K P R G

ENVIRONMENTAL CONSULTATION & REMEDIATION

KPRG and Associates, Inc.

MIDWEST GENERATION
JOLIET/LINCOLN STONE QUARRY LANDFILL

2978090002—Will County
Permit No. 1994-241-LFM (Modification No. 24)

1st ANNUAL CCR SURFACE IMPOUNDMENT REPORT
YEAR ENDING DECEMBER 31ST, 2022

Prepared By:
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14665 W. Lisbon Rd., Suite 1A
Brookfield, WI 53005

January 30, 2023

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1.0 INTRODUCTION TO ANNUAL REPORT

The Lincoln Stone Quarry (LSQ) facility, which is operated by Midwest Generation, LLC, is located at the southwest corner of the intersection of Patterson Road and Brandon Road in Joliet, Illinois. It has operated as a disposal facility for bottom ash and slag from two coal-fired generating stations (Joliet Stations #9 and #29) since 1962. It is noted that both power generating stations were converted to natural gas firing in 2016. The disposal facility consists of an inactive portion referred to as the West Filled Area (WFA) and the active ash/slag disposal area referred to as the Main Quarry. Water was used to sluice the ash from the generating plants and was discharged into the Main Quarry where the ash then settled out and the water was subsequently discharged as discussed further below. The second Annual Coal Combustion Residuals (CCR) Report for the Midwest Generation Lincoln Stone Quarry for calendar year 2022 was prepared in accordance with 35 Illinois Administrative Code (IAC) Sections 845.540 and 845.550.

2.0 ANNUAL INSPECTION (Section 35 IAC Section 845.540(b))

In accordance with Section 35 IAC Section 845.540(b), the Annual Inspection was by a Qualified Professional Engineer, Timothy J. Stohner, on December 21, 2022.

1) The CCR surface impoundment must be inspected on an annual basis by a qualified professional engineer to ensure that the design, construction, operation, and maintenance of the CCR surface impoundment is consistent with recognized and generally accepted engineering standards. In accordance with 35 IAC Section 845.540(b)(1), A through G, the inspection included, at a minimum, the following except as where it was noted to be not applicable.

   A) A review of available information regarding the status and condition of the CCR surface impoundment, including files available in the operating record (e.g., CCR surface impoundment design and construction information required by Sections 845.220(a)(1) and 845.230(d)(2)(A), previous structural stability assessments required under Section 845.450, the results of inspections by a qualified person, and results of previous annual inspections);

      In accordance with Sections 845.220(a)(1) and 845.230(d)(2)(A), the operating record in the form of the Application for Initial Operating Permit, prepared by KPRG and dated October 29, 2021 and the Application for Initial Construction Permit and dated January 28, 2022, both prepared by KPRG, were reviewed. It is noted that as LSQ was initially developed in 1962 by others, detailed construction plans from that time are not available. It is noted that Section 845.450 is NOT APPLICABLE as LSQ is an incised CCR surface impoundment. It is also noted that the annual inspection conducted on December 21, 2022 marks the second annual inspection since the April 21, 2021 effective date of the 35 IAC Part 845 regulation.

B) A visual inspection of the CCR surface impoundment to identify signs of distress or malfunction of the CCR surface impoundment and appurtenant structures;

The visual inspection of the CCR surface impoundment conducted on December 21, 2022 did not identify any signs of distress or malfunction of the CCR surface impoundment and appurtenant structures.

C) A visual inspection of any hydraulic structures underlying the base of the CCR surface impoundment or passing through the dike of the CCR surface impoundment for structural integrity and continued safe and reliable operation;

The visual inspection of visually accessible hydraulic structures underlying or passing through the dike of the CCR surface impoundment conducted on December 21, 2022 did not identify any deficiencies in structural integrity that would prevent continued safe and reliable operation.

D) The annual hazard potential classification certification, if applicable (see Section 845.440);

In accordance with 35 IAC Section 845.440(b), this requirement is NOT APPLICABLE as LSQ is an incised CCR surface impoundment.

E) The annual structural stability assessment certification, if applicable (see Section 845.450);

In accordance with 35 IAC Section 845.450(e), this requirement is NOT APPLICABLE as LSQ is an incised CCR surface impoundment.

F) The annual safety factor assessment certification, if applicable (see Section 845.460); and

In accordance with 35 IAC Section 845.460(e), this requirement is NOT APPLICABLE as LSQ is an incised CCR surface impoundment.

G) The inflow design flood control system plan certification (see Section 845.510(c)).

For an incised CCR surface impoundment, the inflow design flood corresponds to the 25-year flood. This plan certification was prepared by Geosyntec Consultants and dated October 2022.

