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Systematic Assessment for how the NRC Addresses Environmental Justice in its Programs, Policies, and Activities

Comment On: NRC-2021-0137-0001

Systematic Assessment for How the NRC Addresses Environmental Justice in Its Programs, Policies, and Activities

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Comment on FR Doc # 2021-14673

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General Comment

See attached file(s)

Attachments

Final NRC EJ Letter



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October 29, 2021

Sent to: NRC-EJReview@nrc.gov &
Regulations.gov

US Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Re: Docket ID NRC-2021-0137-0001

Dear Sir or Madam,

The President's Executive Order on Tackling the Climate Crisis at Home and Abroad, January 21, 2021, "requires the Interagency Council to develop a strategy to address current & historic environmental injustice by consulting with the White House Environmental Justice Advisory Council and local environmental justice leaders. The Interagency Council shall also develop clear performance metrics to ensure accountability" Sec. 220 (d).

Environmental Injustice in New Mexico—A Recent Example

Developing an environmental justice programs is an extremely tall order for the NRC as the Agency has been making extremely careless and irresponsible decisions as it relates to the most hazardous substance known – spent nuclear fuel or high level nuclear waste. NRC has already approved the plan for interim consolidated storage for thousands of tons of this material to be stored at a planned Holtec facility in New Mexico.

New Mexico and other areas of the Southwest were targeted for Nuclear weapons testing and many uranium mining sites are also abundant with significant environmental contamination issues that have been unaddressed for decades. Few efforts to restore and cleanup the land have been made. Other nuclear facilities in the area include Urenco, USA which does nuclear fuel enrichment and WIPP, the Waste Isolation Pilot Project, the only geological repository in the nation for transuranic waste.

WIPP was the site of a major industrial accident caused by carelessness at the Los Alamos National Laboratory, which failed to follow packing instructions for transuranic waste, requiring use of only inorganic materials. Organic kitty litter was used resulting in an explosion and fire at WIPP exposing workers to airborne plutonium. WIPP was closed for about 3 years for cleanup and recovery, before limited shipments were again allowed. A new ventilation system is to be installed for the facility. This was a very costly disaster for the nation. Los Alamos NL has a history of numerous criticality incidents and the repeated problems point to the need for much stricter safety measures. Wildfires at the Lab recently impacted areas known to be radioactively contaminated. Given the vast areas of

contamination by nuclear wastes, a key task should be identifying these areas and planning for segregation and isolation of these wastes to prevent health impacts to the public.

Water is and will increasingly be an essential resource for communities in this region. Access to clean water is jeopardized by past mining practices as well industry activities associated with oil and gas drilling in the Permian basin.

The potential for contamination of the important Ogallala aquifer is real. The aquifer lies under eight states. At the same time the 4th National Climate Assessment says water is being depleted faster in the Ogallala than it is being replaced.

NRC has allowed secrecy between Holtec and local government entities.

Local government entities are working in collaboration with Holtec on this project, but few of the details regarding the collaboration have been made available to this Environmental Justice community. Essential information for the public includes a comprehensive list of what Holtec is responsible for and what the local government entities will be responsible for. However NRC has opted to allow such critical information to be proprietary. This prevents real collaboration with the public and enables chaos when a real emergency occurs and increases the likelihood of dangerous radioactive exposures.

Transportation of spent nuclear fuel long distances from nuclear reactors is an essential part of the entire project. Therefore transportation should be a detailed part of the EIS, however NRC allowed transportation to be eliminated from the EIS and any analysis in violation of NEPA requirements.

It is known that the vibrations, jolts and shocks associated with transportation could damage spent fuel rods and canisters, potentially leading to radioactive releases. The adopted plan for resolution of this issue is—a “Return to Sender” policy. Unfortunately, NRC has failed to deal with the environmental, safety and health implications of such a policy. Staff members found it very easy to say transportation is low risk when the very real risks have not been analyzed at all. A detailed Plan for dealing with a radioactive release should be prepared by NRC—including the education of volunteer emergency responders.

High Burnup Fuel adds to Transportation Risks and NRC even identified HBR risks in its 2014 Waste Confidence decision. Instead of actually engaging in the research needed on HBF, NRC is dramatically increasing its use and supporting HALEU with enrichment to just under 20%, whereas 5% is the enrichment widely used today.

The Nuclear Waste Technical Review Board identified that it would take at least 10 years to address all the relevant issues and problems associated with transportation. Shouldn't NRC utilize the expertise of this board before giving its approval? The Sandia Lab is currently researching many topics related to key safety issues associated with consolidated interim storage.

NRC has discussed the need for 2 protective barriers for spent fuel—intact fuel rods and a stainless steel canister. However, NRC also allows damaged fuel rods to be included in stainless steel canisters, which means settling for only one barrier from the release of dangerous levels of radioactivity.

No New Rules & Regulations were prepared for Consolidated Interim Storage Facilities

Instead NRC merely used regulations adopted for individual reactor sites. Consolidation and large volumes of spent fuel should have meant much stricter standards and scrutiny to ensure safety and the prevention of catastrophic events.

