michael H. McCabe
Regional Director

Lexington
1776 Avenue of the States Lexington,
Kentucky 40511
Tel: 859.244.8000

Atlanta
P.O. Box 98129
Atlanta, Georgia 30359
Tel: 404.633.1866

New York
22 Cortlandt Street,
22nd Floor
New York, New York 10007
Tel: 212.482.2320

Sacramento
1107 9th Street
Suite 730
Sacramento, California 95814
Tel: 916.553.4423

Washington
444 North Capitol Street, NW
Suite 401
Washington, DC 20001
Tel: 202.624.5460

Andrew Griffith

July 28, 2016

Page 2

Turning to transportation, the Committee's principal interest in site-selection is related to our desire to engage in transportation planning and preparations whenever a facility becomes available. Toward that end, we encourage you, when communicating about possible transportation impacts, to engage the states early and often. Not only do we have expertise in transportation, but we will be the people working with the potentially affected communities. Indeed, we already have relationships with our local governments, so it would be to our mutual benefit for DOE to include us in discussions with those entities and in the preparation of any public information materials that reference the role of state governments in transportation oversight.

Second, to the extent practicable, accessibility should be a criterion for evaluating the suitability of a potential site. This is one of the useful lessons that came from the licensing of the Private Fuel Storage facility in Utah, which was ultimately blocked due to the inability to construct the necessary transportation infrastructure to move spent fuel to the site.

Third, we feel it is important for DOE to develop a thoughtful answer to the question of whether consent will be sought for transportation. It is easy to document that the Blue Ribbon Commission on America's Nuclear Future advocated for consent-based *siting* but not consent-based *transportation*. We recognize that consent-based transportation is neither practicable nor is it enforceable under the Commerce Clause. A more positive answer to the question, however, would be to emphasize that states, Tribes, and local governments are the representatives of the people. As such, they have an obligation to protect the health and safety of the public and the environment. Involving these governments in decision making may not constitute granting consent, but it does help the peoples' representatives ensure that the public is well protected and their concerns are being addressed.

We appreciate the opportunity to submit comments on DOE's efforts to develop an integrated waste management system for the nation's spent nuclear fuel and highly radioactive waste. If you have any questions about our comments, please contact Lisa Janairo, Program Director at the Council of State Governments' Midwestern Office, at 920.458.5910 or ljanairo@csg.org. Thank you.

Sincerely,



Kelly Horn, Co-Chair
CSG Midwestern Radioactive Materials
Transportation Committee



Teri Engelhart, Co-Chair
CSG Midwestern Radioactive Materials
Transportation Committee

Consent-Based Siting

From: Robert Howarth [mailto:robfhow@gmail.com]
Sent: Friday, July 29, 2016 4:00 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Cc: PSRBob <robfhow@gmail.com>
Subject: Response to IPC

1. I could not consent to nuclear waste storage at any new permanent or interim site until after the following has been implemented:

a. DOE must implement the recommendations of the 2006 National Academy of Science

report and other relevant expert reports on this subject before allowing any shipping program movements.

b. Moving by truck, train or barge is fraught with danger. Truck & train collision & wrecks lead

to havoc that emergency responders are not trained or equipped to handle. Waste filled

containers if ever shipped must be designed and tested at highway & rail speeds before

ever used on public byways.

c. A centralized interim storage site would require at least two sets of transportation

movements and is unacceptable.

d. Stop making more waste and keep it where it's generated. Require BRC to adopt and

apply HOSS principles at all existing storage sites, at all reactors.

2. In short, curtail nuclear power growth and investment - stop

making more nuclear waste.

Make the world a safer place, live up to our treaties, build
down nuclear, build up sustainable
safe energy sources ASAP!

Sincerely,

Robert F. Howarth

Consent-Based Siting

From: don hyde (via Google Docs) [<mailto:hydedw@gmail.com>]

Sent: Tuesday, July 26, 2016 1:30 PM

To: Consent Based Siting <consentbasedsiting@hq.doe.gov>

Subject: Public_Comment_Consent.docx Response to IPC

don hyde has attached the following document:



Public_Comment_Consent.docx



My comment attached

Google Docs: Create and edit documents online.



Date July 26, 2016

U.S. Department of Energy
Office of Nuclear Energy, Response to IPC
1000 Independence Ave SW
Washington, DC 20585

RE: Response to IPC

To Whom It May Concern:

We are writing to express our concerns about the DOE's "Consent-Based Siting" of Radioactive Waste Dumps, focusing on our communities in New Mexico.

By virtue of the end result, this process is inherently unfair to the community that will receive the nuclear waste, and the communities that will be at risk along the transportation route.

These are our recommendations:

Stop all nuclear waste production, including weapons-related and reactor operations, which generate irradiated nuclear fuel. Continue to work toward a completely safe, reliable and permanent method of storing the waste.

Simultaneously, Store all radioactive waste in "hardened dry casks" built to prevent leakage and explosions and secured for centuries. These must be stored on-site or as close to point of origin as possible. Casks must not be stored on tribal lands. They must not be transported through high-population centers or tribal lands.

Storage pool structures must not be dismantled during plant decommissioning and must be maintained at utilities' expense as emergency sites for failed cask-to-replacement-cask transfers.

Total liability and expenses should remain with owning utilities, which should also never be permitted to build nuclear plants without demonstrating financial capacity to cover all costs of safe permanent storage of wastes in perpetuity.

Question 1: How can the Department of Energy ensure that the process for selecting a site is fair?

More public meetings are needed, especially ones in Albuquerque, Gallup, and Carlsbad. The DOE needs to including environmental justice organizations, Communities of Color, Low-Income communities, professors in ethics, health professionals, and emergency responders. DOE should postpone any decision on this “consent-based siting” proposal until all these communities have been informed and until DOE has considered the report by NRC on “pool storage safety” due out later this year.

Question 2: What models and experience should the Department of Energy use in designing the process?

Question 3: Who should be involved in the process for selecting a site, and what is their role?

In order to ensure adequate research and consideration for safety for the environment and communities, several focused teams should be created to oversee the following:

A) Safety Teams, including professionals and experts in these fields:

a. Transportation Safety

i. Emergency Responders

ii. First Responders

iii. Health Professionals

B) Community and Human Rights

a. Experts in UNDRIP,

C) Indigenous Peoples Rights

In order to ensure the selection of a site is not in violation with International Law or the Rights of Indigenous Peoples, a team with expertise in these areas needs to be created:

UNDRIP, ADRIP, Trust Responsibility, Sacred sites experts.

All communities likely to be affected by proposed transportation routes and storage sites must be apprised of the risks to our air, water, soil and health.

Question 4: What information and resources do you think would facilitate your participation?

The public must be provided with information and have adequate time to consider the risks and options of site proposals. We must be provided with:

- Site geology and hydrology
- Nature of irradiated nuclear fuel
- Status of hardened cask technologies

This information must be provided in a format understandable by the layperson.

Question 5: What else should be considered?

The process should center the ongoing history of radioactive environmental contamination and its effects on communities. Businesses should not be considered “the public” nor “the community” in terms of consent.

Sincerely,

Don Hyde
4326 PanAmericanFwy NE #300
Albuquerque NM 87107

Consent-Based Siting

From: Jim Hyder [<mailto:Jims12n12@msn.com>]
Sent: Thursday, July 14, 2016 8:29 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: Response to IPC

I started to think that this was none of my business, but I remember the years I lived and went to school in Idaho, grew up in Hagerman and the beautiful country life.

I also remember the Nukes and the threat of pollution and was afraid it would take over as bad as the one near Las Vegas where I live now. We have good laws to keep

the nukes where they originate and we are learning more every day of how to get rid of it safely.

But, it hasn't happened yet and I believe it never will.

Idaho does NOT need radioactive materials trucked across her land nor stored there. You have a good honorable AG so pay attention.

Don't kill when you don't have to.

Jim Hyder
1751 Ringe LN B
Las Vegas, NV 89156

Consent-Based Siting

From: Cuellar , Chelsea [<mailto:Chelsea.Cuellar@mail.house.gov>]
Sent: Sunday, July 31, 2016 11:34 AM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: Response to IPC

Dear Department of Energy,

Attached are the remarks from Congressman Darrell Issa in response to the Department's invitation to comment on the consent-based siting process for nuclear waste storage and disposal facilities.

Please respond to the Congressman directly via mail to 2269 Rayburn House Office Building, Washington, D.C. 20515, or reach out to me directly in the Washington, D.C. Office at 202.225.3906.

All the best,

Chelsea Cuellar
Legislative Assistant
Office of Congressman Darrell Issa
California, District Forty-Nine
202.225.3906



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July 29, 2016

The Honorable Ernest Moniz
Secretary of the Department of Energy
1000 Independence Avenue SW
Washington, D.C. 20585

Dear Mr. Secretary:

I write to comment on the Department of Energy's (Department) consent-based siting process for nuclear waste storage and disposal facilities (Document No. 2015-32346) in order to highlight the value of but also the urgent need our nation has for the Department to develop and execute a national plan to store nuclear waste.

A 2011 Government Accountability Office report estimated over \$15 billion has already been spent toward the development of a nuclear waste repository.¹ The Department estimates an additional \$11 billion will be spent.² Yet the permanent designated site of Yucca Mountain, Nevada, is nowhere near opening while the nation maintains thousands of pounds of radioactive nuclear waste and spent nuclear fuel (SNF) scattered throughout the country.

The Nuclear Regulatory Commission (NRC) released the third volume of its *Safety Evaluation Report*, concluding the Department's license application to construct Yucca Mountain met the long-term nuclear waste repository regulatory and safety requirements, noting that Yucca Mountain would remain safe for one million years.³ I support continued research to create swift solutions for our nation's issue of nuclear waste, albeit the ultimate development of Yucca Mountain or interim consolidated storage facilities, and I urge the Department to take action now to fulfil its long overdue legal obligation.

¹ Mark Gaffigan, Natural Resources and Environment at the U.S. Accountability Office, "Nuclear Waste: Disposal Challenges and Lessons Learned from Yucca Mountain," Testimony Before the Subcommittee on Environment and the Economy, Committee on Energy and Commerce, U.S. House of Representatives, June 1, 2011, p. 2, <http://www.gao.gov/assets/130/126331.pdf>.

² Christopher A. Kouts, Office of Civilian Radioactive Waste Management, "Yucca Mountain Program Status Update," Presentation to Environmental Protection Agency Workshop on Energy and Environmental Sustainability in a Carbon Constrained Future, New York, NY, September 11, 2008, p. 9, http://www.epa.gov/region2/energyworkshop/workshop_presentations/session2/nuclear_session/panell_nuclear_waste_disposal.pdf.

³ Nuclear Regulatory Commission, "Safety Evaluation Report Related to Disposal of High-Level Radioactive Wastes in a Geologic Repository at Yucca Mountain, Nevada: Repository Safety after Permanent Closure," Washington, D.C., October 2014, <http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1949/v3/>.

My district is home to San Onofre Nuclear Generating Station (SONGS), which is positioned near an active earthquake fault line, alongside a hectic train rail line, sandwiched between the heavily trafficked I-5 Freeway and the Pacific Ocean, and borders the densely-populated Counties of Orange and San Diego.

SONGS recently began the initial stages of decommissioning, which are expected to be completed by 2033. 3.6 million pounds of SNF are currently maintained on site and are anticipated to be in dry-cask storage by mid-2019,⁴ ready for the Department to properly remove, transport, and dispose of the materials. Thus, it is particularly important to the residents of Southern California that the Department find a solution to store radioactive waste. I know many from our community surrounding SONGS are too commenting on this process at the Department's request; I ask the Department of Energy to pay special attention to their opinions and recommendations.

This region of over eight million people is greatly concerned about the future of nuclear waste. Unfortunate incidents, such as in 2011 at Fukushima Daiichi, Japan, when radioactive waste spilled into the Pacific Ocean, serve as reminders of potential destruction if the Department does not act.

Solutions such as interim consolidated storage could be an efficient option in securing SNF and ultimately behoove the overall process and handling capabilities to prepare the nation for permanent repository.^{5 6} Most notably, interim consolidated storage could save billions of taxpayer dollars since it costs almost as much to monitor nuclear waste at a single reactor site as it would be to monitor all of the waste in the country if it were located at one repository.⁷ Other major benefits of consolidated storage include the speed in which a site could be approved, licensed and constructed, and ultimately the safety in protecting populated communities.

Therefore, per the Department's request for public comment on the consent-based siting process, my remarks will specifically focus on interim consolidated storage and address the Department's questions regarding a fair process, participation in the process, and transportation.

ENSURING A FAIR PROCESS TO SELECT A SITE

With sixty-one nuclear power plants currently decommissioning or already decommissioned, and Yucca Mountain stalled indefinitely, the Department should carefully consider several factors pertaining to the process of fairly removing nuclear waste from these sites and active reactors, and placing them into interim storage. Evaluating the safety, health, and environmental concerns will impact the timeline, costs, and risks associated with the collection and transportation of radioactive waste but they are imperative components. As such, please consider the following recommendations:

⁵ Cliff Hamal, Julie Carey, Christopher Ring, "Spent Nuclear Fuel Management: How centralized interim storage can expand options and reduce costs," Navigant Economics, May 2011, p. 2,

https://curie.ornl.gov/system/files/documents/not%20yet%20assigned/centralized_interim_storage_of_snf.pdf.

⁶ U.S. Nuclear Regulatory Commission, "Power Reactors," June 2016, <http://www.nrc.gov/reactors/power.html>.

⁷ Cliff Hamal, Julie Carey, Christopher Ring, "Spent Nuclear Fuel Management: How centralized interim storage can expand options and reduce costs," Navigant Economics, May 2011, p. 13,

https://curie.ornl.gov/system/files/documents/not%20yet%20assigned/centralized_interim_storage_of_snf.pdf.

- If nuclear waste becomes increasingly dangerous at its current storage site for reasons such as geological or environmental hazards, the life expectancy of the canisters is nearing the end, or other safety concerns expressed, then the Department should collect and transport the waste in order of the greatest to the least safety risk for the community.
- If the nuclear waste is already cooled to the proper temperature necessary for safe transportation, then the Department should collect and transport the waste based on the order of oldest to newest from the time the waste was placed into the canisters during the decommissioning process.
- If the nuclear waste is already stored in the proper type of cask deemed necessary for safe and secure transportation, then the Department should collect and transport the waste in order of oldest to newest within the decommissioning process.
- If the above criteria are equally met, then the Department should collect and transport the waste in order of geological proximity from closest to the farthest from the repository site per the designated route of shipping.

PROCESS INVOLVEMENT

Throughout the process of selecting an interim nuclear waste disposal site, the Department needs to consider the views of local residents and businesses, other private stakeholders, and government officials at the federal, state, and local levels. Each will undoubtedly provide different perspectives and priorities to contribute to a robust conversation.

What is unique and encouraging about the two proposed interim repository sites in Eddy and Lea Counties, New Mexico, and in Andrews County, Texas, is that the communities – from local city mayors to state governors – have already expressed their support for accepting the radioactive waste, of which my office has received copies. From west to east these three counties border each other, and are isolated from environmental concerns associated with storage on the coastlines, along severe active fault lines, or near dense populations. Additionally, both areas are familiar with the expectations and outcomes of storing nuclear waste because radioactive material is already stored near the prospective sites: low-level waste is contained in Andrews, Texas and high-level radioactive waste from the Department of Defense (DOD) is stored near the prospective site in New Mexico. If a community is offering to solve what the rest of the nation views as a problem, the Department should strongly take this into consideration.

The Department has the duty to maintain an open dialogue with local stakeholders by hosting community forums, asking for public comments and reviewing them carefully, and providing information and resources to those who live near a prospective site to ensure they are current. Government is better when it listens to the people. Local participation and engagement is invaluable for the Department to make informed and sensible decisions. I encourage the

Department to continue holding community-based forums near decommissioned sites and within the communities which have expressed interest in developing a nuclear repository site.

OTHER CONSIDERATIONS

Plans for interim storage of nuclear waste cannot begin without a destination. Local and state governments need to coordinate with the Department to determine the most suitable and logical destination, but also a reasonable plan for execution. Implementation should be in conjunction with local and federal emergency response units, all the while keeping the public aware of the process. Public confidence is essential for the success of these tasks because not only is the removal and transportation of commercial nuclear waste an obligation of the federal government, but it is necessary for long-term protection.

One of the most common concerns expressed regarding the storage of radioactive waste pertains to the transportation of hazardous materials. While the design, logistics, and safety components to coordinate secure transportation are complicated, and it is viewed as a major national security concern, proven technology exists to facilitate responsible nuclear waste transportation. The DOD nuclear program has been transporting millions of pounds of nuclear waste since the 1950's by using train rail lines, heavy haul trucks, and water barges to move the waste across state lines and around major cities throughout the country without incident.

In a report from September 2015, *Preliminary Evaluation of Removing Used Nuclear Fuel from Shutdown Sites*, the Department stated: thirteen "sites were found to have at least one off-site transportation mode option for removing their used nuclear fuel and GTCC low-level radioactive waste, and some sites have multiple options."⁸ This summary includes SONGS located in my district, citing direct rail and heavy haul trucks to barge to rail would be transportation mode options.

The Department should continue its partnership with the DOD, as well as with other federal entities, to emulate their expertise. These proven transportation technologies and safety strategies demonstrate the transference of nuclear materials can efficiently occur without adverse effects. In an hearing hosted by the House Subcommittee on the Environment and the Economy in October 2015, specifically regarding SNF transportation and logistics, it was noted that "in more than 70 years of nuclear materials transport[ed] in the U.S. and worldwide, no member of the public has ever been harmed from a radioactive release."⁹

ADDITIONAL COMMENTS

Residents, elected officials and city councils, businesses, and community organizations throughout California are informed and active on the need to safely remove and secure SNF. Over a dozen local Southern Californian cities and government officials have expressed their support of a bill currently before the U.S. House of Representatives: H.R. 3643, *the Interim*

⁸ "Preliminary Evaluation of Removing Used Nuclear Fuel from Shutdown Sites," Fuel Cycle Research and Development, September 30, 2015, p. v, https://curie.ornl.gov/system/files/documents/87/Shutdown_Sites_Report_Sept2015.pdf.

⁹ Robert Quinn, Vice President of Cask and Container Technology, U.S. House of Representatives Committee on the Energy and Commerce, Subcommittee on Environment and the Economy, October 2015, <https://energycommerce.house.gov/news-center/press-releases/subvecon-examines-transportation-nuclear-material>.

Consolidated Storage Act, which authorizes interim consolidated storage facilities and prioritizes the transfer of nuclear waste from decommissioned sites. California Assemblyman Rocky Chavez, California State Senator Pat Bates, the San Diego Supervisors, San Diego Regional Chamber, and the California cities of Oceanside, Encinitas, Laguna Beach, San Clemente, Vista, Laguna Woods, Dana Point, Carlsbad, and San Louis Obispo have all passed resolutions or written letters in support of this federal bill, and to encourage the Department of Energy and the NRC to move forward with approving an interim repository site and issue the appropriate licenses.

Judicious examination of where to construct an interim nuclear waste repository site and of proposals on how to collect, transport, and securely store the radioactive waste is necessary and needed now. The country has been waiting for nearly three decades since Yucca Mountain, Nevada, was designated as the sole location for permanent repository. Removing the waste spread across the country will improve our national security, save Americans billions of dollars, and fulfil the federal government's obligation to safely store nuclear waste.

I appreciate the opportunity to comment on the siting process for interim nuclear waste storage and disposal facilities. Please contact Chelsea Cuellar in my Washington, D.C. Office at chelsea.cuellar@mail.house.gov or (202) 225-3906.

Sincerely,

I

Darrell Issa
Member of Congress

Consent-Based Siting

From: Lisa Janairo [<mailto:ljanairo@csg.org>]

Sent: Sunday, July 31, 2016 10:00 PM

To: Consent Based Siting <consentbasedsiting@hq.doe.gov>

Subject: Great Lakes Legislative Caucus Public Comment in Response to the IPC

Please accept the attached comment letter from the U.S. members of the Great Lakes Legislative Caucus's Executive Committee .

If you have any questions, please contact me. Thank you.

Sincerely,

Lisa Janairo
Program Director
The Council of State Governments
PO Box 981
Sheboygan, WI 53082-0981
920.458.5910
ljanairo@csg.org



Great Lakes Legislative Caucus

July 31, 2016

Andrew Griffith
Associate Deputy Assistant Secretary for
Fuel Cycle Technologies
U.S. Department of Energy
Office of Nuclear Energy
Response to IPC
1000 Independence Avenue, SW
Washington, DC 20585

Dear Mr. Griffith:

As members of the Executive Committee of the Great Lakes Legislative Caucus (GLLC), we are writing on behalf of the Caucus as a whole to submit a formal comment on the U.S. Department of Energy's Invitation for Public Comment (IPC) to Inform the Design of a Consent-Based Siting Process for Nuclear Waste Storage and Disposal Facilities. The IPC was published in the *Federal Register* on December 23, 2015 (Vol. 80, No. 246, pp. 79872-79874). The GLLC is a nonpartisan, binational organization of over 200 state and provincial legislators from the eight states and two provinces that share the Great Lakes. Our primary purpose is to promote the protection and restoration of the Great Lakes.

At its 2015 Annual Meeting in Buffalo, the GLLC passed the attached resolution opposing the construction of a nuclear waste repository in the Great Lakes Basin. While the impetus for the resolution was the pending approval of a deep geologic repository at the Bruce Nuclear Generating Station in Ontario near the shores of Lake Huron, our resolution broadly opposes the construction of *any* nuclear waste disposal facility in the Great Lakes Basin. Indeed, the Caucus's strong desire is to better protect the Great Lakes by moving spent fuel *away* from the lakes as soon as possible, starting with the shutdown sites in Michigan, Wisconsin, and Illinois. Toward that end, we appreciate the DOE's initiative to develop a process for siting one or more new storage or disposal facilities following a consent-based approach. We wish you well in those efforts and will be monitoring developments.

Andrew Griffith, U.S. Department of Energy

July 31, 2016

Page 2

Thank you for your attention to this matter. Please contact Lisa Janairo at the Council of State Governments if you have any questions about the Caucus's position on this matter.

Sincerely,



Representative Cory Mason, Wisconsin
Chair



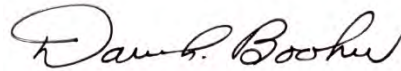
Representative Robyn Gabel, Illinois



Senator Ann Rest, Minnesota



Representative Nick Milroy, Wisconsin



Senator Darwin Booher, Michigan
Vice Chair



Representative Bruce Rendon, Michigan



Representative Curt Sonney, Pennsylvania



GREAT LAKES LEGISLATIVE CAUCUS

2015 Annual Meeting of the Great Lakes Legislative Caucus

*Buffalo, New York
September 25-26, 2015*

Resolution Opposing the Construction of a Nuclear Waste Repository in the Great Lakes Basin

- WHEREAS,** Ontario Power Generation (OPG) is proposing to construct at the Bruce Nuclear Generating Station a deep geologic repository (DGR), which is an underground permanent burial facility for all of Ontario's low and intermediate level radioactive nuclear waste, some of which is highly radioactive and will remain toxic for more than 100,000 years. This site is approximately one kilometer inland from the shore of Lake Huron and about 600 meters below the lake level; and
- WHEREAS,** water is the nation's and Canada's most important natural resource and should be protected and managed prudently; and
- WHEREAS,** the Great Lakes are an irreplaceable natural resource, containing 20 percent of the world's and 95 percent of the United States' fresh water vital to human and environmental health; and
- WHEREAS,** the Great Lakes are vital to the economic and agricultural well-being of both Canada and the United States; and
- WHEREAS,** Lake Huron and the connecting waters are a source of drinking water for millions of people in the United States and Canada, including First Nations and Native Americans; and
- WHEREAS,** concern has been expressed over the proposed OPG DGR by individuals, citizen and environmental groups, and municipalities and counties in both Canada and the United States; and



WHEREAS, the Great Lakes Water Quality Agreement (GLWQA) is a binational agreement to address critical environmental health issues in the Great Lakes region with the overall purpose of restoring and maintaining the chemical, physical, and biological integrity of the Great Lakes. Article 6 of the GLWQA acknowledges the importance of anticipating, preventing, and responding to threats to the Great Lakes and recognizes that a nuclear waste facility sited close to the Great Lakes shoreline could lead to a pollution incident or could have a significant cumulative impact on the waters of the Great Lakes; and

WHEREAS, the 1909 Boundary Waters Treaty recognizes the immense importance of the Great Lakes as a shared resource between the United States and Canada. The wisdom of the Treaty drafters is reflected in the creation of the International Joint Commission (IJC), composed of three members from the United States and three members from Canada, to act as impartial watchdogs over the boundary waters between the countries. Under Article IX of the Treaty, questions or matters of difference between the countries involving their rights, obligations, or interests along their common frontier may be referred to the IJC for examination and report, upon the request of either country. Under Article X, the IJC may be asked to make a binding decision on an issue of difference between the two countries, upon the consent and referral by both the United States and Canada; and

WHEREAS, the Governments of Canada and of the United States share a responsibility and an obligation to protect the Great Lakes from contamination from various sources of pollution, including the potential leakage of radioactive material from an underground nuclear waste repository; and

WHEREAS, placing a permanent nuclear waste burial facility so close to the Great Lakes is ill-advised. The potential damage to the Great Lakes from any leak or breach of radioactivity far outweighs any suggested economic benefit that might be derived from burying nuclear waste at this site. The ecology of the Great Lakes, valuable beyond measure to the health and economic well-being of the entire region, should not be placed at risk by disposing of radioactive waste underground so close to the shoreline; and

WHEREAS, Michigan has significant experience with the concerns for siting a radioactive waste disposal facility as the state went through an exhaustive siting process over 20 years ago and concluded there was no viable location for constructing such a facility within the state; and

WHEREAS, the Michigan Legislature has recognized the inherent dangers of siting a radioactive waste storage facility near the shores of the Great Lakes. Under Public Act 204 of 1987, the final siting criteria for a radioactive waste facility containing the same types of waste as would be stored at the proposed Ontario repository includes a prohibition on siting it within 10 miles of one of the Great Lakes, the Saint Mary's River, Detroit River, St. Clair River, or Lake St. Clair; and

WHEREAS, the Michigan Senate has expressed serious concerns about the failure of the OPG DGR siting process to fully account for all potential impacts of the proposed facility by passing a legislative package urging intervention by the Great Lakes Commission, the International Joint Commission and a special legislatively created Advisory Board. SB 948, SCR 16, SCR 17, SR 150, and SR 151 all have been passed by the Michigan Legislature; now therefore be it

RESOLVED, that the Great Lake Legislative Caucus, in order to protect the Great Lakes and its tributaries, urges that neither this proposed nuclear waste repository at the Bruce Nuclear Generating Station nor any other long term or permanent underground nuclear waste repository be constructed in Canada, the United States, or on any First Nation or Native American property within the Great Lakes Basin; and be it further

RESOLVED, that the Great Lakes Legislative Caucus urges the Government of Canada and the Government of Ontario to reject and seek alternatives to Ontario Power Generation's proposal to bury radioactive waste in the Great Lakes Basin; and be it further

RESOLVED, that the Great Lake Legislative Caucus urges the President of the United States to request that the Secretary of State invoke the participation of the International Joint Commission under Article IX, Article X, or both of the Boundary Waters Treaty to evaluate the proposed underground nuclear waste repository in Ontario, Canada, and similar facilities and we urge the United States Congress to support the request;

RESOLVED, that copies of this resolution be transmitted to the President of the United States, the United States Secretary of State, the President of the United States Senate, the Speaker of the United States House of Representatives, the President and Chief Executive Officer of Ontario Power Generation, the Members of Congress from the Great Lakes states, and the governors and premiers, the legislative majority and minority leaders, and government house leaders of the Great Lakes states and provinces.

Adopted on September 26, 2015.

Consent-Based Siting

From: Reim, Michael
Sent: Wednesday, July 06, 2016 9:24 AM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: FW: Consent Basing Documents I Promised you in Atlanta

From: Cash Jaszczak [<mailto:cashjaz@gmail.com>]
Sent: Monday, April 18, 2016 1:20 PM
To: Griffith, Andrew <ANDREW.GRIFFITH@nuclear.energy.gov>
Subject: Consent Basing Documents I Promised you in Atlanta

Andy, Sorry for being slow to get this to you as promised. Here is our electronic copies of our March 2012 "Consent to Host" letter and our specific "consent considerations" that we submitted at the Atlanta meeting.

Cash

Nye County Considerations in Developing Consent-based Siting

Safeguards & Benefits

Atlanta DOE/CBS Meeting, April 2016

General Comments:

1. Nye County remains committed to seeking resumption of the Yucca Mountain licensing hearings, acquiring funding for the affected counties to participate in all aspects of the deliberations about Yucca Mountain, and ensuring that Nevada be accorded the opportunity to participate in safeguards activities and receive benefits and compensation should the Project resume.
2. Nye County is not opposed to the siting and operation of interim storage facilities so long as the United States makes meaningful progress toward the completion of the licensing hearings for Yucca Mountain, and, should the licensing process confirm that the scientific arguments presented in the Safety Analysis Report are defensible, the development of the repository.
3. Nye County is concerned that this consent based siting effort by the Department of Energy will delay real waste disposal progress through the term of this administration. However, the County is willing to work with all affected parties to define or redefine the factors that must be considered in any new consent-based siting efforts for any combination of a second repository, a defense only repository, or an interim storage facility.

In that regard we view the following as essential to consent based siting of a repository or interim consolidated storage at any location, but specific to Yucca Mountain in Nevada.

4. ***An intervention process:*** that includes a substantive State role in providing oversight and advice for any storage facility/repository, including influence in the Nuclear Regulatory Commission's exercise of its "stop work" authority
5. ***A monitoring process:*** a role for Nevada's Universities that would focus on public health and environmental monitoring activities designed to provide long-term protection for local communities and the State of Nevada.
6. ***A benefits/impact assistance process:*** The resources of all major Federal departments or agencies can influence their respective departmental activities that facilitate siting. Within this context there are things the Executive Branch could direct and those actions that will occur as a result of program execution. The Nuclear Waste Policy Act, as written, includes provisions for "oversight authority" and "payments equal to taxes," but with regard to an expanded "benefits process" specific to Nevada, this process could be addressed in four major areas:

- ***Water:*** The western watershed allocation of water resources, coupled with desalinization plants on the California coast, could be revised to provide more water to Nevada.
- ***Land transfers:*** Eighty-seven percent of Nevada is managed by the federal government. That percentage could be changed by executive decree.
- ***Program implementation activities:*** Development of Yucca Mountain includes rail and road transportation improvements and the repository itself. Economic benefits and activity would result from the siting, construction and operation of storage and/or disposal facilities.
- ***Direct payments:*** Existing law includes provisions for direct cash payments. Negotiating for benefits could provide Nevada and its local communities between \$200 million and \$500 million per year to host the repository,



**Board of County Commissioners
Nye County
Pahrump, Nevada**

Pahrump Office
2100 E. Walt Williams Drive
Pahrump, NV 89048
Phone (775) 751-7075
Fax (775) 751-7093

March 6, 2012

The Honorable Dr. Steven Chu
Secretary, U.S. Department of Energy
1000 Independence Ave., S.W.
Washington, D.C. 20585

Subject: Consent to Host the Proposed Repository at Yucca Mountain

Dear Dr. Chu:

Nye County wants to acknowledge the Department of Energy's FY2011 payments to the Yucca Mountain "Affected Units of Local Government" (AULG) and your "Payment Equal to Taxes (PETT)" to Nye County for the period through FY2011. Nye County has considered itself a partner of the Department for many years as we have undertaken our role as host county to the only site designated by law as the Nation's geologic repository. We look forward to working with you in the ongoing quest for solutions to the challenges associated with the disposition of spent nuclear fuel (SNF) and defense high level waste (DHLW).

As you know, the first recommendation of the Blue Ribbon Commission on America's Nuclear Future (BRC) calls for a new, consent-based approach to siting future nuclear waste management facilities. This recommendation goes to the heart of the purpose for this letter. Nye County, Nevada hereby provides notice to you, the Secretary of Energy, that we consent to host the proposed repository at Yucca Mountain consistent with our previous resolutions (attached) that support the safe and successful development of the Yucca Mountain Repository. Our detailed comments on the BRC Final Report are also attached.

Importantly, the BRC report states, "*The approach we recommend also recognizes that successful siting decisions are most likely to result from a complex and perhaps extended set of negotiations between the implementing organization and potentially affected state, tribal, and local governments, and other entities.*" We acknowledge that opposition by the State of Nevada has been challenging. Up to this point in time, Nevada, represented by the Nevada Commission on Nuclear Projects, has been steadfast in its belief that there are no serious incentives to be had for hosting the Yucca Mountain Project. However, we, like the BRC, believe that (1) assurances from the Federal government of an enduring and significant role for State and Local government involvement in the project to assure safety, and (2) a significant federal incentive package to the State and Local governments could alter the status quo and lead to a resolution of the decades long dispute.

Since the BRC members have testified that the Nation may well need more than one repository,

Dr. Steven Chu
March 6, 2012
Page 2

Since the BRC members have testified that the Nation may well need more than one repository, and that the need is urgent, Yucca Mountain should not automatically be excluded. The fact that over 30 years of scientific and technical work has already been successfully conducted leads us to conclude that Yucca Mountain could be ready to safely receive waste years ahead of any other site. This specifically addresses the "promptness" issue of the fourth BRC recommendation "...that leads to the timely development of one or more permanent deep geologic repositories..."

We ask that you invite Nye County to meet with you or your designated representatives to initiate the cooperative negotiation process the BRC recommends. We want to explore and define potential incentives, and move this urgently needed program forward as promptly as possible. Thanks to the additional AULG oversight funding you provided, we are ready to start that process now. In order to establish our mutual negotiating teams, we propose an initial meeting at the time and place of your choosing in March or soon thereafter. Let us start the dialogue now. We do not need to wait. We look forward to your prompt reply.

Sincerely,



Lorinda Wichman, Chairman
Nye County Board of County Commissioners

Attachments: Nye County Resolutions 2002-007, 2002-22, 2004-25 & 2011-21
Nye County BRC Final Report Comments, March 5, 2012

CC: The White House
Governor Sandoval
Nevada Congressional Delegation
Nevada Commission on Nuclear Projects
Senate Committee on Energy and Water
Senate Committee on Environment and Public Works
House Energy and Commerce
House Science Committee
House Sub Committee on Energy and Environment
House Sub Committee on Science and Technology
NARUC
NEI
USNIC
Nye Board of County Commissioners
Nye County Manager
AULGs
NV4CFE
NWSC
NWTRB
NRC
DOE/NE
DOE/GC
DOE/EM

Resolution No. 2002-07
Nye County Board of Commissioners

**BOARD OF COUNTY COMMISSIONERS
COUNTY OF NYE, STATE OF NEVADA**

**RESOLUTION SETTING FORTH NYE COUNTY'S
POSITION REGARDING THE PROPOSED HIGH LEVEL
NUCLEAR WASTE REPOSITORY AT YUCCA MOUNTAIN
AND THE SITUS COUNTY COMMUNITY PROTECTION PLAN**

WHEREAS, the President of the United States has now formally recommended Yucca Mountain, in Nye County, as the site to which the federal government would transfer the Nation's highly radioactive wastes for interim storage, waste handling, and permanent disposal; and

WHEREAS, Nye County is the location of the Nevada Test Site where, for over 40 years, the Nation conducted nearly 1,000 atmospheric and underground nuclear weapons tests which permanently contaminated large tracts of land and groundwater; and recent studies reveal that radiation released in 828 underground nuclear detonations is migrating in poorly understood regional groundwater systems; and

WHEREAS, the program instituted by the United States Department of Energy (USDOE) to clean up the Nation's defense complex relies heavily on the disposal of low-level radioactive wastes at the Nevada Test Site, in Nye County;

WHEREAS, these low-level wastes arrive by truck on two-lane roads that go through four Nye County communities; in fiscal 2001, about 600 shipments containing 750,000 cubic feet of low-level wastes traveled 107,000 shipment miles on rural highways in the destination county; and

WHEREAS, Nye County also is the site of the Nellis Test and Training Range, a premier training range where the Nation trains its best fighter pilots for combat preparedness; and

WHEREAS, Nye County also is the site of the Tonopah Test Range, a restricted facility where the Nation has developed and based new-technology combat aircraft; and

WHEREAS, these activities (the Nevada Test Site, the Nellis Test and Training Range, and the Tonopah Test Range) have made major contributions to national defense but meager contribution to the Nye County's economic or revenue base; and

WHEREAS, the management and use of 11 million acres of public lands, comprising 98% of the Nye County's total land area, by a variety of federal land management agencies contributes very little to the Nye County's economic or revenue base, and forecloses opportunity for local community development; and

WHEREAS, Nye County has not sought to provide the site to which the federal government would transfer the Nation's highly radioactive wastes for interim storage, waste handling, and permanent disposal; and

WHEREAS, the USDOE claims that the proposed Yucca Mountain Project will be good for national health and safety, good for the nuclear power industry and their ratepayers, good for 80 communities in which highly radioactive wastes are now stored, good for 35 states that do not want to become permanent storage locations for highly radioactive wastes, and/or good for the federal government which has legal obligations to dispose of commercial spent fuel; and

WHEREAS, it is clear that the Yucca Mountain Project, if implemented as proposed, will achieve the expected benefits for others by the transfer of the Nation's highly radioactive wastes, along with all its attendant risks and uncertainties, from 80 sites in 35 states to a single community in Nevada—Nye County; and

WHEREAS, the elected government of Nye County has responsibility to protect local health, safety, and welfare, and is the only representative government whose first and overriding responsibility is to provide such protection in the situs county; and

WHEREAS, since 1995 Nye County has conducted independent scientific investigations in areas downgradient from the proposed Yucca Mountain repository, focusing on geologic and hydrologic conditions affecting the potential for contamination in the repository's major exposure pathways; and

WHEREAS, these independent investigations have identified uncertainties and contingencies—in science, design, and in implementing organization and funding—that require continued independent inquiry and confirmation; and

WHEREAS, in recognition of all of the above, Nye County has prepared a "Community Protection Plan" that identifies the legitimate objectives of the situs county, and the protections it expects in the event that the federal government decides to transfer the Nation's highly radioactive wastes to Yucca Mountain; and

WHEREAS, the Nye County Board of Commissioners deems it imperative that it set forth Nye County's statement of history, policy and intent regarding this issue,

NOW THEREFORE, it hereby is resolved as follows:

1. Nye County has not sought to provide the site to which the federal government would transfer the Nation's highly radioactive wastes for permanent disposal.

2. The Nation and the various parties who stand to benefit have a special obligation to the single local jurisdiction to which they desire to transfer their unwanted radioactive wastes.

3. If the Nation decides to transfer its highly radioactive wastes to this single community—Nye County—it has an obligation to do so under conditions that address the situs county's concerns and that assist rather than jeopardize legitimate site county objectives, as these are outlined Nye County's "Community Protection Plan."

4. Among these concerns and objectives are the following:

Protection of Health, Safety, and the Environment

The situs county—Nye County—should be empowered to conduct independent oversight and monitoring of USDOE activity in the situs county throughout Yucca Mountain site characterization, licensing, construction, operations, and performance confirmation. Situs county empowerment should be permanently financed, and should not be dependent on annual federal appropriations over the expected 50-300 years of repository operations.

Federal activities to confirm repository performance and to conduct research and development related to waste handling and potential reuse should be headquartered in Nye County—the only community in which repository performance, and the potential consequences of poor repository performance, would be an urgent daily concern throughout the expected 50-300 years of repository operations.

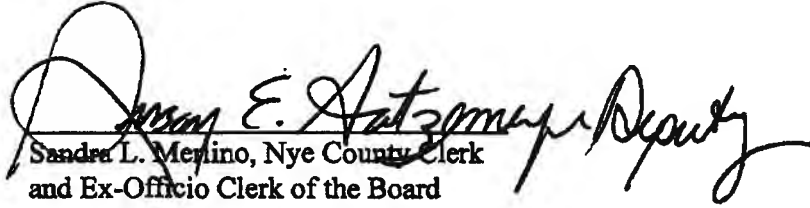
Equity in Nuclear Waste Transportation

Transportation of highly radioactive wastes in the situs county should be conducted by rail, and under policies which minimize the risks for Nye County communities of all high and low-level radioactive waste shipments.

A Viable Local Economic & Revenue Base

Special federal actions should be taken to provide the situs county an opportunity to develop a viable economic and revenue base, with facility and service systems comparable to those in other communities hosting USDOE nuclear facilities—even as the federal government plans to make an extraordinary future imposition in addition to the extraordinary impositions of the past.

By:


Sandra L. Menjino, Nye County Clerk
and Ex-Officio Clerk of the Board

BOARD OF COUNTY COMMISSIONERS
COUNTY OF NYE, STATE OF NEVADA

RESOLUTION STATING THE INTENT OF NYE COUNTY TO ACTIVELY AND CONSTRUCTIVELY ENGAGE WITH THE U.S. DEPARTMENT OF ENERGY (DOE), THE ADMINISTRATION, AND CONGRESS AS THE YUCCA MOUNTAIN PROJECT PROCEEDS TO FINAL DESIGN, LICENSING, AND IMPLEMENTATION:

WHEREAS, the United States Congress has voted to move the Administration's proposed Yucca Mountain Project, located in Nye County, Nevada, towards final design, licensing, and implementation.

WHEREAS, since 1940 the federal government has selected sites in Nye County for nuclear weapons testing, air force fighter training, and low-level radioactive waste disposal in cleanup of other sites in the nation's weapons complex.

WHEREAS, these activities (the Nevada Test Site, the Nellis Test and Training Range, and the Tonopah Test Range) have made major contributions to national defense but meager contribution to the Site County's economic or revenue base.

WHEREAS, the management of 11 million acres of federal lands in Nye County, comprising 98% of the county's total land area, makes meager contribution to the Site County's economic or revenue base, and forecloses opportunity for local community development.

WHEREAS, while the President has recommended and the Congress has mandated that DOE should prepare and apply for a license from the Nuclear Regulatory Commission to construct a repository at Yucca Mountain, many questions and issues regarding the Yucca Mountain Project remain to be addressed—including the safety and equity of the Yucca Mountain Project as proposed, and whether the Yucca Mountain Project will be implemented as proposed.

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**Resolution No. 2002-22
Nye County Board of Commissioners**

WHEREAS, the duty of the representative local government to ensure the health, safety, and welfare of its citizens requires the active engagement of Nye County to ensure that the questions and issues referenced above are addressed in design and licensing as well as in implementation, and to provide assurance of same for the residents of the single local entity to which the nation's highly radioactive wastes would be transferred.

WHEREAS, Nye County has prepared a "Community Protection Plan" that identifies the legitimate objectives of the site county, and the protections it expects in the event that the federal government transfers the nation's highly radioactive wastes from 131 sites in 39 states to a single site at Yucca Mountain, in Nye County.

WHEREAS, if implemented, the Yucca Mountain Project should be more than just a repository 12 miles north of Lathrop Wells in the Nye County community of Amargosa Valley, but the center for a community of synergistic scientific, engineering, educational, and entrepreneurial activities for management and possible reuse of the nation's highly radioactive wastes, and for the demonstration of alternative forms of energy for future generations.

WHEREAS, it is just such a vision for the Yucca Mountain Project that offers the best long-run prospect for converting long-standing resistance and mistrust within the State of Nevada to constructive engagement and cooperation.

WHEREAS, DOE can most effectively and efficiently implement the above-stated vision for the Yucca Mountain Project through close coordination and cooperation with its Nevada Site County, and Nye County intends to constructively engage with DOE to achieve this vision.

NOW THEREFORE, BE IT RESOLVED:

- 1. Nye County intends to engage energetically and constructively with the Department of Energy and the U.S. Congress as the Yucca Mountain Project proceeds to final design, licensing, and implementation.**
- 2. Nye County intends to make constructive scientific, technical, and strategy contributions to address key issues in repository design, licensing, and performance confirmation, as well as transportation and project management.**
- 3. Nye County anticipates constructive engagement by DOE, the Administration, and Congress in addressing such issues in ways that also address the concerns and aspirations of DOE's Site County in Nevada.**
- 4. Nye County will use its "Community Protection Plan" as a resource and framework for its constructive engagement with DOE, the Administration, and**

1 **NYE COUNTY RESOLUTION NO. 2004-25**
2 **RESOLUTION CONCERNING THE INTENT OF NYE COUNTY TO TAKE ACTION TO**
3 **MAXIMIZE THE SAFETY, ECONOMIC OPPORTUNITY AND SUCCESSFUL OUTCOME OF**
4 **THE YUCCA MOUNTAIN REPOSITORY AND TRANSPORTATION SYSTEM BY ACTIVELY**
5 **AND CONSTRUCTIVELY ENGAGING ALL RELEVANT PARTIES.**

6 WHEREAS the Nuclear Waste Policy Act of 1982 as amended designates Yucca Mountain,
7 located in Nye County, Nevada as the only site for consideration as the nation's repository for high-level
8 nuclear waste and spent fuel; and

9 WHEREAS the site has been determined to be a suitable location for a repository, the U.S Court
10 of Appeal dismissed all challenges to the site selection of Yucca Mountain, the scientific basis for the
11 selection process and the constitutionality of the resolution approving Yucca Mountain; and

12 WHEREAS the Department of Energy is preparing a license application for the repository and
13 expects to begin operation beginning in 2010; and

14 WHEREAS the Department intends to use rail transportation, the mode of transportation Nye
15 County prefers, to the maximum extent possible and the Department has made progress in planning the
16 transportation system by selecting the Caliente route; and

17 WHEREAS the Department is beginning the process of identifying repository and transportation
18 facilities which could be located off-site and is considering other means of maximizing local economic
19 opportunity; and

20 WHEREAS the Nye County "Community Protection Plan" has established a vision for
21 protecting the community and for the local development of synergistic economic, scientific and
22 educational activities for management and possible future reuse of material which will be stored at
23 Yucca Mountain; and

24 WHEREAS it is just such a vision for the Yucca Mountain Project that offers the best long-term
25 prospect for converting long-standing resistance and mistrust within the State of Nevada to constructive
engagement and cooperation; and

1 WHEREAS Nye County intends to work cooperatively with communities along the Caliente
2 route, the Department of Energy, and any other appropriate group for the purpose of achieving this
3 vision.

4 NOW THEREFORE, BE IT RESOLVED that Nye County intends to fully, constructively and
5 energetically support:

- 6 1. Development of a safe repository at Yucca Mountain,
- 7 2. Development of policy that empowers the County concerning repository and
8 transportation safety and health,
- 9 3. Creation of synergistic scientific, engineering, educational and entrepreneurial economic
10 opportunities in the County,
- 11 4. Assisting the United States of America in fulfilling the commitment to provide a geologic
12 repository for spent nuclear fuel and high-level waste to protect the health, safety and
13 welfare of the citizens of the United States,
- 14 5. Assisting the United States Department of Energy in meeting their timeline for the
15 reception of spent nuclear fuel and high-level waste at Yucca Mountain,
- 16 6. Maximizing jobs and economic opportunities for Nye County citizens,
- 17 7. Working cooperatively with appropriate federal entities, rural Nevada communities along
18 the transportation route and other parties willing to constructively engage in the
19 development of a repository that is safe and offers significant economic benefit to Nye
20 County and others most affected by the operation of a repository and related
21 transportation systems.

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1 **NYE COUNTY RESOLUTION NO. 2011-21**

2
3 **A RESOLUTION OF THE NYE COUNTY BOARD OF COMMISSIONERS RESOLUTION**
4 **SUPPORTING COMPLETION OF THE NUCLEAR REGULATORY COMMISSION'S REVIEW OF**
5 **THE YUCCA MOUNTAIN LICENSE APPLICATION**

6 WHEREAS, the Nuclear Waste Policy Act of 1982, as amended, ("Act") selected Yucca
7 Mountain, located in Nye County as the only site to be characterized as the nation's first high-level
8 radioactive waste repository; and

9 WHEREAS, Congress in July 2002, in accordance with provisions of the
10 Act, as amended, overrode Nevada's notice of disapproval; and

11 WHEREAS, Yucca Mountain was designated to be the site for development of a permanent
12 repository for United States spent nuclear fuel and defense high level radioactive waste; and

13 WHEREAS, the U.S. Department of Energy ("USDOE"), in accordance with the Act, submitted
14 a License Application (LA) to the Nuclear Regulatory Commission (NRC); and

15 WHEREAS, that LA, in accordance with NRC regulations, was accepted for review by the NRC;
16 and

17 WHEREAS, the USDOE has since requested withdrawal of its submission of the LA "with
18 prejudice"; and

19 WHEREAS, the request for withdrawal has been denied by the Atomic Safety and Licensing
20 Board (ASLB) and challenged in Federal Court; and

21 WHEREAS, the Commissioners of the NRC have not issued a final ruling on their review of the
22 ASLB decision that USDOE does not have the legal authority to withdraw the Yucca Mountain license
23 application; and

24 WHEREAS, the nation needs to move forward on the established NWPA strategy that provides
25 for the permanent storage of spent nuclear fuel and high level waste; and,

 WHEREAS, the Nye County Board of Commissioners (Board) recognizes that further delays in
the development of a permanent geologic repository will result in significant public expenditures and
potentially jeopardizes the future expansion of nuclear power production and energy independence; and

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WHEREAS, the Board is convinced that until such time as the NRC completes its review of the LA, Nye County, the State of Nevada and the nation will be denied a scientific and technical determination of the potential of the Yucca Mountain repository to be built and operated safely and successfully; and

WHEREAS, Nye County adopted Resolutions 2002-7, 2002-22 and 2004-25 defining the County's involvement as the site county for the nation's geologic repository for spent nuclear fuel and defense high level waste,

NOW THEREFORE, it hereby is resolved as follows:

1. The Yucca Mountain licensing proceedings should be restarted and the NRC should complete a thorough and detailed review of the License Application; and
2. If upon completion of the license application review by the NRC staff and the licensing proceeding before the ASLB, the conclusion is that the Yucca Mountain repository can be constructed and operated safely, Nye County reaffirms our prior resolutions and supports such construction and operation consistent with these prior resolutions ; and


APPROVED this 15th day of March, 2011.

NYE COUNTY BOARD OF COUNTY COMMISSIONERS:

ATTEST:



Gary Hollis, Chairman



Sandra "Sam" L. Merlino, Nye County Clerk
And Ex-Officio Clerk of the Board

///

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CLARK HILL

Robert A. Andersen
Phone: (202) 772-0924
E-Mail: randersen@clarkhill.com

Clark Hill PLC
1250 Eye Street NW
Suite 900
Washington, D.C. 20005
T 202.772.0909
F 202.772.0919
clarkhill.com

March 5, 2012

Timothy A. Frazier, *Designated Federal Officer*
U.S. Department of Energy
1000 Independence Avenue, SW.
Washington, DC 20585
brc@nuclear.energy.gov

Re: Nye County comments on the Final Report to the Secretary of Energy from the Blue Ribbon Commission on America's Nuclear Future

I am providing the following comments on behalf of my client Nye County, Nevada, regarding the Blue Ribbon Commission's Final Report on America's Nuclear Future.

EXECUTIVE SUMMARY OF PRINCIPAL COMMENTS

1. Nye County, Nevada, agrees with a principal finding and recommendation of the Blue Ribbon Commission ("BRC") that the United State should undertake *"the timely development of one or more permanent deep geological facilities for the safe disposal of spent fuel and high-level nuclear waste."* In its previous draft report, BRC had acknowledged a need "to promptly" develop one or more deep geological repositories. Whether BRC's concern is for "timely" or "prompt" development of a permanent repository, the only repository that can possibly be completed in the near term is the proposed Yucca Mountain repository. A neutral BRC recommendation could have called for the NRC to reach a final decision on the merits of the currently pending Yucca Mountain license application, which took billions of taxpayer dollars to produce. This added recommendation would have been consistent with the BRC's support for "timely development" of a permanent deep geological repository and could be implemented while BRC's other sweeping recommendations are considered.

2. The BRC suggestion that a new corporation be established to comprehensively handle spent fuel and high level waste disposal issues should be implemented prospectively only, if implemented at all. The call for new legislation should not interfere with the Yucca Mountain licensing proceeding pursuant to the NWPA. The complex BRC proposal recommending this and other major statutory, regulatory, and social changes, in addition to research programs, as a substitute for the current NWPA framework would take decades to implement, with no guarantee of success, and would be just as vulnerable to last minute political derailment as the Yucca Mountain proceeding.

3. Nye County opposes BRC's recommendation that the NWPA be amended so that consolidated interim storage facilities may be sited and licensed before the first permanent repository is licensed. On one hand, all but the final site selection and construction of such a storage facility can be achieved under the NWPA. However, as BRC acknowledges, if interim storage is allowed to proceed ahead of the repository, it could become de facto permanent or long-term storage. The current staging required by the NWPA is therefore prudent and should be maintained.

4. The BRC report now briefly acknowledges that *Nye County supports completion of the NRC licensing proceeding, and construction of the project if NRC determines it is safe.* However, the report minimizes the extent of local support for the repository and asserts that the majority of the State of Nevada opposes the project without providing documentary support. Other adjoining counties have stated support for the project, which is opposed by Nevada's federal and State politicians.

5. Nye County agrees that all affected levels of government must have, at a minimum, a meaningful consultative role in important decisions and that funding of active local participation in repository activities is essential to its success. Pursuant to the NWPA, Nye County has actively consulted with DOE on every step of the repository project, has provided meaningful oversight of all activities at Yucca Mountain, and is a full party participant in the Yucca Mountain licensing proceeding pending before the NRC. Nye County has informed DOE of its consent to serve as the host county for the Yucca Mountain repository.

OVERVIEW

For many decades, Republican and Democrat Administrations alike struggled to find a permanent solution for the safe disposal of high-level nuclear waste and spent nuclear fuel. When the political parties and other stakeholders finally reached an acceptable compromise on a policy direction for the Nation, that policy was embodied in law as the Nuclear Waste Policy Act ("NWPA"). Adhering to the statutory requirements and scientific and technical criteria for site selection, the Executive and Legislative Branches collectively narrowed site characterization to a single, geologically suitable location for the repository, Yucca Mountain, in Nye County, Nevada, about 100 miles from the nearest major population center, Las Vegas. After the State of Nevada failed multiple times to thwart that selection politically and in federal court, the Department of Energy ("DOE") finally filed a license application ("LA") to construct the repository with the Nuclear Regulatory Commission ("NRC") in 2008.

In accordance with carefully crafted statutory and regulatory licensing requirements, interested state, local government, tribal, and other parties intervened in the NRC licensing proceeding, ensuring that all sides on the key issue-- whether or not the facility could be constructed and operated safely-- would be fully heard in a neutral forum. The parties filed approximately three hundred environmental, health, and safety contentions with the assigned NRC Atomic Safety and Licensing Board ("ASLB"). The State of Nevada filed the vast majority of the contentions, re-raising many issues that had already been adjudicated in the past.

The LA adjudication was entering the discovery phase in 2010, and the ASLB was ready to rule on purely legal contentions and proceed with discovery, when DOE abruptly announced that it wanted to withdraw its LA with prejudice, even though DOE still maintained that the repository could be safely built and operated.¹ The ASLB denied DOE's formal Motion to Withdraw on June 29, 2010, and the NRC unilaterally requested parties to file briefs on the question of whether or not NRC should review the ASLB's decision. Thereafter, NRC's Chairman improperly halted staff development of Safety Evaluation Reports (SERs) essential to the licensing proceeding, even though the SERs were nearly complete and the ASLB adjudicatory process was still pending.² An observer of the licensing proceeding need not be a cynic to conclude that the timing of the actions by the Secretary of DOE and NRC's Chairman were based on the fear that the SERs, and the licensing proceeding itself, were about to add weight to the claim that Yucca Mountain could be constructed safely. On September 9, 2011, after more than a year delay, NRC issued a split 2 to 2 decision that left the ASLB decision intact as a matter of law. However, the NRC acted inconsistent with that decision in also ordering the ASLB to preserve its record of the proceedings and suspend the licensing determination until Congress provided additional funding. That decision is currently pending review by the United States Court of Appeals for the DC Circuit.

Prior to DOE's filing the Motion to Withdraw, President Obama stated that advances in science and technology demanded a rethinking of the entire back-end of the nuclear fuel cycle and asked DOE to establish this Blue Ribbon Commission ("BRC") and directed it to consider all alternatives for the storage, processing, and disposal of civilian and defense spent nuclear fuel and nuclear waste. The BRC published its draft report³ open for public comment until October 31, 2011. Nye County filed formal comments with the BRC on October 25, 2011. BRC then issued its Final Report on January 26, 2012.⁴

BRC's Final Report offers numerous suggestions for, in essence, establishing a revised policy and new program for nuclear waste disposal and restarting the repository site selection process. While Nye County agrees in principle with some of the BRC proposed recommendations and key strategies for the future, most of those changes can be made **prospectively** for future projects without further delaying the Yucca Mountain licensing proceedings under the NWP. Nye County is deeply concerned that implementation of a new policy and the requisite statutory and regulatory changes will be costly, time consuming, and in the end, still dependent upon the cooperation of many diverse parties within the federal government and among state, local and tribal parties, and the public at large. In short, implementation of BRC strategies will assuredly take decades, and may not be implementable at all, given political realities. Therefore, Nye County strongly recommends completion of the

¹ Order of ASLB, *In re* Dept of Energy, NRC No. 63-001, ASLB No. 09-892-HLW-CAB04 (June 29, 2010) at 4 (hereinafter cited as "ASLB Order")

² The NRC Staff has now issued TERs on safety issues that presents staff findings short of conclusions regarding safety. See note 35 *infra*, and accompanying text.

³ Blue Ribbon Commission on America's Nuclear Future, Draft Report to the Secretary of Energy, July 29, 2011 (hereinafter cited as "Draft Report").

⁴ Blue Ribbon Commission on America's Nuclear Future, Report to the Secretary of Energy, January 26, 2012 (hereinafter cited as "Final Report").

ongoing Yucca Mountain licensing proceeding, regardless of whether the BRC's recommendations are implemented for future nuclear waste programs.

I. YUCCA MOUNTAIN IS THE ONLY REPOSITORY SITE THAT HAS THE POTENTIAL TO BE EXPEDITIOUSLY DEVELOPED

Nye County agrees with a principal finding and recommendation of the BRC that the United State should undertake *"the timely development of one or more permanent deep geological facilities for the safe disposal of spent fuel and high-level nuclear waste."*⁵

Given BRC members shared "sense of urgency"⁶ and their final determination that a geological repository is essential,⁷ it is difficult to reconcile the report's treatment of the one repository that potentially could be developed promptly, namely Yucca Mountain. Acknowledging the central importance of finding a suitable geological "medium" for nuclear waste disposal; the considerable time it has taken to find such a location; and the fact that a final decision relative to the Yucca Mountain license application was about to be made, BRC's recommendation regarding the need for one or more repository leads inevitably and logically to a single conclusion: the Yucca Mountain licensing proceeding should be completed as soon as possible. An objective assessment of all relevant factors demonstrates that no other site will be available for decades, even under the most optimistic view of the future.

The NRC has now finally ruled on DOE's Motion to Withdraw the license application and left the ASLB denial of DOE's Motion intact as a matter of law. Therefore, the ALSB is required by the NWPA to continue the licensing proceeding to determine if Yucca Mountain could be constructed and operated safely.⁸ Given the history of the long search for a suitable site for a repository, and the amount of effort and resources that have already been invested in the Yucca Mountain licensing proceeding, obtaining a final NRC safety determination is the only timely method to secure the first suitable site for a United States repository.

II. THE NWPA PROGRAM FOR DEVELOPMENT OF A PERMANENT NUCLEAR WASTE REPOSITORY, WHILE DELAYED, IS WORKABLE AND INCORPORATES THE VERY STRATEGIES RECOMMENDED BY THE BRC

While noting what the BRC views as numerous deficiencies in the current policy and repository requirements established by the NWPA, DOE, and NRC, the Final Report fails to emphasize that substantial progress was being made toward a final decision on the LA. Nor are

⁵ Final Report at Ch. 4, p. 27. The Draft BRC Report at Ch. 4, paragraph 1, stated the goal in the following manner: *"Our first recommendation, therefore, is that the United States must proceed promptly to develop one or more permanent deep geological facilities for the safe disposal of spent fuel and high-level nuclear waste."* (emphasis added).

⁶ Final Report at p. vi.

⁷ Final Report at p. xi.

⁸ NWPA, 42 U.S.C. § 10134(d). The Inter-Agency Group established by President Carter and the works of several National Academy of Science ("NAS") committees have addressed delays in establishing a permanent repository, particularly in the 2001 NAS study, *Disposition of High-Level Waste and Spent Nuclear Fuel: The Continuing Societal and Technical Challenges*. All of these groups reached same conclusion: but for the politicization of nuclear waste issues, the solution proposed in the NWPA would be nearing completion of significant safety milestones.

the new strategies outlined by the BRC guaranteed to expeditiously achieve the ultimate goal of safe permanent disposal. Most importantly, if Yucca Mountain is abandoned, and the new strategy and processes outlined by BRC fail, the Nation will have wasted decades of progress achieved under the NWPA.

Proceeding with the ASLB adjudication of the LA would safeguard against such an eventuality and would not foreclose the improvements recommended by the BRC for consolidated interim storage, major organizational changes, modifications in the management of the nuclear waste fund, and a search for a suitable location for a second repository under an improved statutory and regulatory framework.

BRC's draft and final reports both assert that the BRC takes no position on the proposed Yucca Mountain repository or the stalled NRC licensing proceeding.⁹ However, that position is undermined by the erroneous or unsupported BRC findings of flaws in the NWPA and Yucca Mountain repository program contained elsewhere in the report.

Both the BRC's draft report and Final Report described the NWPA and the statutorily established Yucca Mountain repository program in the report as "troubled" and "deeply flawed."¹⁰ BRC still contends that "it will cost something to implement a successful U.S. waste management program; however, trying to implement a deeply flawed program is even more costly..."¹¹ Despite the detailed comments and corrections provided to BRC by Nye County and numerous other sources regarding the draft report, BRC's Final Report still does not present an even-handed or complete review of the existing NWPA programs, and consistently fails to provide adequate supporting evidence and analysis demonstrating that the current program is fundamentally flawed.

For example, the U.S. repository development program is not characterized by decades of failed efforts, despite BRC conclusion to the contrary. Rather, the program has advanced at least as far, if not farther, than repository development programs in other nations. Currently, the U.S. repository program is thirteen years behind the schedule outlined in the NWPA, as amended.

⁹ The Final Report at p. vii-viii, and the Draft Report at p. vi, both state the following: "We have not: Rendered an opinion on the suitability of the Yucca Mountain site or on the request to withdraw the license application for Yucca Mountain. Instead, we focused on developing a sound strategy for future interim storage and permanent disposal facilities and operations that we believe can and should be implemented regardless of what happens with Yucca Mountain." See also Final report at xii. The Final Report asserts that an assessment of Yucca Mountain was not in BRC's charter. Final Report at pp. vii, xii. On the contrary, the Charter, which calls for a "comprehensive review" of "all alternatives" for "nuclear waste disposal" would seem to require an assessment of the only currently existing permanent disposal option, not preclude such an assessment. Final Report, BRC Charter at p. 122. Simply because the BRC was "not a siting committee" does not foreclose an assessment of Yucca Mountain generally or consideration of whether or not the Yucca licensing proceeding should continue as a possible means to "timely develop" a permanent repository. BRC notes that, in any event, the NWPA limits the amount of spent fuel that can be disposed at Yucca until a second repository is built. However, that comment appears to be no more than an excuse to avoid directly addressing the Yucca Mountain option. The BRC knows full well that Yucca's capacity was arbitrarily limited and could easily be expanded if the design and location are determined to be safe. Moreover, BRC was not hesitant to recommend changes in the NWPA in other areas where it supported its position. See, e.g., Final Report at Ch. 5.

¹⁰ Final Report at p. vii; Draft Report at pp. i, iv, vi, xiv.

¹¹ Final Report at p. vii; Draft Report at p. iv.

However, significant annual progress to advance the repository development initiative was being accomplished until recent actions by the Administration sought to terminate the Yucca Mountain program without safety justification for such action. Rather than being viewed as failed efforts, the activities of the past 24 years could be viewed as the results of an "adaptive management" approach, coupled with "appropriate Congressional control," the very approach recommended by the BRC in its Final Report.¹²

Recent political opposition by the Administration and litigation by a single state have been the primary impediments to the timely implementation of the Nuclear Waste Policy Act. A neutral and balanced analysis would also have mentioned that many of BRC's suggestions for future nuclear waste programs are already incorporated in the NWPA and were implemented during the process of siting the Yucca Mountain project.

For example, the BRC recommends an approach to siting and developing nuclear waste management and disposal facilities in the United States that is adaptive, staged, consent-based, transparent, and standards-and science-based.¹³ The NWPA and its implementing regulations contain a careful balance of all these elements. The siting criteria and identification of potential repository sites were based upon scientific assessments that took years to complete. Moreover, the NWPA and the NRC licensing process are staged to allow neutral consideration of design, construction, and operation issues. The NWPA also requires Congressional involvement at each critical stage to insure that any adaptive changes necessary in the national interest are properly taken into account. Federal, State, local and tribal involvement and oversight are provided for at every phase of the process.

The BRC asserts that "[e]ffectively managing the back end of the nuclear fuel cycle requires a vision and a strategy. Both have been lacking in the U.S. waste management program to date."¹⁴ This sweeping statement is unfair, misleading, and inaccurate. The NWPA is a carefully crafted national strategy and vision for disposal of high level waste that enjoyed bipartisan support until the current President and DOE unilaterally decided to withdraw the Yucca Mountain license application without first seeking Congressional approval. The NWPA policy had endured for more than two decades under changing political landscapes and numerous Administrations. The policies and procedures established in the NWPA were being followed and the waste repository program was gathering momentum. Just as the NWPA policy framework was about to reach fruition in the NRC licensing process, with a possible independent verification that the Yucca Mountain Repository could be constructed safely, the longstanding policy framework was undermined by Executive Branch actions that sidestepped Congressional approval. Had it not been for this political interference, which the BRC apparently will not, or cannot acknowledge, the NWPA licensing proceeding for Yucca Mountain, although delayed, should now be close to completion, with an NRC final decision on relevant safety issues.

The BRC's appropriate insistence on "transparency" and "fairness"¹⁵ in nuclear waste decision-making is ironic. The most transparent and objective feature in the consideration of the

¹² See generally Final Report at Ch. 2 ("Foundations of a New Strategy")

¹³ See generally Final Report at Ch. 2; Draft Report at p. xv.

¹⁴ Final Report at p. 4 ; Draft Report at Section 2.1, p. 4.

¹⁵ Final Report at pp. 6-7

proposed Yucca Mountain repository is the ASLB licensing proceeding. The adjudication is conducted by neutral administrative judges and NRC technical experts. Any party with a stake in the licensing proceeding may intervene as a party and file safety and environmental contentions. Evidence is presented in a public adjudicatory forum governed by rules similar to those in federal court. The only non-transparent action under the NWPA to date has been the DOE's and NRC's politically motivated interference with the statutory ASLB licensing process for reasons unrelated to safety.

The assertion that had the Administration not halted the Yucca program, the LA would have led to "further controversy, litigation, and protracted delay"¹⁶ turns the current situation on its head. Yes, there is an opportunity for judicial review of a final NRC decision on the repository license application. However, it was DOE's attempt to unilaterally withdraw the application, on grounds other than safety, and NRC's inexcusable delay in ruling on DOE's Motion to Withdraw that led to "further controversy [involving NRC's Inspector General, Congress, and the Courts], litigation, and protracted delay". DOE and the NRC Chairman's actions prevented the ASLB and NRC from meeting their statutory responsibility to rule on the safety merits of the LA within the three or four year period required by law.¹⁷

Regarding the setting of regulatory standards, BRC starts with the concession that EPA and NRC should retain their respective roles in setting the repository safety and environmental standards.¹⁸ Both agencies, together with the National Academies of Science, were directly involved in the setting of science-based standards and procedures for the Yucca Mountain repository under the NWPA, and the standard-setting process took from 1987 to 2005. There is no reason to believe that new, and *presumably* better, regulations could be promulgated and implemented, without litigation, any faster.

In this regard, the BRC recommends that safety and other performance standards and regulations should be finalized prior to the site-selection process.¹⁹ BRC also recommends that EPA complete this process in a thorough and timely way.

Nye County agrees with those goals for future projects, and notes that thorough and effective standards have been painstakingly promulgated with respect to the Yucca Mountain repository, although not as quickly as many would have wanted. Despite the implications in the BRC Final Report, there is no reason to believe that the current safety and radiological standards for Yucca Mountain are inadequate for the current proposal or for future repositories.²⁰ As noted

¹⁶ Final Report at p. vi; Draft Report at p. iii.

¹⁷ NWPA, 42 U.S.C. § 10134(d).

¹⁸ See Final Report at Ch. 6, 9, 10.

¹⁹ See, e.g., Final Report at Ch 10; Draft Report at Section 9.3, page 104.

²⁰ During a discussion of the nature of radiation hazards, the BRC draft report correctly states, "Human beings are exposed continuously to very low levels of naturally-occurring and man-made radiation (see text box and figure 7)." Draft Report, Section 3.2, p. 14, Figure 7 shows radiation doses of varying levels and the hazard posed at higher levels. In particular, the figure shows a dental x-ray produces about a 5 microSievert dose; daily background radiation to an average individual is about 10 microSieverts; a chest x-ray exposes an individual to about 100 microSieverts; and at 100 milliSieverts (an annual dose 10,000 times background radiation), effects of lifetime risk of cancer become evident. To put this information in proper perspective, as documented in DOE's Yucca Mountain license application, the estimated highest annual dose to a hypothetical Nye County resident living closer than anyone actually does to Yucca Mountain would be less than 3 microSieverts for 10,000 years and less than 30

elsewhere in the BRC report, it took EPA 16 years to establish the current Yucca Mountain standard. While the BRC voices a preference for generic standards, the history of environmental, health, and safety regulations demonstrates that site specific requirements are usually needed to adequately protect human health and safety. Those standards should be left intact for Yucca Mountain licensing and construction.²¹

The BRC Report emphasizes that the public is entitled to a clear understanding of how decisions were reached and how different values and interests were considered and resolved in the process.²² Following its own advice, the BRC should demand that the Administration provide a fuller explanation of why it makes sense to abandon decades of work and tens of billions of dollars in the hope of devising "better" regulations and disposal options compared to those governing the proposed Yucca Mountain project, when the radiation levels anyone could possibly receive at the proposed Yucca Mountain project are much lower than the very low levels of naturally occurring radiation.

Given the BRC's commitment to research into fundamental issues related to storage and disposal of nuclear waste, expressed throughout the Report,²³ it is difficult to understand why BRC did not support capturing the value represented by billions of taxpayers' dollars already expended in examining the Yucca Mountain proposal. That capture would be accomplished by a final determination by the ASLB on whether or not repository construction could proceed safely. Such information would prove invaluable to future repository efforts, regardless of the NRC decision on the merits, as even the Administration acknowledged in 2010.

III. NYE COUNTY OPPOSES BRC'S RECOMMENDATION THAT INTERIM STORAGE BE ALLOWED TO PROCEED BEFORE A PERMANENT REPOSITORY IS LICENSED SINCE THAT RISKS MAKING THE INTERIM STORAGE A DE FACTO REPOSITORY

A monitored retrievable storage facility ("MRS") allowed by the NWPA could serve as the type of consolidated interim storage facility advocated by the BRC.²⁴ As the BRC has acknowledged, the NWPA currently allows DOE to pursue many activities in advance of final site selection for an MRS, including performing the systems analyses and design studies needed for a conceptual design of a highly flexible, initial federal interim spent fuel storage facility; assembling information that would be helpful to the siting process for such a facility; attempting to identify local governments willing to host the site; and working with nuclear utilities, the nuclear industry, and other stakeholders to promote the standardization of dry cask storage

microSieverts for a million years. That means that for over one million years, the highest reasonably estimated dose to any individual resulting from a repository at Yucca Mountain would be equivalent to adding 3 days of background exposure to the individual and less than the radiation dose received by someone flying from New York to Los Angeles (40 microSieverts per Figure 7). In fact, the BRC members received a much higher radiation dose by flying from meeting to meeting than any member of the public ever would from the proposed Yucca Mountain Repository.

²¹ Nye County notes that requiring new standards to be completed upfront for the siting and construction of a second repository could also delay that process for decades.

²² Final Report at pp. 7-8.

²³ See, e.g., Final Report at Ch. 11.

²⁴ Final Report Ch. 5.

system.²⁵ However, any license issued by the NRC for a centralized interim storage facility under the current MRS provisions of the NWPA must specify that construction of the MRS cannot begin until after the NRC has issued a license for construction of a geologic repository.²⁶ BRC recommends that the NWPA be amended to allow the siting and construction of interim consolidated storage before the first permanent repository is licensed.

Nye County opposes this recommendation. The authority to select a site for the MRS and to proceed with construction or expansion of the MRS facility is **linked to progress on licensing and construction of a permanent repository for a very sound policy reason: Congress did not want the MRS to become a de facto permanent repository.** While recognizing this problem,²⁷ the BRC insists that interim storage is urgently needed and should not await the availability of a permanent repository. Nye County believes that the NWPA strikes the right balance and allows many elements of the consolidated storage program to proceed without serving as a potential roadblock to permanent disposal.

IV. THE BRC FAILS TO ACKNOWLEDGE THE FULL EXTENT OF NATIONAL AND LOCAL SUPPORT FOR THE YUCCA MOUNTAIN LICENSING PROCEEDING AND DRAWS A FALSE CONTRAST BETWEEN YUCCA MOUNTAIN AND WIPP

BRC insists that the siting of any repository be "consent based" with the support and cooperation of the local communities surrounding the project.²⁸ BRC devotes major portions of its Final Report to the concept of a consent-based approach to siting and development of a nuclear waste repository, and the need for local involvement and acceptance of the project.²⁹ Because Nye County is the local government host for the proposed Yucca Mountain project, the County has a unique perspective on this recommendation—a perspective that until the final Report was virtually ignored by the BRC.

BRC's Report falsely implies that such factors were not properly accounted for previously under the NWPA framework; nor does it fully concede that unanimous support for any major project is impossible in this era of "not in my back yard" ("NIMBY").³⁰

Regarding the first point, the BRC fails to provide a rigorous analysis of the numerous provisions in the NWPA that require just such local involvement. Congress may not have structured the provisions exactly as the BRC would have, but there is no assurance that any future legislation will strike closer to BRC's ideal. For example, several discrete provisions of the Act call for oversight of DOE's siting, construction, and operation of a nuclear waste repository by affected units of local government, tribes, and states at federal expense.³¹ The Final Report at least acknowledges what the BRC draft report entirely omitted: that Nye County, Nevada, which is the local County host for the proposed Repository, has from the outset supported the Yucca Mountain project, provided NRC ultimately determines that the project can

²⁵ See generally Final Report Ch. 5; Draft Report at pp. 43-44.

²⁶ NWPA § 148(d), 42 U.S.C. § 10168(d).

²⁷ Final Report at p. 41

²⁸ Final Report at Ch. 6.

²⁹ See, e.g., Final Report at Ch. 4 and Ch. 6.

³⁰ But see Draft Report at section 2.3.8 at p. 8.

³¹ See, e.g., NWPA, 42 U.S.C. §§ 10136, 10137; 10138.

be safely constructed and operated.³² As now acknowledged by BRC, Nye County has been joined by other adjoining counties in support of continuing the Yucca Mountain project licensing proceeding. Indeed, broad national support over many decades for the NWPA framework persists, and is not counterbalanced by the State of Nevada's political opposition.³³

The fact that the State of Nevada and Clark County, Nevada, have consistently opposed the project should not prevent the licensing process from reaching a conclusion on the basic safety issues. The ASLB assigned to the proceeding has already dismissed the purely legal contentions filed by Nevada and supported by Clark County, and has yet to sustain a single safety contention filed by any party.³⁴ NRC staff Safety Evaluation Reports, although stripped of their technical conclusions regarding the safety of the repository construction, and issued instead as Technical Evaluation Reports³⁵ at the direction of the NRC Chair, leave little doubt that staff believed that there were no major irresolvable safety issues with the LA.³⁶ For example, the various DOE calculations of possible radiation exposures from the repository meet the regulatory requirements in 10 C.F.R. Part 63, and, in fact, such exposures are much lower than required.

³² Nye County has informed BRC of its support for the licensing proceeding as early as February 2011. Nye County Letter to the BRC (February 7, 2011).

³³ More than two dozen prominent national, state, local and Native American organizations have written to the U.S. Senate expressing their support for the resumption of the Yucca Mountain license review by NRC's ASLB and related licensing-support activities at DOE. The 26 organizations – which comprise a cross-section of energy consumers, regulators, elected officials, Native Americans and community entities and businesses – include the National Association of Regulatory Utility Commissioners, U.S. Chamber of Commerce, Prairie Island Indian Community, U.S. Nuclear Infrastructure Council, Institute for 21st Century Energy, Nuclear Waste Strategy Coalition, U.S. Nuclear Energy Foundation and the Sustainable Fuel Cycle Task Force. Referring to the above-stated findings by the BRC and by Congress, the letter states that "we agree that the need for the Federal government to meet its responsibility for commercial spent fuel and defense waste management under the Nuclear Waste Policy Act is a matter of urgency – and that further delay is only exacerbating taxpayer liability and diminishing confidence in resolution of this national concern." Letter from Sustainable Fuel Cycle Task Force to United States Senate (September 15, 2011) at p. 2.

³⁴ Memorandum and Order of ASLB, *In re* Dept of Energy, NRC No. 63-001-HLW, ASLB No. 09-892-HLW-CAB04 (Dec. 14, 2010) at pp. 1-35.

³⁵ NUREG-1949, Volume 1, "Safety Evaluation Report Related to Disposal of High-Level Radioactive Wastes in a Geologic Repository at Yucca Mountain, Nevada; Volume 1: General Information" (Note that Volume 1 was issued as a Safety Evaluation Report. The title page includes the notation: "Manuscript Completed: August 2010, Date Published: August 2010"); NUREG-2107, "Technical Evaluation Report on the Content of the U.S. Department of Energy's Yucca Mountain Repository License Application; Postclosure Volume: Repository Safety After Permanent Closure." (ML11223A273) (Note that this is what would have been Volume 3 of the SER had NRC issued the postclosure volume as an SER. The title page includes the notation: "Manuscript Completed: July 2011, Date Published: August 2011"); NUREG-2108, "Technical Evaluation Report on the Content of the U.S. Department of Energy's Yucca Mountain Repository License Application; Preclosure Volume: Repository Safety Before Permanent Closure" (ML11250A093) (Note that this would have been SER Volume 2. The title page includes the notation: "Manuscript Completed: August 2011, Date Published: September 2011"); NUREG-2109, "Technical Evaluation Report on the Content of the U.S. Department of Energy's Yucca Mountain Repository License Application; Administrative and Programmatic Volume" (ML11255A002) (Note that this would have been SER Volume 4. The title page includes the notation: "Manuscript Completed: September 2011, Date Published: September 2011")

³⁶ In the Introduction to the TER on postclosure issues, the NRC staff notes that the "TER was developed using the regulations at 10 CFR Part 63 and guidance in the Yucca Mountain Review Plan (YMRP). The TER does not, however, include conclusions as to whether or not DOE satisfies the Commission's regulations." NUREG-2107, "Technical Evaluation Report on the Content of the U.S. Department of Energy's Yucca Mountain Repository License Application; Postclosure Volume: Repository Safety After Permanent Closure." (ML11223A273) (The title page includes the notation: "Manuscript Completed: July 2011, Date Published: August 2011") at p.1, Introduction

The NRC staff reviewed the SAR and other information DOE submitted in support of its calculations and concluded the following: "DOE submitted information consistent with the guidance in the YMRP. Specifically, NRC staff notes that the repository (i) is composed of multiple barriers; (ii) the Total Systems Performance Assessments (TSPAs) used for the individual protection, human intrusion, and separate groundwater protection calculations are reasonable; and (iii) the technical approach and results in DOE's TSPA, including the average annual dose values and the performance of the repository barriers, discussed in this TER, are reasonable."³⁷ Thus, the NRC staff did, in essence, conclude that key safety features incorporated in DOE's license application met NRC regulatory safety requirements.

BRC is also well aware that unanimous backing, or even consensus support, for any major federal project is often unachievable, even if the project is located on federal lands, as Yucca Mountain is. The reasons are political, not sound science. A "consent based" approach advocated by the BRC is preferable, but hardly the most important siting factor. As the Final Report now acknowledges, the primary discriminator must be the scientific and technical suitability of the disposal medium. As our experience under the NWPA demonstrates, the technical site evaluation is a long and difficult process. Once that determination is made for one or more sites, then and only then, should cultural and political factors be weighed in the siting process. That is the approach taken in the NWPA.

When the NWPA was drafted, the Governors of the fifty States recognized this reality and recommended that the NWPA not grant the selected host state veto power over siting of the repository, knowing full well that political realities, rather than technical considerations, would make it virtually impossible for any governor to approve of the siting. Instead, the NWPA gave the governor of the host state the right to file an objection, and Congress and the President the ability to over-ride that objection. That is in fact what happened with the Yucca Mountain siting, and would almost certainly happen again with the siting in most, if not all, of the other forty-nine states.³⁸

BRC's asserted differences between the local support for the Waste Isolation Pilot Project ("WIPP") in New Mexico and at Yucca Mountain in Nevada are not compelling.³⁹ As BRC now acknowledges, both New Mexico and Nevada used litigation to oppose the nuclear waste projects in their respective state. The key difference between WIPP and Yucca are not the ones that are articulated by the BRC, but rather DOE's willingness to fully litigate the issues in WIPP and its determination to stay the course in New Mexico, but not at Yucca Mountain. EPA has been involved in the standards development process for both projects. The host local communities supported the project at WIPP, and from the outset at Yucca Mountain, so long as they were constructed and operated safely. The experts on the BRC are well aware of the difference between perceived and actual risks, but fail to emphasize that the local support in New Mexico measurably strengthened after the WIPP facility was constructed and operated safely for

³⁷ *Id.* at p. xxii. (emphasis added)

³⁸ Both the Final Report and the Draft Report discuss previous efforts to find a volunteer state for a repository site. The BRC notes there were several communities interested but, "In no case, however, was a host state supportive of having the process go forward." Draft Report at p. 24. A sober assessment of the future indicates state politics are unlikely to change in the future.

³⁹ Final Report at pp. 3,57-58

several years. Once a project is completed, and benefits are accrued from a project, irrational fears and misunderstandings that persist before a project is built can be overcome. Sometimes even a vilified project becomes not only accepted, but welcomed by the community when its benefits become obvious once the project is constructed and operated.⁴⁰

IV. IN ESSENCE, THE BRC RECOMMENDS STARTING OVER AGAIN WITH ESTABLISHING REPOSITORY POLICY AND THE SITING PROCESS WITH NO ASSURANCE OF SUCCESS IN THE END

BRC's recommendation in Chapter 6 for a new approach to siting and developing nuclear waste management and disposal facilities in the future is in essence a suggestion for starting over with the entire process of finding sites for repositories.⁴¹ To accomplish this goal, the BRC has made a series of sweeping recommendations regarding establishing and funding a new independent organization for the handling of nuclear fuel disposal, changes to the management of the nuclear waste fund paid into by the utilities, accelerated development of interim storage, new generic regulations and siting criteria for facilities, and research both nationally and internationally—all of which require time, resources, and in most cases, statutory changes.

BRC's recommendations collectively amount to starting over and, as a result, the Nation would face 20 or more years to simply get back to where the Yucca Mountain program is now—with no assurance of greater State or local support than is present now. Throughout its Report, the BRC criticized ways in which the Yucca Mountain project has progressed by making a false comparison with the idealized way the BRC postulates site designation should proceed in the future—without doing a reality check. Site designation under the BRC proposal will take enormous amount of time and resources with no more guarantee of success than under the NWPA.

For example, BRC calls for a new, single-purpose organization to develop and implement a focused, integrated program for the transportation, storage, and disposal of nuclear waste in the United States.⁴² Presumably, DOE's credibility in nuclear waste management is irretrievably lost. Assuming BRC's proposal ever achieves Executive and Legislative Branch approval, and stakeholder support, the new organization will be confronted with all the same challenges that hampered the DOE. There will always be political control on spending. The constancy of leadership for the nuclear waste program is the single most important element of success for any entity responsible for the repository program. The tenure of the individual that heads the organization must be more than the one to two years characterized by the current NWPA program heads.

More importantly, there is nothing fundamentally new in most of the BRC recommendations. The history of the NWPA itself and the evolution of the process over time included each and every one of the five siting processes included in this BRC recommendation. The option for a state to veto the site recommendation was considered and rejected, with sound

⁴⁰ Melnyk & Andersen, OFFSHORE POWER, *Building Renewable Energy Projects in U.S. Waters* (PennWell 2009) at 94, 224-225.

⁴¹ Final Report at Ch. 6.

⁴² Final Report at p. vii, and Ch. 7.

justification, during deliberations on the NWPA. Any consent-based process must be subordinate to a rigorous scientific and technical process as discussed previously. BRC implies that the process of involving state and locals just needs to be done better, with greater efforts to involve and educate the host population. However, educating the general public on nuclear safety and risk has not been achievable, despite enormous effort by EPA, DOE, the National Academies of Science, and most of the independent academic community. Anti-nuclear advocates are willing to equate such disparate situations as Three Mile Island and Chernobyl in an effort to enflame public sentiment against all aspects of nuclear power and as a result public perception of risk for nuclear matters is much higher than actual risk.⁴³

CONCLUSION

The Nation's resources, time, and money invested in developing the NWPA and the Yucca Mountain Repository license deserve more than the passing consideration given them by the BRC. Together, they remain the Nation's best hope for finally solving the problem of permanent disposal of nuclear waste in this century.

For all of the above-sated reasons, Nye County, Nevada, the host County for the Yucca Mountain Nuclear Waste Repository, recommends (1) that the Yucca Mountain licensing process should be allowed to continue as the only possibility for prompt development of a permanent nuclear waste repository in accordance with the BRC's goals; (2) that establishment of a new nuclear waste organization, generally applicable safety rules, uniform siting criteria, and other BRC policies be implemented prospectively only, and not be allowed to impact the NWPA requirements for the Yucca Mountain licensing proceeding; and (3) that interim nuclear waste storage not be sited or licensed until a permanent repository is licensed for construction.

Sincerely,



Robert M. Andersen
Counsel for Nye County

⁴³ Stephen Breyer, *BREAKING THE VICIOUS CIRCLE, Toward Effective Risk Regulation* (1992 Harvard University Press) at p. 21

Consent-Based Siting

From: r johnson [<mailto:r66nj@yahoo.com>]

Sent: Sunday, July 31, 2016 7:16 PM

To: Consent Based Siting <consentbasedsiting@hq.doe.gov>

Subject: Comments on consent based siting

To the DOE,

I attended the meeting in San Juan Capistrano and I was dismayed by what I heard. I heard no apologies or remorse over the last half-century of blunders by the NRC, DOE, and DOT. Government agencies have displayed an almost criminal lack of concern about the completely predictable problem of nuclear waste. The government and the nuclear industry have colluded on creating a problem for which you never had any solution and still don't.

What you should be doing is having a crash plan to focus on this immediately. It should be the No. 1 priority in the DOE. You should have a complete detailed plan by 2017 and it should be completely executed by 2025.

Instead, I found no sense of urgency. I saw bureaucrats whose idea of progress is to schedule more meetings and issue more reports plus an acceptance that this will go on, business as usual, decade after decade. It appears that the government and the nuclear industry will do nothing serious unless there are huge profits to be made. It is widely felt that you will not get serious until there is a catastrophic accident and you want to be in the position of pointing fingers and blaming someone else when that happens.

Also widely noted in the audience was the hypocrisy of consent based siting. No one here ever gave any consent to becoming a nuclear waste dump. To claim that you are sensitive to the local population and abide by consent based siting is a big lie. You promised that the waste would be removed. You lied. You are now saying there will be consent based siting when in fact you are cramming it down the throat of everyone from Los Angeles to San Diego whether they like it or not.

There is no consent. There has never been any consent, yet now we are a nuclear waste dump, an unsafe one at that with skimping on the canisters. The canisters will definitely deteriorate in a few decades, and the ones here now that are about 15 years old are about ready for an accident. The waste has to be removed now, not 20 years from now when the canisters will be too dangerous to move.

Why do you allow thousands of tons of dangerous waste to be stored indefinitely on an active earthquake fault? Don't know know about the Sandia report which said many years ago that a medium truck bomb exploding on the public road outside the perimeter could cause a catastrophe?

Your plan seems to be to wait for a catastrophe and then get serious. Before the end of this year the public demands that you come up with a plan to get the waste out of here. Take it to a deserted military base for temporary storage. Why not the Chocolate Mt. facility which is twice the size of Camp Pendleton. No one lives there and there is no access, no terrorist threat, little chance of earthquakes. The military can do with one less bombing range. Have the accident in a deserted bombing range rather than on Camp Pendleton. Then you can take your time to get serious about a real temporary location, and then you can get serious about a permanent location. Sure it will cost more to move it twice but anything is cheaper than the trillions an accident here will cost.

The slow bureaucratic approach will not work because TIME is the main problem. Your staff should be working 24 hours a day 7 days a week on this. Why have you made so little progress? You don't even have a plan to make a plan.

Roger Johnson, PhD
Professor Emeritus
San Clemente, CA

R. Johnson

Consent-Based Siting

From: verajohnson58@gmail.com [<mailto:verajohnson58@gmail.com>]
Sent: Friday, July 29, 2016 3:55 PM
To: Consent Based Siting
Subject: Comment Opposing DOE's Consent-Based Siting Process for Nuclear Waste

Dear Secretary Moniz,

My father died because of the radio active Isotope Strontium 90. My mother died because of radio active Isotope Iodine 131. I now have Thyroid disease. It is not safe nor will it ever safe to ship it. I live in Utah and all of us here a sick of being a dumping ground for the world.

Say no to all hazardous waste. Please!!!!!!
Vera Johnson

UT 84106

Consent-Based Siting

From: Kevin Kamps [mailto:kevin@beyondnuclear.org]

Sent: Saturday, July 30, 2016 10:58 PM

To: Consent Based Siting <consentbasedsiting@hq.doe.gov>

Subject: Response to IPC--Fourth set of public comments by Beyond Nuclear on DOE's proceeding to define the "Consent-Based Siting" of radioactive waste dumps

Response to IPC--Fourth set of public comments by Beyond Nuclear on DOE's proceeding to define the "Consent-Based Siting" of radioactive waste dumps

At the "Kick Off" meeting of DOE's "Consent-Based Siting" proceeding on January 20, 2016 in Washington, D.C., I asked the following question:

Why was DOE still driving this train, when the Blue Ribbon Commission on America's Nuclear Future had recommended DOE's replacement with a new, independent agency, due to the deep public distrust of DOE after years and decades of DOE failure at radioactive waste management and public process?

John Kotek, Acting Assistant Secretary for Nuclear Energy at the U.S. Department of Energy, leader of this "Consent-Based Siting" proceeding, answered:

DOE would remain in charge, and advance its agenda, until a new change in law by Congress and the White House ordered it to do otherwise, and/or set up that new, independent "nuclear waste management organization."

So DOE will persist at doing all it can, for as long as it can get away with, to promote the nuclear power industry's interests? That answer is objectionable, flies in the face of the BRC recommendation, and is all the more unacceptable, coming as it did from the former BRC Staff Director himself, the selfsame John Kotek.

One of the BRC's major recommendations was that DOE could not be the one carrying out its recommendations – for its reputation was too bad, it was too distrusted by the American people (for very good reason).

It seems DOE has conveniently ignored that particular recommendation of the BRC, because DOE is explicitly saying it will be carrying out this "consent-based siting" process, from start to finish, for both "defense" (nuclear weapons) and "commercial" (nuclear power) irradiated nuclear fuel and high-level radioactive waste, both at consolidated interim storage sites (*de facto* permanent parking lot dumps), and at so-called deep geologic repositories (final dump sites).

This is a non-starter, based on BRC's recommendations themselves! Energy Secretary Moniz should know this -- he was a member of the BRC!

John Kotek, now Acting Assistant Secretary for Nuclear Energy at the U.S. Department of Energy, should also know this, for he was staff director at the BRC, and now he has been in charge of this "Consent-Based Siting" proceeding.

Timothy Frazier should know this. He was Designated Federal Officer for the BRC, and is now again involved in this "Consent-Based Siting" proceeding.

Mary Woolen should know this. She served as public and government liaison for the BRC, and has played a similar role for DOE on this "Consent-Based Siting" proceeding.

This obvious revolving door between the BRC and DOE's staff in charge of this "Consent-Based Siting" proceeding, is itself objectionable. I've identified four persons directly involved in the BRC – Ernest Moniz, John Kotek, Timothy Frazier, and Mary Woolen – who served on the BRC itself (Moniz), or served on the staff of the BRC (Kotek, Frazier, and Woolen), all in senior leadership positions.

The BRC recommended that DOE *not* be the agency put in charge of managing high-level radioactive waste, from then on. The BRC *Final Report* was published in January 2012.

Yet here, more than four years later, not only is DOE still running this "Consent-Based Siting" definition setting proceeding, but the very same individuals – Moniz, Kotek, Frazier, and Woolen – who reached the determination that DOE could not be trusted to run such proceedings, are now running this proceeding, in official roles at DOE itself (such as Moniz, Energy Secretary, and Kotek, Acting Assistant Secretary for Nuclear Energy), or as hired consultants for DOE (Frazier, Woolen).

The public trust has been repeatedly, regularly violated by DOE, not for years, but for decades. That is why, the BRC *Final Report* acknowledged, DOE cannot be left in charge of managing high-level radioactive waste. The public does not and cannot trust it.

So it adds insult to injury that individuals – Moniz, Kotek, Frazier, and Woolen – directly involved in reaching that conclusion, now, working at or for DOE itself, are violating that very recommendation, one that they themselves made. This hypocrisy is unacceptable.

The public cannot trust a definition of so-called "Consent-Based Siting" made by the DOE, in violation of BRC's *Final Report* recommendations. The DOE cannot be trusted.

On top of that already existing, well founded public distrust of DOE, must now be added the utter absurdity, conflict of interest, and inappropriateness, of a member of the BRC (Moniz), and employees of the BRC (Kotek, Frazier, and Woolen), now working at or for DOE itself, and attempting to implement BRC's recommendations (such as "Consent-Based Siting"), while violating a foundational BRC recommendation (DOE cannot be in charge of managing high-level radioactive waste, or related matters, because it has betrayed the public trust too badly in the past, on both radioactive waste management matters, as well as public process matters, to be trusted any longer).

Thus, this entire proceeding has been deeply illegitimate, from the very beginning.

But this revolving door merry-go-round, these absurd and objectionable conflicts of interest, go back to the very beginning of the BRC itself. After all, the DOE Office of Nuclear Energy "hosted" BRC, as a part of its structure. With an executive branch agency mandated to promote nuclear power, "hosting" the panel charged with finding a solution for the radioactive waste problem, the conflicts of interest are all too clear. Of course, the very name of the panel, the Blue Ribbon Commission on America's Nuclear Future, was a very bad sign from the very beginning!

Even the charter for the BRC, and the pronouncements throughout, as by the BRC's co-chairmen, made clear that a "Plan B" for irradiated nuclear fuel was needed, so that nuclear energy in the U.S. could not only be maintained at current levels, but expanded in the future. With friends like that, who needs enemies? Such "solutions" to the high-level radioactive waste problem coming out of such twisted, conflicted motivations are suspect from the start. They have little to nothing to do with public health, safety, and the environment, but rather entirely to do with the nuclear power industry's special interest, its bottom line, and profit margins.

Such revolving doors between "public service" and "nuclear industry promotion" mean that the public often gets "served" all right -- ***up for dinner, to nuclear industry lobbyists!*** -- during these DOE meetings and proceedings, from the BRC (2010 to 2012), to this year's "Consent-Based Siting" proceeding (December 23, 2015 to July 31, 2016).

True to form, the January 20, 2016 "Kick Off" meeting in Washington, D.C. largely boiled down to DOE Office of Nuclear Energy leadership officials singing the praises of nuclear power's preservation, and expansion. For them, "solving the radioactive waste problem" is but a pesky road bump on the way to a nuclear power "Renaissance" – better described as a RELAPSE. And achieving "consent" for siting radioactive waste dumps is now a top priority for them, in order to achieve this coveted "Renaissance"/RELAPSE. Problem is, "consent" has not even been defined, and may not be!

As mentioned above, any DOE definition of "consent-based siting" is not only suspect, but illegitimate – the BRC itself recommended, DOE could not be in charge of such a fundamental definition setting proceeding, as it had betrayed public trust irreparably already.

Incredibly enough, and most tellingly, at the "Kick Off" meeting on January 20th, a DOE official even went so far as to say that "consent" could mean different things in different places, under different circumstances! That would make the phrase "consent-based siting" entirely meaningless, by definition.

Kotek's, and DOE's, misguided motivations came shining through. Kotek, and DOE, want parking lot dumps, and burial dumps, come hell or high water. Kotek, and DOE, have made it clear, they will define "consent-based siting" in a way that is most conducive to their clear, twisted goal of opening dumps, no matter what dissent the public expresses.

But then again, DOE has always behaved this way. And this is why BRC's *Final Report* recommended DOE can't be trusted to run such a proceeding as this, let alone manage high-level radioactive waste. It is clear DOE will do all it can to twist the definition of "consent" as much as necessary to achieve its goal: the opening of radioactive waste dumps, be they "centralized interim storage sites" (that is, *de facto* permanent parking lot dumps), or permanent burial sites, a.k.a. deep geologic repositories, or dumps.

This pro-nuclear promotion, on full display at the DOE "Consent-Based Siting" "Kick Off" meeting, is very similar to how the public was treated during the entire 2010-2012 Blue Ribbon Commission on America's Nuclear Future process. This should not come as a surprise, given that a number of the DOE officials presiding over the January 20 "Kick Off" meeting, were former BRC staffers – or, in the case of Energy Secretary Moniz, a BRC member -- as mentioned above. This pro-nuclear bias continued throughout the "Consent-Based Siting" proceeding. It was inevitable, given who was in charge: DOE's Office of Nuclear Energy, explicitly promotional of nuclear power in its mandate. Its conclusions have been pre-ordained, in favor of the nuclear power industry's special interests.

Given DOE Office of Nuclear Energy's mandate to promote nuclear power, its leadership in the BRC proceeding, and now this "Consent-Based Siting" proceeding, is entirely inappropriate and unacceptable. It is the fox guarding the hen house, especially considering how closely DOE Office of Nuclear Energy coordinates with nuclear lobbyists and advocates from the government-military-industrial-academic nuclear complex. Energy Secretary Moniz himself is a leader of that complex, coming out of the rabidly pro-nuclear MIT Nuclear Engineering Department, and an author of an influential pro-nuclear "Renaissance" (RELAPSE!) report more than a decade ago.

As DOE's "Kick Off" meeting on January 20, 2016 in Washington, D.C. all too sadly made clear, so-called "Consent-Based Siting" is but a focus-grouped, catchy PR phrase and concept for DOE, it appears. A way to gloss over, and get past, citizen concern and public opposition, on the road to DOE's, and the nuclear power industry's it serves, goals: opening parking lot dumps, and burial dumps, ASAP. Although DOE gives lip service to public engagement and involvement, it is clear the agency's agenda is opening one or more parking lot dumps for irradiated nuclear fuel in as little as five years from now. This would launch the largest high-level radioactive waste shipping campaign in history, on the roads, rails, and waterways of most states.

But despite its pro-nuclear mandate and bias, even the BRC acknowledged that DOE cannot be left in charge of high-level radioactive waste management. But DOE has ignored that recommendation, as its launch and carrying out of this illegitimate "Consent-Based Siting" proceeding has shown.

And when I asked on January 20th *What about "consent" from transport corridor*

communities along high-level radioactive waste shipment routes?, John Kotek of DOE ONE responded that the Interstate Commerce Clause of the U.S. Constitution trumps opposition to shipments along the road, rail, and waterway routes, so consent is not even required.

Of course, radioactive waste is not a commodity, is not a part of commerce – it is a forever-deadly poison, that should never have been created in the first place.

Germany is a cautionary tale. When the German federal government tried, year after year, for decades on end, to force high-level radioactive waste down the throats of the German people, as at the targeted parking lot dump, and permanent burial dump, at Gorleben, the shipments were met, year after year, for decades on end, by thousands, or even tens of thousands of protestors, willing to lock their necks to the train tracks, willing to sit down in the roadway, willing to be subjected to water cannon attack, even in freezing temperatures. Non-violent direct action resisted the largest deployment of police since World War Two in Germany.

That is what violating consent-based siting has looked like in Germany. And that Gorleben movement has been the heartbeat of the German anti-nuclear movement for years and decades. It helped create the public pressure to force the Social Democrats to join with the Green Party, to hammer out a nuclear power phase out agreement in 2000. The agreement held that all reactors in Germany would shut by 2020.

When Angela Merkel's Conservative coalition took power, it devoted the first years of its government to undoing the nuclear phase out plan, and instead granting license extensions to reactors. Then Fukushima began. And the Conservative Party lost local elections in places like Stuttgart and Bremen, where it had ruled since just after World War II. And who did they lose to? The anti-nuclear from its inception, German Green Party.

Merkel and the Conservative Party saw the writing on the wall. After living under the radioactive fallout of Chernobyl in 1986, and now seeing the Fukushima nuclear catastrophe broadcast live on their television screens in 2011, the German people would oust the Conservative Party from power, if it did not do a complete backflip, and join the nuclear phase out immediately. Which she, and it, did. Post-Fukushima, all three major parties in Germany – the Greens, the Social Democrats, and the Conservatives – are anti-nuclear. Germany's last operating reactor will close in 2022.

