

CWLP USEPA Extension Response

January 18, 2022



USEPA 257 Rule for Closure of CCR Units

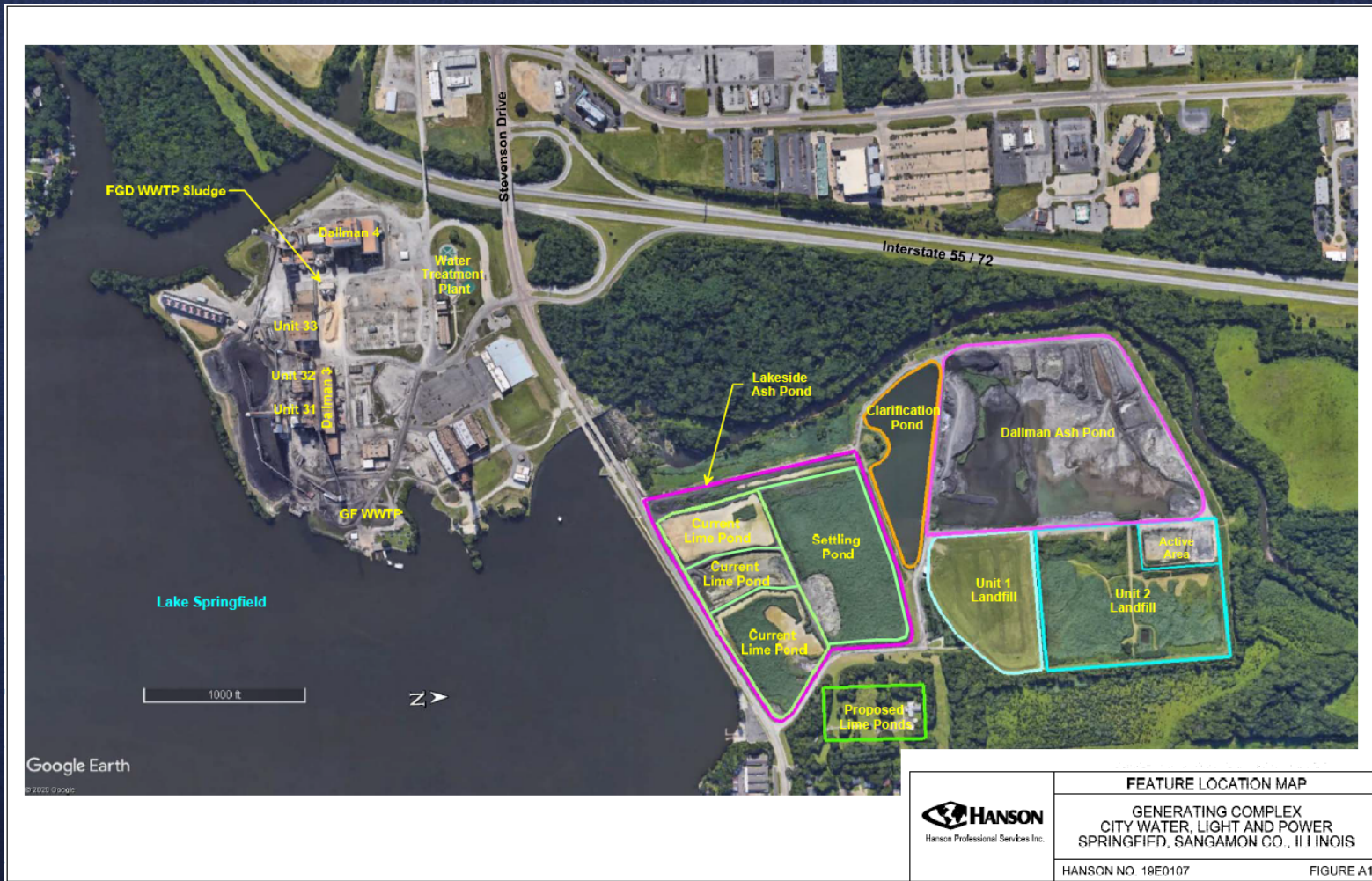
- 40 CFR 257.101(a)(1)

§ 257.101 Closure or retrofit of CCR units.

