



CIVIL • GEOTECHNICAL • ENVIRONMENTAL • GEOLOGY • EARTH SCIENCES

January 18, 2024

Mr. Luke St. Mary
Results Engineer/Plant Chemist
Sikeston Board of Municipal Utilities
1551 West Wakefield
Sikeston, Missouri 63801

RE: SBMU Sikeston Power Station CCR Surface Impoundment
2023 Annual P.E. Inspection of Fly Ash Pond

Dear Mr. St. Mary:

This letter documents the transmittal of the 2023 Annual Inspection Check Sheets for the Fly Ash Surface Impoundment ("Fly Ash Pond") at Sikeston Power Station. The 2023 Annual Inspection is in general accordance with 40 CFR Part 257.83(b), and included the following:

1. §257.83(b)(1)(i) A review of available information regarding the status and condition of the CCR unit, including files available in the operating record.
2. §257.83(b)(1)(ii) A visual inspection of the CCR unit to identify signs of stress or malfunction.
3. §257.83(b)(1)(iii) A visual inspection of any hydraulic structures underlying the base of the CCR unit or passing through the dike of the CCR unit for structural integrity and continued safe and reliable operation.
4. §257.83(b)(2) A report prepared by a qualified professional engineer following the annual inspection.

The visual inspection was conducted by Thomas GredeLL, P.E., and Wayne Elliott, E.I., on October, 2023. The results of the inspection were briefly discussed with you following the annual inspection on October 13, 2023.

When the federal CCR rule went into effect on October 19, 2015, the Fly Ash Pond (surface impoundment) was not routinely used for impounding fly ash but was intermittently used to impound small quantities of fly ash. Prior to October 19, 2015, SBMU declared the Fly Ash Pond 'Inactive' under the federal CCR rule in place at that time and ceased placing any quantity of fly ash into the Fly Ash Pond. When the portion of the rule providing different requirements for 'Inactive' Surface Impoundments was later remanded by the USEPA on October 4, 2016, SBMU resumed the intermittent use of fly ash in the Fly Ash Pond. However, fly ash placed in the Fly Ash Pond is not directly sluiced from the plant to the pond, but transported to the Fly Ash Pond as dry CCR in pneumatic trucks and then discharged into the surface impoundment in batches as a slurry using ponded stormwater. All current water in the Fly Ash Pond has accumulated as stormwater. Therefore, as operated by SBMU since October 2016, the Fly Ash Pond has no process influent water.

Review of Available Documents

The following reports and documents were referenced, as needed, by GREDELL Engineering Resources, Inc. (GER) as part of the completion of the 2023 annual inspection report:

1505 E. High Street
Jefferson City, Missouri 65101-4826

Telephone (573) 659-9078
Fax (573) 659-9079

1. *Previous annual P.E. Inspections, including:*
 - a. *2017 Annual P.E. Inspection of Fly Ash Pond*, by GREDELL Engineering Resources, Inc, Jefferson City, Missouri, January 23, 2018. (Annual Report)
 - b. *2018 Annual P.E. Inspection of Fly Ash Pond*, by GREDELL Engineering Resources, Inc, Jefferson City, Missouri, January 18, 2019. (Annual Report)
 - c. *2019 Annual P.E. Inspection of Fly Ash Pond*, by GREDELL Engineering Resources, Inc, Jefferson City, Missouri, January 17, 2020. (Annual Report)
 - d. *2020 Annual P.E. Inspection of Fly Ash Pond*, by GREDELL Engineering Resources, Inc, Jefferson City, Missouri, January 15, 2021. (Annual Report)
 - e. *2021 Annual P.E. Inspection of Fly Ash Pond*, by GREDELL Engineering Resources, Inc, Jefferson City, Missouri, January 21, 2022. (Annual Report)
 - f. *2022 Annual P.E. Inspection of Fly Ash Pond*, by GREDELL Engineering Resources, Inc, Jefferson City, Missouri, January 19, 2023. (Annual Report)
2. *Clay Liner Evaluation*, by GREDELL Engineering Resources, Inc., Jefferson City, Missouri, April 16, 2018. (One-time Report)
3. *Initial Hazard Potential Classification Assessment*, by GREDELL Engineering Resources, Inc., Jefferson City, Missouri, April 16, 2018. (Report good for 5 years)
4. *History of Construction*, by GREDELL Engineering Resources, Inc., Jefferson City, Missouri, April 17, 2018. (One-time Report, to be updated for new construction or modifications)
5. *Structural Stability Assessment*, by GREDELL Engineering Resources, Inc., Jefferson City, Missouri, April 17, 2018. (Report good for 5 years)
6. *Detailed Initial Safety Factor Assessment*, by Reitz & Jens, Inc., St. Louis, Missouri, March 12, 2018. (Report good for 5 years)
7. *Inflow Design Flood Control System Plan*, by GREDELL Engineering Resources, Inc., Jefferson City, Missouri, April 16, 2018. (Report good for 5 years)
8. *Closure Plan*, by GREDELL Engineering Resources, Inc., Jefferson City, Missouri, April 16, 2018. (One-time Report, to be updated for new construction or modifications)
9. *Post-Closure Plan*, by GREDELL Engineering Resources, Inc., Jefferson City, Missouri, April 16, 2018. (One-time Report, to be updated for new construction or modifications)
10. *Seepage Study For Sikeston Power Station Ash Ponds Embankments*, by Reitz & Jens, Inc., St. Louis, Missouri, June 21, 2018. (Special Report to follow-up on Annual Inspection recommendations. Not required by CCR regulations.)
11. *Bottom Ash Pond and Fly Ash Pond Emergency Spillway*, GREDELL Engineering Resources, Inc., Jefferson City, Missouri, March 22, 2019. (Not required by CCR regulations.)