In 2014 Rulemaking NRC required the use of Dry Transfer Systems or Hot Cells

In 2014 NRC issued its Waste Confidence decision, renamed as “Long Term Storage”. Long term storage of 100 years would apply to a new CIS facility and its Independent Spent Fuel Storage Installation (ISFSI.) In 2014 NRC planned for radiation-shielded facilities where a canister could be safely removed from and outer cask in order to inspect the canister for defects or to replace the canister using remote handling equipment to protect workers. Canisters cannot be re-welded. NRC called these shielded facilities Dry Transfer Systems. They are also called Hot cells. Yet in 2021, NRC failed to provide any rationale for not incorporating its 2014 decision requiring Dry transfer Systems to new CIS facilities.

Security and the Potential for Terrorism should be major concerns for NRC

Going back as far as the first review of safety by the National Academy of Sciences, the panelists noted that no security information was provided to them or discussed. However, that was prior to more recent heightened concern about terrorism. We believe NRC has simply not considered the catastrophic potential of a terrorist attack on a consolidated interim storage facility holding thousands of spent fuel casks. The New Mexico CIS facility will store 147,000 tons of SNF in an open air facility readily visible for hundreds of miles and without hardening. Other countries use reinforced concrete buildings, which provide hardening from a terrorist attack.

In the absence of the ability to transfer a damaged shipment to a new canister, NRC has supported the “Return to Sender” policy. Holtec intends to merely send any damaged shipment back to sender without any intervention to prevent or control a radiological release. This potentially means spewing radioactivity over hundreds or thousands of miles of a return trip, exposing workers and the public to dangerous levels of radiation.

Primacy of Science, Public Health and Climate Change

It is not possible to address Environmental Justice properly without fully recognizing the complete range of serious and long-lasting radiological hazards and public health impacts associated with nuclear materials. So the first step must be to engage qualified scientists with expertise in radiation protection and public health. To adequately perform their jobs, this group of scientists must be isolated from those within the agency who are only there to serve the commercial interests of the nuclear industry. Science, public health and climate change must be the sole focus of this group of scientists. In the absence of this science and public health focus it is not possible to adequately deal with environmental justice because:

- 1) We are dealing with highly toxic and some very long lasting radionuclides, potentially impacting many future generations. Nuclear waste is high risk for the nation as the US GAO has identified. Radiological impacts will be the inheritance for each new generation. Intergenerational injustice is one form of environmental injustice.
- 2) Climate change is dramatically changing the weather for areas we live in. We are not prepared for the type of storms, rainfall, wind and extreme conditions, including

- wildfires we may experience. Neither are the various types of nuclear facilities we have constructed prepared for these changes and they all need climate change assessments.
- 3) There is a critical need to prevent the most serious events involving deaths and exposure to hazardous and radioactive materials. Nuclear facilities also need hardening to protect them from climate change impacts and to protect the public from a catastrophe.
 - 4) Recovering from Climate Change adverse events can take years, but we must prioritize Prevention of Harm.

Key EJ actions for the Agency:

- **The NRC’s mission requires the agency to consider and address environmental justice more fully and deeply.** The NRC’s mission is to “license and regulate the Nation’s civilian use of radioactive materials *to provide reasonable assurance of adequate protection of public health and safety* and to promote the common defense and security and to protect the environment.” Providing protection of public health and safety must include ensuring that the most vulnerable communities are not disproportionately impacted.
- **The NRC must consider the environmental justice impacts of the full nuclear fuel chain.** The nuclear fuel chain includes many steps, from uranium mining, milling, conversion, enrichment, and fuel fabrication to energy production, waste storage, treatment, transportation, and disposal. The NRC currently keeps the consideration of these steps, and their impacts, in distinct silos. But a single community can bear the burden from multiple stages of the nuclear fuel chain and the NRC should take into account these cumulative burdens in their environmental justice analyses. The NRC must look at the impacts of the nuclear cycle beyond radiation.
- **The NRC should look to the 17 Principles of Environmental Justice in defining what environmental justice means for the agency.** <http://www.ejnet.org/ej/principles.pdf> Environmental justice means fair treatment and **meaningful** involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. It means providing both procedural and substantive protections. It means actually addressing environmental injustices, including environmental burdens disproportionately held by low-income communities and communities of color, and it also means including stakeholders that have typically been excluded from the decision-making process.
- **The NRC must follow the Biden Administration’s promise to deliver environmental justice.** In his recent executive order, President Biden directed that “[a]gencies shall make achieving environmental justice part of their missions by developing programs, policies, and activities to address the disproportionately high and adverse human health, environmental, climate-related and other cumulative impacts on disadvantaged communities, as well as the accompanying economic challenges of such impacts.” <https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/27/executive-order-on-tackling-the-climate-crisis-at-home-and-abroad/>

Thank you for your attention.

Sincerely,

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