ENVIRONMENTAL MANAGEMENT SITE-SPECIFIC ADVISORY BOARD

U.S DEPARTMENT OF ENERGY

PUBLIC MEETING MINUTES

May 1-3, 2024

Christopher Conference Center
30 N. Plaza Blvd.
Chillicothe, Ohio 45601

LIST OF ACRONYMS

CAB – Citizens Advisory Board
DDFO – Deputy Designated Federal Officer
DOE–Department of Energy
ECA – Energy Communities Alliance
EFCOG - Energy Facility Contractors Group
EM – (DOE) Office of Environmental Management
EM SSAB – Environmental Management Site-Specific Advisory Board
EPA - Environmental Protection Agency
ETTP – East Tennessee Technology Park
FACA – Federal Advisory Committee Act
HAB – Hanford Advisory Board
HQ – Headquarters
ICP CAB – Idaho Cleanup Project Citizens Advisory Board
LANL – Los Alamos National Laboratory
NE – (DOE) Office of Nuclear Energy
NRC – Nuclear Regulatory Commission
NSSAB – Nevada Site-Specific Advisory Board
NNMCAB – Northern New Mexico Citizens' Advisory Board
NNSA – National Nuclear Security Administration
NNSS – (DOE) Nevada National Security Sites
ORNL – Oak Ridge National Laboratory
ORSSAB – Oak Ridge Site-Specific Advisory Board
PFAS – Per- and Polyfluoroalkyl Substances
PORTS SSAB – Portsmouth Site-Specific Advisory Board
PPPO –Portsmouth/Paducah Project Office
RECA- Radiation Exposure Compensation Act
SODI - Southern Ohio Diversification Initiative
SRS – (DOE) Savannah River Site
SRS CAB – Savannah River Site Citizens Advisory Board
SSAB – Site-Specific Advisory Board
STEM – Science, Technology, Engineering, and Mathematics
TRU – Transuranic Waste
USW- United Steel Workers
WAC- Waste Acceptance Criteria
WIPP – Waste Isolation Pilot Plant

PARTICIPANTS

Hanford Advisory Board: **Susan Coleman,** Chair; **Miya Burke,** Vice-Chair; **Lindsay Somers,** Deputy Designated Federal Officer**; Laura Caulfield,** Staff

Idaho Cleanup Project Citizens Advisory Board: **Teri Ehresman,** Chair; **Robert Skinner**, Vice-Chair; **Mariah Porter**, Staff

Nevada Site-Specific Advisory Board: **Anthony Graham,** Chair; **Mark Hilton**, Vice-Chair; **Frank Bonesteel**, Liaison; **Glenn Puit**, Staff; **Barbara Ulmer**, Staff

Northern New Mexico Citizens Advisory Board: **Sterling Grogan,** Member; **Manuel L' Esperance**, Vice-Chair; **Keith Grindstaff,** Deputy Designated Federal Officer; **Yolanda Valdez,** Staff; **Bridget Maestas**, Staff

Oak Ridge Site Specific Advisory Board: **Amy Jones,** Chair; **Kris Bartholomew** Vice-Chair; **Mary Butler**, Member; **Abby Hill**, Staff; **Sara McManamy Johnson;** Staff; **Leah Alexander**, Staff; **Roger Petrie**, Federal Coordinator

Paducah Citizens Advisory Board: **Don Barger,** Chair; **Frances Johnson,** Vice-Chair; **Eric Roberts**; Meeting Facilitator; **Robert "Buz" Smith**, Federal Coordinator; **Zachary Boyarski**, Staff; **Hayly Wiggins**, Staff; **Clint Combs**, Member; **April Ladd**, Deputy Designated Federal Officer

Portsmouth Site Specific Advisory Board: **Jody Crabtree,** Chair; **Herman Potter,** Vice-Chair; Julie **Galloway**, Staff; **Cindy Lewis**, Staff, **Ginny Manning**, Staff; **Joel Bradburne,** PPPO Manager; **Yvette Cantrell,** Staff; **Hannah Javier,** Staff; **Sarah Marko**, Staff; **Melissa Green**, Staff; **Amanda Cooper,** Staff

Savannah River Site Citizens Advisory Board: **Phyllis Britt,** Chair; **John Thomas,** Vice-Chair; **Juanita Campbell**, Staff; **James Tanner**, Federal Coordinator

Members of the Public: **Lee Blackburn; Cole Coleman,** Laborers Local 8389; **Vina Colley,** PRESS/National Nuclear Workers for Justice; **Chick Lawson,** Nuclear Investigation; **Pat Marida,** Ohio Nuclear Free Network; **Jeff Walburn,** Nuclear Investigations

U.S. Department of Energy Headquarters: **Jeff Avery**, DOE EM Principal Deputy Assistant Secretary; **Kristen Ellis**, DOE EM Associate Principal Deputy Assistant Secretary for the Office of Regulatory and Policy Affairs**; April Kluever**, Acting Director of DOE EM Subsurface Closure; **Charles Love**, EM SSAB Federal Coordinator; **Justin Marble**, Director, DOE EM National Transuranic Program; **Carrie Meyer**, Acting Director of DOE EM Communications and Stakeholder Engagement**; Joceline Nahigian,** DOE EM Director for Intergovernmental and Stakeholder Programs; **Kelly Snyder**, EM SSAB Designated Federal Officer; **Juan Uribe**,

Senior Program Manager, Consent-Based Siting, Office of Integrated Waste Management, DOE Office of Nuclear Energy;

MEETING MINUTES

The U.S. Department of Energy's (DOE) Environmental Management Site-Specific Advisory Board (EM SSAB) Chairs meeting was held in Chillicothe, Ohio. Participants included board member, EM SSAB leadership and support staff, EM Headquarters (HQ) leadership and staff, and the public. The meeting was open to the public and conducted in accordance with the requirements of the Federal Advisory Committee Act (FACA).

Wednesday, May 1, 2024

Day 1

Opening Remarks

Ms. Kelly Snyder, EM SSAB Designated Federal Officer, welcomed attendees and looked forward to an educational and informative meeting. She shared that the insights of the SSABs are highly valued.

Mr. Eric Roberts, contractor support for the Portsmouth/Paducah Project Office (PPPO) and meeting facilitator, introduced Mr. Joel Bradburne, Manager of the DOE PPPO. Mr. Bradburne welcomed everyone and thanked them for their service on their local boards. He said he hoped they would enjoy their time in Southern Ohio.

Mr. Roberts reviewed the agenda with the attendees.

Waste and Transportation Update

Mr. Roberts introduced the first speaker, Dr. Justin Marble, DOE HQ National Transuranic Waste (TRU) Office Director within the Office of Waste and Materials Management for EM. Dr. Marble stated waste disposal is one of DOE EM's highest missions, as highlighted by over 50% of the budget being spent on waste-related activities. He explained the difference between Nuclear Regulatory Commission (NRC) and international classification, highlighting the DOE waste definition. He shared the disposition path for defense TRU waste at DOE's Waste Isolation Pilot Plant (WIPP) facility in southeast New Mexico. He explained the waste class differences and discussed the various low-level disposal facilities and locations throughout the DOE complex, highlighting the disposal pathways. He explained that the Motor Carrier Evaluation Program evaluates carriers for safety by performing onsite inspections, and the Transport Compliance Assurance Program ensures safe packaging and transportation.

Mr. Don Barger, Chair of Paducah Citizen's Advisory Board (CAB), asked about EM's relationships with other organizations trying to find waste repositories. Dr. Marble stated that EM's goal is to package/configure waste in a safe and secure manner until there is a geological repository.

Mr. Anthony Graham, Chair of Nevada SSAB, asked if shipments going to WIPP were tracked in real-time and if there are any plans to expand that technology to sites like Nevada. Dr. Marble replied that the Nevada site does track all its shipments, just not in real-time.

Ms. Miya Burke, Vice Chair of the Hanford Advisory Board (HAB), asked Dr. Marble to speak to the new requirement for DOE to identify additional repositories for transuranic waste. Dr. Marble explained that the hazardous permit signed in November for New Mexico included a condition that DOE initiate a process to look for a second repository for transuranic waste outside New Mexico.

Ms. Fran Johnson, Vice Chair of Paducah CAB, asked if state police have prior notification when TRU waste is transported. Dr. Marble replied that state police are not notified of every shipment that goes through their community, but they know how to identify DOE shipments based on the placards.

Mr. Anthony Graham, Chair of Nevada SSAB, asked what makes waste unsuitable for on-site disposal. DOE sites have site-specific performance assessments, which are very technical documents that look at the site, the location, the rain, the geological area, and many different characteristics to determine what potential radioactive waste could go to that disposal site. One document evolving from that performance assessment is the waste acceptance criteria (WAC).

Mr. Roberts states that Dr. Justin Marble was talking about the uniqueness of the waste acceptance criteria because we want to paint a broad brush and say what each site, from waste characteristics to local geography to local communities, is so different. He kept using the word site-specific, which really hones into what we do as a board—understanding that we have so much in common, but there are differences between all our sites in our communities.

Ms. Amy Jones, Chair of Oak Ridge SSAB, asked if there was any way to repurpose waste. Dr. Marble replied yes. EM is looking at materials that can be reused like the BUP-500 at OR. Also, within the DOE's Office of Science, the isotope program looks at available novel isotopes for medical uses, and even the isotopes that are used to power spacecraft and satellites originating from DOE.

Consent-Based Siting Process

Mr. Roberts introduced Juan Uribe, Senior Program Manager, Consent-Based Siting, Office of Integrated Waste Management, DOE Office of Nuclear Energy.

Ms. Kelly Snyder shared that Mr. Uribe's presentation was outside the EM's scope but was linked to various sites with EM missions.

Mr. Uribe explained that the Office of Nuclear Energy maintains the current fleet of existing light water reactors and continues to work to deploy new nuclear initiatives to decarbonize, increase access to energy, and combat climate change. He highlighted the challenges of interim waste basis vs long-term waste basis. He stated that the approach of consent-based siting, in general, is to value the needs and concerns of people and communities when encouraging volunteer locations. Mr. Uribe shared spent fuel must be managed in interim storage while permanent disposal locations are located. Willing and informed host communities must be identified as partners in this mission. He stated that the Office of Nuclear Energy uses the definition of environmental justice created and developed by the EPA, which develops the community's capacity to engage in decision-making by organizing discussions and inviting communities to participate in these discussions.

Mr. Sterling Grogan, a Northern New Mexico CAB member, shared that the EM SSAB has been told about this initiative. This environmental justice initiative involves spending 40% of the budget on affected communities. Mr. Uribe agreed that the executive order says that federal agencies should aim to invest approximately 40% of their funding in communities.

Mr. Anthony Graham, Chair of Nevada SSAB, asked what would happen if no one stepped forward or volunteered. Mr. Uribe stated that his office believes working closely with stakeholders and encouraging communities to self-volunteer sites it is going to give DOE the best chance for success.

Mr. Mark Hilton, Vice Chair of Nevada SSAB, asked why we focus on temporary rather than permanent storage sites. Mr. Uribe highlighted that we are operating under congressional direction in our appropriations, but we are trying to keep them as broad as possible, so they apply to other types of siting facilities. Mr. Hilton asked if there was any discussion in D.C. about Yucca Mountain as permanent rather than temporary. Mr. Uribe states that the Nuclear Waste Policy Act currently mandates Yucca Mountain as the only permanent disposal pathway without any revisions to the law or legislation.

Ms. Fran Johnson, Vice Chair of Paducah CAB, asked how much would need to be stored. Mr. Uribe said that we currently have roughly 90,000 metric tons. By 2040, when we start construction, there will be approximately 130,000 metric tons. Ms. Johnson asked would be done with that 130,000 in the meantime. Mr. Uribe mentioned that the plan is to remove the fuel from where it is stored as quickly as possible, but it would be stored at the operating nuclear power plants or the locations where the plants have been decommissioned until alternate storage is allowed.

Mr. Herman Potter, Vice Chair of Portsmouth SSAB, asked if the local discussion involving potential volunteer communities included information about increased jobs, improved infrastructure, state-of-the-art technology, and monitoring technology. Mr. Uribe mentioned that this information is shared during community outreach.

Ms. Susan Coleman, Chair of HAB, asked if this same process would be used to incorporate high levels of waste. Mr. Uribe stated that they are focused on commercially spent nuclear fuel but are open to having discussions with the communities on whether they would be willing to accept other types of waste, such as high-level waste.

Mr. Anthony Graham, Chair of Nevada SSAB, said I see two big holes in the map, one for most of the Great Basin and the other for essentially the area of the Ogallala Aquifer. Is there a scientific reason behind that, or are those areas off the table for locations, or is that just a coincidence? Mr. Uribe stated no, it is purely coincidence.

Public Comment Period

Vina Colley: "Hi. My name is Vina Colley, and I'm president of the Portsmouth Piketon Residents for Environmental Safety and Security. I co-chair National Nuclear Workers for Justice and we have combined with Don't Dump On Us in Piketon with Gina Doyle. How many on this board have been told that Piketon has Plutonium and transuranic since 1953? Anybody? Can we raise your hand? One person? So, it's misleading for this board not to know what's going on out here at Piketon. We are the largest facility in the world. We have 12 waste cells onsite. We have fractured bedrock underneath the site. We have a problem with little beavers trying to go in and eat the liner out of these cells. We have the highest rate of cancer in the state of Ohio and 87% nationally. I have documents here that I want to put into the record. There's a letter right now floating around in Congress to get our representatives to help us get on the RECA. And for those of you who don't know what RECA is, it is the Radiation Exposure Compensation Act. We have letters here from unions, tradesmen, congressmen, commissioners, mayors who are supporting this for our communities because they know what a high rate of cancer we have here in our counties. I'm a former worker at the plant and I help a lot of the workers that have been sick. They get the compensation bill. It's a tragedy what's going on here. I don't know if this board is trying to bring more transuranic to Piketon, but we don't want it. We cannot deal with the cancer that we have here. I have beryllium disease. I have thyroid problems. I have all kinds of lung problems. I have a heart condition. When I went to work at that plant, I had no problems. I hear this all the time from the workers who have had the same conditions and beryllium disease. There is no cure for it. I'm going to submit all these letters. I have a letter here from Joe Mangano, who came in and done epidemiology study and said that we had the highest cancer rate in the state of Ohio. He said, Vina, I feel sorry for your people you have the highest cancer rate you've been right for 39 years. I've been studying this facility, and I broke the Plutonium in '93 But it didn't come to light until '99 and then Dr. Kenner, who's been taking samples, passed. I have an air monitor at my house that is picking up the contamination."

Chick Lawson: "I worked at the plant. I had 15 years there before I was medically retired, but I was a DOE Investigator and Safety Officer. I have a lot of radiation training school, classes of that nature. One of the things I want to make a comment about, is you talked about the pilot plant west out west. Piketon Now we also had a pilot plant in Huntington, West Virginia, when it was dismantled, it was brought to Piketon and put in an online hole that was just south of

the X-100 building. That's never been addressed. Another issue I want to address with you is the undiluted Plutonium that was brought into the plant in 1985. I hold these documents. I'm not talking here, I have the documents, probably over 5,000. The other issue is trucking. The lady, I believe you're from Paducah, there's been issues where trucks were taken from our plant to Paducah. They were mislabeled. They weren't labeled correctly. And when they got there, they found out it was higher than low background. It was a lot higher than what it was supposed to be, the way it was shipped over the road, and it was stopped and that was so high, they would not allow the truck to go into the plant. We have documents on that. This has been verified. Another thing I want to make the people aware here is now we have talk Jeff and I do nuclear investigations, mostly on the criminal side. But there are two unreported waste cells on that site that we have reported to the NRC, which is going to cause a problem for you folks. You need to be aware of that. Here is a bunch of documents. But even on the open-air demolition. I have the documents on from the Moody Report and National Labs. It shows all the transuranic that was in that building. According to that was told by the FLUOR representative they were never shown that documents why they did open air. Now, if that's true, that's a legal problem."

Jeff Walburn: "My name's Jeff Walburn. I work with Chick. I testified in the United States Senate called DOE criminal and I called Lockheed criminal. Fred Thompson was the chair, and he gaveled me down and he said, I'm a U.S. senator. And I said, you are that, we're not going to have a blanket indictment here. They go behind closed doors and they cut a deal with USW. We got films that say Richardson saying 'you take this stuff home to your family.' Well then, when the bill got cut, that wasn't in there, and they are all patting each other on the back about what a good job. They cut us out of every negotiation. The USW got to pick all the doctors, DOE gave them money and they got benefits when we did not. And I'm here to tell you that Dwayne Pullman, News Channel 12, Cincinnati, got some cards here with our number on it. He's got a program called Fallout. We'll tell you about the dead kids in our area with leukemia. We've got people with neuroblastoma. Some of you may be familiar with Kate Brown from M.I.T. that wrote a book on Hanford, called Bluetopia. Well, we met a girl that had to flee to Paris because Putin didn't like what she was saying. And she got the Russians to tint the buildings with negative air that they were tearing down. They won't do that here. Putin, the bad, bad man. Putin tinted the buildings for this woman. We've got documents to show that James Goodby who was he was the ambassador to Ukraine wrote a report with Princeton University and they're steamed individuals that there was no transparency on what was brought from Saint Petersburg, Russia. There were 16 protocols in the hand access that prevented us from even seeing what the Russians sent here. And then Nick Timbers said, 'oh, yeah, we got that under ATS standards,' tells Ivan Salem from the NRC. And I said, I'm calling bullshit. they brought Plutonium laced material to piping directly from Russia. It was not warheads, it was junk, it was. It was. Yes, the word. It was reactor junk and we're still suffering. We have dead kids here, 15. Thank you."

Pat Marida: "Pat Marida with the Ohio Nuclear Free Network. I'm a volunteer coordinator, so I'd like to say first about the on-site waste disposal facility here is to hold the less radioactive rubble. But in the June 2015 record of decision, the Department of Energy failed to include binding parameters for disposal of radioactive waste despite lengthy public input. The waste acceptance criteria were said by Ohio Senator Sherrod Brown to have holes big enough to drive a convoy of trucks through. So, we want to ask Joel Bradburne and Jeremy Davis, is there

going to be a record available to the public of what's been going what goes into this landfill? Second, as Chick mentioned, the leaking landfills are being left on remediated all those landfills outside of the perimeter road here at Portsmouth are not going to be dug up. Some of these are unlined, but they, we, the public, say that landfills do need to be dug up and disposed of properly. And that was agreed by the village of Piketon and the Sierra Club way about six years ago in a public statement. It's also imperative that the demolition be covered. DOE has covered demolitions in other sites. It's not a good cost saving when the dust from these massive buildings and so forth threatens workers, it threatens the health of the people living around here. We have materials we're going to submit. They show that Pike County has the highest cancer rate in Ohio, and that did not used to be back in 1950, it was the cancer rate was something like 15% below the national average. Finally, the oxidant report was commissioned by DOE, and they took samples offsite at ports and they found radioactivity that was traceable to the site, and they recommended some follow up studies. So, we want to ask Joel Bradburn and Jeremy Davis, are you going follow the recommendations of the study you commissioned and we, the public, paid for? What are the plans for follow-up studies here at Portsmouth? Thank you."

Cole Coleman: "Cole Coleman, field rep for Labors Local 83 and I would like to say that we have a great working relationship with the DOE at the PORTS Site. We look forward to continuing our relationship with DOE in the future and are excited for what's to come with the redevelopment of the site. Thank you."

Mr. Roberts stated that we also have two written comments, and Ms. Kelly Snyder will read them.

Ms. Snyder states I am going to be reading verbatim what was submitted in for public comment. The first one is from Gina Doyle, DDOU, dated April 28th, 2024:

"The people of Pike and Scioto counties have had their rights stolen from them, their right to live happy, healthy lives, the right to have children and see them grow happy, healthy lives not fighting cancer. At two years old, in April of 2019, the SODI and Ohio University through a grant, did a survey of four counties Pike, Scioto, Ross and Jackson counties and interviewed over a month period, 1141 people, 495 said that they would like to see jobs specifically in nuclear. The part about that people wanted was later added. SODI said that people had grown accustomed to nuclear in our community on this day there were comments from Gene Wilson, Steve Shepard, and Robert Edwards like and this is in quotes we did it. It's a game changer. And now I've got the property, end quote. You want us to believe that report? Even though I have talked to hundreds of people from my community who say they don't want nuclear because it's killing them, that is like giving people crumbs from a big cake and saying they thought it was the best cake ever. We don't want your crumbs, nor do we want your nuclear jobs. We didn't ask for this. We didn't ask to watch our loved ones get cancer and other illnesses from being contaminated. We didn't ask for children to get sick and die from cancer. It should never have happened. We want our country to be free of contamination from radiation. We want our schools where our children attend not to be contaminated. We want our children, dads, mothers, sisters, brothers, and extended family not to get cancer. We want to know when our kids go out into this world that they will see that we spoke up to this corruption and demanded a better way for their future. We have been poisoned for 70 years. I have heard

more stories in the last five years than I could have ever imagined. The stories of each one who signed the petition or talked to at the grocery store or flea market. Those stories along with the stories on my group DDOU you the list I have people with cancers living and dead are far more important than any survey you did. I do mean every single person I have spoken to in the last years. Why won't you make this right and help the people that you contaminated? You are trying to convince our young people to get educated in the nuclear field because when you are too old to work and have to retire, or if God willing you don't get cancer, they will be the ones cleaning up your mess. RECA needs to be extended and expanded to include these communities in a 50-mile radius to compensate the people who have gotten cancer. You know, the truth of this contamination and how many have gotten sick and died for decades? Show us those reports. Show us the real truth of what you have been hiding for decades. But you keep trying to convince the people levels are low, even though we have seen the results physically in the people. Even though you all have family members or know someone who has had cancer, we know the truth and we will stand by and watch our community and our children get sick and die any longer because you simply don't care."

Ms. Snyder read a comment from Dan Solitz:

"Please make the chairs meeting virtual as well as in person. Respectfully submitted, Dan Solitz."

Mr. Roberts states that we want to thank those who have read the person's comments in writing, and we appreciate you taking the time to be here today.

Per- and Polyfluoroalkyl Substances (PFAS) Overview

Mr. Roberts introduced the Acting Director of the Office of Subsurface Closure, Dr. April Kluever. Dr. Kluever stated that in her prior position at the Executive Office of the President, she was responsible for providing scientific advice and coordination on the regulation of PFAS. One of her roles at DOE is to help DOE navigate PFAS challenges in light of an uncertain regulatory landscape. DOE is responsible for implementing and responding to PFAS regulations. Dr. Kluever started off with a basic introduction of the chemistry of PFAS.

The DOE's PFAS mission is to protect human health and the environment by assessing and addressing PFAS at DOE sites while deploying the department's scientific expertise to solve PFAS challenges. DOE is committed to coordinating with other agencies and working groups, staying informed on activities, updates, and challenges related to PFAS contamination and regulations, and continuing investigations and finding solutions for PFAS contamination at DOE sites.

There are four main pillars to the DOE PFAS road map. DOE aims to understand the PFAS contamination at DOE sites, safeguard and protect the health and well-being of employees, the public, and the environment by minimizing exposure to PFAS and addressing PFAS releases, advance solutions by leveraging the expertise of DOE national laboratories and collaborating

with research partners, and engaging with regulators, tribal nations, local communities, and stakeholders to ensure transparency on DOE's PFAS progress and develop effective strategies.

Dr. Kluever shared some updates under Pillar 1, understanding the contamination at DOE sites. Her office issued PFAS environmental sampling guidance in August 2023. This guidance provides advice to sites on determining the nature and extent of PFAS releases and contamination at DOE following the seven steps of the data quality objective process to ensure consistency and robustness in site assessments.

New PFAS regulations and site investigations will increase the need for environmental sampling. DOE recognized very early on that as these regulations move forward, the nation as well as EM will need to be able to sample different types of media (water, soil) for a greater variety of PFAS. The low number of accredited labs that can run the validation methods compared to the number of entities that need to test may create a bottleneck in sampling and characterization. DOE partnered with the Department of Defense to form the Department of Energy Consolidated Audit Programs (DOE-CAP), an accreditation program that has been accrediting labs consistently over the last year to build resilience and capacity in environmental sampling. This enables our sites to receive timely results that use the most current EPA-validated methods.

DOE also recently completed an update to the Annual Site PFAS Survey on January 31st, 2024. This is a survey of all sites in DOE, not just EM sites. The data review and validation by program offices were completed in February 2024. Some highlights included that 100% of DOE sites that provide potable water have sampled drinking water. More than 50% of sites have begun or completed the historical and current use investigation. Specifically for EM, HQ is seeking better ways to capture updates from sites on their progress towards meeting PFAS goals in a more agile way than annual updates. Dr. Kluever showed a draft EM Snapshot to the SSAB and acknowledged that it was still a work in progress, but the ultimate goal was to have an at-a-glance graphic to convey progress towards major milestones for each site.

Dr. Kluever shared that DOE continues to operate according to the Deputy Secretary Turk memorandum issued in 2021 that placed a hold on disposal of all PFAS and emphasized storage of all PFAS while allowing for a process of approval by EM1 in cases where storage is not possible. Any PFAS disposal must be approved by EM-1 and proceed according to EPA's 2020 Guidance. Dr. Kluever shared that DOE will be issuing a DOE-specific Storage and Disposal Guidance later in 2024 that will be consistent with the newly released EPA 2024 Interim Guidance for Destruction and Disposal on PFAS.

