

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

In the Matter of:)
)
)
STANDARD FOR THE DISPOSAL OF) PCB 2020-019
COAL COMBUSTION RESIDUALS) (Rulemaking - Water)
IN SURFACE IMPOUNDMENTS:)
PROPOSED NEW 35 ILL. ADMIN.)
CODE 845)
)
)

NOTICE OF ELECTRONIC FILING

To: Attached Service List

PLEASE TAKE NOTICE that on September 10, 2020, I electronically filed with the Clerk of the Illinois Pollution Control Board the **PREFILED QUESTIONS OF ELPC, PRAIRIE RIVERS NETWORK, AND SIERRA CLUB TO SHARENE SHEALEY.** copies of which are served on you along with this notice.

Dated: September 10, 2020

Respectfully Submitted,



Jeffrey T. Hammons, (IL Bar No. #6324007)
Environmental Law & Policy Center
1440 G Street NW
Washington DC, 20005
T: (785) 217-5722
JHammons@elpc.org

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:)
)
STANDARDS FOR THE DISPOSAL OF) R 20-19
COAL COMBUSTION RESIDUALS IN) (Rulemaking – Land)
SURFACE IMPOUNDMENTS: PROPOSED)
NEW 35 ILL. ADM. CODE 845)
)

PREFILED QUESTIONS OF ELPC, PRAIRIE RIVERS NETWORK, AND SIERRA CLUB TO SHARENE SHEALEY

1. On page 3 of your testimony, you state “Since MWG began operating the Stations in 1999, the coal ash ponds have been used only for temporary storage of coal ash until the material is removed from the ponds for beneficial reuse.”
 - a. Is this statement true about operations prior to MWG’s ownership?
 - b. Has Lincoln Stone Quarry been used only for temporary storage of CCR?
 - c. Has the Former Ash Basin at Powerton been used only for temporary storage of CCR?
 - d. Has the Old Pond at Waukegan been used only for temporary storage of CCR?
 - e. Has the source of the coal burned at the plants changed over time?
 - f. Did the coal burned at the plants change over time from high-sulfur coal to lower-sulfur Powder River Basin coal?
 - i. If so, at which plants?
 - ii. If so, when?
 - iii. If so, is CCR generated from high-sulfur coal mixed with CCR generated from low-sulfur coal in any of MWG’s CCR surface impoundments?
 - g. Has MWG installed dry sorbent injection (DSI) on any of its plants?
 - i. If so, which ones?
 - ii. If so, when?
 - iii. If so, is CCR generated after DSI use commenced mixed with CCR generated before DSI use commenced in any of MWG’s CCR surface impoundments?
 - h. Has MWG installed activated carbon injection on any of its plants?
 - i. If so, which ones?
 - ii. If so, when?

- iii. If so, is CCR generated after activated carbon injection commenced mixed with CCR generated before activated carbon injection began?
2. On pages 2 to 3 of your testimony, including in footnote 1, you indicate that IEPA designated sixteen of MWG areas as CCR surface impoundments. On page 4 of your testimony, you state that “MWG completed its installation of new HDPE liners in all nine of its CCR surface impoundments.”
 - a. Did MWG reline Lincoln Stone Quarry?
 - i. Does Lincoln Stone Quarry have any liner?
 - b. Did MWG reline the Former Ash Basin at Powerton Station?
 - i. Does the Former Ash Basin at Powerton Station have any liner?
 - c. Did MWG reline the Old Pond at Waukegan Station?
 - d. Of the nine CCR surface impoundments that MWG relined, did MWG install compound liners at any of those impoundments? If so, please describe in detail the composition of all components of any such compound liner.
3. On page 2 of your testimony, in footnote 1, you state that Illinois EPA has designated seven areas as CCR surface impoundments that “MWG contends are not CCR surface impoundments as that term is defined in the Act. Six of the areas either do not contain liquid, are not designed to hold an accumulation of CCR and liquid, or do not treat, store or dispose of CCR.”
 - a. What is MWG’s basis for contending that the Former Ash Basin at Powerton Station is not a CCR surface impoundment?
 - b. What is MWG’s basis for contending that the Lincoln Stone Quarry is not a CCR surface impoundment?
 - c. What is MWG’s basis for contending that the remainder of the areas noted are not CCR surface impoundments? Please separately specify the contentions for each such area.
 - d. Is there CCR in any of the seven areas you reference? If so, please identify which areas.
 - e. Are there liquids in any of the seven areas you reference? If so, please identify which.
 - f. Has groundwater monitoring been performed at any of the seven areas you reference?
 - i. If so, has that monitoring revealed exceedances of proposed Part 845 groundwater protection standards or Part 620 groundwater quality standards? If yes, please state for which of those seven areas such exceedances were found.

