



MEDIA RELEASE

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NEW REPORT REVEALS LANL TRITIUM VENTING COULD HAVE TRIPLE THE RADIATION EXPOSURE TO INFANTS COMPARED TO ADULTS

Native-Led Nonprofit Tewa Women United Commissioned Two Reports to Study Impacts. Finding: LANL Omitted Dose Calculations to Infants & Children in Their Compliance Application

ESPANOLA, NM — The Native-led nonprofit organization Tewa Women United (TWU), based in Española, New Mexico, has released two independent scientific technical reports assessing the implications and adherence to regulations concerning Los Alamos National Laboratory's (LANL) proposal to release tritium into the open atmosphere from four Flanged Tritium Waste Containers (FTWCs) located in Area G (TA-54), near White Rock, New Mexico.

These reports found that the concentration of tritium in the most loaded radioactive container, if vented during unfavorable weather conditions, could lead to radiation doses significantly exceeding the annual regulatory limit of 10 millirem established by the Environmental Protection Agency (EPA) regulatory radiation standards.

The author of one report, Bernd Franke, stated, “In the case of tritium, infants and small children get a radiation dose about three times greater than adults, with the same concentrations of tritium in air, water, and food.”

However, LANL's application for venting did not include potential impacts of the tritium venting on infants or children; in effect, LANL did not consider them as “members of the public.” So far during the permitting process, the EPA has allowed LANL to ignore these vulnerable populations in their proposal.

Kathy Wan Povi Sanchez, member of San Ildefonso Pueblo and one of Tewa Women United's co-founders, said, **"Tritium makes water, our sacred source of life, radioactive. We were shocked to learn that LANL's compliance calculations did not take infants and other children into account."**

Due to LANL's failure to both sample the contents within the headspace of the radioactive containers and to conduct a thorough assessment of radiation exposure to all members of the public under various weather conditions, TWU collaborated with German scientist **Bernd Franke**, a Director of the Institute für Energie und Umweltforschung (IFEU), and **Dr. Arjun Makhijani** from the Institute for Energy and Environmental Research (IEER), author of *Exploring Tritium Dangers*, to obtain further insights into the dose and risks of tritium exposure for "members of the public" during various weather events to determine whether the tritium venting project complies with the Clean Air Act.

The first report, *Review of LANL Radiation Dose Assessment for the Venting of Flanged Tritium Waste Containers (FTWCs) at TA-54 of Los Alamos National Laboratory* authored by Franke, contains results from a model used to assess the possible range of radiation doses to the public across various weather scenarios.

Franke, an expert in radiation dose assessment, stated, "I utilized the same model as LANL and incorporated weather data from the station in Area G, while also considering adverse weather conditions, such as days with low humidity and increased wind frequency directed towards White Rock. Additionally, I compared these factors across various age groups of the public, in contrast to LANL, which solely includes adults in their compliance calculations. Using this analysis, I found that infants and small children have a potential radiation exposure three times that of adults."

Dr. Makhijani stated, "According to the EPA regulatory radiation standards, [Title 40 Code of Federal Regulations \(CFR\) 61 Subpart H](#) requires that the radiation dose to 'any member of the public' should be less than 10 millirem per year." Dr. Makhijani noted, **"EPA allowed LANL to ignore children and infants in its dose calculations."**

Tritium is a radioactive hydrogen isotope that displaces ordinary hydrogen in water and makes it radioactive. This is called tritiated water. Since plants take up water and animals eat plants, tritiated water in the environment also makes food radioactive. Tritium exposure poses greater risk for children and infants for many reasons. For instance, infants are about 74% water, while adult males are 59% water, on average.

The second report, *Out of Order*, authored by Dr. Makhijani, assesses the compliance of LANL's proposal with the applicable Clean Air Act radiation protection regulation set forth by the EPA in Title 40 CFR 61, Subpart H, as well as with Department of Energy (DOE) Order 458.1, which requires DOE facilities like LANL to keep public exposures and environmental contamination "as low as reasonably achievable." *Out of Order* indicates that "using the very same assumptions about maximum possible releases at LANL, the proposed venting would not be in compliance with the Clean Air Act. The EPA was wrong to have approved the venting. That permit has expired. It should require that LANL completely re-do its application."

"As important as they are, there are matters far beyond these technicalities," said **Talavi Cook**, Environmental Justice Program Manager at Tewa Women United. **"Not only should the EPA radiation protection standards explicitly include children and infants in its definition of 'any member of the public', but Tewa Women United believes that radiation protection should extend to pregnant women due to fetuses comprising of 70% - 90% water; pregnant members of the public are not currently protected by the Clean Air Act or**

any other radiation protection regulation. It would be especially egregious if fetal health is compromised by LANL venting radioactive water vapor and making our rainwater and food radioactive. It is a matter of simple environmental justice for future generations.”