In the final section of Dr. Kluever's presentation, she emphasized the efforts of EM HQ to facilitate information sharing at the EM level, DOE level, and the interagency level. Information sharing will accelerate progress across the complex in meeting PFAS challenges. The Office of Subsurface Closure is leading the DOE in interagency reviews of significant regulation and guidance related to PFAS to be aware of any potential impacts to site PFAS scenarios. The Office of Subsurface Closure stood up a PFAS roundtable composed of DOE sites, HQ, and the National Laboratories as a platform for open discussion on PFAS critical issues. EM leadership is engaged at the White House level in coordinating discussion on critical PFAS topics: Dr. Kluever currently chairs the White House Office of Science and Technology PFAS Strategy

Team and Mr. Robert Seifert chairs the White House Council on Environmental Quality Disposal and Destruction Interagency Policy Sub-Committee. DOE EM remains highly engaged in conversations at every level to anticipate changes in PFAS science and policy.

Mr. John Thomas, a Savannah River Site CAB member, asked if PFAS is still being released at our sites and if there is any way to quantify how big a problem it is. Dr. Kluever stated that to her knowledge the only way it would still be intentionally released would be through emergency response. Dr. Kluever confirmed there is site characterization taking place this year and, in the future, to determine where PFAS contamination is located. She said it is essential to know those sources to identify the background levels of this anthropogenic substance.

Mr. Sterlin Grogan, a Northern New Mexico CAB member, stated that he wants to encourage engagement with Los Alamos National Laboratory (LANL) on this subject. Dr. Kluever reassured him that LANL has been involved. Sustained conversations about PFAS are ongoing with them and other sites.

Ms. Miya Burke, Vice Chair of HAB, asked if there is a deadline for all sites to complete actions listed on a Participating Office of EM Sites Roadmap slide provided during the presentation on page 10. Dr. Kluever clarified that the slide was a work in progress, stating DOE is using the information to consider what would be reasonable for timelines, and expects to see significant progress over the next year.

Mr. Anthony Graham, Chair of Nevada SSAB, asked about the Participating Office of EM Sites Roadmap on page 10 of the presentation; Questioned why only some of DOE EM sites, such as the Nevada site, are not listed on the roadmap and if there are plans to expand that program to other sites where the EM program has an active project? Dr. Kluever explained this is an example of a lesson learned for headquarters developing a snapshot. Five sites are missing from the EM list because those sites are covered under a different departmental element. Mr. Graham asked if there is a generic global background level or if it is location-based. Dr. Kluever mentioned it is a considerable problem as PFAS is worldwide. Most data shows that emissions go up into the atmosphere, then PFAS chemicals recombine and then come down, so they can be deposited in remote regions even if that region was not a very active PFAS producer. PFAS is a ubiquitous contaminant. DOE will continue to have conversations with EPA on how DOE can best pursue the background characterization at our sites.

Ms. Phyllis Brett, Chair of Savannah River Site CAB, asked if there are any other identifiable sources of PFAS other than fire suppression products. Dr. Kluever highlighted that there are many sources of PFAS. Some of the relevant ones to the DOE have to do with the coating of gaseous diffusion plant infrastructure with PFAS to protect against uranium hexafluoride, which is very corrosive. DOE identified multiple categories relevant to the DOE, but there are many others globally. PFAS can withstand acidity, sunlight, and UV degradation, along with its long-lasting nature. PFAS is in most of our consumer products, for example.

Cleanup to Clean Energy Initiative

Mr. Eric Roberts introduced Kristen Ellis, the DOE EM Associate Principal Deputy Assistant Secretary for the Office of Regulatory and Policy Affairs.

Ms. Kristen Ellis stated that in July 2023, Secretary Granholm launched the Cleanup to Clean Energy initiative. The goal is to support government-wide sustainability goals by utilizing current DOE-managed lands that DOE still needs for its mission and try to harness those for clean energy development. There are five sites that are part of this initiative. Hanford, Idaho and Nevada National Security Site, the Waste Isolation Pilot Plant in New Mexico, and the Savannah River Site. DOE has new goals it's trying to achieve regarding refurbishing federal buildings or building new buildings and what the footprint should look like for those moving forward, but specifically for Cleanup to Clean Energy. Up to 34,000 acres could be identified as potentially suitable for this purpose. They will be refined based on the National Historic Preservation Act and the National Environmental Protection Act. Input will be received from industry since they will potentially be developing or making additional calibrations in the future. DOE's goal is to realize industrial scale and energy generation whenever possible. DOE is also looking beyond those five sites for ways to utilize certain lands at other sites to meet sustainability goals. DOE is seeking ways to provide economic benefit to Tribal nations that are adjacent to DOE sites, local communities, and community resource organizations. DOE has engaged with industry, Tribes, communities, and other stakeholders throughout this process. DOE is also trying to work successfully with utilities wherever possible to address those challenges head-on. Potential developers need to have sufficient time to complete market analysis, advance their thinking on interconnection issues, and potentially line up future off-takers for these energy sources into the future. Nothing can proceed until those reviews are completed, and DOE is satisfied that it's the right decision to move forward. The second period will focus on constructing these facilities and the infrastructure portions. The last phase would be the operations period. Each site will have a slightly different timeline of what that means for each site. DOE is also pursuing a second area at the Savannah River site for phase one. DOE focused more on small-scale solar energy and sustainability goals that can be executed before 2030. Phase two is a slightly different approach that will include a public information day, and it will focus more on larger-scale power production and energy storage that will be technologically neutral. There is potentially 14,000 acres for development at Hanford. Originally, the number was closer to 19,000, but that number came down to 14,000 based on known cultural resources or potential contamination issues at the site. Idaho is the only site that has expressed hope to open this RFQ annually and continue to solicit clean energy projects. There may be other sites that choose to mimic Idaho's approach. At the Savannah River Site, has identified approximately 6700 acres under phase one. There are different kinds of energy focuses, the first one being solar. Savannah River will select the Phase One solar portion in time for developers to work with existing utility providers for interconnection purposes. The deadline for these interconnection studies will be August of this year. In New Mexico, the RFQ was released on April 19 and the proposal deadline was extended to May 29. The topics of clean energy, climate change, carbon footprint reduction, and greenhouse gas emissions are a common discussion in all our communities. There has been interest from solar developers, and it's based on the geography of some of our sites. The appetite for nuclear energy and the variety of sizes, manners, and technologies are prevalent nationwide. DOE is committed to working with stakeholders, communities, and Tribal nations throughout this process. DOE is much more successful when communities support what is taking place and are invested in these projects. DOE is continuing

to make cleanup progress, achieve milestones, properly dispose of materials, tear down buildings, change the landscape view, and continue talking with the various communities about their vision for the future. Being able to look to the future beyond the EM mission is exciting to see, and these new innovative projects are ways that EM will help the nation's energy security into the future.

Mr. Anthony Graham, Chair of Nevada SSAB, stated that an agreement was made that the Nevada National Security Site would return to the public domain once it was no longer used for national defense. Has that agreement been changed in the last 70 years? Ms. Ellis stated this initiative is focused on leases that are happening within the timeframe of when DOE still has an active mission at the sites.

Mr. Bob Skinner, Vice Chair of Idaho Cleanup Project CAB, asked if there is a facility owned by DOE where someone else built a nuclear reactor. Who decides whether DOE or the NRC regulates the reactor? Ms. Ellis emphasized that regardless of where it is located, NRC regulates those types of commercial activities. The actual licensing component doesn't change because it's on a DOE site.

Ms. Phyllis Britt, Chair of Savannah River Site CAB, asked if the acreage at each site would be sold or leased. Ms. Ellis stated that the land is leased within the current DOE-managed area. This is only the Cleanup to Clean energy proposal, which only leases rights and is only for the current DOE mission space.

Ms. Miya Burke, Vice Chair of HAB, asked what would happen to the energy projects after the cleanup missions had concluded. Ms. Ellis stated the goal is that the leases would end before the cleanup mission, or the DOE mission is over. Ms. Burke said solar panels or reactors wouldn't just stop producing energy when the mission ends. Ms. Ellis highlighted that a lot of this will be based on interconnection needs and the individual site's needs.

Mr. Anthony Graham, Chair of Nevada SSAB, asked what the cleanup of a small modular reactor would be like. Ms. Ellis stated the normal nuclear plant decommissioning process is done by the utility that owns it. The EM mission is tied to defense-related activities. Cleaning up commercial nuclear is different from EM's mission.

Mr. Sterling Grogan, member of Northern New Mexico CAB, stated he would like to divert from the current Los Alamos proposal, which is for a new extensive capacity power line powered by coal, to have solar power or some other non-coal electricity instead.

Ms. Phyllis Britt, Chair of Savannah River Site CAB, asked about SRS's transition to NNSA in 2037. What would happen to any leases? Ms. Ellis stated DOE has been working collaboratively on this because this proposal comes from the secretary, and the NNSA and the Environmental Management Office report to the same Secretary. We are all working closely together regarding precisely what that means for how this would be implemented at Savannah River.

Open Discussion

Don Barger, Chair of Paducah CAB, stated that one of the things that jumped out to him this morning is that PFAS has many unanswered questions.

Ms. Frances Johnson, Vice Chair of Paducah CAB, stated she is happy that they're working on the waste that might occur because of the commercial use of nuclear energy and DOE is looking at energy-producing options, like small nuclear reactors.

Mr. Herman Potter, Vice Chair of Portsmouth SSAB, stated he has been involved with safety at the site and in labor for 35 years and he has seen more done in an aggressive, proactive move with PFAS than anything else.

Mr. John Thomas, a Savannah River Site CAB member, stated that since PFAS is in everything and everybody, he is pleased to hear about dealing with this issue.

Ms. Phyllis Britt, Chair of Savannah River Site CAB, stated her concern is over what happens when no one steps up to the plate.

Ms. Teri Ehresman, Chair of Idaho Cleanup Project CAB, stated she is glad they're participating in public meetings for the consent-based siting process. She suggested DOE look into G-NET Communications that took place during the Bush administration. Things done then would be very helpful to NE with this new project.

Mr. Bob Skinner, Vice Chair of Idaho Cleanup Project CAB, stated many people are ill informed about radiation and base what they know on pop culture. Getting accurate information to the people often results in acceptance. Educating the people and sharing the excellent information that is happening with the cleanup and re-utilizing some of these places, is going a long way.

Ms. Susan Coleman, Chair of the HAB, stated the consent-based siting process presentation impressed her. Until there is a significant culture shift in this country, we need to get people to acknowledge that dealing with the need for a geologic repository is in this nation's best interest. Everyone will resent having this waste stored in many locations nationwide. She is glad to hear that they are seeking alternatives.

Ms. Miya Burke, Vice Chair of HAB, stated that PFAS has not yet been discussed at her local board. She appreciated the chart showing where each site was in the process. She stated the upcoming presidential election would impact PFAS work. She hopes the current progress continues.

Mr. Mark Hilton, Vice Chair of Nevada SSAB, stated he was pleased there were requirements for drivers hauling radioactive materials. He stated PFAS has been around since World War II; however, nobody has paid attention to it until recently.

Mr. Anthony Graham, Chair of Nevada SSAB, stated the DOE's openness to admit uncertainty and their commitment to finding solutions. to scientific problems is inspiring. It points in the direction that we will find a solution, which is a hopeful prospect.

Ms. Amy Jones, Chair of Oak Ridge SSAB, stated she found the WIPP presentation compelling. Although much progress has been made, and many sites don't have buildings anymore, there is still the question of remaining waste.

Mr. Kris Bartholmew, Vice Chair of Oak Ridge SSAB, stated it's encouraging to see the initiative to find a repository or a permanent one.

Mr. Sterling Grogan, Member of Northern New Mexico CAB, stated he found the PFAS presentation helpful.

Mr. Manny L'Esperance, Vice Chair of Northern New Mexico CAB, stated he was surprised and disappointed that LANL was behind on their shipments to WIPP.

Ms. Kelly Snyder emphasized the significance of everyone's input. She stated the feedback is invaluable in keeping these meetings as helpful as possible for the attendees.

EM Program Update

Mr. Eric Roberts introduced EM's Principal Deputy Assistant Secretary, Jeff Avery. Mr. Avery stated he is happy to be back in the Portsmouth area. He last spoke with the advisory board chairs last spring in Washington, D.C. He visited all the sites last year. The most important thing he wanted to convey was gratitude for the work the attendees achieved as part of the advisory board leadership, a tremendously important and influential group. EM is much better when diverse views and perspectives inform decisions within the Environmental Management Program. It also assists in quickly sharing perspectives and concerns of the community. The Portsmouth site work illustrates just some cross-cutting themes that focus on the Environmental Management Program. Progress the right way, safely. Themes of engagement and alignment and what can be achieved out of that. Future possibilities for sites and the communities adjacent to sites. He pointed out the X-326 demolition project, which was very successful, done safely, completed early, and under budget. Tremendous progress has been made in the X-333 project, with demolition and disposal activities to begin next year. The beneficial reuse opportunities and the hundreds of acres already transferred to the community for other community and business enterprise opportunities. None of that happens without the broad support of the stakeholders in the community. He thanked Jody Crabtree and Herman Potter for their leadership in the work done together with EM. He spoke of the Fernald site where there is a visitor center that tells the history of the former EM mission, the environmental cleanup operation, and how successful it has been. At that facility, 32 buildings were demolished, one million tons of waste and debris were removed, and a 225-acre contamination plume was remediated. It is a good reminder of how success can be achieved when people work together within the program. The progress across the country and the complex is tremendous because it is being made across all mission

areas at all EM sites. Hanford is making progress with the waste treatment plant. Both melters were at operational temperature for the direct feed low-activity waste system and produced a glass test canister. That places EM on a very positive trajectory as it moves forward into the commissioning process for the low-activity waste system. The status of the holistic negotiations resulting from the discussions between the Department of Energy, Department of Ecology, and EPA to set an achievable path forward for the tank waste mission at Hanford for the future were publicly released this week. That will be moving into the public comment phase over the next several months, so DOE will be looking forward to the feedback they get. That is a tremendous milestone for the program. Like the tank waste mission there, Savannah River is making significant progress. All the facilities are in place to envision completing the tank waste mission with deliberate progress, focusing on achieving that and transitioning responsibility for landlord functions from EM to NNSA based on the future mission split at the site. That's progressing very smoothly. Idaho is also making significant progress. Last year, the Integrated Waste Treatment Unit treated 68,000 gallons of waste. That's about 10% of the waste as part of that project. The facility is currently shut down while repairs to parts of the facility take place. It is tremendous that DOE completed the spent nuclear fuel wet-to-dry campaign nine months early. A significant milestone is the accelerated retrieval project. The project is nearing completion and working toward applying the engineered cap to continue progressing with the transgenic waste mission. A lot of good things are happening in Idaho including safely and deliberately completing up to 17 weekly shipments at that facility. That is the most significant shipping piece EM's experienced in the last decade. EM's also working through the ventilation system upgrades at WIPP for the two major construction projects taking place. In Los Alamos, we plan for 40 shipments of transuranic waste this year to WIPP, the program is on track and making steady progress through the rest of the remediation efforts on the site. Mr. Avery said his Paducah visit showed him firsthand what EM did as part of the deactivation, groundwater remediation, and depleted uranium hexafluoride conversion missions. He enjoyed participating in the Energy Communities Alliance (ECA)-sponsored meetings and forum on reuse and re-industrialization, which highlighted the potential opportunity at EM sites. Mr. Avery's Nevada trip allowed him to see all the extraordinary work that was part of the emissions, groundwater remediation, and waste acceptance missions and he looks forward to efforts to complete the demolition activities for Test Cell C and at the Engine Maintenance, Assembly, Disassembly facility over the next several years. Significant progress has been made in Oak Ridge. The East Tennessee Technology Park project will wrap up in the next few years. EM has seen tremendous opportunities for reuse and reinvestment. As part of that effort, the focus is shifting to demolition activities at Oak Ridge National Laboratory in Y-12 to enable future science and national security missions. None of this happens without close partnerships with stakeholders in the community, tribal nations, and the advisory board. Focusing on accomplishments is excellent, but the focus must also be on the future, looking forward to it, and understanding the challenges and opportunities. Recruiting and retaining the world-class workforce needed to accomplish our mission is tremendously challenging. Energy Facility Contractors Group, EFCOG, has been tasked to complete a workforce assessment to determine what the needs will be in the coming years. Preliminary findings show that thousands of workers across every functional area will be needed in our business over the next five years alone. That assessment is helpful because it helps shape workforce development programs better for the future. It also provides data for more substantive conversations with the community so that the community can help and be part of that solution. Many workers start their development process in the

community, and it's part of their academic training. Workforce engagements have been conducted in different regions of the country, including Los Alamos, last year. There was one in South Carolina, and one has been planned for this spring in Washington state. It takes everyone working together to move this big mission forward. Savannah River is certainly an example of this success. EM's making tremendous progress on the tank waste mission at the site. Portsmouth has made safe progress, and numerous opportunities are now available within the community. Los Alamos has expanded and formalized the role of community leaders, members of the community, and Tribal leaders in providing input on priorities and states for the environmental remediation mission there. DOE and the Environmental Department are working on the potential renegotiation of the consent order elements that guide efforts for environmental remediation at Los Alamos. In Idaho, all the accomplishments previously discussed have taken place just in the last 18 months, so much of that directly resulted from the vital engagement with the community, the Tribal nations, and the State.

Technological developments will be incredibly important in the future. The environmental liability within the program is $400 billion. Even small changes to increase productivity and efficiency or accelerate the mission can have a significant return on investment for the nation, communities, and the taxpayers. The focus is on what can be accomplished through technology development and deployment. The Test Bed Initiative at Hanford turns low-activity waste into grout for offsite disposal that started with some small amounts of seed money from our Headquarters Development Fund worked jointly with our field offices. It started very small with a 20-gallon pilot project. Over the next year, a 2000-gallon pilot project will remove and send low-activity waste in grout for offsite disposal. The holistic agreement talks about alternative treatments for offsite disposal, and this technology will be critical to that effort here in Portsmouth. In Paducah, a robotic pipe crawler initially developed as a joint effort between academia, one of the national laboratories, and a contractor is characterizing uranium deposits in piping, which is vital to the deactivation and decommissioning process for the gaseous diffusion process buildings. At the Savannah River site, machine learning enables a new technology to characterize groundwater plumes much more efficiently and sustainably. At Headquarters there is a new office, the Office of the Chief Technology Officer, which will be a senior leader role at headquarters to better shape and align technology efforts across the country. The Cleanup to Clean Energy Initiative is an inspiring effort to leverage and deploy DOE's land for innovative clean energy projects. In closing, Mr. Avery said he was excited to be here, looking forward to the discussion, and getting the Chairs input again in person.

Chairs Round Robin

Paducah Citizens Advisory Board (Paducah CAB)

Mr. Don Barger, Chair of Paducah CAB, stated that representing Paducah at these meetings has always been his honor. Mr. Barger discussed the Paducah internship program which has been in operation since 2014 and has hosted 114 interns, plus another 25 interns this summer. Fifteen of these interns have been hired on to become a part of the workforce. The Paducah CAB passed a recommendation to enhance that internship program in Paducah.

Mr. Barger then discussed the Paducah Virtual Museum and provided a reproduction of the poster advertising the Virtual Museum with a QR Code, which links to the museum website. A full-sized poster for the Paducah Virtual Museum was created and displayed around the Paducah area. It was also a full-page ad in the local paper, a full-page piece in the Paducah Life magazine, and various other locations. The website went from just over a thousand hits in a day last September, to one day going over 11,000 hits and another with over 14,000 hits. There have also been videos honoring black and women's history at the Paducah Gaseous Diffusion Plant.

The Paducah Chamber of Commerce, with the help of DOE working with Senator Mitch McConnell and Congressman James Conner, received a $2 million grant to study the area's desires for reindustrialization after cleanup is completed. The three-phase grant began in 2023 is continuing now, and the outcome will be available in 2025. Kentucky legislature recently created a nuclear energy development authority, paving the way for possible nuclear energy development.

Portsmouth Site-Specific Advisory Board (PORTS SSAB)

Mr. Jody Crabtree, Chair of Portsmouth SSAB, welcomed everybody to the area and hoped they enjoyed their time in Ohio. The PORTS site had a safe, successful demolition of the X-326 building, which was contaminated and had asbestos. There are a lot of other hazards besides just iron and concrete. The site is moving on to demolish the X-333 process building, and hopefully, in five or six years the board will share another successful demolition. The PORTS SSAB commends DOE for its improved community relations in the last few years. The communities benefited from this shared path forward, better labor relations, unified economic development, and a vision shared between local regions and surrounding plants. DOE does what it can to help support the re-industrialization, as discussed in the SSAB meetings. The PORTS SSAB would like to keep emphasizing the commitment to recycled materials. Recycled nickel wasn't feasible ten years ago, but DOE continues to discuss ways to make it possible to reuse the nickel found at the PORTS site. Property transfers are encouraging. The Southern Ohio Diversification Initiative (SODI) board has a good problem at the site: the need for more property. Those are the economic drivers in the re-industrialized area because that's what the community wants: good jobs for kids, safe work, cleanup of the site, and to provide the chance for a promising future.

Mr. Herman Potter, Vice Chair of the Portsmouth SSAB, said that it's not easy. It's a lot of hard work, but that's why we appreciate it a lot more. Everybody is on the right path, the same path, and doing a lot of good work.

Oak Ridge Site-Specific Advisory Board (ORSSAB)

Ms. Amy Jones, Chair of Oak Ridge SSAB, stated that the OR SSAB made recommendations on groundwater, the main plant, and the K-31/K-33 areas, which is the ETTP area. Board members also participated in a public meeting in the environmental justice community, providing updates on the cleanup efforts and missions. The community came around and asked questions. Community members could talk one-on-one with site works at the posters to understand what was taking place at the site. DOE also began demolishing the Alpha Two building, which was

built during World War II. The board toured the lab where world-leading researchers work on mercury contamination, which was very interesting.

Mr. Kris Bartholomew, Vice Chair of Oak Ridge SSAB, mentioned ecology. When the board toured, they discussed struggles with mercury. A new mercury outfall treatment facility is not online yet, but it is in the works.

Hanford Advisory Board (HAB)

Ms. Susan Coleman, Chair of HAB, stated that the board issued advice on the cleanup priorities, and is working on a new piece of advice on transuranic waste transportation. The HAB continues to be concerned because they are the last ones to ship to WIPP. Approval for the membership packages was received in July, which was three months early. The system works when it works, and the HAB appreciates it. Last year, the HAB put extensive effort into writing and rewriting their local operating procedures. The HAB also decided to realign subcommittee roles, which were implemented on October 1st and they celebrated 30 years as a board in January. The HAB looks forward to their next full board meeting to hear details about a four-year negotiation between the tri-party agencies. At previous board meetings, topics were not discussed because the negotiations regulator embargoed them. The HAB is concerned about the future ability to transfer transuranic waste to WIPP. Ms. Coleman stated there have been issues lately between the board and headquarters related to alternate numbers on the HAB, and the HAB is the only SSAB with alternate members. The HAB continues to be concerned about the implementation of term limits and the lengthy membership package approval timeframe. Hanford is a highly technical site. Understanding the issues on the site can take some time, and the HAB has lost a lot of its institutional knowledge. The HAB has also faced challenges due to the lack of active participation of members in committees, work groups, and leadership positions.

Nevada Site Specific Advisory Board (NSSAB)

Mr. Anthony Graham, Chair of Nevada SSAB, said the NSSAB is very proud of DOE's efforts to revegetate the low-level waste facility at Area 5 and the caps that have been completed. It's tough to work in desert ecology to reestablish a biome that often takes decades, if not centuries, to establish appropriately and with connections to Indigenous communities and using traditional practices. DOE has been taking steps toward reintroducing the conventional collection of desert plants back to Area 5 from before the cap was installed.

This board is proud of the fact that it tends to be a very active board. Outside of official board meetings, members of the board are eager to participate in opportunities to represent the board at different functions, whether that be national conferences, workshops, educational sessions, touring facility evaluations to make sure that the producers shipping to Nevada are following the waste acceptance criteria, as well as going to low-level waste stakeholders' forums, groundwater open houses, or various other community events. NSSAB is a very active board, and the board channels the spirit of volunteerism. The board wants to recognize the liaisons and their expertise in providing their viewpoints to the board.

Mr. Graham stated there is a lot of activism and energy on the NSSAB. The is a lot of public interest in the Nevada National Security Site (NNSS). There is concern about the continued community participation and environmental efforts at the site after EM completes its mission and the NSSAB sunsets. Mr. Graham asked how will the landlord of the NNSS address public concerns in the future and will it be through a similar board? And once the sites pass on to the Office of Legacy Management, what will happen? The Board is also concerned about the impact of climate change on the site's previously closed locations. There are good ideas, but inevitably, systems are complex. No one expects Nevada to suddenly get 40 inches of rainfall yearly, but board members still have concerns about what will happen if the climate change. There is also concern about increased wildfires and other potential negative things that could occur there.