4. On page 3 of your testimony, you state that the five relevant stations—Joliet 29 Station, Joliet 9 Station, Powerton Station, Waukegan Station, and Will County Station (the “Stations”)—are “located in industrial areas”?
 - a. How do you define “industrial areas”?
 - b. Do you know how far the nearest residential dwelling is to each Station?
 - c. Do you know the density of residential units within 1 mile of each Station?

5. On page 4 of your testimony, you state that “[t]he CCR surface impoundments at the Stations have been subject to multiple federal and state statutes and regulations for decades” and “the Draft Rule is seeking to fine tune regulations for specific areas of power-generating stations.”
 - a. Prior to the “Disposal of Coal Combustion Residuals from Electric Utilities” (80 Fed. Reg. 21,301 (April 17, 2015)), codified at 40 CFR Part 257 (“the Federal CCR Rule”), did any rule explicitly require any specific liner to be installed at CCR surface impoundments in Illinois?
 - b. Did any rule specify closure requirements for all CCR surface impoundments in Illinois?
 - c. Did any rule explicitly require groundwater monitoring at or around CCR surface impoundments in Illinois?
 - d. Referring to the nine CCR surface impoundments that MWG does not dispute are “CCR surface impoundments as that term is defined in the Act” (as discussed in your testimony at page 2, footnote 1), has MWG conducted groundwater monitoring at or around those impoundments for decades?
 - e. Has MWG conducted groundwater monitoring at or around those impoundments for more than one decade or ten years?
 - f. Do you know if MWG ever argued that IEPA did not have the authority to require MWG to conduct monitoring of CCR surface impoundments prior to effectiveness of the Federal CCR Rule?
 - i. If so, when and where?

6. On page 5 of your testimony, you state “[t]he groundwater at the Stations has always been subject to the groundwater regulations under 35 Ill. Adm. Code 620.”
 - a. Is it possible to determine ongoing compliance with groundwater regulations without groundwater monitoring? If so, how?
 - b. Would it be difficult or impossible to establishing background by just taking samples of groundwater instead of monitoring?

7. On page 6 of your testimony, you discuss “disposal location[s] for the excavated CCR.”
 - a. How many landfills in Illinois have available space?
 - b. How much space does each of those landfills have?