Let's hope it doesn't take another nuclear power catastrophe, this time in the U.S., to show elected officials here the wisdom of phasing out nuclear power, before the worst happens.

The opening of a parking lot dump would also transfer the title, and liability, for the mountain of radioactive waste generated over the past 60 years by the commercial nuclear power industry, onto the backs of taxpayers. This is the real driver, the real

motivation, for “Consent-Based Siting.” Another favor, by DOE, for its friends, the nuclear power lobbyists.

DOE’s role in both the BRC, and now “Consent-Based Siting,” has been self-serving and self-interested. DOE Office of Nuclear Energy’s mandate, to promote nuclear power, makes it impossible for it to find good, wise, safe and sound solutions to the nuclear waste problem. Its motivations are all wrong.

Of course, the only real solution to the nuclear waste problem, is to not make it in the first place. For once it exists, its “management” requires the choice of lesser evils, none of which can guarantee isolation of the hazardous radioactive wastes from the environment for the duration of their hazard, which is, essentially, forevermore. The U.S. Environmental Protection Agency was forced, under court order, to admit and acknowledge, in its Yucca Mountain regulations, that high-level radioactive waste is hazardous for a million years. (This legal victory against EPA was won by an environmental coalition.) But even a million years is an underestimate. Iodine-129, for example, present in high-level radioactive waste, has a 15.7 million year half-life, so will remain hazardous for 157 to 314 million years.

DOE’s behavior during this “Consent-Based Siting” procedure has intensified and compounded the previous betrayal of the public trust that the BRC *Final Report* recognized, acknowledged, and recommended could no longer be tolerated. DOE’s performance, yet again, has been intolerable, and objectionable. It has been bad faith. Its definition of “Consent-Based Siting” will almost certainly be unacceptable, and fatally flawed. This “Consent-Based Siting” proceeding has been a propagandistic PR campaign. Being a major federal action, the setting of the definition of “Consent-Based” for siting radioactive waste dumps, this proceeding has violated the National Environmental Policy Act. Despite its pretentious façade, this has not been a NEPA-compliant proceeding. In fact, as Kotek admitted at the Chicago meeting on March 29th, it was never intended to be a NEPA-compliant proceeding. This is not only outrageous, this is illegal.

Even DOE’s initial announcement of this “Consent-Based Siting” proceeding, on December 23, 2015, gave a clear indication of how misguided DOE’s motivations are. DOE stated:

Nuclear power is a critical part of our nation’s energy mix, and has reliably provided almost 20 percent of electrical generation in the U.S. over the past two decades. It remains the United States’ single largest contributor (more than 60 percent) of non-greenhouse-gas-emitting electric power generation.

Reliably? As but two examples: two atomic reactors at Cook in Michigan were shut for three long years, due to major safety violations; the Davis-Besse reactor in Ohio was shut for two years for major safety violations; the Browns Ferry Unit 1 in Alabama was shut for decades, after a nearly catastrophic fire in 1975. DOE’s propagandistic claims are very deceptive.

DOE went on:

Spent nuclear fuel from commercial reactors is currently stored on-site at nuclear power plants around the country. While it is safe and secure in these locations, a long-term

solution is needed to ensure that the public and environment continue to be protected.

I beg to differ that irradiated nuclear fuel stored on-site at commercial atomic reactors is safe and secure. As no less than the National Academy of Science itself recently reported, in a Fukushima lessons learned report, Unit 4 at that ill-fated Japanese nuclear power plant narrowly averted a high-level radioactive waste storage pool fire. The only reason catastrophe was averted was sheer luck. A gate between the pool and the adjacent reactor cavity failed, allowing cooling water to flood over. If this hadn't happened, by around early to mid-April 2011, irradiated nuclear fuel at Fukushima Daiichi Unit 4 would have been on fire. Ten times the radioactive Cesium-137 that escaped at Chernobyl, contained in the Fukushima Daiichi Unit 4 pool, could have escaped into the environment in the smoke.

Prime Minister Naoto Kan has publicly confirmed numerous times in the past four years that he was contemplating the evacuation of metro Tokyo and northeast Japan – 35 to 50 million people – if a “demonic chain reaction” (his Chief Cabinet Secretary, Yukiya Edano's, phrase) of atomic reactor meltdowns and pool fires had unfolded. It almost did.

NAS has warned – not for the first time – that high-level radioactive waste storage pools in the U.S. are at high risk. It did so way back in 2004, in response to a warning by Alvarez *et al.* in January 2003. In 2011, post-Fukushima, Robert Alvarez of Institute for Policy Studies repeated his warning about pool risks in the U.S. Given all these warnings, DOE's flippant claim that wastes are stored safely is bogus. Non-hardened on-site storage densely-packed pools in the U.S. are mega-catastrophes waiting to happen, in the event of a natural disaster, heavy load drop accident, terrorist attack, etc.

DOE went on:

Meeting long-term nuclear waste management needs is essential to ensuring that nuclear power continues to power the nation in a safe, sustainable, and responsible way.

As is blatantly clear above, DOE Office of Nuclear Energy's mandated promotion of nuclear power makes it incapable of managing radioactive waste in a trustworthy way. Its motivations are wrongheaded. DOE sees “long-term nuclear waste management” not through the lens of public health, safety, and the environment, but rather through the lens of the continuation of nuclear power in the U.S. Given its conflicting mandate of nuclear power promotion, rather than public health, safety, and environmental protection, DOE must cease and desist from any and all involvement in radioactive waste management, as the BRC recommended. This includes any further involvement in defining “Consent-Based Siting.”

DOE's December 23, 2015 announcement of the “Consent-Based Siting” proceeding went on:

In addition to waste from generation of electricity, waste from defense activities requires

safe storage and disposal. The deterrent provided by the nation's nuclear stockpile has kept this country safe for generations. In order to maintain our nuclear deterrent, warheads must be replaced every twenty years. Currently this older material is stored at a few defense locations across the country. While it is also secure, and there is far less of this high level waste material than commercial spent fuel, a solution for the long-term disposal of this material is needed to address our Cold War legacy.

This is also an objectionably biased statement. Far from keeping this country safe for generations, the U.S. nuclear weapons arsenal – combined with the nuclear arsenals of other countries – has, for the first time in human history, put humankind at risk of ending civilization as we know it, or perhaps even wiping ourselves out entirely, causing the extinction of our own species. Our nuclear arsenals could even cause omnicide – driving to extinction all higher life forms on the planet.

Even the nuclear weapons manufacturing and testing complex has caused tremendous damage in the U.S., to public and environmental health, as it has in other nuclear weapons countries, and globally, as due to nuclear weapons testing.

The claim that “*warheads must be replaced every twenty years*” is very dubious. As the Alliance for Nuclear Accountability has long advocated, based on DOE studies themselves, the U.S. nuclear weapons arsenal is reliable for many decades, and perhaps even centuries, to come. That’s why ANA has long advocated Curatorship, as opposed to warhead replacement, or other unwise, unaffordable, and unnecessary Life Extension Programs.

It is also indefensible to claim that nuclear weapons-related high-level radioactive waste in the U.S. is “secure,” as: high-level radioactive waste sludges are being abandoned in underground storage tanks at SRS, SC and INL, ID, from which they will eventually leak into surface and groundwater; storage tanks at Hanford, WA continue to leak, and emit noxious vapors that sicken and injure workers; etc. And it is hard to take DOE at its word that nuclear weapons highly radioactive wastes are “secure,” as other supposedly secure DOE nuclear weapons-related materials, such as weapons-grade HEU at Oak Ridge, TN, and weapons-usable Pu, have been shown to be vulnerable to attack or even theft, as shown by the Transform Now! Plowshares non-violent civil disobedience action four years ago, as well as by mock DOE attackers at other DOE facilities, as POGO and Tri-Valley CARES have documented.

One last point, regarding Moniz, Kotek, Frazier, and Woolen's involvement in both the BRC proceeding, and this "Consent-Based Siting" proceeding. All public comments submitted to the BRC, should be included as public comments in this "Consent-Based Siting" proceeding. After all, the public took part, in good faith, from 2010 to 2012, in the BRC's proceedings. But in bad faith, the BRC largely to entirely ignored the large number of public comments it received. The BRC thought so little of its own public comment process, that its website was dysfunctional, not long after its public comment proceeding had ended. There was no way to even access the public comments that had been submitted. This unwelcome development was discovered by David Kraft, executive director of Nuclear Energy Information Service of Chicago. After complaints were lodged, access was restored, at an ironically named "Cyber Cemetery" site. Even then, it was difficult or impossible to search public comments there, if they were accessible at all. The entire episode begged the question: how can institutional control over high-level radioactive waste be maintained, forevermore, if the BRC and DOE could not even maintain institutional control over BRC's own documentation, such as the

public comments it had received, for even a short period of time?

In conclusion, DOE must obey the BRC's recommendation. DOE must cease and desist from being involved in high-level radioactive waste and irradiated nuclear fuel management. This includes this "Consent-Based Siting" proceeding. DOE's involvement in this "Consent-Based Siting" proceeding is illegitimate and unacceptable, in light of the BRC's recommendation that DOE be removed from any such role. DOE's final conclusions, its attempts to define "Consent-Based Siting," are illegitimate, and cannot be trusted.

Sincerely,

Kevin Kamps, Radioactive Waste Watchdog at Beyond Nuclear, and board member, Don't Waste Michigan, representing the Kalamazoo chapter

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Kevin Kamps
Radioactive Waste Watchdog
Beyond Nuclear
6930 Carroll Avenue, Suite 400
Takoma Park, Maryland 20912
Office: (301) 270-2209 ext. 1
Cell: (240) 462-3216
Fax: (301) 270-4000
kevin@beyondnuclear.org
www.beyondnuclear.org

Beyond Nuclear aims to educate and activate the public about the connections between nuclear power and nuclear weapons and the need to abandon both to safeguard our future. Beyond Nuclear advocates for an energy future that is sustainable, benign and democratic.

Consent-Based Siting

From: Kevin Kamps [mailto:kevin@beyondnuclear.org]
Sent: Sunday, July 31, 2016 11:59 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: Response to IPC--Final set of public comments by Beyond Nuclear

Please enter the following into the record, both from the same weekend event sponsored by Citizen Action Coalition of the Northeast:

Indigenous Anti-Nuclear Statement: Yucca Mountain and Private Fuel Storage at Skull Valley

Citizens Awareness Network – “The Peoples Summit on High-Level Radioactive Waste”, Wesleyan University Middletown, Connecticut

April 12-14, 2002

The Indigenous Environmental Network, which is a network of 200 Indigenous organizations, traditional societies, and communities across North America remain opposed to any United States legislation, federal or state action, corporate and private or public activity that would allow the transportation, storage or production of spent nuclear fuel, high-level nuclear waste, and low-level radioactive waste within the traditional homelands of Turtle Island, otherwise known as the United States, Canada and Mexico. As Indigenous peoples of this Turtle Island, we are rightfully speaking out as the original caretakers of this vast land that has sustained our tribes for thousands of years. We speak out as the older brothers and older sisters to our younger brothers and younger sisters that have migrated and settled into this continent we call *Turtle Island*. Please listen to our words.

During the past twelve years, the Indigenous Environmental Network has witnessed our tribal grassroots, elders, youth, and tribal leadership from throughout the United States, Canada and Mexico – in what we describe as *Turtle Island* – instructing us to remain strong in defense and protection of our sacred Mother Earth and all our relations. The concept of “all our relations”

includes all life, all colors of human and consideration of those yet to be born. Because of this we express our total opposition to the unsustainable energy plan of nuclear power and its devastating impacts and deadly effects on our communities.

The nuclear industry has waged an undeclared war against our Indigenous peoples and Pacific Islanders that has poisoned our communities worldwide. For more than 50-years, the legacy of the nuclear chain, from exploration to the dumping of radioactive waste has been proven, through documentation, to be genocide and ethnocide and a deadly enemy of Indigenous peoples. The ancestral lands of the Indigenous peoples in the United States has been used for testing nuclear weapons, experimenting with biological and chemical warfare agents, incinerating and burying hazardous wastes, and mining uranium. United States federal law and nuclear policy has not protected Indigenous peoples, and in fact has been created to allow the nuclear industry to continue operations at the expense of our land, territory, health and traditional ways of life. This system of genocide and ethnocide policies and practices has brought our people to the brink of extinction. This disproportionate toxic burden – *called environmental racism* – has culminated in the current attempts to dump much of the nation's nuclear waste in the homelands of the Indigenous peoples of the Great Basin region of the United States. This action does not provide homeland security to our Indigenous peoples. Indigenous peoples have already made countless sacrifices for this country's nuclear programs

The Indigenous Environmental Network opposes the recent decision of the United States President George W. Bush designating Yucca Mountain in Nevada as the country's official repository for highly radioactive nuclear waste. This is a wrong decision. Based upon scientific studies, Yucca Mountain is not a suitable site for a nuclear waste repository. The site has geologic faults and official computer models used to assess site suitability are riddled with uncertainties. Federal environmental regulations have been ignored and changed several times to accommodate this site, thus abandoning protections for drinking water.

According to the spiritual leaders and tribal elders of the Indigenous tribes of *Western Shoshone* and *Paiute*, the Yucca Mountain is sacred with the regional area having deep cultural and historical value to their peoples. President W. Bush and many leaders of Congress do not respect these deep spiritual values and cultural life-ways that have sustained the Indigenous peoples of this region since time immemorial. In the eyes of Indigenous peoples that follow the traditional teachings of our tribal ways, this President and people in Congress do not have a heart of love and compassion for Life and have clouded minds that put money above the health and safety of people and all Life.

If the Yucca Mountain site is approved by Congress, it will store a total of 77,000 tons of highly radioactive waste, most of it spent fuel from nuclear power plants. The spent fuel, which will remain dangerous for hundreds of thousands of years, is now stored at dozens of power plant sites around the country.

If Congress allows the Yucca Mountain site to be approved, it would begin the largest nuclear waste transportation campaign in history, possibly endangering residents in 44 states, thousands of towns and cities, and tribal territories. The United States Department of Energy predicts that there will be nuclear waste accidents occurring during this transportation campaign with lives, health, and properties of citizens living and working along transportation routes endangered by accidents or incidents. Roads, rails, and waterways in 44 states would become zones of terror for dangerous radioactive waste shipments en route to Yucca Mountain. More than 40,000 tons of this waste will be containing hundreds of tons of plutonium, the stuff from which nuclear weapons are made from.

Related to this country's lack of a nuclear waste storage plan, the Indigenous Environmental Network furthers its opposition to the actions of Private Fuel Storage (PFS), a corporate consortium of 8 commercial nuclear utilities, proposing to transport 40,000 metric tons of high-level radioactive spent fuel waste across the country to an interim storage facility on the *Skull Valley Goshute* reservation in Utah. The Indigenous Environmental Network declares PFS actions as a form of economic blackmail and corporate oppression on a small Indigenous community of near 75 adult voting members that have experienced decades of toxic exposures from Department of Defense experiments with toxic and biological warfare and failed United States governmental policies that have created poverty and high unemployment among the *Skull Valley Goshute*. PFS is another example of the nuclear industry gambling with the public health and safety of the *Goshute* tribal members, the people of Utah and all citizens that reside along the vast transportation routes of this country.

The United States government has a long history of abrogating treaties entered into by the Indigenous tribes of this country and the United States. If Congress approves Yucca Mountain for a nuclear waste dump, it will be another attack on the treaty rights of the *Western Shoshone*. *Western Shoshone* Nation of *Newe Sogobia*, which extends from Idaho to Southern California, covers much of Nevada. Recognition of *Shoshone* sovereign territory was formalized by the United States government when it signed the Treaty of "Peace and Friendship" of Ruby Valley in 1863 that guaranteed incoming settlers and military personnel safe passage through the Western Shoshone (*Newe*) land. These territorial boundaries under international law hold the same significance as those of Canada or Mexico. The Organization of American States (OAS) has repeatedly upheld *Shoshone* claims against the United States. The *Western Shoshone* is fighting to protect their lands, including the sacred Yucca Mountain. The *Shoshone* have claims against the United States for land that was stolen and illegally occupied in violation of the Treaty of Ruby Valley of 1863. Although extensive litigation has taken place, the United States has never to this day been able to show a document to back its current claim of ownership of this land. This Treaty is one of the few treaties made between the United States and Indigenous nations that did not cede any land.

Although the many Indigenous peoples in our vast network are varied in language and beliefs, we have the common ground of being Indigenous peoples who have no desire to give up the traditional laws that the Creator gave us. We have no desire to accept the deadly, unsustainable ways the colonial government and nuclear industry is trying to force upon us. We are not asking anyone else to accept our ways, however, we are exercising our right to live our sustainable lifestyles, practice our culture, conduct our ceremonies, and raise our children in a land that is clean, safe and healthy for all our *relations*.

The Indigenous Environmental Network stands in solidarity with many concerned non-Indigenous citizens and organizations to stop this pattern of abusing our natural environment. Every living being, every creature and every plant has a right to a healthy, sustainable, equitable, and safe environment. To meet these needs, all communities must have a viable and sustainable economic base that protects the diversity of our communities. Nuclear waste jeopardizes the most basic human right, which is a clean environment. We commit to end the cycle of abuse that has been initiated by our government, nuclear industry and corporations.

The Indigenous Environmental Network recommends:

1. Congress should do what is morally and ethically right and uphold Nevada Governor Guinn's veto of President Bush's approval of the Yucca Mountain project.

2. Private Fuel Storage member utilities should immediately withdraw from the PFS consortium so as not to be implicated in such a dangerously flawed program and a program that could violate the human rights of tribal members of the *Skull Valley Goshute*.
3. United State citizens must organize to stop the Department of Energy and Private Fuel Storage from transporting and storing nuclear waste across the country to Yucca Mountain, located within the traditional homelands of the *Newe Sogobia* and *Paiute* peoples, and *Skull Valley Band of Goshute*.
4. United State citizens must oppose the generation of more nuclear waste by demanding a moratorium on the building of new nuclear power plants, a moratorium against re-commissioning old nuclear power plants and demanding the phase-out of current nuclear power plants. The continued production of all levels of radioactive waste and transportation to either an interim or permanent repository does nothing to solve the nuclear waste problem in our country.
5. United States citizens, the government and the nuclear industry must accept responsible for the nuclear waste that is generated every day. We call for state and federal action to be made for on-site storage of spent nuclear fuel. On-site at or near reactor above-ground monitored retrievable dry cask storage technology can be used to safely and economically store high-level radioactive wastes on site for at least 100 years or until alternative technology is found to safely dispose this radioactive waste that normally will remain dangerous for hundreds of thousands of years.
6. The United States, the nuclear industry and all parties responsible, ensure for the proper clean up of toxic and radioactive contamination on Indigenous lands, all people of color and disenfranchised communities of this country, including victims compensation for all citizens exposed to radiation contamination from nuclear industry activities and militarization.
7. Governments, including tribal, state, national and international, to do whatever possible to stop all uranium exploration, mining, milling, conversion, testing, research, weapons and other military production, use, and waste disposals onto and into Mother Earth.
8. Congress increase research and development and funding allocations for the utilization of sustainable and alternative clean renewable energy such as solar, wind, and appropriate technologies that are consistent with our natural laws and respect for the natural world (environment).
9. We particularly call upon tribal governments and inter-tribal organizations to measure their responsibilities to our peoples, not in terms of dollars, but in terms of maintaining our spiritual traditions, and assuring our physical, mental, spiritual well being. It is our responsibility to assure the survival of all future generations and be true caretakers for our Mother Earth.
10. We demand for the United States government, the nuclear industry and all private sectors that benefited from the legacy of perpetrating nuclear colonialism upon our Indigenous peoples to pay up, in the form of developing tribal “just transition” programs for sustainable economic development and education and training for the Indigenous tribal nations that have been the target of these nuclear waste programs and the legacy of nuclear colonialism.

11. Congress appropriate funding to tribes for capacity building and development of clean renewable energy projects within tribal utility infrastructures.
12. Last, but not least, we call upon the United States to honor all treaty rights, agreements and executive orders entered into with the Indigenous peoples of this country.

INDIGENOUS ENVIRONMENTAL NETWORK – PO Box 485, Bemidji, Minnesota 56619
USA

Tel: + 1 218 751 4967, Fax: + 1 218 751 0561, email: ien@igc.org

www.ienearth

[posted online at: <http://www.ienearth.org/indigenous-anti-nuclear-statement-yucca-mountain-and-private-fuel-storage-at-skull-valley/>]

Principles for Safeguarding Nuclear Waste at Reactors

The following principles are based on the urgent need to protect the public from the threats posed by the current vulnerable storage of commercial irradiated fuel.

The United States does not currently have a national policy for the permanent storage of high-level nuclear waste.

The Obama administration has determined that the Yucca Mountain site, which has been mired in bad science and mismanagement, is not an option for geologic storage of nuclear waste.

Unfortunately, reprocessing proponents have used this opportunity to promote reprocessing as the solution for managing our nuclear waste.

Contrary to their claims, however, reprocessing is extremely expensive, highly polluting, and a proliferation threat, and will actually complicate the management of irradiated fuel.

Nor will reprocessing obviate the need for, or “save space” in, a geologic repository.

The United States has a unique opportunity to re-evaluate our nuclear waste management plan.

We can make wise decisions about safeguarding radioactive waste or go down the risky, costly, and proliferation prone path towards reprocessing.

The undersigned organizations' support for improving the protection of radioactive waste stored at reactor sites is a matter of security and is in no way an indication that we support nuclear power and the generation of more nuclear waste.

Require a low-density, open-frame layout for fuel pools: Fuel pools were originally designed for temporary storage of a limited number of irradiated fuel assemblies in a low density, open frame configuration.

As the amount of waste generated has increased beyond the designed capacity, the pools have been reorganized so that the concentration of fuel in the pools is nearly the same as that in operating reactor cores.

If water is lost from a densely packed pool as the result of an attack or an accident, cooling by ambient air would likely be insufficient to prevent a fire, resulting in the release of large quantities of radioactivity to the environment.

A low density, open-frame arrangement within fuel pools could allow enough air circulation to keep the fuel from catching fire.

In order to achieve and maintain this arrangement within the pools, irradiated fuel must be transferred from the pools to dry storage within five years of being discharged from the reactor.

Establish hardened on-site storage (HOSS): Irradiated fuel must be stored as safely as possible as close to the site of generation as possible.

Waste moved from fuel pools must be safeguarded in hardened, on-site storage (HOSS) facilities.

Transporting waste to interim away-from-reactor storage should not be done unless the reactor site is unsuitable for a HOSS facility and the move increases the safety and security of the waste.

HOSS facilities must not be regarded as a permanent waste solution, and thus should not be constructed deep underground.

The waste must be retrievable, and real-time radiation and heat monitoring at the HOSS facility must be implemented for early detection of radiation releases and overheating.

The overall objective of HOSS should be that the amount of releases projected in even severe attacks should be low enough that the storage system would be unattractive as a terrorist target.

Design criteria that would correspond to the overall objective must include:

- Resistance to severe attacks, such as a direct hit by high-explosive or deeply penetrating weapons and munitions or a direct hit by a large aircraft loaded with fuel or a small aircraft loaded with fuel and/or explosives, without major releases.

- Placement of individual canisters that makes detection difficult from outside the site boundary.

Protect fuel pools:

Irradiated fuel must be kept in pools for several years before it can be stored in a dry facility.

The pools must be protected to withstand an attack by air, land, or water from a force at least equal in size and coordination to the 9/11 attacks.

The security improvements must be approved by a panel of experts independent of the nuclear industry and the Nuclear Regulatory Commission. Require periodic review of HOSS facilities and fuel pools:

An annual report consisting of the review of each HOSS facility and fuel pool should be prepared with meaningful participation from public stakeholders, regulators, and utility managers at each site.

The report must be made publicly available and may include recommendations for actions to be taken.

Dedicate funding to local and state governments to independently monitor the

sites:

Funding for monitoring the HOSS facilities at each site must be provided to affected local and state governments. The affected public must have the right to fully participate.

Prohibit reprocessing:

The reprocessing of irradiated fuel has not solved the nuclear waste problem in any country, and actually exacerbates it by creating numerous additional waste streams that must be managed. In addition to being expensive and polluting, reprocessing also increases nuclear weapons proliferation threats.

The hundreds of groups, representing all 50 states, that have endorsed these HOSS principles, are posted/listed online at:

http://ieer.org/wp/wp-content/uploads/2010/03/HOSS_PRINCIPLES_3-23-10x.pdf

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Kevin Kamps
Radioactive Waste Watchdog
Beyond Nuclear
6930 Carroll Avenue, Suite 400
Takoma Park, Maryland 20912
Office: (301) 270-2209 ext. 1
Cell: (240) 462-3216
Fax: (301) 270-4000
kevin@beyondnuclear.org
www.beyondnuclear.org

Beyond Nuclear aims to educate and activate the public about the connections between nuclear power and nuclear weapons and the need to abandon both to safeguard our future. Beyond Nuclear advocates for an energy future that is sustainable, benign and democratic.

Consent-Based Siting

From: Kevin Kamps [mailto:kevin@beyondnuclear.org]

Sent: Saturday, July 30, 2016 11:17 AM

To: Consent Based Siting <consentbasedsiting@hq.doe.gov>

Subject: Response to IPC--Second set of public comments by Beyond Nuclear on DOE's proceeding to define the "Consent-Based Siting" of radioactive waste dumps

Response to IPC

Second set of public comments by Beyond Nuclear

on DOE's proceeding to define the "Consent-Based Siting" of radioactive waste dumps

We Do Not Consent!

THE RUSH JOB TO DE FACTO PERMANENT PARKING LOT DUMPS, FOR ALL

THE WRONG REASONS: We do not consent to DOE rushing into *de facto* permanent parking lot dumps (so-called “centralized” or “consolidated interim storage”), in order to expedite the transfer of title and liability from the nuclear utilities that profited from the generation of high-level radioactive waste, onto the backs of taxpayers.

FLOATING FUKUSHIMAS ON SURFACE WATERS: We do not consent to radioactive waste barge shipments on the lakes and rivers of this country, the fresh drinking water supply for countless millions, nor on the seacoasts. In addition to a disastrous radioactive release if the shipping container is breached, infiltrating water could spark a nuclear chain reaction, if a critical mass forms, due to the fissile U-235 and Pu-239 still present in the waste.

MOBILE CHERNOBYLS/DIRTY BOMBS ON WHEELS: We do not consent to high-level radioactive waste truck and train shipments through the heart of major population centers; through the agricultural heartland; on, over, or alongside the drinking water supplies of our nation. Whether due to high-speed crashes, heavy crushing loads, high-temperature/long duration fires, falls from a great height, underwater submersion, collapsing transport infrastructure, or intentional attack with powerful or sophisticated explosives, such as anti-tank missiles or shaped charges, high-level radioactive waste shipments, if breached, could unleash catastrophic amounts of hazardous radioactivity into the environment.

ENVIRONMENTAL INJUSTICE/RADIOACTIVE RACISM: We do not consent to the targeting, yet again, of low-income, Native American, and other communities of color, with

high-level radioactive waste parking lot dumps. It is most ironic that President Obama's Blue Ribbon Commission on America's Nuclear Future, and his DOE, have yet again targeted Native Americans. Obama honored Sauk and Fox environmental activist Grace Thorpe for defending her reservation in Oklahoma against a parking lot dump, and then assisting allies at dozens of other reservations being targeted by DOE's Nuclear Waste Negotiator. Obama praised Thorpe as a "Woman Taking the Lead to Save Our Planet," alongside the likes of Rachel Carson of *Silent Spring* fame, in his March 2009 Women's History Month proclamation. Similarly, Yucca Mountain, Nevada is Western Shoshone Indian land, as the U.S. government acknowledged by signing the "peace and friendship" Treaty of Ruby Valley in 1863. In addition, Yucca is not scientifically suitable. It is an active earthquake zone, a volcanic zone, and water-saturated underground. If waste is ever buried there, it will leak massively into the environment. And the State of Nevada has never consented to becoming the country's high-level radioactive waste dump.

SITES CURRENTLY AT THE VERY TOP OF THE TARGET LIST FOR *DE FACTO* PERMANENT PARKING LOT DUMPS:

We do not consent to the targeting of nuclear power plants, radioactive waste dumps, or DOE sites, already heavily contaminated with radioactivity and burdened with high-level radioactive waste, to become parking lot dumps for the importation of other sites' or reactors' wastes. DOE, NRC, and industry's top targets include Waste Control Specialists in Andrews County, TX; Eddy-Lea Counties, NM, near DOE's Waste Isolation Pilot Plant; DOE's Savannah River Site, SC; Dresden nuclear power plant in Morris, IL; the list goes on.

RISKS OF HIGH-LEVEL RADIOACTIVE WASTE STORAGE POOLS, AND NEED FOR HARDENED ON-SITE STORAGE (HOSS):

As just re-confirmed by the National Academies of Science, and Princeton U. researchers Von Hippel and Schoeppner, pools are at risk of fires that could unleash catastrophic amounts of hazardous Cesium-137 into the environment over a wide region. Since 2002, a coalition of hundreds of environmental and public interest groups, representing all 50 states, has called for expedited transfer of high-level radioactive waste from vulnerable pools into hardened dry casks, designed and built to last not decades but centuries, without leaking, safeguarded against accidents and natural disasters, and secured against attack.

NUCLEAR POWER AND HIGH-LEVEL RADIOACTIVE WASTE GENERATION:

The mountain of radioactive waste in the U.S. has grown 70 years high, and we still don't know what to do with the first cupful. Radioactive waste may well prove to be a "trans-solutional" problem, one created by humans, but beyond our ability to solve. The only safe, sound solution for radioactive waste is to not make it in the first place. Reactors should be permanently shut down, to stop the generation of high-level radioactive waste for which we have no good solution. The electricity they supplied can be replaced with renewable sources, such as wind power and solar power, or displaced via efficiency and conservation.

Prepared by Kevin Kamps, Radioactive Waste Watchdog at Beyond Nuclear, and board member, Don't Waste Michigan, representing the Kalamazoo chapter

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Kevin Kamps
Radioactive Waste Watchdog
Beyond Nuclear

6930 Carroll Avenue, Suite 400
Takoma Park, Maryland 20912
Office: (301) 270-2209 ext. 1
Cell: (240) 462-3216
Fax: (301) 270-4000
kevin@beyondnuclear.org
www.beyondnuclear.org

Beyond Nuclear aims to educate and activate the public about the connections between nuclear power and nuclear weapons and the need to abandon both to safeguard our future. Beyond Nuclear advocates for an energy future that is sustainable, benign and democratic.

Consent-Based Siting

From: Kevin Kamps [mailto:kevin@beyondnuclear.org]

Sent: Saturday, July 30, 2016 12:52 PM

To: Consent Based Siting <consentbasedsiting@hq.doe.gov>

Subject: Response to IPC--Third set of public comments by Beyond Nuclear on DOE's proceeding to define the "Consent-Based Siting" of radioactive waste dumps

Response to IPC--Third set of public comments by Beyond Nuclear on DOE's proceeding to define the "Consent-Based Siting" of radioactive waste dumps

We do not consent!

THE RUSH JOB TO *DE FACTO* PERMANENT PARKING LOT DUMPS, FOR ALL THE WRONG REASONS

We do not consent to DOE rushing into parking lot dumps (so-called “centralized” or “consolidated interim storage,” in order to expedite the transfer of title and liability from the nuclear utilities that profited from the generation of high-level radioactive waste, onto the backs of taxpayers.

We do not consent to “centralized interim storage” facilities becoming ***de facto* permanent surface storage parking lot dumps** for high-level radioactive waste.

We do not consent to “games” of radioactive Russian roulette, radioactive hot potato, and radioactive musical chairs being played, when it comes to high-risk, high-level radioactive waste shipments on the roads, rails, and waterways through most states.

We do not consent to the nonsense of shipping high-level radioactive waste to “centralized interim storage,” when permanent disposal could well involve shipping those very same wastes, right back to, or through, where they came from in the first place, heading in the opposite direction.

We do not consent to the nuclear establishment’s “return to sender” schemes with “centralized interim storage.” Had the Private Fuel Storage, LLC (PFS) parking lot dump – its license for construction and operation at the Skull Valley Goshutes Indian Reservation in Utah rubber-

stamped by the U.S. Nuclear Regulatory Commission (NRC) a decade ago – actually opened, this nonsensical multiplication of transport risks could have occurred. PFS’s plan was for the wastes to ultimately be dumped at Yucca Mountain, Nevada. But its Plan B, should Yucca not open, was to “return to sender.” Yucca has been cancelled. Had the Maine Yankee nuclear power plant, for example, sent its wastes to PFS, they would have been “returned to sender.” More than 50 containers of high-risk, high-level radioactive waste, shipped 5,000 miles round-trip through numerous states, accomplishing absolutely nothing.

We do not consent to DOE’s oldest trick in the book, of trying to divide and conquer, by attempting to play “orphaned” waste communities off against the rest of us – many “stranded” waste communities have stated explicitly that DOE’s *de facto* permanent parking lot dump shenanigans are done “not in our name.” DOE’s stated purpose for prioritizing “stranded” waste export to parking lot dumps – to free up decommissioned nuclear power plant sites for “unrestricted,” productive “re-use,” is a non-starter. Decommissioning regulations are so inadequate, supposedly “cleaned up” sites are still significantly contaminated with hazardous radioactivity, making re-use of those sites risky for current and future generations.

FLOATING FUKUSHIMAS ON SURFACE WATERS

We do not consent to radioactive waste barge shipments on the lakes and rivers of this country, the fresh drinking water supply for countless millions, nor on the seacoasts.

We do not consent to “Floating Fukushimas.” There are some 26 atomic reactors in the U.S. that lack direct rail access. Yet DOE has chosen the “mostly rail” shipping scenario of high-level radioactive wastes as its preferred policy. Rail shipping containers weigh more than 100 tons. These cannot go down the highways. They are designed to go down railways. But to get these giant, very heavy containers to the nearest rail head, either heavy haul trucks, or barges on waterways, would have to be used. Barges raise the specter of a high-level radioactive waste shipment sinking, with the potential for disastrous releases of high-level radioactive waste into drinking water supplies and fisheries, or even a nuclear chain reaction on the bottom of the surface waterway (there is enough fissile U-235 and Pu-239 present in high-level radioactive waste that, if a critical mass forms in the sinking disaster, and water infiltrates the container, a nuclear chain reaction could be initiated, worsening radioactivity releases to the water body, and making emergency response a suicide mission, given the fatal gamma -- and even neutron -- doses coming off the inadvertent chain reaction).

We do not consent to high-level radioactive waste shipments on the Great Lakes; one barge sinking could radioactively contaminate the drinking water supply for 40 million people in two countries – eight states in the U.S., and two provinces in Canada – as well as a large number of Native American First Nations. The Palisades reactor in southwest Michigan, and the Kewaunee and Point Beach nuclear power plants in Wisconsin, were revealed by DOE in 2002 to be potential barge shipment points of origin. The barges would ply the waters of Lake Michigan, headwaters for the rest of the Great Lakes downstream, and the direct drinking water supply for many millions of people, including the Chicago metro region.

We do not consent to high-level radioactive waste barge shipments from the Calvert Cliffs nuclear power plant in Maryland, to the Port of Baltimore on the Chesapeake Bay. A sinking could destroy decades of Bay restoration work in one fell swoop, putting countless watermen out of work forever, and wrecking the Bay’s tourism and recreation industries, as well as its fragile, irreplaceable, vibrant, biologically diverse ecosystem. Property values along the Bay

shore would also be ruined.

We do not consent to high-level radioactive waste barge shipments from the Surry nuclear power plant in Virginia, to the Port of Norfolk on the James River. A sinking could ruin this historic river, and also impact the Chesapeake downstream.

We do not consent to Floating Fukushimas from the Salem/Hope Creek nuclear power plant in New Jersey traveling up the already badly polluted Delaware River to the Port of Wilmington.

We do not consent to Floating Fukushimas on the surface waters of New Jersey, New York, and Connecticut, surrounding the metropolitan New York City area, including: from New Jersey's Oyster Creek nuclear power plant, up the Jersey Shore, around Staten Island, New York, to the Port of Newark, New Jersey; from Indian Point nuclear power plant, down the Hudson River, past Manhattan, to the Port of Jersey City, New Jersey; and from the decommissioned Connecticut Yankee nuclear power plant site, down the Connecticut River, onto Long Island Sound, into the Port of New Haven, Connecticut. The very high security risks alone, of intentionally bringing ultra-hazardous high-level radioactive waste, into such close proximity to so many millions of people, is a non-starter.

We do not consent to Floating Fukushimas on Cape Cod Bay, Massachusetts Bay, and Boston Harbor, traveling from Pilgrim nuclear power plant to the Port of Boston.

We do not consent to Floating Fukushimas on the Mississippi River, traveling from the Grand Gulf nuclear power plant to the Port of Vicksburg in Mississippi.

We do not consent to Floating Fukushimas on the Tennessee River, traveling from the Browns Ferry nuclear power plant to Florence, Alabama.

We do not consent to Floating Fukushimas on the Missouri River, traveling from the Cooper nuclear power plant to the Port of Omaha in Nebraska.

We do not consent to Floating Fukushimas on the Pacific Coast, traveling from the Diablo Canyon nuclear power plant to Oxnard/Port of Hueneme in California.

We do not consent to Floating Fukushimas on south Florida's Atlantic Coast, traveling from St. Lucie nuclear power plant to Fort Lauderdale/Port of Everglades and/or from Turkey Point nuclear power plant to the Port of Miami.

We do not consent to Floating Fukushimas on any other surface waters in the U.S., whether they be fresh water drinking water supplies, or salt water fisheries.

We also do not consent to the alternative means of transporting these 100+ ton high-level radioactive waste containers to the nearest rail head -- heavy-haul trucks. Many locations could not accommodate heavy haul trucks, easily or at all. Curves in narrow roads could prove prohibitive, as in the vicinity of Indian Point, New York. Heavy haul trucks could involve a puller truck in front, and even a pusher truck in the back, with 200 wheels in between. They can only travel a few miles per hour. In this sense, they would be even more vulnerable to a terrorist attack, such as one involving an anti-tank missile, than legal weight trucks traveling up to 70 miles per hour, or trains traveling similar faster speeds.

The relatively short distance shipment (just some tens of miles) of Big Rock Point's radioactive reactor pressure vessel in 2003 was instructive regarding the risks of heavy haul trucks. The shipping container weighed 290 tons -- a weight that could be reached by three rail-sized casks of irradiated nuclear fuel, for example. The very heavy weight of the Big Rock Point reactor pressure vessel likely contributed to the breaking of an axle broke as the heavy haul truck shipment passed over a bridge above a waterway. The shipment had to make an emergency pull over stop at the next gas station. That gas station happened to be a school bus stop, so young children were exposed to the gamma radiation emanating from the shipping container, at relatively short distance. When the shipment finally pulled into Gaylord, Michigan, the site of the rail head where it was transferred from the heavy haul truck, onto the train, a crowd of local residents gathered, to watch the spectacle at close range, again exacerbating public health damage due to exposure to gamma radiation at short range. Some local residents were even allowed to approach and touch the shipping container, maximizing their unwitting exposure to harmful ionizing radioactivity, due to the neglect by the shipping authorities to warn the public about the hazards, nor even to establish a no-go zone perimeter around the perimeter. The heavy shipment then damaged train tracks in both southeast Michigan, as well as the Carolinas, causing derailments of other trains in its wake. In a rail yard in Walbridge, Ohio, due to a paperwork snafu, the shipment was held overnight, again with no security perimeter established, allowing ready public access. Although considered "low" level radioactive waste, this reactor pressure vessel shipment -- due to its weight, as well as its gamma radioactivity -- is a cautionary tale for irradiated nuclear fuel shipments to come. A few casks of irradiated nuclear fuel, shipped on the same train, such as a designated one, will weigh as much, raising the specter of rail car damage, or failure of deteriorating railway infrastructure, such as the train tracks themselves, or even bridges -- falls from great heights onto unyielding surfaces below, as well as underwater submersion, could result. Irradiated nuclear fuel, however, is many orders of magnitude more radioactive, than the Big Rock Point reactor pressure vessel.

MOBILE CHERNOBYLS/DIRTY BOMBS ON WHEELS

We do not consent to high-level radioactive waste truck and train shipments through the heart of major population centers; through the agricultural heartland; on, over, or alongside the drinking water supplies of our nation. Whether due to high-speed crashes, heavy crushing loads, high-temperature/long duration fires, falls from a great height, underwater submersion, collapsing transport infrastructure, or intentional attack with powerful or sophisticated explosives, such as anti-tank missiles or shaped charges, high-level radioactive waste shipments, if breached, could unleash catastrophic amounts of hazardous radioactivity into the environment.

We do not consent to heavy haul trucks (monster truck in front and back, two hundred wheels on the trailer in between, traveling only 3 miles per hour) as an end run attempt to transport very heavy rail casks to the nearest rail head, while attempting to avoid controversial, high-risk barge shipments. (See the paragraph just above.)

We do not consent to Mobile Chernobyls, or Dirty Bombs on Wheels, traveling by railway through most states in the country under DOE's "mostly rail" shipping scheme.

We do not consent to Mobile Chernobyls, Fukushima Freeways, or Dirty Bombs on Wheels, traveling by highway through most states in the country, even under DOE's "mostly [but not entirely] rail" shipping scheme. (Casks designed for "legal-weight truck" shipments, as they

are called, are significantly smaller and less heavy than rail casks, and would travel on interstate highways, and connecting roadways.)

We do not consent to containers, in violation of quality assurance and quality control (QA/QC) standards, being used to ship high-level radioactive waste. Commonwealth Edison/Exelon whistle-blower Oscar Shirani, and NRC Midwest Region dry cask storage inspector, Dr. Ross Landsman, revealed major QA/QC violations with Holtec casks, 15 years ago. They questioned the structural integrity of Holtec casks *sitting still, going zero miles per hour*, let alone at 60 mph -- or faster -- on the rail lines. NRC has never adequately addressed these QA violations, so we have to assume they have continued right up to the present. Holtec containers have received an NRC rubber-stamp permit not only for on-site storage at more than a third of U.S. reactors, but also for rail/barge transport. To make matters worse, Holtec is the lead partner in the scheme to establish a parking lot dump in New Mexico. (The Private Fuel Storage, LLC parking lot dump targeted at the Skull Valley Goshute Indian Reservation, NRC rubber-stamped but later stopped despite this, would have utilized 4,000 Holtec casks, containing 40,000 metric tons of irradiated nuclear fuel.) Holtec is not the only high-level radioactive waste container with QA/QC failures, however. NAC (Nuclear Assurance Corp.), VSCs (Ventilated Storage Casks), TN NUHOMS (TransNuclear), and others have violated QA/QC standards, as well. In fact, cask QA violations run rampant across industry, enabled by NRC complicity and collusion.

We do not consent to DOE's and industry's cynical attempt to "railroad" the American public on high-risk, high-level radioactive waste transport, by invoking the U.S. Constitution's Interstate Commerce Clause, to ram Mobile Chernobyls down our throats, through our communities. For starters, radioactive waste is not a commodity. It is a forever-deadly poison, with nowhere to go, and never belonged on our living planet to begin with. We must stop making it.

ENVIRONMENTAL INJUSTICE/RADIOACTIVE RACISM

We do not consent to the environmental injustice and radioactive racism of yet again targeting low-income Native American communities with the most hazardous substances ever created. From 1987 to 1992, DOE's Nuclear Waste Negotiator wrote to every one of the many hundreds of federally recognized Native American tribes in the U.S., offering relatively large (for the tribes, anyway) sums of money in exchange for them "just to consider" hosting high-level radioactive waste parking lot dumps (the amount of money was exceedingly small, as compared to DOE's annual budgets, and especially as compared to nuclear power industry profit margins). DOE's Nuclear Waste Negotiator focused on 60-some tribes in particular. Mescalero Apache in New Mexico, and Skull Valley Goshutes in Utah, went the furthest. But traditionals like Rufina Marie Laws and Joe Geronimo at Mescalero, and Margene Bullcreek and Sammy Blackbear at Skull Valley, blocked the parking lot dumps in the end, after fierce battles, that left very deep wounds in those communities, for which the nuclear establishment bears responsibility. This resistance was assisted by Grace Thorpe, who not only blocked the parking lot dump targeted at her own Sauk and Fox Reservation in Oklahoma, but assisted environmental allies at reservations across the country to do the same. President Obama honored Thorpe for her anti-dump work, as a "Woman Taking the Lead to Save Our Planet," alongside the likes of Rachel Carson of *Silent Spring* fame, in his March 2009 Women's History Month proclamation. And yet, President Obama's own Blue Ribbon Commission on America's Nuclear Future, as well as his DOE, are yet again including Native American reservations on the target list for parking lot dumps. This most disturbing internal Obama

administration contradiction has never been explained.

We do not consent to the targeting of nuclear power plant sites already heavily burdened with irradiated nuclear fuel to become parking lot dumps, importing other reactors' wastes. A study by Oak Ridge National (Nuclear) Lab, for example, has singled out the Dresden nuclear power plant in Morris, IL as a top target for a parking lot dump. But Dresden is already heavily burdened with around a whopping 3,000 metric tons of irradiated nuclear fuel, in the storage pools at three atomic reactors, in the "overflow parking" dry cask storage installations, as well as the immediately adjacent General Electric-Morris reprocessing facility "wet storage" pool. (The dry cask storage pads at Dresden also involved back foundation pours of concrete, but NRC yet again rubber-stamped an exemption from safety regulations, allowing them to be used nonetheless. Combined with the QA violations of the Holtec casks deployed on those defective pads, the risks are piled up at Dresden already.)

SITES CURRENTLY AT THE VERY TOP OF THE TARGET LIST FOR DE FACTO PERMANENT PARKING LOT DUMPS

We do not consent to the targeting of DOE sites, already heavily contaminated with radioactivity and burdened with high-level radioactive waste, to become parking lot dumps for the importation of other sites' or reactors' wastes. The proposal to open a parking lot dump in Eddy-Lea Counties in southeastern New Mexico, near the Waste Isolation Pilot Project (WIPP), is a case in point. WIPP is the U.S. national dump-site, in a salt formation 2,000 feet below ground, for trans-uranic contaminated radioactive wastes from the U.S. nuclear weapons complex. Although DOE assured the public that WIPP could not possibly leak in the first 10,000 years, and would leak at most once in the first 200,000 years, WIPP suffered a trans-uranic radioactive waste leak to the environment in year 15 of its operations, on Valentine's Day, 2014. Nearly two-dozen workers at the surface suffered inhalation doses of ultra-hazardous, alpha-emitting substances, including plutonium. Trans-uranics also fell out downwind, to be further distributed by wind and rain over time. The burst of a single barrel 2,000 feet underground caused the radioactivity release. The root cause of the burst was a chemical reaction due to the mixing of chemically reactive nitrates and lead in with the radioactive wastes, which sparked the ignition. The fire was sustained by the inclusion of organic (meaning fibrous, plant-based) *kitty litter*, meant to absorb liquids. The burst of the single barrel has already shut down WIPP for two and a half years. DOE estimates the recovery cost at \$500 million; the *L.A. Times* estimates one billion dollars.

We do not consent to a *de facto* permanent parking lot dump targeted at Waste Control Specialists, LLC (WCS) in Andrews County, Texas. WCS applied to NRC for a construction and operation license on April 28, 2016. WCS already dumps all categories of so-called "low" level radioactive waste – Class A, B, and C – into the ground, either directly above, or immediately adjacent to, the Ogallala Aquifer. The Ogallala Aquifer serves as a vital supply of drinking and irrigation water for numerous states on the Great Plains, from Texas to South Dakota. WCS effectively serves as a *national* dump-site for such radioactive wastes. (Several state environmental agency staffers resigned their career jobs in protest over the outrageous decision to allow WCS to open for "low" level radioactive waste dumping in the first place, endangering or even dooming the Ogallala, over time, to hazardous radioactive contamination.) WCS also accepted many scores of barrels from Los Alamos National (Nuclear) Lab in New Mexico, containing the same volatile mix as burst in the WIPP underground in 2014. Already, the potentially bursting barrels have sat out in the hot summer

sun at WCS in 2014, 2015, and now 2016, with no end in sight. Heat fueling a chemical reaction, igniting combustibles, and pressure build-up, is the entire problem with the burst risk. If one or more barrels burst at WCS, into the open air of the surface environment, the releases of plutonium and other ultra-hazardous trans-uranic radioactive wastes could be significantly worse, in terms of downwind and downstream fallout, than the 2014 WIPP release, which originated 2,000 feet below ground, and had to follow a long, circuitous path, through thousands of feet of horizontal burial caverns and tunnels, as well as thousands of feet of vertical ventilation shaft, to reach the surface environment, and fallout over a wide area downwind. The barrels at WCS are *at* the surface environment! WCS accepting these potentially explosive barrels in such a great big hurry in the first place, without even knowing the risks they were getting into, shows what a careless company it is, and the high risks they are all too willing to rush into, or blunder into, just to make a buck. It cannot and should not be trusted to store high-level radioactive waste, not even temporarily (although “interim” is a deception – the storage would become very long term, perhaps even permanent).

A second company, Advanced Fuel Cycle Initiative (AFCI), is targeting another west TX county for *de facto* permanent storage as well: Culberson. Given the large Hispanic American population in the area, as well as low-income levels, Environmental Justice concerns are raised, yet again, by these proposed west TX parking lot dumps. Much the same can be said regarding the populations in southeastern New Mexico, surrounding the proposed parking lot dump there.

Another parking lot dump target – Savannah River Site (SRS), South Carolina – also raises red flags about disproportionate impacts on people of color and low-income communities. SRS is already a very badly radioactively contaminated region, due to decades of nuclear weapons production, and other related nuclear activities (such as proposed mixed oxide plutonium fuel storage and fabrication, proposed civilian high-level radioactive waste reprocessing, etc.). SRS is now also “serving” as the “host” for high-level radioactive wastes being “re-imported” from multiple countries overseas. Germany pebble bed modular reactor irradiated nuclear fuel just “returned” to SRS, for example. Canadian *liquid* high-level radioactive waste is poised to be trucked to SRS (liquid high-level radioactive waste has never been transported in North American history; this unprecedented, high-risk scheme shows that DOE itself has thrown caution to the wind, and cannot be trusted to obey laws, such as the National Environmental Policy Act, Atomic Energy Act, and Administrative Procedure Act, leading to illegal, highly dangerous risk-taking, for no good reason). But in addition, the area also “hosts” the adjacent Barnwell, SC “low” level radioactive waste dump – a national dump (a total of 39 states dumped there) for decades on end, long leaking. To make matters even worse, the area “hosts” the largest – in terms of number of reactors – nuclear power plant in the U.S., Vogtle. Vogtle Units 1 and 2 have already operated for decades; Units 3 and 4 are currently under construction. The nearby community of Shell Bluff, Georgia is predominantly African American and low-income. Targeting the SRS area with a high-level radioactive waste parking lot dump would just compound the environmental injustice even worse.

HIGH-LEVEL RADIOACTIVE WASTE STORAGE POOLS

We do not consent to the nuclear power industry, with NRC’s blessing, keeping high-level radioactive waste at high-risk, high-density “wet” storage in waste pools, for years or decades into the future. NRC decommissioning regulations, for example, allow pool storage for as long as 60-years post reactor shutdown (so, if the reactor had operated for 60 years, as NRC has permitted time and again, that would mean a total of 120 years of pool storage; NRC is

now actively considering allowing 80 years of operations at reactors, which would then add up to 140 years of pool storage.). Nuclear utilities seek to defer dry cask storage costs as far off into the future as possible, by maximizing pool storage for as long as possible. Pools are so densely-packed, they have approached operating reactor core densities. Especially considering degradation of neutron absorbing structures (such as Boraflex panels) in the pools, this risks potentially deadly and disastrous nuclear chain reactions in the un-shielded pool, which also happens to not be housed in a robust radioactive containment structure. But high-density storage also risks a sudden cooling water drain down, or a slower motion boil down. Either way, the worst case scenario would be a partial drain down, where irradiated nuclear fuel is partially exposed to air, with remaining pool water below blocking convection air currents, that would at least provide some (and perhaps still not enough) cooling to the overheating exposed irradiated nuclear fuel assemblies. Once exposed to air, the zirconium-clad fuel rods could reach ignition temperature within hours, initiating spontaneous combustion. The chemical reaction would turn exothermic, self-feeding, with the fire burning down the fuel rods, not unlike 4th of July sparklers. The pool would be unapproachable, due to lack of cooling water radiation shielding, with instantaneously deadly doses at close range. Thus, emergency responders would likely be blocked from intervening, making even suicide squad (those willing to sacrifice their lives for the greater good) interventions ineffective, due to the instantly deadly doses, preventing any effective action from being taken. The radioactive Cesium-137 releases alone, to the environment, would be catastrophic, due to such a pool fire. Up to 100% of the Cs-137 contained in the pool could escape in the smoke, to fallout over a vast region downwind. A hazardous radioactivity release, orders of magnitude larger than that released at Chernobyl, could result.

We do not consent to ongoing pool storage, due to pool leaks that, according to NRC in 2013, have already occurred at 13 pools across the U.S. This number can be expected to increase, with worsening age-related degradation at U.S. nuclear power plants. Such pool leaks harm soil, groundwater, surface water, and people and other living things downstream, up the food chain, and down the generations.

We do not consent to pools being dismantled during nuclear power plant decommissioning. Although the irradiated nuclear fuel stored in pools should be off-loaded into hardened on-site storage ASAP (see below), and kept unloaded, the pool structures, systems, and components themselves should be left intact, maintained, and not dismantled or allowed to fall into disrepair. Keeping functional pools extant, albeit empty until needed, would provide an emergency location for failed cask to new replacement cask transfers of irradiated nuclear fuel, with needed radiation shielding. If pools are dismantled at decommissioning nuclear power plant sites (as has been the standard approach thus far), any cask-to-cask transfers would have to be done on an *ad hoc* basis, perhaps under a worsening emergency situation. There is no reason to paint ourselves into such a corner. Pools can be maintained to provide an emergency back-up transfer option. Although they should no longer be used for regular waste storage, as they are too risky.

NEED FOR HARDENED ON-SITE STORAGE (HOSS)

We do not consent to NRC's status quo, allowing nuclear utilities to store irradiated nuclear fuel for as long as 120 years in vulnerable storage pools, and to store high-level radioactive waste in vulnerable dry casks. Many hundreds of environmental, public interest, and social justice groups, representing all 50 states, have called for Hardened On-Site Storage (HOSS) for 15 years. HOSS calls for emptying of irradiated nuclear fuel from vulnerable storage pools

into dry casks, but not into vulnerable status quo ones, as is currently done. This out of the frying pan, into the fire approach is unacceptable and dangerous. Dry casks must be designed and built well, with rigorous QA standards, to last not decades, but centuries. Dry cask storage must be safeguarded against leaks, accidents, natural disasters, and intentional attacks. Such health, safety, security, and environmental protections are not fulfilled by current, vulnerable dry cask storage permitted by NRC.

We do not consent to abandonment of high-level radioactive waste on the shores of the Great Lakes, on the banks of rivers, on the ocean coasts, etc., where it is currently stored. Such abandonment would lead to catastrophic releases of hazardous radioactivity over time, into the drinking water supplies for countless millions of people, into major fisheries, etc. This is especially true under climate chaos scenarios, with ever more frequent extreme weather events at such locations, and rising sea levels, causing major flooding. Many of these very same sites are also vulnerable to earthquakes, tsunamis, and other natural disasters. As environmental groups have long advocated, high-level radioactive wastes should be stored as close to the point of origin as possible, as safely as possible. Certain sites are not appropriate for HOSS, just as they were not appropriate for reactors in the first place. Prairie Island, Minnesota, is a case in point, home to the Prairie Island Indian Community, which never granted its consent to the construction and operation of the two atomic reactors there, nor to the generation and storage of high-level radioactive waste, just hundreds of yards from their community. While wastes need to be relocated from Prairie Island to higher ground, out of the flood plain of the Mississippi River, this should be done in the immediate area, as close as possible, as safely as possible. This is no justification to launch a national Mobile Chernobyl/parking lot dump campaign, creating a whole new set of potentially catastrophic risks elsewhere (including on the roads, rails, and waterways themselves, passing through most states). In fact, Prairie Island nuclear power plant's owner, Xcel Energy/Northern States Power, has been an infamous leader in such schemes, for decades, including the radioactively racist targeting of PFS at the Skull Valley Goshutes Indian Reservation in Utah.

We do not consent to NRC's science fiction fantasy of non-existent, unfunded "Dry Transfer Systems," and the absurd notion that these Dry Transfer Systems and dry cask storage installations, will be replaced, in their entirety, once every hundred years, whether the storage is at current nuclear power plant sites, or away-from-reactor locations (such as *de facto* permanent parking lot dumps). Dr. Mark Cooper of Vermont Law School has estimated that the first 200 years of irradiated nuclear fuel management in the U.S. – assuming a single repository, and a certain number of centralized interim storage sites – will already cost ratepayers, and/or taxpayers, \$210 to 350 billion – effectively doubling the cost of nuclear-generated electricity, if accounted for (which it never has been, till Dr. Cooper did the calculations on his own initiative, on behalf of an environmental coalition intervening in NRC's Nuclear Waste Confidence/Continued Storage of Spent Nuclear Fuel proceeding). But 200 years is a drop in the ocean, compared to the million years, or longer, high-level radioactive waste remains hazardous (Iodine-129, present in high-level radioactive waste, for example, has a half-life of 15.7 million years, so a hazardous persistence of 157 to 314 million years). Irradiated nuclear fuel and high-level radioactive waste are a curse upon all future generations. They -- who got not one kilowatt-hour of electricity from the atomic reactors -- must now be burdened forevermore, to figure out how to keep the radioactive wastes from leaking out into the biosphere. If current and future generations fail in this burdensome, perhaps impossible task, the human health damage, and damage to other living things, will be incalculably large, in terms of cancer, birth defects, genetic damage, and other diseases. We need to stop making radioactive waste, by shutting down reactors and replacing

them with energy efficiency (as well as conservation) and renewable sources, such as wind power and solar photo-voltaics (PV). And we need to figure out how to keep the radioactive waste that already exists, isolated from the living environment, forevermore. As Arnie Gundersen, Chief Engineer of Fairewinds Associates, Inc., has put it: *“We all know that the wind doesn’t blow consistently and the sun doesn’t shine every day, but the nuclear industry would have you believe that humankind is smart enough to develop techniques to store nuclear waste for a quarter of a million years, but at the same time humankind is so dumb we can’t figure out a way to store solar electricity overnight. To me that doesn’t make sense.”*

Yucca Mountain

We do not consent to the proposed dumpsite for high-level radioactive waste at Yucca Mountain, Nevada. It was wisely cancelled and de-funded by the Obama administration and DOE in 2010, as it should have been from the beginning, in the early 1980s. Obama and the Energy Secretaries serving under him declared Yucca “unworkable.” Unfolding what “unworkable” means would have to include that the site is not scientifically suitable. It is a very active earthquake zone. It is a volcanic zone. It is saturated with water underground. It has highly corrosive chemistry in the rock, which, combined with the thermal heat of the waste, and the surrounding saturating moisture, would create the perfect storm for burial container failure in a relatively short period of time. If irradiated nuclear fuel were ever to be buried at Yucca, it would leak out massively over time. The catastrophic amounts of hazardous radioactivity would be carried by Yucca’s groundwater to points downstream, including the Amargosa Valley agricultural region, one of Nevada’s most productive, as well as Death Valley, home to the Timbisha Shoshone Nation.

Unworkable also means that Yucca is Western Shoshone Indian Nation land, by the “peace and friendship” Treaty of Ruby Valley of 1863, signed by the U.S. government, making it the highest law of the land, equal in stature to the U.S. Constitution itself. The Yucca dump is an unacceptable environmental justice violation, as well as being unconstitutional under U.S. law, since the Western Shoshone do not consent to radioactive waste dumping on their territory.

Unworkable also means that Nevada does not consent to the dump. It never has. Yucca Mountain, Nevada was singled out as the only site in the U.S. for further consideration as a potential dump-site, by the “Screw Nevada bill” of 1987, as it is most commonly referred to. This amendment to the Nuclear Waste Policy Act of 1983 was orchestrated by such powerful state congressional delegations as Texas and Washington State – other Western targets, which also happened to hold the U.S. House Speakership, and U.S. House Majority Leadership. Conspiring with such Eastern states as New Hampshire, these states successfully got themselves off the short list for the country’s high-level radioactive waste dump, by “screwing Nevada.” This turned a science-based comparative site search, including regional equity (a dump in the West, but also one in the East, where the vast majority of atomic reactors are located to begin with -- 75% of the reactors, and thus the irradiated nuclear fuel, is east of the Mississippi River; 90% of the reactors, and thus the irradiated nuclear fuel, is in the eastern half of the U.S.; and yet, over and over again, parking lot dumps and permanent burial dumps have been targeted at the West, a clear case of regional inequity -- and iniquity - of East dumping on West), into a ram it down Nevada’s throat case of raw politics (Nevada had only one U.S. Representative in 1987; Texas and Washington, by comparison, had three

dozen, and one dozen, respectively.) Despite this, the State of Nevada has successfully fought tooth and nail, expressing its non-consent to the Yucca dump, for 30 years now.

The Yucca dump is a non-starter, and must be removed from any further consideration.

Nuclear Power and High-Level Radioactive Waste Generation

We do not consent to the generation of irradiated nuclear fuel in the first place. Both the Blue Ribbon Commission on America's Nuclear Future, and now DOE's ONE (Office of Nuclear Energy), have cynically framed the radioactive waste problem as a minor one, to be solved as expeditiously – and seemingly flippantly – as possible, so that nuclear power can go on its merry way, making ever more forever deadly high-level radioactive waste, for which there is still no safe, sound solution, and may never be. As Dr. Judith Johnsrud of Environmental Coalition on Nuclear Power put it, radioactive waste may well be “trans-solutional,” a problem we have created that is beyond our ability to solve. And as Beyond Nuclear board member Kay Drey has put it, the mountain of radioactive waste is now more than 70 years high, and we still don't know what to do with the first cupful.

Add your additional idea(s) here! Or use the ones above verbatim, or adapt them to your own words.

For more information, please see the following valuable sources, which provide references and citations for the points made above:

<http://www.state.nv.us/nucwaste/trans.htm>

<http://www.nirs.org/radwaste/hlwtransport/mobilechernobyl.htm>

<http://www.nirs.org/fukushimafreeways/stopfukushimafreeways.htm>

<http://www.nirs.org/radwaste/atreactorstorage/atreactorhome.htm>

<http://www.nirs.org/radwaste/yucca/yuccahome.htm>

<http://www.nirs.org/radwaste/scullvalley/skullvalley.htm>

<http://www.nirs.org/radwaste/wasteconfidence.htm>

<http://www.nirs.org/radwaste//atreactorstorage/shiranialeg04.htm>

<http://www.nirs.org/radwaste/scullvalley/historynativecommunitiesnuclearwaste06142005.pdf>

<http://www.nirs.org/factsheets/nirsfctshdrycaskvulnerable.pdf>

<http://www.beyondnuclear.org/radioactive-waste/>

<http://www.beyondnuclear.org/centralized-storage/>

<http://www.beyondnuclear.org/on-site-storage/>

<http://www.beyondnuclear.org/waste-transportation/>

<http://www.beyondnuclear.org/yucca-mountain/>

<http://www.beyondnuclear.org/waste-transportation/2016/1/20/doe-undertaking-logistical-planning-for-shipment-of-stranded.html>

<http://www.beyondnuclear.org/home/2012/1/18/a-mountain-of-waste-70-years-high-and-no-solution-in-sight.html>

<http://neis.org/2012-conference/>

<https://sanonofresafety.files.wordpress.com/2011/11/doe-designedtoleak2016-05-3sos.pdf>

<http://nonuclearwasteaqui.org/>

http://ieer.org/wp/wp-content/uploads/2010/03/HOSS_PRINCIPLES_3-23-10x.pdf

<http://www.sric.org/nuclear/wippleak2014.php>

<http://www.indianz.com/News/2015/019111.asp>

Prepared by Kevin Kamps, Radioactive Waste Watchdog at Beyond Nuclear, and board member, Don't Waste Michigan, representing the Kalamazoo chapter.

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Kevin Kamps
Radioactive Waste Watchdog
Beyond Nuclear
6930 Carroll Avenue, Suite 400
Takoma Park, Maryland 20912
Office: (301) 270-2209 ext. 1
Cell: (240) 462-3216
Fax: (301) 270-4000
kevin@beyondnuclear.org
www.beyondnuclear.org

Beyond Nuclear aims to educate and activate the public about the connections between nuclear power and nuclear weapons and the need to abandon both to safeguard our future. Beyond Nuclear advocates for an energy future that is sustainable, benign and democratic.

Consent-Based Siting

From: Kevin Kamps [mailto:kevin@beyondnuclear.org]

Sent: Sunday, July 31, 2016 11:39 PM

To: Consent Based Siting <consentbasedsiting@hq.doe.gov>

Subject: Response to IPC--Fifth set of public comments by Beyond Nuclear on DOE's proceeding to define the "Consent-Based Siting" of radioactive waste dumps

Response to IPC--Fifth set of public comments by Beyond Nuclear on DOE's proceeding to define the "Consent-Based Siting" of radioactive waste dumps

In the lead up to the January 20, 2016 “Kick Off” meeting for “Consent-Based Siting, held in Washington, D.C., DOE asked the public to comment on

(1) How can the Department of Energy ensure that the process for selecting a site is fair?

Consent based siting seeks to ensure fairness in the distribution of costs, benefits, risks and responsibilities now and in future generations. How, in your view, can fairness be best assured by the process for selecting a site?

Of course, it was difficult to comment upon that question, as DOE did not make a public comment opportunity possible during that “Kick Off” meeting. That oversight marked a very inauspicious beginning for this “Consent-Based Siting” proceeding, one that DOE never has rectified, unfortunately.

But to answer that question regarding fairness, the Department of Energy must cease and desist from targeting Native American tribes and communities, and their lands. So too must the U.S. Nuclear Regulatory Commission, nuclear power industry, and the rest of the nuclear establishment in industry, government, academia, etc. This is environmental injustice, this is radioactive racism. This must be stopped.

To further explain this point, I would like to reproduce here below an extended extract from my public comments delivered to the Blue Ribbon Commission on American’s Nuclear Future, at its “Kick Off” meeting in Washington, D.C. in late March 2010:

*At first glance, it would seem that this panel's name is inappropriate. For a panel that is supposed to address the lack of a solution to the high-level radioactive waste crisis, the name "Blue Ribbon Commission on America's Nuclear Future" seems a bit odd. But it may be ironically fitting, for forever deadly radioactive waste which has no solution **IS** the future of nuclear power in America, and around the world for that matter.*

As Michael Keegan of the Coalition for a Nuclear-Free Great Lakes has put it, "Electricity is but the fleeting byproduct from atomic reactors. The actual product is forever deadly radioactive waste."

Forever deadly is no exaggeration. The U.S. Environmental Protection Agency, under court order, now recognizes a one million year hazard associated with high-level radioactive waste, at least in its applicable Yucca Mountain repository regulations. One million years equates to 40,000 human generations. A few generations of electricity, in exchange for 40,000 generations of radiological hazard, is quite a future for nuclear power, quite a burden for us to offload onto our descendants.

As Yucca Mountain, Nevada is Western Shoshone Indian land by the "peace and friendship" Treaty of Ruby Valley signed by the U.S. government in 1863, I'd like to thank President Obama and Energy Secretary Chu for the tremendous environmental justice victory the dumpsite's cancellation represents.

It also represents a tremendous environmental victory. Any radioactive waste that had been buried at Yucca would have leaked out, massively, over time, turning all points downstream into a nuclear sacrifice zone. The drinking water beneath Yucca serves a farming community downstream, as well as a National Wildlife Refuge, National Park, and the Timbisha Shoshone Indian Band. The dumpsite also could have cataclysmically failed in an earthquake or even volcanic eruption at that seismically active area. No wonder, then, that over 1,000 national and grassroots environmental groups opposed the dump at Yucca Mountain, and are now relieved and thankful that President Obama and Energy Secretary Chu have cancelled the dumpsite and the thousands of high-level radioactive waste trucks, trains, and barges that would have carried the wastes through most states bound for Nevada.

I would also like to thank President Obama for recognizing Grace Thorpe on March 3, 2009 in his "Women Taking the Lead to Save our Planet" Women's History Month 2009 Proclamation. President Obama proclaimed:

“Grace Thorpe, another leading environmental advocate, also connected environmental protection with human well-being by emphasizing the vulnerability of certain populations to environmental hazards. In 1992, she launched a successful campaign to organize Native Americans to oppose the storage of nuclear waste on their reservations, which she said contradicted Native American principles of stewardship of the earth. She also proposed that America invest in alternative energy sources such as hydroelectricity, solar power, and wind power.”

Grace Thorpe, who passed away a few years ago now, was a Sauk and Fox as well as Pokagon Potawatomi Indian best known for restoring her father’s – “Athlete of the Century” Jim Thorpe’s - Olympic gold medals to the Thorpe family.

But she also led the effort on her Sauk and Fox Reservation in Oklahoma to immediately put a stop to any consideration that her community become an “interim” parking lot dump for commercial high-level radioactive waste. She then went on the road, and helped stop such environmentally racist targeting of dozens more Native American tribes by the U.S. Department of Energy’s “Nuclear Waste Negotiator.” She was instrumental in seeing that the Nuclear Waste Negotiator program was de-funded and done away with in 1992, five years after it came into existence.

But in that time, the Nuclear Waste Negotiator gave “federally recognized” Indian tribe a whole new meaning. It seems the federal government “recognized” that politically and economically vulnerable Native American reservation communities could serve as the “path of least resistance” for parking high-level radioactive wastes with nowhere else to go for decades, or perhaps even forever. Every single federally recognized tribe in the country received a solicitation letter from the DOE’s Nuclear Waste Negotiator. Sixty tribal chairmen or councils, in their economic desperation, expressed interest.

But traditionals and environmentalists within those targeted tribal communities worked with Grace and others to put a stop to the radioactive racism. Rufina Marie Laws and Joe Geronimo at Mescalero Apache, New Mexico, led efforts to defend their community – one of the first “Downwinder” communities in the world, as it is immediately downwind of the Alamogordo site where the “Trinity” plutonium bomb was tested on July 16, 1945. First the Nuclear Waste Negotiator’s federal “monitored retrievable storage” site was defeated. Later, a private industry attempt to do what the federal government was unable to at Mescalero was likewise defeated.

But undaunted and shameless, the nuclear power industry's "Private Fuel Storage, Limited Liability Corporation" picked up where it had left off at Mescalero, and attempted to force its parking lot dump on the tiny Skull Valley Goshute Indian Reservation in Utah. Margene Bullcreek and Sammy Blackbear put a stop to it.

These bitter struggles lasted many long years, leaving wounds in these communities that will take a very long time to heal, even though no radioactive waste was ever delivered to either Mescalero or Skull Valley. The anti-dump tribal members suffered severe harassment and even death threats for their courageous stand.

Winona LaDuke of Honor the Earth, an Ojibwe environmental leader from the White Earth Reservation in Minnesota, has helped lead the national effort to stop radioactive waste dumps targeted at Indian lands. She has said "The best minds in nuclear science have been hard at work for over 50 years to figure out a solution to the radioactive waste problem, and now they've finally got it – haul it down a dirt road and dump it on an Indian reservation."

Tom Goldtooth of Indigenous Environmental Network, another leader against radioactive waste dumps on Native lands, reminds us that environmental justice principles must be at the forefront of decision making in the 21st century.

Joe Campbell at the Prairie Island Indian Community in Minnesota also deserves praise, for opposing the generation of high-level radioactive waste at the Prairie Island Nuclear Power Plant. Incredibly, the dry cask storage facility there, in the floodplain of the Mississippi River, is located a mere 600 yards from the tribal day care center and the nearest tribal residences.

At this time when the Yucca Mountain dumpsite proposal has been so wisely cancelled by President Obama and Energy Secretary Chu, I would also like to honor the Western Shoshone National Council for its tireless vigilance against the dump, as well as against nuclear weapons testing at the Nevada Test Site. Corbin Harney, Western Shoshone spiritual leader, founder of the Shundahai Network, passed away in 2007. For decades, he led and inspired the grassroots resistance to the dump and nuclear weapons testing. Other Western Shoshone leaders are fortunately still with us, including Ian Zabarte, Secretary of State of the Western Shoshone National Council, who for 25 years, in an unpaid voluntary capacity, has served as a legal and technical policy coordinator in the Western Shoshone Nation's vigilant resistance against the Yucca Mountain dumpsite proposal.

I urgently call upon this Blue Ribbon Commission to put a stop, once and for all, to the shameful history of targeting Native American communities and lands with radioactive waste dumps.

Thank you.

Most unfortunately, the Blue Ribbon Commission ignored my comments, and my pleas, to cease and desist with such radioactive racism. In its Final Report of January 2012, the Blue Ribbon Commission went right on listing Native American tribes, communities, reservations, and lands as a category of potential sites for so-called centralized interim storage (*de facto* permanent parking lot dumps), as well as permanent burial dumps.

But then again, the Blue Ribbon Commission ignored most to all public comments coming from concerned individuals, environmental group representatives, Native American traditionals, etc. It's as if the Blue Ribbon Commission report could have been written before the 2010 to 2012 process of holding numerous meetings across the U.S., allowing public comment opportunities, etc. In fact, it would seem that is exactly what happened. The Blue Ribbon Commission had a predetermined agenda, and bulldozed it through, in spite of the thousands of public comments provided, in good faith.

As I mentioned in previous comments to DOE on this "Consent-Based Siting" IPC (Invitation for Public Comment), and as I pointed out at the Chicago meeting on March 29, 2016, Ernest Moniz, now Energy Secretary, was a member of the Blue Ribbon Commission; John Kotek, now DOE Acting Assistant Undersecretary for Nuclear Energy, was staff director for the Blue Ribbon Commission; Timothy Frazier was Designated Federal Official, from DOE Office of Nuclear Energy, for the Blue Ribbon Commission, and now works as a private consultant for DOE on "Consent-Based Siting"; Mary Woolen, a government-public liaison for the Blue Ribbon Commission, now works as a private consultant for DOE in a similar role on "Consent-Based Siting." Given these very selfsame individuals having ignored such public comments as mine above from 2010 to 2012, I have little to no confidence that this "Consent-Based Siting" proceeding public comment opportunity is any more sincere.

To add insult to injury, DOE invited David Leroy, DOE's former Nuclear Waste Negotiator, to present as a panelist at the July 14, 2016 "Consent-Based Siting" meeting in Boise, held on the eve of the anniversary of the Trinity test in 1945, which blanketed the Mescalero Apache reservation with the first bomb fallout of the Atomic Age, as well as the 1979 uranium tailings disaster that radioactively contaminated Diné drinking and irrigation water in Church Rock, New Mexico.

As I mentioned during my comments to the Blue Ribbon Commission in 2010, Grace Thorp helped stop not only the parking lot dump targeted at her own Sauk and Fox Reservation in Oklahoma, but also such environmentally racist targeting of dozens more Native American tribes by the U.S. Department of Energy's "Nuclear Waste Negotiator." She was also instrumental in seeing that the Nuclear Waste Negotiator program was de-funded and done away with in 1992, five years after it came into existence.

President Barack Obama honored Grace Thorpe for her work in 2009. His proclamation is attached to these comments. DOE dishonored her memory, by having the former Nuclear Waste Negotiator speak in 2016. It rubbed salt in the wounds of DOE's past radioactive racism.

In 2005, myself (working as Nuclear Waste Specialist at Nuclear Information and Resource Service) and a colleague at Public Citizen, Melissa Kemp, co-authored a document entitled *Radioactive Racism: The History of Targeting Native American Communities with High-Level Atomic Waste Dumps*.

The document chronicled the DOE Office of Nuclear Waste Negotiator's shameful actions over the course of several years.

It quoted the following infamous statement made by David Leroy himself:

*"We cannot rewrite the history of imbalance between our peoples. We can, however, write the future. It is the Native American cultures of this continent which have long adhered to the concept of planning for many generations of future unborn children in the decisions which are made today. This contrasts with the modern practices of American governments at all levels where planning and budgeting are done with most of the emphasis upon only the next fiscal year. With atomic facilities designed to safely hold radioactive materials with half-lives of thousands of years, **it is the Native American culture and perspective that is best designed to correctly consider and balance the benefits and burdens of these proposals.** ---David Leroy, U.S. Nuclear Waste Negotiator, addressing the National Congress of American Indians in 1991. [emphasis added; see footnote for reference below.]*

Which is why we'd like to indefinitely park high-level radioactive waste in large quantities on your reservation lands, Nuclear Waste Negotiator Leroy could have added. Of course, Leroy's intimation that "benefits" could make such "burdens" worth it, is itself objectionable. Buying off low-income communities of color to shoulder toxic or radioactive burdens that wealthier and whiter communities are unwilling to accept, is a text book example of environmental racism, or environmental injustice. In this case, it is radioactive racism.

As Keith Lewis, environmental director for the Serpent River First Nation of Ontario put it, "There is nothing moral about tempting a starving man with money." He spoke in the context of the radioactively ruinous aftermath of uranium mining at Elliot Lake, but his wise words, reflecting the ravages borne by his community to the present day, apply equally well to radioactive waste dumping.

The footnote accompanying the Nuclear Waste Negotiator's infamous statement above sheds more light on the outrage it generated amongst Native American traditionals, environmental and environmental justice activists:

Leroy, David. "Federalism on Your Terms: An Invitation for Dialogue, Government to Government." Address to National Congress of American Indians. San Francisco, CA. 4 Dec. 1991. In this speech, David Leroy argues that Native American Tribes are incredibly suited (even preferable) for storing the country's high-level nuclear waste. He cites the Native American values of long-term health and sustainability as reason for this. Coming on the eve of the 500th anniversary of what many Native Americans and modern historians regard as Columbus's brutal invasion of this hemisphere, quoting the famous Duwamish leader Sealth (more commonly known as Chief Seattle) many times, Leroy's words were regarded as Machiavellian and Orwellian by many of those in attendance. After the speech, one man called Leroy's linkage of the Native ethic and nuclear waste "the granddaddy of all oxymorons," and a Duwamish woman asked Leroy why, if he so liked quoting Sealth, her tribe had been dispossessed of what later became the City of Seattle and still not received full federal recognition (Wahpepah, Wilda. "Tribal Leaders Get N-Waste Pitch". The Oregonian, 5 Dec. 1991).

The 2005 document *Radioactive Racism* is also attached to these comments. I request that DOE include *Radioactive Racism* as a part and parcel of my comments, and reproduce it in its entirety in the official record of public comments as if rewritten in its entirety herein.

To add to the irony of targeting Native American lands and communities for high-level radioactive waste dumps is the fact that many reservations receive no electricity from atomic reactors. The same can be said of the ravages of uranium mining and milling on Native lands – most of those communities don't derive any benefit from nuclear-generated electricity. It seems most to all of the burden is being targeted at Native Americans, while they are offered few to none of the benefits.

Even the “incentives” – or legal bribes, buy off money – being considered, are objectionably small. The rumored “incentives” offered to the Skull Valley Goshutes band in Utah, to “host” 40,000 metric tons of commercial irradiated nuclear fuel for 20 years, or 40 years, or – truth be told -- perhaps forever, was \$50 to 200 million. Compare this to an annual DOE budget of tens of billions of dollars. Or the *daily* net profits at a single nuclear power plant, such as Indian Point, New York, of well over a million dollars. Such “incentives” – while desperately needed by low-income communities of color, such as historically and even contemporarily long oppressed Native American reservations – are unjustly and insultingly small in size, compared to the filthy riches amassed by the nuclear power establishment, at public expense.

But then again, how Native Americans have been targeted for all the burden, and none of the benefit, is how the nuclear power industry, and its friends at DOE, treat all future generations, of every race and ethnic group. Future generations will get none of the benefit, but all of the risk, from high-level radioactive waste, forevermore.

David Leroy was downplaying the risks when he stated in 1991 that “*atomic facilities [are] designed to safely hold radioactive materials with half-lives of thousands of years...*”. As the U.S. National Academy of Science has warned in 2004, and again in 2016, high-level radioactive waste storage pools in the U.S. are at risk of catastrophic releases of hazardous radioactivity, due to zirconium cladding fires that could release up to 100% of the volatile Cesium-137 stored in the pools. And as mentioned in my previously submitted comments in this proceeding, U.S. EPA has acknowledged – under court order – that irradiated nuclear fuel and high-level radioactive waste remains hazardous not for thousands of years, but rather for a million years. But even this figure is an underestimate. Hazardous Iodine-129, for example, present in irradiated nuclear fuel, has a half-life of 15.7 million years. Thus, its hazardous persistence lasts 157 to 314 million years.

As Michael Keegan of Coalition for a Nuclear-Free Great Lakes puts it, “Electricity is but the fleeting byproduct of nuclear power. The actual product is forever deadly high-level radioactive waste.”

This is a curse on all future generations. We must stop making it. And we must stop trying to dump it on Native American, and other low income, people of color communities. We must stop radioactive racism.

It was to honor Grace Thorpe (Pokagon Potawatomi), and Winona LaDuke (Prairie Island Ojibwe), and their incredible work to stop radioactive waste dumps targeted at Native American lands, that I introduced myself and said where I was from, and said some basic greetings, in Anishinaabemowin, at the Chicago public meeting on March 29, 2016. Yet, as I spoke about the shameful history of radioactive racism at DOE itself, and throughout the nuclear power industry's history, John Kotek shook his head "No" at me, with a big grin on his face. As Kotek's behavior in Chicago demonstrated, and as Leroy's invitation to speak on the panel at Boise on July 14 revealed, DOE has refused to learn any lessons from its shameful radioactive racism for the past many decades. It appears that DOE will continue to shamefully practice radioactive racism, targeting Native American, and other low-income people of color communities, for radioactive waste dumps. This must be stopped, once and for all.

DOE also asked at the Jan. 20, 2016 “Kick-Off” meeting:

(2) What models and experience should the Department of Energy use in designing the process?

The challenges and opportunities of site selection drive us to continue to learn from previous or ongoing examples. From your perspective, what experience and models do you think are the most relevant to consider and draw from in designing the process for selecting a site?

There is a very long list of negative examples, and many of them are DOE’s own creation. Targeting Native Americans is at the top of that list, including the dumpsite targeted at Yucca Mountain, Nevada – Western Shoshone Indian land, as acknowledged by the U.S. government when it signed the “peace and friendship” Treaty of Ruby Valley of 1863, making it the highest law of the land, equal in stature to the Constitution itself.

“Consent-Based Siting” must mean fully informed consent, adhering to the strictest protocols of environmental justice principles. Keith Lewis’s quote above was a powerful rebuttal to U.S. Republican Senators’ (such as Jim Risch of Idaho) thinly veiled “incentives” cynicism, made as out-loud jokes as code for legalized bribery, as during summer 2013 U.S. Energy and Natural Resources hearings regarding so-called “Consent-Based Siting” of radioactive waste centralized interim storage sites, to supposedly carry out the mandate of the Blue Ribbon Commission’s recommendations, as documented in its January 2012 *Final Report*.

DOE also asked in the lead up to the Jan. 20, 2016 “Kick-Off” meeting:

(3) Who should be involved in the process for selecting a site, and what is their role?

The Department believes that there may be a wide range of communities who will want to learn more and be involved in selecting a site. Participation in the process for selecting a site carries important responsibilities. What are your views on who should be involved and the roles participants should have?

Per the Blue Ribbon Commission's second highest recommendation, the DOE should NOT be a participant in "Consent-Based Siting." DOE has irreparably betrayed the public trust, too many times, over too many years.

Transport corridor communities should be involved, along any potential high-level radioactive waste truck/roadway, train/railway, or barge/waterway routes.

All neighboring communities surrounding targeted dumpsites must be involved meaningful. This must include all those downwind, downstream, up the food chain, and down the generations, at risk of the radioactive waste's forever deadly hazard.

Every jurisdiction must grant its consent. Dissent at any level, no matter how "low," should block the proposed dump. Yet even states, such as Nevada, New Mexico, Idaho, and others, can say "NO!" to being dumped on, over and over again, but DOE STILL won't take them off the target list.

DOE seems to be deaf to community groups such as SRS Watch, Nukewatch South, the Sierra Club, etc., as at SRS in SC, or such community groups as SRIC (Southwest Research Information Center) and many others in New Mexico, vis-à-vis the Eddy-Lea Counties/WIPP parking lot dump proposal. Yet DOE can clearly hear the pro-dump boosters, who they continue to work with, to advance dump proposals. DOE needs to stop pretending to be neutral. It is not. But then again, DOE and the pro-dump boosters have huge areas of overlap between themselves. That's what happens when a nuclear power industry promotional agency is put in charge – or puts itself in charge – of high-level radioactive waste management, and setting the definition for "Consent-Based Siting," as in the instant proceeding. This conflict of interest is unacceptable. The Blue Ribbon Commission concluded as much, recommending that DOE could not be involved any longer, after so betraying the public trust in the past. Just as the U.S. Atomic Energy Commission was split in two – DOE to promote nuclear power, and NRC to regulate nuclear safety – "Consent-Based Siting" for the safe storage and disposal of irradiated nuclear fuel cannot be entrusted to DOE/Office of Nuclear Energy, the promoter of the nuclear power industry.

DOE also asked:

(4) What information and resources do you think would facilitate your participation?

The Department of Energy is committed to ensuring that people and communities have sufficient information and access to resources for engaging fully and effectively in siting. What information and resources would be essential to enable you to learn the most about and participate in the siting process?

Participant funding for opponents to proposed dumps should be provided, as they provide in Canada for similar proceedings. Public Citizen has made this same recommendation in this proceeding. Along similar lines, in order for fully informed consent-based siting to occur, the full information from opponents to proposed dumps should be made accessible, and share in full, by DOE, at DOE expense, with the targeted communities.

DOE also asked:

(5) What else should be considered?

The questions posed in this document are a starting point for discussion on the design of the process for consent-based siting of nuclear waste facilities, the Department of Energy would like to hear about and discuss any related questions, issues, and ideas that you think are important.

DOE should consider all previous related public comments. For example, U.S. Senator Ron Wyden (D-OR), Chair of the U.S. Senate ENR Committee (Energy and Natural Resources), solicited public comments in summer 2013 regarding his bill to enact the recommendations of the Blue Ribbon Commission *Final Report*. DOE should consider all the comments submitted to Senator Wyden coming from concerned members of the public, environmental groups, and opponents to the bill.

DOE should all critical public comments made to the Blue Ribbon Commission from 2010 to 2012. Not just the BRC Final Report should be considered, but ALL CRITICAL PUBLIC COMMENTS to BRC, made from 2010 to 2012, that were, most unfortunately, largely to entirely ignored by the BRC in its *Final Report*.

All critical public comments made during the DOE's Draft Environmental Impact Statement public comment periods regarding the proposed Yucca Mountain dump proceedings, over the decade beginning in 1999, should be considered by DOE.

In short, DOE must cease and desist from burning our critical public comments down the Orwellian Memory Hole, as if they never happened.

Sincerely,

Kevin Kamps, Radioactive Waste Watchdog, Beyond Nuclear, and board member, Don't Waste Michigan, representing the Kalamazoo chapter

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Kevin Kamps
Radioactive Waste Watchdog
Beyond Nuclear
6930 Carroll Avenue, Suite 400
Takoma Park, Maryland 20912
Office: (301) 270-2209 ext. 1
Cell: (240) 462-3216
Fax: (301) 270-4000
kevin@beyondnuclear.org
www.beyondnuclear.org

Beyond Nuclear aims to educate and activate the public about the connections between nuclear power and nuclear weapons and the need to abandon both to safeguard our future. Beyond Nuclear advocates for an energy future that is sustainable, benign and democratic.



WOMEN'S HISTORY MONTH, 2009

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA

A PROCLAMATION

With passion and courage, women have taught us that when we band together to advocate for our highest ideals, we can advance our common well-being and strengthen the fabric of our Nation. Each year during Women's History Month, we remember and celebrate women from all walks of life who have shaped this great Nation. This year, in accordance with the theme, "Women Taking the Lead to Save our Planet," we pay particular tribute to the efforts of women in preserving and protecting the environment for present and future generations.

Ellen Swallow Richards is known to have been the first woman in the United States to be accepted at a scientific school. She graduated from the Massachusetts Institute of Technology in 1873 and went on to become a prominent chemist. In 1887, she conducted a survey of water quality in Massachusetts. This study, the first of its kind in America, led to the Nation's first state water-quality standards.

Women have also taken the lead throughout our history in preserving our natural environment. In 1900, Maria Sanford led the Minnesota Federation of Women's Groups in their efforts to protect forestland near the Mississippi River, which eventually became the Chippewa National Forest, the first Congressionally mandated national forest. Marjory Stoneman Douglas dedicated her life to protecting and restoring the Florida Everglades. Her book, *The Everglades: Rivers of Grass*, published in 1947, led to the preservation of the Everglades as a National Park. She was awarded the Presidential Medal of Freedom in 1993.

Rachel Carson brought even greater attention to the environment by exposing the dangers of certain pesticides to the environment and to human health. Her landmark 1962 book, *Silent Spring*, was fiercely criticized for its unconventional perspective. As early as 1963, however, President Kennedy acknowledged its importance and appointed a panel to investigate the book's findings. *Silent Spring* has emerged as a seminal work in environmental studies. Carson was awarded the Presidential Medal of Freedom posthumously in 1980.

Grace Thorpe, another leading environmental advocate, also connected environmental protection with human well-being by emphasizing the vulnerability of certain populations to environmental hazards. In 1992, she launched a successful campaign to organize Native Americans to oppose the storage of nuclear waste on their reservations, which she said contradicted Native American principles of stewardship of the earth. She also proposed that America invest in alternative energy sources such as hydroelectricity, solar power, and wind power.

These women helped protect our environment and our people while challenging the status quo and breaking social barriers. Their achievements inspired generations of American women and men not only to save our planet, but also to overcome obstacles and pursue their interests and talents. They join a long and proud history of American women leaders, and this month we honor the contributions of all women to our Nation.

NOW, THEREFORE, I, BARACK OBAMA, President of the United States of America, by virtue of the authority vested in me by the Constitution and the laws of the United States, do hereby proclaim March 2009 as Women's History Month. I call upon all our citizens to observe this month with appropriate programs, ceremonies, and activities that honor the history, accomplishments, and contributions of American women.

IN WITNESS WHEREOF, I have hereunto set my hand this third day of March, in the year of our Lord two thousand nine, and of the Independence of the United States of America the two hundred and thirty-third.

BARACK OBAMA



Radioactive Racism: The History of Targeting Native American Communities with High-Level Atomic Waste Dumps

Low-income and minority communities are disproportionately targeted with facilities and wastes that have significant and adverse human health and environmental effects.¹ This places the burdens of society on those who are most vulnerable. These communities are at a tremendous economic and political disadvantage over the decision-making process that is dominated by large, wealthy corporations and/or government agencies. Ironically, low income and People of Color communities targeted with hazardous facilities often benefit the least from whatever societal “good” is purported to justify the generation of the hazardous substances in the first place.²

According to the 1990 U.S. Census (the very time period when the U.S. nuclear establishment intensified and accelerated its targeting of Native American communities with high-level radioactive waste dumps, as shown below), over 31% of Native Americans living on reservations had incomes below the federal poverty line.³ After centuries of oppression and domination, stripped of their lands, resources, and traditional governments, these communities lack political power, and desperately need economic development. The “tribal sovereignty” of Native Americans, which makes their lands exempt from state law and many environmental regulations, only increases their attractiveness as targets for facilities unwanted elsewhere. Native Americans have already disproportionately borne the brunt of the impacts from the nuclear fuel chain over the past 60 years.⁴ In the case of radioactive waste storage and disposal, the nuclear power establishment in industry and government is simply taking advantage of these vulnerable communities, attempting to hide from environmental regulation and widespread public opposition behind the shield of tribal sovereignty.

"We cannot rewrite the history of imbalance between our peoples. We can, however, write the future. It is the Native American cultures of this continent which have long adhered to the concept of planning for many generations of future unborn children in the decisions which are made today. This contrasts with the modern practices of American governments at all levels where planning and budgeting are done with most of the emphasis upon only the next fiscal year. With atomic facilities designed to safely hold radioactive materials with half-lives of thousands of years, it is the Native American culture and perspective that is best designed to correctly consider and balance the benefits and burdens of these proposals."

-- David Leroy, U.S. Nuclear Waste Negotiator, addressing the National Congress of American Indians⁵ in 1991⁶

December 1987 – The U.S. Congress creates the Office of the Nuclear Waste Negotiator in an effort to open a federal “Monitored Retrievable Storage” (MRS) site for the interim storage of high-level nuclear waste. The dump is proposed to be “temporary”, and the Negotiator is authorized to seek states, counties, or Native American Tribes that might be interested in hosting such a facility in return for compensation. The process is supposed to be voluntary, where initial requests for information and preliminary discussions are

not viewed as a commitment to proceed further, and where a state, county, or tribe's elected representatives only act under authorization of the majority of their people.⁷ There are no specific procedures, however, that the Negotiator must follow.

August 1990 – David Leroy is confirmed by Congress as the first Nuclear Waste Negotiator.

May 1991 - The Negotiator sends letters to states, counties, and every federally recognized tribe in the country, offering hundreds of thousands (and eventually millions) of dollars for first considering, and then ultimately hosting a dump. He follows up this initial introduction letter with a formal Request for Participation and Dialogue.⁸ Of the 50 states and thousands of counties approached, only four counties officially respond,⁹ and submit applications for Phase I study grants. These are Grant County in ND¹⁰, Apache County in NM, San Juan County in UT, and Fremont County in WY (about a 0.1% response rate). Out of the over five hundred federally recognized Tribes approached, over sixty respond. Twenty Tribes apply for Phase I study grants (this is a 3.7% response rate, almost 40 times higher than that of counties).¹¹ (In addition, four more tribes skipped the Phase I stage and proceeded directly to Phase II. See Sept. 1992 below). These Phase I study grants give the applicant \$100,000 to “investigate and learn” about the technical aspects of high-level atomic waste storage.

October 1991 through August 1992 - Objections by State Governors and widespread public opposition prevent the four counties from moving forward in the process. The Negotiator begins to spend almost all of his time approaching and dealing with Tribes. In fact, the MRS siting process comes to center almost exclusively on Native American communities. Seventeen of the twenty Tribes that applied for grants are approved by the Negotiator. Four Tribes whose applications are approved, however, withdraw from the process before the funds are issued (these were the Chickasaw, Sac and Fox¹², Absentee Shawnee, and Caddo Tribes, all in Oklahoma). This reduces the number of Tribes that receive Phase I grants to thirteen.

September 1992 –The Negotiator begins to negotiate and court the thirteen Tribal councils. Eight of the thirteen Tribes that received Phase I study grants drop out of the process. This leaves the Mescalero Apache Tribe (New Mexico), the Prairie Island Community (Minnesota), the Skull Valley Band of Goshutes (Utah), the Eastern Shawnee Tribe (Oklahoma), and the Fort McDermitt Paiute/Shoshone Tribe (Oregon and Nevada). These Tribes and four others that skipped Phase I (Miami Tribe in Oklahoma, Ute Mountain Tribe of Colorado, Tonkawa Tribe of Oklahoma, and the Northern Arapaho Tribe of Wyoming) proceed to apply for Phase II-A grants (which provide \$200,000, and require a more focused investigation of potential sites and local response).

March 1993 - The Mescalero Apache, Skull Valley Goshutes, Tonkawa, and the Fort McDermitt Tribe are the only Tribes that remain interested in the proposed dump. They receive Phase II-A grants.

August 1993 – The Mescalero Apache Tribe leadership moves to take one step further into the process, submitting an application for a Phase II-B grant to the Waste Negotiator, and expressing a desire to begin formal negotiations. A similar application is soon submitted by the Skull Valley Goshutes.

October 1993 – Congress votes to effectively cancel the Office of the Waste Negotiator and the study-grant program¹³. Authorization and funding for the office expires in December 1994.

December 1993 – A private consortium of 33 nuclear utilities forms to pick up where the Negotiator left off, and begins negotiating with both the Mescalero Apaches and Skull Valley Goshutes. The consortium is headed by Northern States Power, which is based in Minnesota.

March 1994 - The consortium begins serious negotiations with the Mescalero Tribe, which has been headed by Wendell Chino for decades. The consortium supports these negotiations by providing the tribal council significant sums of money. Rufina Marie Laws, a Mescalero Apache living on the reservation, opposes the dump and begins to rally people against it, founding a group called Humans Against Nuclear-Waste Dumping (HANDS).

September 1994 - The Tonkawa Tribe in Oklahoma holds a popular referendum on hosting the “temporary” dump. A majority of tribal members reject the proposal.

December 1994 – The consortium and the Mescalero Tribe leadership reach a tentative agreement about a temporary high-level radioactive waste facility. The Tribal Council has been involved in negotiations leading to this agreement for over three years, yet tribal members themselves know little about the proposal. No public meetings have been held. Several members of the Tribe have attempted to call meetings, but the Council has ignored such requests.¹⁴

January 1995 – When the proposal to host the MRS dump comes before the Tribe for a vote, the Mescalero Apaches vote 490 to 362 to deny it. Mescalero Waste-Storage project manager Silas Cochise says the project was defeated by elderly tribal members, apparently unwilling to risk their grandchildren’s future.¹⁵

March 1995 – A petition drive begins, calling for a second referendum. Although tribal officials characterize the petition drive as a grassroots initiative, the move to overturn the referendum is led by the Tribal Housing Director. Many on the Reservation believe that the Tribal council, dissatisfied with the January referendum, is directly backing the effort. The Tribe is torn apart as tribal leaders barrage the tribe’s 3,300 members with letters. Rumors circulate that each tribal member will receive \$2,000 if the MRS referendum passes. As the tribal official heading up the petition drive is also in charge of tribal housing and other support services, many tribal members fear voicing opposition to the dump, lest they suffer retaliation and loss of services. It is reported that the petition gathers enough signatures to force a second vote, though the signature sheets have not been made available to the public. The Mescalero Apache Tribe votes again, this time overturning the earlier January referendum by a vote count of 593 to 372, and approving the dump on their land. Negotiations with the nuclear utility companies continue.¹⁶

April 1995 – Ironically, just after the dump has been “approved” by the Mescalero Tribe, issues emerge amongst the consortium of utilities. Many of the 33 companies have doubts about the necessity of the project, and are unwilling to get financially involved. The consortium of utilities begins to fray as a result. Northern States Power admits that the actual number of companies still committed may be fewer than 16.¹⁷ Opposition to the dump continues on the reservation, and communities along the transportation routes throughout New Mexico begin to oppose it as well.

June 1995 – Scott Northard, Manager of Technical Standards at Northern States Power, submits testimony before the U.S. House of Representatives Commerce Committee’s Subcommittee on Energy & Power, which is holding a series of High-Level Nuclear Waste Policy hearings. Northard states that NSP and 32 other companies, in “partnership” with the Mescalero Apache Tribe, are in the process of designing and licensing a MRS facility. He says this has allowed the industry to avoid “continually facing obstacles in this emotionally and highly charged area” and to proceed “in a more timely [and] cost effective manner”.¹⁸

August 1995 - Concerned with relying too much on one possible “waste solution”, the nuclear industry begins to push in Congress for an interim storage facility on the Nevada Test Site, next door to the proposed Yucca Mountain Repository. (Between 1995 and 2000, the bill is reintroduced each session of Congress and passes one or both Houses, but faces a veto threat by President Clinton. On April 25, 2000, Clinton vetoes such a bill passed by both Houses; on May 2, the Senate sustains Clinton’s veto.)

May 1996 – The Mescalero Tribe breaks off negotiations with the utility consortium led by Northern States Power.¹⁹

December 1996 –Northern States Power reorganizes and forms a smaller consortium of eight utilities. The consortium calls itself Private Fuel Storage (PFS). Leon Bear, disputed Chairman of the Skull Valley Goshute Tribe, signs a preliminary lease with PFS soon after. See “Skull Valley Goshutes/PFS Timeline.”

For more information please contact:

Nuclear Information and Resource Service, 1424 16th Street NW, #404, Washington, DC 20036; Ph. 202.328.0002. www.nirs.org, Kevin Kamps, email: kevin@nirs.org.

Public Citizen, Energy Campaign, 215 Pennsylvania Ave SE, Washington, DC, Ph. +1-202.454.5176. energyactivist.org, Melissa Kemp, email: mkemp@citizen.org

References

¹ The United Church of Christ Commission for Racial Justice Report, Toxic Wastes and Race in the United States: A National Report on the Racial and Socioeconomic Characteristics of Communities Surrounding Hazardous Waste Sites. New York: United Church of Christ, 1987.

² The most complex issue about environmental justice is its meaning, and how such a notion could be implemented. The 1994 Clinton Presidential Executive Order instructs that, “To the greatest extent practicable and permitted by law, and consistent with the principles set forth in the report on the National Performance Review [which Clinton had completed in 1993], each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States...” This sounds simple enough, but in truth it is a much larger and more complex issue. Many people agree, for instance, that it is unjust to specifically target a poor and vulnerable community against their will with a facility that has high adverse human health and environmental impacts. These communities are often not able to economically or politically oppose such a project, and they also frequently find it difficult to mandate and enforce strict regulation if a project is sited there. These communities have virtually no say in the decisions being made, and they often benefit the least from the processes of which they will bear the burden. What complicates the situation is when a company looking to site a facility doesn’t acknowledge the vulnerability of a community or any intention to specifically target it. In some cases, they even say the process is voluntary and beneficial. The community is just “naturally” economically and politically the place that will end up being the site for the facility. These impoverished communities’ governing bodies are only interested in hosting hazardous facilities because of the promised income that would accompany the project. Yet, this dynamic is also environmental injustice. The impoverishment of segments of the population in this country is not an accident, and it is not reflective of some “character” of those segments. Our history is scarred with the systematic and violent oppression of Native American, African American, Latin American and other Peoples of Color and low income levels (see Bury My Heart at Wounded Knee by Dee Brown and A People's History of the United States: 1492-Present by Howard Zinn), and this can not be ignored. Until these significant historical wrongs and the poverty they created are remedied in some way, it is not necessary for a company to publicly acknowledge the vulnerability of a particular community for it to be environmental injustice. Such acknowledgement would only highlight the underlying reality.

