State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
141 NW Barstow St. Room 180
Waukesha, WI 53188

Tony Evers, Governor
Karen Hyun, Ph.D., Secretary
Telephone 608-266-2621
Toll Free 1-888-936-7463
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March 25, 2025

FID #737054120
Marathon County
SW/Approval

Mr. Eric Kovatch, P.G. – Facility Manager
WEC Energy Group – Business Services
333 W. Everett St
Milwaukee, WI 53203

Subject: **DRAFT** Conditional Plan of Operation Approval Modification for Initial Permitting of a Coal Combustion Residuals (CCR) Landfill, Wisconsin Public Service Corporation Weston Disposal Site #3 Ash Landfill, License #3067

Dear Mr. Kovatch:

The Department of Natural Resources (department) has reviewed the proposed plan of operation modification for initial permitting of a coal combustion residuals (CCR) landfill for the Wisconsin Public Service Corporation Weston Disposal Site #3 Ash Landfill. The department is issuing this draft decision for a conditional approval of the plan of operation modification for initial permitting in accordance with s. NR 514.045(4), Wis. Adm. Code. This draft decision will be published on the department's internet site at https://dnr.wisconsin.gov/topic/Waste/Comment.html for 30 days for public comment.

Please include this draft approval in the written operating record and on the CCR Landfill publicly accessible internet site for the landfill in accordance with s. NR 506.17(2) and (3), Wis. Adm. Code. Provide notification to the department upon placing the documents on the internet site.

If you have questions regarding this draft approval, please contact Tony Peterson at 715-491-8546 or anthony.peterson@wisconsin.gov or Matthew Bachman at (608) 512-3233 or matthew.bachman@wisconsin.gov.

Sincerely,

Tony Peterson
Waste Management Engineer
Southeast Region

cc: John Trast – GEI Consultants (jtrast@geiconsultants.com)
Andrew Schwoerer – GEI Consultants (aschwoerer@geiconsultants.com)
Nate Keller – Ramboll (nate.keller@ramboll.com)
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Mr. Eric Kovatch, P.G. – Facility Manager
WEC Energy Group – Business Services
333 W. Everett St
Milwaukee, WI 53203

Subject: DRAFT Conditional Plan of Operation Approval Modification for Initial Permitting of a Coal Combustion Residuals (CCR) Landfill, Wisconsin Public Service Corporation Weston Disposal Site #3 Ash Landfill, License #3067

Dear Mr. Kovatch:

The Department of Natural Resources (department) has reviewed the proposed plan of operation modification for initial permitting of a coal combustion residuals (CCR) landfill for the Wisconsin Public Service Corporation Weston Disposal Site #3 Ash Landfill (Weston). There are attachments to this letter which include a project summary, the plan of operation approval modification, environmental monitoring tables, preventive action limits (PAL) and alternative concentration limits (ACL) tables, closure and long-term care cost estimate tables, and a summary of existing conditions.

The department is issuing this draft decision for a conditional approval of the plan of operation modification for initial permitting in accordance with s. NR 514.045(4), Wis. Adm. Code. This draft decision includes a written response to comments received during the completeness public comment period and public meeting held in accordance with s. NR 514.045(3), Wis. Adm. Code. This draft decision will be published on the department's internet site at https://dnr.wisconsin.gov/topic/Waste/Comment.html for 30 days for public comment.

Please include this draft approval in the written operating record and on the CCR Landfill publicly accessible internet site for the landfill in accordance with s. NR 506.17(2) and (3), Wis. Adm. Code. Provide notification to the department upon placing the documents on the internet site.

Previous conditions of approval for the Weston Landfill still apply unless specifically superseded or rescinded by the department.

A condition of this approval requires proof of financial responsibility for closure and long-term care be adjusted within 60 days. The revised proof of financial responsibility must be established based upon the approved costs contained herein and the requirements of ch. NR 520, Wis. Adm. Code. Please contact Dustin Sholly, owner financial responsibility specialist, at Dustin.Sholly@wisconsin.gov or 608-886-0154 if you have questions.

Please keep in mind that this approval does not relieve you of obligations to meet all other applicable federal, state, and local permits, as well as zoning and regulatory requirements. If you have questions regarding this approval, please contact Tony Peterson at (715) 491-8546 or anthony.peterson@wisconsin.gov or Matthew Bachman at (608) 512-3233 or matthew.bachman@wisconsin.gov.

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Sincerely,

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Melanie Burns
Waste and Materials Management Program Supervisor
Southeast Region

cc: John Trast – GEI Consultants (jtrast@geiconsultants.com)
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Attachments:
1. Draft Project Summary
2. Draft Conditional Plan of Operation Approval Modification for Initial Permitting
3. Draft Environmental Monitoring Tables
4. Draft Preventive Action Limit (PAL) and Alternative Concentration Limit (ACL) Tables
5. Draft Closure and Long-term Care Cost Estimates
6. Draft Condition Summary Table

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DRAFT PROJECT SUMMARY
PLAN OF OPERATION APPROVAL MODIFICATION
COAL COMBUSTION RESIDUALS (CCR) INITIAL PERMITTING
FOR THE
WISCONSIN PUBLIC SERVICE CORPORATION
WESTON DISPOSAL SITE #3 ASH LANDFILL, LICENSE #3067

General Facility Information

AUTHORIZED CONTACT: Mr. Eric Kovatch, P.G. – Facility Manager
WEC Energy Group – Business Services
333 W. Everett St
Milwaukee, WI 53203

LICENSEE AND PROPERTY OWNER: The Weston Disposal Site #3 Ash Landfill (Weston Landfill) is owned and operated by Wisconsin Public Service Corporation (WPSC).

SITE LOCATION: The Weston landfill is located in the N½ of the NE ½ of Section 3, Town 27 North, Range 7 East, Town of Kronenwetter, Marathon County, Wisconsin.

CCR LANDFILL DESCRIPTION:

The initial plan of operation was approved on October 20, 1986, for an eight-cell landfill approximately 35 acres in size with a design capacity of 873,000 cubic yards (cy). Cell 1 was constructed and placed into operation but was only partially filled and remained inactive due to WPSC's beneficial reuse program. On December 11, 2014, the Department of Natural Resources (department) issued a conditional plan of operation approved for the vertical and horizontal expansion of the Weston Landfill for an additional 22.6 acres and 3,202,000 cy of design capacity that required exhuming of all waste previously placed in Cell 1. The current Weston Landfill is permitted for 57.6 acres with a 4,075,500-cy design capacity and is divided into nine sequential cells.

The existing Weston Landfill consists of Cell 1 and Cell 2 which are actively being filled. Cell 2 is partially capped with approximately 3.55 acres of final cover. Cells 3 through 9 are unconstructed and have a permitted area of 42.5 acres and a design capacity of 3,407,600 cy.

CCR LANDFILL WASTE STREAMS:

The Weston Landfill is approved to accept CCR waste generated from the WPSC Weston Generating Station and the WPSC Pulliam Power Plant. As part of the initial permitting plan modification, WPSC requested approval to also dispose of the following waste streams in the Weston Landfill.

- CCR waste generated by the WPSC Weston Generating Station or the WPSC Pulliam Power Plant which has been excavated from another landfill or historic fill site.
- CCR waste and by-products generated by the WPSC Weston Generating Station or the WPSC Pulliam Power Plant which have been previously beneficially reused.

Pursuant to condition 9 of the attached approval, WPSC will need to receive written concurrence from the department for each specific occurrence of the above items prior to disposing of these CCR materials at the Weston Landfill. Pursuant to condition 10 of the attached approval, WPSC will need to receive written approval

from the department prior to disposing of CCR waste in the Weston Landfill that was not generated at the WPSC Weston Generating Station or the WPSC Pulliam Power Plant.

INITIAL PERMITTING REQUIREMENTS:

PERFORMANCE CRITERIA, s. NR 514.045(1)(b), Wis. Adm. Code:

Wetlands, s. NR 504.04(4)(a), Wis. Adm. Code:

The existing footprint of the Weston Landfill is not located within a wetland. Two freshwater emergent wetlands are mapped northwest and southwest of the existing landfill footprint, within the permitted area for future landfill cell development. WPSC received approval to remove these wetlands from both the department and the United States Army Corps of Engineers. These wetlands were removed during the construction of Cells 1 and 2 in 2015. A detailed description of the removal of these two wetlands was provided in the March 2016, "Cell 1 and Cell 2 Liner Construction Documentation Report", which was approved by the department on April 22, 2016.

Endangered or Threatened Species, s. NR 504.04(4)(b), Wis. Adm. Code:

In August 2023, an endangered resources review was performed for the remaining construction of the Site #3 Landfill. The review indicated that two federally endangered species may be present in the landfill area. No actions were required or recommended for the endangered resources due to the lack of suitable habitat for the species within the project boundary. The department's endangered resources review is included in Appendix B or the December 19, 2023, plan of operation modification report.

Surface water, s. NR 504.04(4)(c), Wis. Adm. Code:

The department's Surface Water Data Viewer Map features two 'lakes and open waters' within the footprint of the Weston Landfill. One 'lake and open water' feature is located in the existing Cell 2, while the other 'lake and open water' is located southeast of Cell 2. The 'lake and open water' feature located within existing Cell 2 was an old sedimentation basin that was excavated to construct the base liner of Cell 2 and is erroneously labeled in the Surface Water Data Viewer Map as an existing feature. The 'lake and open water' feature southeast of Cell 2 is a wetland that was delineated in 2011 as part of the Feasibility Study and is located outside of the limits of clearing and grubbing necessary for the development of the Weston Landfill. This wetland extends west along the southern limit of the landfill and was preserved during site development. The WDNR Surface Water Data Viewer erroneously characterizes this wetland as a 'lake and open water' feature.

Johnson Creek is the surface water body nearest to the Weston Landfill, located approximately 2,800 feet to the southeast. There are no ponds, flowages, or floodplains identified within the project area.

LOCATIONAL CRITERIA, s. NR 514.045(1)(c), Wis. Adm. Code:

Faults, s. NR 504.04(3)(g), Wis. Adm. Code:

Based on a review of the U.S. Geological Survey (USGS) Quaternary faults database and map, the Site #3 Landfill is not located within 200 feet of the outermost damage zone of a fault that has had displacement in Holocene time. In s. NR 500.03 (103), Wis. Adm. Code, Holocene is defined as the most recent epoch of the Quaternary period extending from the end of the Pleistocene Epoch to the present. The USGS map shows that no faults are located in Wisconsin. The USGS map is included in Appendix D of the December 19, 2023, plan of operation modification report.

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Seismic Impact Zones, s. NR 504.04(3)(h), Wis. Adm. Code:

The Weston Landfill is not located in a seismic impact zone. Section NR 500.03(208), Wis. Adm. Code, defines a seismic impact zone as an area having a 10 percent or greater probability that the maximum expected horizontal acceleration in lithified earth material, expressed as a percentage of the earth's gravitational pull (g), will exceed 0.10 g in 50 years. Appendix E of the December 19, 2023, plan of operation modification report includes a calculation demonstrating that the probability of exceedance is less than two percent in 50 years for a maximum expected horizontal ground acceleration of 0.10 g, therefore the Site #3 Landfill is not located in a seismic impact zone.

Unstable Areas and Differential Settling, ss. NR 504.04(3)(i) and NR 514.045(1)(c)1., Wis. Adm. Code:

The Weston Landfill is not located in an unstable area where on-site or local soil conditions may result in significant differential settling. Information considered when evaluating whether the Weston Landfill is located in an unstable area included the following: overburden soil type and depth, the slope of the underlying bedrock, the proximity of the site to documented karst regions, the proximity of the site to documented oil wells, and the proximity of the site to documented gas wells.