- c. How many new landfills have been constructed in Illinois in the last 3 years? Of what size?
 - d. Do you know how many years of landfill capacity Illinois landfills are predicted to have?
 - i. If so, is your answer based on no new landfills being constructed and no expansions of existing landfills?
 - e. Do you know if it possible to transport CCR for disposal outside of Illinois?
8. On page 6 of your testimony you state that closure by removal would, in certain circumstances, have “considerable” impact “because of...the much higher potential for exposure to human and environmental receptors associated with removal.”
- a. Exposure to human and environmental receptors can be reduced, correct?
 - b. Do you agree that measures including but not limited to covering vehicles transporting CCR, drop distance limits for loading and transfer points, truck wheel washing, and limitations on activity during high winds mitigate exposure to CCR dust during removal? If not, please provide the basis for your answer.
 - c. Do you agree that air monitoring helps to determine whether ongoing air pollution controls are effectively limiting air pollution, including dust pollution? If not, please provide the basis for your answer.
 - d. Do you agree that transportation plans can help mitigate safety concerns associated with transport of CCR? If not, please provide the basis for your answer.
 - e. Do you agree that full evaluation of all potential CCR transport methods assists communities and the Agency in evaluating which options are most protective of human health and the environment? If not, please provide the basis for your answer.
9. On page 7 of your testimony you state “Any new method of transportation of CCR, where new is determined on a case-by-case basis, from an existing CCR surface impoundment for off-site disposal would likely require new infrastructure.”
- a. Would the determination as to whether there is a need for new infrastructure also have to be made on a case-by-case basis?
 - b. How does coal currently get delivered to Powerton Station?
 - i. Is there a rail line or spur on the Powerton Station property?
 - ii. Is the Illinois River immediately adjacent to the Powerton Station property?
 - iii. Do you know if barges travel on the Illinois River adjacent to Powerton Station?
 - c. How does coal currently get delivered to Waukegan Station?

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- i. Is there a rail line or spur on the Waukegan Station property?
 - d. How does coal currently get delivered to Will County Station?
 - i. Is there a rail line or spur on the Will County Station property?
 - ii. Is the Des Plaines River immediately adjacent to the Will County Station property?
 - iii. Is the Chicago Sanitary and Ship Canal immediately adjacent to the Will County Station property?
 - iv. Do you know if barges travel on the Des Plaines River or Chicago Sanitary and Ship Canal adjacent to Will County Station?
 - e. How did coal formerly get delivered to Joliet 9 Station?
 - i. Is there a rail line or spur on the Joliet 9 Station property?
 - ii. Is the Des Plaines River immediately adjacent to the Joliet 9 Station property?
 - iii. Do you know if barges travel on the Des Plaines River adjacent to Joliet 9 Station?
 - f. How did coal formerly get delivered to Joliet 29 Station?
 - i. Is there a rail line or spur on the Joliet 29 Station property?
 - ii. Is the Des Plaines River immediately adjacent to the Joliet 29 Station property?
 - iii. Do you know if barges travel on the Des Plaines River adjacent to the Joliet 29 Station property?
10. On page 7 of your testimony you state, in reference to moving material by methods such as barge or train, that “depending on the method, could increase risks to the environment.”
 - a. What is the basis for your opinion that the barge method of moving material “could increase risks to the environment?”
 - b. What is the basis for your opinion that the train method of moving material “could increase risks to the environment?”
11. On page 7, you state that “Without new infrastructure, transporting ash via barge or rail would increase fugitive CCR emissions from material handling by increasing the number of transfer points.”
 - a. Is this based on the premise of no new infrastructure being installed for handling CCR?
 - b. If new infrastructure is installed, could an increase in fugitive emissions from CCR handling be avoided?

