MWG
Midwest Generation, LLC

Midwest Generation, LLC

Powerton Generating Station

Documentation of Public Meeting

35 Ill. Adm. Code Sections 845.240(d) and 845.800(d)(2)

Midwest Generation, LLC's (MWG) Powerton Generating Station (Powerton Station) is located at 13082 E. Manito Road in Pekin, Illinois. Powerton Station operates the Bypass Basin and Former Ash Basin.

Pursuant to Section 845.240, MWG held two public meetings on the tentative applications and as required by subsection (d) of that section, MWG is placing documentation of the meeting in its operating record consisting of the following Exhibits:

Exhibit A:	Public Notice
Exhibit B:	Map of 2-mile radius of impoundment (selected postal routes highlighted blue) and USPS Every Door Direct Mail forms
Exhibit C:	Posting of notice in conspicuous locations within 10 miles of the facility
Exhibit D:	Letter to Illinois EPA requesting notice be sent to listserv for MWG
Exhibit E:	Presentation for May 18 and 19, 2022 public meetings
Exhibit F:	Summary of public meetings

Exhibit A:

Public Notice

MWG
Midwest Generation, LLC

Public Notice

Midwest Generation to Host Public Meetings on Closure of the Former Ash Basin and Retrofit of the Bypass Basin at Powerton Generating Station

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What: Midwest Generation is hosting two public meetings to share information and engage with the community about its proposed plans for its Former Ash Basin and Bypass Basin at Powerton Generating Station. Midwest Generation's plans are to (1) close the Former Ash Basin and (2) retrofit the Bypass Basin. Neither basin currently receives coal-combustion residuals, or CCR. Consistent with state and federal regulations, MWG is proposing to close the Former Ash Basin through capping and long-term monitoring. The proposal for the Bypass Basin entails removing the remaining CCR, installing a new composite liner system, installing a new leachate collection and removal system, and continuing to use the Bypass Basin as a CCR surface impoundment. MWG anticipates filing construction permit applications for each basin with the State of Illinois in June 2022. Following a presentation at the meetings, there will be an opportunity to participate in a question-and-answer session.

When: Wednesday, May 18, 2022, 6 p.m. to 8 p.m.
Thursday, May 19, 2022, 10 a.m. to 12 p.m.

Where: Avanti's Dome*
3401 Griffin Ave
Pekin, IL 61554
**Accessible to persons with disabilities.*

Livestream: The meeting will be streamed live online. Please check **midwestgenerationllc.com** for log-in details and updated information closer to the meeting dates.

Information on closure construction permit applications will be posted at **midwestgenerationllc.com** no later than **April 18, 2022**. Contact: **midwestgeneration@nrg.com.**

MWG
Midwest Generation, LLC

Public Notice

Midwest Generation to Host Public Meetings on Closure of the Former Ash Basin and Retrofit of the Bypass Basin at Powerton Generating Station

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PRSRT STD
ECRWSS
U.S. POSTAGE
PAID
EDDM RETAIL

**** ECRWSS EDDM **

Postal Customer

Exhibit B:

Map of 2-mile radius of impoundment - selected postal routes highlighted blue

Every Door Direct Mail®

Step 1: Search for Routes

Use the EDDM® Online Tool to search for neighborhoods where your customers live. Then, use the filters to target customers by specific demographics such as age, household size, and income.

Search for Routes

13082 E Manito Rd, Pekin, IL

Radius

2 mi

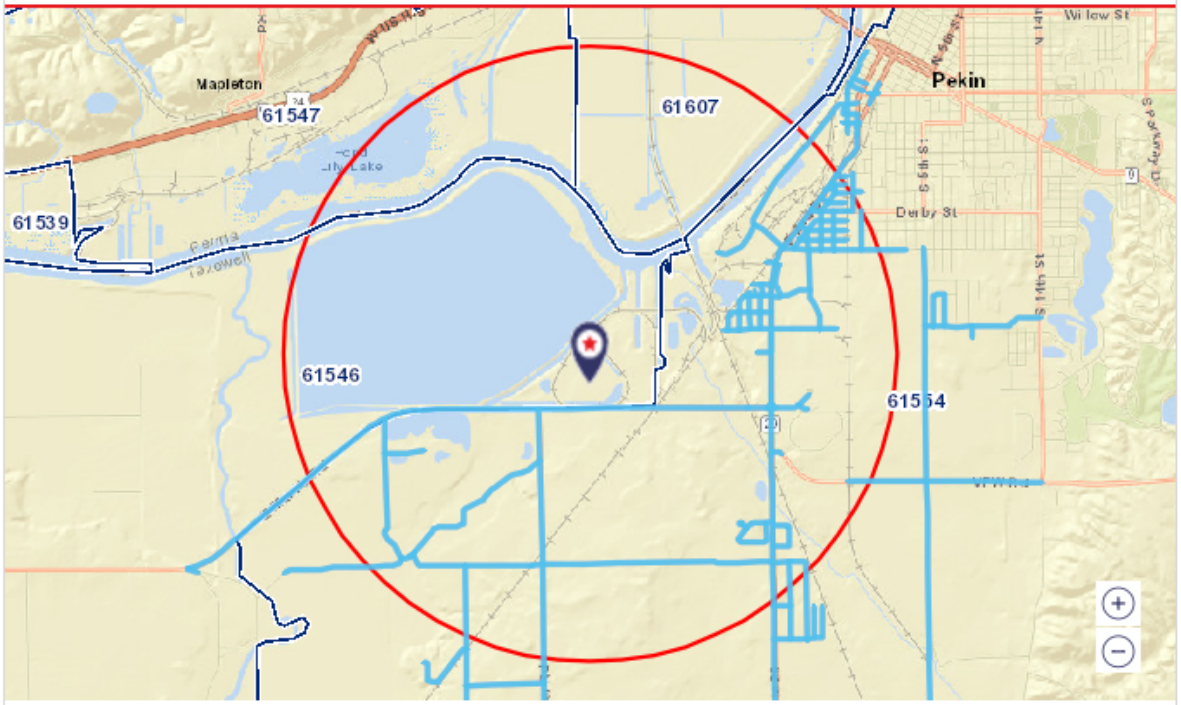
Search

Clear

Refine Search

View as: Map Table

Route	Residential	Total	Age: 25-34	Size	Income	Cost
–	–	–	–	–	–	–



Map Key

Hide

- Selected Route
- Hovered Route
- Business Only Route
- P.O. Box
- Selected P.O. Box
- Search Position

Order Summary

Drop-Off Entry Type

Local Post Office (DDU)

Selected Routes

2

Post Office™ Drop-Offs

1

Total Mailpieces

986

Approximate Cost

$165.65

Next Step

Save Order

Clear Routes

Target Audience

View as: Map Table

	Route	Residential	Total	Age: 25-34	Size	Income	Cost
☑	61554-C002	477	477	20.3%	2.51	$36.73k	$80.14
☑	61554-R003	509	509	18.2%	2.52	$52.44k	$85.51

United States Postal Service®

Plant-Verified Drop Shipment (PVDS) Verification and Clearance

This form available at www.usps.com.

See Instruction on Reverse

1. Requested In-Home Delivery Date *(3-day window)*	2. Drop Ship Appointment Number
04/15/2022 - 04/17/2022	

Mailer Information

3. Mailer Name	4. FAST Scheduler ID	5. Mailer Contact Name	6. Mailer Contact Telephone *(Include area code)*
ALLEGRA EAST PEORIA		**KEITH HOPKINS**	**(309) 699-3977**

7. Origin Plant Location *(City, state, ZIP+4®)*	8. Check One
PEORIA, IL 61601	☒ Identical-Weight Pieces. Weight of a Single Piece **0.02225** lbs. ☐ Nonidentical-Weight Pieces

9. Class of Mail	10. Product or Publication Title or Names	11. Total Gross Weight of Shipment *(Verified at origin office)*
☐ Periodicals ☒ Std. Mail ☐ Package Services ☐ International *(Specify class)* _____		**25.5385** 12. Type of Mail Processing Category *(Check all that apply)* ☐ Letters ☐ Automation Compatible ☐ Irregular Parcels ☒ Flats ☐ Machinable Parcels ☐ Nonmachinable Parcels

13. Pallets		a. No. Pallets of Trays	b. No. Pallets of Sacks	c. No. Pallets of Parcels	d. No. Pallets of Bundles	13.e. Non-Palletized Containers
Optional if Pallet Presort is known.	i. 5-Digit					i. No. of Bundles
	ii. 5-D Scheme					ii. No. of Trays **2**
	iii. 5-D CR					iii. No. of Sacks
	iv. 5-D Scheme CR					iv. No. of Parcels
	v. 3-D					v. No. of Air Boxes
	vi. All Other					vi. No. of Other *(Describe)*

14. Entry Discounts Claimed *(Check all that apply)*: ☒ DDU ☐ DNDC ☐ DFSS ☐ Mailing Includes Pieces for Delivery Outside Service Area of Entry Office ☐ DSCF ☐ DADC ☐ International Service Center (ISC) ☐ International: _____

15. Comments -- Record SCF/ADC/NDC/ASF designator(s) and ZIP Code(s) from the DMM label list for mailing presented, or attach register.
DDU 61554

16a. Contact at Company Making Drop Ship Appointment *(if other than mailer and if known when completing this form)* | 16b. Telephone

Origin Post Office *(Where verified)*

17. Origin Post Office™ *(City, state, and ZIP+4)*	26a. Name of USPS® Employee Verifying Mail	26b. Employee's Telephone Number *(Include area code)*
Peoria IL 61601	L Densberger	309 [illegible] 8332

18. Verified at: ☐ DMU *(Mailer's plant)* ☒ BMEU or Post Office

26c. Signature of Verifying Employee: COPY

27. Round Stamp *(Required)*: BMEU PEORIA IL 61601 APR 14 2022 USPS

19. Permit Number	20. Postage Payment Method *(Except for Periodicals)*	26d. USPS Contact Name *(If other than verifying employee)*
332	☒ Permit ☐ Stamped ☐ Meter	309-671-5532
21. Total Pieces: 986	22. Total Weight of Mailing: 25.5385	
23. Vehicle PVDS Seal Number	24. Vehicle ID Number	

25. Comments

33. Load Condition Irregularities *(Check all that apply)*

- ☐ Broken Pallets
- ☐ Container Counts do not match PS Form 8125
- ☐ Damaged Mail
- ☐ Improper Mail Makeup
- ☐ Load Unsafe
- ☐ Incorrect Appointment Type
- ☐ Mailings are not separated by PS Form 8125
- ☐ Overweight Pallets
- ☐ Pallets Too Tall
- ☐ Incorrect Mail Class
- ☐ Other *(Describe in item 32)*

Destination Entry Post Office or Delivery Unit

28. Entry Office *(Facility name, address, city, state and ZIP+4 code as found in the Drop Ship Product.)*
PEKIN Post Office Facility
514 BROADWAY ST
PEKIN, IL 61554
Note: Appointments with 100% Periodicals can be presented whenever the destination facility is open and staffed.

29a. USPS Receiving Employee Signature	29b. USPS Receiving Employee Name	34. Scan the barcode upon receipt.
30. Date/Time of Arrival	31. Date/Time of Departure	

32. Comments *(NOTE: Enter bedload discrepancies as percentages and pallet discrepancies as pallet counts.)*

Exhibit C:

Posting of notice in conspicuous locations within 10 miles of the facility

MWG Community Posting Summary

April 2022

The summary below details actions taken by Midwest Generation to meet Section 845.240 regulations for Pre-Application Public Notification and Public Meetings. These regulations require the owner or operator of a CCR surface impoundment to "*post the notice in conspicuous locations throughout villages, towns, or cities within 10 miles of the facility, or use appropriate broadcast media (such as radio or television)".*

We identified and contacted a total of 64 conspicuous locations via telephone over two days – Friday, April 8, 2022, and Wednesday, April 13, 2022. All locations are within 10 miles of the facility in the City of Pekin.

On Thursday, April 14, 2022, we posted public notices in many of these locations. In instances where we did not post a notice, the facilities were closed or refused to allow posting. In total, 31 flyers were posted within a 10-mile radius of the City of Pekin – covering surrounding areas such as South Pekin, Mapleton, Glasford and Hanna City.

Pekin

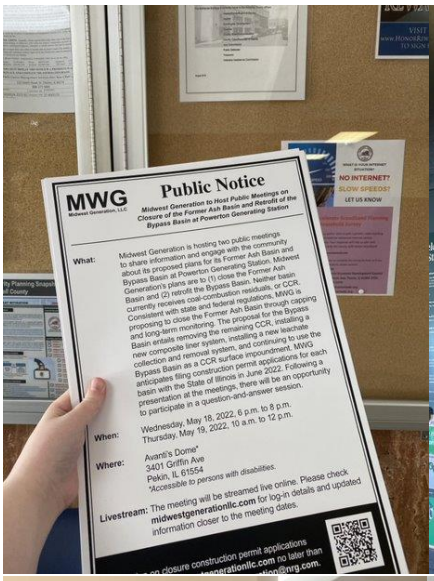
Public meeting notices were placed at **20 locations**, including:

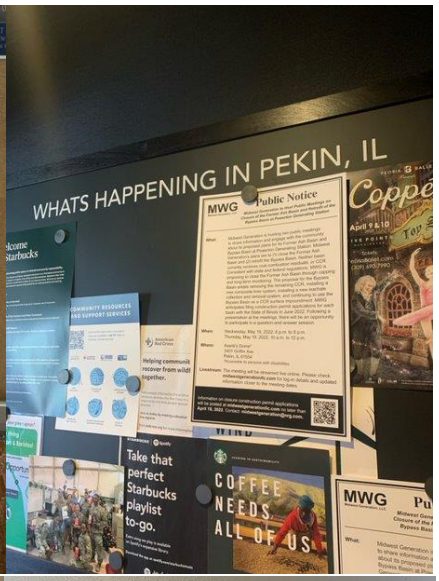
- Pekin Public Library
- Pekin Park District
- Pekin Community Bank
- Tazewell County Circuit Clerk Office
- St. John's Church
- Trinity Lutheran Church
- First United Methodist Church
- First Christian Church
- First Assembly of God
- Casey's General Store
- Miller Center
- Veterans Memorial Arena
- IRSRVA Rec Center
- Pekin City Hall
- Casey's General Store
- First Pekin Savings Bank
- Leaves N' Beans Café
- Coffee Connection
- Starbucks
- Dunkin

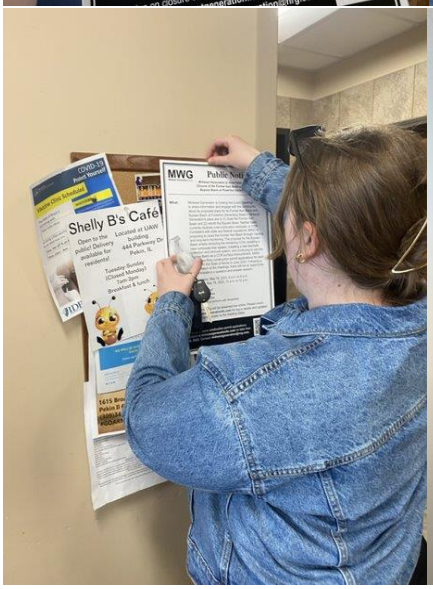
Locations that were closed or refused, included:

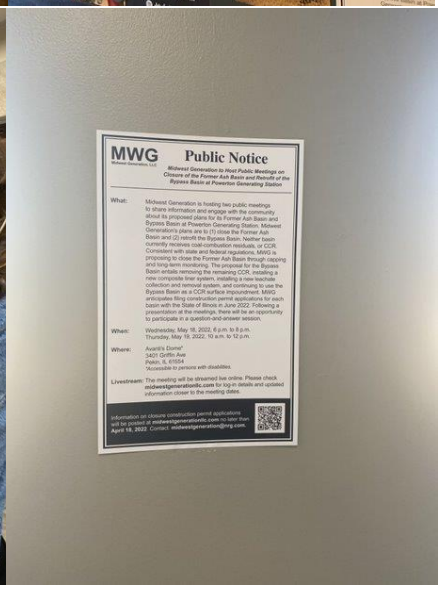
- Aldi
- Grace United Methodist Church
- American Legion
- Elks Lodge
- Community of Christ Church
- Our Savior Lutheran Church
- Walmart
- New Pointe Church
- Lick Creek Golf Course
- Dragonland
- First State Bank
- Hat Tricks Sports Bar
- CVS
- Pekin Animal Hospital
- Redbrand Credit Union
- Planned Parenthood
- Walgreens
- Pekin Country Club
- Sunset Hills Golf Club
- Schnucks
- USPS
- Kroger
- Dollar General
- Faith Tabernacle Church

