TO THE RAMPARTS!
An Alert To Mobilize
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This **CALL FOR REMEMBRANCE**, issued in commemoration of the Fukushima Daiichi power complex destruction ten years ago and this week's resurgence for compensation and resettlement (return) efforts by the Marshall Islanders' Nuclear Legacy Remembrance Week, is intended to inform and motivate our readership. As the Los Alamos National Laboratory (LANL) is assigned additional tasks by the US Department of Energy (DOE) and as it shifts its mission from research to weapons production, along with a similar change of mission at the Savannah River Site (SRS), we hope to precipitate action by the public and elected officials. We continue to highlight special opportunities to responsibly, peacefully, and vigorously advocate for an immediate halt of the US Empire's ownership, production, and threatened use of nuclear munitions, and for reversal of national policy that perpetuates New Mexico's status as a nuclear sacrifice zone.

"WE'RE AWASH WITH PLUTONIUM. WE HAVE MORE THAN WE NEED," stated the Secretary of Energy in 1988. The US government built a grossly oversized nuclear arsenal and never envisioned having to stop building it. Between 1944 and 1994, DOE and its predecessors produced 99.5 metric tons of plutonium for use in an estimated 70,000 nuclear weapons. An additional 11 tons were produced or acquired for research and development purposes. Now, 80% of the US nuclear arsenal has been discarded, and the US is still struggling with the strategic mistake of producing so much fissile material. Currently, a total of 61.2 tons of plutonium, of which 53.4 tons was designated for weapons, is declared excess to the needs of the US government.

DOE's recent baseline cost estimate for waste management and environmental remediation is about $485 billion for the two main plutonium production facilities, the Hanford Reservation (Hanford) in Washington and the Savannah River Site in South Carolina. The clean-up of the LANL and Idaho National Laboratory (INL) is not factored into the $485 billion estimate. Only token clean-up efforts occur at LANL (3.1% of the FY21 annual operating budget) while the Idaho Lab is currently trying to rid itself of the waste and contaminated equipment sent to it from the ill-fated Rocky Flats Nuclear Plant. Further, the Idaho Lab site is the custodian of the reactors salvaged from US Navy ships that have been broken up. Nevertheless, the Idaho Lab accounts for twice as many shipments to the Waste Isolation Pilot Plant (WIPP) as does LANL.

Safely ridding the US of one of the world's largest excess stockpiles of weapon-grade plutonium will be no minor feat. At issue is DOE's 2016 decision to dilute and dispose of 48.2 metric tons of plutonium, including 26.2 tons of components, known as "pits," from several thousand dismantled thermonuclear warheads, and 22 metric tons in other forms. These massive quantities of plutonium are destined for DOE's WIPP, the nation's only geologic burial site for low level radiological waste generated by the DOE weapons facilities, deep into an underground salt formation near Carlsbad, New Mexico. The single largest portion of the entire US government's environmental liability in 2019, including the Department of Defense (DOD), is due to plutonium production at the Hanford site and the Savannah River Site. In terms of the human legacy, 22,459 sick workers at three major plutonium and fabrication sites have been granted more than $4.2 billion in compensation and medical care.

In addition to the excess weapon-grade plutonium generated at DOE plants and labs, plutonium and uranium wastes generated by 131 public utility power generating plants await disposal. Plants that have shut down, decommissioned, or currently operate have on-site low and high level radioactive materials stored in cement vaults or cooling pools. Since a blinding flash lit up the pre-dawn sky at Alamogordo in the Chihuahua Desert of New Mexico 75 years ago, the US has failed to

develop a site for transuranic (TRU) waste other than the WIPP and no permanent storage site for high level waste. The TRU material is awaiting a permit for evacuation to a permanent or interim "temporary" storage site. By default, the WIPP is the only site available for DOE generators to deposit their low level wastes. Permits are pending at the Nuclear Regulator Agency for civilian owned and operated utility waste sites to open along the border of southeastern New Mexico and western Texas, now referred to as "Nuclear Alley."