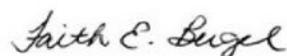
- c. If new infrastructure is not installed, do you contend that controls could not be implemented to limit fugitive emissions from existing infrastructure? If so, please provide the basis for that contention.
12. On page 7 of your testimony, you discuss “considerations that are critical in Environmental Justice communities.”
- a. What is the basis of your statement that “these types of considerations are critical in Environmental Justice communities”?
 - b. Have you asked members of Environmental Justice communities whether such considerations are “critical” to them? If so, please describe with whom you spoke and which Environmental Justice community they belong to.
 - c. Is Lincoln Stone Quarry located in an Environmental Justice community?
 - d. Did MWG host a meeting to present the Assessment of Corrective Measures for Lincoln Stone Quarry to the public on August 27, 2019?
 - i. Did you attend that August 27 meeting?
 - ii. Did MWG follow up with answers to members of the public who asked questions that MWG was not able to answer at that meeting?
 - e. Are you familiar with the letter that William Naglosky sent to Jennifer Cassel on Sept. 6, 2019 (Attachment 1) in response to a letter Jennifer Cassel sent on Aug. 23, 2019 (Attachment 2)?
 - i. Mr. Naglosky stated in that letter that “MWG is reviewing community input received at the August 27 meeting.”
 - ii. Were you involved in reviewing community input received at that meeting?
 - iii. What did “reviewing community input received the August 27 meeting” entail?
 - iv. Did MWG respond to any community input after that meeting?
 1. If so, what community input did MWG respond to?
 2. How did MWG respond?
 3. To whom did MWG respond?
 4. When did MWG respond?
 - f. Jennifer Cassel sent two follow up letters to Mr. Naglosky’s letter (Attachments 3 and 4). Are you familiar with those letters?
 - i. Did MWG respond to either one of those letters?
 - ii. One of those letters contained questions asked at the August 27th meeting and repeated in that letter (Attachment 4). Did MWG ever communicate answers to those questions to any member of the community?

1. If so, what question did MWG respond to?
 2. How did MWG respond?
 3. To whom did MWG respond?
 4. When did MWG respond?
- g. NRG spokeswoman Pat Hammond, stated to the Herald News that “the company is ‘committed’ to holding another meeting” as reported in an article published on Sept. 12, 2019 (Attachment 5).
 - i. Did MWG ever hold “another meeting” as Pat Hammond referenced in this article?
- h. Did NRG offer Attachment 6 as a public presentation at that meeting?
 - i. Did MWG make that presentation available on its Federal CCR website after the meeting?
 - ii. Does that presentation mention anywhere that LSQ has caused exceedances of Part 620 IL groundwater standards?
 - iii. Does that presentation mention anywhere that without pumping, groundwater exceeding Part 620 standards would travel outside the property lines of LSQ?
 - iv. If LSQ were to close in place, does modeling indicate when groundwater standards would be achieved?
 - v. If LSQ were to close in place, does modeling indicate when pumping could be discontinued?
 - vi. Does that presentation state anywhere that there are benefits to removal?
 1. If so, what benefits are mentioned?
 2. If so, where in the presentation are those benefits mentioned?
13. On page 9 of your testimony, you state: “While the cost of financial assurance will vary across impoundments based on size and risk, a general rule of thumb is that each \$1,000 of financial assurance costs \$10.”
 - a. What is the basis for your “general rule of thumb?
 - b. Does MWG currently have any financial assurances covering any of its CCR surface impoundments? If yes, what are the costs of those financial assurances and what do they cover?
14. On page 9 of your testimony, you state: “While MWG does not object to financial assurance, the increased cost must be properly accounted for in an analysis of the economic impact to the people of Illinois.”
 - a. What does “properly accounted for in an analysis of the economic impact to the people of Illinois” mean?

- b. Do you offer a methodology on how to “properly account” the cost of financial assurance and its impact on the people of Illinois? If yes, how did you arrive at that methodology?
15. On page 9 of your testimony, you state “[a] leachate collection system placed above the liner of a CCR surface impoundment, as proposed in the Draft Rule, serves no functional purpose.”
- a. Are you familiar with the purpose that IEPA has articulated for such a leachate collection system?
- b. Would a leachate collection system placed above the composite liner minimize the hydraulic head on the composite liner? If not, why not?
- c. Would minimizing the head on the liner system “decrease the potential for the movement of fluids through the liner”? If not, why not?
- d. Would having a filterable layer placed above the leachate collection system reduce the amount of leachate that would reach the leachate collection system? If not, why not?
16. On page 12 of your testimony, you state: “Accordingly, to allow for the development of a scientifically sound groundwater monitoring program and allow for preparation of a complete operating permit application, operating permits should be due fifteen months after the effective date of the Draft Rule.”
- a. Does MWG currently conduct groundwater monitoring at or near any of its CCR surface impoundments?
- i. If yes, which impoundments have existing groundwater monitoring and which impoundments do not?
- ii. If yes, could existing groundwater monitoring be used to comply with the rule’s requirements at all of MWG’s CCR surface impoundments? Why not all? At which ones could existing groundwater monitoring not be used to comply with the rule’s requirements at all of MWG’s CCR surface impoundments?
- iii. If not all, could existing groundwater monitoring be used to comply with the rule’s requirements at some of MWG’s CCR surface impoundments?
- iv. If yes, is existing groundwater monitoring conducted according to a “scientifically sound groundwater monitoring program?”