Pekin Photos









South Pekin

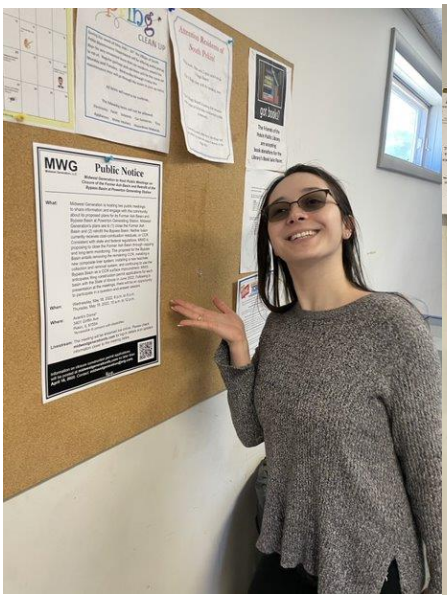
Public meeting notices <u>were placed</u> at **2 locations**, including:

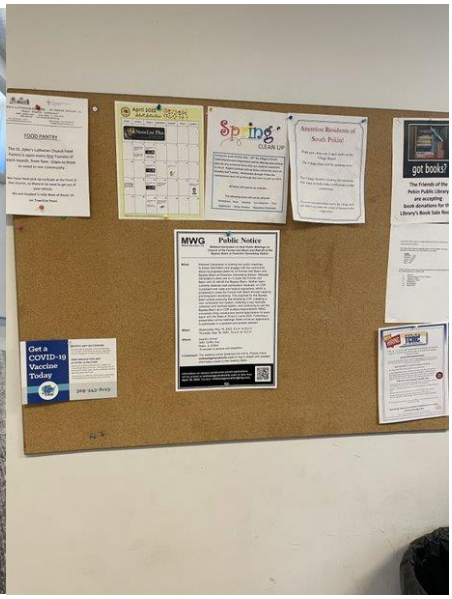
- USPS
- Casey's General Store

Locations that were closed or refused, included:

- Subway
- South Pekin Congregational Church
- South Pekin Baptist Church
- South Pekin Village Hall

South Pekin Photos



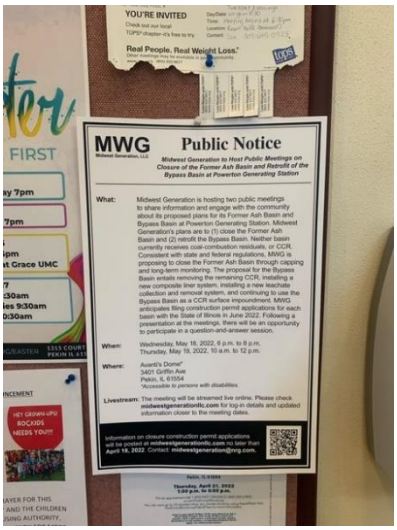


Mapleton

Public meeting notices were placed at **4 locations**, including:

- Hollis Park Recreation Center
- Hollis Park District
- Village of Mapleton
- USPS

Mapleton Photos



Glasford

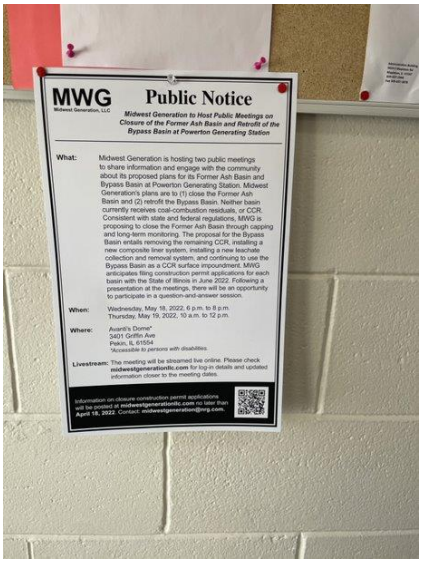
Public meeting notices <u>were placed</u> at **2 locations**, including:

- USPS
- Glasford Local Bar

Locations that were closed or refused, included:

- C & M Market
- Glasford Senior Citizen Center
- Glasford Village Hall

<u>Glasford Photos</u>



Hanna City

Public meeting notices <u>were placed</u> at **3 locations**, including:

- Village of Hanna City
- Hanna City Park District
- USPS

Locations that were closed or refused, included:

- Hanna City Presbyterian Church
- Smithville Bible Church

Hanna City Photos

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Exhibit D:

Submittal to Illinois EPA requesting notice be sent to listserv for MWG

MWG
Midwest Generation, LLC

Midwest Generation, LLC
Powerton Generating Station
13082 E. Manito Road
Pekin, Illinois 61554

April 13, 2022

VIA CERTIFIED MAIL
Illinois Environmental Protection Agency
DWPC – Permits MC #15
Attn: Part 845 Coal combustion Residual Rule Submittal
1021 North Grand Avenue East
P.O. Box 19276
Springfield, IL 62794-9276

Re: Powerton Generating Station – Pekin, Tazewell County, Illinois
Facility ID No. W1798010008
Notice of Public Meetings for CCR Construction Permit Application

Dear Sir or Madam:

In accordance with the requirements of 35 IAC Section 845.240(b), please find enclosed the public meeting notice for the Former Ash Basin (ID No. W1798010008-05) and Bypass Basin (ID No. W1798010008-04) at Powerton Generating Station.

Midwest Generation, LLC requests that the Agency email the enclosed notice to the Agency's listserv for the facility. An electronic copy of this notification has been submitted to the Agency's CCR Coordinator.

If you have any questions or require additional information regarding this submittal, please contact me at [redacted].

Sincerely,

Sharene Shealey

Director, Environmental

CC via Email: Illinois EPA CCR Coordinator
Todd Mundorf, Powerton Station Plant Manager
Joseph Kotas, Powerton Station Environmental Specialist
Jill Buckley, Environmental Manager

Exhibit E:

Presentation for May 18 and 19, 2022 public meetings

MWG

Midwest Generation LLC.

Powerton Construction Permit Applications

ID No. W1978010008

Bypass Basin Proposed Retrofit Construction Project

Former Ash Basin Proposed Closure Construction Project

May 2022

Safety Message

COVID-19 PRECAUTIONS

- Offering a virtual option due to the COVID-19 pandemic

- Participants in Q and A portion will be following public health protocols. For those joining in person:

    - You may choose to social distance or wear a mask
    - Respect for each other is of the utmost importance

Reminders for Those Joining Virtually

In today's meeting, you can:

Enter questions in "Q&A" box

Click the Q&A icon on your screen and type your question. We will also be monitoring the chat.

Sign up for a post-meeting summary and IEPA listserv

During the meeting, click the link that Midwest Generation, LLC has placed in the Chat to complete the Google form.

Public Website: midwestgenerationllc.com

MWG
Midwest Generation LLC.

Meeting Agenda

- Illinois Coal Ash & Other Environmental Rules
- Powerton Generating Station
- Bypass Basin - Proposed Retrofit Plan
- Former Ash Basin – Proposed Closure Plan
- Question & Answer Session

MWG
Midwest Generation LLC.

Illinois Coal Ash Rules & Other Regulations

- In 2015, the US EPA finalized the Federal CCR Rules to regulate coal ash landfills and surface impoundments at power plants.
- In 2019, the state passed a law to regulate coal ash stored in CCR surface impoundments at power plants throughout Illinois.
  - The law required that the Illinois Environmental Protection Agency propose, and that the Illinois Pollution Control Board adopt, state regulations for storage and disposal of coal ash produced from electric generating facilities through a new permitting program.
  - As required by the law, the Illinois EPA and the Board undertook a public rulemaking process that resulted in the Board adopting regulations at 35 IAC Part 845 – Standards for the Disposal of Coal Combustion Residuals in Surface Impoundments (the Illinois Coal Ash Rules) in April 2021.
- Additionally, both the Bypass Basin and Former Ash Basin are permitted as part of the Station's wastewater treatment system by the Illinois EPA under the NPDES permitting program.

What is a CCR? What is a CCR surface impoundment?

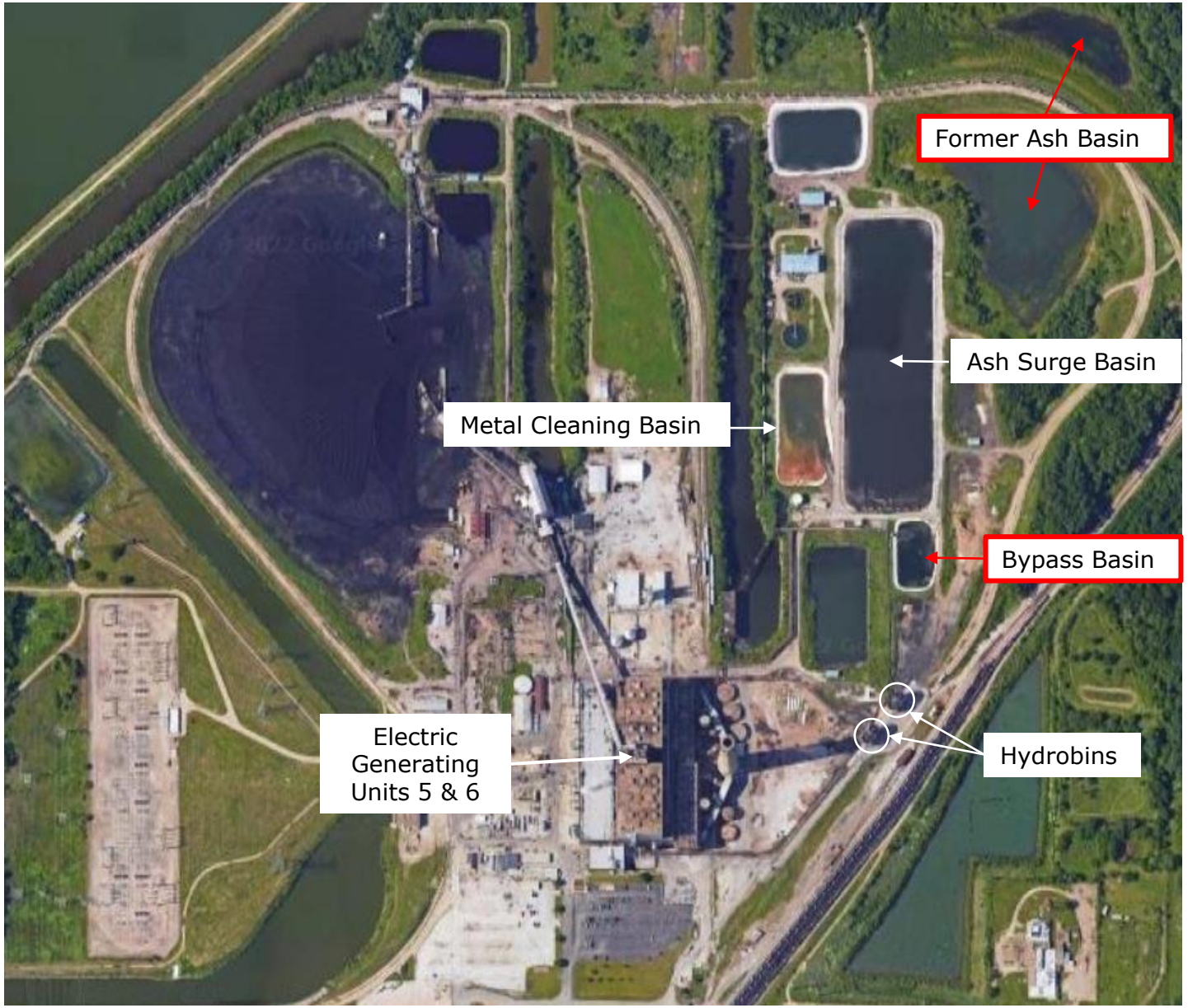
The Illinois Coal Ash Rules define both CCR and CCR surface impoundments:

> "Coal combustion residuals" or "CCR" means fly ash, bottom ash, boiler slag, and flue gas desulfurization materials generated from burning coal for the purpose of generating electricity by electric utilities and independent power producers.

> "CCR surface impoundment" or "impoundment" means a natural topographic depression, man-made excavation, or diked area, which is designed to hold an accumulation of CCR and liquids, and the surface impoundment treats, stores, or disposes of CCR.

We’re here today to present plans regarding a specific aspect of the Illinois Coal Ash Rules – the planned retrofit of the Bypass Basin and the planned closure of the Former Ash Basin at Powerton Generating Station.

Powerton Generating Station



Bypass Basin Retrofit

Retrofitting the Bypass Basin

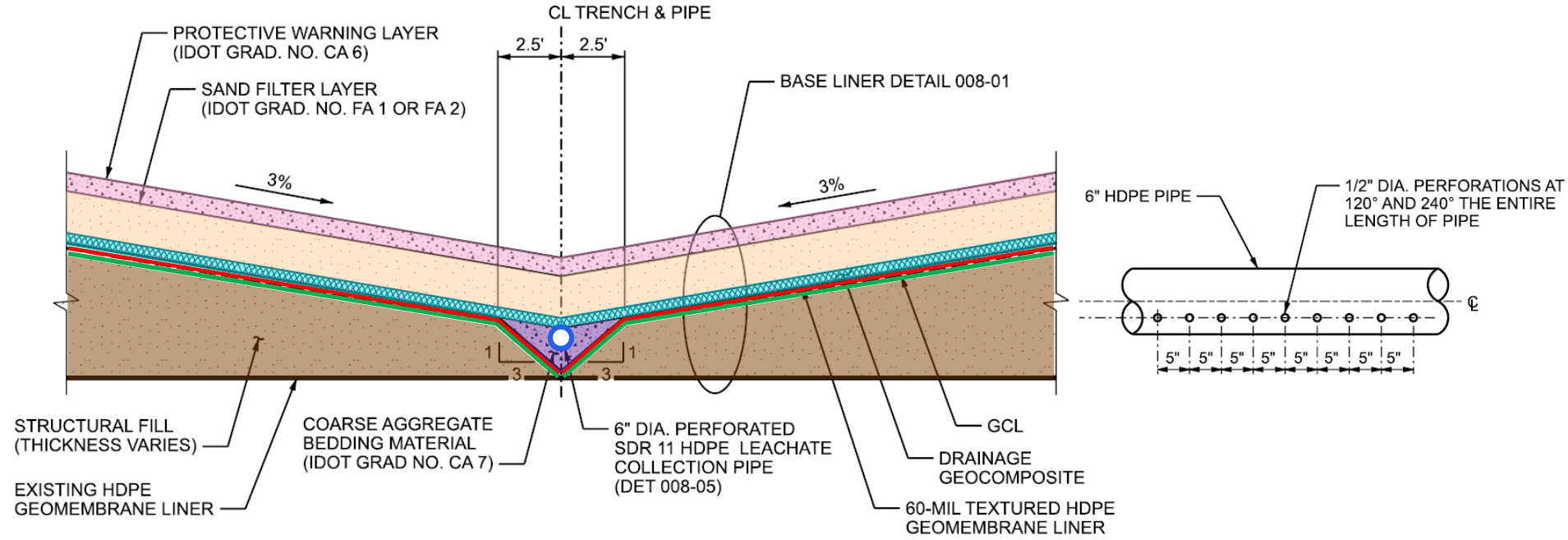
- The primary basins for the settling of ash remaining in decant water from the Hydrobins at the Powerton Generating Station are the Ash Surge Basin, which is approximately 8 acres in size and currently in service, and the Bypass Basin, which is less than an acre in size and currently out of service.
- In addition to being regulated under the IL Coal Ash Rules, both basins have been regulated under the Federal CCR Rules since 2015.
- While both basins have (intact) 60-mil HDPE geomembrane liners, neither basin has a composite liner system as required under both IL and federal regulations and are required to either close or retrofit.
- MWG's current plans are to retrofit the Ash Surge Basin once the Bypass Basin has been retrofitted and placed back into service.
- In November 2020, MWG submitted a "Demonstration for a Site-Specific Alternative Deadline to Initiate Closure" for the Ash Surge Basin. This Demonstration, and USEPA's subsequent completeness determination, allows for continued use of the Ash Surge Basin until the Bypass Basin is retrofitted.