The reports listed above were prepared by GER or their subconsultant, primarily under the supervision of Thomas R. Gredell, P.E., Principal, and have not changed since the 2022 Annual P.E. Inspection. These reports were referenced, as needed, in the process of completing the 2023 Annual P.E. Inspection.

Weekly Inspection Reports and Monthly Instrumentation Monitoring Reports for the Fly Ash Pond (completed by Sikeston Power Station personnel from January 1, 2023, through December 18, 2023) were reviewed as a part of the preparation of the 2023 inspection report. Conditions requiring ongoing observation, minor maintenance, or immediate maintenance items observed intermittently in 2023 were: rutting along the roadways on top of the surface impoundment berms.

- Excessive height of vegetation was intermittently identified throughout 2023, but this federal CCR rule requirement was remanded and has not been republished as a final rule at this time. However, it is good practice to keep the vegetation mowed to assist SBMU's inspectors in observing outside berm conditions on a weekly basis.
- Rutting and potholes in the perimeter roads on top of the berms were noted on weekly inspection reports by plant personnel on several occasions throughout the year. This condition was listed as OB or MM. As in past years, weekly reports during a calendar year indicate that rutting and potholes occasionally occur, but are remedied by routine maintenance (i.e., grading the road and adding gravel).

The identified rutting and potholes in the perimeter roads on top of the berms can be remedied with routine maintenance. The intermittent nature of the notes indicate that these items were periodically corrected in a timely manner during 2023. During the October 2023 site visit, broad, shallow low areas were observed on the top of the perimeter southern berm of the Fly Ash Pond that separates it from the Bottom Ash Pond. It is recommended that low areas or rutting in the roads on top of the berms be corrected in a timely manner. When repaired, this minor maintenance item should continue to be observed to avoid impact on the structural integrity of the embankment and continued safe operation of the Fly Ash Pond.

Visual Inspection Results

The 2023 Annual P.E. Inspection was performed by Thomas R. Gredell, P.E., and Wayne Elliott, E.I., GER. Items observed during the annual inspection that require further observation or minor maintenance investigation and/or corrective action are identified on Figure 1 of the 2023 Annual Inspection Check Sheets. Items observed on October 13, 2023, that require minor maintenance or further observation include:

- Some areas around the inside top of the containment berm lack a drainage channel to prevent excessive stormwater from potentially discharging over the top of the Fly Ash Pond berms.
 - We observed that drainage channels constructed along the inside of the berm along parts of the north, east, and south embankment in 2019 and 2020 were still present in 2023. SBMU should continue developing perimeter drainage channels where they are needed in 2023. We recommend the drainage channels be observed and maintained at a depth of approximately two feet deep to contain stormwater and prevent the uncontrolled discharge of stormwater over the top of the berm during or following heavy rainfall events.
- No instrumentation exists at the Fly Ash Pond to track the elevation of water at the outlet structure. However, in 2022 eight (8) piezometers were installed in the sedimented fly ash in the pond to monitor the interior piezometric head inside of the Fly Ash Pond.
 - In 2021 the Fly Ash Pond was required to cease accepting CCR materials. Therefore, the only water influent to the Fly Ash Pond is direct rainfall. At the time of the current inspection (a dry year), only a small body of water was observed in the pond. However, no water was present in the northwest corner of the Fly Ash Pond at the permanently closed discharge structure. Due to the inactive status of the Fly Ash Pond, the prior recommendation to install a staff gauge is no longer considered necessary. However,

