

**EMERGENCY ACTION PLAN**

**JOLIET/LINCOLN STONE QUARRY  
MIDWEST GENERATION, LLC  
JOLIET, ILLINOIS  
Permit No. 1994-241-LFM  
  
IEPA Site No. 1978090001**

Prepared for:

Midwest Generation, LLC  
1800 Channahon Road  
Joliet, IL 60436

Prepared by:

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Project No: 19520.4

October 2021

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Figure 2 – Lincoln Stone Quarry Site Map

## 1. INTRODUCTION

This Emergency Action Plan (EAP) has been prepared in accordance with 35 Ill. Adm. Code Part 845.520 for Lincoln Stone Quarry (LSQ) associated with Joliet 9 Generating Station in Joliet, Illinois. This EAP describes the measures that will be implemented by Midwest Generation, LLC and any contractors and/or subcontractors working on behalf of Midwest Generation, LLC at Lincoln Stone Quarry (LSQ) to prevent a safety emergency or in the event of a safety emergency, to respond in a safe, effective and timely manner to mitigate the situation.

Safety emergencies can result from natural disasters or malfunctioning equipment while work is being performed. A risk assessment was performed to identify the most likely safety emergencies to occur and opportunities to mitigate or minimize the impacts and occurrence of those emergencies. As always, Midwest Generation, LLC strives for a safety emergency/injury free work experience, but in the event of a safety emergency this EAP will act as a reference.

This EAP is to be used as a reference describing the operation of LSQ, to communicate practices for preventing and responding to safety emergency response situations, and the notification procedures during emergency response situations.

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## 2. FACILITY INFORMATION

Facility Name: Lincoln Stone Quarry

Mailing Address: 1800 Channahon Road  
Joliet, Illinois 60436

Site Address: Southeast Corner of Patterson & Brandon Road  
Joliet, Illinois 60436

Operator: Midwest Generation, LLC

Contact Name: DeAndre Cooley  
1800 Channahon Road  
Joliet, Illinois 60436  
Telephone: 779-279-2321

Owner: Lincoln Stone Quarry, Inc.  
Attn: Mr. Fred Kaplan  
500 North Dearborn Street, Second Floor  
Chicago, Illinois 60654-3372

The final disposal of the bottom ash/boiler slag is in the Main Quarry. In the Main Quarry, the bottom ash/boiler slag settles out of the water and is contained in the Main Quarry. The water gravity drains from the Main Quarry to the Lower Quarry through two underground discharge pipes that are located under Patterson Road. The flow rate from the Main Quarry to the Lower Quarry can be controlled. The water enters the Lower Quarry into the pond where it is aerated before it is pumped to the Des Plaines River under NPDES discharge permit no. IL0002216, Outfall 005.

As warranted by market demand, some of the CCB material is removed from the Main Quarry and reused. As allowed by the permit, up to 40,000 tons of CCB material can be removed from the Main Quarry and hauled offsite for beneficial reuse. The removal is performed by LaFarge, which will excavate the bottom ash/boiler slag from the disposal area using a mechanical excavator, load the ash/slag material into dump trucks and haul offsite.

A groundwater extraction system was installed along the south edge of LSQ to address the component of groundwater flow away from the Main Quarry to the southeast. The extraction system consists of twelve extraction wells, X101 through X112, that are approximately 145 feet deep and each well contains one pump. The pumps are set 100 feet deep inside each extraction well and their pump rates generally range from 3 to 12 gallons per minute (gpm). The pumps discharge through a series of pipes and valves and exit into the Main Quarry. The flow rate for each pump is manually controlled using ball valves and globe valves. As needed, the valves are manually opened and closed to adjust the flow rate of the pump. The valves for extraction wells X101 through X104 are located in an underground vault that is near extraction well X104. The valves for extraction wells X105 through X107 are located in individual ground level vaults for

each extraction well. The valves for extraction wells X108 through X112 are located in an underground vault that is near the sluice pipes discharge, between extraction wells X108 and X109. The set of twelve pumps are controlled by three panels, which turn the pumps on and off, record the water level in each extraction well, and record the flow rates of each pump. The components of the extraction system are identified on Figure 2.

