CLOSURE PLAN FOR EXISTING CCR SURFACE IMPOUNDMENT

CLOSURE PLAN DESCRIPTION

(b)(1)(i) - Reason for Initiating Closure

The Old West Ash Pond (Pond No. 1, and Pond No. 3) will be dewatered to facilitate closure and closed in-place. The final cover will be sloped to promote drainage and the stormwater runoff will be discharged through the existing NPDES permitted outfall. Closure operations will involve: (i) regrade fill to create acceptable grades for closure and (ii) install final cover. In accordance with 257.102(b)(i), this initial written closure plan will be amended to provide additional details after the final engineering design for the grading and cover system is completed. This initial plan closure reflects the best information available to date.

(b)(1)(ii) - If closure of the CCR unit will be accomplished by leaving CCR in place - a description of the final cover system and methods and procedures used to install the final cover system.

The final cover system will be installed in direct contact with graded CCR to achieve final subgrade elevations and will consist of: (i) 18" of compacted earthen material with a permeability of less than or equal to the permeability of the natural subsoils present at the site or no greater than 1 x 10⁻⁵ cm/sec, whichever is less (infiltration layer); (ii) 6" of soil capable of sustaining native plant growth (erosion layer); and (iii) planted with native grasses. The final cover slope will have a minimum slope of 2% and will be graded to convey stormwater runoff for final discharge through the existing NPDES outfall. CCR material will be regarded as fill to bring the grade up to the design slopes. Earthen material will be placed, graded, and compacted to meet the thickness as discussed above. Earthen material will be placed to create a 6" soil erosion layer that will sustain native plant growth. The final cover surface will be seeded and vegetated.

(b)(1)(iii) - How the final cover system will achieve the performance standards in 257.102(d).

The permeability of the final cover will be equal to or less than the permeability of the natural subsoils present or a permeability no greater than 1 x 10⁻⁵ cm/sec, whichever is less, and will be graded with a minimum 2% slope.

The final cover will be installed with a minimum 2% slope. Benches will have a maximum width of 300', as needed across the unit.

The final cover will have a minimum 2% slope. Final slope of the berms and cover will meet the stability requirements to prevent sloughing or movement of the final cover system using geotechnical analysis. The final cover will be vegetated to minimize erosion and maintenance. Closure is estimated to be completed by November 19, 2020.

The unit will be dewatered sufficiently to remove the free liquids to provide a stable base for the construction of the final cover system. Dewatering and regrading of existing in-place CCR will sufficiently stabilize the waste such that the final cover will be supported.

The final cover will consist of a minimum 18" infiltration layer with a permeability equal to or less than the permeability of the natural subsoils or no greater than 1 x 10⁻⁵ cm/sec, whichever is less. Erosion will be minimized with an erosion layer no less than 6" of earth material capable of sustaining native plant growth. The final cover surface will be seeded and vegetated.

When the final design of the final cover system is completed, the written closure plan will be amended to include the detailed final design.

The permeability of the final cover will be equal to or less than the permeability of the natural subsoils present or a permeability no greater than 1 x 10⁻⁵ cm/sec, whichever is less.

This will be verified during construction per the construction quality assurance plan to be developed in conjunction with the detailed amended closure plan.

The final cover will include a minimum 18" of compacted earthen material with a permeability equal to or less than the permeability of the natural subsoils or no greater than 1 x 10⁻⁵ cm/sec, whichever is less (infiltration layer).

The final cover will be a minimum 6" of soil erosion layer that is capable of sustaining native plant growth (erosion layer). The final cover will be seeded and vegetated.

The final cover will be installed with a minimum 2% slope and will incorporate calculated settlement as well as different settling and subsidence.

INVENTORY AND AREA ESTIMATES

(b)(1)(i) - Estimate of the maximum inventory of CCR ever on-site over the active life of the CCR unit

200,000 cubic yards

(b)(1)(ii) - Estimate of the largest area of the CCR unit ever requiring a final cover

30 acres

CLOSURE SCHEDULE

(b)(3)(ii) - Schedule for completing all activities necessary to satisfy the closure criteria in this section, including an estimate of the year in which all closure activities for the CCR unit will be completed. The schedule should provide sufficient information to describe the sequential steps that will be taken to close the CCR unit, including major milestones, and the estimated time frames to complete each step or phase of CCR unit closure.

The milestone and the associated timeframes are initial estimates. Some of the activities associated with the milestones will overlap. Amendments to the milestones and time frames will be made as more information becomes available.

Written Closure Plan and Notification of Intent to Close Placed in Operating Record

By November 18, 2015

Agency coordination and permit acquisition

- Coordinating with state agencies for completeness
- Acquiring state permits

2020 (estimated)

2017 (estimated)

Mobilization

2018 (estimated)

Reroute plant process water pipes and dewater and stabilize CCR

- Complete dewatering
- Complete stabilization of CCR

2018 (estimated)

2018 (estimated)

Grading

- Grading of CCR material in pond to facilitate surface water drainage

2019 (estimated)

Installation of final cover

2020 (estimated)

Estimate of Year in which all closure activities will be completed

2020

Certification by qualified professional engineer appended to this plan.
Certification Statement 40 CFR § 257.102 (b)(4) – Initial Written Closure Plan for a CCR Surface Impoundment or Landfill

CCR Unit: Dynegy Midwest Generation, LLC; Hennepin Power Station; Hennepin Old West Ash Pond

I, Jeremy M. Thomas, being a Registered Professional Engineer in good standing in the State of Illinois, do hereby certify, to the best of my knowledge, information, and belief that the information contained in this certification has been prepared in accordance with the accepted practice of engineering. I certify, for the above referenced CCR Unit, that the information contained in the initial written closure plan, November 18, 2015, meets the requirements of 40 CFR § 257.102.

Jeremy M. Thomas
Printed Name

11-18-2015
Date
Certification Statement 40 CFR § 257.102 (d)(3)(iii) – Design of the Final Cover System for a CCR Surface Impoundment or Landfill

CCR Unit: Dynegy Midwest Generation, LLC; Hennepin Power Station; Hennepin Old West Ash Pond

I, Jeremy M. Thomas, being a Registered Professional Engineer in good standing in the State of Illinois, do hereby certify, to the best of my knowledge, information, and belief that the information contained in this certification has been prepared in accordance with the accepted practice of engineering. I certify, for the above referenced CCR Unit, that the design of the final cover system as included in the initial written closure plan, dated November 18, 2015, currently prepared meets the requirements of 40 CFR § 257.102.

[Signature]

Printed Name

[Signature]

Date