# OHIO VALLEY ELECTRIC CORPORATION

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April 9, 2010

Mr. Stephen Hoffman
US Environmental Protection Agency (5304P)
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Dear Mr. Hoffman:

Re: Ohio Valley Electric Corporation
Kyger Creek Station
Response to U.S. EPA's Recommendations
Coal Ash Impoundments

Please find attached the Ohio Valley Electric Corporation's (OVEC's) responses regarding the implementation of U.S. EPA's recommendations to ensure the stability of the coal combustion residual impoundments at the Kyger Creek Station. The recommendations were received in a report and cover letter from the U.S. EPA March 8, 2010.

If you have any questions, please contact Matthew Smith of my staff at (740) 289-7249 or msmith@ovec.com.

Sincerely,

Donald T. Fulkerson
Environmental Affairs Director

DTF:men

Attachment

### 4.2 Maintaining Vegetation Growth

Trees and brush should be cleared from all of the interior and exterior slopes of all the Bottom Ash and South Fly Ash Pond dikes. Tree roots can allow for seepage of the retained water through the dikes, which could lead to internal erosion. Internal erosion could weaken the dikes and cause slope failures.

Additionally, the uprooting of trees during storms can create large voids in the embankments that are then susceptible to erosion. Considering the progressive erosion that could occur during a storm which blows the tree over during heavy rains (i.e., hurricane type storm systems) progressive erosion could potentially result in enough loss of soil from the dike to create an unstable situation, which if failure occurs could result in a release of ash. CHA recommends that vegetation be cut on a regular basis to ensure that adequate visual observations are being made by during routine inspections.

*Action: OVEC fully understands that maintenance of the facilities is part of the actions required to ensure the integrity of the dam and dikes at the Kyger Creek Station. Therefore, OVEC will continue a proactive maintenance and monitoring program as established. Vegetation within rock-lined channels will be controlled through the proper use of herbicides to retard growth. Existing vegetation within these channels will be cut prior to application.*

*As part of our annual maintenance program, mowing is performed at least twice a year. Mowing will be coordinated such that the visual inspections can be performed without hindrance.*

### 4.3 Erosion Protection and Repair

Erosion rills and subsequent loss of grass cover were observed on multiple embankment slopes of the Bottom Ash Pond and South Fly Ash Pond as discussed in Sections 2.2.1 and 2.3.1. Thinning and loss of grass cover due to concentrated flow was noted on the embankment slopes. CHA recommends repairing these areas by filling all rills with compacted material and reseeding to establish grass where applicable (i.e. exterior embankment slopes).

*Action: Existing erosion rills will be filled/graded, compacted and stabilized by October, 30 2010. OVEC will continue to monitor this area as part of its Dam Inspection and Maintenance Program (DIMP). Quarterly inspections of the facility are performed by Plant personnel and AEP Engineering conducts an annual inspection. If erosion areas are noted during the inspections, repairs will be performed with compacted fill and stabilized.*

### 4.4 Animal Control

Evidence of animal burrows was observed on the exterior dike of Bottom Ash Pond and the South Fly Ash Pond. CHA recommends OVEC personnel make note of areas disturbed by animal activity, trap animals, and make repairs to areas to protect the integrity of the dikes. Although not seen on other dikes, vegetation cover hides these features.

*Action: OVEC will continue to monitor this area as part of its Dam Inspection and Maintenance Program (DIMP). Monthly inspections of the facility are performed by Plant personnel and AEP Engineering conducts an annual inspection. If rodent holes are noted during the inspections, repairs will be performed.*

**4.5 Stability Analysis**

It is recommended that detailed stability analyses be performed for the Bottom Ash Pond and South Fly Ash Pond. CHA was not provided with information regarding stability analyses performed prior to or following construction of the ponds nor was information regarding properties of the embankment and foundation soils provided.

The stability analyses for each pond should include a subsurface investigation to determine existing soil parameters in the embankments and foundation soils and the installation of piezometers to determine the current pheratic surface. Loading conditions that should be modeled should include those listed in Table 3, Section 3.3.

*Action: OVEC concurs that there is limited data available to establish a factor of safety for the existing embankments. Based on the results of visual inspections performed in 2009 of the facilities reported by CHA, and of inspections by AEP engineers, OVEC's independent consultant STANTEC, and the ODNR Dam Safety, there are no apparent safety deficiencies or the need for remedial measures to the embankments at the Kyger Creek Station.*

*OVEC concurs that a geotechnical evaluation should be completed on the embankments including a subsurface investigation, laboratory testing and stability analyses to document the internal conditions of the dams, and their ability of continue performance in accordance with applicable criteria. This work will be completed by March 2011.*