

Schahfer Generating Station 12-Acre Coal Combustion Residual (CCR) Landfill Expansion Detailed Design Project Profile

**Client:**

NIPSCO

Project Name:

Schahfer Generating Station
12-Acre Landfill Expansion

Location:

Wheatfield, Indiana

Plant Type:

Coal-fired boilers

**COD Units 1-4:**

1976 1979 1983 1986

Dry Ash Landfill Size:

198-acre total; 12-acre expansion

Project Completion:

2014

Project Description:

Sargent & Lundy was the A/E for design of the 12-acre landfill expansion in 2014, at the Schahfer site in northwest Indiana. The scope of work included design construction plans and specifications, quality assurance specification, and an operations manual for the ash disposal site. In addition, Sargent & Lundy prepared and received an Indiana Department of Environmental Management Permit Modification approval for use of an alternative geosynthetic clay liner (GCL) for subsequent phases as a substitute for the permitted clay liner. The rationale for the Permit Modification was that good clay sources are located at a costly distance and the GCL would be more economical.

The dry landfill receives CCRs from several of NIPSCO's generating stations. Key features of the Schahfer landfill design included:

- Composite clay and 60-mil HDPE membrane liner system meeting the facility's current IDEM Permit, leachate collection layer and piping network, leachate pumping station, and protective cover materials over the liner system. To reduce costs, the leachate collection granular material and protective cover layer were processed from an existing bottom ash disposal pond. Similarly, the final closure cover design system included use of bottom ash to reduce the costs of obtaining alternate cover soils.
- Operations Manual, including groundwater monitoring program, dust control, placement filling and compaction, closure and post-closure requirements, erosion controls, and inspection and construction documentation, operation staff, equipment, emergency response requirements, phase transition in the 12-acre cell.

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