Active Surface Improvement Plan
Hatfield’s Ferry Coal Combustion Byproduct (CCB) Landfill

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1 INTRODUCTION

On July 6, 2017, FirstEnergy Generation, LLC (FirstEnergy) submitted surface improvement procedures to the Pennsylvania Department of Environmental Protection (PADEP) to address erosion rill repair, re-establishing vegetation and stormwater management at the Hatfield’s Ferry Coal Combustion Byproduct (CCB) Landfill (hereinafter referred to as the “Landfill”). After FirstEnergy addressed certain points of clarification, PADEP subsequently approved the surface improvement procedures proposed by FirstEnergy. FirstEnergy’s contractor has mobilized at the Landfill and started the surface improvement work. This Active Surface Improvement Plan redrafts and expands the previously submitted surface improvement procedures into a more formalized plan.

1.1 BACKGROUND

The Landfill at the Hatfield’s Ferry Power Station (hereinafter referred to as the “Station”) located in Greene County, Pennsylvania is operated by FirstEnergy. The Station was deactivated and ceased operations in 2013. Wastes generated by Station operations were disposed of at the Landfill, which is a captive site located approximately 1 mile west-southwest of the Station. The Landfill is permitted under Pennsylvania Department of Environmental Protection (PADEP) Solid Waste Permit No. 300370. Between 2009 and 2013, the Phase III disposal area was constructed in stages (referred to as “Steps”): Steps 1, 2, and 3-1, which have a combined lined area of approximately 58 acres. Surface water runoff and leachate collected from the Phase III disposal area are routed to the LSI, which is located east of the Phase II and Phase III disposal areas.

Upon deactivation of the Station in 2013, the Landfill surface was graded to provide positive drainage and was subsequently seeded to provide stabilization from surface water runoff. Recently the active Landfill surface has exhibited localized areas of surface erosion, poorly-draining areas, and areas of inadequate vegetative cover. Figure 1 shows the current surface water conditions.

2 PURPOSE

The purposes of this Active Surface Improvement Plan are to, among other things, further promote positive drainage, prevent ponding of stormwater, and ensure adequate vegetation.

3 WORK SCOPE/PROCEDURE

This Active Surface Improvement Plan outlines activities to identify areas on the active Landfill surface that should be repaired/regraded to promote positive drainage, to reestablish adequate vegetative cover, and to install Erosion and Sediment (E&S) control best management practices (BMPs) in accordance with the PADEP Erosion and Sediment Pollution Control Program Manual. Figure 2 depicts the improved surface water management plan. The following procedures shall be implemented to execute the proposed plan.
3.1 IDENTIFICATION

A FirstEnergy representative and a contractor representative will walk the active Landfill surface to identify and mark:

- Existing E&S control features and assess their condition
- Erosion rills and areas that should be repaired (filled in/smoothed out) using on-site bottom ash
- Erosion rills and areas that can be regraded to remove the rills
- Exposed bottom and fly ash areas
- Areas that have partial vegetative cover
- Areas that should be regraded to divert runoff to prevent erosion
- Areas that could benefit from additional sedimentation control features on the active surface
- Areas of ponding water/poorly-draining areas that must be regraded to minimize standing water on the active surface

3.2 IMPROVEMENTS

Once all areas of the active Landfill surface requiring improvement have been identified and marked, the contractor shall proceed as follows:

- Fill in and/or regrade the rills
- Remove sediment and debris that has accumulated in existing E&S control structures
- Install 12” diameter compost filter sock on the down gradient side of the bottom ash stockpile
- Establish additional E&S control measures (as applicable)
- Establish bottom ash maintenance roads to support future pipe jetting efforts

Permanent/existing and new E&S control BMPs shall be implemented and maintained in accordance with the PADEP Erosion and Sedimentation Control Program Manual and the facility’s solid waste permit. Damaged sediment control structures shall be repaired or replaced immediately.

Compost filter sock material shall be of photodegradable multi-filament polypropylene (MFPP). Sock fabric and compost shall meet the standards of Tables 4.1 and 4.2, respectively, of the PADEP Erosion and Sedimentation Control Program Manual. Traffic shall not be permitted to cross filter socks.

As disturbed areas within the active Landfill boundary approach grade, preparations should be made for seeding and mulching to begin (refer to Section 3.4 below). The Contractor shall not
disturb areas beyond that necessary to satisfactorily complete the required work. Contractor should track or groove the disturbed surface to slow surface water during a storm event.

3.3 SOIL COVER

Soil will be placed on areas of the active Landfill surface which have exhibited signs of erosion or minimal vegetative growth on the CCB surface to promote vegetative growth, and in areas where addition of soil is needed to prevent ponding of water on the landfill surface. Soil will be obtained from the on-site soil stockpiles or from the permitted borrow areas.

- As the rills are repaired a layer of soil sufficient to support vegetation will be applied
- A layer of soil to support vegetation will also be applied to the identified exposed bottom/fly ash areas
- Regrade the soil stock piles/borrow areas and install E&S controls as appropriate

3.4 SEEDING/MULCHING

Disturbed areas of the active Landfill surface will be seeded as soon as practical upon completion of improvements and placement of soil cover as outlined in Sections 3.2 and 3.3 herein. In accordance with facility’s solid waste permit Form H (Revegetation), direct seeding of CCBs may be performed. Form H, Table C.a.2 provides a temporary seed mixture for direct seeding of CCBs. Based on current discussions with a seeding contractor a slightly modified seed mix will be used as follows:

- All soil, partially vegetated areas, and the soil stock piles/borrow areas will be addressed
- Lime and fertilizer will be applied
- Seed will be applied at 170 pounds per acre
- Seed mix:
  - 40% Fawn Tall Fescue
  - 15% Birdsfoot Trefoil
  - 15% Aslike Clover
  - 10% Perennial Ryegrass
  - 10% Orchardgrass
  - 10% Climax Timothy
- Mulching will be with hay, straw, or if hydro seeding, a wood cellulose fiber

FirstEnergy will periodically inspect the Landfill surface and make any repairs needed in order to maintain the surface improvements made pursuant to this Active Surface Improvement Plan.

4 SCHEDULE

The following schedule outlines the activities and durations associated with the implementation of the Active Surface Improvement Plan:
• Contractor mobilized on July 10th to begin repair activities in accordance with this procedure
• Approximately 8 weeks will be needed to prepare the site for seeding
• Seeding will occur within one week after site is prepared