The pumps and controls are supplied by electrical power that comes from Patterson Road and Brandon Road. The pumps and control panel for extraction wells X101 through X104 are supplied power by overhead power lines that come from Brandon Road. The overhead power lines connect to a transformer on the east side of Brandon Road, cross Brandon Road, connect to an electrical meter on the west side of Brandon Road, and then run overhead to the control panel. The pumps and controls for extraction wells X105 through X112 are powered by overhead power lines that first come from Patterson Road and run south adjacent to the access road and then turn east when the access road turns east, from this point the power lines run underground and connect to a transformer. This transformer then drops the power from three-phase, high-voltage power down to single-phase 200-240 volts, which is then connected to the control panel for extraction wells X108 through X112 and the control panel for extraction wells X105 through X107.

The above described groundwater extraction system was necessary due to the influence on the groundwater flow caused by Laraway Quarry. Boyd's Quarry, which is an inactive quarry owned by Midwest Generation, LLC, is used by the owner as a hydraulic control to maintain natural groundwater flow on the east side of LSQ to counteract the unnatural groundwater flow caused by the influence of the Laraway Quarry dewatering. Boyd's Quarry has established a static water level since being inactive and it has an influence on groundwater flow in the area. Field observations identified that Boyd's Quarry is connected to the Main Quarry by the same permeable portion of the Silurian dolomite described above. If the water level in Boyd's Quarry were to drop below the water level in the Main Quarry, the natural groundwater flow would be affected. This would result in groundwater flow going to the east/northeast, which would be opposite of the natural groundwater flow direction. The natural groundwater flow direction is from Boyd's Quarry going west and northwest towards the Main Quarry and the Des Plaines River. In order to maintain compliance with the operations permit for LSQ and to avoid the need for an additional groundwater extraction system, the natural groundwater flow must be maintained and this is accomplished by ensuring the water level in the Main Quarry is lower than the static water level in Boyd's Quarry.

The water levels in Boyd's Quarry and the Main Quarry are monitored continuously using pressure transducers. The water levels are recorded and uploaded to a website so the LSQ operator can monitor the difference in water levels between Boyd's Quarry and the Main Quarry. It is important that the water level in the Main Quarry remain below the water level in Boyd's Quarry and this is accomplished by keeping the Main Quarry water level at least three (3) feet lower than the water level in Boyd's Quarry. If the water level in the Main Quarry is less than three feet lower than the water level in Boyd's Quarry, then the discharge from the Main Quarry into the Lower Quarry must be increased in order to lower the water level in the Main Quarry. The Lower Quarry pond is able to accommodate any additional water from the Main Quarry by increasing the pumping rate from the pond to the Des Plaines River.

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### 3. EVENTS THAT REPRESENT A SAFETY EMERGENCY

In accordance with 35 Ill. Adm. Code 845.520, this section identifies the events or circumstances that represent a safety emergency, along with a description of the procedures that will be followed to detect a safety emergency in a timely manner. The safety emergencies discussed below are based on LSQ not accepting CCR or any other waste streams and its existence as an incised surface impoundment.

#### 3.1 Main Quarry Discharge Pipes

The scenarios that would affect the Main Quarry discharge pipes are as follows:

##### 3.1.1 Destruction of the Pipes by a Tornado

If a tornado were to touch down at LSQ, damage to the discharge pipes may be possible because they are exposed. Any type of damage from a tornado or other natural disaster is unavoidable. The probability of a tornado touching down at LSQ is low, so the overall hazard rating for this scenario is low probability/low impact because the sluice pipes are no longer in use.

##### 3.1.2 Vehicle Traffic Damages the Pipes

Making contractors aware of the pipes and having spotters when large vehicles are maneuvering near the pipes will prevent any damage and/or collisions to the pipes. Also ensuring proper maintenance of the pipes will maintain the structural integrity of the pipes, which will help to minimize or eliminate any damage to the pipes in the event a collision occurs. The overall hazard rating for this event is low probability/low impact because the vehicle traffic around the pipes is minimal, but if a pipe is damaged that will cause an inconvenience requiring repair.