Unstable Areas and Geologic or Geomorphologic Features, ss. NR 504.04(3)(i) and NR 514.045(1)(c)2., Wis. Adm. Code:

The Weston Landfill is not located in an area where on-site geologic or geomorphological features are unstable. The site investigation did not identify any evidence of Karst systems existing beneath or around the landfill. The USGS identifies the Wabash Valley Seismic Zone as the closest seismic activity with documented displacement in the Holocene to the landfill. The Wabash Valley Seismic Zone is located approximately 530 miles south of the Weston Landfill. The Weston Landfill is underlain by unconsolidated material consisting of glacial till and residuum identified as the Marathon Formation overlying weathered and competent Precambrian bedrock. The Precambrian bedrock consists of quartz diorite, with lesser amounts of granite and amphibolite. These geologic features provide a stable foundation for the landfill. This assessment is confirmed by a slope stability analysis completed for the landfill which indicates that the slope stability safety factors are acceptable.

Unstable Areas and Human-made Features or Events, ss. NR 504.04(3)(i) and NR 514.045(1)(c)3., Wis. Adm. Code:

The Weston Landfill is not located in an area with on-site or local human-made features (surface or subsurface) that are unstable. The Weston Landfill is not located on human-made features or events that could create an unstable area. Surface water around the landfill is managed with an adequate stormwater management system and best management practices.

Floodplains, NR 514.045(1)(d), Wis. Adm. Code:

The Weston Landfill is not located within a floodplain and is in an area of minimal flood hazard. A Federal Emergency Management Agency (FEMA) flood insurance rate map and a department Surface water Data Viewer Map are provided in Appendix G of the December 19, 2023, plan of operation modification report.

Critical Habitat of Endangered or Threatened Species, NR 514.045(1)(e), Wis. Adm. Code:

As discussed in the previous section of the project summary, an endangered resources review was performed for the remaining construction of the Weston Landfill in August 2023. The review indicated that two federally endangered species may be present in the landfill area. No actions were required or recommended for the

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endangered resources due to the lack of suitable habitat for the species within the project boundary. The department's endangered resources review is included in Appendix B or the December 19, 2023, plan of operation modification report.

Additionally, according to the Natural Heritage Inventory (NHI) preliminary review, the Weston Landfill site overlaps the Kerner Blue Butterfly and Rusty Patched Bumble Bee high potential zones. The NIH recommended that WPSC take into consideration additional improvements to make the site an attractive habitat for native pollinators once the landfill is closed and final cover is constructed, specifically with regards to the type of seeding. WPSC has no current plans to take additional measures to make the Weston Landfill more attractive for native pollinators after closure of the landfill.

LANDFILL DESIGN, s. NR 514.045(1)(f), Wis. Adm. Code:

Subbase and Base Grades:

The department granted an exemption to s. NR 504.06(2)(c), Wis. Adm. Code in its December 11, 2014, conditional plan of operation approval to reduce the 10-foot separation distance between the top of bedrock surface and the bottom of the clay liner. In some areas of the permitted landfill area, the top of the bedrock surface is less than 5 feet from the bottom of the composite liner.

Subbase grade activities for unconstructed cells 3 through 9 of Weston Landfill will consist of the following:

- Construction and testing of the perimeter berms.
- Minimal excavating to reach subbase grades and maintain as much separation to the top of bedrock as possible.
- Undercutting the gradient control system and leachate collection system lines.
- Documenting subbase grades prior to construction of the gradient control system and compacted clay liner.
- General fill used to construct the perimeter berms will be placed in 12-inch lifts and compacted to a minimum of 90 or 95 percent of the modified or standard Proctor maximum dry density, respectively. The field testing, laboratory testing, and documentation of general fill placement will follow the requirements outlined in the construction quality assurance (CQA) plan provided in Appendix N of the plan modification request.
- Subbase grades will be surveyed on a 50-foot grid pattern and at breaks and changes in grade. Subbase grade documentation and grade tolerances are included in the CQA Plan.
- Excavated material removed during subbase construction will be identified and stockpiled for use as topsoil, general fill, or in the gradient control system. During excavation, stormwater drainage will be controlled through the use of temporary ditching, silt fences, straw-base and riprap check dams, diversion berms, or other erosion control measures.

Gradient Control System:

The groundwater gradient control system is designed to limit the rise of groundwater into the clay liner system and prevent an intermittent, recurring, or sustained hydraulic connection between any portion of the base of the landfill and the uppermost aquifer due to fluctuations in groundwater elevations.

The groundwater gradient control system consists of a 12-inch-thick layer of select granular fill placed beneath the composite liner system with a minimum hydraulic conductivity of 1.0×10^{-3} centimeters per second (cm/sec). The gradient control system extends a minimum of 25 feet perpendicularly from the leachate collection line. A network of perforated and solid wall 6-inch diameter standard dimensional ratio (SDR) 11 high-density

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polyethylene (HDPE) or schedule 80 polyvinyl chloride (PVC) drainage pipes are bedded in a 2-foot-wide collection trench filled with aggregate backfill material gravel, meeting the criteria of s. NR 504.06(5)(e), Wis. Adm. Code, and is wrapped in geotextile within the granular fill layer. The perforated pipe gravity drains under the leachate collection sump where it transitions to a non-perforated pipe that extends through the perimeter berm and discharges near the toe of the outside slope.

Composite Liner Design:

The liner system for Cells 1 and 2, and future Cells 3 through 9, consists of the following components from bottom to top:

- 24-inch-thick compacted clay layer
- Geosynthetic clay liner (GCL)
- 60-mil textured HDPE geomembrane
- 12-ounce per square yard nonwoven geotextile cushion layer placed in leachate collection trenches and sump

The compacted clay liner will be constructed in accordance with s. NR 504.06(2), Wis. Adm. Code and documented in accordance with s. NR 516, Wis. Adm. Code. The liner design meets the minimum design and construction criteria for CCR Landfills listed in s. NR 504.06(7), Wis. Adm. Code.

The 24-inch clay component of the liner will be placed in 6-inch lifts upon the subbase grade and compacted to achieve a maximum hydraulic conductivity of 1×10^{-7} cm/sec. The compacted clay layer will be constructed in accordance with the requirements of s. NR 504.06(2)(a), Wis. Adm Code and Section 5 of the construction quality assurance (CQA) plan included in Appendix N of the report dated December 19, 2023.

A GCL layer will be placed directly above the 24-inch-thick compacted clay layer in accordance with s. NR 504.07(4)(a), Wis. Adm. Code and Section 12 of the CQA plan. As required in s. 504.12(3)(a)5, Wis. Adm. Code a liner that utilizes a GCL and soil barrier layer will be designed to have a liquid flow rate no greater than the liquid flow rate through 2 feet of compacted soil with a hydraulic conductivity of 1×10^{-7} cm/sec.

A 60-mil HDPE geomembrane layer will be installed above the GCL in accordance with s. NR 504.06(3), Wis. Adm. Code and Section 10 of the CQA plan. A geotextile cushion layer will be installed above the 60-mil HDPE geomembrane liner within the leachate collection pipe trench and sump in accordance with Section 11 of the CQA Plan.

Leachate Collection and Removal System:

The leachate collection system will be construct in accordance with s. NR 504.06(5), Wis. Adm. Code and will consist of the following: a 12-inch-thick layer of granular drainage material, a network of leachate collection and transfer pipes, sumps, cleanout pipes, perimeter access manholes, transfer manholes, a collection tank, and a load-out station.

Leachate forcemain piping consists of a double-walled, 3-inch diameter non-perforated HDPE pipe inside a 6-inch diameter HDPE pipe. The forcemain sections will be pressure tested during installation prior to use in accordance with Section 13 of the CQA Plan.

The leachate storage tank is an above-ground tank with a nominal storage capacity of 100,000 gallons. The tank provides approximately 10 days of storage capacity based on an estimated maximum daily leachate generation of 10,400 gallons per day. The leachate tank is surrounded by a reinforced concrete secondary containment structure.

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The leachate loadout consists of a sloped concrete pad with a catch basin in the center to collect any spills that may occur while loading tanker trucks. The catch basin drains back to the dry sump in the secondary containment where it is pumped back into the tank.

Leachate generated at the Weston Landfill is hauled to and treated at the wastewater treatment facility at the WSPC Weston Power Plant. Leachate headwells will be installed within the leachate collection system to monitor the hydraulic head on the base liner. Two leachate headwells will be installed in each cell.

Final Cover System:

The existing Cell 2 is partially capped with approximately 3.55 acres of final cover. The existing final cover on Cell 2 consists of a composite cover with the following components from bottom to top:

- 24-inch compacted fly ash barrier layer
- 40-mil geomembrane
- Geocomposite drainage layer
- 30-inch rooting zone
- 6-inch topsoil layer

The initial permitting plan modification request proposed to continue to use 2 feet of moisture-conditioned and compacted fly ash as part of the final cover system, which was approved by the department in the past as part of the December 11, 2014 plan of operation approval for the Weston Landfill. The department informed WPSC that it was unlikely to approve that design under the current requirements of Wisconsin Administrative Code and department policies. WPSC therefore rescinded this request from the initial permitting plan modification request.

The final cover for the remaining areas of the active Cells 1 and 2, and future Cells 3 through 9, will consist of the following components from bottom to top:

- 24-inch-thick compacted clay layer or 24-inch soil barrier layer with a GCL
- 40-mil textured liner low-density polyethylene (LLDPE) geomembrane
- Geocomposite drainage layer
- 30-inch-thick rooting zone layer
- 6-inch-thick topsoil layer

The final cover will be constructed in accordance with s. NR 504.07, Wis. Adm. Code and documented in accordance with s. NR 516, Wis. Adm. Code.

If the 24-inch-thick compacted clay layer final cover design is utilized then the clay layer will meet the requirements of s. NR 504.06(2)(a), Wis. Adm. Code and will be constructed in accordance with s. NR 504.06(2)(f), Wis. Adm. Code and Section 5 of the CQA plan.

If the soil barrier layer and GCL design are utilized, a 24-inch-thick layer of compacted soil barrier material will be placed in accordance with s. NR 504.07(4)(a)(12), Wis. Adm. Code and Section 8 of the CQA plan. GCL will be placed directly above the compacted soil barrier layer. Specifications for the materials, installation, and documentation of the GCL will meet the requirements of s. NR 504.07(4), Wis. Adm. Code and Section 12 of the CQA plan.

A 40-mil HDPE geomembrane layer will be installed above the compacted clay layer or the GCL in accordance with s. NR 504.06(3), Wis. Adm. Code and Section 10 of the CQA plan. A geocomposite drainage layer will be installed above the geomembrane and will have an equivalent or greater hydraulic conductivity flow capacity of 1

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foot of sand with a minimum hydraulic conductivity of 1.0×10^{-3} cm/sec, in accordance with s. NR 504.07(6)(a), Wis. Adm. Code and Section 14 of the CQA plan.

A 30-inch-thick rooting layer will be installed immediately above the geocomposite drainage layer in accordance with s. NR 504.07(6), Wis. Adm. Code and Section 6 of the CQA plan. A pipe drainage system will be installed within the rooting zone and will have outlets spaced approximately every 200 feet around the perimeter of the landfill. The rooting zone will be overtopped by a 6-inch layer of topsoil in accordance with s. NR 504.07(7), Wis. Adm. Code and Section 9 of the CQA plan.