(a) The owner or operator of an existing unlined CCR surface impoundment, as determined under [§ 257.71\(a\)](#), is subject to the requirements of [paragraph \(a\)\(1\)](#) of this section.

(1) Except as provided by [paragraph \(a\)\(3\)](#) of this section, as soon as technically feasible, but not later than April 11, 2021, an owner or operator of an existing unlined CCR surface impoundment must cease placing CCR and non-CCR wastestreams into such CCR surface impoundment and either retrofit or close the CCR unit in accordance with the requirements of [§ 257.102](#).

CWLP Location Map



CWLP USEPA Extension Request

- Submitted November 24, 2020
- Summarized previous studies and detailed a construction timeline for allowing flows to the Ash Ponds to be removed by October 2023
 - 2018 Integrated Resources Plan
 - 2018 Coal Combustion Residuals Final Rules Study
 - 2020 Description of Site Hydrogeology
- Connected both the electric and water utilities use of the ash pond
- Detailed the progress ongoing towards closure of the ash ponds
- Provided a reasonable timeline for construction of the proposed facilities

CWLP USEPA Extension Request

From Conclusion of Extension Request

The unique circumstances in which not only the City of Springfield's electric needs are tied to the continued use of the ash ponds, but the continued supply of potable water to those same citizens demonstrate that the current use of these facilities must be maintained, until other accommodations may be made. As is shown by CWLP's past studies and evaluations, along with their current progress towards the preliminary design of the necessary facilities to support the closure of the ash ponds, progressive steps have been taken with respect to closure. The timeline presented itemizes the numerous steps necessary to complete the required projects that must extend beyond April 11, 2021.

Listed Report Deficiencies

- The Demonstration contains no evaluation of any potential offsite alternative capacity options, as required by 40 C.F.R. § 257.103(f)(1)(iv)(A)(1). The narrative stated “Offsite capacity is not available due to the plant footprint being landlocked by Lake Springfield, Interstate 55 and Stevenson Drive. The Ash Pond area is also landlocked by Sugar Creek, Stevenson Drive, and a residential subdivision.” This is an insufficient evaluation of possible off-site alternative disposal options.

- PDF Request Page 7-8, Section 2.1 Detailed Alternative Capacity Options. The stated quote above was a summary.
- PDF Request Page 451-603, Burns/Mac report details offsite alternative capacity options.

Listed Report Deficiencies

pounds/cubic foot for bottom ash. According to the "Annual Inspection Report for Coal Combustion Residuals Landfill" prepared for CWLP by Andrews Engineering, Inc. in January 2016, the actual Unit 2 landfill capacity is estimated at 1,162,275 cubic yards. Additional landfill space would need to be developed to meet a 20-year design basis unless CWLP chooses to dispose of the excess CCR material at a third-party landfill or has other means of disposal.

7.5.1.2 Offsite Landfill

The second landfill option considered is to build a new landfill off-site at a location to be determined. For this option, it is assumed that the future landfill location will not contain any groundwater, seismic, or wetland interferences and can be designed in accordance with the IEPA regulations and the CCR Rule, rather than following the existing site permit. The new landfill will be designed for a 20-year life. For the purposes of this study, it was assumed that the landfill would be constructed in two (2) cells for comparison with the existing Unit 2 permitted landfill estimate. The first phase of the new landfill will have a capacity of approximately 1,200,000 cubic yards, assuming a final height of 60 feet. The second phase will have the capacity of approximately 800,000 cubic yards. A new landfill will also require construction of a stormwater pond and leachate pond with a truck loadout structure. It is assumed that the bottom liner system for the landfill ponds will consist of 24 inches of compacted clay, a geomembrane liner, and 24 inches of protective soil. A sketch of the layout and sections is shown on SKC-200 in Appendix K.

7.5.2 Ash Pond Closure

The Dallman Station contains two (2) existing CCR impoundments: Lakeside ash pond and Dallman ash pond. The original Lakeside ash pond consisted of 34 acres. This area was divided into separate 16 and 18-acre plats. The current Lakeside ash pond is an inactive 16-acre diked impoundment which ceased receiving CCR in 2009. The 18-acre plat, south of the current Lakeside ash pond, was repurposed to handle lime softening residuals from the City's potable water treatment plant (which is unrelated to power production) and is currently referred to as the lime ponds. The Dallman ash pond is a diked impoundment covering approximately 34.5 acres. Fly ash and bottom ash are sluiced to the pond with raw lake water. The arrangements of the ash and lime ponds are shown on SKC-100 in Appendix K.