#### 3.2 Groundwater Extraction System

The groundwater extraction system in general consists of twelve (12) extraction wells, twelve (12) pumps, three control panels, and two underground vaults. Further detail was provided previously in Section 2.2. The scenarios that would affect the groundwater extraction system are as follows:

##### 3.2.1 Natural Disaster

In the event that a natural disaster knocks down the power lines at LSQ, the groundwater extraction system will be without power. The groundwater extraction system going offline is not considered a release; however the operation of the system is important to the operation of LSQ and is required to be in compliance with LSQ's permit. Power should be restored to the system as soon as possible, but this plan recognizes that the power distribution through the power lines is out of the control of Midwest Generation, LLC. If a prolonged power outage is to occur, other precautions should be made, such as powering the system with a temporary generator.

In addition, a tornado or severe storm could destroy or cause the control panels to malfunction. Destruction or malfunctioning of the control panels causing the pumps to go offline is not considered a release, for the same reasons the power going out is not a release, which is noted above. As noted above it is important to return the pumps to full operation as quickly as possible to ensure compliance with LSQ's landfill permit. This event has occurred in the past as a result of a lightning strike near the control panel for X101 through X104, which caused the pumps to stop operating. The non-operational pumps were discovered as part of the regular maintenance of the system and were returned to operational as quickly as possible.

The overall hazard ratings for these scenarios are medium probability/high impact. This is a result of the fact that lightning has struck nearby one of the cabinets before and caused the system to stop operating and also thunderstorms occur on a regular basis throughout the spring and summer months.

### 3.2.2 Transformer Malfunction

The power for extraction wells X105-X112 is relayed to the system using a transformer that is adjacent to the sluice pipe discharge into the Main Quarry. In the event this transformer malfunctions, those pumps would be non-operational. Malfunctioning could include a simple failure or an explosion of the transformer as a worst case situation. In the event the transformer fails, notify the appropriate personnel, as outlined in this Plan. If the transformer explodes, notify the appropriate personnel and the electric utility, whose contact information is included in this Plan, see section 6. The overall hazard rating for this scenario is low probability/high impact because the chance it would happen is very unlikely but the impact to the groundwater extraction system is high because this would cause the system to lose power, potentially for a long time.

### 3.3 Other Scenarios of Concern

Some scenarios for other areas of the site are presented below.

#### 3.3.1 Natural Disaster affecting the West Filled Area Cap

A fire on the cap of the WFA would damage the grass and loosen the soil allowing for the potential for erosion to occur. Erosion of the cap would expose CCR and allow for a potential release to occur. If CCR is released from the WFA, extent of the CCR release could extend north on to Patterson Road, west on to the Commonwealth Edison substation, south on to agricultural land, and east into the Main Quarry. This release would not extend into a waterway even if it enters the Main Quarry. If a CCR release were to enter the Main Quarry, it would be handled as part of the normal disposal process of the other CCR that enters the Main Quarry. The overall hazard rating for this scenario is low probability/medium impact because the chance for a fire is low and the effect to the cap would be detrimental. The CCR release would create a nuisance for the land that is spread to, but the nuisance could be cleaned up and taken care of relatively quickly and easily.

A tornado would cause more damage to the WFA cap than a fire and has the potential to create a greater extent of a release. Any type of damage from a tornado is unavoidable. The tornado

would certainly expose the CCR material and potentially transport it to an offsite location. The probability of a tornado touching down at LSQ is low but the potential for damage to the cap and a CCR release is high, so the overall hazard rating for this scenario is low probability/high impact.

### 3.3.2 Severe Weather Occurs at LSQ

There is the possibility for severe weather to occur at LSQ when workers are present. The presence of workers at LSQ takes place at least twice a month when the groundwater extraction system is serviced. The workers present consist of two people using typical passenger vehicles and tools to change pumps in the extraction wells. On rare occasions, additional personnel and equipment are used to service the groundwater extraction system. The weather is monitored prior to personnel being at LSQ, and if the potential for severe weather does exist, the weather is monitored while personnel are at LSQ.