The last concern relates to the fall 2023 EM SSAB Chairs meeting which was canceled six months ago. NSSAB wants to recognize all the efforts that Oak Ridge put into planning that meeting, which ended up being canceled at the last minute. The concerns of the board were that there wasn't an alternate or backup plan to create a venue for them to express their problems and that it would be nice to have at least one. The NSSAB prefers in-person meetings over digital ones. The NSSAB would have liked at least a digital half-day meeting to have a chance to communicate because members value this time significantly and share our accomplishments and concerns. Meetings should not be planned during government shutdown season without a backup plan. The Chairs meetings give the SSAB valuable time to meet with DOE leadership.

Northern New Mexico Citizens Advisory Board (NNMCAB)

Mr. Manuel L'Esperance, Vice Chair of Northern New Mexico CAB, stated that the NNMCAB maintained a quorum and held all board meetings and executive and subcommittee meetings in a virtual/hybrid format. The number of public participants has increased at each meeting. The board also approved a fiscal budget priorities recommendation. The NNMCAB welcomed five new members to the board and said goodbye to two long-term members who will be missed. Now, there is a new site manager, Ellie Gilbertson, a new DDFO, and at the same time, there is a new chair, Mr. Patricia Pacheco, who couldn't make it today, and Mr. L'Esperance noted that he was a newly minted Vice-Chair, performing his first official act. The board is looking forward to moving forward, letting the dust settle, and making some progress.

Mr. Sterling Grogan, a member of Northern New Mexico CAB, stated that EM-LA agreed to fund a year-long process that will result in the resolution of a dispute between DOE and the State over how to proceed with the Chromium pollution at Los Alamos.

Savannah River Site Citizens Advisory Board (SRS CAB)

Ms. Phyllis Britt, Chair of Savannah River Site CAB, stated the number one issue for the SRSCAB right now is the landlord transition. SRS is preparing to transfer land lordship from DOE to NNSA. The board is concerned because the NNSA isn't part of the SSAB mission. The boards mission it to provide recommendations related to environmental management activities. During the January board meeting, leaders from NNSA and EM assured the board that they would continue supporting EM's SSAB. NNSA will now have 51% plus of the missions at SRS because they are moving into plutonium pit production and plan to wind down environmental

management cleanup by 2037. There is a possibility of using artificial intelligence computer modeling to streamline deactivation and decommissioning in tandem rather than doing all their deactivation and then all the decommissioning on site. Some SRS CAB members were on a SRS panel at the Waste Management Symposium this past February. The biggest concern is recruiting CAB members because happy people prefer to avoid getting involved. Unhappy people are the ones who get involved. The board now has a diverse group of technical and non-technical, which is fun and are still working on recruiting more.

Idaho Cleanup Project Citizens Advisory Board (ICP CAB)

Ms. Teri Ehresman, Chair of the Idaho Cleanup Project Citizens Advisory Board, stated one of the biggest things heard from the community is protecting the Snake River Plain Aquifer. The Integrated Waste Treatment Unit is finally operating after years of effort. Then the other one is member recruitment. ICP CAB still has issues recruiting, mostly because Idaho is not diverse. It is difficult to find minorities to fill the board positions. 96% of our first-term members are staying on for a second or third term. Last October, our CAB had 100% attendance in person for the very first time. The Idaho settlement agreement is a big deal in Idaho, and it's something that the CAB focuses on. We also encourage the development of a complex-wide plan and process to move toward establishing certainty in identifying funding and opening a long-term high-level waste repository. It is also important for Idaho to continue to meet the goals for shipments to WIPP.

Open Discussion

Mr. Jeff Avery said, “Thank you for the input in the discussion. This is tremendously important, and it's beneficial for me to understand what you think is going well and what we need to continue working on. Again, I appreciate all your efforts and everything you do and look forward to continuing to progress together.”

Ms. Miya Burke, Vice Chair of HAB, asked the Nevada board chair to share their secret to having such active and engaged members. Mr. Anthony Graham, Chair of Nevada SSAB, mentioned that this is not a permanent thing that's been on the board. The professional staff has done an excellent job with recruiting. The Board put in a membership package with 20 members on the board, interviewed 26, and had 14 returning members. 26 people were applying for those 6 vacant positions. Many applicants came to the meetings, watched online meetings, and finally applied for membership. In the interviews, we're looking for people who want to go out or can go out and engage in these activities.

Mr. Mark Hilton, Vice-Chair of Nevada SSAB, stated that the board covers the size of Rhode Island, so we have a vast area to draw our membership. In years past, the board has struggled obtaining applicants. After the pandemic, people found out about the board and that it was a good thing. This year, there were more applicants than the board had room for. The board wants to make sure life is good for their grandchildren. Yes, EM is cleaning up the messes of my

parents and grandparents, but it will affect our children and grandchildren. It's a good thing that we're doing. I applaud the efforts of all the boards.

Ms. Kelly Snyder emphasized her background in Nevada. She was there for the first 20 years of her career. Now that she has the headquarters perspective, she can see what all the boards are doing regularly. She notices a pattern for the boards that hold shorter meetings. If their meetings are only a few hours or maybe every other month, they do not have as much trouble recruiting and retaining members. Those boards holding 2-day meetings find it sometimes hard to get people to commit to that much time because all members are volunteers. Members participate on their own time, including taking vacation time to participate and to provide the department recommendations. The Department is grateful for board members. Some boards meet twice or three times a year, some meet every other month, and some meet in some way, shape, or form monthly. The other thing that's unique about Nevada compared to the other boards is they do not have active subcommittees. They have ad hoc committees that will come into existence when they have a particular topic that they feel a subcommittee is needed. Typically, the NSSAB meets as an entire board every other month and most topics are discussed as a committee of the whole during full board meetings unless it needs to break into a subcommittee. There is a correlation with a strong work plan that's developed on an annual basis. A work plan allows everyone to be on the same page about what will be discussed, and members know how to prep, so they feel they can be part of the conversation because they've had the opportunity to educate themselves and talk to community members. Often, most new board members may sit and observe while they learn the subject. Another solution is holding educational sessions in addition to board meetings. Newer board members and members of the public can learn about complex topics in a non-stressful environment. Those educational sessions often lead to new applicants. Boards should look like the communities they represent, and most members of the communities are non-technical.

Ms. Susan Coleman, Chair of HAB, stated that the HAB meetings are two days because there is quite a distance to travel. The board meets three times a year and tries to get every one of the CAB members to be there.

Mr. Bob Skinner, Vice Chair of Idaho Cleanup Project CAB, stated having different people talk about the programs is very refreshing. These dedicated speakers are enthusiastic about the mission, and that energy and enthusiasm go through the CAB members and down to the people we talk to. Mr. Skinner said, good things come out of people like Mr. Avery speaking at these meetings.

Phyllis Britt, Chair of Savannah River Site CAB, stated that her board is happy to have a great relationship with SRS DOE. If there are questions, nine times out of ten, the questions get answered before the meeting ends. They'll find a way to get an answer.

Mr. Eric Roberts stated that tomorrow’s agenda is more about discussion from the board, so come prepared with thoughts, ideas, and questions.

Thursday, May 2, 2024

Day 2

Opening Remarks

Mr. Eric Roberts discussed the agenda and introduced the public members.

Public Comments

Vina Colley. “I want to thank you for letting me be here. I'm concerned about the forever chemicals. That letter F concerns me, such as uranium hexafluoride. I have also taken a test and sent the samples out. We have these chemicals going offsite from the plant forever. I'm concerned about the nickel that was buried at the plant in an unlined pit. I'm concerned about the nickel that's been recycled at the plants being contaminated, and I'm concerned about the columns at the plant that's got raffinate in them. When they take down these buildings, what will they do about these columns and the raffinate material in them? We're also concerned maybe not all of you guys are lovely people, but we have a board here in Portsmouth, and I don't know if it's the same way with all the other boards, but it consists of mayors, commissioners, and the workforce, people who lobby for jobs. It does not have community people who are sick and concerned about what's going on in these facilities. This makes us unhappy and concerned that they don't care about the community. We had a group at Ohio University that took a survey supposedly and claimed that the people here want nuclear. We were surprised that they wanted more nuclear stuff. We don't want more nuclear stuff. We want our plants cleaned up, and we want our children safe. Children are dying of leukemia here, and we have the highest rate of cancer in the state of Ohio. I don't know how we will solve all this if we have these boards stacked against the community. We worked at the Dogwood Festival this weekend and talked to 500 people who signed our petition to get us on RECA's downwinders list because we were sick. We spoke to 500 people, and I don't know anyone who said they like nuclear. I don't know where this lady from Ohio University completed this survey. From what I understand, she just stuck it at the end of the conversation. It wasn't even in there until the end. I'm concerned about my community. I'm concerned about the workers. I talk to all kinds of workers that are sick. I help get the compensation bill in for the workers. I'm pushing for the community because we have cancer. I've got five or six family members; two of them worked at the plant, and both are dead now from kidney cancer. My brother-in-law had a wooden leg, and they bought him a new leg at Fernald. He had these nodules, and they wound up getting cancer. All of us workers have these nodules. We don't want to be sick; we don't want to be mean. However, something will have to happen for the communities to build trust. We don't have any faith. There have been people who applied for the board, but they didn't get it. We had one guy on there, Dennis Foreman, who was asking all kinds of questions, and his time wasn't up, but they got rid of him. I don't know the answers, but I'm hoping some of you will see the answer. But we're sick. We need help. We don't need clean, safe energy jobs because there's no such thing as clean, secure

energy jobs. They want to put two small modular reactors here on site so we can reprocess transatlantic waste from all these other sites. I'm concerned about the railroad shipments because I was in East Palestine. Those people had this accident from the railroad, and they're sick, and no one's helping them. They won't give them health insurance. We're going to have many shipments coming in and out of here because we believe that the back door, they want to make us a hub for the nuclear waste industry. As I said, this plant sits on top of fractured bedrock. We have the largest aquifer in the Midwest. It's affecting not only us but also a lot of people. Just find out how far that river goes. It goes all the way to the Mississippi. We're concerned. If you're in this line, you will be affected, too. Thank you."

Mr. Eric Roberts introduced Ms. Kelly Snyder.

EM-SSAB Spring 2024 Recommendation Update

Ms. Snyder, EM SSAB DFO, shared that the boards have been around for decades, and DOE is proud of the community involvement. The EM SSAB has provided 1,786 recommendations since its inception. Sixty-eight percent of recommendations have been fully accepted, and 17% have been partially accepted. One of the requirements of the Federal Advisory Committee Act (FACA) is to document what the boards are doing, and boards are required to do formal minutes, preserve the records, and send them to the National Archives. One of the things that FACA requires is tracking how many recommendations are received and the acceptance rate. Those interested in the numbers can go to the FACA database. The eight local boards are rolled up into one report on that website. It discusses the costs associated with the board, the number of employees associated with the board, recommendations, and the purpose of the recommendations. The Board's recommendation for better follow-up on recommendations asked that DOE go back to 2018 for the reporting. For information on a recommendation prior to 2018, please contact Ms. Snyder. This presentation is a result of the Chairs' Recommendation **2023-01** to provide an annual report of the status of recommendations.

2018-01:

The Office of Environmental Management went through and looked at those regulatory changes to ensure that they aligned with the core values of the board. This recommendation is accepted and closed.

2018-02:

The board supported an Energy Community Alliance (ECA) report titled "Waste Management: A New Approach to DOE's Waste Management Must be Pursued," and wanted to make sure that the Department knew that, not only did ECA like this recommendation, but the board supported it as well. Headquarters met with the ECA representative multiple times to talk about that report. Waste management updates have been provided at each of the chair's meetings since the original recommendation in 2018. The recommendation requested an update to the board regularly, and the plan is to continue doing that. Waste disposal is an important part of our mission, so each

chairs meeting will have some component related to waste management. This recommendation is accepted and closed.

2018-03:

A common theme is advisory boards, public outreach, and community involvement. For the specifics of how your site implemented this recommendation, you can contact your local site contacts because they'll have the details of their public outreach program at the site level. This recommendation was accepted and closed.

2019-01:

Headquarters recently realigned the organizational structure to better integrate and centralize technology program activities under one authority. This change will help realize the immense potential for cleanup innovation with the underlying goals of mitigating technical risks and uncertainties, lowering operating and lifecycle costs, accelerating schedules, and helping to address programmatic vulnerabilities within EM' technology program. The Office of Technology Operations will integrate research and technology. Technology activities at the department's national labs support our cleanup sites, project offices, and various colleges and universities, including minority-serving institutions. This change will capitalize on opportunities to engage with other program secretarial offices, the Department's National Laboratories and technology centers to synergize and leverage technology activities. This will allow sharing of existing best practices from other parts of the Department. DOE recently awarded $27 million to six of national laboratories to conduct research and development activities provided in the Hanford tank waste roadmap. This investment is part of EM's broader commitment to advancing the tank wate mission at Hanford by conducting R&D that promises technology breakthroughs and will continue to collaborate with the Advanced Research Projects Agency-Energy on other impactful technology initiatives.

2019-02:

DOE updated its program management protocol to include specific definitions for regulatory and project management milestones. DOE Headquarters performs quarterly training sessions for site regulatory points of contact to ensure the proper use of milestone technology. The information should clarify the classification of the milestone. DOE headquarters strategy for presenting information on milestone status includes relying on currently established, formal, and informal interactions with regulatory partners, stakeholders, and tribal governments. DOE wants to ensure open and ongoing communication with stakeholders, community members, elected officials, and regulators. This recommendation ensures that everybody has the base knowledge and vocabulary used when discussing DOE topics. This recommendation was accepted and is very much appreciated.

2020-01:

In 2020, the Chairs gave DOE EM two recommendations. The first recommendation focused on waste disposal, and it was partially accepted. During the waste management briefing on Day 1

of the Chairs meeting, DOE staff covered where EM is with the various disposal activities and the footprints at the site. The DOE representative talked about the waste acceptance criteria and how they are unique compared to the various environmental components in that location. The status of this recommendation is ongoing. DOE will invite a transportation subject matter expert to present at the Fall Chairs meeting. This recommendation is open, ongoing, and partially accepted. Often, a general recommendation is difficult to fully accept because it tries to make the recommendation fit at eight different locations. Sometimes, when a recommendation is partially accepted, DOE accepts the recommendation, but each site works within that recommendation to implement it. DOE looks at that when determining whether it's accepted or partially accepted.

2020-02:

Each year, EM issues budget guidance to each site directing the sites to engage with stakeholders on budget priorities and gives regular updates regarding various parts of the budget process. Part of this budget guidance is making sure the boards are aware of the President's budget request and the Department's priorities. DOE solicits the board's feedback on the community's priorities for the budget. This budget guidance is issued each year at the beginning of the calendar year and is provided to all the sites. All boards have an opportunity to express their priorities for upcoming budget activities. Additional budget guidance will be distributed during the next calendar year to ensure the board is able to provide input on the budget priorities.

2022-01:

There's been an ongoing concern about how long it takes to get members appointed to the board. Unfortunately, it is a long process because of the various policies, regulations, and procedures that must be followed. If a membership package is in the review process and a member is seeking reappointment, the DFO can appoint a member for 90 days to help bridge that gap, if the package has not been approved by the target appointment date. In the charter, there is a six-year term limit. The term limit is because it allows other community members to join the board. EM recognizes that sometimes, finding someone to fill an empty spot on a board, is difficult. When a member has reached their six-year term limit and the site has tried extensively to recruit someone to fill that position, but has not received any viable applicants, EM can allow an extension to fill that spot. The purpose of term limits is to provide opportunities for other voices.

2022-02:

There are ways to ensure the community's voice continues to be heard, even though practices are in place to ensure continual opportunities for members to speak and community members to be involved. EM encourages all sites to adopt a hybrid approach to their meetings to get participation from those who cannot attend the meeting in person. One recommendation stated that headquarters and sites should define acronyms and speak at a level that a variety of people will be able to understand, not just those with a technical background. Those were shared with the various site contact points and asked to implement.

Mr. Eric Roberts asked the board if they had any questions for Kelly.

Ms. Phyllis Britt, Chair of Savannah River Site CAB, shared that the SRS CAB agreed with DOE that our DOE liaison would come to every committee meeting prepared with a list of recommendations that had and had not been dealt with since the last time it was discussed. That's been helpful because some were several years old. It's nice to find out, at least, whether they're not dealing with it or why. Ms. Britt asked why there is no mechanism to remove a CAB member who just stopped coming. Is it correct that one can only be replaced once he resigns? The SRS CAB had a situation with a member who simply did not attend or respond to any type of communication for over a year. Ms. Kelly Snyder explained there are different scenarios and possibilities for situations like the one being discussed. Members are appointed for two-year terms. There have been situations where board members are not following the operating procedures or the bylaws of the board; and a request can be made that a board member be removed from the board if there is a known justification for it. Then, the request is considered on a case-by-case basis. Ms. Snyder encouraged members and staff to reach out to her office to discuss the options because it is on a case-by-case basis due to extenuating circumstances. There are mechanisms to ensure various viewpoints are heard.

Mr. Anthony Graham, Chair of Nevada SSAB, stated that per the Nevada SSAB's bylaws, a board member can be removed with two unexcused absences or by not attending half of the meetings in one year. It had been enforced prior to his time on the board. Mr. Graham asked what was the nature of the 15% rejected or under-review recommendations? Ms. Snyder stated that sometimes recommendations include something that needs to be funded, and we cannot obtain funding for it. That would be considered rejected, or we would consider it partially accepted if we could implement a portion of the recommendation.

Ms. Snyder emphasized that the board should focus on providing recommendations specifically related to the work plan items. Those are areas of EM work where there are opportunities to include community input. If there's something outside of the work plan that members would like to make a recommendation on, let your site leaders know. The priorities and concerns of the board are important to EM.

Mr. Jody Crabtree, Chair of Portsmouth SSAB, stated that whether it be on the local board level or national level, all recommendations are essential, and the department listens and takes action in the future. Many of the recommendations will take time, but eventually come to fruition. The board's voice matters.

Board Discussion #1: Community Awareness

Mr. Eric Roberts asked if anyone had anything to discuss regarding community awareness.

Mr. Anthony Graham, Chair of Nevada SSAB, shared that many community members have difficulty accessing information when it's online. It doesn't necessarily cross equally across generations or economic levels. He asked if other sites had physical locations where people could access information about their sites and EM activities.

Mr. Jody Crabtree, Chair of Portsmouth SSAB, stated that Portsmouth had similar problems with communication. He stated only some people have computer access, but the department sends mailers with information on what's happening. The mailer will usually lead them to a link if they want to dive into it more. The mailers have helped.

Ms. Kelly Snyder asked board members to raise their hands if they had a public reading room at their site; and if Department of Energy documents are stored and available to the public.

Mr. Anthony Graham, Chair of Nevada SSAB, stated that the Nevada site public reading room was closed.

Mr. Eric Roberts asked what the board members would like their community to know about their boards.

Ms. Teri Ehresman, Chair of the Idaho Cleanup Project Citizens Advisory Board, said in Idaho, the staff sends a newsletter with the agenda for any upcoming meetings highlighting accomplishments since the previous newsletter. It includes previous newsletters, meeting minutes, and member bios.

Ms. Amy Jones, Chair of Oak Ridge SSAB, stated Oak Ridge sends a mailer, both physically and online. Additionally, they have local newspaper ads, which is an excellent recruitment method. They also have a YouTube show and share information about the DOE Information Center.

Ms. Susan Coleman, Chair of HAB, shared that since their board is such a large one that it reaches a large regional area, including multiple tribes and states, they rely on a robust website. The website includes all meeting minutes and documents. Their agencies have very active Facebook postings. Board members post about meetings and upcoming meetings. The Hanford site hosted a town open house event, and the board was there. To help recruit, talk to people, participate, and learn. Not everybody's electronic.

Mr. Jody Crabtree, Chair of Portsmouth SSAB, stated that the most important thing is the information related to the scope of the local board. Education about the site and the past is crucial. Some stakeholders believe the Portsmouth SSAB is DOE. The Board's scope is to successfully follow the record decision for the site, which is to clean it up and be industrious. That information is essential because it makes it hard for board members to stay focused when off course. It's necessary to make it clear what each board's purpose is.

Mr. Eric Roberts stated sites with multiple missions, multiple agencies, and now private industry coming on-site, people come to the SSAB because they think that's the place to voice all their opinions and complaints.

Mr. Mark Hilton, Vice Chair of Nevada SSAB, stated that if the Nevada SSAB had a physical office, people wanting information about Area 51 would come - which is not part of the board's scope.

Mr. Anthony Graham, Chair of Nevada SSAB, said sometimes half the public thinks his board is involved in Area 51, and the other half think it is involved in Yucca Mountain. He works with college students, and many of them tell him that Facebook is for older people. They are not on Facebook, but they are on other social media sites.

Ms. Susan Coleman, Chair of HAB, stated that their board tries to emphasize meeting content that interests the public, not just general business but presentations on topics of concern.

Mr. Eric Roberts asked if topics are only a concern of the board, does it matter to the public, or at all?

Ms. Susan Coleman, Chair of HAB, stated it matters to the board because revising procedures, processes, and documents is necessary for the board. For example, last summer, one of the HAB buildings identified a significant leak that hit national news almost immediately. Luckily, they had a full board meeting coming up and got a complete presentation. They had some of the best participation because it concerned and interested the entire board and the public.

Mr. Manuel L'Esperance, Vice Chair of Northern New Mexico CAB, stated that there are four things that each board needs to point out to the public. Number one, the boards are here. Number two, they are aware of the situation. Number three, they are working on it. And number four, they will not rest until it's resolved. The board's message is out with those four things and satisfies most public concerns.

Mr. Robert Skinner, Vice Chair of Idaho Cleanup Project CAB, stated that the public is so varied. In Idaho, there are farmers, miners, homeowners, and more. In the past, there were town hall-style meetings where public affairs would go and make a presentation, and people were standing around and waiting because everyone had a question in their back pocket, something they had always wanted to know but never knew who to ask. It is essential to have as much face-to-face communication as possible where anyone can ask questions and there is someone to answer them or say they don't know but will find out. The public's desire to hear is authoritarian. Sometimes, if they come to the meeting and think they're going to hear something about a process that is not covered, they won't go to future meetings. He stated their newsletter is gaining popularity.

Ms. Phyllis Britt, Chair of Savannah River Site CAB, stated her community is on board with SRS. One of the things they do is hold meetings in various locations, which helps make more people aware. DOE has a pretty good website. DOE has a Facebook presence and good newspaper coverage. DOE streams our meetings.

Ms. Kelly Snyder stated that community participation in board meetings is based on the level of interest of each community. The boards want people to come to the meetings and want them to participate. EM wants the community to be aware of and engaged with the board. Each board is fulfilling its mission of giving DOE recommendations. That is what the board is chartered to do. Additionally, the SSAB is an outreach tool that allows people to have access to the information and know what's going on in the program. The strict purpose of the SSAB is to be a voice for the community and provide the community's point of view to the Department through

recommendations. Ms. Snyder stated not to view success on how many people are at the meetings. The time and input each board provide are essential in fulfilling the board's mission.

Mr. Kris Bartholomew, Vice Chair of Oak Ridge SSAB, stated that virtual meetings allow members of the public to attend the meeting without physically being there. This outreach makes it easier than coming to the physical site.

Mr. Robert Skinner, Vice Chair of Idaho Cleanup Project CAB, stated that everyone used to listen to the new but most of the news is now national.

Ms. Amy Jones, Chair of Oak Ridge SSAB, mentioned that her information comes from people who walk into my office or by text, not the newspaper.

Mr. Anthony Graham, Chair of Nevada SSAB, stated he still reads the newspaper, but a key source of news he uses is radio and podcasts.

Mr. Jody Crabtree, Chair of Portsmouth SSAB, emphasized that everyone is busy, and the Internet is probably his primary news source.

Mr. Manny L'Esperance, Vice Chair of Northern New Mexico CAB, stated he subscribes to several different summary reports that he reads every morning. He also signed up for all local alerts and Google alerts for the region.

Ms. Teri Ehresman, Chair of Idaho Cleanup Project CAB, stated that she reads several newspapers daily. She also subscribes to various alerts to keep up on local and national things.

Mr. Don Barger, Chair of Paducah CAB, stated he is a newspaper junkie. He reads multiple newspapers, most of them electronically. He reads the papers where his kids live and then tells them what's happening in their communities.

Mr. Sterling Grogan, Member of Northern New Mexico CAB, stated that there are three public radio stations in northern New Mexico, one of which broadcasts little or no national or international news. It's locally focused. He listens to those three stations and subscribes to several different newspapers.

Mr. Eric Roberts asked that during the following discussion on board recruitment, each participant consider the following takeaways from this discussion: How can boards attract people? What do members like best about being on the board? And how do boards communicate that information to people in the future?

Open Discussion

Mr. Roberts asked why each attendee served on their board.

Mr. Robert Skinner, Vice Chair of Idaho CAB, stated that he is a science nerd and wants to know what's happening.

Mr. Mark Hilton, Vice Chair of Nevada CAB shared that during his professional career he worked on nuclear activities.

Mr. Jody Crabtree, Vice Chair of Portsmouth SSAB, stated he was born and raised in the area and his family has been in the area for generations before the site existed. He wants to clean up the site and wants reindustrialization. He also wants to serve the workforce, by helping reindustrialize with good jobs.