Tewa Women United has formally requested that LANL and the EPA Region 6 provide a list of evaluated alternatives to venting tritium. LANL has told EPA there are 53 alternatives; that list of alternatives, initially requested in 2022, has not yet been disclosed. Tewa Women United has repeatedly asked LANL to provide the public with that list.

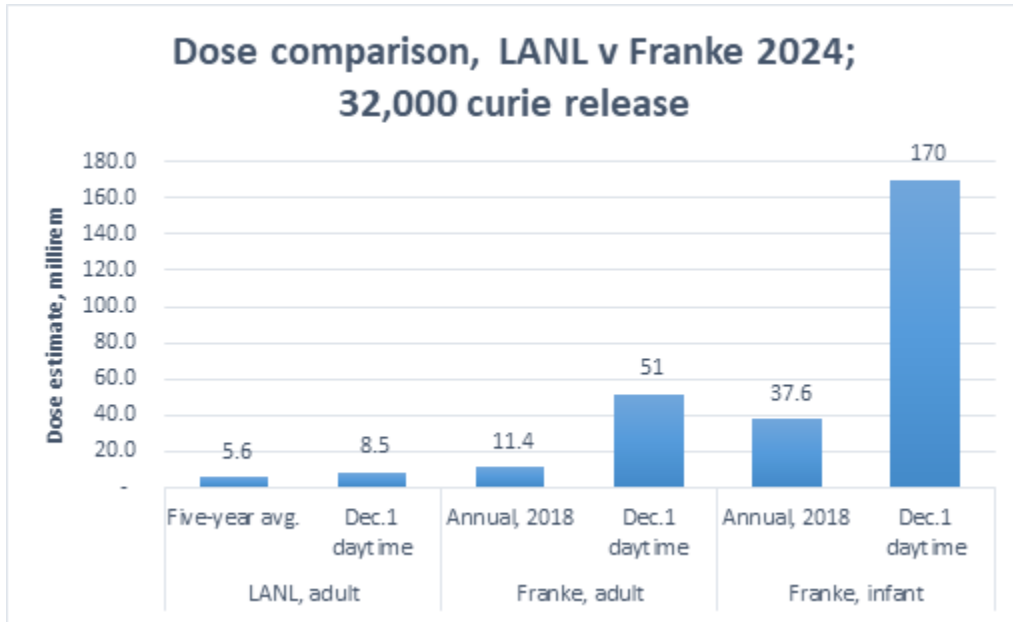
“Normally, if an agency or government entity intends to release radioactive emissions in the course of a project, it must demonstrate that the approach only releases radiation at a dose level that is ‘as low as reasonably achievable’ (ALARA) below the regulatory limit,” said **Maslyn Locke**, Senior Staff Attorney at the New Mexico Environmental Law Center. “This well-known principle of radiation safety is something that LANL is very familiar with, yet was not addressed when it came to the venting project according to the requirements of DOE Order 458.1, to which LANL is subject. In the absence of an ALARA analysis, and certainly in the absence of any consideration of how tritium impacts children as members of the public, it is impossible to know whether venting is needed at all. **Until LANL considers impacts to children as members of the public and files a completely new application, the EPA should not permit the venting of the flanged tritium waste containers.”**

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ABOUT TEWA WOMEN UNITED

Tewa Women United (TWU), founded in 1989, is a multicultural and multiracial organization led by Native women. TWU’s mission is to provide a brave space for Indigenous women to uncover the power, strength, and skills they possess to become positive forces for social change in their families and communities. For more information, visit: www.tewawomenunited.org.

The chart shows the significant impact of considering infants, for whom calculations indicate non-compliance with the Clean Air Act. The compliance limit is 10 millirem per year. Annual and single day weather data are shown.



Tewa Women United’s Perspective

The wellness of land-based peoples is reflected in the health of their environment and local food sources. By ensuring protections are designed with the unique physiologies and health needs of women, mothers, birthing people, and children in mind, we protect the current and coming generations. *Nava To’i Yiya* is the Tewa phrase for Land Working Mother.

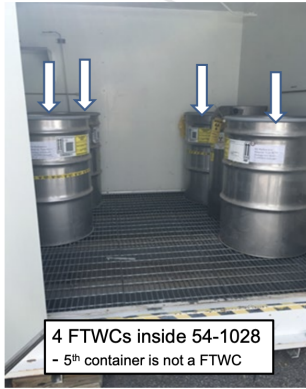
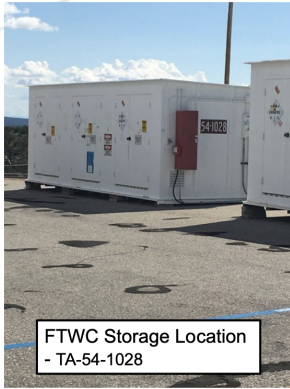
TEWA WOMEN UNITED’S PERSPECTIVE

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Nava To’i Yiya/Yiya
(Land Working Mother)

Area G FTWCs



UNCLASSIFIED

Area G FTWCs - Map



FTWC Storage Location
- TA-54-1028



UNCLASSIFIED