

September 13, 2019

Baskut Tuncak
Special Rapporteur on the implications
for human rights of the environmentally sound management
and disposal of hazardous substances and wastes

Dear Mr. Tuncak,

Thank you for your letter of March 15, 2019, concerning the AES-Puerto Rico (AES-PR) coal-fired power plant in the municipality of Guayama, Puerto Rico and the Coal Combustion Residuals (CCR) produced there.

Please find enclosed a U.S. response to your letter.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Daniel A. Kronenfeld', with a stylized, flowing script.

Daniel A. Kronenfeld
Human Rights Counselor

SUBJECT: U.S. Response to Letter regarding Coal Combustion Residuals in Puerto Rico

We assure you that both the Commonwealth of Puerto Rico and the U.S. Environmental Protection Agency (EPA) remain focused on the importance of protecting the health and environment in Puerto Rico as we continue to pursue domestic measures to address this issue.

The federal environmental statutes applicable to Puerto Rico regulating hazardous/non-hazardous wastes, air emissions, and the quality of water bodies, include but are not limited to the 1970 National Environmental Policy Act (NEPA), the Clean Air Act (CAA), the 1974 Clean Water Act (CWA), the 1976 Resource Conservation and Recovery Act (RCRA), and the 1980 Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The regulations pertaining to these laws are included in Chapter 40 of the United States of America Code of Federal Regulations (40 CFR). The Puerto Rico Environmental Quality Board (EQB) (now a bureau of the Department of Natural Environmental and Resources), is the governmental instrumentality responsible for the protection and conservation of the environment; promulgation and enforcement of environmental regulations on public or private entities; and the establishment of environmental controls and requirements for these entities with the purpose of protecting human health and the environment from pollutants. All of the EQB regulations can be found at <http://app.estado.gobierno.pr/ReglamentosOnLine/ReglOnLine.aspx>.

As required by statute, in 1995 AES-PR submitted an Environmental Impact Declaration to the EQB, requesting government permission for building and commencing operations at the current location, in which they established that this company would export the CCR outside of Puerto Rico rather than deposit CCR in local landfills. After a public comment period and evaluation of the declaration, the request was approved on March 4, 1996. Between 2002 and 2004, multiple EQB inspectors toured the AES-PR plant to ensure compliance with the EQB Air and Water Quality Regulations. In addition, CCR samples were collected at AES-PR by EQB personnel which later showed that these residues were not hazardous waste as established by the EPA criteria for identifying hazardous waste in 40 CFR part 261. On October 7, 2010, acting in response to citizen complaints, EQB observed operations, identified the points of generation of the CCRs being released into the environment, and collected samples of the Agremax product for a RCRA toxicity test. In March 2012, EQB joined EPA for a sampling activity at AES-PR using the then-proposed Leaching Environmental Assessment Framework (LEAF) test method. Based upon the recommendations from an EQB technical review of the EPA publication “Leaching Behavior of “Agremax” Collected from a Coal-fired Plant in Puerto Rico,” inspections were performed at AES-PR on June 14, 2013, and again on May 7, 2014, which observed the Agremax manufacturing process, evaluated management of and volume of the pile of CCRs accumulated outdoors, assessed the fugitive dust released into the air as part of the AES-PR operations, and observed the conditions of the runoff water retention lagoons with particular attention to the conditions of the liners of these lagoons. In light of the results of these inspections, in August 2014 EQB authorized the CCRs from AES-PR to be handled as Non-hazardous Solid Waste which included disposal in landfills and use as daily cover. EQB also required AES-PR to both test their CCR output through EPA-approved methods and submit Certificate of Analyses to EQB, with which AES-PR complied.