Question? Virtual participants, open the Q&A function at the bottom of your screen to type a question.

Bypass Basin

- The Bypass Basin is approximately 0.8 acre in size and was originally built in the early 1980's with a Hypalon membrane liner.
- In 2010, the basin was relined with a high-density polyethylene (HDPE) geomembrane liner.
- The Bypass Basin was used to temporarily store CCR when the Ash Surge Basin was out of service.
- The only type of CCR that was stored in this basin is slag, or bottom ash, which is the non-combustible residue that settles to the bottom of the power plant's boilers.
- The Bypass Basin was removed from service in early October 2020 for routine cleaning and has not received CCR since. It will not receive CCR again until it is retrofitted per the IL Coal Ash Rule.

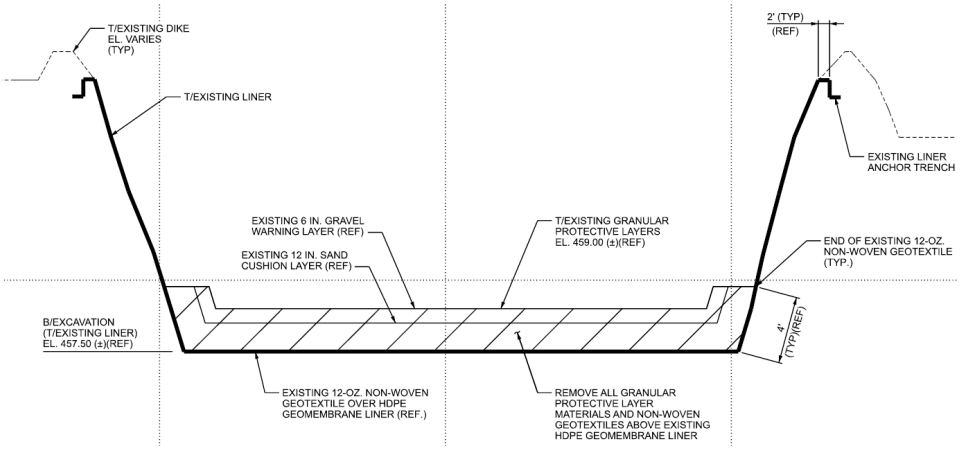
Retrofitted Bypass Basin – Liner Requirements



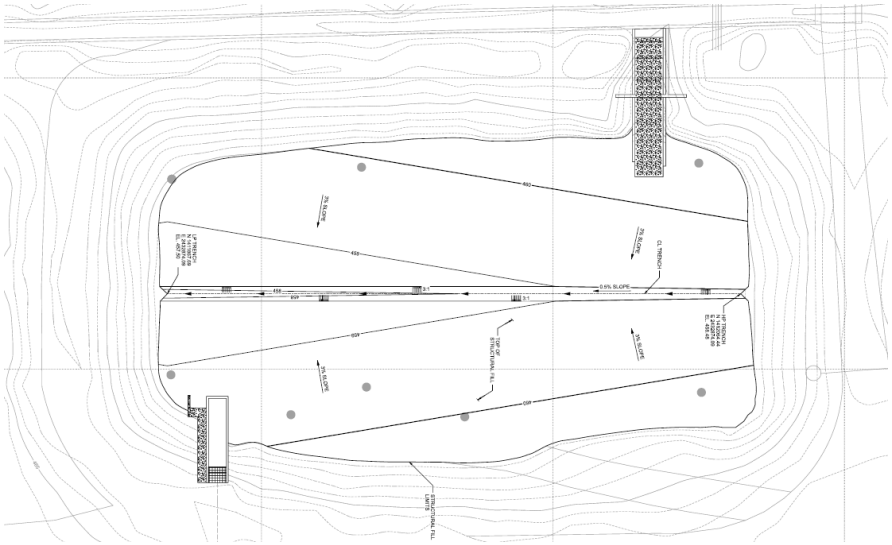
Component	Layer / Feature	Description	Reference(s)
Basin Floor	Structural Fill	Fill material to establish 3% slope for LCRS	845.420(a)(3)
Composite Liner System	Geosynthetic Clay Liner (GCL)	Bottom component of new composite liner system	845.410(a) & (b) 845.400(c)
	60-mil HDPE Geomembrane Liner	Top component of new composite liner system	845.410(a) & (b) 845.400(c)
Leachate Collection & Removal System (LCRS)	Drainage Geocomposite	Directs leachate to leachate collection pipe	845.420(a)(4)(B)
	Perf. HDPE Leachate Collection Pipe	Collects and directs leachate to sump pump	845.420(a)(7)
	Coarse Aggregate Bedding Material	Prevents finer particles from clogging the leachate collection pipe	845.420(a)(6)
	Sand Filter Layer	Limits intrusion of finer CCR particles into LCRS	845.420(a)(2)
	Protective Warning Layer	Protects liner and LCRS components	845.420(a)(8)

Retrofitted Bypass Basin – Preliminary Design

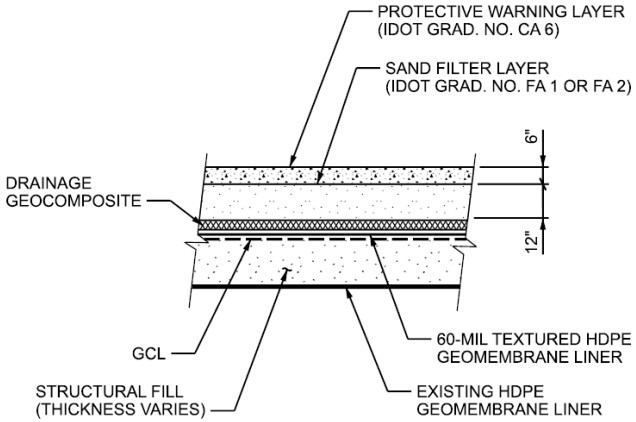
1. Material Removal & Decontamination



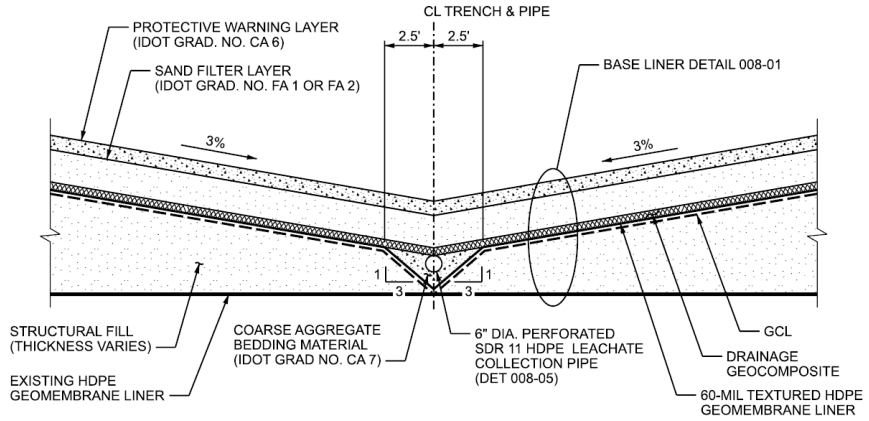
2. Place Structural Fill



3. Install New Composite Liner



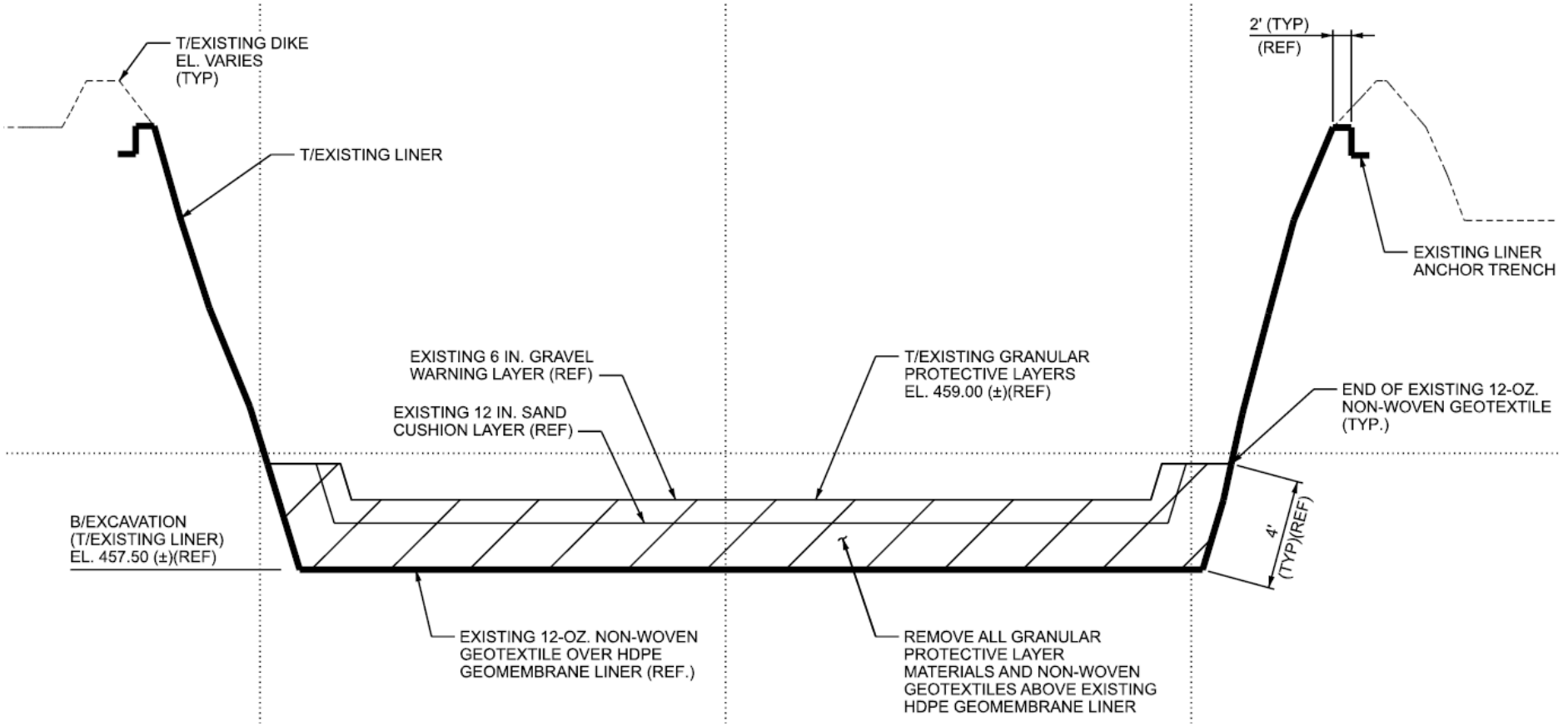
4. Install New Leachate Collection System



TYPICAL SECTION AT LEACHATE COLLECTION TRENCH

Retrofitted Bypass Basin – Preliminary Design

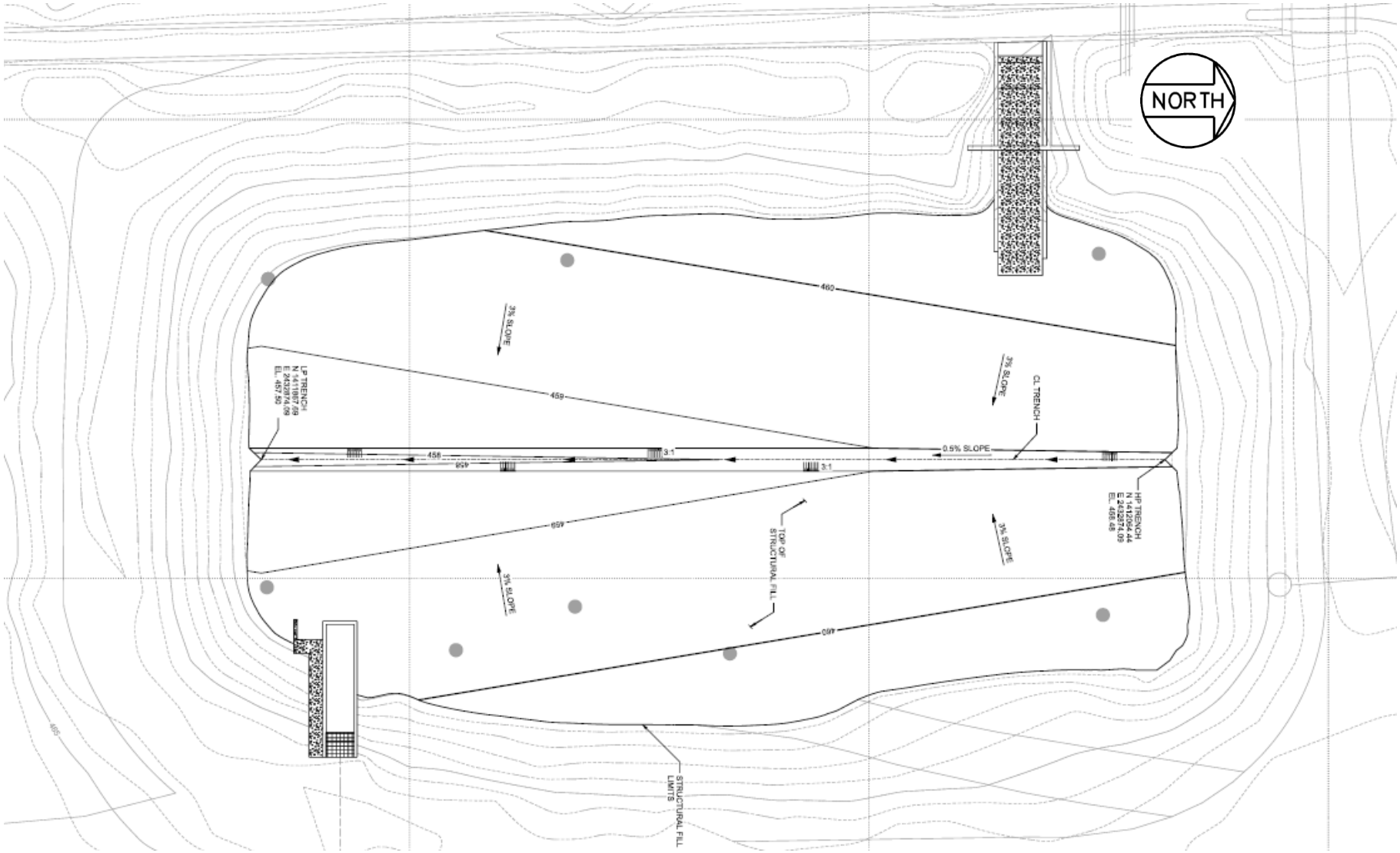
1. Material Removal & Decontamination



Question? Open the Q&A function at the bottom of your screen to type a question.