The basis for the cover system for each of the closures is to use 18 inches thick compacted clay cover material followed by 6-inch thick vegetative layer (topsoil) which will be seeded for the capping of the closed ponds. This is the prescribed cover system in the CCR Rule, but the CCR Rule does allow for alternate cover systems including geomembrane. We have assumed that clay would be used because of the close proximity of clay material to the site. During the execution phase of the project, the

The final cover system of the permitted landfill is currently permitted to consist of 36 inches of compacted clay cover and 36 inches of protective soil cover (24 inches of protective soil with 12 inches of topsoil for establishing vegetation). Layer thickness for the final cover is also dictated by the existing landfill facility permit requirements for the site.

The estimate assumes clay liner and fill material will be obtained within CWLP owned land with a 1-mile haul distance.

The total capital cost for the Unit 2 landfill expansion is \$9,480,000. The direct costs, which include equipment, materials, labor, and installation are \$4,630,000 while the indirect costs, not including inflation, are \$1,110,000. A summary of capital costs for the landfill options is located in Table 8-7.

8.3.1.2 Offsite Landfill

For the new, CCR-compliant landfill, the assumed bottom liner system consists of 36 inches of compacted clay liner, a 60-mil HDPE geomembrane liner, 12 inches of leachate collection layer (with geotextile and piping included), and 24 inches of protective soil layer. The final cover system of the future landfill would consist of 36 inches of compacted clay, 60-mil HDPE geomembrane liner, and 36 inches of protective soil cover (24 inches of protective soil with 12 inches of topsoil for establishing vegetation). The new landfill estimate also includes construction of a stormwater pond and a leachate pond with a truck loadout structure. The bottom liner system for the stormwater and leachate ponds will consist of 24 inches of compacted clay, a geomembrane liner, and 24 inches of protective soil.

The costs presented assume development of one (1) of the two (2) cells of the landfill (23 acres). Along with the site development for the landfill, the new site also includes site development items such as clearing and grubbing and asphalt-paved roads. The estimate assumes liner and fill material will be obtained on-site with a 1-mile haul distance.

Burns and McDonnell researched land transactions that previously sold near Springfield, Illinois as well as land that is currently being marketed for sale. It was assumed that approximately 40 to 80 acres of preferably vacant land would be needed for the Project and that the land would be located as close to the existing Dallman Plant as possible. Properties that most closely matched these requirements were selected as a comparable sale/listing and are summarized in Table 8-6.

Listed Report Deficiencies

- The Demonstration fails to provide an in-depth analysis of the site and any site-specific conditions that led to the decision to select the alternative capacity being developed, as required by 40 C.F.R. § 257.103(f)(1)(iv)(A)(I)(i). Specifically, the narrative fails to contain any of the necessary details that would allow EPA to evaluate the Demonstration, including for example, generation rates of different CCR and non-CCR wastestreams and how these were used to select the alternative capacity option and justify the continued need of the existing CCR surface impoundments, and the size of the new lime pond that is needed for EPA to evaluate the time needed to construct the new capacity.
- PDF Request Page 451-603, Burns/Mac report details CCR and non-CCR waste streams and these evaluations for alternative capacity options.

