December 11, 2023

via www.regulations.org

Michael Regan
Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Ave NW
William Jefferson Clinton Bldg Room: EPA East Room 1309
Washington, DC 20004

Re: New Data Support Urgent Need to Prevent Harm to Human Health from Use of Coal Ash as Structural Fill, Docket ID No. EPA-HQ-OLEM-2020- 0107

Dear Administrator Regan:

The undersigned xxx groups and individuals demand immediate action by the Environmental Protection Agency ("EPA") to prevent further serious harm from coal ash (coal combustion residuals or "CCR") used as fill in residential areas. The EPA's "Risk Assessment of Coal Combustion Residuals: Legacy Impoundments and CCR Management Units," (draft), published on November 14, 2023[1] reveals significant new human health risks from coal ash used as structural fill. Therefore, In addition to finalizing a strong Legacy CCR Surface Impoundments Rule,[2] we ask the EPA to take the following actions: (1) quantify the full range of health risks posed by coal ash used as structural fill, particularly the risk from radiation; (2) investigate areas where coal ash fill has been placed near residences and require cleanup; (3) initiate a rulemaking to prohibit the use of coal ash as structural fill; and (4) issue a public advisory recommending that coal ash fill in residential areas be immediately terminated pending a final rulemaking.

We request these urgent steps because EPA's recently published draft risk assessment found unacceptable cancer and non-cancer risks from exposure to arsenic and radioactivity from coal ash fill.[3] Radioactivity is released from coal ash in subsurface deposits when ash is used as fill. EPA found cancer risks exceeding health standards when coal ash is mixed with soil at ratios that include *very small amounts* of coal ash (1 and 2 percent of the soil mixture).[4] When coal ash constitutes 8 to 17 percent of the soil mixture, EPA found cancer risks above 1 in 10,000 – the threshold for EPA regulation.[5] These findings are alarming because coal ash used as fill is often

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[1] U.S. Environmental Protection Agency, Hazardous and Solid Waste Management System: Disposal of Coal Combustion Residuals From Electric Utilities; Legacy CCR Surface Impoundments, Notice of Data Availability, 88 Fed. Reg. 77,941 (Nov. 14, 2023).

[2] *See* letter from 160 public interest groups calling for a strong Legacy CCR Surface Impoundments Rule, July 17, 2023, Docket ID No. EPA-HQ-OLEM-2020-0107-0287, available at https://www.regulations.gov/comment/EPA-HQ-OLEM-2020-0107-0287.

[3] U.S. Environmental Protection Agency, Risk Assessment of Coal Combustion Residuals: Legacy Impundments and CCR Management Units (Draft) (Oct. 2023) at Section 6.

[4] *Id*. at 6-10.

[5] *Id.* Draft Risk Assessment at 6-10. EPA typically relies on a risk to determine when regulation is appropriate. Waste streams for which the calculated high- end individual cancer-risk level is 1×10^5 or higher generally are considered

not diluted nor covered with soil to shield its radioactivity.[6] Thus, for coal ash fills where ash is not mixed with soil or where ash is present at much higher concentrations,[7] cancer risk is likely to be substantially higher for residents living near or on top of these fills.

Second, EPA found unacceptable health risks from arsenic from coal ash fills.[8] While a finding of unacceptable cancer risks from arsenic in coal ash is not new, the finding is significant in light of EPA's draft Integrated Risk Information System (IRIS) Toxicological Review of Inorganic Arsenic published in October 2023.[9] EPA's draft IRIS assessment finds significantly heightened health risks from inorganic arsenic, one of the most common hazardous substances in coal ash and coal ash leachate. In fact, EPA is proposing to raise the cancer potency estimate by 35 times, finding that much smaller amounts of arsenic are carcinogenic. In addition, EPA found an increased risk of heart disease from arsenic ingestion and recommended that the safe daily lifetime dose be 10 times lower than the current value. These findings indicate serious harm from exposure to low levels of arsenic, which in turn raises the risk from exposure to coal ash used as fill.

EPA action is urgently needed. Immense volumes of coal ash have historically been used as fill in the U.S. for more than a century. The American Coal Ash Association ("ACAA") found that more than 118 million tons of coal ash were used for "structural fill or embankments" from 2000-2017.[10] This figure underestimates the amount of ash used in fill projects, because the data only include volumes reported voluntarily by industry. Despite the certain underestimation, the volume reported by ACAA is enormous. 118 million tons of coal ash could bury the State of Kentucky in toxic waste about three feet deep. Further, this volume does not account for the many decades of coal ash use prior to 2000, which would bring the total amount of coal ash fill to more than 180 million tons.[11] Since most states do not regulate coal ash fill, safeguards are largely absent. Few states prohibit the placement of ash near drinking water wells, homes, or even playgrounds. To make matters worse, the use of coal ash as fill is rapidly increasing. This November, the ACAA reported that use of coal ash as structural fill *rose by 40 percent* from 2020

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candidates for regulation. According to EPA, "waste streams whose risks are calculated to be 1×10^4 or higher generally will be considered to pose a substantial present or potential hazard to human health and the environment and generally will be regulated." 80 Fed. Reg. at 21,449.

[6] The EPA assumes there is always sufficient cover on top of structural fill. Draft Risk Assessment at 6-10.