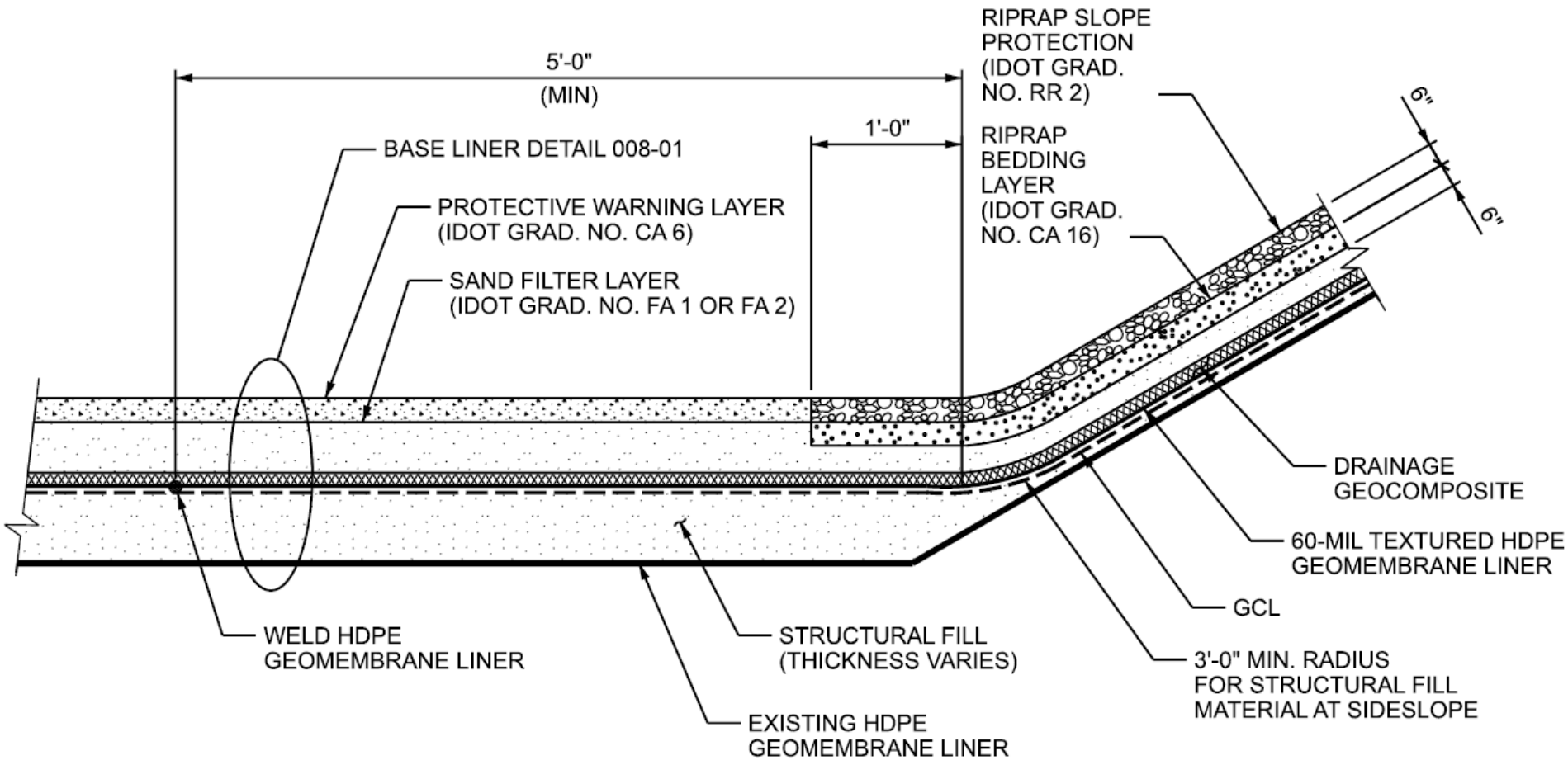
Retrofitted Bypass Basin – Preliminary Design

2. Place Structural Fill



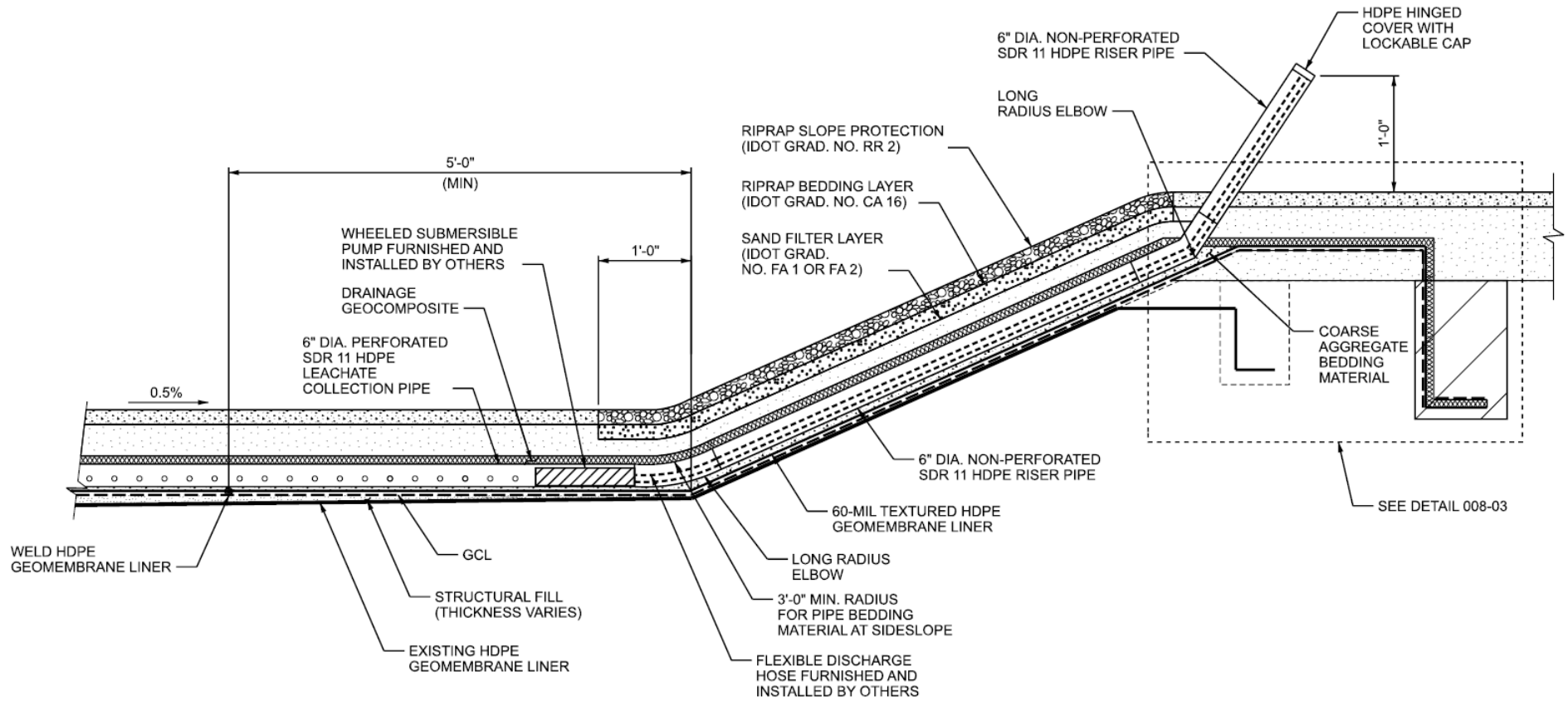
Retrofitted Bypass Basin – Preliminary Design

3. Install New Composite Liner



TYPICAL SLOPE TRANSITION DETAIL

4. Install New Leachate Collection System



TYPICAL SECTION AT LEACHATE COLLECTION SUMP PUMP

Retrofitted Bypass Basin

MWG estimates the retrofit process will take approximately 6 to 8 months to complete after receipt of a construction permit.

Once retrofitted, the Bypass Basin will be used to store CCR remaining in the decant water from the Station's Hydrobins, and the Ash Surge Basin will be taken out of service to begin the process of dewatering, ash removal, and retrofit.

Groundwater monitoring will continue during the operating life and required post-closure care period for the retrofitted Bypass Basin.

Question? Virtual participants, open the Q&A function at the bottom of your screen to type a question.

Former Ash Basin (FAB) Closure

Powerton Generating Station

Closure Alternatives Analysis

Two closure methods, both allowed by regulation:

- Closure by Removal of CCR

  An owner or operator may elect to close a CCR surface impoundment by removing all CCR and decontaminating all areas affected by releases of CCR from the CCR surface impoundment. CCR removal and decontamination of the CCR surface impoundment are complete when all CCR and CCR residues, containment system components such as the impoundment liner and contaminated subsoils, and CCR impoundment structures and ancillary equipment have been removed. Closure by removal must be completed before the completion of a groundwater corrective action under Subpart F. *(35 IAC Section 845.740(a))*

- Closure in Place

  If a CCR surface impoundment is closed by leaving CCR in place, the owner or operator must install a final cover system that is designed to minimize infiltration and erosion, and, at a minimum, meets the requirements of this subsection (c). The final cover system must consist of a low permeability layer and a final protective layer. The design of the final cover system must be included in the preliminary and final written closure plans required by Section 845.720 and the construction permit application for closure submitted to the Agency. *(35 IAC Section 845.750(c))*

Closure Alternatives Analysis

Evaluation of 4 Alternative Closure Scenarios:

- Scenario 1 – Complete removal of CCR
- Scenario 2 – Closure in Place
  - Leave CCR in both north & south portions of FAB and install final cover system
- Scenario 3 – Consolidate and Closure in Place
  - Consolidate CCR to southern portion of FAB and install a final cover system
- Scenario 4 – Closure in Place with in-situ soil stabilization (ISS)
  - Leave CCR in place via ISS and install a final cover system

Question? Virtual participants, open the Q&A function at the bottom of your screen to type a question.

Scenario 1 – Complete Removal of CCR

Removal to Off-site Landfill

- Closure Activities
  - Dewater the North & South portions of the FAB,
  - Install erosion control measures,
  - Construct access roads,
  - CCR excavation and staging to allow for additional dewatering,
  - Load CCR into trucks and transport for disposal at off-site landfill.
- Approximately 920,000 cubic yards of material to be to be removed (more than 61,000 trucks of material)
- Closure Schedule at least 5 years (1,200 days)
- Off-Site Landfills
  - Indian Creek Landfill
    - 35 million cubic yards of airspace
    - 31 years of landfill life
- Groundwater monitoring would continue for at least 3 years after closure

Scenario 1 – Complete Removal of CCR

Closure by removal transportation methods that were evaluated:

- Rail
  - Requires develop of 2 new railroad facilities, one to load and one to unload
    - At Powerton
    - At Unloading Facility near landfill (railroad access is 8-10 miles away)
  - IEPA permitting at both locations for new material handling facilities
  - Would still need to truck CCR from unloading facility to landfill
  - Assessed as unfeasible
- Barge
  - Requires develop of 2 new barge facilities, one to load and one to unload
    - At Powerton
    - At Unloading Facility closer to landfill
  - IEPA and federal Agency permitting at both facilities
  - Would still need to truck CCR from unloading facility to landfill
  - Assessed as unfeasible
- Trucks –
  - Only existing transportation method that was deemed feasible
  - Doesn't require building new facilities
  - Significant Impact on Roadway System (usage, accidents, and greenhouse gas emissions)

Scenario 1 – Complete Removal of CCR

Removal to New On-site Landfill

- Closure by Removal to New On-Site Landfill Tasks:
  - Obtaining property;
  - Landfill zoning, permitting, designing;
  - Landfill construction and operation;
  - Engineering and environmental compliance;
  - Financial assurance and closure, 30-year post-closure responsibilities.

- Area Need for New On-Site Landfill
  - 30 acres for landfill;
  - 20 acres for setbacks, stormwater management, operational infrastructure and groundwater monitoring; and
  - Total area is 50 acres (minimum).

- On-site Landfill was not feasible
  - No on-site property available
  - No off-site property was feasible to obtain
  - Greenfield landfill development is challenging

Scenario 2 - Closure in Place

- Consists of leaving the CCR in place and installing an alternative final cover system (ClosureTurf)

- Mitigates risks to human health and the environment by:
  - Engineered barrier
  - Reduction of leachate generation

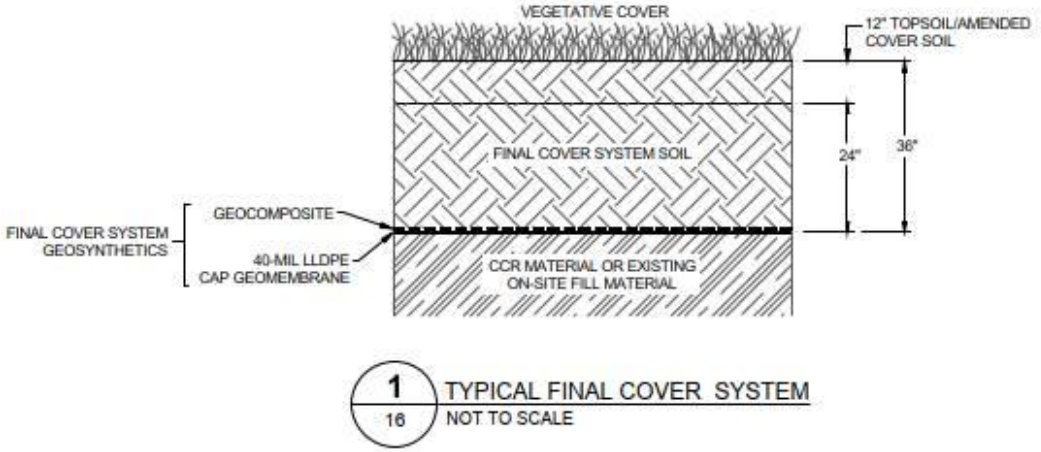
- <u>USEPA and IEPA approved closure method for similar solid waste management Units</u>

- Closure Schedule is approximately 10 months

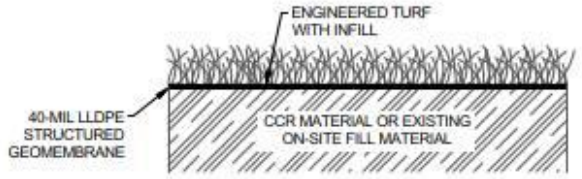
- The following permits or approvals may be required for the closure in-place scenarios:
  - 35 IAC Part 845 construction and operation permit(s)
  - Modification to existing NPDES Permit
- Embankment to be installed adjacent to the north perimeter to prevent potential ponding if a flood condition is present
- Groundwater monitoring would continue for at least 30 years

Scenario 2 - Closure in Place

Illinois EPA Prescribed Cover System and Alternative Cover System



1/16 TYPICAL FINAL COVER SYSTEM
NOT TO SCALE



2/16 TYPICAL FINAL COVER SYSTEM - ENGINEERED TURF
NOT TO SCALE

Question? Virtual participants, open the Q&A function at the bottom of your screen to type a question.