- weekly inspections should continue to monitor the level of water accumulated in low areas of the fly ash surface within the pond, especially following heavy rainfall events.
- In 2022, eight (8) small diameter piezometers were installed to periodically monitor the piezometric levels within the sedimented ash. The piezometers are constructed of 2-inch diameter PVC pipe installed at depths between 18.0 to 20.0 feet. The water levels of the 8 piezometers were measured during the 2023 annual inspection and ranged from 4.8 to 15.2 feet below top of casing (BTOC). [NOTE - Water level was not measured in piezometer FAP-2.]
- A potential wet or saturated area was previously observed along the exterior slope of the southeast berm of the Fly Ash Pond.
 - This wet area was identified in the Initial Annual Inspection conducted in 2017 as an area of potential seepage from the Fly Ash Pond based on the presence of a small number of cattails a few feet up the slope from the perimeter stormwater ditch inside of the railroad loop. No visual signs of erosion of the outer berm soils were observed in 2017, 2018, 2019, 2020, 2021, 2022 or 2023. In mid-2018, GER subcontracted to Reitz & Jens, Inc. (St. Louis) to complete an evaluation of the area of the southeastern embankment of the Fly Ash Pond. The report stated that the possible seepage did not have a negative impact on the stability of the embankments.
 - In 2023 the area was again observed and found to be dry, and the vegetation was recently mowed. Overall, green vegetation was observed throughout the surrounding areas (including outside of the Fly Ash Pond). However, a small mound of soil near the toe of the slope and inside of the railroad berm was noted during the annual inspection (due to the freshly cut, short vegetation). It is noted that this small quantity of soil potentially represents a small movement of berm material during past saturation. The small mound of soil had approximate dimensions of 10 ft by 2 feet by 1 foot high. It was concluded the potential movement did not impact the integrity of the perimeter berm. No action is required at this time, but it is recommended that this area continue to be visually observed for any potential change in conditions.
 - There is no operational emergency spillway in the Fly Ash Pond at this time.
 - Inflow to the inactive Fly Ash Pond is limited to only rainfall. Process water has not been discharged into the Fly Ash Pond since 2021. The required Inflow Design Flood Control System Plan was completed by GER in April 2018 while the Fly Ash Pond was still receiving limited waste. Based on that plan, it was recommended that SBMU construct an emergency spillway. However, the 5-year update of that plan (currently near completion) has concluded that an emergency spillway is no longer required in the current inactive state.
 - In addition, the FAP is planned to be closed by mid-2025. Therefore, the construction of an emergency spillway is no longer critical to preventing uncontrolled discharge of accumulated rainfall.
 - The outfall structure discharge pipes in the northwest corner of the Fly Ash Pond and the connecting pipe between them are currently reported and the sliding gate valves were observed to be permanently sealed inside of the discharge structure.

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- In 2020, the potential presence of burrowing animals was noted in the southwest berm of the Fly Ash Pond. However, evidence of burrowing animals were not observed since. Burrowing animals are a common maintenance concern with all types of wastewater ponds containing surface water. GER recommends that weekly inspections continue to look for evidence of burrowing animals. No evidence of burrowing animals was observed during the 2023 inspection.

Per §257.83(b)(5), the owner or operator must remedy identified minor maintenance items or items which require further investigation and/or corrective action as soon as feasible.

GER appreciates assisting you and SBMU in this important effort. If you have any other questions or comments, please contact us at your convenience at (573) 659-9078.

Sincerely,

A handwritten signature in black ink, appearing to read "Thomas R. Gredell". The signature is fluid and cursive, written over a light blue circular stamp.

Thomas R. Gredell, P.E.
Principal Engineer

Attachments: Sikeston Power Station Fly Ash Pond Annual Inspection Check Sheet

C: Mark McGill, Plant Manager, SBMU
Mikel C. Carlson, R.G., GREDELL Engineering Resources, Inc.