³ United States Dept. of Commerce. Economics and Statistics Administration, Bureau of the Census. We the First Americans. Washington: 1993.

⁴ The nuclear fuel chain involves the mining and milling of uranium, and the processing, conversion and enrichment of it into fuel for nuclear reactors and atomic weaponry. Most of the uranium in the U.S. is located on Native American lands. Uranium mines were, and continue to be, on Navajo lands throughout the Grants Mineral Belt (Arizona and New Mexico), on Laguna Pueblo land in New Mexico and tribal lands in the Northwest, as well as on and near Sioux Indian lands in western South Dakota. These mines have taken a particularly hard toll on the communities near them. Native Americans miners, most of whom were never informed of the dangers of uranium, were exposed to its particulate and radioactive gases in the mines for decades. They have suffered large numbers of lung cancer fatalities, a disease almost entirely unknown among the Navajos and Pueblos before uranium mining. Mining debris and mill tailings, as milling often takes place near the mines to minimize transport of waste rock, were put into unlined storage ponds or out in the open air, where often they leached into nearby soil and water. Groundwater that entered into the mines, and thus became contaminated, was regularly pumped out into rivers and lakes. Worsening this already poor situation, when mining ceased in the late 1970's (because of the drop in uranium prices), companies abandoned the mines. They did this without sealing the tunnels, filling the pits, or removing the large piles of radioactive and toxic tailings. As a result, Native American families have lived for many decades in very close proximity to the mines, grazed their livestock there, and had children playing in them. Uranium mine tailings have been used in roads, homes, buildings and school

playgrounds. Serious health effects have been documented (See, for example, Peter H. Eichstaedt, [If You Poison Us: Uranium and Native Americans](#), Red Crane Books, Santa Fe, New Mexico, 1994; [Poison Fire, Sacred Earth: Testimonies, Lectures, Conclusions](#), The World Uranium Hearing, Salzburg, Austria, September, 1992; [This Is My Homeland: Stories of the effects of nuclear industries by people of the Serpent River First Nation and the north shore of Lake Huron](#), edited by Lorraine Rekmans, Keith Lewis and Anabel Dwyer, Serpent River First Nation, 2003; Winona LaDuke, "Nuclear Waste: Dumping on the Indians," [All Our Relations](#), South End Press, 2001.) Some of the extraction and processing facilities for converting milled uranium into nuclear fuel (such as Kerr-McGee's Sequoyah Fuels Plant at Gore, Oklahoma) have also disproportionately impacted Native communities. Nuclear reactors, such as those at Prairie Island, Minnesota and Big Rock Point, Michigan, have been built next to Native American communities or on their sacred sites against the tribes' will. Such exploitation extends back to the dawn of the Atomic Age, such as during the Manhattan Project in the 1940's when the Los Alamos National Laboratory in New Mexico was built near Pueblo Indian communities directly on top of their sacred burial grounds, and when the "Trinity" test – the first atomic weapons explosion in history – was conducted immediately upwind of the Mescalero Apache Indian Reservation in New Mexico, a tribal community targeted 40 to 50 years later for a national high-level radioactive waste dump.

⁵ The National Congress of American Indians (NCAI) is comprised of tribal chairpersons and is the oldest Native American organization in the U.S. Between 1986 and 1990 alone, DOE gave NCAI nearly \$1 million in grants - more than 25% of the organization's total revenue -- to study nuclear waste storage options on Native American reservations. On Nov. 2, 1992, DOE announced it would grant \$1.8 million in "sole source" Cooperative Agreement funding to NCAI for another five years. These monies were granted in order to "provide assistance services to ensure participation of Indian tribal governments in the planning and development of storage and transportation of high-level nuclear waste." Such large sums of money effectively silenced NCAI opposition to the targeting of Native American reservations for high-level radioactive waste dumps. For more information, please refer to Winona LaDuke's "Native Environmentalism," reprinted from Earth Island Journal in Cultural Survival Quarterly, Winter 1994, pages 47 - 48.

⁶ Leroy, David. "Federalism on Your Terms: An Invitation for Dialogue, Government to Government." Address to National Congress of American Indians. San Francisco, CA. 4 Dec. 1991. In this speech, David Leroy argues that Native American Tribes are incredibly suited (even preferable) for storing the country's high-level nuclear waste. He cites the Native American values of long-term health and sustainability as reason for this. Coming on the eve of the 500th anniversary of what many Native Americans and modern historians regard as Columbus's brutal invasion of this hemisphere, quoting the famous Duwamish leader Sealth (more commonly known as Chief Seattle) many times, Leroy's words were regarded as Machiavellian and Orwellian by many of those in attendance. After the speech, one man called Leroy's linkage of the Native ethic and nuclear waste "the granddaddy of all oxymorons," and a Duwamish woman asked Leroy why, if he so liked quoting Sealth, her tribe had been dispossessed of what later became the City of Seattle and still not received full federal recognition (Wahpepah, Wilda. "Tribal Leaders Get N-Waste Pitch". The Oregonian, 5 Dec. 1991).

⁷ These intentions, however, did not always translate into reality. Although voluntary siting has been championed as a procedurally fair alternative to traditional siting policy, it is not necessarily fair. The economic impoverishment of tribes, the tendency for tribal leaders to act without the authorization or even knowledge of their people, and the Bureau of Indian Affairs' ability to interfere in internal tribal affairs arbitrarily and capriciously (as there are no existing regulations or statutory standards defining the appropriate procedures the BIA must follow regarding internal tribal disputes), all mean that this siting process was all too often not fair, nor truly voluntary.

⁸ Leroy, David. "Federalism on Your Terms: An Invitation for Dialogue, Government to Government." Address to National Congress of American Indians. San Francisco, CA. 4 Dec. 1991. Also, Leroy's May 3, 1991 form letter to Indian Tribal Leaders.

⁹ "Federal, State, and Local Governments: 1997 Census of Governments", Bureau of the Census,

<http://www.census.gov/govs/www/cog.html>

¹⁰ The Grant County supervisors were ousted by voters after it was revealed that they had applied for a MRS study grant without their constituents' knowledge or permission. Grant County's involvement with the project was discontinued shortly thereafter.

¹¹ These included: Mescalero Apache Tribe, NM; Chickasaw Nation, OK; Sac and Fox Nation, OK; Prairie Island Nation, MN; Yakima Indian Nation, WA; Skull Valley Goshute Tribe, UT; Alabama Quassarte Tribe, OK; Eastern Shawnee Tribe, OK; Tetlin Village, AK; Lower Brule Sioux, SD; Akhiok-Kaguyak, AK; Apache Development Authority, OK; Absentee Shawnee Tribe, OK; Ponca Tribe, OK; Caddo Tribe, OK; Ft. McDermitt Paiute Shoshone, NV. The Miami Tribe in Oklahoma, Ute Mountain Tribe of Colorado, Tonkawa Tribe of Oklahoma, and the Northern Arapaho Tribe of Wyoming skipped Phase I but proceeded directly to the larger Phase II monetary grants. See September 1992 in the timeline above.

¹² On February 29, 1992, the Sac and Fox tribal members called a special meeting to vote on their application for an MRS. They became the first tribe to vote and reject the storage of nuclear waste on their land. Grace Thorpe was the leading opponent to this dump. She had read about the proposed storage in a newspaper, was outraged that she hadn't been informed about it, and then educated herself and the tribe about the hazards. Of the 75 voters in attendance at a special meeting, 70 voted against it. The five who voted for it were the members of the Tribal Council who had earlier

accepted the money for the MRS study. The Council was ordered by the vote to return the money, and many of the members involved were voted out of office. On August 28th 1993, the Sac and Fox Nation became the first tribe in Oklahoma to declare a "Nuclear Free Zone" (NFZ) on their tribal lands. Grace Thorpe was instrumental to this and went on to help many other tribes across the U.S. resist dumps targeted at their communities.

¹³ To some extent, this came about because of pressure from New Mexico and other states, who were concerned about the growing possibility of a MRS facility (particularly one being sited without their permission, control, or profit). Also, the nuclear power industry and its supporters in Congress had grown impatient with the lack of success of the Negotiator, and instead began to push for "interim storage" of high-level radioactive waste on Western Shoshone Indian land at the Nevada Test Site near Yucca Mountain the very next congressional session. In addition, grassroots Native American activists like Grace Thorpe also played a very important role in the demise of the Negotiator program.

¹⁴ For instance, a petition was signed by 221 Tribal members in July requesting a public meeting to discuss the pros and cons of such an MRS facility. The Tribal Council refused, but tribal members invited speakers and held the meeting anyway on August 12, 1992.

¹⁵ Davis, Tony. "Apaches Send a Signal to Nuclear Industry." High Country News 20 Feb. 1995:

¹⁶ Davis, Tony. "Flip-Flop on Storing Nuclear Waste Shakes up Tribe." High Country News 29 May 1995.

¹⁷ Hanson, Randel. "Indian Burial Grounds for Nuclear Waste." Multinational Monitor Sept. 1995: 6. 19 Apr. 2005.
<<http://www.multinationalmonitor.org/hyper/mm0995.07.html>>

¹⁸ U.S. Congress. House. Committee on Commerce. Subcommittee on Energy and Power. High-Level Nuclear Waste Policy: Interim Storage. Hearing, 28 June 1995. 104th Congress, 1st Session, Serial no. 104-24. Washington, U.S. Govt. Print Off., 1995.

¹⁹ Meersman, Tom. "NSP's talks on nuclear waste break off; Storage sought in New Mexico." Star Tribune [Minneapolis, MN] 19 Apr. 1996.

Consent-Based Siting

From: Theresa Kaufmann [<mailto:kaufterr@icloud.com>]
Sent: Monday, July 25, 2016 10:01 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: Response to IPC

To Whom It May Concern:

I am writing to voice my concerns regarding the storage of nuclear fuel at INL for the following reasons:

1. Spent nuclear fuel should not be consolidated at an "interim" storage site - it should be stored as closely as possible to the source of generation. Transportation is risky -sabotage and accidents are a constant and growing danger.
2. Idaho is a Non-consent state. In 1995 Gov Batt and others signed an agreement banning the storage of nuclear fuel at INL. Then a statewide ballot initiative was passed in 1996 that approved the ban on commercial spent fuel coming to Idaho.
3. Legal standards for nuclear waste disposal have not been adequately developed. The 2012 Blue Ribbon Commission on America's Nuclear Future recommended a new agency be formed; the DOE should not be in charge of the spent fuel and high level waste programs.

I oppose the consolidation of spent nuclear fuel and believe it should be stored at the site of it's generation and not be moved. This problem certainly needs to be solved but this is not the way to do it.

Thank you for your consideration.

Sincerely,
Theresa Kaufmann
4977 Clearview Ave
Pocatello ID 83204
Email: tmrkauf48@gmail.com

Sent from my iPad

WILLIAM R. KEATING
9TH DISTRICT, MASSACHUSETTS



WASHINGTON DC OFFICE
315 CANNON HOUSE OFFICE BUILDING
WASHINGTON, DC 20515
(202) 225-3111

COMMITTEE ON FOREIGN AFFAIRS
SUBCOMMITTEES
RANKING MEMBER
TERRORISM, NONPROLIFERATION, AND TRADE
EUROPE, EURASIA, AND EMERGING THREATS

CAPE AND ISLANDS OFFICE
297 NORTH STREET, SUITE 312
HYANNIS, MA 02601
(508) 771-0666

COMMITTEE ON HOMELAND SECURITY
SUBCOMMITTEES
COUNTERTERRORISM AND INTELLIGENCE
TRANSPORTATION SECURITY

Congress of the United States
House of Representatives
Washington, DC 20515

NEW BEDFORD OFFICE
558 PLEASANT STREET, SUITE 309
NEW BEDFORD, MA 02740
(508) 999-6462

PLYMOUTH OFFICE
2 COURT STREET
PLYMOUTH, MA 02360
(508) 746-9000

June 2, 2016

U.S. Department of Energy
Office of Nuclear Energy
1000 Independence Ave SW.
Washington, DC 20585

ATTN: Response to IPC

To Whom It May Concern:

I am writing today in support of the Department of Energy's plan to develop potential national nuclear waste storage facilities through a consent-based model. As the Member of Congress representing the town of Plymouth, we are hosting almost 4000 spent fuel rod assemblies onsite at Pilgrim Nuclear Power Station. The operator of this plant, Entergy, is planning to move these fuel rods from wet pool storage to dry cask storage. However, current plans do not call for the spent fuel to be removed to the dry casks for decades.

Given that spent fuel in the storage pool is much less safe than spent fuel stored in dry casks, the people of my district are very eager for the Department of Energy to explore a national central storage facility, or facilities, and to develop a transportation plan that will provide for the safe movement of this waste from Plymouth to these proposed sites. The people of Southeastern Massachusetts, including Plymouth, the South Shore and Cape Cod and the Islands, have lived with nuclear waste as a reality for over 45 years, since the plant began operations in the early 1970's. Many believe that the failure to execute the completion of the Yucca Mountain storage site represents a failure by the federal government to fulfill the promise it made to host communities such as Plymouth to provide a national solution to the national problem of locally stored, accumulating nuclear waste.

It is my fervent hope that, through the consent-based process, the DOE can identify several potential host locations that would have the appropriate geographical, topographical and demographic conditions that would allow for the siting of nuclear waste storage facilities. I would certainly urge the Department to pursue this siting process with sufficient regard for the environmental impact that the placement of a waste storage facility would have, not only on the

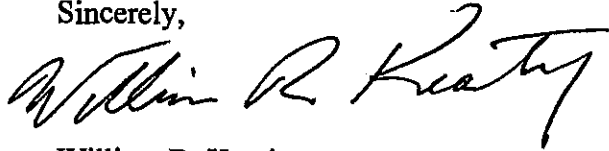
locality where the facility is proposed, but also on residents and communities within a reasonable distance whose natural resources may be affected by the presence of nuclear waste.

In addition, it is important to acknowledge that any nuclear waste destined for a central storage site must be transported through multiple states and localities with varying jurisdictional responsibilities for clean air, clean water, infrastructure integrity and general public safety. Therefore, I support the development of a transportation protocol that would maximize public safety for all citizens who could potentially be affected by any calamity that might befall a shipment of nuclear waste.

I look forward to working with constituents here in Southeastern Massachusetts to ensure that the decommissioning of Pilgrim Nuclear Power Station is conducted safely and expeditiously, so that the property may be returned to full productive use as soon as possible, given its long history as the host site for a nuclear power plant. To that end, I remain hopeful that the consent-based siting model that the Department is pursuing will result in appropriate sites for long-term storage of the great amounts of nuclear waste that has accumulated, and that are projected to accumulate over the coming decades, so that communities such as Plymouth will not be required to bear the burden of this waste in perpetuity.

Thank you for the opportunity to share these comments.

Sincerely,

A handwritten signature in black ink, appearing to read "William R. Keating". The signature is fluid and cursive, with a large, stylized initial "W".

William R. Keating
Member of Congress

Congress of the United States

House of Representatives

Washington, DC 20515-2109

OFFICIAL BUSINESS

PRINTED ON RECYCLED PAPER

Jim R. Keating

JUN - 8 2015

M.C.

MAIL SANITIZED

U.S. Department of Energy
Office of Nuclear Energy..
1000 Independence Ave SW.
Washington, DC 20585

11111111111111111111

Standley, Erica

From: Honaker, Sarah (CONTR)
Sent: Thursday, June 09, 2016 9:32 AM
To: Johnsen, Steven (MA)
Cc: Standley, Erica
Subject: Response to IPC
Attachments: 2016_06_09_09_30_29.pdf

Good Morning,

This action came through the mail can you please assign this to NE?

Thank you,

Sarah Honaker
Correspondence Control Center Lead
Office of Nuclear Energy (NE-1)
Office Telephone: 202-586-6441
Email: sarah.honaker@hq.doe.gov

Consent-Based Siting

From: Harry Kershner [<mailto:hkershner35@yahoo.com>]
Sent: Thursday, July 28, 2016 3:39 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: Re: Nuclear Waste

DOE must cease the continued production of nuclear waste.

It must store it at the site of generation through Hardened On-Reactor-Site Storage (HOSS).

Harry Kershner
9322 N Oswego Ave
Portland, OR 97203

Consent-Based Siting

From: William Kinsella [mailto:wjkinsel@ncsu.edu]
Sent: Sunday, July 31, 2016 9:28 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: Response to IPC

Please see the attached document with my comments, which are also included in this message. Thank you for this opportunity to comment.

To: consentbasedsiting@hq.doe.gov
From: William J. Kinsella, wjkinsel@ncsu.edu
Subject: Response to IPC
Date: 31 July 2016

Dear Department of Energy Staff:

I am responding to the *Invitation for Public Comment to Inform the Design of a Consent-Based Siting Process for Nuclear Waste Storage and Disposal Facilities* published in the *Federal Register*, vol. 80, n. 246, 23 December 2015.

As context for my comments, I am a social scientist and a professor at a major U.S. research university, and my research has examined questions of public communication in nuclear energy and environmental contexts for more than two decades. I have also served with the DOE's site-specific advisory board for the Hanford site, and as Vice-chair of the board's Public Involvement and Communication Committee. I offer the comments below as an individual, but they are informed by these professional and civic experiences.

To ensure that my comments are understood within the scope of the IPC, I am responding directly to the questions DOE has provided.

How can the Department ensure that the process for selecting a site is fair?

Consent based siting seeks to ensure fairness in the distribution of costs, benefits, risks and responsibilities now and in future generations. How, in your view, can fairness be best assured by the process for selecting a site?

The integrated waste management system envisioned by DOE would comprise not one site, but potentially many, and not all of these are localized or bounded. Understood in a truly integrated

sense, the system includes not only waste storage and disposal sites, but also all transport routes (road, rail, and water) that could potentially serve those facilities (initially or at times far into the future). The system also includes all populations, communities, and ecosystems that might be impacted by waste storage, transportation, or disposal at any potential site and along any potential route, including downwind and downstream locations. Potential health, environmental, economic, and social, and cultural risks must all be identified and considered. Accordingly, the site selection process must rise to the very demanding challenge of incorporating voices from all of these “sites.”

In the temporal dimension, the process must also represent future generations of stakeholders (human and ecological) across the full timespan of radiological and other toxic hazards.

Another temporal question involves timeliness: when it is appropriate to begin the site selection process, and when “closure” for that process can be claimed. In this regard, I am concerned that the DOE is starting this process too soon, before there is clarity on important institutional elements. Although the DOE has embraced the Blue Ribbon Commission’s (BRC’s) support for consent-based siting, this IPC appears to contradict the BRC’s finding that “A new waste management and disposal organization (MDO) is needed to provide the stability, focus, and credibility to build public trust and confidence” (DOE, 2013). Until there is clarity regarding the form, funding, constitution, and responsibilities of this “new organizational entity,” it seems premature for DOE to begin the process, for at least two reasons. First, public trust and confidence in the process depend on who is conducting it, and there is considerable public skepticism directed at the DOE in this regard. Second, what might be learned in a public consultation process begun today may not be well-suited to conditions that could prevail if and when a new MDO begins its work.

What models and experience should the Department use in designing the process?

The challenges and opportunities of site selection drive us to continue to learn from previous or ongoing examples. From your perspective, what experience and models do you think are the most relevant to consider and draw from in designing the process for selecting a site?

As stated above, it’s not clear that the Department should be the organization designing the process. The organization that ultimately does so (whether DOE or another entity) may benefit from considering the model provided by the DOE’s system of site-specific advisory boards (SSABs) associated with the production sites across the nuclear weapons complex. Such a system of advisory boards, however, could only be one element in a much larger infrastructure for public engagement.

Empowering local communities to obtain their own, independent technical expertise through a mechanism such as the EPA’s Technical Assistance Grants (see <https://www.epa.gov/superfund/technical-assistance-grant-tag-program>) might also be valuable.

Objective and disinterested professional facilitators, with demonstrated skills and clear records of independence, should be retained to design and implement public meetings.

Who should be involved in the process for selecting a site, and what is their role?

The Department believes that there may be a wide range of communities who will want to learn more and be involved in selecting a site. Participation in the process for selecting a site carries important responsibilities. What are your views on who should be involved and the roles participants should have?

In light of the virtually unlimited geographic and temporal scope of the risks involved, everything possible should be done, well in advance of beginning the next round of public engagement, to identify, reach, and incorporate the voices of the broadest possible range of participants. Beyond simply listening to and recording those participants' comments, the process should ensure and demonstrate that those comments have true influence on decision outcomes.

Rather than seeking out respondents based on potential receptiveness to the idea of hosting a waste storage or disposal site, the process should operate in a more neutral manner. I would recommend publicizing the concept of an integrated waste management system as broadly as possible, with care to avoid approaches that may be perceived as "marketing" or "promotion" for the concept. Go slowly, and reach out as broadly as possible with the goal of starting a conversation rather than selling a preconceived package.

What information and resources do you think would facilitate your participation?

The Department is committed to ensuring people and communities have sufficient information and access to resources for engaging fully and effectively in siting. What information and resources would be essential to enable you to learn the most about and participate in the siting process?

My own participation will depend on factors that I believe will also affect many concerned individuals, groups, and communities. Your question mentions information and access to resources, and of course those elements are important. However, I believe the most fundamental factors are less tangible, although they are typically described as "confidence" and "trust." My responses to the earlier questions, above, suggest some of the indicators that would inform my own sense of trust and confidence.

What else should be considered?

These questions are a starting point for discussion on the design of the consent-based siting process. The Department would like to hear about and discuss any related questions, issues, and ideas that you think are important.

I have no further comments for now, and I thank you for this opportunity to comment.

References

DOE (2013). Strategy for the Management and Disposal of Used Nuclear Fuel and High-Level Radioactive Waste.

To: consentbasedsiting@hq.doe.gov
From: William J. Kinsella, wjkinsel@ncsu.edu
Subject: Response to IPC
Date: 31 July 2016

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References

DOE (2013). Strategy for the Management and Disposal of Used Nuclear Fuel and High-Level Radioactive Waste.

Consent-Based Siting

From: Frederick Klein [mailto:franz_clone@mindspring.com]
Sent: Sunday, July 31, 2016 9:04 AM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: Consent-based siting public comment

People should not, as they are now, without any input in the process, be forced to live near a nuclear waste dump, or move if they choose not to do so. Maybe, if enough communities firmly, stentorianly, proclaim they don't want these things, maybe then will the necessary transition to renewable energy proceed at something which approaches an acceptable rate.

Frederick Klein

02144

From: David Kraft [mailto:neis@neis.org]
Sent: Sunday, July 31, 2016 1:30 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: Response to IPC

**FINAL COMMENTS ON DOE’S “CONSENT-BASED” SITING OF
RADIOACTIVE WASTE FACILITIES**

30 July, 2016

David A. Kraft, Director, NEIS

Nuclear Energy Information Service (NEIS) is a Chicago-based safe-energy advocacy anti-nuclear environmental organization. We represent over 600 individuals and organizations in Illinois. Illinois is home to the most reactors (14) and high-level radioactive waste (HLRW) of any state in the U.S.

NEIS participated as a panelist to the DOE’s consent-based siting focus group in Chicago on March 29, 2016. We question the very legitimacy of this process. All the while DOE is running around the country seeking “public comment” – and receiving sizable negative commentary on HLRW issues everywhere – the nuclear industry is in the process of establishing waste facilities in the Southwest in Texas/New Mexico region absent the input from these proceedings. While we recognize, and DOE as much admitted during the Chicago session in large and small groups that it has no Congressionally mandated authority or responsibility driving this process, no dedicated funding to conduct it, and that its outcomes are therefore not legally binding, nor satisfying the requirements of a formal NEPA-related proceeding, NEIS believes it important to contribute to this unsolicited public discourse, despite the undermining hypocrisy of the nuclear industry’s activities in Texas and New Mexico.

We submit the following as our final comments on the matter of “consent-based siting” of HLRW.

I. THE NATURE OF CONSENT

ATTRIBUTES OF CONSENT:

- an act of reason and deliberation
- a party possesses and exercises sufficient mental capacity to make an intelligent decision
- assumes a physical power to act and a reflective, determined, and *unencumbered* exertion of these powers
- submission due to other factors (e.g., fear, terror, lack of power, exploitation of financial hardship) is not real consent; it is duress
- contractual aspects involved:
 - it is a *binding* contract between parties once agreed upon
 - In contracts, an agreement may be reached only if there has been *full disclosure* by *both* parties of everything each party knows which is significant to the agreement
 - While the actual attributes of the parties may be unequal, there is parity between/among them in the final agreement
- **INFORMED CONSENT (legal definition) is: *Assent to permit an occurrence that is based on a complete disclosure of facts needed to make the decision intelligently, such as knowledge of the risks entailed or alternatives.***

IMPLICATIONS OF CONSENT:

- It is ultimately a “power” relationship
- One party has something the other party needs or wants, and the “wanting” party can’t just take it away
- The agreement will be made based on *full disclosure* of the *all* facts and the consequences
- *Just, full and equitable compensation* will be paid by one party to the other in exchange for the object/agreement desired.
- *Both* parties have obligations, responsibilities and recourse for breach of contract or fraud (see attached legal definitions)

II. REPUTATION AND TRACK RECORD MATTERS: RELEVANT EXAMPLES OF SORRY HISTORY OF GOVERNMENT/INDUSTRY SEEKING “CONSENT”:

- U.S. Government violation of the Treaty of Ruby Valley of 1863, creating the nuclear weapons test range in Nevada, and later on, Yucca Mountain HLRW repository over the objections and refusal of the Western Shoshone First Nation. (1863 to present day)
- Industry and government activity to “persuade” the impoverished Skull Valley Band of Goshute Indians in Utah to create “Private Fuels Storage Facility ” for storing 40,000 tons of spent reactor fuel. (2004-2007)
- DOE’s/NRC’s existing “Credibility Gap”:
 - numerous instances of breach of contract, regulation, or professionally advocated recommendations:
 - Federal agencies such as DOE and NRC routinely ignore and are not interested in implementing the first two primary “rules” of proper and professional waste management: 1.) *don’t make it* in the first place; and 2.) *minimize the amounts* you do make.
 - “bait and switch” of reactor operating licenses: communities signed on for a 40 year reactor operating license; now have to deal with 20 and possibly 40 year extensions, and/or becoming *de facto* HLRW spent-fuel storage communities against their will, and without compensation
 - U.S. government failing to open a permanent deep-geological repository in 1997, creating *de facto* HLRW dumps in reactor communities after reactors close
 - BRC advised removing DOE from the process and instituting a new waste management entity; *yet, DOE is convening today’s meeting*
 - numerous instances of soliciting and ignoring public and professional comment:
 - suggestions to implement HOSS – hardened onsite storage of HLRW -- denied by NRC and industry since 2002; yet today, we now face nuclear terrorism through threats to nuclear reactors in Belgium and in war zones in Ukraine
 - NRC “waste confidence” rule process: the overwhelming public sentiment in testimony was that the public has no confidence in the NRC rule, and that it should be abandoned. NRC did the opposite.
 - Many Fukushima “lessons learned” – and ignored by NRC, in spite of recommendations to the contrary by its own professional staff

III. CURRENT REALITY:

- This is a nuclear industry crisis and need, not the U.S. government's, nor the U.S. public's
- The nuclear industry seeks a "solution" to legitimize the creation of more waste, not to solve the current or future waste problems.
- Both government and industry have a *long* and *consistent* history of seeking and then ignoring the public's input and interests when convenient for them, or when it conflicts with their narrow vested interests.
- **CONCLUSION:** An enormous "credibility gap" exists with both government and the nuclear industry, one that must be fixed before any new radwaste siting can be contemplated.

IV. SOME PRE-CONDITIONS BEFORE ANY FUTURE CONSENT CAN BE REACHED OR CONSIDERED LEGITIMATE:

- **FIX THE CREDIBILITY GAP:** Keep your word on all previous commitments, treaties, contracts, laws, regulations, etc. *first – before any other new radioactive waste facilities are proposed or sited.*
- **COMPENSATE AND REMEDIATE COMMUNITIES** already affected by nuclear contamination and presence: e.g., tribes by 10,000 abandoned uranium mines, orphaned HLRW waste communities like Zion, GEMO, and Big Rock Point, contaminated fuel chain facility communities like Metropolis, Piketon, Barnwell etc., previous waste sites like Sheffield, West Valley, and West lake Landfill, etc.
- **"INFORMED CONSENT": YES;** "Bribery, duress, bait-and-switch": no. Under no circumstances will an alleged "consent" not meeting the conditions and characteristics described in section one above be considered legitimate or valid.
- **NO means NO;** exemption from eminent domain proceedings.
- Begin to **"know the unknowable"** – fully disclose all technical aspects of the proposed technology to be used, geology, health physics, transportation, and all aspects of a facility that would have a health, environmental or economic impact on the community, now and over the future of the potential site facility, as a basis of approaching the conditions for "informed consent"
- **FINANCIAL SUPPORT** must be made available to communities to retain *independent team* of experts (law, technology, radiation health, etc.) of their choosing to represent their interests, to approach the conditions required for "informed consent".
- **LOCAL CONTROL** to set safety standards they deem necessary – requires act of Congress to pre-empt the NRC, et al.
- **INDEPENDENT BASELINE HEALTH STUDIES** done by professionals of the local community's choosing *prior* to establishment of any facilities.
- **COMPENSATION** to community commensurate for helping solve one of the nuclear industry's and U.S. government's most pressing problems; should be *large, fair, and intergenerational*; it should also

include *plans for a “just transitions” termination fund* for when active site operations cease; and funds for *long-term health and environmental monitoring* for as long as the wastes are present.

- *SEVERE PENALTIES* for government and industry violation or non-compliance: e.g., \$1 million per day until contract agreements are restored or terminated.
- Mechanism established to *prevent “company town” mentality* from compromising the safety-first attitude towards the mission of managing HLRW.

V. ADDITIONAL COMMENTS BY BOARD MEMBERS OF NEIS:

NEIS Board members attended five of the DOE’s Consent-Based Siting focus groups around the country. Some attended more than one. They are uniquely qualified to make the additional comments about both the issues relating to consent, and on the DOE’s process:

Kathleen Rude, Board member; attended Chicago and Denver session:

These hearings on informed consent are inherently flawed. They presuppose that centralized interim storage is going to happen, that it has legal standing and that it has public support. I do not consent to centralized interim storage. I do not consent to nuclear waste being transported all over the country to interim storage facilities. I do not agree that centralized interim storage is the next best step in dealing with storage and oversight on nuclear waste.

Informed consent requires that the people being potentially impacted have all the facts, presented in an unbiased way, have the time, ability, capacity and inclination to be able to understand the information being shared with them and to understand the consequences. The communities being targeted for interim storage are already under stress financially, economically and emotionally. It would be near impossible to have truly informed consent on the siting of consolidated interim storage.

Consolidated interim storage is an extremely dangerous proposition that will increase the risk of radioactive exposure across the entire country. Keep the nuclear waste on site where it's being generated, provide the best technology to keep it as safe as possible and STOP MAKING MORE NUCLEAR WASTE!

Stephanie Bilenko, Board member; attended Atlanta session:

:

Most nuclear power sites can be considered nuclear waste dumps and that is where the waste should stay. Radioactive waste is not a minor matter although proponents of nuclear power believe otherwise. It's the most critical of half a dozen disastrous flaws in the shopworn 1950s- era fantasy of limitless nuclear power still being retailed by the nuclear industry's few remaining cheerleaders. A nuclear fission reactor produces wastes so lethal they have to be isolated from the rest of existence for a quarter of a million years. In theory, containing high level waste is possible in practice, Murphy's Law is the safer guide. In the real world, it's certain that sooner or later, things go wrong.

By accident or cussedness of natures, that waste is going to leak into the biosphere, and once that happens, anyone and anything that comes into contact with even a few milligrams of it will suffer a miserable death. The more nuclear power we generate now, the more of this ghastly gift we'll be stockpiling for the people of the far future. It is a basic concept of morality that each of us ought to leave the world a better place for those who come after us. If we know better we have to do better.

One of the essential boundaries of appropriate tech is the boundary between the kinds of matter you can change with tools you have on hand, and the kinds you can't, and if you can't change it into something safe, it's a bad idea to produce it in the first place. It really is that simple. If you can't transform it, don't produce it.

The time is NOW for Wind, Wave, Solar, and Geothermal.

Wrap your mind 'round Fukushima

It's no time to be a dreamer

It's no time to be a schemer

Google Fukushima!

Jan Boudart, Board member; attended Chicago, Sacramento and Minneapolis sessions:

The Federal Government, which owns the type of high-level nuclear waste known as "spent fuel" must create a new agency to deal with HLNW and only HLNW. The encounter with Waste Control Specialists of Andrews, Texas illustrates this point:

At the DOE's Consent-Based Siting meeting in Minneapolis there was a lawyer, Karen Hadden, from the western part of Texas. She was angry because she was sure that WCS (Waste Control Specialists) had already

been selected to serve as a consolidated interim storage recipient, ready to received shipments of HLNW from all over the country. The website <http://www.wcstexas.com> seems to confirm what Ms Hadden was saying:

WCS - Home | Waste Control Specialists

www.wcstexas.com

WCS Files License Application with NRC. WCS Files License Application with Nuclear Regulatory Commission to Operate a Consolidated Interim Storage Facility for Used ...

She pointed out that the WCS application was inadequate and the NRC had to ask for a great deal of missing information. This was to emphasize the point that if they couldn't handle the paperwork, how could they handle the actual waste?

When she insisted that WCS had already been chosen, John Kotek insisted right back at her that there have been no selections of any community.

WCS is not a community; it is a limited liability company*. It is not an elected body that represents the people. It represents itself as a business, not the people who live in the area and would be affected by radiation, potential accidents, fires, etc. from the “used fuel” — never called high level nuclear waste.

But www.WCSstorage.com gives the impression that they are ready and expecting to be chosen for interim storage.

The rub here is that the application for CIS was submitted to the NRC, not the DOE. So who owns the waste, the DOE or the NRC? Who controls whether it will have interim storage and where that would be?

This problem emphasizes the need for a separate, federal, TRUSTED, new agency to take charge of the HLNW. The DOE/NRC mish mash in connection with Waste Control Specialists exposes what might be agency rivalry at the federal level.

Seeking a Consent Based Siting design is not the process that it seems to be.

At the beginning of the C-BS meetings, Secretary Moniz "admits" that we need to solve the problem of spent fuel waste in order to continue to grow our nuclear power fleet of reactors.

But person after person who commented at the DOE C-BS meetings asked, why figure out what to do with it when there's always more coming down the pike? All the informed anti-nuclear people emphasized that we must quit making it; then and only then, can we consider ways of dealing with the waste.

So the controversy arose with most speakers that the people who called the meetings, the DOE, were in rock bottom, fundamental disagreement with the people they were trying to appeal to: The government (Sec'y Moniz) says we have to continue making new NPPs; the people say, Stop making HLNW, then talk to us about a solution.

I am of the opinion that the DOE (Sec'y Moniz) and the NRC will not get consensus until they agree to stop making HLNW.

Linda Lewison, Board Secretary:

Comments on "so called CONSENT based" sites for "so-called interim storage" of irradiated fuel at centralized or consolidated sites- Away From Reactor storage (AFRs), Monitored Retrievable Storage (MRSs) and (the newest name and acronym for the same), Consolidated Interim Storage (CIS).

The DOE "so called consolidated interim storage" pilot plan does not comply with many Nuclear Waste Policy Act (NWPA) legal and critical safety requirements.

Pending the establishment of a permanent repository, interim storage can best be accomplished through the safest dry storage of irradiated (or spent) fuel at the site of generation.

I do NOT support ANY FORM OF consenting to CIS facilities. I OPPOSE THEM—and this applies to waste storage anywhere I oppose any type of centralized interim storage.

Until a permanent repository is operating, the law prohibits so-called "interim" storage sites, thus I am opposed to any invitation to communities to "volunteer" or consent to illegal facilities.

Until such time as these technical issues are resolved, no informed communities would agree to host irradiated/"spent" nuclear fuel waste.

--

David A. Kraft, Director

NEIS

3411 W. Diversey #16

Chicago, IL 60647

(773)342-7650

neis@neis.org

www.neis.org

SKYPE address: davekhamburg

NEIS is a member of [EarthShare Illinois](#)

No more Chornobyls! No more Fukushimas!

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Nuclear Energy Information Service

Illinois' Nuclear Power Watchdog since 1981

Office and Mail: 3411 W. Diversey Avenue, #16, Chicago, IL 60647-1245
(773)342-7650 www.neis.org neis@neis.org

FINAL COMMENTS ON DOE'S "CONSENT-BASED" SITING OF RADIOACTIVE WASTE FACILITIES

30 July, 2016

David A. Kraft, Director, NEIS

Nuclear Energy Information Service (NEIS) is a Chicago-based safe-energy advocacy anti-nuclear environmental organization. We represent over 600 individuals and organizations in Illinois. Illinois is home to the most reactors (14) and high-level radioactive waste (HLRW) of any state in the U.S.

NEIS participated as a panelist to the DOE's consent-based siting focus group in Chicago on March 29, 2016. We question the very legitimacy of this process. All the while DOE is running around the country seeking "public comment" – and receiving sizable negative commentary on HLRW issues everywhere – the nuclear industry is in the process of establishing waste facilities in the Southwest in Texas/New Mexico region absent the input from these proceedings. While we recognize, and DOE as much admitted during the Chicago session in large and small groups that it has no Congressionally mandated authority or responsibility driving this process, no dedicated funding to conduct it, and that its outcomes are therefore not legally binding, nor satisfying the requirements of a formal NEPA-related proceeding, NEIS believes it important to contribute to this unsolicited public discourse, despite the undermining hypocrisy of the nuclear industry's activities in Texas and New Mexico.

We submit the following as our final comments on the matter of "consent-based siting" of HLRW.

I. THE NATURE OF CONSENT

ATTRIBUTES OF CONSENT:

- an act of reason and deliberation
- a party possesses and exercises sufficient mental capacity to make an intelligent decision
- assumes a physical power to act and a reflective, determined, and ***unencumbered*** exertion of these powers
- submission due to other factors (e.g., fear, terror, lack of power, exploitation of financial hardship) is not real consent; it is duress
- contractual aspects involved:
 - it is a ***binding*** contract between parties once agreed upon
 - In contracts, an agreement may be reached only if there has been ***full disclosure*** by ***both*** parties of everything each party knows which is significant to the agreement
 - While the actual attributes of the parties may be unequal, there is parity between/among them in the final agreement
- **INFORMED CONSENT (legal definition) is: *Assent to permit an occurrence that is based on a complete disclosure of facts needed to make the decision intelligently, such as knowledge of the risks entailed or alternatives.***

IMPLICATIONS OF CONSENT:

- It is ultimately a “power” relationship
- One party has something the other party needs or wants, and the “wanting” party can’t just take it away
- The agreement will be made based on **full disclosure** of the **all** facts and the consequences
- **Just, full and equitable compensation** will be paid by one party to the other in exchange for the object/agreement desired.
- **Both** parties have obligations, responsibilities and recourse for breach of contract or fraud (see attached legal definitions)

II. REPUTATION AND TRACK RECORD MATTERS: RELEVANT EXAMPLES OF SORRY HISTORY OF GOVERNMENT/INDUSTRY SEEKING “CONSENT”:

- U.S. Government violation of the Treaty of Ruby Valley of 1863, creating the nuclear weapons test range in Nevada, and later on, Yucca Mountain HLRW repository over the objections and refusal of the Western Shoshone First Nation. (1863 to present day)
- Industry and government activity to “persuade” the impoverished Skull Valley Band of Goshute Indians in Utah to create “Private Fuels Storage Facility ” for storing 40,000 tons of spent reactor fuel. (2004-2007)
- DOE’s/NRC’s existing “Credibility Gap”:
 - numerous instances of breach of contract, regulation, or professionally advocated recommendations:
 - Federal agencies such as DOE and NRC routinely ignore and are not interested in implementing the first two primary “rules” of proper and professional waste management: 1.) **don’t make it** in the first place; and 2.) **minimize the amounts** you do make.
 - “bait and switch” of reactor operating licenses: communities signed on for a 40 year reactor operating license; now have to deal with 20 and possibly 40 year extensions, and/or becoming *de facto* HLRW spent-fuel storage communities against their will, and without compensation
 - U.S. government failing to open a permanent deep-geological repository in 1997, creating *de facto* HLRW dumps in reactor communities after reactors close
 - BRC advised removing DOE from the process and instituting a new waste management entity; **yet, DOE is convening today’s meeting**
 - numerous instances of soliciting and ignoring public and professional comment:
 - suggestions to implement HOSS – hardened onsite storage of HLRW -- denied by NRC and industry since 2002; yet today, we now face nuclear terrorism through threats to nuclear reactors in Belgium and in war zones in Ukraine

- NRC “waste confidence” rule process: the overwhelming public sentiment in testimony was that the public has no confidence in the NRC rule, and that it should be abandoned. NRC did the opposite.
- Many Fukushima “lessons learned” – and ignored by NRC, in spite of recommendations to the contrary by its own professional staff

III. CURRENT REALITY:

- This is a nuclear industry crisis and need, not the U.S. government’s, nor the U.S. public’s
- The nuclear industry seeks a “solution” to legitimize the creation of more waste, not to solve the current or future waste problems.
- Both government and industry have a **long** and **consistent** history of seeking and then ignoring the public’s input and interests when convenient for them, or when it conflicts with their narrow vested interests.
- **CONCLUSION:** An enormous “credibility gap” exists with both government and the nuclear industry, one that must be fixed before any new radwaste siting can be contemplated.

IV. SOME PRE-CONDITIONS BEFORE ANY FUTURE CONSENT CAN BE REACHED OR CONSIDERED LEGITIMATE:

- **FIX THE CREDIBILITY GAP:** Keep your word on all previous commitments, treaties, contracts, laws, regulations, etc. **first – before any other new radioactive waste facilities are proposed or sited.**
- **COMPENSATE AND REMEDIATE COMMUNITIES** already affected by nuclear contamination and presence: e.g., tribes by 10,000 abandoned uranium mines, orphaned HLRW waste communities like Zion, GEMO, and Big Rock Point, contaminated fuel chain facility communities like Metropolis, Piketon, Barnwell etc., previous waste sites like Sheffield, West Valley, and West lake Landfill, etc.
- **“INFORMED CONSENT”:** **YES;** “Bribery, duress, bait-and-switch”: no. Under no circumstances will an alleged “consent” not meeting the conditions and characteristics described in section one above be considered legitimate or valid.
- **NO means NO;** exemption from eminent domain proceedings.
- Begin to **“know the unknowable”** – fully disclose all technical aspects of the proposed technology to be used, geology, health physics, transportation, and all aspects of a facility that would have a health, environmental or economic impact on the community, now and over the future of the potential site facility, as a basis of approaching the conditions for “informed consent”
- **FINANCIAL SUPPORT** must be made available to communities to retain **independent team** of experts (law, technology, radiation health, etc.) of their choosing to represent their interests, to approach the conditions required for “informed consent”.
- **LOCAL CONTROL** to set safety standards they deem necessary – requires act of Congress to preempt the NRC, et al.
- **INDEPENDENT BASELINE HEALTH STUDIES** done by professionals of the local community’s choosing **prior** to establishment of any facilities.

- **COMPENSATION** to community commensurate for helping solve one of the nuclear industry's and U.S. government's most pressing problems; should be *large, fair, and intergenerational*; it should also include *plans for a "just transitions" termination fund* for when active site operations cease; and funds for *long-term health and environmental monitoring* for as long as the wastes are present.
- **SEVERE PENALTIES** for government and industry violation or non-compliance: e.g., \$1 million per day until contract agreements are restored or terminated.
- Mechanism established to *prevent "company town" mentality* from compromising the safety-first attitude towards the mission of managing HLRW.

V. ADDITIONAL COMMENTS BY BOARD MEMBERS OF NEIS:

NEIS Board members attended five of the DOE's Consent-Based Siting focus groups around the country. Some attended more than one. They are uniquely qualified to make the additional comments about both the issues relating to consent, and on the DOE's process:

Kathleen Rude, Board member; attended Chicago and Denver session:

These hearings on informed consent are inherently flawed. They presuppose that centralized interim storage is going to happen, that it has legal standing and that it has public support. I do not consent to centralized interim storage. I do not consent to nuclear waste being transported all over the country to interim storage facilities. I do not agree that centralized interim storage is the next best step in dealing with storage and oversight on nuclear waste.

Informed consent requires that the people being potentially impacted have all the facts, presented in an unbiased way, have the time, ability, capacity and inclination to be able to understand the information being shared with them and to understand the consequences. The communities being targeted for interim storage are already under stress financially, economically and emotionally. It would be near impossible to have truly informed consent on the siting of consolidated interim storage.

Consolidated interim storage is an extremely dangerous proposition that will increase the risk of radioactive exposure across the entire country. Keep the nuclear waste on site where it's being generated, provide the best technology to keep it as safe as possible and STOP MAKING MORE NUCLEAR WASTE!

Stephanie Bilenko, Board member; attended Atlanta session:

:
Most nuclear power sites can be considered nuclear waste dumps and that is where the waste should stay. Radioactive waste is not a minor matter although proponents of nuclear power believe otherwise. It's the most critical of half a dozen disastrous flaws in the shopworn 1950s- era fantasy of limitless nuclear power still being retailed by the nuclear industry's few remaining cheerleaders. A nuclear fission reactor produces wastes so lethal they have to be isolated from the rest of existence for a quarter of a million years. In theory, containing high level waste is possible in practice, Murphy's Law is the safer guide. In the real world, it's certain that sooner or later, things go wrong.

By accident or cussedness of natures, that waste is going to leak into the biosphere, and once that happens, anyone and anything that comes into contact with even a few milligrams of it will suffer a miserable death. The more nuclear power we generate now, the more of this ghastly gift we'll be stockpiling for the people of the far future. It is a basic concept of morality that each of us ought to leave the world a better place for those who come after us. If we know better we have to do better.

One of the essential boundaries of appropriate tech is the boundary between the kinds of matter you can change with tools you have on hand, and the kinds you can't, and if you can't change it into something safe, it's a bad idea to produce it in the first place. It really is that simple. If you can't transform it, don't produce it.

The time is NOW for Wind, Wave, Solar, and Geothermal.
Wrap your mind 'round Fukushima
It's no time to be a dreamer
It's no time to be a schemer
Google Fukushima!

Jan Boudart, Board member; attended Chicago, Sacramento and Minneapolis sessions:

The Federal Government, which owns the type of high-level nuclear waste known as "spent fuel" must create a new agency to deal with HLNW and only HLNW. The encounter with Waste Control Specialists of Andrews, Texas illustrates this point:

At the DOE's Consent-Based Siting meeting in Minneapolis there was a lawyer, Karen Hadden, from the western part of Texas. She was angry because she was sure that WCS (Waste Control Specialists) had already been selected to serve as a consolidated interim storage recipient, ready to receive shipments of HLNW from all over the country. The website <http://www.wcstexas.com> seems to confirm what Ms Hadden was saying:

WCS - Home | Waste Control Specialists
www.wcstexas.com
WCS Files License Application with NRC. WCS Files License Application with Nuclear Regulatory Commission to Operate a Consolidated Interim Storage Facility for Used ...

She pointed out that the WCS application was inadequate and the NRC had to ask for a great deal of missing information. This was to emphasize the point that if they couldn't handle the paperwork, how could they handle the actual waste?

When she insisted that WCS had already been chosen, John Kotek insisted right back at her that there have been no selections of any community.

WCS is not a community; it is a limited liability company*. It is not an elected body that represents the people. It represents itself as a business, not the people who live in the area and would be affected by radiation, potential accidents, fires, etc. from the "used fuel" — never called high level nuclear waste. But www.WCSstorage.com gives the impression that they are ready and expecting to be chosen for interim storage.

The rub here is that the application for CIS was submitted to the NRC, not the DOE. So who owns the waste, the DOE or the NRC? Who controls whether it will have interim storage and where that would be? This problem emphasizes the need for a separate, federal, TRUSTED, new agency to take charge of the HLNW. The DOE/NRC mish mash in connection with Waste Control Specialists exposes what might be agency rivalry at the federal level.

Seeking a Consent Based Siting design is not the process that it seems to be. At the beginning of the C-BS meetings, Secretary Moniz "admits" that we need to solve the problem of spent fuel waste in order to continue to grow our nuclear power fleet of reactors.

But person after person who commented at the DOE C-BS meetings asked, why figure out what to do with it when there's always more coming down the pike? All the informed anti-nuclear people emphasized that we must quit making it; then and only then, can we consider ways of dealing with the waste.

So the controversy arose with most speakers that the people who called the meetings, the DOE, were in rock bottom, fundamental disagreement with the people they were trying to appeal to: The government (Sec'y Moniz) says we have to continue making new NPPs; the people say, Stop making HLNW, then talk to us about a solution.

I am of the opinion that the DOE (Sec'y Moniz) and the NRC will not get consensus until they agree to stop making HLNW.

Linda Lewison, Board Secretary:

Comments on "so called CONSENT based" sites for " so-called interim storage" of irradiated fuel at centralized or consolidated sites- Away From Reactor storage (AFRs), Monitored Retrievable Storage (MRSs) and (the newest name and acronym for the same), Consolidated Interim Storage (CIS).

The DOE "so called consolidated interim storage" pilot plan does not comply with many Nuclear Waste Policy Act (NWPA) legal and critical safety requirements.

Pending the establishment of a permanent repository, interim storage can best be accomplished through the safest dry storage of irradiated (or spent) fuel at the site of generation.

I do NOT support ANY FORM OF consenting to CIS facilities. I OPPOSE THEM—and this applies to waste storage anywhere I oppose any type of centralized interim storage.

Until a permanent repository is operating, the law prohibits so-called "interim" storage sites, thus I am opposed to any invitation to communities to "volunteer" or consent to illegal facilities.

Until such time as these technical issues are resolved, no informed communities would agree to host irradiated/"spent" nuclear fuel waste.

CONSENT – LEGAL DEFINITIONS:

Consent

Voluntary Acquiescence to the proposal of another; the act or result of reaching an accord; a concurrence of minds; actual willingness that an act or an infringement of an interest shall occur.

Consent is ***an act of reason and deliberation***. A person who possesses and exercises sufficient mental capacity to make an intelligent decision demonstrates consent by performing an act recommended by another. ***Consent assumes a physical power to act and a reflective, determined, and unencumbered exertion of these powers***. It is an act unaffected by Fraud, duress, or sometimes even mistake when these factors are not the reason for the consent. Consent is implied in every agreement.

Parties who terminate litigation pursuant to a consent judgment agree to the terms of a decision that is entered into the court record subsequent to its approval by the court.

In the context of rape, submission due to apprehension or terror is not real consent. There must be a choice between resistance and acquiescence. If a woman resists to the point where additional resistance would be futile or until her resistance is forcibly overcome, submission thereafter is not consent.

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consent

1) n. a voluntary agreement to another's proposition. 2) v. to voluntarily agree to an act or proposal of another, which may range from contracts to sexual relations.

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Informed Consent

Also found in: Dictionary, Thesaurus, Medical, Financial, Acronyms, Encyclopedia, Wikipedia.

Related to Informed Consent: Informed Consent Form

Informed Consent

Assent to permit an occurrence, such as surgery, that is based on a complete disclosure of facts needed to make the decision intelligently, such as knowledge of the risks entailed or alternatives.

The name for a fundamental principle of law that a physician has a duty to reveal what a reasonably prudent physician in the medical community employing reasonable care would reveal to a patient as to whatever reasonably foreseeable risks of harm might result from a proposed course of treatment. This disclosure must be afforded so that a patient—exercising ordinary care for his or her own welfare and confronted with a choice of undergoing the proposed treatment, alternative treatment, or none at all—can intelligently exercise judgment by reasonably Balancing the probable risks against the probable benefits.

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informed consent

n. agreement to do something or to allow something to happen ***only after all the relevant facts are known***. In contracts, an agreement may be reached only if there has been full disclosure by both parties of everything each party knows which is significant to the agreement. A patient's consent to a medical procedure must be based on his/her having been told all the possible consequences, except in emergency cases when such consent cannot be obtained. A physician or dentist who does not tell all the possible bad news as well as the good, operates at his/her peril of a lawsuit if anything goes wrong. In criminal law, a person accused or even suspected of a crime cannot give up his/her legal rights such as remaining silent or having an attorney, unless he/she has been fully informed of his/her rights. (See: consent, Miranda warning)

Fraud

A false representation of a matter of fact—whether by words or by conduct, by false or misleading allegations, or by concealment of what should have been disclosed—that deceives and is intended to deceive another so that the individual will act upon it to her or his legal injury.

Fraud is commonly understood as dishonesty calculated for advantage. A person who is dishonest may be called a fraud. In the U.S. legal system, fraud is a specific offense with certain features.

Fraud is most common in the buying or selling of property, including real estate, [Personal Property](#), and intangible property, such as stocks, bonds, and copyrights. State and federal statutes criminalize fraud, but not all cases rise to the level of criminality. Prosecutors have discretion in determining which cases to pursue. Victims may also seek redress in civil court. Fraud must be proved by showing that the defendant's actions involved five separate elements: (1) a false statement of a material fact, (2) knowledge on the part of the defendant that the statement is untrue, (3) intent on the part of the defendant to deceive the alleged victim, (4) justifiable reliance by the alleged victim on the statement, and (5) injury to the alleged victim as a result.

These elements contain nuances that are not all easily proved.

First, not all false statements are fraudulent. To be fraudulent, a false statement must relate to a material fact. It should also substantially affect a person's decision to enter into a contract or pursue a certain course of action. A false statement of fact that does not bear on the disputed transaction will not be considered fraudulent.

Second, the defendant must know that the statement is untrue. A statement of fact that is simply mistaken is not fraudulent. To be fraudulent, a false statement must be made with intent to deceive the victim. This is perhaps the easiest element to prove, once falsity and materiality are proved, because most material false statements are designed to mislead.

Third, the false statement must be made with the intent to deprive the victim of some legal right.

Fourth, the victim's reliance on the false statement must be reasonable. Reliance on a patently absurd false statement generally will not give rise to fraud; however, people who are especially gullible, superstitious, or ignorant or who are illiterate may recover damages for fraud if the defendant knew and took advantage of their condition.

Finally, the false statement must cause the victim some injury that leaves her or him in a worse position than she or he was in before the fraud.

A statement of belief is not a statement of fact and thus is not fraudulent. Puffing, or the expression of a glowing opinion by a seller, is likewise not fraudulent. For example, a car dealer may represent that a particular vehicle is "the finest in the lot." Although the statement may not be true, it is not a statement of fact, and a reasonable buyer would not be justified in relying on it.

The relationship between parties can make a difference in determining whether a statement is fraudulent. A misleading statement is more likely to be fraudulent when one party has superior knowledge in a transaction, and knows that the other is relying on that knowledge, than when the two parties possess equal knowledge. For example, if the seller of a car with a bad engine tells the buyer the car is in excellent running condition, a court is more likely to find fraud if the seller is an auto mechanic as opposed to a sales trainee. Misleading statements are most likely to be fraudulent where one party exploits a position of trust and confidence, or a fiduciary relationship. Fiduciary relationships include those between attorneys and clients, physicians and patients, stockbrokers and clients, and the officers and partners of a corporation and its stockholders.

A statement need not be affirmative to be fraudulent. **When a person has a duty to speak, silence may be treated as a false statement.** This can arise if a party who has knowledge of a fact fails to disclose it to another party who is justified in assuming its nonexistence. For example, if a real estate agent fails to disclose that a home is built on a toxic waste dump, the omission may be regarded as a fraudulent statement. **Even if the agent does not know of the dump, the omission may be considered fraudulent.** This is constructive fraud, and it is usually inferred **when a party is a fiduciary and has a duty to know of, and disclose, particular facts.**

Consent-Based Siting

From: Larry Kramer [<mailto:larrykramer11@att.net>]
Sent: Thursday, July 07, 2016 5:27 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Cc: Bill Christiansen <Bill.Christiansen@Mail.House.Gov>
Subject: Responses to IPC

The concerns the storage of high level nuclear material at San Onofre Nuclear Generating Stations (SONGS).

As background, I live in San Juan Capistrano, California which is very near the site of SONGS. I am a former Councilman and Mayor of San Juan Capistrano.

The federal government has promised for many years to establish a permanent storage for high level nuclear material. They have failed miserably in this endeavor. I am a proponent of nuclear power but this lack of action has had a very negative impact on the nuclear power industry in the United States and it s grossly unsafe to have high level nuclear material stored at many locations throughout the United States.

In particular, storing nuclear material at SONGS is very wrong. The location is on the an earthquake prone region and is very near the coast. I am less concerned about it being stored there for a short time but worry that in the long time contamination of our coastline would occur.

I know that Congressman Darrell Issa has been working to help find new storage facilities for spent fuel rods. Please work with him to achieve this very worthy goal.

Please find a safe facility to store this material and the material from other nuclear power plants safely for for the intermediate and the long term. This is a federal responsibility for which the federal government has failed in their duty to the American public.

Please find both intermediate and long term storage facilities and provide safe and secure transportation to those sites. Many people will sleep more soundly once this material has been removed from SONGS.

Larry Kramer
Captain (USN, Ret.)
949-842-4784
28371 Paseo Establo
San Juan Capistrano, CA 92675

larrykramer11@att.net

Consent-Based Siting

From: Paul Krumm [<mailto:pkrumm@gyldwynds.info>]
Sent: Wednesday, July 27, 2016 11:33 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: Comment Opposing DOE's Consent-Based Siting Process for Nuclear Waste

Dear Secretary Moniz,

The nuclear industry wants to externalize its liability and you are facilitating this process. That is not in the best interest of the citizens of the US. Do not promote the approval of taking the waste off of the hands of the industry. They made it, and it is their responsibility to deal with it.

Paul Krumm
1313 23rd Rd
Kanopolis, KS 67454

Consent-Based Siting

From: Krystyna [mailto:ms.dragon.lady@gmail.com]
Sent: Wednesday, July 27, 2016 11:54 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: Response to IPC

Since it is evident that using nuclear power is creating great amounts of nuclear waste for which we cannot find reasonable methods of disposal, perhaps we should be looking at a different kind of power source. Perhaps we've already found it and refuse to make it affordable for the people? Could it be solar power?'

To answer your question: NO, the residents of Arizona and Nevada definitely do NOT want this DEATHLY, TOXIC NUCLEAR WASTE dumped in our states! How absolutely irresponsible can politicians and corporations be to allow our ground, in which we grow our fruits and vegetables and the grains that we eat and feed to our livestock, and our water, which is supposed to nourish the fruits, vegetables, grains and meats we eat, and to pollute our air, which we breathe and which our fruits, vegetables and livestock require to live and grow?

It's no wonder we can't conquer cancer and other diseases, as the nuclear waste still gives off radiation which alters our genes and affects our immune systems. I have not seen such destructive compliance since Hitler led millions of people to their deaths with lies and false promises of a better world!

I'm an avid gardener and this year has been the worst that I've ever seen, with the heat destroying trees and plants, and the diminished aquifer causing trees to die even when we water them more than in previous years, and they just don't seem to get enough water at all.

Bees are dying off for several reasons: the lack of flowers from which to collect pollen, and from pesticides used in areas where natural insect control would be more beneficial. The high heat has driven bees into my yard, where I have a number of water gardens, and the bees come to drink water from the ponds and planters, even when I choose to take a little water out of the container where the bees are drinking, and we live in harmony. The bees are not aggressive and I'm sure that they understand that I am the one who replaces the water in the containers from which they drink. I am happy to see them in my yard, along with Butterflies, Dragonflies, birds, geckos, and occasionally other wildlife. Even my neighbors cats love to come and sit on my front porch, where there is a comfortable cushion on which to sleep and shade which brings the temperature down 30 degrees in the mid-day.

It sickens me to see the waste in this new age. Replacement upon replacement of electronic equipment, furnishings, clothing, autos, kitchen equipment, and on and on, with no regard to where to put the "old" stuff. Pretty soon, we will be building deep in the earth just to dump the waste products because we won't have the room on crust of the planet Earth to dump any more! Technology is a good thing, but when we feel the need to replace our cell phones every

six months because of some new innovation, that's insanity.

Do we really want cars that will drive us where they think we want to go? How's your computer functioning lately? And, you want a computer to make your life and death decisions for you? I've already experienced the computerized function of my cruise control. My car took me on a race at over 100 MPH in RUSH HOUR TRAFFIC, where I was forced to get off the road and totally shut the car off. The brake would not shut the cruise control off, as it was "designed" to do. I stepped on the brake, pulled on the emergency brake, to no avail. After "getting the cruise control repaired" I took it out for a test drive on a newly built, not yet open highway. Guess what? It happened again. When I took it back to the repair shop, I had them totally remove the cruise control. I value my life more than I do some inane "conveniences".

So, if you are expecting politicians and computers to run your life and affect your health and well-being, good luck to you!

Again, I re-iterate....NO we do NOT want this radioactive, toxic trash in our states!!!!!!!!!!!!!!

If you don't take time to analyze the issues and do your part to improve U.S. energy policy, you may just end up with *Nuclear Waste in Your Backyard* indefinitely.

"Bob Ferguson has written an important book-his analysis is right on target. I highly recommend his book to be read and acted upon by every American concerned about how partisan politics can trump good science. Such action is especially important for those in positions of policy development." -- Dr. Alan Waltar, past president of the American Nuclear Society and author of *America the Powerless*

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BE KIND TO OUR EMAIL FRIENDS

To be considerate to my Friends, their email addresses have been hidden by putting them in the BCC area.

Any email address shown on the original message were also removed before the message was forwarded.

If you decide to send, after clicking on "Forward", please remove all names and e-mail addresses before forwarding and send only as blind carbon copy (Bcc). It helps prevent the spread of worms

and viruses and reduces the possibility of identity theft.

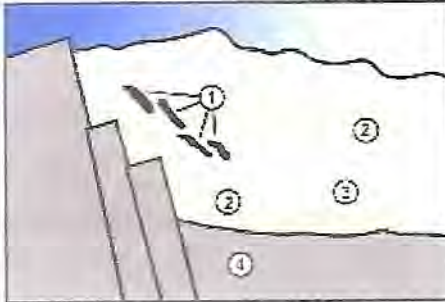
Subject: Fwd: Waste Disposal

Date: Thu, Mar 17, 2016 10:27 am

posal

Waste Disposal;

Volcanos, Lava Flows and the Molton Core of the Earth are the result of Decaying Chemical Element Isotopes that were Manufactured in Exploded Super Nova stars by the process of Neu Cleo Synthesis and that went to the Earths core when the Earth was formed 5 billion years ago. Hazardious Chemical Compounds and also Nuclear Waste containing decaying Isotopes can be easily disposed of by placing them in Lava flows and Volcanos as they are caused by decaying Chemical Element Isotopes which produce enough heat to nutralize the hazardous chemical Compounds and dilute the Nuclear Wastes and recycle them back into the Earth's Crust. These materials need to be disposed of in Lava flows that are in Earth locations that are remote from Human population centers such as Iceland or the remote areas of the Great Rift Valley of Africa.



Geological situation in Gabon leading to natural nuclear fission reactors

1. Nuclear reactor zones
2. Sandstone
3. Uranium ore layer
4. Granite

Volcanic Activity is caused by Heat from Decaying Chemical Element Isotopes that came from Exploding Super Nova Stars.

The Earth and all of the other Planets were formed from the scattered remnants of Stars. These Remnants consist of all of

all of the Chemical Elements and their corresponding Isotopes which were manufactured in these Stars. A process that is

called Nue Cleo Synthesis.

A **natural nuclear fission reactor** is a uranium deposit where self-sustaining nuclear chain reactions have occurred. This can be examined by analysis of isotope ratios. The existence of this phenomenon was discovered in 1972 at Oklo in Gabon, Africa, by French physicist Francis Perrin. The conditions under which a natural nuclear reactor could exist had been predicted in 1956 by Paul Kazuo Kuroda.^[1] The conditions found were very similar to what was predicted.

Oklo is the only known location for this in the world and consists of 16 sites at which self-sustaining nuclear fission reactions took place approximately 1.7 billion years ago, and ran for a few hundred thousand years, averaging 100 kW of thermal power during that time.^{[2][3]}

July 2015 was Earth's hottest month on record.
Records go back to 1880, but nine of the 10 hottest months on record have happened since 2005.
The first seven months of 2015 are the hottest January-to-July span on record.

Lagrange Points;

Are 5 positions in an Orbital Configuration where a small object affected only by gravity can maintain a stable orbit configuration with respect to 2 larger objects, such as the Earth and the Sun. A Satellite that is placed at this point in Space will stay there due to the Gravitational forces of the larger 2 objects.

As Mark Twain once

said " Every one talks about the Weather, but no one does any thing to change the Weather " Well

it may now be possible for Humans to Control or change the Weather on the Earth. By placing Asteroids

at the L-1 point one million miles from the Earth directly between the Earth and the Sun, some of the

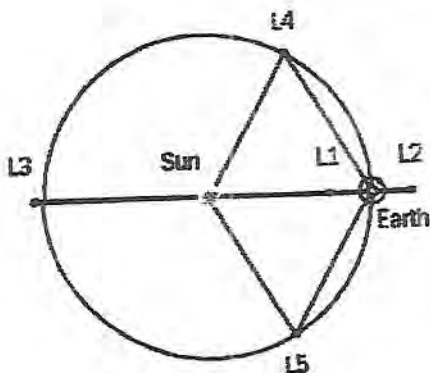
Energy from the Sun can be blocked thus lowering the Temperature of the Earth. By using this method

of Sun Shading or Sun Blocking, Humans can have a control over the Weather, Global Warming, and

truly change the Global Climate. A large mass at 1,000 miles in diameter at L-1 would cause a permanant

total eclipse of the Sun, placing the Earth in total darkness.

and the Lagrange points



Jay M. Lamb Sr
10323 Fox Ct.
Northglenn, Colorado

Where Everything Came From

The BIG BANG seems to be the Origin of everything as with the discoveries by the Large Hadron Collider in Geneva, Switzerland, of proof of the Higgs Boson Particle or the GOD Particle which allows Matter to form from Pure Energy. This Basic Matter turns into Hydrogen Atoms and these Hydrogen Atoms, with the Force of Gravity then form into Stars which turn on and Manufacture all of the Chemical Elements and their Corresponding Chemical Element Isotopes, from which everything in the Universe is made of. This process is called Nuclear Synthesis. These Stars, depending on their Mass will either Explode, such as a Super Nova, or will exhaust their Nuclear Fuel and expand and come apart and the Remnants will then form new Stars with Planetary Systems. Our Sun which is our closest Star will eventually expand as it gets hotter with age and will engulf the Earth before it comes apart.

The idea of the BIG BANG Theory was first published by Astronomer and Catholic Priest Georges Lemaitre in Belgium. The name BIG BANG came about as Astronomer Fred Hoyle was making fun of Lemaitre's new Theory.

The reason that Planets and Moon's have Volcano's and Lava flows, is that Nuclear Active Chemical Element Isotopes that were manufactured in the Stars will go to the core of the Planets and Moon's as these bodies are formed around Newly formed Stars. As the Chemical Element Isotopes Decay into different Chemical Elements there is a tremendous amount of heat that is released, so the end result is Volcano's and Molten Rock Lava Flows and Geo Thermal Heated Water flowing to the Planets surface.

PILGRIM WATCH COMMENT CONSENT BASED SITING

Boston, June 2, 2016

Due to the government's failure to establish a repository, spent fuel is piling up in all the wrong places- locations, like Pilgrim here in Plymouth, threatened by rising sea levels, storms of increased intensity and frequency, vulnerability to terrorism and a location surrounded by dense populations. Therefore it is important to learn why siting failed in the past so that the same mistakes will not be repeated in a search for a permanent repository & consolidated site.

Lessons learned from past failure to site show that the government (1) failed to develop a process that gives states, host communities and parties with standing regulatory authority over health and safety issues at the site; and (2) failed to provide a process that would allow meaningful consent – that means informed consent.

1. States must have regulatory authority- require Congress amend AEA

Currently the state and local authorities are preempted by the Atomic Energy Act from almost all matters dealing with radiation health and safety- they belong to the federal government. This needs to change by changing federal laws-namely amending the Atomic Energy Act to allow states and the EPA to have authority. This authority probably would come under **Resource Conservation Recovery Act (RCRA)** and the Clean Water Act and other rules.

Why does this matter? Consent means that what you agreed to has to happen and communities are consenting to safe storage that will not harm their health, environment, safety or diminish their property values. Absent amending the AEA, states & local communities are left powerless so why would they consent?

A precedent is WIPP project in NM. Before WIPP was sited, New Mexico got RCRA authority and after the accident in 2014, New Mexico used its RCRA authority to put a hold on the permit until the site could be cleaned up and required the state to come in and do investigations before they would allow it to operate again.

So that example can serve as a model for having the federal government and a state work together by having the site governed by both federal and state regulations. Note that under these environmental laws there are citizen-suit

provisions. So citizens can play an active role in ensuring that the laws are enforced.

2. Meaningful Consent - consent must be informed

Communities need to know what they are getting into before being asked for consent. Therefore the following has to be worked out & specified:

- a. Technical criteria for site screening
- b. Standards for site development/operations
- c. Operating requirements for the site
- d. Standards for radiation and environmental protection
- e. Requirements for security
- f. Financial & job packages
- g. Financial assurances- liability
- h. Provisions money to community to be able to conduct own assessments.

Examples:

- a. Establish site screening criteria standards, such a hydrology, geology, seismic, population density, transportation access, environmental justice issues
- b. Establish standards for development of the site, including:
 - base line radiological monitoring before the site is developed;
 - capability to **monitor canisters & replace defective/leaking casks** - casks coming to the site have thin (0.5”) stainless steel canisters that may crack within 30 years with no current technology to inspect, repair or replace cracked canisters; and some of the casks were at reactor sites located on the ocean, subject to salt water corrosion.
 - monitoring equipment for the casks and protocol for reporting to state, local community and public;
- c. Establish standards for radiation and environmental protection- such as the existing limits for drinking water in 40 CFR 141.66 & dose limits for fuel cycle facilities 40 CFR 190.00(a) including organ dose limits- and compliance based on the most susceptible, children according to Executive Order 13045. The NRC and EPA have their work to do to establish these standards.
- d. Standards security: whether blast shields, earthen berms or a building over the casks to prevent line of sight targeting;

- e. **Finances:** financial package for community including training emergency planning & number/type local jobs-union commitments
- f. **Liability-** is the owner of the site a limited liability company? If so, assure “Mother Company” guarantees payment and when they run dry DOE commits to covering costs-not the state’s taxpayers. Will a separate fund be set aside to be held by the state for added assurance?
- g. **Establish funding for states, tribes, local governments, and other parties with** standing so that they can have the resources to investigate these issues on their own and come to their own conclusions about whether they might be willing to serve as a host. This must be part of the final package.
- h. **Establish state/citizens advisory panel-** receive and review documents, advise the Governor, pertinent branches of government, local community and public, educate the public –panel adheres to open meeting requirements

3. Who Consents?

- a. **Governor-**one state or more if site on boundary
- b. Tribe/Nation
- c. Adjacent and or nearby areas heavily affected by transportation, socioeconomic & environmental impacts-establish method draw circle around site at certain radius-or abutting towns or adjacent state if site on boundary.

4. How Consent given?

- a. Purview of state/local authority-Governor/tribe/ impacted community (s)?
- b. Referendum?
- c. Those oppose site and directly impacted due to proximity site or main transportation route should be offered pre-proposal value property and moving costs

5. Criteria established when specifically consent can be withdrawn Intrusion

Prepared by,


Mary Lampert

Pilgrim Watch, director

148 Washington Street, Duxbury, MA 02332

Tel. 781-934-0389/Email: mary.lampert@comcast.net

Consent-Based Siting

From: Jay Lee [<mailto:leejaycz@gmail.com>]

Sent: Thursday, July 14, 2016 9:20 PM

To: Consent Based Siting <consentbasedsiting@hq.doe.gov>

Subject: Response to IPC

Nuclear power is not "clean"! Stop making it in the first place!

Expedite transfer of irradiated nuclear fuel from "wet" storage pools to hardened *on-site* storage dry casks. These casks need to be as safe and secure as possible AND as close to point of generation as possible in a monitored, inspectable, retrievable manner.

Transport these casks only once and not to so-called interim storage sites.

These sites must be scientifically suitable, socially acceptable, and environmentally just.

Do not reprocess irradiated nuclear fuel. Not discounting the astronomical expense, this would risk nuclear weapons proliferation, terrorism threats, and environmental ruin downwind and downstream.

Preserve and maintain "wet" storage pools (after emptying them of irradiated nuclear fuel) as emergency backup locations for cask to cask transfers. Don't dismantle along with the plant decommissioning post reactor shut downs.

Share this storage information keeping in mind national security concerns.

Address the shortfall for funding these procedures.

Address the environment injustice of targeting Native American communities and lands as well as low income communities for storage and burial of these wastes (Bill Clinton's 1994 Executive Order 12898).

Thank you for your attention.

Jay C. Lee
Dayton, Ohio 45440

Consent-Based Siting

From: Ryan Lee [<mailto:rel131@gmail.com>]
Sent: Monday, July 25, 2016 1:40 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: Comment for the DOE on "consent" based siting

Dear Department of Energy,

I appreciate the fact that you are welcoming comments from the public concerning this matter of consent based siting. My name is Ryan Lee and I currently reside in Albuquerque, NM. An area that may be considered within the sacrifice zone.

The way that the DOE has starting this process of "consent"-based siting leaves much to be desired. It's as if you want to show that you are approaching this process with transparency and an honest dialogue, but you have already started ignoring the voices that you need to be listening to. The geographical locations that have been chosen for these open panel discussions are a long ways geographically and economically for many of these communities. Watching the panel discussion in Tempe, I got the feeling that the panel were being a bit dismissive of the concerns that were being brought up. As if the safety of nuclear waste containment was being assured to us while the obvious failures and accidents in nuclear energy (Churchrock, 3 mile island, Chernobyl, Fukushima) were not a clear indication of the inherent danger of nuclear power.

I would hope that you could make a future visit to Albuquerque, NM. Here, we have Los Alamos laboratory as well as Sandia labs. We also have an unaddressed issue of the mixed waste landfill that already stores high level nuclear waste from the 1950's - the 1980's. This landfill is unlined and a current threat to the thriving community of Albuquerque. Was there consent at this site?

Or you can hold a meeting in Gallup, NM, the border of the Navajo Nation, who have suffered an immeasurable amount due to uranium mining that took place throughout the 20th century. Where throughout the 1950's and 1960's, atomic weapons tests were being conducted while the indigenous people of this country were living downwind were exposed to harmful radiation, again without consent. Near the community of Churchrock, where the largest nuclear accident in US history took place with little fanfare or publicity. Where the indigenous people in the area had their children playing in the wastewater, where crops and livestock were contaminated with radiation, bringing sickness, cancer, birth defects. Again without consent.

You wish to move forward with a plan to store high level nuclear waste without taking responsibility or acknowledging the harmful nature of the nuclear industry. You side with the corporations and let them walk away with their profits while passing the high cost of their reckless and thoughtless actions on to the American people to pay.

I married my wife, who is Navajo, 3 years ago. I was blissfully unaware of what happened to her family throughout this past century of nuclear proliferation. But, in 1958, my mother in law was in the womb while

living downwind of the government's nuclear testing. She is now a cancer survivor, but she has suffered much. My wife was only a year old in 1979 when the Churchrock Accident occurred. She grew up in a contaminated area throughout her life.

For the past year and a half, I spend many sleepless nights wondering if she has been exposed to radiation or if my one year old son may somehow be affected by her exposure. I have been pulled into the narrative of the nuclear age, and I never gave my consent.

Please stop presenting this consent based siting as an economic opportunity or a chance for a community to thrive. Your track record is horrendous. I watch in anticipation what moves you will make as this project moves forward. I know that the waste is adding up and someone must deal with it. But why is the discussion never focused on transitioning away from this destructive means of energy, and warfare? A more truthful discussion could take place with your acknowledgement that nuclear power is inherently unsafe and unpredictable. But that would not be good for your agenda, I suppose.

All I ask is for some accountability and transparency in your actions. I ask for your department to truly listen to what people are saying when they stand against you.

I hope that whatever community is chosen will be given the full account of possible risks and negative consequences that they will come to bear if something does not go according to plan. At least in that way, the consent would be informed.

As a gesture of good faith and a show of commitments to citizens negatively affected by the nuclear industry, perhaps the DOE could set up a fund or public health study.

Before addressing the issue of consent based siting of high level radioactive waste, I would like to say that I am ashamed by the past actions of the United States government in these matters. As we "progress," I'd like my voice heard and recorded as a voice of opposition to your actions.

Ryan Lee

Consent-Based Siting

From: Jeannine Lee [<mailto:jeanninekadanelee@gmail.com>]
Sent: Thursday, July 28, 2016 2:44 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: This makes sense

My daughter is a PhD student at Clemson University in Nuclear Engineering. Her masters was on Nuclear Waste. In my limited knowledge, she helped to educate me on the importance of having a "safe and sane" way to manage our nuclear waste. This is one of the means that she has shared with me over time.

I'm a digital communicator who understands the importance and power of social media and I believe that you are going to need non-technical, non-extreme green people who can help educate the public on methods such as this that will help our country manage this forthcoming nightmare (if we don't). That my daughter wants to eventually go into nuclear policy is beyond me ...

Anyway, it was not clear how I should approve this method of containment. If you're come to the DFW area to speak on this issue, please let me know.

Regards,
Jeannine Lee

Consent-Based Siting

[Please process this.](#) Apologies for any confusion from earlier emails.

From: Michel Lee [<mailto:ciecplee@verizon.net>]

Sent: Monday, August 01, 2016 12:42 PM

To: Consent Based Siting <consentbasedsiting@hq.doe.gov>

Subject: Redacted version of Joint CIECP-PHASE Comments on Consent-Based Siting of Radioactive Nuclear Waste/Spent Fuel - Response to Invitation for Public Comment (July 31, 2016)

[Submission of Redacted Version of Comments Submitted July 31, 2016 Re: U.S. Department of Energy Consent-Based Siting of Radioactive Nuclear Waste/Spent Fuel – Response to Invitation for Public Comment](#)

Dear Department of Energy,

The Comments of the Council on Intelligent Energy & Conservation Policy (CIECP) and Promoting Health and Sustainable Energy (PHASE) submitted yesterday inadvertently had 2 sets of the comments combined (duplicate copied) in the submitted document.

Please substitute these instead, if you would be so kind. (These are 29 pages instead of 57 pages long!)

We apologize for our error,

Michel Lee, Esq.

Chairman
Council on Intelligent Energy & Conservation Policy (CIECP)
Sr. Analyst and Advisor, Promoting Health and Sustainable Energy (PHASE)

July 31, 2016

**JOINT COMMENTS OF COUNCIL ON INTELLIGENT ENERGY &
CONSERVATION POLICY (CIECP) and
PROMOTING HEALTH AND SUSTAINABLE ENERGY (PHASE)**

Re: U.S. Department of Energy “Consent-Based Siting” of Radioactive Nuclear Waste/Spent Fuel – Response to Invitation for Public Comment

Via email to: consentbasedsiting@hq.doe.gov

Dear Department of Energy:

We submit that an optimum scheme would promote the following:

1. A clear change of course to a truly clean, low carbon energy economy.
2. Sustainability.
3. Efficiency.
4. Wide public acceptance.
5. Consumer choice.
6. Flexibility and agility (including avoidance of inflexible and difficult to modify schemes).
7. Stimulation of innovative ideas and technologies (including those outside the energy production sphere).
8. Entrepreneurship; especially small and midsize businesses.
9. Strong support for workers and communities challenged by change (with emphasis on investment and development of new diverse opportunities in economically stressed regions).
10. Active engagement by diverse stakeholders (individuals, communities, companies, schools and universities, cooperatives, etc)
11. Transparency (full discourse of all risks, accessibility and availability of industry documents for public assessment)
12. Development of industries that can ultimately flourish without massive government subsidies.
13. Robust reduction of toxic waste products.

14. Environmental and social justice.
15. Protection of the environment – all ecosystems, but especially precious waters.
16. Public health.
17. Public safety.
18. National security.
19. Worldwide: environmental justice, safety and security.
20. The interests of future generations.

The proposed consent-based scheme fails on all of the above 20 accounts. Most crucially, it fails to consider future generations, disregards the total toxic burden, and fails to be transparent about the challenges and costs (obvious from the studies noted below).

The energy landscape is changing dramatically. A renewable-based, sustainable energy economy is technically and commercially possible. Citizens the world over yearn for clean, safe and sharable energy systems.

Reckless gambles with the public health, safety, and security were made by decision makers in the past. As a result, we have been left with a mess. Our generation must assume responsibility for those decisions.

As the nation's leading energy agency, the DOE has the duty to be candid with the American people. Acknowledge the extent of the problem. Don't keep directing the ship towards the iceberg. And don't pretend the solution is to rearrange the chairs on the deck.

This time in history also, however, presents the DOE with a rare opportunity. The mandate of climate action and this decade's dramatic advancements in renewable and efficiency technology converge at this moment.

We no longer need to sacrifice one community for the benefit of another. We can chart a new course. We can achieve all the goals enumerated above.

Please set your aspirations high and lead America towards a clean energy future.

Respectfully,

Michel Lee, Esq.

On behalf of the Council on Intelligent Energy & Conservation Policy and Promoting Health and Sustainable Energy

Annotated References

2016

ADVANCED CONCRETE TECHNOLOGY: Attar A, Gencturk B, Hanifehzadeh M, and William K, Accelerated Aging of Concrete Dry Cask Storage Systems for Nuclear Waste, Journal of Advanced Concrete Technology (2016); 14 (6): 299-310.

https://www.istage.jst.go.jp/article/jact/14/6/14_299/pdf.

[Authors are with the Departments of Civil and Environmental Engineering at University of Houston and the University of Southern California,

Dry cask storage systems are the only means for storage of spent nuclear fuel after removal from pools. In the US, dry cask systems are licensed for an initial 20 years, with possible extension of 40 years. The absence of a permanent disposal site raises concerns about the long-term performance of dry cask systems, which may now have to be used for extended durations reaching over 100 years. The system with an exposed concrete overpack represent ~61% of the dry cask storage inventory in the US.

Corrosion of the steel reinforcing bars (rebar) and the alkali-silica reactivity (ASR) of concrete have been identified as two of the main degradation mechanisms. Although accelerated aging of concrete structures have been extensively studied in the literature, this is one of the first studies on the long-term degradation in dry cask storage systems due to corrosion and ASR.

In this paper, the authors describe findings relating to reinforced concrete (RC) overpacks of a vertical casks 3 specimens (fabricated to one-third scale) the evaluated experimentally at the structural scale. The first specimen was a control using conventional self-consolidating concrete. The second and third specimens were built with special concrete mixtures, designed to accelerate the corrosion of rebar and ASR. All 3 casks were observed for 2 years for aging-induced deterioration using various non-destructive approaches (visual inspection, half-cell potential, Schmidt hammer, and ultra-sonic pulse velocity measurements). The results indicate that accelerating ASR and corrosion of reactive aggregates and/or addition of chemicals (NaOH and CaCl₂ here) is a practical approach for large-scale studies.

“The RC overpacks were observed to exhibit significant distress due to these aging mechanisms.”]

ENVIRONMENTAL RADIOACTIVITY: Turick CE and Berry CJ, Review of concrete biodeterioration in relation to nuclear waste, Journal of Environmental Radioactivity (2016); 151 (1): 12-21. Abstract.

<http://www.sciencedirect.com/science/article/pii/S0265931X15301004>

[Charles E. Turick and Christopher J. Berry are with the Environmental Science and Biotechnology unit of Savannah River National Laboratory. In this study they review the research literature focusing on specific parameters applicable to modeling and prediction of the fate of concrete structures used to store or dispose radioactive waste.

“Microbial activity can play a significant role in the process of concrete degradation and ultimately structural deterioration. ... Rates of concrete biodegradation vary with the

environmental conditions, illustrating a need to understand the bioavailability of key compounds involved in microbial activity.”

Certain ranges of pH and osmotic pressure allow for microbial growth as do as the availability/abundance of energy sources (e.g., components involved in sulfur, iron and nitrogen oxidation). Carbon flow and availability are additional factors which affect concrete biodegradation.

“The microbial contribution to degradation of the concrete structures containing radioactive waste is a constant possibility. The rate and degree of concrete biodegradation is dependent on numerous physical, chemical and biological parameters. Parameters to focus on for modeling activities and possible options for mitigation that would minimize concrete biodegradation are discussed and include key conditions that drive microbial activity on concrete surfaces.”]

Ross SB, Klymyshyn NA, Jensen PJ, Best RE, Maheras SJ, McConnell PE, and Orchard J, Rail Shock and Vibration Pre-Test Modeling of a Used Nuclear Fuel Assembly (2016), research related to DOE PNL-SA-106815 AF5865010, presented at International High-Level Radioactive Waste Management Conference: Real World Solutions for Integrated Management of Used Fuel and HLW, Apr 12-16, Charleston, South Carolina. Abstract. <http://www.osti.gov/scitech/biblio/1222106>.

[Authors note the Office of Fuel Cycle Technology at the Department of Energy (DOE) Office of Nuclear Energy has set up a Used Fuel Disposition Campaign (UFDC) to conduct the research and development activities related to storage, transportation, and disposal of nuclear waste; both spent fuel (also called used nuclear fuel or UNF) and weapons' grade high-level radioactive waste (HLW).

The UFDC will conduct research to support technology enable storage, transportation and disposal of nuclear waste “generated by existing and future nuclear fuel cycles.”

“Available information is not sufficient to determine the ability of ES UNF, including high-burnup fuel, to withstand shock and vibration forces that could occur when the UNF is shipped by rail from nuclear power plant sites to a storage or disposal facility.”

Major gaps in available knowledge are: (1) the forces to which spent fuel assemblies would be subject during transport by rail, (2) the mechanical characteristics of fuel rod cladding, which is an essential structure for controlling the geometry of the UNF, a safety related feature, and (3) the appropriate modeling methodologies needed to evaluate multiple possible degradation or damage mechanisms over the nuclear waste lifetime.

With respect to transport, testing will be conducted on surrogate assemblies. Shock and vibration forces “expected to be experienced during normal conditions of transportation (NCT) by rail must be identified and evaluated.” “The objective of the rail shock and vibration tests is to obtain data that will help researchers understand the mechanical loads that ES UNF assemblies would be subjected to under normal conditions of transportation and to fortify the computer modeling that will be necessary to evaluate the impact those loads may have on the integrity of the UNF assembly.”

The shock and vibration testing and computer model development are a vital to close the “gap in information” regarding the ability of extended storage spent fuel containers to maintain their safety function during normal transportation conditions.

The paper presents “preliminary structural dynamics modeling” used to investigate rigidity of a “hypothetical cask and cradle structure by comparing it to a monolithic concrete mass.” However the dynamic loads transmitted through a monolithic concrete configuration may not be adequately representative of a realistic cask and cradle system on a flatbed railcar. “This modeling highlights the need for rail testing by reporting the phenomenon of structural transmissibility. ...this structural transmissibility can cause an amplification of shock and vibration loads through the structure, which could potentially lead to accelerated mechanical degradation” of spent fuel under normal transportation conditions.]

NEW YORK TIMES: Risen, James, Half-Built Nuclear Fuel Plant in South Carolina Faces Test on Its Future, New York Times, Feb 9, 2016.

<http://www.nytimes.com/2016/02/09/us/politics/half-built-nuclear-fuel-plant-in-south-carolina-faces-test-on-its-future.html>.

[The Department of Energy (DOE) wants to abandon the Mixed Oxide Fuel Fabrication Facility near Aiken, South Carolina. The DOE has already spent about \$4.5 billion on the half-built plant designed to make commercial nuclear reactor fuel (MOX) from bomb-grade plutonium. Estimates place the ultimate cost of the facility at between \$9.4 billion and \$21 billion, and the outlay for the overall program, including related costs, could reach \$30 billion. Delays on the have been so bad that the plant might not be ready to start operation until 2040.

The South Carolina congressional delegation led by Republican Senator Lindsey Graham is fighting to keep federal funding since it is a source of South Carolina jobs. Sen. Graham sits on the powerful Armed Services and Appropriations Committee.

“If you tell me that MOX won’t work after all this, then why should I believe you when you say the other thing will work?” Mr. Graham said.”

Representative Joe Wilson, the Republican whose district includes Aiken, said in a statement: “The administration must complete construction of MOX — the only viable method at this time of disposing of the plutonium’.” The companies involved with the plant’s construction are among Rep. Wilson’s biggest campaign contributors. One, the French company Areva Group, donated \$8,000, according to campaign records.

In January 2016, Gov. Nikki Haley of SC, a Republican, issued a letter asking the state’s attorney general to sue the DOE over MOX. The lawsuit is expected to be based on the grounds that the DOE missed a Jan. 1 deadline for the removal of some of the plutonium out of the state.

The DOE would like to move the nuclear waste to an underground storage facility near Carlsbad, New Mexico, where it would be stored in deep underground salt formations. However the Carlsbad site has been closed for 2 years because of a 2014 leak of radioactive material.]

U.S. NUCLEAR REGULATORY COMMISSION (NRC): Chowdhury A, Caseres L, Pan Y-M, Oberson G, and Jones C, Expert Panel Workshop on Concrete Degradation in Spent Nuclear Fuel Dry Cask Storage Systems – Summary Report, Report prepared for U.S. Nuclear Regulatory Commission Contract NRC-HQ-12-C-02-0089, Mar 2016.
<http://www.nrc.gov/docs/ML1610/ML16103A218.pdf>.

[Authors are with the Center for Nuclear Waste Regulatory Analyses; Southwest Research Institute; U.S. Nuclear Regulatory Commission; and Sandia National Laboratories. The report summarizes the technical proceedings of a 5 man expert panel workshop to evaluate degradation of concrete structures in spent nuclear fuel dry cask storage systems (DCSSs). Concrete is used for support pads and shielding structures such as overpacks.

NRC staff's main criterion for selecting the panel participants was demonstrated expertise in concrete structure design, degradation processes, inspection, repair, and/or functional assessment. The panelists (Neal Berke; Laurence Jacobs; Randy James; John Popovics; and Yunping Xi) have degrees in mechanics and engineering. (p 3-2)

Modes of degradation identified as most likely to occur were freeze-thaw cracking; acid and ion attack; alkali-silica reaction (ASR); and reinforcing bar corrosion. All involve the presence of water on the surface or within the mass of concrete and – as many mechanisms are temporally correlated either via chemical reaction or diffusion kinetics – “the likelihood that degradation will occur increases over time.” (p iii) The panel believed all of the mechanisms will eventually manifest on external surfaces detectable by periodic visual inspection, but degradation on below grade or inaccessible areas may require soil evacuation to detect. The panelists did not analyze the effects specific to DCSSs but based their knowledge on other reinforced concrete structures.

Dr Xi indicated that the area of concern for DCSSs is likely to be the interior because temperatures are greater than the outside concrete surface. The temperature differential between the inside and outside of the structure can create tensile stresses in the concrete through wall thickness. Dr Xi also said that moisture on the outside concrete surface could become saturated at high relative humidity's (RHs) resulting in moisture moving from the outside to the inside of the concrete, potentially leading to enhanced transportation of other aggressive ions inside the concrete. (pp 4-12 – 4-13)

Prevention of thermal desiccation of DCSSs involves ensuring the concrete is not exposed to excessive temperatures for a duration that could cause deleterious changes in the material properties. NRC believes aging effects do not need to be specifically managed if analysis shows no part of the concrete exceeds 65°C (149°F) generally and 93.3°C (200°F) in localized areas. The “inlets and outlets for ventilated systems are typically checked daily to ensure that there are no blockages to interfere with passive cooling flow.” (p 4-13)

Creep in concrete is a deformation caused by sustained load and is generally understood to only affect concrete structures early in their service life. Cement paste in concrete exhibits creep due to its porous structure and a large internal surface area sensitive to water movements. Creep-caused cracking on the outer surfaces causes redistributions of internal forces. Creep is also a function of applied stress. Creep rate also grows with temperature. Basic creep is a time-dependent deformation under constant load and humidity conditions and is primarily influenced by the material properties of the concrete (composition, fineness of cement, mineral composition of aggregates). (p 4-13 - 4-14) Drying creep is the deformation that exceeds the basic creep strain observed when the same material is exposed to drying while under load and is believed to

be primarily influenced by the environment and size of the concrete structure. “However the mechanisms behind drying creep are still not well understood.” (p 4-14)

Delayed ettringite formation has not been identified as a potential degradation mechanism for DCSS, but was proposed by the expert panel due to evidence of such damage in other concrete structures. The condition is caused due to improper casting.

“In general, the radiation effects on the concrete properties depend on the intensity of the radiation field, temperature, and exposure period. Investigations conducted in the late 70s are still used as the basis for concrete degradation due to radiation”. (p 4-16) Drs Popovics and Jacobs indicated that the concrete performance cannot be assessed by total radiation fluence limits because those are not well understood or well established in the literature. (p 4-18) Dr Xi is uncertain whether fluence limits can be extrapolated to a 300 year timeframe and said that several investigations on performance of concrete under radiation are not reliable because of differences in aggregates and cements used in those studies. “The panelists indicated that the gamma radiation dose can promote concrete degradation after 100 years of exposure.” (p 4-18) Other factors – like temperature and types of aggregates influence radiation damage. “Dr. Xi suggested that radiation may affect other degradation modes of concrete, such as those from freeze and thaw mechanism and from alkali-silica reaction.” (p 4-18)

Corrosion of reinforcing steel in concrete is mainly caused by chloride ions in the concrete pore solution and carbonation of the concrete. A universal well-defined chloride threshold value does not exist and can be affected by chemical composition of the rebar and surface roughness. (p 4-19)

Corrosion of embedded steel reinforcement is a well-known degradation mode. “[C]orrosion of the embedded steel can progress to reduce the steel cross section to the point that the steel may compromise the load capacity of the structure... the high temperature exposures under the presence of moisture may create conditions of accelerated corrosion.” (p 4-20) Carbonation may be a corrosion issue for concrete needed to reach hundreds of years of service.

Coupled degradation mechanisms may also affect concrete degradation, these are chemical, physical and mechanical degradation modes that can interact, affecting the initiation and progress of each other. Examples of coupled degradation mechanisms include ASR, chloride penetration, sulfate attack, carbonation, freeze-thaw cycles, and shrinkage.” (p 4-21) The presence of cracks in concrete can exacerbate diffusion of aggressive species inside the concrete, further enhancing initiation of corrosion of the reinforcing steel. Leaching of calcium hydroxide and carbonation can decrease concrete pH, affecting stability of the passive film of the steel and increasing steel corrosion. Carbonation and leaching of concrete can affect chloride diffusivity and reduce pH. Leaching can also increase porosity, leading to more water absorption with the potential of ASR development. Concrete cracks produced by ASR can exacerbate freeze and thaw because of enhanced pathways of moisture ingress. “The additional influence of heat and radiation damage can compound environmental damage. Research into the significance of radiation effects for concrete is ongoing.” (p 4-22) There is evidence that radiation may play a significant role in promoting ASR degradation; as, for example, at the Seabrook Nuclear Power Plant. (NRC, 2013) (p 4-22) “In-depth studies of the effects of concrete damage subjected to all the potential coupled degradation mechanisms are lacking.” (p 4-22)

Panelists agreed more testing is needed to identify optimal concrete mix design and curing processes taking into consideration many of the effects of the different degradation

mechanisms. ASR, for example, is highly linked to the reactivity of aggregates. (p 5-4) The panel discussed methods to repair and remediate concrete structures with grout, epoxies or overlays. Most concrete sealers and coatings are, however, not effective for sealing cracks. Literature review on concrete coatings and sealers indicates a wide difference in performance of surface treatments for protecting or minimizing concrete deterioration. (p 5-6 - 5-8)

There are ~2,200 loaded DCSSs at over 70 facilities in the US, but, to date, “the extent of focused inspections, particularly beyond exterior surfaces, is rather limited.” (p 2-2) One case of known degradation involved freeze-thaw cracking of horizontal storage modules containing Three Mile Island Unit 2 fuel at Idaho National Laboratory (2012). Shrinkage cracks were also detected on vertical storage casks at Arkansas Nuclear One (2005) (pp 2-2 – 2-3) A few inspections which involved insertion of remote cameras through vents to see the condition of interior DCSS surfaces did not identify any evidence of “gross degradation of concrete structures. It appears that rainwater and airborne particulate matter are able to pass through the vents and fall on the interior surfaces. Further, some small stalactites, indicative of leaching from the concrete, were seen on horizontal storage module walls at the Calvert Cliffs facility (CENG, 2012).” (p 2-3)

In broad terms, the current state of knowledge about concrete degradation is deemed high by the NRC, while allowing for a “high need for further research”. (p 2-5) If analysis of monitoring methods shows that early degradation cannot be reliably detected, the NRC will make evaluation of individual degradation mechanisms a higher priority.

“The concrete structure of DCSSs is exposed to sustained high temperatures for a long period of time due to the decaying heat of the spent fuel. Exposure of concrete to elevated temperature affects its mechanical and physical properties. It is well known that concretes can degrade at high temperatures due to dehydration reactions of the hydrated cement paste, thermal incompatibility between cement and aggregate, and likely physiochemical deterioration of the aggregates.” (p 4-11) High temperature degradation in concrete manifests as changes in compressive strength and stiffness as well as increases in concrete shrinkage and transient creep with consequent formation of cracks. An increase in temperature can also produce a significant and progressive increase in the strain corresponding to peak stress. “The degree of concrete degradation with temperature depends on several factors, including concrete mixing, aggregate type, curing, loading condition, moisture retention and content, and exposure time”. (p 4-12)

2015

INDIAN POINT SAFE ENERGY COALITION: Comments of Indian Point Safe Energy Coalition (IPSEC) for Docket NRC-2014-0273, Impact of Variation in Environmental Conditions on the Thermal Performance of Dry Storage Casks: NUREG 2174 DRAFT – DOCKET ID NRC-2014-0273, May 4, 2015.

<http://pbadupws.nrc.gov/docs/ML1513/ML15138A099.pdf> .

Oberson G, Dunn D, Hiser M, Torres R, Tripathi B, Wise J, Wong E, Pan Y, He X, Chowdhury A, Page R, Caseres L, and Jones C, Identification of Potential Degradation

Phenomena for Spent Fuel Dry Cask Storage Systems, Paper published in the Proceedings of the 17th International Conference on Environmental Degradation of materials in Nuclear Power Systems – Water Reactors, Aug 9-12, 2015, Ottawa, Ontario, Canada. <http://www.nrc.gov/docs/ML1521/ML15218A353.pdf>.

[Authors affiliated with the U.S. Nuclear Regulatory Commission, the Southwest Research Institute and Sandia National Laboratories, present this paper in their individual, not institutional, capacity. The paper describes age-related degradation phenomena that could affect austenitic stainless steel canisters and concrete overpacks or shielding structures for nuclear waste – spent fuel – dry cask storage systems (DCSSs).

Nuclear power plant operators began placing spent nuclear fuel in dry casks beginning in the 1980s. The NRC licensed DCSSs for an initial term of 20 years, after which they may be renewed for additional terms up to 40 years. When the DCSSs were initially placed into service it was anticipated a permanent geological repository would be available in 20 to 40 years, but, to date, there is no permanent repository. Thus technical information needs to be identified to ensure the nuclear waste can be safely stored and transported for extended timeframes and support aging management programs (AMPs).

NRC NUREG-1929 guidance states that degradation phenomena should be considered which "...could be reasonably expected to occur, as well as those that have actually occurred, based on industry and sit-specific operating experience and component testing." (p 2)

"To date, only limited attempts have been made to inspect the interiors of the overpack or storage modules, but there is evidence of dust or other particulate materials on the canister surfaces, as well as of rainwater intrusion through the vents." (p 5)

This analysis is part of an ongoing NRC process to update the generic guidance for license renewal of cask systems, and to identify issues where further research is needed in the context of long-term storage and transportability. Authors consider the following degradation phenomena to be of primary significance: For metallic components (the stainless steel canister shell, canister internal elements, and support elements for concrete structures) these are stress corrosion cracking of the canister shell and other stainless steel components exposed to indoor air; thermal aging and creep of aluminum elements internal to the cask; corrosion of carbon steel components exposed to indoor air; and blistering of Boral neutron absorbers. For concrete structural and shielding components, the degradation phenomena include freeze-thaw; alkali-silica reaction; aggressive ion an acid attack; carbonation and leaching; and differential settlement.

Stress corrosion cracking (SCC) and localized corrosion of stainless steel in the inside air (the atmosphere outside the sealed canister, but within the confined internal space of the overpack or storage module): "The environmental parameters of concern for inside air include the temperature, humidity, radiation field, and the composition of atmospheric particulates which may enter through the vents." (p 4) Modeling suggests the surface temperature of canisters would be 120°C - 200°C {120°F - 392°F} for the first few years after loading, 100°C {212°F} after 20 years, and below 60°C {140°F} within 60 years. "Stresses to propagate cracking may arise from weld residual stresses or from other work imparted to the components." (p 5) The operative temperature range with the requisite humidity for this process appears to be ~30°C - 80°C {86°F - 176°F}. Localized pitting and crevice corrosion, including in tight spaces where components come into contact, could occur in environmental conditions similar to that of stress corrosion cracking and may serve as a precursor for crack initiation.