CCR LANDFILL PLANS, s. NR 514.045(1)(g), Wis. Adm. Code:

Fugitive Dust Control Plan, s. NR 514.07(10)(a), Wis. Adm. Code:

The fugitive dust control plan is included in Appendix J of the December 19, 2023, plan of operation modification report.

The fugitive dust control plan consists of the following measures to limit fugitive dust generated at the Weston Landfill.

- CCR delivered to the landfill is conditioned with water prior to being transported to the Weston Landfill.
- The Weston Landfill is designed and operated to have filling areas at different elevations to create a wind block that assists in the prevention of windblown dust during adverse weather conditions.
- CCR discharged from the trucks in the designated active area of the cell are graded, water conditioned, if necessary, and compacted to suppress dust generation.
- Access roads to the Weston Landfill are paved to minimize the generation of dust due to truck traffic and are swept and watered regularly.
- In areas not being actively filled intimidate cover may be applied as necessary to help reduce the potential for windblown CCR.
- Final cover is installed as soon as final waste grades are achieved over a sufficient area to support a practical final cover installation work scope to minimize wind-generated dust in the active area.

The CCR fugitive dust control plan will be reviewed annually, and updated as necessary, in conjunction with preparation of the annual CCR fugitive dust control report required by s. NR 514.07(10)(a)(5), Wis. Adm. Code. The annual CCR fugitive dust control report will be included in the annual report in accordance with s. NR 506.20(3)(a), Wis. Adm. Code, and include a description of the actions taken by the owner or operator to control CCR fugitive dust, a record of all citizen complaints, and a summary of any corrective measures taken.

Run-On And Run-Off Control System Plan, s. NR 514.07(10)(b), Wis. Adm. Code:

The run-on and run-off control system plan is included in Appendix K of the December 19, 2023, plan of operation modification report.

In order to control stormwater and prevent run-on into the active landfill, permanent perimeter berms have been established around the east, north, and south sides of the landfill to direct stormwater run-on away from the landfill. Temporary intercell berms perform the same function on the west and south sides of Cell 1 and the west sides of Cell 2. Approximately 2.7 acres of the Cell 2 perimeter slopes on the south and east sides of Cell 2 have received final cover. The stormwater flow from the final cover is routed to a perimeter ditch and discharges into Storm Water Basin No. 3. Table 1 displays an estimated schedule for the construction of the future stormwater control structures.

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Table 1: Estimated Schedule for Storm Water Control Structure Construction

Phase	Storm Water Control Structures	Date of Construction
Cell 3	Permanent south perimeter berm, temporary west perimeter berm	Fall 2025
Cells 4A and 4B	Permanent north and south perimeter berms, temporary west perimeter berm	Fall 2029
Cells 5A and 5B	Stormwater Basin No. 4, permanent north and south perimeter berms, temporary west perimeter berm	Fall 2040
Cells 6A and 6B	Permanent north and south perimeter berms, temporary west perimeter berm	Fall 2049
Cells 7A and 7B	Permanent north and south perimeter berms, temporary west perimeter berm	Fall 2058
Cell 8	Stormwater Basin No. 5, Stormwater Basin No. 6, permanent west and south perimeter berms, temporary north perimeter berm	Fall 2067
Cell 9	Stormwater Basin No. 7, permanent north and west perimeter berms	Fall 2072

During the operation and filling of Cells 1 and 2 storm water within the landfill is handled and treated as leachate. Leachate is directed to the perimeter containment ditches on the inside of the perimeter berms and routed to a stormwater surge area along the Cell 2-3 intercell berm area, where it is allowed to infiltrate into the leachate collection system.

In general, stormwater is conveyed off the slopes of Cells 1 and 2 as sheet flow until it is intercepted by temporary containment ditches. The temporary containment ditches at the perimeter of the landfill cell are a minimum of 2 feet deep and have a 3H:1V exterior slope and 2H:1V interior side slope. The exterior slope of the ditch is the top of the granular drainage layer of the leachate collection system. The interior slope is cut into the CCR disposed of in the landfill. Upon closure of the landfill, the temporary stormwater containment ditch will be filled with soil or CCR prior to placement of the final cover system.

The run-on and run-off control plan will be reviewed at least every 5 years in accordance with s. NR 514.07(10)(b)(4), Wis. Adm. Code.

Closure Plan, s. NR 514.07(10)(c), Wis. Adm. Code:

The closure plan is included in Appendix L of the December 19, 2023, plan of operation modification report.

The closure plan describes the engineering design of the landfill, phased development, a description of the final cover system, and how the final cover system will meet the applicable performance standards contained in s. NR 506.083(6), Wis. Adm. Code. In addition, it also includes an estimate of the maximum open area that would require closure at one time and an estimated closure schedule based on the anticipated landfill filling rates.

The Weston Landfill has a phased development plan, describing the construction, operation, and closure of each phase of the landfill from the construction of Cell 1 to the closure of Cell 9. The development plan requires active landfill cells that have reached final waste grades to be closed as soon as practical to limit the maximum open area, leachate generation, and potential operational problems. The first phase of landfill construction, Cells 1 and 2, were completed in 2015. Cell 2 was placed into service in 2016 and has received two phases of final cover over the south and east slopes in 2018 and 2020. Cell 1 was placed into service in 2021. Cells 3 through 9 are currently unconstructed and have a permitted area of 42.5 acres.

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In accordance with s. NR 514.07(10)(c)(6), Wis. Adm. Code, a schedule for completion of all closure activities, broken down into seven different areas (A through H) that will receive final cover and the estimated of the year in which the closure activities will be completed was included in the closure plan, Table 2 below. Plan sheets PM-7 through PM-15 in the closure plan display the locations of the closure areas A through H within the Weston Landfill. The estimated year in which all closure activities will be completed for each area is dependent on CCR generation rates, beneficial reuse programs, and disposal rate volumes.

Table 2: Estimated Final Cover Construction Schedule

Phase	Area to Receive Final Cover (Acres)	Estimated Closure Date
Area A	4.6	Fall 2026
Area B	5.4	Fall 2029
Area C	8.0	Fall 2040
Area D	7.1	Fall 2049
Area E	6.8	Fall 2058
Area F	7.6	Fall 2067
Area G	5.4	Fall 2072
Area H	10.9	Fall 2089

When CCR placement is completed in a CCR unit, or if early closure is required, the unit will be closed by covering the CCR with the final cover system described in the previous section of the project summary. Prior to final cover system construction, the CCR surfaces will be graded and compacted to establish a firm subgrade for final cover construction. In addition, all required notifications will be submitted to the department, and WPSC will obtain all additional necessary permits, such as a general permit coverage for construction storm water management. The initiation of closure activities will commence no later than 30 days after the known final receipt of CCR as required by ss. NR 506.083(2)(a) and (b), Wis. Adm. Code.

WPSC will provide notification to the department for the following:

- Intent to initiate closure
- Closure completion
- Availability of the written Closure Plan and any amendments

The closure plan will be modified when a new module is constructed, when there is a change in the operation of the CCR unit that affects the plan, or when unanticipated events warrant a revision to the closure plan as required by s. NR 514.07(10)(c)(7), Wis. Adm. Code.

Long-term Care Plan, s. NR 514.07(10)(d), Wis. Adm. Code:

The long-term care plan is included in Appendix M of the December 19, 2023, report.

The long-term care plan includes provisions for the following: maintaining the integrity and effectiveness of the final cover system, maintaining the leachate collection and removal system, maintaining the groundwater monitoring system, and monitoring the groundwater in accordance with the requirements of ch. NR 507, Wis. Adm. Code during the long-term care period. An estimated schedule for long-term care activities is provided in Table 3.

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Table 3: Estimated Long-Term Care Activities Schedule

Monitoring and Maintenance Activities	Frequency
Final Cover Vegetation Maintenance	Annually for first five years, every five years thereafter
Inspection of Stormwater Control Structures and Final Cover System	Annually
Final Cover Maintenance and Repairs	As needed, determined by annual inspection
Leachate Collection System Cleaning	Annually
Environmental Monitoring - Groundwater and Leachate	Semi-Annually

The owner/operator will perform annual inspections of the landfill surface, leachate collection system, and groundwater monitoring systems. If issues are noticed during the inspection, action will be taken to remedy the situation. Eroded areas will be repaired and reseeded. Repairs or replacement will be performed on the groundwater monitoring system as needed.

Final Cover System Maintenance:

WPSC will be responsible for maintaining the integrity of the final cover system. The landfill surface will be inspected annually. The annual inspection will note any final cover defects requiring repair. Maintenance of the final cover will include repairs due to settlement, subsidence, erosion, or other events and regular mowing of the cover vegetation. Final cover system repairs will be completed as soon as practical. Repair and maintenance activities will be noted in the annual inspection report required under s. NR 514.07(10)(d)1.b, Wis. Adm. Code.

The final cover will be mowed at a minimum on an annual basis for the first five years to help establish a well-vegetated final cover and at a minimum once every five years thereafter, to inhibit the growth and presence of woody vegetation. Mowing on a more frequent basis may be required to accommodate a more vigorous growth rate or to prevent the establishment of woody vegetation.

Leachate Collection System Maintenance:

WPSC will be responsible for maintaining the effectiveness of the leachate collection and removal system and operating the leachate collection and removal system in accordance with the requirements of s. NR 504.12(3)(a), Wis. Adm. Code. The leachate collection system will be annually jetted with a water jet cleanout device with a maximum pressure of 10,000 pounds per square inch from each access point to the toe of the opposite slope. A video camera inspection will be conducted on all leachate collection pipes at 5-year intervals and will extend a minimum of 300 feet onto the base grades of each leachate collection line. All blockages of the leachate collection pipe, pipe breaks, or any impedances will be investigated. A summary report will be submitted for each pipe cleaning and each video camera inspection event in accordance with s. NR 506.07(5)(g), Wis. Adm. Code.

Groundwater Monitoring Network Maintenance:

WPSC will be responsible for maintaining the groundwater monitoring system and monitoring the groundwater in accordance with the requirements of ch. NR 507, Wis. Adm. Code. The groundwater monitoring network will be inspected on a semi-annual basis, in conjunction with the groundwater sampling. Any noted deficiencies, damage, or required repairs will be completed as soon as practical. All groundwater monitoring will be completed in accordance with the facility's groundwater monitoring plan in perpetuity. All sampling and analysis will be completed in accordance with the facility's sampling and analysis plan.

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Currently, the contact information for Weston Landfill during the long-term care period is as follows:

Mr. Eric P. Kovatch, P.G.
WEC Energy Group
333 West Everett Street
Milwaukee, Wisconsin 53203
(414) 221-2457
eric.kovatch@wecenergygroup.com

The final use of the Weston Landfill will be limited to green space or other activities that do not disturb the integrity of the final cover, base liner, or any other component of the final cover, leachate collection system, or groundwater monitoring system.

The long-term care plan will be modified when there is a change in the operation of the CCR unit that affects the plan or when unanticipated events warrant revision to the closure plan as required by s. NR 514.07(10)(c)(7), Wis. Adm. Code.

GROUNDWATER MONITORING SYSTEM, s. NR 514.045(1)(h), Wis. Adm. Code:

CCR Groundwater Monitoring System Plan, ss. NR 507.15(3)(a) through (e), Wis. Adm. Code:

WPSC proposed three water table monitoring wells (LS-100, LS-101, and LS-105) and two piezometers (LS-106, and LS-107) as CCR wells in accordance with s. NR 507.15(3), Wis. Adm. Code. Monitoring well LS-101 of the proposed CCR wells is hydraulically upgradient to the landfill. The remaining four proposed CCR wells are hydraulically downgradient to the landfill. These monitoring wells meet the requirements outlined in s. NR 507.15(3)(c), Wis. Adm. Code.