Listed Report Deficiencies

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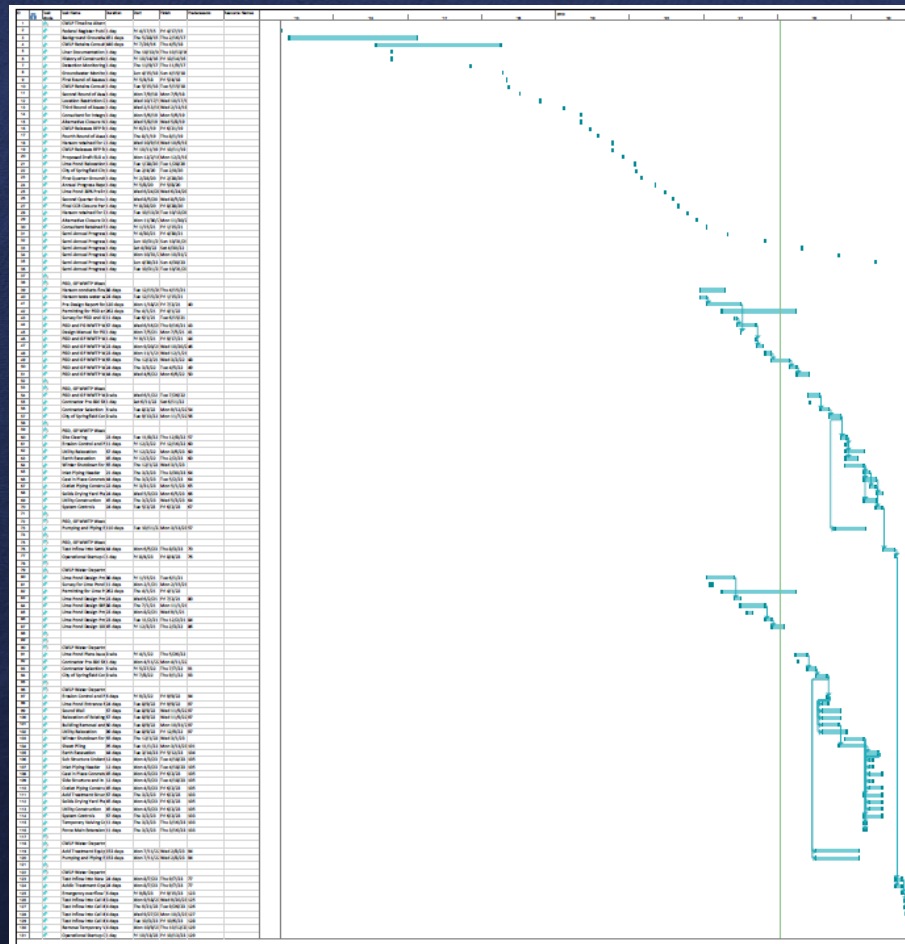
City Water, Light & Power TOC-2 Burns & McDonnell

Listed Report Deficiencies

- The Demonstration fails to provide either explanation or justification for the amount of time being requested for the Dallman Ash Pond to continue operation, or substantiation that this is the fastest feasible time to cease receipt of waste, as required by 40 C.F.R. § 257.103(f)(1)(iv)(A)(I)(iii).

- PDF Request Page 9-13 includes a detail for the justification of the amount of time requested
- PDF Request Page 20-22 is a detailed schedule showing the work completed up to the request date and the time required to design, permit and construct the facilities necessary to remove flows from the ash ponds.

Listed Report Deficiencies



Listed Report Deficiencies

- The Demonstration fails to include either a certification of compliance or any of the required supporting documentation for the on-site CCR landfill, as required by 40 C.F.R. § 257.103(f)(1)(iv)(B). The requirements in this section apply to all CCR units at the facility. For example, the Demonstration fails to include any of the groundwater monitoring data for the CCR landfill, as required by 40 C.F.R. § 257.103(f)(1)(iv)(B)(3).
- 257.103(f) specifically refers to only CCR surface impoundments
- PDF Request Page 26 includes a certification for all CCR units under 257.103(f)(1)(iv)(B)(1)
- PDF Request Page 26 include reference to the CWLP CCR compliance website containing landfill supporting documentation
- CWLP can provide additional certification and data upon request

CWLP Work to Date

- Units 31-33 have closed, reducing a majority of CCR waste flows to the ash ponds.
- Public meeting held on the relocation of the Lime Ponds.
- Public meetings held on the closure of the Ash Ponds.
- Design is underway for new Lime Pond and Dallman facilities. Construction set to begin in 2022.
- IL EPA Construction permits submitted for new Lime Pond and Dallman facilities.
- IL EPA NPDES draft permit update submitted for removal of waste flows to ash ponds.

Moving Forward

- CWLP public comment response documenting work to date towards closure by CWLP and requesting additional time for construction of the required facilities
- Move forward with construction for Dallman and Lime Pond Project
- Continued coordination with USEPA regarding project
 - Welcome the opportunity to respond to USEPA's questions