TRANSURANIC WASTE, as defined by the NRC, is material contaminated with wastes that are artificially made radioactive elements, such as neptunium, plutonium, americium, and others. Materials that have atomic numbers higher than uranium (i.e., 92) in the periodic table of elements. TRU waste is primarily produced by recycling spent fuel or using plutonium to fabricate nuclear weapons.

Plutonium is a waste-disposal nightmare! The isotope used in American nuclear weapons, plutonium 239, has a specific activity that is about 200,000 times greater than uranium 238's. Plutonium has a radioactive half-life of 24,110 years; Iodine 129's is 16 million years! Alpha particle emissions from plutonium and other TRU elements are considered to be about 20 times more carcinogenic than x-rays. Particles of plutonium less than a few microns in diameter can penetrate deep in the lungs and lymph nodes and also be deposited, via the blood stream, in the liver, on bone surfaces, and in other organs. If inhaled, extremely small amounts can lead to cancer.

ALTERNATIVE USES OF PLUTONIUM In May 1974, India conducted a nuclear weapons test with a plutonium fueled bomb. The plutonium used in India's bomb had been produced with "peaceful atom" technology provided by the US and Canada. In response to the Indian test, in 1977 the Carter administration banned chemical separation of plutonium from irradiated (spent or used) reactor fuel, a manipulation known as reprocessing. The 1982 Nuclear Waste Policy Act underscored this posture by directing geologic disposal of spent reactor fuel, without reprocessing. DOE did little to nothing in the interim to develop a network of geologic depositories to prevent the interstate shipment of TRU waste and a total dependency on the WIPP.

Meanwhile, utilities and the government keep generating more plutonium waste. In 1993, President Clinton issued a directive declaring that the US is "committed to eliminating, where possible, the accumulation of stockpiles of highly enriched uranium and plutonium." The WIPP opened in New Mexico in 1999 for only DOE and DOD generated waste, not civilian power plant wastes. In 2006 a study written by the nuclear utility lobby concluded that reprocessing "would incur a substantial cost penalty" to utilities if spent nuclear fuel were reprocessed before placement in a depository. Reprocessing was an onerous and expensive step the utilities wished to avoid. The lobby advocated for placing spent waste "as is" in a subterranean vault as its preferred alternative. So the mountain of waste grew. As of the end of 2018, US spent power reactor fuel contained about 824 metric tons of plutonium—the world's largest single inventory of that element.

In September 2000, the US and Russia signed the Plutonium Management Disposition Agreement, under which 34 metric tons of plutonium from weapons would be blended with uranium and serve as mixed-oxide (MOX) reactor fuel to produce electricity. In October 2016, Russian President Putin suspended implementation of the Agreement. In 2017, after spending billions on the project, the US halted work on its partially finished Mixed Oxide Fuel Fabrication Plant plutonium fuel facility at the SRS. On December 5, 2020, DOE issued a Record of Determination that the SRS would be one of two sites (the other being LANL) producing plutonium weapon spherical trigger cones, as mandated by federal law 50USC2538a. The House Armed Services Committee is the authorizing body for DOD and DOE programs funded by the Appropriations Committees. Congress allocated $241 million for a reconfigured Savannah River Plutonium Processing Facility in the fiscal year 2021 budget for construction of facilities so that no fewer than 50 pits might be produced annually by 2030.

ALTERNATIVE SOLUTIONS FOR DISPOSING OF WEAPON-GRADE PLUTONIUM

A scheme now under active consideration proposed by DOE is to transport high level wastes to the Los Alamos Lab for chemical dilution or "down blending." By oxidizing the waste and adding a compound (a classified mixture known as "star dust"), the plutonium would be transformed and its toxicity lowered so that it would meet US Department of Transportation (DOT) standards for shipment to the WIPP, and WIPP standards for acceptance and deposit into the geologic vault. New Mexicans might agree with Senator Pete Domenici, who in the 1980s, when the WIPP site was proposed by US DOE, vehemently objected to such a "back door" method of qualifying waste for WIPP acceptance. The senator explicitly bargained for an agreement that featured three provisos. His conditions for supporting the WIPP in New Mexico were: (1) only a 25-year operational life, (2) only 6.2 million cubic feet capacity, and (3) no "down blending" of waste. The WIPP, as stated in its name, was to be a "pilot program" that would give DOE 25 years to find a permanent waste storage solution and master plan for TRU and high level waste generated at "atomic energy defense activities." If DOE had found a depository for high level waste in the interim, no "down blending" would have been necessary for acceptance of waste at the WIPP.