Ms. Phyllis Britt, Chair of Savannah River Site CAB, stated she has lived in the shadow of SRS for almost 50 years. Her husband worked there, and early in her career, she covered the CAB in North Augusta. She understood absolutely nothing because it was all so scientific and so acronym ridden. She would write to make it so other people could understand it. She saw a recruiting ad in the paper one day and thought that the board needed a few people who weren't scientists. Now, the board is much more diverse. DOE has worked very hard on the number of acronyms, which is helpful because people understand more.

Mr. Don Barger, Chair of Paducah CAB, shared that he moved into the community in 2002. He came in with no preconceived idea about the plant and didn't even know the plant was there. He serves on the board because his life as an educator was to make a difference. He is a lifelong learner; those who serve on a board and learn much.

Mr. Sterling Grogan, Member of Northern New Mexico CAB, said he has resided in northern New Mexico for half a century and closely observed the operations at Los Alamos and other sites across the country. This firsthand experience and a profound 99% lack of trust in DOE compelled him to join the board."

Mr. Kris Bartholomew, Vice Chair of Oak Ridge SSAB, stated he lives three and a half miles from the edge of the Oak Ridge site. He is a scientist and loves problem-solving. He was skeptical. He is happy with the transparency he sees in DOE now.

Ms. Amy Jones, Chair of Oak Ridge SSAB, stated being on the board is a way of giving back to the community and learning what is going on outside of the reservation. It's not hearsay. It's not information she gets from somebody else.

Mr. Anthony Graham, Chair of Nevada SSAB, shared that these locations have played vital roles in community formation and identity formation, and they mean many different things to many groups of people. The test site, for example, is essential to the Western Shoshone and the Southern Paiute with points of religious significance. For people who arrived in the area later, it also played a crucial role in their identity formation as they passed towards events before nuclear testing and their participation in testing. It's trying to balance the environmental cleanup with aspects of historic preservation, as many of these sites are recognized as unique locations worldwide. It's trying to balance what is being done to protect the community and the critical points in the identity and formation of communities.

Ms. Miya Burke, Vice Chair of HAB, stated that she serves on the board because it is part of her job. She works for an environmental nonprofit called Hanford Challenge, where the seat on the board represents the Hanford workforce. But she honestly, personally, really cares about being involved. She attends all in-person meetings, driving three and a half hours from Portland. She could do it virtually, but the relationships built on the board are meaningful to her. The mission of providing policy-level advice to the tri-party agencies is crucial, not just because it's the job but because it feels like a calling. She would never have known about the Hanford Advisory Board if she hadn't worked for the Hanford Challenge.

Ms. Teri Ehresman, Chair of the Idaho Cleanup Project Citizens Advisory Board, stated that after a career in journalism, she went into public affairs for the research side of the lab. DOE made a lot of promises and after retirement she wanted to join the board in part to make sure that DOE completed some of those promises made to the people. She has grandkids and kids living in the area and wants to protect it for them. When someone uses mostly acronyms, people think they are hiding something from them.

Mr. John Thomas, a Savannah River Site CAB member, stated that he joined the board because he was concerned about water when building a house. It's all flowing towards the Savannah River. He wanted to be on board to get as much information as possible as to what was happening with the plumes, the cleanup, and the associated operation. Now, it's transitioned more to safety and making sure that the community and workers are safe.

Mr. Manny L'Esperance, Vice Chair of Northern New Mexico CAB, stated he joined the board because he believed in the mission at the Los Alamos National Laboratory. He felt a personal sense of responsibility for the health and safety of the workers performing these cleanup operations. He thought that by being on the board, he might use his experience and talent to ensure that it occurs safely.

Ms. Fran Johnson, Vice Chair of Paducah CAB, stated her family believes that if you earn your living from a community, you should give back to that community. She was vice president of governmental affairs for the local Chamber of Commerce which gives her more insight into the bureaucracy.

Board Discussion #2: Board Recruitment

Mr. Eric Roberts stated that current members joined for a variety of reason and the boards are made up of diverse populations. He then asked how can we find new members?

Ms. Teri Ehresman, Chair of Idaho Cleanup Project CAB, stated questioning is essential. They shouldn’t take everything at face value; instead, they should do their research and use facts to help back up what somebody tells them.

Mr. Mark Hilton, Vice Chair of Nevada SSAB, stated that some public comments should be answered. The board's goal is to address those issues and try to take care of them to protect not only local sites but all the sites nationwide.

Mr. Eric Roberts asked what a good meeting looks like. How do you know when boards will be effective? What is a good board meeting, and what is it productive like? When do you know one has been successful?

Mr. Anthony Graham, Chair of Nevada SSAB, stated that a good board meeting involves engagement, questions, and discussion. Poor meetings are when there's a presentation, one person makes a recommendation, it's seconded, everyone votes in favor, and it is over. Good meetings make sure that different opinions come to the table. Challenging questions are asked of the presenters, and the board comes to a consensus on something with action back and forth.

Ms. Amy Jones, Chair of Oak Ridge SSAB, stated that it's about engagement. It's about people asking questions. Someone could have a question not thought of, and boards learn from them.

Mr. Don Barger, Chair of Paducah CAB, stated during board meetings, sometimes the speaker is stopped, and members ask them to explain something because they are speaking at the scientific level and that's not who the audience is. Presenters must be willing and able to answer questions. Sometimes, they don't know the answers, but they will get back to the board. The good part is that when they come back with the answer, the board knows they are critical in that process.

Mr. Eric Roberts asked what the best way at your local sites is to speak about everything we discussed. What works in your area, and what could be done better across our sites to bring people in?

Mr. Robert Skinner, Vice Chair of Idaho Cleanup Project CAB, stated that one of the things that he likes most is the site tours. Afterwards, members talk about what they saw, ask why what they saw is essential, and discuss their plans to go forward. Being able to see it and then talk about it makes it much more straightforward, especially for people who do not have a technical background.

Ms. Phyillis Britt, Chair of Savannah River Site CAB, feels that recruitment is best-done one-on-one, and often, a board member finds their replacement. Many people don't know the boards exist because they aren't worried. Only a few people are concerned about what might be happening at SRS.

Mr. Eric Roberts emphasized contentment is not necessarily the enemy.

Ms. Amy Jones, Chair of Oak Ridge SSAB, stated that recruitment is more one-on-one finding one's replacement, but there must be a passion. If a board member doesn't have a passion, why would the potential board member have an interest?

Mr. Manny L'Esperance, Vice Chair of Northern New Mexico CAB, stated in his area they do not have a problem recruiting people because of the culture. People are interested in making sure things are done right. The biggest way to convince people to join this crew of talented and skilled doers is finding people who are trying to get something done and recognize that their time is valuable, and if they want to effect change, this is the place to do it.

Mr. Anthony Graham, Chair of Nevada SSAB, stated that they have a little bit of a leg up when it comes to attracting people. There is a widespread discussion that draws people in. Even though Las Vegas is filled with transplants from around the country, they come here because they already know about at least the existence of some place where nuclear devices were tested. They have the images of the mannequins and the Apple II houses in their minds, and there's already a seated interest from both people who have a personal connection to the site and have moved to the area from all over the world. Recruiting from Las Vegas is easy. It's more difficult in the rural communities around the other parts of the site. That is a case where expanding by going through newspapers, having specials on the local community television station, sending out mailers, and having meetings such as groundwater, open houses in different communities, and almost having a little traveling road tour around Nevada is essential.

Mr. Mark Hilton, Vice Chair of Nevada SSAB, stated they have excellent support staff. They take the time to go out and visit and make presentations not just to the local people but to the local town councils and the village leadership. They talk about who the board is, what they do, and what they attempt to do. That gets the word out about what the board's doing. When recruiting time does come up, they already know about it from the leadership perspective, talk to their people, and take advantage of the application process. Mr. Hilton asked if there were a universal set of interview questions.

Ms. Kelly Snyder stated that each site has its recruitment process. For example, in Nevada, members are part of the interview process. In some locations, it's all done by staff, and in other places, it's dictated by a memorandum of understanding of the board's makeup. Each site is unique in how it recruits and populates the board.

Mr. Don Barger, Chair of Paducah CAB, stated the Paducah CAB draws from multiple counties and states. The board strives for diversity, which means discovering the interests of communities scattered throughout western Kentucky. The liaison says the board needs a female from Graves County. So far, the board has been very successful in Paducah. Current board members who constantly reach out and talk to people, letting them know what the board is doing, plants the seeds for future members.

Mr. Robert Skinner, Vice Chair of Idaho Cleanup Project CAB, stated that when DOE at the site gets a great question from somebody in the community, the person hands them a card and says, here, why not think about joining the CAB?

From DOE headquarters, Mr. Charles Love stated that boards with trouble getting younger members should look to smaller, local universities. He graduated from Shawnee State University, which is just a couple of miles south of the Portsmouth site, and many students there

did not know the site existed. He learned about the Portsmouth site's existence through an email about an internship at the Portsmouth site.

Ms. Fran Johnson, Vice Chair of Paducah CAB, stated that one of the things she was thinking about in recruitment was getting the message out. It's invaluable that the board goes and speaks to civic groups about the board's work.

Mr. Mark Hilton, Vice Chair of Nevada SSAB, stated one recruiting source that will not produce results quickly but will in the future is the contractor scholarship programs for local schools' STEM-related programs.

Ms. Kelly Snyder shared that a good board member is somebody who wants to be there and be vocal and give their opinions. There is a big push to ensure boards mirror the communities they represent. But at the end of the day, the best board member is the one who wants to be there and who wants to participate.

Board Business/Open Discussion

Ms. Kelly Snyder stated she would like to hear from attendees on what they think is an appropriate amount of time to leave records on the EM SSAB website. She said there was interest in streamlining what information was housed on the website. The streamlined items would still be accessible even if they are not on the website. A contact would be listed, and the requestor would have to contact the person and make a request.

Mr. Anthony Graham, Chair of the Nevada SSAB, stated that the documents should be on the website indefinitely. Darkness leads to ignorance, which leads to conspiracy.

Ms. Amy Jones, Chair of Oak Ridge SSAB, mentioned there should be an archive section.

Mr. Jody Crabtree, Chair of Portsmouth SSAB, agreed.

Ms. Susan Coleman, Chair of HAB, stated that all documents produced should be easily accessible online. There needs to be a link or something on that site for archived material.

Mr. Charles Love stated that it's mainly the separation of the board from DOE because documents that are non-board related on energy.gov are specific EM or DOE documents. Those are things DOE employees drafted, put together, and uploaded. These are publicly produced documents rather than employee documents. Does the board feel there should be a proper separation from employee documents rather than public documents that boards put together?

Mr. Robert Skinner, Vice Chair of Idaho Cleanup Project CAB, stated that unless these documents are classified or sensitive, there is no reason not to keep them available.

Ms. Kelly Snyder requested a recommendation from the board on public document storage on the EM SSAB website. The EM SSAB Chairs Meeting attendees developed the following recommendation:

The board recommends that the EM SSAB website maintain and keep documents related to board activities in perpetuity. The documents shall be in a searchable archival online location available to the public. These documents include, but are not limited to, recommendations, responses, and minutes.

Each board was tasked to present the draft recommendation at their next local board meeting and either approve or disapprove the recommendation.

Final Comments/Wrap Up

Ms. Phyllis Britt, Chair of Savannah River Site CAB, states that it's nice to get with people and realize all have similar problems and positive aspects of the work being done.

Mr. John Thomas, Member of Savannah River Site CAB, thanked the staff for the meeting.

Mr. Jody Crabtree, Portsmouth SSAB Chair, thanked everyone who came. This last little exercise of drafting recommendation is what these boards are designed to do.

Ms. Fran Johnson, Vice Chair of Paducah CAB, expressed appreciation to everyone.

Mr. Manny L'Esperance, Vice Chair of Northern New Mexico CAB, states he enjoyed his first experience here and especially enjoyed seeing the work done at the PORTS Site.

Mr. Sterling Grogan, Member of Northern New Mexico CAB, expressed thanks to everybody around the table and in the room for a very enjoyable experience.

Mr. Kris Bartholomew, Vice Chair of Oak Ridge SSAB, thanked Portsmouth for the tour.

Ms. Amy Jones, Chair of Oak Ridge SSAB, thanked Portsmouth for the wonderful meeting and tour.

Mr. Anthony Graham, Chair of Nevada SSAB, would like to thank everyone for coming together in the spirit of collaboration for such an enjoyable time.

Mr. Mark Hilton, Vice Chair of Nevada SSAB, mentioned that The Holy Land is at war again. There is chaos on our college campuses and strife across the nation. But what this group has done here these past few days speaks well for our nation and our future. Thank you.

Ms. Miya Burke, Vice Chair of HAB, thanked the meeting organizers for providing two tours and all the planning for the event.

Ms. Susan Coleman, Chair of HAB, stated that she agrees and looks forward to the next meeting in Oak Ridge.

Mr. Richard Skinner, Vice Chair of Idaho Cleanup Project CAB, states he appreciates the hospitality as a person who is very tired of Zoom meetings. He was glad to be able to see people face to face.

Ms. Amy Jones, Chair of Oak Ridge SSAB, thanked Kelly Snyder because she had done a lot of background work for the meeting.

Ms. Kelly Snyder stated there were no words to express her gratitude to the volunteer board members present. She stated it is essential that the Board's voice be maintained. She also thanked the entire PPPO team. She thanked the Ohio community for openly welcoming the attendees. She thanked the members of the public who spoke, and their perspectives are appreciated. She stated there must be an avenue for people to have a voice in government work.

The next EM SSAB Chairs meeting will be in Oak Ridge, and it is set for September 24-26. Logistics are being worked on, and the team is planning the agenda.

The meeting adjourned at 12:15 p.m.

Documents Submitted During Public Comment to Be Included in the Record

NAU NORTHERN ARIZONA UNIVERSITY

April 28, 2021

TO: Matthew D. Brewster, Health Commissioner

Pike County General Health District mbrewster@pike-health.org

FROM: Michael E. Ketterer, Ph.D., Professor Emeritus, Chemistry and Biochemistry Michael.Ketterer@nau.edu

SUBJECT: Neptunium-237 in Groundwater at the X701 Contamination Plume, Portsmouth Gaseous Diffusion Facility

The subject of this memorandum is to inform the Pike County General Health District of the presence of neptunium-237 (^{237}Np) in groundwater at the X-701 location on the Portsmouth Gaseous Diffusion Facility (PORTS) site.

The US Department of Energy has made data available for public review through its PEGASIS system (https://pegasis.ports.pppo.gov/Pegasis/Default.aspx); this publicly available data is used herein. After a careful review of the PEGASIS data, I find that it is beyond any reasonable level of question, that ^{237}Np is present in PORTS site groundwater, and that DOE's past actions of irresponsible disposal of transuranic (TRU) wastes (including ^{237}Np and plutonium isotopes) have resulted in the groundwater contamination that exists decades later.

A series of graphs, and relevant 1976/1977 internal correspondence from Goodyear Atomic Corporation are included with this report.

I am offering my pro Bono assistance to the Pike County General Health District in order to complete a timely, independent investigation into possible off-site releases of ^{237}Np into surface waters draining the PORTS site.

I also recommend that the Pike County General Health District implore Ohio EPA and USEPA to set an enforceable standard of 0.15 pCi/L for ^{237}Np in groundwater and surface water leaving the site. Please refer to Finding 8, and the use of this standard for $^{239+240}$Pu in surface and ground water at the Rocky Flats site in Colorado.

The following are my findings:

1. For the years 2017, 2018 and 2019, activities of neptunium-237 (^{237}Np) were measured for a total of 170 groundwater samples from the PORTS site. The sampled locations are shown on PEGASIS and are discussed in greater detail in the 2019 "ASER" Annual Site Environmental Report. One sample collected on August 8, 2018 from Well X701-20G was reported as "DETECT" with a ^{237}Np result of 1.48 picocuries per liter (pCi/L). This result indicates that ^{237}Np is a groundwater contaminant at PORTS and is present as a constituent of the contamination plume near the former X-701B former holding pond; the X701 plume also contains trichloroethylene (TCE) and the radioisotope technetium-99 (^{99}Tc). The 2018 DOE Groundwater Monitoring Report (DOE/PPPO/03-0908&D1) contains the following brief statement on page 45, without elaboration: "Neptunium-237 was also detected in well X701-20G at 1.48 pCi/L".

2. The following comment is also made on page 45 of the 2018 DOE Groundwater Monitoring Report, again without any further discussion or elaboration: "Plutonium 239/240 was detected in two wells: X701-TC10G (0.254 pCi/L) and X701-TC61G (0.218 pCi/L).

3. In addition to the 1.48 pCi/L result from Well X701-20G, PEGASIS reports numeric ^{237}Np values for an additional 169 groundwater samples collected in 2017-2019; however, these are all designated as NONDETECT. A more detailed analysis of these n=169 NONDETECT samples shows that the majority of the samples (n=149) are reported as values of less than 0.10 pCi/L ^{237}Np, including many values reported as negative numbers. The 149 samples with reported values of less than 0.10 pCi/L ^{237}Np appear to reflect circumstances where ^{237}Np is actually not present at a detection threshold of 0.10 pCi/L and are correctly designated within PEGASIS as NONDETECT.

4. An additional 20 samples have reported ^{237}Np activities between 0.10 and 0.369 pCi/L; these samples are nevertheless reported as NONDETECT in PEGASIS. However, the 20 samples appear to also contain detectable ^{237}Np, based upon a comparison to the distribution pattern of these n=20 samples vs. the N=149 samples with reported ^{237}Np results of less than 0.10 pCi/L. The reporting as NONDETECT generates a "false negative" situation, where one states ^{237}Np is absent when it is, in fact, present. All of the 20 above-mentioned samples were obtained in 2018 and 2019 from wells within the X701 study area. It is evident that other PORTS locations, where ^{237}Np was monitored in groundwater in the years 2017-2019, uniformly exhibited results that fit within the < 0.10 pCi/L group.

5. The practice of reporting the n=20 values with ^{237}Np > 0.10 pCi/L as "NONDETECT" is intellectually dishonest and appears to reflect a deliberate effort to avoid reporting DETECT results in PEGASIS, so as to minimize drawing public attention to the ^{237}Np plume. Moreover, the DOE has reported 0.369 pCi/L as "NONDETECT" while 1.48 pCi/L is reported as "DETECT", hence implying the ^{237}Np detection threshold (not stated) being applied by DOE is between 0.369 and

1.48 pCi/L. An implied detection limit of, for instance, 0.50 pCi/L for the determination of ^{237}Np in water by alpha spectrometry indicates that the radiochemistry laboratory is making a deliberate effort to ***not*** produce a lower detection limit, *via* use of unrealistically small sample volumes and/or very short counting times. It is evident that, if DOE were to use a one-liter sample volume, while achieving typical chemical yields, counting efficiencies, and background noise, it would not be difficult to achieve a detection limit of ~ 0.1 pCi/L with a 24-hour alpha source counting time.

6. The DOE also has access to advanced mass spectrometric instrumentation in the National Laboratory complex, and could easily apply techniques such as thermal ionization mass spectrometry or inductively coupled plasma mass spectrometry for more sensitive measurements of low-level ^{237}Np in water (e.g., Maxwell *et al.*, 2011). These techniques could have been used as confirmation, or to replace the alpha spectrometric determinations of ^{237}Np in groundwater, and would be expected to achieve detection limits of << 0.1 pCi/L.

7. The X701 sample results from 2018 and 2019 indicate that a plume of ^{237}Np-contaminated groundwater is present at PORTS in the X701 area. One specific sample (X701-48G, August 7, 2018) has a reported ^{237}Np result of 0.369 pCi/L, a value which excludes any reasonable probability of fitting within the distribution of n=149 results having results of less than 0.10 pCi/L. Accordingly, it is evident that ^{237}Np is present at the X701-48G location, which is on the opposite side of Little Beaver Creek from the contamination plume (refer to Figure 6.5, DOE 2019 ASER). The X701-48G location is on the downstream side of the X-237 groundwater collection system and interception trench, indicating that ^{237}Np is not being fully captured by the contaminant treatment system. The results indicate that dissolved ^{237}Np is entering Little Beaver Creek from the X701 plume.

8. A significant number of the X701 plume samples exhibited ^{237}Np activities exceeding 0.15 pCi/L. It is noted that the groundwater standard for $^{239+240}$Pu in Colorado near the Rocky Flats Site is 0.15 pCi/L, a maximum contaminant level that has been consented to by DOE-Legacy Management, the State of Colorado Department of Public Health and Environment, and USEPA. The same enforceable regulatory limit, of 0.15 pCi/L, for ^{237}Np in surface water and groundwater at PORTS appears reasonable on this basis. Further, there are approximately 100 times as many ^{237}Np atoms than Pu for equal alpha activities (pCi/L), and a separate evaluation of the *chemical* toxicity of neptunium might well support an even lower regulatory standard for ^{237}Np.

9. Neptunium exhibits complex aqueous geochemical behavior but is generally recognized as having significant mobility in natural waters (Thompson, 1982; Peruski *et al.*, 2018). Note that the Peruski *et al.* (2018) study, at Clemson University, was funded by DOE Basic Energy Sciences; hence, DOE has an apparent interest in the behavior of neptunium in groundwater at its sites.

10. As the DOE has minimally mentioned the X-701 ^{237}Np plume, it follows that there have been no openly reported studies of the chemical speciation and solute-solid interactions of ^{237}Np within the PORTS groundwaters. Nevertheless, the appearance of a ^{237}Np plume at the X701 location demonstrates that neptunium is mobile under site-specific conditions at PORTS.

11. The groundwater ^{237}Np plume that is evidently discharging into Little Beaver Creek may be contributing to downstream sediment contamination in the creek. A May 12, 2019 sampling of sediment at Station RM-8, on Little Beaver Creek downstream of the X-701 plume detected 0.0409 pCi/g ^{237}Np, along with 0.0293 pCi/g $^{239+240}$Pu. The ^{237}Np/$^{239+240}$Pu activity ratio of 1.40 indicates that the ^{237}Np must be of non-fallout (i.e., PORTS) origin, as nuclear weapons testing fallout has a ^{237}Np/$^{239+240}$Pu activity ratio of 0.0032, which has been calculated using the results in Kelley *et al.* (1999).

12. In addressing the local community, the DOE and its contractors have repeatedly offered the false explanation that the ^{237}Np detected offsite originated from nuclear weapons testing fallout. Unequivocal statements to this effect were made on April 27, 2019 by DOE employee Jeremy Davis and Fluor-BWXT employee JD Dowell, at a public meeting sponsored by the Pike County General Health District (refer to: https://www.youtube.com/watch?v=ggtv0umNI1U). Additional comments to this effect were also made in the *Wall Street Journal* (April 28, 2021) by Robert Edwards III, PPPO Manager. Despite these weapons-testing fallout attributions as the ^{237}Np source made by the DOE and its contractors, an abundance of evidence shows that there is extensive ^{237}Np contamination on the PORTS site. The ^{237}Np contamination, along with ^{99}Tc, ^{236}U, ^{239}Pu and ^{240}Pu, has been present since the 1950's, when "recycled uranium" recovered from plutonium production reactors was used as feed at PORTS and the other gaseous diffusion plants.

13. Various unclassified studies, funded by DOE, report the presence of ^{237}Np at PORTS, and the connection between recycled uranium feed and ^{237}Np contamination in the gaseous diffusion system. Moody (1995) conducted a "counter forensics" study of dust samples collected inside process buildings at PORTS and Paducah, revealing the onsite presence of ^{237}Np and other recycled uranium contaminants. On page 25, Moody states: *"Feed stock to the enrichment plants contained a significant amount of uranium that had been irradiated in a natural-uranium-fueled graphite-moderated reactor for the purpose of producing weapons-grade plutonium. Recovery of Pu from this fuel was probably accomplished with the PUREX process, leaving about 10^{-3} % of the plutonium and virtually all the byproduct ^{237}Np with the uranium. The use of this incompletely decontaminated material in the cascade feed was probably required by a uranium shortage occurring sometime after the plants started operations."*

14. In a 2018 study, Mission Support and Test Services, LLC (DOE/NV/03624—0188) characterized the radionuclides present in spent trap media from PORTS that was destined for disposal at the Area 5 Radioactive Waste Management Site in

Nevada. These waste materials are described on page 7 as *"...consists of trap media, including activated aluminum oxide (Al_2O_3), sodium fluoride (NaF), and magnesium fluoride (MgF_2) used to remove chemical constituents from GDP process gases. The waste stream also includes particulate matter collected during decommissioning and disassembly of GDP process equipment along with associated dry active waste and floor sweepings."* Table 1 of the DOE/NV/03624—0188 document lists average activities of radioisotopes in the PORTS spent trap media. It is evident that ^{237}Np (along with ^{99}Tc and other long-lived radionuclides) would have been present in recent air emissions from PORTS, indicating the obvious PORTS origin of the ^{237}Np detected in a 2017 air sample collected at DOE's A41A monitoring station at Zahn's Corner.

