

# POST CLOSURE PLAN

**CFR 257.104(D)**

Fly Ash Landfill  
Rockport Plant  
Rockport, Indiana

October, 2016

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Prepared for: Indiana Michigan Company

Rockport Plant

2791 North US 231

Rockport, Indiana 47635

Prepared by: Geotechnical Engineering Services

American Electric Power Service Corporation

1 Riverside Plaza

Columbus, OH 43215



POST CLOSURE PLAN  
CFR 257.104(d)  
FLY ASH LANDFILL  
ROCKPORT PLANT

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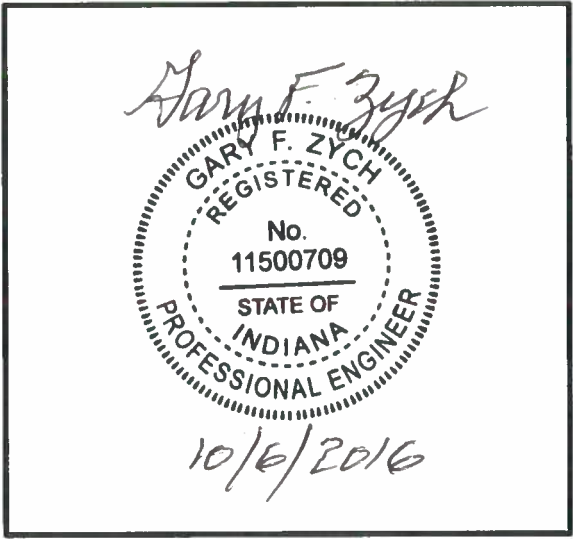
**DATE** 9/26/2016

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**DATE** 10/6/2016



I certify to the best of my knowledge, information, and belief that the information contained in this post closure plan meets the requirements of 40 CFR § 257.104

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## **Attachment A: Post Closure Care Plan**

## **1.0 OBJECTIVE**

This report was prepared by AEP- Geotechnical Engineering Services (GES) section to fulfill requirements of CFR 257.104(d) for Post Closure Plans of CCR units.

## **2.0 DESCRIPTION OF THE CCR UNIT**

The Rockport Power Plant is located near Rockport, Indiana

It is owned and operated by Indiana Michigan Power Company (I&M). The facility operates a landfill for the disposal of CCR materials.

The landfill is permitted by the Indiana Department of Environmental Quality under RWS 1 Landfill permit FP-74-02.

The landfill is divided into Area 1A and Area 1B with a permitted footprint of 554 acres. Area 1A is currently active and is 178 acres that is permitted to receive type 1 coal combustion residual wastes for a capacity of 13.6 million cubic yards of storage. Area 1B will be re-permitted at a later date and will be dependent upon the characteristics of the CCR waste at the time of permitting.

Approximately 54 acres of the total acreage has been closed and capped with a low permeable cohesive soil.

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## **3.0 DESCRIPTION OF POST CLOSURE PLAN 257.104(d)(1)(i)**

*[A description of the monitoring and maintenance activities required in paragraph (b) of this section for the CCR unit, and the frequency at which these activities will be performed.]*

The landfill will be closed by closure in place in accordance with the approved post closure plan by the Indiana DEQ (Attachment A).

### **3.1 SECTION 257.104(B)(1)**

*[Maintaining the integrity and effectiveness of the final cover system including making repairs to the final cover as necessary to correct the effects of settlement, subsidence, erosion, or other events, and preventing run-on and run-off from eroding or otherwise damaging the final cover.]*

Inspections are performed for the items noted below. The inspection frequencies are scheduled to properly detect any issues so that repairs can be performed before significant harm occurs.

- **Embankment**: The entire waste embankment, including top surface and side-slopes, will be inspected for slides, settlement, subsidence, displacement, and cover condition (see below).
- **Soil Dike**: The soil dike will be inspected for slides, displacement, and erosion.
- **Cover**: The final cover will be inspected for erosion and for the condition of the vegetated cover, i.e., gaps in vegetation or presence of undesirable trees or brush. The integrity of the cover drainage system will also be inspected.
- **Final Cover Surface**: The Final Cover surface will be inspected for any ponding of water or flat areas.

- Final Cover Surface: The Final Cover surface will be inspected for any ponding of water or flat areas.
- Surface Drainage System: The surface drainage system, including channels, culverts, slope drains, etc., will be inspected for erosion, integrity of channel lining, ponding, and accumulated sediment.
- Leachate Collection Piping: The discharge pipes of the Leachate Collection System at the Leachate Collection Pond will be inspected for clogging or damage. Other exposed portions of the Leachate Collection System including cleanouts will be inspected for damage. Similarly, the Leachate Collection Pond will be inspected for general damage to the pond and perimeter berms, and for accumulation of sediment in the pond.

Maintenance during the post-closure care period will be performed as discussed below, based upon the facility inspections described above.

