

# CCR 2017 Inspection Report

## AES Puerto Rico

### Introduction

- Purpose** Annual inspection under the Standards for the Disposal of Coal Combustion Residuals From Electric Utilities of April 17, 2015 (CCR Rule).
- Scope** Review of available information and perform a visual inspection of the AES Puerto Rico (AES-PR) Agremax™ Stockpile Area.

### Facility Location

- General** AES-PR is located in the south coast of the island of Puerto Rico, about 3.4 miles southwest of downtown Guayama.
- Address** 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. AES-PR also produces a manufactured aggregate known as Agremax™, produced by AES-PR. using its own CCRs. 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, and the trucks then place the Agremax™ onto a stockpile. From the Stockpile Area the Agremax™ is loaded by an excavator or front-end loader into dump trucks, and sent for transport by public highway to off-site users or for disposal. Alternatively, the 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.

## 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 430,000 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, a broom sweeper, 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 daily inspection records for the October 2016 to July 2017 were reviewed as part of this scope of work. There were no significant issues identified during said inspections and action items have been addressed.

## Visual Inspection

<b>Date</b>	Thursday July 6, 2017.
<b>Time/Weather</b>	Calm wind and sunny weather conditions prevailed.
<b>Methodology and Limiting Conditions</b>	WRE confirmed the Stockpile Area boundaries and performed a vehicle and walking reconnaissance around its accessible perimeter and terraces but did not look at areas where gaining access may have presented health and/or safety hazards. The Stockpile Area was viewed during afternoon hours for visual evidence of signs of distress or malfunction.
<b>Escort</b>	Gil Rosario of AES provided escort during the visual inspection.

<b>General Observations</b>	The Stockpile Area was operational at the time of the visual inspection. A main work terrace with berms on the edges was observed at the top of the stockpile.
<b>Access Road</b>	The access road was observed to be well graded, with berms on the edges, free of potholes and wetted.
<b>Stockpile Surface / Slopes</b>	No animal burrows were observed. Slopes appeared adequate.
<b>Erosion</b>	Localized rills were observed on the surface of stockpile slopes, they appeared to be related to over-watering by the water sprinkler guns.
<b>Dust</b>	Dust controls, including the broom sweeper, mobile water sprinkler guns, large water hoses and fixed water spray nozzle systems were observed to be in good condition. The water truck was not operational at the time. Some fugitive dust caused by wind was observed on the west slope of the Stockpile at the time of inspection.
<b>Sediment</b>	The gabion wall surrounding the Stockpile Area was observed to be free of sediment and with an adequate and unobstructed setback.
<b>Drainage</b>	The drainage channels surrounding the Stockpile Area were observed to be free of standing water or sediment and unobstructed.
<b>Containment Structures</b>	The low wall appeared to be structurally sound. No gaps or cracks were observed on its concrete surfaces.

## Conclusions

<b>Changes in Geometry</b>	The size of the Stockpile has increased to an estimated height of 120 feet.
<b>Potential Structural Weaknesses</b>	Based on the visual inspection, no apparent or potential structural weaknesses were observed.
<b>Other Changes</b>	The stockpile slopes have become longer and steeper.

## Certification

I hereby certify that I visually inspected and prepared this Report for the 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.

7/13/17

Date

8827

License Number

8/31/17

License Renewal Date



P.E. Seal