PREPARING PLUTONIUM FOR ACCEPTANCE AT THE WIPP Plutonium is transported in specialized casks loaded onto trucks and trains. The US DOT regulates the movement by setting the material standards for transport. Depending on the toxicity of the material, shipments may be composed of 42 or fewer 55-gallon drums of material loaded into casks. The US DOE sets standards according to the characterization of the contents of the casks, before moving them to the WIPP. The WIPP opened in 1999, originally for disposal of equipment, clothing, and soil contaminated with dilute amounts of TRU, mostly plutonium, anywhere in the nation's nuclear weapons complex. To fully understand the potential hazards and risks associated with moving this waste material across the nation's highways and railways to the WIPP, and to two other proposed non-governmental storage sites in southeast New Mexico and western Texas, it must be understood that if one gram of soil contains as little as 1.5587 micro grams of plutonium, the DOE is required by federal standards to geologically isolate it from the environment for at least 10,000 years at the WIPP!

In August 2020, DOE issued a decision allowing the Savannah River Plutonium Processing Facility (SRPPF) to down blend (aka dilute and dispose) 7.1 metric tons of plutonium so that it meets TRU waste criteria for disposal at the WIPP. A decision issued in 2015 by DOE for an initial 6 metric tons to undergo dilution and disposal apparently established a policy precedent. In other words, high level waste will be transformed into lower level waste by a chemical process at either SRPPF or LANL. LANL will either produce plutonium oxides and send them to SRS, where the plutonium will be diluted and mixed with an adulterant, or SRS will ship the high level waste to LANL for diluting and down blending. The disposition of yet another 34 tons of plutonium at the SRPPF (previously destined for the MOX method) to move from Aiken, South Carolina, to New Mexico is pending. Meanwhile, discussions are underway regarding proposals for the surplus plutonium at the Lawrence Livermore National Laboratory (LLNL) in Livermore, California, and the Idaho Lab to become eligible for transport, as is, to the LANL for down blending and further shipment to the WIPP. New Mexico stands to receive many tons of highly dangerous plutonium for manipulation, transportation to Carlsbad, and handling at the WIPP. New Mexicans must understand that there is nothing preventing DOE from ordering LANL, then the WIPP, to handle plutonium waste from other sites in the nation where TRU waste exists. Significantly, the down blending mission at LANL concurrent with the mission of gearing up to produce the benchmark quantities of 5, then 20, then 30, and ultimately 80 pits annually would result in many more tons of high level waste generated and possibly stranded at LANL.

The national down blending program, if funded would involve four facilities and extensive transportation of plutonium in various characterizations and stages:

~ The Pantex Plant in Amarillo, Texas, has thousands of pits and other forms of plutonium which must be shipped to LANL.

~ LANL will down blend wastes received from other generators. *Note:* In addition to the pit production mission discussed in previous editions of *To The Ramparts!,* LANL has an ongoing mission in Plutonium Facility 4 (PF-4), a 69-year-old complex where DOE has a major multi-billion dollar project underway to upgrade for reuse of aged pits. These two missions involving plutonium are in addition to the manufacture of new pits, as described in the preceding paragraphs.

~ The SRS faces a challenge to fill about 166,000 drums with dilute fissile material. Scaling up by a factor of 10 and working around the clock, the facility will be almost 100 years old by 2049 when the dilute and dispose project is expected to be complete.

~ The WIPP accepts and interns waste material.