The background well LS-101 is located to the north of Cells 1 and 2 and is upgradient to the landfill. Monitoring well LS-107 is located northeast of cell 1 and cell 2 and is hydraulically downgradient to the landfill. Downgradient monitoring wells LS-100, and LS-105 are east of cell 1, and cell 2 and LS-106 is southeast of cell 2. The downgradient wells were installed as close as practicable to the CCR limits of waste considering the site layout and obstructions. The CCR monitoring wells are screened in the silty sand and weathered bedrock.

Monitoring wells will be operated and maintained so that the devices perform to the design specifications throughout the life of the monitoring program. If additional monitoring wells are installed in the future, documentation will be performed and submitted as required by s. NR 507.15(3)(e), Wis. Adm. Code.

In addition to the CCR groundwater monitoring system WPSC has an additional seven water table monitoring wells (LS-10 OW, LS-48R, LS-49R, LS-54 OW, LS-102, LS-103, LS-104) and seven piezometers (LS-48P, LS-54P, LS-100P, LS-101P, LS-102P, LS-103P, LS-105P) that are included in the state's detection monitoring plan established in the December 11, 2014 plan of operation approval.

The Weston Landfill has seven cells with 10 phases yet to be constructed. As future cells are constructed the CCR, and state monitoring program will be evaluated, and wells will be added or removed to ensure adequate detection of potential contaminants.

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Baseline Groundwater Quality, s. NR 507.15(3)(i), Wis. Adm. Code:

Baseline groundwater quality will be established for each CCR well in accordance with s. NR 507.18, Wis. Adm. Code. Baseline sampling at CCR wells during the initial permitting process under s. NR 514.045, Wis. Adm. Code, included additional sampling events at existing wells for constituents listed in s. NR 507 Appendix I, Tables 1A and 3, Wis. Adm. Code, such as manganese, that were not collected to meet background sampling requirements of the Federal CCR Rule because the parameters are not included in Appendix III or IV to 40 CFR Part 257.

Baseline groundwater quality calculations for preventative action limits (PALs) and alternative concentration limits (ACLs) for CCR wells at the Phase IV Landfill were calculated and proposed in accordance with s. NR 507.27, Wis. Adm. Code, and the department's guidance for calculating PALs and ACLs (PUB-WA-1105).

The CCR wells had previously been issued PALs and ACLs in the December 11, 2014, conditional plan of operation approval. These historic PALs and ACLs were calculated for dissolved parameters as opposed to the total parameters that will now be sampled at the wells. The department has calculated new PALs and ACLs for total parameters and will supersede the old standards.

Groundwater quality standard exemptions in accordance with ss. NR 507.29 and NR 140.28, Wis. Adm. Code, were requested for Boron at LS-106 and are not being granted. Refer to finding of fact 8.b. for documentation on why it is not being granted.

The department did not calculate new standards for the non-CCR wells as PALs and ACLs were established for these wells in the December 11, 2014, conditional plan of operation approval. Condition 15 of the December 11, 2014, conditional plan of operation approval will be superseded, and the standards will be outlined in the tables attached to the approval.

Detection Groundwater Monitoring, s. NR 507.15(3)(L), Wis. Adm. Code:

Detection monitoring will be performed at CCR wells on a semiannual basis in April and October.

The department will be informed in accordance with s. NR 507.26, Wis. Adm. Code, of any CCR well that purges dry, is damaged or obstructed, or in any way is rendered such that a sample was unable to be collected from the well during a scheduled sampling event when the sampling event data are submitted.

A notification and response in accordance with s. NR 507.30, Wis. Adm. Code, will be made when a groundwater standard at the point of standards application has been attained or exceeded at any CCR well. This response includes the establishment of an assessment monitoring program meeting the requirements under s. NR 508.06, Wis. Adm. Code, unless the exceedance is determined by the department to be from a source other than the CCR landfill, or that the groundwater standard exceedance resulted from error in sampling, analysis, or natural variation in background groundwater quality in accordance with s. NR 508.06(2)(f)2., Wis. Adm. Code.

The point of standards application for a groundwater quality exceedance at a CCR well is 0 feet from the waste boundary.

Annual Groundwater Monitoring and Corrective Action Report, s. NR 507.15(3)(m), Wis. Adm. Code:

Annual groundwater monitoring and corrective action reports will be submitted in accordance with s. NR 507.15(3)(m), Wis. Adm. Code, for monitoring wells included in the CCR well monitoring program.

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SAMPLING PLAN, s. NR 514.045(1)(i), Wis. Adm. Code:

Sampling Plan, ss. NR 507.15(3)(f), (g), (h), (j), (k) Wis. Adm. Code:

The environmental sampling and analysis plan included in Appendix O of the August 23, 2024, revised plan of operation modification addresses the detection groundwater monitoring (CCR wells and non-CCR wells), leachate monitoring, and surface water monitoring.

Appropriate sampling and analytical methods are described in the sampling plan. Groundwater elevation data will be reported to the department semiannually (April and October) in accordance with s. NR 507.26, Wis. Adm. Code. During each sampling event, depths to groundwater at all wells will be measured immediately prior to purging and within a period of time short enough to avoid temporal variations in groundwater flow which could preclude accurate determination of groundwater flow rate and direction. The rate and direction of groundwater flow will be determined for each semiannual sampling event. Field pH, field temperature, and specific conductance will be measured using a hand-held monitor or flow-through cell.

Monitoring wells will be sampled in an order that allows for efficient collection of all samples to avoid effects from temporal variations in groundwater flow. Pumps used for purging and sample collection at CCR and non-CCR monitoring wells are dedicated to specific wells. Monitoring wells will be purged using low-flow sampling methods.

All groundwater samples collected under the CCR monitoring program will be unfiltered (total analysis). Groundwater samples collected under the plan of operation groundwater monitoring plan (non-CCR Wells) that predates the requirements of s. NR 514.045, Wis. Adm. Code, will be filtered (dissolved analysis) or unfiltered (total analysis) as shown in Table 1 of Attachment 1 of the attached approval.

The department will be notified in writing if a groundwater standard at a point of standards application has been attained or exceeded within 60 days of completing sampling and analysis at any CCR well in accordance with s. NR 507.15(3)(k), Wis. Adm. Code. The department will be notified in writing if a groundwater standard at a point of standards application has been attained or exceeded within 60 days of the end of the sampling period at any non-CCR well in accordance with s. NR 507.30, Wis. Adm. Code.

RECORD KEEPING, s. NR 506.17(3), Wis. Adm. Code:

All plan modifications, documentation reports, monitoring, annual reports, plans, notifications, and amendments will be placed in the facility's operating record and on WPSC's CCR Rule Compliance Data and Information website as required by s. NR 506.17(3), Wis. Adm. Code.

CLOSURE AND LONG-TERM CARE COST ESTIMATES, ss. NR 520.02(2) & (3), Wis. Adm. Code:

Although WPSC will be perpetually responsible, in accordance with s. 289.41(1m)(c), Wis. Stats., for the long-term care of this landfill, proof of owner financial responsibility is only required for the closure of the most expensive area, and for long-term care of the entire facility for a period of 40 years. Closure costs reflect the most expensive area to close, which includes 19.3 acres of the landfill when Cell 3 is open. The closure costs include the purchasing, hauling, placement, and documentation testing of all the final cover materials including soils, membranes, fabrics, grids, and topsoil; seeding, fertilizing, mulching, and labor; the cost of preparing an engineering report documenting the work performed and a 10% contingency per NR 520.02(2), Wis. Adm, Code. Long-term care costs include land surface care; leachate pumping, transportation, monitoring, and treatment; groundwater monitoring including sample collection and analysis; leachate collection line cleaning on an annual

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basis; leachate line jetting; the annual cost of electricity for maintaining the closed site; and a 10% contingency per NR 520.02(3), Wis. Adm, Code.

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BEFORE THE
STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

CONDITIONAL PLAN OF OPERATION APPROVAL MODIFICATION FOR INITIAL PERMITTING OF COAL COMBUSTION RESIDUALS (CCR) LANDFILL FOR THE WISCONSIN PUBLIC SERVICE CORPORATION WESTON DISPOSAL SITE #3 ASH LANDFILL (WESTON LANDFILL), LICENSE #3067

FINDINGS OF FACT

The Department of Natural Resources (department) finds that:

1. Wisconsin Public Service Corporation (WPSC) owns and operates a solid waste disposal facility. The Weston Disposal Site #3 Ash Landfill (Weston Landfill), located in the N½ of the NE ½ of Section 3, Town 27 North, Range 7 East, Town of Kronenwetter, Marathon County, Wisconsin.

2. The department issued a conditional plan of operation approval for the solid waste disposal facility on December 12, 1979.

3. The department received a plan of operation modification request on January 31, 2023, from GEI Consultants on behalf of WPSC for the initial permitting of a CCR landfill. The department received the review fee of $30,500 on February 15, 2023.

4. The information submitted in connection with the plan of operation modification request includes the following:

    a. A report prepared by GEI Consultants, on behalf of WPSC, titled "Wisconsin Public Service Weston Disposal Site #3 Ash Landfill License #2879 - FID# 737062150 Plan of Operation Modification", dated and received by the department on January 31, 2023.

    b. A report prepared by GEI Consultants, on behalf of WPSC, titled "Plan of Operation Modification Wisconsin Public Service Weston Disposal Site #3 Ash Landfill License #3067 - FID# 737054120", dated and received by the department on December 19, 2023.

    c. A report prepared by GEI Consultants, on behalf of WPSC, titled "Plan of Operation Modification Revised Submittal Wisconsin Public Service Weston Disposal Site #3 Ash Landfill License #3067 - FID# 737054120", dated and received by the department on August 23, 2024.

5. Additional documents considered in connection with the review of the plan of operation modification request include the following:

    a. The department's Solid Waste Technical Guidance for Preventative Action Limit (PAL)/ Alternative Concentration Limit (ACL) Calculations (guidance document WA 1105, 2007).

    b. A memo to the Weston Landfill file dated [add date], summarizing the department's evaluation of the PALs proposed in the plan of operation.

    c. The department's February 11, 1986 feasibility determination.

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d. The department's October 20, 1986 plan of operation approval.

e. The department's December 19, 2013 feasibility determination.

f. The department's December 11, 2014 plan of operation approval.

g. The department's August 25, 2015 feasibility plan modification.

h. The department's April 13, 2018 plan approval modification.

i. The department's November 14, 2024 email to WPSC regarding scheduling a public meeting for the initial permitting plan modification.

j. An email received by the department on November 19, 2024 from WPSC regarding scheduling a public meeting for the initial permitting plan modification.

k. The department's November 21, 2024 completeness letter for the initial permitting plan modification and a corresponding email of the same date.

l. The department's public notice dated November 21, 2024 for the initial permitting plan modification.

m. The following department internal email correspondence between William Phelps, hydrogeologist in the Drinking Water and Groundwater Program and Matthew Bachman, hydrogeologist in the Waste and Materials Management Program, regarding the requested ch. NR 140, Wis. Adm. Code (PAL) exemption for boron at monitoring well LS-106:

    i. emails from Matthew Bachman to William Phelps dated November 20, 2024, December 3, 2024, and December 13, 2024;

    ii. emails from William Phelps to Matthew Bachman dated December 3, 2024, December 6, 2024 and December 13, 2024.

n. The department's March 5, 2025 email to WPSC regarding reported lithium concentrations being 3 orders of magnitude below the calculated PAL and a reported high specific conductance value in groundwater samples collected from monitoring well LS-105.

o. An email received by the department on March 7, 2025 regarding the lithium data unit conversion issue and specific conductivity result in LS-105.

p. The department's March 7, 2025 email to WPSC regarding the department's calculated PALs and discrepancies between the proposed PALs submitted by WPSC.

q. An email received by the department on March 7, 2025 regarding WPSC's response to the March 7, 2025 email from the department regarding department calculated PALs.

r. An email received by the department on March 11, 2025 regarding the updating of lithium data in the department's Groundwater and Environmental Monitoring System (GEMS) due to an error in units.