Creep and thermal aging of aluminum components in the canister internals: Deformation over time under applied stress or creep can occur in aluminum at $\sim 100^{\circ}\text{C}$ $\{212^{\circ}\text{F}\}$. This aging phenomenon is of main concern during the first 40 years, before temperature drops.

Wet corrosion and blistering of Boral in the canister internal. Reactions between water and aluminum in the pores which generate aluminum oxide and hydrogen are one cause of blister formation. Blistering is expected to lessen over time and likely to cease within 60 years.

Freeze-thaw degradation: Successive freeze thaw cycles may cause an accumulation of damage and cause cracking or scaling of the outside concrete surface of the overpack or storage module. Cracking of spent nuclear fuel storage structures at Idaho National Laboratory was caused by freeze-thaw degradation.

Aggregate reactions in inside air, outside air and below grade: The primary aggregate reaction of concern for concrete structures is alkali-silica reaction (ASR). ASR has occurred in concrete structures at nuclear plants.

Aggressive ion and acid attack of concrete and reinforcing bar inside air, outside air and below grade: Aggressive ions can attack and cause degradation of concrete structures. "For sulfate attack, species such as K^2SO^4 , Na^2SO^4 , CaSO^4 , and MgSO^4 which are present in groundwater and rainwater, penetrate the concrete and react with alkali and calcium ions. Sulfate attack can promote cracking by expansive pressure from reaction products, as well as increase the porosity. Chloride ions have a particularly deleterious effect on reinforcing bar by degrading the protective oxide layer which is typically maintained in the presence of basic pore water. This compromises the integrity of the bond between the concrete and the reinforcing bar, and makes the latter more susceptible to corrosion. Acid attack could be caused by rainwater containing sulfur, nitrogen, or chloride-bearing species. Low pH acids can dissolve cement compounds and aggregate to form water-soluble compounds which are washed away by aqueous solutions." (p 7)

Carbonation and leaching of concrete in inside air, outside air and below grade: Gas-phase carbonation can lower the pH and compromise the passivity of reinforcing bar as well as cause shrinkage of the cement paste which leads to cracking. Carbonation typically occurs at moderate humidity levels. Concrete exposed to water can experience leaching. Water then passing through porous pastes or cracks can lower the pH at the reinforcing bar, making it more susceptible to corrosion.

Differential settlement of concrete in inside air and outside air: Differential or structural concrete settling can be caused by uneven deformation of the supporting foundation material. "Factors affecting the settlement include the type of foundation soil (clayey, sandy, etc.), thickness of the foundation, water table level, and load, among others." (p 8) Earthquake-triggered liquefaction of supporting soil can also cause settlement. Some evidence of uneven settlement was identified at the Three Mile Island fuel storage facility at Idaho National Laboratory.

"It is the responsibility of the licensee or CoC *{Certificates of Compliance}* holder to make an assessment for a specific system and environment." (p 8)]

PROGRESS IN NUCLEAR ENERGY: Radwan S, Winfrey L and Bourham M, Simulation of particle impact on protective coating of high-level waste storage packages, Progress in Nuclear Energy (2015); 81: 196-202. Abstract.

<http://www.sciencedirect.com/science/article/pii/S0149197015000177>.

[Authors, from the Atomic energy Authority (Egypt), Virginia Polytechnic Institute and State University, and North Carolina State University, note that potential coatings applied to future high level nuclear waste packages may be affected by the development of micro-cracks. In such a case heavy radioactive particles (neutrons) and gamma rays might interact with the external coatings.]

U.S. DEPARTMENT OF ENERGY (DOE): Maheras SJ, Best RE, Ross SB, Buxton KA, England JL, McConnell PE, Massaro LM, and Jensen PJ, Preliminary Evaluation of Removing Used Nuclear Fuel from Shutdown Sites – Fuel Cycle Research & Development, report prepared for U.S. Department of Energy Nuclear Fuels Storage and Transportation Planning Project, FCRD-NFST-2015-000498, PNNL-22676 Rev. 6, Sep 30, 2015.

http://www.energy.gov/sites/prod/files/2016/05/f31/Shutdown_Sites_Report_Sept2015_web.pdf.

[Authors are from Pacific Northwest National Laboratory, Savannah River National Laboratory, Sandia National Laboratory, and the Federal Railroad Administration.

This study looks at the issue of removal of on-site nuclear waste (spent fuel and greater than Class C radioactive waste) inventory at shut nuclear power plant sites. “The 13 shutdown sites use designs from 4 different suppliers, including 11 different (horizontal and vertical) storage systems that would require 9 different transportation cask designs.” (p iv) At the 13 shutdown sites, a total of 17,963 used nuclear fuel assemblies and a total of 6227.7 metric tons heavy metal (NTHM) of used nuclear fuel are forecast to be stored in 506 to 512 storage canisters.

Authors looked at strategies for removal of on-site nuclear waste (spent fuel and greater than Class C radioactive waste inventory) from 9 of 13 shutdown commercial nuclear power sites: Maine Yankee; Yankee Rowe; Connecticut Yankee; Humboldt Bay; Big Rock Point; Rancho Seco; Trojan; La Crosse; and Zion. (Crystal River; Kewaunee; San Onofre; and Vermont Yankee were not included because these sites recently shut down.)

At Rancho Seco, 6 damaged fuel assemblies in 5 storage canisters were not placed in failed fuel dry shielded canisters. More evaluation is need to determine if the considers holding damage fuel can be shipped without repackaging. At some sites high burnup fuel may need changes to certificates of compliance for transportation casks.

Overall, actions necessary to prepare for and remove nuclear fuel and waste include evaluation of: inventories of spent fuel and low-level radioactive waste; on-site conditions; near-site transportation infrastructure and experience; time sequences of activities. Nine steps are outlined (Table S-2 Activities to Prepare for and Remove Used Nuclear Fuel from Shutdown Sites, p vii):

Step 1, the Assemble Project Organization step, involves assembly of management teams; identification of shutdown site existing infrastructure; constraints; and transportation resource needs, as well as development of interface procedures.

Step 2, the Acquire casks, Railcars, Ancillary Equipment and Transport Services step, involves: development of specifications; solicitation of bids; issuance of contracts; initiation of preparations for shipping campaigns; procurement of transportation casks and revisions to certificates of compliance; procurement of AAR Standard S-2043 railcars; and procurement of off-site transportation services.

Step 3, the Conduct Preliminary Logistics Analysis and Planning step, involves: determination of fleet size, transport requirements, and modes of transport for shutdown site.

Step 4, the Coordinate with Stakeholders step, involves assessment and selection of routes and modes of transport and support training of transportation emergency response personnel.

Step 5, the Develop Campaign Plans step, involves development of plans, policies and procedures for at-site operational interfaces and acceptance, support operations, and in-transit security operations.

Step 6, the Conduct Readiness Activities step, involves: assembly and training of at-site operations interface teams and shutdown site workers; including readiness reviews, tabletop exercises and dry run operations.

Step 7, the Load for Off-site Transport step, involves loading and preparing casks and placing casks on transporters for off-site transportation.

Step 8, the Accept for Off-site Transport step, involves acceptance of loaded casks on transporters for off-site transportation.

Step 9, the transport step, involves shipment of shutdown site casks.

Transport analysis will require evaluation of specific infrastructure conditions, including the conditions of: barge slips; canals; tunnels; potential heavy haul truck routes; and transload locations. Examples: At Maine Yankee, the on-site rail spur has not been maintained; at Rancho Seco, the rail spur has not been maintained; at Connecticut Yankee, it is uncertain whether the cooling water discharge canal is deep enough to accommodate barges without dredging. (Table 5-1. Summary of Transportation Mode Options for Shipments from Shutdown Sites (p 283)

Authors preliminarily estimate the cumulative duration of nuclear waste activities at 11.5 to 14.5 years, but notes this “assumes that project resources (personnel, funding, and functions such as procurement and quality assurance) would be adequate to support concurrent acquisitions of transportation casks and associated components that would include several units of each of the eight transportation casks that would be used at the shutdown sites... and to acquire and certify the fleet of AAR Standard S-2043 compliant railcars that would be needed. (p 279) The time estimate also assumes there would be “flexibility” in procuring casks and associated components “from non-domestic suppliers.” (p 279)

The initial dry cask storage licenses were for a period of 20 years, “so renewal will need to occur starting in about 2018 to 2020.” (p 282) In addition, transportation cask certificates of

compliance are for 5 year periods, so they will need to be regularly renewed. “This will require a long-term commitment by the owners of the certificates of compliance to maintain these certificates.” (p 282)]

U.S. GOVERNMENT ACCOUNTABILITY OFFICE: Spent Nuclear Fuel: Legislative, Technical, and Societal Challenges to Its Transportation, U.S. Government Accountability Office report, GAO-16-121T, Oct 1, 2015. <http://www.gao.gov/products/GAO-16-121T>.

U.S. NUCLEAR REGULATORY COMMISSION (NRC): Solis J and Zigh G, Impact of Variation in Environmental Conditions on the Thermal Performance of Dry Storage Casks, Nuclear Regulatory Commission (NRC) Draft Report, NUREG-2174, Feb 2015. *Link to pdf at:* <http://www.regulations.gov/#!documentDetail;D=NRC-2014-0273-0002>.

[Environmental variables like ambient temperature, solar heating, relative humidity, elevation, and wind speed and direction may affect the thermal performance of ventilated dry casks. “The thermal evaluation generally assumes a set of fixed environmental factors (e.g., average annual ambient temperature, quiescent conditions, sea level) that will bound all sites in the continental United States. However, for some sites, using average values may not be adequate, because more adverse ambient conditions could exist for prolonged periods of time, allowing a storage system to reach new steady-state conditions that could result in higher spent fuel cladding temperatures exceeding recommended limits for normal conditions of storage.” (p iii)

The paper describes the application of ANSYS FLUENT commercial computational fluid dynamics (CFD) code to examine the effect of environmental conditions – wind speed and direction, elevation, total decay heat, air humidity, and ambient temperature – on the thermal performance of dry storage casks. Magnitude of environmental variables was selected using available data from National Oceanic and Atmospheric Administration (NOAA) and ASHRAE Handbook Fundamentals (ASHRAE, 1997). Findings included: Ambient temperature inversely affects the thermal performance of a spent fuel dry storage cask. The PCT {*peak cladding temperature*} increases by 8 Kelvin (K) (14.4°F) for every 5.6 K (10°F) increase in ambient temperature. (p 44) Elevation inversely affects thermal performance of a spent fuel dry storage cask. The PCT increases by 6 K (11°F) for every 500 m increase in elevation.]

2014

ARGONNE NATIONAL LABORATORY: Billone MC, Burtseva TA, Han Z and Liu YY, Effects of Multiple Drying Cycles on High-Burnup PWR Cladding Alloys, Argonne National Laboratory Study for Department of Energy, FCRD-UFD-2014-000052 ANL-14/11, Sep 26, 2014. <http://www.ipd.anl.gov/anlpubs/2014/09/107521.pdf>.

[High-burnup (HBU) fuel cladding “is subject to higher tensile hoop stresses induced by higher temperatures and pressure relative to in-reactor operation and pool storage.” The high burnup cladding alloys have a wide range of hydrogen contents. High burnup cladding alloys also evidence varying hydride morphology after fuel removal from nuclear reactor cores.

Radial hydrides are a potential embrittlement mechanism for high burnup fuel cladding subjected to hoop-stress loading. Hoop-stress loading may be significant during normal cask transport. (p v)

A concern for high burnup fuel is that radial hydrides may precipitate in the cladding during slow cooling and introduce an embrittlement mechanism if the cladding temperature decreases below the ductile-to-brittle transition temperature. Cladding failure criteria may have to be revised to account for embrittlement in response to hoop-stress loading.

The NRC recommends a peak cladding temperature limit of 400°C for all fuel burnups “under normal conditions of storage and short-term loading operations (e.g., drying, backfilling with inert gas, and transfer of the cask to the storage pad.” (p 1) Different claddings – Zircaloy-2 (Zry-2), Zircaloy-4 (Zry-4), ZIRO™ and M5® – have different properties.

“[C]urrent best estimate thermal analyses indicate that peak cladding temperatures may not exceed 350°C during vacuum drying and storage for canisters/casks containing HBU fuel assemblies. (p 2) Some test results indicate the potential benefit of a decrease in peak drying temperature is negated by a small increase in peak hoop stress. “It appears that multiple drying cycles from 250°C to 350°C might result in more radial hydride precipitation than what was observed with multiple drying cycles from 300°C to 400°C.” (p iv) Some recent testing results have been “surprising”. (p 31)

In 2003, the “NRC recognized that data for HBU fuel cladding alloys were needed to determine the extent of radial-hydride embrittlement under conditions relevant to drying-transfer operations and storage.” (p 1).

There is a “lack of data for HBU fuel cladding after more than 20 years of storage, which corresponds to peak cladding temperatures of ≈200°C or less.” (p 1)

“A major concern is whether or not HBU fuel will maintain cladding integrity and be readily retrievable after more than 20 years of storage.” (p 1)

Tests by Argonne and Aomi labs have indicated that susceptibility to radial-hydride precipitation during cooling is dependent on the cladding alloy. “The database for HBU M5® is sparse for the peak RHT {radial-hydride treatment} temperature of 400°C.” (p 31) Preliminary indications suggest high burnup PWR cladding alloys in dry storage systems may operate at temperatures lower than the 400°C limit. (p 32)

Observations indicate that “radial hydrides that emanate from the cladding inner or outer surface have the most significant impact on crack initiation and subsequent propagation.” (p 32) Radial hydrides within the inner third of the cladding wall are the most damaging. (p 31)

The Department of Energy has recommended “additional R&D” on cladding hydride reorientation and embrittlement. (p 32) One of the “high priority activities is to establish the materials properties of cladding, especially for HBU cladding, and to supply models with the data necessary to determine how fuel rods will behave under normal, off-normal, and accident conditions, during both extended storage and transportation.” (p 32)]

2013

ARGONNE NATIONAL LABORATORY: Chopra OK, Diercks D, Ma D, Shah VN, Tam S-W, Fabian RR, Han Z, and Liu YY, Managing Aging Effects on Dry Cask Storage Systems for Extended Long-Term Storage and Transportation of Used Fuel Rev. Argonne National Laboratory Study for Department of Energy, FCRD-UFD-2013-000294 ANL-13/15, Sep 30, 2013. <http://www.ipd.anl.gov/anlpubs/2013/10/77650.pdf>.

Billone MC, Burtseva TA, and Liu YY, Effects of drying and storage on high-burnup cladding ductility, Conference Paper, 14th International High-Level Radioactive Waste Management Conference, IHLRWMC 2013: Integrating Storage, Transportation, and Disposal (2013); 2: 1106-1113. Abstract. <http://www.scopus.com/record/display.url?eid=2-s2.0-84886884479&origin=inward&txGid=5FB4D61C836A9B562E30191367ACA154.N5T5nM1aaTEF8rE6yKCR3A%3a7>.

[“Pre-storage drying-transfer operations and early stage storage can subject cladding to high enough temperatures and hoop stresses to induce radial-hydride precipitation during long-term dry-cask cooling. These radial hydrides could provide an additional embrittlement mechanism in response to hoop-stress loading during post-storage fuel retrieval and cask transport.” (Abstract). Paper discusses the protocol Argonne National Laboratory proposes for study of high burnup cladding embrittlement.]

NUCLEAR ENGINEERING AND TECHNOLOGY: Kook D, Choi J, Kim J, and Kim Y, Review of Spent Fuel Integrity Evaluation for Dry Storage, Nuclear Engineering and Technology (2013); 45 (1): 115-124. <http://www.sciencedirect.com/science/article/pii/S1738573315300140>.

[“Fuel temperature and burnup can play a key role in determining the oxide layer thickness, hydrogen pickup fraction, fission gas release rate, rod internal pressure, and hoop stress of the inner cladding wall. The cladding material condition, which is determined by the reactor’s operation history, is also again becoming dependent on the storage temperature history.” The US uses uniform criteria (400 °C) for zirconium-based alloy cladding.

Because of transportation at the end of storage, cladding degradation induced by hydride is increasing in importance as time goes by and the cask fuel system temperature drops. In the US, considering extended storage, several blind points of the DCSC project implementation have been brought to light. Previous belief that the most dangerous period was the initial 20 years of dry cask storage has been challenged due to growing recognition of the significant hydride effect in low temperature ranges for the remaining 40 years. This has revealed the “new necessity for spent fuel integrity research on extended storage” via an Extended Storage Collaboration Program led by EPRI. The program is engaging in data acquisition examination of high burnup spent fuel.

All efforts for calculating the temperature of all system components are focused on lowering the fuel temperature.]

LAWRENCE LIVERMORE NATIONAL LABORATORY: Hamilton T, A Visual Description of the Concrete Exterior of the Cactus Crater Containment Structure, Lawrence Livermore National Laboratory Report LLNL-TR-648143, Oct 2013.
https://marshallislands.llnl.gov/ccs/Hamilton_LLNL-TR-648143_final.pdf.

OAK RIDGE NATIONAL LABORATORY: Howard RH, Yan Y, Howard RL, McDuffee JL, Ott LJ, Production of Simulated High-Burnup Used Fuel Cladding in the HFIR, R, Proceedings of the 14th International High-Level Radioactive Waste Management Conference (IHLRWMC), Albuquerque, NM, April 28-May 2, 2013. {referenced in link}
http://web.ornl.gov/sci/nsed/rnsd/staff_details_HowardRob.shtml

U.S. DEPARTMENT OF ENERGY (DOE): Energy Department Announces New Investment in Nuclear Fuel Storage Research, Department of Energy Press Release, Apr 16, 2013.
<http://energy.gov/articles/energy-department-announces-new-investment-nuclear-fuel-storage-research>.

[US Energy Department announces new research and development project led by the Electric Power Research Institute (EPRI) aimed at designing and demonstrating dry storage cask technology for high burnup spent nuclear fuel.]

2012

ARGONNE NATIONAL LABORATORY: Billone MC, Burtseva TA, and Yan Y, Ductile-to-Brittle Transition Temperature for High-Burnup Zircaloy-4 and ZIRLO™ Cladding Alloys Exposed to Simulated Drying-Storage Conditions, Report of Argonne National Laboratory, Sep 28, 2012. <http://pbadupws.nrc.gov/docs/ML1218/ML12181A238.pdf>.
{NOTE: Results in this report were used to generate the article: Billone MC, Burtseva TA, and Einziger RE, Ductile-to-brittle transition temperature for high-burnup cladding alloys exposed to simulated drying-storage conditions, Nuclear Materials (2013); 433 (1-3): 431-448.
<http://www.sciencedirect.com/science/article/pii/S0022311512005181>.}

[Compared to lower burnup rods, “high-burnup fuel rods are characterized by increased: decay heat following reactor discharge, internal gas pressure, cladding corrosion layer thickness, and cladding hydrogen content.” During cooling, under tensile hoop stress, some dissolved hydrogen may precipitate across the cladding. After cooling to about 200° C, most of the dissolved hydrogen re-precipitates as hydrides and additional cooling during storage could result in radial-hydride-induced embrittlement. Both this embrittlement and the corresponding ductile-to-ductile transition temperature “may have a significant effect on cladding mechanical properties used in structural analyses for storage and transport casks.” (p 1)

The report presents numerous photos of test results, including images of cracked cladding rings. {See, e.g., image of through-wall cracking at p. 16 and image of crack extending through

70% of the wall of ring, at p 62.} The behavior of cladding materials depends, in part, on the microstructure of the alloy materials (i.e., orientation of grains and grain boundaries.) Residual tensile hoop stresses from fabrication and irradiation can also impact radial hydride precipitation. Overall, evidence suggests high burnup ZIRLO™ be more susceptible than high burnup Zry-4 to radial-hydride precipitation both during reactor shut down and during simulated drying storage conditions. Data are not publically available for the behavior of MF® (p 69)

Authors conclude additional data will be needed to determine ductile-to-ductile transition temperature. However “the trend of the data generated in the current work clearly indicates that failure criteria for high-burnup cladding need to include the embrittling effects of radial-hydrides for drying-storage conditions that are likely to result in significant radial-hydride precipitation.” (p. 71)]

ARGONNE NATIONAL LABORATORY: Lambert JD, Bakhtiari S, Bodnar I, Kot C, and Pence J, Extended In-Situ and Real Time Monitoring – Task 3: Long-Term Dry Cask Storage of Spent Nuclear Fuel, Argonne National Laboratory report for U.S. Nuclear Regulatory Commission, NRC Job Code V6060, ANL/NE-12/18, Mar 2012.
<http://pbadupws.nrc.gov/docs/ML1301/ML13015A321.pdf>.

[This report reviews monitoring methods for dry cask storage systems (DCSSs). An overall recommendation is that “Monitoring methods must be carefully evaluated for application to the unique geometries and limited component clearances in dry cask storage systems.” (p 45)

In the expectation of the opening of a national repository by the late 1990s, the NRC licensed use of dry casks for an initial period of 20 years. Examination in 1999 of 12 dry cask canisters which held low burnup fuel from the Surry PWR plant which had been stored for ~14 revealed no signs of physical deterioration or gas leakage, and the concrete pad under the cask showed no degradation or sagging. Those “encouraging results” led the NRC to grant license extension for dry cask storage systems (DCSSs). (p 2)

With cancellation of the Yucca Mountain repository “and no clear path forward” for spent nuclear fuel, fuel for longer periods and at higher burnup levels will need to remain in dry cask storage. “Mechanisms for degradation of DCSSs inoperative in the short term may become important to the safety functions of the system, structure or components (SSCs) over such a prolonged period. For example, excessive dry-out of concrete in an arid climate, corrosion of concrete rebar in a marine climate, or stress corrosion cracking (SCC) of welds on storage canisters need to be considered, and, if possible, monitored.” (p 2)

There is a diversity of DCSS designs. (Table I. Dry Cask Storage Systems in Use in the U.S. 2009-2012, p 3) DCSSs may be divided into two major types: those with welded metal canisters (89% of those deployed) and older versions with bolted metal casks. (Appendix A: Dry Cask Storage systems in the U.S. by Vendor and Utility as of 7 February 2012, pp 51-53)

In October 2010, helium leaks were detected by the monitoring system from two TN-68 casks (with bolted lids) at Exelon’s Peach Bottom BWR. One of the leaks from a main outer lid seal required unloading the cask’s spent fuel. NRC regulations require DCSSs to have the capability for continuous monitoring. “In practice, however, many components important to safe storage of SNF are not monitored or tested. These include the fuel, cladding, neutron poisons, fuel baskets, and fuel assembly hardware.” (p 6)

For dry storage of long duration “accurate measurement of conditions will be challenging,” requiring instrumentation – like sensors, cabling and electronics – that will not degrade, or can be readily replaced, or are rugged and self-calibrating. (p 22) “The instrumentation must also remain functional in severe environmental conditions and/or accident conditions.” (p 22) “The biggest technical challenge will be transmission of sensor information out of the welded canister.” (p 33)

ANL work has shown that the temperature inside canisters must be maintained below 400°C to avoid degradation of high burnup cladding by radial reorientation of hydride precipitates.

There exists no direct method for testing the leak tightness of a SNF canister with welded primary and secondary lids. It is assumed the 2 welded lids will, in combination, preclude radionuclide leakage. “This is a very reasonable assumption in the short term, but possibly not in the long term, when weld temperatures approach ambient values, moisture can condense, and salt spray may deliquesce to promote SSC of welds.” (p 30)

Changes in the gas composition in the interior of a canister may be related to canister leakage, failure of fuel cladding or both. The presence of Kr-85 activity – an indicator of altered gas composition – will not work for cooling times greater than 40-50 years.

Reinforced concrete forms an integral part of most DCSS designs and its long-term stability is “essential” to isolating spent fuel from operators and the general public. (p 38) Methods used to monitor the integrity of concrete buildings and bridges should be further evaluated for application to dry cast storage systems. (p 45)]

NUCLEAR INFORMATION AND RESOURCE SERVICE (NIRS): Damveld H and Bannick D, Management of Spent Fuel and Radioactive Waste: State of affairs – A worldwide overview, NIRS Nuclear Monitor, 746/7/8, May 2, 2012. http://www.nirs.org/mononline/nm746_48.pdf.

U.S. CONGRESSIONAL RESEARCH SERVICE: Werner, JD, May 24, 2012. U.S. Spent Nuclear Fuel Storage, Report of the Congressional Research Service, 7-5700; R42513, May 24, 2012. <https://www.fas.org/sqp/crs/misc/R42513.pdf>.

[As of Dec 2011 more than 67,000 metric tons of spent fuel in more than 174,000 assemblies is stored at 77 sites (including 4 DOE facilities) in 35 states, increasing at the rate of about 2,000 metric tons per year. About 73% (67,450 metric tons) of spent fuel continues to be in spent fuel pools, which are becoming filled to capacity. At 27 sites there is no current dry cask storage capability. (Summary)

The 5 states with the largest total amount of spent nuclear fuel measured by metric tons of heavy metal content are: Illinois; Pennsylvania; South Carolina; New York; and North Carolina. The top five states with the largest amount of spent nuclear fuel in pools are Illinois: Pennsylvania; New York; North Carolina; and Alabama. (p 24)

“In fact, virtually every site that has ever hosted a commercial nuclear reactor is currently also a storage site for SNF.” (p 17) Approximately 80% of commercial spent nuclear fuel, measured by mass, is stored east of the Mississippi River. (p 23)

“Notwithstanding the mandate in the Nuclear Waste Policy Act (NWPAA) and various contracts that DOE begin accepting SNF for disposal in 1998, no disposal repository has been completed or licensed.” Even if the Yucca Mountain program – terminated in 2009 – were to be resumed quickly, the time required to ship nuclear waste would require an extended period of storage, with interim storage being needed until at least 2056. The current quantity of nuclear waste in the nation (at commercial and government sites) exceeds the legal capacity of the proposed Yucca Mountain repository. (p 5)

A survey of spent fuel storage in 10 nations with significant nuclear operations found that all store substantial amounts of spent fuel in pools or dry casks. France – with 13,500 metric tons of spent fuel and 2,229 cm of vitrified high level waste as of 2007 – has not yet selected a disposal site for high level waste. Finland (with 4 nuclear reactors) is the only country where a commercial nuclear waste repository site has been selected with local government support. (p 7)

The US federal government has already paid out about \$1 billion in claims and faces significant and growing liability arising from contracts DOE signed in 1983 and the 1987 Nuclear Waste Policy Act whereby the government was supposed to assume nuclear waste from commercial nuclear utilities. “The future estimated costs for storage of commercial SNF are approximately \$500 million per year.” (pp 7-8)

The Department of Energy took possession of the spent fuel and debris from the 1979 Three Mile Island plant accident. (p 25)

“In the 1970s a relatively small amount (248.7 MTU of commercial SNF was shipped from commercial reactors, including utilities in Michigan and New York, to the West Valley site in New York, which reprocessed SNF for about six years (1966 to 1972). The resulting high-level waste and contaminated facilities remain at the site. DOE has estimated that decommissioning and environmental remediation of the contamination at the West Valley site will continue until at least 2020, cost \$3.7 billion, and require indefinite long-term stewardship thereafter.” (pp 25-26)

In addition to the releases of tritium contamination from spent fuel pools and other structures to groundwater at 38 commercial nuclear sites, “tritium contamination was found in groundwater from spent fuel storage pools at DOE sites, including the Brookhaven National Laboratory in New York, Hanford in Washington State, and the Savannah River Site in South Carolina. . . . Tritium is inherently difficult to remediate, once released, because it is simply a radioactive form of hydrogen that substitutes freely with hydrogen in water and decays at a rate of about 5% per year (12.32 year half life). (p 34)

The inherent hazards of spent nuclear fuel can result in a variety of risks. “A variety of forces or ‘threats’ acting on spent fuel could result in containment being breached, resulting in potential exposures and risks, generally: (1) loss of power for water supply, circulation, or cooling, which can have significant consequences for SNF in wet pool storage; (2) external threats, like hydrogen explosions from adjacent reactors, or an airplane crashing into an SNF storage facility; (3) long-term degradation of SNF through chronic corrosion of cladding (e.g., hydride corrosion); and (4) leakage of contaminated water from wet pools to groundwater.” (p 30) In contrast to the U.S. “Germany explicitly requires protection against risks, including ‘external

events' such as an attack on SNF storage, and this has resulted in construction of hardened storage buildings for dry cask storage of SNF." (p 32)

"Another potential threat to SNF storage safety is degradation of the cladding and fuel elements." The potential for degradation of SNF cladding has been well known for decades. (p 33) "Zirconium has a high affinity for hydrogen. Absorption of hydrogen leads to hydrogen embrittlement, which can lead to failure of the zirconium tubing used as cladding for nuclear fuel. In addition, zirconium also reacts with oxygen, which can lead to corrosion." (p 33, fn 142, quoting Kok, Kenneth D, *Nuclear Engineering Handbook*, CRC press, 2009, at p. 287)]

2011

NUCLEAR MATERIALS: Hsu H-H and Tsay L-W, Effect of hydride orientation on fracture toughness of Zircaloy-4 cladding, Nuclear Materials (2011); 408 (1): 67-72. Abstract. <http://www.sciencedirect.com/science/article/pii/S0022311510006628>. Full Article: [ftp://ftp.stormchild.name/books/physics,%20math/%D0%96%D1%83%D1%80%D0%BD%0%B0%D0%BB%D1%8B/Journal%20of%20Nuclear%20Materials%20\(1997-2011\)/2011%20Volume%20408/1/67-72.pdf](ftp://ftp.stormchild.name/books/physics,%20math/%D0%96%D1%83%D1%80%D0%BD%0%B0%D0%BB%D1%8B/Journal%20of%20Nuclear%20Materials%20(1997-2011)/2011%20Volume%20408/1/67-72.pdf).

[Researchers at the Institute of Nuclear Energy Research (INER) and the Institute of Materials Engineering at National Taiwan Ocean University (both in Taiwan) note that the zirconium alloy Zircaloy-4 (Zry-4) has been used in light water reactors as nuclear fuel cladding for many years.

However, "the nuclear industry is pushing to extend the fuel burnup to higher levels." (p 67)

"Hydrogen in zirconium alloys has a low solubility and will precipitate in a form of brittle zirconium hydride when the solubility limit is exceeded. The mechanical properties and fracture toughness degrade with precipitation of brittle zirconium hydrides." (p 67)

At higher burnup levels, increasing hydrogen concentration and internal fuel cladding pressure could exacerbate the hydrogen embrittlement of zircaloy cladding as a result of the attendant variation of hydride orientation and distribution during reactor service and dry storage.

Hydrogen embrittlement is one of the "major degradation mechanisms" for high burnup fuel cladding during both reactor service and spent fuel dry storage.

"The hydrogen embrittlement of Zircaloy cladding depends not only on the hydrogen concentration, but also on the morphology and orientation of zirconium hydrides." (p 67) Zirconium hydrides might be reoriented from a circumferential into a radial direction when fuel cladding is subjected to thermal cycling under hoop stress of sufficient magnitude. Failed fuel rods at the Savannah River nuclear plant, for example, showed radial zirconium hydrides in front of cracks and that "the cladding ductility degraded remarkably." (p 67)

Thus it is believed that radial hydrides may exacerbate hydrogen embrittlement and "play a crucial role" in the axial split of Zircaloy cladding. (p 67) The extension of fuel burnup results in the precipitation of more radial hydrides in Zircaloy cladding. This "is a concern of fuel integrity at higher burnups." (p 67)

Here, the researchers tested the effect of radial hydride on fracture behavior of Zircaloy cladding with 300wppm hydrogen concentration.

Findings: “The fractographic features reveal that the crack path is influenced by the orientation of zirconium hydride.” (p 67)

Researchers conclude: “Hydrogen concentration, hydride orientation and temperature are factors affecting the fracture toughness of Zr-4 cladding, governing the embrittlement behavior.” (p 72)]

SAVANNAH RIVER NATIONAL LABORATORY: Vinson D, Kesterson R, and Mendez-Torres A, Inventory and Description of Commercial Reactor Fuels within the United States, Savannah River National Laboratory study prepared for the US Department of Energy, FCRD-USED-2011-000093, SRNL-STI-2011-00228, Mar 31, 2011.
<http://sti.srs.gov/fulltext/SRNL-STI-2011-00228.pdf>.

[Over the last few decades of commercial reactor operation, spent fuel pools have been reaching capacity. Reracking and fuel rod consolidation has increased pool capacity. “However, these activities have only postponed the inevitable situation of having full fuel pools.” (p 9)

Report provides inventory of spent fuel being stored in the US “based upon publicly available resources.” (p 14) The DOE is negotiating with the industry for a framework “in which industry will provide and *sic* specific information on used fuel inventory and the Department will compensate industry for the material required for R&D and TEF *{testing and evaluation facility}* activities.” (p 14)

At Indian Point, the minimum to maximum burnup (MWd/MTIHM) ranges are: For Unit 2: 12,034 – 60,368 and for Unit 3: 15,900 – 66,608. Average enrichment at IP2 is 4.24% and at IP3 4.34%. For the no-longer operational Indian Point 1 fuel, minimum to maximum burnup range is: 3,713 – 27,048. (Table 7, Range of Burnup for Used Nuclear Fuel by Reactor, p 26)

At Indian Point, the Units 1, 2, and 3 pools capacities are, respectively: 756, 1,374 and 1,345. Units 2 and 3 both have reserves of 193. (Table 8, Pool types and Capacity by Utility, p 28) Entergy uses Holtec HI-STORM dry casks canister types MPC-32.]

Tsai H, Liu YY, Nutt M, and Shuler J, Advanced Surveillance Technologies for Used Fuel Long-Term Storage and Transportation, Paper published in the Proceedings of the 14th International Conference on Environmental Remediation and Radioactive Waste Management IREM2011, Reims, France, Sep 25-29, 2011.
<http://proceedings.asmedigitalcollection.asme.org/proceeding.aspx?articleid=1645996>.
www.gbv.de/dms/tib-ub-hannover/731832299.pdf.

[Paper authored by scientists from the Argonne National Laboratory and the U.S. Department of Energy. “With the prospect looming for extended long term storage – possibly over multiple decades – and deferred transport, condition-and performance-based aging management of cask structures and components is now a necessity that requires immediate attention. From the standpoint of consequences, one of the greatest concerns is the rupture of a substantial number of fuel rods that would affect fuel retrievability. Used fuel cladding may become susceptible to rupture due to radial-hydride-induced embrittlement caused by water-side corrosion during the

reactor operation and subsequent drying/transfer process, through early state of storage in a dry cask, especially for high burnup fuels.”(p 1)

“Of the numerous potential cask degradation processes, aside from those caused by severe nature or man-made disasters, air/moisture ingress into the cask is possibly the one with the gravest concern. The displacement of the more-conductive helium cover gas by air/moisture would cause the canister interior temperature to rise. Air and moisture could also cause the zirconium-based fuel rod cladding to oxidize if the system temperature is sufficiently elevated. The released hydrogen from zirconium/moisture interaction could form a contamination in the canister or cask.” (p 2)

“Currently, the dry cask storage systems are not required to have instrumentation to monitor heat loads or radiation leaks on a continuous basis... [Periodic inspections and other routine surveillance] may not be sufficient in the long term, particularly when fuel retrievability is an issue.” (p 2)

The authors then posit use of a surveillance technology called “ARG-US,” developed by Argonne, noting “[s]oftware provides the vital link between the technology and the end user and is a key component in the development and implementation of ARG-US. The ARG-US software package consists of a program called ARG-US OnSite, local and central databases, and web applications. ARG-US OnSite, the basic building block, controls the readers via the control computer and provides a graphical user interface (GUI) to operate the hardware.” (p 4)

“To perform in-canister monitoring, numerous enabling technologies have to be developed.” (p 6)

While casts have been shown in tests to meet regulatory requirements “under storage and accident transport conditions, the integrity of the used fuel rods in the cask is not assured in such tests.” (p 6)

“While research is underway to study drying/transfer conditions that could mitigate radial-hydride-induced cladding embrittlement for high-burnup fuels, there is presently insufficient data to confidently project rod integrity beyond even the short term.” (p 7)

The authors’ conclude: “The integrity of canisters/casks and that of the used fuel rods in them are vital for the safe operation of DCSS {dry cask storage systems} during extended long-term storage and deferred transportation. The present surveillance programs...may not be sufficient for extended long term storage, which can span multiple decades. Likewise, present practices do not ensure the integrity of the used fuel rods in the canister/casks.” (p 7)]

U.S. GOVERNMENT ACCOUNTABILITY OFFICE (GAO): Commercial Nuclear Waste: Effects of a Termination of the Yucca Mountain Repository Program and Lessons Learned, Report of the Government Accountability Office, Apr 2011, GAO-11-229. <http://www.gao.gov/assets/320/317627.pdf>.

[“Spent nuclear fuel – considered very hazardous – is accumulating at commercial reactor sites in 33 states.” The Nuclear Waste Policy Act of 1982 put the responsibility for creating a waste depository on the government.” DOE decided to terminate the Yucca Mountain repository

program because, according to DOE officials, it is not a workable option...." and the Yucca Mountain program was to be dismantled by September 30, 2010. "Because successfully resolving the issue of what to do with spent commercial nuclear fuel will likely be a decades-long, costly, and complex endeavor, which can be disrupted by changing views and unpredictable funding, Congress may wish to consider whether a more predictable funding mechanism would enhance the federal government's future efforts to develop and implement a disposal solution for the nation's spent nuclear fuel."

"However, there is no guarantee that a more acceptable or less costly alternative [to Yucca Mountain] will be identified; termination could instead restart a costly and time-consuming process to find and develop an alternative permanent solution. It would also likely prolong the need for interim storage of spent nuclear fuel at reactor sites, which would have financial and other impacts. For example, the federal government bears part of the storage costs as a result of industry lawsuits over DOE's failure to take custody of commercial spent nuclear fuel in 1998, as required. These costs exceed \$15.4 billion and could grow by an additional \$500 million a year after 2020."

"...it is important that a waste management strategy have consistent policy, funding, and leadership, especially since the process will likely take decades... GAO suggests that Congress consider whether a more predictable funding mechanism would enhance future efforts...."]

WALL STREET JOURNAL: Maremont, Mark, Nuclear Waste Piles Up—in Budget Deficit, Wall Street Journal, Aug 9, 2011.
<http://online.wsj.com/article/SB10001424053111904292504576484133479927502.html>.

[Spent nuclear fuel stranded nuclear sites across the US is not just a potential public health hazard, but a growing burden on federal finances. The federal government's assumption of responsibility for nuclear waste disposal three decades ago has become another unfunded liability, starting with a \$25 billion Nuclear Waste Fund gone astray. Congress spent the fund money on other things, so it is little more than an IOU. In addition, the Department of Energy will owe an estimated \$16.2 billion in legal judgments to nuclear utilities for the cost of holding nuclear waste by 2020; and \$500 million a year after that.

The costs of the ultimate disposal project also are sure to rise, with no plan in sight. (The DOE in 2008 estimated that building the Yucca Mountain facility and then transferring waste to it would cost \$83 billion in 2007 dollars on top of \$13.5 billion already spent.) Taxpayers are on the hook for the cost.]

2010

POLICY REVIEW: Sokolski H, The High and Hidden Costs of Nuclear Power, Policy Review (Aug & Sep 2010); 162: 53-68. <http://www.psr.org/nuclear-bailout/resources/the-high-and-hidden-costs-of.pdf>.

[Henry Sokolski, a former US Department of Defense deputy and former member of the Central Intelligence Agency's Senior Advisory Group, is Executive Director of the Nonproliferation Policy Education Center. *Policy Review* is a publication of the Hoover Institution at Stanford University. Paper discusses the significant negatives of nuclear power, both from an economics and proliferation danger perspective.

The many hidden costs of nuclear power include the costs inherent in the full fuel cycle, including nuclear waste.]

U.S. DEPARTMENT OF ENERGY (DOE): Motion to Withdraw, In the Matter of U.S. Department of Energy (High-Level Waste Repository, Atomic Safety and Licensing Board of the U.S. Nuclear Regulatory Commission, Docket No. 63-001. ASLB No. 09-892-HL-CAB04, Mar 3, 2010.
http://energy.gov/sites/prod/files/edg/media/DOE_Motion_to_Withdraw.pdf.

[US Department of Energy (DOE) motion to withdraw its pending license application for a permanent geologic repository at Yucca Mountain, Nevada. The DOE reaffirms its obligation to take possession and dispose of the nation's spent nuclear fuel and high-level nuclear waste pursuant to the provisions of the Nuclear Waste Policy Act of 1982, as amended, 42 U.S.C. §§ 10101 *et seq* (NWPA). "[T]he Secretary of energy has decided that a geologic repository at Yucca Mountain is not a workable option for the long-term disposition of these materials." (p 1) This action will provide finality in ending the Yucca Mountain project. "Future proposals for the disposition of such materials should thus be based on a comprehensive and careful evaluation of options supported by that knowledge, as well as other relevant factors, including the ability to secure broad public support, not on an approach that 'has not proven effective' over several decades." (pp 2-3)

To open a nuclear waste facility, the DOE "would be required to obtain water rights, rights of way from the Bureau of Land Management for utilities and access roads, and Clean Water Act § 404 permits for repository construction, as well as all the state and federal approvals necessary for an approximately 300-mile rail line, among many other things." (p 6)]

2009

ASSOCIATED PRESS: Blaney, Betsy, Critics: Burial site for Hudson river PCBs is inadequate, Associated Press, Jun 22, 2009.
http://lubbockonline.com/stories/062209/sta_453317901.shtml#.VipnYv-FMuU.

[A stretch of West Texas, bordering New Mexico, has become a dumping ground for radioactive waste – including 45,000 tons of waste from a former uranium-processing plant – and carcinogenic PCB-tainted sludge dredged from the Hudson River.

Critics charge the dumping will only create a new toxic mess for future generations to clean up.

Waste Control Specialists (WCS), the Dallas-based company that operates a low level radioactive waste and PCB disposal site, stands to make tens of millions of dollars from the Hudson PCBs. Glenn Lewis, formerly with the Texas Commission of Environmental Quality said geologists studying the site found holes and fissures in the clay at the site. "The 'geology is awful. It leaks,' said Lewis, who compiled the geologists' findings. He called the site

'irredeemably inadequate' for radioactive waste." The Santa Rosa aquifer is near the site. The aquifer is not used for drinking water but it is used to water livestock which could transfer contaminants to the human food chain in the event of a leak Lewis said.

Neil Carman, an official with the Sierra Club in Texas charged: "There's no cleanup. It's just gone from the Hudson River," and called the {WCS LLC site in Andrews County} a "cheap pay toilet ... the cheapest GE could find'."]

JOURNAL NEWS: Clary, Greg, Indian Pt vendor faulted over nuclear fuel canister testing, Journal News, Aug 14, 2009.
<http://www.lohud.com/article/20090814/NEWS02/908140368/1018/>.

RADIOACTIVE WASTE MANAGEMENT ASSOCIATES (RWMA): Lamb M and Resnikoff M, Radiological Consequences of Severe Rail Accidents Involving Spent Nuclear Fuel Shipments To Yucca Mountain: Hypothetical Baltimore Rail Tunnel Fire Involving SNF, Report of Radioactive Waste Management Associates, Nov 2009.
<http://www.state.nv.us/nucwaste/news2001/nn11459.pdf>.

2008

NUCLEAR INFORMATION AND RESOURCE SERVICE (NIRS): False Promises, Report of the Nuclear Information and Resource Service, May 2008.
<http://www.nirs.org/falsepromises.pdf>.

[Report provides broad overview of key issues relating to nuclear power. Chapter 7 focuses on waste risks.]

U.S. DEPARTMENT OF ENERGY (DOE): The Report To The President And The Congress By The Secretary of Energy On The Need For A Second Repository, U.S. Department of Energy Report, DOE/RW-0595, Dec 2008.
http://www.energy.gov/sites/prod/files/edg/media/Second_Repository_Rpt_120908.pdf.

[The Nuclear Waste Policy Act of 1982 anticipated operation of a national high level nuclear waste repository by 1998. The Department of Energy has entered into contracts with the nation's current fleet of nuclear power plants to take title to and dispose of spent nuclear fuel beginning no later than January 31, 1998.

The Nuclear Waste Policy Act, as amended, set a statutory capacity limit of 70,000 metric tons of high level radioactive waste/spent fuel for a planned repository at Yucca Mountain, NV. As of 2008, 63,000 metric tons of commercial irradiated nuclear fuel had already been generated by the US nuclear power industry, yet Yucca has not opened. DOE expects that, by 2010, nuclear power plants will have generated the entire amount of spent fuel allocated for disposal in the Yucca Mountain repository.

If Congress does not increase the Yucca holding cap, a second repository will be needed to accommodate the increasing amount of spent fuel being generated. Each of the Lower 48 states is under consideration by DOE for the second high-level radioactive waste repository. States with granitic bodies “believed to be adequate for investigation” include: New York; New Jersey; Connecticut; Pennsylvania; Delaware; Massachusetts; Michigan; Maine; New Hampshire; and Vermont.]

2007

HENRY L. STIMSON CENTER: Mannan A, Preventing Nuclear Terrorism in Pakistan: Sabotage of a Spent Fuel Cask or a Commercial Irradiation Source in Transport, Henry L. Stimson Center Report, Apr 2007. <http://www.stimson.org/images/uploads/research-pdfs/VFMannan.pdf>.

[The author was a visiting fellow at the Henry L. Stimson Center and the Director of Transport and Waste Safety at the Pakistan Nuclear Regulatory Authority.

The 400 power reactors located worldwide produced some 255,000 tons of spent fuel by 2003, which will increase to ~340,000 tons by 2010, and ~457,000 tons by 2020. The bulk of spent nuclear fuel (in tons) has been generated by the US. Among the various radioisotopes, Co-60, Cs-137, Ir-192, Sr-90, Am-241, Cf-252, Pu-238 and Ra-226 are the sources of greatest security concern. (p 10) “Materials like spent nuclear fuel and high activity sources under movement are much more difficult to defend from adversaries than materials in fixed location. Terrorist attacks against the transportation of radioactive material can occur almost anywhere in any industrialized country. Transporting thousands of shipments of nuclear waste across a country would provide thousands of targets for terrorists, putting millions of people at risk along the transportation routes. Spent fuel is highly vulnerable and there are several tactics terrorists can use with a higher-than-anticipated probability of breaching a shipping cask.” (p 13)

“The advancement in the knowledge of science and technology and their accessibility to terrorists has made the threat of nuclear terrorism no longer a fiction but real with their intention to inflict catastrophic damages to man, environment, and property.” (p 33)

While probabilities of sabotage events may be low, the study examines scenarios where attacks causing explosion and subsequent fire could lead to radiation sickness in the area of 200m² and cause extensive environmental contamination.]

UNION OF CONCERNED SCIENTISTS: Gronlund L, Lochbaum D, and Lyman E, Nuclear Power in a warming world: Assessing the Risks, Addressing the Challenges, Report of the Union of Concerned Scientists (UCS), Dec 2007. http://www.ucsusa.org/assets/documents/nuclear_power/nuclear-power-in-a-warming-world.pdf.

[Nuclear experts state: “Although the dry casks would present less of a hazard than spent fuel pools if attacked, they remain vulnerable to weapons such as rocket-propelled grenades. These weapons could penetrate most dry casks and their vaults, igniting a zirconium fire and resulting in the release of significant amounts of radioactive material.” (p 47) However, interim storage of

spent fuel in hardened dry casks with berm protection is a relatively safe option for 50 years. (p 47)]

2006

NATIONAL RESEARCH COUNCIL: Safety and Security of Commercial Spent Nuclear Fuel Storage, Public Report, National Research Council Committee on the Safety and Security of Commercial Spent Nuclear Fuel Storage, Board on Radioactive Waste Management, National Academies Press, Washington DC (2006) (*non-pub version, NAS, 2004*).
http://www.nap.edu/catalog.php?record_id=11263.

2003

Halstead, Robert J, Lindsay Audin, James David Ballard, Merritt Birky, Fred C. Dilger, Jim Hall, and Martin Resnikoff, Spent Nuclear Fuel Shipments As Terrorist Targets, Comment filed with the U.S. Department of Energy, Aug 14, 2003.
<http://www.energy.ca.gov/nuclear/yucca/documents/AG-155-2007-000066.pdf>.

[Robert J. Halstead, is Transportation Advisor, Agency for Nuclear Projects for the State of Nevada. Marvin Resnikoff, PhD, is a theoretical physicist and expert on nuclear waste transport and storage.]

2002

Halstead, Robert J. Testimony on Behalf of the State of Nevada Before the Subcommittees on Highways and Transit and Railroads of the Committee on Transportation and Infrastructure U.S. House of Representatives, Apr 25, 2002.
<http://www.state.nv.us/nucwaste/news2002/nn11678.pdf>.

[Robert J. Halstead, Transportation Advisor, Agency for Nuclear Projects for the State of Nevada testifies on the vulnerability of shipments to sabotage and terrorist attack and on the radiological consequences of severe highway and rail accidents. For one repository, should it go forward, there would be more than 108,500 cross-county truck shipments of spent nuclear fuel and high level radioactive waste over 38 years. That works out to 2,855 truckloads per year every year. By comparison, over the prior 40 years, there have been fewer than 100 shipments a year in the U.S. The combined truck and rail total of commercial spent nuclear fuel shipments would be 36,400 (p 2). The combined total of truck and rail shipments from 72 utility sites + 5 DOE sites would be 42,100 to 47,00 over 38 years, an average of 1,200 to 1,240 per year. A mostly rail scenario would involve 3,000 barge shipments (p 3). The significant increase in the volume and weight of nuclear cargo changes the manner in which the waste itself acts within the cask in the event of an impact accident. It is impossible to accurately predict this role through scale model accident simulation.]

Resnikoff, Marvin: Testimony of Marvin Resnikoff, PhD, on behalf of Radioactive Waste Management Associates (RWMA) to the U.S. House of Representatives Committee on Transportation & Infrastructure, Apr 25, 2002.

<http://www.yuccamountain.org/leg/resnikoff042502.html>.

PIRG EDUCATION FUND and PENN ENVIRONMENT RESEARCH AND POLICY CENTER: Sadik, Pierre, Radioactive Roads and Rails: Hauling Nuclear Waste Through Our Neighborhoods, Report of the U.S. PIRG Education Fund and Penn Environment Research and Policy Center, Jun 2002.

https://pincdn.s3.amazonaws.com/assets/5F7uHwbKhTsl_0c6mfPtfq/RadioactiveRoadsandRails.pdf. Synopsis at: Sadik, Pierre, Nuclear Waste Transportation Accidents in the U.S., U.S. Public Interest Research Group fact sheet, 2002.

http://www.nuclearactive.org/graphix/transport_accidents.pdf.

[Inherent dangers in the transportation of nuclear waste evidenced by series of documented cases of radioactive material leakage from casks resulting in contamination both within and beyond the transportation vehicles. Incidents involved rail and truck transport modes.]

2001 and prior

NEVADA: Transportation of Spent Nuclear Fuel and High-Level Radioactive Waste to A Repository, State of Nevada Nuclear Waste Project Office factsheet May 20, 1999.

<http://www.state.nv.us/nucwaste/trans/trfact03.htm>.

[Review of uncertainties and hazards involved in transport of spent nuclear fuel and high-level radioactive waste to the proposed Yucca Mountain repository site.

“Even after ten years of cooling, spent nuclear fuel emits dangerous levels of gamma and neutron radiation. A person standing one yard away from an unshielded spent fuel assembly could receive a lethal dose of radiation (about 500 rems) in less than three minutes. A 30 – second exposure (about 85 rems) at the same distance could significantly increase the risk of cancer and/or genetic damage.”

“A typical ten-year old spent fuel assembly from a Pressurized Water Reactor (PWR) contains about 26,000 curies of strontium-90 (plus many thousands of curies of other dangerous isotopes). The strontium-90 in just one spent PWR assembly would be sufficient to contaminate twice the volume of water in Lake Mead (23 trillion gallons).” A severe accident or series of human errors could cause a release of fuel or crud particles mixed with smoke accompanying a fire and be inhaled or enter the soil and contaminate the food chain. “Other isotopes that remain highly radioactive for decades are so hazardous that inhalation or ingestion of amounts too small to be seen can lead to cancer, radiation-induced disease, and death.”

A Department of Energy contractor report concluded that a credible severe accident (from impact and fire) involving a single shipping cask’s contents would be sufficient to contaminate a

42 square mile area. If occurring in a rural area, cleanup could take well over a year and cost over \$620 million. An alternative analysis by an Agency contractor estimated cleanup costs of up to \$19.4 billion. Cleanup in a metropolitan area would be considerably more time consuming and costly.]

State of Vermont
Department of Public Service
112 State Street
Drawer 20
Montpelier, VT 05620-2601
<http://www.publicservice.vermont.gov>

[phone] 802-828-2811
[fax] 802-828-2342
[tty] 800-734-8390

July 28, 2016

Federal Register Document ID # 2015-32346
Comments from the Vermont State Nuclear Engineer regarding the Design of a Consent-Based Siting Process for Nuclear Waste Storage and Disposal Facilities, provided in response to the following Department of Energy publication in the Federal Register on December 23, 2015:

FEDERAL REGISTER CITATION 80 FR 79872, "Invitation for Public Comment To Inform the Design of a Consent-Based Siting Process for Nuclear Waste Storage and Disposal Facilities."

Gentlemen:

The questionnaire contained in the subject US Department of Energy (DOE) Invitation for Public Comment as published in the Federal Register has been reviewed by the Vermont State Nuclear Engineer and Decommissioning Coordinator. In response, the Vermont State Nuclear Engineer and Decommissioning Coordinator has prepared several comments and observations for your consideration in designing a Consent-Based Siting Process for Nuclear Waste Storage and Disposal Facilities (noted as Spent Fuel Storage Facilities or Spent Fuel Repositories throughout this commentary). These comments and observations are contained in the Enclosure to this letter.

Note that these comments may not be consistent with any other recommendations or commentary provided by other Vermont State Agencies or State Officials. Any DOE questions regarding these comments and observations may be directed to the Vermont State Nuclear Engineer and Decommissioning Coordinator via the contact information included with the electronic signature below.

Best regards,

/s/ Anthony R. Leshinskie

Anthony R. Leshinskie
State Nuclear Engineer & Decommissioning Coordinator
State of Vermont
Public Service Department
112 State Street
Montpelier, VT 05620-2601
Anthony.Leshinskie@vermont.gov



ENCLOSURE

Comments from the Vermont State Nuclear Engineer Regarding the
Design of a Consent-Based Siting Process for Nuclear Waste Storage and Disposal Facilities

How can the Department ensure that the process for selecting a site is fair?

Consent based siting seeks to ensure fairness in the distribution of costs, benefits, risks and responsibilities now and in future generations. How, in your view, can fairness be best assured by the process for selecting a site?

- The process must recognize that host State Government and host community support for siting a Spent Fuel Repository within the community is a factor just as important as the technological and geological requirements for siting such a facility. Identifying ideal sites from only geological and technological perspectives will limit the number of potential repository sites to a very small number of Yucca Mountain-like sites. While this may be appropriate when assuming that a proposed facility will be used for several thousands of years, considering much shorter storage periods (e.g. 50 to 500 years), and assuming subsequent relocation or repurposing of the spent fuel, will appreciably expand the number of potential storage sites such that a significant number of communities willing to host a facility can be identified. This shorter term option assumes that additional technology (e.g. man-made shielding and structures, enhanced cask designs, active monitoring) built into a facility will sufficiently compensate for the geological shortcomings of a proposed facility such that it is operated as safely as reasonably possible.
- The siting process and the subsequent facility operating regulations must allow the host State Government or host community to withdraw its consent should the facility planning, construction or operational history provide significant indications that the facility will not or is not being maintained as safely as reasonably possible. The consent must include an expiration date, with the opportunity for the consent to be renewed or rejected (e.g. a facility operating license, including host State Government and host community consent, must be reissued once per decade, etc.) In the event that consent renewal is denied subsequent to the opening of the facility, a means for ending fuel storage operations and relocating the spent fuel to another facility in a timely manner (e.g. within 5 years) is required.
- The siting process should consider multi-stage consent. Instead of completing a single consent process for designing, constructing and operation of a facility, consent should be obtained prior to the start of the design process solely for the design development, with an additional consent obtained prior to the start of facility construction (i.e. approval to construct is obtained once the design for a specific facility is well-defined). Some degree of host State Government and host community approval prior to the start of fuel storage operations is also appropriate. This last consent process however, should not be as extensive as those for the design and construction consents. Otherwise, there would likely be constructed facilities that are not allowed to operate.
- The process must allow for implementing enhancements to facility safety into the facility designs as new technologies that would enhance facility safety become available.
- An Independent oversight board must be created that assures open communications between the facility operators, federal regulators, the host state government and the host community will exist regarding a facility's design, construction and safe operation.

What models and experience should the Department use in designing the process?

The challenges and opportunities of site selection drive us to continue to learn from previous or ongoing examples. From your perspective, what experience and models do you think are the most relevant to consider and draw from in designing the process for selecting a site?

The following can serve as models for fair, functioning processes that engage all of the stakeholders for proposing, designing, constructing and operating a Spent Fuel Repository:

- Established Citizen Engagement / Advisory Panels for decommissioning nuclear power plants. Vermont's Nuclear Decommissioning Citizens Advisory Panel (NDCAP) should be given careful consideration, since its composition is intended to provide several State Agencies, local governments and other key stakeholders a voice in the decommissioning of the former Vermont Yankee Nuclear Power Station. The NDCAP was created by Vermont state law (18 V.S.A. §1700 through §1702). Details of its functions and composition are available online at <http://publicservice.vermont.gov/electric/ndcap>.
- Commissions governing Low Level Waste facilities (e.g. the Texas Low Level Waste Compact Commission and/or the Yucca Mountain / State of Nevada Low Level Waste Storage Authority).
- The Department of Defense's Base Realignment and Closure (BRAC) process has been suggested as a model for engaging host communities during the proposal and implementation of significant projects within a region. There is no reason why the BRAC process could not serve as a starting point for a consent-based siting process for spent fuel storage facilities.
- The cooperation between State and local communities for Emergency Management planning should be examined for lessons learned in how individual stakeholder organizations can be coordinated to manage a long-term project such as the construction and safe operation of a spent fuel storage facility.

Who should be involved in the process for selecting a site, and what is their role?

The Department believes that there may be a wide range of communities who will want to learn more and be involved in selecting a site. Participation in the process for selecting a site carries important responsibilities. What are your views on who should be involved and the roles participants should have?

- At a minimum, the host State Government and local government of the host community must have a role in the planning and safe operation of the spent fuel storage facility. A voice for other local community governments in immediate proximity to a proposed facility should be considered as well. The roles of local communities within Emergency Planning Zones for operating nuclear power plants with the United States may serve as templates for the appropriate combination of State and local government authority necessary in planning and safely operating a spent fuel storage facility. More generally, the rolls of host State and local governments for a spent fuel storage facility should parallel the rolls that these governments have in overseeing any large federal or state government-sponsored project within their jurisdictions. The level of authority should be consistent with the typical authority-sharing arrangements that exist between individual State Governments and their constituent local governments.

Given the variety of authority-sharing arrangements that exist between individual State Governments and their constituent communities, it is recommended that State Governments be provided the authority to organize the authority-sharing between local communities and itself within the site selection process. The process should encourage that this authority-sharing be consistent with the typical authority-sharing arrangements in that state. For example, if county or town governments typically have a role in the oversight of state-sponsored projects within their jurisdictions, then the authority-sharing for establishing or operating a spent fuel repository within a community should include county or town government consent. If the host State Government typically establishes a commission to oversee large-scale state-sponsored projects, then one should be established when a spent fuel repository is proposed, constructed or operated.

- The key role for a host State Government and host community government in a consent-based siting process is to assure that the voices of their constituents are not lost in the face of the overriding national concern such as establishing a national spent fuel repository. Primarily, this role is to assure unbiased, accurate information is available to the residents of potential host communities to assure that informed decisions can be made in deciding whether or not to host a spent fuel repository.
- On a national level, the roles of the Department of Energy, the Nuclear Regulatory Commission, the Federal Emergency Management Agency and the Environmental Protection Agency must be clearly defined and represented within the siting process. For the purposes of coordinating these roles with the host State Government and host community, it is recommended that a single Federal Government point of contact be designated.

What information and resources do you think would facilitate your participation?

The Department is committed to ensuring people and communities have sufficient information and access to resources for engaging fully and effectively in siting. What information and resources would be essential to enable you to learn the most about and participate in the siting process?

Access to the following information is essential assuring that informed decisions are made in deciding to host a spent fuel repository:

- Accurate information on the safety record in transporting “fresh” and “spent” special nuclear material since sustained nuclear fission was first achieved. While much of this information is likely classified due to US National Security concerns, the information must at the very least be made available to a select number of independent experts who can then inform the general public on the strengths and short-comings special nuclear material transportation to date.
- Accurate information on the geological requirements for a storage facility and how those requirements assure continued public safety over the entire life of the facility.
- Detailed information on background radiation levels surrounding a proposed facility and the likely changes in those radiation levels due to the facility.
- Detailed information on the natural and man-made processes that will adversely impact the facility over its lifetime.

- Best-estimate information on how natural processes are likely to change the characteristics of the facility's site and how the facility's design will withstand these changes.
- Detailed information on the selection of construction materials and components that assure that the facility will remain intact over its lifetime. This information must also include all aging management program and maintenance requirements that assure the integrity of the facility over its lifetime.
- Accurate information on the safety programs and regulatory inspections that assure that the facility and its components remain in compliance with their design and regulatory requirements.
- Accurate information on the safety programs and regulatory inspections in place for safely transporting spent nuclear fuel to and from the facility.
- Accurate information on how a site meets the geological and technical requirements for a spent fuel repository.
- Accurate information on how the facility's design will withstand natural disasters, design basis events and component failures without compromising safety to the facility and the general public.

All required information must be available in a form that is readily understandable by any member of the public with an average level of education.

What else should be considered?

These questions are a starting point for discussion on the design of the consent-based siting process.

The Department would like to hear about and discuss any related questions, issues, and ideas that you think are important.

- It must be demonstrated that the transportation and other public infrastructure enhanced or created for a Spent Fuel Storage Facility will have additional, significant benefits to the host community and its surrounding region (e.g. promote unrelated economic growth, facilitate tourism, etc.).
- The transportation and other public infrastructure enhanced or created for the Spent Fuel Storage Facility must not adversely impact landmarks, historical sites or the ecology of the host community and its surrounding region.
- The long-term economic benefits of hosting a Spent Fuel Storage Facility must be demonstrated to potential host states and local communities. The benefits of hosting a repository should not simply be those that occur while the facility is being constructed.
- It must be demonstrated that the environmental impact of a proposed national Spent Fuel Storage Facility is at least no worse (and preferably less) than the environmental impact of spent fuel storage facilities currently located at operating and permanently shut down US nuclear power plants.

Consent-Based Siting

From: Gerson Lesser [mailto:gtl1@nyu.edu]
Sent: Thursday, July 28, 2016 7:54 PM
To: Consent Based Siting
Subject: nuclear waste

Gentlemen,

The problem of nuclear waste has never been solved. There is no totally safe repository, as you well know, which is the main reason no permit repository has ever been fully approved.

The main answer is to produce as little nuclear waste as possible. The objective should be to close existing nuclear plants as soon as feasible.

Also, we must reverse the president's plan to increase and update our present nuclear weapons, but to push for the decrease in eventual abolishment of all nuclear weapons – – internationally and by the US.

Gerson Lesser, M.D.
Clinical Prof. of Medicine
New York University school of medicine

Consent-Based Siting

From: Suzanne L [mailto:suzstarrose@gmail.com]
Sent: Friday, July 15, 2016 8:54 AM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: Response to IPC Suzanne Lewis

Consent-based Siting Public Meeting - Boise, Idaho
July 14, 2016

Suzanne Lewis
317 No. Hillview Dr.
Boise, Idaho

To: Consent-based Siting Public Meeting - Boise, Idaho

The DOE is coming to Boise on Thursday for a discussion of whether Idaho is willing to throw out the Batt Agreement. The federal jargon being used is whether Idaho is now willing to become a "Consent State;" volunteering to allow tons and tons of new shipments of commercial waste generated by the dying nuclear power plant industry (in our own country and overseas.)"

Laws are only as strong as those that enforce them. We are here today to one more time "blow the whistle" on the sneaky, maneuvering of private nuclear business to ignore the people of Idaho 1995 Initiative that banned movement or passage of nuclear waste into or through the state.

As a fifth generation Idahoan, a "DOWNWINDERS" survivor, I have spent my adult life showing up and speaking out for the health and well-being of our people, our waters and our future generations. Unfortunately, the mindset of the DOE, NRC, private nuclear businesses and our governor and congressional representative has a blindness, a deafness or maybe just plain disregard for we the people. It's all about the money honey.

Precedence was set for disregard of we Idahoans and our families in the late nineties. The National Academy of Science National Board on Radiation held the first ever in Idaho public hearing to receive input on people affected by iodine 131 fallout from the 1950-60's nuclear testing that occurred in the dead of night with no warning or follow through for accountability for the radiation exposure and health consequences. The DOE was forced to go

public and admit to their unthinkable, deliberate testing and contamination to our very way of life.

Two days of receiving public testimony, 1000's of Idahoans grievously sharing tragic ONGOING HEALTH CONSEQUENCES (from diabetes, brain tumors, Cancer, Endocrine systems collapsing). It was sitting for hours in the conference hall, that I grasped the magnitude of harm done to so many Idahoans. I learned that other states like Utah and Nevada's citizens were being acknowledge as victims of downwinder's contamination and being extended research, health assistance, treatment and compensation.

The rude awakening that the DOE and NRC and our congress refused to acknowledge that we Idahoans were also affected set in motion a pattern that **we Idahoans are dispensable and worthy of being the sacrificial lamb for the private nuclear industry and the "good ol' boy club that values money over humanity.** Our health, our land, our waters of no concern.

The trail of dishonesty and failure to enforce the ruling, the voice of we people who can speak for the voiceless must be heard, acknowledged. We had the federal 2014 deadline for cleaning up and containment of nuclear waste. Well from my view...all talk and no enforcement. Now it's 2016, and here we are today, same ol, same ol propaganda pitch "the powers present once again knowing what's best for we Idahoan and our sacred waters."

The conniving, under handed power play to bring more contaminated, nuclear waste and further endanger our Peoples and Land is CRIMINAL. Please honor and hear we the people clearly stating NO.

"In 1995 Gov. Phil Batt worked a deal with the U.S. Department of Energy: In exchange for a limited amount of new military waste shipments (the "nuclear Navy," Three Mile Island, etc.) the DOE would: 1) Build a permanent site for those (and previous) shipments, and 2) Clean up the mess that was already there.

The agreed-to shipments began to arrive. Neither the permanent storage nor the cleanup has happened.

The military waste shipments that were allowed into Idaho continue to this day; I saw new shipments in rail cars at the Pocatello yard two weeks ago.

Many of us anti-nuclear types, including the Snake River Alliance, opposed the Batt 1995 Agreement at the time, believing it was too weak; it allowed for too much waste and caved in to the Feds.

But, even if too weak, it was at least some kind of a brake on the seemingly endless shipments to our state. Idaho voters approved the Batt Agreement. Even the campaign slogan of the pro-Batt Agreement forces, including INL itself, was "Keep the Waste Out."

Now, those same forces want to get rid of the Batt Agreement altogether; not because it's too weak, but because it's too strong. It doesn't allow enough waste in. It commits the feds and our state to clean-up. Apparently, they want more waste, with no permanent repository in sight, and they want it without a commitment for cleanup. They want to throw out the people's referendum vote. The governor has used state dollars to support this campaign by creating the Leaders In Nuclear Energy (LINE) Commission. One of the appointed members is Larry Craig." Snake River Alliance board member Brent Marchbanks in his guest opinion featured in the Idaho Statesman.

Consent-Based Siting

From: gerald lindhorst [<mailto:geraldwlindhorst@yahoo.com>]
Sent: Wednesday, July 27, 2016 4:42 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: Comment Opposing DOE's Consent-Based Siting Process for Nuclear Waste

Dear Secretary Moniz,

Until such time as there is a safe way to transport and store nuclear waste and production of nuclear energy is 100% safe, do not ask me where to put the waste. You have no right to even ask this question.

gerald lindhorst
12520 Fee Fee Rd.
12520 Fee Fee Rd
St. Louis, MO 63146

Consent-Based Siting

From: Ross Lockridge [<mailto:murlock@raintreecounty.com>]
Sent: Friday, July 22, 2016 4:56 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: Response to IPC [We do NOT consent]

Thank you for the Invitation for Public Comment on the DOE latest plans for dealing with high-level rad waste.

We do NOT consent to New Mexico being targeted for transport or storage or disposal of high-level radioactive waste. Just because a few people in Carlsbad and Hobbs New Mexico and Andrews Texas have expressed a desire cash in to house high level waste is no reason to think a majority of the citizens of NM consent.

We believe that DOE should NOT be transporting such materials around the country but focus on local storage of such materials on or very near to the locations where they are generated. Transporting high-level radioactive waste imperils our health and lives with risks of accidents, radiation releases, leaks or terrorist actions.

Here are some additional points we wish you to note:

Even the Texas Commission on Environmental Quality (TCEQ) acknowledges the vulnerability of radioactive waste to sabotage during transport, and that “consequences due to sabotage or accidents are also higher during transport since the waste may be near population centers”

Around 53,000 truck shipments originally estimated to go to Yucca Mountain if transport was mainly by truck would likely have resulted in 53 accidents. Train accidents were anticipated at a rate of 1 in 10,000 shipments. At least one train accident was expected to occur if transport was mainly by train.

A DOE report found that a severe accident involving one radioactive waste cask that released only a small amount of waste would contaminate a 42-square mile area, with cleanup costs exceeding \$620 million in a rural area. Clean up in an urban area would be more time consuming and it could cost up to \$9.5 billion to raze and rebuild the most heavily contaminated square mile.

Again, importing high-level radioactive waste might benefit a few corporations, but millions of Texans and people along transport routes throughout the country would bear the financial and health risks of accidents or sabotage.

Ross Lockridge
Ann Murray
POB 22 / 12 Waldo St.
Cerrillos, NM 87010-0022

Consent-Based Siting

From: Vic Macks [mailto:vicmacks3@gmail.com]
Sent: Thursday, July 28, 2016 4:46 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: Public Comment on Consent Based Siting of Nuclear Waste

The U.S. Department of Energy solicitation of public comment on Consent Based Siting of nuclear waste has been narrowly focused and not widely publicized.

There is no legal underpinning of the idea of Consent Based Siting of man made nuclear material (high level, mid-level, or low level) as the public has never had the opportunity to vote its approval of the production of it or the management of it, based on informed knowledge of the reality of radionuclides, their production, and the fact that they are permanent in their presence and impact on all living things. In fact, the production of radionuclides through fission was begun in secret with the awareness that people and the environment would be affected by nuclear radiation releases to the extent necessary to produce the uranium, to operate reactors and to produce nuclear weapons. The entire nuclear legacy from uranium mining, through nuclear reactors, weapons and enormous accumulation of man made nuclear material has entailed government/nuclear industry deception, obfuscation and a continuing willingness to produce ever more nuclear material, regardless of the fact that there is no solution. Radionuclides cannot be turned off, and they must be shielded and monitored forever through every generation into eternity.

There can be no consent to the movement around the country of the approximately 75,000 metric tons of withdrawn nuclear reactor fuel rods that are lethal in minutes and dangerous for up to a million years. It risks an accident that would render a region permanently uninhabitable and which can produce illness, morbidity, and genetic mutations. To pretend that the transportation of 75,000 metric tons of withdrawn nuclear fuel rods around the country can be done without catastrophic risk is dishonest.

What you have undertaken is a lobbying effort to produce the pretense of public acceptance of the risk of movement of nuclear material when in fact the public is not given a choice based on full disclosure of what is proposed.

In fact, the least dangerous management of withdrawn nuclear fuel rods is Hardened On Site Storage, monitored forever, with publicly accountable oversight and replacement of shielding as needed. And stop all production of nuclear material.

[Expedite the transfer of irradiated nuclear fuel from densely-packed “wet” storage pools into Hardened On-Site Storage \(HOSS\) dry casks.](#)

Preserve and maintain “wet” storage pools – albeit *emptied* of irradiated

nuclear fuel -- as an emergency back up location for cask-to-cask HOSS transfers, when old HOSS casks deteriorate toward failure, and need to be replaced with brand new HOSS casks. That is, do not dismantle pools as part of nuclear power plant decommissioning post-reactor shutdown.

Carefully pass information about storing irradiated nuclear fuel as safely as possible, as close to the point of generation as possible, **from one generation to the next, à la the concept of [“Rolling Stewardship”](#)** described by the Canadian Coalition for Nuclear Responsibility.

We do not consent the continued production of nuclear material, to the movement of radioactive ‘waste’ around the country, to the privatization of its management, to the dispersal of it into the environment, or to its abandonment from human management.

*Vic Macks, member Peace Action of Michigan, Michigan Stop the Nuclear Bombs Campaign, Alliance to Halt Fermi 3
20318 Edmunton St.
St. Clair Shores, MI 48080-3748
vicmacks3@gmail.com*

Consent-Based Siting

From: Marni Magda [mailto:marnimagda@gmail.com]
Sent: Sunday, July 31, 2016 7:14 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Cc: Marni Magda <marnimagda@gmail.com>
Subject: Response to IPC

Dear John Kotek and the consent based siting team,

Thank you for your efforts to lift the difficulties ahead for our nation in creating a standardized irradiated fuel management program that will safeguard spent nuclear fuel.

Consent for private storage of our nation's waste must be given by the stakeholders in a 50 mile radius of the facility.

The DOE must make congress aware of the pressing need for a law to allow Consolidated Interim Storage of our nuclear fuel as well as a final deposit system. The Standard Contract for the queue controlling which fuel gets moved first must be changed in that law. For interim storage the nation's stranded fuel must have priority over the oldest fuel. The areas near large population and where environmental hazards may not follow the NRC theory models such as happened at Fukushima must be given priority.

Consolidated Interim Storage facilities must be better safeguarded than any of our nuclear facilities have ever been. The world has changed. Terrorism is a real threat.

For the CIS facilities the contract for must be at least a hundred years for the land use.

The private facility must be run under a contract that must be renewed every 20 years. Surprise evaluations by stakeholders and the DOE need to be made available to the public and the NWTRB.

The private facilities must have a no fly, no drone enforced protection, a military presence.

The private facilities must include the cranes and cooling pools necessary if a dry storage canister is defective. There must be research on location that can test these experimental dry storage canisters that must last 100 to 300 years. They have only been in use since 1989. And we don't know when a final deposit answer will become reality.

The current facilities in Texas and New Mexico must have more oversight than just the NRC. The NRC has old ideas and has not protected our nations growing stranded fuel. They have created a false sense of security at places like San Onofre by saying no environmental hazard exists beyond "small". We must have safety, not profit as the goal of any irradiated spent fuel management program.

The employees of these facilities must be 90% American citizens. The top decisions makers cannot be 100% foreign. Our nuclear engineers must not be replaced by foreign ones. At the last NRC meeting, I couldn't understand the English of many of the speakers from Holtec. We have to create a culture of safety where the stakeholders are a part of the safety solution.

I attended both Sacramento and San Onofre meetings on CIS siting and I am concerned that more help by the DOE is necessary to move this system forward. Congress will ignore these problems through each election cycle.

Thank you for tireless meetings. I would like to have a copy of your final findings.

Best Regards,

Marni Magda
949 230 9181
marnimagda@gmail.com

Consent-Based Siting

From: Edward Mainland [<mailto:emainland@comcast.net>]
Sent: Monday, July 11, 2016 7:24 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Cc: Edward Mainland <emainland@comcast.net>
Subject: Nuclear Siting

My recommendation is that no new nuclear reactor siting take place anywhere owing to nuclear power's exorbitant costs relative to renewable energy resources and its relatively poor investment payoff in reducing greenhouse gas emissions compared to all other alternatives. Not to mention the intractable and possibly impossible problem of radwaste disposal and the catastrophic risk liability now borne by taxpayers under the Price Anderson Act. Remember Fukushima?

Edward A. Mainland
415-902-6365

Sent from my iPhone

Consent-Based Siting

From: Arjun Makhijani [<mailto:arjun@ieer.org>]
Sent: Sunday, July 31, 2016 6:02 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Cc: 'Lois Chalmers/IEER' <lois@ieer.org>
Subject: Comments on Design of a Consent-Based Siting Process

Arjun Makhijani
Institute for Energy and Environmental Research
6935 Laurel Avenue, Suite 201
Takoma Park, Maryland 20912 U.S.A.
301-270-5500
arjun@ieer.org
website: www.ieer.org



INSTITUTE FOR ENERGY AND ENVIRONMENTAL RESEARCH

6935 Laurel Avenue, Suite 201
Takoma Park, MD 20912

Phone: (301) 270-5500
FAX: (301) 270-3029
e-mail: ieer@ieer.org
<http://www.ieer.org>

IEER COMMENTS ON DOE'S SOLICITATION OF COMMENTS ON THE "DESIGN OF A CONSENT-BASED SITING PROCESS FOR NUCLEAR WASTE AND DISPOSAL STORAGE FACILITIES"¹

31 July, 2016

Arjun Makhijani, Ph.D.
President, IEER

Sent by email to consentbasedsiting@hq.doe.gov.

"Consent" in a democracy must always be informed consent. As the Nuclear Energy Information Service noted in its comments:

INFORMED CONSENT (legal definition) is: Assent to permit an occurrence that is based on a complete disclosure of facts needed to make the decision intelligently, such as knowledge of the risks entailed or alternatives.²

Informed consent is all the more necessary in regard to an issue as fraught as nuclear waste, including spent fuel (which contains that vast majority of radioactivity in all nuclear waste). An experiment with a drug requires informed consent, for instance. What should be the standard of informed consent in regard to matters involving security for eons (given the plutonium-239 content of spent fuel) and involving health risks for even longer, given that the half-lives of some fission products, like iodine-129 and cesium-135 are in the millions of years? Informed consent can never be in the abstract: it is the obligation of the DOE to inform the public exactly what is involved. The DOE has fallen very far short what is needed in its discussion of "Integrated Waste Management". Since the DOE is seeking comment on what a "consent-based siting process" should consist of, IEER is setting forth some minimal requirements.

¹ Federal Register Notice of 23 December 2015 at <https://www.federalregister.gov/articles/2015/12/23/2015-32346/invitation-for-public-comment-to-inform-the-design-of-a-consent-based-siting-process-for-nuclear>

² NEIS 2016. Final Comments of DOE's "Consent-based" Siting of Radioactive Waste Facilities, July 30, 2016. Quoted with permission, emphasis in the original.

1. First of all, consent should not be sought for a “siting process”. Consent should be sought for geologic isolation of waste, which is more complex but which is, or should be, the goal. Consent for any “interim” measures should be in that context.
2. In light of the requirements of geologic isolation, it is entirely premature to seek consent for a siting process. If the storage and disposal of spent fuel and high-level waste is seen as an “integrated” process, as the DOE claims, then it is imperative to recognize that disposal will consist of three technical elements working together: (i) the repository site (or geologic setting); (ii) the various barriers to package and contain the waste, and (iii) the sealing systems for the repository. These elements working together create an isolation system, not the site alone, which cannot assure adequate isolation. A geologic repository is a vast mine in which thermally hot, radioactive wastes will be disposed of, notably in the case of spent fuel or derivative high-level wastes. It is a highly perturbed system. To ignore that fact is to ignore the fact is to ignore some of the most essential technical aspects of the isolation system. Therefore, informed consent means that the DOE, or preferably the waste management agency recommended by the Blue Ribbon Commission, must first study, with already available information, potential combinations of these three elements. Then it can make a list of potential sites, barriers, and sealing systems that may work at least in theory. If the process is sound, it will be able to specify the combinations that are unlikely to work. Geologic isolation systems also require redundancy, since estimates of impact over eons are uncertain. Only after these initial scientific and technical assessments have been completed would the DOE (or other institution) be able to go to communities and inform them about the range of potential consequences now and into the far future. Seeking consent in the absence of the systematic prior analysis is to undermine the democratic process and misinform the public. Moreover, given the technical difficulties involved in geologic isolation and in combining the three elements (including any provisions for redundancy), it is also likely to result in decisions that are deeply flawed. This is, among other things, a recipe for future failure and further waste of public money.
3. The kind of assessment prior to siting discussed in the prior paragraph must be done in the context of stringent environmental and health protection standards for geologic isolation. *These must be set before siting is even considered.* It is essential that these standards be at least as stringent as those we use today including those applying to nuclear operations (40 CFR 190.10(a)) and drinking water standards (40 CFR 141.66). A failure to commit to this minimum of radiation protection prior to seeking consent is like asking consent for an experiment on thousands of generations into the future with no sense of the extent of protection to be afforded to those who did not even benefit from the nuclear energy that created the waste. We cannot actually consult the generations far into the future who will be affected by actions today and in few decades to come. The only practical proxy for that is to guarantee as best we can that their health and environment will be protected as we do ourselves today. As it is, these standards are inadequate. For instance, no environmental radiation protection standard today explicitly or adequately protects pregnant women who want to have children during the *in utero*

period.³ A guarantee that the standard will at least conform to 40 CFR 190.10(a) (and not some watered down version of it) and to 40 CFR 141.66 is the first requirement for getting even a modicum of proxy consent from future generations. The second is to acknowledge that we have unfairly burdened future generations without corresponding benefit. Consent in that regard therefore involves limiting future creation of highly radioactive waste, including spent fuel, so that an endpoint is visible to those giving consent today. The DOE has not fulfilled either of these preconditions for consent.

4. The DOE must be explicit about the past history of failures of repository siting, including that under the 1982 Nuclear Waste Policy Act and its amendments, including its own role in these failures.
5. In brief, a consent-based process must be *preceded by a science-based and health-based process* that includes criteria for and analysis of a geologic isolation system and health and environmental standards by which to assess performance. Without such scientific and standard-setting process prior to any discussion of “consent” is necessarily uninformed and undemocratic.
6. The above comments relate to geologic isolation. All interim storage considerations must be set in the context of geologic isolation. Without that, proposals for moving spent fuel to one or more new sites would be a waste shell game, adding one more site to the dozens that already exist; it simply creates new risks. Specifically, an interim site will add risks from the vast amounts of transportation, with potentially zero net increase in benefits. Moreover, it is a significant risk, even if there is “consent” for “interim” storage that that storage site will become permanent in the absence of a geologic isolation process that is firmly in place. The community will have no recourse if the “interim” period becomes more and more prolonged, indeed permanent. In this context the DOE should disclose the various ways in which it has violated commitments in the past, including in relation to its contracts to begin to take spent fuel from utilities by 1998 and, in another realm, its repeated failure to fulfill its commitments under the Tri-Party Agreement relating to the Hanford site.
7. A failure to embark upon a science-based and health-based process first, *prior to seeking consent for any part of the spent fuel and high-level waste management process*, is to create a high likelihood of environmental injustice – that is the facilities, whether interim or permanent, will be in some combination of poor, minority, Native American, or rural areas.

³ See Arjun Makhijani, Brice Smith, and Michael C. Thorne, *Science for the Vulnerable: Setting Radiation and Multiple Exposure Environmental Health Standards to Protect Those Most at Risk*, Institute for Energy and Environmental Research, Takoma Park, Maryland, October 2006. On the Web at <http://ieer.org/wp/wp-content/uploads/2006/10/Science-for-the-Vulnerable.pdf>

Consent-Based Siting

From: Talia T. Martin [<mailto:tamartin@sbtribes.com>]
Sent: Sunday, July 31, 2016 10:19 AM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: Response to IPC

Talia T. Martin

Director of Tribal/DOE-AIP

Shoshone-Bannock Tribes Tribal Department of Energy

PO Box 306

Fort Hall, ID 83203

Office Ph: (208)-236-1079

tamartin@sbtribes.com

<http://www.shoshonebannocktribes.com/shoshone-bannock-doe.html>

The SHOSHONE-BANNOCK TRIBES



TRIBAL/DOE PROGRAM
PROGRAM ADMINISTRATIVE
DIRECTOR: (208) 478-3706
(208) 478-3707
FAX (208) 478-3741

FORT HALL INDIAN RESERVATION
PIMA DRIVE
P. O. BOX 306
FORT HALL, IDAHO 83203

July 30, 2016

U.S. Department of Energy
Office of Nuclear Energy
1000 Independence Ave, SW
Washington, D.C. 20585

RE: Response to U.S. Department of Energy Invitation for Public Comment to Inform the Design of a Consent-Based Process for Nuclear Waste Storage and Disposal Facilities (Federal Register, published 12/23/2015)

The Shoshone-Bannock Tribes (SBT) have a long-standing relationship with the Department of Energy (DOE) beginning from the initial negotiations of a 1992 Working Agreement and the current 5-year agreement known as the 2012 Agreement in Principle (AIP). The Tribal DOE program implements the AIP and sustains this relationship through facilitating consultations and Idaho National Laboratory (INL) oversight activities. This letter was compiled from Tribal staff comments in a response to the Notice of Invitation for Public Comment in the Federal Register (80 FRN 79872).

This letter provides the current status of SBT and how it relates to DOE's approach to designing a consent-based siting approach to the Nation's nuclear waste problem. We have taken in consideration the *Blue Ribbon Commission (BRC) on America's Nuclear Future*, the Administration's *Strategy for Management and Disposal of Used Nuclear Fuel and High-Level Radioactive Waste*, Executive Order 13175, DOE Order 144.1, and the DOE and Shoshone Bannock Tribes 2012 Agreement In Principle, and other published literature to frame the most relevant issues to SBT surrounding a tribal perspective on Consent-Based Siting:

- **In accordance to the Executive Order establishing Fort Hall under the Fort Bridger Treaty of 1868, SBT retains Treaty rights to the lands controlled by the federal government, including DOE lands on SBT original ancestral lands.** SBT has remained adamantly opposed to the storage and disposal of radiological, non-radiological and hazardous waste on original ancestral lands, tribal lands, and ceded lands. SBT has been aware of DOE activities and issues for greater than 20 years and still some miscommunication exists between DOE and the Tribes. Misconceptions of nuclear waste and impacts also exists amongst the Tribes and members.

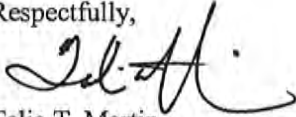
Consent-based siting process will have an overwhelming difficulty in gaining trust and confidence of Tribes with similar opposition and misunderstandings where DOE is involved.

- **The AIP promotes the federal government trust-responsibility to the Tribes.** The AIP is implemented by DOE to promote Tribes self-determination, recognition of inherent sovereign rights, and government to government consultation. This understanding has led to the development of the Tribes' Idaho National Laboratory (INL) Oversight activities to protect the SBT interest on the INL site as well as local and national DOE activities affecting SBT. One unforeseen consequence of this long-standing agreement is the lessening involvement of both governments to maintain a strong relationship when it is not enforced; DOE lack of promoting economic development for SBT, regular consultation and communication, less tribal input on site projects affecting natural and cultural resources.
- **Existing Tribal policies and liaisons in various regulatory entities nuclear waste issues will need to be re-evaluated.** Already existing, in EPA, NRC, and some state departments are Tribal liaisons and policies affecting the collaboration between departments, organizations, and Tribes. Plans must be integrated in the consent-based siting process for consideration of how these regulatory agencies will work together with Tribal input and active involvement in reaching a "consensus" on siting a nuclear waste facility.
- **How will DOE consider the consent of Tribes on transportation corridors?** The INL transportation corridor transverses the Fort Hall Indian Reservation and increase shipments can and will directly affect SBT, tribal members, natural and cultural resources. SBT has historical experience, knowledge, and measures in place to mitigate potential hazards through the Tribes Department of Public Safety and Emergency Operations Center. DOE has a trust-responsibility to provide resources and funding for affected Federally Recognized Tribes with lack of experience and resources. This will enhance the affected Tribes ability to provide protection and safety in a newly developed and/or increased use of an existing transportation corridor.
- **Tribal Jurisdiction and Environmental Considerations.** Tribes sovereignty includes regulating and enforcing federal and tribal laws and regulations within Tribal lands. Federally-Recognized Tribes have environmental laws and regulations such as Land Use, Hazardous & Non-Hazardous Waste, Clean-up Standards, Water Quality Standards for the protection of human, environmental, and natural and cultural resources. It is expected tribal laws, regulations, and standards will be implemented and enforced in tribal jurisdictions where affected Tribes are impacted by any nuclear waste activities.
- **Tribal involvement by State are not consistent.** The Blue Ribbon Commission recommendations emphasized the importance of State approval, however Tribal Sovereign Rights are undermined by the BRC recommendations. Federal government's trust-responsibility should uphold Tribal self-determination, and not cater to the states activities that impede on the Tribes right to self-determination during the consent-based siting process.

In summary, the AIP has facilitated SBT participation on DOE and private projects on the INL site by promoting communication and collaboration between DOE and Tribal leadership and staff. Federally Recognized Tribes existing individual agreements could potentially be a starting point as a methodology or

model for working with Tribes. They can also serve as a resource for facilitating Tribal participation and input in the consent-based siting process. DOE must do a better job in maintaining the intent of the agreement by encouraging legislation for legal and binding agreements with Tribes. Legally and enforceable agreements between DOE and Tribes will ensure the intent is met even through state and local government opposition.

Respectfully,

A handwritten signature in black ink, appearing to read 'Talia T. Martin', with a stylized flourish at the end.

Talia T. Martin,
Tribal DOE Program Director, Shoshone-Bannock Tribes

Consent-Based Siting

From: Bruce Martin [<mailto:dbmartin@zianet.com>]
Sent: Sunday, July 31, 2016 7:27 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: Comment Opposing DOE's Consent-Based Siting Process for Nuclear Waste

Dear Secretary Moniz,

The nuclear waste "consent" process is a sham. The local communities that will be most impacted by the prospective waste sites have not been included in the process in a meaningful way. We Do Not Consent to the waste, and we do not consent to the sham process.

Bruce Martin
408 Taylor Ranch Road
Alamogordo, NM 88310

Consent-Based Siting

From: Betsy McBride [<mailto:bmcbride@ctcweb.net>]
Sent: Sunday, July 31, 2016 3:43 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Cc: bmcbride@hrcce.org; candrus@Q.com
Subject: Comments on Consent-Based Siting

Date: July 31, 2015

RE: Consent-Based Siting

TWO COMMENTS:

1. There are assumptions included in the consent-based siting proposal materials that are subject to question. The Department of Energy has a very mixed record related to public process. Since the Department knowledge and practice is so mixed, it is difficult to believe that the Department would recognize the “required” good public process at the state or local level. Some federal regions include expertise, some states include expertise but DOE doesn’t currently appear to have this sensitivity or willingness to explore its weakness in this regard. Moreover, state and local governments are also subject to confusing public relations and information with actual public participation. Bottom line = idea of “consent” lacks resources for quality implementation.

Examples from Idaho include:

- A. Secretary’s Office denial to requests to meet with citizen activists when he visits INL.
 - B. DOE/contractor funding of expensive conferences without scholarships for interested citizens.
 - C. Ongoing litigation with 4-term Governor Andrus and Governor Batt, including a lawsuit related to FOIA requests.
 - D. Idaho Falls Mayor concerned about local jobs, as she should be. No apparent effort to enlarge the community conversation on matters related to spent fuel storage.
 - E. Governor’s appointed LINE Commission with no representation of multiple views.
 - F. No apparent effort to fully engage Governor Andrus and Governor Batt in the Blue Ribbon process
2. The lesson learned by the Department from the Yucca Mountain legacy, is that it is a good idea to have the state’s governors in agreement with plans. Hence, the Blue Ribbon call for support from state and local officials. The missing lesson is that some sites are just plain unsuitable for storage of spent fuel. The history of

Yucca suggests that it was selected and THEN the universities and other experts were given grants to prove it was a suitable site. That was a political choice gone bad. Next time suitability needs to rise higher on the list of considerations.

EXAMPLES:

Transportation routes. Accidents happen. The missile dropped off the truck in the “mousetrap” inside Denver is a reminder that there are better and worse places for something to go wrong. This isn’t about notification, which mostly happens but sometimes does not. (This has been complained about by a local official member of the INL Citizens Advisory Board (INLCAB). This isn’t about shipping casks, we have been shown the video about the testing. This is about better and worse routes.

Geological considerations. Much has been said about the porous nature of the ground in the Snake River Plain and the potential impact on the aquifer.

Less has been said about the geological activity of the Snake River Plain. It experiences two types of magma/lava events and nearly daily earthquakes. A Boise State University publication titled “Snake, The Plain and Its People,” page 26, explains; “The plain, a 50- to 70-mile-wide belt of sage-covered lava and farmland, is the dominant geographic feature of southern Idaho. It is also one of the most widely known and most extensive volcanic regions on Earth.”

SO, eastern Idaho now barely west of the well-known magma “hot spot” is a prime example of a site uniquely unsuitable.

Respectfully submitted,

Betsy McBride
aka Elizabeth McBride
12923 N. Schicks Ridge Road
Boise, Idaho 83714
bmcbride@ctcweb.net

Member, INL Citizens Advisory Board
Previous DOE Activities – EM’s national Citizens Leadership Network (CLN), author “Spent Fuel Transportation” (funded by DOE grant), DOE Alternatives to Incineration Committee, DOE Technology Selection Committee, Rocky Flats 5-Year Plan Review Committee, presentations on public participation on behalf of DOE

Consent-Based Siting

From: Neal McLain [<mailto:nmclain@annsgarden.com>]
Sent: Sunday, July 31, 2016 8:38 AM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: Consent-based siting public comment from Texas

I not NOT oppose a Radioactive Waste site in Texas. We need to get a site build as soon as possible in order to safely store waste now being stored in temporary facilities all over teh country, including Texas.

Neal McLain
Brazoria, Texas 77422

Neal McLain

77422

Consent-Based Siting

From: Rick McLeod [<mailto:Rick.McLeod@srsro.org>]
Sent: Thursday, July 21, 2016 11:03 AM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Cc: Amy Merry <Amy.Merry@srsro.org>
Subject: Response to IPC

I participated in the second public meeting held in Atlanta, Georgia on April 11th. I was also a panel member, so as a caveat, some of these comments may be redundant to my remarks in the transcript from that meeting. Although, I have tried to elaborate and provide more substance to my position.

First, DOE-NE, and John Kotek in particular, should be commended for hosting 8 public meetings across the Nation in an effort to formulate public discourse on a very difficult topic. Consent based siting is very esoteric, at the least. Furthermore, it is just one process in a sequence of activities and discrete tasks. For the consent based process to work properly, it is extremely important that all of the sequence of tasks are followed. Developing a consent based approach to siting may be just one of these activities but if it is implemented out of sequence, all efforts may be for naught. The identification and sequence of these tasks are more critical than the proposed 5 key questions DOE has asked the general public to consider.

The meeting summary from the April 11th Atlanta, Georgia meeting did not reflect the strong opinions from both sides that establishment of a non-DOE entity to perform these sequence of tasks needs to be first. I don't know how any host community could sign on to an agreement without having some special purpose, independent organization behind the agreement with the legal authority to make it binding. Due to the past experience and the lack of trust, DOE cannot function as this organization. Host communities have been "burned" too many times by promises made and promises broken by DOE.

So when you reflect on the necessary sequence of tasks, I hope DOE would consider the initial list below and begin to add others. It may not be necessary for them to be implemented in series, some may be implemented in parallel. But they need to be fully developed and prioritized for DOE to move ahead with its goal to develop solutions for the long-term, sustainable management of our nation's spent nuclear fuel and high-level radioactive waste.

- Establish an independent organization with legal authority
- Establish a set of core incentives
- Negotiate additional (beyond core incentives) and other unique incentives and special conditions with host states and communities
- Determine and communicate the benefits and risks for host states and communities
- Provide upfront resources for independent community analysis, education, and outreach for not only consent based siting efforts but all components including research & development

associated with the management of our nation's spent nuclear fuel and high-level radioactive waste

- Establish clear technical criteria
- Establish clear standards for what site screening requires
- Establish clear standards for repository development
- Establish clear standards for radiation and environmental protection
- Provide provisions for local community, State, and regulatory oversight authority

DOE cannot do this alone, Congress has to appropriate the required funding and develop and pass legislation that establishes this special purpose, independent organization with legal authority. The final execution of this sequence of tasks needs to be done outside of the DOE. I disagree with DOE's position that they can't wait for that other entity to form. I think it is imperative. This organization needs to be seen as trustworthy and credible, and knowledgeable and accountable. One of the first steps of the organization would be to partner with elected officials, to hold town hall meetings, to ensure that the public was informed; to really be able to work at that state and local level to ensure that a site selection process was certainly fair and equitable and had that community's well-being in mind.

We've seen recent problems with communities consenting to DOE backed projects when the decision is made to jump to the end result. One can just look to the deep borehole rejection, which was a research project, by communities in both South and North Dakota. In addition, the State of Idaho is not in unison on the consent to bring commercial spent fuel into Idaho National Laboratories for research purposes. DOE should look to these recent examples and not just focus on the consent-based siting process but toward the entire sequence of events.

Thanks,

Rick McLeod
Executive Director
SRSCRO
P. O. Box 696
Aiken, SC 29802

803-508-7402
803-645-1976 (cell)

Consent-Based Siting

From: Jill McManus [<mailto:jimac4@verizon.net>]
Sent: Wednesday, July 27, 2016 3:00 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: "Response to IPC" [Invitation for Public Comment] on Consent- based Siting

In response to proposed consent-based siting of nuclear waste, I would like to make the following comment:

Nuclear waste, lacking a site for permanent burial (possibly forever), is backing up all over the country. The only way we will be able to deal with this mounting problem is to cease all nuclear production of energy and weapons now. The present 76 million tons or so of waste we have already created in the U.S. should be transferred from cooling pools into hardened casks and buried on or near its present plant sites, which are already contaminated.

This deadly waste should not be transported across our country: it should not be shipped across oceans, nor barged, driven or sent by railroad through our communities near roads, tracks or rivers, putting thousands or maybe millions more people at risk of accidental spills or releases.

It should not be foisted onto poor communities such as Native American lands or minority areas that are blackmailed by their need for a few jobs.

It should not be dumped into aquifers nor waters in areas near our food crops where it can leach into groundwater and further contaminate the food that we eat, from land that is just now beginning to recover somewhat from exposure to the atmospheric bomb testing in the 1950s into the 60s.

The only way mankind has a chance of preventing slow genocide by radiation is to stop production of nuclear energy and weapons. Old plants should not be shored up by subsidies, as is being proposed in New York State and presumably other states, when those huge amounts, which are a tax on citizens, should be invested in the safer energy methods we now have at our disposal, such as solar and wind.

Any new funds for the nuclear industry itself should instead be applied to moving the stored spent fuel rods into hardened casks and buried as safely as possible at the already-contaminated sites where they sit in the open, vulnerable to earthquakes, sabotage, fire, plane crashes, and other unpredictable events. Back-up cooling pools must be maintained for cask-to-cask transfer as needed later.

Meanwhile let's go renewables ASAP.

Thank you for giving the public a chance to respond to the obviously untenable premise of "consent-based siting."

Sincerely,
Jill McManus
401 E. 81st St.
New York, NY 10028



This email has been checked for viruses by Avast antivirus software.

www.avast.com

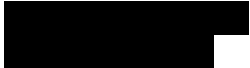
Consent-Based Siting

From: Katrina McMurrian [<mailto:katrina@thenwsc.org>]
Sent: Sunday, July 31, 2016 8:00 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: Response to IPC

The attached comments of the Nuclear Waste Strategy Coalition (NWSC) are in response to the U.S. Department of Energy's "Invitation for Public Comment to Inform the Design of a Consent-Based Siting Process for Nuclear Waste Storage and Disposal Facilities," 80 Fed. Reg. 79,872 (Dec. 23, 2015).

Thank you for the opportunity to comment. Should you have questions or wish to discuss further, please contact me at the email or phone number below. (Please protect the mailing address below from public disclosure.)

Katrina J. McMurrian
Executive Director
Nuclear Waste Strategy Coalition (NWSC)



615.905.1375 office
888.526.6883 fax
katrina@theNWSC.org
www.theNWSC.org
[www.Twitter.com/NWSCoalition](https://www.twitter.com/NWSCoalition)

Sarah Hofmann, Chair

Board Member, Vermont Public Service Board

Renze Hoeksema, Vice Chairman

Vice President of Government Affairs, DTE Energy

Lauren "Bubba" McDonald, Jr., Communications

Vice Chairman, Georgia Public Service Commission

Robert W. Capstick, Jr., Finance

Director of Regulatory Affairs, 3 Yankee Companies

Julie I. Brown, Membership

Chairman, Florida Public Service Commission

David A. Wright, Ex-Officio

President, Wright Directions, LLC



The following comments by the Nuclear Waste Strategy Coalition are in response to the U.S. Department of Energy's "Invitation for Public Comment to Inform the Design of a Consent-Based Siting Process for Nuclear Waste Storage and Disposal Facilities," 80 Fed. Reg. 79,872 (Dec. 23, 2015).