THE WIPP The facility was authorized by The Waste Isolation Pilot Plant Land Withdrawal Act (Public Law 102-579, HR 3230, 104th Congress) as approved October 20, 1992, and amended September 1996. In the 23 sections of the document spanning only 7 pages of text, Section 12 stands out. It reads, in its entirety, "The Secretary shall not transport high-level radioactive waste or spent nuclear fuel to WIPP or emplace or dispose of such waste or fuel at WIPP." Senator Domenici sought to block down blended waste in his negotiations in the 1980s. Currently, DOE plans to move plutonium across the nation's railways and federal and state highways plus county roads to LANL and the WIPP. We note that Section 16(d) (2) provides a ban on the movement of wastes through the city of Santa Fe! Obviously, forward thinkers sought to preclude any chance of a nuclear accident on the roadways of the the New Mexican state capitol. The Act does not ban movement of nuclear waste on any other roadways or railways within the US. *Note:* DOE seeks to dispose of 6 tons of fuel-grade plutonium from its research and development program, sludge from Hanford's high level radioactive waste tanks, TRU waste generated from the production of new plutonium pits, and other radioactive waste at the WIPP.

The WIPP has received 12,500 shipments of waste from 22 generator sites nationwide. Fortunately for New Mexicans, the WIPP also accepts non-nuclear wastes, such as solvents. Because the EPA enforces environmental safety standards, the New Mexico Environmental Department (NMED) can weigh in on certain permit applications and regulations at the site. The NMED regulates the WIPP by way of a Hazardous Waste Facility Permit (HWFP) that details how the facility is to manage, store, and dispose of the hazardous components that are present in the WIPP's "mixed" waste. Mixed waste at the WIPP contains both radioactive (TRU) and regulated chemically hazardous materials. The HWFP is renewed every 10 years.

OPPOSITION TO DOE AND DOD NUCLEAR ACTIVITIES WITHIN NEW MEXICO For decades there has been robust opposition to the continued colonization of New Mexico by DOE and DOD. NGOs have monitored, studied, and organized to oppose the Empire's degradation of the environment, the capture of elected governments, the reliance of the local jurisdictions on the federal government's dollar, and the opacity of the operational plans within the state. New Mexico's economy continues to lose diversity due to increased reliance on federal promises of future jobs and prosperity based on expansion of nuclear and military activities in the state. Federal congressional delegations continue to pander to and support DOE and DOD in all aspects. The business community and chambers of commerce continue to be not only supporters, but also boosters of the federal government's proposals. During her term in office, former Governor Susana Martinez granted 150 extensions of time and waivers for LANL to clean up its campus and to comply with the 2005 Consent Decree. She abrogated the Decree and negotiated a sweetheart replacement Consent Agreement for LANL in 2016.

A paradigm shift may be occurring in the tone of some state and local governments, although the awareness of the nuclear influence and risk of catastrophic accident among the voting public continues to be abysmally low. In a move toward self-determination in January 2021, both the County and City of Santa Fe voted to request a Site-Wide Environmental Study by DOE of its plans to produce pits at LANL. Last month, NMED filed suit against DOE requesting the federal court to

terminate the 2016 Consent Order for the clean-up of radioactive, hazardous, and toxic wastes at LANL. After waiting twenty years for substantial progress by DOE to clean up LANL and enduring 2005 and 2016 Consent Orders, lengthy court-supervised negotiations, and mandated dispute resolution, the NMED resorted to a
lawsuit. All this followed a Determination by the NMED in May 2002 that LANL created an “Imminent and Substantial Endangerment to Health or the Environment.”

THE THREATS AND THE CHALLENGE:

~ The Act that established the WIPP limits its capacity to 6.2 million cubic feet of TRU waste. DOE plans to lobby Congress to amend the Act and increase the authorized capacity to 175,564 cubic feet, or by as much as 50 percent, to accommodate all the waste.
Credible rumors abound that DOE’s ultimate plan is to extend the WIPP’s life until 2080 to accommodate legacy waste and waste that will be generated in the interim. Currently, millions of dollars are being spent to upgrade and extend the life of infrastructure and equipment at the WIPP.

~ DOE also hopes to dispose of as much as 500,000 gallons of grouted wastes from Hanford’s high level radioactive waste tanks at the Waste Control Specialists’ landfill in Andrews County, Texas. That landfill is a DOE temporary storage site for radioactive waste and treatment generated in DOE projects, to include the 2009-2921 clean up of the Fernald Feed Materials (Uranium) Production Center (1951-1989); it is 5 miles from Eunice, New Mexico, as the crow flies and 71 miles from the WIPP.