If severe weather occurs while workers are present and evacuation of the site is required, the workers should notify the guard shack located off of Brandon Road and proceed to that guard shack. The guards will provide the workers with further instructions if additional shelter is needed, say in the event of a tornado or nearby chemical spill.

If severe weather causes a fire while workers are present, they should follow the notification procedures outlined in this Plan and also call the fire department using 911. Workers should not attempt to extinguish a large fire, but they can attempt to extinguish a small fire by smothering or with a fire extinguisher.

The overall hazard rating for severe weather occurring at LSQ is medium probability/high impact. Thunderstorms and large precipitation events occur every year without damaging LSQ, but it is the presence of these events and their ability to turn into something more severe that warrants the medium probability rating. A typical thunderstorm and/or large precipitation event would not cause damage to LSQ, but if the weather turns severe, damage will occur and it will affect some operation and/or portion of the LSQ property.

### 3.3.3 Releases other than CCR or CCB

Releases that involve material other than CCR and/or CCB have the potential to occur. The releases would mainly consist of oil and or fuel from vehicles that are used by personnel at LSQ during typical maintenance operations. The potential quantity of material released is small, typically less than 20 gallons and the release would have the potential to enter the Main Quarry. If the release enters the Main Quarry notify the appropriate personnel as outlined in this Plan. Another potential for a release would be during the acid treatment of the groundwater extraction system. This treatment consists of mixing an acidic solution which is then pumped through the underground discharge piping associated with the extraction systems to remove build-up of precipitated scale. The release would be from the storage tank used to contain the acid mixture as it is being pumped. This quantity is typically between 200 to 400 gallons. A release of this material does have a chance of entering the Main Quarry, but the small quantity does not pose a risk to the Main Quarry, Des Plaines River or other waterway. If a release occurs notify the appropriate personnel as outlined in this Plan



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### 3.3.4 Beneficial Reuse of Bottom Ash/Boiler Slag

As noted above in Section 2.2, some of the bottom ash/boiler slag from Joliet #9 Generating Station is beneficially reused. Lafarge removes the material as it is needed based upon market demand for their products in which the bottom ash/boiler slag is reused. Lafarge personnel are in charge of removing the material from the Main Quarry and they use their own mechanical excavator at LSQ when needed. Lafarge personnel should be aware of the notification procedures outlined in this Plan and they should have enough personnel onsite to safely perform the material removal. At times, Lafarge equipment and personnel are setup on the bottom ash/boiler slag that is in the Main Quarry to move the material to a point where it can be removed and loaded into dump trucks. At these times, Lafarge should have equipment/tools to be able to safely make their way back to the solid ground of LSQ if the bottom ash/boiler slag where their machine was located began to slough or collapse. It is Lafarge's responsibility to have an appropriate health and safety plan to conduct this work.

## 4. INCIDENT RESPONSE ACTIONS

### 4.1 General Response Procedures for Release and/or Spill

This section describes the general response procedures once an incident occurs and/or is discovered at LSQ. The following actions should be taken:

- Stabilize the Incident:
  - Evacuate the area if necessary;
  - If material has been released but is no longer flowing, contain the material to prevent further migration of the material, place a stop-gap measure at the point of release to prevent immediate reoccurrence;
  - If a material has been released that presents an immediate danger to people or the environment, initiate recovery operations of the material. Recovery operations should be completed only by qualified and trained personnel;
  - Initiate cleanup of the spilled product if a threat to human health is not present;
  - Remove equipment from the spill area, if possible;
  - If a structure or site infrastructure is damaged, assess the situation to evaluate if containment or shoring measures need to be put in place to prevent further damage;
  - Establish a security perimeter if needed, and limit personnel from the area.
- Notify appropriate personnel
  - Notify the supervising personnel at LSQ;
  - Notify Operations/shift supervisor;
  - Notify emergency personnel (Fire Dept/EMS/Police), if necessary;
  - Notify the landfill operator, operations manager, the Regional Environmental Manager;
  - Notify cleanup contractors and consultants, who can begin planning the recovery/repair options;