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s. The department's March 12, 2025 email to WPSC regarding the updating of lithium data in GEMS due to an error in units.

t. The department's March 14, 2025 email to WPSC regarding the status of several wells proposed to be part of the monitoring program for the Weston Landfill.

u. An email received by the department on March 14, 2024 from WPSC regarding the status of several wells proposed to be part of the monitoring program for the Weston Landfill.

v. Groundwater monitoring data for the Weston Landfill contained in GEMS.

w. The department's files pertaining to the Weston Landfill (License #3067).

6. Additional information considered in connection with the modification request includes the following:

a. A public information meeting was held virtually on January 7, 2024, to comply with s. NR 514.045(3), Wis. Adm. Code, regarding the initial permitting of CCR landfill. During this meeting, the department did not receive any oral comments from the public regarding the proposed plan modification.

b. A 60-day public comment period was held between November 27, 2024 and January 27, 2025 to comply with s. NR 514.045(3), Wis. Adm. Code, regarding the initial permitting of a CCR landfill. The department did not receive any written comments from the public regarding the proposed plan modification.

c. A 30-day public comment period was held between [add date] and [add date] to comply with s. NR 514.045(4), Wis. Adm. Code, regarding the initial permitting of a CCR landfill.

7. Additional facts relevant to the review of the plan of operation modification request include:

a. The initial permitting for CCR landfills plan modification is required in accordance with s. NR 514.045, Wis. Adm. Code to update the plan of operation to comply with the applicable requirements under chs. NR 500 to 520 for CCR landfills.

b. CCR landfills are regulated under 40 CFR Part 257 A and D. Wisconsin updated chs. NR 500 – 520, Wis. Adm. Code to incorporate federal requirements related to CCR landfills in July 2022. Wisconsin intends to seek EPA approval for a partial permit program for CCR Landfills in Wisconsin. To obtain EPA approval of a partial permit program for CCR landfills, Wisconsin regulations are required to be as protective as the federal rule.

c. 40 CFR 257.95(h)(2)(i) establishes a maximum contaminant level (MCL) for Cobalt at 6 micrograms per liter (ug/l). This standard is lower than the PAL established in s. NR 140 Table 1, Wis. Adm. Code. Preventive action limits will be established for CCR wells at 6 ug/l to be as protective as federal rule.

d. WPSC requested approval to dispose of the following in the Weston Landfill. CCR waste generated by the WPSC Weston Generating Station or the WPSC Pulliam Power Plant which has been excavated from another landfill or historic fill site, and CCR waste and by-products generated by the WPSC Weston Generating Station or the WPSC Pulliam Power Plant which have been beneficially reused. Pursuant to condition 9 of this approval, WPSC will need to request written concurrence from the department prior to disposing of these CCR materials at the Weston Landfill for each specific occurrence.

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e. The initial permitting plan modification request proposed to continue to use 2 feet of moisture-conditioned and compacted fly ash as part of the final cover system, which was approved by the department in the past as part of the Weston Landfills December 11, 2014 plan of operation approval. The department informed WPSC that it was unlikely to approve that design under the current Wisconsin Administrative Code and department policies. WPSC therefore rescinded this request from the initial permitting plan modification request.

f. WPSC currently treats the leachate generated at the Weston Landfill at their wastewater treatment facility located onsite at their Weston Power Plant. Pursuant to condition 13 of this approval, WPSC will need to notify the department at least 30 days prior to sending leachate to an alternative wastewater treatment facility other than those approved as part of the initial permitting plan modification.

g. WPSC proposed three water table monitoring wells (LS-100, LS-101, and LS-105) and two piezometers (LS-106, and LS-107) as CCR wells in accordance with s. NR 507.15(3), Wis. Adm. Code. Monitoring well LS-101 of the proposed CCR wells is hydraulically upgradient to the landfill. The remaining four proposed CCR wells are hydraulically downgradient to the landfill. These monitoring wells meet the requirements outlined in s. NR 507.15(3)(c), Wis. Adm. Code.

h. The initial permitting plan modification request included monitoring wells LS-9 OW, LS-22R, LS-56 OW, and LS-57 OW, and piezometers LS-9P, LS-22P, and LS-56P in the proposed monitoring plan. Monitoring wells LS-9 OW, LS-22R, LS-56 OW, and LS-57 OW, and piezometers LS-9P, LS-22P, and LS-56P have been permanently abandoned during construction of Cell 1, and 2, and will not be included in the monitoring plan for the Weston Landfill.

8. The department considered the following information pertaining to the request for groundwater quality exemptions:

a. The Weston Landfill has requested an exemption from ch. NR 140, Wis. Adm. Code, groundwater quality standards for total boron in accordance with s. NR 140.28(1), Wis. Adm. Code, to allow for approval of this plan of operation for initial permitting where a preventive action limit (PAL) or an enforcement standard (ES) adopted under ss. NR 140.10 or 140.12, Wis. Adm. Code has been attained or exceeded. The department considered the following information while reviewing the need for exemptions to groundwater standards at this facility.

i. Baseline groundwater monitoring data provided in the January 31, 2023 plan of operation modification request and the following reports:

1. December 19, 2023, Plan of Operation Modification; and,

2. August 23, 2024, Plan of Operation Modification Revised Submittal.

ii. Well construction details, boring logs, well location plan sheets, and water table maps provided in the January 31, 2023 plan of operation modification request and the following reports:

1. December 19, 2023, Plan of Operation Modification; and,

2. August 23, 2024, Plan of Operation Modification Revised Submittal.

iii. The landfill design specifications provided in the January 31, 2023 plan of operation modification request and the following reports:

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1. December 19, 2023, Plan of Operation Modification; and,

2. August 23, 2024, Plan of Operation Modification Revised Submittal.

iv. Groundwater sample data collected from around the Weston Landfill that is available in GEMS dating back to 1984.

v. Information in the department's files relating to groundwater conditions at the Weston Landfill.

vi. Previously granted exemptions from the December 19, 2013 feasibility determination.

b. The department finds the requested groundwater quality exemptions are not warranted for the following wells and substances:

i. A PAL for boron (Total) in well LS-106 is not warranted due to the following reasons.

1. The sample data does not represent stabilized concentrations over the period it was collected. "Baseline" is defined in s. NR 500.03(17) Wis. Adm. Code, as groundwater quality at a point that is measured after the parameters have stabilized following the installation of a monitoring well. Non-stabilized data by definition is not baseline data and should not be used to provide justification for exemptions.

2. The data shows a decreasing concentration trend with the last several sample concentrations below the respective ch. NR 140, Wis. Adm. Code PAL, with all reported concentrations since 2019 below the ch. NR 140, Wis. Adm. Code PAL for boron.

9. The department considered the following information with respect to the review of PALs and ACLs:

a. The PALs for indicator parameters established in this approval are based on at least 8 sample results for each substance at each monitoring well.

b. The PALs for indicator parameters established in this approval are equal to the mean background water quality plus 3 standard deviations or the mean background water quality plus the minimum increase specified in Table 3, ch. NR 140, Wis. Adm. Code, whichever is greater.

c. The calculated PALs were rounded up to 2 significant figures.

d. The department approved PALs and ACLs in the department's December 11, 2014 plan of operation approval for the state monitoring program wells. The previously approved PALs and ACLs for non-CCR wells remain in effect. The department will be superseding the previous PALs and ACLs for the CCR wells as they were issued for dissolved parameters and are no longer relevant to the monitoring of total parameters.

e. The parameter chemical oxygen demand (COD) will no longer be part of the monitoring program for the Weston Landfill. The PALs issued for the on-site monitoring wells for COD are no longer needed and are removed from the PAL/ACL tables in Attachment 2.

f. Section NR 507.27(1), Wis. Adm. Code, states that PALs are not required for temperature. The department will not be issuing PALs for temperature at the CCR wells.

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10. The special conditions set forth below are needed to assure that the site is operated and maintained in an environmentally sound manner. If the special conditions are complied with, the proposed modification will not inhibit compliance with the standards set forth in the applicable portions of chs. NR 500-538, Wis. Adm. Code.

CONCLUSIONS OF LAW

1. The department has the authority under s. 289.30(6), Wis. Stats., to modify a plan of operation approval if the modification would not inhibit compliance with the applicable portions of chs. NR 500-538, Wis. Adm. Code.

2. The department has the authority to approve a modification to the plan of operation with special conditions if the conditions are needed to ensure compliance with the applicable portions of chs. NR 500-538, Wis. Adm. Code.

3. The department has authority under ss. NR 140.28 and NR 507.27, Wis. Adm. Code, and ss. 160.19(8) to (10), Wis. Stats., to grant exemptions to groundwater quality standards and to establish corresponding alternative concentration limits.

4. The department has authority under s. NR 140.20, Wis. Adm. Code, and s. 160.15(3), Wis. Stats., to establish preventive action limits for groundwater indicator parameters at waste disposal facilities.

5. The conditions of approval set forth below are needed to ensure compliance with the applicable portions of chs. NR 500-538, Wis. Adm. Code.

6. In accordance with the foregoing, the department has the authority under s. 289.30(6), Wis. Stats., to issue the following conditional plan of operation modification approval.

CONDITIONAL PLAN OF OPERATION APPROVAL MODIFICATION

The department hereby approves the proposed plan of operation modification for the initial permitting of a CCR landfill for the Weston Landfill, subject to compliance with chs. NR 500-538, Wis. Adm. Code and the following conditions:

1. The landfill owner or operator shall place all of the following on the landfill's publicly accessible internet site and shall do so in accordance with the requirements specified in s. NR 506.17(3), Wis. Adm. Code.

    a. The landfill's annual report required under s. NR 506.20(3), Wis. Adm. Code.

    b. The landfill's notification required by s. NR 506.084(2)(b), Wis. Adm. Code related to the end of the long-term care proof period.

    c. All notifications required for CCR landfills in addition to those specified under s. NR 506.17(3)(d), Wis. Adm. Code.

    d. A copy of the affidavit for the deed notation required under s. NR 506.083(4), Wis. Adm. Code.

2. The annual report required by s. NR 506.20(3), Wis. Adm. Code, shall also include the following:

    a. The leachate line video camera inspection required by s. NR 506.07(5)(c), Wis. Adm. Code.