15. Internal 1976/1977 correspondence from the PORTS site operating contractor, Goodyear Atomic Corporation, addresses concern over the presence of high levels of "transuranics" (TRU) at the facility. The correspondence specifically addresses the discharge of TRU-laden contaminants into the X-701B holding pond area, which is the specific site of the ^{237}Np groundwater plume described herein. The Goodyear Atomic Corporation also details the likely entry of TRU contaminants from the X-701B area into Little Beaver Creek. It is apparent that DOE has been aware of the TRU contamination in the X-701 area for at least 45 years. ***On a personal note, this writer was a first-year student at University of Notre Dame at the time the GAT correspondence was written.***

Literature Cited

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DOE, 2020. Portsmouth Gaseous Diffusion Plant Annual Site Environmental Report 2018, DOE/PPPO/03-0932&D1.

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Kelley, 1999. Kelley, J.M.; Bond, L.A.; Beasley, T.M. Global distribution of Pu isotopes and ^{237}Np, The Science of the Total Environment 1999, 237/238:483-500.

Maxwell, 2011. Maxwell, S.L., Culligan, B.A., Jones, V.D., Nichols, S.T., Noyes, G.W. Rapid determination of ^{237}Np and plutonium isotopes in water by inductively-coupled plasma mass spectrometry and alpha spectrometry. Journal of Radioanalytical and Nuclear Chemistry 2011, 287:223-230.

Mission Support and Test Services, LLC, 2018. Unreviewed disposal question evaluation: disposal of the Portsmouth Gaseous Diffusion Plant spent trap media and other uranium-bearing particulate wastes at the Area 5 Radioactive Waste Management Site, Nevada National Security Site, Nye County, Nevada, DOE/NV/03624--0188.

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Peruski, 2018. Peruski, K.M., Maloubier, M., Kaplan, D.L., Almond, P.M., Powell, B.A. Mobility of aqueous and colloidal neptunium species in field lysimeter experiments. Environmental Science and Technology 2018, 52:1963-1970.

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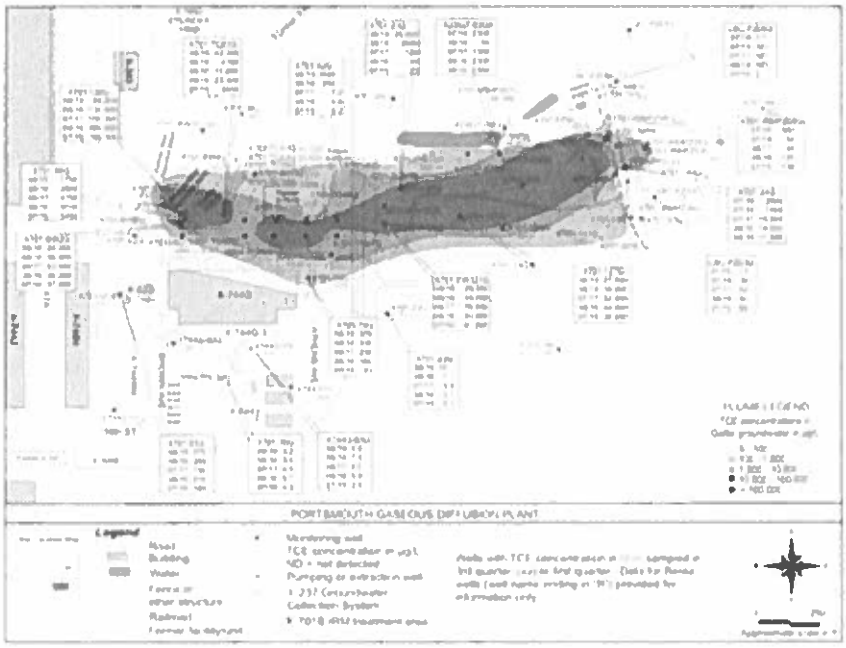
Acknowledgments

This report has been prepared as a *pro Bono*, independent, scholarly work of the author. Although the author maintains an active professional affiliation with Northern Arizona University's Department of Chemistry and Biochemistry, this work is the initiative and product of the author alone; any results/opinions expressed represent those of the author, and do not reflect opinions of the University, the Arizona Board of Regents, or the State of Arizona. ***This work has been for the benefit of the public and citizens of Pike County and is intended for public dissemination.***

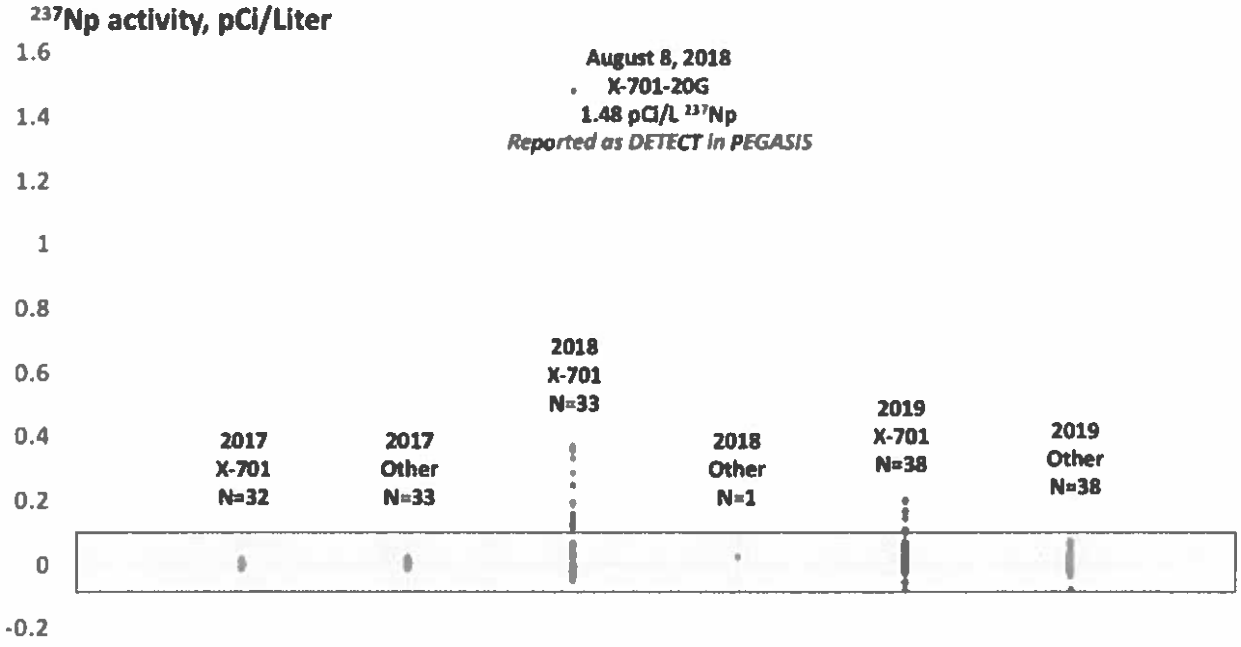
Appendix I. Figures

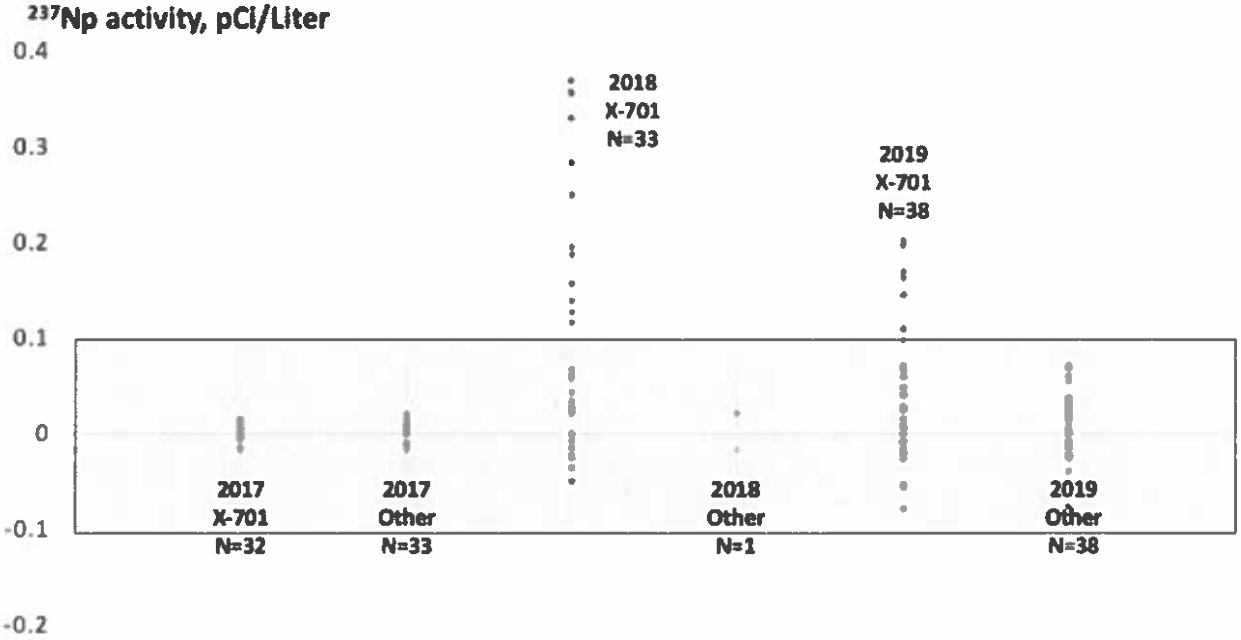
X-701 plume location, where ^{237}Np activity has been detected in groundwater at the Portsmouth Gaseous Diffusion Facility

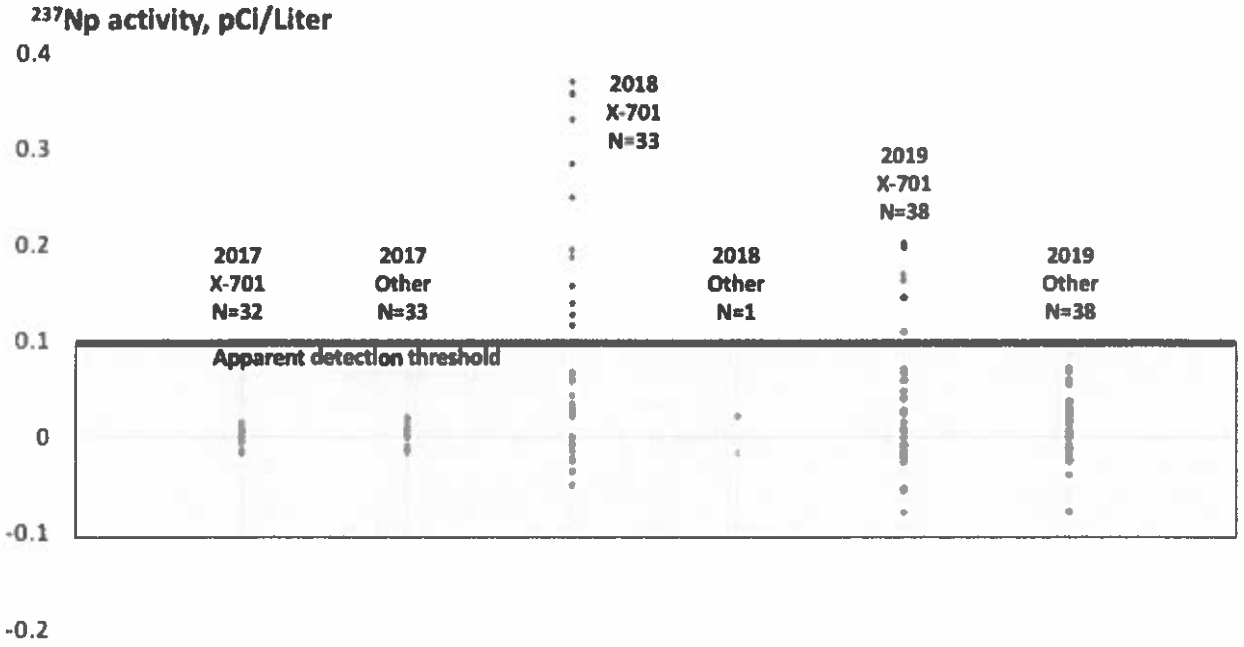


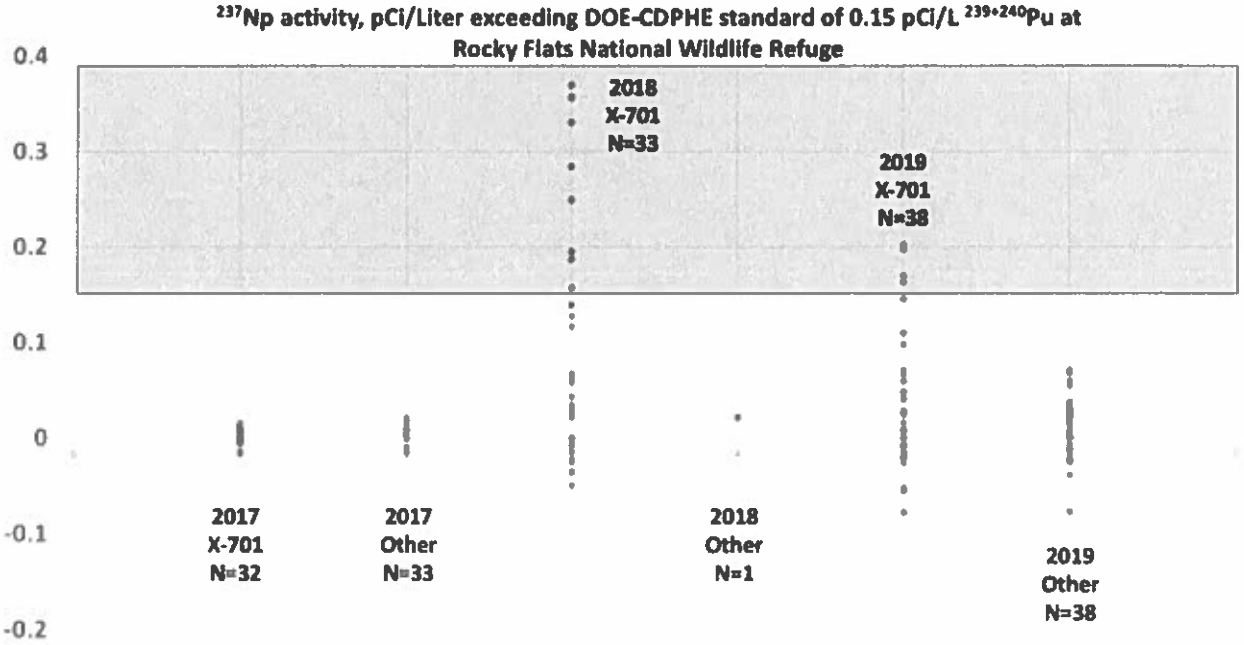
All groundwater results for ^{237}Np activity at all PORTS locations were extracted from PEGASIS for the years 2017, 2018, and 2019.

The locations were categorized as "X701" or "other" areas of the PORTS site


237Np activity, pCi/Liter
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
-0.2
August 8, 2018
X-701-20G
1.48 pCi/L 237Np
Reported as DETECT in PEGASIS
2017
X-701
N=32
2017
Other
N=33
2018
X-701
N=33
2018
Other
N=1
2019
X-701
N=38
2019
Other
N=38

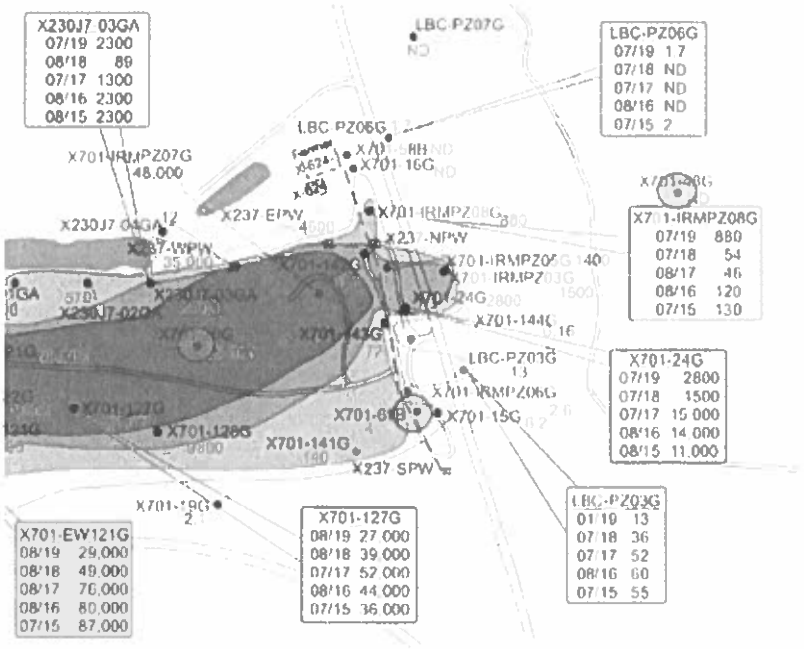

237Np activity, pCi/Liter
0.4
0.3
0.2
0.1
0
-0.1
-0.2
2018
X-701
N=33
2019
X-701
N=38
2017
X-701
N=32
2017
Other
N=33
2018
Other
N=1
2019
Other
N=38


^{237}Np activity, pCi/Liter
0.4
0.3
0.2
0.1
0
-0.1
-0.2
2017
X-701
N=32
2017
Other
N=33
2018
X-701
N=33
2018
Other
N=1
2019
X-701
N=38
2019
Other
N=38
Apparent detection threshold

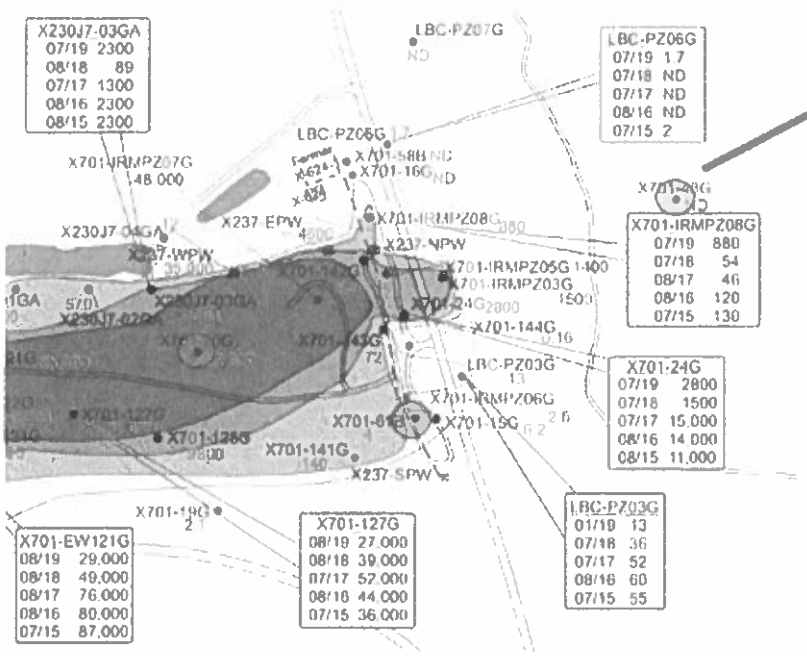

^{237}Np activity, pCi/Liter exceeding DOE-CDPHE standard of 0.15 pCi/L $^{239+240}$Pu at Rocky Flats National Wildlife Refuge
0.4
0.3
0.2
0.1
0
-0.1
-0.2
2017
X-701
N=32
2017
Other
N=33
2018
X-701
N=33
2018
Other
N=1
2019
X-701
N=38
2019
Other
N=38

Station Name	Station Type	Date Collected	Media Type Description	Matrix	Results	Units	Chemical Name	Detect Flag
X701-20G	WL	8/8/18 0:00	Groundwater	WATER	1.48	pCi/L	Neptunium-237	DETECT
X701-4BG	WL	8/7/18 0:00	Groundwater	WATER	0.369	pCi/L	Neptunium-237	NONDETECT
X701-TC54G	WL	8/13/18 0:00	Groundwater	WATER	0.357	pCi/L	Neptunium-237	NONDETECT
X701-TC10G	WL	8/8/18 0:00	Groundwater	WATER	0.356	pCi/L	Neptunium-237	NONDETECT
X701-TC17G	WL	8/8/18 0:00	Groundwater	WATER	0.33	pCi/L	Neptunium-237	NONDETECT
X701-TC05G	WL	8/13/18 0:00	Groundwater	WATER	0.284	pCi/L	Neptunium-237	NONDETECT
X701-127G	WL	8/8/18 0:00	Groundwater	WATER	0.249	pCi/L	Neptunium-237	NONDETECT
X701-TC01G	WL	8/13/18 0:00	Groundwater	WATER	0.195	pCi/L	Neptunium-237	NONDETECT
X701-TC03G	WL	8/13/18 0:00	Groundwater	WATER	0.187	pCi/L	Neptunium-237	NONDETECT
X701-TC48G	WL	8/8/18 0:00	Groundwater	WATER	0.157	pCi/L	Neptunium-237	NONDETECT
X701-TC22G	WL	8/13/18 0:00	Groundwater	WATER	0.139	pCi/L	Neptunium-237	NONDETECT
X701-66G	WL	8/14/18 0:00	Groundwater	WATER	0.127	pCi/L	Neptunium-237	NONDETECT
X701-TC61G	WL	8/13/18 0:00	Groundwater	WATER	0.116	pCi/L	Neptunium-237	NONDETECT

Station Name	Station Type	Date Collected	Media Type Description	Matrix	Results	Units	Chemical Name	Detect Flag
X701-TC28G	WL	8/14/19 0:00	Groundwater	WATER	0.202	pCi/L	Neptunium-237	NONDETECT
X701-TC10G	WL	8/14/19 0:00	Groundwater	WATER	0.197	pCi/L	Neptunium-237	NONDETECT
X701-20G	WL	8/7/19 0:00	Groundwater	WATER	0.169	pCi/L	Neptunium-237	NONDETECT
X701-TC03G	WL	8/12/19 0:00	Groundwater	WATER	0.163	pCi/L	Neptunium-237	NONDETECT
X701-TC05G	WL	8/12/19 0:00	Groundwater	WATER	0.145	pCi/L	Neptunium-237	NONDETECT
X701-TC61G	WL	8/12/19 0:00	Groundwater	WATER	0.145	pCi/L	Neptunium-237	NONDETECT
X701-TC67G	WL	8/12/19 0:00	Groundwater	WATER	0.11	pCi/L	Neptunium-237	NONDETECT
X701-20G	WL	8/7/19 0:00	Groundwater	WATER	0.109	pCi/L	Neptunium-237	NONDETECT



Examples of locations where ^{237}Np activity exceeds apparent detection threshold of 0.10 pCi/L in 2018 and/or 2019



Note that ^{237}Np activity exceeds apparent detection threshold of 0.10 pCi/L on the opposite side of Little Beaver Creek.

The ^{237}Np measured at X701-48G was 0.369 pCi/L on August 7, 2018

The apparent situation exists where the contaminated X-701 plume is discharging ^{237}Np into Little Beaver Creek

Appendix II.

1976/1977 GAT Correspondence on TRU at X-701 and Little Beaver Creek

Scioto County

OFFICE OF
COUNTY COMMISSIONERS

BRYAN DAVIS, Chairman
SCOTTIE POWELL
CATHY COLEMAN

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Main Line (740) 355-8313
Fax (740) 355-7358

April 25,2024

The Honorable Sherrod Brown
503 Hart Senate Office Building
Washington, D.C. 20510

The Honorable JD Vance
288 Russell Senate Office Building
Washington, D.C. 20510

Dear Senators Brown and Vance,

For decades workers in Southern Ohio have worked faithfully to produce the necessary enriched uranium for our nation's defense, and commercial needs. Many of those workers were and are from Scioto County. (RECA), the Radiation Exposure Compensation Act, originally passed in 1990, provides compensation for healthcare costs incurred by workers and residents in select locales affected by radiation and toxic chemicals associated with nuclear weapons activities such as uranium mining, weapons production, and atmospheric nuclear testing. RECA is set to expire June of 2024.

The Scioto County Commissioners have vigorously advocated for a safe work environment for the workers at the Portsmouth site. As such, we strongly urge Senators Brown and Vance to support the inclusion of ALL zip codes within Scioto County in the Nuclear Storage Exposure Provision of the Radiation Exposure Compensation Reauthorization Act.