Scenario 3 - Consolidation and Closure in Place

- Remove CCR from north portion and place in south portion and construct an alternative cover system (ClosureTurf).
- Mitigates risks to human health and the environment by:
  - Engineered barrier
  - Reduction of leachate generation
- USEPA and IEPA approved closure method for similar solid waste management Units
- Closure Schedule is approximately 12 months
- The following permits or approvals may be required for the closure in-place scenarios:
  - 35 IAC Part 845 construction and operation permit(s)
  - Modification to existing NPDES Permit
- Groundwater monitoring would continue for at least 30 years

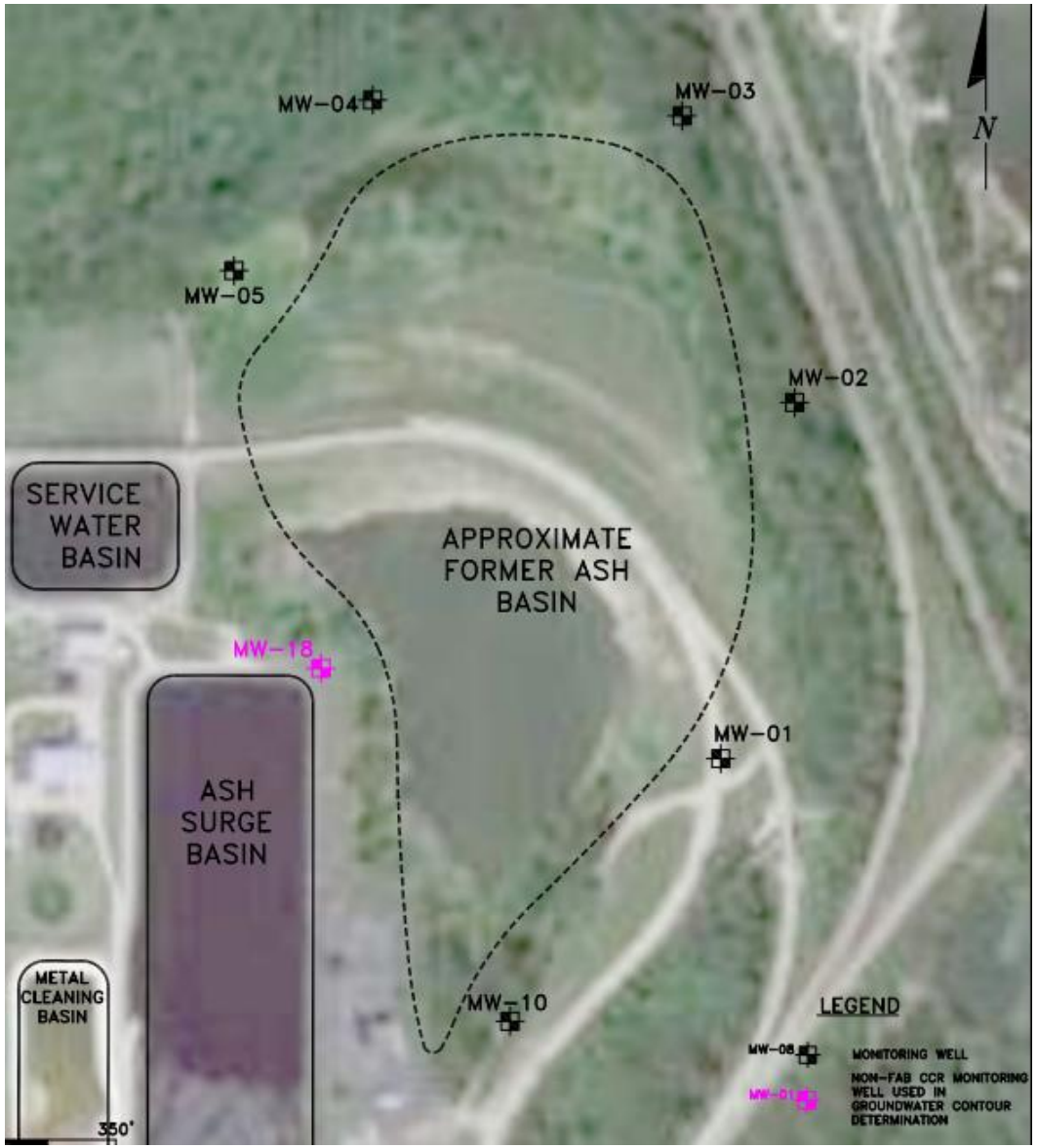
Scenario 4 – Closure in Place with In-situ Soil Stabilization

- Leave CCR in place via in-situ soil stabilization (ISS) and install a final cover system
  - ISS consists of adding reagents to physically bind and/or chemically stabilize the CCR
  - ISS would be applied by soil mixing from the top of the CCR down to the bottom most extent of the CCR (12-16 ft)
  - Reduces constituent mobility and leachability
  - Isolates CCR from human contact and groundwater by encapsulating in a low permeable monolith
  - Reagents typically include pozzolanic compounds – cement/blast furnace slag or bentonite that are mixed with water to form a slurry that is then mixed with the CCR.
- Closure Schedule is approximately 24 months
- The following permits or approvals may be required for the closure in-place scenarios:
  - 35 IAC Part 845 construction and operation permit(s)
  - Modification to existing NPDES Permit
- Groundwater monitoring would continue for at least 30 years

Groundwater Monitoring Results

- Groundwater quality and flow conditions are monitored quarterly via a groundwater monitoring well network installed around the pond

- Groundwater sampling around the FAB shows that the FAB is not a source of CCR constituents



Groundwater Modeling

To comply with the Illinois Coal Ash Rule, MWG conducted groundwater modeling of the groundwater concentrations. The purpose of the groundwater modeling was to provide a platform from which to be able to compare the relative effectiveness of various closure and/or corrective action alternatives relative to groundwater quality on a short term and long-term basis for the CCR unit.

To accomplish this, the model establishes a hypothetical source of contamination which means it is not an actual source in the pond and allowed to distribute itself over time until an equilibrium (stable) condition is observed by the model (worst case distribution of impacts).

This model looks at theoretical, potential contamination from the CCR unit – it assumes the pond has ash and water and that the liner is compromised or non-existent.

Once equilibrium is established, engineering alternatives can be overlain and the model is then run over a time sequence to evaluate the change/improvement in water quality associated with the proposed alternative.

Groundwater Modeling Data

Four groundwater modeling scenarios were run:

1. Removal of CCR – Scenario #1
2. Closure in place with final cover – Scenario #2
3. Consolidate and closure in place – Scenario #3
4. Closure in place with ISS – Scenario #4

Groundwater modeling was done to compare the effectiveness of each closure scenario. Each model shows the current condition and compares to a hypothetical plume after closure scenario is implemented and completed.

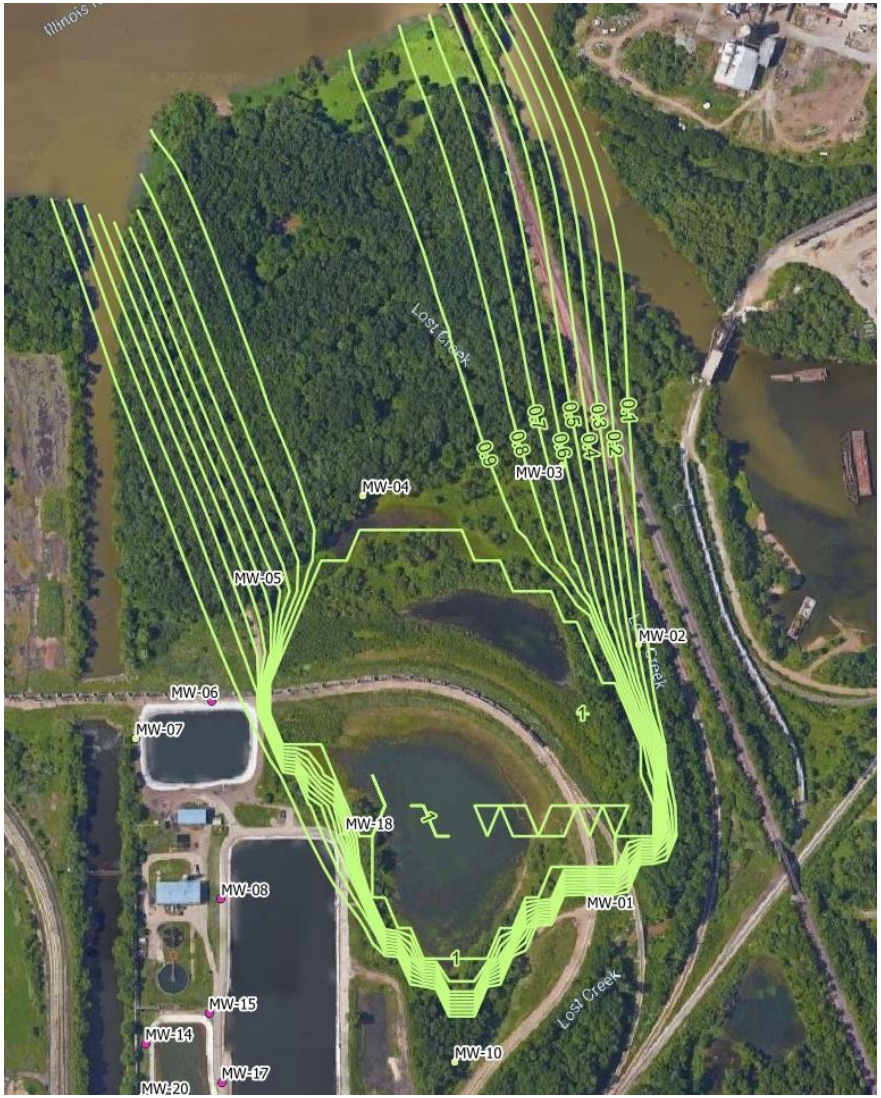
Each contour line shows relative concentration levels in 10% increments.

- 1 = 100% concentration of groundwater constituents
- 0.9 = 90% concentration of groundwater constituents (10% reduction of concentrations)
- 0.1 = 10% concentration of groundwater constituents (90% reduction of concentrations)

Question? Virtual participants, open the Q&A function at the bottom of your screen to type a question.

Groundwater Modeling Starting Conditions

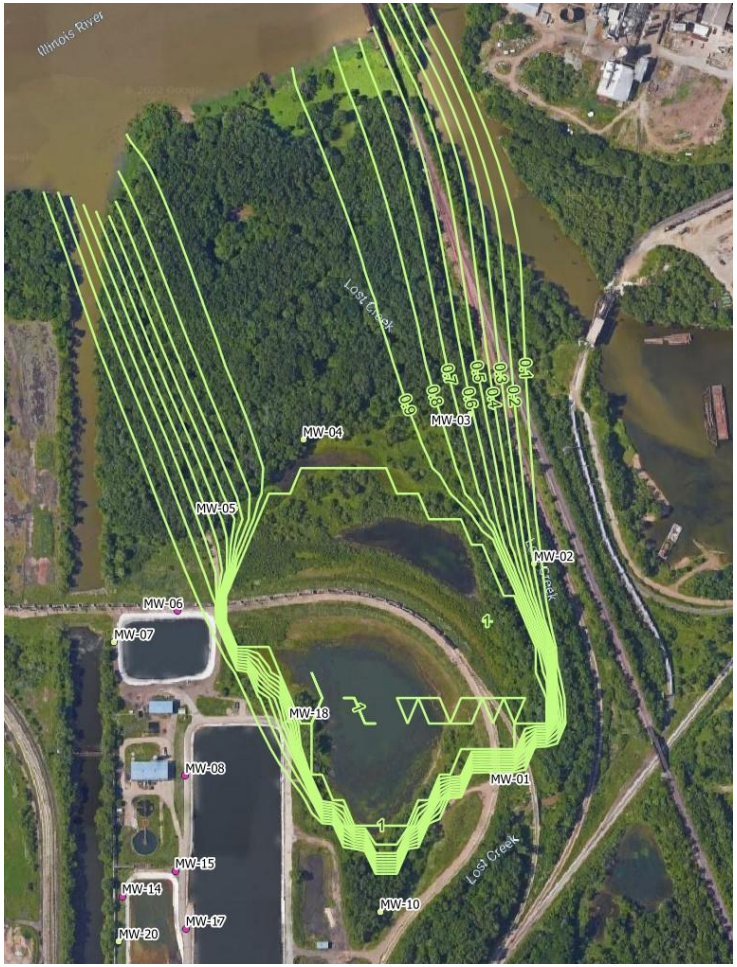
Assumes a hypothetical constant source at the FAB:



Groundwater Modeling Scenario #1

Closure by Removal

Hypothetical source as starting point:

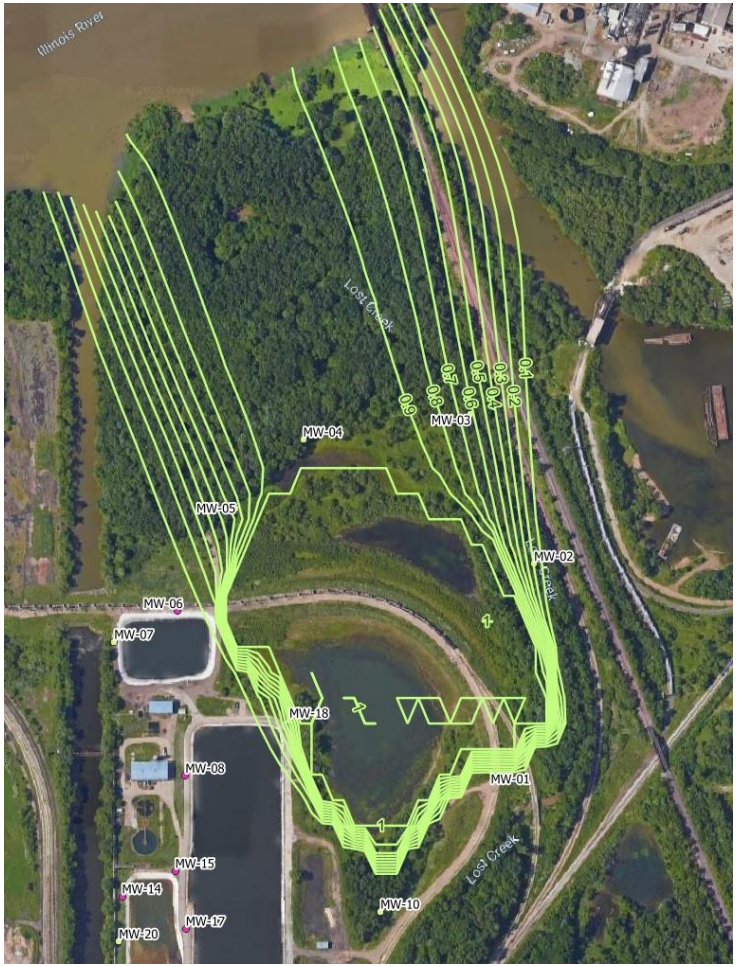


Source removed, after 25 years

Groundwater Modeling Scenario #2

Closure in Place

Hypothetical source as starting point:



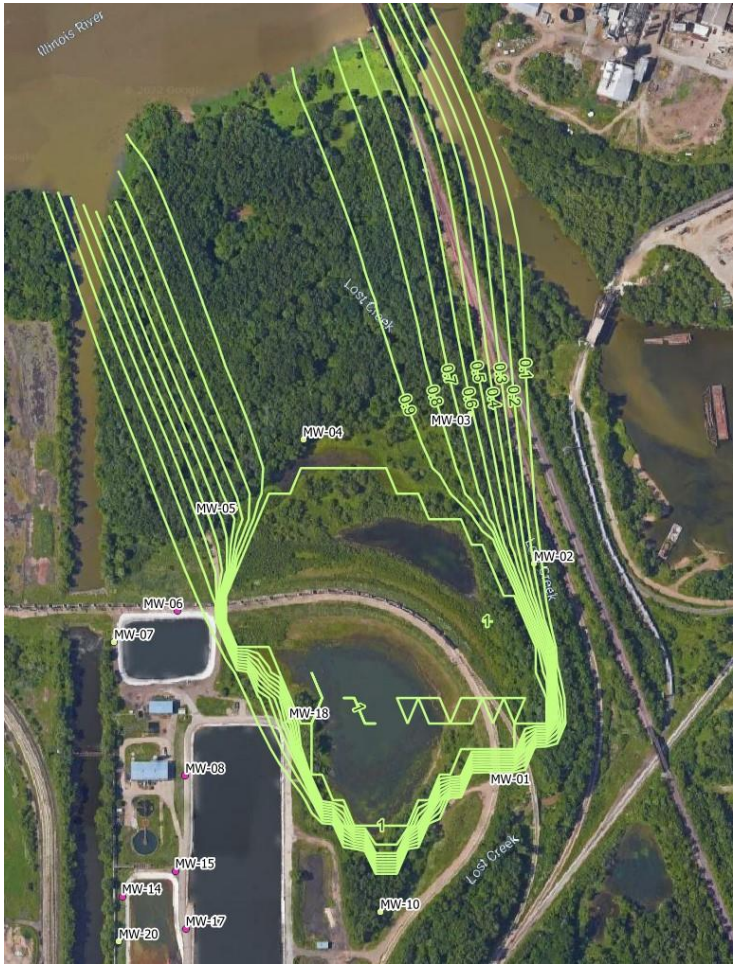
Closure in-place, after 25 years

Concentrations reach steady state after 25 years

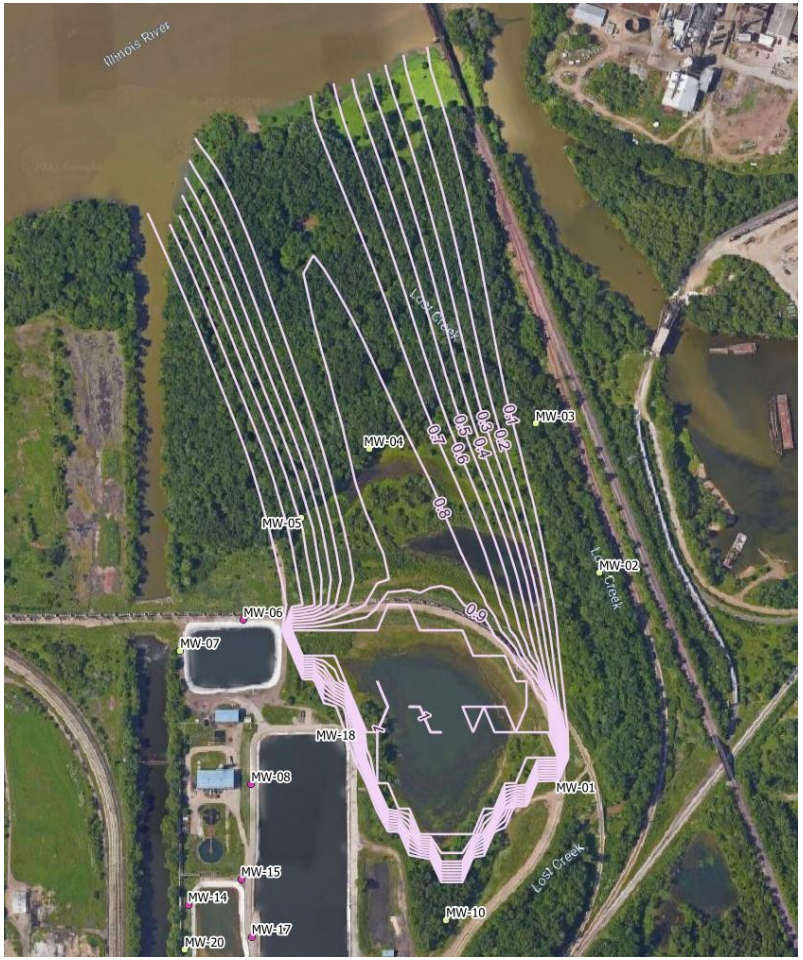
Groundwater Modeling Scenario #3

Consolidate and Closure in Place

Hypothetical source as starting point:



Consolidated to south and closure in-place, after 25 years

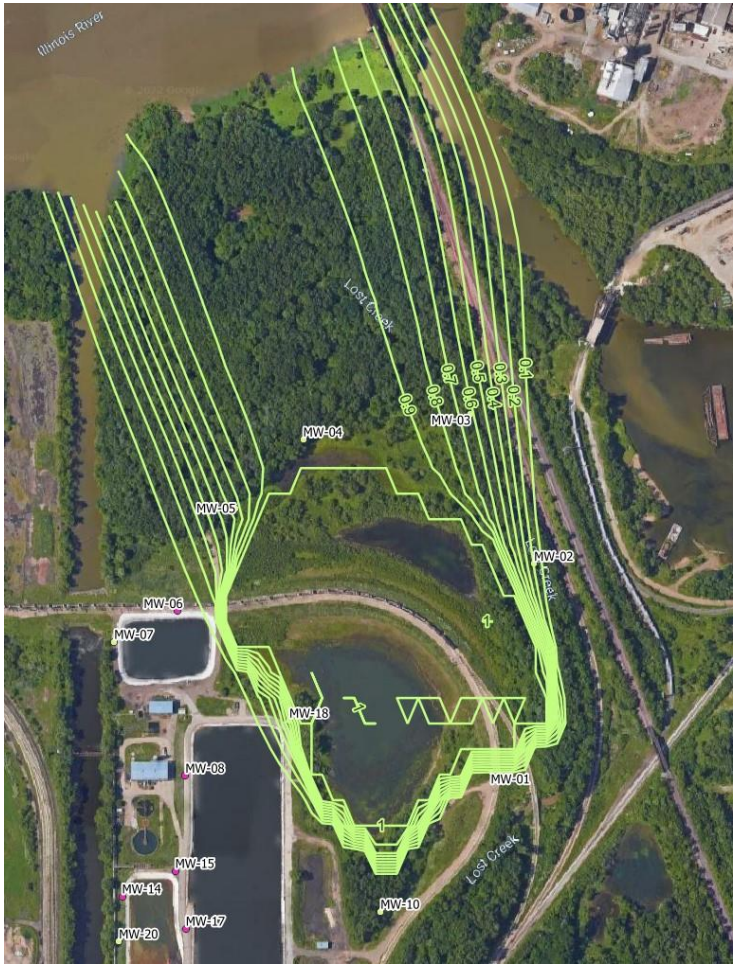


Concentrations reach steady state after 25 years

Groundwater Modeling Scenario #4

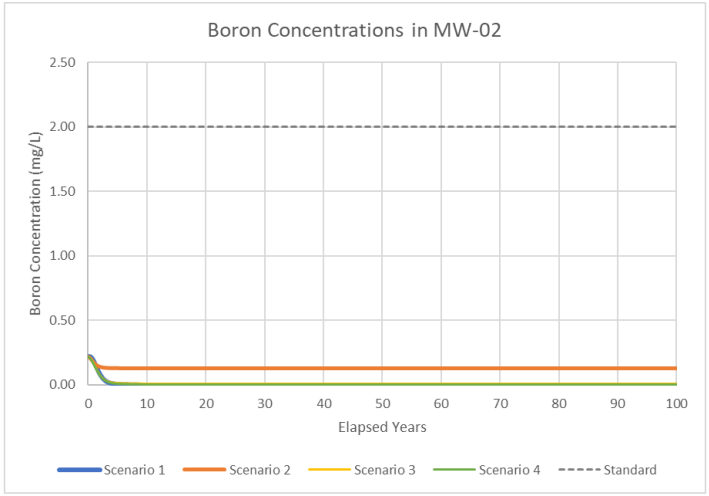
Closure in Place with In-Situ Stabilization

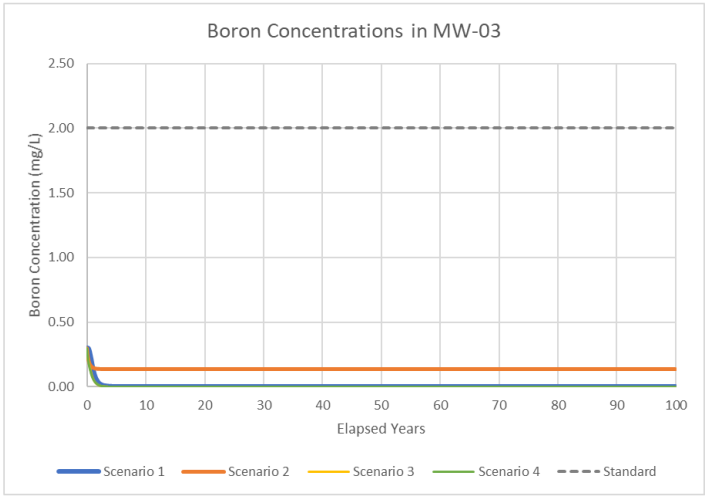
Hypothetical source as starting point:

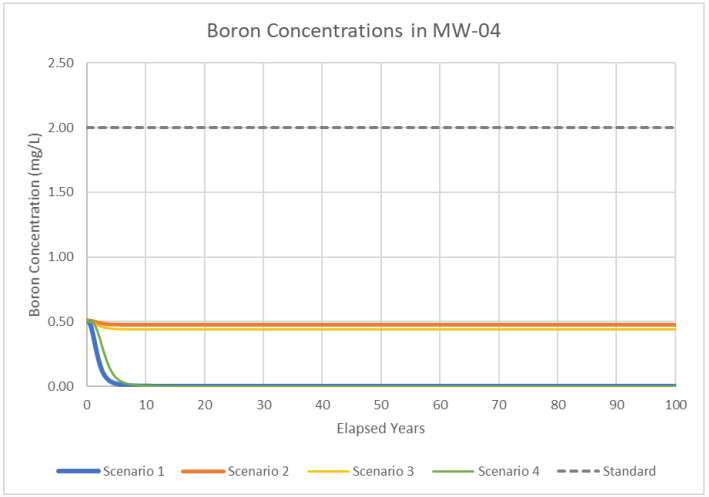


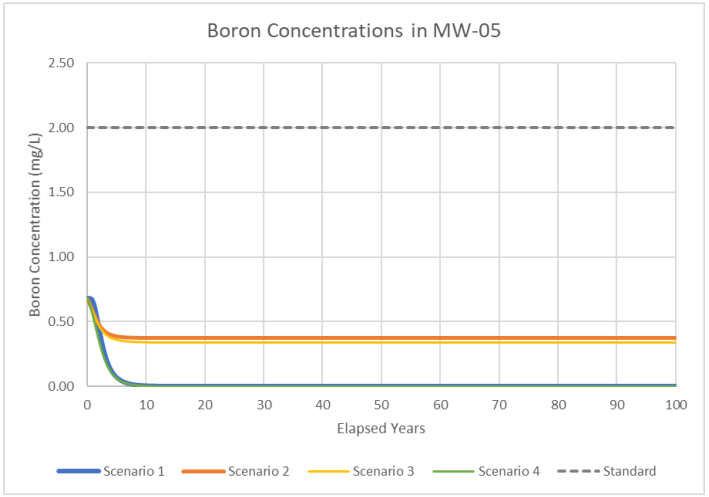
Stabilized and capped, after 25 years

Groundwater Modeling – 100 Years









To show the initial "source" concentration change over time, we took the **Boron** concentrations from each monitoring well during the 4th Quarter 2021 sampling event and modeled each of the closure scenarios over 100 years.

Closure Alternatives Analysis Summary

The closure by removal and closure in place options were evaluated based on effectiveness/protectiveness and ease of implementation.

- Scenario 1 – Closure by removal:
  - Requires removal of 920,000 cubic yards of CCR
  - 1,200 days to complete (~5 years)
  - 3 years of post closure care monitoring
- Scenario 2 – Closure in place:
  - Preferred Option
  - Embankment to be installed adjacent to the north perimeter to prevent potential ponding if a flood condition is present
  - Approximately 10 months to complete
  - 30 years of post-closure care monitoring
- Scenario 3 – Consolidate and closure in place:
  - Approximately 12 months to complete
  - 30 years of post-closure care monitoring
- Scenario 4 – Closure in place with ISS
  - Requires addition of reagents to physically bind and/or chemically stabilize the CCR
  - Approximately 24 months to complete
  - 30 years of post-closure care monitoring

Proposed Closure Plan – FAB

Closure in Place with Alternate Final Cover (ClosureTurf)

- Isolates CCR from stormwater, protecting surface waters.
- Proven closure method at other surface impoundments in US, including in IL.
- Long term reliability in minimizing risk to human health and the environment.
- Closure construction could be completed in approximately 10 months.
- The post-closure care period for closure in place is at least 30 years.
- Closure by removal more challenging – no space to build onsite landfill, increased ash handling.

Based on site specific conditions, the Closure in Place scenario provides both short- and long-term protection to groundwater and surface water resources along with ensuring overall protection to the public health, welfare and safety.

Summary – Retrofit the Bypass Basin and Close the Former Ash Basin

To support continued operation, the Powerton Bypass Basin will be retrofit with a composite liner system and leachate collection system, designed in accordance with the requirements of the IL CCR regulations.

- Groundwater monitoring will continue through the useful life of the Bypass Basin and through the post-closure care period.

The Former Ash Basin (FAB), Powerton Station's inactive CCR impoundment, will be closed in-place with an alternative final cover system.

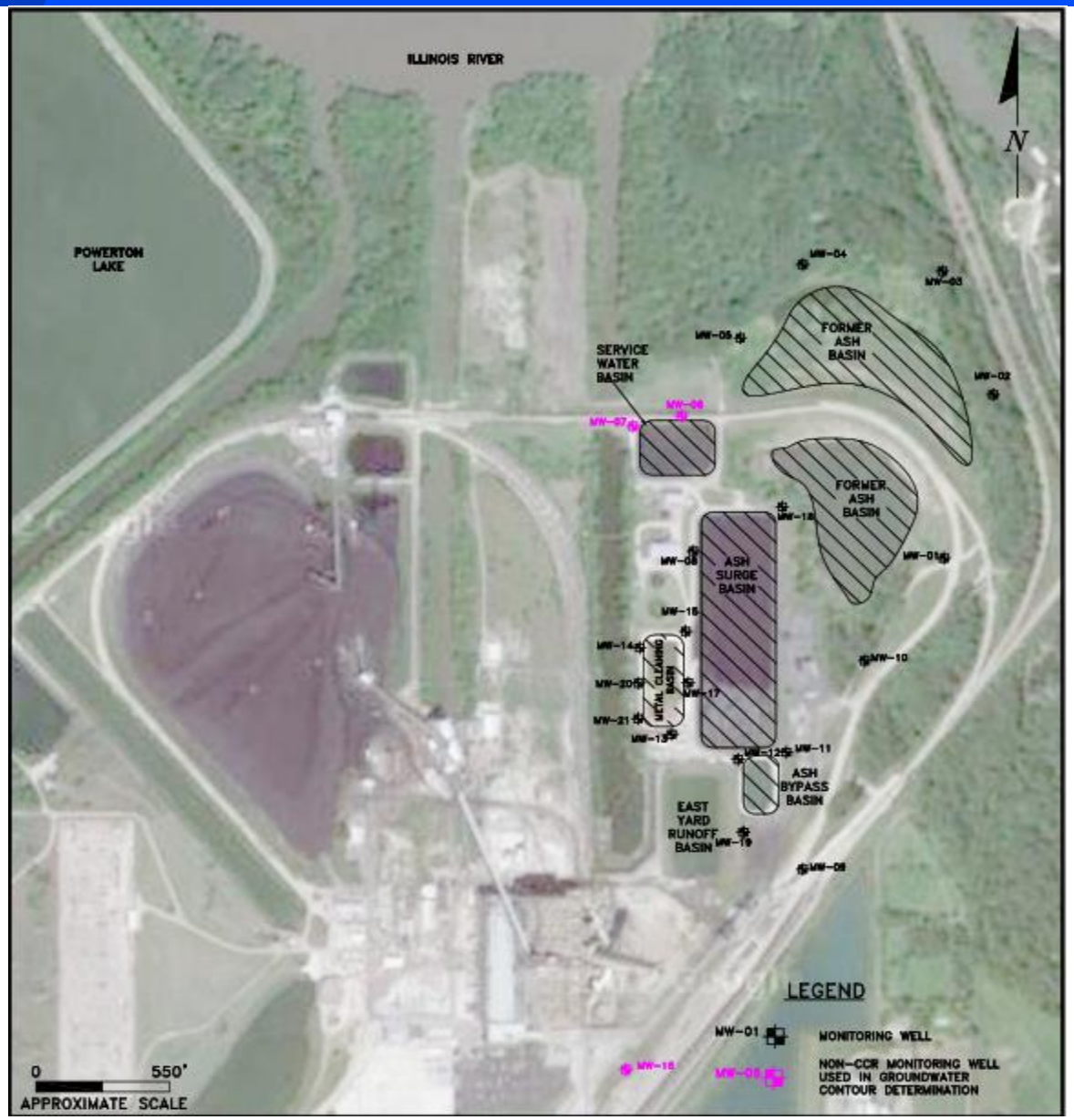
- Groundwater monitoring to date demonstrates that there is no groundwater contamination from the FAB.

Question? Virtual participants, open the Q&A function at the bottom of your screen to type a question.