- Notify Will County Emergency Management Agency, IEPA, and Illinois Emergency Management Agency as necessary.
- Document the discovery, nature, and extent of the incident
  - Date/time and who discovered the incident;
  - Date/time of discovery;
  - Name of responsible party of the incident;
  - Describe the incident, including location and whether a danger or threat exists;
  - Source and cause of the incident;
  - Estimate of the quantity of material if the incident is a release;
  - Number and types of injuries (if any);
  - Media affected or threatened by the incident (i.e., water, land, or air);
  - If material entered any surface water, name the surface water and identify where the material entered the surface water;
  - Describe the weather at time of incident;
  - Describe stabilization actions;
  - Take photographs of the incident including the point of release, extent of release, and stabilization methods.
- Initiate Privileged and Confidential Protocols for CCB and CCR Material
  - Initiate privileged and confidential protocols if CCB and/or CCR material was released, any material left Midwest Generation, LLC owned/operated property, or any material entered surface water;
  - Notify corporate counsel for further instructions, use “Privileged and Confidential” on all communications.

#### 4.2 Fire Response

If a small fire breaks out, attempt to extinguish it using a fire extinguisher or other appropriate measures. If the fire can't be contained using a fire extinguisher or other appropriate measures, call the fire department. The Site location information is as follows:

- Address: 1601 S. Patterson Road, Joliet, IL 60436;
- Location: Southwest corner of Brandon Road and Patterson Road, gate entrance on Patterson Road, after the bend. The gate is approximately 0.5 miles west of the intersection.

If possible, attempts should be made to control the fire with either fire breaks or by wetting the perimeter area around the fire or in its path.

#### 4.3 Emergency Responders Contact Information

Section 5.34 below provides the contact information for the emergency responders. The appropriate Midwest Generation personnel will determine who to notify, including any affected residents, in the case of an imminent or actual site failure. Appropriate contractors will be utilized to assist Midwest Generation personnel with mitigated actions being undertaken in order

to minimize the impact of an event that has occurred. Contact information for contractors and consultants are provided below.

## 5. INFORMATION FOR INCIDENT NOTIFICATION

### 5.1 Facility Address and Location

- Address: Lincoln Stone Quarry, 1601 Patterson Road, Joliet, IL 60436
- Location: Southwest corner of Brandon Road and Patterson Road, gate entrance on Patterson Road, approximately 0.5 miles west of the corner of Patterson Road and Brandon Road.
- Entrances and Exits (see Figure 2) – There are three gates that provide access to LSQ:
  - Gate 1 – Northeast corner of LSQ, at the intersection of Brandon and Patterson Road;
  - Gate 2 – Approximately 0.5 miles west along Patterson Road from Brandon Road, this gate provides access to the Joliet Generating Station 9 bottom ash/boiler slag disposal area;
  - Gate 3 – Approximately 0.5 miles west along Patterson Road from Brandon Road, this gate provides access to the WFA and the groundwater extraction system.

### 5.2 Notification Chain within Midwest Generation, LLC

<b>Priority</b>	<b>Midwest Generation, LLC Contacts</b>
1a	Joliet 9 Station Operations/Shift Supervisor 815-207-4911 815-207-4902
1b	Joliet 29 Station Operations/Shift Supervisor 815-207-5410 815-207-5409 815-207-5402
1c	Joliet 9 Guard Shack 815-207-4918 or 815-207-4919
2	Landfill Operator DeAndre Cooley – 779-279-2321
3	Joliet 9 and 29 Stations' Operations Manager 815-207-5415
4	Regional Environmental Manager Sharene Shealey – 724-255-3220
5	LSQ Consultant – KPRG and Associates, Inc., 262-781-0475 Richard Gnat – 262-227-7755
6	Site Cleanup Contractor SET Environmental – 877-437-7455

### 5.3 Other Contact Information

<b>Agency</b>	<b>Contact</b>
Joliet Fire Department	911 or 815-724-3500
Joliet Police Department	911 or 815-724-3100 Non-emergency 815-726-2491
Will County Emergency Management Agency	EMERGENCY – 815-740-0911 Non-Emergency/Office – 815-740-8351
National Response Center	800-424-8802
Illinois Emergency Management Agency	Office – 217-782-2700 24-hour Response – 800-782-7860
Illinois Environmental Protection Agency	Imran Syed 217-782-7813

### 6.0 SITE MAP AND A SITE MAP DELINEATING DOWNSTREAM AREA

In accordance with 845.520(b)(), a site map is provided as Figure 1 and a site map close-up is provided as Figure 2. Figure 2 shows the extent of LSQ and the areas downstream of LSQ.

