



April 24, 2025

Mr. Nate Senn, Environmental Administrator
Florida Department of Environmental Protection – Siting Section

Re: Request for Amendment to Authorize One-Time Pilot Test of WTE Bottom Ash as a Kiln Feed Ingredient

Mr. Senn,

The Pasco County Solid Waste and Resource Recovery Department has partnered with the University of Florida (UF), and CEMEX Construction Materials, Florida, LLC (CEMEX), to explore the use of Waste-to-Energy (WTE) bottom ash (BA) as a kiln feed ingredient in cement production. These efforts have included extensive laboratory-scale investigation where cement products have been created using WTE BA from the Pasco County WTE facility as a partial replacement of traditional raw materials. Our laboratory-scale efforts show considerable promise for the viability of utilizing WTE bottom ash as a kiln feed ingredient for the production of cement. The next step in this research endeavor is a full-scale pilot study whereby cement is created at the CEMEX cement kiln located in Brooksville, Florida utilizing BA from the Pasco County Resource Recovery Facility . The scope of the proposed work is outlined below:

Approximately 1,000 tons of WTE BA from the Pasco County RRF is being stockpiled and aged on site of the existing ash monofill at the Pasco County RRF (14230 Hays Rd, Spring Hill, FL 34610). Once sufficiently weathered, this ash will be transported to the CEMEX cement manufacturing facility (10311 Cement Plant Rd., Brooksville, FL 32669). At the CEMEX site it will be stored in a permitted, covered storage area prior to being introduced to the kiln as a raw ingredient in cement production. This trial will involve incorporating multiple replacement percentages of WTE ash, with a maximum of approximately 10% by mass of traditional materials. We expect this trial to last two entire days, and it may extend into a third day. Care will be taken to minimize the amount of time between the delivery of the ash to CEMEX and its incorporation into cement production. Representatives from CEMEX have also been in contact with the FDEP Air Permitting Division to notify them of this trial. Because the material being processed is limited to bottom ash (no fly ash), fugitive ash emissions are not expected to create a concern, but will nonetheless be controlled as required by Specific Condition C.1 of Title V Permit No. 1010056-015-AV. All transportation from Pasco County to CEMEX will be in tarped vehicles.

Clinker and cement products created during this trial will be extensively tested for their physical and environmental performance in reference to a control cement product containing no WTE bottom ash. We see the successful execution of this trial and the data generated from it as critical to advancing WTE BA reuse in Florida. UF has previously performed similar trials with Miami-Dade County, and with Argos Cement. A report summarizing results was provided to the Department for the Miami project; this report indicated no increased direct exposure or leaching risk associated with WTE BA incorporated into cement production.

To date, we have engaged in limited informal discussion with the Department regarding the execution of this project. Accordingly, we are writing this memo to formally notify the Department of our efforts and to request permission to execute this trial as described above. UF researchers will be the technical lead on this project. Pasco County and UF are happy to provide any additional details requested by the Department in reference to this project.

Thank you for your attention to the topic of WTE BA reuse in Pasco County. We look forward to discussing any concerns or needs with the Department in order secure formal permission to execute this trial. Should you have any questions concerning this submittal, please contact Mr. Jason Gorrie at (813) 220-0653.

Sincerely, ,

Kevin Pliska,
Solid Waste Director