NWSC Overview and Call to Action

- The Nuclear Waste Strategy Coalition (NWSC) is an ad hoc organization representing the collective interests of member state utility regulators, state consumer advocates, state radiation control officials, state energy officials, tribal governments, local governments, electric utilities with operating and shutdown nuclear reactors, and other public and private sector experts on nuclear waste policy matters. Its primary focus is to support the removal and ultimate disposal of used nuclear fuel and high-level radioactive waste currently stranded at numerous sites across the country and to protect electric consumer payments into the Nuclear Waste Fund (NWF).
- The NWSC calls upon the federal government to act now to meet its statutory and contractual obligations under the Nuclear Waste Policy Act (NWPA) to promptly remove used nuclear fuel from existing and decommissioned reactor sites in our states. Electric consumers have paid in excess of \$40 billion (including interest) into the NWF. Consumers have dutifully met their legal obligation over the last 30 years, but the federal government has not.
- Specifically, the NWSC calls for the following:
 - **Transportation & Other Key Program Elements.** We support the re-establishment of an office within DOE solely focused on managing the nation's nuclear waste; the timely preparation of the nation's transportation infrastructure needed to support both consolidated storage and a repository program, including DOE certification and procurement of rail cars and licensed transportation casks and components; increased funding for state and tribal transportation preparation and related activities; and DOE's engagement with potential waste site host communities.
 - **Yucca Mountain License Application Completion.** Stating only that the NWPA-designated Yucca Mountain repository is "unworkable," the Administration abandoned the project in 2010. However, in response to a court mandamus, the Nuclear Regulatory Commission (NRC) completed and released the Safety Evaluation Report and Supplemental Environmental Impact Statement and found that Yucca Mountain meets the independent safety regulator's requirements as a permanent repository for the geologic disposal of nuclear waste. We urge Congress to fund the completion of the license application review and urge DOE to support the license application it submitted in 2008.
 - **Pilot Consolidated Interim Storage with Priority for Shutdown Reactor Fuel.** Congress and the Administration should facilitate consolidated interim storage as a way for the federal government to begin meeting its obligations, particularly removal of used fuel stranded at sites without an operating reactor. We are encouraged by the private consolidated interim storage initiatives.
 - **Funding Reform.** We support reforms that would ensure timely access to the NWF for its intended purpose. DOE should also consider the Blue Ribbon Commission on America's Nuclear Future (BRC) Co-Chairs' near-term recommendation to establish a mechanism by which NWF collections are limited to the specific amounts appropriated by Congress for activities under the NWPA, with the remainder of electric consumer payments held in escrow until such time as they are appropriated for NWPA activities.

- **Governance Reform.** We support moving the nuclear waste management program out of DOE entirely to an independent waste management organization, such as a federal corporation. Unlike DOE, such an entity would singularly focus on the mission of nuclear waste removal, be held accountable for progress on that mission, and better insulate the program from undue political interference.

DOE Consent-Based Siting (CBS) Efforts

- We thank DOE for reaching out to, and seeking input from, the NWSC about DOE's consent-based siting (CBS) efforts. In fact, several of our members have been invited to participate in DOE public meetings held across the country and have provided constructive input.
- First and foremost, any CBS process should complement (and not compete with) actions to carry out the NWPA, which itself recognized need for additional nuclear waste facilities and provided for local and state input into facility siting.
- The NWSC is generally pleased to see DOE ramping up efforts with respect to development of an integrated waste management system to include CBS but has significant concerns about the timing, the approach, the details, and the results.
- We are concerned about the timing and the lack of a clear action plan beyond gathering input and issuing reports. Generally, we are supportive of providing for multiple methods of communication to facilitate a broader public discourse in an effort to make progress. However, the public meetings – likely at considerable expense – appear to primarily have drawn those of us who already follow nuclear waste policy issues closely and not many average Americans as reportedly sought by DOE. In addition, the comment period is too protracted. Unfortunately, the CBS process is not set up to make meaningful progress in the remainder of the current Administration's term.
- While we understand the need for an open process and consideration of a range of perspectives, we suggest that DOE focus its limited resources on working with:
 - potential hosts, particularly those who have already taken steps toward licensing a site;
 - representatives from communities, states, or tribes who have previously expressed some level of interest in hosting a nuclear waste-related facility to ascertain what could have been – or may still be – done to advance that prospect; and
 - groups and individuals who support meaningful and timely progress on nuclear waste management.
- The NRC's role in licensing and regulating all U.S. used nuclear fuel and high-level radioactive waste facilities is important. DOE should highlight that role and avoid unnecessary duplication of the portion of NRC's well-established licensing process in which opponents, supporters, and other intervenors may be heard and raise issues that are ultimately resolved by the independent safety regulator.
- Although well-intentioned, we are concerned the CBS process will result in needless bureaucracy, additional costs, and further delay in the nuclear waste removal that the federal government is contractually and statutorily obligated to provide and for which electric consumers have handsomely paid.

Trust/Accountability

- Because DOE has not lived up to numerous contractual commitments, DOE is likely to face significant obstacles with respect to successful implementation of even the best-designed CBS process. This is one of the reasons we stress the need for DOE to actively pursue legislative reforms to include moving the program out of DOE entirely to an independent waste management organization, such as a federal corporation.
- There are things that DOE can do to begin to restore trust. It can begin living up to its numerous commitments and following the law (to include all provisions of the NWPA). One near-term action that DOE can take along these lines is to re-establish the Office of Civilian Radioactive Waste Management (OCRWM) to handle nuclear waste management issues, at least temporarily, to better facilitate a smooth, effective transition to an independent waste management organization.

Concept of Consent

- “Consent-based siting” is a nebulous concept. In fact, the phrase appears to have created an impression among some public meeting attendees that everyone in some given location must agree before a nuclear waste facility may be sited. Also, consent or the lack thereof may be highly dependent on the area ultimately determined to be “affected.” Regardless of the ambiguity of the concept, however, DOE should maintain as much flexibility as possible, particularly at earlier stages of a CBS process. Certainly, DOE should avoid furthering any impression that unanimity is necessary to achieve “consent.” DOE should also avoid being prescriptive about methods of gauging consent.
- DOE did not seek – nor does the current process seek – the “consent” of the communities within which nuclear-generating utilities have been forced to resort to indefinite on-site dry cask storage due to DOE’s failure to meet its statutory and contractual commitments. And as noted by Prairie Island Indian Community Tribal Council President Shelley Buck in Minneapolis and many others over the course of the public meetings, no one has asked whether those living near such *de facto* storage sites consent to hosting the spent nuclear fuel for the next several decades or longer.
- Endorsement from local, state, and tribal governments and populations is certainly a desired characteristic for any industrial facility, including those that manage and dispose of nuclear waste. However, if it establishes a bureaucratic process for “consent,” DOE runs the risk of establishing an unattainable goal for nuclear facilities. It is not clear why it is appropriate to establish an extra overlay of requirements on nuclear facilities but not on other industrial facilities that pose potential risks to public health and safety and the environment (e.g., chemical and petrochemical plants, highways, pipelines, liquefied natural gas terminals, windmills). Nothing in “consent-based siting” should preclude the use of a facility (nuclear or otherwise) that has demonstrated adequate protection of the public and the environment by obtaining the necessary regulatory approvals to operate.
- We are concerned that establishing an elaborate consent-based process inherently and greatly exaggerates the uncertainty associated with the facilities under consideration. Consolidated used nuclear fuel storage facilities require no active cooling systems and do not lead to appreciable doses to the public under normal and even postulated accident conditions. Similarly, a geologic repository poses essentially no hazard to the public in the short term, and must meet exacting standards for public protection out to one million years. Transportation of used nuclear fuel has been done extensively and safely for decades. DOE should consistently make these points in its communications with the public.
- Yet-to-be-determined criteria for “consent” should not be retroactively applied to existing commercial or defense nuclear waste storage or disposal facilities.
- Specifically, there is no need to impose a CBS requirement retroactively to the Yucca Mountain repository, a site designated by federal law.
- Likewise, a CBS requirement should not be applied retroactively to nuclear waste projects that have previously attained consent by investing time and resources in a bottoms-up approach. A CBS process should not adversely affect DOE’s ability to contract with private voluntary sites.
- At the same time, communities that have been previously considered in some manner for nuclear waste storage or disposal facilities should not be precluded from engaging in a CBS process due to the perception that consent cannot be achieved based on those past experiences. For example, if communities in the vicinity of the Yucca Mountain site want to engage in a CBS process, whether for a repository or storage facility, they should not be precluded. In addition, DOE should not take any actions to preclude the Yucca Mountain repository from inclusion in a broader integrated waste management program.
- DOE should actively reach out to communities that previously have been considered in some manner for nuclear waste storage or disposal facilities to gain valuable insight into both positive and negative experiences.
- We support DOE statements at public meetings that DOE is *not* seeking consent for the transport of used nuclear fuel and high-level radioactive waste. DOE should also educate the public about what it is already doing with states and tribes to lay the groundwork for the eventual transport of nuclear waste.

Concept of Fairness

- While fairness is indeed a laudable goal, the NWSC cautions DOE that it may be setting itself up for failure by focusing on a subjective standard of “fairness” that it lacks the tools to determine.
- However, in the spirit of providing constructive feedback, the NWSC believes that DOE should consider the following in its endeavor to ensure a fair site selection process:
 - DOE should not favor government-owned facilities over privately-owned facilities for that reason alone.
 - DOE should not exclude certain community, state, or tribal governments from consideration due solely to historical siting experiences or perceived obstacles that may be removed in a negotiation process.
 - To the extent funds are provided to communities, states, or tribes to support their consideration of hosting a site, such funds should be distributed based on transparent, pre-determined factors.
 - The result of such a siting process should be an enforceable consent-based system, the touchstone of which must be serving the public interest, including both those in the host communities *and* those who are counting on removal of waste from their sites and communities.
 - DOE should facilitate this process in a manner that demonstrates a willingness to take timely action and not waste time and precious resources that are needed for nuclear waste management and disposal.
 - DOE should focus on meeting its obligation to remove nuclear waste from current sites as paid for by electric consumers across the U.S. That is the ultimate test of fairness.
- More specifically, in selecting any site for waste management facilities, DOE should strive to satisfy several criteria, including:
 - A facility on the site meets applicable environmental and health and safety criteria, with margin.
 - A facility on the site can meet its mission requirements.
 - The cost is reasonable.
 - Potential host communities have an opportunity to be considered, if they so desire.

CBS Process

- We support DOE timely and meaningful engagement with potential hosts, including those interested in siting consolidated interim storage facilities with a priority for shutdown reactor fuel removal and those interested in hosting a permanent repository (such as Nye County, Nevada).
- We emphasize the need to afford potential hosts maximum flexibility so as not to limit creative, effective solutions that may be proposed by potential hosts and negotiated by the parties in consent agreements. DOE should not design a top-down, overly prescriptive process.
- At the same time, those with potential interest in hosting a facility have expressed a need for some minimum level of guidance in determining whether to take additional steps toward hosting a facility. Therefore, DOE should share any initial screening criteria with respect to candidate sites.
- A CBS process should include mechanisms to ensure that the process is not easily sidetracked by detractors who oppose meaningful and timely progress on nuclear waste management.
- A CBS process should be designed to produce a legally-enforceable and timely consent agreement so that the nation may plan, construct, and rely on such facilities in a timely manner.

Potential Use of the NWF in CBS Process

- Some communities have expressed a need for funding from the federal government to educate its citizens and further explore pros and cons to seriously assess interest in hosting a site. The amount necessary for numerous communities to undertake such an effort could be substantial. In addition, potential incentives and economic

benefits for communities and states that host consolidated interim storage or permanent disposal sites have been proposed. Again, this could be substantial. While not opposing funding for such purposes from other sources, our members have considerable concern regarding any potential expanded uses of the NWF beyond those outlined in the NWPA.

Conclusion / Call to Action

- In January 2012, the BRC, as established by the current Administration, issued a report containing recommendations on nuclear waste management issues, including a number of near-term actions that could have been implemented under existing legislative authority. Unfortunately, four years later, DOE appears to have cherry-picked the BRC recommendations on which it wants to focus. Instead, DOE should actively pursue (and propose or support Congressional legislation consistent with these items as necessary):
 - In the near term, the re-establishment of an office within DOE solely focused on managing the nation's nuclear waste, and in the longer term, movement of the program out of DOE, opting for an independent waste management organization (e.g., a fed corp) that can singularly focus on the mission of nuclear waste removal and better insulate the program from undue political interference.
 - Reform of the funding mechanism to ensure access to the NWF for its intended purpose. DOE should also consider the BRC Co-Chairs' recommendation to establish a mechanism by which NWF collections are limited to the specific amounts appropriated by Congress for activities under the NWPA, with the remainder of electric consumer payments held in escrow until such time as they are appropriated for NWPA activities.
 - Preparation of the nation's transportation infrastructure needed to support both consolidated storage and a repository program by certifying and procuring rail cars and licensed transportation casks and components.
 - Increased funding for state and tribal transportation preparation and related activities.
 - Other BRC-recommended actions that could be pursued in the near term and without additional grants of authority by Congress.
- Once again, we remind the DOE of its longstanding obligation to nuclear power plant operators and electric customers across the U.S. to carry out the provisions of the NWPA. First and foremost, DOE should support its license application for the Yucca Mountain repository and support completion of the licensing review. Such action would go a long way toward restoration of trust in DOE, an important factor in its development of a successful CBS process.
- In addition, DOE should focus on removing – and not creating additional – barriers to contracting with private entities on nuclear waste storage or disposal facilities, especially given that private entities have announced two separate proposed projects for consolidated interim storage.
- The NWSC will engage in the DOE process aimed at designing an effective CBS process, but we will continue urging timely performance by DOE to carry out its statutory and contractual obligation to remove used nuclear fuel and high-level radioactive waste from plant sites across the nation.

* * *

Thank you for the opportunity to comment. Should you have questions or wish to discuss further, please contact NWSC Executive Director Katrina McMurrian by email at katrina@theNWSC.org or by phone at 615.905.1375.

United States Department of Energy

Consent Based Siting Meeting

Boise, Idaho

July 14, 2016

Submitted By

Richard McPherson

Eagle, Idaho

Consent Based Siting

By Richard McPherson

It is an indisputable fact, that since 1982, the federal government has failed to meet its legal obligations to manage and dispose of America's partially spent nuclear fuel and nuclear waste.

Having said that, for over 30 years before the 1982 Law Congress passed, we as a country failed to create a complete commercial nuclear reactor fuel cycle system starting in 1951, when Experimental Breeder Reactor Number 1 (EBR1) first produced electricity.

Today, every day, after 65 years, it gets more time consuming and expensive to the government "taxpayers", utilities "rate payers" and the private sector "economy" because there is no completed back end for partially spent fuel from commercial nuclear reactors.

And, in spite of all the efforts and the hard working federal employees here today, it becomes even more difficult daily to arrive at an acceptable "Consent Based Siting" plan agreeable to everyone in America for the next administration to execute.

Partially used nuclear fuels and actual radioactive wastes are a significant part of commercial nuclear power, and need to be managed and disposed of properly. However, in more than 60 years of commercial nuclear power experience they have not caused any serious health or environmental problems, nor posed any real risks to people.

The DOE has posed six statements, each followed by one or more questions to Americans.

After Yucca Mountain was not put forth by the Nuclear Regulatory Commission (NRC), as had been anticipated, those six statements, evolved from the Presidents Blue Ribbon Commission (BRC), that "Consent Based Siting" seeks to ensure fairness in the distribution of:

- Costs,
- Benefits,
- Risks and
- Responsibilities now and in future generations.

In short, "How, in the public view, how can fairness be best assured by the process for selecting a site?"

The DOE, before that Energy Research and Development Agency (ERDA) and before that the Atomic Energy Commission (AEC) have been asking the same questions for decades. Today the tool exists to

allow input and receive “knowledge” starting back from 1940, to present day about this process. In a word, “Mitopia®” – read below.

We are fortunate that an option to permanent storage (“disposal”) or long-term storage is currently underway based upon an already demonstrated technology. It is developing the Molten Salt Reactor (MSR).

Today’s large Light Water Reactor’s (LWRs) produce around 20-metric tons of high-level radioactive material annually to be stored for 100,000 years.

Conversely, a 500 Megawatt MSR is anticipated to produce only a few kilograms of high-level radioactive material, along with perhaps 250-kilograms of other radioactive materials that must be stored for only a few hundred years.

An MSR provides even a better solution to the currently stored partially used nuclear fuels in fuel pools, and dry casks from LWR’s can fuel MSR’s; negating the need a huge final depository.

MSR’s are safer than the sun. We can quantify melanoma cancer cases from the sun (more than 10,000 deaths annually) and costs, we cannot confirm any deaths from commercial nuclear power.

We are also fortunate that the ability to assemble, interrogate and evaluate all the data and information, from 1940 until today, including public comments after the July 31, 2016 closing date about “Consent Based Siting” and about commercial nuclear power that will be placed at the fingertips of stakeholders instant “knowledge”. It is already available as a mature technology in the Mitopia® system from Mitosystems Inc., (www.mitosystems.com). Right after the September 11, 2001 attack on America, I was fortunate enough to see the Mitopia® system in operation over 100 times. It is ideal for the huge amount of data collected over 60 plus years associated with commercial nuclear power.

There are a miniscule number of Americans that do not want to enjoy carbon free commercial nuclear power. For some others, there remain legitimate questions about safety, including partially used fuel. That is why this meeting and others like it are being held around the country.

The two opportunities available for the DOE above can answer any question for most Americans who deserve that fairness be understood and assured for them. And, the funds have already been collected under the *1982 Nuclear Waste Policy Act* passed by Congress and the are available to be applied to those solutions. Solutions that will save billions from being spent on more studies, hearings, meetings and based upon decades of the history of failings to deal with partially used fuels from LWR’s.

An additional opportunity is addressing the failure to take partially used nuclear fuel from commercial nuclear power plants that created a breach of contract for the DOE. As of the end of 2015, the DOE has paid \$5.3 billion for failing to fulfill its obligations, and even if it manages to start disposing of waste in the next 10 years, it could still be on the hook for nearly \$24 billion in additional liability. By the end of 2015, the DOE had settled 35 lawsuits and resolved 33 with judgments, with 19 cases pending, according to the Congressional Budget Office. While a court decision in 2014 stopped the collection of storage fees, utilities are still seeking to recoup the money they're spending every year on partially used fuel storage. Even after the settlements for the storage fees collected are reached, the DOE is going to be required to reimburse those costs moving forward. Shifting \$24 billion away from lawyers, courts and settlements into the solutions will the funds will be used instead of squandered.

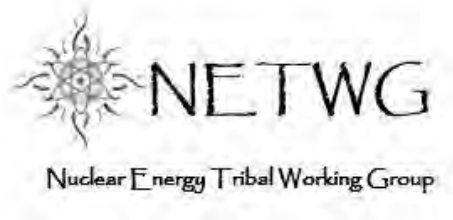
For the United States to stay competitive, the DOE and NRC should work together using end of the year funds to bring together a MSR consortium.

I recommend, the Electric Power Research Institute (EPRI) the University of Idaho (UI), Idaho National Laboratory (INL) and the Center for Advanced Studies (CAES) utilizing Mitopia® from DownRange Global Solutions, Inc. The consortium should create a knowledge base from data and a configuration management plan starting with the Oak Ridge National Laboratory (ORNL) MSR design that operated for several years at ORNL. This small effort over the next six months would significantly advance American MSR technology. The follow on part of this consortium would be to create a Developers Group meeting inviting companies involved in MSR design efforts such as, Flibe Energy, Terrestrial Energy, TerraPower and the Southern Company.

The above two undertakings can be completed this calendar year in preparation for the results of the Consent Based Siting Meetings analysis, ready for executing the DOE plans in 2017.

Richard McPherson
1843 W Sugar Crest St.
Eagle, Idaho 83616
949-292-9104
Rmcphe8888@aol.com

The author, Richard McPherson has been involved in nuclear power since 1963. He spent 20 years in the US Navy, first qualifying as a nuclear power plant operator in Idaho in 1965. Since retiring from the Navy in 1983, he worked in over 30 countries over the past 33 years. Richard has served as the United States Representative to the International Atomic Energy Agency (IAEA) in Vienna, Austria on the combined subjects of "Nuclear Fuel Cycle Facilities, the Environment and Public Opinion" during 1989-1993. Recently, he moved to Eagle, Idaho. Richard writes and is often asked to speak about energy and the economy as they relate to America's national security. Since moving to Idaho a few months ago, he has spoken to around 100 people by the invitation of Richard Christensen, Director Nuclear Engineering, at the University of Idaho in the auditorium at the Center for Advanced Energy Studies (CAES).



Consent-Based Siting and Indian Tribes

Submitted to the Department of Energy, Office of Nuclear Energy

July 29, 2016

The Nuclear Energy Tribal Working Group (NETWG) was chartered to connect Tribal government leaders and representatives with the Department of Energy Office of Nuclear Energy (hereby referred to as "DOE" or "Department"). NETWG works closely with DOE to ensure tribal concerns are recognized. This paper highlights the key concerns NETWG shares pertaining to tribal involvement throughout DOE's consent-based siting process. These concerns should not be taken to be representative of tribes as a whole.

An overarching theme of concern for NETWG is the lack of consistency and integrity in DOE's approach to incorporating tribal views and concerns throughout its efforts. The majority of the information in this paper has previously been brought to the Department's attention, and, in some instances, is language DOE adopted on its own. Generally, because of the Department's inconsistent consideration to the laws, policies, and inherent sovereign rights of tribal governments, there tends to be disconnect and a lack of trust and confidence in the Department's decisions. It is NETWG's intention to bring these discrepancies to light, and to ensure American Indian tribes are provided the mindful consideration and legal standing they deserve throughout the federal government's processes.

The following paper outlines some primary concerns pertaining to tribal participation and acknowledgement throughout the Blue Ribbon Commission on America's Nuclear Future (BRC) and DOE's consent-based siting process. With increased integrity and consideration, NETWG is confident American Indians and the Department can continue working together to solve the country's nuclear waste challenges, amongst other important political issues.

I. Background

Following the recommendations of President Obama and the BRC, DOE initiated a national dialogue on a consent-based siting process as a basis for the development of an interim storage facility and/or a repository for disposal of spent nuclear fuel and high-level waste. DOE's consent-based approach to siting will be built upon collaboration with the public, industry, NGO's, tribal, state, and local governments, as well as other stakeholders.

The BRC was formed in 2010 after President Obama declared the process to license Yucca Mountain was "unworkable." Two years later, the BRC advanced eight recommendations

in its “2012 Report to the Secretary of Energy.” The recommendations identified implementing a “new, consent-based approach to siting future nuclear waste management facilities.” This acknowledges the Yucca Mountain project, as a top-down, federally-mandated approach, was unsuccessful due to objections of the state and local governments. **From the BRC’s report, it is clear consideration should be given to potential tribal host communities when responding to the question of what to do with the United States’ nuclear waste.**

The report explains successful siting decisions are the result of complex and sustained negotiations between project proponents and potentially affected tribal, state, and local governments. The report suggests host states and/or tribes should retain direct authority over aspects of project regulation, permitting, and operations.

In January of 2013, DOE released the Administration’s “Strategy for the Management and Disposal of Used Nuclear Fuel and High Level Radioactive Waste” (hereby referred to as “Strategy”). The Strategy, an implementation plan for the BRC Report, outlines the Obama Administration’s policy regarding the disposition of used nuclear fuel and high level radioactive waste. Among other things, the Strategy recommends a comprehensive waste management and disposal system including a pilot interim storage facility, a full-scale storage facility, and a geologic repository. These facilities are sited using a phased, adaptive, and consent-based process recommended by the BRC.

Earlier this year, DOE initiated the consent-based siting process, providing notice in the Federal Register (80 FRN 79872) and a kick-off meeting in Washington, DC. The agency hosted a number of public meetings designed to engage Americans in the discussion of how best to develop a siting process that is “fair and reflective of public input.”¹

Ultimately, these efforts will result in a report seeking to inform DOE on what the public views to be a fair and consent-based approach to siting the nuclear waste.

II. DOE Must Amend its Recommendations to Acknowledge Tribal Support is Vital to Ensuring Success of the Nuclear Siting Program.

When discussing DOE’s past efforts to site a repository and strong opposition from the elected leaders of potentially affected parties, the BRC report mentions “the cooperation of affected state governments will be vital to the success of the nuclear waste program going forward.”² The report also mentions tribal and local support is not “sufficient to overcome state-level opposition.”³ The Department’s actions are consistent with this

¹ "Consent-Based Siting." *Department of Energy*. N.p., 2016. Web. 29 July 2016. Available at: <<http://www.energy.gov/ne/consent-based-siting>>.

² Blue Ribbon Commission on America's Nuclear Future. *Report to the Secretary of Energy*. Rep. January, 2012. P. 22.

³ Blue Ribbon Commission on America's Nuclear Future, p. 56.

language, highlighting the importance of state consent and participation. These statements, however, overlook the intent of the Commission and the overarching idea that governments (federal, tribal, and state) must work equally together to solve our country's nuclear energy challenges.

The BRC report highlights tribes and local governments as being generally supportive of siting facilities (for job creation and economic development), whereas states are not. The BRC recommends that to be successful, “the new waste management organization must find ways to address *state* concerns, while at the same time capitalizing on local support for proposed facilities” (emphasis added).⁴ These statements imply that decisions made at the state level are valued more than those made at the local or tribal level.

DOE made several efforts throughout designing the consent-based siting process to ensure tribal input is received. These efforts are not unnoticed; however, conversations with DOE staff imply state priority over tribal rights is a prevalent issue. Our view, which was mentioned throughout these meetings, is the Department believes state opposition (or support) will take priority over the tribal perspective, whatever it may be. In other words, if a tribe wanted to host a facility (or opposed a state's desire to host), but the adjacent state did not agree, the state's position would prevail.

As they stand, both the BRC report and DOE's current consent-based siting strategy minimizes or mischaracterizes tribal sovereign rights. These efforts incorrectly imply states and counties are stakeholders in tribal affairs, rather than recognizing tribal nations as domestic dependent nations with inherent sovereign rights. Without the appropriate recognition of the importance of tribal support, the Administration's efforts will never be sufficient to meet the standards of “consent-based.”

It is imperative the Department reaffirms the rights of federally recognized tribes, and accurately describe the vital role that tribes play in contributing to the success of the nuclear program as the agency moves forward.

III. The Department Must Recognize the Inherent Sovereign Rights of Tribal Nations.

Before engaging in any conversation based on consent, particularly in reference to Indian country, the Department must clearly understand the dynamics of tribal sovereignty. The relationship of the United States to American Indians is “unlike that of any other two people in existence.”⁵

According to the BRC report, “a good gauge of consent would be the willingness of affected units of government—the host states, tribes, and local community—to enter into legally binding agreements with the facility operator, where these agreements enable

⁴ Blue Ribbon Commission on America's Nuclear Future, p. 56.

⁵ Cherokee Nation v. Georgia, 30 U.S. 1, 16 (1831).

states, tribes, and communities to have confidence that they can protect the interests of their citizens.”⁶

This language emphasizes consent must be sought from all affected governmental units (tribal, state, and local) before a project may proceed. Consent from all affected government units is ideal, but the right of federally recognized Indian tribes to develop or site a facility on tribal land, without state objection or oversight, is a sovereign right. This recognition of the tribes’ legal standing is notably absent in the BRC report.

Indian reservations are considered to be “domestic, dependent nations.”⁷ As such, Indian tribes possess inherent governmental power over all internal affairs and states, as well as other adjacent tribes, are prevented from interfering with the tribes in their self-government.⁸

Indian tribes may face similar issues as states regarding siting considerations. That is, an individual tribe may find itself with competing interests (e.g., weighing potential environmental and cultural impacts from hosting a site with economic benefits from hosting). However, determination of these issues is reconciled by the tribe itself, rather than through federal government oversight.

Tribal lands are typically located within the geographic boundaries of a state or states, but they are not political sub-jurisdictions of the state. Rather, they should be thought of as adjacent jurisdictions. The BRC appropriately recognizes states do not have regulatory authority over Indian tribes. However, the report also quotes “**it would be unrealistic to attempt to locate a facility on tribal land in the face of determined state-level opposition**” (emphasis added).⁹

Without explicit Congressional permission, a state or adjacent tribe, regardless of location, has no authority “to regulate tribal activity or conduct concerning locating facilities on Indian lands for interim (or long-term) storage for and permanent disposal of used/spent nuclear fuel and high-level radioactive wastes.”¹⁰ This language was submitted to the BRC in 2011 as a White Paper prior to the development of the final report. Inexplicably, this language was dismissed from the final report and replaced by language highlighting the importance of state approval.

⁶ Blue Ribbon Commission on America's Nuclear Future, Ex. Summary, page ix.

⁷ Worcester v. Georgia, 31 U.S. 515 (1832).

⁸ Some exceptions exist with regard to civil and criminal authority.

⁹ *Report to the Secretary of Energy*, p. 58.

¹⁰ Chestnut, Peter C., Ann B. Rodgers, Joe M. Tenorio, and Janis E. Hawk. *The Role of Indian Tribes in America's Nuclear Future Prepared for The Blue Ribbon Commission on America's Nuclear Future*. Rep. 2011. Print.

The BRC's position underscores the struggle by the Skull Valley Band of Goshute Indians in their attempt to develop an interim storage facility on their reservation in the 1990's. While the counties around the reservation were generally supportive of the project, the State of Utah strongly opposed having nuclear waste in its state. State opposition and transportation concerns helped to halt the tribe's efforts.¹¹ This situation is unjust and brings to light a difficult situation DOE must consider throughout its consent-based process.

For perspective, imagine Wisconsin chose to host a facility. There is question as to how much voice Minnesota, or any neighboring state, would have in Wisconsin's decision-making process. While communication and negotiation regarding transportation and other safety issues must occur for the siting to be successful, it is doubtful DOE would halt the project on Minnesota's objection alone.

In reality, siting of spent nuclear fuel and high-level waste is challenging with the expectation that some level of opposition will always exist. With this in mind, the Department must determine how it will balance varying perspectives while accounting for tribal sovereignty and individual state rights. Differing views between Indian country and a state should be given great consideration and, at minimum, the same treatment as state-to-state opposition. Before the Department adopts and implements a consent-based approach, it must appropriately recognize state approval is not necessary for decisions made on tribal land.

IV. The Federal Government has a Trust Responsibility to American Indian Tribes.

One of the foundational principles of Indian law is the federal government's trust responsibility to Indian tribes. Federal trust responsibility includes legal duties, moral obligations, and the fulfillment of understandings and expectations arising over the entire course of the relationship between the United States and federally recognized tribes.¹²

The United States holds legal title to Indian lands, but the lands must be managed in unison with the equitable title resting with Indians.¹³ Therefore, it is the right of federally recognized Indian tribes to make development decisions in Indian country, without state objection or oversight.

¹¹ For more details, please refer to the Appendix 2 attached to this paper.

¹² *Cherokee Nation v. Georgia* 30 U.S. 1 (1831); *United States v. Mason*, 412 U.S. 391 (1978); *Manchester Band of Pomo Indians, Inc. v. United States*, 363 F. Supp. 1288 (N.D. Cal. 1978).

¹³ *United States v. Mason*, 412 U.S. 391 (1978); *Manchester Band of Pomo Indians, Inc. v. United States*, 363 F. Supp. 1288 (N.D. Cal. 1978).

Indian country is defined as “all land within the boundaries of an Indian reservation, regardless of ownership.”¹⁴ Therefore, land located within a reservation but owned by a non-Indian is still Indian country. Additionally, rights-of-way through reservation lands (e.g., state or federal highways) are a part of Indian country. Indian country extends outside of reservations, including “dependent Indian communities”¹⁵ as well as “trust” and “restricted” allotments of land.

Because rights-of-way through reservations are considered Indian country, tribes have the authority to manage and maintain activity that happens in that area (recognizing a tribe may not violate certain constitutional prohibitions such as impairing interstate commerce).

V. The Department must be Consistent in its Implementation of Existing Laws and Policies Speaking to American Indian Tribes.

The Department already has several laws and policies in place recognizing the importance of both tribal sovereignty and trust responsibility. Disconnect between existing policies and current departmental implementation is a key area the Department can, and must, begin to improve. Several existing policies, namely: DOE’s Indian Policy, Executive Order 13175 on consultation and cooperation, and the Nuclear Waste Policy Act, all may be used as background for the Department in engaging with tribes on developing a consent-based approach to siting.

a. DOE Indian Policy 144.1

The Department established an American Indian policy in 1992. The Indian Policy has been revised and reaffirmed a couple of times, with the most recent version released in 2006.¹⁶ The purpose of the Department’s Indian Policy is to convey the agency’s guiding principles for consistent interactions with tribal governments. The Indian Policy is based on the United States Constitution, treaties, Supreme Court decisions, Executive Orders, statues, existing federal policies, tribal laws, and other political relationships between the tribes and the United States government.

Policy Principle I states the “Department recognizes the Federal Trust relationship and will fulfill its trust responsibilities to American Indian and Alaska Native Nations.” The Policy Principle further states the Department will “pursue actions that uphold treaty and other federally recognized and reserved rights of the Indian nations and peoples.”

¹⁴ 18 U.S.C. 1151 (2012).

¹⁵ “All dependent Indian communities” within the United States. A dependent Indian community is any area of land which has been set aside by the federal government for the use, occupancy or benefit of Indians, even if it is not a reservation (e.g., Pueblos of New Mexico). 18 U.S.C. 1151 (2012).

¹⁶ DOE Order 144.1, November 16, 2009.

In Policy Principle II, the Department recognizes tribal governments as “sovereign entities with primary authority and responsibility for the protection of the health, safety and welfare of its citizens.” The Policy Principles also recognizes tribal governments as separate and distinct authorities, independent of state governments.

Many agency offices have developed frameworks for implementing the Department’s Indian Policy, including the Office of Nuclear Energy, to ensure consistent interpretation and application. With respect to Policy Principle I (*Trust Responsibility*), the framework states the offices endeavor to inform state and local governments, and other stakeholders, about the Department’s role and responsibilities with respect to Indian tribes, including “its responsibility to treat tribes as sovereign governments.”

The consent-based siting process must be revised to include and explain how these policy principles relate to the new siting process. Ultimately, the process must afford an opportunity for an interested tribal government to actively participate.

b. Executive Order 13175

According to Executive Order 13175, “Consultation and Coordination with Indian Tribal Governments”, each Federal agency is required to engage in government-to-government consultation with American Indian tribes. These government-to-government relationships recognize tribal sovereignty and allow an opportunity for tribal officials to give timely input in the development of regulatory policies affecting the Tribe. Furthermore, in a government-to-government relationship, a tribe has a recognized right to protect the health, safety, and welfare of its citizens.

The order requires each Federal agency to ensure meaningful and timely input by tribal officials in the development of regulatory policies that affect the tribe. The continual highlight of the need for state approval to result in a “workable” solution undermines the consultation and cooperation requirements established under this order.

c. Nuclear Waste Policy Act

The Nuclear Waste Policy Act (NWSA) of 1982, amended in 1987, was designed to assist in the siting, construction, and operation of interim and permanent repositories for spent nuclear fuel. The NWSA contains many provisions recognizing Indian rights, including: “(1) recognizing tribal authority over tribal lands; (2) mandating the tribal right of consultation; and (3) providing for financial and technical assistance to tribes.”¹⁷

The 1987 amendments to the NWSA created the Office of the United States Nuclear Waste Negotiator (NWN). The NWN is designed to work with states or Indian tribes to

¹⁷ 18 U.S.C. 1151 (2012).

reach agreements on the potential voluntarily hosting of a Monitored Retrievable Storage (MRS) facility.¹⁸ All states and federally recognized tribes were sent a letter from the NWN, explaining the need for the MRS and the availability of tiered-funding to study the feasibility of voluntarily hosting a facility. The fact that tribes were included in the search for an MRS site demonstrates their unique sovereign status; otherwise, the Office of the NWN would have only contacted states.¹⁹

Section 135 of the NWPA clearly specifies the state governor or legislature has no authority to disapprove siting decisions on Indian land.²⁰ The overarching concept woven throughout the NWPA, that tribal sovereignty requires tribes to be engaged with on an individual level, separate from state opinion, must be transmitted through the entirety of the Department's communications and decision-making process.

Elements of the NWPA are ideal example of an appropriate consent-based approach, holding tribal governments equal to state governments for siting considerations, while simultaneously recognizing tribal sovereignty.²¹ Recognizing such, the federal government must be consistent in its implementation of this language.

VI. Conclusion

The right of Indian tribes to exercise their sovereign powers, including but not limited to the right to make complex economic, environmental, and political decisions free from state oversight, is continually overlooked or discounted by both the BRC and DOE. Tribes are being denied the right of self-determination as promulgated in the federal regulations by requiring or encouraging state and local consent.

NETWG understands the Department's current effort is focused on creating a process to define consent, in terms of siting a facility for the storage of high-level spent nuclear fuel. It is vital for the Department to begin prioritizing integrity and thoughtful consideration in gathering input from tribal people throughout its efforts.

When funding is becomes available and the process moves forward for determining a suitable location for a storage facility, tribal communities must be consulted on a government-to-government basis consistent with laws and regulations at the forefront of any siting effort that may have an impact on their community. Central to these

¹⁸ A MRS is designed to store a maximum of 10,000 MTU until a repository was open.

¹⁹ Visit the Appendix to this paper for more information on the NWPA and the authority of the NWN to negotiate with Indian tribes.

²⁰ 42 U.S.C. 10136(b)(3).

²¹ Title IV of the NWPA creates a "Nuclear Waste Negotiator" to coordinate the governing body of any tribe or state interested in hosting a potential site with the Federal government to reach a mutually beneficial agreement for siting the waste. 42 U.S.C. 10241, et seq.

recommendations is the principal foundation of trust and transparency in tandem with the importance of DOE implementing a consistent and effective approach to working with American Indian tribes in a good-faith manner.

Tribes are not equivalent to states. Sovereignty and trust responsibility aside, from an ethical standpoint, tribes should be treated at a minimum, in tandem with states. As the current policies and processes exist relating to the siting of nuclear waste, tribes are inappropriately afforded less deference than states. Regardless of where waste is sited, it is incumbent upon DOE to provide American Indians with the legal distinction and respect they deserve.

Appendix 1: Nuclear Energy Tribal Working Group (NETWG) Members

Richard Arnold
Chairman
Pahrump Paiute Tribe
rwarnold@hotmail.com

Marcus Coby
Fort Hall Business Council
Shoshone-Bannock Tribes
mcoby@sbtribes.com

George Gholson
Chairman
Timbisha Shoshone Tribe
george@timbisha.com

Laurie Hernandez
Emergency Management Coordinator
Shoshone-Bannock Tribes
lhernandez@sbtribes.com

Ronald Johnson
Tribal Administrator
Prairie Island Indian Community
rjohnson@piic.org

Daniel King
Safety Coordinator
Oneida Nation of Wisconsin
dking1@oneidanation.org

Clarice Madalena
Program Manager, Natural Resources
Department
Pueblo of Jemez
clarice.madalena@jemezpuablo.org

Talia Martin
Tribal/DOE Program Director
Shoshone-Bannock Tribes
tamartin@sbtribes.com

Carmencita Mejia
Emergency Preparedness Coordinator
Shoshone-Bannock Tribes
cmejia@sbtribes.com

Michael Sobotta
Hanford Cultural Resources Coordinator
Nez Perce Tribes
mikes@nezperce.org

Heather Westra
Consultant
Prairie Island Indian Community
hwestra@piic.org

Appendix 2: Nuclear Waste Negotiator / Skull Valley Band of Goshute Indians Example

The Nuclear Waste Negotiator (NWN) was created under the Nuclear Waste Policy Act (NWPA) to reach agreements with states or Indian tribes to voluntarily host a Monitored Retrievable Storage (MRS) facility, which could store a maximum of 10,000 MTU until a repository was open. All states and federally recognized tribes were sent a letter from the NWN, explaining the need for the MRS and the availability of tiered-funding to study the feasibility of voluntarily hosting a facility.

After the NWN initiated communication with tribes and states regarding the MRS facility, twenty Phase I grant applications were submitted by sixteen tribes and four non-tribal applicants. Nine tribes were awarded Phase I funding of \$100,000, with eight completing their feasibility studies. Nine tribes applied for Phase II funding (\$200,000), of which four received funding and two returned their awards. The two tribes completing their Phase II projects included the Mescalero Apache Tribe in New Mexico and the Skull Valley Band of Goshute Indians in Utah. Phase II-B funding (up to \$2.8 million to continue feasibility studies and educational outreach and entering into formal negotiations) was scheduled to be distributed, but Congress subsequently canceled the funding and the program. In discussing the MRS process and the number of potential host tribes, the BRC report concluded by stating, “in no case, however, was the host state supportive of having the process go forward.”²²

Because the MRS siting process was significantly delayed, Mescalero Apache began working on their own with a group of utilities to site a facility in December 1993. The tribal council and the utilities drafted a Letter of Intent in December 1994. However, in a January 31, 1995 referendum, the Mescalero voted 490 to 362 against further negotiations. The tribal leadership, which supported the venture, organized a petition drive for a revote, and on March 9, 1995, the Mescalero reversed the former decision and voted 593 to 372 in favor of the project. Negotiations over the design and financing of the facility continued through 1995 and early 1996, but these efforts ended in April 1996.²³

The Skull Valley Band of Goshute Indians partnered with eight utilities that formed Private Fuel Storage (PFS), after the federal government abandoned efforts to site an MRS facility. PFS received a license from the Nuclear Regulatory Commission (NRC) for an Independent Spent Fuel Storage Installation (ISFSI). The PFS facility is not a NWPA authorized facility. The counties surrounding the PFS facility were generally supportive of the Tribe, while the State of Utah was not. The State of Utah conveyed its disapproval in a comment letter to the BRC based on the lack of a consent-based process (advocated by the BRC) and science-

²² BRC report, page 23

²³ Richmond School of Law, *The Mescalero Apache Indians and Monitored Retrievable Storage of Spent Nuclear Fuel: A study of Environmental Ethics*, Noah M. Sachs 1996.

based approach.²⁴ There was no discussion in the BRC Report that Skull Valley has the right to site such a facility on its land as a sovereign nation. Nor was there mention that Skull Valley had received MRS funding to conduct technical studies on the proposed site.

This example is highlighted with the intent that the Department will consider it to be a lesson learned to continue moving forward the conversation of what to do with the nation's high-level spent nuclear fuel.

²⁴ Blue Ribbon Commission on America's Nuclear Future. *Report to the Secretary of Energy*. Rep. January, 2012. P. 24.

Consent-Based Siting

From: Mary Woollen <mjwoollen@msn.com>
Sent: Monday, February 22, 2016 5:13 PM
To: Reim, Michael
Subject: FW: DOE Consent-based siting process

Just re-read and he is going to send it to website. My error there. I will send the other.

From: Greg Mello [mailto:gmello@lasg.org]
Sent: Monday, February 22, 2016 12:01 PM
To: mjwoollen@msn.com
Cc: twm@lasg.org
Subject: DOE Consent-based siting process

Re: DOE Consent-based siting process, hearing locations

For later reference:

- <https://www.federalregister.gov/articles/2015/12/23/2015-32346/invitation-for-public-comment-to-inform-the-design-of-a-consent-based-siting-process-for-nuclear>
- <http://www.energy.gov/ne/consent-based-siting> and consentbasedsiting@hq.doe.gov
- <http://www.nei.org/News-Media/News/News-Archives/Holtec-to-Pursue-Consent-Based-Interim-Storage-in>
- <http://www.abqjournal.com/578960/biz/biz-columns/proposed-nwaste-project-faces-many-hurdles.html>

Dear Ms. Woollen (Mary) --

Allison McFarlane gave me your email address; I probably should write you at work but I don't have that email address. I will write a separate, short, formal inquiry to the email address above regarding hearing location, so you may get this content twice!

A New Mexico colleague asked me why it was that there was not a New Mexico hearing scheduled (and not a Texas hearing, we might add). I had no good answer. Applications for spent nuclear fuel storage are expected from Waste Control Specialists (Andrews, TX) and Holtec International (Eddy and Lea counties, NM) this spring and summer, respectively. These proposals are relatively far advanced. **So shouldn't there be hearings by DOE in or near those places?**

We are unaware of any consent-based siting process hearings in the state. I understand that there will be NRC licensing hearings for these specific projects, and this may be the explanation.

Please feel free to write, or to call my cell phone (505-577-8563) this week, as I am in the DC area (actually: Bethesda, staying with Allison and family).

Best wishes,

Greg Mello

--

Greg Mello
[Los Alamos Study Group](#)
2901 Summit Place NE
Albuquerque, NM 87106
505-265-1200 office
505-577-8563 cell

To subscribe to the Study Group's main listserv [send a blank email here](#). To unsubscribe [send a blank email here](#).
Facebook: [Los Alamos Study Group](#); Twitter: [@TrishABQ](#); Blog: [Forget the Rest](#)

Consent-Based Siting

From: Leona Morgan [mailto:leona.morgan.nm@gmail.com]

Sent: Monday, August 01, 2016 12:00 AM

To: Consent Based Siting <consentbasedsiting@hq.doe.gov>

Subject: Response to IPC

To Whom It May Concern,

Please see attached Documents RE: Consent Based Siting.

Thank you,

Leona Morgan
Diné No Nukes
505 879 8547

www.dinenonukes.org

July 31, 2016

U.S. Department of Energy
Office of Nuclear Energy, Response to IPC
1000 Independence Ave SW
Washington, DC 20585

RE: Response to IPC

To Whom It May Concern:

We are writing in response to your “Consent-Based Siting” of Radioactive Waste Dumps, with special concern to our communities in New Mexico.

By virtue of the end result, this process is inherently unfair to the community that will receive the nuclear waste, and the communities that will be at risk along the transportation routes.

Being a state that already has one failed nuclear waste site (the Waste Isolation Pilot Project or “WIPP”), we know that such facilities cannot be safe into perpetuity and any community who receives nuclear waste will forever be at risk of accidents, explosions, and resulting health-related issues.

We understand that WIPP near Carlsbad, NM and the Waste Control Specialists (WCS) in Andrews, TX are sites that may be considered for interim and long-term storage. Because WCS has invited DOE to bring waste to its facility, this invitation by WCS cannot be considered an invitation by a community. We as residents of New Mexico do not invite DOE to bring waste to New Mexico. We DO NOT CONSENT to the storage of high level nuclear waste in our state now or ever!

DOE has not done sufficient outreach to the general population of American citizens on this proposal, and has not heard from all the communities who will be impacted by transport through their areas. We request DOE to continue to do educational presentations and to hold additional meetings in New Mexico regarding your Consent Based Siting process, in Albuquerque, Carlsbad, Las Cruces, Gallup, and to the various Tribal Nations including Navajo, Mescalero, and any of the 19 Pueblos along possible transportation routes.

These are our recommendations:

Stop all nuclear waste production that generates irradiated nuclear fuel in the first place, including weapons-related and reactor operations. Work toward clean, non-nuclear, and carbon free forms of energy production—such as energy efficiency, wind, and solar.

Continue to work toward safe, reliable and permanent methods of storing nuclear waste, such as Hardened On-Site Storage (HOSS), as has been suggested in the past by several organizations, including the Institute for Energy and Environmental Research, Nuclear Information Resource Services and Beyond Nuclear.

The cost of storage and transport of nuclear waste must not be the financial burden of rate-payers or tax-payers. Total liability and all expenses should remain with owning utilities. These companies should also never be permitted to build nuclear plants without demonstrating financial capacity to cover all costs of safe permanent storage of wastes in perpetuity.

Question 1:

How can the Department of Energy ensure that the process for selecting a site is fair?

More public meetings are needed, especially ones in Albuquerque, Gallup, and Carlsbad. The DOE needs to include outreach to Environmental Justice organizations, Communities of Color, Low-Income communities, professors in ethics, health professionals, and emergency responders and other interested parties. DOE should postpone any decision on this “consent-based siting” proposal until all these communities have been informed *and* until DOE has considered the report by NRC on “pool storage safety” due out later this year.

Question 2:

What models and experience should the Department of Energy use in designing the process?

We support the storage of nuclear waste and spent fuel using HOSS techniques, in “hardened dry casks” built to prevent leakage and explosions, instead of cooling pools. There will be less risk storing waste at the places where it was created instead of moving it, storing it on-site or as close to the point of origin as possible. Casks must not be stored or transported through tribal lands or high-population centers.

Storage pool structures must not be dismantled during plant decommissioning and must be maintained at utilities’ expense as emergency sites for failed cask-to-replacement-cask transfers.

Question 3:

Who should be involved in the process for selecting a site, and what is their role?

In order to ensure adequate research and consideration for safety for the environment and communities, several focused teams should be created to oversee the following:

A) Safety Teams, including professionals and experts in these fields: Transportation Safety, Emergency Responders and First Responders, Health Professionals, Hazmat, etc.

B) Human Rights, experts and professionals who specialize in the protection of the rights of: the Child, Women, the Poor, and Indigenous Peoples Rights.

C) Health, all communities likely to be affected by proposed transportation routes and storage sites must be apprised of the risks by experts who can ensure the safety of: our air, waters, soil, plants, animals, and human health.

Question 4:

What information and resources do you think would facilitate your participation?

The public must be provided with information and have adequate time to consider the risks and options of site proposals. We must be provided with:

-Site geology and hydrology

- Nature of irradiated nuclear fuel
- Status of hardened cask technologies
- Nearest Emergency facilities
- Worst-case scenario of possible explosions and releases of radioactivity

This information must be provided in a plain English format, understandable by the common layperson.

Question 5:

What else should be considered?

The process should center on the ongoing history of radioactive environmental contamination and its effects on communities. Corporations and nuclear industry or similar businesses should not be considered “the public” or as “the community” in terms of consent.

New Mexico is a state with several indigenous nations and various traditional cultures. Each tribal nation and traditional Chicano or Hispanic community must be contacted and informed of the process and provided with materials translated in the appropriate language. DOE must follow its Federal Trust Responsibility when addressing Tribal Nations. DOE must also abide by all international conventions, including the United Nations Declaration on the Rights of Indigenous Peoples which states that “free, informed, and prior consent” is necessary before proceeding with federal actions such as transport and storage of dangerous and hazardous materials in areas that may affect tribal nations, tribal members, and indigenous peoples.

Sincerely,

On Behalf of Nuclear Issue Study Group:

Benjamin Abbott
Karen Bonime
Don Hyde
Leona Morgan
Eileen Shaughnessy

Sent By:

Leona Morgan
725 Tijeras Ave NW
Albuquerque, NM 87102

Enclosure:

NMThreatsFromPotentialHighLevelNuclearWasteTransport.pdf

DOE Consent Based Siting

Potential Route For Waste Transportation (I-25)

A

US-87 & I-25, Raton, NM
87740, USA

B

I-10, El Paso, TX 79902, USA

Potential Route For Waste Transportation (I-40)

A

Indn Service Rte 7140, Lupton,
AZ 86508, USA

B

6301-6397 Quay Rd A,
Hereford, TX 79045, USA

Directions from 7-13 Chato Rd,
Lordsburg, NM 88045, USA to
1390 N Main St, Las Cruces, NM
88001, USA

A

7-13 Chato Rd, Lordsburg, NM
88045, USA

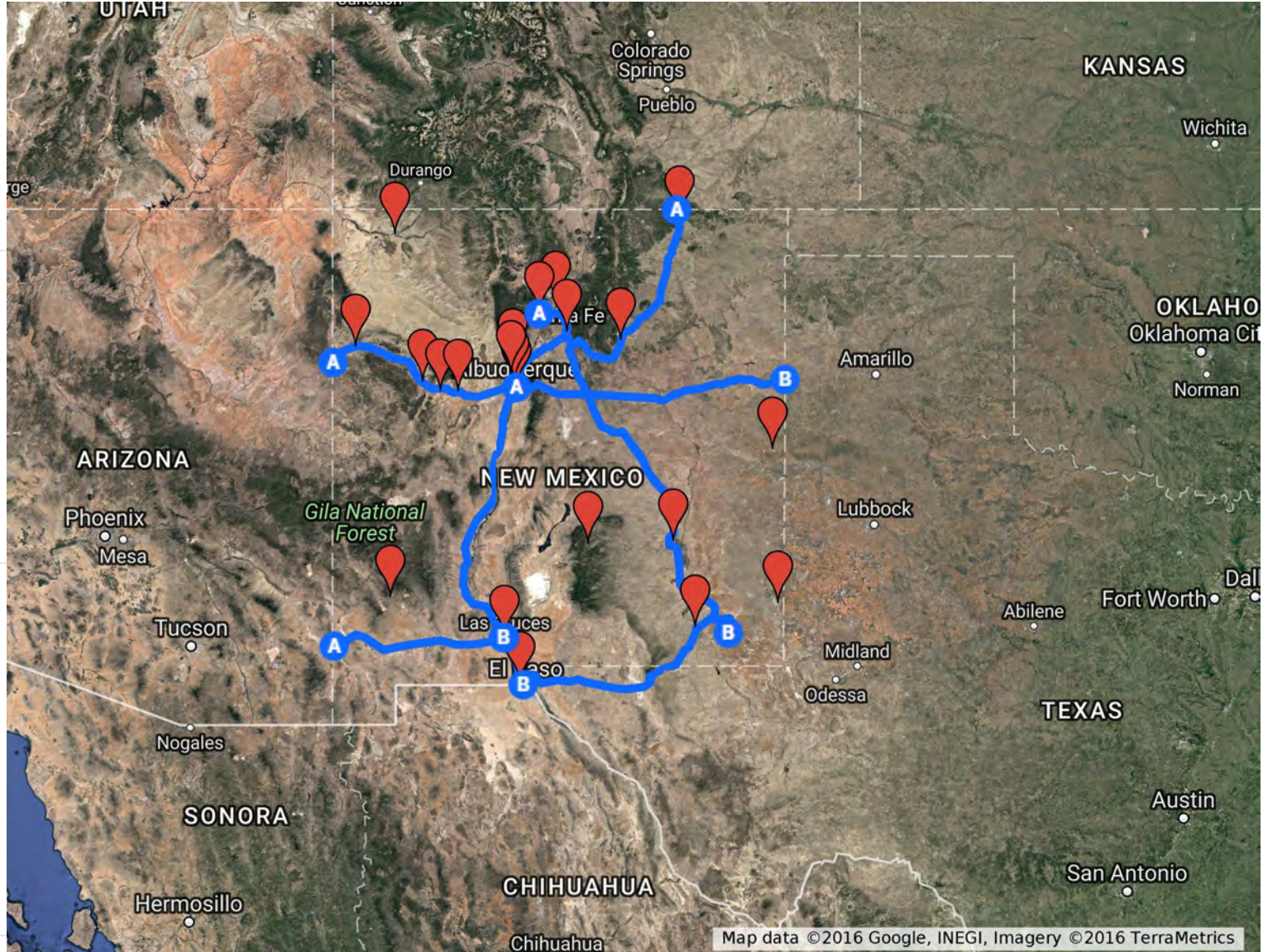
B

1390 N Main St, Las Cruces,
NM 88001, USA

HAZMAT Response Teams


















Albuquerque Fire Department



Threats to New Mexico from Potential Transport of High Level Nuclear Waste

The Department of Energy (DOE) is currently working on a process for getting consent from the communities it plans to eventually store nuclear waste in and are trying to create a

-  Carlsbad Fire Department
-  Clovis Fire Department
-  Espanola Fire Department
-  Farmington Fire Department
-  Grants Fire Department
-  Gallup Fire Department
-  Hobbs Fire Department
-  Las Cruces Fire Department
-  Pueblo of Acoma Fire Department
-  Raton Fire Department
-  Roswell Fire Department
-  Santa Fe Fire Department
-  Sunland Park Fire Department
-  64th Civil Support Team (CST)
-  Bernalillo County Fire Department
-  Las Vegas Fire Department
-  Los Alamos Fire Department
-  Rio Rancho Fire Department
-  Ruidoso Fire Department
-  Silver City Fire Department
-  Laguna Fire Department

process for how that can be done. The goal of this map is for communities to see and understand possible threats they may face if the DOE starts to relocate high level nuclear waste created in other parts of the U.S. to or through New Mexico. This map depicts the most probable routes that would be used to transport the waste so that communities can better understand possible future risk. Also included in this map are the locations of HAZMAT Response teams throughout the state so the viewer can have a good idea of where they are located in regards to their own community.

Here is what the DOE has to say about this project, "Our goal is to develop solutions for the long-term, sustainable management of our nation's spent nuclear fuel and high-level radioactive waste. We are planning for an integrated waste management system to transport, store, and dispose of spent nuclear fuel and high-level radioactive waste from commercial electricity generation, as well national defense activities. To achieve this goal, we are developing a process to site facilities collaboratively with the public, communities, stakeholders, and governments at the state, tribal, and local levels. We are seeking the help of all Americans in developing a consent-based approach to siting that is fair and reflective of public input. We are committed to finding a solution that protects our nation's citizens, communities, and the environment."

Please share the map and send any additions or corrections to:
contact@dinenonukes.org

Directions from Albuquerque, NM,
 United States to WIPP, Carlsbad,
 NM, United States



Albuquerque, NM, United States



WIPP, Carlsbad, NM, United States

Las Cruces to WIPP



Las Cruces, NM, United States



WIPP, Carlsbad, NM, United States

Los Alamos to WIPP



Los Alamos, NM, United States



WIPP, Carlsbad, NM, United States

Consent-Based Siting

From: Mori, Gina <Gina.Mori@diamondresorts.com>
Sent: Wednesday, March 23, 2016 6:31 PM
To: Consent Based Siting
Cc: 'winamarieag@aol.com'
Subject: FW: Deny Radioactive Storage facilities

3-23-16

Deny Radioactive Storage facilities (consentbasedsiting@hq.doe.gov)

Yucca Mountain nuclear dump has never been acceptable and there is no acceptable site for storage of this deadly, toxic, radioactive waste. Nuclear energy is obsolete. Renewables are the way of the future; therefore we need to decommission all remaining Nuke plants immediately. Without the Nuke plants we won't have to deal with the spent fuel. Problem solved!!!! There is no other solution.

We need to start preserving our planet, instead of destroying it. Profits should never be more important than life.

We do not consent to being put at risk of death and destruction, caused by deadly nuke plants. It is unconscionable that our future generations will be burdened by the waste, which will be around for thousands of years.

It is time to use common sense. No nukes and no nuke storage.

Gina Mori

Gina Mori | Quality Assurance Officer | San Luis Bay Inn | Diamond Resorts International® | Tel: 805.595.4040 x6 | Fax: 805.595.4047

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Consent-Based Siting

From: Ranelle Nabring [<mailto:ranellen@hotmail.com>]
Sent: Monday, July 25, 2016 1:42 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: Response to IPC

To Whom It Concerns:

I attended the public meeting on July 14 in Boise, Idaho, at the Boise Centre. Many concerns regarding the lack of transparency were raised, with regard to the DOE's handling of spent nuclear fuel being stored in Idaho. Our small-group discussion "take-aways" were that we don't trust the DOE and their approach, so agreeing on what constitutes Consent-Based Siting is hampered from the start. I believe that Idaho's Snake River Aquifer should NOT be considered for any more spent nuclear fuel storage, PERIOD. Address clean-up (as has been promised but not fully delivered) FIRST!

Sincerely,

Ranelle Nabring
Boise, Idaho

Consent-Based Siting

From: Judith Dale [<mailto:Judith.Dale@house.texas.gov>]

Sent: Friday, July 29, 2016 4:35 PM

To: Consent Based Siting <consentbasedsiting@hq.doe.gov>

Subject: Regarding Invitation for Public Comment on Consent-Based Siting

Please accept these comments on consent-based siting. Thank you.

Judith Dale
Acting Chief of Staff
Rep. Elliott Naishtat
512/463-0668



The State of Texas
House of Representatives
Austin

P.O. BOX 2910
AUSTIN, TEXAS 78768-2910
512-463-0668

July 29, 2016

U.S. Department of Energy, Office of Nuclear Energy
1000 Independence Ave SW
Washington, DC 20585
Submitted by email to consentbasedsiting@hq.doe.gov.

Regarding Invitation for Public Comment on Consent-Based Siting

As members of the Legislature of the State of Texas, we thank you for the opportunity to submit comments on DOE's Consent-Based Siting Process.

The plan to transport the nation's deadly nuclear reactor waste for consolidated storage in Texas or nearby in New Mexico raises grave concerns about long-term risks to health and state finances. Risks from radioactive contamination from leaks, accidents or terrorist attacks could threaten our health, land and aquifers. In 2014 the Texas Commission on Environmental Quality studied this issue. In their "Assessment of Texas' High Level Radioactive Waste Storage Options the agency issued two dire warnings: Texas could unintentionally become a de facto permanent radioactive waste repository and terrorism risks would be increased by transport of this waste. These warnings should be taken seriously since exposure to radioactivity can cause cancer, birth defects and death. A single train carload of high-level radioactive waste would contain as much plutonium as the bomb that devastated Nagasaki. Plutonium 239 in radioactive waste must remain isolated for over 240,000 years and some radioactive materials require even longer periods of isolation, up to a million years. Decisions involving this waste are no small matter.

Waste Control Specialists (WCS) applied to the Nuclear Regulatory Commission in April 2016 for a consolidated storage license that would allow them to store high-level radioactive waste in dry casks on a big concrete slab for forty years at their site on the Texas/ New Mexico border. This fall the Eddy Lea Energy Alliance is expected to apply for a license for a site just across the border in New Mexico. This means much of the nation's high-level waste would be transported through Texas. In previous analysis, the DOE estimated that more than 10,000 train shipments would be needed. This would place many of our largest cities at risk, with shipments that would last for over 20 years.

The federal government acknowledges that no one wants radioactive waste in their backyard, so there has been an effort to find communities to "volunteer" to take it and now the DOE is

seeking comment on what constitutes “consent.” While claims have been made that no site has been selected, it has been clear since 2012 and the work of the Blue Ribbon Commission that the Texas/ New Mexico region is being targeted. Any “consent” discussions must keep this consideration in mind.

The discussion on what should constitute consent is premature. Despite the fact that an active NRC license application is being reviewed for a site in our state, many key decisions are yet to be made and a huge amount of information is lacking. How can there be consent if people don’t know what they’re consenting to?

- We can only guess at what the transportation routes would be since they would not be determined until 2022 or later .
- There has been no decision on a final permanent repository since Yucca Mountain efforts have been halted. Until a site is permitted and constructed we must assume that any high-level radioactive waste “stored” here is likely to stay in Texas, creating a de facto permanent disposal site. Would “consent” to storage become consent to a permanent repository, adding a whole additional level of risk? Thorough review using the best science available is needed to know whether WCS or any such site could safely isolate waste for thousands of years. Decisions on where to store or dispose of radioactive waste should be based on full scientific analysis, not political pressure or assurances from corporate promoters.
- No Environmental Impact statement has been completed for high-level waste storage at the WCS site.
- The NRC found numerous significant deficiencies in the license application, including lack of engineering analysis for transfer casks that would be used, information about how shielding would be accomplished, and the design of the concrete pads. There was inadequate information about how water contamination would be prevented, radiation monitoring, worker dose rates and cumulative impacts from this site combined with low-level radioactive waste at the site and other nearby nuclear facilities.

While the U.S. Department of Energy held eight “consent-based siting” meetings around the country, the agency failed to schedule a single one in Texas or New Mexico, the states targeted as ground zero for storing the nation’s high-level radioactive waste. Instead, they held eight meetings elsewhere around the country - in Boston, Denver, Sacramento, Atlanta, Chicago, Boise, Minneapolis and Tempe. Texas and New Mexico are the first places the DOE should have gone, and the oversight is glaring and perhaps it was intentional. Instead the DOE has been asking other states how they feel about getting radioactive waste out of their backyard, knowing full well that this means dumping on Texas/ New Mexico.

Those most likely to be impacted were not being asked for their thoughts. Rules based on this process and these meetings are likely to continue to be unfair and inappropriate.

Texas has been portrayed as wanting radioactive waste storage based on a vote by Commissioners in Andrews County, Texas. But there was no real public debate, or broad discussion, just a routine vote that most people didn’t even know about. Commissioners were no doubt looking at potential county revenues. Many local people are opposed to having high-level radioactive waste in their backyard. They were never given a chance to vote.

Dumping radioactive waste on largely Hispanic communities with few resources to fight back would be extreme environmental injustice. Local people have only recently become aware of the plans to dump radioactive waste on them and are beginning to fight back.

Many people in Texas and New Mexico have signed petitions saying that they do not consent to having radioactive waste from the nation's nuclear reactors stored in or transported through their communities.

A "No Consent to High-Level Radioactive Waste" resolution became the number one Democratic Party resolution this year, passing in 29 County and District Democratic Conventions. As a result, the 2016 Democratic Party Platform includes the following: "We support... halting the plan to import high-level radioactive waste for consolidated storage in Texas due to risks of water contamination, security concerns and transportation accidents, and we oppose transport of high-level radioactive waste on our highways or railways."

If the plan to transport radioactive waste for consolidated storage moves forward, every "affected" citizen in Texas, New Mexico and other states should have the right to vote on whether or not to "consent" in a normal election process. Those who should be asked for their consent include those most likely to be exposed including: people in any host county or county through which radioactive waste would be transported: those who live within 50 miles of a proposed storage site, and those who use an aquifer that might be contaminated. A simple vote by a County Commission should not constitute "consent." A vote should be required in each of the potentially impacted communities. The use of funds to influence the election should be prohibited, including funds from the applicant, contractors, shippers, utilities, or other interests that could benefit financially.

It is important to note that there is no need to move radioactive waste for consolidated storage or to transport it across the country when there is no permanent disposal site. The Nuclear Regulatory Commission has previously said that the least risky option is to keep the waste stored securely at or close to the site where it was generated, and most reactor sites are already licensed to do so.

Decisions on whether or not to "consent" should be determined only after key rules on transportation have been finalized, transportation routes proposed, after engineering and environmental impact studies have been completed, and after vigorous debate at a series of local hearings in host counties, counties through which the waste could be transported, as well as counties that could be impacted by aquifer contamination.

The plan to ship the nation's deadly nuclear reactor waste to Texas / New Mexico should be halted immediately due to the risks of radioactive contamination from leaks, accidents or terrorist attacks and the threats they pose to our health, land and aquifers. The DOE not use the "consent-based siting" process to further efforts to target Texas and New Mexico as radioactive waste sites.

As members of the Texas House of Representatives, we want to be clear that Texas is not a wasteland. We are not a dumping ground. We do not consent to accepting high-level radioactive waste for storage in Texas or to transporting it through our state for this purpose. We urge the DOE to delay the "consent" process until such time as citizens have enough information to make

their decision knowing the full magnitude of what is under consideration. This requires a legitimate, lengthy, fully-informed discussion of the risks involved and a vote of all communities where people are most at risk for impacts.

Thank you for your attention to this matter.

Sincerely,



Elliott Naishtat
State Representative District 49



Donna Howard
State Representative District 48



Eddie Rodriguez
State Representative District 51



Consent-Based Siting

From: Leon Neihouse [mailto:neihouse@gwi.net]
Sent: Monday, July 25, 2016 6:30 AM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: Dirigo Energy Islands

Dr. Ernest Moniz
Secretary of Energy
Attention: John F. Kotek
Acting Assistant Secretary for Nuclear Energy
U.S. Department of Energy
1000 Independence Ave., SW
Washington, DC 20585

Dear Dr. Moniz:

The response of your Consent-based Siting Team to my below request was encouraging to the point that the DEI Team is investigating the development of Navassa Island to serve as a location for the consolidated interim storage (CIS) of spent nuclear fuel (SNF).

It is my understanding that your team has finished seeking input from presentations made at eight locations and is now in the process of preparing a draft report.

I would like to point out that, subject to a successful Environmental Impact Statement, the method proposed in the attached Concept of Operations for Dirigo Energy Islands (with Island logo attached) is a “sure thing” for an acceptable CIS site.

The USA owns Navassa Island in the Caribbean, it is uninhabited, and these approximately two square miles of real estate can easily hold all of the SNF presently residing at the shutdown nuclear power plants in the USA.

I respectfully request that DEI be given a copy of the draft report and all follow up information necessary for DEI to submit an application to develop Navassa Island, as well as one or more alternate locations, to serve as a CIS site for SNF storage.

Thank you for any attention you can give to this request.

Very Respectfully,

Leon Neihouse
Vice President: Quality Assurance
Dirigo Energy International, Inc.
24 Oak Grove Ave.
Bath, ME 04530
1-207-443-5184

From: Consent Based Siting [<mailto:consentbasedsiting@hq.doe.gov>]
Sent: Wednesday, June 15, 2016 11:36 AM
To: Leon Neihouse
Subject: RE: International Nuclear VillagesT

Mr. Neihouse,

Thank you for your email and attached Concept of Operations. In regards to your questions:

“(1) are there any specific methods and procedures that we must follow to, as it were, “throw our hat in the ring” for consideration in the CIS process”

There are no specific procedures or requirements for you to follow at this time. The Department is currently seeking input about elements to consider in the design of a consent-based siting process and plans to publish a draft report summarizing the initial input this fall.

“and (2) is the Passamaquoddy Nation one of the Indian Tribes, mentioned in your booklet, currently under consideration for a CIS site?”

At this time, the Department is not considering locations or requesting volunteers to host facilities to store or dispose of spent nuclear fuel and/or high-level waste.

-The Consent-based Siting Team

From: Leon Neihouse [<mailto:neihouse@gwi.net>]
Sent: Tuesday, June 07, 2016 10:17 AM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Cc: kimber.colton@mail.house.gov; 'mark campagna' <sicilianatom@hotmail.com>; ClintonCrackel@aol.com; jde31459@gmail.com; 'Hall, Thomas D' <thall@alionscience.com>
Subject: International Nuclear VillagesT

Dr. Ernest Moniz
Secretary of Energy
Attention: John F. Kotek
Acting Assistant Secretary for Nuclear Energy

U.S. Department of Energy
1000 Independence Ave., SW
Washington, DC 20585

Dear Dr. Moniz:

I want to first thank you for the May 17, 2016 response of Mr. Kotek to my letter to you of 20 April 2016.

I have visited your Consent based siting web site, read your booklet entitled Integrated Waste Management Consent Based Siting 2016, and am following your progress in making eight presentations to develop an adaptive consent based approach to finding one or more suitable consolidated interim storage (CIS) locations.

To digress into a related initiative, I have expanded Dirigo Energy International, introduced in my 20 April letter, into a franchise business with the prospective name of International Nuclear Villages (INV) - introduced in the attached Concept of Operations.

The INV intent is to invite the participation of all national governments in developing a prototype business on USA owned Navassa Island in the Caribbean.

This island would be set up for all governments to dispose of their low level radioactive wastes and other hazardous material.

Those nations who now have or once had nuclear power in their energy supply portfolio could use this location for the interim storage of some or all of their spent nuclear fuel (SNF), high level radioactive wastes, and Greater than Class C low level radioactive wastes.

The SNF could then be recycled there for use in Generation IV nuclear power plants and the residue, plus other radioactive wastes greater than Class C, disposed of in a geologic repository approved by all concerned.

Nations in the Caribbean (Haiti, Jamaica, Cuba, etc) could use underwater power cables to receive electrical power generated on the island by Generation IV nuclear power plants (GE-Hitachi's PRISM and/or TerraPower's Traveling Wave Reactor, for examples).

The five person start-up team of Consultants and Advisors noted in the attachment has a collective total of over 70 years of United States military service; two are living in Maine and one each in New Jersey, Illinois, and North Carolina.

We are in the process of starting up the prototype International Nuclear Village™ One on Navassa Island by working on the following steps:

1. locating SEC qualified sophisticated investors to provide startup capital
2. asking the current Administration to lease Navassa Island to International Nuclear Villages™
3. requesting the Department of State to help resolve ownership issues with Haiti
4. going through the United States Ambassador to introduce International Nuclear Villages™ to all UN members, and
5. applying for World Bank loans to supplement initial private funding.

Our intent is to volunteer Navassa Island for a USA proof of concept of CIS option for some or all of the SNF presently stored at shutdown nuclear power plants in the United States.

The next stage in our startup plan is to research two back-up locations: (1) San Miguel Island (a Channel Island off the coast of California) and (2) a Reservation of the Passamaquoddy Indian Nation in Maine.

We have two questions at this time: (1) are there any specific methods and procedures that we must follow to, as it were, “throw our hat in the ring” for consideration in the CIS process and (2) is the Passamaquoddy Nation one of the Indian Tribes, mentioned in your booklet, currently under consideration for a CIS site?

Thank you for any attention you can give to these requests.

Very Respectfully,

Leon Neihouse
Consultant
Bath Office
International Nuclear Villages™
24 Oak Grove Ave.
Bath, ME 04530
1-207-443-5184

Dirigo Energy Islands
Concept of Operations
07-25-16

Dirigo Energy International, Inc. (aka DEI) has a mission to provide energy in a cost effective and environmentally benign manner.

The first DEI project is a prototype Dirigo Energy Island that will generate electricity with sources that might include, but not be limited to solar, wind, ocean wave, ocean current, barge-mounted gas turbines, and generation IV nuclear power plants. The energy so generated will be transmitted by underwater power cables for sale to nearby customers.

Another income generating function of the island is to provide for the disposal/interim storage of hazardous materials that might include, but not limited to radioactive wastes and spent nuclear fuel (SNF).

The final disposal of low level radioactive wastes and some other types of hazardous materials will be provided for on the island but Greater than Class C low level radioactive wastes and high level radioactive wastes will be stored on an interim basis until sent elsewhere for final disposal.

SNF, on the other hand, can be recycled on site and then used as the fuel source for Generation IV nuclear power plants.

The projected foot print on the island for the above functions is one square mile.

The size of an SNF storage facility can be patterned after the 120 acre site designed by Private Fuel Storage on the Reservation of the Skull Valley Band of Goshute Indians in Utah. The United States Nuclear Regulatory Commission issued a license for storage of 40,000 metric tons of SNF but non-technical factors prevented startup.

The design life of SNF storage casks can extend into the 100 year range. As implied above, the design intent is to recycle the SNF but sufficient time is available to explore disposal options (a geologic repository, sub sea bed burial, subduction into the planetary mantle, etc) for the SNF and other hazardous materials stored on an interim basis.

The location under current investigation for the prototype is Navassa Island in the Caribbean. It would be renamed Navassa Energy Island and transmit generated electricity to Haiti, Jamaica, and Cuba - as a minimum.

After construction and operational testing of a prototype, DEI will replicate it to meet demand using (1) uninhabited or sparsely populated islands close enough to populated areas such that power transmission using underwater cables can be cost effective and (2) land-based locations that have the unequivocal support of those living in close proximity.

This prototype and replications of it can accept some or all of the 400,000 metric tons of SNF available on a global basis.

The United States Department of Energy (DOE) is in the process of [selecting a site](#) for the consolidated interim storage (CIS) of SNF. The prototype energy island will volunteer to accept SNF stored at a shut down USA nuclear power plant for a proof of concept of the CIS option.

The Principals working on the prototype are, in alphabetical order:

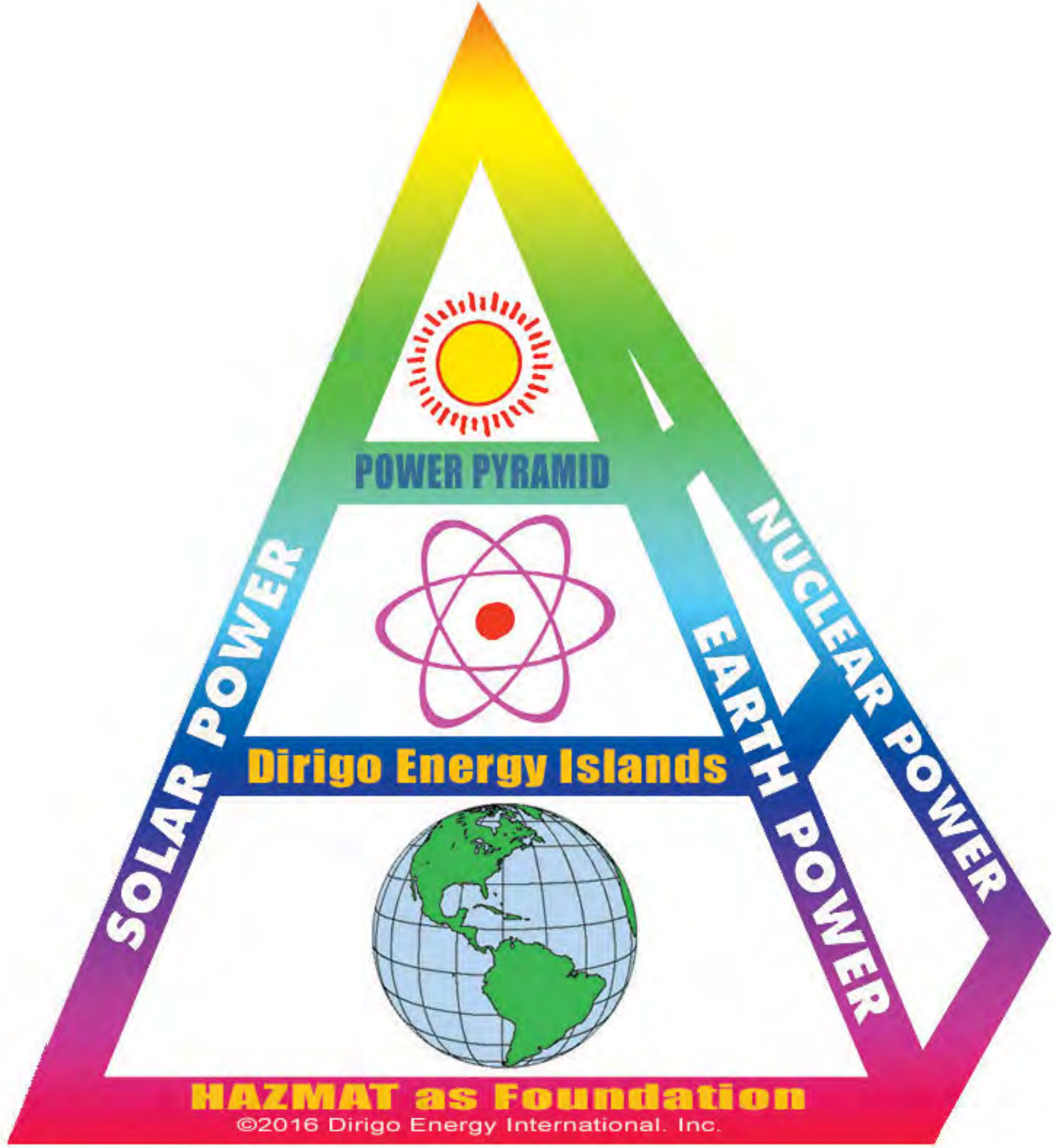
- **Mark Campagna** - United States Naval Academy: [LinkedIn Profile](#)
- **Clinton Crackel** - Co-Founder: Nuclear Fuels Reprocessing Coalition: [LinkedIn Profile](#)
- **James Ertner** - Two Masters Degrees from MIT: [LinkedIn Profile](#)
- **Thomas D. Hall** - Maine Maritime Academy: [LinkedIn Profile](#)
- **Leon Neihouse** - University of Dallas: [LinkedIn Profile](#)

This list is comprised of four U.S. Navy veterans and one U.S. Air Force veteran. These five have a collective total of over 70 years of military service. One each is living in New Jersey, Illinois, and North Carolina; two are living in Maine.

The plan is to enlist organizations in a Joint Venture to support the design, construction, and startup of a prototype energy island. No one has yet been invited but participants might include:

- [SunPower](#) for solar electricity
- [Maine Aqua Ventus](#) for wind generated electricity
- [Ocean Renewable Power Company](#) for ocean current converters
- [Float, Inc](#) for ocean wave converters
- [Waller Marine](#) for barge mounted gas turbines
- [Energy Solutions](#) for low level radioactive waste disposal
- [NAES Corporation](#) for SNF storage
- [TerraPower](#) for a Generation IV nuclear power plant
- [GE-Hitachi](#) for a Generation IV nuclear power plant
- [Bath Iron Works](#) for a barge designed to transfer SNF, and
- [The Buckminster Fuller Institute](#) for a floating Triton development to serve as personnel living quarters.

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Dirigo Energy International, Inc.

Bath Office
24 Oak Grove Ave.
Bath, ME 04530
1-207-443-5184

20 April 2016

Dr. Ernest Moniz
Secretary of Energy
U.S. Department of Energy
1000 Independence Ave., SW
Washington, DC 20585

Dear Dr. Moniz:

As a Nuclear Plant Startup Engineer/Site Manager working for Combustion Engineering during two years of the startup of Maine Yankee, I was present when the first fuel assembly arrived.

The recent Blue Ribbon Commission on America's Nuclear Future (aka BRC) highly publicized an initial goal to move stranded spent nuclear fuel (SNF) into a consolidated storage facility set up at some unknown location by some unknown entity.

It is disconcerting to me that that initial fuel assembly and all others used at Maine Yankee remain on site. So, as President of the non-profit Dirigo Energy Institute (DEI), I made 19 submittals to the BRC that this spent nuclear fuel (SNF), and all other SNF stranded at other shutdown nuclear plants, should be moved to a common remote and uninhabited Island.

The BRC, however, had no siting authority to address this issue in that manner so nothing happened and I terminated DEI. After three years I decided to resurrect it (this time as the for-profit Dirigo Energy International), with incorporation today.

As I pointed out in my letter to President Obama (enclosed) the initial DEI project is to develop Navassa Island in the Caribbean as (1) a site for Generation IV nuclear power plants research and development, (2) low level and high level nuclear waste disposal, and (3) SNF storage and recycling.

For a proof of concept of the latter SNF storage, we recommend the relocation of the SNF now stored at the former Maine Yankee site in Wiscasset. If the results warrant, Navassa Island could accept all of the stranded SNF now existing in the USA.

In the normal course of events the funding would come from the Nuclear Waste Fund. The release of the money, however, requires a Congressional majority, a virtual impossibility in this pre-election climate.

I will wager my Rickover awarded qualification to serve as Chief Engineer of a nuclear powered submarine that, as an order of magnitude estimate, it will take one tenth of one percent of the money in the Nuclear Waste Fund to make this transfer for Maine Yankee stranded SNF and one percent for all stranded SNF.

I respectfully request that you work with the President to find some other source for this relatively small amount of funding needed to relocate the SNF under discussion from Maine Yankee to Navassa Island.

Thank you for any attention you can give to this request.

Very Respectfully,

Leon Neihouse
Advisor
Dirigo Energy International, Inc.

Enclosures: DEI Logo, DEI Concept of Operations, and letter to President Obama

Copy to: President Obama, U.S. Senators Susan Collins, Angus King, and U.S. Representative Chellie Pingree

Energy Efficiency

Amusement park developments
Covered mall developments
Micro-City™ developments
Strip mall developments

Solar Power

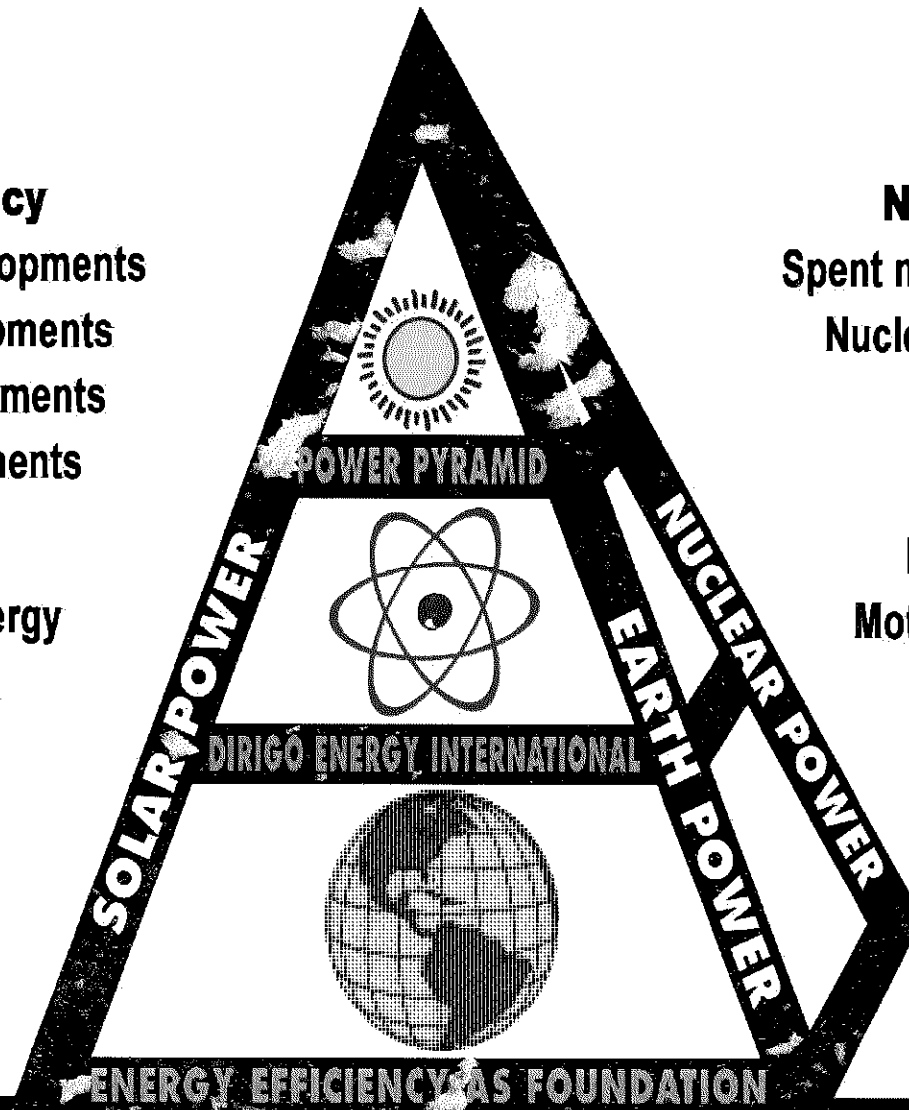
Ocean thermal energy
Solar roof tops
Solar satellites
Solar farms

Nuclear Power

Spent nuclear fuel recycling
Nuclear waste disposal
Fission
Fusion

Earth Power

Motion of the ocean
Geothermal
Hydro
Wind



Power Without Borders™

Dirigo Energy International, Inc.

Concept of Operations

04-20-16

Dirigo Energy International (DEI) has a mission to research and design green regenerative energy options and then start companies that will build, own, operate, and maintain franchises based on the results.

The attached DEI logo introduces four Departments that will use R&D results to develop franchise companies sharing profits with DEI.

The ideal form DEI management team will have a Chair, CEO, and a Senior Vice President for each of the four Logo Departments as well as Research, Design, and Quality Assurance Departments. The Chair will be supported by nine Advisors and Consultants and the other eight will each have four in support to comprise an ideal form DEI Management Team of fifty.

The Board of Directors will consist of the Chair, CEO, and seven Senior Vice Presidents. The nine Advisors and Consultants will sit in on Board meetings but not have a vote.

The members of a DEI Startup Advisor team of 50 are, in alphabetical order:

Mark Campagna - United States Naval Academy: [LinkedIn Profile](#)

Walter Claypool – United States Navy Veteran: extensive civilian experience in shipbuilding

Clinton Crackel - Co-Founder Nuclear Fuels Reprocessing Coalition: [LinkedIn Profile](#)

Joel Culver - Senior Marine Engineer: [LinkedIn Profile](#)

James Ertner - Masters Degrees: MIT: [LinkedIn Profile](#)

Mark C. Fitzgerald – Associate Marine Engineer: [LinkedIn Profile](#)

David Forkey - L.L. Bean: [LinkedIn Profile](#)

Alan Hale - United States Naval Academy: Co-discover of Comet Hale-Bopp

Thomas D. Hall - Maine Maritime Academy: [LinkedIn Profile](#)

Eric Hunting - Jack of all Trades: [LinkedIn Profile](#)

Robert Lydon - Rensselaer: Jack of all Trades

John Neihouse - Southern Methodist University: [LinkedIn Profile](#)

Kristina Neihouse - Masters: University of South Florida: Librarian and Jill of all Trades

Leon Neihouse - University of Dallas: [LinkedIn Profile](#)

Vanessa Reynolds – Program Control Analyst: [LinkedIn Profile](#)

Carl Schlick – Owner: Schlick Studio: Graphics Designer

34 TBDs

The responsibility of each DEI Startup Advisor begins with a review of the tasks introduced below.

- The content of letters to President Obama, two Maine U.S. Senators, one Maine U.S. Representative, the DOE, and the NRC.
- A public campaign for the USA to sell Navassa Island, a USA owned and unoccupied territory of about 1300 acres 35 miles west of Haiti, to DEI.
- The proposed content of the DEI web site scheduled for startup on June 20, 2016.

Each DEI Startup Advisor is to review all information associated with the above and provide comments, questions, and concerns as he or she deems appropriate.

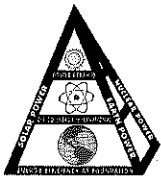
DEI plans to adapt Navassa Island for the purposes of low level nuclear waste disposal, high level nuclear waste storage with transfer to a final disposal site when one has been approved by all concerned, storing spent nuclear fuel (SNF) for its eventual recycling, and reserving land for research and development of Generation IV nuclear power plants.

The plan is to provide a Triton floating housing development for personnel quarters and barge mounted gas turbine power plants for electrical power to support Navassa Island with excess power sent to neighboring countries via underwater cables.

A DEI Stock Advisor team of 50, which will include some of the DEI Startup Advisor team named above, will review the content of and provide advice and consultation to DEI for up to two years from DEI web site set up (planned for 20 June) until the first of three private stock placement offerings have been sold to SEC qualified sophisticated investors. Publicity will be generated via YouTube videos and other venues.

DEI common stock will be allocated for uses IAW the below distribution plan.

- Ten percent (10%) sold in an initial private placement stock offering for 40 million dollars to begin the nuclear development project discussed above as well as six DEI Cash Cow franchise companies. These investors will elect the initial ten year DEI Management Team with first consideration given to the 50 in the DEI Stock Advisor team involved with selling this first private placement stock offering.
- Ten percent (10%) sold in a second private stock placement offering for enough money to develop franchise companies identified in the Energy Efficiency department.
- Ten percent (10%) sold in a third private stock placement offering for enough money to develop franchise companies identified in the Solar and Earth departments.
- Twenty percent (20%) allocated for distribution among the 50 DEI Startup Advisors, the 50 DEI Stock Advisors pursuing the sale of the first private stock placement offering, and the 50 members of the initial ten year DEI Management Team.
- Fifty percent (50%) placed with The Jon Foundation, a non-profit organization that will be responsible for using the principles of Relativistic Organizational Design to maximize profits, customer satisfaction, and employee satisfaction in the franchises of DEI itself and all other franchise companies started by DEI.



Dirigo Energy International, Inc.

Bath Office
24 Oak Grove Ave.
Bath, ME 04530
1-207-443-5184

20 April 2016

The Honorable Barack Obama
White House
1600 Pennsylvania Ave., N.W.
Washington, D.C. 20500

Dear President Obama:

The action you took to terminate Yucca Mountain at the beginning of your first term preserved spent nuclear fuel (SNF) for recycling in the near term.

Because of your decision, Dirigo Energy International (DEI – see enclosed logo and Concept of Operations) believes it is now possible for SNF to be transferred to a prepared site and recycled for further use in Generation IV nuclear power plants. Enough recycled SNF and depleted uranium exists in the USA to provide all electrical needs for several hundred years, so it seems reasonable to set this as a DEI priority.

An objective under this priority is to develop Navassa Island in the Caribbean as (1) a site for Generation IV nuclear power plants research and development, (2) low level and high level nuclear waste disposal, and (3) SNF storage and recycling. For proof of concept of the latter project, we propose that you relocate the SNF now stored at the former Maine Yankee site in Wiscasset. If the results warrant, Navassa Island could accept all, or at least a significant portion, of the SNF now existing in the USA.

We recognize that the existing political climate precludes Congress releasing money from the approximately thirty billion dollars in the Nuclear Waste Fund to develop Navassa Island for the SNF storage and recycling functions.

We, therefore, respectfully request that the USA sell Navassa Island to DEI. We would then seek sources of funds other than those in the Nuclear Waste Fund for its development. We would assign 1,000 of the 1,300 acres for low level nuclear waste disposal, for high level nuclear waste storage to await final disposal, and for the construction, testing, and operation of Generation IV nuclear power plants.

We would generate power from barge mounted gas turbine power plants, send excess power to nearby countries with underwater power cables, and use floating housing developments for living facilities.

We would reserve the final 300 acres for the USA to later release money from the Nuclear Waste Fund, build a storage facility, transfer SNF to it, and perhaps recycle the SNF at some future date.

We believe this course of action to be in the best interests of both the USA and DEI.

Thank you for any attention you can give to this request.

Very Respectfully,

Leon Neihouse
Advisor
Dirigo Energy International, Inc.

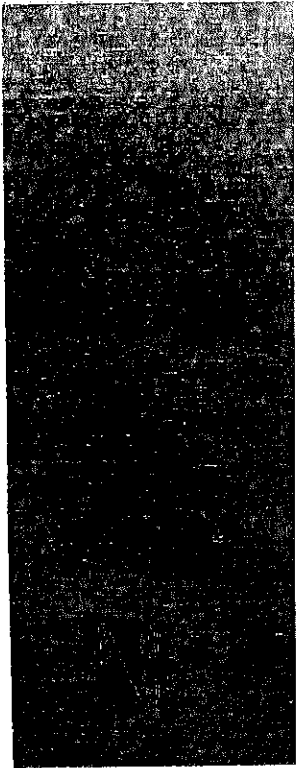
Enclosures: DEI Logo, DEI Concept of Operations, letters to Senators Collins and King, Representative Pingree, DOE, and NRC

Copy to: Senators Susan Collins and Angus King, Representative Chellie Pingree, DOE and NRC



Leon Neihouse
Adviser
Bath Office
Dirigo Energy International, Inc.
24 Oak Grove Ave.
Bath, ME 04530

Dr. Ernest Moniz
Secretary of Energy
U.S. Department of Energy
1000 Independence Ave., SW
Washington, DC 20585





Consent-Based Siting

From: Niedzielski-Eichner [<mailto:pne@govdynamics.net>]
Sent: Monday, August 01, 2016 1:46 AM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: Response to IPC to inform the design of a consent-based siting process

To whom it may concern,

Please accept these comments written in response to your invitation for public comment to inform the design of a consent-based siting process for nuclear waste storage and disposal facilities.


I would appreciate a return e-mail that acknowledges receipt of these comments.

Thank you. Best. Phil

Phillip A. Niedzielski-Eichner, President
Governmental Dynamics | A Benefit Corporation
P.O. Box 164 | Oakton, VA 22124
703-861-5069 | pne@govdynamics.net
www.linkedin.com/in/pneichner

July 31, 2016

Response to Invitation for Public Comment
Office of Nuclear Energy
U.S. Department of Energy
1000 Independence Ave SW
Washington, DC 20585


Phillip A. Niedzielski-Eichner, President
Governmental Dynamics
P.O. Box 164
Oakton, VA 22124

Response to Invitation for Public Comment to Inform the Design of a Consent-Based Siting Process for Nuclear Waste Storage and Disposal Facilities

I write in response to your Invitation for Public Comment. The focus of my comments are on (a) institutional constructs and relationships needed to promote consent-based partnerships that can be sustained over multiple generations; and (b) the design of a consent-based siting process that has as an overarching desired outcome a set of institutional and political relationships built on mutual benefit, power sharing and trusted mechanisms for dispute resolution.

Following a discussion of a multi-generational program time horizon, my comments are captured under the following headings:

- Types of consent agreement
- Negotiation parameters for potential host jurisdictions
- Institutional constructs and relationships
- Securing and sustaining partnerships with host jurisdictions

An essential consideration underpinning the management and operation of an integrated nuclear waste storage and disposal system is the multi-generational time horizon required to ultimately dispose of many thousands of tons of spent nuclear fuel. Figure 1 demonstrates a time horizon for siting and operating a storage/disposal facilities that is multi-generational and could extend until at least 2148, long beyond the current generations.

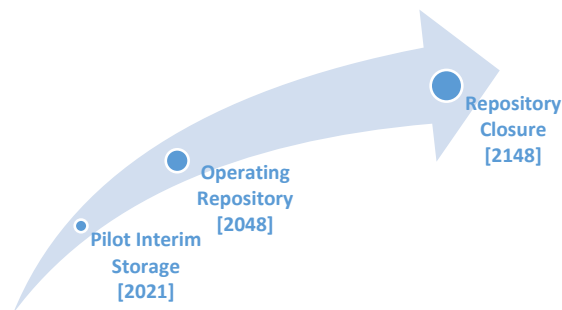


Figure 1. A notional time horizon for siting and operating a spent nuclear fuel consolidated storage facility and deep geologic repository.¹

¹ Timeline is notional. Storage and operating repository dates are drawn from the Obama Administration's *Strategy for the Management and Disposal of Used Nuclear Fuel and High-level Radioactive Waste*, January 2013.

TYPES OF CONSENT AGREEMENT

In recognition of the challenge of maintaining a working partnership with potential host jurisdictions, the Blue Ribbon Commission's concept of staged development should be embraced,² with clearly established opportunities for host jurisdictions to close out their relationship with the government through "off ramps." Negotiations should be relatively time insensitive, but the parties should agree on a set of milestones to keep the process participants motivated and so that progress can be demonstrated.

The potential exists for at least short and long-term consent agreements. A short term agreement would address the siting process and would bridge to the ratification of long-term agreement, as may be desired by the participants. The shorter-term agreement would define the terms of the relationship leading to key go/no go decisions regarding (a) the suitability of a candidate site or (b) the continued approval by the participating host jurisdictions. The shorter-term agreement would have provisions for how negotiations could be reopened. The expectation should be that multiple short-term agreements, or amendments to the original agreement, will be negotiated. The focus of the long-term agreement would be provisions that promote a partnership after a facility is operational with the expectation of over a long and sustained time period.

NEGOTIATION PARAMETERS FOR POTENTIAL HOST JURISDICTIONS

Two key questions for reaching a siting agreement are who negotiates and who decides? Any agreement must be secured within the framework of our democratic institutions, which by definition means that the public delegates these responsibilities to elected officials or the public exercises its franchise directly through referendum.

The political and institutional construct will need to be situation specific based on geography and jurisdictional boundaries. The degree of involvement and level of benefits should be commensurate with the potential risk burden. An additional consideration is the relative ability of a jurisdiction to promote or impede success.

A successful consent-based siting process can be expected to be multi-jurisdictional and involve tribal (if tribal nations are potential hosts of a spent nuclear storage or disposal facility), state and local governments in a "nested hierarchy of political jurisdictions."³ Alternatively, new, special purpose, institutional and political constructs (e.g., a regional authority) can be created with accountability to a board of directors made up of representatives from impacted jurisdictions.

In light of the diversity of their types and purposes, arrangements for local government participation could account for the following:

- Adjacent political boundaries (e.g. NWSA affected units of local government)
- Defined by geographic distance (e.g., 25 sq. miles)
- Consistent with historical relationships (e.g., mutual aid agreements)
- Organically devised based on common interests

² Blue Ribbon Commission on America's Nuclear Future, Report to the Secretary of Energy, 2012, p 55.

³ Tuler, Seth, *Consent-Based Siting Project Design Workshop*, Boston, June, 2016.

A role must be clearly defined for members of a state or region's Congressional delegation, as all terms agreed to by the parties will require ratification through either or both of the authorization and appropriation process(es). Support from both Senators is particularly important as they are elected in state-wide balloting and therefore able to exercise significant influence in Congress and within their state.

Finally, consideration should be given to establishing a two track but integrated process; one for hosting a spent nuclear fuel management facility and one for addressing the needs of governmental jurisdictions along candidate transportation routes. It matters little if a site for a storage or repository facility can be sited, but the SNF cannot be delivered to it.

INSTITUTIONAL CONSTRUCTS AND RELATIONSHIPS

Management and Disposition Organization

The Department of Energy (DOE) is assigned the mission responsibility for the management and disposal of spent nuclear fuel (SNF). Once the decision was made by the Obama Administration that the Yucca Mountain Project was no longer viable, the organization responsible for the program was largely dismantled and only a small, albeit motivated, team now maintains a focus on this mission. More importantly, program history demonstrates that SNF management and disposition has always had to compete for secretarial and congressional attention – and for resources -- with DOE's wide array of other major and important programs.

The Blue Ribbon Commission analyzed this program constraint and recommended a new executive branch organization with single purpose mission be established that is empowered to negotiate consent-based agreements on the government's behalf.⁴

The Management and Disposition Organization (MDO)⁵ should be staged as it evolves, with its early focus being on the policy and procedure development, siting, transportation planning and R&D and then transitioning into a more operationally focused capability.

Executive Interagency Team

The President will need to charter an executive branch interagency team to respond to inducement and incentive proposals from candidate hosts, which will likely require working across agency missions to satisfy. A western state could, for example, seek federal land conveyances, currently under the management of the Interior Department, to support the state's economic development initiatives.

⁴ *Ibid*, pp. 60-70.

⁵ See the Obama Administration's *Strategy for the Management and Disposal of Used Nuclear Fuel and High-level Radioactive Waste*, January 2013.

Joint Senate and House Committees

The Congress should establish joint Senate and House committees to streamline congressional oversight and appropriations processes and to facilitate action on consent agreements negotiated by the executive branch

Designated Appeals Court

The U.S. Court of Appeals for the Federal Circuit -- unique among the courts of appeals as its jurisdiction is based wholly upon subject matter rather than geographic location -- should be designated by Congress to hear all SNF management and disposal legal actions. Legal challenges could emanate from the relationship of the federal government and host jurisdictions and pertinent agreements or from challenges by the public to decisions made related to siting or operations related to these nuclear materials management facilities.

Generic Siting Standards

A consent-based process should not be undertaken for either a storage facility or geologic repository until generic siting and performance standards are set and the regulatory roles and responsibilities are clear among federal agencies, such as the Environmental Protection Administration and the Nuclear Regulatory Commission. Candidate host jurisdictions should have the benefit of knowing and understanding the public health, safety and security standards the SNF facilities are to meet, as well as those protecting the environment.

Broadly Inclusive Public Participation And Civic Engagement

While any agreement between an MDO and potential host jurisdictions must be secured through elected officials (unless directly through a citizen referendum), siting negotiations and processes must be expected to be open and transparent. The negotiation and decision-making mechanisms must be clearly understood, not only by the parties to the negotiation, but to the public as well. In short, for the sake of assuring public trust and confidence, the public must be actively and regularly engaged as to the terms and conditions being pursued by both the MDO and the potential host jurisdictions. Public participation and civic engagement must be broadly inclusive, perhaps tiered in some fashion into effective mechanisms for local, regional and national involvement.

