

University of Iowa Power Plant Solid By-Product Management Plan

IAC 567-108.6(2)a. **Sources of the solid by-product.**

The solid by-product (ash) generated at the University of Iowa Power Plant is a result of combustion in two solid fuel boilers: Boilers 10 and 11. 5,000 to 10,000 tons of ash is generated by the plant on an annual basis. Boiler 11 was in and extended outage in 2025, continuing into 2026, so ash generation was greatly reduced over the past year.

Boiler 10 is a stoker unit that burns approximately 10,000 tons of energy pellets per year generating a combination of bottom ash and fly ash.

Boiler 11 is a circulating fluidized bed boiler. This boiler burns coal, oat hulls, and energy pellets, and uses significant quantities of limestone for sulfur dioxide emissions control. The unit burns approximately 10,000 tons of coal, 20,000 tons of oat hulls, 10,000 tons of energy pellets, and uses approximately 2,500 tons of limestone each year. Boiler 11 produces both bottom ash and fly ash. Boiler 11 has been offline since April of 2025, for an extensive repair.

IAC 108.6(2)b. **Periodic testing procedure.**

In 2025 the University collected composite samples of the combined bottom ash and fly ash from Boiler's 10 and 11, on a quarterly basis for the purpose of verifying that the chemical and physical composition of the ash has not changed significantly. Total metals testing was carried out in accordance with IAC 567-108.6. The ash was analyzed using SPLP (EPA Method 1312), and TCLP (EPA Method 1311.) The list of contaminants tested met the requirements specified by the Iowa Department of Natural Resources for Beneficial Use Determination. Additional ash samples will be collected if there is a significant change in the fuel being burned in either of the solid fuel boilers.

IAC 108.6(2)c. **Description of Storage Procedures.**

(1) All of the ash generated at the plant is combined into a single, enclosed, concrete silo located on the east side of the building. Ash is loaded from the silo into trucks on a regular basis (Monday – Friday) and, in 2025, was hauled to the Waterloo South Quarry disposal site near Elk Run Heights, Iowa operated by BMC Aggregates LC (101 BMC Drive, Elk Run Heights, IA 50707). The trucking company used to haul the ash to the BMC Aggregates site was Peterson Contractors, Inc. of Reinbeck, Iowa.

(a) In the event the BMC Aggregates is unable to accept the ash, see Contingency Plan for Ash Material

(b) In 2025 ash was deposited at the Iowa County Landfill and the Benton County Landfill due to high barium SPLP results which made the material unacceptable for the BMC Aggregates site.

(2) The design capacity of the silo is 750 tons of ash. The actual achievable maximum is closer to 720 tons due to the configuration of the loading equipment.

(3) The power plant operates under a general National Pollutant Discharge Elimination System storm water permit (# IA-1112-0876). Storm water runoff from the ash loading area is directed to the southern portion of the plant property where it collects and infiltrates into the ground. This prevents runoff of material from the plant property.

(4) The ash truck loading system for the silo utilizes a vacuum system and dust recovery collector to prevent release of ash into the air and on to the ground during truck loading. Spilled material is swept up immediately and disposed of.

(5) Ash is regularly removed from the silo and hauled away for disposal. Failure to continuously remove the ash would allow the silo to quickly fill up and would shut the plant down since there would be no room for additional ash. Maximum storage time would likely never exceed one month.

Revision History

Date	Revision Notes	Person
1/1/2019	Development	M. Maxwell
3/1/2022	Review	M. Gilmartin
10/20/2022	Separated Contingency Plan to separate document	M. Gilmartin
02/26/2024	Updated Fuel and Limestone Quantities	M. Maxwell
02/26/2026	Updated Boiler 11 status	M. Maxwell