- Security Control Devices: Any portions of the roadway barricades which might be damaged will be repaired or replaced as necessary.
- Erosion Damage Repair: Any areas exhibiting erosion will be repaired by replacing and compacting the material in-kind to design grade/specifications, and reseeding the area to the specifications. Applications of additional fertilizer, selective herbicides, rodent control measures, etc. will be implemented as necessary. In the selection of fertilizers and herbicides, ensure their use will not impact the groundwater negatively. Follow-up monitoring of the repaired area will be conducted to ascertain the integrity of the repair.
- Settlement, Subsidence, Displacement: Any areas at the closed site exhibiting evidence of settlement, subsidence, or displacement will be examined to determine the cause of the movement. If backfilling or placing additional fill material is needed to maintain the integrity of the closed structure, it will be performed in accordance with the site/closure specifications, including seeding. If the condition reoccurs or persists, or if the severity of the condition initially is judged to warrant it, a detailed investigation of the cause will be performed and remedial action will be performed. Similarly, any areas of the soil dike exhibiting sliding, displacement, or seepage will be investigated. Repairs will be made as necessary. Follow-up monitoring of the area will be performed to ascertain that the problem has been corrected.
- Closure Cap Surface: Any areas that show signs of ponding water or flat contours will be examined and rectified.
- Surface Water Drainage System: The channel linings are designed to withstand the design velocities. Maintenance of the surface water drainage system will consist of removing sediment and/or undesirable vegetation from the surface water runoff control system (channels and culverts) as required. Eroded areas will be repaired by back-filling and reseeding according to the specifications. Damage to culverts will be repaired; structure replacement will be performed if needed.
- Leachate Collection System: Maintenance of the leachate collection system, collection sump, and leachate pumps will consist of repairing and/or replacing in-kind any damaged or eroded portions of the system and pond, cleaning pipes, and removing leachate and sediment from the collection sump and the Leachate Collection Pond, as needed.

### **3.2 SECTION 257.104(B)(3)**

***[Maintaining the groundwater monitoring system and monitoring the groundwater in accordance with the requirements of §§257.90 through 257.98.]***

The groundwater monitoring system will be inspected for the general integrity of the wells, well casings and well protective casings. Any damaged portions of the monitoring wells and/or their protective casings will be replaced in-kind.

Monitoring the groundwater will be in accordance with the groundwater monitoring plan for this facility and in accordance with the requirements of §§257.90 through 257.98.

### **4.0 POST-CLOSURE CONTACT 257.104 (d)(1)(ii)**

***[The name, address, telephone number and email address of the person or office to contact about the facility during the post-closure care period.]***

The name, address, and telephone number of the person to contact about the Facility during the post-closure period shall be provided upon notice of closure.

### **5.0 POST-CLOSURE PLANNED USE 257.104 (d)(1)(iii)**

***[A description of the planned uses of the property during the post-closure period. Post-closure use of the property shall not disturb the integrity of the final cover, liner(s), or any other component of the containment system, or the function of the monitoring systems unless necessary to comply with the requirements in this subpart...]***

The post-closure use of the property will be undisturbed vacant land space. The only activities occurring on the closed CCR unit will be related to the Post-Closure care activities.

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**ATTACHMENT A**  
**Post Closure Care Plan**





**INDIANA MICHIGAN POWER COMPANY  
ROCKPORT PLANT  
RESTRICTED WASTE LANDFILL  
POST-CLOSURE PLAN**

**I. GENERAL INFORMATION**

- A. Facility Name : Indiana Michigan Power Company  
Rockport Plant Restricted Waste Landfill
- B. Facility Location: 2791 N. U.S. Highway 231, Rockport, Indiana, 47635
- C. Facility County: Spencer County
- D. Facility Solid Waste Permit No.: FP 74-02

**II. POST-CLOSURE CONTACT PERSON**

- A. Name: Dana M. Sheets P.E.
- B. Address: 1 Riverside Plaza  
Columbus, Ohio 43215
- C. Telephone No: 614-716-1254

**III. GROUND WATER MONITORING ACTIVITIES (Provide a description of planned ground water monitoring activities including the frequency of the activities. See instructions.)**

Groundwater monitoring wells are placed around the perimeter of the landfill areas. During the post-closure care period of 30 years, the wells will be sampled on at least a semiannual basis and downgradient wells will be statistically analyzed for significant increases in indicator parameters. An indicator parameter is one whose concentration is very high in the landfill leachate and very low in the background groundwater. A statistically significant increase in an indicator parameter then may indicate a release from the landfill. A report detailing the results of each sampling event and statistical analysis will be submitted to IDEM as required by regulations.

Groundwater sample collection procedures, analysis procedures, well maintenance, chain of custody control, laboratory QA/QC methods, measurement of groundwater elevations, and equipment decontamination will follow those detailed in the IDEM-approved site Ground Water Monitoring Plan (GWMP). A map showing the locations of all of the groundwater monitoring wells is included as part of the GWMP.

**IV. MAINTENANCE ACTIVITIES (Provide a description of planned maintenance activities and the frequency at which they will be performed. See instructions.)**

Maintenance activities include the following:

Rockport Plant Landfill  
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- Site mowing of vegetative cover at least two times per year to assure no trees or other deep rooted vegetation can impact the integrity of the cap.
  - Replace each monitoring well pump
  - once over the 30 year post closure period (estimated 35 wells) and perform regular maintenance duties on the wells as needed.
  - Maintenance of final cover on at least a yearly basis to repair erosion issues relative to the cover and reseed where necessary.
  - Repair of riprap down chutes and perimeter drainage ditches on a yearly basis where needed.
  - Maintenance of access control and benchmarks on a yearly basis.
  - Maintenance of the leachate collection system including removal of accumulated sediment every 5 years if necessary.
  - Maintenance of lift stations and pumps on a yearly basis and pump replacement when needed.
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