[7] EPA describes CCR structural fill as CCR "used as a substitute for natural materials in the construction of a structural fill." This description implies that coal ash is *substituted* for soil, rather than mixed. *See,* EPA, Frequent Questions about the Beneficial Use of Coal Ash, "What is structural fill?" https://www.epa.gov/coalash/frequent-questions-about-beneficial-use-coal-ash#t1q7. Further, EPA's discussion of CCR fills in the preamble to the 2015 CCR Rule does not mention mixing CCR with other materials and discusses placement of volumes of CCR directly on the land, noting the similarity between "large scale structural fills" and CCR landfills. 80 Fed. Reg. 21,349-54. In the preamble, EPA also cites ASTM E277-03, "Standard Guide for Design and Construction of Coal Ash Structural Fills," which clearly describes the practice of using fly ash and bottom ash, without mixing, in engineered fills. Lastly, EPA damage cases involving CCR fills illustrate the practice of CCR placement without soil mixing, including the Gambrills, Maryland fill site and the Battlefield Golf Course in Chesapeake, VA. 80 Fed. Reg. 21,328.

[8] Draft Risk Assessment at 6-10.

[9] Environmental Protection Agency, Availability of the Draft IRIS Toxicological Review of Inorganic Arsenic, 88 Fed. Reg.71,360 (Oct. 16, 2023).

[10] *Id.*

[11] According to oral testimony of Thomas Adams, President, ACAA, at the EPA Public Hearing for the Phase 2 Proposed Rule in Arlington, VA on October 2, 2019, approximately 180 million tons of CCR has been used for structural fill since 1980.

to 2021.[12] Thus the historic and continuing use of coal ash as fill presents substantial risks to human health.

EPA, however, has done almost nothing to investigate and remediate contaminated fill sites or prohibit dangerous practices. The following sites illustrate the continuing threats to human health:

• **Iredell County, North Carolina**: Coal ash from Duke Energy's Marshall Steam Station was routinely used as structural fill, landscaping and other projects in residential neighborhoods, including 40,000 tons of coal ash near the local high school. The volume of coal ash fill used in this area (the Highway 150 corridor) is the largest documented in the State of North Carolina. The rate of papillary thyroid cancer in Iredell County is 2-3 times higher than the state average, and cancer has stricken dozens of local teenagers. Although ionizing radiation is a scientifically proven environmental link to thyroid cancer,[13] no investigation of coal ash as a source of radioactivity has been conducted, and the coal ash remains near homes and schools.[14]

• **Southeastern Puerto Rico:** From 2004 to 2012, more than 2 million tons of coal ash from the AES Guayama Power Plant were used as fill in dozens of construction projects in southeastern Puerto Rico, including housing, hospital, and road projects.[15] Most sites are located directly above the South Coast Aquifer in the vicinity of public supply water wells, and in some cases ash was placed directly in the aquifer.[16] At dozens of sites, coal ash remains uncovered and close to homes, parks and schools. The Guayama region where the ash was placed is an environmental justice community.

EPA action to remedy these hazardous sites and prevent further dangerous use of toxic ash is needed because EPA's current regulation of coal ash fill is grossly inadequate. There are no restrictions whatsoever on placement of coal ash for volumes less than 12,400 tons. For larger volumes, the lack of enforceable safeguards and oversight is equally disastrous.[17] Coal fill can be placed directly next to or under dwellings, drinking water wells, aquifers, and playgrounds. Further, there is no requirement to even cover the toxic waste.

EPA must immediately protect communities across the nation from the dangerous and unacceptable practice of substituting toxic coal ash for clean soil. At a minimum, we ask EPA to take the following four steps to protect public health:

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[12] ACAA, 2021 Production and Use Survey Results News Release (Nov. 2023), available at https://acaa-usa.org/wp-content/uploads/2022/12/News-Release-Coal-Ash-Production-and-Use-2021.pdf

[13] Lisa Sorg, "Duke U. scientists to focus on radon, coal ash, flame retardants in Iredell thyroid cancer cluster probe," NC Newsline, March 22, 2019, https://ncnewsline.com/2019/03/22/duke-u-scientists-to-focus-on-radon-coal-ash-flame-retardants-in-iredell-thyroid-cancer-cluster-probe/

[14] In some areas the coal ash is uncovered. *See,* Lisa Sorg, NC Newsline, Coal ash sinkhole expands in Mooresville, contaminating stream while legal dispute delays cleanup, June 28, 2023, available at https://ncnewsline.com/2023/06/28/coal-ash-sinkhole-expands-in-mooresville-contaminating-stream-while-legal-dispute-delays-cleanup/

[15] 84 Fed. Reg. at 21,328.

[16] 80 Fed. Reg. at 21,329.

[17] 40 C.F.R. § 267.53.

(1) Quantify the health risks via inhalation and ingestion posed by the use of coal ash as structural fill, particularly the risk from exposure to radiation;
(2) Investigate areas where coal ash fill has been placed near residences and require cleanup;
(3) Initiate a rulemaking to prohibit the use of coal ash as structural fill; and
(4) Issue a public advisory recommending that coal ash fill in residential areas be immediately terminated pending a final rulemaking.

Thank you for considering this urgent request to protect the health of vulnerable communities nationwide from dangerous placement of toxic coal ash. We also thank you for moving expeditiously to finalize a strong Legacy CCR Surface Impoundments Rule.

Respectfully submitted,