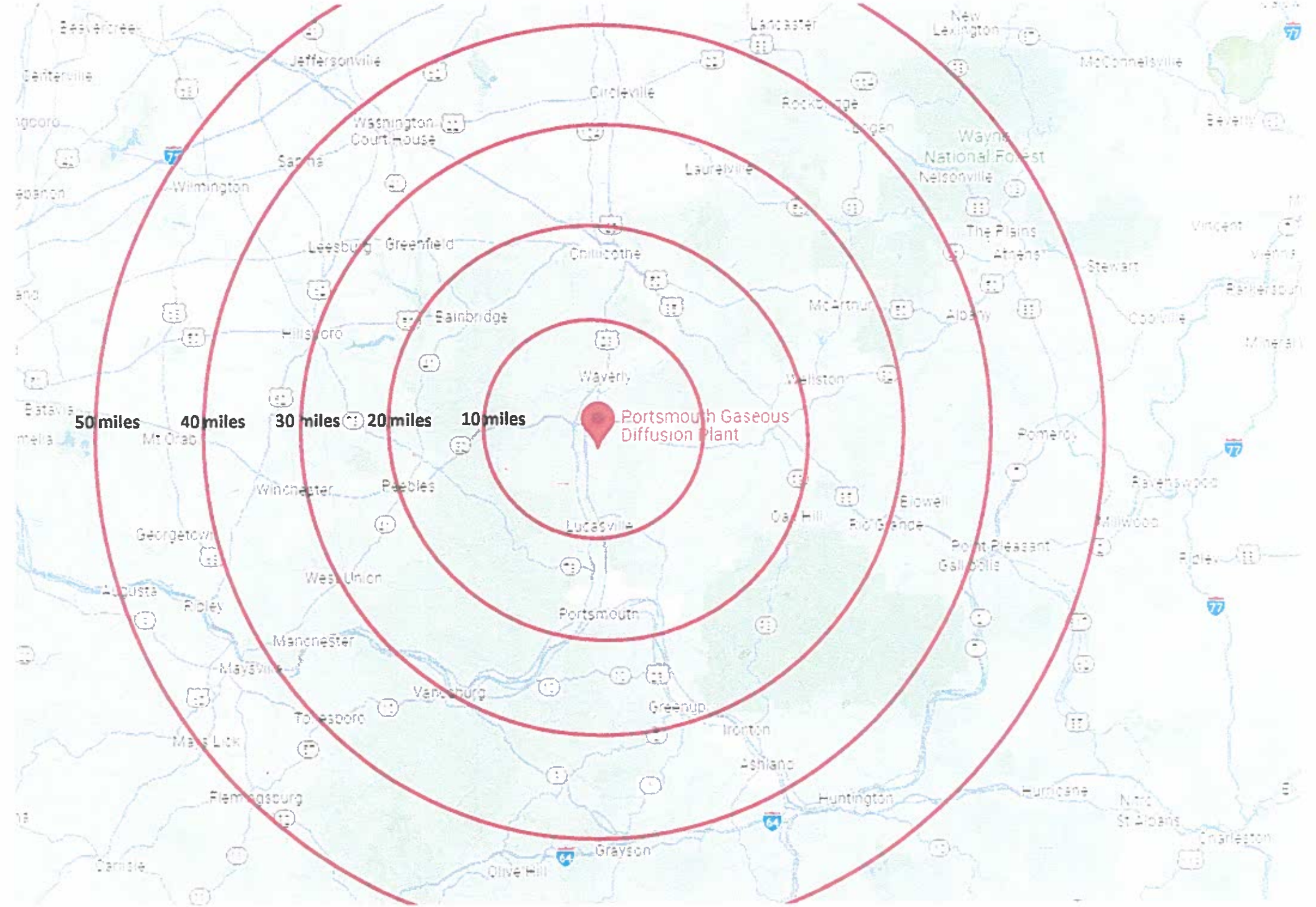
The inclusion of the Paducah office and the communities in the revised RECA legislation necessitates the inclusion of Scioto County zip codes at PORTS.

Bryan K. Davis, Chairman
Commissioner

Scottie Powell, Vice Chair
Commissioner

Cathy Coleman, Member
Commissioner

"Scioto County, OH – "A Great Place To Live, Work And Raise a Family!"


50 miles
40 miles
30 miles
20 miles
10 miles
Portsmouth Gaseous Diffusion Plant
Jeffersonville
Washington Court House
Circleville
Lancaster
New Lexington
Wilmington
Sardine
Laurelville
Wayne National Forest
Nelsonville
Leesburg
Greenfield
Chillicothe
The Plains
Athens
Bainbridge
Hillsboro
Waverly
Batavia
Mt Orab
Winchester
Peebles
Lucasville
Pomeroy
Gallipolis
Point Pleasant
Georgetown
West Union
Ripley
Portsmouth
Manchester
Maysville
Vanceburg
Greenup
Ironton
Ashland
Huntington
Flemingsburg
Grayson
Olive Hill

Scioto Valley-Piketon Area
COUNCIL OF GOVERNMENTS

The Honorable Sherrod Brown
503 Hart Senate Office Bldg.
Washington, DC 20510

The Honorable J.D. Vance
288 Russell Senate Office Bldg.
Washington, DC 20510

Dear Senators Brown and Vance,

The Radiation Exposure Compensation Act (RECA) was passed in 1990 to provide one-time payments to uranium workers and residents in discrete geographies diagnosed with specific cancers caused by uranium exposure. RECA is due to expire in June of 2024; included in the Radiation Exposure Compensation Act Reauthorization legislation is a provision to add compensation eligibility to people living near improperly stored nuclear waste sites in zip codes in Missouri, Tennessee, Alaska, and Kentucky. The Scioto Valley-Piketon Area Council of Governments (SVPA COG) writes this letter to advocate for the inclusion of Ohio zip codes adjacent to the US Department of Energy site in Piketon, Ohio in the Nuclear Storage Exposure Provision.

The Scioto Valley-Piketon Area Council of Governments was formed to advocate for the health, safety, and success of Pike County communities most impacted by activities at PORTS, the US Department of Energy site in Piketon, Ohio. It is our perspective that, like residents living near the PORTS sister facility in Paducah, Kentucky, residents near the DOE Portsmouth Site deserve to be considered for compensation for health care costs incurred as a result of exposure to improperly stored waste. Further, residents in these Ohio zip codes are potentially at greater risk for exposure, due to the permanent Onsite Waste Disposal Facility (OSWDF). This facility – which has saved the Department upwards of $1 billion in clean up costs – puts local residents at an increased risk of coming into contact with contaminated material for the foreseeable future.

In light of this increased risk, and in combination with the inclusion of PGDP, the sister site to PORTS, the SVPA COG encourages Senators Brown and Vance to advocate for fair and equal treatment for Ohio residents, and to include zip codes 45661, 45690, 45613, and 45648 in the Nuclear Storage Exposure Provision.

We thank you for your continuous support of our community's health, safety, and well-being, and eagerly anticipate your response to our request.

Sincerely,

Megan Williams

Megan Williams
Treasurer
Scioto Valley-Piketon Area
Council of Governments

PIKE COUNTY BOARD OF COMMISSIONERS

Pike County Government Center * 230 Waverly Plaza, Suite 1000 * Waverly, Ohio 45690
(740) 947-4817 * Fax (740) 947-5065 *
pikecountycommissioners@yahoo.com

The Honorable Sherrod Brown
503 Hart Senate Office Bldg.
Washington, DC 20510

The Honorable J.D. Vance
288 Russell Senate Office Bldg.
Washington, DC 20510

Dear Senators Brown and Vance,

The Radiation Exposure Compensation Act has historically provided one-time payments to uranium workers and residents who are diagnosed with specific cancers caused by uranium exposure. Included in the Radiation Exposure Compensation Act Reauthorization legislation is a provision to add compensation eligibility to people living near improperly stored nuclear waste sites in zip codes in Missouri, Tennessee, Alaska, and Kentucky. The Pike County Board of Commissioners urges Senators Brown and Vance to advocate for the inclusion of zip codes 45661, 45690, 45613, and 45648 in the Nuclear Storage Exposure Provision of the reauthorization language.

For generations, Pike County has been proud to provide the workforce and talent at the Portsmouth Gaseous Diffusion Plant that enriched the uranium that protected our country's national security interest, and that ultimately helped the US win the Cold War. Today, the Board of Commissioners remains committed to positioning Pike County as a leader in economic activity, and to providing good jobs, a safe environment, and opportunities for our residents. As part of this commitment, the Commission encourages Senators Brown and Vance to include zip codes adjacent to PORTS in the Nuclear Storage Exposure Provision of the RECA reauthorization legislation. Residents near the DOE Portsmouth Site deserve to be considered for compensation for health care costs incurred as a result of exposure to improperly stored waste, just like residents living near the PORTS sister facility in Paducah, Kentucky.

Sincerely,

Tony Montgomery
Board President
Pike County Board of
Commissioners

Jeff Chattin

Commissioner
Pike County Board of
Commissioners

Jerry Miller

Commissioner
Pike County Board of
Commissioners

The Honorable Sherrod Brown
503 Hart Senate Office Bldg.
Washington, DC 20510

The Honorable J.D. Vance
288 Russell Senate Office Bldg.
Washington, DC 20510

Dear Senators Brown and Vance,

The Radiation Exposure Compensation Act (RECA) was passed in 1990 to provide one-time payments to uranium workers and residents in discrete geographies diagnosed with specific cancers caused by uranium exposure. RECA is due to expire in June of 2024; included in the Radiation Exposure Compensation Act Reauthorization legislation is a provision to add compensation eligibility to people living near improperly stored nuclear waste sites in zip codes in Missouri, Tennessee, Alaska, and Kentucky. The Southern Ohio Diversification Initiative (SODI) writes this letter to advocate for the inclusion of Ohio zip codes adjacent to the US Department of Energy site in Piketon, Ohio in the Nuclear Storage Exposure Provision.

As the designated Community Reuse Organization, SODI is tasked with ensuring that property transferred from the Department is adequately utilized by companies and industries that can deliver good jobs, increased economic activity, and that are not detrimental to the environmental and physical health of the local community. In support of our core mission, SODI encourages Senators Brown and Vance to advocate for the inclusion of the relevant zip codes in the Nuclear Storage Exposure Provision.

We thank you for your continuous support of our communities and workforce, and appreciate your consideration of our request.

Sincerely,

The Southern Ohio Diversification Initiative

UNITED STEELWORKERS
USW
UNITY AND STRENGTH FOR WORKERS

Herman Potter, President
Evan Brown, Vice President

The Honorable Sherrod Brown
503 Hart Senate Office Bldg.
Washington, DC 20510

The Honorable J.D. Vance
288 Russell Senate Office Bldg.
Washington, DC 20510

Dear Senators Brown and Vance,

The United Steelworkers Local 689 represents over 900 members across Southern Ohio and surrounding states. Guided by our founding principles, we act as leaders in our industries and communities to protect the health and safety of our members and the neighborhoods in which we operate. As such, we strongly urge Senators Brown and Vance to support the inclusion of zip codes adjacent to the US Department of Energy site in Piketon, Ohio in the Nuclear Storage Exposure Provision of the Radiation Exposure Compensation Reauthorization Act.

The Radiation Exposure Compensation Act (RECA) was initially passed in 1990 to compensate health care costs incurred by workers and residents in select locales affected by radiation and toxic chemicals associated with nuclear weapons activities such as uranium mining, weapons production, and atmospheric nuclear testing. RECA is set to expire in June of 2024. As part of its reauthorization, a provision has been added to include compensation for those affected by the improper storage of radioactive material in Alaska, Tennessee, and Kentucky.

For decades, the PORTS USW members have supported the nation in its nuclear energy and national security efforts alongside its sister facility in Paducah, KY. Before ceasing activity in the early 2000s, these two facilities worked in tandem to provide the nation with enriched uranium throughout the 20th century. The inclusion of the Paducah office and its communities in the revised RECA legislation necessitates the inclusion of PORTS, and it is for this reason that USW Local 689 urges Senators Brown and Vance to include zip codes 45661, 45690, 45613, and 45648 in the Nuclear Storage Exposure Provision.

Herman Potter
President
USW Local 689

TRI-STATE
BUILDING TRADES UNIONS
Value on Display. Every Day.

The Honorable Sherrod Brown
503 Hart Senate Office Bldg.
Washington, DC 20510

The Honorable J.D. Vance
288 Russell Senate Office Bldg.
Washington, DC 20510

Dear Senators Brown and Vance,

Through fifty affiliated local construction unions from fourteen different internationals, the Tri-State Building and Construction Trades Council (KY-OH-WV) represents thousands of tradesmen and tradeswomen across Ohio, Kentucky, and West Virginia. As a core tenant of our institution, we fiercely advocate for the health and safety of our members and the communities in which we operate. As such, we strongly urge Senators Brown and Vance to support the inclusion of zip codes adjacent to the US Department of Energy site in Piketon, Ohio in the Nuclear Storage Exposure Provision of the Radiation Exposure Compensation Reauthorization Act.

The Radiation Exposure Compensation Act (RECA) was initially passed in 1990 to compensate health care costs incurred by workers and residents in select locales affected by radiation and toxic chemicals associated with nuclear weapons activities such as uranium mining, weapons production, and atmospheric nuclear testing. RECA is set to expire in June of 2024. As part of its reauthorization, a provision has been added to include compensation for those affected by the improper storage of radioactive material in Alaska, Tennessee, and Kentucky.

For decades, Tri-State tradespeople at the Portsmouth Gaseous Diffusion Plant have supported the nation in its nuclear energy and national security efforts alongside its sister facility in Paducah, KY. Today, hard working tradespeople and workers continue to support the Department in its clean up mission. The inclusion of the Paducah office and its communities in the revised RECA legislation necessitates the inclusion of adjacent zip codes at PORTS.

John L. Holbrook

John L. Holbrook
Business Manager
Tri-State Building and Construction Trades Council

Jody Crabtree
DOE Site Representative
Tri-State Building and Construction Trades Council

The City of Portsmouth State of Ohio

The Honorable Sherrod Brown
503 Hart Senate Office Bldg
Washington, DC 20510

The Honorable J.D. Vance
288 Russell Senate Office Bldg
Washington, DC 20510

Dear Senators Brown and Vance,

I have been the First Ward representative on Portsmouth City Council since January 2018. I have visited the Portsmouth Gaseous Diffusion Plant and worked with residents concerned about the health risks associated with it. As 65% of the workers at the plant are from Scioto County, I strongly urge you to include the zip codes adjacent to the U.S Department of Energy site in the Piketon, Ohio in the Nuclear Storage Exposure Provision of the Radiation Exposure Compensation Reauthorization Act

The people in this region have supplied the plant with labor for decades, and are not requesting special treatment. They are asking to be treated as equals to the workers and residents in other counties that have been included in this legislation

Sean Dunne
First Ward Representative
Portsmouth City Council

First Ward

Tue 4/23/2024 6:42 PM

To: joe_mccarthy@vance.senate.g...
amy_myers@brown.senate.gov;

support letter.pdf
50 KB

Hi,

My name is Sean Dunne and I am the First Ward Representative on Portsmouth City Council. I am submitting a letter of support for the inclusion of our area in the Nuclear Storage Exposure Provision of the Radiation Exposure Compensation Reauthorization Act.

Radiation and Public Health Project
Joseph J. Mangano, MPH, MBA, Executive Director
716 Simpson Avenue, Ocean City NJ 08226
odiejoe@aol.com
www.radiation.org
484-948-7965

HEALTH RISK TO LOCAL RESIDENTS FROM THE PORTSMOUTH GASEOUS DIFFUSION PLANT

Joseph J. Mangano MPH MBA, August 15, 2022

EXECUTIVE SUMMARY

The Portsmouth Gaseous Diffusion Plant (PGDP) in Pike County, Ohio used the UF_6 gaseous diffusion process to enrich uranium from 1954 to 2001. As a result of routine plant operations, radioisotopes and toxic chemicals were regularly released to the air, water, and soil. Despite ongoing concerns about health effects of exposures to toxic radioactivity, little research on local health patterns has been conducted.

This report, using official health statistics, found the following health patterns and trends for Pike County:

1. The county's cancer incidence in 2010-2019 was 15% higher than the U.S., the highest rate of all 88 Ohio counties.

2. In the 1950s and 1960s, county cancer mortality was 12% below the U.S. The gap closed, and by 1993, the Pike rate exceeded the U.S. The largest gap (+32.8%) occurred in 2019-2020.

3. In 2009-2020, the cancer death rate in the county exceeded the U.S. by about 50% for all age groups, except for persons over age 75 (0.5% below the U.S.).

4. County age-adjusted mortality for all causes was 2-5% above the U.S. in the 1980s and early 1990s. By 2019-2020, the county rate was 42.3% greater.

5. Among persons 0-74, all-cause mortality in the county soared to 85.0% above the U.S. in 2017-2020, nearly twice that of the nation.

These unexpected findings constitute a great concern, and call for prompt and thorough review of all potential causes, including socioeconomic factors, access to medical care, health behavior, and exposures to environmental toxins, such as those from the PGDP. Any findings must be shared with the public and public officials, so that any efforts to reduce future local disease and death rates may begin promptly.

Radiation and Public Health Project
Joseph J. Mangano, MPH, MBA, Executive Director
716 Simpson Avenue, Ocean City NJ 08226
odiejoe@aol.com
www.radiation.org
484-948-7965

Mortality/Morbidity Study, 7 Counties Downwind of the Portsmouth Nuclear Site
Joseph J. Mangano MPH MBA, June 10, 2023

EXECUTIVE SUMMARY

A November 2022 report found mortality in Pike County, Ohio rising sharply in the past four decades compared to the U.S. (https://radiation.org/rphp-report-finds-soaring-death-rate-near-ohio-uranium-plant/). The Pike County death rate was slightly above the U.S. until the early 1990s, but now is among the highest in the nation. In addition, Pike County has the highest current cancer incidence rate of all counties in Ohio.

Findings called for follow-up analysis of health data, addressing socioeconomic factors' role in Pike County's health decline. In addition, it raised the question of whether toxic exposures to local residents from the Portsmouth Nuclear Site (PORTS) – home to the former Portsmouth Gaseous Diffusion Plant (PGDP) – extended beyond Pike County.

This report compares seven Ohio counties closest to/downwind of PORTS - study counties (Adams, Gallia, Jackson, Lawrence, Pike, Scioto, and Vinton) with six counties, also in Ohio, further from the plant - "control" counties (Athens, Guernsey, Jefferson, Meigs, Morgan, and Noble). Each has similar population density; racial/ethnic composition; and rates of poverty, education, unemployment, and health insurance. Findings include:

1. In the late 1990s, cancer incidence in both areas was 0.4% below the U.S. rate. By 2015-2019, the study counties rate exceeded the U.S. by 17.5%, versus 8.8% in control counties.

2. In the 1970s, infant death rates were slightly above the U.S. in both areas (+4.4% and +1.6%). However, by 1999-2020, the excesses were +31.9% (study) and +9.9% (control).

3. In the early 1970s, all-cause mortality rates in both areas were slightly above the U.S. But by the most recent five-year period (2017-2021), mortality in the study counties far exceeded the rate in the U.S. *and* control counties, specifically:

	Study Counties vs. U.S.	Control Counties vs. U.S.
Deaths 0-74, All Causes	+ 77.5%	+31.5%
Deaths 0-74, All Cancers	+ 60.8%	+26.0%
Deaths 25-54, All Causes	+109.6%	+47.7%

The large and growing gaps between study and control areas indicate that socio-economic factors – which have likely undergone similar changes over time - cannot account for most of the high rates near PORTS. Nevertheless, with 13,138 "excess" premature deaths (under age 75) in the seven study counties since 1974, a thorough evaluation of contamination from PORTS and the plant's current decommissioning process are in order.

Read the full report at **https://bit.ly/OH7CountyStudy** or on the RPHP website above.

Piketon	45661
Waverly	45690
Perry	45661
Seals	45661
Sunfish	45661
Pee Pee	45690
Peeples	45660
Serpent Mound	45660
Chillicothe	45601
Huntington Township	45601
Beaver	45613
Camp creek	45648
Bear Creek	45648
Jasper	45642
Bainbridge	45612
Marion	43302
Newton	45629
Mt Orab	45121
Benton	45612
Latham	45646
Seaman	45679
Sinking Spring	45172
Wakefield	45687

Lucasville	45648
Clarktown	45648
Otway	45657
Rarden	45671
McDermott	45652
Rushtown	45652
Portsmouth	45662
Sciotoville	45662
New Boston	45662
Rosemount	45662
Rubyville	45662
West Portsmouth	45663
Friendship	45630
Union town	44685
Jackson	45640
Union	45686
Cynthiana	45624
Chestville	45624
Minford	45653
South Webster	45682
Wheelersburg	45694

Franklin furnace	45629
Stockdale	45683
RockyFork	45133
Bourneville	45617
South Salem	45681
Oak-hill	45656
Rynx	45693
Adams	45693
Riply	45167
Piketon	45661
Waverly	45690
Perry	45661
Seals	45661
Sunfish	45661
Pee Pee	45690
Peeples	45660
Serpent Mound	45660
Chillicothe	45601
Huntington Township	45601
Beaver	45613
Camp creek	45648
Bear Creek	45648
Jasper	45642
Bainbridge	45612
Marion	43302
Newton	45629

Mt Orab	45121
Benton	45612
Latham	45646
Seaman	45679
Sinking Spring	45172
Wakefield	45687
Lucasville	45648
Clarktown	45648
Otway	45657
Rarden	45671
McDermott	45652
Rushtown	45652
Portsmouth	45662
Sciotoville	45662
New Boston	45662
Rosemount	45662
Rubyville	45662
West Portsmouth	45663
Friendship	45630
Union town	44685
Jackson	45640
Union	45686

Cynthiana	45624
Chestville	45624
Minford	45653
South Webster	45682
Wheelersburg	45694
Franklin furnace	45629
Stockdale	45683
RockyFork	45133
Bourneville	45617
South Salem	45681
Oak-hill	45656
Rynx	45693
Adams	45693
Riply	45167
Rome	45684
Lawrence County	44666
Ironton	45638
Hanging Rock	45368
Haverhill	45636
Coal Grove	45638
West Union	45693
Stout	45684

Hillsboro	45133
Firebrick	41174
Ashland	41102
Flatwoods	41139
Russel	41144
Wutand	41144
Green up	41144
St Paul	41166
South Shore	41175
South Portsmouth	41174
Garrison	41141
Vanceburg	41179
Maysville	41056

ZIP Codes in Vinton County Ohio: · 45651 · 45710 · 45686 · 45647 · 45634 · 45766 · 45654 · 45672 · 43152 · 45695 · 45622

Zip Code List County - Gallia County, Ohio; 45631 · Gallipolis · Gallia County; 45643 · Kerr · Gallia County; 45658 · Patriot · Gallia

Rome	45684
Lawrence County	44666
Ironton	45638
Hanging Rock	45368
Haverhill	45636
Coal Grove	45638
West Union	45693
Stout	45684
Hillsboro	45133

Firebrick	41174
Ashland	41102
Flatwoods	41139
Russel	41144
Wutand	41144
Green up	41144
St Paul	41166
South Shore	41175
South Portsmouth	41174
Garrison	41141
Vanceburg	41179
Maysville	41056

ZIP Codes in Vinton County Ohio: · 45651 · 45710 · 45686 · 45647 · 45634 · 45766 · 45654 · 45672 · 43152 · 45695 · 45622

Zip Code List County - Gallia County, Ohio; 45631 · Gallipolis · Gallia County; 45643 · Kerr · Gallia County; 45658 · Patriot · Gallia

Congress of the United States

Washington, DC 20515

April 30, 2024

The Honorable Mike Johnson
Speaker
United State House of Representatives
Washington, DC 20510

The Honorable Hakeem Jefferies
Minority Leader
United State House of Representatives
Washington, DC 20510

Dear Speaker Johnson and Minority Leader Jefferies,

We are writing to urge you to immediately act to pass the Radiation Exposure Compensation Reauthorization Act, which was approved by the Senate on March 7, 2024 by a vote of 69-30. This critical legislation is critical to the communities and individuals historically marginalized and left suffering from the consequences of the United States' nuclear testing program.

Between 1945 and 1992, the U.S. conducted 206 above-ground nuclear weapons tests, dispersing radioactive material across vast swathes of the nation. The landmark film Oppenheimer has brought renewed attention to these events, particularly highlighting the first nuclear explosion in New Mexico in 1945. The "downwinders," along with those involved in uranium mining, milling, and transportation, are still enduring the health impacts from their exposure to this radiation. Initially established in 1990, the Radiation Exposure Compensation Act (RECA) acknowledges these sacrifices by offering a one-time benefit to those afflicted with diseases due to their exposure to atomic testing and uranium industry work. Since its establishment, we have learned that far more communities were impacted by radiation exposure but were left out of the program. With RECA set to expire in June 2024, time is running out to ensure these individuals are not forgotten.

Although the Senate took a laudable step by passing an amendment in the National Defense Authorization Act for FY2024 to strengthen RECA, it was omitted in the final bill. Recently, the Senate passed a scaled down but nonetheless vital measure that proposes a five-year extension of the RECA program and expands compensation to downwinders in Western states, including New Mexico, and to post-1971uranium workers, alongside residents in Missouri, Kentucky, Alaska, and Tennessee who have suffered from exposure to improperly stored nuclear waste.

The action in the Senate to strengthen RECA was meaningful step in seeking long overdue justice. But it is important that the scope of the RECA's coverage be expanded to cover others who suffer the health consequences of the U.S.'s pursuit of national security to include regions in Pike and Scioto County, Ohio; Armstrong County, Pennsylvania; and communities near the Hanford site in Washington, where people have been adversely affected by the mishandling of nuclear waste. The residents in these areas deserve recognition and compensation for the health challenges they face due to government nuclear activity.

We urge to act immediately to strengthen the RECA program before its impending sunset in June 2024. The United States government exposed these Americans to radiation as part of our national security efforts through World War II and the Cold War. It is long past time that RECA is strengthened to give these Americans their recognition and compensation. Their livelihoods, often devastated by the long-term consequences of radiation exposure, depend on your leadership and commitment to rectifying past injustices. Let us honor the

commitment we made to these citizens by ensuring they receive the support and recognition they so rightly deserve.