40 CFR Parts 257

2023 Checklist for P.E. Annual Inspection for CCR Surface Impoundments, § 257.83(b)

Sikeston BMU Sikeston Power Station Fly Ash Surface Impoundment Annual Inspection

NOTE – THE FLY ASH POND CEASED RECEIVING WASTE IN 2021.

Requirements	Signs of actual or potential structural weakness (257.83(b)(vi))	Disruptions or potential disruption to the operation and safety of the unit (257.83(b)(vi))
CCR Unit and appurtenant structures 257.83(b)(II)	None Observed. Continue to Monitor.	None Observed. Potential seepage has been noted in past annual inspection reports and on the northwestern embankment. No evidence of erosion or slope instability. Seepage is minor and vegetation is in very good condition. Continue to monitor.
CCR Unit and appurtenant structures 257.83(b)(ii)	No Staff Gauge Present. The need for staff gauges is no longer necessary due to the inactive status of the Fly Ash Pond and pending closure	Fly Ash Pond is inactive and currently only receives direct rainfall. Water levels should be checked after heavy rainfall events. Continue to monitor.

The 2023 Annual Inspection included a review of available information regarding the status and condition of the CCR unit, including, but not limited to, files available in the operating record in general accordance with 257.83(b)(i).

Minor maintenance items associated with routine upkeep and items that require further investigation and/or corrective action observed during the 2023 Annual Inspection presently do not impact the structural integrity of the embankment. SBMU agrees to monitor and address these items in a timely manner through normal maintenance.

GREDELL Engineering Resources, Inc.

Engineer's Seal



Thomas R. Gredell, P.E.
Missouri License: PE-021137
Date: January 19, 2024

**SIKESTON POWER STATION – FLY ASH POND
2023 ANNUAL INSPECTION CHECK SHEET**

SIKESTON POWER STATION
Fly Ash Pond
Annual Inspection Check Sheet

Date	October 13, 2023
Inspector	Thomas R. Gredell, P.E.
Pool Level	Estimated el. 318+/- (Small areas of surface water present)
Temperature	Mid 80°s
Weather	Partly cloudy, dry

1. Date of Previous Annual Inspection:
 - a. October 20, 2022
2. Date of Previous Periodic Inspection:
 - a. The date of the most recent monthly inspection report reviewed for this Annual Inspection was December 18, 2023.
3. Description of Emergency Conditions (EC) or Immediate Maintenance (IM) conditions observed since the last annual inspection:
 - a. No EC or IM conditions were noted for of the Bottom Ash Pond during the 2023 Annual Inspection on October 13, 2023. The FAP was in good condition during our annual inspection and generally unchanged from 2022.
4. Describe any action taken to restore or improve safety and integrity of impounding structure:
 - a. The rutting and potholes periodically identified in weekly inspection reports by plant personnel were corrected by grading the road on one or more occasions in 2023 as evidenced by the intermittent nature of the weekly report comments and observations during our annual site inspection.
 - b. In response to the past recommendations made in prior Fly Ash Pond Annual Inspection reports, a partial perimeter ditch was noted during the 2020 inspection along a significant portion of the north, east, and south sides of the Fly Ash Pond. During our 2023 site inspection, these ditches were still open. No actions were required in 2023.
 - c. In response to past observations of potential berm seepage in the southeast FAP berm (indicated by the observation of cattails above the toe of the slope), a field investigation and office evaluation was completed in mid-2018 by Reitz & Jens, Inc. as a subconsultant to GREDELL Engineering Resources, Inc. (GER). The conclusion of that evaluation is that the possible seepage did not have a negative impact on the stability of the embankments. No intrusive investigations or evaluations other than visual field observations have been made for these areas since 2018. 2022 and 2023 field observations found that potential seepage on the northwest and southeast berms have not resulted in evidence of slumping, seepage flow or erosion. No actions were required in 2023. Continued monitoring is recommended.
5. Describe any modifications to the geometry of the impounding structure since the previous annual inspection:
 - a. No geometry changes were observed in 2023. The Fly Ash Pond is inactive and no new CCR materials were deposited in the pond since early 2021.
6. Describe any modifications to the operation of the impounding structure since the previous annual inspection:
 - a. No modifications to the operation in 2023. The Fly Ash Pond ceased accepting waste in early 2021. The Fly Ash Pond is inactive and no CCR materials were deposited in 2022 or 2023.
7. List the approximate remaining storage capacity (Cubic Yards) of the impounding structure:

**SIKESTON POWER STATION – FLY ASH POND
2023 ANNUAL INSPECTION CHECK SHEET**

- a. Due to the inactive status of the Fly Ash Pond, no CCR has been placed into the Fly Ash Pond since early 2021. Therefore, the estimated available storage remains the same as in 2021, at 50,000 CY below el. 320 (allowing a minimum 2.0 feet of freeboard).
8. List the approximate maximum, minimum and present depth and elevation of the impounded water since the previous annual inspection:
- a. The weekly inspection reports do not indicate an elevation of impounded water due to the lack of a staff gauge at the Fly Ash Pond outlet structure. Only direct precipitation enters the Fly Ash Pond. In preparation for the Fly Ash Pond closure design, in August 2022 GER installed 8 shallow piezometers in the interior of the Fly Ash Pond to periodically monitor piezometric levels within the sedimented ash.

The piezometers are constructed of 2-inch diameter PVC pipe installed at depths between 18.0 to 20.0 feet. The water levels of the 8 piezometers were measured during the October 13, 2023, annual inspection and ranged from 4.8 to 15.2 feet below top of casing (BTOC). [NOTE - Water level was not measured in piezometer FAP-2.]
9. List the approximate maximum, minimum and present depth and elevation of the impounded CCR since the previous annual inspection:
- a. The Fly Ash Pond has been inactive since early 2021 and receives only direct rainfall. At the time of the inspection on October 13, 2023, a small area of surface water was apparent and is estimated to be at approximate elevation 318.
10. Approximate volume of impounded water and CCR at the time of the inspection:
- a. No CCR materials were placed in the Fly Ash Pond in 2023. Therefore, CCR volumes are the same as estimated at the end of 2021. As previously noted, the pond was dry at the time of site observations in October 2022. However, during the inspection on October 13, 2023, the water level was estimated to be elevation 318, with the source of water being precipitation. Process water is no longer discharged into the pond.
11. Describe any changes to the downstream watershed since the last annual inspection:
- a. No changes to the downstream watershed have occurred in 2023.

**SIKESTON POWER STATION – FLY ASH POND
2023 ANNUAL INSPECTION CHECK SHEET**

Inlet and Outlet Works		
Item	Condition Code	Comments
Outlet Condition	OB	<p>The outlet structure is concrete with an open intake that will accept stop logs. No stop logs were in place. The outlet structure discharges into one of two buried 24-inch pipes: one pipe discharges north and offsite the property; and one pipe discharges west and then follows an open channel swale to Process Waste Pond. Both pipes have been reported as permanently closed since 2016.</p> <p>At the time of inspection, no water was observed in the vicinity of the outlet structure. A small area of ponded water was observed in the north-central area of the pond but. Regular observation of the presence and relative height of ponded water compared to the top of the berms should be made during weekly inspections until closure is completed.</p>
Gate Condition/ Operability	NE	<p>Stop logs originally controlled water level but are no longer present nor used. Two slide gate valves originally provided flow control. Both slide gate valves were observed to be closed. GER previously recommended that the gate valve that discharges to the west (toward the Process Waste Pond) be repaired and returned to operable condition. However, due to the inactive status of the Fly Ash Pond and its pending closure by 2025, this recommendation was previously withdrawn and remains withdrawn.</p>
Leakage	NE	<p>No standing water was observed at the outlet structure. Therefore, no leakage from the outlet structure was observed.</p>
Outfall Condition	NE	<p>The pond system outfall structure discharge pipes are currently observed to be closed and reportedly permanently sealed. See previous comments on the Outlet Condition.</p>
Discharge (color and/or sediment)	NE	<p>No discharge was occurring from the Fly Ash Pond during the October 13, 2023, site inspection and no discharge was reported in 2023.</p>
Obstructions	NE	<p>The Surface Impoundment is near full capacity with CCR solids. Influent water consists solely of precipitation. Interior perimeter ditches have been constructed along part of the north, east, and south sides of the Fly Ash Pond but could be extended to provide drainage around the entire Fly Ash Pond and to the outlet structure in the northwest corner of the pond. The pond system outfall structure discharge pipes are currently reported to be permanently sealed, but this area could be used as a temporary sump from which to pump surface water to the process water pond.</p>
Instrumentation	OB	<p>No instrumentation exists at the outlet of the Fly Ash Pond to track the elevation of water at the outlet structure. It has previously been recommended that a staff gauge be installed and read during the weekly inspections or following heavy rainfall events, but that is no longer believed necessary due to the inactive status of the pond and the impending closure of the pond.</p> <p>There are four (4) piezometers (installed ~ 2011) constructed within the Fly Ash Pond perimeter berms</p>