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b. The landfill compliance certification required by s. NR 506.19(1), Wis. Adm. Code may also be submitted in the annual report.

c. The following information pertaining to the non-CCR well environmental monitoring program:

i. A summary of groundwater sampling results (including water supply well data) that exceed any approved PAL, ACL, ch. NR 140, PAL, or ES (where ACLs are not approved), and an assessment of the cause and significance of the exceedances.

ii. An assessment of any increasing concentration trends of monitored parameters in groundwater over the past 4 or more sampling events.

iii. A groundwater elevation contour map with a summary of any significant change in flow patterns compared to previous flow patterns, unless otherwise approved by the department in writing.

iv. A summary of the status and condition of all environmental monitoring devices including:

1. A list of all monitoring devices that did not function properly or were damaged.

2. A description of repairs, replacements, or modifications completed to regain the function of the monitoring device.

3. A summary of anticipated significant monitoring device activities for the upcoming year, such as installations or abandonments.

3. The landfill owner or operator shall notify the department when the information required under s. NR 506.17(3)(d), Wis. Adm. Code and Condition 1. above have been placed on the landfill's publicly accessible internet site.

4. The landfill owner or operator shall maintain procedures within the fugitive dust control plan for logging citizen complaints received by the landfill involving CCR fugitive dust events at the facility throughout the active life of the landfill.

5. Environmental monitoring shall be performed during both the active life and after closure in accordance with the schedules provided in the environmental monitoring tables of Attachment #1.

   This condition supersedes condition 14 of the department's December 11, 2014 conditional plan of operation approval.

6. A ch. NR 140, Wis. Adm. Code, preventive action limit for total cobalt shall be established at 6 ug/l for all CCR monitoring wells including LS-100, LS-101, LS-105, LS-106, and LS-107 to correspond to the MCL established in 40 CFR 257.95(h)(2)(i).

7. The ch. NR 140, Wis. Adm. Code, preventive action limits (PALs), and alternative concentration limits (ACLs) for the groundwater monitoring points shall be those listed in Attachment #2.

   This condition supersedes condition 15 of the department's December 11, 2014 plan of operation approval.

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8. The PALs and enforcement standards (ESs) for all other substances not identified in Attachment #2 shall be as specified in ch. NR 140, Wis. Adm. Code, unless specifically approved by the department in writing.

9. WPSC shall receive written concurrence from the department prior to disposing of the following in the Weston Landfill:

   a. CCR waste generated by the WPSC Weston Generating Station or the WPSC Pulliam Power Plant which has been excavated from another landfill or historic fill site.

   b. CCR waste and by-products generated by the WPSC Weston Generating Station or the WPSC Pulliam Power Plant which have been beneficially reused.

   Refer to finding of fact 7.e. above for more information pertaining to this condition.

10. WPSC shall receive written approval from the department prior to disposing of CCR waste in the Weston Landfill that was not generated at the WPSC Weston Generating Station or the WPSC Pulliam Power Plant.

11. Condition 1 of the department's April 13, 2018 plan modification approval, which relates to an alternative cover design that is no longer approved for use at the Weston Landfill, is hereby rescinded. Refer to finding of fact 7.f. for additional information on the rescinding of this condition.

12. Proof of financial responsibility for closure and long-term care shall be adjusted in accordance with ch. NR 520, Wis. Adm. Code. The proof of financial responsibility shall be established based upon the approved closure and long-term care cost estimates included in Tables 1 and 2 of Attachment 5.

    This condition supersedes condition 9 of the department's December 11, 2014 plan of operation approval.

13. The landfill owner or operator shall notify the department in writing 30 days prior to beginning to haul leachate to a wastewater treatment facility other than the wastewater treatment facility located at the Weston Power Plan wastewater treatment facility. The notification shall include the name of the wastewater treatment facility and a copy of the leachate treatment agreement.

Unless specifically noted, the conditions of this approval do not supersede or replace any previous conditions of approval for this facility.

This approval is based on the information available to the department as of the date of approval. If additional information, project changes, or other circumstances indicate a possible need to modify this approval, the department may ask you to provide further information relating to this activity. Likewise, the department accepts proposals to modify approvals, as provided for in state statutes and administrative codes.

NOTICE OF APPEAL RIGHTS

If you believe you have a right to challenge this decision made by the department, you should know that Wisconsin statutes and administrative codes establish time periods and requirements for reviewing Department decisions.

To seek judicial review of the department's decision, sections 227.52 and 227.53, Wis. Stats., establish criteria for filing a petition for judicial review. You have 30 days after the decision is mailed or otherwise served by the

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department to file your petition with the appropriate circuit court and serve the petition on the department. The petition shall name the Department of Natural Resources as the respondent.

Dated: [add date]

DEPARTMENT OF NATURAL RESOURCES
For the Secretary

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_____
Melanie Burns
Waste and Materials Management Program Supervisor
Southeast Region

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_____
Tony Peterson
Waste Management Engineer
Southeast Region

DRAFT

_____
Matthew Bachman
Hydrogeologist
West Central Region

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Attachment # 1 for WPSC Weston Disposal Site #3 Ash Landfill -
CCR Initial Permitting Plan of Operation Modification
License # 3067
Environmental Monitoring Tables

Table 1 - Detection Groundwater Monitoring

Monitoring Pt.	DNR ID#	WUWN	Sampling & Reporting[1] Frequency	Parameter Codes	Parameters
CCR wells					
LS-100	064	VU955	Sample	04189	Elevation, Groundwater (feet above mean sea level)
LS-101	068	VU952	Semiannually	00010	Field Temperature (^{0}C)
LS-105	082	VU953	April and October	00094	Field Conductivity @ 25^{0}C (umho/cm)
LS-106	084	VR450		00400	Field pH (standard units)
LS-107	086	VR451		00410	Alkalinity, total (mg/L as $CaCO_3$)
				00900	Hardness, total (mg/L as $CaCO_3$)
				00916	Calcium, total (mg/L)
				00940	Chloride, total (mg/L)
				00945	Sulfate, total (mg/L)
				00951	Fluoride, total (mg/L)
				01022	Boron, total (mg/L)
				70300	Total Dissolved Solids (mg/L)
Non-CCR wells					
LS-10 OW	003	BY253	Sample	04189	Elevation, Groundwater (feet above mean sea level)
LS-48P	060	UT532	Semiannually	00010	Field Temperature (^{0}C)
LS-48R	056	JG243	April and October	00094	Field Conductivity @ 25^{0}C (umho/cm)
LS-49R	059	JG245		00400	Field pH (standard units)
LS-54 OW	023	BY273		00946	Sulfate, dissolved (mg/L)
LS-54P	024	BY274		01020	Boron, dissolved (mg/L)
LS-100P	062	VU956		01060	Molybednum, dissolved (ug/L)
LS-101P	066	VU951		22413	Total Hardness, dissolved (mg/L as $CaCO_3$)
LS-102P	070	VU958		39036	Alkalinity, dissolved (mg/L)
LS-102	072	VU957			
LS-103P	074	VY695			
LS-103	076	VY694			
LS-104	078	VU959			
LS-105P	080	VU954			
LS-16 OW	004	BY254	Sample	04189	Elevation, Groundwater (feet above mean sea level)
LS-16P	005	BY255	Semiannually		
LS-24 OW	009	BY259	April and October		
LS-24P	010	BY260			
LS-40 OW	012	BY262			
LS-40P	013	BY263			
LS-50 OW	017	BY267			
LS-51 OW	018	BY268			
LS-52 OW	019	BY269			
LS-52P	020	BY270			
LS-55 OW	025	BY275			
LS-55P	026	BY276			

Notes

1. Unless specifically stated, reporting is typically within 60 days after the end of the specified monitoring period, per s. NR 507.26(3), Wis. Adm. Code. CCR wells may require a notification within 60 days of completing sampling and analysis per s. NR 507.15(3)(k), Wis. Adm. Code.

2. The color, odor and turbidity shall be recorded for all samples in accordance with ss. NR 507.17(1)(b) and 507.26(1), but do not need to be reported into GEMS.

3. Field Blank (DNR ID #997) data are also required to be submitted electronically, per s. NR 507.26(3), Wis. Adm. Code.

4. Groundwater samples collected at CCR wells must be unfiltered.

Attachment # 1 for WPSC Weston Disposal Site #3 Ash Landfill -
CCR Initial Permitting Plan of Operation Modification
License # 3067
Environmental Monitoring Tables

Table 2 - Leachate Monitoring

Monitoring Pt.	DNR ID#	Sampling & Reporting[1] Frequency	Parameter Codes	Parameters
Leachate Tank				
Leachate Tank	400	Sample Monthly	00032	Leachate Volume Pumped (1000s of gallons)
		Sample Semiannually April and October	00010	Temperature, Field (^{o}C)
			00094	Field Conductivity @ 25^{o}C (umho/cm)
			00150	Total Suspended Solids (mg/L)
			00310	BOD (5 day @ 20^{o}C (mg/L)
			00400	Field pH (standard units)
			00410	Alkalinity, total (mg/L as $CaCO_3$)
			00900	Hardness, total (mg/L as $CaCO_3$)
			00940	Chloride, total (mg/L)
			00945	Sulfate, total (mg/L)
			00951	Fluoride, total (mg/L)
			01012	Beryllium, total (ug/L)
			01022	Boron, total (mg/L)
			01027	Cadmium, total (ug/L)
			01037	Cobalt, total (ug/L)
			01051	Lead, total (ug/L)
			01055	Manganese, total (ug/L)
			01059	Thallium, total (ug/L)
			01062	Molybdenum, total (ug/L)
			01097	Antimony, total (ug/L)
			01132	Lithium, total (ug/L)
			01147	Selenium, total (ug/L)
			11503	Radium 226+228, total in water (pCi/L)
			71900	Mercury, total (ug/L)
			74010	Iron, total (mg/L)
		Sample Annually October	SVOCs (ug/L) Using EPA Solid Waste Method 8270 (NR 507, appendix IV)	
Leachate Head Wells				
LH-1-1	411	Sample Quarterly January, April, July, and October Report semi-annually	00031	Leachate Depth (feet)
LH-1-2	412		99423	Leachate Elevation (feet above mean sea level)
LH-2-1	421			
LH-2-2	422			
LH-3-1	xxx			
LH-3-2	xxx			
LH-4A-1	xxx			
LH-4B-1	xxx			
LH-5A-1	xxx			
LH-5B-1	xxx			
LH-6A-1	xxx			
LH-6B-1	xxx			
LH-7A-1	xxx			
LH-7B-1	xxx			
LH-8-1	xxx			
LH-8-2	xxx			
LH-9-1	xxx			
LH-9-2	xxx			

Notes

1. Unless specifically stated, reporting is typically within 60 days after the end of the specified monitoring period, per s. NR 507.26(3), Wis. Adm. Code.

2. The color, odor and turbidity shall be recorded for all samples in accordance with ss. NR 507.17(1)(b) and 507.26(1), but do not need to be reported into GEMS.

3. Leachate samples may not be filtered.

4. Point IDs listed as "xxx" are planned and not assigned yet.

Attachment # 1 for WPSC Weston Disposal Site #3 Ash Landfill -
CCR Initial Permitting Plan of Operation Modification
License # 3067
Environmental Monitoring Tables

Table 3 - Surface Water Monitoring

Monitoring Pt.	DNR ID#	Sampling & Reporting[1] Frequency	Parameter Codes	Parameters
Surface Water Monitoring Point(s)				
SW-1	851	Sample	00010	Temperature, Field (^{o}C)
SW-2	852	Semiannually	00094	Field Conductivity @ 25^{o}C (umho/cm)
SW-3	853	April and October	00400	Field pH (standard units)
SW-4	xxx			
SW-5	xxx			
SW-6	xxx			
SW-7	xxx			

Notes

1. Unless specifically stated, reporting is typically within 60 days after the end of the specified monitoring period, per s. NR 507.26(3), Wis. Adm. Code.

