November 8, 2024

The Honorable Joseph Goffman

Assistant Administrator

Office of Air and Radiation

U.S. Environmental Protection Agency

1200 Pennsylvania Avenue, N.W.

Washington DC 20460

**Subject: Opposing Use of Radioactive Phosphogypsum in Roads (Docket ID No. EPA-HQ- OAR-2024-0446)**

Dear Assistant Administrator Goffman,

We the undersigned XX organizations are writing in opposition to Environmental Protection Agency’s (“EPA”) pending approval of radioactive phosphogypsum for use in roads. This hazardous waste emits harmful, cancer-causing radon gas and contains other carcinogens and heavy metals like arsenic, cadmium, and lead, and has been banned in road use for over three decades.[[1]](#footnote-1) EPA’s pending approval rejects well-documented harms and serious risks associated with phosphogypsum in roads while arbitrarily permitting cancer-exposure three times the amount legally permissible in contravention of the Clean Air Act.

Since 1992, the Environmental Protection Agency has prohibited the use of phosphogypsum in road construction, citing numerous scenarios that would expose the public, and especially road construction workers, to an unacceptable risk of cancer.[[2]](#footnote-2) EPA also found that phosphogypsum used in roads could contaminate nearby surface and groundwater quality through leaching, and that radioactive material could be disseminated into the air by wind and vehicle traffic.

Phosphogypsum stacks are also historically located adjacent to vulnerable communities that are already dealing with disproportionate legacy impacts of cancer-causing pollution and environmental injustice. Radium-226 present in phosphogypsum has a 1,600-year half-life and will outlast most roads throughout the state, and EPA must look at the long-term consequences of its use in road construction.

Any application for other use *must* be “at least as protective of public health, both in the short term and the long term, as disposal of phosphogypsum in a stack or mine,” meaning that it may not present a lifetime cancer risk of 9.1 in 100,000.[[3]](#footnote-3) This is precisely why EPA excluded road construction as a viable alternative use in its 1992 rulemaking, finding that cancer risks *always* exceeded even the upper limit of the presumptively safe level of 1 in 10,000 historically used as the ceiling for Clean Air Act safety determinations. The Director of EPA’s Office of Radiation and Indoor Air previously testified before Congress that “[a]n unreasonable risk is one that exceeds 1 in 10,000” and that “a generic national exemption for road building material could not meet the risk criteria.”[[4]](#footnote-4)

Approval of an erroneous application for a road project will inevitably lead to an erroneous application for road use nationwide. This small-scale study is not an innocuous science-experiment, it is in fact “the intermediate step between laboratory testing and full-scale implementation” of phosphogypsum use in roads. Approving this application would accept a cancer risk that is three times what EPA has historically deemed acceptable, flouting the goal to reduce cancer pathways to the public.

Even assuming the cancer threshold was appropriate, the application relies on the concept of “reasonable maximum exposure,” a term that appears to be absent from any Clean Air Act guidance or rulemaking, but that allows for any assessment of risk to be severely limited – only looking at 1 year for utility workers and failing to analyze the exposure pathway previously found “to be significantly above the acceptable risk” in road construction projects, for example.[[5]](#footnote-5) These arbitrary limitations of exposure pathways do not conform with EPA’s own regulation.[[6]](#footnote-6) Risk assessments should be “based on the exposure to the maximally exposed individual,” which “ensures that the NESHAPs protect the health of even the most exposed individual regardless of the likelihood of that individual’s becoming exposed.”[[7]](#footnote-7)

Any practice “involving exposure to radiation” must “do more good than harm” taking into account social costs and should offer “legitimate use with real benefits.”[[8]](#footnote-8) A project conducted by the fertilizer industry, on fertilizer industry land, and relying on methodology developed by a fertilizer industry grant, is nothing more than a convenient disposal option for this industry’s waste. Moreover, the facility at which this construction will occur has well-known structural integrity problems, having experienced a litany of liner tears and sinkhole-like anomalies that dumped millions of gallons of waste into the Floridan aquifer.[[9]](#footnote-9) That toxic waste likely remains in the aquifer to this day despite attempts to recover contaminated groundwater.[[10]](#footnote-10)

Approval of this project will undoubtably authorize the placement of radioactive phosphogypsum in roads nationwide. EPA cannot work to reduce cancer by half through the “Cancer Moonshot” while at the same time adopting a three-fold increase in the “acceptable” cancer risk by approving this arbitrary assessment.[[11]](#footnote-11) We thus urge you to rescind this pending approval.

Sincerely,

[[GROUPS]]

1. EPA BID, Potential Uses of Phosphogypsum and Associated Risk (1992) [↑](#footnote-ref-1)
2. National Emission Standards for Hazardous Air Pollutants; National Emissions Standards for Radon Emissions from Phosphogypsum Stacks, 57 Fed. Reg. 23305 (June 3, 1992). [↑](#footnote-ref-2)
3. 40 C.F.R. 61.206(c); National Emission Standards for Hazardous Air Pollutants and Radionuclides, 54 Fed. Reg. 51654, 51675 (Dec. 15, 1989) [↑](#footnote-ref-3)
4. Phosphogypsum: Should We Just Let It Go to Waste? Parts 1 and 2: Hearing Before the Subcomm. On Technology, Information Policy, Intergovernmental Relations, and The Census, 108 Cong. 191 (2004). [↑](#footnote-ref-4)
5. U.S. EPA, Review of the Small-Scale Road Pilot Project on Private Land in Florida Submitted by Mosaic Fertilizer, LLC at 20 (Oct. 1, 2024) [↑](#footnote-ref-5)
6. 54 Fed. Reg. at 38045 (Sept. 14, 1989). [↑](#footnote-ref-6)
7. U.S. EPA, Comments and Response to Comments, NESHAPS; National Emission Standards for Radon Emissions From Phosphogypsum Stacks at 8 (Nov. 1998). [↑](#footnote-ref-7)
8. U.S. EPA, Applying to EPA for Approval of Other Uses of Phosphogypsum at 11 (Dec. 2005) [↑](#footnote-ref-8)
9. Christopher O’Donnell, *Mosaic plant sinkhole dumps 215 million gallons of reprocessed water into Floridan Aquifer*,Tampa Bay Times(Sept. 16, 2016), <https://www.tampabay.com/news/environment/water/mosaic-plant-sinkhole-dumps-215-million-gallons-of-reprocessed-water-into/2293845/> (last visited Nov. 1, 2024). [↑](#footnote-ref-9)
10. FDEP Application Phase IV Gypsum Stack Extension, Mosaic New Wales, Table 1-7 at 1-23. [↑](#footnote-ref-10)
11. White House, Fact Sheet: Biden-⁠Harris Administration Announces $150 Million from ARPA-H to Deliver Progress on Biden Cancer Moonshot Goals and Improve Health Outcomes (Aug. 13, 2024) https://www.whitehouse.gov/briefing-room/statements-releases/2024/08/13/fact-sheet-biden-harris-administration-announces-150-million-from-arpa-h-to-deliver-progress-on-biden-cancer-moonshot-goals-and-improve-health-outcomes/ [↑](#footnote-ref-11)