~ GE Hitachi Nuclear Energy in Morris, Ohio (aka Morris Operation), is the location of a de facto high level radioactive waste storage site, which as of May 2020 held 772 tons of spent nuclear fuel. It intends to ship all or a portion of its inventory of low level waste to Andrews County, Texas, under an application to the Texas Waste Disposal Compact, where currently, the Waste Control Specialists LLC (WCS) site accepts wastes from 36 other states across the US.

~ Consolidated Interim Storage (CIS) facilities have bills before Congress to authorize the storage of nuclear waste in Andrews County, Texas and Lea County, New Mexico. If the bills pass and the NRC approves the long pending applications and grants a 30-year permit, all nuclear waste, both legacy and current, from 131 utilities and other non-DOE generators could traverse the nation’s roadways and railways to those two “interim” storage depositories.

~ It is no secret that in the 1942-45 “Secret City,” LANL facilities are inadequate, old, unsafe, and poorly situated for the missions assigned and proposed. To that end, LANL this month began its reoccupation (like the Spanish in 1692) of the city of Santa Fe. LANL’s parent federal agency, the NNSA, has approved leasing up to 180,000 sq. ft. of real estate for the purposes of public meetings and teleworking. In February, it leased 28,000 and in March 77,856 sq. ft. with 10-year leases. The NNSA anticipates that about 2,000 additional staff will be necessary to accommodate round-the-clock plutonium pit production. The NNSA is looking at additional work spaces in Santa Fe, Rio Arriba, and Sandoval counties. Pit production will proceed with or without a Site-Wide Environmental Study. To that end the city of Santa Fe is reviewing its continued affiliation with an organization of governments and tribal delegations called the Regional Coalition of LANL. Due to the failure of the Coalition to affect a clean-up of LANL and its apparent use by nuclear industry lobbyists as a fig leaf for so-called ill perceived community involvement and grassroots tacit approval of DOE’s activities in Mexico, the Coalition might lose membership and clout. Further, the state senator from Las Cruces introduced SB 82, which provides, among other things, increased regulation of the flow of high level nuclear waste to commercial storage facilities in New Mexico and enhanced membership in the states’ Radioactive Task Force. The Albuquerque chapter of Veterans For Peace and Rio Grande Chapter of the Sierra Club dissented and opposed the Bill on the grounds that they want a total ban on the flow of waste into and within the state! The Alliance for Nuclear Accountability (ANA), consisting of Tri-Valley CAREs (CA), Nuclear Watch New Mexico (NM), and Savannah River Site Watch (SC) remains united in its coordinated efforts across state lines.

LEGACY We close on a somber note. This document is prepared in a dwelling that in July 1945 was a US Forest Ranger station. The Forest Rangers reported through channels to Dr.

Oppenheimer what they observed from the front porch when the Trinity test detonation occurred only 100 feet above ground level. We now know that in that test only about 20 percent of the 6.4 kilograms of plutonium exploded. The residual plutonium mixed with the soil at “ground zero” that was not consumed in the explosion and entered the ambient air, which moved throughout the US and contaminated millions of downwinders, who are yet to be compensated, along with wildlife and habitat.

New Mexico and west Texas are experiencing a cascade of nuclear challenges. It is imperative that activists work diligently and persistently to prevent a tsunami of nuclear waste from traversing the nation’s roadways and railways, which if released might ultimately enter the air, water, and soil, as well as living organisms.

Chapter #63 (https://vfp-abq.com/) is one of 130 active chapters in the international organization Veterans For Peace (VFP), including 2 chapters in New Mexico: Albuquerque (#63) and Santa Fe (#55). Chapter #63 meets virtually at 5:30 pm Mountain Time on the second Monday of each month. We welcome members, associate members, and non-members to join us at our meetings and events. You need not have been in the armed forces to join VFP. VFP members pledge to use non-violent means and to maintain an organization that is both democratic and open, with the understanding that all members are trusted to act in the best interests of the group for the larger purpose of world peace.

Chapter #63’s Environmental Committee welcomes suggestions and input regarding *To The Ramparts!* Kindly send your thoughts to John Wilks at johnewilksiii@windstream.net or Bill Tiwald at vhtiwal@gmail.com.