Thank you for your attention to this crucial matter.

Sincerely,

Ben Ray Luján
United States Senator

Mike Crapo
United States Senator

Mark Kelly
United States Senator

James E. Risch
United States Senator

Martin Heinrich
United States Senator

Eric S. Schmitt
United States Senator

Patty Murray
United States Senator

Ron Wyden
United States Senator

JD Vance
United States Senator

Maria Cantwell
United States Senator

Jacky Rosen
United States Senator

John Hickenlooper
United States Senator

Sherrod Brown
United States Senator

Catherine Cortez Masto
United States Senator

Jeffrey A. Merkley
United States Senator

Teresa Leger Fernández
Member of Congress

James C. Moylan
Member of Congress

Gabe Vasquez
Member of Congress

Ann Wagner
Member of Congress

Greg Stanton
Member of Congress

Melanie Stansbury
Member of Congress

Raúl M. Grijalva
Member of Congress

Dina Titus
Member of Congress

Ruben Gallego
Member of Congress

Brittany Pettersen
Member of Congress

Steve Cohen
Member of Congress

Susie Lee
Member of Congress

Val Hoyle
Member of Congress

Joe Neguse
Member of Congress

Josh Hawley
United States Senator

CC: Chair Durbin
Ranking Member Graham
Chair Jordan
Ranking Member Nadler

Vina Colley, President of Portsmouth/Piketon Residents for Environmental Safety and Security (PRESS) and co-founder of

National Nuclear Workers for Justice (NNWJ)

3683 McDermott Pond Creek
McDermott, Ohio 45652
740-357-8916

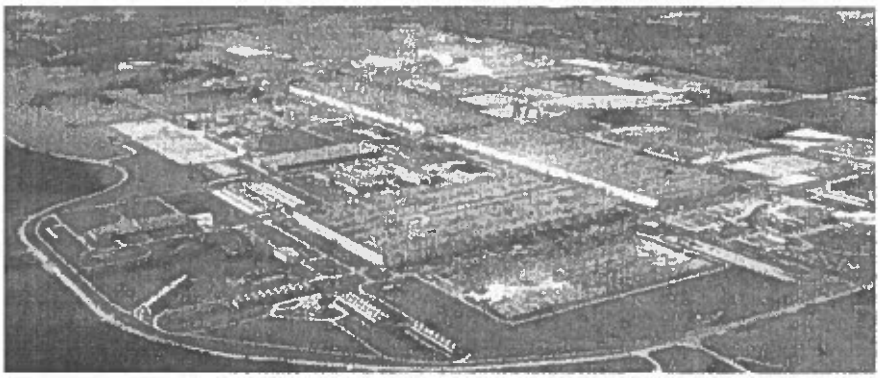
Don't Dumpon us
Gina D

The Ohio Nuclear Free Network
316 North Michigan Street, Suite 520
Toledo, OH 43604-5627

THE PORTSMOUTH NUCLEAR SITE
AT PIKETON, OHIO

THE PORTSMOUTH NUCLEAR SITE (PORTS) is a 3,777-acre U.S. Department of Energy (DOE) facility in Pike County in southern Ohio, 23 miles from the Ohio River. **THE PORTSMOUTH GASEOUS DIFFUSION PLANT** was the site's original, massive facility that enriched uranium for nuclear bombs. Operations started in 1954. Gaseous diffusion enrichment was monumental in scale. Three enrichment buildings (85, 75, and 65 feet tall) covered ***95 acres under roof***. The site used **as much electricity as New York City** according to the former Atomic Energy Commission. Two coal plants were built to supply electricity, burning 7.5 million tons of coal annually. In the mid-1960s the site also began producing low-enriched uranium for fuel for commercial nuclear reactors. **The U.S. Dept. of Energy (DOE)** privatized the operation at a giveaway price in 1998. The new owner, USEC, Inc. operated the facility until 2001.

- ***Reprocessed high-level radioactive waste:*** Called by over a dozen names by the DOE, nuclear waste was brought to PORTS and run through the enrichment processes for years, contaminating the entire site with transuranics (neptunium, americium, plutonium) the deadliest substances on earth, plus numerous other toxins.
- ***Environmental remediation*** of the contaminated site began in 1989 with a consent decree between the U.S. EPA, Ohio EPA and the Department of Energy. Production ended in 2001. DOE delayed cleanup by putting the plant on "cold standby" until it was officially closed in 2005.
- ***Ohio's Nuclear Legacy: Troubled Past, Uncertain Future*:** The *Dayton Daily News* series by this title was published in 2006. The report detailed how "The Piketon plant leaves poisoned land, sick workers in its wake." Some of the articles from the long report are still available online by searching for the title.
- ***Site Specific Advisory Board (SSAB):*** In 2008, under pressure from U.S. Senator Sherrod Brown, a long-overdue citizen advisory board was created to oversee cleanup. A year later, 3 members resigned from the board, **citing DOE's failure to abide by its own regulations** barring people with conflicts of interest from the board. The SSAB first met monthly, then every other month, currently sporadically. DOE did not fill vacancies on the Board, often having less than half its 20 eligible members serving.
- ***Site cleanup started slowly*** due to inadequate federal funding. The cleanup budget was $458 million in 2011 and has been up and down since then. Ohio's senators had to pressure the national DOE to get this money, important for job retention. The DOE projects cleanup to be completed between 2034-2043. At $400+ million per year, it would be $10 billion at minimum, more with inflation.



The Portsmouth Nuclear Site at Piketon, Ohio covers 3,777 acres.

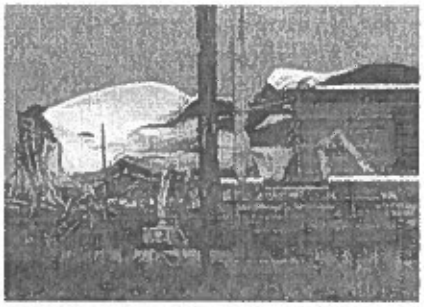
- ***On Site Waste Disposal Facility (OSWDF):*** Fluor-BWXT Portsmouth, a private entity, is building a 5 million cubic yard, clay-lined disposal facility to hold the "less radioactive" rubble from the enormous buildings. In its June 2015 **Record of Decision for Waste Disposition** (ROD), ***DOE failed to include binding parameters for disposal of radioactive waste,*** despite lengthy public input. The ROD and its Waste Acceptance Criteria were said by Ohio Senator Sherrod Brown to have "holes big enough to drive a convoy of trucks through."
- ***Fractured rock:*** DOE misrepresented its own geologic study, claiming that rock under the OSWDF was intact. A geologist hired by the Village of Piketon found that the DOE's study showed fractured rock. Any facility will leak in time, but with fractured rock below, contaminants will move more quickly to the aquifer.
- ***Leaking landfills left unremediated:*** The DOE is refusing to remediate landfills – *some unlined* – outside the Perimeter Road. These dumps contain highly toxic as well as highly radioactive materials. Landfills are leaking mercury into Little Beaver Creek. In 2018 the **Village of Piketon and the Sierra Club made a joint statement**

outlining problems and recommendations regarding the DOE's Waste Disposal Decisions. The public must continue to lobby for ***ALL landfills to be dug up and disposed of properly.***

- ***The Government Accountability Office 2019 Report*** criticized cleanups at PORTS and other U.S. nuclear sites, saying that DOE needs to set standards and rules to cut costs and address the greatest risks.

AMERICAN CENTRIFUGE: The private entity USEC, Inc. put about $2.5 billion, much of it taxpayer money, into a never-completed centrifuge uranium enrichment facility. Citizen interventions to stop its licensing were rejected by the **Nuclear Regulatory Commission (NRC)**. Of 11,500 centrifuges planned, 120 were completed. Six centrifuges crashed in 2011, spewing contents. DOE gave USEC hundreds of millions toward the facility ***after USEC's stock became junk rated.*** USEC declared bankruptcy in 2014. DOE took over plant management, ending its funding in 2015.

HALEU ALERT! See our flier Ohio, Centrus and the Nuclear Bomb. Out of USEC's ashes emerged Centrus, LLC. In 2019, DOE gave Centrus a $115-million, no-bid contract for a pilot plant to produce **High Assay Low Enriched Uranium (HALEU).** HALEU is weapons usable and easily enriched to bomb grade – a weapons proliferation risk. In 2022 DOE gave Centrus a new contract for $150 million more – a public subsidy for a private firm. The Ohio Nuclear Free Network has challenged the Nuclear Regulatory Commission's licensing of the new American Centrifuge facility ***without doing the required Environmental Impact Statement.***



The tiny fraction of PGDP demolition that is covered is improper.

DEPLETED URANIUM: Operation of a **deconversion** facility began in 2011. Confusingly called "conversion" by DOE, the process removes fluorine from **Depleted Uranium Hexafluoride (DUF6)**, the enrichment waste. Deconversion was stopped in 2015 as accidents contaminated workers. A new operator, **Mid-America Conversion,** restarted deconversion in 2018.

Originally there were 225,000 metric tons of DUF6 onsite, some shipped prematurely from Oak Ridge, TN. The highly-reactive DUF6 is/was contained in roughly 19,500 cylinders containing 10-14 tons. Many are 60 years old and rusting. DOE estimates it will take until 2036 to convert all the DUF6 on the site.

ALERT! The deconversion process has been modified. The NRC licensed Mid-America to make depleted uranium (DU) for weapons ***without doing the required Environmental Impact Statement.*** DU has contaminated war zones as well as test sites in the U.S. See our flier ***Portsmouth Conversion Facility to Make Depleted Uranium for Warfare.***

A DANGEROUS FUTURE: In 2009, DOE gave Ohio University $500,000 to study PORTS site reuse. **Results were doctored.** In 2017, DOE granted themselves the right to transfer/sell all but 100 acres of the site ***without doing the required Environmental Impact Statement***. The extraordinary decision covers all nuclear sites and waste dumps.

The relationship between nuclear power and nuclear weapons is pronounced in using DU waste to make weapons and the production of HALEU which is slated to be exported – a serious nuclear weapons proliferation risk.

ALERT! **Two new nuclear reactors** and a facility that would obtain hydrogen from natural gas are proposed. ONFN's flier ***Hydrogen at Davis-Besse, Portsmouth and Beyond*** exposes big hydrogen proposals as dirty - using nuclear power or methane. Nuclear reactor fuel fabrication and reprocessing of nuclear waste are also proposed.

OFFSITE RADIOACTIVITY: In 2019 Dr. Michael Ketterer, an expert on nuclear isotope analysis, reviewed the 2017 DOE Annual Site Environmental Report. The report showed neptunium in an air monitor outside the Zahn's Corner Middle School, 4 miles from PORTS. Dr. Ketterer's testing **identified PORTS as the source** of this radioactivity. DOE falsely claimed that it came from atmospheric nuclear bomb testing. The school board closed the school. DOE has given $20 million for a new school. DOE later engaged "independent" **offsite sampling** and a followup report (**see slides**) that took 4 years to complete. Properties tested had radioactivity. The report recommended followup, but DOE remains silent. Two class action lawsuits have been filed by residents claiming radioactive contamination of properties and/or illnesses related to radioactivity. A **massive RICO lawsuit** was filed against DOE and current and former contractors.

CANCER IN PIKE COUNTY: The Ohio Nuclear Free Network engaged Joseph Mangano, Executive Director of the Radiation and Public Health Project, to analyze cancer and death statistics in Pike County. His 2022 report, ***Health Risk to Local Residents from the Portsmouth Gaseous Diffusion Plant,*** showed that Pike County cancer mortality rose from 12% below the US in 1950 to 32.8% above the US in 2020. Pike County's death rate is now 85% above the US. In 2023 Mangano released **a second study of 7 counties surrounding PORTS**, with cancer and death rates significantly higher than 6 Appalachian Ohio counties farther east. *Updated April 2024 Contact Pat Marida* ***patmarida@outlook.com***.

The Ohio Nuclear Free Network
316 North Michigan Street, Suite 520
Toledo, OH 43604-5627

Ohio's Portsmouth Nuclear Site and HALEU for Nuclear Weapons

*The Centrus **High Assay Low Enriched Uranium (HALEU)** project is located on the Portsmouth Nuclear Site (PORTS) at Piketon, Ohio. This 3,777-acre site in Southern Ohio is where uranium was enriched from 1954 until 2001 – first to make fuel for nuclear weapons and later to also make fuel for commercial nuclear power. HALEU is a term used to reference uranium that has been enriched to a higher degree than what is now being used for nuclear power. The term HALEU is confusing, because HALEU is very close to being **highly** enriched.*

BACKGROUND: USEC fails, becomes Centrus: About $2.5 billion (much of it taxpayer money) was put into the private entity USEC's original American Centrifuge Plant at the Portsmouth Nuclear Site (PORTS). DOE gave USEC hundreds of millions of dollars ***after USEC stock became junk-rated.*** USEC's attempts to get a $2 billion DOE loan guarantee, championed by Governor Kasich (R) and senators Portman (R) and Brown (D), eventually failed. In 2015 DOE ended funding, resulting in USEC closing the facility. ***USEC declared bankruptcy and came out of the ashes with a new name: Centrus, LLC - a Limited Liability Corporation.***

A NUCLEAR WEAPONS PROLIFERATION RISK! In November, 2019, the U.S. Dept. of Energy (DOE) gave Centrus a $115 million, **no-bid contract** to produce HALEU. The 3-year contract was for 16 centrifuges to enrich uranium up to 19.75% (an impossibly precise figure) of its fissionable isotope U-235. **By definition**, uranium enriched to 20% or more is high enriched, not low. Also, at 20% it is defined as weapons usable and cannot be exported. **Centrus' license allows enrichment up to 25%.** Using HALEU exported from the U.S, a foreign country could not only make a dirty bomb but could fairly easily enrich it to weapons grade (90+%).

2019, Reuter's: ***U.S. lawmakers question why Centrus awarded federal uranium contract.*** Lawmakers asked how the contract was funded, why other companies were not allowed to compete for the award, and whether there was a need for HALEU at that time. They also noted that if the HALEU project is for defense purposes, ***agencies other than the Department of Energy should provide funding.***

The Portsmouth Nuclear Site with Centrus buildings circled.

The Department of Energy (DOE) is underwriting Centrus HALEU for both commercial and military use. The doublespeak agreement states that HALEU is for civilian use, while justifying a no-bid contract on the basis that ***a domestically owned source of enriched uranium is required for military purposes.*** Other U.S. enrichment facilities are foreign owned. **2019, Energy News Network:** ***Nuclear watchdogs warn against blurring energy, military uses at Ohio fuel plant.*** Peter Bradford, a former member of the Nuclear Regulatory Commission (NRC), shared concerns about the dangers of crossover and co-mingling between military and civilian nuclear activities.

If a full-scale HALEU facility is built at the Portsmouth Nuclear Site (PORTS), the Nuclear Regulatory Commission could amend Centrus' license to enable enrichment to weapons grade at 90+%.

Commercial HALEU won't be needed for years, if ever. Urenco in New Mexico is the only U.S. commercial producer of low-enriched uranium (3-5% fissionable) and has plans to increase that to 10%. Their foreign-owned facility in New Mexico can meet all U.S. commercial needs. HALEU is said to be needed for yet-to-be-developed "small" "modular" or "advanced" nuclear reactors (power plants). Most of these would use only 10%. It will take a decade or more to design and build any hypothetical reactors that would need 19.75% from Centrus. HALEU can also be obtained from Idaho National Laboratory which **has stockpiled tons of it**. **2019, Arms Control Association:** ***No Rush to Enrich: Alternatives for Providing Uranium for U.S. National Security Needs.***

Urenco's plans to produce HALEU in New Mexico would be at a much lower price than a small, expensive ***Centrus facility that could cost $10 billion or more.***

2021: The Nuclear Regulatory Commission (NRC) said Centrus HALEU will have "No Significant Environmental Impact" and did only an Environmental Assessment (EA), not the required Environmental Impact Statement (EIS). The Ohio Nuclear Free Network (ONFN) and Beyond Nuclear sent a **Petition for Review of NRC's Environmental Assessment.** Grounds for Review included bypassing the EIS, segmentation of a much larger planned project, lack of a Weapons Proliferation Review or consideration of environmental justice, theft or diversion, further environmental contamination, alternatives to HALEU. In May of 2022, after DOE declared no need for review, the two groups appealed the license decision to the District of Columbia Court of Appeals, saying **NRC violated the National Environmental Policy Act by not issuing an EIS**. Unresolved questions on safety and potential criticality were highlighted. The Court denied the appeal.

MAKING A SHAM OF COMPETITIVE BIDS: Congress required DOE to put out a competitive bid for the HALEU demonstration project. **February 2022:** DOE asked for bids – and with a straight face, required operations to be at PORTS – where Centrus had inherited the original USEC centrifuge project as well as was updating the project with money from the unbid contract. Physics Today wrote a scathing article, ***DOE prepares to put a nearly completed uranium contract up for bid***, noting that the project was 85% complete. **November 2022:** DOE **awarded Centrus the $150 million contract**. **November 2023**: Centrus produced 20 kg. (44 pounds) of HALEU, costing **$6.2 million per pound.** Plans for producing 900 kg. by December of 2024 were temporarily put on hold because DOE cannot provide cylinders to hold it. DOE wants 40 metric tons of HALEU by 2030.

2023: DOE REALIZES AN EIS IS REQUIRED FOR HALEU – after the project has started and a Centrus EIS has been denied! The Nuclear Energy Policy Act requires an Environmental Impact Statement for a project as large as a full-scale HALEU plant. This EIS must cover environmental challenges from the entire nuclear cycle, including uranium mining and milling, and enrichment; transportation; radioactive waste; nuclear weapons proliferation; and threat of terrorism. **July 2023**: ONFN attorney Terry Lodge **wrote Scoping Comments** saying the EIS should look at **offsite radioactivity from previous enrichment at PORTS** as revealed by Dr. Michael Ketterer, at the fact that **Pike County has the highest cancer rate of any county in Ohio** as revealed by epidemiologist Joseph Mangano, at threats of nuclear weapons proliferation and terrorism; and more. **March 2024**: **The Draft EIS** came out. DOE essentially did no updated work, saying that studies done as many as 50 years ago was sufficient to cover the EIS. The public had 60 days to respond. **April 2024**: Attorney Lodge sent **comments on the draft**, essentially repeating his Scoping Comments. No doubt, the Draft will be the final EIS.

Daniel Poneman, Centrus CEO: In April, 2015 the Project on Government Oversight wrote a scathing article ***The Revolving Door Goes Nuclear*** about how Poneman, who served as the number two official at DOE, became president and CEO of Centrus in less than six months after leaving DOE. Poneman has DOE inside knowledge and connections for getting deals for Centrus. His total compensation was $1,929,517 in 2020.


Daniel Poneman

Centrus, HALEU, and Saudi Arabia: The U.S. House Committee on Oversight and Reform **investigated secretive negotiations** between the Trump Administration and Saudi Arabia on exporting nuclear reactors and technology. Negotiations were initiated in 2016 by a group that included former National Security Advisor General Michael Flynn, and later taken up by the White House and the industry consortium ***IP3 International, one of whose commercial partners is Centrus.*** In January, 2017, four IP3 leaders and the chief executives of six companies – ***one of whom was Poneman from Centrus*** – signed a letter to Crown Prince Mohammed bin Salman, expressing a desire for commercial partnerships between the U.S. and Saudi Arabia.

In February of 2019 the Oversight Committee published its first report, ***Multiple Whistleblowers Raise Grave Concerns with White House Efforts to Transfer Sensitive Nuclear Technology to Saudi Arabia***, documenting the conduct of the Trump Administration's negotiations violating the Atomic Energy Act. That July, the Oversight Committee published its second report, ***Corporate and Foreign Interests Behind White House Push to Transfer U.S. Nuclear Technology to Saudi Arabia***.

April 2024 Contact Pat Marida patmarida@outlook.com.

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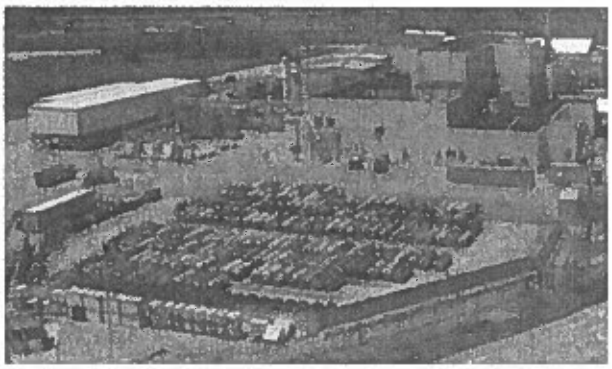
Ohio's Portsmouth Nuclear Site and Depleted Uranium for Warfare

The Portsmouth Nuclear Site (PORTS) at Piketon, Ohio, *is the 3,777-acre site where uranium was enriched from the 1950s until 2001. Uranium was first enriched to make nuclear weapons and later for fuel for nuclear power. Enrichment increases the amount of fissionable uranium (U-235) from 0.7% in yellowcake to 3-5% for power and to 95% for weapons. The* ***U.S. Department of Energy (DOE)*** *brought in reprocessed high-level radioactive waste and added it to the enrichment process, contaminating the entire site with radioactive elements such as plutonium, americium, and neptunium, as well as toxins of other types.* ***Depleted uranium (DU)*** *is the waste from uranium enrichment, which is 99% of the original uranium and just as radioactive. PORTS DU is "dirty" because it, too, is contaminated with nuclear waste. PORTS enrichment* ***used as much electricity as New York City*** *according to the former Atomic Energy Commission.*

Uranium Conversion: Fluorine is added to uranium in Metropolis, Illinois, creating uranium hexafluoride (UF6), the uranium compound that can be enriched. It is shipped to the Portsmouth Nuclear Site (PORTS) and the Paducah Nuclear Site in Kentucky. The original waste from enrichment is **depleted uranium hexafluoride (DUF6).** DUF6 is highly chemically reactive. It is eating its way through 19 thousand 14-ton cylinders sitting at PORTS. The conversion process began in 2011. Fluorine is removed from the uranium, leaving depleted uranium (DU) – which **has almost all of its radioactivity** but no longer reacts with everything around it – an important environmental process. Conversion was stopped in 2015 after several accidents contaminated workers. A new operator, **Mid-America Conversion,** restarted conversion gradually in 2018.

Depleted Uranium Tetrafluoride (DUF4): In January 2020, the **Department of Energy (DOE) amended its 2004 Record of Decision (ROD)** that had approved the DUF6 process at PORTS. The amended ROD approves a new process not mentioned or analyzed in the original 2004 Environmental Impact Statement. **That new process would make purified DUF4 for military use - without doing the required Supplemental Environmental Impact Statement (SEIS).**



The Mid-America Conversion Facility at Portsmouth

The Ohio Nuclear Free Network Challenges DUF4: The National Environmental Policy Act indicates that a Supplemental EIS is Required. In February 2020, ONFN attorney Terry Lodge wrote a **16-page letter to DOE** stating objections and petitioning DOE for a Supplemental Environmental Impact Statement (SEIS) for DUF4. The letter was signed by 36 organizations. Lodge noted that an adequate SEIS must quantify prospective civilian and soldier victims of DU exposure based upon what is now known about pathways of contamination. Future costs of human decontamination, medical treatment, remediation, and disposal of contaminated infrastructure must be identified. DU dangers to manufacturing workers, transport workers, the American public, combatants, and noncombatants must be assessed. One month later, the DOE responded with a **5-page letter stating no concern** with ONFN objections and denying a need for an SEIS. **In this letter DOE states that the DUF4 process is for nuclear weapons.**

Controversial Health Effects of Depleted Uranium: There is little civilian use for depleted uranium. It is used in armor-piercing shells, bunker-buster bombs, and as protective armor in tanks. Use of these weapons disperses depleted uranium in fine particles, including when tanks are hit. Using DU for weapons and

armoring of vehicles is highly controversial because of implications for the environment, public and troop health, and international law. **Serious health risks** occur when this material is ingested or inhaled in war zones, or in test areas such as the **former Jefferson Proving Ground** in Indiana, which the **army claims is too dangerous to clean up**. **Thousands of tons of DU munitions have been detonated** in the former Yugoslavia, Iraq, Afghanistan, and **Syria**, DU weapons are currently being used in **Ukraine** and in **Gaza**.

Depleted Uranium is an unknown quantity: It can catch fire spontaneously. Uranium tends to concentrate in specific areas in the body, where the risk of bone, liver, and blood cancers such as leukemia may be increased. Inhaled DU particles may damage lung cells and increase the possibility of lung cancer. Internally, DU may damage the kidneys, the central nervous system, the immune system, or cause reproductive disorders. Since there is a 10- to 30-year lag in development of cancer, effects from DU exposure show up over time. In war areas, children play in DU-contaminated dirt and in shattered tanks where DU has been dispersed. **Birth defects in Iraq have greatly increased**. DU from PORTS, as explained in the first paragraph, is "dirty," being contaminated with plutonium and other highly radioactive elements. This greatly and directly worsens the environmental and health impacts.

Gulf War Syndrome: The U.S. has attempted to deny a connection between DU and veterans' illnesses. Yet years ago the Department of Defense developed regulations and orders requiring military personnel to conduct prompt remediation of personnel and equipment following DU exposures.