**SIKESTON POWER STATION – FLY ASH POND
2023 ANNUAL INSPECTION CHECK SHEET**

Inlet and Outlet Works		
Item	Condition Code	Comments
		<p>that serve to monitor water or saturation within the pond berms. These are identified as P-3, P-4, P-5 and P-9. The total depths of each piezometer are reported to be 25 feet, 25 feet, 14.5 feet and 25 feet, respectively. The total depths of each piezometer measured during the October 13, 2023, annual inspection were 24.73 feet, 24.80 feet, 14.63 feet and 24.84 feet, respectively. Water levels in P-3, P-4, and P-9 were very low throughout 2023, presumably due to dry conditions. P-3 water levels ranged from 24.0 to 26.6 feet below the top of casing in 2022. P-4 water levels ranged from 23.85 to 24.85 feet below the top of casing in 2022. P-5 water levels ranged from 5.30 to 14.78 feet below casing in 2023. P-9 water levels ranged from 24.45 to 24.9 feet below the top of casing.</p> <p>Eight (8) additional piezometers were installed in the interior of the ash pond in August 2022. The piezometers are constructed of 2-inch diameter PVC pipe installed at depths between 18.0 to 20.0 feet. These eight (8) piezometers are numbered FAP-1 through FAP-8. Water column heights in these piezometers reflect the piezometric level in CCR materials within the Fly Ash Pond. The water levels of the 8 piezometers were measured during the October 2023 annual inspection and ranged from 4.8 to 15.2 feet below top of casing (BTOC). [NOTE - Water level was not measured in piezometer FAP-2.]</p>
Inlet Piping Condition	NE	<p>Fly ash has not routinely been sluiced into the Fly Ash Pond since the CCR rule has been in effect. No CCR materials have been placed in the pond since early 2021.</p> <p>A buried 30-inch pipe exists that was designed to convey excess water from the Bottom Ash Pond to the Fly Ash Pond or vice versa as an emergency spillway. This structure is no longer in use and sedimented CCR blocks the influent side of the pipe into the Fly Ash Pond. The swing gate on the Bottom Ash Pond side is closed and secured with bolts. The Bottom Ash Pond has been inactive since June 5, 2023. Therefore, this discharge structure is insignificant to the structural stability of the pond.</p>
Emergency Spillway	OB	<p>There is no operational emergency spillway in the Fly Ash Pond. Inflow to the Fly Ash Pond is limited to rainfall only. Both CCR solids and process water are no longer discharged into the Fly Ash Pond. Due to the current operating status (inactive), the net zero CCR quantity increase, and the planned closure of the Fly Ash Pond in 2025 the construction of an emergency discharge structure is no longer considered necessary.</p>
Other:		NONE

