

US EPA ARCHIVE DOCUMENT

Mr. Stephen Hoffman  
U.S. Environmental Protection Agency  
Two Potomac Yard  
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5<sup>th</sup> Floor, N-5838  
Arlington, VA 22202-2733

Re: Action Plan regarding San Miguel Electric Cooperative Inc.'s CCR Surface Impoundments located at the San Miguel Electric Plant

Mr. Hoffman:

On May 2, 2014 San Miguel received the final report on coal combustion residual (CCR) site assessment at the San Miguel Electric Cooperative Inc.'s San Miguel Electric Plant facility. The United States Environmental Protection Agency ("EPA") and its engineering contractors conducted a site visit on August 30, 2012. The visit was to assess the structural stability of the impoundments or other similar management units that contain "wet" handled CCRs.

The report included a specific condition rating for the CCR management units and five recommendations that EPA and its engineering contractors believe should be undertaken to ensure the stability of the CCR impoundments.

San Miguel proposes the following implementation plan and schedule for the five recommendations:

**1) Recommendations Regarding the Hydrologic/Hydraulic Safety**

It is recommended that a qualified professional engineer determine the required flood frequency and evaluate the hydrologic and hydraulic capacity of the CCW impoundments to withstand design storm events without overtopping.

**Implementation Plan**

A hydrologic and hydraulic capacity analysis will be performed by a qualified Professional Engineer on both CCR surface impoundments. We anticipate this study will be completed by the end of September 2014.

**2) Recommendations Regarding the Technical Documentation for Structural Stability**

It is recommended that a qualified professional engineer reevaluate the impoundments for structural stability should conditions from those included in the Arias & Associates, Inc. structural stability analyses change.

**Implementation Plan**

If there are any changes in conditions from the Arias report, an updated structural stability analysis will be performed by a qualified Professional Engineer.

### 3) Recommendations Regarding Field Observations

CDM Smith recommends corrective actions be taken for the specific conditions identified below:

- Erosion rills were observed on the interior slopes of the Sludge Basin and the interior and exterior slopes of the Ash Pond. Structural fill should be placed and compacted in the rills and graded to adjacent existing contours. The area should be sodded or reseeded.
- Surface erosion - Structural fill should be placed and compacted, graded to adjacent existing contours, and sodded or reseeded. Alternatively, riprap or other armoring could be used. Riprap or other armoring is recommended for the west, north, and east interior slopes to reduce the potential for erosion.
- Rodent burrows - Rodent burrows were observed on the crest and exterior embankment of the Ash Pond. Although not seen on other embankments, vegetation cover may have hidden additional rodent burrows. CDM Smith recommends San Miguel accurately document areas disturbed by animal activity, remove the animals, and backfill the burrows with compacted structural fill to protect the integrity of the embankments.
- Potential seepage area - CDM Smith observed an area of potential seepage at the west embankment exterior slope of the Ash Pond. CDM Smith recommends San Miguel take the following actions:
  - Cut back and maintain vegetation in the area to facilitate monitoring the condition
  - Develop a regular surveillance program to monitor areas of seepage and potential seepage to measure the rate, volume, and turbidity of flow emerging from the embankment slope; and
  - Develop and execute a geotechnical exploration program that includes additional test borings and installation of piezometers and other instrumentation to analyze and regularly monitor embankment seepage and stability.

#### **Implementation Plan**

- Erosion rills will be filled, compacted and reseeded during the summer of 2014.
- Surface erosion will be filled, compacted, graded to adjacent contour, and reseeded. Riprap or other armoring will be placed on the interior slopes to below the normal operating level on the east, west and south sides (the north side is not a dike. It is at natural elevation and we assume the recommendation is for the south side not the north side). We anticipate completing this work during the summer of 2014 when the ash water pond level is below the normal operating level.
- Rodent burrows will be documented, filled, compacted to the adjacent slope contour. This will be completed during the summer of 2014.
- Potential seepage area
  - The area of potential seepage on the west slope of the ash water pond will be cleared of all brush, trees and will be hand mowed by July 15, 2014. The plant environmental engineer will provide a more detailed monitoring of this area during the weekly impoundment surveillance check.

- SMEC will develop a geotechnical exploration program with a qualified consultant. The program will be developed by October 2014 and any recommended additional boring, along with installation of any instrumentation, will be completed by the summer of 2015.

#### **4) Recommendations Regarding Surveillance and Monitoring Program**

Monitoring for potential seepage at the exterior embankment slopes is recommended for both the Ash Pond and Sludge Basin considering historical issues with seepage. Potential areas of seepage may be more readily assessed after clearing of trees and dense vegetation on embankment slopes. It is recommended that vegetation on the impoundment embankments be maintained with seasonal mowing, as necessary, for animal control and surveillance and monitoring of embankments.

##### **Implementation Plan**

SMEC is investigating seasonal mowing. All trees and brush will be removed and areas reseeded on all slopes by September 2014. The plant environmental engineer will monitor impoundment embankments during the weekly impoundment surveillance check.

#### **5) Recommendations Regarding Continued Safe and Reliable Operation**

Inspections should be made following periods of heavy and/or prolonged rainfall, and the occurrence of these events should be documented. Inspection procedures should be documented and inspection records should be retained at the facility for a minimum of three years.

Major repairs and slope restoration should be designed by a registered professional engineer experienced with earthen dam design.

##### **Implementation Plan**

Inspections will be performed by the plant environmental engineer after periods of heavy or prolonged rain. All inspections will be documented and kept for a minimum period of three years.

If you have any questions concerning these implementation plans or schedule please contact me by email at [mkezar@smeci.net](mailto:mkezar@smeci.net) or Joe Eutizi at [jeutizi@smeci.net](mailto:jeutizi@smeci.net) or either us by phone at 830-784-3411.

Sincerely,

Mike Kezar  
General Manager  
San Miguel Electric Cooperative