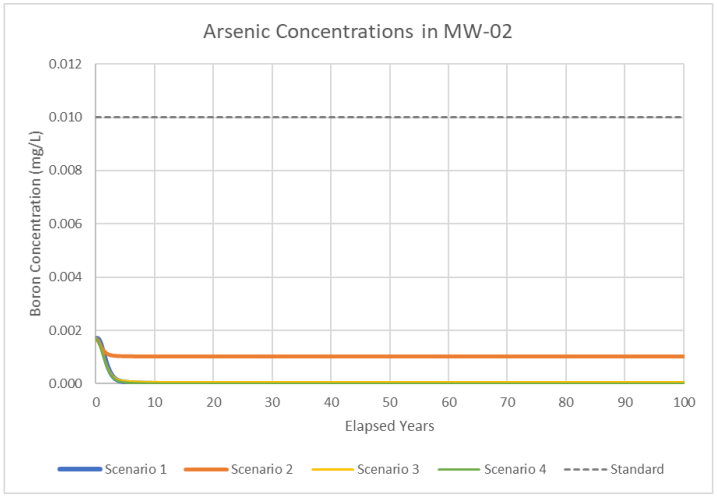
Public Website:
midwestgenerationllc.com

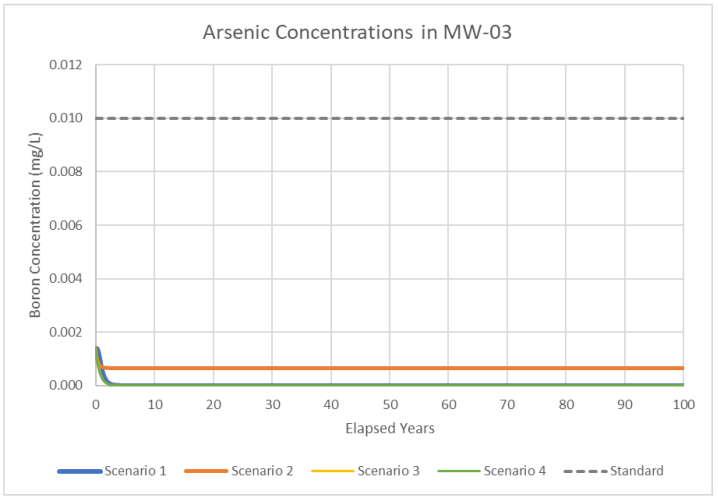
Appendix

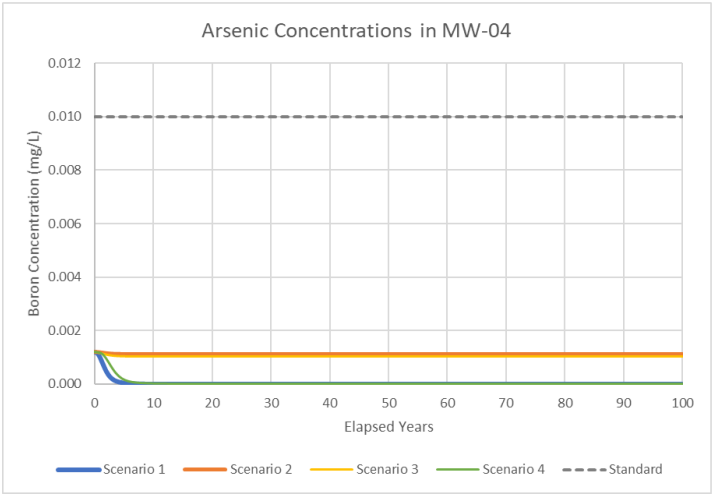
Powerton Generating Station Monitoring Well Network

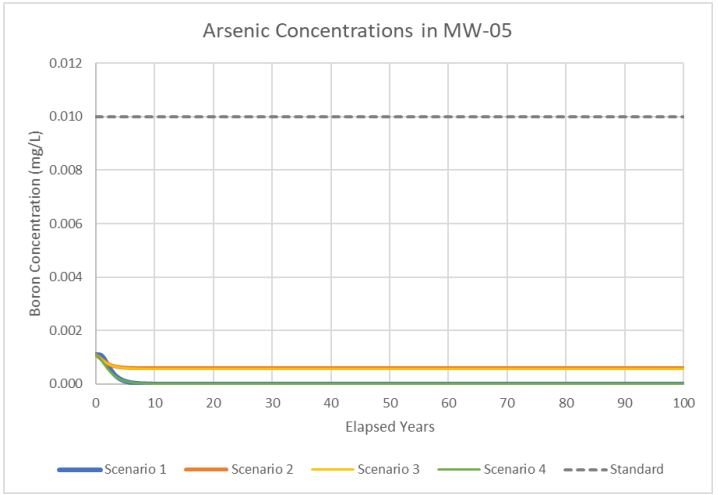


Groundwater Modeling – 100 Years



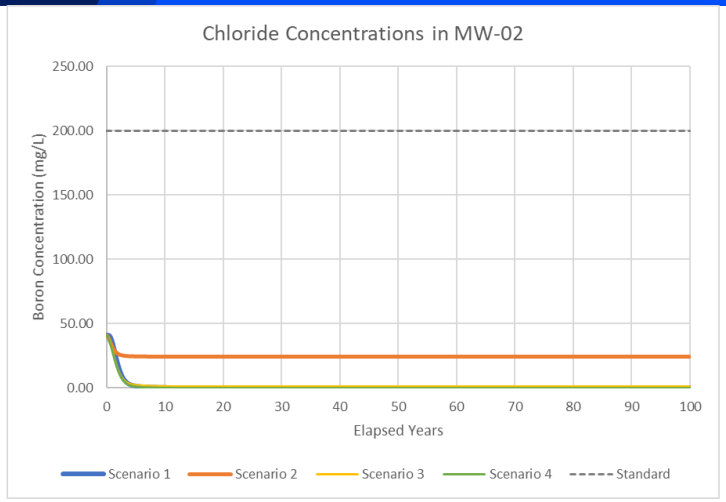


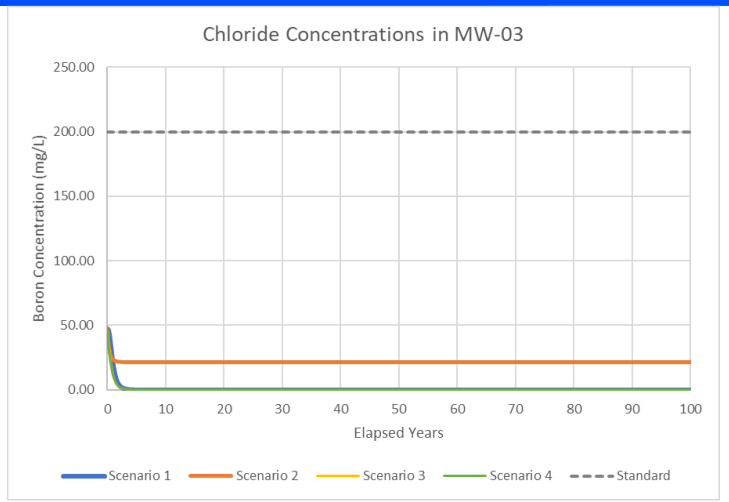


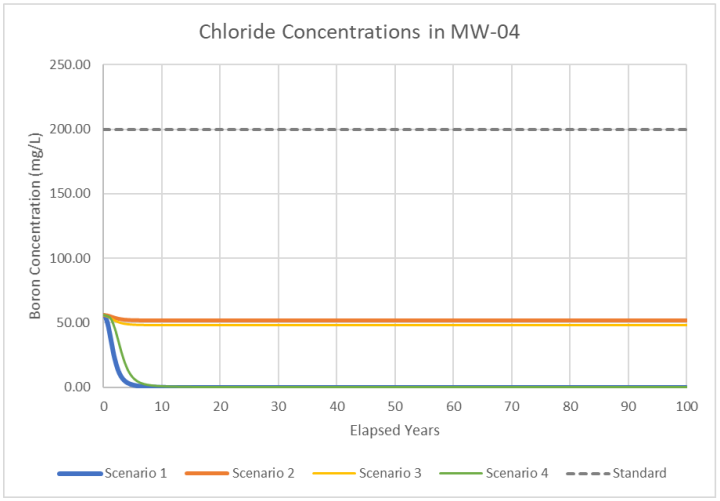


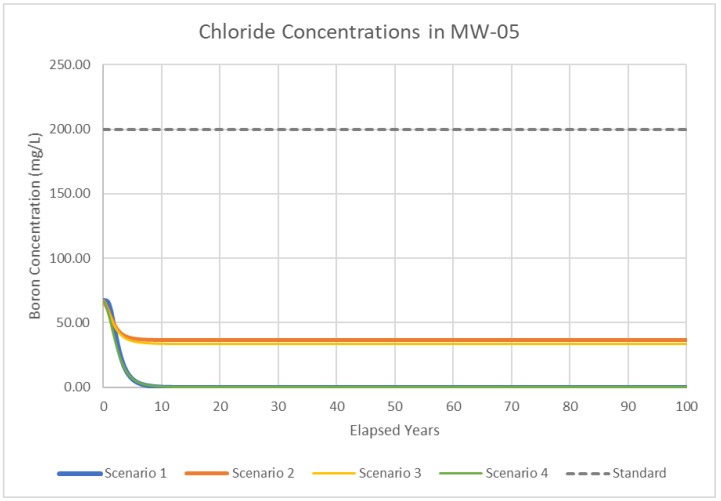
To show the initial "source" concentration change over time, we took the **Arsenic** concentrations from each monitoring well during the 4th Quarter 2021 sampling event and modeled each of the closure scenarios over 100 years.

Groundwater Modeling – 100 Years



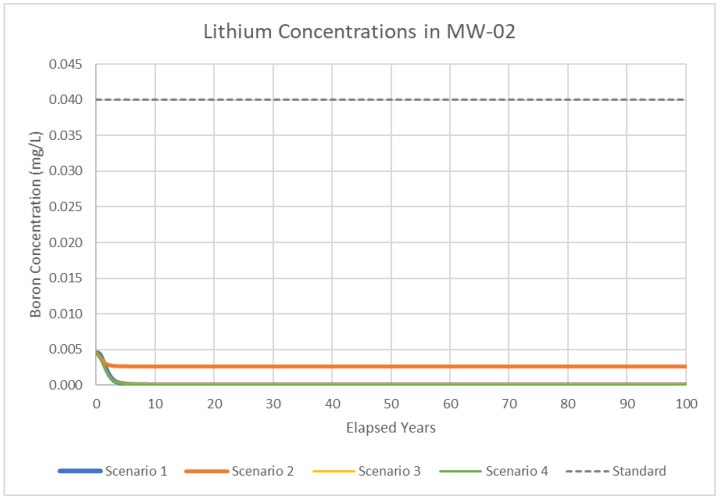


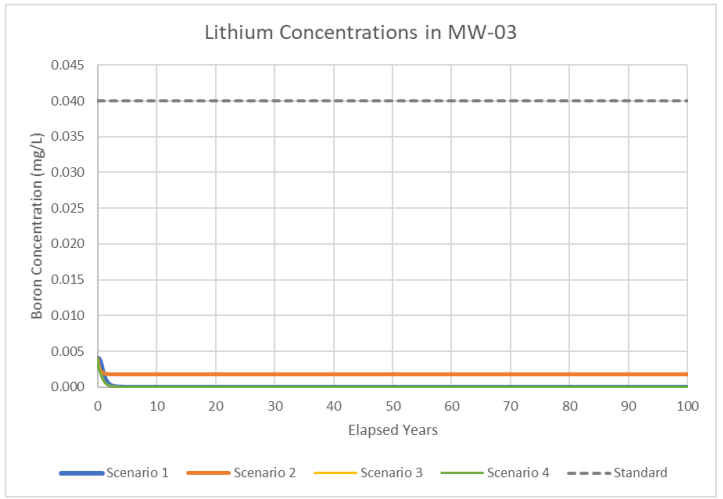


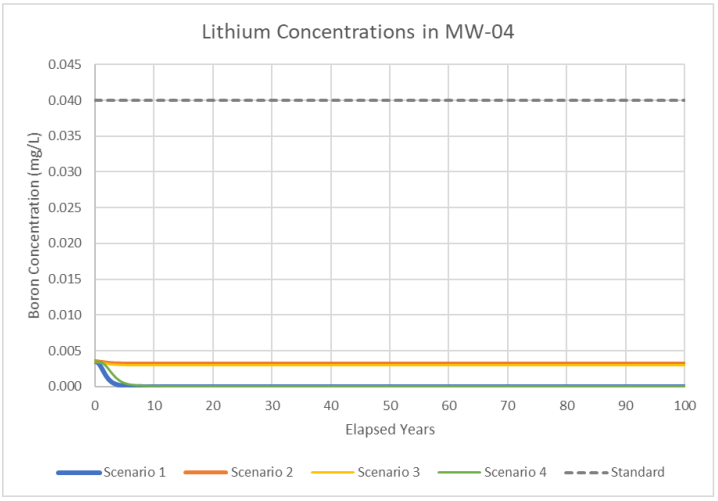


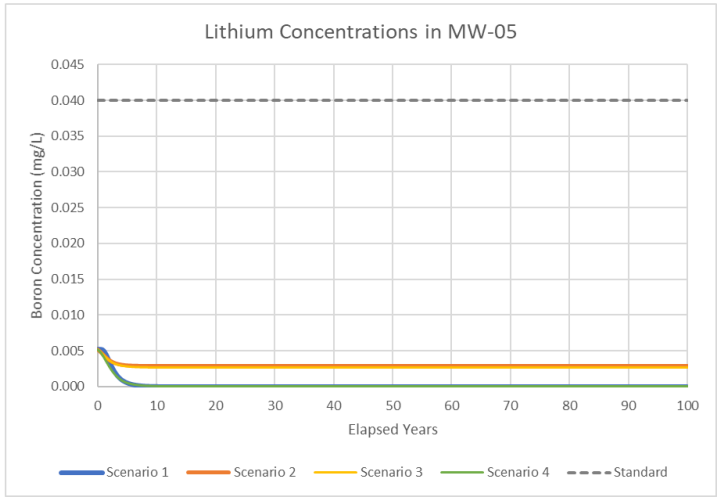
To show the initial "source" concentration change over time, we took the **Chloride** concentrations from each monitoring well during the 4th Quarter 2021 sampling event and modeled each of the closure scenarios over 100 years.