SECURING AND SUSTAINING PARTNERSHIPS WITH HOST JURISDICTIONS

This closing section will address the outcomes potentially expected by host jurisdictions, as well as – importantly – the type of provisions that will not only underpin an initial consent agreement but help promote a lasting working partnership over the longer term.

Health, Safety and Security and Environmental Protection

The first obligation of any government is to protect its citizens. As a corollary, the first provisions of any agreement should address health, safety, security and environmental protections.

Second, while the federal government has the primary obligation to ensure public health, safety and security and protection of the environment, it will need to cede control in significant ways and empower the host jurisdictions through such means as funding independent technical, scientific and data collection capability.

Dispute resolution mechanisms will need to be crafted and incorporated, to include empowering potential host jurisdictions with the ability to stop-work until safety or environmental concerns are addressed; or until a third-party mechanism is convened to arbitrate the dispute.

The earlier reference to the assignment of adjudicatory responsibilities to the U.S. Court of Appeals for the Federal Circuit is pertinent in this regard. The parties should agree in principle to the types of issues that are appropriate for such independent adjudication.

Third, transparency of information and operations must be assured. The parties should be expected to seek agreement to the greatest possible extent on baseline site information. In this regard, potential host jurisdictions should be offered on-site representation to monitor site investigations, licensing processes and operations; and should have the authority to undertake independent data collection with regard to whatever range of technical and socioeconomic issues they wish to understand and validate. Finally, a technically based independent mechanism should be incorporated to adjudicate any differences in findings from key data that the project or host jurisdictions generate.

Finally, potential host jurisdictions should be encouraged to define the terms that would cause them to no longer consent to the project and thereby end any further site activity and consideration. The agreement could specify the terms allowing for non-consent off-ramps from either short or long-term agreements, including the potential for third party review.

Inducements that Promote Sustainability

Finally, what are the considerations that attract interest from tribal, state and / or local jurisdictions? And -- as importantly -- in relation to a sustained program to consolidate and dispose of high-level nuclear materials -- what are the inducements that will promote a working relationship through “good times and bad.”

These two criteria -- attractiveness and long-term robustness -- must include highly creative provisions for job creation and economic development goal achievement. The question federal negotiators must ask is what can the federal government offer prospective host jurisdictions in return for hosting a nuclear materials management facility?

Federal negotiators must be strategic and savvy to the needs of macro and micro nation wide economic markets. Inducement negotiations must be more than “money thrown over the transom” and address in concrete terms how nuclear materials management facilities will engender long-term job creation and economic development goal achievement. The federal government, to be successful, must be prepared to leverage the wide array of federal programs, as well as financial resources and assets, such as infrastructure, water and land. The importance of establishing an executive interagency team to support these negotiations is to facilitate just this type of consideration.

Every state and locality maintains some form of job and tax-base focused economic development strategy. For example, Maryland and Virginia are in a heated competition to host the new FBI headquarters, which is to be relocated from D.C. proper. Should either one of these also aspire to host a nuclear materials storage facility, then the siting of the FBI headquarters should be on the table for negotiation.

As another example, Ohio’s economic development arm asks: “What makes Ohio ‘The New Ohio?’” A large number of diverse industries have evolved to meet the opportunities posed by a digital, knowledge-based world. Manufacturing, agriculture, and automotive are already transforming themselves to meet the demands of clean and high-tech working environments. BioHealth, IT, aerospace, logistics, and financial services are also considered leading edge industries. Plus, Ohio is one of the few states that has all five game changer opportunities for U.S. growth and renewal, identified by McKinsey Global Institute: shale energy, big data analytics, advanced manufacturing, infrastructure, and talent.⁶

The strength of this comprehensive approach to inducing interest is that it also helps sustain the working relationship among the federal government’s MDO and host jurisdictions over multiple transitions of government leaders and during difficult times. A mutually beneficial relationship, where a jurisdiction hosts a federal SNF storage or repository facility in return for significant and substantial job and economic development, will ensure that both parties stay highly motivated to collaboratively address respective concerns. Oversight by independent federal, state and local regulatory agencies will also work to ensure that protecting economic interests are not achieved at the risk to public health and safety and the environment.

SUMMARY

In summary and closure, these comments are offered in response to DOE’s invitation for public comment to help inform the design of a consent-based siting process for nuclear waste storage and disposal facilities. This national problem has resisted resolution for over many decades and the timeline for a successful solution is multi-generational. As such, non-traditional institutional arrangements are needed, such as an MDO, joint Congressional committees, an appeals court charged with hearing all related legal challenges, a presidentially chartered executive branch interagency committee and a streamlined and efficient regulatory construct. Finally, consent agreements must be robust to be sustainable, which includes independent oversight, power sharing, off ramps and inducements that promote sustainability through job creation and economic development.

⁶ <http://www.jobs-ohio.com/>

Consent-Based Siting

From: captainnorty@gmail.com [<mailto:captainnorty@gmail.com>] **On Behalf Of** Tim Norton

Sent: Monday, July 25, 2016 9:50 PM

To: Consent Based Siting <consentbasedsiting@hq.doe.gov>

Subject: Response to IPC

To whom it may concern.

I am writing to voice my concern for the storing of nuclear waste. Idaho has been a non consent state since 1974. In 1996 the citizens of the state of Idaho voted to not accept any nuclear fuel. The site for storage sits over the Snake River Aquifer, the second largest fresh water aquifer in the North American Continent. It also is the life blood of a large part of our states agricultural based economy. Not the best place to store toxic nuclear waste that remains radioactive for thousands of years.

Spent nuclear fuel should not be consolidated in an interim storage site. It should be kept at the site of origin until a permanent site is established.

There should be a legal standards for how the spent fuel should be disposed of and stored, Standards have not been established. DOE should not be in charge of this because of their poor track record. A new agency should be formed to be in charge of this.

I am tiring of the constant pressure from the DOE to push storage of nuclear spent fuel onto the people of Idaho. These decisions have many stake holders. Many people should be included in any decision making.

Sincerely
Tim Norton
240 Valleyview
Pocatello, Idaho
83204

Consent-Based Siting

From: obid@juno.com [mailto:obid@juno.com]
Sent: Sunday, July 31, 2016 8:19 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: "Response to IPC"

I am writing to comment on "consent-based nuclear waste siting." I would not consent to bringing more nuclear waste to Idaho. The waste we have is far from cleaned up. In fact, there seems to be no way to fully clean it up. I do not want Idaho to ever be a "consent" state.

If you must go through a "consent-based process," it must be completely transparent, include everyone equally (government, business, tribes, environmental community, regular folks.) The idea must be explained in layman's terms with complete honesty and no glossing over anything or glorifying technology that may not work. No acronyms or technical jargon should be used. Others besides DOE (such as the Snake River Alliance) should be involved in the explanation. Costs must not be underestimated and risks must be honestly and realistically set forth.

If I were to go to a meeting where the idea of bringing nuclear waste to Idaho was presented as a rosy scenario with no risks or minimized risks and just a lot of promises, my answer would be a resounding NO.

Sincerely,
Kathy O'Brien
1136 S. 3rd Ave.
Pocatello, ID 83201
208-233-3763
obid@juno.com

Consent-Based Siting

From: Kate O'Connor [<mailto:kateoconnorvt@gmail.com>]
Sent: Sunday, July 31, 2016 10:59 AM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: Response to IPC

Attached please find my comments in response to the IPC.

Kate O'Connor

Kate O'Connor
P.O. Box 6206
Brattleboro, VT 05302
kateoconnorvt@gmail.com

July 29, 2016

U.S. Department of Energy
Office of Nuclear Energy
1000 Independence Ave, NW
Washington, DC 20585

Re: Invitation for Public Comment to Inform the Design of a Consent-Based Siting Process for Nuclear Waste Storage and Disposal Facilities

I am the chair of the Vermont Nuclear Decommissioning Citizens Advisory Panel. Vermont's nineteen member panel was formed by the Vermont legislature in 2014 in response to Entergy Corporation's announcement that it would close the Vermont Yankee Nuclear Power Station in Vernon, Vt.

I am writing to share my personal thoughts on the Department of Energy's consent-based siting process and offer my perspective on the value of citizen and stakeholder engagement.

What models and experience should the Department of Energy use in designing the process?

The Vermont Nuclear Decommissioning Citizens Advisory Panel has played an essential role in providing a forum for public engagement in the decommissioning of the Vermont Yankee plant. The panel has allowed for the dissemination of information from all parties involved; allowed the public to express its views and concerns; provided a forum for open and transparent discussion; and has established a working relationship between parties who might not otherwise have worked together.

I would recommend that the Department of Energy support the establishment of similar groups in the communities where nuclear waste siting is being considered. As a member of the Vermont panel, I have experienced firsthand the benefits of having issues – especially the concerns of the local community – aired and addressed publicly.

Who should be involved in the process for selecting a site, and what is their role?

Key to the Vermont panel's success is the fact that we were formed as an independent body by the Vermont legislature, not the licensee. This has worked well for us and I believe the host state and local community, in consultation with the DOE, should have the flexibility to establish a panel that will best serve their needs.

When forming a panel careful consideration should be given to make sure that stakeholders on all levels – local, regional, state – are included and all points of view are heard. The Vermont panel includes representatives of the licensee; the State of Vermont; the host community; communities located within the emergency planning zone; the regional development organization; and private citizens.

The Department of Energy and other relevant federal agencies should play an active role in any committee or panel that is established. The storage of nuclear waste involves a long-term relationship between the federal government and the host community. In Vermont, I have witnessed the lack of trust that some members of the public harbor toward the federal agencies that deal with nuclear power matters. Building trust doesn't come easily. The first step in the consent-based siting process is for federal agencies to have a transparent working relationship with their community partners.

Public engagement is vital to the integrity of the process, therefore, the public should be given ample opportunity to ask questions, get answers, and provide comment.

What else should be considered?

For the siting process to work fairly the local and state stakeholders must have access to information independent of that provided by federal agencies and site operators. The DOE should make this possible by providing the financial resources necessary for a community to obtain the information and independent advice it needs to determine whether it should host a waste storage facility. Because the storage of nuclear waste is the responsibility of the federal government, the financial burden of the siting process should not fall on state or local governments.

Thank you for the opportunity to comment. I urge the Department of Energy to recognize the genuine interest the public has in the siting of long-term nuclear waste storage facilities and provide real opportunities for public involvement and participation. We have a successful public engagement process in Vermont. If you have any questions about the Vermont Nuclear Decommissioning Citizens Advisory Panel I am happy to answer them.

Sincerely,

A handwritten signature in cursive script that reads "Kate O'Connor". The signature is written in black ink and is positioned above the printed name.

Kate O'Connor

Consent-Based Siting

From: Casey O'Leary [<mailto:greenshera@hotmail.com>]
Sent: Friday, July 15, 2016 6:13 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: Response to IPC

Governor Otter and Representatives,

Under no circumstances do I support bringing waste to Idaho for storage/dumping. Idaho has said NO for decades, and rest assured we're watching what you do this time as well.

Say NO to protect us all!

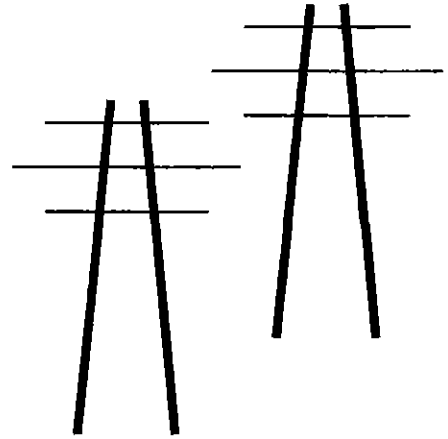
Sincerely,

Casey O'Leary
2609 Arthur St
Boise, ID 83703

Legalelectric, Inc.

Carol Overland Attorney at Law, MN #254617
Energy Consultant—Transmission, Power Plants, Nuclear Waste
overland@legalelectric.org

1110 West Avenue
Red Wing, Minnesota 55066
612.227.8638



CONSENT-BASED SITING OF NUCLEAR WASTE

Initial Questions:

What is a stakeholder?

Who/what entities would be required to give consent?

How would fairness be assured?

What are shared objectives?

How are individuals, organizations, governments funded to participate, and how is funding an organization not buying them off?

Who does an organization receiving funding speak for?

Have any of the seals been replaced on the TN-40 or TN-29 casks at Prairie Island?

Initial Comments:

“Interim” = “permanent” in nuclear waste.

“Codification” is a contract solution to a societal problem between multiple groups that instead requires a treaty or agreement in a covenant relationship.¹

Definition of Affirmative Consent²

- Consent to any nuclear waste or prior consensual nuclear activity between or with any party does not necessarily constitute consent to any other nuclear act.
- Consent is required regardless of whether the person initiating the act is under the influence of drugs and/or alcohol.
- Consent may be initially given but withdrawn at any time.
- Consent cannot be given when a person is incapacitated, which occurs when an individual lacks the ability to knowingly choose to participate in nuclear activity. Incapacitation may be caused by the lack of consciousness or awareness, being involuntarily restrained, or if monetary consideration is received and not publicly disclosed.
- Consent cannot be given when it is the result of any coercion, intimidation, force, or threat of harm.
- When consent is withdrawn or can no longer be given, nuclear activity must stop.

¹ See Vine Deloria, Jr., *We Talk, You Listen*, Ch. 8, p.148 particularly.

² Borrowed liberally from SUNY’s Definition of Affirmative Consent, online at <http://system.suny.edu/sexual-violence-prevention-workgroup/policies/affirmative-consent/>

Consent-Based Siting

From: Bob Parker [mailto:bob-bp@prodigy.net]
Sent: Wednesday, July 27, 2016 11:55 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: Response to IPC

Nuclear waste is a long lasting issue (that will extend far past my lifetime). The storage will have many public health effects.

First and foremost, we need to cut the amount of nuclear waste being produced. There is no safe storage to last tens of thousands of years. Only a few structures in the world have lasted 5,000 years. We cannot count on containers with hot radioactive material, subject to unknown geological stress in the future, to last many times longer. In the more than 70 years since the first nuclear reaction, mankind has not developed a safe storage yet. So to repeat, this must be the number one issue.

But given that we need a place to store radioactive waste, we need to transfer high-level waste from vulnerable pools into hardened and dry casks that are designed to last for centuries. These are more securely protected against accidents and terrorism. After this is accomplished, we need to have our best scientists try to find the best permanent solution.

Radioactive waste should not be transported on water. Leaks would put our drinking water at risk. And other transportation should be used as little as possible, because every time waste is transported, we are putting new areas at risk.

We must produce as little new radioactive waste as possible, because there has been no good solution yet devised. For the waste already produced, extreme care must be taken so that future generations do not have to deal with problems that our generation left them.

Bob Parker
Cleveland, Ohio

Consent-Based Siting

From: Sheila Parks [<mailto:sheilaruthparks@comcast.net>]
Sent: Sunday, July 31, 2016 11:51 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Cc: Sheila Parks <sheilaruthparks@comcast.net>
Subject: Response to IPS

To: DOE

There is only one response to what to do with nuclear waste and that is to CLOSE ALL NUCLEAR POWER PLANTS NOW

To even try to get consent is such a lie, I cannot imagine what PR firm you hired to get to this place and trying to foist it on people to respond to such a lie

Making believe that all is nicey nicey and you can get an honest consent from some community to receive a gift of radioactive waste that lasts hundreds of thousands, even millions of years, to give leukemia and other cancers to all, especially fetuses, infants and children is immoral, evil, vile, wicked, unethical, despicable and white supremacist.

Sincerely,

Sheila Parks, Ed.D.

Sheila Parks, Ed.D.
Founder, On Behalf of Planet Earth
617 744 6020



Consent-Based Siting

From: Donald Pay [mailto:dmpay114@yahoo.com]
Sent: Tuesday, July 19, 2016 11:06 AM
To: Consent Based Siting
Subject: Response to IPC on Consent-Based Siting

Donald Pay
517 N. Midvale Boulevard, Apt. D
Madison, WI 53705
(608) 277-1054
dmpay114@yahoo.com

To: US Department of Energy
RE: Response to IPC on Consent-Based Siting
DATE: July 19, 2016

Thank you for this opportunity to comment on the Invitation for Public Comment to inform a consent-based siting process for nuclear waste storage and disposal facilities.

I support an effective phased, adaptive, consent-based, scientifically justifiable siting approach to the problem of disposal or storage of radioactive wastes. Fleshing out how this process should work, however, requires a new broad-based agency or commission, separate from the Department of Energy. It requires a commitment to limiting generation of nuclear waste by limiting or ending generation of that waste.

The Department of Energy has earned a reputation as an unreliable partner, especially in matters of radioactive waste storage and disposal. Independent stakeholders and state, tribal and local governments do not trust the Department of Energy, which is too tied to the nuclear and defense industries to provide trusted, independent thinking, policies or science regarding the storage/disposal of the wastes those industries generate.

The Blue Ribbon Commission also saw flaws in how the Department of Energy has managed nuclear wastes, and recommended that responsibilities for managing these wastes be shifted to a broad-based independent commission. My concern is that the concept of consent-based siting, while laudable, needs to be instituted by the independent commission, rather than the Department of Energy. This would be as envisioned by the Blue Ribbon Commission. To have the Department of Energy fast track consent-based siting risks tainting the process. Until the independent commission is authorized and up and running, there should be a moratorium on all efforts to site a storage or disposal facility.

We already see that the Department of Energy's attempts to fast track a half-baked consent-based siting has resulted in the failure to site a test of the deep borehole disposal concept in two locations, one in North Dakota and one in South Dakota. The Department of Energy used its Request for Proposal process to hide information from local governments and stakeholders and refused to engage the local community early, while claiming they were engaging in

consent-based siting. This created almost immediate suspicion that the "consent-based siting" the Department of Energy supported was essentially this: "Let's get the camel's nose under the tent, and call it consent." The entire process was done in secret, to the point of using the exemptions under the Freedom of Information Act to stifle knowledge about who was applying, what states were involved, potential locations, and all specifics about the project. If that is what the Department of Energy thinks consent-based siting should be, then we should just stop this effort now.

I'm concerned, further, that there is no statutory authority for consent-based siting. Congress has never bought into the process. Any effort to go down this path could be undone by a legal challenge from one side or the other. Could the Department of Energy cite specifically what laws and rules it is claiming provide it with the authority to use consent-based siting? Will the Department of Energy be proposing rules?

Regarding how consent-based siting would actually occur would be a very complex matter. States and local governments may differ in how they would like to proceed, if at all. Several states already have statutory requirements that the Governor must agree to any siting of a radioactive waste storage or disposal system. Whether those statutes would be recognized as valid in a court of law or by the Department of Energy is something that the Department of Energy must be willing to state forthrightly. Other states, South Dakota being one, have had statutes that require a vote of the public prior to siting of a radioactive waste storage or disposal area. Would the courts and the Department of Energy recognize such a process as legal? My guess is that any time the Department of Energy wanted to shove a site down someone's throat, various state statutes would be found to be an illegal pre-emption of federal authority. Absent clearly written statute, what constitutes an adequate consent-based siting process to people in a state may be absolutely overridden by a court of law. Why would any state go down that path without clear statutory language regarding consent-based siting process?

States and local governments, or course, also would have regulatory authority over some aspects of the facility, even as they might be pre-empted from regulating issues of containment of radioactive materials. Whether state and local units of government could actually use these regulatory authorities to halt any federal government effort to site a facility would be fraught with legal peril.

The issue arises regarding what "incentives" should be provided a host community or host state. Certainly, any host community should be provide funding sufficient to hire independent experts sufficient to track and participate in the considerable scientific and engineering discussions that would ensue from consenting to host a facility. But, at what point does an incentive turn into a bribe? A number of poor states, for example, deregulated gaming in exchange for a cut of the take. Now these states are addicted to the gambling money, and can't get rid of gaming unless they want to tank their budgets. That could easily happen with the federal government handing out big checks to relatively small states and local communities. At that point you've bribed your way into consent, and it looks more like prostitution than consent.

The question of fairness is never going to be adequately answered. It is manifestly unfair to saddle any community or state with this burden. It is unfair to saddle future generations with these wastes. The nuclear age and most of the commercial and defense nuclear enterprise was shoved onto folks without consideration of all the ramifications, particularly what was going to be the ultimate resting place for the highly dangerous waste products. We probably have to solve this issue at some point, but until we do, we ought to all agree that it makes no sense from a fairness perspective to continue to produce these dangerous wastes. A commitment to end all but health-related radioactive wastes as soon as practical would be the fairest way to deal with future wastes. When we have that commitment, it will be easier to find agreement as to what to do with past and current waste.

While I am supportive of the concept of consent-based siting, I do not trust that the Department of Energy can follow through. My dealings with the Department of Energy on the deep borehole test issue indicate that there has to be systemic change. For the deep borehole project test, the Department of Energy used the RFP system to justify keeping the public in total darkness until after all decisions were made. Then they wanted a rubber stamp Governor and a rubber stamp county government to believe their claims that this was just a scientific study, not an attempt to site a

facility. This years long secrecy and chicanery is absolutely unacceptable. Yet, the Department of Energy points to this process as an example of consent-based siting. And THAT, right there, is the problem. It is why a completely new agency, one that can be trusted, has to take on this effort.

But there is another long-term issue. Another administration or another Congress will simply toss out the concept, once they've gotten close enough to their goal of siting a storage or disposal facility. There would need to be signed, enforceable contracts with ironclad out ramps, and no ability to override them.

I hope this helps you as you develop proposals on consent-based siting.



Bill Pitesa
Chief Nuclear Officer
Nuclear Generation

Duke Energy
EC3XP | 526 South Church Street
P.O. Box 1006
Charlotte, NC 28202

704.382.7258
704.989.0943
bill.pitesa@duke-energy.com

July 26, 2016

U. S. Department of Energy
Office of Nuclear Energy
Response to IPC
1000 Independence Avenue SW
Washington, DC 20585

Subject: Response to Invitation for Public Comment to Inform the Design of a Consent-Based Siting Process for Nuclear Waste Storage and Disposal Facilities

Reference: Federal Register Notice "Invitation for Public Comment to Inform the Design of a Consent-Based Siting Process for Nuclear Waste Storage and Disposal Facilities," 79872-79874, December 23, 2015.

This letter provides Duke Energy Corporation's response to the Department of Energy's (DOE's) request for comments on the design of a consent-based siting process for nuclear waste storage and disposal facilities. Duke Energy is the largest electric power holding company in the United States, supplying and delivering electricity to approximately 7.4 million U.S. customers. Duke Energy operates the country's largest regulated fleet of nuclear plants, with 11 nuclear power reactors at six sites in North Carolina and South Carolina, and maintains one permanently shut down reactor in Florida¹. Duke Energy has combined construction and operating license applications under active Nuclear Regulatory Commission (NRC) review for four new nuclear power reactors at sites in Florida and South Carolina.

Duke Energy is eager for DOE to fulfill the federal government's statutory and contractual responsibility to remove used nuclear fuel from nuclear power reactor sites. Over the past several decades, Duke Energy met its obligations under the Nuclear Waste Policy Act by paying approximately \$2.5 billion in nuclear waste fees to the federal government. In contrast, the federal government has failed to meet its obligation to dispose of used nuclear fuel, ultimately resulting in the 2013 decision by the United States Court of Appeals for the District of Columbia that the DOE could not continue to collect fees from nuclear power plant operators because it had no active used fuel management program.

Duke Energy has followed closely the federal government's used fuel management activities, including the termination of the Yucca Mountain geologic disposal project in Nevada, the Blue Ribbon Commission of America's Nuclear Future, DOE's publication of its *Strategy for the*

¹ Each site has one or more pools for wet storage of used fuel, and five of the sites also have facilities for dry storage of used fuel, with a sixth dry storage facility under construction at the shutdown reactor.

Management and Disposal of Used Nuclear Fuel and High-Level Waste (Strategy Document), DOE's annual funding requests for used fuel management work, the Administration's decision to develop separate repositories for commercial and defense waste, and now its consent-based siting initiative. A Duke Energy representative attended your public meeting on consent-based siting held in Atlanta on April 11, 2016. Moreover, Duke Energy is engaged in efforts by stakeholder groups such as the Nuclear Energy Institute, the Nuclear Infrastructure Council and the Nuclear Waste Strategy Coalition to restart an effective program for used fuel management in this country.

Duke Energy does not consider DOE's current consent-based siting work to be an effective initiative. Federal law calls for DOE to complete the process of applying for a construction authorization for Yucca Mountain from the Nuclear Regulatory Commission and, if the authorization is granted, develop a repository for used nuclear fuel and high-level radioactive waste at that site. However, contrary to the law, and without obtaining input from stakeholders, DOE terminated the Yucca Mountain project. Subsequent significant actions on the part of the federal government have also been taken without obtaining input from stakeholders, most notably (i) publication of DOE's Strategy Document in January 2013 and (ii) the Administration's March 2015 decision to pursue a separate repository for high-level radioactive waste resulting from defense activities. The Blue Ribbon Commission's report and the public response observed at DOE's consent-based siting public meetings illustrate that DOE's insular approach to used fuel policy has eroded trust in this area.

Duke Energy urges DOE to begin the process of regaining the public trust by following the law and restarting the Yucca Mountain licensing process. DOE should request from Congress all funds necessary to carry out that work. If DOE desires fundamental changes in the used fuel and high-level waste management program (e.g., consent-based siting), it should request specific changes in the law.

Thank you for your consideration of these comments. If you have any questions regarding them, please contact Steve Nesbit of my staff at 704-382-2197 or by e-mail at steve.nesbit@duke-energy.com.

Sincerely,

Signed Original Sent Via Mail

Bill Pitesa

Consent-Based Siting

From: Leah [<mailto:lples@yahoo.com>]
Sent: Monday, July 25, 2016 3:25 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: Response to IPC

Hello DOE,

I am a local of San Juan Capistrano for more than 25 years now & I have always had a fear of the Nuclear Power plant & as I got older, I realized that my fears are valid & that we aren't always all safe, even in America, there are bad things that can happen in this world!

I drive past SONGS & notice the ocean surf pounding the old stone & concrete wall. This does not look safe to me & because of glacial melting & large surf, the tides are higher & more violent than in years past.

We all know the unsafe situation at the plant & what I want, is for the urgency of SONGS decommissioning & storage of waste to take priority over older decommissioned plants in America due to the urgency of tidal forces, earthquake threats, terrorism threats, and the population of a 50 mile radius, the real estate costs & the fact that South Orange Co. is the most desirable & pristine coastline, the unsecured waste is time bomb waiting to happen any time!

I need for the task at hand (the cask storage) to be handled asap & not put into the category of not doing anything & trying to figure out where to send it before the waste is put into safe casks that can be moved when ready & that the casks can hold up to the salt water corrosive degradation that happens pretty quickly to metals living near the beach! (I had a boat trailer dissolve into a pile of rust in 5 years) These Casks need to be more durable than the ones that are being considered & the people need to have a say in what the choice will be.

I feel that there is no real sense of urgency by the people that are making the decisions! This can not be put on the back-burner we need to get moving on getting that waste out of the pools & into the appropriate Casks that can handle being moved when that part of the process is ready & not wait any longer! This needs to happen now! This is so serious & there are life & death consequences for not making the right decisions on when the clean up happens & choosing the right durable & salt water resistant casks!!!

Please please please, this is so serious, can you please see the danger we are all in?? I don't usually get involved, but this is so serious & there are no "do overs" for making the wrong choices!!

Get it done now, however you can!! Keep having meetings with the public, there needs to be total communication & transparency in this entire process!

Thank You,
Leah Pleaofsky
949-412-6183

Sent from my iPod

Consent-Based Siting

From: blackrockforge@cableone.net [<mailto:blackrockforge@cableone.net>]

Sent: Wednesday, July 13, 2016 5:28 PM

To: Consent Based Siting <consentbasedsiting@hq.doe.gov>

Subject: Response to IPC

Hello,

You do not have our consent to bring more waste too Idaho.

You are insulting our intelligence by asking "our permission" to alter the agreement, and imply that you have solutions to the inherent problems of the disposal of nuclear waste.

Idaho is not the solution, and we have an unflagging commitment to fight the decision to bring more waste here along with everyone else who knows what you're up to AGAIN.

Thanks for including our written comments in the testimony, we will be out of state.

Sincerely,

Margo & Dennis Proksa

5192 West Old Highway 91
Pocatello, ID 83204

July 20, 2016

Dear Secretary Moniz,

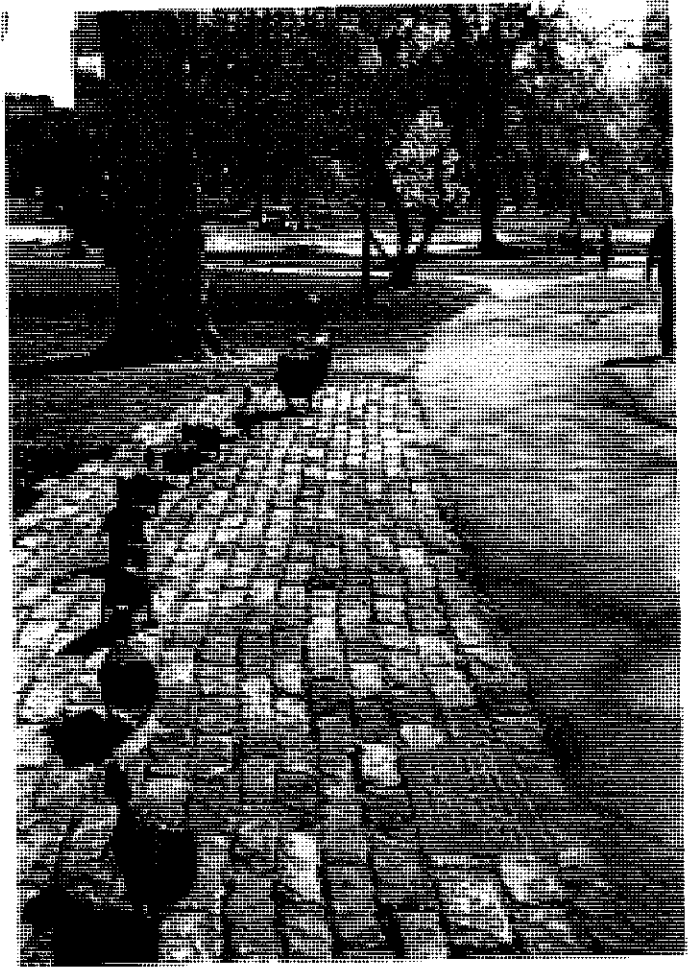
Thinking there may be many IPC comments to read on-line, here is a pre-printed copy of mine being sent today to your offices.

I hope you are having an enjoyable summer.

Sincerely,

Rebecca

W. J. ...
...
...



Response to IPC

Spent fuel can be kept in pools for five years before being transferred to on-site dry hardened cask storage; however, some pools are already beyond capacity. Instead of investing in additional nuclear power plants, creating ever accumulating highly radioactive nuclear waste, we can invest in safer on-site storage conditions for what is currently being stored, For instance: more impermeable steel-lined concrete barriers for temporary pool storage, plus back-up generators, to keep pools from overheating in the event of power outages. Such measures will lower the risk of a release of radioactivity while we await permanent dry cask storage at current nuclear facilities. On-site dry cask storage eliminates the hazards posed by transporting nuclear waste to off-site storage facilities.

Rebecca L. Ramsay
Cambridge, Massachusetts

July 20, 2016



Ms. Rebecca Ramsay
30 Churchill Ave Apt 610
Cambridge, MA 02140

BOSTON MA 021

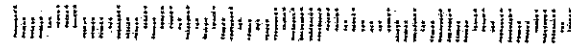
25 JUL 2016 PM 3:11

RECEIVED

JUL 25 2016

MAIL SANITIZED

Secretary Ernest Moniz
Department of Energy
1000 Independence Avenue, S.W.
Washington, DC 20585



Consent-Based Siting

From: Deborah Reade [mailto:reade@nets.com]
Sent: Sunday, July 31, 2016 6:38 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: Comment on Consent Based Siting

This is my comment on Consent Based Siting.

There is no such thing as “consent” in this situation. When people “consent” to site nuclear or hazardous storage or disposal, it is often only because they do not have enough information. Bringing high level waste to New Mexico or to other areas and storing it is really de facto disposal as there are no other disposal options now. DOE, NRC and NMED have a long history of allowing shoddy programs and inadequate storage facilities to substitute for high quality work. As I’ve said before, *good enough for government work* would be a massive improvement for how radioactive materials are handled in New Mexico. From what I’ve heard, it is the same elsewhere in the country.

Until these government agencies are willing to admit that they don’t want to spend the money necessary to build adequate storage facilities and admit that they still need to do a lot of research on these materials so they can control them safely, they are not giving enough information to any of the public for the public to “consent.” Therefore, don’t even try to get consent from anyone here in New Mexico until you’ve done the hard work that you are missing first.

Sincerely,
Deborah Reade

Deborah Reade
117 Duran Street
Santa Fe, NM 87501-1817
Phone/Fax 505-986-9284
reade@nets.com

Consent-Based Siting

From: James Reed [<mailto:jamesandlesleereed@gmail.com>]

Sent: Thursday, July 14, 2016 7:35 PM

To: Consent Based Siting <consentbasedsiting@hq.doe.gov>

Subject: Response to IPC

We do not want anymore nuclear waste in Idaho!! The people have said NO before, and we're saying it again.

Thank you,

James & Leslee Reed
Buhl

Onsen Farm
208/720-0673

Consent-Based Siting

From: Cyrus Reed [mailto:cbhreed@gmail.com]
Sent: Friday, July 29, 2016 11:24 AM
To: Consent Based Siting
Subject: Comments on Nuclear Waste Siting Policy

DOE Invitation for Public Comment regarding Consent-Based Siting

Dear U.S. Department of Energy,

In 2012 the Blue Ribbon Commission on America's Nuclear Future came out with a plan to get communities to "volunteer" to take dangerous radioactive waste from around the country.

From the perspective of the Lone Star Chapter of the Sierra Club, which represents some 22,000 members in Texas, there is no need to consolidate radioactive waste for the purpose of storage. DOE is putting the nuclear cart before the horse. DOE has no authority to pursue such a siting process for consolidated storage of commercial nuclear waste. The Nuclear Waste Policy Act (NWPA) and the DOE's Standard Contract with nuclear power generators explicitly state that the federal government may take title to and possession of the waste from commercial nuclear power generation when a repository is in operation.

More than 100 organizations have endorsed improving the storage and security of nuclear waste at reactor sites through Hardened On-Reactor-Site Storage (HOSS). HOSS would first move waste (when sufficiently cooled) out of fuel pools to robust, hardened dry-cask storage, reducing the hazard of catastrophic fuel pool fires and better protecting the waste from natural disasters, industrial accidents, and military or terrorist attacks. HOSS would improve the safety and security of this waste for interim storage at, or as near as possible to, the reactor sites where it is generated.

I oppose the consolidation and transportation of waste to new sites unless and until a viable long-term management facility is in operation, per the Nuclear Waste Policy Act.

Any shipment of this cancer-causing waste should happen only once, and only to a permanent repository, if a site can be found based on sound science that might be able to isolate waste of over 250,000 years. The Nuclear Regulatory Commission has previously said that the least risky option is to keep the waste stored securely at or close to the site of generation, and most nuclear reactor sites are now licensed to do so.

If the plan to transport radioactive waste for consolidated storage moves forward, people in any host county or in any county through which radioactive waste would be transported should be able to vote on whether or not to "consent," and not have state or local political leaders speak for them on this crucial health and safety issue. These are the people most at risk. Those living near aquifers that could become contaminated should be able to vote as well, and interests that stand to benefit from high-level radioactive waste storage, such as the license applicant, contractors and utilities, should be prohibited from expending funds to influence the elections.

Texas and New Mexico are the states most targeted for storing the nation's high-level radioactive waste and should have been the first asked about whether they "consent," but DOE

failed to schedule even a single meeting in either state. Indeed, the nearest meeting was held in Arizona, and most Texans and New Mexicans concerned with the issue could not attend. This shows utter disregard for those that are most likely to get the waste. Instead eight meetings were held elsewhere around the country. Is this an effort to get people to gang up against our region? People at ground zero are most likely to be impacted, but DOE did not see fit to hold a meeting here. It is clear that rules and policies based on this “consent-based siting” process and the meetings held are likely to be unfair, inappropriate and perhaps designed to dump on our region.

Many people in Texas and New Mexico have signed petitions saying that they DO NOT CONSENT to having radioactive waste from the nation’s nuclear reactors stored in their backyard. The 2016 Democratic Party Platform calls for a halt to the misguided plan for consolidated storage of high-level radioactive waste.

In Texas, we have seen how Waste Control Specialist has used the legislative process to continually expand the types and volumes of waste they are disposing of at their site in Andrews County, from mercury, to PCBs, to low-level radioactive waste to depleted uranium, and now apparently high-level waste if they get their wish. Along the way, they have used lawsuits and lobbyists to get their desires, while selling themselves as the solution to the nuclear waste legacy.

The effort to send the nation’s most deadly radioactive waste to the Texas/New Mexico region is an example of extreme environmental injustice. The largely Hispanic communities in the Texas/ New Mexico region don’t benefit from nuclear energy produced around the country. They should not have to suffer the burden of having deadly waste stored in their backyard, posing threats to their health and safety. It is not their patriotic duty to do so.

The plan to ship the nation’s deadly nuclear reactor waste to Texas / New Mexico should be halted immediately due to the risks of radioactive contamination from leaks, accidents or terrorist attacks. Our health, land and aquifers would be threatened. A person exposed up close to the waste would die within a week, and leaks could lead to cancer and genetic damage.

We ask that the DOE not portray us as wanting to accept this waste. People in Texas and New Mexico DO NOT CONSENT to having the nation’s deadly radioactive waste dumped in our backyard.

Thank you for your consideration of these comments.

Sincerely,

Cyrus Reed, PhD
Conservation Director, Lone Star Chapter
1202 San Antonio
Sierra Club
Austin, Texas

512-740-4086 (c)
512-477-1729 (o)
cyrus.reed@sierraclub.org

@cyrustx
@TexasSierraClub

Consent-Based Siting

From: John Revier [mailto:j.revier@gmail.com]
Sent: Saturday, July 30, 2016 9:02 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Cc: John P Revier <john.revier@inl.gov>; Brown, Elli F <elli.brown@inl.gov>
Subject: Letter from Idaho LINE Commission

July 30, 2016

The Honorable John Kotek
Acting Assistant Secretary for Nuclear Energy
U.S. Department of Energy
1000 Independence Ave., SW
Washington, DC 20585

Dear Acting Assistant Secretary Kotek:

On behalf of the members of Idaho Governor C.L. "Butch" Otter's Leadership in Nuclear Energy Commission, we are writing to offer our input on the Department of Energy's Consent-Based Siting process. We appreciate your efforts to conduct a public meeting in Boise earlier this month and your willingness to consider our thoughts through the submission of this letter.

As you may know, The Leadership in Nuclear Energy Commission 2.0 (LINE) was created by Governor C.L. "Butch" Otter through Executive Order 2013-02. LINE 2.0 is charged with implementing and overseeing progress on recommendations from the original LINE Commission (LINE 1.0). The LINE 1.0 Commission identified a robust and expansive nuclear industries sector in the state—anchored by the Idaho National Laboratory—consisting of more than 20 firms that employ thousands of Idahoans, contribute millions of dollars to Idaho's general fund and help realize our state's goal of achieving robust economic growth.

The LINE Commission offers the following thoughts on a consent-based siting process:

- It is our view that federal law requires the Department of Energy and the Nuclear Regulatory Commission to move forward with licensing, and ultimately construction of, a permanent repository for spent fuel and high-level nuclear waste at Yucca

Mountain, Nevada.

- It is our view that from a scientific and technical perspective, Yucca Mountain is a suitable location for the establishment of a permanent repository.
- We recognize, however, that a number of factors have impeded the progress of Yucca Mountain and that it is time for our nation to move forward with a process that can identify a future site for either interim or permanent repositories. Further, we believe that effort should involve collaborative, consent-based processes, such as those outlined in the final report of the Blue Ribbon Commission on America's Nuclear Future, for identifying potential sites.
- We further recognize that the process of imposing a repository facility on an unwilling host community or state has contributed to the spent nuclear fuel and nuclear waste disposal stalemate now facing our nation.
- It is our view that, regardless of any future effort that might lead to renewed progress at Yucca Mountain, our nation will eventually need additional repository capacity beyond that which could be offered with just one geologic repository. With that in mind, we believe moving forward with a consent-based process for the identification of additional repository capacity is not only prudent, it is absolutely necessary.
- It is our view that the processes utilized in Europe and Canada for seeking receptive host repository communities provides an appropriate and effective model for the United States to follow in establishing our own repository. Further, we believe the process utilized for the establishment of the Waste Isolation Pilot Plant in New Mexico provides another model for future consent-based siting efforts.
- It is our view that the consent-based siting public meeting in Boise clearly demonstrated that establishing trust in the methodology used by DOE and offering transparency to all decision-making processes will be essential to ensuring public acceptance and confidence in any final decision.
- It is our view that universities, state agencies, and other public and community interests

groups should be engaged early and often throughout the process to build and maintain public trust. These entities can be very helpful in objectively analyzing risks and communicating confidence in risk mitigation efforts to the public.

- While we have confidence in the inherent safety of ongoing storage at operating and shut-down commercial reactors across the United State, it is our view that centralized storage, particularly of spent fuel from reactors no longer in operation, is safer, cheaper, more efficient, and in keeping with the long-term promises and legal and contractual obligations of the federal government to remove spent fuel from commercial sites beginning in January, 1998.
- It is our opinion that used nuclear fuel should only be moved for very good reasons. Having said that, it is our opinion that increased flexibility at operating reactors sites, enhanced security, cost reductions, the return of storage-only sites to productive economic use, and the fulfillment of the federal government's commitments and responsibilities to the commercial industry justify the creation of a national interim storage facility.
- We are concerned that the failure to move forward with the siting of an interim storage facility or permanent geologic repository will be utilized by opponents of nuclear energy as an excuse to block marketplace innovation in the United States and beyond.
- We acknowledge that in addition to considering interim storage and a geologic repository through the consent-based process, DOE is considering deep borehole disposal. The LINE Commission would benefit from better understanding this new disposal concept and its development in the United States and internationally.
- Beyond spent fuel being housed at commercial nuclear utilities, large volumes of both spent nuclear fuel and high-level nuclear wastes are currently stored at DOE facilities across the country, including here in Idaho where they are managed primarily by the Idaho Cleanup Project. These fuels and wastes are subject to a court-enforceable agreement between the Department of Energy and the State of Idaho. It is clear that portions of the agreement will not be met as a result of the failure to construct and operate a repository and that it is in the interests of the State of Idaho, the federal government, and U.S. taxpayers that the federal government move forward with construction of a repository as soon as possible.
- We acknowledge the DOE is not yet at a point where it is exploring particular sites or

seeking substantive discussions with specific localities or states. With that in mind, this letter is intended to express our support for a consent-based process only.

- It is our view that consent needs to be not only obtained, but maintained. Idaho's experience with hosting INL and operating under the provisions of the 1995 Settlement Agreement have demonstrated to us that consent for ongoing operations needs to be maintained through trust, transparency, and the effective flow of accurate public information.
- We remind the Department of Energy and the American people that the federal government is incurring tens of billions of dollars in liabilities by failing to establish an interim storage site or permanent repository for these materials and removing them from commercial and government facilities across the country.
- We acknowledge that the process for finding a willing host community, designing a facility, licensing and constructing that facility, and working through the transportation, security, and other considerations will take decades and must begin as soon as possible.
- We acknowledge that Congress will need to act in order to move forward with the consent-based siting process and we urge Idaho's Representatives and Senators to support this process and work with their colleagues on both sides of the aisle to take action expeditiously.
- We point out that nuclear energy ratepayers have paid billions of dollars in the Nuclear Waste Fund for the express purpose of developing repository facilities for the storage and disposal of spent nuclear fuel. In fact, the Nuclear Waste Fund currently holds over \$30 billion in unspent reserves that should be used for the consent-based process and establishment of repository facilities.

Thank you for providing us an opportunity to provide input into this important matter.

Sincerely,

Admiral John Grossenbacher (Ret.)
LINE Commission Co-Chair

Lt. Governor Brad Little
LINE Commission Co-Chair

Consent-Based Siting

From: Muriel Roberts [<mailto:murielroberts255@gmail.com>]

Sent: Wednesday, July 27, 2016 1:51 PM

To: Consent Based Siting <consentbasedsiting@hq.doe.gov>

Subject: Response to IPC

I am a resident of Idaho, living in Pocatello, on the Snake River Aquifer. Idaho has been saying, since 1995, that we do not consent to the moving of any more nuclear waste to the Idaho National Laboratory. To Idahoans, NO means NO.

We Idahoans know full well what an "interim" storage site means. We have had waste on an interim site since the mid-fifties. Until the government can establish and build a place for permanent disposal of the nuclear waste being generated in this country, waste should all be stored as safely a possible as close to the point of generation as possible.

I would also question just how the DOE is going to establish consent. What is the process? Should a consenting community have to hold a referendum? Would a few loud voices be sufficient to be considered consent? What amount of waste is expected to be disposed, and for how long? What about the impacts of transporting the waste across the country? Who decides? Is the Department of Energy the appropriate agency to be making this decision?

I appreciate the opportunity to share my thoughts. I hope there will be a lot more discussion before any community is saddled with nuclear waste that has not been generated in their community.

Sincerely,

Muriel R. Roberts

545 ½ South Nineteenth Avenue
Pocatello, ID 83201

[208-232-5424](tel:208-232-5424)

Consent-Based Siting

From: Eric Robinson [<mailto:eric.robinson@omnisafe.net>]
Sent: Monday, July 11, 2016 7:30 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: Consume Spent Fuel in tested system

Dear Nuclear Reg Commission,

The unintended consequences start to pile up. Some technologies are just not as scalable as they appear to be on paper. Rooftop panels may have a low environmental impact but these large solar and wind installations in the desert are not eco friendly and cannot maintain affordable base load power.

<https://www.google.com/search?q=Ivanpah+Solar+Plant+May+Be+Forced+to+Shut+Down&oq=Ivanpah+Solar+Plant+May+Be+Forced+to+Shut+Down&aqs=chrome..69i57.807j0j4&client=ms-android-google&sourceid=chrome-mobile&ie=UTF-8>

Then congratulate ourselves on having no measurable effect.

<http://www.climatedepot.com/2015/07/15/epa-chief-admits-obama-regs-have-no-measurable-climate-impact-one-one-hundredth-of-a-degree-epa-chief-mccarthy-defends-regs-as-enormously-beneficial-symbolic-impact/>

It is time to get real and ask the tough questions and accept the facts.

Is there any realistic way to stop Global CO2 increases?

1. Feasible scalability to at least keep up with increases in global energy demand.
 - A. We need to add 2-3% per year, 11 GWs of new generation capacity per year.
 - B. Then begin reducing existing fossil fuel energy production. (5% per year), 14 GW new capacity.
2. Realistically needs to be cheaper than coal to work in China & 3rd world.
3. Assembly line or ship building model construction of 25 GW of new generating capacity per year.
4. Has it ever happened anywhere before? Check France and Sweden

Kind regards,

Eric Robinson
OMNISAFE.
2451 Frankfort St

San Diego, CA 92110
619 275 1103 PH
408 370 3123 FX
408 422 1096 CELL

*Resolve Spent Fuel Issue at San Onofre
Generate Clean, no Green House Gas, electricity.*



A Proposal for 2016
Search : [meetup.com San-Diego Thorium](https://www.meetup.com/San-Diego-Thorium)

Eric Robinson

Origin of all heavy elements? Super nova!



All Energy Comes From Nuclear



Fusion

Without nuclear energy earth would be cold, dark, and lifeless.



Fission

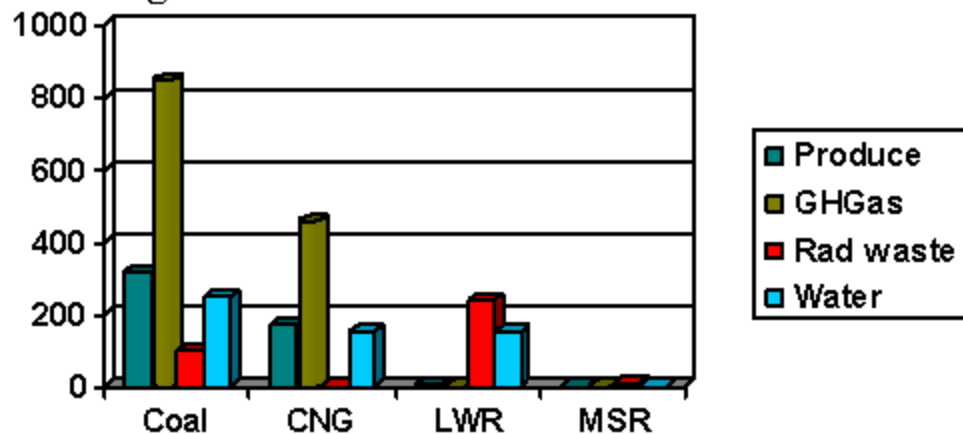
Type	Issues	Ave Cost USD/MWh
Solar- rooftop	intermittent	242
Solar-PV thin film	Intermittent*	55
Wind	Intermittent/unpredictable, climate sensitive*	54
Nat Gas	CO ₂ + methane leakage	84
Coal	CO ₂ , particles +gases	107
Biomass	CO ₂ + NxOy etc.	96
Hydro microturbine	Not scalable globally Climate sensitive*	74
Wave	Experimental, variable, species threats	-
NIF, ITER	Experimental	-

Type	Issues	Ave Cost USD/MWh
Geothermal	Not scalable globally*	99
Light water reactors	Inefficient, high pressure	116
<u>Molten Salt reactors</u>	<u>Waiting NRC approval, efficient, safer</u>	<u>38</u>

*Transmission losses

1) Mine 3,200,000 tonnes of Coal

- emit 8,500,000 tonnes of greenhouse gases and particulates
- landfill 900,000 cubic meters of toxic/radioactive fly-ash.
- Water used in mining, steam generation, and scrubbing exhaust.



3) Mine 50,000 tonnes of uranium ore –

- Emit no greenhouse gases
- produces 24 tonnes of long lived radiotoxic 'waste'.
- In a Conventional, High pressure Light Water Reactor, (LWR)
- Water needed to mine and steam generation.

2) Frack 1,730,000 metric tons Compressed Natural Gas CNG

- emit 4,600,000 tonnes of greenhouse gases and particulates.
- Water used in fracking and steam generation.

Environmental Impact
of generating electricity for a
1 million people for 1 year.

4) Consume 50 tonnes of waste spent nuclear fuel

- Emit no greenhouse gases.
- produces 0.8 tonnes of short lived reusable 'waste'.
- In a Sustainable, Low pressure, Molten Salt Reactor, (MSR)
- No Water need to extract or for steam generation

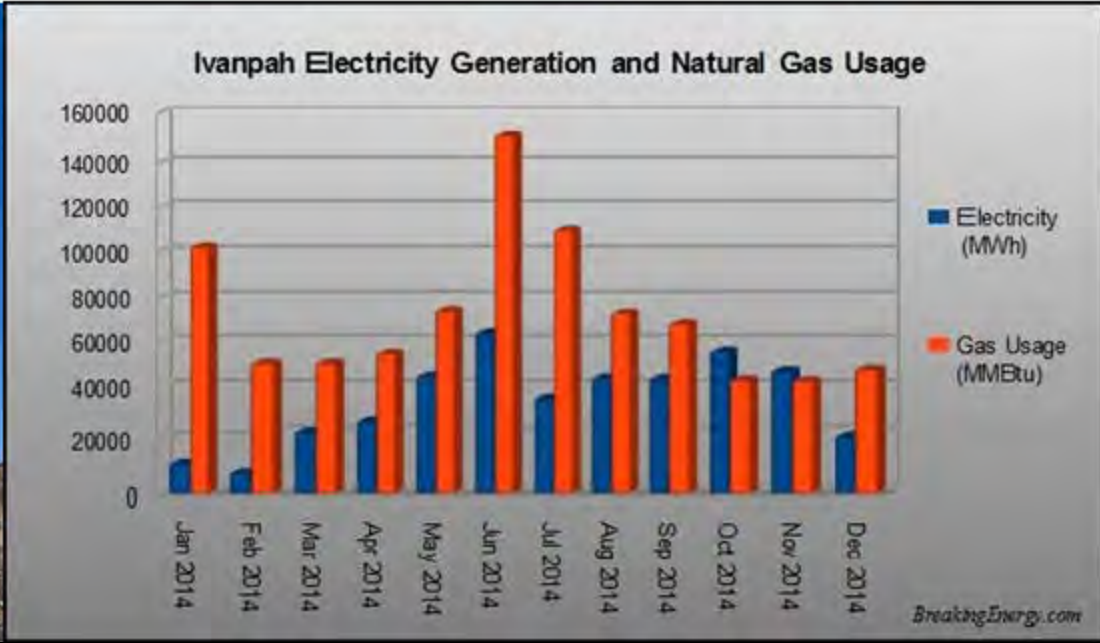
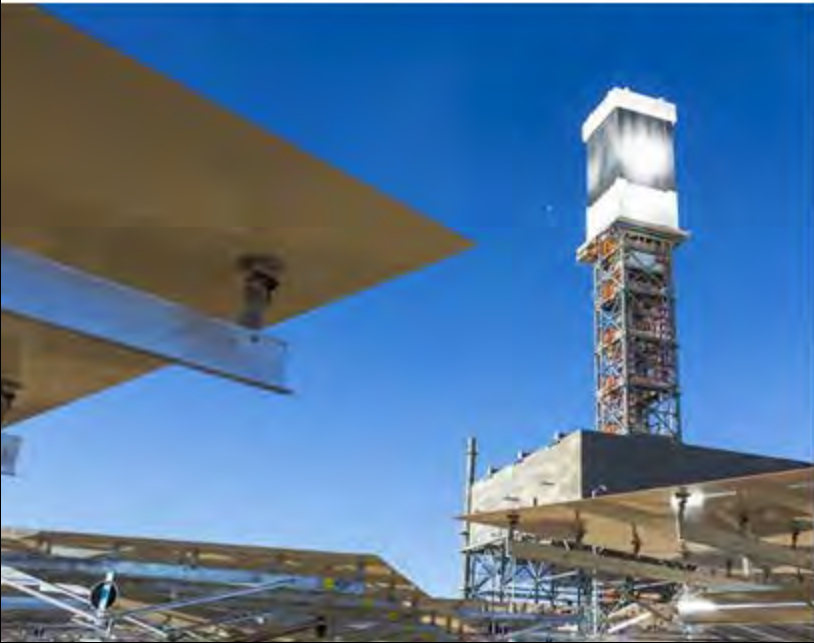
Basis for Current US Energy Policy

“We do not have the resource base to be energy independent. The fact that the United States and the rest of the world will have to depend increasingly for its oil and also for its natural gas from the Middle East is not a matter of ideology and politics. It is simply inevitable.”—Lee Raymond, CEO, Exxon Mobil



**THANKFULLY,
THERE IS A
INSPIRING
ALTERNATIVE TO
THIS BLEAK VIEW
OF OUR COUNTRY'S
ENERGY AND
POLITICAL FUTURE.**

Scalability: \$56MILLION to transplant tortoises, Birds being incinerated mid-flight. Fossil fuels required, 4,000 acres, 173,000 mirrors for 392 MW. Cost 2.2Bil



How can we be more like France & Sweden?

Highest per capita CO₂

- **Qatar**40.1
- Kuwait34.24
- United Arab Emirates22.31
- Luxembourg21.34
- Bahrain19.18
- **United States** 17.5
- Saudi Arabia16.92
- **Australia**16.75
- Kazakhstan15.52
- **Canada**14.67
- Estonia13.67
- **Russian Federation**12.18
- South Korea11.78
- Norway11.71
- Finland11.53
- **Netherlands**10.96

Czech Republic10.65
Belgium10.17
Israel9.52
Libya9.29
Japan 9.25
SouthAfrica9.18
Germany 9.06
Ireland8.95
Denmark8.34
Poland 8.29
Bosnia & 8.28
Austria7.97
U K 7.96
Iran7.73
Malaysia7.63

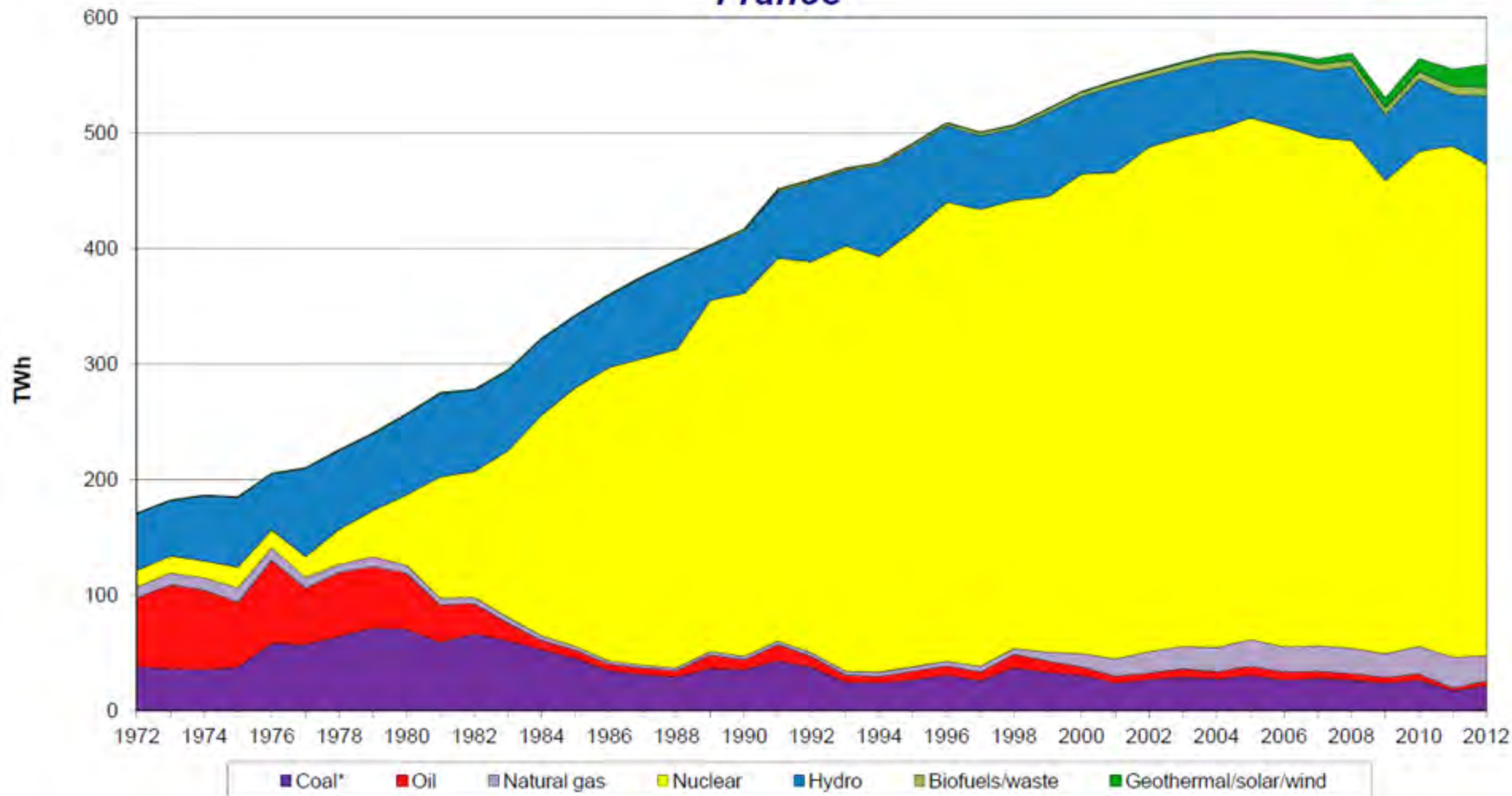
Greece7.63
Bermuda7.35
New Zealand7.22
Cyprus 6.98
Venezuela6.96
Ukraine 6.71
Italy 6.71
Belarus6.48
Malta6.22
China 6.18
Iceland 6.13
Bulgaria 5.96
Spain 5.85
Antigua & Barbuda 5.78
France 5.75 (over 75% nuclear)
Sweden 5.6 (over 40% nuclear)

Lowest per capita CO₂



Electricity generation by fuel

France



* In this graph, peat and oil shale are aggregated with coal, when relevant.

Generation 1 Nuclear Power – 1950s era



Pros – Connected to Existing infrastructure
Cons – It is shut down and produces no power, 1600 Metric Tonnes of Spent Nuclear Fuel on site,
13 Feet above high tide
On a fault line.
On a critical freeway
Next to a military base.
2-4 Bil to build, 5.3Mil to operate per year
uprating issues.



We don't still use 1950s cars and phones. We can do better than 1950s Nuclear reactors.



What can be done with the 1600 metric tonnes of spent nuclear fuel at San Onofre?



- Two things that can be done with spent nuclear fuel
 - 1) store it for 30,000-years.
 - 2) consume it in a reactor.
- The inefficient processing of solid fuel in a high pressure Light Water Reactor accounts for the large amount of waste and why its so long-lived.
- Putting the spent fuel in a Molten Salt Reactors (MSR) results in a clean, environment with gigawatts of cheap, carbon-free electricity.
- Consuming nuclear waste in a MSR can reduce it from an unsustainable 30,000-year problem to a **99% reduced** 300-year resource.
- Renewable energy providers utilizing MSR technology can consume our spent nuclear fuel
 - 1) in a reactor in So Cal.
 - 2) at an interested out of state power generating facility.
- San Onofre has 1,600 tonnes of spent fuel (a tonne is a metric ton, or 1,000 kgs, which weighs 2,200 lbs.) The US has 70,000 tonnes, and the amount is growing at 4% a year.
- The MSR can convert this unsustainable waste into a nearly limitless green resource.

A Solution for the San Onofre Facility

Problem

1. Spent nuclear fuel, 1600 metric tonnes at San Onofre cannot legally be moved and has 10,000 year half life.
2. California has no viable plan to provide adequate, affordable, renewable, base load power needed by consumers & businesses as required by SB350 and AB32 implementation.
3. California is the 2nd highest CO₂ emitting state, producing 98 million tonnes of CO₂ and particulates annually.
4. Intermittent, diffuse sources like solar panel & wind farms require a base load source of back up power for continuous, affordable electricity.
5. California has a water shortage.

Solution

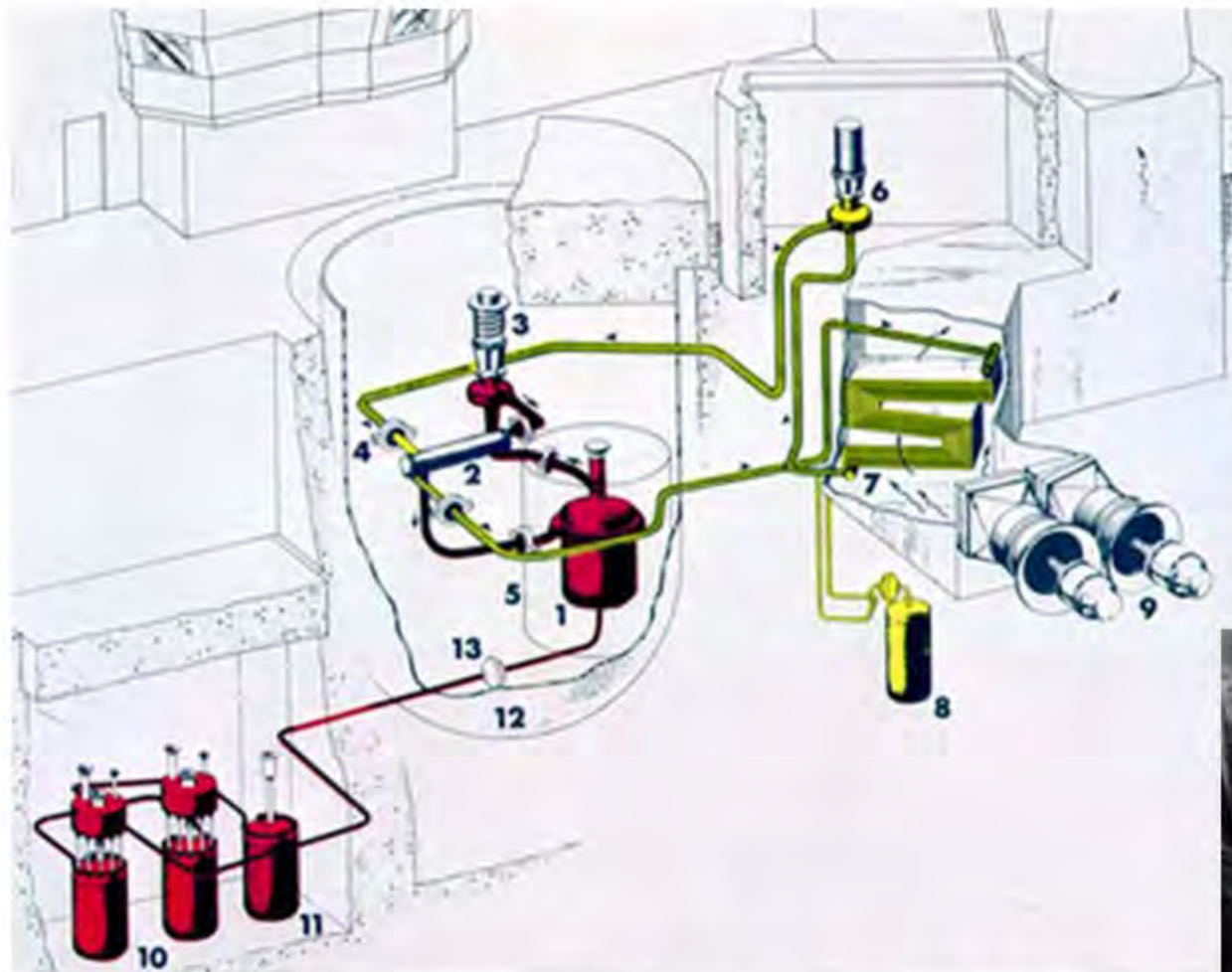
1. A low pressure Gen IV Molten Salt Reactor will recycle and eliminate 99% of nuclear waste while generating clean power.
2. The modular Molten Salt Reactor can produce sustainable, no GHG base load power and is cheaper than coal at \$.02/kw.
3. Molten Salt Reactors produce no CO₂ or particulates.
4. A Molten Salt Reactor has a small footprint, is easily scalable and can provide continuous **base load** to support wind and solar.
5. Highly efficient Molten Salt Reactors provide low cost desalination.

The Innovative Molten Salt Reactor *The Solution to our Energy requirements, a Fail-Safe future*

- **The Gen IV Molten Salt Reactor (MSR)**, was designed and operated at Oak Ridge National Labs.
- The reactor ran for 5 years with no technical problems.
- MSR is low pressure, it cannot blow up because it is not pressurized.
- In **Molten Salt Reactors (MSR)**, The fuel is **liquid!**
- **Liquid** fuel is superior, it can't melt down.
- **Liquid** useful products produced by the reactor are continually removed for resale.
- **Liquid** reactor refueling can take place while it is running.
- **Liquid** fuel is self moderating meaning that as it heats up the fuel density decreases, decreasing the reaction rate. If the fuel temperature gets low the density increases, increasing the reaction rate. It consumes a large amount of long lived nuclear waste.
- It creates a very small amount of short lived products that can be used for medical isotopes, rocket fuel and a neutron source to start other reactors.
- If power is lost, a salt plug kept frozen by a fan, melts and the reactor passively empties into a, non-critical configuration, drain tank. It "fails safe"



Generation IV Power – The Future



- Power cheaper than coal
- Clean electricity generation
- Do not need cooling water
- Reuse of LWR nuclear waste
- Low Pressure

Using modern, advanced technology



Is energy from spent nuclear fuel “renewable” and “clean” energy?



1. **Like** renewable Geothermal, the heat comes from uranium and thorium. Better than geothermal, MSR is scalable globally.
2. **Like** renewable Biomass, MSR takes a waste stream and makes useable energy from it. Better than biomass, MSR does not produce CO₂.

Unlike conventional Nuclear Light Water Reactors

- A. Consumes an existing, as yet, unsustainable spent nuclear fuel waste stream.
- B. No mining required for MSR fuel.
- C. A Fail Safe reactor
- D. No CO₂ or particle exhaust.
- E. Is a sustainable global solution for 1000s of years.
- F. Produces usable products (Medical isotopes, rocket fuel).
- G. Excess heat suitable for desalination.

The Molten Salt Reactor is a safe Proven Technology

- Developed at Oak Ridge National Lab; backed by John Kennedy in 1962 after recommendations by nuclear physics, Nobel laureates, Dr. Alvin Weinberg, Dr. Glenn Seaborg. MSRE ran from 1965 to 1969 – 20,000 hours of operation with no technical problems.
- Defunded by Richard Nixon 1972 with the collaboration of Congressman Chet Holifield, a who had made his fortune in men's apparel.
- Who was the best judge of this innovative, safe, civilian power technology? Who had our best interests in mind?
- Cold War military considerations and Political machinations denied us the most practical and realizable solution to the issues of our current energy crisis.
- The Chinese now have a MSR prototype reactor running based on the design from Oak Ridge National Lab.



San Onofre – Spent nuclear fuel 3 options

1. Leave Spent nuclear fuel on the beach in San Onofre for 30,000 years

- Spend decommissioning fund on projects that don't remediate
- Make the consumers pay for additional costs

2. Consume Spent nuclear fuel onsite in CA

- Recondition fuel onsite at San Onofre .
- Install MSR at San Onofre .
- Resume & increase power production for So Cal.
- Include Spent nuclear fuel energy from MSR as “renewable” in – SB 350, AB 32, San Diego Climate Action Plan.

3. Consume Spent nuclear fuel at an out-of-state power plant

- Recondition Spent nuclear fuel onsite at San Onofre .
- Deliver reconditioned fuel to out-of-state MSR.
- So Cal Edison enters buyback, Long-Term Power Purchase Agreement with out-of-state provider.
- Include Spent nuclear fuel energy from MSR as “renewable” in – SB 350, AB 32, San Diego Climate Action Plan.



Strategic Financial Plan

- How much energy can be derived by a Molten Salt Reactor from San Onofre Spent Nuclear Fuel? 307,034 GW h
- Enough to power to replace San Onofre for 20 years without the 147,000,000 tonnes of CO₂ and particulates from replacement fossil fuels.
- Value of that energy in today's market assuming legacy 33% efficiency conversion? \$36.5 Billion
- **The MSR creates a safe, profitable way to utilize Spent Nuclear Fuel to make clean energy. This efficiently leads to the elimination of this currently unsustainable nuclear waste stream.**
- **The success of the Molten Salt Reactor technology will expand economic opportunity for So Cal Edison.**

Action Items

- Invest a portion of the \$4 billion San Onofre decommissioning fund to implement Molten Salt Reactor technology eliminating their 1600 metric tonnes of spent nuclear fuel. This program can take place at San Onofre or an interested power generating facility out of state.
- Legislation - Append Section 25741 (a)(1) of the Public Resources Code to include the energy derived from recycling spent nuclear fuel in a Molten Salt Reactor as “renewable”. – Add Gen IV Molten Salt Reactors to the following definition; "renewable electrical generation facility" must use one of the following: "biomass, solar thermal, photovoltaic, wind, geothermal, fuel cells using renewable fuels, small hydroelectric generation of 30 megawatts or less, digester gas, municipal solid waste conversion, landfill gas, ocean wave, ocean thermal, or tidal current, and any additions or enhancements to the facility using that technology."
- Join the San Diego Thorium Energy Alliance- <http://www.meetup.com/San-Diego-Thorium-Energy-Alliance-pollution-emacipation/>

What future does MSR offer?

1. Molten Salt Reactors will permanently consume all existing spent nuclear fuel.
2. Once the spent fuel is gone the San Onofre power facility can be removed or repurposed to safe & renewable.
3. MSRs will create inexpensive "green" electricity from spent nuclear fuel
4. MSRs can be used to produce CA energy that now annually produces 98,000,000 tonnes of Global Climate Changing CO2 and particulates.
5. The excess heat from MSRs can be used to affordably desalinate water for civil and agricultural use.
6. MSRs do not need a large facility, don't need water cooling and don't need to be on the beach.
7. Eliminates the cost and risk of securely storing 1,600 MTonnes of spent nuclear fuel for 30,000 years.

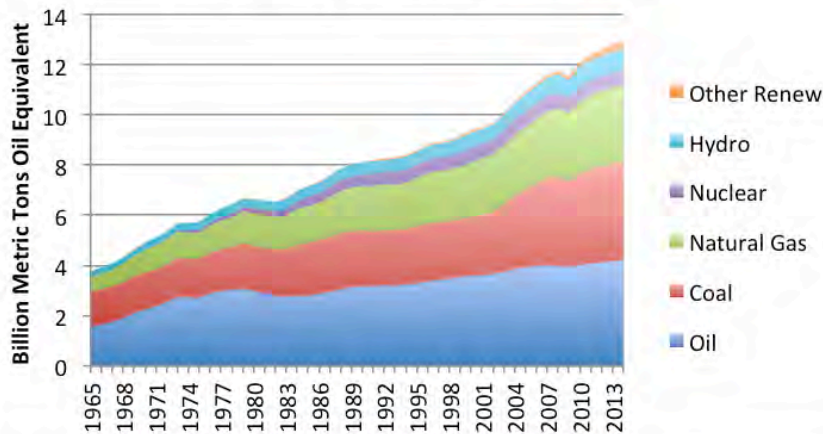


- ✓ A Peaceful, Clean, Financially sound future.
- ✓ MSR is the cheapest new renewable and does not require subsidies once in place because it can produce electricity at \$.02/kw.

Is there any realistic way to stop Global CO₂ increases?

- 1) Feasible scalability to at least keep up with increases in global energy demand.
 - a) We need to add 2-3% per yr added, 11 GWs of new generation capacity per year.
 - b) Begin reducing existing fossil fuel energy production. (5% per year), 14 GW new capacity.
- 2) Realistically the price needs to be cheaper than coal to work in China & 3rd world.
- 3) Assembly line construction to build 25 GW of new generating capacity per year.

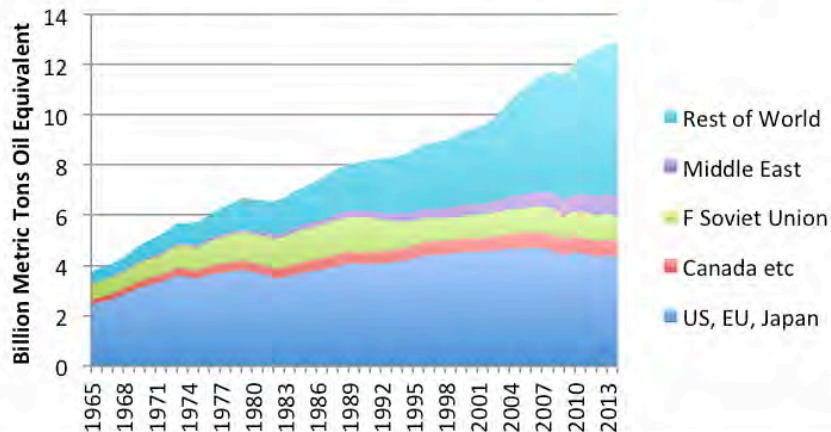
World Energy Consumption by Fuel



Where and how has this ever happened before?

- 1) Keeps up with increases in energy demand.
- 2) Over 90% energy with no CO₂ emissions.
- 3) Reduce fossil fuels use by 50%.
- 4) Energy prices remain affordable.
- 5) See France 1976-2016.

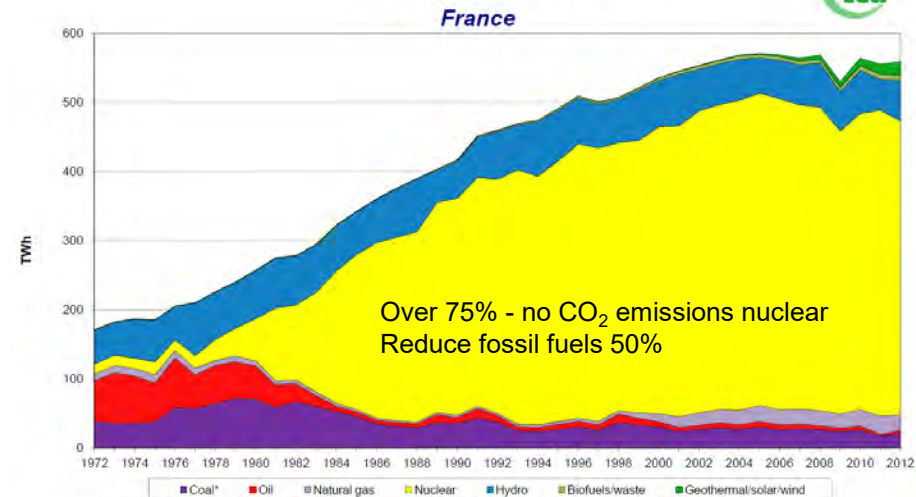
World Energy Consumption by Part of World



IEA Energy Statistics

Statistics on the web: <http://www.iea.org/statistics/>

Electricity generation by fuel



* In this graph, peat and oil shale are aggregated with coal, when relevant.

© OECD/IEA 2014

For more detailed data, please consult our on-line data service at <http://data.iea.org>.

Creating an amazing possibility!

- I stand for the possibility of an innovative source of energy that creates abundant and affordable power. The energy source consumes spent nuclear fuel and produces no CO₂. This source of energy will cure global energy poverty so that all children will have access to the energy needed for clean water, food and shelter.

Consent-Based Siting

From: Sushma Smith [<mailto:Sushma.Smith@senate.texas.gov>]
Sent: Sunday, July 31, 2016 5:27 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: Response to IPC

Please find attached a letter from Texas Senators John Whitmire, Kirk Watson, José Menendez, and José Rodríguez. The letter is provided in response to:

Invitation for Public Comment To Inform the Design of a Consent-Based Siting Process for Nuclear Waste Storage and Disposal Facilities (<https://www.federalregister.gov/articles/2015/12/23/2015-32346/invitation-for-public-comment-to-inform-the-design-of-a-consent-based-siting-process-for-nuclear>)

Should you have any questions, please do not hesitate to contact me.

Thank you!

Sushma Jasti Smith
Chief of Staff
Senator José R. Rodríguez
Texas Senate District 29
Capitol Extension, E1.610
(512) 463-0129 office
(512) 463-7100 fax
Sushma.Smith@senate.texas.gov

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July 31, 2016

Franklin Orr, Ph.D.
Under Secretary for Science and Energy
U.S. Department of Energy
1000 Independence Ave., SW
Washington, D.C. 20585

Via U.S. Mail and electronic mail to consentbasedsiting@hq.doe.gov

RE: Invitation for Public Comment on Consent-Based Siting

Dear Under Secretary Orr:

As elected members of the Texas Senate, we write to submit comments on the U.S. Department of Energy's (DOE) consent-based siting process, and express our concerns over plans to potentially transport nuclear waste for consolidated storage in Texas or New Mexico.

We have serious reservations about the potential for long-term adverse health effects resulting from radioactive contamination. We also have concerns about potential contamination of land and groundwater resources that could negatively impact communities well afar of any storage site.

Because radioactive waste could be isolated in Texas or New Mexico for decades or more, before any site is selected, the federal government must engage in a rigorous engineering and environmental study, using the best science available, to ensure the selected site is up to this task. Such study must include a thorough analysis of how a proposed site would include adequate shielding and radiation monitoring to prevent environmental contamination, and appropriate emergency response, accident prevention, and security plans as well as conclude that the company owning such site could cover potential liabilities and decommissioning costs. To date, we are not aware of any federal risk assessment study having been completed for high-level waste storage at any potential site in Texas or New Mexico.

Selection of a storage site in Texas or New Mexico would not only put the areas immediately surrounding the storage site at risk of nuclear contamination, but also other heavily populated areas of Texas. The DOE previously estimated that more than 10,000 train shipments or more than 50,000 truckloads would be needed to transport materials to a selected site. Exact transportation routes have yet to be determined. We don't feel comfortable potentially placing Texas's largest cities at risk while nuclear material passes through them.

Before any site is selected, it is vitally important that communities impacted in Texas and New Mexico have an opportunity for substantive discussion and debate. We understand that DOE has yet to have a single consent-based siting meeting in Texas or New Mexico despite the fact that these states have been widely reported as possible storage sites.

Please do not assume that resolutions passed by any single county government signals consent from adjoining communities that would also bear the risks associated with a long-term storage. Certainly no single county government can signal consent for the entire state of Texas.

It is our view that local communities are only now becoming aware of plans to potentially locate radioactive waste in their state. From communities across Texas, there have been numerous petitions opposing this proposal. These communities deserve to have their voices included in this process — at minimum via a series of local hearings in potential host counties, as well as counties through which nuclear waste may be transported and counties that could be impacted by soil and groundwater contamination.

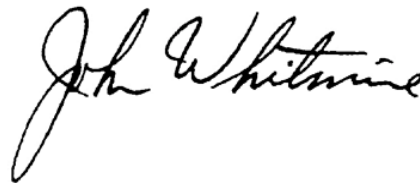
As members of the Texas Legislature, we must make clear that Texas has not consented to accepting radioactive waste for storage, and will not do so until a fair, broad-based, and intensive discussion of the risks involved is held in impacted communities, and those communities affirmatively consent to the associated risks.

Thank you for your time and attention to this important matter.

Sincerely,



José Rodríguez
Senate District 29



John Whitmire
Senate District 15



Kirk Watson
Senate District 14



José Menéndez
Senate District 26

Consent-Based Siting

From: Diane Ronayne [<mailto:dianeronayne@gmail.com>]
Sent: Thursday, July 14, 2016 4:39 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: Response to IPC

To whom it may concern:

I am a longtime citizen of Idaho. I do NOT want nuclear waste (spent fuel, in particular) to be shipped to my state for storage. Idaho Governors Batt and Andrus signed agreements with federal agencies to prohibit shipments of nuclear waste into Idaho until the waste currently stored here is removed. Thousands of Idahoans, including me, encouraged them to do that by voting against accepting additional shipments. WE DO NOT WANT RADIOACTIVE WASTE STORED ABOVE OUR AQUIFER, WHICH PROVIDES IRRIGATION AND DRINKING WATER TO HALF OF OUR STATE!

The nuclear waste stored in Idaho has not been entirely removed. Therefore, NO MORE NUCLEAR WASTE may legally be shipped to Idaho. Please follow the law and forbid shipping additional nuclear waste to Idaho until such time as all waste currently here is removed.

I also have notified my U.S. congressmen and senators of my position on this matter.

Thank you.

Diane Ronayne

DIANE RONAYNE
208-336-2128; dianeronayne@gmail.com
746 Santa Paula Ct., Boise, ID 83712

"We cannot eliminate all of the challenges
or obstacles in life—our own or anyone else's.
We can only learn to rise to the occasion
and face them."

—Dzigar Kongtul, "*Old Relationships, New Possibilities*"

Consent-Based Siting

From: audrey ross [<mailto:audreymross@msn.com>]
Sent: Thursday, July 28, 2016 4:35 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: Consent-based siting public comment

I would task one of the two emerging space flight industries with removing the waste and propelling it from a space platform toward the sun, otherwise it has to be stored for 40,000 years and personally i don't think we can do it.

of course the public comment thing is better than nothing until it is actually neutralized or permanently removed.

Thank you for your consideration.

Sincerely,

audrey ross

85712

Consent-Based Siting

From: Tony Rutz [mailto:rutz0246@gmail.com]
Sent: Sunday, July 31, 2016 5:50 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: Response to IPC

This response is posed to Question 5, “What Else Should be Considered?” although it bears on the other questions, too.

I am an advocate for nuclear power generation. I spent the majority of my career working on the environmental and safety assessments for licenses to operate nuclear power plants, SNF and HLW repositories, and for the various contractors’ challenges at Hanford and the Idaho National Laboratory, among other public service endeavors.

But I am also biologist enough to know that while nature moves in discernible cycles and rhythms, the government/nuclear energy industry partnership has gone arrhythmic and acyclic in its patterns. I’ve heard many explanations about why the fuel cycle cannot close. And now, as a member of the public, I’m being invited to consent to continue avoiding its closure. Perhaps the explanations for why this is are well known and evident, but I am certainly not aware of them. And I have an abiding interest!

Maybe, just maybe, I’ve recovered from consuming too many varieties of contractor and DOE cool aid, but this just new DOE activity doesn’t feel quite right. The intention is noble, of that I have no doubt. But I’ve read the BRC reports and LINE Commission reports, and I still do not understand why this industry seems so stuck after so much time. If Waste Management, Inc., among many other waste management entities, can be successful, why not “nuclear waste management?”

I’ve also lived long enough to witness instances when many “experts” get together, out pops an occasional Edsel. So I just want to be clear that I’m very interested in consenting to something that could work successfully. But I’m not interested in an Edsel.

Now a Tesla..., well, that’s a whole other matter...

The scale of the proposal is, as Mr. Trump might opine, “Yuge!” And while the repository process itself was, and will likely remain, “national” in scope, the above-ground scale that we all live at should give us something easier to imagine, to compose, and to participate in; an “xample”, if you will; or a “small-scale experiment”, just to see if the process can work and gain some momentum. My thought here is a slim, regional concept, or two, each an essential piece of the larger picture, but which will afford scope, pace and budgets that tantalize but not overwhelm the resources needed (and the political resolve that will doubtless be essential). And which might, just might, begin to attract private capital to complete the project. I’ve mentioned one such example near the end of my submittal.

These public meetings on consent-based siting herald what should be a significant, positive directional shift in the conversations concerning nuclear energy’s “back end.” At the meeting in Boise, I sat next to Cecil Andrus, and he, like all the others at our working group table, listened attentively—and posed his positions with enthusiasm—as we made our attempts to complete our facilitated discussion. We basically arrived at an impasse; a passionate impasse, but nonetheless an impasse. Sadly, around 9:30 Governor Andrus abruptly exited, saying he’d been hearing these same points made for too many years, and that nothing new was in evidence. (He also said it was past his bed time...).

What I believe should recur in these discussions, and in whatever follows them, is whether nuclear

power continues to fit into the evolving landscape of electricity generation, when it alone leaves it's "cycle" open. This is not because I disbelieve they are valuable, but because effective opponents continue making a strong case that nuclear power industry makes little sense, economically, environmentally, socially, politically, or from the perspectives of safety and security, and particularly in light of significant gains made by newer, greener technologies.

These interactions, these conversations, then, must include topics like reprocessing spent fuel and moving the high-level radioactive wastes to a permanent "disposal site," which is not a "repository," and one presumably in Nevada or New Mexico, already well characterized and well isolated from population centers. The interactions will continue to include talk of new reactor designs and applications, particularly small modular reactors, as they move along the development path. But the conversations should always question the future viability of the industry itself. The present focus seems to me to be mostly about kicking the can down the road, even further delaying the inevitable discussions about the end of the fuel cycle—or at least about closing the fuel cycle. It makes me suspect that the industry is cloaking its economic realities, or has perhaps shifted its business case to dismiss the remaining expenses as not urgent enough to deal with now. If that is the case, then industry should have a seat right at the front of the table.

In other words, confining the present conversation about nuclear energy to consent-based siting alone for interim storage of SNF and HLW neglects much of the broader conversations already underway—and echoed across several decades now. Narrowing the conversation, however unintended it may seem as regards the scope of this important consent-based siting construct, will not help get through to the heart of the matter, which is that we will continue to find clever ways of ducking out of our collective stewardship responsibilities to finish what was started so many decades ago, and that continues to build up in our collective consciousness (and our literal physical reality). Of course, somebody brave enough could step up and explain why it is such a compelling idea NOT to close the fuel cycle until some approximate decade in the future. (Admiral Grossenbacher has actually done that at employee meetings I attended at the INL. I know this because I was the one who asked him the question. But his voice doesn't carry as far these days, now that he, like me, is "an interested citizen" at these public meetings.)

Ultimately, this set of conversations the DOE is proposing to a design consent-based siting process, merges with our collective societal sets of conversations about technological evolution generally. They should remind us that "...we [humans] have been at home in nature—we *trust* nature, not technology. And yet we look to technology to take care of our future—we *hope* in technology. **So we hope in something we do not quite trust** (my emphasis, with attribution to W. Brian Arthur, "*The Nature of Technology—What it is and How it Evolves*," 2009)."

The point I want to make here is that these conversations are among the issues Dr. Arthur describes "that brim with messy vitality." The meeting in Boise (and perhaps elsewhere) captured the essence of the public, consent-based endeavor as "messy," as indeed it is, and will be. Here, I believe it is vital to remember to hold this "messiness" in a broader perspective, one that emphasizes "vitality": Dr. Arthur goes on to say that in spite of this seeming cognitive dissonance about our dance with technology:

"Thus our reaction to technology as represented unconsciously in popular myth does not reject technology. To have no technology is to be not-human; technology is a very large part of what makes us human. 'The Buddha, the Godhead, resides quite as comfortably in the circuits of a digital computer or the gears of a cycle transmission as he does at the top of a mountain or in the petals of a flower,' quoted by Arthur from Robert Pirsig ["Zen and the Art of Motorcycle Maintenance," 1974]. Technology is a part of the deeper order of things. But our unconscious makes a distinction between technology as enslaving our nature versus technology as extending our nature. This is the correct distinction. We should not accept technology that deadens us; nor should we always equate what is possible with what is desirable. We are human beings and we need more than economic comfort. We need challenge, we need meaning, we need purpose, we need alignment with nature. Where technology separates us from these it brings a type of death. But where it enhances these, it affirms life. It affirms our humanness."

To me, the question about the future of commercial nuclear power, and most especially the conversations about the "back-end" of the fuel cycle, then, becomes the question of whether it affirms our humanness or deadens it, and this will not be answered by the abstractions of nuclear physics or the economics of business cycles, though they will doubtless inform us about the answer. But it **will** be answered by a sincere conversation that can last long enough to take us beyond the distraction of questions that have

only to do with the imagined future as a desirable reflection of the remembered past, which is where the issues of mistrust molder and suppurate. Once they begin to heal, newer, brighter issues of the present as it hints toward a preferred, or intended, “emerging future,” give us bearings for common ground, which is ultimately up to all of us to create. Not just scientists and engineers and economists and bureaucrats; all of us.

So building “systematic, informed consent,” a process copyrighted by Hans and Annmarie Bleiker, could be vital to whatever future DOE and US commercial nuclear ventures are attempted. Inevitably, and vitally, consent is not the same as consensus, so the process offers untested opportunities to alter the future of the US nuclear industry. Here, I’d like to suggest another borderline heresy: the delay in the repository program may well turn out to have been a blessing in disguise, given that the design was to include retrievability of the SNF packages in the event reprocessing was ever resumed. The estimated costs for such a “retrievability” design were, and are, staggering. SNF is not a “waste,” but is a resource to be reprocessed until it IS, finally, no longer reprocessible, and thus a “waste.” At that point it should be disposed of, not “stored” for future retrieval. One other point: scaling the work at the national level is just too big. Scaling it back to something workable is inevitable.

So, the three remaining pieces of the (fuel cycle) puzzle are: spent fuel storage (away from the generation station sites—a ready example is in Utah, at the PFS site), reprocessing (where reprocessing in Idaho, say, could potentially serve as a replacement for the AREVA enrichment facility, and in service to a small number of working reactors in the western US), and high level waste disposal site (in Nevada or New Mexico, taking appropriate advantage of all the work already completed, and replete with all concessions needed to ensure fairness). This completes the stewardship responsibility, and describes any future, cyclical role for nuclear power to reveal itself, or at least allow for a more graceful exit from the field if it doesn’t fit.

The Idaho Settlement Agreement offers a compelling, on-going forum for negotiating Idaho’s “roles” in the completion of DOE’s “regional” stewardship responsibilities, perhaps by starting at the finish: attending to the back-end of the cycle as the feedstocks for the next cycle. The Settlement Agreement will continue to be the lever Idaho uses to extract the best deal possible from a difficult partner. At present, it appears the State of Idaho is reluctant to modify the agreement. This may be because the proposed amendments increase the volume of fuels at INL, but don’t do anything to accelerate the cleanup, or provide Idaho with anything else that is new and useful. Suppose the discussion were significantly reshaped and refocused to do both, and more besides, including a way to finance much of the agenda?

In sum, let’s let these conversations also move along to create the path forward, perhaps discovering directions we cannot even imagine right now. Most of the dissenters will lose interest, energy, or both, once the fanfare is over. If their role is expanded to one of collaborator, then they can help keep the endeavor from steering into the ditch. But in the messy business of public process, that’s when things start getting really interesting, challenging and maybe even fun!

Speaking only for myself, though perhaps for others among the many, many technocrats who have cycled through the labyrinthine national laboratory system, and whose “careers” have cycled through the various bureaucratic tangles, I am delighted to see some fresh direction from DOE. It will take some genius to recreate “value” in our collective minds from the very materials that appear to have “spent” themselves out. And some true grit to sustain the effort necessary to succeed. Yet that is the quest, and in the process succeed in having those in opposition move voluntarily off the tracks!

Contact information:
Submitted 07/30/2016
Tony Rutz
2384 E. Gloucester Place
Boise, ID 82706
Cell 208-521-5105

Consent-Based Siting

From: Jaynee Reeves [<mailto:jreeves@co.nye.nv.us>]
Sent: Tuesday, July 26, 2016 7:43 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Cc: Lewis Lacy <llacy@co.nye.nv.us>; Daniel Schinhofen <dschinhofen@co.nye.nv.us>; Celeste Sandoval <csandoval@co.nye.nv.us>; Lorina F. Dellinger <ldellinger@co.nye.nv.us>
Subject: Response to IPC

Hello,

Please see attached response letter from Commissioner Dan Schinhofen from Nye County, Nevada. Thank you.



Jaynee Reeves

Secretary I

Nye County Administration
2100 E. Walt Williams Drive, Suite 100
Pahrump, NV 89048
775/751-7073
775/751-7093-Fax
jreeves@co.nye.nv.us

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Pahrump Office
Nye County Government Center
2100 E. Calvada Blvd.
Suite 100
Pahrump, NV 89048
Phone (775) 751-7075
Fax (775) 751-7093



Board of County Commissioners
Nye County, Nevada

Tonopah Office
Nye County Courthouse
William P. Beko Justice Facility
PO Box 153
Tonopah, NV 89049
Phone (775) 482-8191
Fax (775) 482-8198

July 26, 2016

U.S. Department of Energy, Office of Nuclear Energy
Response to IPC
1000 Independence Ave. SW
Washington, DC 20585

Subject: Nye County, Nevada, Response to *Invitation for Public Comment to Inform the Design of a Consent-Based Siting Process for Nuclear Waste Storage and Disposal Facilities*.

Nye County is concerned that this consent-based siting effort by the Department of Energy will delay real waste disposal progress through the term of this administration. The County is, however, willing to work with all affected parties to define or redefine the factors that must be considered in any new consent-based siting efforts for any combination of a second repository, a defense only repository, or an interim storage facility.

Nye County is not opposed to the siting and operation of interim storage facilities so long as the United States makes meaningful progress toward the completion of the licensing hearings for Yucca Mountain, and, should the licensing process confirm that the scientific arguments presented in the Safety Analysis Report are defensible, the development of the repository. This position is consistent with the Nye County response to your Question 1: How can the Department of Energy ensure that the process for selecting a site is fair? addressed in the attachment to this letter.

Nye County remains committed to seeking resumption of the Yucca Mountain licensing hearings, acquiring funding for the affected counties to participate in all aspects of the deliberations about Yucca Mountain, and ensuring that Nevada and the affected local communities be accorded the opportunity to participate in safeguards activities and receive mitigation benefits and compensation should the Project resume.

In response to the Invitation for Public Comment to Inform the Design of a Consent-Based Siting Process for Nuclear Waste Storage and Disposal Facilities, Nye County makes the following recommendations. The recommendations are supported by additional discussion in the attachment.

1. **Because the success of a consent-based siting program for an interim storage facility depends ultimately on a guarantee of the availability of a repository, the Department of Energy should actively seek to complete the Yucca Mountain project, in accordance with existing law, rather than continue to postpone repository development with vague promises of siting a repository thirty years in the future.**
2. **Do not start discussions about sites until statutes and regulations are in place to define the process. There can be no serious discussions until communities know the processes, the technical reviews, when they can opt out, etc. What constitutes consent in this process must be defined as well as how the local communities and states and other stakeholders fit in the process.**
3. **The Department of Energy should not be proposing to replace the Nuclear Waste Policy Act. Yucca Mountain should continue to be the focus of the disposal program unless and until Congress elects to rescind the Nuclear Waste Policy Act. The history of Yucca Mountain could be used to help improve future consent based processes.**
4. **The Department of Energy should recognize that previous attempts at siting repository facilities contain a wealth of information that is of value in crafting a consent-based program. In particular, previous attempts have failed and Congress specifically declined to give states the right to veto the program.**
5. **The Department of Energy should recognize past difficulties in reaching consensus in promulgating high-level waste legislation, the time required to promulgate governing regulations, and the abilities of diverse stakeholder groups to express conflicting positions in such deliberations.**
6. **The local community ought to be a principal entity in the decision to site a high-level waste storage or disposal facility, have a meaningful role in the decision that the site can be operated safely, and be the principal recipient of mitigation benefits and compensation**
7. **The Department of Energy and the Nuclear Regulatory Commission should be funded to complete Yucca Mountain licensing and let this process work for the future.**
8. **The Department of Energy should enable access to Licensing Support Network records to allow communities to research and understand what was involved in the processes used to collect and analyses information supporting nomination, recommendation, and the license application of the Yucca Mountain site. This could also help communities understand the nature of the technical issues related to the siting, design, construction, and operation of an interim storage facility or a repository**

9. **Recognize that wastes emplaced at Yucca Mountain will be retrievable while most other geologies will not be. Furthermore, waste packages for Yucca Mountain are larger than most other options, and Savannah River and Hanford defense waste containers have been designed for Yucca Mountain. To ignore this is to saddle the program with additional time and costs.**
10. **Recognize that the Federal government is in default on contracts to take the wastes and is incurring ever increasing costs for damages without making any progress on the necessary disposal. Also, a large portion of the wastes are defense wastes; this is a national security issue and commitments have been made to move the defense wastes**
11. **Recognize that to start over with a new repository program is not productive since it will take twenty to thirty years for any other site to get where Yucca Mountain is today and could still end up with another state declining to take the wastes. Yucca Mountain is a good site with a balance of favorable geologic and hydrologic attributes. The site is isolated and on land the Federal government already controls.**

Nye County believes that the community most impacted by the selection of a site and the development of a storage or repository facility should have an important role in oversight of the development process.

This is crucial to ensure fairness in the distribution of costs, mitigation benefits, risks, and responsibilities now and for future generations. While by law, the Nuclear Regulatory Commission bears ultimate licensing authority, any new siting process ought to include a meaningful role for the local community and state in the licensing deliberations. There is no precedent for a licensing hearing with the number of contentions facing the Yucca Mountain hearings, so it cannot be known how the hearing could proceed in a timely manner. The possibility exists that an agreement modeled after the consultation and cooperation provisions of the Nuclear Waste Policy Act could expedite the process.

There is little reason to expect that siting of a new storage facility will not lead to the same conflict and differences of opinion that the Yucca Mountain project experienced. Local community acceptance appears much easier to obtain than state acceptance for a repository, if not a storage facility as well if there is not a guaranteed repository. One certain element of the Yucca Mountain impasse is that no attempt was made to get Nevada, Nye County, and the Department of Energy to examine the provisions for consultation and cooperation of the Nuclear Waste Policy Act and try to negotiate an agreement that could have allowed the project to move forward. This could also be a model to be considered in the consent-based initiative.

Likewise, siting a multi-hundred million dollar public works project with thousands of direct jobs and many more indirect jobs in a rural area with no ability to provide services constitutes a real impact on the lives of those who already live there. The infrastructure needs for the project—including roads, land, water, and education—must be addressed, and mitigation benefits must be provided to improve, for example, existing schools, roads, and parks. Additional financial compensation should be provided, not to buy off the community to accept an unsafe project, but to accept the impacts from a major project in a rural area.

The points in this letter, together with those provided in detail in the attachment, constitute the Nye County, Nevada, response to the *Invitation for Public Comment to Inform the Design of a Consent-Based Siting Process for Nuclear Waste Storage and Disposal Facilities* noticed in the Federal Register.¹

Thank you for your consideration in this matter.

Sincerely,



Dan Schinhofen
Vice- Chairman
Nye County Board of County Commissioners

DS/jr

Encs: Nye County, Nevada, Response to Invitation for Public Comment to Inform the Design of a Consent-Based Siting Process for Nuclear Waste Storage and Disposal Facilities

¹ Federal Register, Vol. 80, No. 246, page 79872. Wednesday, December 23, 2015

U.S. Department of Energy, Office of Nuclear Energy,
Response to IPC
Attachment.

Nye County, Nevada, Response to Invitation for Public Comment to Inform the Design of a Consent-Based Siting Process for Nuclear Waste Storage and Disposal Facilities

Questions for Input

(1) How can the Department of Energy ensure that the process for selecting a site is fair?

To address fairly a consent-based interim storage or repository program at Yucca Mountain or elsewhere will require a real discussion about mitigation of impacts and benefits to the host community. Safety must be more important than political acceptability. If a facility and site cannot be shown to be safe, no community should agree to host the facility, nor should the Nuclear Regulatory Commission license it. It is not clear how a community can know *a priori* that a site that it is willing to offer for consideration can meet regulatory suitability criteria. The situation is exacerbated by the current situation of not having either Department of Energy siting guidelines or Nuclear Regulatory Commission regulations in place.