4. Point IDs listed as "xxx" are planned and not assigned yet.

Attachment #2 for WPSC Weston Disposal Site #3 Ash Landfill - CCR Initial Permitting Plan of Operation Approval Modification
License # 3067

PAL and ACL Tables

Table 1 - CCR Well Preventive Action Limits (PALs)

Wells	DNR ID#	WUWN	Alkalinity, Total (mg/L) GEMS ID#: 00410	Calcium, Total (mg/L) GEMS ID#: 00916	Hardness, Total (mg/L) GEMS ID#: 00900	Specific Conductance (umhos/cm) GEMS ID#: 00094	Total Dissolved Solids (mg/L) GEMS ID#: 70300	Lithium, Total (ug/L) GEMS ID#: 01132	Cobalt, Total (ug/L) GEMS ID#: 01037	pH (Lower Limit) Field (SU) GEMS ID#: 00400	pH (Upper Limit) Field (SU) GEMS ID#: 00400
LS-100	064	VU955	140	45	190	340	300	2.4	6.0	5.3	7.3
LS-101	068	VU952	120	30	120	280	250	0.9	6.0	5.4	7.4
LS-105	082	VU953	180	46	190	390	320	2.4	6.0	5.2	7.2
LS-106	084	VR450	150	37	160	310	300	35	6.0	5.4	7.4
LS-107	086	VR451	150	55	230	440	340	1.3	6.0	5.0	7.0

Attachment #2 for WPSC Weston Disposal Site #3 Ash Landfill - CCR Initial Permitting Plan of Operation Approval Modification License # 3067

PAL and ACL Tables

Table 2 - Non-CCR Well Preventive Action Limits (PALs)

Wells	DNR ID#	WUWN	Alkalinity, Dissolved (mg/L) GEMS ID#: 39036	Total Hardness, Dissolved (mg/L) GEMS ID#: 22413	Specific Conductance @ 25 C (umhos/cm) GEMS ID#: 00094
LS-48P	060	UT532	190	170	450
LS-48R	056	JG243	200	190	410
LS-49R	059	JG245	140	140	300
LS-54	023	BY273	120	120	260
LS-54P	024	BY274	150	150	320
LS-100P	062	VU956	200	190	430
LS-101P	066	VU951	130	130	260
LS-102	072	VU957	130	130	290
LS-102P	070	VU958	170	160	350
LS-103	076	VY694	170	170	340
LS-103P	074	VY695	220	210	460
LS-104	078	VU959	120	130	280
LS-105P	080	VU954	160	160	330

Notes

1. The PALs for non-CCR wells were established in the December 11, 2014 Plan of Operation Approval

Attachment #2 for WPSC Weston Disposal Site #3 Ash Landfill - CCR Initial Permitting Plan of Operation Approval Modification License # 3067

PAL and ACL Tables

Table 3 - Non-CCR Well Alternative Concentration Limits (ACLs)

Wells	DNR ID#	WUWN	Manganese, Dissolved (ug/L) GEMS ID#: 01056
LS-48R	056	JG243	260

Notes.

1. The ACLs for non-CCR wells were established in the December 11, 2014 Plan of Operation Approval

Attachment #3 for the Wisconsin Public Service Corporation Weston Disposal Site #3 Ash Landfill
CCR Initial Permitting Plan of Operation Approval Modification
License #3067

Owner Financial Responsibility Cost Estimates

Table 1 – Closure Cost Estimate

Major Cost Item Unit 2023	Quantity	Unit	Unit Cost	Average Cost per Year
Engineering Plans and Specifications	1	lump sum	$ 30,000.00	$ 30,000.00
Mobilization	1	lump sum	$ 15,000.00	$ 15,000.00
Surveying	1	lump sum	$ 10,000.00	$ 10,000.00
Borrow Source and Stockpile Restoration	1	lump sum	$ 10,000.00	$ 10,000.00
24-inch Soil Barrier Layer (clay or soil) - Haul, Place, and Compact	62,275	cubic yards	$ 6.50	$ 404,788.00
Geosynthetic Clay Liner (GCL)	840,700	square feet	$ 0.70	$ 588,490.00
40-mil LLDPE Geomembrane Textured	840,700	square feet	$ 0.50	$ 420,350.00
Geocomposite Drainage Layer	840,700	square feet	$ 0.65	$ 546,455.00
Rooting Zone Soil (30-inches)	77,850	cubic yards	$ 7.50	$ 583,875.00
Diversion Berm	3,130	lump sum	$ 12.00	$ 37,560.00
Topsoil (6-inches)	15,570	cubic yards	$ 6.00	$ 93,420.00
Seed, Mulch, Fertilizer, Lime	19.3	acre	$ 2,800.00	$ 54,040.00
Downslope Flume/Drop Manhole	3	lump sum	$ 20,000.00	$ 60,000.00
Drainage Layer Discharge Trench	2,750	lump sum	$ 25.00	$ 68,750.00
Construction QA & Documentation	19.3	acre	$ 25,000.00	$ 482,500.00
			Subtotal	$ 3,405,228.00
			10% Contingency	$ 340,522.80
			Total Cost	**$ 3,745,750.80**

Notes:

1) The total worst-case closure cost applies to the largest open area of the staged construction plan, which is 19.3 acres of closure.
2) Average costs per year are rounded to the nearest dollar.
3) Unit cost estimates are in 2024 dollars.

Table 2 – Long-Term Care Cost Estimate

Major Cost Item Unit 2023	Quantity	Unit	Unit Cost	Average Cost per Year
Land Surface Care/Cover Maintenance				
Erosion Repair, Fertilizer, Seed/Mulch	1	acre	$ 3,500.00	$ 3,500.00
Final Cover Regrading Within 5% Slope Areas	1	lump sum	$ 3,500.00	$ 3,500.00
Downslope Flumes Maintenance	1	lump sum	$ 1,500.00	$ 1,500.00
Mowing	1	lump sum	$ 6,000.00	$ 6,000.00
Stormwater Basin Cleaning(2)/Road Maintenance	1	lump sum	$ 6,000.00	$ 6,000.00
Snow Plowing	1	lump sum	$ 6,000.00	$ 6,000.00
Monitoring System Maintenance				
Groundwater Monitoring Wells Replacement/Maintenance	0.68	each	$ 3,000.00	$ 2,040.00
Leachate Management System Maintenance				
Leachate Line Cleaning/Jetting	1	lump sum	$ 8,720.00	$ 8,720.00
Leachate Line Televising	0.2	lump sum	$ 17,770.00	$ 3,554.00
Leachate Pumps/Leachate Tank Electricity Costs	1	lump sum	$ 30,000.00	$ 30,000.00
Leachate Pump Replacement	1	lump sum	$ 4,500.00	$ 4,500.00
Leachate Disposal/Treatment/Transportation	1569.5	1000 gallons	$ 35.00	$ 54,933.00
Leachate System Operation and Maintenance	1	lump sum	$ 8,000.00	$ 8,000.00
Tank Replacement	1	lump sum	$ 2,500.00	$ 2,500.00
Forcemain, Manholes, and Tank Cleaning	1	lump sum	$ 7,500.00	$ 7,500.00
Programmable Logic Control System	1	lump sum	$ 2,500.00	$ 2,500.00
Replace Transducers	0.05	lump sum	$ 1,500.00	$ 75.00
Site Inspections				
Annual Site Inspection	1	lump sum	$ 2,000.00	$ 2,000.00
Annual Report	1	lump sum	$ 5,000.00	$ 5,000.00
Monthly Inspections - Manholes, Cover, Headwells, Tanks, Surface Water Features	12	lump sum	$ 3,000.00	$ 36,000.00
Groundwater and Groundwater Head Monitoring (Semi-Annual)				
Semi-annual Landfill Well Monitoring (16 wells - field parameters & analytical)	32	each	$ 600.00	$ 19,200.00
Leachate Monitoring (Semi-Annual)				
Leachate Head Well Elevation (17 locations)	34	each	$ 10.00	$ 340.00
Leachate Tank Analysis (field parameters and analytical)	2	each	$ 600.00	$ 1,200.00
Stormwater Basin Monitoring (Semi-Annual)				
Stormwater Basin Analysis (7 locations - field parameters)	14	each	$ 40.00	$ 560.00
Reporting and Submittals				
GEMS Database Submittal	1	lump sum	$ 2,000.00	$ 2,000.00

Subtotal	$	217,122.00
10% Contingency	$	21,712.20
Total Cost	**$**	**238,834.20**
40 Year Total Cost	**$**	**9,553,368.00**

Notes:

1) Average costs per year were rounded up to the nearest $1,000.
2) Unit cost estimates are in 2024 US dollars.

Attachment #4 for the Wisconsin Public Service Corporation Weston Disposal Site #3 Ash Landfill
CCR Initial Permitting Plan of Operation Approval Modification
License #3067

Table 1 – Approval Conditional Status Summary

Condition Number	Description	Status	Comments
December 11, 2014, Plan of Operation Approval Site No. 3 Expansion			
1	The capacity of this facility shall not exceed its design volume of 4,075,500 cubic yards.	Active	
2	All aspects of construction, operation, monitoring and closure of the landfill shall be performed in accordance with the October 20, 1986 Plan of Operation and subsequent plan modifications where not superseded by subsequent approvals, the Plan of Operation for the horizontal and vertical expansion, the requirements of chs. NR 500 to 590, Wis. Adm. Code, and the conditions of this approval. In the case of any discrepancies between the approval conditions and the respective Plan of Operations and their associated plan sheets, the approval conditions shall take precedence.	Superseded by the 12/21/16 approval	
3	Any proposed changes to the plan or this approval shall be presented to the Department. If the changes are compatible with the desired performance of this landfill, as determined by the Department, an addendum will be added to this approval accepting those changes. Written Department approval is necessary prior to implementing any changes with the exception of minor field modifications that are documented in accordance with NR 516.04(3)(d), Wis. Adm. Code. All field modifications shall be discussed with the Department prior to implementation. Other changes may be handled as expedited plan modifications under s. NR 514.09, Wis. Adm. Code as appropriate.	Active	
4	The department shall have the right of unannounced entry to the WPSC WDS3 facility for inspection purposes.	Active	
5	Documentation of the Department's approval for the Highway II Clay borrow source shall be submitted to the Department within 90 days of this approval.	Inactive	Completed
6	The leachate collection lines shall be cleaned annually and after any construction events where the liner or alterations to the leachate collection system have occurred.	Active	
7	The secondary containment system for the leachate collection tank shall be checked monthly.	Active	
8	WPSC shall notify the Department's environmental engineer assigned to this site a minimum of one week prior to beginning each of the construction events, listed below, for the purpose of allowing the Department to inspect the work. A construction documentation report shall be submitted in accordance with the requirements in NR 516, Wis. Adm. Code for the liner and final cover construction in the respective cells as noted below. Fees shall be paid to the Department in accordance with s. NR 520.04(5), Wis. Adm. Code for each of the inspections and associated construction documentation reports as noted below for Phases 1-9: (Liner) Sub-base & Clay Soil, Geomembrane installation, Leachate collection system, Drainage blanket (Capping) Grading Layer & Barrier Placement Soil Placement, GCL, Geomembrane Installation, Geocomposite Drainage Components Layer, Rooting zone & Topsoil	Active	
9	Proof of financial responsibility for closure and long-term care shall be provided within 45 days of the date of this approval, in accordance with ch. NR 520, Wis. Adm. Code. Proof of financial responsibility shall be established using the approved costs contained in the attached summary document.	Superseded by the department's [add date] initial permitting plan of operation approval.	