2) Inspection Report. The qualified professional engineer must prepare a report following each inspection that addresses the following:

A) Any changes in geometry of the impounding structure since the previous annual inspection;

The annual inspection conducted on December 21, 2022 marks the second annual inspection since the April 21, 2021 effective date of the 35 IAC Part 845 regulation. Also, KPRG personnel have been performing weekly inspections of LSQ since April 1, 2020. To date, no changes in the impounding structure have been identified.

B) The location and type of existing instrumentation and the maximum recorded readings of each instrument since the previous annual inspection;

Water level instrumentation (pressure transducer, data logger, and radio antenna to transmit data to a website accessible by MWG) for LSQ is located near the northeast corner of the site (Figure 1). Water levels are recorded daily and delivered wirelessly to QED Environmental. Water level alerts are transmitted via email to relevant personnel with Midwest Generation and KPRG.

An interim remedial action consisting of four extraction wells was installed and operational since the end of April 2010 at the southeast corner of the Main Quarry. This system was expanded in 2011 along the entire south perimeter of the Main Quarry and WFA (becoming operational in the first quarter of 2012) to include a total of 12 extraction wells. The extraction system intercepts Main Quarry water before it is pulled to the southeast as a result of dewatering operations at the Vulcan Laraway Quarry located approximately 1,000 feet southeast of the LSQ facility. KPRG monitors the proper pump operation. Instrumentation located in control panels along the southern perimeter notes the pump operation and includes total hours of operation for each pump.

C) The approximate minimum, maximum, and present depth and elevation of the impounded water and CCR since the previous annual inspection;

KPRG reviewed water level data from January 1, 2022 through December 31, 2022, the minimum water level was 538.52 feet above mean sea level (amsl) on May 19, 2022 and the maximum water level was 543.72 feet amsl occurring on August 9, 2022. The average water level during 2022 was 541.41 feet amsl.

The base of the Main Quarry ranges from 510 ft amsl to a low point of 477 ft amsl and the base of the West Filled Area (WFA) at approximately 480 ft amsl. The current average ash elevation is 533 ft amsl. The surrounding ground elevation of the WFA and the Main Quarry is at approximately 590-600 ft ft amsl. The surrounding walls of LSQ are Silurian Dolomite bedrock topped with overburden soil. The overburden ranges from approximately 5 feet in thickness to 20 feet in thickness as the ground elevations increase to the south, west, and east. The overburden to the north, remains at a relatively constant elevation because Patterson Road is constructed adjacent to LSQ.

D) The storage capacity of the impounding structure at the time of the inspection;

According to available records, the storage capacity is approximately 6,300,000 cubic yards).

E) The approximate volume of the impounded water and CCR at the time of the inspection;

The approximate volumes of impounded water and CCR based on the average 2022 water level of 541.41 feet above sea level were 576,312 and 4,300,000 cubic yards, respectively.

F) Any appearances of an actual or potential structural weakness of the CCR surface impoundment, in addition to any existing conditions that are disrupting or have the potential to disrupt the operation and safety of the CCR surface impoundment and appurtenant structures;

The annual inspection conducted on December 21, 2022 marks the second annual inspection since the April 21, 2021 effective date of the 35 IAC Part 845 regulation. No actual or potential structural weaknesses have been noted to date.

G) Any other changes that may have affected the stability or operation of the impounding structure since the previous annual inspection.

The annual inspection conducted on December 21, 2022 marks the second annual inspection since the April 21, 2021 effective date of the 35 IAC Part 845 regulation. No changes were been noted to the stability or operation of the impounding structure on that day or previously.

3) By January 31 of each year, the inspection report must be completed and included with the annual consolidated report required by Section 845.550.

This annual inspection report is included as an Attachment to the Annual Consolidated Report.

4) Frequency of Inspections. The owner or operator of the CCR surface impoundment must conduct the inspection required by subsections (b)(1) and (2) on an annual basis. The deadline for conducting a subsequent inspection is based on the date of conducting the previous inspection.

Future annual inspections will be performed on or before December 31, of the appropriate year.

5) If a deficiency or release is identified during an inspection, the owner or operator must submit to the Agency documentation detailing proposed corrective measures and obtain any necessary permits from the Agency.

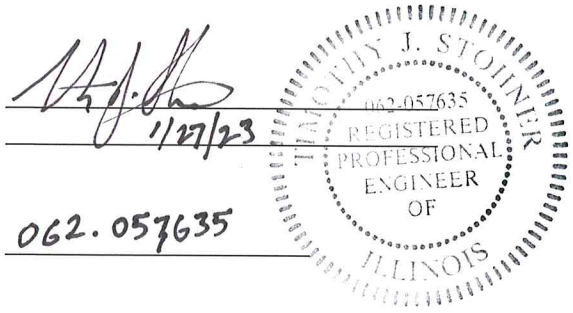
This inspection did not identify any deficiency or release.