Assessing Depleted Uranium in Iraq
Photo: U.N. Environment Programme

International Law and DU Munitions Usage: DU usage falls within a controversial area in international law. The U.N. Human Rights Subcommission on the Prevention of Discrimination and Protection of Minorities passed motions in 1996 and 1997 that urged all states to curb the production and spread of weapons of mass destruction, weapons with indiscriminate effect, and weapons that cause superfluous injury or unnecessary suffering. The list included DU weaponry. The paper concluded that use of DU may breach UN treaties and/or conventions. Serbia has been attempting to **sue the NATO nations** for DU dropped there in the 1990s.

The new PORTS DU process is dangerous upgrade: Purified DU is needed for "**tampers**" in nuclear bombs - not for DU munitions and tanks. Tampers allow dialing the magnitude of nuclear explosions up or down. Tampers must have the highly radioactive contamination removed. This is a new process in addition to producing DUF4. These new nuclear bombs present a new escalation in the nuclear arms race.

DOE saves $$: There is a major cost difference between disposing of DU as low-level radioactive waste at a cost of hundreds of millions of dollars, versus selling it to munitions makers. DOE has no plan for purifying the dirty DU used in munitions and tanks so there will be less radioactive contamination when it is used.

The DUF4 process is currently on hold: The cost for Mid-America to build "Line 4" to make DUF4 was discovered to be $58 million - interestingly at a later date. When a contract is over $50 million, DOE is required to put it out for bids. Two other companies then applied for this work. It remains imperative that an SEIS be done for any site.

Another choice? The Pentagon is scrapping 35 million DU rounds because they are becoming increasingly unsafe to use. Disposing of these munitions, including hundreds of thousands of armor-piercing tank shells, is its own challenge. More DUF 4 must be made if there are to be DU munitions in the future. Meanwhile, the military has been thinking about using less-controversial tungsten to replace DU in new munitions.

Every effort must be made to prevent more depleted uranium weapons from entering the world.

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HEALTH RISK TO LOCAL RESIDENTS FROM THE PORTSMOUTH GASEOUS DIFFUSION PLANT

Joseph J. Mangano MPH MBA, August 15, 2022

EXECUTIVE SUMMARY

The Portsmouth Gaseous Diffusion Plant (PGDP) in Pike County, Ohio used the UF_6 gaseous diffusion process to enrich uranium from 1954 to 2001. As a result of routine plant operations, radioisotopes and toxic chemicals were regularly released to the air, water, and soil. Despite ongoing concerns about health effects of exposures to toxic radioactivity, little research on local health patterns has been conducted.

This report, using official health statistics, found the following health patterns and trends for Pike County:

1. The county's cancer incidence in 2010-2019 was 15% higher than the U.S., the highest rate of all 88 Ohio counties.

2. In the 1950s and 1960s, county cancer mortality was 12% below the U.S. The gap closed, and by 1993, the Pike rate exceeded the U.S. The largest gap (+32.8%) occurred in 2019-2020.

3. In 2009-2020, the cancer death rate in the county exceeded the U.S. by about 50% for all age groups, except for persons over age 75 (0.5% below the U.S.).

4. County age-adjusted mortality for all causes was 2-5% above the U.S. in the 1980s and early 1990s. By 2019-2020, the county rate was 42.3% greater.

5. Among persons 0-74, all-cause mortality in the county soared to 85.0% above the U.S. in 2017-2020, nearly twice that of the nation.

These unexpected findings constitute a great concern, and call for prompt and thorough review of all potential causes, including socioeconomic factors, access to medical care, health behavior, and exposures to environmental toxins, such as those from the PGDP. Any findings must be shared with the public and public officials, so that any efforts to reduce future local disease and death rates may begin promptly.

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Mortality /Morbidity Study, 7 Counties Downwind of the Portsmouth Nuclear Site
Joseph J. Mangano MPH MBA, June 10, 2023

EXECUTIVE SUMMARY

A November 2022 report found mortality in Pike County, Ohio rising sharply in the past four decades compared to the U.S. (https://radiation.org/rphp-report-finds-soaring-death-rate-near-ohio-uranium-plant/). The Pike County death rate was slightly above the U.S. until the early 1990s, but now is among the highest in the nation. In addition, Pike County has the highest current cancer incidence rate of all counties in Ohio.

Findings called for follow-up analysis of health data, addressing socioeconomic factors' role in Pike County's health decline. In addition, it raised the question of whether toxic exposures to local residents from the Portsmouth Nuclear Site (PORTS) – home to the former Portsmouth Gaseous Diffusion Plant (PGDP) – extended beyond Pike County.

This report compares seven Ohio counties closest to/downwind of PORTS - study counties (Adams, Gallia, Jackson, Lawrence, Pike, Scioto, and Vinton) with six counties, also in Ohio, further from the plant - "control" counties (Athens, Guernsey, Jefferson, Meigs, Morgan, and Noble). Each has similar population density; racial/ethnic composition; and rates of poverty, education, unemployment, and health insurance. Findings include:

1. In the late 1990s, cancer incidence in both areas was 0.4% below the U.S. rate. By 2015-2019, the study counties rate exceeded the U.S. by 17.5%, versus 8.8% in control counties.

2. In the 1970s, infant death rates were slightly above the U.S. in both areas (+4.4% and +1.6%). However, by 1999-2020, the excesses were +31.9% (study) and +9.9% (control).

3. In the early 1970s, all-cause mortality rates in both areas were slightly above the U.S. But by the most recent five-year period (2017-2021), mortality in the study counties far exceeded the rate in the U.S. *and* control counties, specifically:

	Study Counties vs. U.S.	Control Counties vs. U.S.
Deaths 0-74, All Causes	+ 77.5%	+31.5%
Deaths 0-74, All Cancers	+ 60.8%	+26.0%
Deaths 25-54, All Causes	+109.6%	+47.7%

The large and growing gaps between study and control areas indicate that socio-economic factors – which have likely undergone similar changes over time - cannot account for most of the high rates near PORTS. Nevertheless, with 13,138 "excess" premature deaths (under age 75) in the seven study counties since 1974, a thorough evaluation of contamination from PORTS and the plant's current decommissioning process are in order.

Inconclusive by Design:
Waste, Fraud and Abuse in Federal Environmental Health Research

An Investigative Study by the
Environmental Health Network
and the National Toxics Campaign Fund

"One of the conspicuous casualties in the war against toxic wastes is the public's regard for public health officials... More often than anyone would like, frustrated and concerned citizens have received little sympathy, understanding, or help from local, state, or federal health agencies. Instead, officials have tried to minimize public concern, often irrespective of the situation. Departments of public health have become departments of public reassurance."

-- Dr. David Ozonoff and Leslie I. Boden
Boston University School of Public Health
"Truth and Consequences: Health Agency
Responses to Environmental Health Problems"

Abstract

Two federal agencies, the Centers for Disease Control (CDC) *and the Agency for Toxic* Substances and Disease Registry (ATSDR), bear the primary responsibility for safeguarding the nation's environmental health. They are responsible for studying communities exposed to toxic pollution and wastes and making recommendations for public protection. Instead of ensuring a margin of safety and recommending measures to end public exposures to toxics, both of these agencies have routinely funded and conducted studies of effects of toxic pollution on public health which are *inconclusive by design. These intentionally inconclusive studies have been used* by polluters and government officials to mislead local citizens into believing that further measures to prevent toxic exposures are unnecessary. In systematically engaging in such practices, the two agencies are violating sound public health policy. This report offers an accounting of the waste, fraud and abuse that has proliferated in these agencies, and recommends reforms and congressional action to end the patterns identified.

This Report is Dedicated to the Memory
of the Uncounted Multitudes
Whose Lives Were Taken by Toxic Pollution
May 1992

The full 71-page report can be found online by searching for Inconclusive by Design, or at https://www.csu.edu/cerc/researchreports/documents/InconclusiveByDesignATSDR.pdf

Below is a copy of the letter of resignation-in-protest that was read by three members of the Piketon Citizens Advisory Board (SSAB) at the DOE public meeting in Piketon this past Thursday, August 6th. The three members who resigned in protest are all Sierrans who have long been active in the struggle for the development of renewable energy, environmental justice, and the genuine environmental cleanup of the contaminated Piketon A-plant site. Many Sierra Club members were in attendance and made public comments at the meeting about the critical need to focus on efficiency and sustainability.

Dr. Inés R. Triay, Assistant Secretary for Environmental Management
US Department of Energy
1000 Independence Ave., SW
Washington, DC 20585
6 August 2009

Dear Assistant Secretary Triay:

When we accepted our appointments to the Portsmouth Site-Specific Advisory Board, officials with the Department of Energy (DOE) told us that our board would play a meaningful role in the decisions guiding the clean-up and future use of the Piketon site. Recent events, however, have proven that DOE has failed to protect the board's operation from significant conflicts of interest, and has colluded in blocking the SSAB from any meaningful role in the most important decisions impacting the site and our larger community.

With sadness and disillusionment, we submit our resignations as committee chairs and members of the SSAB. Sadness, because we know there are competent, hard-working individuals employed at the OEPA, the Ohio Department of Health, the US Department of Energy, and its contractors and we were encouraged by the chance to work with these individuals to fulfill the mission of the SSAB. However, overshadowing all is our recognition that the SSAB mission has been thwarted by DOE's failure to abide by federal regulations and guard the SSAB from conflicts of interest.

The problem of conflicts of interest became particularly clear with the recent announcement that SODI, USEC, and their other business partners plan to construct a nuclear reactor at the Piketon site. The SSAB was never consulted regarding this matter, which clearly impacts future land use, cleanup levels, and the board's reason-for-being. Future use planning involving the nuclear reactor took place in secret over a span of months prior to its announcement on the 18th of June, during which time the SSAB was developing a recommendation in favor of locating a new DOE alternative "Energy Park " at the site, as well as a more general recommendation on future-use principles. As members of the Future Land Use Committee, we were deceived by DOE officials and members of our own board who had significant conflicts of interest. We believe the proposed reactor project is at variance with one of the board's recent recommendations, which specifically advised, "that the future use of the Piketon site never include the interim storage of spent nuclear fuel (High-Level Radioactive Waste)." As no permanent storage facility for spent nuclear fuel is currently accepting such high level radioactive waste, the proposed reactor will of necessity include the interim storage of spent nuclear fuel at Piketon.

The DOE's *Conflict of Interest Guidance* states that SSAB members are not to be employees of DOE contractors, yet some board members are employed by DOE contractors or hold positions with the DOE-funded community re-use organization, known as SODI. When SSAB members expressed concern that the DOE's hiring of SODI's Executive Director to oversee the board posed a conflict of interest given that SODI proposals would be coming before the SSAB for recommendations, DOE dismissed our concerns. DOE guidance requires that DOE officials and SSAB members refrain from participating in any matter "that is or gives the appearance of being motivated by the desire for private, professional, or financial gain." After one committee meeting, during which SSAB members pressed DOE on this conflict-of-interest matter, we requested a copy of the audio recording of that meeting and were told by the DOE contractor responsible for the administration of the board that the recording had been "lost."

The problem of conflicts of interest has also shown itself with DOE's handling of SODI's proposal for a transfer of 340 acres from DOE to SODI. When we questioned DOE about soil tests on the

340 acres, which indicate the presence of plutonium, neptunium and other contaminants, DOE officials downplayed or denied the existence and source of these contaminants. Requests for documents related to the transfer have sometimes been ignored for months or never fulfilled. Copies of the current lease agreement between DOE and USEC, Inc, as well as correspondence between USEC, DOE, and SODI concerning the 340 acres, were repeatedly requested and only provided after months of delay. Instead of facilitating our advisory activities DOE has acted in ways that obstructed and undermined our efforts.

DOE and SODI have also failed to follow Federal property transfer regulations, specifically *10 CFR 770,* which requires SODI to identify a specific use for the transferred land, specific economic development to be furthered by the transfer, and specific information supporting the economic viability of the proposed development. The proposed transfer documents, which have been made public to-date, include none of these specific requirements. And when we have suggested that the transfer is at variance with the site's existing *End State Vision,* adopted by DOE in 2005, DOE officials have both denied the variance and, at the same time, indicated that these future use principles, which were created with community input, were not binding on future use planning. Since the formation of the SSAB in the summer of 2008, we've continually requested the services of Perspectives Group to work with our committees and shareholder communities because we recognize that the broader community must work together to develop a shared vision of the local stakeholders and of the agencies managing the cleanup. For that shared vision to develop there must be a high level of community participation and a decision-making process that allows for broad-based participation. This is not happening. Stakeholders remain opposed to each other on questions of future land use, methods for disposition of contaminated materials, and other issues, yet these stakeholders aren't even meeting together. Perspectives Group has successfully assisted other SSABs and similar citizens' advisory boards with community participation, decision process planning, facilitation, and other needed training. We believe that DOE's inaction on our requests violates the spirit of the *Federal Advisory Committee Act,* which governs the operation of the SSAB and calls for broad public involvement and access to the training needed to carry out our mission. We can no longer remain on this board, contributing to the false impression that the *Federal Advisory Committee Act* is being properly enforced and that public money is being appropriately spent to ensure an open, procedurally fair process where all stakeholders have a voice in making informed decisions.

Lastly, DOE has sanctioned violations of the SSAB's operating procedures, which require that each board member serve on at least one committee. Yet, DOE has allowed exceptions to that rule and dismissed our concerns.

Altogether, due to DOE's failure to properly implement federal regulations and safeguards against conflicts of interest, the mission of our SSAB has been essentially sabotaged. For these and other reasons we submit our resignations, effective immediately.

Regards,

Lee Blackburn
Andrew Lee Feight, Ph.D.
Lorry Swain

This article was originally printed in the May/June 2012 issue of The Ohio Sierran.

Piketon at Center of DOE Radmetal Ban Reversal Attempt

by Pat Marida, chair, Ohio Sierra Club Nuclear Issues Committee

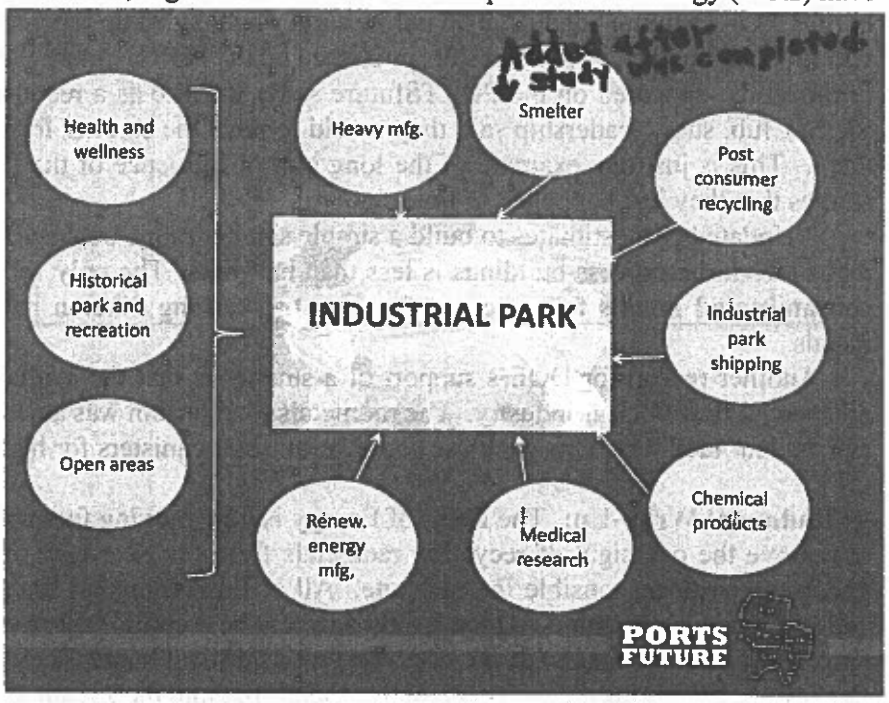
Imagine eating with radioactive flatware, driving in vehicles that are radioactive in small or large part, working with radioactive tools and living in homes with radioactive nails, appliances, and so forth.

Shortly before leaving office as Secretary of Energy under President Clinton, Bill Richardson put a contaminated metals moratorium in place, disallowing radioactive steel, nickel, and other radioactive metal waste to be recycled and mixed with the nation's scrap metal stream.

Ever since the radmetal moratorium was enacted, segments within the U.S. Department of Energy (DOE) have been trying to reverse it.

Pie-in-the sky proposals for "decontamination" of the metals by removing part of the radioactivity have resulted in studies (expensive in themselves) of the cost of a radioactive metals smelter and metals "decontamination". Shortly after Richardson's January 2001 moratorium, a *Dedicated Steel Mill Feasibility Study* was completed by DOE, projecting a cost range of $855 million to $2.9 billion for a metal recycling facility.

Consistently, DOE has been evaluating and generating documents on the possibilities for the reuse of radioactive metals. The lack of a market, due to the moratorium and demand factors, has prevented serious consideration of such a facility.



A smelter was added to the diagram months after the study was completed.

Enter: Cleanup at the Portsmouth Nuclear Site at Piketon, OH: Nowhere is there more radioactive metal available than at the sites of the nation's three gaseous diffusion uranium enrichment plants. These facilities used enormous amounts of electricity. A promotional movie by the former US Atomic Energy Commission impressed viewers with the fact that the Piketon uranium enrichment plant used "18 billion kilowatt-hours yearly, enough for the whole city of New York, or 2/3 of that required for the highly-industrialized state of Ohio." Over 500,000 cubic yards of concrete, 100,000 tons of structural steel, 14,500 tons of reinforcing steel and 75,000 lineal feet of 5/8-inch cable were used. Siding was of cement/asbestos. New enrichment technologies are far smaller and less expensive to operate.

The three plants were built as part of the nation's war effort, enriching uranium for nuclear bombs. The smaller facility at Oak Ridge, TN, was part of the Manhattan Project and is now closed. The second plant at Paducah, KY, is still in operation, now enriching uranium for power plants. Its operator, USEC, Inc., is being bankrupted by the expense of the electricity needed to run the facility, and they are expected to announce closure of the plant in the near future. The government-owned US Enrichment Corporation, which first operated the Piketon facility, became simply USEC, Inc. when the company was privatized in 1996. USEC leased the uranium enrichment plant at Piketon until it was put on "cold standby" in 2001. It was finally closed in 2005. The lease on the closed plant was returned to the DOE in 2011. Taxpayers now pay for the ongoing cleanup.

The size of the Piketon facility staggers the imagination. The 3 process buildings cover 93 acres. The Portsmouth/Paducah DOE office is heavily promoting the reuse of contaminated metal from the site, which would turn a liability into an asset. It is expected that 900,000 cubic yards of contaminated metals will come from demolition of the buildings. Of this, an estimated 110,000 cubic yards is being considered "reusable".

Continued on page 2.

A Radmetals Smelter at Piketon? The DOE has been promoting the idea of building a radioactive metals smelter at the Piketon site since 2009. Initially, they asked a subcommittee of the Site Specific Advisory Board (a citizen cleanup oversight group) to recommend a smelter to the full Advisory Board, which in turn voted in May 2010 to recommend a smelter back to the DOE! This is one of hundreds of examples of how DOE manipulates citizen and public processes at Piketon and across the nation.

A more recent example of DOE manipulation is the **PORTSfuture project.** Billed as an independent study, the Voinovich School at Ohio University was given **$500,000** (yes, half a million) by the DOE to study the opinions of residents in the 4 counties surrounding the Piketon site on what they would like to see for the future of the site. While the town meetings, open to the public, put the recommendations of more nuclear on the back burner, PORTSfuture conducted an online survey and ended up recommending a nuclear power plant. The study was finished in 2011, with the results published on the PORTSfuture website. In 2012, a smelter, never discussed in the study, appeared on the PORTSfuture study website as a recommended facility! When contacted by the Sierra Club, study leadership said they would remove the smelter from the website—with no hint of how it got there. This is just one example of the long arm of influence of the DOE, extending sway over "independent" studies that they just happened to finance.

Updated cost estimates to build a simple smelter range between $1.5 and $2 billion, while the value of the metals from the process buildings is less than half that. The only way to justify the cost would be to **bring in contaminated metals from across the country**, turning Piketon into a virtual waste dump for contaminated metals.

Another reason for DOE's support of a smelter is that the availability of cheap metal could stimulate the prospect of new nuclear industry. The radmetals moratorium was amended to allow radmetals to be used at DOE and nuclear facilities. One such use could be casks or canisters for high-level radioactive waste.

Radmetal Wrap-Up: The Dept. of Energy is now moving forward with an environmental assessment (EA) to remove the oversight of recycling radmetals from the Secretary of Energy and place it in the hands of the undersecretaries responsible for each site. All of Environmental Management (and Legacy Management) falls under Thomas D'Agostino. There would scarcely be a call for this move unless it was motivated by a desire to recycle radioactive metals. If the decision on this critical matter is moved down the pecking order, it is a major step toward having the nation's radioactive metals put into the stream of commerce. This is an action for everyone to note. We expect that the Environmental Assessment will be presented for public comment sometime mid-2012.

With or without radmetal recycling, the scars of nuclear weapons and power production stand in high profile at Piketon.

My name is Patricia Marida, and I am a volunteer coordinator with the Ohio Nuclear Free Network. I'd like to say a few words about issues with the cleanup of the PGDP here at PORTS.

- ***On Site Waste Disposal Facility (OSWDF):*** is to hold the "less radioactive" rubble from the enormous buildings. In its June 2015 Record of Decision for Waste Disposition (ROD), ***DOE failed to include binding parameters for disposal of radioactive waste,*** despite lengthy public input. The ROD and its Waste Acceptance Criteria were said by Ohio Senator Sherrod Brown to have "holes big enough to drive a convoy of trucks through." **Jeremy Davis, as the Portsmouth Site Lead, is there a record of what is going into the Onsite Disposal?** available to public?
- ***Leaking landfills left unremediated:*** The DOE is refusing to remediate landfills – *some unlined* – outside the Perimeter Road. These dumps contain highly toxic as well as highly radioactive materials. Landfills are leaking mercury into Little Beaver Creek. **ALL landfills to be dug up, tested, and disposed of properly.** In 2018 the Village of Piketon and the Sierra Club made a joint statement outlining problems and recommendations regarding the DOE's Waste Disposal Decisions.

- **It is imperative that demolition be covered.** DOE has covered demolitions in other sites. It is not a good cost savings when the dust from these massive buildings threatens workers and the health of people for miles around. The use of water collected in a ditch around a massive building, with rain flooding the premises, is not a scientific way to handle the dust.

- The Auxier Report, commissioned by DOE, took samples offsite PORTS and found radioactivity, and recommended follow-up studies. **Joel Bradburne and Jeremy Davis, are you going to follow the recommendations of the study you commissioned and we the public paid for? What plans are there for follow-up studies?**

- Dr. Michael Ketterer, retired professor of chemistry and biochemistry, found that DOE's air monitors revealed a dip in radioactivity when demolition was shut down due to covid. With access to one of the world's newest and best spectrophotometers, Dr. Ketterer has identified enriched uranium, plutonium, and neptunium offsite that have the signature of PORTS. Like Auxier.

- Epidemiologist Joe Mangano has put together two reports on health statistics from the Ohio Dept. of Health and the Centers for Disease Control. He showed that Pike County has the highest cancer rate in Ohio. Pike County cancer mortality rose from 12% below the US in 1950 to 32.8% above the US in 2020. Pike County's premature death rate is now 85% above the US.

- ***Site Specific Advisory Board (SSAB):*** In 2008, under pressure from U.S. Senator Sherrod Brown, a long-overdue citizen advisory board was created to oversee cleanup at PORTS. One year later, 3 members resigned from the board, **citing DOE's failure to abide by its own regulations** barring people with conflicts of interest from the board. The SSAB first met monthly, then every other month, currently sporadically, seemingly at the whim of the DOE, and sometimes cancelled because there is not a quorum. DOE did not fill vacancies on the Board, often having less than half its 20 eligible members serving.

- Ohioans are asking for PORTS to be added to the Radiation Compensation Exposure Act, giving a one-time compensation to people living offsite who have illnesses related to radioactivity.

- **Fractured rock:** DOE misrepresented its own geologic study, claiming that rock under the OSWDF was intact. A geologist hired by the Village of Piketon found that the DOE's study showed fractured rock. Any facility will leak in time, but with fractured rock below, contaminants will move more quickly to the aquifer.

We have materials here.

- ***The Government Accountability Office 2019 Report*** criticized cleanups at PORTS and other U.S. nuclear sites, saying that DOE needs to set standards and rules to cut costs and address the greatest risks.

- **Reprocessed high-level radioactive waste:** Called by over a dozen names by the DOE, nuclear waste was brought to PORTS and run through the enrichment processes for years, contaminating the entire site with transuranics (neptunium, americium, plutonium) the deadliest substances on earth, plus numerous other toxins.

- ***Ohio's Nuclear Legacy: Troubled Past, Uncertain Future*****:** *The Dayton Daily News series by this title was published in 2006. The report detailed how "The Piketon plant leaves poisoned land, sick workers in its wake." Some of the articles from the long report are still available online by searching for the title.*

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The Ohio Nuclear Free Network

"Ohio's Nuclear Watchdog"