The EPA's CCR Rule, which was issued in April 2015 and codified through a change to the federal RCRA law (40 CFR §§ 257 and 261) effective October 2015, established national regulatory requirements and criteria for existing and new CCR landfills and surface impoundments, and lateral expansions. Under the rule, EPA regulates the disposal of CCRs as non-hazardous solid waste under subtitle D of RCRA, the nation's primary law for regulating solid waste. The rule requires groundwater monitoring and fugitive dust controls as well as recordkeeping and public disclosure of CCR storage ([see http://aespuertorico.com/ccr/](http://aespuertorico.com/ccr/)) while still allowing for beneficial uses. AES-PR, in following EPA's CCR Rule, installed groundwater monitoring wells; has posted groundwater monitoring information on its website; and is assessing cleanup approaches that will address constituents that have been detected in the groundwater above applicable standards. The CCR unit at AES-PR is one of 371 CCR regulated units (285 surface impoundments and 86 landfills) where groundwater assessment monitoring is currently underway in the United States. The process for addressing releases of contaminants to groundwater and identifying and implementing corrective actions is ongoing nationally, following the CCR Rule. In July of 2017, Puerto Rico passed Act 40-2017 which prohibited the disposal of CCRs on Puerto Rico, establishing fines for illegal deposit of CCRs retaining an exception for beneficial uses. In September 2017, in anticipation of Hurricanes Irma and Maria striking Puerto Rico, EQB passed resolutions requiring AES-PR to contain, cover, and protect the CCRs, preventing either the release of dust or the escape of runoff water. AES-PR did not provide evidence of compliance and was fined USD 70,000. In response to AES-PR's 2017 Annual Groundwater Monitoring Report, EQB issued a series of four administrative orders requiring further information, sampling, and documentation, culminating in a October 1 and 2, 2018, EQB Field Technical Audit at AES-PR. (In June 2018, EQB was consolidated into Puerto Rico's Department of Natural and Environmental Resources, DNER.) Based upon AES-PR's 2018 Annual Groundwater Monitoring Report, a fifth administrative order was issued to obtain further laboratory data and other documentation. In addition to the dust control requirements in the CCR Rule, AES-PR is subject to storm-water runoff control requirements under EPA's Clean Water Act - National Pollutant Discharge Elimination System (NPDES) permit program. Under its Clean Water Act authority, EPA has issued enforcement actions against AES-PR concerning, among other things, non-compliance with dust control measures and maintenance of storm-water runoff control measures.

While the EPA is aware of the accumulation of CCR materials at AES-PR's facility, there are no federal requirements that establish a prohibition on the disposal of such materials in compliant, state-permitted municipal solid waste landfills (MSWLFs), such as those existing in Puerto Rico and in other jurisdictions. The EPA is monitoring activities at AES-PR, the implementation of the CCR Rule in Puerto Rico, and the required reporting under the CCR Rule in collaboration with the DNER. As part of its oversight responsibilities, the EPA reviews and assesses information that becomes available to ensure that necessary actions are taken to fulfill EPA's mission of protecting human health and the environment. EPA intends to re-evaluate the concerns expressed by the community and those included in your letter to determine if there are any other actions needed within EPA's authority.

Regarding your comment about exceedances listed in this report, while DNER awaits further documentation, preliminary findings showed that the exceedances to the EPA Maximum Concentration Levels (the federal standards applicable in this case) were Lithium (one well),

Molybdenum (two wells), Selenium (one well), Total Dissolved Solids (all wells, including background wells), Chloride (four wells, including one background well), and Sulfate (four wells, including one background well). No Arsenic, Chromium or Radium were detected above the MCLs, contrary to your letter's assertions.

By March 2019, examinations of prior samples revealed the presence of Lithium, Molybdenum, and Selenium in excess of the EPA Maximums for these contaminants. Coupled with AES-PR's incomplete compliance with previous administrative orders, DNER issued two more administrative orders in which proposed an administrative penalty of \$160,000 and ordered AES to submit a restoration and compliance plan.

Puerto Rico indicates that contrary to your assertions regarding the EPA study "Leaching Behavior of Agremax," the only conclusions that can be drawn from the LEAF test (which was in draft form at the time) are: the types of heavy metals that could leach out from CCRs and the usability of the test for assessing risk regarding beneficial use of CCRs. EPA publications "Background Information for the Leaching Environmental Assessment Framework (LEAF) Test Methods" (EPA/600/R-10/170; November 2010) and "Interlaboratory Validation of the Leaching Environmental Assessment Framework (LEAF) Method 1313 and Method 1316 (EPA 600/R-12/623; September 2012), as well as the LEAF test methods published by the EPA at <https://www.epa.gov/hw-sw846/sw-846-compendium> and by Vanderbilt University at <https://www.vanderbilt.edu/leaching/downloads/test-methods/>, clarifies the applicability of these test methods, specifically for testing CCRs for beneficial uses. As your inquiry did not provide a source for the results of epidemiological studies cited, the Commonwealth of Puerto Rico would welcome receipt of these epidemiological studies to bolster their public policy decisions protecting the residents of Puerto Rico.