OFFICE OF RADIATION AND INDOOR AIR
WASHINGTON, D.C. 20460

June 27, 2024

Mr. Mark Bollinger
Manager
Carlsbad Field Office
U.S. Department of Energy
P.O. Box 3090
Carlsbad, New Mexico 88221

Re: Notification for Start of Experimental Activities Associated with Storage of a Nonflammable Gas Mixture Containing Hydrogen in Permian Basin Bedded Salt Formations

Dear Mr. Bollinger:

The U.S. Environmental Protection Agency has reviewed the Department of Energy (DOE) letter dated June 5, 2024, regarding the start of certain experimental activities. The DOE letter describes these experiments as activities to characterize the behavior of hydrogen gas (H_2) stored in bedded salt by drilling vertical boreholes in the northern underground experimental area and injecting the boreholes with a nonflammable mixture of H_2 and argon or nitrogen.

DOE's submitted documentation meets the requirements established for experimental activities in the EPA's 2003 letter[1] and, based on the DOE's representations, the EPA finds that these activities are not directly related to the disposal of transuranic wastes at the Waste isolation Pilot Plant (WIPP). Further, the EPA agrees that no modifications or impacts to waste disposal processes or operations will occur as a result of these experiments. The planned activities will not alter either WIPP's ability to safely emplace waste or the current certified design of the disposal system. Additionally, the <5.5% mixture of H_2 with nitrogen/argon does not appear to be a flammable hazard.

For this and any other experiments, the DOE should provide status updates in the change reports required by 40 C.F.R. § 194.4 (b)(4). Please be advised that this letter does not in any way constitute a determination that the DOE has actual statutory authority under the WIPP Land Withdrawal Act to

[1] Letter from Frank Marcinowski, Director, Radiation Protection Division, Office of Radiation and Indoor Air, EPA to Dr. Ines Triay, Manager, Carlsbad Field Office, DOE. (March 11, 2003).

conduct such activities, nor is this letter intended to indicate in any manner the agency's opinion on this question.

The EPA appreciates DOE's adherence to established processes for reporting experimental activities at WIPP. If you have any questions, please contact Tom Peake at (202) 343-9765.

Sincerely,

Lee Veal Digitally signed by Lee Veal
Date: 2024.06.27 13:39:19 -04'00'

Lee Ann B. Veal
Director
Radiation Protection Division

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