### 7.0 ANNUAL FACE-TO-FACE MEETING

In accordance with 845.520(b)(5), a face-to-face meeting or an exercise between representatives of Will County Station and the local emergency responders shall be offered and, if accepted, held on an annual basis. The purpose of the annual meeting is to review the EAP to assure that contacts, addresses, telephone numbers, etc. are current. The annual meeting will be held whether or not an incident occurred in the previous year. In the event an incident occurs, the annual meeting date may be moved up in order to discuss the incident closer to the date of occurrence. If no incidents have occurred, the annual meeting will be held to inform local emergency responders on the contents of the EAP and changes from the previous year. Documentation of the annual face to face meeting will be recorded and placed in the operating record for the Station.

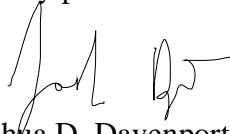
Pursuant to §845.520(d), the EAP requires modification whenever there is a change in conditions that would substantially affect the EAP in effect. Changes to the plan shall be made as appropriate, and a copy of the changes will be kept at the station, with the revised EAP placed in the facility's operating record. The written EAP must be evaluated, at a minimum, every five years to ensure the EAP is accurate with §845.520.

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## 8.0 LIMITATIONS AND CERTIFICATION

This Emergency Action Plan was prepared to meet the requirements of 845.520(b). I do hereby certify to the best of my knowledge, information, and belief that the information contained in this report is true and correct. I further certify I am licensed to practice in the State of Illinois and that it is within my professional expertise to verify the correctness of the information.

Signature:

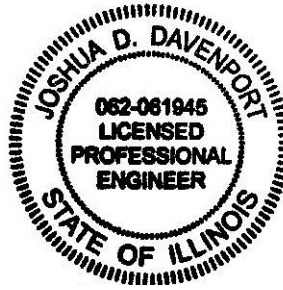


Name: Joshua D. Davenport, P.E.

Date of Certification: 10/29/21

Illinois Professional Engineer No.: 062.061945

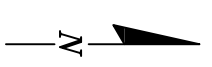
License Expires: 11/30/2021



## **FIGURES**



0 500'  
APPROXIMATE SCALE



ENVIRONMENTAL CONSULTATION & REMEDIATION

**K P R G**

KPRG and Associates, Inc.

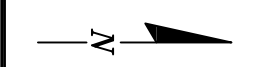
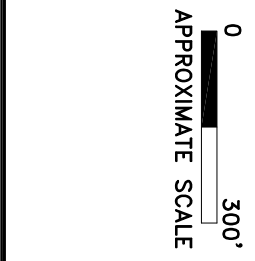
14655 West Lisbon Road, Suite 1A Brookfield, Wisconsin 53005 Telephone 262-781-0475 Facsimile 262-781-0478  
414 Plaza Drive, Suite 106 Westmont, Illinois 60559 Telephone 630-325-1300 Facsimile 630-325-1593

SITE MAP INCLUDING GENERATING STATIONS

LINCOLN STONE QUARRY  
JOLIET, ILLINOIS

Scale: 1" = 500' Date: October 25, 2021

KPRG Project No. 12815 FIGURE 1



ENVIRONMENTAL CONSULTATION & REMEDIATION

# K P R G

KPRG and Associates, Inc.

14655 West Usbon Road, Suite 1A Brookfield, Wisconsin 53005 Telephone 262-781-0475 Facsimile 262-781-0478  
 414 Plaza Drive, Suite 106 Westmont, Illinois 60559 Telephone 630-325-1300 Facsimile 630-325-1593

LINCOLN STONE QUARRY SITE MAP

LINCOLN STONE QUARRY  
 JOLETT, ILLINOIS

Scale: 1" = 300' Date: October 25, 2021

KPRG Project No. 12815 FIGURE 2