3.0 PE CERTIFICATION

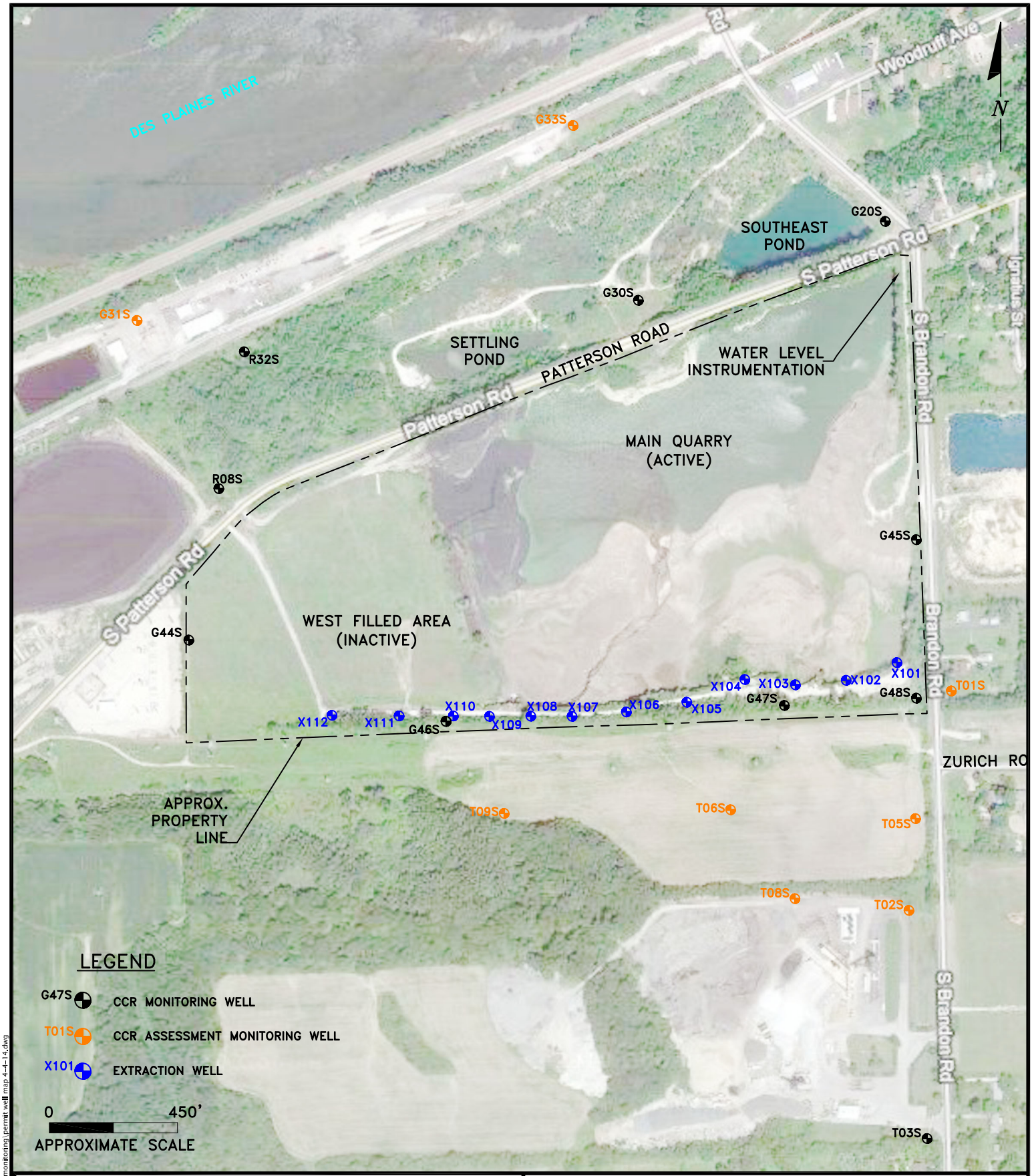
The owner or operator of the CCR surface impoundment must submit the annual consolidated report to the Agency in addition to placing the annual consolidated report in the facility's operating record as required by Section 845.800(d)(14).

I hereby certify that the annual inspection was conducted in accordance with Section 845.540(b), and that this annual consolidated report was prepared and is being submitted to IEPA and placed in the facility's operating record as required.

Certified by:
Date: 1/27/23



Timothy J. Stohner, P.E.
Professional Engineer Registration No.: 062.057635
KPRG and Associates, Inc.



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CCR MONITORING WELL SITE MAP

LINCOLN STONE QUARRY
JOLIET, ILLINOIS

Scale: 1" = 450' | Date: January 27, 2022

KPRG Project No. 19620.4 | FIGURE 1