

# CCR 2021 Inspection Report

## AES Puerto Rico

### Introduction

<b>Purpose</b>	Annual inspection under the Standards for the Disposal of Coal Combustion Residuals From Electric Utilities of April 17, 2015 (CCR Rule).
<b>Scope</b>	Review of available information and perform a remote visual inspection of the AES Puerto Rico (AES-PR) Agremax™ Stockpile Area in line with the current pandemic-related limitations.

### Facility Location

<b>General</b>	AES-PR is located in the south coast of the island of Puerto Rico, about 3.4 miles southwest of downtown Guayama.
<b>Address</b>	AES Puerto Rico Km 142.0 State Road PR-3 Guayama, Puerto Rico 00784

### Facility Description

AES-PR is a bituminous coal power plant that generates and sells electricity to the Puerto Rico Electric Power Authority with a total power generation capacity of 520 Megawatts; this represents approximately 15% of the electricity consumed on the island. Using its own CCRs, AES-PR also produces a manufactured aggregate, known as Agremax™. Dry ashes that are not delivered to off-site users are mixed in a pug mill that conditions this CCR to produce Agremax™ before feeding a conveyor belt used to transfer the mixture to the Stockpile Area at the facility. A stockpile to store the inventory of Agremax™ is formed by a bulldozer or by dump trucks that are loaded with Agremax™ by an excavator or front end loader; the trucks then place the Agremax™ onto a stockpile. From the Stockpile Area Agremax™ can be fed by a bulldozer into a crusher located in the Stockpile Area. The crusher feeds a conveyor to transfer the Agremax™ to marine vessels in the AES-PR dock area for shipment overseas. Alternatively, the Agremax™ could be loaded by an excavator or front-end loader into dump trucks and sent for transport by public highway in accordance with applicable laws and regulations.

## CCR Unit Description

<b>Location</b>	The Stockpile Area is located at the southeast quadrant of the AES-PR site, south of the power plant and east of the limestone storage dome.
<b>Volume</b>	At the time of the inspection the approximate volume of Agremax™ contained in the stockpile was 121,213 short tons.
<b>Components</b>	Equipment and facilities of the Stockpile Area include a front-end loader, a bulldozer, a backhoe, a water truck with rear spray nozzles and front water cannon, mobile water sprinkler guns, large water hoses, fixed water spray nozzle systems, a truck wheel cleaning station and a feeder / breaker mill. It also includes a three-layer physical containment system to prevent run-on or migration of sediments and runoff from the stockpile. This triple-containment system is composed of a gabion wall, drainage channels made of reinforced concrete and concrete low wall external to an internal road at the south side of the stockpile.

## Review of Available Information

The available inspection records did not identify significant issues during said inspections and action items have been addressed, the Agremax™ inventory has remained low.

## Visual Inspection

<b>Date</b>	Wednesday August 25, 2021.
<b>Time/Weather</b>	Afternoon / calm wind and sunny weather conditions prevailed.
<b>Methodology and Limiting Conditions</b>	Due to the current pandemic limitations, an aerial drone reconnaissance of the Stockpile Area boundaries was performed. The Stockpile Area was viewed for visual evidence of signs of distress or malfunction.
<b>Escort</b>	No escort was required for the desktop visual inspection.

<b>General Observations</b>	The eastern half of the Stockpile Area and its gabion wall section had been removed to allow the installation of a low permeability geomembrane liner under the footprint of the Stockpile. The Stockpile was operational at the time of the visual inspection with trucks moving up and down the access road. A main work terrace with berms on the edges was observed at the top.
<b>Access Road</b>	The access road was observed to be well graded, with Agremax™ berms on the edges, wetted and with some rills created by over watering.
<b>Stockpile Surface / Slopes</b>	No animal burrows were observed. Slopes appeared adequate.
<b>Erosion</b>	Rills were observed on the west and east slopes of the stockpile, they appeared to be related to over-watering.
<b>Dust</b>	Dust controls, including the water truck, large water hoses and fixed water spray nozzles systems were observed. Stockpile surfaces appeared wet, therefore the water hoses and spray nozzles system were not operational at the time. No fugitive dust plumes were observed on the Stockpile at the time of inspection.
<b>Sediment</b>	An accumulation of Agremax™ blocked a section of the remaining gabion wall setback at the south side of the Stockpile Area.
<b>Drainage</b>	The drainage channels surrounding the Stockpile Area were observed clean and unobstructed.
<b>Containment Structures</b>	The low wall appeared to be structurally sound.

## Conclusions

<b>Changes in Geometry</b>	The height of the Stockpile was estimated at 66 feet above ground surface; its overall horizontal extension reduced in about half.
<b>Potential Structural Weaknesses</b>	Based on the visual inspection, no apparent or potential structural weaknesses of the stockpile ancillary structures were observed.

**Certification**

I hereby certify that I performed a telematic inspection and prepared this Report for the Agremax™ Stockpile Area, owned and operated by AES-PR in accordance with the Coal Combustion Residuals Rule 40 CFR 257.84(b). I am a dully-licensed Professional Engineer under the laws of Puerto Rico.



Winston R. Esteves P.E.

12/12/21

Date

8827

License Number

8/31/22

License Renewal Date



P.E. Seal