**SIKESTON POWER STATION – FLY ASH POND
2023 ANNUAL INSPECTION CHECK SHEET**

Earth Embankment		
Item	Condition Code	Comments
Vertical & Horizontal Alignment of Crest	GC	No visible evidence of deformation of embankment has been observed. Small, shallow (less than 1.0 foot) depressions were noted and repaired when needed throughout 2023.
Seepage/Wetness / Ponding Areas	GC(Seepage)	<p>An area along the exterior of the southeastern berm of the Fly Ash Pond was previously identified as an area of potential seepage from the Fly Ash Pond based on the presence of a small number of cattails and green vegetation present during drought conditions. The area is located upslope from the perimeter stormwater ditch inside of the railroad loop. The area was observed during the 2023 inspection, and there were no signs of erosion of the outer berm soils or other indications of instability during our annual inspection. The berms of the fly ash pond had been recently mowed, indicating that the surface conditions were not saturated.</p> <p>It is recommended that this area be visually monitored in the future to note any change in conditions. Future remediation of the previously identified wet areas will be considered during closure design.</p>
Erosion/Rutting	MM/OB	No evidence of erosion or rutting on the outside slopes of the berms was observed in 2023. While three weekly inspections in March, August, and November noted that rutting and potholes existed in the road surfaces located on top of the Fly Ash Pond berms or on the ramps to access the top of the berms. The lack of mentions in subsequent inspection reports indicate that they were adequately repaired in a timely manner. Future rutting should be corrected to maintain a consistent vertical height of the perimeter berms.
Fencing	GC	Fencing is only adjacent to the Fly Ash Surface Impoundment on the north perimeter along Wakefield Road. The fencing is located within 50 to 100 feet of the toe of the berms. The fencing is in very good condition.
Vegetation	GC	Vegetation on exterior slopes was periodically cut and maintained during 2023 as observed during the October 13, 2023, annual inspection and weekly inspection reports prepared by plant personnel. Keeping the exterior berm vegetation cut allows better visual observation of potential future erosion or slumping. NOTE that a specific vegetation requirement was removed from the federal CCR rules in 2016.
Sloughs/Slides/ Cracks	OB	During the October 13, 2023, inspection, a small mound of soil near the toe of the southeast slope of the berm, just inside of the railroad track, was observed. The mound of soil could possibly be a small slump of soil from the outer berm sideslope, but it was not previously observed, likely due to the density of vegetation in previous annual inspections. This has been identified as an area for continued observation.
Animal Control	OB	No evidence of burrowing animals was noted in 2023 weekly and monthly inspection reports nor was any observed during the site inspection in October 2023. SBMU staff should continue to monitor for burrowing animals and attempt to remove such animals from the area.

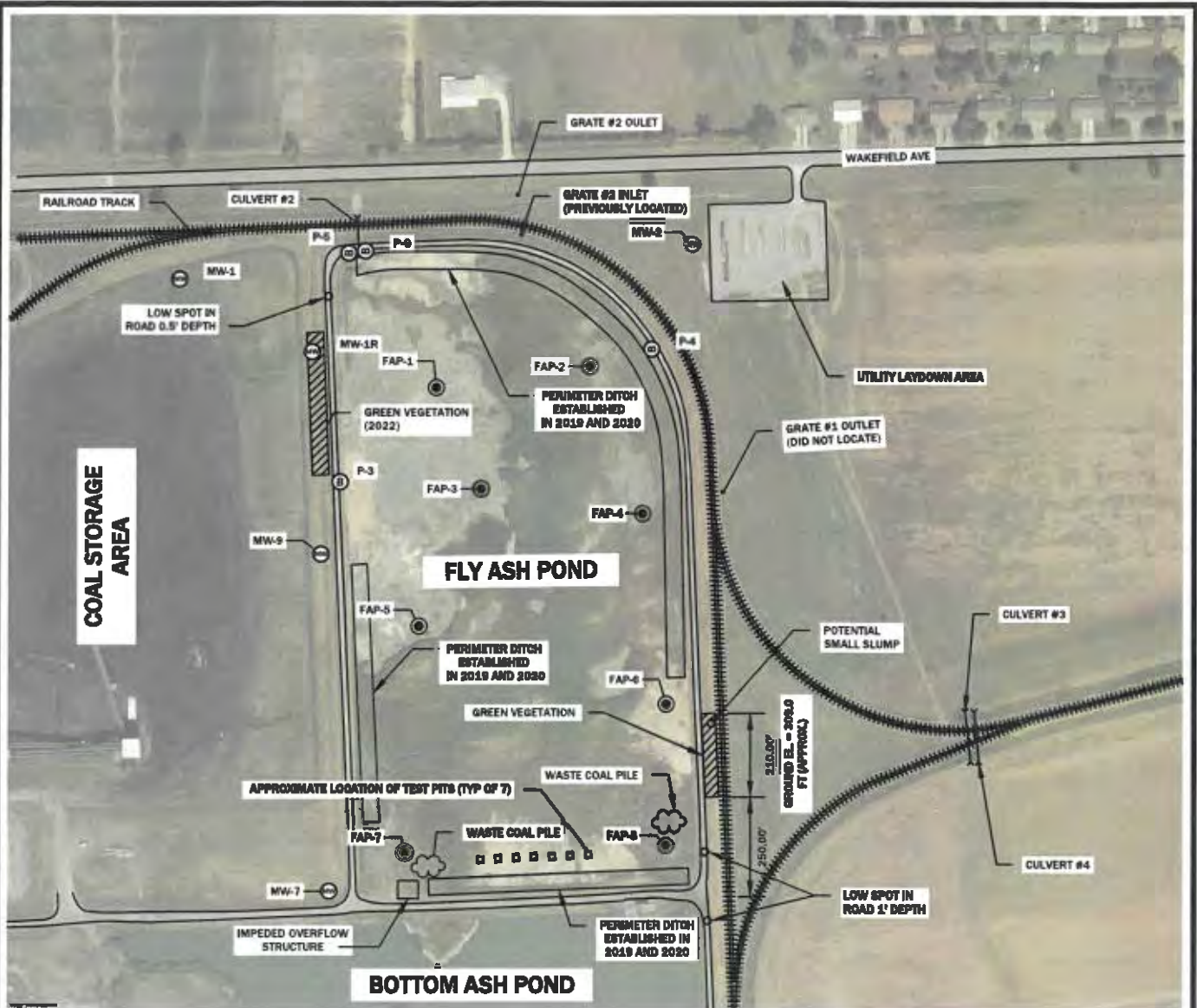
**SIKESTON POWER STATION – FLY ASH POND
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Earth Embankment		
Item	Condition Code	Comments
Other	NONE	