Abandoning the Nuclear Waste Policy Act constructs of multiple repositories and the comparison of multiple sites could aggravate the situation of finding a repository site and perhaps an interim storage site, and could especially have impacts in a consent-based program focused on a single site. The State of Nevada's strongest argument against the program at Yucca Mountain has always been a fairness argument—under the Nuclear Waste Policy Act before amendment in 1987, no one state would have had to take all of the waste.

It is important to recognize that high-level radioactive waste management involves an integrated waste management system, and that focus on one part of the system at the expense of another is intrinsically unfair. In particular, how can the Department of Energy expect an entity to consent to storage without an absolute guarantee of a repository to ultimately receive the wastes? The Department of Energy Strategy to have a repository sited and constructed in the future does not provide a guarantee, and brings to mind the situation in the early 1970s following the demise of the first geologic disposal program.

By 1974, following the collapse of the Lyons, Kansas repository project, the Atomic Energy Commission had gone public with its proposal to build the Retrievable Surface Storage Facility. The nature of the revised approach to handling high-level radioactive waste, as well as the transuranic waste produced through reprocessing, was presented to the public in detail in the Environmental Statement for the Retrievable Surface Storage Facility.¹ The Environmental Statement for the project did not garner wide spread support; to the contrary, it resulted in significant negative comments.

One of the first actions the administrator of the new Energy Research and Development Administration was to withdraw the Environmental Statement for the Retrievable Surface Storage Facility. This change returned the focus of the disposal of high-level radioactive waste to the mined geological repository concept; by May 1975 the concept of the National Waste Terminal Storage Program had been outlined.

The primary comments that caused the termination of the Retrievable Surface Storage Facility approach to management of the high-level radioactive wastes were from the Environmental Protection Agency: “[a] major concern—the employment of the Retrievable Surface Storage Facility [RSSF] concept— is the

¹ Atomic Energy Commission, *Environmental Statement: Management of Commercial High-Level and Transuranic-Contaminated Radioactive Waste*. WASH-1539. Washington, D.C. September 1974.

possibility that economic factors could later dictate utilization of the facility as a permanent repository, contrary to the stated intent to make the RSSF interim in nature. Economic factors would consist mainly of the fiscal investment attendant to its construction and the activities which arise in the commercial segment of the economy to support its operation. Since there are controlling environmental factors that must be considered before final disposition of the RSSF, it is important that these factors never be allowed to become secondary to economic factors in the decision making process. Vigorous and timely pursuit of ultimate disposal techniques would assist in negating such a possibility.”²

In addition to ensuring fairness to future generations by guaranteeing the availability of a repository facility should an interim storage facility be sited, the process should give more weight to the position of the local community than to other affected entities. While this is inconsistent with the Nuclear Waste Policy Act,³ it is not in a sense inconsistent with the recommendations of the Blue Ribbon Commission on America's Nuclear Future,⁴ as its two most meaningful examples of consent-based siting, the sites in Sweden and Finland, were sited with solely the consent of the local communities.

In the case of Yucca Mountain, not only does the site have the consent of the local community, it is located on Federal land, and clearly had the consent of the Federal government. At issue is the role of the State of Nevada in objecting to the Federal government's use of Federal land. The tenth amendment arguments raised by the state of Nevada at the time of the designation of the Yucca Mountain site⁵ — the Joint Resolution — were not found to be persuasive by the Court of Appeals for the District of Columbia Circuit.⁶ Nevada challenged the constitutionality of the designation of the Yucca Mountain site, asserting that the Constitution required Congress, when it regulated federal lands in a manner that imposed a unique burden on a particular state, to do so by means of facially neutral and generally applicable criteria. Nevada claimed that the Joint Resolution violated this equal treatment requirement and, accordingly, it should be set aside. Nevada argued that the resolution violated the equal treatment requirement because Congress approved the Yucca Mountain site based on site suitability criteria that were applicable only to Yucca Mountain and that allegedly reduced to a virtual irrelevancy the actual geologic characteristics of the site. The court pointed out that the so-called equal treatment claim Nevada asserted was not based upon any specific provision of the Constitution, but rather on principles of federalism ostensibly inherent in the Constitution as a whole. The court believed that Nevada's argument was based primarily on the Supreme Court's interpretation of the Tenth Amendment where that Court suggested the possibility that some extraordinary defects in the national political process might render congressional regulation of state activities invalid under the Tenth Amendment. The Court of Appeals also noted that there clearly was a rational relationship between Congress's stated purpose, the development of a geologic repository for the safe disposal of radioactive waste, and its decision to approve the Yucca Mountain site. The court noted that it was not for it or any other court to examine the strength of the evidence upon which Congress based its judgment. The court found no basis in the Constitution for Nevada's proposed equal treatment requirement, and, accordingly, rejected Nevada's challenge to the Joint Resolution.

To ensure fairness in the distribution of costs, benefits, risks and responsibilities now and for future generations, the Federal government must provide funds for interested participants at all stages of

² Environmental Protection Agency, *Letter from Sheldon Meyers to Robert Seamans*. November 15, 1974

³ Nuclear Waste Policy Act of 1982, *Public Law 97-425* as amended by *Public Law 100-203*. Section 117(b).

⁴ Blue Ribbon Commission on America's Nuclear Future, *Report to the Secretary of Energy*. January 2012.

⁵ U.S. Congress, “Joint Resolution Approving the Site at Yucca Mountain, Nevada, for the Development of a Repository for the Disposal of High-Level Radioactive Waste and Spent Nuclear Fuel, Pursuant to the Nuclear Waste Policy Act of 1982.” *Public Law 107-200*. July 23, 2002.

⁶ United States Court of Appeals for the District of Columbia Circuit, *Nuclear Energy Institute, Inc., Petitioner, v. Environmental Protection Agency, Respondent*. Case No. 01-1258. *On Petitions for Review of Orders of the Environmental Protection Agency, the Department of Energy, and the Nuclear Regulatory Commission*. July 9, 2004.

development. Sufficient funds must be provided to allow communities with potential locations to study the site to understand if a facility has a likelihood of meeting regulatory requirements and functioning safely. This likely will entail the hiring of technical experts and perhaps preliminary exploratory field activities. As identification and development advance, it is equally important that funds be made available for communities to participate in the process of regulatory documentation, including environmental assessments, intermediate technical progress reports and design documents, environmental impact statements, and license applications. Should the United States program develop along the lines of the International *Safety Case*,⁷ documentation addressing concept development, site investigation, and site selection, development of the design and construction, operation and closure, and the period after closure should be made available for review.

As the International Atomic Energy Agency notes: “[t]he safety case provides a basis for decision making and is presented to the relevant decision makers for their review and consideration. The parties interested in the safety case may include regulators, the general public, and other interested parties. These parties will decide for themselves the extent to which they are convinced by the reasoning that is presented, and whether they share the confidence of the operator developing the safety case. The confidence of the interested parties in the findings of the safety case should, however, be enhanced if the arguments and evidence are presented in a manner that is open and transparent, and all relevant results are fully disclosed and subject to quality control and independent review.”

Fairness also dictates that distribution of such funds be limited to meaningful participation in the ongoing development of the *Safety Case*. Funding should be constrained to that needed for participation as evidenced by the degree of active participation in the process.

It is important that communities have the opportunity to investigate the viability of a potential site before decisions are made that a site is not acceptable politically. Affected communities and states should have factual technical information in hand in order to make an informed decision about the socio-political acceptability of a site. The discussion of the experiences gained under the National Waste Terminal Storage program and the deliberations leading to the passage of the Nuclear Waste Policy Act presented in comment on Question 2 illustrates the difficulty that the country faced in earlier siting programs regarding state acceptance of a high-level waste facility. Of particular note in that deliberation is why Congress elected to withhold the state veto and opt instead for a consultation and cooperation approach.

(2) What models and experience should the Department of Energy use in designing the process?

Nye County believes that the Blue Ribbon Commission on America's Nuclear Future's conclusions regarding the efficacy of consent-based siting are not persuasive. According to the Commission's own report, the selection of the Waste Isolation Pilot Plant was not consent-based.⁸ While there was support, neither the community of Carlsbad nor the State of New Mexico made or participated in the decision; the siting decision was formally made by Congress in the legislation that authorized and funded the development of the facility. In fact, the Blue Ribbon Commission report notes: “no one could have designed the process that was ultimately followed ahead of time nor could that process ever be replicated.”⁹ That point is worth emphasizing: the Blue Ribbon Commission acknowledged that the process it considered to be the basis for success for consent-based siting of a high-level radioactive waste storage or disposal facility likely could not be reproduced.

⁷ International Atomic Energy Agency, *The Safety Case and Safety Assessment for the Disposal of Radioactive Waste*. Specific Safety Guide No. SSG-23. 2012

⁸ Blue Ribbon Commission on America's Nuclear Future, *A Report to the Secretary of Energy*. January 26, 2012. p. 21

⁹ *Ibid.* p. 49

That would seem to leave the Nuclear Waste Policy Act process as a model to be examined. Advice given to and adopted by Congress in their deliberations prior to the passage of the Act in 1982 argued strongly against a consent-based process. The Act did, however, provide for consultation and cooperation.¹⁰ Because Nevada elected not to negotiate the required agreement with the Department of Energy, this provision has not been tested. Nonetheless, the consultation and cooperation provisions of the Nuclear Waste Policy Act appear to provide a reasonable model for Department - local community interactions, at least as a starting point, and Congress could make clarifying recommendations consistent with its intent.

The history of the development of the Nuclear Waste Policy Act provides a wealth of experience relevant to consent-based siting that was not always acknowledged explicitly in the Blue Ribbon Commission on America's Nuclear Future effort. The National Waste Terminal Storage program was developed at the end of the Ford administration under the Energy Research and Development Administration. It was expected that six repositories would be built in different geological media by the year 2000. Also, this was the point in time when the United States stopped reprocessing spent fuel because of proliferation concerns. The program intended to approach multiple state governments with a comprehensive program for identifying sites for multiple repositories in a short period of time. Letters were sent during the lame duck period of the Ford administration to the governors and congressional members of the thirty-six states in which the program intended to look for sites. Initially there was a somewhat muted reaction. With the start of the 97th Congress in 1997, the negative response toward the newly installed Carter White House was unrelenting.

The approach to evaluating sites for multiple high-level radioactive waste repositories had been modified by April 1977 to a simpler approach that was viewed as having less political impact on the White House. The new approach was to select five or six sites that appeared to have the best chance for success; Hanford and the Nevada Test Site, sites that were already contaminated, also were to be evaluated for the first repository. In addition to learning what effects local political pressure could have on the development of a national program, it became clear that governors wanted to have their roles and authorities in the decision path defined.

Carter empaneled an Interagency Review Group to help define a path forward. Their recommendations were important considerations in development of subsequent legislation. The Group recommended that siting of repositories should be on a regional basis to reduce local concerns over the use of a single location for nuclear waste from all parts of the United States. Importantly, the Group recommended the use of cooperative agreements that did not force either federal preemption or state veto, and pointed out that multiple barriers should be used to avoid over reliance on geological containment. Carter's policy also included the admonition that responsibility would not be passed to future generations.

As a result of these recommendations, President Carter developed three overarching principles related to radioactive waste management. First, a new Executive Planning Council was created that would have primary responsibility for setting nuclear waste policy with federal, state, and local institutions working collaboratively. Next, President Carter believed that state consultation and concurrence that would lead to an acceptable solution of the waste disposal problem only if the states participated as partners in the program being put forward. Finally, President Carter retained the right of federal preemption if relations between the federal government and the state reached an impasse.

After several years of deliberation, Congress was not able to turn these principles directly into legislation, although the Nuclear Waste Policy Act of 1982 generally reflected recommendations of the Interagency

¹⁰ Nuclear Waste Policy Act of 1982, *Public Law 97-425* as amended by *Public Law 100-203*. Section 117(b).

Review Group. The Act took several years of congressional effort, marked by compromises and difficult decisions, to develop.

The Act addressed the issue of the role of the states in the decision making process. Rather than a state veto, section 116(b)(2) of the Act includes provisions for a Notice of Disapproval: “[u]pon the submission by the President to the Congress of a recommendation of a site for a repository, the Governor or legislature of the State in which such site is located may disapprove the site designation and submit to the Congress a notice of disapproval.” By giving the state the opportunity to file a Notice of Disapproval to the Department’s site recommendation, which would become effective unless Congress subsequently passed a notice of siting approval, the Act effectively set the level of authority of the state to be equal to that of the Department. Whether or not Congress acted to override the Notice of Disapproval, ultimately, Congress got to make the final decision.

Who gets to make the decision?: In light of the Department of Energy request seeking input to inform the design of a consent-based siting process for nuclear waste storage and disposal facilities, which to date has not been authorized by Congress, it is imperative to review the thinking of Congress when it last addressed this issue directly. The decision not to give states a veto was deliberate and long debated, and the consensus was — no. Congress retained the siting decision to itself. There were, however, attempts to include a state veto in the Nuclear Waste Policy Act. None were successful. In the controversy over “who gets to make the decision,” there were attempts to introduce a state’s veto by Senator George McGovern and Senator William Proxmire. As well, the State Planning Council’s provided a position on the absolute veto, and the Comptroller General provided advice regarding federal preemption.

Senator McGovern’s attempt at the absolute veto: This attempt was made by Senator McGovern and is documented in a letter from the General Accounting Office to Representative John Dingell, chair of the Commerce Committee.¹¹ Congressman Dingell believed that the Department of Energy may have exceeded its authority in giving certain states a veto over the establishment of nuclear waste repositories; he stated he was unaware of any statutory provision authorizing the Department to share decision-making responsibilities with the states. Senator McGovern offered an amendment to the 1978 Energy and Research Development Agency authorization bill which would have amended the Energy Act of 1974 to prohibit contracting for or construction of a radioactive waste storage facility in the event a state legislature by resolution or law, or a state-wide referendum, disapproved of the use of a particular site in the state. After a colloquy regarding the advisability of adopting the amendment, a majority of the Senate voted to lay it on the table. Senator Church observed . . . “for years we have been trying to find a permanent depository for the wastes we have already created. As yet, we have not found a state government that has been willing to accept that depository. I think that it is a suggestion of what lies in store for the country if we adopt this amendment in its present form. The problem we face would become unsolvable.”¹²

Senator Proxmire’s attempt at the absolute veto: Senator Proxmire was insistent on the protection of states’ rights to the maximum possible extent. He had a hold placed on the nuclear waste bill and was threatening to filibuster, which would have, in effect, killed the bill for that session of Congress. Two options were considered: first, a notice of disapproval by the state would not be automatically effective unless one house of Congress supported the state’s position. This would put the burden of effecting the disapproval on the state, which was seen as comparable to the Department of Energy’s position that the site was suitable. Under the second option the notice of disapproval was automatically effective unless both houses of Congress voted to override it. He believed that no other action could do more to put the host state on an equal footing with the Department of Energy. In late December 1982, the last hurdle to

¹¹ Comptroller General of the United States, *Letter to Representative John Dingell*. June 19, 1978.

¹² 123 Cong Rec. S11643-11650 (daily ed. July 12, 1977).

the passage to the Nuclear Waste Policy Act was overcome. At the end of a four-year effort, the bill became law.¹³

The State Planning Council's position on the absolute veto: The State Planning Council did not support the political position that states should have an absolute veto, and agreed that states should not have veto authority. The recommendation of the State Planning Council regarding the final siting decision for a high-level radioactive waste repository was for a statutorily defined conflict resolution mechanism that called upon the President or the Congress to make the final siting decision if the parties reached an impasse.¹⁴

Advice provided by the Comptroller General regarding Federal preemption: In response to a congressional committee request by the chair of the Subcommittee on Energy Research and Production of the House Committee on Science and Technology, the General Accounting Office provided specific guidance¹⁵ in early 1981 during the debate on the Nuclear Waste Policy Act. The report concluded that the Department of Energy successfully had been prohibited from screening some areas of the country because of state and local opposition. It noted that some states had refused to permit a repository within their borders, and others had been suspicious of the Department's motives and fear that if screening efforts are permitted, the agency would select their state as a repository location without adequate public participation or state concurrence. The report specifically noted that no matter how successful the technical aspect of the Department's waste isolation program, a repository likely would not be built until the political aspects and public fears were addressed and resolved adequately. Of particular note to the question at hand today, the report further concluded that if all state concurrence efforts fail, the federal government may have to act unilaterally to override state and local opposition and select the best repository site available. The Comptroller General observed that the waste problem was already of such paramount importance that a solution must be obtained, even if one or more segments of the public are dissatisfied.

The Concept of Consultation and Cooperation: section 117(b) of the Act includes provisions for a consultation and cooperation agreement: "... the Secretary shall consult and cooperate with the Governor and legislature of such State and the governing body of any affected Indian tribe in an effort to resolve the concerns of such State and any affected Indian tribe regarding the public health and safety, environmental, and economic impacts of any such repository." And section 117 (c) "... the Secretary shall seek to enter into a binding written agreement."

The Nuclear Waste Policy Act provided that the political leadership and the public of the states under consideration be actively involved in the program for identifying and selecting a site. In hearings after passage of the Nuclear Waste Policy Act, Paul Laxalt (R-NV) reiterated the position he held when the act was crafted: "[a]s I stated during the Senate deliberations of the Nuclear Waste Policy Act in December 1982, it is important to have the states and affected tribes resolve their concerns within a process of

¹³ Luther J. Carter, *Nuclear Imperatives and the Public Trust: Dealing with Radioactive Waste*. Washington, D.C.: Resources for the Future, 1987. See also Robert Vandenbosch and Susanne F. Vandenbosch, *Nuclear Stalemate: Political and Scientific Controversies*. Salt Lake City: University of Utah Press, 2007.

¹⁴ Richard W. Riley, chairman, and Paul R. Hess, vice chairman, State Planning Council, "Letter Report to President Jimmy Carter: Appendix C: Executive Summary of the Interim Report of the State Planning Council." In E. William Colglazier Jr. (ed.), *The Politics of Nuclear Waste*. New York, Pergamon, 1982.

¹⁵ General Accounting Office, *Is Spent Fuel or Waste from Reprocessed Spent Fuel Simpler to Dispose Of?* EMD-81-78. June 12, 1981. See particularly transmittal letter from Acting Comptroller General.

consultation and cooperation with the Department of Energy, rather than before the Congress”¹⁶ (emphasis added).

The first repository program began five years before the passage of the Nuclear Waste Policy Act, in a political framework wherein the federal government had total control over the decision-making process for siting a repository under the Atomic Energy Act of 1954. The passage of the Nuclear Waste Policy Act changed the policy and legal framework governing the contentious process of selecting a site for a high-level radioactive waste repository. Under the Act, the states now had the authority to voice disapproval of the federal government’s recommendation, which they did not have under the Atomic Energy Act of 1954.

At the beginning of 1983 the first repository program was evaluating nine potentially acceptable sites for the first repository that had been identified prior to passage of the Act. None of the projects had undertaken a formal consultation and cooperation effort in working with the states to evaluate the sites of interest. When the three sites were recommended to the President for formal site characterization, the first repository sites would come under the requirements for negotiating a consultation and cooperation agreement. When the second repository program was initiated, also at the beginning of 1983, sites had not been identified and there was limited experience with the concept of a formal consultation and cooperation effort. The second repository program had to determine when to initiate its consultation and cooperation process to promote a partnership, at least at the working level. There were technical and political issues that had to be addressed in establishing the strategy and information basis for identifying potentially acceptable sites; these were essential in establishing the basis for a real working partnership. The second repository program had to conceive and conduct a program of political and public involvement for providing input into the execution of a technical program to identify sites that had the proper geotechnical characteristics for long-term isolation of high-level radioactive waste. The technical program faced the imperative of the legislation to identify multiple sites as suitable for a repository. The State Planning Council had noted in its report to the President that “full and timely exchange of information on plans and program activities” was important in fostering the partnership concept between the federal government and the states. This provided a rationale for early interaction with the states and good faith commitment to an early initiation of the concept of consultation and cooperation. The situation facing the second repository program was challenging because the scope of the consultation and cooperation program and protocols that it would have to develop involved seventeen sovereign states that were independent of federal control for this issue. In 1976, with the announcement of the National Waste Terminal Storage Program, none of the states that were subsequently included in the second repository program were willing to support site characterization within their state.

With the amendment of the Nuclear Waste Policy Act and the selection of Yucca Mountain as the single site to be characterized, Nevada became the focus for a consultation and cooperation agreement. Under Subtitle E, Redirection of the Nuclear Waste Program: Selection of Yucca Mountain Site, the Act authorized a benefits agreement with a provision at section 171(b)(2) that would have required Nevada to waive its rights to disapprove the recommendation of the site for a repository. Nevada used this as a basis to decline to enter into a consultation and cooperation agreement.

While not explicitly part of the consultation and cooperation agreement, nonetheless, any path forward for a consent-based program must recognize the intent of Congress to provide benefits had to be linked to the agreement, and Congress once again was expressing its position that it was unwilling to give veto authority to a state. There is today no evidence that Congress as a whole has changed its position on consultation and cooperation in preference to a consent-based program.

¹⁶ Senator Paul Laxalt, *Testimony Before Senate Subcommittee on Energy Research and Development of the Committee on Energy and Natural Resources*. June 16, 1986

Lack of Availability of Siting Guidelines and Licensing Regulations: In order to make meaningful progress toward identifying a site for a storage facility, a community must know that such a facility can be operated safely at the proposed location. Regulatory requirements for licensing of an independent spent fuel storage facility¹⁷ exist and have been tested, although the regulation doesn't address the linkage between the interim storage facility and a future repository. This linkage is important, as demonstrated by the Yucca Mountain repository design; material properties could be important to waste package designs, and multipurpose storage canister designs could turn out to be incompatible with the chemistry of an as yet undefined repository system. Moreover, it is not possible to guarantee a safe repository because repository siting guidelines and licensing regulations do not exist today.

In the Energy Policy Act of 1992,¹⁸ Congress directed that the Environmental Protection Agency and the Nuclear Regulatory Commission promulgate site specific regulations for Yucca Mountain. The Agencies complied, promulgating 40 CFR Part 197¹⁹ and 10 CFR Part 63²⁰ respectively. While not specifically directed to do so in the Energy Policy Act, the Department of Energy promulgated new Siting Guidelines at 10 CFR Part 963²¹ because the existing Siting Guidelines at 10 CFR Part 960²² were linked explicitly to the older regulations, 10 CFR Part 60 and 40 CFR Part 91. This point is key to the following discussion. The Department needed to change its regulations because its Siting Guidelines addressed requirements in 10 CFR Part 60 and 10 CFR Part 91, which were no longer applicable to Yucca Mountain. Because the Site Recommendation decision was essentially an assessment by the Secretary of Energy of the Yucca Mountain site's ability to comply with the Environmental Protection Agency and Nuclear Regulatory Commission regulations, it followed that the Department of Energy's Siting Guidelines needed to address the Yucca Mountain specific regulations.

In a November 2015 report, the Nuclear Waste Technical Review Board²³ noted that the Department of Energy's 1984 Siting Guidelines²⁴ were a striking example of Generic Criteria and were consistent with international practice and technically defensible. On the other hand, the Board noted that a different approach, embodied in the Department's 2001 Yucca Mountain-specific site-suitability regulation,²⁵ relies on probabilistic performance assessment and, putting aside the ongoing debate over the utility and validity of that methodology, using it to winnow down sites is inappropriate and technically questionable. Specifically, the Board noted that the data needed to employ sensibly such an approach simply are not available at the earliest stages of any siting effort. Therefore, the Board recommended that the Department of Energy's 1984 Siting Guidelines be adopted as a sound basis for developing any new rules

¹⁷ 10 CFR Part 72, *Licensing Requirements for the Independent Storage of Spent Nuclear Fuel, High-Level Radioactive Waste, and Reactor-Related Greater Than Class C Waste*. Readily available.

¹⁸ Energy Policy Act of 1992, *Public Law 102-486*.

¹⁹ U.S. Environmental Protection Agency, *Public Health and Environmental Radiation Protection Standards for Yucca Mountain, Nevada; Final Rule*. 66 FR 32074. June 13, 2001

²⁰ U.S. Nuclear Regulatory Commission, *Disposal of High-Level Radioactive Wastes in a Proposed Geologic Repository at Yucca Mountain, Nevada; Final Rule*. 66 FR 55732. November 2, 2001.

²¹ U.S. Department of Energy, *General Guidelines for the Recommendation of Sites for Nuclear Waste Repositories; Yucca Mountain Site Suitability Guidelines; Final Rule*. 66 FR 57208

²² 10 CFR Part 960, *General Guidelines for the Recommendation of Sites for Nuclear Waste Repositories*. Readily available.

²³ U.S. Nuclear Waste Technical Review Board, *Designing a Process for Selecting a Site for a Deep-Mined, Geologic Repository for High-Level Radioactive Waste and Spent Nuclear Fuel: Overview and Summary*. Report to the United States Congress and the Secretary of Energy, November 2015.

²⁴ U.S. Department of Energy, *General Guidelines for the Recommendation of Sites for Nuclear Waste Repositories*. 49 FR 47752. December 6, 1984.

²⁵ U.S. Department of Energy, *General Guidelines for the Recommendation of Sites for Nuclear Waste Repositories; Yucca Mountain Site Suitability Guidelines*. 66FR57298. November 14, 2001.

that might structure a future siting process. The Board stated explicitly that a site-suitability regulation that relies on a technically complex performance assessment, such as the Department's 2001 regulation for Yucca Mountain, does not provide a sound basis for the initial stages of site selection.

A close examination of the 1984 Siting Guidelines, 10 CFR Part 960 and 10 CFR Part 60, on which it is based, shows that both depend on total system performance assessment for their implementation. 10 CFR Part 960, which by law, required Nuclear Regulatory Commission concurrence, reflects the 10 CFR Part 60 favorable and potentially adverse conditions.

For example, the 10 CFR 960.4-2-1 Geohydrology Qualifying condition states: "The present and expected geohydrologic setting of a site shall be compatible with waste containment and isolation. The geohydrologic setting, **shall permit compliance with (1) the requirements specified in § 960.4-1 for radionuclide releases to the accessible environment and (2) the requirements specified in 10 CFR 60.113 for radionuclide releases from the engineered barrier system using reasonably available technology.**" The 10 CFR 960.4-1 System Guideline Qualifying Condition states: " The geologic setting at the site shall allow for the physical separation of radioactive waste from the accessible environment after closure in accordance with the **requirements of 40 CFR part 191, subpart B, as implemented by the provisions of 10 CFR part 60.** The geologic setting at the site will allow for the use of engineered barriers to ensure compliance with the requirements of 40 CFR part 191 and 10 CFR part 60." (emphasis added to illustrate reliance on total system performance assessment)

10 CFR 60.113, Performance of particular barriers after permanent closure, states: "(a) *General provisions*—(1) *Engineered barrier system.* (i) The engineered barrier system shall be designed so that **assuming anticipated processes and events:** (A) Containment of HLW will be substantially complete during the period when radiation and thermal conditions in the engineered barrier system are dominated by fission product decay; and (B) any release of radionuclides from the engineered barrier system shall be a gradual process(ii) In satisfying the preceding requirement, the engineered barrier system shall be designed, **assuming anticipated processes and events,** so that: (A) Containment of HLW within the waste packages will be substantially complete for a period to be determined by the Commission taking into account the factors specified in § 60.113(b) provided, that such period shall be not less than 300 years nor more than 1,000 years after permanent closure of the geologic repository; and (B) The release rate of any radionuclide from the engineered barrier system following the containment period shall not exceed one part in 100,000 per year of the inventory of that radionuclide calculated to be present at 1,000 years following permanent closure (2) *Geologic setting.* The geologic repository shall be located so that prewaste-emplacement groundwater travel time along the **fastest path of likely radionuclide travel** from the disturbed zone to the accessible environment shall be at least 1,000 years or such other travel time as may be approved or specified by the Commission. (b) On a case-by-case basis, the Commission may approve or specify some other radionuclide release rate, designed containment period or prewaste-emplacement groundwater travel time, **provided that the overall system performance objective, as it relates to anticipated processes and events, is satisfied.** Among the factors that the Commission may take into account are: (1) Any generally applicable environmental standard for radioactivity established by the Environmental Protection Agency; (2) The age and nature of the waste, and the design of the underground facility, particularly as these factors bear upon the time during which the thermal pulse is dominated by the decay heat from the fission products; (3) The geochemical characteristics of the host rock, surrounding strata and groundwater; and (4) Particular sources of uncertainty in predicting the performance of the geologic repository" (emphasis added to illustrate reliance on total system performance assessment)

The 10 CFR 60.122 Siting Criteria include favorable and potentially adverse conditions that also indicate reliance on total system performance assessment. For example: "(a)(1) A geologic setting shall exhibit an appropriate combination of the conditions specified in paragraph (b) of this section so that, together with

the engineered barriers system, the favorable conditions present are sufficient to provide **reasonable assurance that the performance objectives relating to isolation of the waste will be met.** (2) If any of the potentially adverse conditions specified in paragraph (c) of this section is present, it may compromise the ability of the geologic repository to meet the performance objectives relating to isolation of the waste. In order to show that a potentially adverse condition does not so compromise the performance of the geologic repository the following must be demonstrated: (i) The potentially adverse human activity or natural condition has been adequately investigated, including the extent to which the condition may be present and still be undetected taking into account the degree of resolution achieved by the investigations; and (ii) The effect of the potentially adverse human activity or natural condition on the site **has been adequately evaluated using analyses which are sensitive to the potentially adverse human activity or natural condition and assumptions which are not likely to underestimate its effect;** and (iii)(A) The potentially adverse human activity or natural condition is shown by analysis pursuant to paragraph (a)(2)(ii) of this section **not to affect significantly the ability of the geologic repository to meet the performance objectives relating to isolation of the waste,** or (B) The effect of the potentially adverse human activity or natural condition is compensated by the presence of a combination of the favorable characteristics so **that the performance objectives relating to isolation of the waste are met,** or (C) The potentially adverse human activity or natural condition can be remedied.” (emphasis added to illustrate reliance on total system performance assessment)

Hence, the Nuclear Waste Technical Review Board argument that 10 CFR Part 960 is an adequate screening tool while 10 CFR 963 is not is based on an incorrect premise. What 10 CFR 960 does have, however, is a recognition that less information will be available at early stages of screening and makes provisions for it.²⁶

Additionally, 10 CFR Part 960 also was amended when 10 CFR Part 963 was promulgated, and it no longer allows for Department actions after recommendation of sites for characterization (10 CFR 960.3–2–3 Recommendation of sites for characterization-). In particular 10 CFR 960.3–2–4, Recommendation of sites for the development of repositories, has been deleted. Hence, there is no extant guidance for recommending a site for development of a repository and such guidance should be developed before proceeding to seek a new site for a repository. The issue of lack of guidance for siting or licensing is further compounded by the fact that the Nuclear Regulatory Commission staff have stated before the Nuclear Waste Technical Review Board that they have no intention of ever going back to the quantitative subsystem requirements of 10 CFR Part 60. Nuclear Regulatory Commission staff member Tim Martin noted at a Nuclear Waste Technical Review Board meeting²⁷ that “Part 63 does not have separate quantitative subsystem requirements. There is a reason it doesn’t. We walked away from that in 63. I thought we made it clear when we published 63 that we said the only reason they stayed in 60 was, it was a matter of efficiency. We weren’t going to bother to change it, because there was no need for 60, but I believe we tried to make it clear that the NRC has no intention of ever going back to quantitative subsystem requirements.” In other words, the regulatory basis for 10 CFR Part 960 no longer exists.

It summary, it appears that there is no defensible basis for using 10 CFR 960 for evaluating the suitability of a site. There are, however, older sets of screening criteria that could form the basis for developing siting guidelines for the United States. In 1978, the National Research Council published *Geological*

²⁶ Appendix III, *Application of the System and Technical Guidelines during the Siting Process* indicates how the guidelines are to be applied at the principal decision points of the siting process. In particular, it includes a table defining how findings are to be made at the different points with less confidence in the findings.

²⁷ U.S. Nuclear Waste Technical Review Board, *Spring 2012 Board Meeting Transcript*. Albuquerque, New Mexico, March 7, 2012.

*Criteria for Repositories for High-Level Radioactive Wastes.*²⁸ Also, the International Atomic Energy Agency has published *Siting of Geological Disposal Facilities.*²⁹ While useful starting points for site screening, neither of these approaches is adequate to support a community decision to commit to consent to host a storage or disposal facility. For a repository, the Nuclear Waste Policy Act required the Secretary of Energy and the President to decide that they considered the Yucca Mountain site qualified for application for a construction authorization for a repository.³⁰ Without the ability to ascertain the safety and likelihood for success of a repository program, there is no rational basis for a community to enter into a consent-based agreement unless it is simply to spend Federal funds with no intention of ultimately committing to the facility.

This argument on lack of availability of siting guidelines and licensing regulations extends to siting an interim storage facility as well.

Without other legislative guidance the Nuclear Waste Policy Act model appears to be the only guidance on which to base an approach for a community understanding how to make a decision about whether or not a high-level waste facility could be operated safely. Also, the Nuclear Waste Policy Act amendment provided a mechanism to restart the second repository program.³¹

(3) Who should be involved in the process for selecting a site, and what is their role?

The Blue Ribbon Commission on America's Nuclear Future's recommendation to pursue consent-based siting was developed from a model that, while not applicable specifically to the United States, was truly consent-based only because the local communities had the ability and the authority to make the decision to site the facility. The Nuclear Waste Policy Act model did not give the states, or local communities for that matter, the authority to veto the Secretary of Energy and the President's decision to recommend the Yucca Mountain site for a repository.

In a letter to Secretary of Energy Steven Chu consenting to host the proposed repository at Yucca Mountain,³² Nye County acknowledged that opposition by the State of Nevada had been challenging and that up to that point in time, Nevada, represented by the Nevada Commission on Nuclear Projects, had been steadfast in its position that there were no serious incentives to be had for hosting the Yucca Mountain Project. However, Nye County noted that like the Blue Ribbon Commission on America's Nuclear Future, it believed that (1) assurances from the Federal government of an enduring and significant role for state and local government involvement in the project to assure safety, and (2) a significant federal incentive package to the state and local governments could alter the status quo and lead to a resolution of the decades long dispute.

²⁸ National Academy of Sciences, National Research Council, *Geological Criteria for Repositories for High-Level Radioactive Wastes*. Washington, DC. 1978.

²⁹ International Atomic Energy Agency, *Siting of Geological Disposal Facilities*. Safety Series No. 111-G-4.1. 1994.

³⁰ Nuclear Waste Policy Act, Section 114(a)2(A): "If, after recommendation by the Secretary, the President considers the Yucca Mountain site qualified for application for a construction authorization for a repository, the President shall submit a recommendation of such site to Congress." While the Act is explicit only for the President's responsibility, clearly the Secretary could not make the recommendation to the President unless he too considered the Yucca Mountain site qualified for an application for a construction authorization for a repository.

³¹ Section 161(a) "Congressional action required. The Secretary may not conduct site-specific activities with respect to a second repository unless Congress has specifically authorized and appropriated funds for such activities."

³² Lorinda Wichman, Chairman, Nye County Board of County Commissioners, *Letter to The Honorable Steven Chu, Secretary, U.S. Department of Energy: Consent to Host the Proposed Repository at Yucca Mountain*. March 6, 2012.

If a model could be developed that gave the local community primacy, or a position at least equal to the state in negotiating a technical basis for supporting or rebutting the findings of the Nuclear Regulatory Commission, there could be a path forward. It likely would require a meaningful role in oversight including the ability to challenge the technical findings of Nuclear Regulatory Commission. While the ability to challenge the Nuclear Regulatory Commission staff position already exists through the intervention process of the licensing hearing for both the local community and the state, either a consent-based process or the consultation and cooperation process of the Nuclear Waste Policy Act, could support a case for a more meaningful role for the parties to the proceeding.

As the process stands today, if the state, local community, or other intervenor is not persuasive in its technical arguments and the Nuclear Regulatory Commission votes to authorize the license, the only recourse for the intervenor is through the courts. If, however, an agreement could be negotiated between the community, state, and Nuclear Regulatory Commission, and be approved by Congress, an independent technical commission could be the ultimate judge of the technical merits in supporting the case before the Nuclear Regulatory Commission. Ultimate authority could not be taken from the Nuclear Regulatory Commission without significant change to existing law; however there are two obvious benefits to this pathway. First, if convincing technical arguments could sway the independent technical commission to side with the intervenor, this could cause the Nuclear Regulatory Commission to revisit its decision. Also, if this were not successful in convincing the Nuclear Regulatory Commission to revise its decision, the independent technical commission's position could provide a meaningful argument in the intervenors' defense in any court case.

While this more closely argues for following the Nuclear Waste Policy Act construct than for a true consent-based program, it is important to recognize that today, even though the Senate has put forth legislation to implement the Blue Ribbon Commission recommendations, there does not seem to be strong support for abandoning the Nuclear Waste Policy Act and Yucca Mountain.³³ It only makes sense

³³ The Nuclear Waste Administration Act of 2015^a establishes a Nuclear Waste Administration to provide for the disposal of nuclear waste, including the siting, construction, and operation of additional repositories, a test and evaluation facility, and additional storage facilities. The bill was sponsored by Senators Alexander, Murkowski, Feinstein, and Cantwell. While this bill states it will terminate those authorities of the Secretary regarding siting, construction, and operation of repositories, storage facilities, or test and evaluation facilities that were not transferred to the Administrator, it did not address directly the issue of changing the law^b designating Yucca Mountain for development of a repository. On March 4, 2015, Senator Lamar Alexander stated: “[l]et me be clear: Yucca Mountain can and should be part of the solution. Federal law designates Yucca Mountain as the nation’s repository for used nuclear fuel. To continue to oppose Yucca Mountain because of radiation concerns is to ignore science—as well as the law.” And: “The next steps on Yucca Mountain include ... restarting the hearings before the Atomic Safety and Licensing Board, which were suspended in September 2011. Money is available for these activities, and I want to hear why there is no request to use it.”^c

The Chairman of the House subcommittee with responsibility for management of nuclear waste, John Shimkus, has made clear the House support for moving forward with Yucca Mountain and not replacing it with an interim storage program: “[w]e’re open to interim but there always has to be a nexus to Yucca, otherwise you’re not going to have interim.”^d

Shimkus also emphasized the bipartisan support that exists in the House: “[l]et me state at the outset that the issue of the nation’s nuclear waste management policy is not a partisan issue. The House of Representatives has repeatedly supported Yucca Mountain in an overwhelming and bipartisan manner. Last summer, efforts to abandon Yucca Mountain were defeated on the House floor with the body voting four to one in favor of Yucca Mountain. This includes nearly 2/3 of the Chamber’s Democrats.”^e

^a U.S. Senate, *Nuclear Waste Administration Act of 2015: S. 854*. 114th Congress. Introduced in the Senate on March 24, 2015.

^b United States Congress. *Joint Resolution. Approving the site at Yucca Mountain, Nevada, for the development of a repository for the disposal of high-level radioactive waste and spent nuclear fuel, pursuant to the Nuclear Waste Policy Act of 1982. Public Law 107-200*. H.J. Res. 87. July 23, 2002.

in the development of a consent-based program not to abandon the Nuclear Waste Policy Act and the Yucca Mountain project

(4) What information and resources do you think would facilitate your participation?

The principal resource needed to initiate negotiations for a volunteer site for an interim storage facility or repository is funding to study the site sufficiently to know that it has a chance of performing safely. Herein lies the first dilemma of a consent-based program—without funds, a state or community has little means for performing the scientific investigations needed, and those funds are not likely to materialize unless a site is picked and consent contracts are signed. Alternatively, a number of sites could be selected from a number of volunteer sites, and all could be studied. That is a combination of what was tried with the Nuclear Waste Policy Act with its consultation and concurrence program and the National Waste Terminal Storage program which actively sought volunteers prior to passage of the Nuclear Waste Policy Act. This produces and is tainted by the second dilemma of a consent-based program— political suitability cannot replace technical suitability. Together, the conundrum created is: does one seek sites and then from that set determine those that are potentially suitable for characterization or does one determine set of sites that are potentially suitable and then seek volunteers? Assuming regulatory siting guidelines exist and an equitable way can be found to identify one or more sites, then it just comes down to sufficient funding for affected entities to participate meaningfully at each stage of the development process. Sufficient funding must be made available in the early stage of the program to allow identification, collection, and interpretation and analyses of technical information about the site and design. As the program matures, additional significant funding is required for independent technical studies, evaluation, and participation in reviews of government produced documentation. Make no mistake about this—a clear path forward defined in regulations promulgated before decisions are made about pursuing a particular site is needed before the process can begin.

The Affected Unit of Local Government program and funding provided under Nuclear Waste Policy Act Section 116 and 117 worked to a degree. Nye County was able to field a strong science program and generate data that not only was used to inform the County Commissioners and the local residents about the safety of the Yucca Mountain site, the data Nye County collected was of sufficient quality to be used in the Department of Energy license application. Other counties used these funds to review program documents and inform local residents. The most important points here are that the site county was able to obtain funds to perform an independent science program and adjoining communities were able to hire technical experts to independently review project progress. This is consistent with the *Safety Case* model discussed in these comments and should be an integral part of any future program. Remember, however, that Yucca Mountain was not a volunteer site; Congress picked the site and crafted the Affected Unit of Local Government program concept in the legislation.

The international model for a *Safety Case* includes relevant provisions for local community involvement: “[d]evelopment of the safety case should commence at the inception of the project and should be continued through all steps in the development and operation of the facility through to its closure and licence (*sic*) termination. The safety case should also be used throughout all steps to guide the site selection process, the facility design, excavation and construction activities, operation of the facility and its closure. It should be used to identify research and development needs, to identify and establish limits,

(foot note 33 continued) ^c Senator Lamar Alexander, Chairman Appropriations Subcommittee on Energy & Water Development, *Hearing on FY16 Nuclear Regulatory Commission Budget: Opening Statement*. March 4, 2015.

^d Hannah Northey, *House GOP willing to play hardball with Senate*. Environment & Energy Daily. May 22, 2015.

^e Congressman John Shimkus, Chairman, Subcommittee on Environment and the Economy, *Hearing on Update on the Current Status of Nuclear Waste Management Policy: Opening Statement*. May 15, 2015.

controls and conditions at the various steps, and primarily to provide the basis for the licensing process. It will also be the main vehicle of communication with interested parties, in terms of explaining the safety features and how a reasonable level of safety will be ensured.”³⁴ In practice, the *Safety Case* model involves intensive public involvement, including review and comment, on the documents generated at each stage of the facility development.

Distribution of funds should be limited to meaningful participation in the ongoing development of the *Safety Case* for an interim storage facility or repository. Funding should be constrained to that needed for participation as evidenced by potential for impact to the local population and the degree of active participation in the process. In other words there must be a limit to the number of entities that need to consent in order to move forward. Adjacent communities and counties could have equally persuasive arguments for impacts and adjacent states could have potentially persuasive arguments for impacts. States affected by transportation likely could have seemingly persuasive arguments for impacts. There has to be a limit to the number of entities that could argue for participation in the consent-based process. Senate bill S.691³⁵ would have required the Secretary of Energy to have entered into an agreement to host the repository with (1) the governor of the state in which the repository is proposed to be located; (2) each affected unit of local government; (3) any unit of general local government contiguous to the affected unit of local government if spent nuclear fuel or high-level radioactive waste will be transported through that unit of general local government for disposal at the repository; and (4) each affected Indian tribe. In the case of Yucca Mountain, arguably every county in Nevada, and counties in California, Utah, and Arizona would have to consent. And, if counties in contiguous states need to consent, why wouldn't the governors of those states need to consent as well?

This is taking the concept of consent-based siting to an extreme—it would be more logical to identify the affected county and state as the principal entities and focus the interactions and funding there. Further, there needs to be a meaningful commitment to mitigation, benefits, and compensation as the program proceeds to completion. A situation subject to the annual appropriation process does not offer a meaningful guarantee of long-term acquiescence. A fund or endowment, overseen by an independent oversight organization, could provide security in assuring that commitments will be honored. An example of the types of mitigation, benefits, and compensation envisioned can be found in testimony of Nye County Commissioner Dan Schinhofen, who recently testified before the House Energy and Commerce Committee's Subcommittee on Energy and the Environment³⁶ on mitigation, benefits, and compensation.

Commissioner Schinhofen noted that he had praised the Nuclear Waste Policy Act as a good bill, but that it did have a deficiency, which he was pleased the committee was reviewing. That flaw is lack of a clearly articulated benefits package to go to the State of Nevada and the local communities. Commissioner Schinhofen stated this is not "bribe money; it is a package of benefits to fairly compensate the local governments for the use of the land for nuclear waste. The resources are also for mitigation to the State and Nye County for the adverse impacts of a large multibillion dollar project located in a sparsely populated region.

³⁴ International Atomic Energy Agency, *The Safety Case and Safety Assessment for the Disposal of Radioactive Waste*. Specific Safety Guide No. SSG-23. 2012.

³⁵ U.S. Senate, *Nuclear Waste Informed Consent Act*. 114th Congress, 1st Session. March 10, 2015

³⁶ Dan Schinhofen, Vice-Chairman of the Nye County, Nevada, Board of County Commissioners. *Written Testimony before the House Energy and Commerce Committee Subcommittee on Environment and the Economy on Yucca Mountain Issues*. July 7, 2016

Commissioner Schinhofen noted that Nye County proposed a two stage process to determine the proper level of benefits. The first stage would start when the license process is restarted. The second would start when construction of the repository commences.

The first stage proposal included the following:

1. Resources to the State and local counties to provide oversight and participation in the licensing process.
2. Resources to the State and local governments so they can be involved in the transportation decision making process to insure integration with existing infrastructure and needs.
3. Resources to the site county to improve its infrastructure in preparation for the construction. This would include resources for equipment, manpower, and training for Nye County's EMS, fire, and law enforcement agencies. It would also provide resources to upgrade to the county's roads, and water systems.
4. The transfer of federal land to the State and impacted counties.
5. Resources to the University of Nevada system and community colleges to develop the trained workforce and expertise to support and monitor the project if it is approved.
6. Transferring more Yucca Mountain support activities by the Department of Energy and the contractors from other states to Nevada. Construction of new Department of Energy laboratory facilities in Nye County to support Yucca Mountain and work on the next generation of nuclear technologies.
7. Payments to the State and local governments to replace any lost taxes and other revenue.

Commissioner Schinhofen noted that he did not have a comprehensive list of the benefits that will be needed during construction and operation of the repository. Rather, he proposed the creation of a task force with representatives from the Department of Energy, the Nuclear Regulatory Commission, the State of Nevada, Nye County, impacted Native American tribes and other local governments to develop a prioritized list of the benefits. The task force would report back to Congress within two years. The legislation should provide, at a minimum, the additional land transfers, construction of a rail line that would serve both Yucca Mountain and other users, construction of I-11, grants to the University of Nevada and the local community colleges, and payments to the state, site county, impacted local communities, and Native American tribes. The package should also address the need for water, which will be required for the project and associated support activities. If additional water became available from a desalination plant, it would greatly relieve the water controversies that plague Southern Nevada as well as guarantee needed supplies for the project.

Commissioner Schinhofen further noted that this benefit package would not be a long term drain on the federal budget, and pointed out the savings that would result if the Department of Energy was not required to study other sites. Also, getting the waste moved to Yucca Mountain will end the suits and payments for lawsuits for the government failing to honor the contracts to take control of the nuclear waste.

Commissioner Schinhofen noted that the current design of the Yucca Mountain repository includes aging pads to hold up to 30,000 metric tons of waste that can be built quickly and efficiently. This would eliminate the need for an interim site in the near future. This, in turn, would eliminate the need to study and characterize another site. In short, he concluded, the savings from proceeding with Yucca Mountain would far exceed the most generous benefits package.

Commissioner Schinhofen did not recommend payment of a large sum. Instead, he proposed collaboration between the Department of Energy, the State, Nye County and other impacted local governments to insure that resources were provided for activities that support the construction and operation of a nuclear waste repository at Yucca Mountain.

The Administration's decision to abandon the Yucca Mountain project was accompanied by actions to remove project technical information from public access; importantly, the Nuclear Regulatory Commission's Licensing Support Network was taken off internet access. Communities desiring to know if they have a viable site need access to such information. Access to the records of the earlier Energy Research and Development Agency—National Waste Terminal Storage siting program and the Department of Energy Nuclear Waste Policy Act screening programs will be needed. Access to the records of the second repository program of the Nuclear Waste Policy Act could help to prevent a repeat of the problems that program incurred as the state and federal governments tried to make sense of diverse and scattered information. United States Geological Survey records and technical support, together with that of state geological surveys to allow understanding of extant geological and hydrological information will be important, as will any previous source of records from large programs that gathered such information - for example Environmental Impact Statements. Any records that lead to an understanding of the failure consultation and concurrence effort of the second repository program of the Nuclear Waste Policy Act would be invaluable.

(5) What else should be considered?

The Department of Energy budget presentation on February 1, 2010³⁷ noted that the Obama administration had determined that developing a repository at Yucca Mountain, Nevada, was not a workable option, and had decided to terminate the Office of Civilian Radioactive Waste Management. This was done without the consent of Congress, and followed earlier statements by then Senator Obama that he believed a better short-term solution was to store nuclear waste on-site at the reactors where it was protected, or at a designated facility in the state where it is produced, until a safe, long-term disposal solution that is based on sound science could be found.³⁸ While Senator Obama provided no evidence to support his claim that the science of Yucca Mountain was not sound and was not challenged, Secretary of Energy Chu in the Obama administration did not fare so well. When challenged, Secretary Chu was not able to identify the scientific shortcomings implied by the White House. When confronted and asked to present evidence to support his claim, Chu's argument—and the administration's argument against Yucca Mountain—changed to *it's unworkable*.³⁹

Regarding the question of the soundness of the science, the Nuclear Regulatory Commission staff has issued their Safety Evaluation Report and found that the Department met the applicable regulatory requirements, subject to the proposed conditions of construction authorization, except for the requirements regarding ownership of land and water rights, respectively. Safety Evaluation Report Volume 5, *Proposed Conditions on the Construction Authorization and Probable Subjects of License Specifications*,⁴⁰ documents the results of the Nuclear Regulatory Commission staff's proposed conditions

³⁷ U.S. Department of Energy, *Department of Energy FY 2011 Congressional Budget Request. Volume 7. Nuclear Energy: Defense Nuclear Waste Disposal: Nuclear Waste Disposal*. DOE/CF-0053. February, 2010.

³⁸ Barack Obama, "Barack Obama Explains Yucca Mountain Stance." Letter to the Editor. *Las Vegas Review-Journal*. May 20, 2007. And: Zachary Scott Edwards, "Yucca Nuclear Storage 'Has Failed.'" *Las Vegas Review-Journal*. October 31, 2007.

³⁹ By January 21, 2009, Chu was Secretary of Energy in the Obama administration, and actively working to dismantle the Yucca Mountain Project, first by testifying that the science of the Yucca Mountain site was bad. Early testimony by Secretary Chu reiterated President Obama's position that the science of Yucca Mountain was bad: "[w]hile it's fair to say that the whole history of Yucca Mountain was more political than scientific, but also, very truthfully, I can say that given what we know today the repository looks less and less good. So now we're in a situation where it can't move forward." Steven Chu, cited in March 24, 2010, House Appropriations Subcommittee Hearing questioning.

⁴⁰ U.S. Nuclear Regulatory Commission, *Safety Evaluation Report Related to Disposal of High-Level Radioactive Wastes in a Geologic Repository at Yucca Mountain, Nevada. Volume 5: Proposed Conditions on the Construction Authorization and Probable Subjects of License Specifications* NUREG-1949, Vol. 5. January 2015.

of construction authorization, including proposed conditions documented in the other Safety Evaluation Report volumes. In addition, Safety Evaluation Report Volume 5 documents the staff's review of the Department of Energy's probable subjects of license specifications provided in its Safety Analysis Report. Note that neither unsatisfied condition is a technical issue. Because the Yucca Mountain site is located on Federal land administered by the Bureau of Land Management, the United States Air Force, and the Department of Energy, only Congress can effect a land transfer. As to the water rights issue, law suits addressing that are currently on hold in court because the administration has dismantled the program. Congress likely will have to act on this as well.

Regarding the site being *unworkable*, this stems from a position of the Obama administration that is contrary to the Nuclear Waste Policy Act of 1982. The legislation leading to the Act was duly debated and passed by Congress with an explicit provision that a veto of the Secretary and President's site recommendation was not to be allowed, and specification of consultation and cooperation, not consent, to resolve issues.⁴¹ The administration empaneled a Blue Ribbon Commission on America's Nuclear Future⁴² to conduct a comprehensive review of policies for managing the back end of the nuclear fuel cycle, including all alternatives for the storage, processing, and disposal of civilian and defense used nuclear fuel and nuclear waste.

Absent from the directive is mention of seeking the input of Congress.

A situation of an administration deciding that a law is not correct and acting without involving Congress in the high-level waste program is reminiscent of May, 1986 when the Department of Energy announced that a second repository was not needed.⁴³ Congress's reaction was not unexpected: "[t]his unfortunate and ill-timed move by DOE does not simply impact the second repository program, it threatens the integrity of the whole high-level nuclear waste disposal plan. NWPA was crafted with the clear intent of providing for two repositories. For the citizens of the states under consideration for the first repository, these plans for a second repository made it clear that the waste disposal program was truly a national solution to the waste problem and that their state would not become the sole dumping grounds for all of our nation's high-level nuclear waste."⁴⁴ In January, 1987 the Department of Energy took a second action that would further heighten Congress's unhappiness with the Department. The Department released a draft Mission Plan Amendment⁴⁵ that attempted to revise certain details regarding the second repository program. In response to this Senator Evans noted, "[t]he department has the gall to imply: We'll go ahead and implement these changes if the Congress doesn't act affirmatively in 30 days to overrule our new game plan."⁴⁶

Today, the Senate has acted to begin to implement the recommendations of the Blue Ribbon Commission on America's Nuclear Future.⁴⁷ While it has focused principally on interim storage, as noted, the sponsor of the bill has said Yucca Mountain is needed. The House has indicated that is open to interim provided there is a nexus to Yucca, otherwise there won't be interim. So, the directive of the Nuclear Waste Policy

⁴¹ See earlier discussion on *Who gets to make the decision?*, particularly *Advice provided by the Comptroller General regarding Federal preemption*

⁴² Barack Obama, *Memorandum for the Secretary of Energy: Blue Ribbon Commission on America's Nuclear Future*. White House Office of the Press Secretary. January 29, 2010.

⁴³ U.S. Department of Energy, *DOE Announces Decisions on High-Level Waste Repository Program*. Office of the Press Secretary. May 28, 1986.

⁴⁴ U.S. Congress, *Hearing Before the Senate Committee on Energy and Natural Resources*. June 16, 1986, pp. 11, 17.

⁴⁵ U.S. Department of Energy, *Draft Mission Plan Amendment*. DOE/RW-0128. January 28, 1987.

⁴⁶ Senator Daniel J. Evans, *Opening Statement before the Hearing on the Nuclear Waste Program, Before the Senate Committee on Energy and Natural Resources*. S. Hrg. 100-230 Part 1. January 29, 1987.

⁴⁷ See footnote 33

Act to study Yucca Mountain has not changed and does not appear likely to change. When the Department acted independent of Congress to dismantle the Office of Civilian Radioactive Waste Management, affected parties sued the government for failure to follow the law. This challenge resulted in the Court finding the administration did not have the authority to not follow the law and directed the resumption of the Nuclear Regulatory Commission licensing hearings.⁴⁸ Yucca Mountain is on hold today for no reason other than the administration and Department of Energy have not requested funds, although realistically, powerful Senators have proven that they could prevent budget action even if funds were requested. The stalemate must be addressed: it does not appear that there will be an interim storage program authorized by Congress unless the administration follows the law and completes the licensing hearings for Yucca Mountain.

Finally, another important fact to consider is the likelihood of any site meeting Nuclear Regulatory Commission licensing requirements. To date, the Yucca Mountain appears highly likely to be safe and licensable, as confirmed by the Nuclear Regulatory Commission staff's Safety Evaluation Report. No other site probably is within thirty years of where Yucca Mountain is today, and in reality, the time is likely longer considering the need to promulgate siting and licensing regulations. Additionally, siting of an interim storage facility could end up being contingent on a guarantee of the availability of a repository. Associated with the time to get to an end is the cost to get to an end; to the cost of the facility must be added the costs incurred by the failure of the Federal government to meet its contractual obligations to take the waste in 1998. Yucca Mountain cost nearly \$11 billion to date in year of expenditure dollars.⁴⁹ The government's failure to meet its contractual obligations so has resulted in nearly \$2 billion in court-awarded damage settlements being paid from the taxpayer-funded Judgment Fund to compensate energy companies for storing the used fuel onsite. Damages could reach more than \$20 billion by 2020 and up to \$500 million annually after 2020.⁵⁰

Together, technical arguments and economics dictate that the prudent course of action is to recognize that Congress was aware of the issues related to consent-based siting when it passed the Nuclear Waste Policy Act and follow the Nuclear Waste Policy Act directive, affirmed by the Court of appeals for the District of Columbia Circuit, and complete the Yucca Mountain licensing hearing. If that is successful, Yucca Mountain can be built with assurance that it is safe.

⁴⁸ United States Court of Appeals for the District of Columbia Circuit, *Nuclear Energy Institute, Inc., Petitioner, v. Environmental Protection Agency, Op. Cit.*

⁴⁹ U.S. Department of Energy, *Summary of Program Financial & Budget Information*, Office of Civilian Radioactive Waste Management. January 31, 2010.

⁵⁰ Nuclear Energy Institute, *Issues & Policy: Nuclear Waste Management: Disposal: Government Liabilities*. <http://www.nei.org/issues-policy/nuclear-waste-management/disposal> Accessed July 8, 2016

SEAs, with instructions, and will request that SEAs commence submitting FY 2015 data to the Census Bureau on Tuesday, February 2, 2016. SEAs are urged to submit accurate and complete data by Friday, March 18, 2016, to facilitate timely processing.

Submissions by SEAs to the Census Bureau will be analyzed for accuracy and returned to each SEA for verification. SEAs must submit all data, including any revisions to FY 2014 and FY 2015 data, to the Census Bureau no later than Monday, August 15, 2016. Any resubmissions of FY 2014 or FY 2015 data by SEAs in response to requests for clarification or reconciliation or other inquiries by NCES or the Census Bureau must be completed by Tuesday, September 6, 2016. Between August 15, 2016, and September 6, 2016, SEAs may also, on their own initiative, resubmit data to resolve issues not addressed in their final submission of NPEFS data by August 15, 2016. All outstanding data issues must be reconciled or resolved by the SEAs, NCES, and the Census Bureau as soon as possible, but no later than September 6, 2016.

In order to facilitate timely submission of data, the Census Bureau will send reminder notices to SEAs in May, June, and July of 2016.

Having accurate, consistent, and timely information is critical to an efficient and fair Department of Education (Department) allocation process and to the NCES statistical process. To ensure timely distribution of Federal education funds based on the best, most accurate data available, the Department establishes, for program funding allocation purposes, Monday, August 15, 2016, as the final date by which the SEAs must submit data using either the interactive survey form on the NPEFS data collection Web site at: <http://surveys.nces.ed.gov/ccdnpefs> or ED Form 2447.

Any resubmissions of FY 2014 or FY 2015 data by SEAs in response to requests for clarification or reconciliation or other inquiries by NCES or the Census Bureau must be completed through the interactive survey form on the NPEFS data collection Web site or ED Form 2447 by Tuesday, September 6, 2016. If an SEA submits revised data after the final deadline that result in a lower SPPE figure, the SEA's allocations may be adjusted downward, or the Department may direct the SEA to return funds. SEAs should be aware that all of these data are subject to audit and that, if any inaccuracies are discovered in the audit process, the Department may seek

recovery of overpayments for the applicable programs.

Note: The following are important dates in the data collection process for FY 2015:

February 2, 2016—SEAs can begin to submit accurate and complete data for FY 2015 and revisions to previously submitted data for FY 2014.

March 18, 2016—Date by which SEAs are urged to submit accurate and complete data for FY 2014 and FY 2015.

August 15, 2016—Mandatory final submission date for FY 2014 and FY 2015 data to be used for program funding allocation purposes.

September 6, 2016—Mandatory final deadline for responses by SEAs to requests for clarification or reconciliation or other inquiries by NCES or the Census Bureau. All data issues must be resolved.

If an SEA's submission is received by the Census Bureau after August 15, 2016, the SEA must show one of the following as proof that the submission was mailed on or before that date:

1. A legibly dated U.S. Postal Service postmark.
2. A legible mail receipt with the date of mailing stamped by the U.S. Postal Service.
3. A dated shipping label, invoice, or receipt from a commercial carrier.
4. Any other proof of mailing acceptable to the Secretary.

If the SEA mails ED Form 2447 through the U.S. Postal Service, the Secretary does not accept either of the following as proof of mailing:

1. A private metered postmark.
2. A mail receipt that is not dated by the U.S. Postal Service.

Note: The U.S. Postal Service does not uniformly provide a dated postmark. Before relying on this method, an SEA should check with its local post office.

Accessible Format: Individuals with disabilities may obtain this document in an accessible format (e.g., braille, large print, audiotape, or compact disc) on request to: Mr. Stephen Q. Cornman, NPEFS Project Director, National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Telephone: (202) 245-7753 or by email: stephen.cornman@ed.gov.

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Authority: 20 U.S.C. 9543.

Dated: December 18, 2015.

Ruth Neild,

*Deputy Director for Policy and Research
Delegated the Duties of the Director for the
Institute of Education Sciences.*

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DEPARTMENT OF ENERGY

Invitation for Public Comment To Inform the Design of a Consent-Based Siting Process for Nuclear Waste Storage and Disposal Facilities

AGENCY: Fuel Cycle Technologies, Office of Nuclear Energy, Department of Energy.

ACTION: Notice of Invitation for Public Comment (IPC).

SUMMARY: The U.S. Department of Energy (DOE) is implementing a consent-based siting process to establish an integrated waste management system to transport, store, and dispose of commercial spent nuclear fuel and high level defense radioactive waste. In a consent-based siting approach, DOE will work with communities, tribal governments and states across the country that express interest in hosting any of the facilities identified as part of an integrated waste management system. As part of this process, the Department wants public input on implementing this system. In order to solicit public feedback, DOE is submitting this Invitation for Public Comment (IPC). Through this IPC, we are requesting feedback from communities, states, Tribes, and other interested stakeholders on how to design a consent-based siting process. In addition, the Department intends to host a series of public meetings to engage communities and discuss the development of a consent-based approach to managing our nation's nuclear waste.

DATES: Written comments will be accepted beginning December 23, 2015 through June 15, 2016. Separate announcements will be made for each public meeting.

ADDRESSES: You may submit questions or comments by any of the following methods:

Email: Responses may be provided by email to consentbasedsiting@hq.doe.gov. Please include "Response to IPC" in the subject line.

Mail: Responses may be provided by mail to the following address: U.S. Department of Energy, Office of Nuclear Energy, Response to IPC, 1000 Independence Ave SW., Washington, DC 20585.

Fax: Responses may be faxed to 202-586-0544. Please include "Response to IPC" on the fax cover page.

Online: Responses will be accepted online at www.regulations.gov.

FOR FURTHER INFORMATION CONTACT:

Requests for further information should be sent to consentbasedsiting@hq.doe.gov. Please include "Question on IPC" in the subject line.

SUPPLEMENTARY INFORMATION:

Background

Electricity generated by nuclear energy has powered homes, schools, and industry in the United States since the 1950s. Nuclear material is used to power naval vessels and was used to build the U.S. nuclear weapon stockpile during the Cold War. These activities have generated spent nuclear fuel (SNF) and high-level radioactive waste (HLW).

Isolating and containing this radioactive waste is necessary to ensure the long-term safety and security of the public and environment. Though the Cold War ended a quarter century ago and commercial nuclear power has been generated for over half a century, the country still lacks a permanent disposal solution for SNF and HLW. Instead, commercial SNF is stored at operating and shutdown reactor sites around the country while HLW from defense activities resides at Department of Energy sites. Previous attempts to develop long-term solutions for storage and disposal of this waste have resulted in controversy, litigation, protracted delays, and ultimately a failure to address the problem.¹

Failure to dispose of nuclear waste has proven costly for energy ratepayers and taxpayers who are paying for the inability of the government to meet federal waste management commitments. States, Tribes, and others in the public carry the undue burden of hosting radioactive waste they were promised was only temporary.² Collectively, we have the responsibility to dispose of waste using a process that

is fair to present and future generations. We must live up to our obligations and develop a lasting solution.

Purpose

The purpose of this IPC is to seek input on the elements that the Department of Energy should consider in the development of a consent-based siting process. As reflected in the Administration's *Strategy for the Management and Disposal of Used Nuclear Fuel and High-Level Waste (Strategy)*,³ the Department concurs with the recommendation from the Blue Ribbon Commission on America's Nuclear Future that a phased, adaptive, consent-based siting process is the best approach to gain the public trust and confidence needed to site nuclear waste facilities. As the Department begins to consider a process for consent-based siting, we want to hear from all interested parties.

The Administration's Strategy envisioned the implementation of an integrated waste management system consisting of a range of nuclear waste facilities, each serving a specific role, to address the challenges facing the U.S. These nuclear waste facilities could include:

- A pilot interim storage facility with limited capacity capable of accepting used nuclear fuel and high-level radioactive waste and initially focused on serving shut-down reactor sites;
- A larger, consolidated interim storage facility, potentially co-located with the pilot facility and/or with a geologic repository, that provides the needed flexibility in the waste management system and allows for important near-term progress in implementing the federal commitment;
- Deep borehole disposal, which could be an option for disposal of smaller and more compact waste forms currently stored at Department of Energy sites;
- A permanent geologic repository for the disposal of defense high-level waste and, potentially, some DOE-managed spent nuclear fuel, which would be generally less radioactive, cooler, and easier to handle, enabling a simpler design and earlier availability; and
- A permanent geologic repository for the disposal of commercial spent nuclear fuel.

In early to mid-2016, the Department of Energy will host a series of public meetings to receive input for the design of a consent-based siting process. This

IPC announces the Department's intention to hold meetings and to request input about what considerations are important when designing a fair and effective process for consent-based siting. Written input as well as feedback from public meetings will enable the Department to draft the initial steps on a proposal for a phased, adaptive, consent-based process for selecting sites.

Moving forward, the Department of Energy will draw upon extensive experience in storage, transportation, siting, policy, legislative, and regulatory issues both in the U.S. and elsewhere. A top priority is to build upon and improve existing relationships with states, Tribes, communities, and stakeholders to help identify important considerations, challenges, and opportunities for discussion.

Questions for Input

(1) *How can the Department of Energy ensure that the process for selecting a site is fair?*

Consent based siting seeks to ensure fairness in the distribution of costs, benefits, risks and responsibilities now and in future generations. How, in your view, can fairness be best assured by the process for selecting a site?

(2) *What models and experience should the Department of Energy use in designing the process?*

The challenges and opportunities of site selection drive us to continue to learn from previous or ongoing examples. From your perspective, what experience and models do you think are the most relevant to consider and draw from in designing the process for selecting a site?

(3) *Who should be involved in the process for selecting a site, and what is their role?*

The Department believes that there may be a wide range of communities who will want to learn more and be involved in selecting a site. Participation in the process for selecting a site carries important responsibilities. What are your views on who should be involved and the roles participants should have?

(4) *What information and resources do you think would facilitate your participation?*

The Department of Energy is committed to ensuring that people and communities have sufficient information and access to resources for engaging fully and effectively in siting. What information and resources would be essential to enable you to learn the most about and participate in the siting process?

(5) *What else should be considered?*

¹ Blue Ribbon Commission on America's Nuclear Future, Report to the Secretary of Energy, January 2012. <http://energy.gov/ne/downloads/blue-ribbon-commission-americas-nuclear-future-report-secretary-energy>.

² Ibid.

³ Strategy for the Management and Disposal of Used Nuclear Fuel and High-Level Radioactive Waste, January 2013. <http://www.energy.gov/downloads/strategy-management-and-disposal-used-nuclear-fuel-and-high-level-radioactive-waste>.

The questions posed in this document are a starting point for discussion on the design of the process for consent-based siting of nuclear waste facilities, the Department of Energy would like to hear about and discuss any related questions, issues, and ideas that you think are important.

Next Steps

Written comments from this IPC, along with input from public meetings, will be documented in a draft report scheduled to be released in summer 2016. The Department is planning to solicit comments on the draft report in order to ensure the content accurately reflects input received.

If you are unable to attend a public meeting or would like to further discuss ideas for consent-based siting, please propose an opportunity for us to speak with you. The Department will do its best to accommodate requests and help arrange additional opportunities to engage. To learn more about nuclear energy, nuclear waste, and ongoing technical work please see energy.gov/consentbasedsiting.

Submitting Comments

Instructions: Submit comments via any of the mechanisms set forth in the ADDRESSES section above. Respondents are requested to provide the following information at the beginning of their response to this IPC:

State, tribal, community, organization, public or individual name;

State, tribal, community, organization, public or individual point of contact; and

Point of contact's address, phone number, and email address.

If an email or phone number is included, it will allow the DOE to contact the commenter if questions or clarifications arise. No responses will be provided to commenters in regards to the disposition of their comments. All comments will be officially recorded without change or edit, including any personal information provided. Personal information (other than name) will be protected from public disclosure upon request.

Please identify your answers by responding to a specific question or topic, if possible. Respondents may answer as many or as few questions as they wish. Any additional comments that do not address a particular question should be included at the end of your response to this IPC as "Additional Comments."

DOE would appreciate early input in order to identify initial interest and concerns, as well as any early opportunities. Amended or revised inputs from commenters are also

welcome throughout the comment period to help DOE develop this process. Comments received after the closing date will be considered as the planning process progresses; however, the DOE is only able to ensure consideration of comments received on or before the closing date as the initial phase of the consent based siting process is developed. Subsequent comments and input will also be welcome as DOE views this as a core component of a phased and adaptive consent-based siting process.

Privacy Act: Data collected via the mechanisms listed above will not be protected from the public view in any way.

Issued in Washington, DC, on December 15, 2015.

Andrew Griffith,

Associate Deputy Assistant Secretary for Fuel Cycle Technologies, Office of Nuclear Energy, Department of Energy.

[FR Doc. 2015-32346 Filed 12-22-15; 8:45 am]

BILLING CODE 6450-01-P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Docket No. NJ16-4-000]

City of Banning, California; Notice of Filing

Take notice that on December 15, 2015, City of Banning, California submitted its tariff filing: Filing 2016 Transmission Revenue Balancing Account Adjustment and Existing Transmission Contracts update, to be effective 1/1/2016.

Any person desiring to intervene or to protest this filing must file in accordance with Rules 211 and 214 of the Commission's Rules of Practice and Procedure (18 CFR 385.211, 385.214). Protests will be considered by the Commission in determining the appropriate action to be taken, but will not serve to make protestants parties to the proceeding. Any person wishing to become a party must file a notice of intervention or motion to intervene, as appropriate. Such notices, motions, or protests must be filed on or before the comment date. On or before the comment date, it is not necessary to serve motions to intervene or protests on persons other than the Applicant.

The Commission encourages electronic submission of protests and interventions in lieu of paper using the "eFiling" link at <http://www.ferc.gov>. Persons unable to file electronically should submit an original and 5 copies of the protest or intervention to the

Federal Energy Regulatory Commission, 888 First Street NE., Washington, DC 20426.

This filing is accessible on-line at <http://www.ferc.gov>, using the "eLibrary" link and is available for review in the Commission's Public Reference Room in Washington, DC. There is an "eSubscription" link on the Web site that enables subscribers to receive email notification when a document is added to a subscribed docket(s). For assistance with any FERC Online service, please email FERCOnlineSupport@ferc.gov, or call (866) 208-3676 (toll free). For TTY, call (202) 502-8659.

Comment Date: 5:00 p.m. Eastern Time on January 5, 2016.

Dated: December 17, 2015.

Nathaniel J. Davis, Sr.,

Deputy Secretary.

[FR Doc. 2015-32270 Filed 12-22-15; 8:45 am]

BILLING CODE 6717-01-P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Docket No. IN16-2-000]

ETRACOM LLC; Michael Rosenberg; Notice of Designation of Commission Staff as Non-Decisional

December 16, 2015.

With respect to an order issued by the Commission on December 16, 2015 in the above-captioned docket, with the exceptions noted below, the staff of the Office of Enforcement are designated as non-decisional in deliberations by the Commission in this docket.¹

Accordingly, pursuant to 18 CFR 385.2202 (2015), they will not serve as advisors to the Commission or take part in the Commission's review of any offer of settlement. Likewise, as non-decisional staff, pursuant to 18 CFR 385.2201 (2015), they are prohibited from communicating with advisory staff concerning any deliberations in this docket.

Exceptions to this designation as non-decisional are:

Larry Parkinson
Lee Ann Watson
Janel Burdick
Maria Brun
Sam Bonar
Gabriel Sterling
Carol Clayton
Wesley Heath
Seema Jain

¹ ETRACOM LLC and Michael Rosenberg, 153 FERC ¶ 61,314 (2015).

Consent-Based Siting

From: Michelle Schumacher [<mailto:schumacherfamily@me.com>]

Sent: Sunday, July 17, 2016 7:04 PM

To: Consent Based Siting <consentbasedsiting@hq.doe.gov>

Subject: Spent Nuclear Waste

Ok so the federal government collected taxes from all nuclear power users for YEARS AND YEARS and promised that the nuclear waste would be dealt with. There is even a process by which the spent fuel can be turned into inert glass chips - oh but wait the Federal government would just as soon build infrastructure in Afghanistan that take care of the harmful garbage that they promised to take care of - digging a hole in the ocean is UNACCEPTABLE putting it into a mountain is NOT ACCEPTABLE - do the right thing for a change and be leaders instead of not holding up the promises made.

We are watching you all and expect more form you -

Consent-Based Siting

From: Melanie Urich [<mailto:Melanie.Urich@piic.org>]
Sent: Monday, August 01, 2016 3:12 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Cc: Jessie Seim <Jessie.Seim@piic.org>
Subject: Response to IPC

Please find attached our response to the DOE's invitation for public comments. Thank you for the opportunity to participate in the consent-based siting process public comment period.

Melanie Urich

Legal Administrative Assistant | Prairie Island Indian Community
5636 Sturgeon Lake Road | Welch, MN 55089 | e-mail: Melanie.Urich@piic.org
Direct: 651-385-4136 | FAX: 651-385-4140 | toll free 800-554-5473



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PRAIRIE ISLAND INDIAN COMMUNITY LEGAL DEPARTMENT

August 1, 2016

US Department of Energy
Office of Nuclear Energy
Response to IPC
1000 Independence Avenue
Washington DC, 20585

RE: Invitation for Public Comments on the Design of a Consent-Based Siting Process

On December 23, 2015 the U.S. Department of Energy (“DOE”) published a notice in the Federal Register requesting comments to inform the design of a consent-based siting process for nuclear waste storage and disposal facilities (80 FR 79872). The Prairie Island Indian Community (the “PIIC,” “Community,” or “Tribe”) offers the following comments and recommendations on the consent-based siting process.

The Prairie Island Indian Community is a federally recognized Indian tribe organized under the Indian Reorganization Act of 1934. The Tribe’s Reservation is located on the ancestral homeland of the Mdewakanton Dakota on Prairie Island, which is formed at the confluence of the Vermillion and Mississippi Rivers in southeastern Minnesota (approximately 35 miles southeast of the Twin Cities of Minneapolis and St. Paul, Minnesota). The Mdewakanton, “those who were born of the waters,” have lived on Prairie Island for countless generations. The Tribe’s current land base (including both trust and fee lands) has grown through various federal acts beginning in 1891 and direct purchases by the Tribal Council, and now totals over 3,000 acres (including both land and water). See Figure 1.

The Prairie Island Indian Community is governed pursuant to its Constitution and By-Laws, adopted by tribal members on May 23, 1936, and approved by the Secretary of the Interior on June 20, 1936. The Constitution and By-laws provide that the Community Council (sometimes referred to as the “Tribal Council”) shall be the governing body for the Community. The five-member Tribal Council consists of a President, Vice-President, Secretary, Treasurer, and Assistant Secretary/Treasurer.

Immediately adjacent to our homeland is the Prairie Island Nuclear Generating Plant Units 1 and 2 (“PINGP”), which is owned and operated by Northern States Power Company d/b/a Xcel Energy (“Xcel”). The PINGP has been on-line since the early 1970s and will operate at least until 2034, as the plant received approval from the NRC in June 2011 to extend its operating licenses for an additional twenty years.

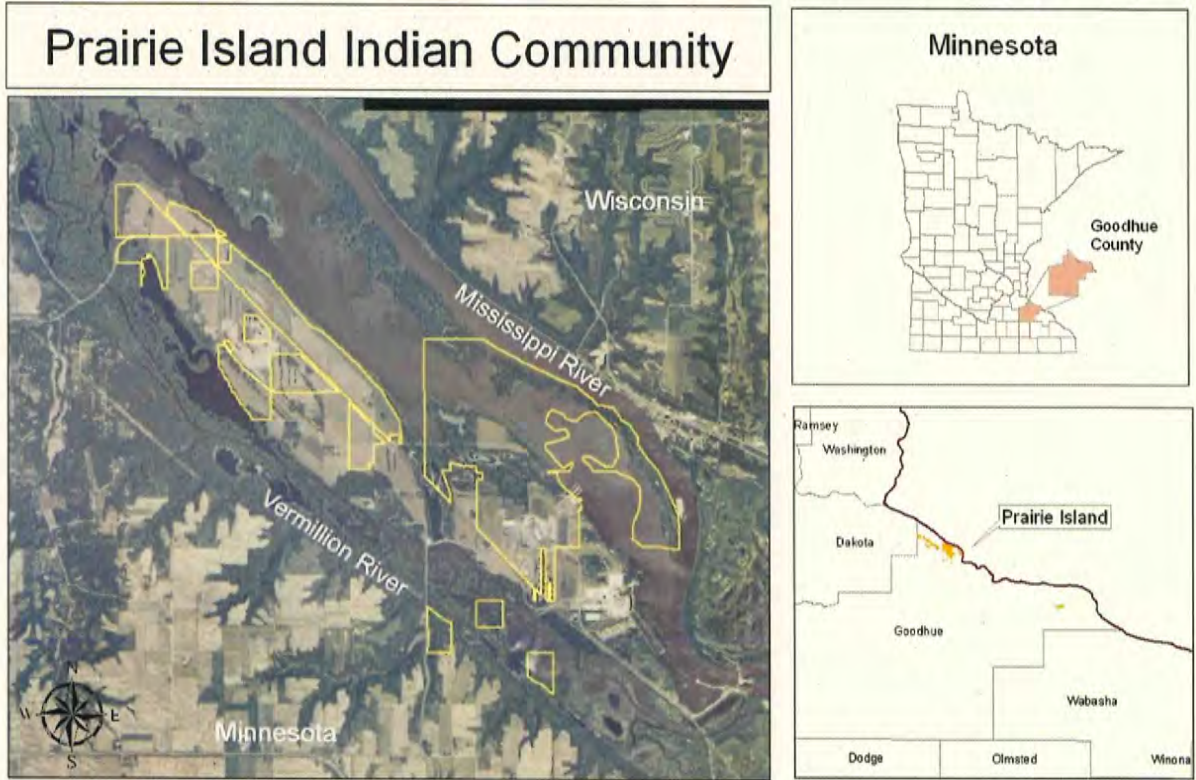


Figure 1. Lands of the Prairie Island Indian Community

Xcel has been storing spent nuclear fuel on-site at its Independent Spent Fuel Storage Installation (“ISFSI”) since 1995. Xcel’s application to renew the ISFSI license for an additional 40 years was recently approved by the NRC. The ISFSI and its 40 dry casks are approximately 600 yards from tribal members’ homes and less than a mile from our community center, our elders’ center, education center and our gaming enterprise. See Figure 2.

There are currently 40 TN-40 and TN-40HT casks stored on-site and the license for this temporary storage facility has just been recently renewed for an additional 40 years. If the PINGP is decommissioned in 2034, the spent fuel is estimated to require a total of 98 casks (or approximately 2500 tons of spent nuclear fuel).

We had no role in the siting or licensing of the power plant. We did not benefit from the plant’s construction nor do we benefit from its continued operation, such as through job creation or an expanded tax base. Like most nuclear power plants in the country, the Prairie Island plant developed on-site to keep the plant operational. When the NRC licensed the ISFSI in the early

1990's, we understood that on-site storage was a temporary means of keeping the plant operational until Yucca Mountain could begin accepting waste. My tribe was strongly opposed to the ISFSI, while the surrounding communities supported it because of the continuing tax benefits and local jobs.

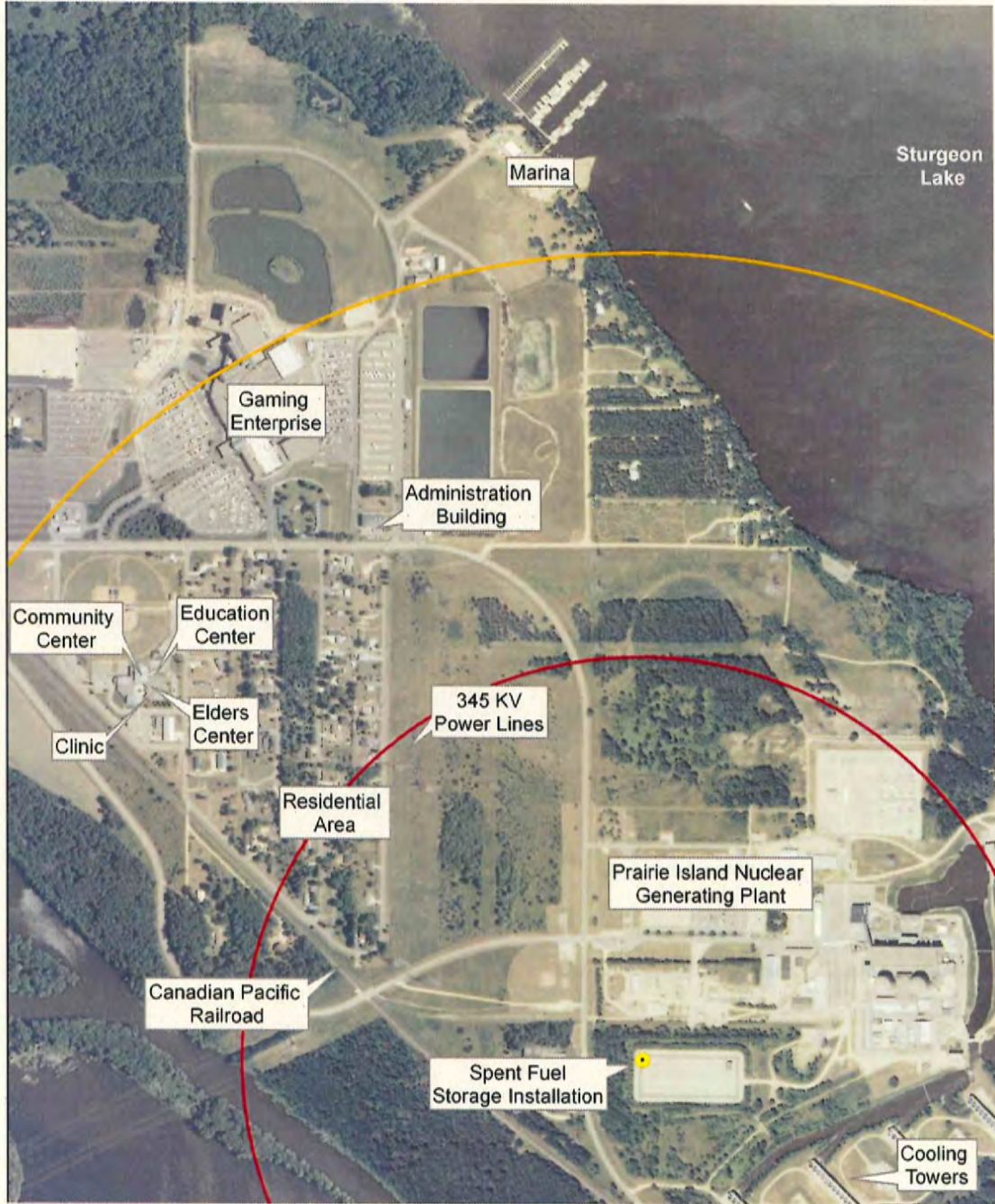


Figure 2. Location of the Prairie Island Indian Community and the PINGP and ISFSI

According to the original licensing documents for the power plant, it was assumed that the spent nuclear fuel would be sent to the Department of Energy's (DOE) West Valley facility for reprocessing. Thus, communities would not need to worry about stranded spent nuclear fuel. This never occurred.

With the passage of the Nuclear Waste Policy Act (NWPA), the spent fuel was then to be shipped to Yucca Mountain for disposal, starting in 1998. Licensing activities for the Yucca Mountain project were halted in 2010 after President Obama declared that the process to license Yucca Mountain was "unworkable."

The Blue Ribbon Commission on America's Nuclear Future (BRC) was formed in 2010 to conduct a comprehensive review of policies for managing the back end of the nuclear fuel cycle and to develop recommendations for a new strategy. Toward that end, after two years of meetings and study, the BRC advanced eight recommendations in its 2012 *Report to the Secretary of Energy*. Among the recommendations was that there should be a "new, consent-based approach to siting future nuclear waste management facilities"

The 2013 DOE's *Strategy* for implementing the recommendations of the Blue Ribbon Commission (BRC) calls for a pilot interim storage facility by 2021, that could accept spent nuclear fuel from shut-down reactor sites; a larger interim storage facility to be available by 2025; and demonstrable progress on the siting and characterization of repository sites to facilitate the availability of a geologic repository by 2048.

These dates, however, were noticeably absent from the DOE's December 23, 2015 Federal Register Notice and in the *Integrated Waste Management* booklet. This omission makes us concerned that the consent based siting process is behind even before it has begun. Slipping deadlines, inadequate funding, on-site storage and the continued storage rule have all contributed to a lack of urgency in removing spent fuel from sites that were never meant to be long-term storage sites. The communities impacted by on-site long term spent nuclear fuel storage problem have been patient while deadlines for removing the fuel have come and gone, but our patience is wearing thin.

Without a federal storage or disposal facility, Prairie Island is the *de facto* storage site for the indefinite future. No one has asked us whether we consent to hosting the spent nuclear fuel for the next several decades or longer.

We would like to offer the following recommendations as the DOE moves forward with consent based siting:

1. Indian tribes are not political sub jurisdictions of the state. Nor are tribes equal to states or counties. The DOE's goals for a fair process seem to imply that all levels of government must be in agreement before a site proposal could move forward. Indian tribes are sovereign governments, free to develop its land as it sees fit, free from state or county oversight. Not only is this well-established law, it's recognized in the NWPA. States and tribes should be thought of as adjacent jurisdictions, much like Minnesota and Wisconsin.

Minnesota wouldn't have a voice in what happens in Wisconsin, why then would a state have a role in what happens with a tribe?

2. The DOE has an obligation to consider impacts to Indian lands from proposed storage sites (if applicable) and work with Indian tribes on a government-to-government basis.
3. Current host communities need assurances that the fuel is not coming back, once it goes to an interim storage facility.
4. Potential host communities need assurances that the spent fuel will not be there forever.
5. Maximum benefits must be provided to potential host communities. Benefits could be financial, technical, or regulatory (that is, the state or local host community have some regulatory oversight).
6. With respect to benefits to a potential host community, it should be made clear from the beginning whether the CIS is a private or federal facility. If it's a private facility, it can be taxed; if it's a federal facility it cannot be taxed. This difference could be a sticking point for many communities.
7. The DOE must give deference to the community closest to the proposed site, since they bear the greatest risk. We must presume that a potential host community has evaluated the project and understands the risks involved. If adjacent jurisdictions are allowed to intervene in the decision-making, the process becomes political. Adjacent jurisdictions will have the opportunity to participate in the licensing process to raise technical, environmental, and safety concerns.
8. The DOE must consider Nye County as a potential host community. At the July 7, 2016 House Subcommittee on the Environment and the Economy, representatives from Nye County reiterated their interest in and support for the Yucca Mountain project. They have evaluated the project, understand the risks and benefits, and still want to host the repository.
9. The DOE should engage the two private entities working to develop interim storage facilities, in Texas and New Mexico. These two communities have demonstrated their willingness to host storage facilities and also have the consent of the adjacent jurisdictions. There is no reason to continue this process (and expend resources) just because the DOE didn't identify these sites through their consent-based process.
10. We do not believe, as others have asserted, that each corridor community must provide its consent for transporting these shipments through their jurisdiction. Section 180 (c) of the NWPA authorizes funding to states and tribes through whose jurisdiction the Secretary of Energy plans to ship spent nuclear fuel and high-level waste. In turn, the states will provide funding and training to its sub-jurisdictions to prepare for shipments.
11. The DOE could look for "lessons learned" from the Nuclear Waste Negotiator. The 1987 amendments to the NWPA created the Office of the United States Nuclear Waste Negotiator (NWN), which was authorized to reach agreements with states or Indian tribes to voluntarily host a Monitored Retrievable Storage (MRS) facility, which could store a maximum of 10,000 MTU until a repository was open. Toward that end, all states and federally recognized tribes were sent a letter from the NWN, explaining the need for the MRS and the availability of funding to study the feasibility of voluntarily hosting such a facility in their respective jurisdictions. Tribes were included in the search for an MRS site because of their *sovereign status*. Phase I and II grants were awarded to nine Indian tribes.

There was to have been Phase II-B funding (up to \$2.8 million to continue feasibility studies and education outreach and enter formal negotiations); Congress subsequently canceled the funding and the program. The DOE could look at this effort to see whether aspects of the project are worth adopting.

We would like to reiterate that unless it is amended or repealed, the Nuclear Waste Policy Act is still the law of the land. The NRC has completed its technical and scientific evaluation of the Yucca Mountain site and released the 5-volume Safety Evaluation Report (SER). The SER found no technical or scientific showstoppers. Having worked closely with the NRC over the last 22 years, we have the utmost confidence in the agency's technical and scientific qualifications. By continuing its work on the Yucca Mountain application the DOE could re-gain the public's trust and confidence.

It bears reminding that there is a cost-for inaction, both at the local level and the federal level. We understand that one of the goals in removing the spent fuel is to reduce federal government's liability for partial breach of contract, estimated to be \$20 Billion by 2020. This liability is now the responsibility of the US taxpayers, you and me. At the very local level, we have spent millions of dollars participating in licensing dockets, hearings at the federal and state levels, meetings with the NRC and DOE, all in an effort to get the nuclear waste out of our backyard. This is the cost of inaction on our community; these are funds that could have used for other purposes.

Because of the federal government's inaction, we have taken the unprecedented and drastic step towards making an emergency evacuation and relocation plan for our community. We have purchased 112 acres east of St. Paul, MN, because of the continued storage of spent nuclear fuel or in the event of accident at the plant. Relocating our community is not something we take lightly, but it is something we must consider for the future of our community.

Thank you for the opportunity to provide these comments on this most important matter. If you have any questions, please contact me at (651) 385-4137

Respectfully submitted,



Jessie Seim
General Counsel
Prairie Island Indian Community

Consent-Based Siting

From: Donald Seitz [<mailto:dtimseitz@gmail.com>]
Sent: Friday, July 29, 2016 7:34 AM
To: Consent Based Siting
Subject: Midronomics does not consent to your ideas for coping with nuclear waste

Consent Based Siting co/ DOE
Email: consentbasedsiting@hq.doe.gov

July 29, 2016

Dear Sirs

Before you can talk seriously about Nuclear Waste Management

We ask you to consider the following guidelines;

1. Stop producing more of it.

In other words close these nuclear power stations down as soon as possible/

2. Develop permanent onsite storage for nuclear waste at the nuclear stations where it was and still is being produced.

Your promises to undo all the nuclear waste, your industry has produced, have yet to be fulfilled. (I remember claims made by nuclear experts in the 1950's claiming all the nuclear waste accrued at that time will have been neutralized by 1960.) It is obvious in 2016 that more research needs to be continued here.

3. Nuclear waste cannot become a 'bury and forget' proposition because sometime in the future our nuclear experts may yet fulfill their earlier promises to undo all the nuclear waste accrued. (Maybe that may not happen for another hundred years or maybe a thousand years..)

By managing to keep nuclear waste safely contained above ground onsite, it will also remain more easily retrievable for the time when our nuclear experts finally discover how to effectively neutralize it.

Further to that we now know that any hole dug deep enough into our Earth's surface will eventually fill with water unless it is continuously pumped dry.

I cannot imagine pumps designed to run continuously for thousands of years, nor can I imagine underground elevators that will run continuously for thousands of years.

4. Being that nuclear waste management of our present inventory may go on for many generations will require training of personnel who pass on this information and experience from one generation to the next.

The Canadian Coalition for Nuclear Responsibility has developed and can describe a concept of "Rolling Stewardship" about how this can work from one generation to the next.

Please give my thoughts expressed here some serious consideration before you make your decisions.

Sincerely

D Tim Seitz, executive officer

Midronomics
Suite 1008
91 King Street East
Kingston, ON
K7L 2Z8
phone (613) 877 9892
cell (613) 453 8948

Consent-Based Siting

From: [A S] [mailto:senegal@dslextreme.com]
Sent: Thursday, July 28, 2016 2:18 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: Response to IPC

ENVIRONMENTAL INJUSTICE/RADIOACTIVE RACISM: We do not consent to the targeting, yet again, of low-income, Native American, and other communities of color, with high-level radioactive waste parking lot dumps. It is most ironic that President Obama's Blue Ribbon Commission on America's Nuclear Future, and his DOE, have yet again targeted Native Americans. Obama honored Sauk and Fox environmental activist Grace Thorpe for defending her reservation in Oklahoma against a parking lot dump, and then assisting allies at dozens of other reservations being targeted by DOE's Nuclear Waste Negotiator. Obama praised Thorpe as a "Woman Taking the Lead to Save Our Planet," alongside the likes of Rachel Carson of *Silent Spring* fame, in his March 2009 Women's History Month proclamation. Similarly, Yucca Mountain, Nevada is Western Shoshone Indian land, as the U.S. government acknowledged by signing a treaty. In addition, Yucca is not scientifically suitable. It is an active earthquake zone, a volcanic zone, and water-saturated underground. If waste is ever buried there, it will leak massively into the environment. And the State of Nevada has never consented to becoming the country's high-level radioactive waste dump.

Sincerely,

Aaron Senegal

Consent-Based Siting

From: Diana Shipley [<mailto:shipdian@isu.edu>]
Sent: Thursday, July 14, 2016 6:41 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: Response to IPC

To whom it may concern: Idaho has clearly stated that we do not want more nuclear waste to be shipped into our state. Nuclear waste needs to be stored at the point of origin. If you make it, you store it! Quit spending time and money shipping spent fuel all over the country and find a way to store it at the point of origin!

Sincerely, Diana Y. Shipley
405 N. Lincoln
Pocatello, ID 83204

Consent-Based Siting

From: Andrea Shipley [mailto:andrea_shipley@hotmail.com]

Sent: Thursday, July 14, 2016 4:04 PM

To: Consent Based Siting <consentbasedsiting@hq.doe.gov>

Subject: SAY NO to more nuclear waste in Idaho

Dear DOE,

I am writing to encourage the DOE to keep Idaho's non-consent agreement strong and keep nuclear waste out of Idaho. I am very concerned about keeping the Snake River Aquifer protected for the multiple generations of family and friends who live in Pocatello, Burley and Boise. There is no need for the DOE and its contractor at the Idaho National Laboratory to keep testing the resolve of Idahoans who have continually said NO to nuclear waste.

The DOE must stop trying to change Idaho's existing "non-consent" status. Idahoans do not deserve to indefinitely hold on to nuclear waste above the Snake River Aquifer because of the DOE's dirty nuclear power legacy.

Thank you for the opportunity to comment on this matter.

Sincerely,
Andrea Shipley

Consent-Based Siting

From: Jenn Siegel [<mailto:dreamspynner@yahoo.com>]

Sent: Thursday, July 14, 2016 9:16 PM

To: Consent Based Siting <consentbasedsiting@hq.doe.gov>

Subject: Thank you for the chance to submit my statement (as an Idaho resident and small business owner for 38 years).

1) The burden of getting consent from the citizens of Idaho should be a mute point. This state has a long history of refusing any further shipments of nuclear waste because we don't believe the risks are worth the benefits. If the DOE does come back to Idaho to propose consent from the residents of Idaho, the Native leaders, the city councils, the county commissioners, or the Governor and state representatives it cannot be a simple or quick process. All citizens of Idaho should be educated and given at least monthly opportunities for no less than 6 months and up to a year to discuss, question, and decide. Fairness would include extensive public education of the proposition, detailed plans (that include solutions that last as long as the life of the waste itself). I would expect explicit list of costs and risks and benefits to be printed in all available news publications in Idaho and any other ways that could reach citizens in a rural and sparsely populated state.

2) No doubt the nation faces a critical need to resolve the nuclear waste disposal issue. Moving waste is a terrible idea though. The challenge of transporting nuclear waste is daunting enough to make any rational human being stop to at least consider whether there are other options. Even if the material arrives without mishap, storage over the Snake River aquifer is a terrible idea that Idaho has been rejecting for 30+ years.

3) The initiative may describe the storage as temporary or interim but why are we trucking this stuff around? With no permanent repository in sight, why would we residents of Idaho consent, especially without a lined out commitment for cleanup. We've been storing our current nuclear waste on an interim basis for over half a century. So my personal suspicion is that any nuclear waste brought to Idaho will be stored indefinitely (at the very least for many decades) and I don't see the incentive for Idahoans.

Thank you for including my comments in any public record of your process.

Sincerely,
Jennifer Siegel

Jenn Siegel

Greener Cleaners
Boise, Idaho, 83702

208.859.2987

environmentallymindful@gmail.com



Greener Cleaners | Specialized in environmentally friend...

Specialized in environmentally friendly commercial and residential cleaning.

View on [greenercleanersofidah...](#)

Preview by Yahoo

Consent-Based Siting

From: Cody Slama [mailto:slama.cody@gmail.com]
Sent: Saturday, July 30, 2016 10:52 AM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: I Do Not Consent

Dear DOE,

I have recently heard about the DOE accepting public comments on the storage of high-level waste. I am writing the DOE to give my opinion on this very serious issue. As a lifelong citizen of Albuquerque NM, who has already had to live with the nuclear legacy, I would like to say that I very strongly feel that **I do not consent** to holding any more high-level waste in the Land of Enchantment.

Let me give my first reason why I do not consent. Firstly I am a college student at the University of New Mexico. At my school there is a serious problem with rape because many students do not get consent before sex. This I feel is very similar to what has happened in NM since WW2 when the nuclear industry was started. I did not consent for my grandpa I never met to die of cancer as a result of being exposed from too much radiation at the labs. Nor did I ever want my grandma to be a victim of the radiation exposure from the Nevada test sites. She is now slowly dying of cancer. NM has been raped over and over again as a result of every part of the nuclear cycle being carried out here NM. Everything from the extraction of Uranium too the creation of the nuclear bomb, and lastly all the way to the testing of the bomb has occurred here in NM. And now it is an option to bring more nuclear waste. I am tired of my land being exploited to radiation that is killing people close to me. So to this I say please keep high-level waste out of NM.

Secondly I would like to point out that it would be extremely dangerous throughout NM to transport waste to the suggested sites in southern NM. Transportation accidents are all too common and an accident in which a truck is carrying high-level waste could result in outrageous consequences. I know that the DOE and any transport contractors will do their best to protect us and avoid an accident as most people do every day. But the truth is that accidents happen every day on the roads. This means that the transportation of high-level waste is just too dangerous.

Lastly I would just like to say that I really hope that you will consider the citizens of NM that have already gone through over 80 years of the nuclear legacy. We don't always understand the consequences, as my grandpa likely never did working at the labs, but you all do. So please use your knowledge to understand that NM can't be the dump to this dangerous radioactive waste.

Wishing for a safe future at my home,

Cody Slama

Consent-Based Siting

From: Betty Slifer [<mailto:slifer@filertel.com>]

Sent: Sunday, July 17, 2016 12:17 PM

To: Consent Based Siting <consentbasedsiting@hq.doe.gov>

Subject: Response to IPC

The DOE must honor the Nuclear Waste Agreement that was signed by Idaho Governor Batt.

Sincerely,
Betty Slifer
Filer

Consent-Based Siting

From: Timothy Smith [mailto:tim_smith@govstrat.com]
Sent: Sunday, July 31, 2016 11:18 AM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: Response to IPC

Please find attached comments from the Decommissioning Plant Coalition in response to the DOE Invitation for Public Comment To Inform the Design of a Consent-Based Siting Process for Nuclear Waste Storage and Disposal Facilities.

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Tim Smith
Governmental Strategies, Inc.
Office: (703) 716-4846
Mobile: (703) 303-6478

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DPC Response to DOE Invitation for Comment to Inform the Design of a Consent-Based Siting Process for Nuclear Waste Storage and Disposal Facilities

The Decommissioning Plant Coalition (DPC) is pleased to respond to the invitation for public comment published in the Federal Register last December (80 Fed. Reg. 79,872). The DPC was formed 15 years ago precisely because the Department of Energy (DOE) was then in partial default of its obligations to those companies who were required to sign contracts with the agency for the disposal of used nuclear fuel pursuant to the Nuclear Waste Policy Act of 1982 (NWPA) and who had permanently ceased commercial operation. Our member companiesⁱ have participated in the public debate regarding the future of the United States' used nuclear fuel management program since that time; indeed, representatives from member companies attended and participated in conversations the DOE has had in cities around the country over the past few months.

