

CCR Surface Impoundment – Hazard Potential Classification

The Cardinal Fly Ash Reservoir II dam is situated upstream of Brilliant Township, Cardinal Plant and Ohio River. This dam is reported to be 250 feet high per the 2020 Annual Engineering Inspection report. The Ohio Department of Natural Resources Dam Safety (ODNR) has 4 classes of dams pursuant to OAC Rule 1501:21-13-01 and is based on the height of the dam, storage volume, and potential downstream hazard. Each dam is evaluated in the following criteria and placed in the highest class that any one of these criteria meet:

Dam Classification	Height of Dam (feet)	Storage Volume (acre-ft)	Potential Downstream Hazard
I	>60 ft	> 5,000 acre-feet	Probable loss of life
II	>40 ft	> 500 acre-feet	Health hazard, flood water damage to homes, businesses, industrial structures (no loss of life envisioned), damage to state and interstate highways, loss of public utilities, railroads, downstream dams, only access to residential areas
III	>25 ft	> 50 acre-feet	Damage to low value non-residential structures, local roads, agricultural crops and livestock
IV	< 25 ft	< 50 acre-feet	Losses restricted mainly to the dam

The Fly Ash Reservoir II is a Class I dam using this criterion.

The Hazard Potential Classification Systems according to Title 40 of the Code of Federal Regulations (40 CFR) Section 257.53 for coal combustion residual management units are as follows:

- (1) High hazard potential CCR surface impoundment means a diked surface impoundment where failure or mis operation will probably cause loss of human life.
- (2) Low hazard potential CCR surface impoundment means a diked surface impoundment where failure or mis operation results in no probable loss of human life and low economic and/or environmental losses. Losses are principally limited to the surface impoundment owner's property.
- (3) Significant hazard potential CCR surface impoundment means a diked surface impoundment where failure or mis-operation results in no probable loss of human life, but can cause economic loss, environmental damage, disruption of lifeline facilities, or impact other concerns.

Based on the ODNR Class I categorization and the potential hazards located downstream of the dam, the Fly Ash Reservoir II dam can potentially result in loss of human life in the event of a dam failure. Therefore, Fly Ash Reservoir II dam/impoundment is classified as a High Hazard Potential surface impoundment in accordance with 40 CFR 257.73(a)(2).

I certify that this periodic hazard potential classification meets the requirements of 40 CFR 257.73(a)(2).

7/27/2021 Signature of Professional Engineer Date

Shawn D. McGee E-68761

Printed Name of Professional Engineer and Registration Number