10	If partial clay liner is constructed prior to freeze up, the completed and tested part of the clay liner shall be covered by a minimum one foot of compacted protective clay (no testing required). In the following spring, at least the upper six inches of the protective clay layer shall be removed, and the upper foot of the completed clay liner shall be re-tested for density and moisture at the same locations previously tested. If the tests meet compaction specifications the upper three inches of the completed clay liner and the remaining protective clay layer shall be scarified and re-compacted. If the tests do not meet compaction specifications, then the entire lift of protective clay and at least the upper four inches of the clay liner shall be removed and the second foot of the clay liner shall be re-tested for density and moisture at the same locations previously tested. If the tests meet compaction specifications the remaining eight inches of the upper foot of the clay liner shall be scarified and re-compacted. If the tests do not meet compaction specifications than the procedure shall be repeated for the remaining depth of clay liner until compaction specifications are met.	Active	
11	Conformance sampling and testing shall be conducted on the GCL delivered on site and used in construction. Sampling shall be conducted by the quality assurance engineer or qualified technician. Laboratory testing shall be performed at a laboratory not affiliated with the quality control testing. Manufacturer testing performed on the GCL materials delivered to the facility may be submitted in place of the conformance testing, provided the testing was performed at the minimum frequency stated in NR 516.07(2m), Wis. Adm. Code.	Active	
12	Requirements for placement and testing of the two-foot soil barrier layer below the GCL.	Superseded by Condition 1 of the 9/15/2017 approval	
13	WPSC shall submit to the Department a Sampling Plan to document the removal of the coal combustion wastes from the existing landfill. The plan shall be submitted prior to reconstruction the area to the new elevations and design standards approved herein.	Inactive	Completed
14	All previous environmental monitoring requirements are rescinded and replaced with the following: WPSC shall perform environmental monitoring as specified in the attached Environmental Monitoring Tables 1 to 4, or as modified by Department approval.	Superseded by the department's [add date] initial permitting plan of operation approval.	
15	The PALs and Enforcement Standards (ESs) for all substances not listed in Table A and B shall be as specified in ch. NR 140, Wis. Adm. Code, or as specified in other appropriate plan modification approvals for the facility.	Superseded by the department's [add date] initial permitting plan of operation approval.	
16	Within 60 days after all the necessary rounds of suitable groundwater sampling data are received from the laboratory, WPSC shall submit an evaluation of the need for exemptions from ch. NR 140, Wis. Adm. Code, groundwater quality standards and if necessary, shall propose the established of ACLs for each of the following: a. Manganese at wells LS-100P, LS-101, LS-102P, LS-103, and LS-105, for which a minimum of four (4)rounds of suitable monitoring data b. Arsenic at well LS-105, for which a minimum of two (2) additional rounds of suitable monitoring data are needed.	Inactive	Completed
March 24, 2015, Plan of Operation Modification Approval for the Somers Clay Borrow Site			
1	WPSC shall have a geologist, geological engineer or soils technician at the clay borrow source at all times that the clay is being excavated to identify the liner quality clay.	Active	
2	WPSC shall construct and document the clay liner and cap in accordance with ch. NR 516, Wis. Adm. Code.	Active	

3	WPSC shall inform the Department's environmental engineer assigned to this project a minimum of one week prior to beginning each excavation phase at the clay borrow source and following restoration of each section of the clay borrow source in order to allow a Department representative to observe the work. WPSC shall pay a fee to the Department for each required inspection in accordance with the rules in effect at the time of the inspection. WPSC shall pay the inspection fees at the time the construction documentation is submitted to the Department for review.	Active	
August 27, 2015, Plan of Operation Modification Approval for the Relocation of the Landfill Footprint			
April 4, 2016, Construction Documentation Approval for Cells 1 and 2 Liner			
December 21, 2016, Plan of Operation Modification to Relocate Landfill Footprint			
1	The following approval conditions are rescinded: October 20, 1986 conditions 1-49, February 13, 1990 condition 1, December 5, 1990 conditions 1-5, December 18, 1990 conditions 1-3, August 21, 1991, September 3, 1992, July 23, 1993 conditions 1-3, September 26, 1996, December 12, 1997 conditions 1-2, September 20, 2004 conditions 1-2, March 9, 2005, June 30, 2008, and May 21, 2009 conditions 1-3. The above listed conditions are replaced by applicable conditions in the December 11, 2014, plan of operation approval.	Active	
2	Conditions 1 and 2 of the May 30, 1990 approval for the Siem borrow site are rescinded and replaced with the following: a. Areas in the borrow source where the clay is less than 2 feet thick shall not be used in the construction of the cap or liner at the Legner Ash Disposal Site. b. WPSC shall have a geologist, geological engineer or soil technician at the clay borrow source at all times that clay is being excavated to identify the liner quality clay. c. WPSC shall construct and document the clay liner and cap in accordance with ch. NR 516, Wis. Adm. Code. d. WPSC shall inform the department's environmental engineer assigned to this project a minimum of one week prior to beginning each excavation phase at the clay borrow source and following restoration of each section of the clay borrow source in order to allow a department representative to observe the work. WPSC shall pay a fee to the department for each required inspection in accordance with the rules in effect at the time of the inspection. WPSC shall pay the inspection fees at the time the construction documentation is submitted to the department for review.		
3	Condition 2 of the December 11, 2014 approval is rescinded and replaced with the following: All aspects of construction and operation of the landfill shall be performed in accordance with the plan of operation, the requirements of chs. NR 500 to 538, Wis. Adm. Code and the conditions of approval. In the case of any discrepancies between the approval conditions and the plan of operation, the approval conditions shall take precedence.	Active	
4	The department waives the requirement of NR 506.07(3)(b), Wis. Adm. Code for a frost protection layer in Cell 1 for the 2016/2017 season. WPSC shall place at least 2 feet of approved waste or an alternate approved means of frost protection on Cell base liner prior to December 1, 2017, unless WPSC provides justification acceptable to the department that exposure to additional freeze-thaw cycles will not be detrimental to the performance of the liner. If WPSC chooses to submit a request for additional extension to the date of frost protection layer completion, this request will be in the form of a plan of operation modification. In the absence of an approved extension, those portions of the base liner or lower 10 feet of side slopes not covered with a frost protection material by December 1, 2017, shall be investigated for density and effects from freeze-thaw as specified by the department and shall be repaired and recertified during the next construction season, prior to waste placement per NR 506.07(3)9b), Wis. Adm. Code.	Superseded by 9/15/17 approval	
September 15, 2017, Plan of Operation Modification for Frost Protection Layer			
1	Condition 12 of the December 11, 2014 approval is rescinded. Section NR 504.06(7), Wis. Adm. Code contains the specifications and requirements for composite lined landfills using GCLs.		

2	Condition 4 of the December 21, 2016, approval is rescinded and replaced with the following: The department waives the requirement of s. NR 506.07(3)(b), Wis. Adm. Code for a frost protection layer in Cell 1 for 5 years. WPSC shall place at least 2 feet of approved waste or an alternate approved means of frost protection on the Cell base liner prior to December 1, 2022 unless WPSC provides justification acceptable to the department that exposure to additional freeze-thaw cycles will not be detrimental to the performance of the liner. If WPSC chooses to submit a request for additional extension to the date of frost protection layer completion, this request will be in the form of a plan of operation modification. In the absence of an approved extension, those portions of the base liner or lower 10 feet of side slopes not covered with a frost protection material by December 1, 2022, shall be investigated for density and effects from freeze-thaw as specified by the department and shall be repaired and recertified during the next construction season, prior to waste placement per s. NR 506.07(3)(b), Wis. Adm. Code.	Inactive	
3	Prior to placing a frost protection layer in the year that an increase in hydraulic conductivity of the GCL is observed, WPSC shall evaluate the condition and integrity of the liner system GCL and geomembrane. The evaluation shall be reported to the department with recommendations for repair or replacement, as appropriate. The department may require repair or replacement if the condition of the liner does not meet the requirements for the landfill or if it is no longer protective of groundwater.	Inactive	
4	WPSC shall submit an annual report by March 1 of each year until this waiver ends on December 1, 2022. The annual report shall include the following for the preceding year. a. A certification statement by a professional engineer. b. A discussion of: i. The landfill liner condition, ii. The drainage layer condition, iii. The gradient control outlet inspections, iv. Any maintenance or repairs performed, and v. Freeze-thaw cycling events based on temperature readings. c. The data for i. GCL hydraulic conductivity laboratory test results, ii. Drainage layer survey point results, and iii. Landfill liner system temperature readings. d. In the year that repairs are made to the liner components where samples are collected, provide documentation demonstrating the repairs were made in accordance with the construction quality assurance plan and applicable code requirements.	Inactive	Completed
April 13, 2018, Plan of Operation Modification Approval for CQA Plan Revision			
1	WPSC shall provide proctor curves, hydraulic conductivity data and target compaction zone when electing to use fly ash in the final cover. This information shall be submitted to the department prior to the construction of the fly ash layer.	Rescinded by the department's [add date] initial permitting plan of operation approval.	
April 13, 2018, Construction Documentation Approval for Cell 2 Partial Final Cover			
March 3, 2021, Construction Documentation Approval for Cell 2 Partial Final Cover			
[add date], Plan of Operation Modification Approval for Initial Permitting of a CCR Landfill			
1	Publicly accessible internet site publication requirements.	Active	
2	Additional annual report requirements.	Active	
3	Notification requirements for the landfill's publicly accessible internet site.	Active	
4	The landfill owner or operator shall maintain procedures within the fugitive dust control plan for logging citizen complaints received by the landfill involving CCR fugitive dust events at the facility throughout the active life of the landfill.	Active	
5	Environmental monitoring shall be performed during both the active life and after closure in accordance with the schedules provided in the environmental monitoring tables of Attachment #1.	Active	This supersedes condition 14 of the department's December 11, 2014 conditional plan of operation approval.

6	A ch. NR 140, Wis. Adm. Code, preventive action limit for total cobalt shall be established at 6 ug/l for all CCR monitoring wells including LS-100, LS-101, LS-105, LS-106, and LS-107 to correspond to the MCL established in 40 CFR 257.95(h)(2)(i).	Active	
7	The ch. NR 140, Wis. Adm. Code, preventive action limits (PALs) and alternative concentration limits (ACLs) for the groundwater monitoring points shall be those listed in Attachment #2.	Active	This supersedes condition 15 of the department's December 11, 2014 plan of operation approval.
8	The PALs and enforcement standards (ESs) for all other substances not identified in Attachment #2 shall be as specified in ch. NR 140, Wis. Adm. Code, unless specifically approved by the department in writing.	Active	
9	WPSC shall receive written concurrence from the department prior to disposing of the following in the Weston Landfill: CCR waste generated by the WPSC Weston Power Plant which has been excavated from another landfill or historic fill site. CCR waste and by-products generated by the WPSC Weston Power Plant which have been beneficially reused.	Active	
10	WPSC shall receive written approval from the department prior to disposing of CCR waste that was not generated at the WPSC Weston Power Plant in the Weston Landfill.	Active	
11	Condition 1 of the department's April 13, 2018 plan modification approval, which relates to an alternative cover design that is no longer approved for use at the Weston Landfill, is hereby rescinded.		
12	Proof of financial responsibility for closure and long-term care requirements.	Active	This supersedes condition 9 of the department's December 11, 2014 plan of operation approval.
13	Notification requirements for the use of a new wastewater treatment facility for leachate treatment and management.	Active	