While the DPC believes it important for the government to determine with finality the integrity of the scientific work performed studying the proposed Yucca Mountain repository, we understand the benefit of a conversation leading to the development of a consent based siting process for future storage and disposal facilities. Until such an alternative process takes root, however, the Nuclear Waste Policy Act, as amended, remains the framework under which our members' rights, and by extension the rights of their customers, are protected.

As a preliminary matter, it is important to note that officials and residents in the localities where our plants have undergone, or are actively undergoing, the decommissioning process, and where the removal of used fuel has become a long lead time variable in the ability to return the site for other useful purposes, are constantly reminding us that they did not "volunteer" to be the host of an interim storage site. The frustration felt by these communities is evidenced not only by the comments many of them made in the public sessions, but the recent introduction of federal legislation that would provide limited payments to them for their non-voluntary role in the spent fuel management system.

With those facts as a backdrop to the conversation, should Congress and the Executive Branch agree to an alternative strategy and approach to a resolution of the current impasse, a conversation regarding consent for the siting of either an interim storage or permanent disposal facility is appropriate. We would hope that

ⁱ DPC member companies, all of whom are licensees of the Nuclear Regulatory Commission at sites where all reactors have permanently ceased commercial operation, include: Connecticut Yankee, Dairyland Power Cooperative, Duke Energy, Edison International, Entergy, Exelon, Maine Yankee, Pacific Gas & Electric, Sacramento Municipal Utility District, and the Yankee Atomic Power Company.

the Department does not view or attempt to define consent as unanimity in any given population. As long as interested parties have sufficient resources and the right to express their view on a proposed action, and the decision making process is transparent, the decision of a local or state government to express consent should be respected.

While consent must begin with a local community, state agreement and mutual commitments between the parties is key to the long-term durability of the decision to site any facility of this nature. At the same time, we think it would be an error for the federal government, at this point in the conversation, to develop a “one size fits all” approach to consent based siting of either an interim or permanent disposal facility. Not only are the considerations for the two types of facilities likely to be different, but as we can attest through our geographically diverse locations, communities and states will likely have differing perspectives on the nature of, and the circumstances under which they grant, their consent.

We would observe that much of the substantive discussion at the regional meetings we attended centered on the development of a consent based process between state and local governments and a federal entity that would act as the siting, licensing, construction and operating authority. While this approach might be inevitable as relates to a permanent repository, it need not be the case with respect to a consolidated interim storage facility (CISF) and it does not take into account the likelihood that in some jurisdictions, local and state governments would rather engage with private enterprise than a representative of the federal sovereign.

In fact, as the Department is well aware, two non-governmental entities have announced plans to site, license, construct and operate a CISF, and one has already submitted a license application to the NRC; the second has been targeted for submittal in the late fall. Before either of these proposed facilities were announced, steps were taken to engage with stakeholders and solicit preliminary support from local and state authorities for their efforts. We would encourage the Department to expeditiously take full advantage of the potential opportunities afforded by these two ventures, as we expect either facility could be capable of offering services to the federal government before a federal facility, interim or permanent, could be readied to accept used nuclear fuel from our member sites.

Thank you again for the opportunity to provide these brief comments.

Consent-Based Siting

From: Dr. Susan Spieler [mailto:sspsyd@yahoo.com]
Sent: Sunday, July 31, 2016 5:17 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: I oppose consent-based siting

The problem of storing/disposing of nuclear waste should have been considered before the US began to produce nuclear power. Instead, millions of people and all who will follow them carry the dangers indefinitely. As we all know, there is no safe way to store/dispose of nuclear waste. And, as we know, there are alternatives to nuclear power that are less costly and renewable. And yet, the DOE has spent considerable time developing a plan that would be extremely dangerous to implement and extremely unjust to any communities that would consent to it. Transporting radioactive waste via train, truck and barge across the US would obviously be a terrorist target and it would endanger all who live along the paths of these trains, trucks and barges. In addition, the potential for accidents is great and the harm such accidents would cause is even greater to our land, air and water and to all communities within many miles of them.

And, what about the communities that would consent to this? Why would they consent to this? What would motivate them to do so? Will the plan include compensation? What could possibly compensate them enough to agree to live near a nuclear waste site that contains vast quantities of nuclear waste? Only very poor people with little hope or understanding about this would consider this. And, where are the guarantees against leakage from these sites and the related health risks?

Despite these issues, the US continues to grant permits to new nuclear power plants and to extend the licenses of many of the aging plants despite their frequent accidents, shut-downs and radioactive leaks. The argument is that we need nuclear power to power our country and that nuclear power is clean.

A form of energy which is carcinogenic and mutagenic is not clean. And its radioactivity will outlive us all and hundreds or thousands of generations who may dig it up unknowingly. This is not a plan that I want to leave for future generations if they are fortunate enough to survive.

We have the possibility of replacing all nuclear power with solar, wind and energy efficiency and yet we are not moving as fast as we can to do so. This along with the fact that we continue to dig up coal, oil and gas which produces the carbon and methane that cause climate change, is utterly irrational and a path most apt to destroy life as we know it for millions of years.

There is considerable evidence that we are in the process of a 6th mass extinction as it is and that the incidence of cancer among people who live near nuclear power plants is considerably greater than it is among those who live further away from these plants.

The reason that more people are not submitting comments that oppose of consent-based siting is that they naively trust their government agencies to do more to protect them. Please demonstrate that you are worthy of their trust by rejecting this proposed plan. Instead, please begin to rapidly phase out nuclear power and replace it with solar, wind and energy efficiency and store existing nuclear waste in dry casks on the grounds of the forever closed nuclear power plants that currently exist.

I have chosen to write only about waste from nuclear power plants as I am not as well informed about

waste from nuclear weapons production. I oppose nuclear proliferation for many of the same reasons as I have stated above and many additional reasons.

Thank you for considering my comments.

Dr. Susan Spieler,
Clinical Psychologist,
Psychologists for Social Responsibility, Environmental Action Group
230 Central Park West
New York, NY 10024

From: AJ Spillane [<mailto:lz8bar8@gmail.com>]
Sent: Tuesday, July 12, 2016 8:34 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: Response to IPC

The Department of Energy should not be in charge of the spent fuel and high-level waste programs any longer.

- The Blue Ribbon Commission on America's Nuclear Future recommended a **new** agency be formed.

The framework for America's nuclear waste management program should be fully developed and have the force of law.

- Only then should the government seek consent from a community to host a nuclear waste storage facility.

Nuclear waste is very dangerous and should be stored as safely as possible.

- The safest location is as close to its point of generation as possible because transportation is risky.

Spent nuclear fuel should not be consolidated at an "interim" storage site.

- To minimize risk and cost, spent fuel should be moved only once and to a location that is designed for permanent disposal.

Idaho is a NON-CONSENT STATE.

- Idahoans have already decided they don't want to receive commercial spent nuclear fuel and the government should respect that decision.

Consent must be free, prior, and informed.

- Informed consent is currently not possible. The government has not provided enough information including how much spent fuel it intends to store or for how long it will be stored in any given place.

It's not clear whose consent will "count."

- Transportation and storage of dangerous nuclear waste has local, regional and national impacts that must be considered and can't be circumvented by one community.

Sincerely,

Anthony Spillane
5619 W Gage Sreet
Boise, ID 83706

--

Ultimately, the decision to save the environment must come from the human heart. The key point is a call for a genuine sense of universal responsibility that is based on love, compassion and clear awareness.

- Dalai Lama

Consent-Based Siting

From: Cletus Stein [mailto:cletus@arn.net]
Sent: Thursday, July 28, 2016 8:56 PM
To: Consent Based Siting
Subject: response to IPC

Dear Sir:

We of the Peace Farm believe nuclear waste is a ***global human challenge*** which is only worsening as time progresses (i.e. The proliferation of nuclear waste worldwide due to nuclear energy production and arsenal proliferation) and threatens the continuity of life on Earth.

More global human energy and cooperation efforts are necessary to solve the site selection issue within our own country to set as a leading global example (i.e. with the use of more-objective non-U.S. observers, researchers, etc.). Please do all you can to care for our children, grandchildren and on into the future, rather than saddle them with this curse!

Jerry Stein
The Peace Farm
5113 sw 16th
Amarillo TX 79106



Virus-free. www.avast.com

Consent-Based Siting

From: Marilyn Stern [mailto:marilystern@earthlink.net]
Sent: Sunday, July 31, 2016 9:29 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: COMMENT RE CONSENT BASED SITING OF NUCLEAR WASTE

To United States Department of Energy,

I am strongly opposed to your proposed "Consent Based Siting" of nuclear waste. It will clearly exploit communities that are financially desperate, taking advantage of public ignorance of the long-term impact of such sitings, holding out the carrot of short-term financial reward.

Furthermore, as nuclear waste remains toxic for tens of thousands of years, a de-centralized solution to its storage will require perpetual isolation, maintenance, monitoring and warnings in hundreds or thousands of sites. This is inefficient and bound to fail, with disastrous consequences. Breaches of security, corrosion, lapses of management &/or funding are certain to occur over this unimaginable time span. Your proposed decentralized solution is exactly the opposite of Finland's Onkalo spent nuclear fuel repository based on the [KBS-3](#) method developed in Sweden. I wonder if you have studied this alternative? Though not perfect, it is vastly better than your proposed plan.

It's bad enough that communities across America have lost their factories and their jobs to cheap labor overseas. We should be providing them with new jobs, new technologies, *not* the toxic burden of a failed technology from the 20th century. Your proposal is a dystopian solution that will make countless communities pay with their health and the health of their children's children *ad infinitum* for the folly of an industry that went ahead full throttle with no solution for its waste.

To quote a well-known Iroquois principal: "In every deliberation, we must consider the impact on the seventh generation." In the case of nuclear waste, we must consider the impact on 1,000 generations or more. Is toxic radioactive waste scattered across America the legacy we want to leave our descendants?

WE THE PEOPLE DO NOT CONSENT.

Thank you for your consideration.

Sincerely,

Marilyn Stern
303 Park Ave South #512
New York, NY 10010

Consent-Based Siting

From: maggiemaystewart@yahoo.com [<mailto:maggiemaystewart@yahoo.com>]
Sent: Sunday, July 31, 2016 10:21 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: Response to IPC

I am Margaret Macdonald Stewart and I have lived in Idaho, 60 air miles from the Idaho National Laboratory, for more than 40 years. And have been telling the DOE what I think of its' nuclear waste and nuclear power plans for nearly every one of those years.

As you well know, 100% of the Navy's nuclear waste has come to Idaho and 100% of it has never left Idaho. And Idaho has received thousands of cubic meters of nuclear waste from other reactor sites around the country. 100% of the Idaho National Lab sits directly over the Snake River Aquifer, the 2nd largest unified aquifer in the USA, and is the sole-source of drinking water for over 300,000 people in southern Idaho. Idahoans have lived with HUGE amounts of nuclear waste from around the country, leaking directly into our precious aquifer, for over 50 years with countless promises to remove it. And precious little of it has ever left Idaho. EVER.

You are obviously aware that Idaho is a NON-CONSENT state. That means Idahoans have said.....many times.... NO. That means we are not saying anything except NO NO NO to any possibility that we will allow any more of your nuclear waste to come to Idaho. If you think that re-writing or re-negotiating or re-doing the "one-of-a-kind" contract between Idaho and the DOE back in 1995, that PROHIBITS more nuclear waste coming into Idaho, you must not understand the word NO and the determined resolve of Idahoans to stand by that word NO.

Moving nuclear waste across the country--anywhere--is a dangerous prospect, especially if it is to a "temporary" location where, hypothetically, it will need to be moved again. Trains and trucks and boats have accidents, leaving those in the transportation corridor exposed to deadly nuclear materials.

Moving nuclear waste is also astronomically expensive--- especially in these times of drastically shrinking available finances. How can you believe, or hope people will believe, there will be enough, or any, money to move your precious cargo anywhere?

And in the current world we live in where security threats are everywhere, how can you even begin to think that moving the world's most dangerous materials would not be A MAJOR TERRORIST TARGET?

Nuclear waste must be stored as close to its source of generation as possible in monitored, above ground hardened containers. Or better yet, STOP PRODUCING NUCLEAR WASTE.....Period.

Your thoughts of transporting these vast volumes of nuclear waste to places unknown for what we all know will be permanent is nothing short of insane. Give it up!

AND ALWAYS REMEMBER, IDAHO SAID NO BEFORE AND WILL CONTINUE TO SAY NO.

Sincerely, Margaret Macdonald StewartJuly 31, 2016

Sent from my iPhone



TOWN OF PLYMOUTH

11 Lincoln Street
Plymouth, Massachusetts 02360

FAX: (508) 830-4140

Board of Selectmen
Town Manager
(508) 747-1620 ext. 100

Human Resources
(508) 747-1620 ext. 101

February 9, 2016

U.S. Department of Energy
Office of Nuclear Energy
Response to IPC
1000 Independence Ave SW
Washington, DC 20585

To Whom It May Concern:

The Town of Plymouth, Massachusetts, the Pilgrim Nuclear Power Station host community since 1972, is pleased to provide the Department of Energy with feedback to the five questions posed in the Invitation for Public Comment (IPC) published in the Federal Register on December 23, 2015.

The Town of Plymouth fully supports the concept of a consent-based siting process to manage the transportation, storage, and disposal of commercial spent nuclear fuel and high level defense radioactive wastes. The Town of Plymouth supports a truly consent-based process because this approach does not ignore the realities and experiences of the several dozen communities across the country which, like Plymouth, are currently burdened with spent fuel storage facilities.

Please find the Town of Plymouth's feedback below:

1. How can the Department of Energy ensure that the process for selecting a site is fair?

A truly fair process for an integrated waste management system must account for the status quo of nuclear waste storage in the United States by providing relief or certainty to the communities across the country that have become de facto spent fuel repositories. The alternative, a process that only focuses on consent for the future of spent fuel storage, would reinforce the existing impression that the nation's nuclear policy has left these "pre-consent" communities by the wayside.

This is especially true in the case of nuclear power plant closure, which have increased in frequency since 2013. Such instances leave a host community without the socioeconomic benefits of a major employer and taxpayer, while



simultaneously burdening it with dry cask storage installations. While the DOE has a framework in place to compensate licensees and operators for the construction and maintenance of such ISFSI-only sites, the communities that host these sites are left out of the equation. Attempts to stabilize local revenues by levying a property tax on the spent fuel facility have proven unsuccessful, and have resulted in expensive legal proceedings between licensees and municipalities. The result is an open-ended, non-consensual liability that frustrates local socioeconomic growth and redevelopment.

2. What models and experience should the Department of Energy use in designing the process?

We believe that the DOE should build on the experiences of the Department of Defense's Base Realignment and Closure Commission (BRAC), which has a history of interagency cooperation relevant to the consent-based process at hand. The BRAC process not only provides the necessary technical support services to affected communities through the department's Office of Economic Adjustment (OEA), it recognizes that actions causing community growth, whether short-term or long-term, also need to be adequately planned for. For the communities experiencing the removal of spent fuel, and the communities experiencing the development of the long-term repository, managing the changes will require sustained support from federal and state levels.

3. Who should be involved in the process for selecting a site, and what is their role?

The DOE should recognize communities with ISFSIs and other storage installations as existing interim sites. The DOE should consult with representatives of those communities to broker agreements on the continuation of spent fuel storage in a manner that conforms to local and state land use policy and legislation.

4. What information and resources do you think would facilitate your participation?

Engaging with organizations that serve the interests of communities affected by the presence of spent fuel would ensure sustained participation from many existing nuclear host communities. The National Association of Development Organizations (NADO), the National Association of Counties (NACo), and the International Economic Development Council (IEDC) serve the interests of many of these communities, and have established local, regional, state, and federal partnerships that serve local interests.

5. What else should be considered?

The DOE should consider revising its "oldest fuel first" policy for the acceptance of spent nuclear fuel to allow for the prioritization of fuel from commercial reactor sites that have been permanently shut down. This would enable communities that have lost the socioeconomic benefits of an operational reactor to more quickly return the entire site to unrestricted use, and remove a major redevelopment obstacle from the landscape.

The Town of Plymouth welcomes the opportunity to work collaboratively with DOE throughout this process. If there are any questions related to the feedback, provided above, please do not hesitate to contact the Town Manager's Office at 508-747-1620, ext. 100.

Sincerely,



Kenneth Tavares, Chair
Plymouth Board of Selectmen

C: Senator Elizabeth Warren
Senator Edward Markey
Congressman William Keating
Massachusetts Governor Charlie Baker
Attorney General Maura Healey
Senator Viriato deMacedo
Representative Mathew Muratore
Representative Thomas Calter
Representative Randy Hunt

Consent-Based Siting

From: Melody Taylor [mailto:seattlegirlingresham@gmail.com]

Sent: Thursday, July 28, 2016 1:21 PM

To: Consent Based Siting <consentbasedsiting@hq.doe.gov>

Subject: Nuclear Waste

WE THE PEOPLE want our government to STOP creating Nuclear Waste!!! WE should take Your Chemistry-Set away and to STOP your radical behavior, put You INA Corner on a Time-Out. Shame On You! SIMPLY utilize the SUN, WIND, RAIN,that are Available Naturally....and Quit Creating Toxic Material...as children w/o any guidance might do!!!

Consent-Based Siting

From: Kiki Tidwell [<mailto:ktinsv@cox.net>]
Sent: Wednesday, July 13, 2016 3:34 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Cc: Ken Miller <kmiller@snakeriveralliance.org>
Subject: Opposed to accepting nuclear waste into Idaho

TO: DOE

As a long time Idaho citizen, I am very much opposed to accepting nuclear waste into Idaho, for any reason. Idaho had an agreement with the federal government which should remain in effect. The DOE has not finished cleaning up the existing waste problem at INL and it is leaking into the large aquifer under the Snake River plain. The government has wasted billions of dollars attempting this clean up and it is nowhere close to being finished. I will use all resources available to me to oppose the DOE in this matter, including opinion pieces in the newspapers or social media, and potentially supporting legal action. Trust me, you really don't want this fight.

Sincerely,
Kiki

Kiki Tidwell
President, Tidwell Idaho Foundation
President, Idaho Land & Pine, Inc.
300 Let Er Buck Rd.
Hailey, ID 83333
208-578-7769

Consent-Based Siting

From: rezjedi . [mailto:rezjedi3@gmail.com]
Sent: Sunday, July 31, 2016 11:09 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: Response to IPC

Date July 31, 2016

U.S. Department of Energy
Office of Nuclear Energy, Response to IPC
1000 Independence Ave SW
Washington, DC 20585

RE: Response to IPC

To Whom It May Concern:

We are writing in response to your “Consent-Based Siting” of Radioactive Waste Dumps, with special concern to our communities in New Mexico.

By virtue of the end result, this process is inherently unfair to the community that will receive the nuclear waste, and the communities that will be at risk along the transportation routes.

Being a state that already has one failed nuclear waste site (the Waste Isolation Pilot Project or “WIPP”), we know that such facilities cannot be safe into perpetuity and any community who receives nuclear waste will forever be at risk of accidents, explosions, and resulting health-related issues.

We understand that WIPP near Carlsbad, NM and the Waste Control Specialists (WCS) in Andrews, TX are sites that may be considered for interim and long-term storage. Because WCS has invited DOE to bring waste to its facility, this invitation by WCS cannot be considered an invitation by a community. We as residents of New Mexico do not invite DOE to bring waste to New Mexico. We DO NOT CONSENT to the storage of high level nuclear waste in our state now or ever!

DOE has not done sufficient outreach to the general population of American citizens on this proposal, and has not heard from all the communities who will be impacted by transport through their areas. We request DOE to continue to do educational presentations and to hold additional meetings in New Mexico regarding your Consent Based Siting process, in Albuquerque, Carlsbad, Las Cruces, Gallup, and to the various Tribal Nations including Navajo, Mescalero, and any of the 19 Pueblos along possible transportation routes.

These are our recommendations:

Stop all nuclear waste production that generates irradiated nuclear fuel in the first place, including weapons-related and reactor operations. Work toward clean, non-nuclear, and carbon free forms of energy production—such as energy efficiency, wind, and solar.

Continue to work toward safe, reliable and permanent methods of storing nuclear waste, such as Hardened On-Site Storage (HOSS), as has been suggested in the past by several organizations, including the Institute for Energy and Environmental Research, Nuclear Information Resource Services and Beyond Nuclear.

The cost of storage and transport of nuclear waste must not be the financial burden of rate-payers or tax-payers. Total liability and all expenses should remain with owning utilities. These companies should also never be permitted to build nuclear plants without demonstrating financial capacity to cover all costs of safe permanent storage of wastes in perpetuity.

Question 1:

How can the Department of Energy ensure that the process for selecting a site is fair?

More public meetings are needed, especially ones in Albuquerque, Gallup, and Carlsbad. The DOE needs to include outreach to Environmental Justice organizations, Communities of Color, Low-Income communities, professors in ethics, health professionals, and emergency responders and other interested parties. DOE should postpone any decision on this “consent-based siting” proposal until all these communities have been informed and until DOE has considered the report by NRC on “pool storage safety” due out later this year.

Question 2:

What models and experience should the Department of Energy use in designing the process?

We support the storage of nuclear waste and spent fuel using HOSS techniques, in “hardened dry casks” built to prevent leakage and explosions, instead of cooling pools. There will be less risk storing waste at the places where it was created instead of moving it, storing it on-site or as close to the point of origin as possible. Casks must not be stored or transported through tribal lands or high-population centers.

Storage pool structures must not be dismantled during plant decommissioning and must be maintained at utilities’ expense as emergency sites for failed cask-to-replacement-cask transfers.

Question 3:

Who should be involved in the process for selecting a site, and what is their role?

In order to ensure adequate research and consideration for safety for the environment and communities, several focused teams should be created to oversee the following:

A) Safety Teams, including professionals and experts in these fields: Transportation Safety, Emergency Responders and First Responders, Health Professionals, Hazmat, etc.

B) Human Rights, experts and professionals who specialize in the protection of the rights of: the Child, Women, the Poor, and Indigenous Peoples Rights.

C) Health, all communities likely to be affected by proposed transportation routes and storage sites must be apprised of the risks by experts who can ensure the safety of: our air, waters, soil, plants, animals, and human health.

Question 4:

What information and resources do you think would facilitate your participation?

The public must be provided with information and have adequate time to consider the risks and options of site proposals. We must be provided with:

- Site geology and hydrology
- Nature of irradiated nuclear fuel
- Status of hardened cask technologies
- Nearest Emergency facilities
- Worst-case scenario of possible explosions and releases of radioactivity

This information must be provided in a plain English format, understandable by the common layperson.

Question 5:

What else should be considered?

The process should center on the ongoing history of radioactive environmental contamination and its effects on communities. Corporations and nuclear industry or similar businesses should not be considered “the public” or as “the community” in terms of consent.

New Mexico is a state with several indigenous nations and various traditional cultures. Each tribal nation and traditional Chicano or Hispanic community must be contacted and informed of the process and provided with materials translated in the appropriate language. DOE must follow its Federal Trust Responsibility when addressing Tribal Nations. DOE must also abide by all international conventions, including the United Nations Declaration on the Rights of Indigenous Peoples which states that “free, informed, and prior consent” is necessary before proceeding with federal actions such as transport and storage of dangerous and hazardous materials in areas that may affect tribal nations, tribal members, and indigenous peoples.

Sincerely,

Tiffany Tracy

PO BOX 2851

FORT DEFIANCE AZ 86504

Consent-Based Siting

From: Carolyn Treadway [<mailto:carolyn@planetcare.us>]
Sent: Thursday, July 28, 2016 2:01 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: Response to IPC

Dear Department of Energy:

I am completely and profoundly opposed to your developing “interim” storage sites for high level radioactive waste, or for transporting such waste across our nation, creating Mobile Chernobnyls wherever they go. The only possible solution for the radioactive waste problem is not to make it in the first place. Close all nuclear reactors NOW and FOREVER!!

For the waste we now have, it must be inspected, protected, and guarded for millennia. Until better containment is developed, store the irradiated nuclear fuel and wastes in HOSS casks as near to the point of generation as possible. Each time waste is moved, it brings further risk. In unleashing the atom, we have let the Genie out of the bottle, never to be returned. The consequences for health, environment, and civilization itself are horrific.

No geological repository that is scientifically suitable, socially acceptable, and environmentally just has been found, in many decades of looking. Nor will any such repository ever be found.

Never seek to reprocess irradiated nuclear fuel. Places such as Hanford, Savannah River, West Valley, Sellafield, Le Hague, and Kyshtym show the downwind and downstream ruin that would be caused.

Immediately cease and desist trying to site waste dumps on the lands of Native Americans and communities of color and low income. This is a shameful form of radioactive racism that has occurred since the advent of the nuclear age.

My list could go on and on and on. But it can best be summed up by saying once again: STOP production of nuclear waste, now and forever. Leave waste where it was created. Monitor and guard it for millennia.

We do NOT need nuclear, not for anything. Instead, develop renewable energies. The sun’s energy is FREE, and is not lethal!

Carolyn Treadway

Carolyn@PlanetCare.us
Lacey, WA

Consent-Based Siting

From: Kathleen Treat [mailto:kathleentreat123@gmail.com]

Sent: Sunday, July 31, 2016 11:15 PM

To: Consent Based Siting <consentbasedsiting@hq.doe.gov>

Subject: Response to IPC

STOP making nuclear fuel. STOP making radioactive waste dumps. Just STOP!

K. Treat

NYC

Consent-Based Siting

From: Diane Turco [<mailto:tturco@comcast.net>]
Sent: Wednesday, July 27, 2016 1:49 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Cc: susan carpenter <scarpenter1103@gmail.com>
Subject: Response to IPC

Dear Associate Director Griffith,
Please accept these comments on the DOE 'Consent Based Siting' IPC from Cape Downwinders.
Thank you,
Diane Turco, Director
Cape Downwinders
Cape Cod, MA



www.capedownwinders.info

PO Box 303
South Harwich, MA 02664
25 July 2016

Mr. Andrew Griffith, Associate Deputy
Assistant Secretary for Fuel Cycle Technologies
U.S. Department of Energy
Office of Nuclear Energy
1000 Independence Ave SW
Washington, DC 20585

Re: DOE Consent Based Siting Process: Response to Invitation for Public Comment

Dear Associate Deputy Griffith,

Cape Downwinders is submitting comments on the Department of Energy's 'Consent Based Siting' proposal for spent fuel nuclear waste. We are a Cape Cod and Islands citizens' advocacy group working to protect the public health, safety, and environment from the radiological threat at Entergy's Pilgrim nuclear power station in Plymouth, MA.

The DOE is requesting the public to look at five specific questions for this proposal; however, only the question, "What else should be considered?" is relevant. The DOE suggested 'starting posing questions for discussion' of the consent based siting process for "related ideas, issues, and ideas you think are important." The following comments are our related issues and ideas.

We have serious concerns that this request for public comment supports the nuclear industry's continuance of producing dangerous high level nuclear waste (HLW) that has no permanent repository site as promised by the federal government. Ongoing production of HLW which threatens the health and safety of our communities in unacceptable.

Interim storage is a desperate attempt by the DOE to address the environmental mess they have created and preside over. The 'Consent Based Siting Initiative' is simply a generational boondoggle for the nuclear bureaucracy to command new resources and relevancy. The fact is the genie is out of the bottle and NO ONE knows how to deal with the waste with any reasonable assurance of adequacy for the long term. The NRC, DOE, the nuclear industry, and a failed government have led us to this abyss while its citizens choke on the future costs of redemption and protection.

The DOE's desire to build 'trust' in a 'Consent Based Siting Process' is not attainable. A legacy of failures in the development of policy and genuinely adequate long term spent nuclear fuel storage, neutralization, and repurposing technology will be difficult to overcome. The Yucca Mountain debacle and decades of waiting for the hollow commitments of the "Waste Confidence Decision" strategy to develop speaks to how difficult it is to come up with a realistic adequate prescription for the short term, interim or long term storage of high level nuclear waste. Asking the American people to buy into trusting that the nuclear industry and DOE have a legitimate handle on solving the HLW storage problem appears to be more smoke and mirrors, just like the WCD policy, but by a different name. At Yucca Mountain, efforts to relocate nuclear waste have failed after billions of dollars spent, communities disrupted, and public concerns ignored. Kicking the can down the road with short term dry cask technology is good for only sixty to a hundred years which only marginally, at best, qualifies it as a credible short term treatment solution. We have no evidence that the government has any idea for comprehensive and responsible high level waste storage that protects the public health and safety.

The fact is that the technology doesn't exist to safely store HLW for hundreds never mind hundreds of thousands of years. Believing that we do is analogous to climate change denial. Similarly, Chernobyl and Fukushima have proven that the technology doesn't exist to cope with large scale nuclear accidents that can also occur during storage or transport.

To build trust, the EPA has to be honest with the American people. Currently, every nuclear reactor site is a de facto waste dump to which the people have never given consent. As Paul Gunter of Beyond Nuclear cited at the DOE Boston meeting, why would the DOE ask for consent now? We were never asked if we wanted nuclear power and the dangerous waste it produces. We did not and do not consent to the continued operation of nuclear power reactors and ongoing production of nuclear waste.

The EPA question 'What should be immediately considered?' is the primary concern. The answer is 'safety' and what to do with the nuclear waste which has been piled into re-

racked and tightly packed vulnerable spent fuel pools now. Communities across the country have spoken out to close reactors and store the spent fuel in secure dry casks to no avail. Our own Pilgrim nuclear reactor is one of the worst operating plants in the country, continually failing inspection reports, and yet it continues to operate at risk to the public. The spent fuel pool dangers are well documented, and both the NRC and DOE fail to address this imminent danger.¹ Promoting the nuclear industry that produces this toxic waste with nowhere to go is unacceptable. The NRC should require the expedited transfer of spent fuel from pools to dry cask storage containers at U.S. nuclear reactors.²

To move this dangerous waste on an interim basis from communities that profited from the production of nuclear power to other communities, transferring the danger from one community to another generally low income minority community, is immoral. We are all at risk today and will continue to be so until nuclear reactors are closed and there is a real resolution for safe storage of HLW.

We, Cape Downwinders, do not support 'Interim Based Storage'. The DOE plan for the process as 'consent based', asking the public how to make it fair, what models to use, who should be involved, is a hoax and another 'bait and switch' nuclear industry marketing strategy like "electricity to cheap to meter". It attempts to hide the real fact that there is no safe way to dispose of HLW, a huge public relations problem for the NRC, DOE, and nuclear industry.

Until 'Real Deal' solutions are developed, HLW should remain on the sites where it was generated using Hardened On-Site Storage technology (HOSS) subject to in-depth and comprehensive environmental assessment of the specified technology and specific location of the facility. Hosting communities should be compensated at a rate equal to the average of the last ten years of on-line power producing operations of both the direct and the indirect revenue streams realized by that community. Community involvement during the design process, environmental assessment, construction process and development of emergency planning should be an important component of the program if trust is genuinely one of the desired goals of a consent based process.

The Union of Concerned Scientists has summed up the DOE proposal:

*"The motive for centralized interim storage is largely political: it would provide a place for utilities to send their spent fuel in the event that a geologic repository is further delayed, thus satisfying the DOE's legal obligations."*³

¹ https://www.princeton.edu/sgs/publications/articles/fvhippel_spentfuel/rAlvarez_reducing_hazards.pdf

² <http://www.nirs.org/radwaste/exhibitc2013-12-19thompsonfinaldeclarationrepoolfirerisks.pdf>

³ http://www.ucsusa.org/sites/default/files/legacy/assets/documents/nuclear_power/NPWWch5.pdf

This initiative for 'Consent Based Interim Storage' is hiding an unethical and outrageous contamination problem, not solving it. It is a dangerous shell game we will not play.

The Department of Energy has failed the American people unless the following is implemented:

1. Closure of all nuclear reactors
2. Stopping production of nuclear waste.
3. Immediately emptying spent fuel pools and storing the spent fuel in the best available dry casks in protected Hardened On-Site Storage
4. Full public input on all aspects for on-site waste storage and for any movement of future off-site permanent storage including transportation across state lines.
5. Increasing security at spent fuel pools and HOSS at all NPP.
6. Fully recognizing the issue of Environmental Racism.

For Cape Downwinders,

Steering Committee:

Diane Turco, Harwich tturco@comcast.net
Arlene Williamson, Mashpee a.williamson99@comcast.net
Susan Carpenter, South Dennis scarpenter1103@gmail.com
Elaine Dickinson, Harwich edickinson1149@gmail.com
Margaret Steven, Bourne cybermaga@gmail.com
Maxine Wolfset, Mashpee maxwolfset@comcast.net
William Maurer, Falmouth wmmaurer@comcast.net
Don Barton, Mashpee dbarton357@gmail.com
Karen Quinn, Centerville kequinn101@comcast.net
Mary Conathan, Chatham marathan@verizon.net
Bonnie Brydges, Harwich bonbry@verizon.net
Sarah Thacher, East Dennis benthacher@hotmail.com

Three-Step Concept for executing a consent-based siting process

Step 1—DOE or new management organization seeks expressions of interest from communities or entities that might consider hosting a consolidated storage facility. Upon meeting specified criteria, grants are provided to entities within individual states, or states themselves, that may be interested in studying the benefits and drawbacks of hosting a facility. The purpose of the funding should be:

1. To establish a network for educating elected officials, interested parties, constituencies and stakeholders through an open dialogue regarding the potential positive and negative effects of hosting a facility on the state, local constituencies and the region, and
2. To develop a set of potential consent-based terms and conditions, if any, under which a community, affected Indian tribe, and state might consider hosting such a facility. These terms and conditions should be developed through existing state and local government structures.

The goal of this step is to build sufficient support from local stakeholders, affected tribes, and the state to participate in the next step.

Step 2—DOE or new management organization provides grants to interested communities and states (from those that participated in step 1) to develop a proposed consent agreement for hosting a consolidated storage facility in a specific location in the state. The consent agreement should address incentives and other items that the communities and states feel are important (e.g., regulatory role). The proposed consent agreement will be presented to DOE or the new management organization at the end of this step.

Step 3— After reviewing the proposed consent agreements submitted under step 2, DOE or a new management organization negotiates with one or more of state and local coalitions (from those that participated in step 2) to finalize a legally binding consent agreement using the proposed consent agreement developed in Step 2 as the starting point. Pending approval of an agreement, DOE could begin funding design development for the specified site.

Consent-Based Siting

From: Graham Unverzagt [mailto:gcracker505@gmail.com]
Sent: Sunday, July 31, 2016 11:42 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Cc: Leticia_Delgado@tomudall.senate.gov; Elizabeth_Hill@heinrich.senate.gov
Subject: Response to IPC

Date July 31, 2016

U.S. Department of Energy
Office of Nuclear Energy, Response to IPC
1000 Independence Ave SW
Washington, DC 20585

RE: Response to IPC

To Whom It May Concern:

I am writing in response to your “Consent-Based Siting” of Radioactive Waste Dumps, with special concern to communities in New Mexico.

By virtue of the end result, this process is inherently unfair to the community that will receive the nuclear waste, and the communities that will be at risk along the transportation routes.

Being a state that already has one failed nuclear waste site (the Waste Isolation Pilot Project or “WIPP”), I know that such facilities cannot be safe into perpetuity and any community who receives nuclear waste will forever be at risk of accidents, explosions, and resulting health-related issues.

I understand that WIPP near Carlsbad, NM and the Waste Control Specialists (WCS) in Andrews, TX are sites that may be considered for interim and long-term storage. Because WCS has invited DOE to bring waste to its facility, this invitation by WCS cannot be considered an invitation by a community. As a resident of New Mexico I do not invite DOE to bring waste to New Mexico. I DO NOT CONSENT to the storage of high level nuclear waste in our state now or ever!

DOE has not done sufficient outreach to the general population of American citizens on this proposal, and has not heard from all the communities who will be impacted by transport through their areas. I request that the DOE continue to do educational presentations and to hold additional meetings in New Mexico regarding your Consent Based Siting process, in Albuquerque, Carlsbad, Las Cruces, Gallup, and to the various Tribal Nations including Navajo, Mescalero, and any of the 19 Pueblos along possible transportation routes.

These are some recommendations:

Stop all nuclear waste production that generates irradiated nuclear fuel in the first place, including weapons-related and reactor operations. Work toward clean, non-nuclear, and carbon free forms of energy production—such as energy efficiency, wind, and solar.

Continue to work toward safe, reliable and permanent methods of storing nuclear waste, such as Hardened On-Site Storage (HOSS), as has been suggested in the past by several organizations, including the Institute for Energy and Environmental Research, Nuclear Information Resource Services and Beyond Nuclear.

The cost of storage and transport of nuclear waste must not be the financial burden of rate-payers or tax-payers. Total liability and all expenses should remain with owning utilities. These companies should also never be permitted to build nuclear plants without demonstrating financial capacity to cover all costs of safe permanent storage of wastes in perpetuity.

Question 1:

How can the Department of Energy ensure that the process for selecting a site is fair?

More public meetings are needed, especially ones in Albuquerque, Gallup, and Carlsbad. The DOE needs to include outreach to Environmental Justice organizations, Communities of Color, Low-Income communities, professors in ethics, health professionals, and emergency responders and other interested parties. DOE should postpone any decision on this “consent-based siting” proposal until all these communities have been informed *and* until DOE has considered the report by NRC on “pool storage safety” due out later this year.

Question 2:

What models and experience should the Department of Energy use in designing the process?

I support the storage of nuclear waste and spent fuel using HOSS techniques, in “hardened dry casks” built to prevent leakage and explosions, instead of cooling pools. There will be less risk storing waste at the places where it was created instead of moving it, storing it on-site or as close to the point of origin as possible. Casks must not be stored or transported through tribal lands or high-population centers.

Storage pool structures must not be dismantled during plant decommissioning and must be maintained at utilities' expense as emergency sites for failed cask-to-replacement-cask transfers.

Question 3:

Who should be involved in the process for selecting a site, and what is their role?

In order to ensure adequate research and consideration for safety for the environment and communities, several focused teams should be created to oversee the following:

A) Safety Teams, including professionals and experts in these fields: Transportation Safety, Emergency Responders and First Responders, Health Professionals, Hazmat, etc.

B) Human Rights, experts and professionals who specialize in the protection of the rights of: the Child, Women, the Poor, and Indigenous Peoples Rights.

C) Health, all communities likely to be affected by proposed transportation routes and storage sites must be apprised of the risks by experts who can ensure the safety of: our air, waters, soil, plants, animals, and human health.

Question 4:

What information and resources do you think would facilitate your participation?

The public must be provided with information and have adequate time to consider the risks and options of site proposals. We must be provided with:

- Site geology and hydrology
- Nature of irradiated nuclear fuel
- Status of hardened cask technologies
- Nearest Emergency facilities
- Worst-case scenario of possible explosions and releases of radioactivity

This information must be provided in a plain English format, understandable by the common layperson.

Question 5:

What else should be considered?

The process should center on the ongoing history of radioactive environmental contamination and its effects on communities. Corporations and nuclear industry or similar businesses should not be considered "the public" or as "the community" in terms of consent.

New Mexico is a state with several indigenous nations and various traditional cultures. Each tribal nation and traditional Chicano or Hispanic community must be contacted and informed of the process and provided with materials translated in the appropriate language. DOE must follow its Federal Trust Responsibility when addressing Tribal Nations. DOE must also abide by all international conventions, including the United Nations Declaration on the Rights of Indigenous Peoples which states that "free, informed, and prior consent" is

necessary before proceeding with federal actions such as transport and storage of dangerous and hazardous materials in areas that may affect tribal nations, tribal members, and indigenous peoples.

Sincerely,

John Graham Unverzagt
236 Carlisle Blvd NE
Albuquerque, NM 87106

Enclosure:
NMThreatsFromPotentialHighLevelNuclearWasteTransport.pdf

DOE Consent Based Siting

Potential Route For Waste Transportation (I-25)

A

US-87 & I-25, Raton, NM
87740, USA

B

I-10, El Paso, TX 79902, USA

Potential Route For Waste Transportation (I-40)

A

Indn Service Rte 7140, Lupton,
AZ 86508, USA

B

6301-6397 Quay Rd A,
Hereford, TX 79045, USA

Directions from 7-13 Chato Rd,
Lordsburg, NM 88045, USA to
1390 N Main St, Las Cruces, NM
88001, USA

A

7-13 Chato Rd, Lordsburg, NM
88045, USA

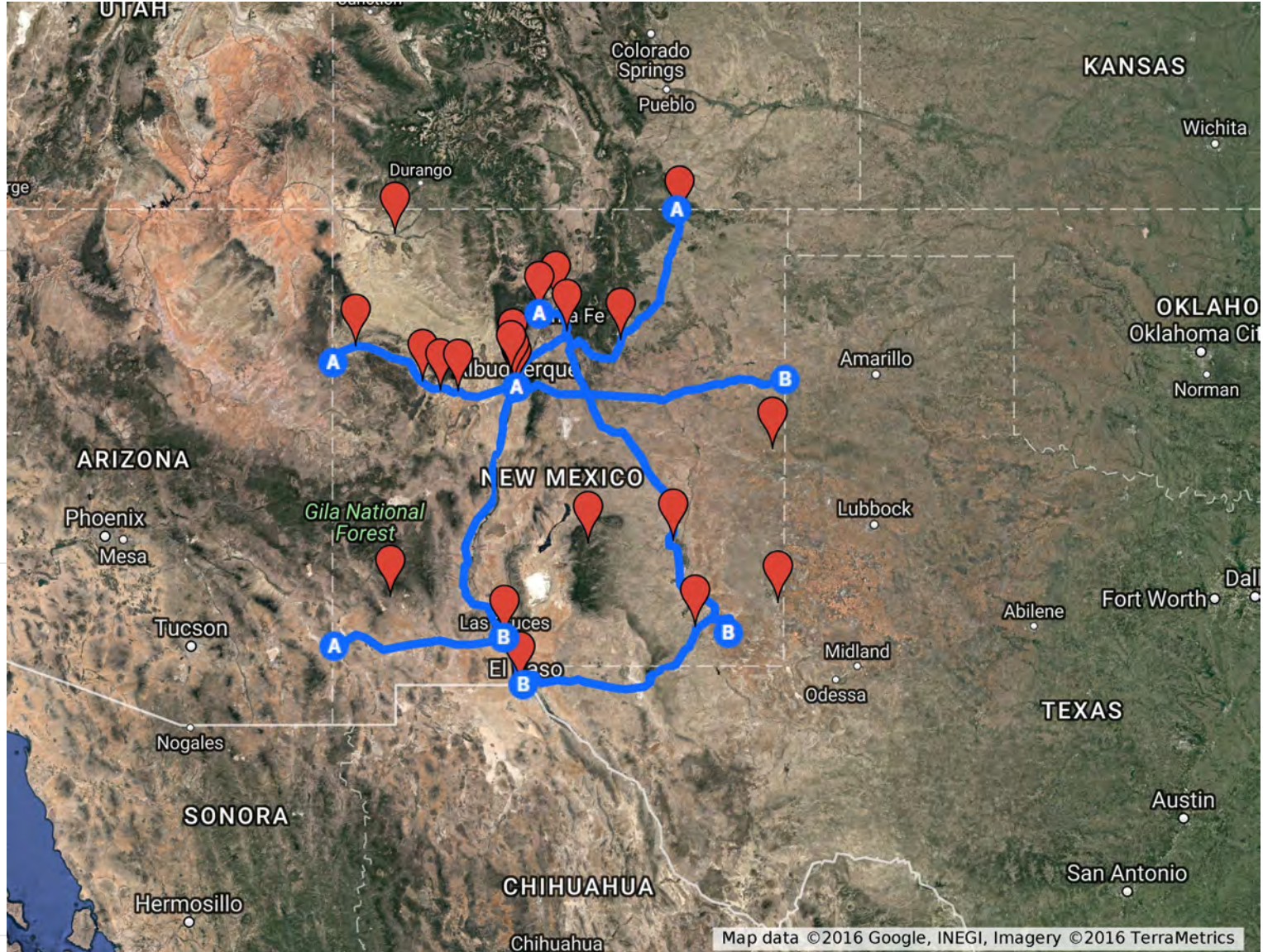
B

1390 N Main St, Las Cruces,
NM 88001, USA

HAZMAT Response Teams















Albuquerque Fire Department



Threats to New Mexico from Potential Transport of High Level Nuclear Waste

The Department of Energy (DOE) is currently working on a process for getting consent from the communities it plans to eventually store nuclear waste in and are trying to create a

-  Carlsbad Fire Department
-  Clovis Fire Department
-  Espanola Fire Department
-  Farmington Fire Department
-  Grants Fire Department
-  Gallup Fire Department
-  Hobbs Fire Department
-  Las Cruces Fire Department
-  Pueblo of Acoma Fire Department
-  Raton Fire Department
-  Roswell Fire Department
-  Santa Fe Fire Department
-  Sunland Park Fire Department
-  64th Civil Support Team (CST)
-  Bernalillo County Fire Department
-  Las Vegas Fire Department
-  Los Alamos Fire Department
-  Rio Rancho Fire Department
-  Ruidoso Fire Department
-  Silver City Fire Department
-  Laguna Fire Department

process for how that can be done. The goal of this map is for communities to see and understand possible threats they may face if the DOE starts to relocate high level nuclear waste created in other parts of the U.S. to or through New Mexico. This map depicts the most probable routes that would be used to transport the waste so that communities can better understand possible future risk. Also included in this map are the locations of HAZMAT Response teams throughout the state so the viewer can have a good idea of where they are located in regards to their own community.

Here is what the DOE has to say about this project, "Our goal is to develop solutions for the long-term, sustainable management of our nation's spent nuclear fuel and high-level radioactive waste. We are planning for an integrated waste management system to transport, store, and dispose of spent nuclear fuel and high-level radioactive waste from commercial electricity generation, as well national defense activities. To achieve this goal, we are developing a process to site facilities collaboratively with the public, communities, stakeholders, and governments at the state, tribal, and local levels. We are seeking the help of all Americans in developing a consent-based approach to siting that is fair and reflective of public input. We are committed to finding a solution that protects our nation's citizens, communities, and the environment."

Please share the map and send any additions or corrections to:
contact@dinenonukes.org

Directions from Albuquerque, NM,
 United States to WIPP, Carlsbad,
 NM, United States



Albuquerque, NM, United States

B

WIPP, Carlsbad, NM, United States

Las Cruces to WIPP

A

Las Cruces, NM, United States

B

WIPP, Carlsbad, NM, United States

Los Alamos to WIPP

A

Los Alamos, NM, United States

B

WIPP, Carlsbad, NM, United States

Consent-Based Siting

From: Reba Utevsky [mailto:RUtevsky@giddensschool.org]
Sent: Friday, July 29, 2016 8:09 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: No Nuclear Waste Storage in Washington State

Hello --

The big problem with nuclear anything is the waste component. How long is the half-life? a million years? Please do not transport nor store any more waste in Washington, we have enough and are not able to effectively store what we have.

Thank you for allowing community comment.

Regards,

Reba Utevsky
Science Specialist
Giddens School
620 20th Ave S
Seattle, WA 98144
206-324-4847 ex17

Consent-Based Siting

From: Maheras, Steven J <Steven.Maheras@pnnl.gov>
Sent: Friday, February 05, 2016 8:11 AM
To: Consent Based Siting
Cc: Helvey, Elizabeth (ehelvey@northwindgrp.com); Howard, Rob (howardrl1@ornl.gov)
Subject: FW: federal register notice on consent based siting

See below for a question from Gerry Van Noordennen at ZionSolutions.

From: Gerard P. Van Noordennen [mailto:gpvannoordennen@energysolutions.com]
Sent: Wednesday, December 23, 2015 11:49 AM
To: Maheras, Steven J
Subject: Re: federal register notice on consent based siting

Steve,
If the NRC issues a Part 72 license to the WCS Consolidated Spent Fuel Storage Facility in West Texas, then by definition, the DOE consent based during process is complete. Correct?
Gerry van Noordennen

Sent from my Verizon 4G LTE Smartphone

----- Original message-----

From: Maheras, Steven J
Date: Wed, Dec 23, 2015 11:31 AM
To: James C. Ashley; Capstick, Bob (bcapstick@3yankees.com); Cowan, Pamela (pamela.cowan@exeloncorp.com); Davin, Pete (pdavin@davinconsult.com); Fata, Alan (Alan.Fata@duke-energy.com); Granaas, Randall (Randall.Granaas@sce.com); Holt, Julie (julie.c.holt@sce.com); Howes, Eric (ehowes@3yankees.com); Leblang, Suzanne (slebla2@entergy.com); Lynch, Joe (jlynch4@entergy.com); Mitchell, Bob (bmitchell@3yankees.com); Olson, Cheryl (clo@dairynet.com); Olson, Tim (timothy.p.olson@dom.com); Plante, Paul (pplante@3yankees.com); Potter, Larry (lpotte1@entergy.com); Ronningen, Einar (eronnin@smud.org); Sharp, Loren (ldsl@pge.com); Smith, Brian (bsmith@3yankees.com); Smith, Mark (MGS1@pge.com); Swanger, Ken (kswange@entergy.com); Tursa, Mark (Mark.Tursa@pgn.com); Gerard P. Van Noordennen;
Cc:
Subject: federal register notice on consent based siting

All—

Attached is the DOE Federal Register notice on consent-based siting (published today, 12/23/2015). Please note that the comment period runs through June 15, 2016.

Regards,

Steve Maheras
Pacific Northwest National Laboratory
1435 Ridgeview Road
Columbus, OH 43221
(614) 486-5350 (Phone)
(614) 429-6836 (Fax)
(614) 915-7391 (Mobile)

Steven.Maheras@pnnl.gov

Consent-Based Siting

From: Maheras, Steven J <Steven.Maheras@pnnl.gov>
Sent: Friday, February 05, 2016 9:15 AM
To: Consent Based Siting
Cc: Helvey, Elizabeth (ehelvey@northwindgrp.com); Howard, Rob (howardrl1@ornl.gov)
Subject: FW: consent-based siting meeting in chicago

See below for a second comment/question from Gerry Van Noordennen at ZionSolutions.

From: Gerard P. Van Noordennen [mailto:gpvan Noordennen@energysolutions.com]
Sent: Tuesday, February 02, 2016 8:51 AM
To: Maheras, Steven J
Subject: RE: consent-based siting meeting in chicago

Thanks Steve.

Hopefully, DOE will hold a meeting in West Texas and in New Mexico which are the most likely locations for a Consolidated Storage Repository.

Gerry vN

From: Maheras, Steven J [<mailto:Steven.Maheras@pnnl.gov>]
Sent: Tuesday, February 02, 2016 7:38 AM
To: Cowan, Pamela (pamela.cowan@exeloncorp.com); Gerard P. Van Noordennen
Subject: consent-based siting meeting in chicago

Pamela and Gerry—

Just a quick not to let you know that the DOE is planning on holding a consent-based siting meeting in the Chicago area. The specifics of the meeting have not been set, but I thought that you all would like to know and I will forward you the meeting info when I get it.

Regards,

Steve Maheras
Pacific Northwest National Laboratory
1435 Ridgeview Road
Columbus, OH 43221
(614) 486-5350 (Phone)
(614) 429-6836 (Fax)
(614) 915-7391 (Mobile)
Steven.Maheras@pnnl.gov

Consent-Based Siting

From: Peter Van der Does [<mailto:p.vanderdoes1@gmail.com>]

Sent: Monday, July 18, 2016 4:26 PM

To: Consent Based Siting <consentbasedsiting@hq.doe.gov>

Subject: Consent based siting.

What consent ???

Nuclear plant operating companies have gotten their permits and licenses from the Nuclear Regulatory Commission but they did not get their permission from an informed public. Where is democracy in this ?

You are asking about consent for spent fuel storage after the fact !!

Who will change the spent fuel casks rotting on the ISFSI pads 500 years from now ?

Who gave the DOE permission to okay nuclear power so it can add Cobalt 60 , Strontium 90 and Tritium to the groundwater and eventually migrate into the water table or the river sediment ?

In 2010 Strontium 90 was discovered in the fish in the Connecticut river near the Vermont Yankee nuclear plant where I live. You think we want Strontium 90 in our fish ? Forget allowable amounts...we don't want it in any amounts!

Have you considered the bio-accumulation which occurs over time ? Just remember that when you or someone you know gets cancer that there is a distinct possibility it was caused by industrial radioactivity and inactivity on the part of regulatory personnel. That is you fella.

Consent-Based Siting

From: Daniel Venzon [<mailto:dvenzon7@gmail.com>]
Sent: Thursday, July 14, 2016 5:28 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: The case for no more waste

I am writing you as a concerned father who has children in Idaho.

My concern is always been for the health of the people of Idaho. I lived there 30 years, And enjoyed the outdoors and beauty and splendor of Idaho. Unfortunately we are again at a cross roads and I don't believe that we can come back from a bad decision.

The problem with nuclear energy is that creates waste we cannot handle and dispose of. Nuclear bombs are created from the plutonium and as a veteran for peace I disagree with arming nations with nuclear bombs.

There should be zero tolerance for shipping more commercial radio active waste to Idaho. We have one of the greatest pure aquifers in the nation and enough toxic radioactive waste at this time. I believe we need to say no more nuclear waste ever.

Daniel Venzon
Concerned citizen

Sent from my iPhone

Consent-Based Siting

From: Ravi W [mailto:ravimw@gmail.com]
Sent: Sunday, July 31, 2016 11:57 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: Response to IPC

Date July 31, 2016

U.S. Department of Energy
Office of Nuclear Energy, Response to IPC
1000 Independence Ave SW
Washington, DC 20585

RE: Response to IPC

To Whom It May Concern:

We are writing in response to your “Consent-Based Siting” of Radioactive Waste Dumps, with special concern to our communities in New Mexico.

By virtue of the end result, this process is inherently unfair to the community that will receive the nuclear waste, and the communities that will be at risk along the transportation routes.

Being a state that already has one failed nuclear waste site (the Waste Isolation Pilot Project or “WIPP”), we know that such facilities cannot be safe into perpetuity and any community who receives nuclear waste will forever be at risk of accidents, explosions, and resulting health-related issues.

We understand that WIPP near Carlsbad, NM and the Waste Control Specialists (WCS) in Andrews, TX are sites that may be considered for interim and long-term storage. Because WCS has invited DOE to bring waste to its facility, this invitation by WCS cannot be considered an invitation by a community. We as residents of New Mexico do not invite DOE to bring waste to New Mexico. We DO NOT CONSENT to the storage of high level nuclear

waste in our state now or ever!

DOE has not done sufficient outreach to the general population of American citizens on this proposal, and has not heard from all the communities who will be impacted by transport through their areas. We request DOE to continue to do educational presentations and to hold additional meetings in New Mexico regarding your Consent Based Siting process, in Albuquerque, Carlsbad, Las Cruces, Gallup, and to the various Tribal Nations including Navajo, Mescalero, and any of the 19 Pueblos along possible transportation routes.

These are our recommendations:

Stop all nuclear waste production that generates irradiated nuclear fuel in the first place, including weapons-related and reactor operations. Work toward clean, non-nuclear, and carbon free forms of energy production—such as energy efficiency, wind, and solar.

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The cost of storage and transport of nuclear waste must not be the financial burden of rate-payers or tax-payers. Total liability and all expenses should remain with owning utilities. These companies should also never be permitted to build nuclear plants without demonstrating financial capacity to cover all costs of safe permanent storage of wastes in perpetuity.

Question 1:

How can the Department of Energy ensure that the process for selecting a site is fair?

More public meetings are needed, especially ones in Albuquerque, Gallup, and Carlsbad. The DOE needs to include outreach to Environmental Justice organizations, Communities of Color, Low-Income communities, professors in ethics, health professionals, and emergency responders and other interested parties. DOE should postpone any decision on this “consent-based siting” proposal until all these communities have been informed *and* until DOE has considered the report by NRC on “pool storage safety” due out later this year.

Question 2:

What models and experience should the Department of Energy use in designing the process?

We support the storage of nuclear waste and spent fuel using HOSS techniques, in “hardened dry casks” built to prevent leakage and explosions, instead of cooling pools. There will be less risk storing waste at the places where it was created instead of moving it, storing it on-site or as close to the point of origin as possible. Casks must not be stored or transported through tribal lands or high-population centers.

Storage pool structures must not be dismantled during plant decommissioning and must be

maintained at utilities' expense as emergency sites for failed cask-to-replacement-cask transfers.

Question 3:

Who should be involved in the process for selecting a site, and what is their role?

In order to ensure adequate research and consideration for safety for the environment and communities, several focused teams should be created to oversee the following:

A) Safety Teams, including professionals and experts in these fields: Transportation Safety, Emergency Responders and First Responders, Health Professionals, Hazmat, etc.

B) Human Rights, experts and professionals who specialize in the protection of the rights of: the Child, Women, the Poor, and Indigenous Peoples Rights.

C) Health, all communities likely to be affected by proposed transportation routes and storage sites must be apprised of the risks by experts who can ensure the safety of: our air, waters, soil, plants, animals, and human health.

Question 4:

What information and resources do you think would facilitate your participation?

The public must be provided with information and have adequate time to consider the risks and options of site proposals. We must be provided with:

- Site geology and hydrology
- Nature of irradiated nuclear fuel
- Status of hardened cask technologies
- Nearest Emergency facilities
- Worst-case scenario of possible explosions and releases of radioactivity

This information must be provided in a plain English format, understandable by the common layperson.

Question 5:

What else should be considered?

The process should center on the ongoing history of radioactive environmental contamination and its effects on communities. Corporations and nuclear industry or similar businesses should not be considered "the public" or as "the community" in terms of consent.

New Mexico is a state with several indigenous nations and various traditional cultures. Each tribal nation and traditional Chicano or Hispanic community must be contacted and informed of the process and provided with materials translated in the appropriate language. DOE must follow its Federal Trust Responsibility when addressing Tribal Nations. DOE must also abide by all international conventions, including the United Nations Declaration on the Rights of

Indigenous Peoples which states that “free, informed, and prior consent” is necessary before proceeding with federal actions such as transport and storage of dangerous and hazardous materials in areas that may affect tribal nations, tribal members, and indigenous peoples.

Sincerely,

Ravi Wadhvani
1200 Nakomis Dr, Albuquerque, NM 87112

Enclosure:
NMThreatsFromPotentialHighLevelNuclearWasteTransport.pdf

DOE Consent Based Siting

Potential Route For Waste Transportation (I-25)

A

US-87 & I-25, Raton, NM
87740, USA

B

I-10, El Paso, TX 79902, USA

Potential Route For Waste Transportation (I-40)

A

Indn Service Rte 7140, Lupton,
AZ 86508, USA

B

6301-6397 Quay Rd A,
Hereford, TX 79045, USA

Directions from 7-13 Chato Rd,
Lordsburg, NM 88045, USA to
1390 N Main St, Las Cruces, NM
88001, USA

A

7-13 Chato Rd, Lordsburg, NM
88045, USA

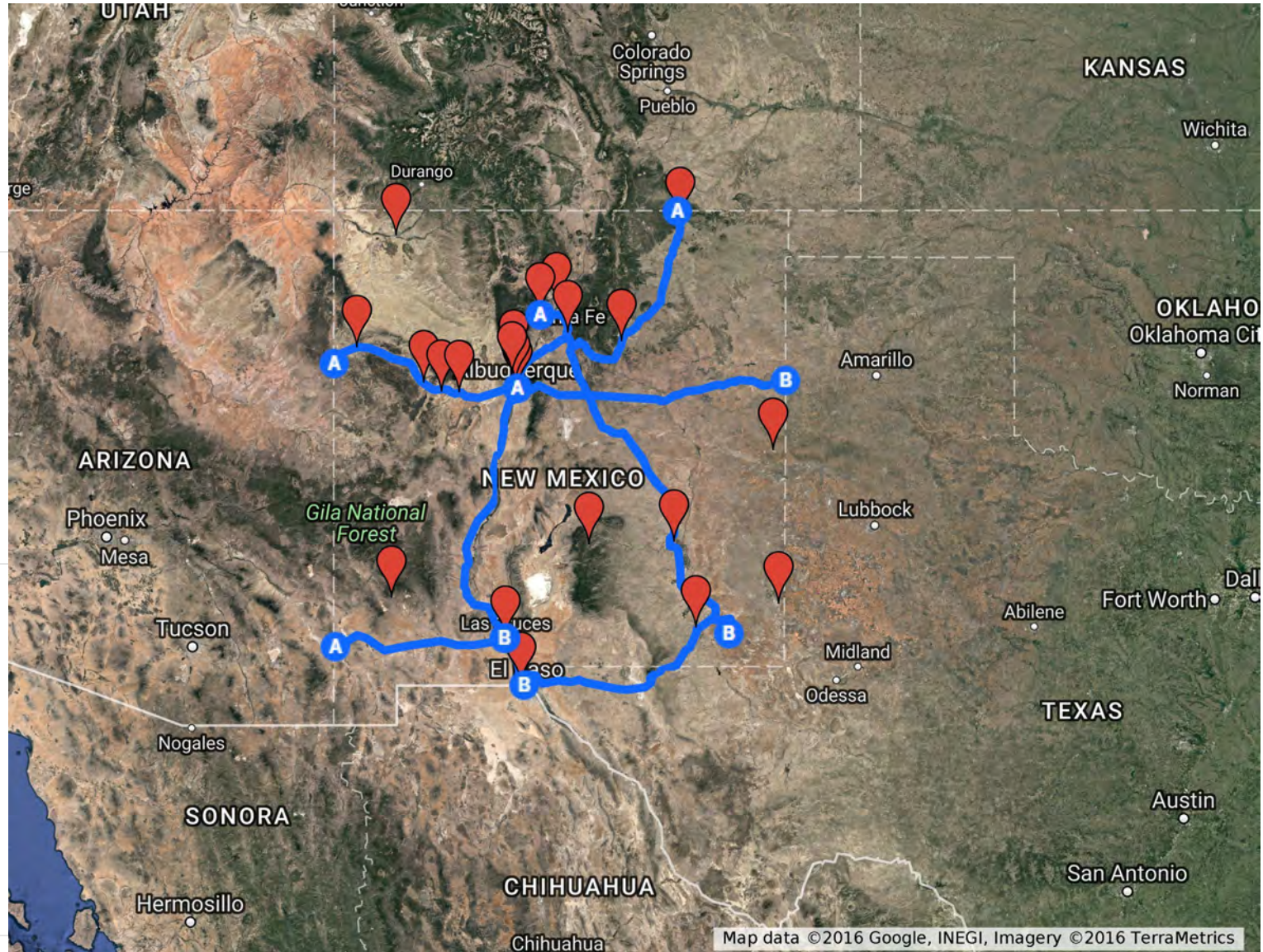
B

1390 N Main St, Las Cruces,
NM 88001, USA

HAZMAT Response Teams













Albuquerque Fire Department



Threats to New Mexico from Potential Transport of High Level Nuclear Waste

The Department of Energy (DOE) is currently working on a process for getting consent from the communities it plans to eventually store nuclear waste in and are trying to create a

-  Carlsbad Fire Department
-  Clovis Fire Department
-  Espanola Fire Department
-  Farmington Fire Department
-  Grants Fire Department
-  Gallup Fire Department
-  Hobbs Fire Department
-  Las Cruces Fire Department
-  Pueblo of Acoma Fire Department
-  Raton Fire Department
-  Roswell Fire Department
-  Santa Fe Fire Department
-  Sunland Park Fire Department
-  64th Civil Support Team (CST)
-  Bernalillo County Fire Department
-  Las Vegas Fire Department
-  Los Alamos Fire Department
-  Rio Rancho Fire Department
-  Ruidoso Fire Department
-  Silver City Fire Department
-  Laguna Fire Department

process for how that can be done. The goal of this map is for communities to see and understand possible threats they may face if the DOE starts to relocate high level nuclear waste created in other parts of the U.S. to or through New Mexico. This map depicts the most probable routes that would be used to transport the waste so that communities can better understand possible future risk. Also included in this map are the locations of HAZMAT Response teams throughout the state so the viewer can have a good idea of where they are located in regards to their own community.

Here is what the DOE has to say about this project, "Our goal is to develop solutions for the long-term, sustainable management of our nation's spent nuclear fuel and high-level radioactive waste. We are planning for an integrated waste management system to transport, store, and dispose of spent nuclear fuel and high-level radioactive waste from commercial electricity generation, as well national defense activities. To achieve this goal, we are developing a process to site facilities collaboratively with the public, communities, stakeholders, and governments at the state, tribal, and local levels. We are seeking the help of all Americans in developing a consent-based approach to siting that is fair and reflective of public input. We are committed to finding a solution that protects our nation's citizens, communities, and the environment."

Please share the map and send any additions or corrections to:
contact@dinenonukes.org

Directions from Albuquerque, NM,
 United States to WIPP, Carlsbad,
 NM, United States



Albuquerque, NM, United States



WIPP, Carlsbad, NM, United States

Las Cruces to WIPP



Las Cruces, NM, United States



WIPP, Carlsbad, NM, United States

Los Alamos to WIPP



Los Alamos, NM, United States



WIPP, Carlsbad, NM, United States

Consent-Based Siting

From: patbund@comcast.net [mailto:patbund@comcast.net]

Sent: Saturday, July 16, 2016 8:06 PM

To: Consent Based Siting <consentbasedsiting@hq.doe.gov>

Subject: Comments on Choosing Location for Radioactive Waste

DOE: Please include all of my following comments when you set up instructions on how to find a place for the radioactive waste, if it must be moved.

I attended the DOE public meeting on March 29, 2016, in Chicago Illinois. We were given a great deal of information, but no clear focus on just what would be involved. For example, the quote "70 tons of waste is here now" - in different locations? From closed and open plants? Can it be shipped as is (probably not)? What solid science has been considered for holding all of this?

However, the waste is somewhere and many questions must be considered on what to do. Some of these are:

- 1) Design the safest structures to hold the material, not just from the "lowest bidder."
- 2) Provide extensive and wide-spread public education, in the schools, meetings, media, etc., to explain the extensive issues involved.
- 3) Define what is meant by "community" and "location." One town will always affect others. This includes a definition (town, tribe, county, multiple entities, etc.) of places that are affected, both for getting the waste there and for final placement.
- 4) Determine who, what, when and how payments are made for costs incurred. Costs include the initial buildings, ongoing maintenance, loss of use of the area where it is stored, etc. The travesty in Zion, Illinois, unfortunately gives some good specifics on what was not done and should have been. Zion residents lost part of their lakefront, infrastructure for getting to and from the location, etc.
- 5) Identify and use the best experts who will be involved, with engineers, scientists in multiple fields, such as nuclear, water, medical (e.g., endocrine disruptor group of TEDX founded by Dr. Theo Coburn, at <http://endocrinedisruption.org/>).
- 6) Set up monitoring that will be permanently in place (in perpetuity), for air, soil, underground, etc.
- 7) Possibly start with the current programs in municipalities that already have a waste process, such as the one in Illinois (SB 172). Our table had someone from CB & I, out of St. Charles, who was very familiar with this and recommended it. It sounded limited, though, as he mostly worked with just the immediate community/town council, and not the neighboring ones.

8) Set up permanent community councils, with government, public and company representatives.

Patricia Walter
Glenview, IL

Consent-Based Siting

From: Vicki Watson [<mailto:vickiwatson2002@yahoo.com>]
Sent: Monday, July 25, 2016 9:55 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: Response to IPC

To Whom it May Concern:

Number one, spent fuel should not be placed in an interim facility. There are multiple problems with this approach. Spent fuel is already stored at the initial facility on an interim basis and there is no reason to transport any spent fuel and put this dangerous material on our railroads and through our cities.

Number two, Idaho is a NON CONSENT state and Idaho already has interim storage that is to be transported at some time to a nonexistant consolidation site. We already receive spent fuel from the Department of Navy.

Number three, a new agency needs to be developed per the recommendation of the Blue Ribbon Commission on American's Nuclear Future. The Department of Energy should not be in charge. A new agency would develop legal standards regarding multiple issues regarding nuclear waste, such as regulations for storage, disposal, transportation, consent and have waste as the primary concern unlike the DOE whose primary concern is energy development. This new agency would be able to provide information to create an informed US population.

I support solving this very complicated problem in the best manner possible.

Thank you for your time and very thoughtful consideration of my concerns.

Vicki A. Watson
240 Valleyview Drive
Pocatello, ID 83204
208 241.7570

Sent from my iPad

Consent-Based Siting

From: Stephen Weeg [<mailto:stephenweeg@gmail.com>]
Sent: Monday, July 25, 2016 9:53 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: Response to IPC

To whom it may concern:

My core messages are as follows:

1. Spent fuel should not be consolidated at an interim storage site ANYWHERE. Spent fuel is already in interim storage at individual reactors around the country. Moving it prior to having a final solution is an inadvisable waste of precious financial resources. Idaho has already been storing waste on an "interim" basis, with multiple promises that it would be moved. Based upon history, too often interim becomes permanent. Creating an consolidated interim storage site takes all the pressure off of decision-makers to find a permanent solution.
2. Idaho is a non-consent state. We, in Idaho, have already made our decision in 1995 with the Batt settlement agreement which includes a ban on receiving commercial spent nuclear fuel. The 1996 statewide ballot initiative, which passed, reaffirmed the desire of Idaho citizens to have an Idaho free on nuclear waste. All Idahoans have a stake in this project. The current waste stream of over 75,000 tons of commercial waste is too big a risk to consolidate over our aquifer.
3. The framework for nuclear waste management and disposal and storage must be clear, well-designed, and thorough and have the full force of law. Because of conflicting priorities, it would be wise to separate this function from the Department of Energy, which is in the business of energy development. Historically, waste management has take a back seat to energy development. Its been put on the back 40 too often.

I am not in favor of the consolidation of commercial spent nuclear fuel in Idaho, or anywhere in the United States. Since there is no real plan or process for a permanent solution, the odds are too strong that interim will begin permanent.

For Idaho's future,
I am sincerely yours,
Stephen Weeg
442 S Garfield Ave
Pocatello, ID 83204

stephenweeg@gmail.com

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Stephen Weeg
stephenweeg@gmail.com
208 251-2607

Consent-Based Siting

From: Dennis Welch [<mailto:blakeprof@gmail.com>]
Sent: Friday, July 29, 2016 2:26 PM
To: Consent Based Siting
Subject: Comment Opposing DOE's Consent-Based Siting Process for Nuclear Waste

Dear Secretary Moniz,

Concerning the reception of nuclear wastes, the manner in which the DOE seeks to inveigle the consent of communities--undoubtedly, minority and/or poor communities (but we all know there is no such thing as systemic environmental racism or classism)--deserves nothing but outrage and absolute rejection.

Here is what the DOE's PR game amounts to:

(1) The DOE wants to identify who adequately represents a community and will consent to receive nuclear waste on its behalf. No doubt, the DOE will find just the right community "representatives" to consent to the inevitable contamination and the severe health risks resulting from nuclear wastes.

(2) The DOE is not defining exactly what or how much nuclear waste communities would be "consenting" or not consenting to receive. So long as the DOE determines where to store (I.e., dump) nuclear wastes, it and the nuclear power industry--subsidized heavily by US taxpayers for decades--will be content. (The Price-Anderson Act, which has for all those decades protected the industry at the expense of taxpayers, should be repealed. Then we will see how independently capitalist an enterprise that industry is.)

(3) The DOE is not asking how a community can refuse or express permanent "non-consent." That's because it is rigging the whole process to get the results it and the industry want.

The DOE serves the interests of the nuclear power industry, as well as the military industrial complex--not the health, safety and welfare of U.S. citizens.

Indeed, the DOE acknowledges that "consent" by community "representatives" to receive nuclear wastes means consent to future nuclear waste production as part of setting up an "integrated waste management system."

The federal agency says that the future of nuclear energy in this country depends on this. But, why would presumably rational people want to continue subsidizing an industry whose waste products remain radioactive for thousands of years? What storage system(s) can foolhardy decision-makers guarantee will last that long?!

The DOE is giving no consideration to the rights of future generations who will inevitably and adversely be affected nuclear wastes.

Dennis Welch
701 Eldridge Loop
Cary, NC 27519

Consent-Based Siting

From: ROBERT S. WEST, MD FACS [<mailto:robertwest8@roadrunner.com>]
Sent: Saturday, July 16, 2016 1:21 AM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Cc: MPatrick@cdapress.com; MIKE CRAPOS <CRAPO@SENATE.GOV>
Subject: Nuclear Waste Idaho National Laboratory,Snake River Alliance.org

Sirs:

I am opposed to DOE proposal to import ~75 metric tons of high level nuclear waste to the Idaho National Laboratory (INL) for "Intermediate Storage" for the following reasons:

1: It would negate the prior negotiated agreement between Idaho and the DOE for removal of ALL Nuclear Waste by 2025.

2: The demonstrated inability of the INL to remove the 900,000 Gallons of high level waste currently stored in Stainless Steel Tanks(Single Walled vs Double Walled) on the INL overlying the Snake River Plain, the source for water for ~500,000 Idaho Citizens.

3: No data are presently available to public citizens whether there have been leaks of this material into the Plain. There is no indication that INL monitors radioactivity from any leakage from the tanks. The experience at the Hanford Nuclear Reservation (HNR.)

4: The present closure of the Waste Isolation Pilot Program (WIPP) due to a significant radioactive spill (with scheduled reopening recently postponed to ~2017 or beyond) AND the cancellation the Yucca Mountain Permanent Waste Disposal facility by the efforts of DOE and Sen. Harry Reid (D-Nev) leaves NO credible future permanent storage facility.

5: The INL is presently storing Naval Nuclear Reactor Cores in a million gallon water pool which is approaching its storage capacity. There are NO Permanent Storage for the Stainless Steel Storage Casks being accumulated at INL.

6: The pumping of the radioactive liquids from the tanks and calcination of residual materials is proceeding at what can only be described as a "Glacial Pace."

7: The location of INL in the 891 square miles overlying the Snake River Aquifer is regarded by DOE as "Only desolate desert and devoid of concerns about contamination. The millions (Billions) of taxpayer dollars already spent on INL, while beneficial to surrounding communities of Idaho Falls and others makes the lack of urgency in solving the problems above a continuing problem with Congressional inaction in providing the funding so vitally necessary for solving problems.

8: The retrieval of rusted steel drums at INL containing low level radioactive waste and restoring the waste in new steel drums does not satisfactorily meet standards for disposal.

9: There is no confidence that the selection of a new Waste Management Contractor will in any way solve or accelerate the solution to these problems.

10: No credible evidence is available to suggest that the current storage of Nuclear Waste at closed Nuclear Power Plants represents an emergency necessitating violation of the above Negotiated Agreement between DOE and the sovereign State of Idaho.

11: Lastly, the scheduling of the workshop program in Boise on July 14, 2012 was NOT available for live streaming via my current internet connection.

Respectfully submitted,

Robert S. West, MD FACS
3621 W. Fairway Drive
Coeur d'Alene, Idaho 83815

CC: Snake River Alliance, Gov. Butch Otter, Sens. Mike Crapo, Jim Risch, Reps. Raul Labrador and Mike Simpson.

Consent-Based Siting

From: Michele Weston [mailto:michelerene69@yahoo.com]

Sent: Sunday, July 31, 2016 2:01 PM

To: Consent Based Siting <consentbasedsiting@hq.doe.gov>

Subject: WE DO NOT CONSENT TO HIGH-LEVEL WASTE IN TEXAS!

Dear Department of Energy Folks,

I speak for my family and many friends who DO NOT WANT the nation's radioactive waste to come rolling into Texas. We DO NOT volunteer for this burden and we DO NOT CONSENT to any high-level shipments of radioactive waste from anywhere else coming here!

We do not consent to shipping that level of radioactivity around at all, let alone shipping it again after 40 years. This is a ridiculous and dangerous scenario, presuming everything is going to be peachy-keen 40 years from now. We shouldn't gamble like that, especially when the "temporary" waste site is above the nation's largest underground water aquifer! I worry less about foreign terrorists tainting the nation's water supply, than our own domestic idiots who would have us do it ourselves. WE DO NOT CONSENT TO THIS. This is crazy! Permanent on-site storage is the only reasonable solution.

Do you even realize that Waste Control Specialists in Texas is above the Oglalla Water Aquifer? Do you understand how important that is to the country's agriculture? Are you daft for even considering putting radioactive waste anywhere near that precious resource? That is a risk that I am not willing to take, nor do I think any reasonable person who is not paid off would be willing to take either. If you do this, you defy the people of this country and its future generations.

The Nuclear Regulatory Commission has previously said that the least risky option is to keep the waste stored securely at or close to the site of generation, and most nuclear reactor sites are now licensed to do so. In this precarious state of global affairs, I propose we gamble on the least risky option.

With sustainable energy being so affordable now, and the price of nuclear power being so expensive, it is more than obvious that we need to shut down our nuclear reactors and store the high-level waste there on site in above-ground, isolated retrievable storage - not disposal. There's no good argument whatsoever to consolidate radioactive waste anyway.

Any plans to bring high-level waste to Texas will be met with resistance. Even any discussions of such matters need to be held here and in public. Do not disregard the

people who live here who do not have the power to consent, the people who live along the routes who do not consent, nor the children who will have to deal with this in the future.

I am a mother with three children. WE DO NOT CONSENT! I'm ashamed of you for even considering something so stupid and potentially dangerous. Drop this plan entirely.

Thank you for your consideration of these comments.

Sincerely,
Michele R. Weston

Consent-Based Siting

From: Greg [<mailto:greg.white@twc.com>]
Sent: Monday, July 11, 2016 6:34 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: Consent-based Siting Public comment

DOE, leave the waste (unspent fuel) right where it is, costs nothing, no consent needed. Instead focus your attentions and redirect those funds towards Generation IV reactor technologies that can use that “waste” as fuel. It’s a win/win. Transatomic Power, an American company is working on reactor plans right now, they have given Senate testimony expressing the same sentiment. Company

link; <http://www.transatomicpower.com/> and Senate testimony video starting at 1:23:30 <https://www.youtube.com/watch?v=D1fWqyYfQqs>

There is enough energy in that “waste” to power our country for a hundred years and the tiny bit that is left over only has a half life of 300 years, not hundreds of thousands.

Thank you for the opportunity to comment.

Greg White

Consent-Based Siting

From: Stephen Williams [<mailto:shwilliams54321@gmail.com>]

Sent: Tuesday, July 12, 2016 4:10 PM

To: Consent Based Siting <consentbasedsiting@hq.doe.gov>

Subject: "Response to IPC" [Invitation for Public Comment]

With regard to where to locate/dispose of spent nuclear fuel, I implore you to not bury it. Instead, restart the Integral Fast Reactor program, or buy the commercial version of the reactor, the GE Hitachi PRISM. Use those reactors to turn that "waste" into electricity without emitting greenhouse gases. In a few years from now, we can also start building molten salt reactors (MSRs) to also turn spent fuel into electricity.

In the process, we can be engaged in deep decarbonization of the U.S.

Once PRISM and MSRs are finished with the spent fuel from conventional reactors, the resulting waste is radioactive for only 300 years or so, after which it is no more radioactive than the dirt it came from. The, whala! We will have solved the nuclear waste problem and completely decarbonized U.S. electricity with a single solution. Fabulous!

The so-called "waste" problem was created by anti-nukes who, in the U.S. managed to get President Carter to outlaw reprocessing of spent fuel by executive order, and also get Congress (under Clinton) to kill the Integral Fast Reactor Program. They are the people that caused this "waste" problem. Please stop listening to them. Do the right thing this time around.

Sincerely,
Stephen Williams

Consent-Based Siting

From: Sharon Irwin [<mailto:sharon@westernenergyboard.org>]

Sent: Wednesday, July 27, 2016 1:44 PM

To: Consent Based Siting <consentbasedsiting@hq.doe.gov>

Subject: WIEB Response to IPC on CBS

Importance: High

Sent on behalf of Jim Williams, HLRW Program Manager, Western Interstate Energy Board, Denver, Colorado

July 27, 2016

U.S. Department of Energy
Office of Nuclear Energy,
1000 Independence Ave, SW
Washington, DC 20585
consentbasedsiting@hq.doe.gov

re: *Response to IPC*

Dear Sirs,

I have reviewed the materials assembled, attended the CBS (Consent Based Siting) meetings in Sacramento and Denver, read the transcript of the meeting in Tempe, and prepared reports on these meetings for the WIEB HLRW Committee. I have appreciated how this process has been conducted: e.g.

- The background information developed, and placed on posters;
- The DOE lab staff available to address “off-line” questions;
- The participation and engagement of John Kotek;
- The range of people selected for opening remarks and panel discussions;
- The responsiveness of DOE in meeting discussion.

I am nevertheless concerned about the limitations of the process, which seems to assume:

- that offsite storage siting can be separated from other program components;
- that initial program steps (e.g. large-scale interim offsite storage) do not skew options for second steps, and second steps do not skew options for third steps, etc.;
- that a “pilot” storage facility that morphs into a large centralized storage facility constitutes an “integrated” waste disposition program; and
- that transport, if conducted safely (which we intend but cannot guarantee) has no effects warranting consideration in program design.

I have hoped that DOE could take a systems approach to SNF/HLW disposition, and use this in a national discussion on directions for the U.S. waste disposition program, including the changes to the NWPAA needed for implementation. I do not claim special expertise in systems analysis, but there are people in DOE labs that might qualify, and DOE has invested in tools (e.g. NGSAM) that could support the effort.

As I understand, the basics of good systems assessment involve system objectives:

- Identification, specification and prioritization of national objectives;
- Identification of alternative means to achieve these objectives;
- Identification of linkages (positive or negative) among objectives;
- Characterization of effects: first round and in sequence.

This is much more than a purely technical exercise, of course, and I do not claim that it is easy, or easily done by an entity such as DOE-NE—which does not directly control key elements of an effective waste disposition program. However, DOE could—and, I would argue, should—provide leadership on the structure and design of a successful waste disposition program in the U.S.

Articulating National Objectives in Waste Disposition

Systems assessment requires careful thinking about program objectives—national vs. parochial; short and long-term; safety, fiscal, equity. Often this involves careful consideration of questions:

Should SNF Be Transported Offsite Prior to Final Disposal?

Should SNF be removed from its 75 current locations (or from some subset of these) prior to removal for final disposal? The recent NRC “Waste Confidence Decision” strongly suggests that there is no compelling safety or security reason to do so. If DOE thinks otherwise, it should present the argument and specify the sites. It could then address the portion of the problem that poses the main safety concern over the next 10-15 years.

Must SNF be removed from current sites in order to limit breach-of-contract costs? Note that the framers of the NWPA were reluctant to authorize transport to an interim storage site, which it anticipated could become permanent, thereby subverting the overall program objective. It therefore established a close “linkage” between interim storage and permanent

disposal,¹ for two key purposes:

- To prevent an interim storage facility from becoming permanent, and
- To keep the program focus on final disposal

To what extent should the national program accede to the desire of communities (and whole regions) that have benefitted from nuclear power to remove the waste onto someone else, preferably far, far away? Can the program be “fair” if it avoids this question?

In its 2013 “Strategy” the DOE abandoned the linkage between interim storage and permanent disposal, apparently in order to limit breach-of-contract costs, which become significant mainly after reactor shutdown. However, does this not suggest alternatives to the current urgency to site a large centralized storage facility? Perhaps SNF at several shutdown sites could be stored at a larger nearby operating site. Perhaps GEN IV implementation could prioritize sites with an inventory of SNF to burn. Perhaps the Standard Contract could be modified to make this attractive to the host utility.

Should SNF be Transported to a Single Storage Location not Linked to Final Disposal?

There is strong local interest² to site a large interim storage facility in southeastern New Mexico, and a similar initiative 30 miles east in Andrews County, Texas. While salt formations in the area (along with granite, clay and salt formations elsewhere) are *potentially* suitable for SNF/HLW disposal, the operative word is “potentially.” Characterization of these sites in southeast New Mexico or elsewhere has barely begun, certainly not in a disposal program fully discussed, or agreed to by the State of New Mexico.

The national interest question, therefore, is whether and why SNF should be transported for interim storage to one or more locations that have not been characterized for their suitability for final disposal, much less consented to or authorized for such purpose? Sub-questions include:

-
1. In paraphrase: NWSA Section 145(a): A monitored retrievable storage facility should be an integral part of the system for the disposal of SNF/HLW. NWSA Section 145(b): The DOE may not select a site for a monitored retrievable storage facility until the President has approved a site for development as a repository.
 2. And strong local reservations, as evidenced at the Tempe (and other) CBS meetings.

- Does such a choice put undue pressure on the characterization of potential nearby disposal media, hazarding selection of a sub-par disposal media?
- Does such a choice relieve other areas with potential disposal media of the obligation to have them considered in the national interest, either for a first repository or a second?
- Given funding contingencies, might a large away-from-reactor “interim” storage facility become permanent--exactly what the NWPA sought to avoid?
- My judgment is that the answer to each of the above questions is “very possibly, yes”. If so, the current CBS (Consent Based Siting) initiative could leave the nation’s waste disposition program seriously off-track.

Articulated National Objectives in an Integrated Waste Disposition Program

This is not the place to conduct a full systems assessment as suggested above. The point, however, is that careful consideration of national objectives, alternative means, linkages and effects can provide the basis for a national discussion leading to a fairer and more integrated national program. For discussion, however, let’s assume the following:

- While the NRC concluded that SNF can be stored safely and securely at reactor sites indefinitely, the waste disposition program can reasonably assume safe and secure on-site storage for 20-25 years.
- Even so, the safety &/or security of continued on-site storage is a *legitimate local concern* at perhaps ten reactor sites—some still operating. DOE should identify any such sites, and explain.
- Continued on-site storage at shutdown sites is a legitimate federal fiscal concern. Alternative means for addressing this concern should be identified, assessed and publicly discussed.
- Large-scale removal to a single storage facility could lead to permanent “interim” storage and/or skewed and procedurally invalid disposal siting. DOE should acknowledge and address these contingencies.
- There is a very large but unacknowledged NIMBY component to current calls for early removal. This is understandable but not legitimate as the basis for national policy. DOE should challenge NIMBY-based calls for federal action.

- The contribution (within 20-25 years) of Gen IV (molten salt) technology in waste disposition should be incorporated into an integrated waste management strategy.
- The consent of the host locality and state is desirable in siting off-site storage &/or disposal facilities if it offers: a) Assurance that scientific and technical investigations are conducted with full integrity, and b) Convincing evidence that the host locality and state judge other non-technical factors “net positive”.
- However, facility siting identifies destinations for SNF/HLW transport, and largely determines routes, which, in turn, largely determine transportation impacts. So, facility siting should not be addressed in isolation from other program components.
- SNF transport should be conducted as necessary for well-articulated national purposes, with impacts fully assessed, and addressed in program design. In general, transportation impacts are greater in corridor communities affected by removal from 5-6 origins than in those affected by removal from just 1 or 2, greater in corridor communities affected by removal from 10-12 origins than in those affected by removal from 5-6, greater in corridor communities affected by removal from 20-25 origins than in those affected by removal from 10-12. Transportation impacts can be limited by program design that limits the number of corridor communities affected by removal from multiple origins. Transportation impacts can be mitigated by program design that makes removal (and clearance of origin sites and initial route segments) efficient and effective, once initiated.
- Even so, SNF transport is complicated and full of contingency—for affected communities and for the waste disposition program as a whole. Program design should limit transport to that necessary for well-articulated national purposes, and to mitigate transport impacts. Thus reduced, transport operations should be conducted in a safe and uneventful manner.

Though illustrative, any of the propositions above, plus others, could be aired in national discussion, perhaps modified, and applied in integrated program design.

Responding to questions posed

With the above as background, I will attempt to preliminarily respond to the questions posed on page 9 of DOE’s “Integrated Waste management” booklet:

1. How can the Department ensure that the process for selecting a site is fair?

Site selection will not be “fair” unless it is conducted as part of an integrated waste management program which considers systems relationships between storage, transport, and disposal/disposition, focusing on “well-articulated national objectives”. Parochial objectives and local advocacy are inevitable and legitimate, but are distinct from national purposes which should drive decisions.

2. What models and experience should the Department use in designing the process?

The process should be designed as a national discussion on SNF disposal. The systems assessment process (including all components—not just siting) should provide the basis.

3. Who should be involved in the process for selecting a site, and what is their role?

The process should not focus on selecting a site, but on shaping a national program. It might be modeled on the NWTRB process:

- A carefully selected panel of national experts, joined by local experts in various venues;
- High-level DOE staff presenting the results of systems assessment in public meetings;
- The panel (joined by local experts and the public) asking questions;
- The panel shaping recommendations, with input from DOE.

4. What information and resources would facilitate your participation?

The necessary information and resources are:

- The results of thoughtful systems assessment;
- A carefully-selected and fully-briefed expert panel;
- High-quality DOE presenters, authorized to engage in “real discussion”;
- A vigorous process to identify local and regional contributors;
- Time to conduct the process.....at least one year after steps 1 & 2 above;

- Senate and House interest in the process and the results.

I hope these comments may be helpful.

Sincerely,

A handwritten signature in cursive script that reads "James M. Williams".

jwilliams@westernenergyboard.org

(303) 573-8910 x6

Consent-Based Siting

From: meadowtrees@att.net
Sent: Tuesday, March 29, 2016 8:36 AM
To: Consent Based Siting
Subject: Response to IPC

EMERGENCY: when I went online just now to register for the Chicago meeting I got the message there are no slots available for registration!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!

So your whole process has already bogged down before your first meeting.

My Comment:

Your goal is enable more nuclear waste to be generated. As long as that is the goal of siting nuclear waste dumps, "interim" or permanent, no community should allow itself to be saddled with this waste.

Waste, which, according to the EPA has to be protected from the biosphere for one MILLION years. Long after our country has disappeared.

Sincerely

Mary Jane Williams
Winter Springs, FL

Consent-Based Siting

From: Joanne Williams [<mailto:joanne29206@yahoo.com>]
Sent: Friday, July 29, 2016 7:30 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: Comment Opposing DOE's Consent-Based Siting Process for Nuclear Waste

Dear Secretary Moniz,

As a member of the public, I am writing to oppose the consent based process the DOE is proposing to handle nuclear waste. Absolutely no community wants to be the interim storage site for nuclear waste that has no permanent place to go.

Moving the fuel rods from commercial nuclear facilities invites a multitude of risks. An overwhelming one is that if a commercial reactor has a power outage for longer than two weeks there is no back-up plan for keeping the fuel rods from overheating. With this risk of nuclear disaster, why would you consider any plan other than hardened on-site storage?

Make that the plan and quit wasting time trying to get communities to be nuclear waste dumps.

Sincerely,
Joanne Williams
Columbia, SC

Joanne Williams
6436 Sylvan Drive
6436 Sylvan Drive
Columbia, SC 29206

Department of Energy Invitation for Public Comment to Inform the
Design of a Consent-Based Siting Process for Nuclear Waste Storage
and Disposal Facilities

Comments from the

South Carolina Department of Health and Environmental Control
(SCDHEC)

July 29, 2016

- 1) The Nuclear Waste Policy Act designates Yucca Mountain as the central federal repository for spent fuel and high level waste. No other central disposal option is legal at this time.
- 2) Should any other additional management facilities be considered (such as for interim storage), SCDHEC does support a consent-based siting approach.
- 3) The potential host state for any additional management facilities should have a strong decision-making voice in the consent-based siting process.
- 4) Section 3116 of the 2005 National Defense Authorization Act authorizes a strong state decision-making voice by requiring coverage under a “State-issued permit.” Coverage under an appropriate state permitting process ensures that a state has had the opportunity to consider all technical aspects of a facility and undertake appropriate public participation activities. A state issued permit also allows the state an ongoing oversight role for continuing facility operation as well as ultimate closure.
- 5) The Federal Facility Compliance Act of 1992 outlined an excellent and successful process for consent-based siting of mixed waste treatment, addressing both technical and equity aspects.
 - a. The Act contained a schedule for the process.
 - b. The Act required the Department of Energy to submit a proposal to the affected state.
 - c. The Act required approval of the proposal from the Governor of the state.
 - d. The Act required approval, modification or disapproval of the proposal by the state environmental agency, followed by issuance of an order requiring compliance, if the proposal was approved.
 - e. The Act allowed for penalties to be assessed for non-compliance with the order.
 - f. The Act required the host state to consult with “...any other State in which a facility affected by the plan is located...” establishing the concept of equity discussions between states.

- 6) The Hazardous Waste Permit issued by New Mexico for the Waste Isolation Pilot Plant is another good example of a strong state decision making voice. The permit process allowed for state consideration of siting and construction concerns, as well as provision of an ongoing and defined oversight role.
- 7) Federal legislation should be passed that defines a strong potential host state decision making process as part of consent-based siting. The legislation should require that the state decision consist of the following at a minimum:
 - a. Approval of state elected officials and
 - b. Approval from the state environmental agency in the form of an issued permit.
 - i. The legislation should also authorize the state to determine the permit type and conditions, allow for assessment of penalties, and define the scope and life of the facility in enforceable conditions, if the state desires. The legislation should also ensure that the facility is authorized only if it continues operation under a state issued permit.
 - ii. The legislation should also authorize the state to incorporate equity considerations of its choosing in the issued permit. Equity considerations would consist of any other elements that would make hosting a national/regional facility equitable for the host state.
 - iii. The legislation should allow for discussions between affected states, regionally or nationally to address equity considerations raised by a host state.
 - iv. The legislation should allow for provision of federal funding to the host state if needed to conduct equity discussions, public participation, technical review and/or oversight activities.
- 8) Since vitrified high level waste at Savannah River Site is essentially ready for disposal, the glass waste canisters would make an ideal pilot project for permanent disposal at a federal repository. Given that South Carolina has shouldered the burden of this legacy waste and other risks for so long, priority should be given to disposal of the vitrified waste. Lessons learned from early disposal of this small volume (and similar waste forms at other DOE sites) could be applied to larger system solutions across the nation.

Consent-Based Siting

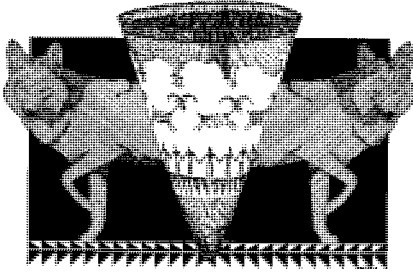
From: Jan Wimberley [<mailto:janbuhl2@gmail.com>]
Sent: Thursday, July 14, 2016 9:43 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: Response to IPC

When will you learn that Idaho is better off without nuclear or the waste? People like to live here because we don't have any more than we do.

Take the waste somewhere else. This is not a legacy of honor to leave for the record or the future. Look at the sites that are having so many troubles and contamination issues. Don't put it off to others down the road to suffer and to deal with it.

Absolutely no to more Idaho nuclear waste.

Mrs. Jan Wimberley
Buhl, ID 83316



Native Community Action Council
P.O. Box 46301
Las Vegas, NV 89114

Public Comment To Inform the Design of a Consent-
Based Siting Process for Nuclear
Waste Storage and Disposal Facilities

Thursday, July 28, 2016

As a tribal community stakeholder group, the Native Community Action Council (NCAC) continues to analyze and advocate on behalf of the land the people of the Great Basin. We have only one land, one air and one water. Last year the NRC admitted that radiation will discharge into the groundwater from the proposed Yucca Mountain high level nuclear waste repository currently undergoing licensing. The Nuclear Regulatory Commission (NRC) Staff were directed to consider disproportionate impact to low income and minority populations. The NRC staff did not. Then, consequentially the NRC found that impacts to Native Americans will be minimal. We view the NRC as abdicating responsibility, an inordinate act of negligence.

We want to advise others from our experience as down-winders, victims of nuclear weapons testing, and as stakeholders in the siting of the proposed Yucca Mountain high level nuclear waste repository. As *"a party with standing"* in the Yucca Mountain licensing proceedings, the NCAC's primary contention is that the Department of Energy cannot meet the requirement of ownership and that significant legal encumbrances exist, disqualifying the site under the NRC regulation, 10 CFR 63 Land Ownership and Control.¹ Yucca Mountain is Western Shoshone domain defined by the 1863 Treaty of Ruby Valley and the US cannot prove ownership. The proposed Yucca Mountain repository is a violation of treaty of Ruby Valley and the Western Shoshone do not consent to the inclusion of any part of Newe Sogobia into the boundaries or jurisdiction of any US state or territory.²

Yucca Mountain is the longest and most complicated legal proceeding ever contemplated in human history. We are the only non-federally funded party to the proceedings, which puts the NCAC at a disadvantage in the proceedings. Since selection of Yucca Mountain in 1987 by Congress, the DOE has not considered any argument made by the Western Shoshone that does not support licensing by the NRC. Our well documented comments about disproportionate burden of risk from exposure to radiation

¹ § 63.121 Requirements for ownership and control of interests in land.

(a) Ownership of land.

(1) The geologic repository operations area must be located in and on lands that are either acquired lands under the jurisdiction and control of DOE, or lands permanently withdrawn and reserved for its use.

(2) These lands must be held free and clear of all encumbrances, if significant, such as:...

² U.S. Statutes at Large, 1863, v. 12, pp. 209-214 Provided, further, That nothing in this act contained shall be construed to impair the rights of person or property now pertaining to the Indians in said Territory, so long as such rights shall remain unextinguished by treaty between the United States and such Indians, or to include any territory which, by treaty with any Indian tribe, is not, without the consent of said tribe, to be included within the territorial limits or jurisdiction of any State or Territory;...

in fallout and land rights treaty are ignored.³ Other state and counties have been funded for the past 30 years with the \$15 billion spent from the nuclear waste fund for site characterization. This is unfair and constitutes environmental racism. In 2015 President Obama found that: *"In accordance with the Act, I find the development of a repository for the disposal of high-level radioactive waste resulting from atomic energy defense activities only is required."* Disposal cost for any civilian high-level waste will increase substantially. Also, the US could choose any location for high-level waste disposal under *"national security."*

The Great Basin is a *"crushed rock aquifer"* with all tribal communities sharing in the *"one water."* All tribal communities are stakeholders. The US has an obligation to preserve the water quality and clarity necessary to meet the future needs of the Western Shoshone people. Deliberate contamination with radiation cannot be tolerated now, or at any time in the future as contemplated by the NRC.

Radiation protection can change putting tribal communities at risk. To meet the current EPA radiation protections standards, in 100 years, titanium drip shields will be installed at Yucca Mountain. The amount of titanium is more than is currently used in the Air Force with \$15 billion dollars or more cost. We do not believe promises of what Congress will do in 100 years. We believe that the DOE should meet the radiation protection standards without the drip shields that may never be installed.

Our final contention at the NRC licensing of Yucca Mountain is that the EPA inappropriately used the *"reasonably maximally exposed individual"* modeling (RMEI), applying it to Native Americans when setting radiation protection standards for Yucca Mountain. We informed the EPA that a disproportionate burden of risk to Native Americans exists based on lifestyle differences that was not considered. We continue to make an important point to the DOE, EPA and now NRC, that all have failed to address: calculate risk studies using a culturally appropriate context for Western Shoshone. The EPA, DOE and NRC have all failed to investigate cumulative risk to Native Americans living in community.

Our experience as a Native American tribal community stakeholder group is a cautionary tale of what to expect in the characterization and licensing of nuclear facilities. We want to state again that, the current ongoing licensing of Yucca Mountain constitutes environmental racism.

³ Frohberg E, Goble R, Sanchez V, et al. 2000. The Assessment of Radiation Exposures in Native American Communities from Nuclear Weapons Testing in Nevada. Risk Anal 20(1):101-11

Consent-Based Siting

From: Walter Zeichner [<mailto:walter@walterzeichner.com>]
Sent: Wednesday, July 27, 2016 5:22 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: Comment Opposing DOE's Consent-Based Siting Process for Nuclear Waste

Dear Secretary Moniz,

NO nuclear waste in our communities...what are you, nuts? Yeah, let's put dangerous poisons everywhere...let's continue to make the biosphere increasingly uninhabitable.

Please, don;t let concerns about money and power and status and doing what you're told, get in the way of being smart and caring.

NO Nuclear Waste in our communities! None. Zero. Nada. Zilch. Zip.

Walter Zeichner
985 SW Disk Dr
Bend, OR 97702

Consent-Based Siting

From: stu Gmail [mailto:stu.zeiger@gmail.com]
Sent: Sunday, July 31, 2016 11:41 PM
To: Consent Based Siting <consentbasedsiting@hq.doe.gov>
Subject: Response to IPC

I am writing to express my strong opposition to "Consent Based Siting" of nuclear waste around the US.

This process is biased against communities struggling financially due to factory closings and the global economy. Choosing an atomic waste dump is tempting to towns and villages so anxious to increase short term income and economic survival that they are willing to sacrifice long-term environmental damage in return for that income.

At its heart, the *consent based process* is an environmental justice violation as well as a DOE method to avoid finding an appropriate scientifically viable site to dump by foisting it on impoverished citizens who will not mount a protest.

Nuclear waste remains toxic for tens of thousands of years. The *consent based siting* proposed by the DOE lures currently underemployed citizens to commit their hometown community for hundreds of future generations of potential genetic damage in return for a short term income gain to a few individuals, who own that land.

Furthermore, as nuclear waste remains toxic for tens of thousands of years, a de-centralized solution to its storage will require perpetual isolation, maintenance, monitoring and warnings in hundreds or thousands of sites. This is inefficient and bound to fail, with disastrous consequences. Breaches of security, corrosion, lapses of management &/or funding are certain to occur over this unimaginable time span. Your proposed decentralized solution is exactly the opposite of Finland's Onkalo spent nuclear fuel repository based on the KBS-3 method developed in Sweden. I wonder if you have studied this alternative? Though not perfect, it is vastly better than your proposed plan.

Your proposal is a dystopian solution that will make countless communities pay with their health and the health of their children's children ad infinitum for the folly of an industry that went ahead full throttle with no solution for its waste.

Toxic radioactive waste scattered across America is NOT the legacy we want to leave our descendants for a thousand generations!

Thank you for your consideration.

Sincerely,
Stuart Zeiger