Groundwater Modeling – 100 Years



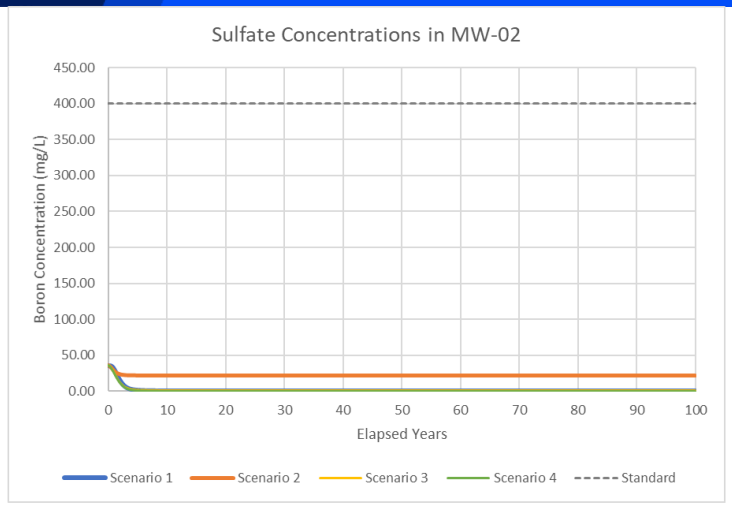


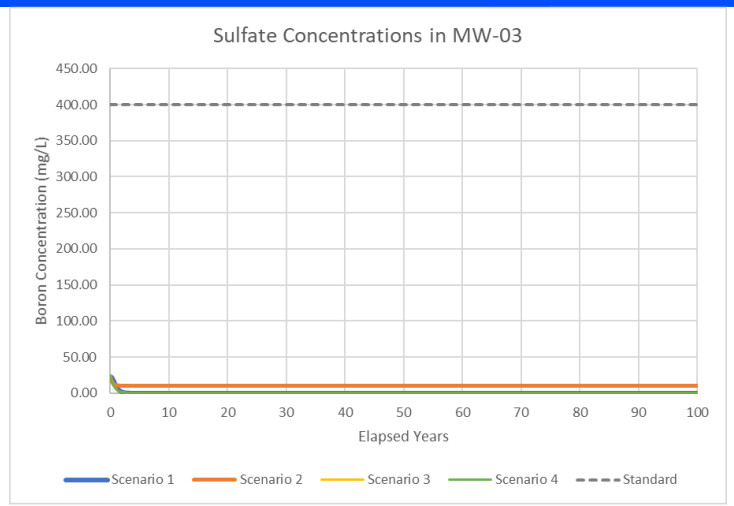


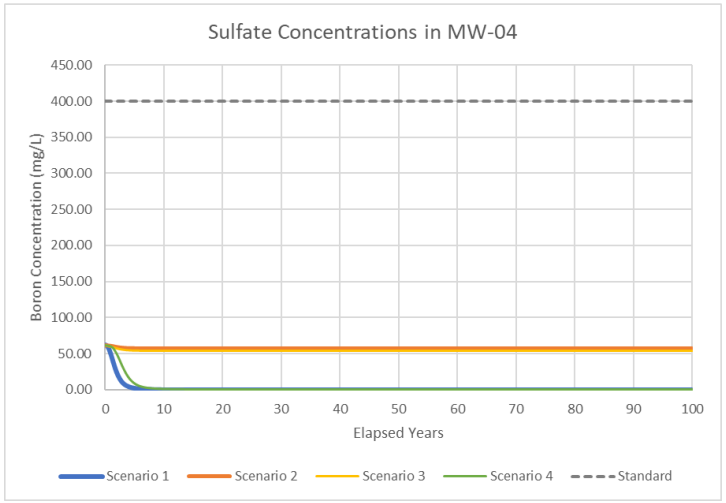


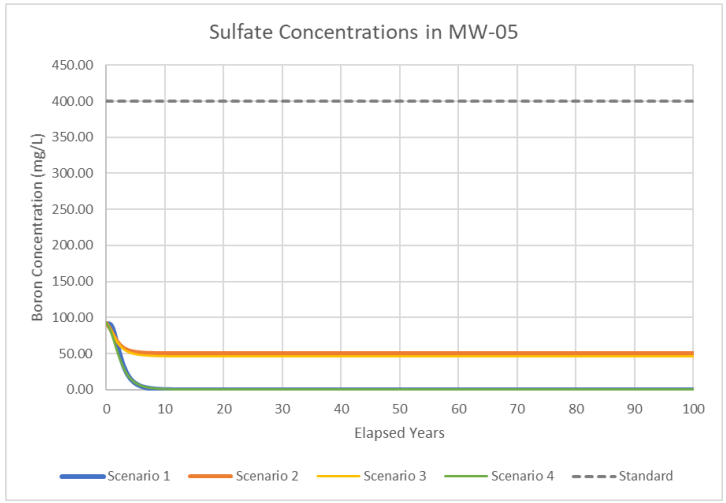
To show the initial "source" concentration change over time, we took the **Lithium** concentrations from each monitoring well during the 4th Quarter 2021 sampling event and modeled each of the closure scenarios over 100 years.

Groundwater Modeling – 100 Years









To show the initial "source" concentration change over time, we took the **Sulfate** concentrations from each monitoring well during the 4th Quarter 2021 sampling event and modeled each of the closure scenarios over 100 years.

Exhibit F:

Summary of public meetings

Midwest Generation, LLC
Powerton Generating Station
Bypass Basin Retrofit and Former Ash Basin Closure
Public Meeting General Summary

INTRODUCTION

In accordance with Title 35 of the Illinois Administrative Code ("35 IAC") Section 845.240, Midwest Generation, LLC (MWG) posted the public meeting notice for closure of the Powerton Generating Station's Former Ash Basin and the Retrofit Plan for the Bypass Basin on its publicly available website and provided a copy of such notice to the Illinois Environmental Protection Agency (Illinois EPA or Agency) to email to its listserv for this facility. The public meeting notice was also mailed to all residents within at least 1 mile of the facility on April 14, 2022, which totaled 986 residential mailing addresses. The notice was also posted in 31 public locations within 10 miles of the facility boundary.

The public meetings for Powerton Generating Station's Bypass Basin and Former Ash Basin (FAB) were held on May 18, 2022 from 6:00 p.m. to 8:00 p.m. and on May 19, 2022 from 10:00 a.m. to 12:00 p.m. The meetings were held in a hybrid format – in person and via Zoom or telephone. Seven members of the public attended the May 18th meeting in person; four attended via Zoom. Seven members of the public attended the May 19th meeting in person; eleven attended via Zoom. The remaining attendees were MWG affiliate employees and consultants. Attendees who wished to sign up for a copy of the meeting summary and/or be added to Illinois EPA's listserv for the facility were asked to sign up via a form provided at the in-person location or a link to a Google form that was provided within the chat function of the Zoom meeting and posted on MWG's website, midwestgenerationllc.com. Seventeen attendees requested a copy of the meeting summary, eleven of whom requested transmittal of their email address to the Agency to be added to the Agency's listserv for the facility. It was also announced that the link would be available on MWG's public website for two weeks. After an introduction and approximate 50-minute presentation on the proposed retrofit and closure construction plans, the public was given approximately 1 hour during each meeting to ask questions and provide comments.

This document serves as a summary of the issues and questions raised during the meeting.

MWG proposes to retrofit the Bypass Basin by removing and disposing of the remaining material in the basin, decontaminating the existing geomembrane liner so that it will act as another protective layer in the composite liner system, and installing a composite liner system and leachate collection system. MWG proposes to close the Former Ash Basin in-place by installing an alternate final cover system (ClosureTurf®).

SUMMARY OF ISSUES AND QUESTIONS RAISED DURING THE MEETING

General

Powerton Lake

In response to a specific question, there is one fish advisory specific to Powerton Lake, for the channel catfish. The advisory is for polychlorinated biphenyls (PCBs) and the Illinois Department of Public Health recommends that people consume no more than 1 meal per week of channel catfish that are between 15 and 19 inches in size, and no more than 1 meal per month of channel catfish that are 19 inches or longer. Note that the Illinois Department of Natural Resources (IDNR) leases Powerton Lake for fishing, waterfowl hunting, and other recreation uses; IDNR has leased Powerton Lake since 1984. In 2021, IDNR stocked the Powerton Lake with over 230,000 fish across three species: blue catfish, smallmouth bass, and hybrid striped bass. Information on IDNR's management of the fishery at Powerton Lake can be found on IDNR's website (https://www.ifishillinois.org/profiles/waterbody.php?waternum=00039).

Labor

Midwest Generation, LLC operates under a Power House Labor Agreement (PHLA) that gives preference to Union labor for construction and maintenance activities at all plants that MWG owns and/or operates in Illinois. MWG will continue to abide by PHLA.

Availability of Information

Questions were raised about availability of information regarding MWG's plans for retrofitting the Bypass Basin and closing the FAB. Generally, MWG posts all required reports and assessments to its publicly available website within 14 days of completion. This information can be found at midwestgenerationllc.com.

Former Ash Basin

FAB History

Questions were asked about whether ash has washed out of the FAB into the Illinois River, if MWG has studied whether potential contaminants have leached over time into the Illinois River, and whether MWG has studied the Illinois River.

> The ash that is currently in the FAB is stable and not moving. Powerton Station personnel inspect the FAB weekly and the FAB is inspected by a third-party Professional Engineer annually. The inspection reports are posted at midwestgenerationllc.com.

MWG has not studied whether potential contaminants have leached over time because MWG is unable to recreate the initial conditions that likely produced the ash that is in the FAB. Powerton Station began operation in the late 1920's with pulverized coal-fired (PC) boilers (Units 1 through 4) that burned Illinois coal. Units 1 through 4 were retired before MWG began operating Powerton Station, presumably in the 1970's, the same decade that placement of ash in the FAB ceased.

Ash from the FAB was sampled and analyzed as required by the IL CCR Rule. The results of that sampling can be found in the Initial Operating Permit application, available at midwestgenerationllc.com. MWG did not identify any constituent levels of concern in that sampling.

MWG does not study the Illinois River. Instead, we monitor our discharges to the Illinois River and report those to the Illinois EPA as required by the Station's NPDES permit.

Groundwater Monitoring

Groundwater monitoring at the FAB shows that groundwater from each of the four downgradient monitoring wells meet the Section 845.600(a) groundwater protection standards which are based on the Illinois Class I Potable Resource Groundwater standards.

Closure in Place Regulations and Financial Assurance

Several questions were asked about whether the regulations allow for closure in place of the FAB as it is unlined and not separated from the uppermost aquifer by at least five feet.

The regulations do not distinguish between closure methods for unlined or lined CCR surface impoundments, nor do the regulations distinguish between closure methods for CCR surface impoundments that fail any location restrictions. Instead, the regulations require impoundments that are unlined or fail one or more location restrictions to close. The closure alternatives analysis compared three methods of closure in place and one closure by removal. Various transportation methods were examined for closure by removal.

Under Illinois EPA oversight, MWG will be required to inspect and monitor any CCR surface impoundment that is closed in place for at least 30 years after the closure construction is complete. Post-closure care includes continued groundwater monitoring, impoundment inspections, as-needed repairs to the final cover system, and corrective actions as necessary. Once 30 years of monitoring have been completed, the owner or operator of a CCR surface impoundment must request Illinois EPA approval to terminate post-closure care. While MWG cannot predict future events, the Illinois EPA will continue to have oversight for CCR surface impoundments until the Agency agrees that its oversight is no longer necessary.

Owners and operators of CCR surface impoundments are required to financially assure the costs of closure and post-closure care through the end of the post-closure care period. Financial assurance would be used only in the case of owner insolvency; otherwise costs for closure, post-closure care, and any necessary remedial activities are paid by the surface impoundment owner and/or operator. The responsibility for a CCR surface impoundment would transfer to any future owner, similarly to how the FAB responsibility transferred to MWG when MWG became the operator of Powerton Station in 1999. Additionally, should any additional corrective actions be required in the future, 35 IAC Part 845 requires the owner to financially assure the costs of the additional corrective actions. In addition, the corrective action would be performed by the CCR surface impoundment owner to ensure that impacts to the environment, including groundwater, do not occur or are corrected under EPA oversight. Groundwater modeling may be used as part of evaluating the appropriate corrective action to demonstrate the selected corrective action's effectiveness in remedying the environmental impacts.

Closure in Place Design

Several questions were asked about the northern berm that is included in the closure in place design. The berm is designed to be three to four feet above grade to prevent flooding of the impoundment once the final cover system is placed. The berm will be constructed of fill material composed of natural soils, but the specific materials have not been chosen at this time. Material specifications will be included in construction bid requests. Construction bid requests will not occur until a final closure construction permit is issued by the Agency.

The FAB will be dewatered before placement of the final cover system. The final cover system will be the proprietary ClosureTurf cover system that consists of an impermeable geomembrane liner covered with synthetic turf and sand infill. The impermeable geomembrane liner is a specially designed plastic liner that minimizes precipitation from passing through it and moves precipitation off the liner, so it does not accumulate on top of the liner. The synthetic turf and sand infill protect the geomembrane liner from animal, weather, and UV damage. Third party testing has demonstrated the geomembrane liner has a permeability of $1x10^{-13}$ centimeters per second (cm/s) and a lifespan of at 100 years. Additional testing has demonstrated that the freeze-thaw cycle has no impact on the integrity and effectiveness of the geomembrane liner.

Questions were raised regarding potential future concerns, specifically seismic activity and rising water levels. On its website, the United States Geological Survey (USGS) lists earthquakes in Illinois since 1900. No earthquakes have been recorded in Tazewell County in the 122-year period recorded by the USGS. Closure in place requires continued monitoring of the surface impoundment and corrective action if necessary. As part of the Initial FAB Operating Permit application, the location of the FAB was determined to not be located in a seismic impact zone, not in a fault area, and not in an unstable area.

Onsite Landfill/Consolidate and Close

An onsite landfill was considered and ultimately ruled out because of the lengthy process of siting a new landfill and lack of available space vertically and horizontally. One commentor suggested MWG examine removing ash from the northern portion of the FAB, placing a liner in that area, and consolidating the ash in the northern portion. While MWG did not overtly examine this scenario in the closure alternatives analysis, it was considered and eliminated because installation of a liner and consolidating the ash in the northern portion could be considered construction of a CCR landfill, further delaying the closure of the FAB.

The rail line that separates the northern portion of the FAB from southern portion acts as a berm to prevent flooding of the southern portion from the Illinois River, so consolidation in the southern half could be the better option for protection of the environment. This alternative option is still being internally considered/evaluated, but consideration could not be finalized within the 14 days that this summary is required to be posted.

Closure Costs

The selected option for closure of the FAB is not the least expensive based on engineering analysis that is documented in the Closure Alternatives Analysis. Costs were not determinative in selecting closure in place.

Bypass Basin

Bypass Basin Underlying Surface

Questions were asked about whether the Bypass Basin currently has a Poz-o-Pac liner, had a Poz-o-Pac liner, and whether the Bypass Basin retrofit includes reusing the Poz-o-Pac liner if it exists.

> During the May 18 meeting, MWG mistakenly stated that the Bypass Basin never had a Poz-o-Pac liner and corrected that statement during the May 19 meeting when the question was asked again. The original construction documents show that a 12-inch-thick layer of Poz-o-Pac was installed over the Bypass Basin's original Hypalon® liner along the basin floor.
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> Both the Poz-o-Pac and Hypalon® liners were removed from the Bypass Basin when the basin was relined in 2010 with a 60-mil HDPE geomembrane liner. Currently, the Bypass Basin does not have either of its original Poz-o-Pac or Hypalon® liners; only the relatively new 60-mil HDPE geomembrane liner is present.

It should be noted that Poz-o-Pac is a cementitious material and has been used as a supporting surface for things like roads, highways, and parking lots (in addition to similar pozzolan-stabilized base materials). According to the Federal Highway Administration, Poz-o-Pac was used at over 100 sites throughout Illinois between 1955 and 1985.

Questions were asked about the material that underlies the Bypass Basin's current HDPE geomembrane liner and whether this material will be tested during the retrofit process. The plan for retrofitting the Bypass Basin does not include testing of soils beneath the HDPE geomembrane liner unless tears in the liner are discovered which may indicate the potential release of contaminants into the Bypass Basin's subgrade. The competency of the Bypass Basin's existing HDPE geomembrane liner will be verified by conducting an electrical leak location survey, which involves placing a voltage across the entire liner and using a detection probe to determine whether any tears are present in the liner. Where a tear is present, the probe will identify an electrical current flowing through the tear. If a tear is discovered, the soils under the tear will be inspected to determine whether any contaminants have been released into the basin subgrade. Contaminated soils identified during this inspection will be removed and replaced with structural fill.

Retrofit Design

Questions were asked about the structural fill material that will be used to establish the slopes for the retrofitted Bypass Basin's leachate collection system. This fill material will be comprised of natural soils, not CCR; however, the specific soil materials have not been chosen at this time. Material specifications will be included in construction bid requests. Construction bid requests will not occur until a final retrofit construction permit is issued by the Illinois EPA.

SUMMARY OF REVISIONS, CHANGES, AND CONSIDERATIONS

Public engagement is an important part of the permitting process. Midwest Generation, LLC valued the opportunity to hear and consider the comments of community members and others who participated in the public meetings. At this time, Midwest Generation is proceeding with the proposal for retrofitting the Bypass Basin and closing the Former Ash Basin in-place as presented at the public meetings. Taking public comments into consideration, the current analysis continues to indicate that the proposed plan – which remains subject to regulatory review and approval – prioritizes the environment and community well-being.