Condition Codes: EC Emergency Condition – a serious safety condition exists that requires immediate action.
 IM Immediate Maintenance – an item that requires maintenance within about 30 days to ensure safety or operation.
 MM Minor Maintenance – item needing minor maintenance or repair within 6 months.
 OB Observation – condition requires regular observation to ensure that the condition does not become worse.
 GC Good Condition.
 NE No Evidence of a problem.
 NI Not Inspected. State reason in comments.

Additional Notes:

1. The location of observations on attached plan sheet (Figure 1).



NOTES:

1. MINOR MAINTENANCE ITEMS INCLUDE:
 - a. TWO LOW SPOTS IN THE BERM ROAD: ONE NEAR SOUTHEAST CORNER; AND ONE NEAR NORTHWEST CORNER.
 - b. MAINTAIN EXCAVATED INTERIOR STORMWATER CHANNEL AT 2 FEET DEPTH ALONG POND PERIMETER (WHERE IT EXISTS OR IS REQUIRED)
2. ITEMS RECOMMENDED FOR CONTINUED OBSERVATION INCLUDE:
 - a. GREEN VEGETATION IN THE AREAS ALONG THE SOUTHEAST BERM AND NORTHWEST BERM INDICATED POSSIBLE SEEPAGE. CONTINUED OBSERVATION RECOMMENDED.
 - b. NOTE ACCUMULATION OF PONDED RAINFALL IN LOW AREAS, STORMWATER CHANNELS AND AT THE NORTHWEST OUTLET STRUCTURE DURING WEEKLY INSPECTIONS.
 - c. PERIODIC WATER LEVEL READINGS IN THE EIGHT (8) PIEZOMETERS INSTALLED WITHIN THE POND IN CCR MATERIALS. (PIEZOMETER LOCATIONS NOT SHOWN ON FIGURE)
3. ITEMS IDENTIFIED DURING THE ANNUAL INSPECTION WHICH DO NOT REQUIRE MAINTENANCE:
 - a. THE IMPEDED OVERFLOW STRUCTURE BETWEEN THE BOTTOM ASH POND AND THE FLY ASH POND.
 - b. PERMANENTLY CLOSED DISCHARGE STRUCTURE.
4. PIEZOMETER LOCATIONS APPROXIMATED WITH HANDHELD GPS.
5. GRATE #1 INLET NOT IDENTIFIED.

LEGEND:

- PIEZOMETER
- MONITORING WELLS
- FLUSH MOUNT PIEZOMETER (GEOTECHNOLOGY (2011))
- APPROXIMATE TEST PIT LOCATIONS
- GREEN VEGETATION



**FIGURE 1
2023 ANNUAL INSPECTION
FLY ASH POND**



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 1505 East High Street Telephone: (573) 659-9078
 Jefferson City, Missouri Facsimile: (573) 659-9079
 MO CORP. ENGINEERING LICENSE NO. 5-2001001669-D

SIKESTON POWER STATION

DATE 1/2024	SCALE 1" = 400'	PROJECT NAME SIKESTON	REVISION N/A
DRAWN KW	APPROVED TQ	FILE NAME 2023 ANNUAL INSPECTION FAP	SHEET # 1 OF 1