Dated: September 10, 2020

Respectfully submitted,



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Attorneys for Prairie Rivers Network

CERTIFICATE OF SERVICE

The undersigned, Jeffery T. Hammons, an attorney, certifies that I have served by email the Clerk and by email the individuals with email addresses named on the Service List provided on the Board's website, available at <https://pcb.illinois.gov/Cases/GetCaseDetailsById?caseId=16858>, true and correct copies of the **PREFILED QUESTIONS OF ELPC, PRAIRIE RIVERS NETWORK, AND SIERRA CLUB TO SHARENE SHEALEY**, before 5 p.m. Central Time on September 10, 2020. The number of pages in the email transmission is 14 pages.

Respectfully Submitted,



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<p>Gibson, Dunn, & Crutcher, LLP Michael L. Raiff mraiff@gibsondunn.com 2001 Ross Avenue Suite 2100 Dallas, TX 75201</p>	<p>Earthjustice Jennifer Cassel jcassel@earthjustice.org Thomas Cmar tcmar@earthjustice.org Melissa Legge mlegge@earthjustice.org Mychal Ozaeta mozaeta@earthjustice.org 311 S. Wacker Drive Suite 1400 Chicago, IL 60606</p>
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**The following are attachments to the Pre-Filed Questions Of
ELPC, Prairie Rivers Network, And Sierra Club to Sharene
Shealey.**

ATTACHMENT 1

Midwest Generation, LLC
Joliet Generating Station
1800 Channahon Road
Joliet, Illinois 60436

September 6, 2019

Via FedEx

Jennifer Cassel
Earthjustice
311 S. Wacker Drive, Suite 1400
Chicago, IL 60606

RE: Request for public meetings and information for Lincoln Stone Quarry dated August 23, 2019

Dear Ms. Cassel:

Thank you for your letter dated August 23, 2019.

As you are aware, as required by Title 40 of the Code of Federal Regulations Section 257.96(e)¹, Midwest Generation, LLC ("MWG") hosted a meeting to present the Assessment of Corrective Measures for Lincoln Stone Quarry to the public on August 27, 2019. The meeting, which as you know was well attended, was held at Mt. Zion Baptist Church, located less than one mile from Lincoln Stone Quarry. MWG is reviewing community input received at the August 27 meeting.

Contrary to what you stated in your letter of August 23, MWG provided public notice of the August 27 meeting via publication in two newspapers circulated in Joliet: The Times Weekly (published August 8 and 22, 2019) and The Herald News (published August 11-13, 2019).

Per your request, copies of the Correct Measures Assessment Report and Annual Groundwater Monitoring and Corrective Action reports for calendar years 2017 and 2018 are enclosed. These documents have been available on and can be accessed through our Coal Combustion Residuals website: <https://www.nrg.com/legal/coal-combustion-residuals.html>. MWG intends to continue to comply with the federal CCR Rule requirements, including future requirements to post on its Coal Combustion Residuals website progress reports every six months to update the public about its selection and design of remedy and to publish a report describing the final selected remedy and how the remedy meets the CCR Rule requirements.

In closing, MWG would like to thank Mt. Zion Baptist Church for generously hosting the community to discuss MWG's Assessment of Corrective Measures for Lincoln Stone Quarry.

Sincerely,



William Naglosky
Plant Manager
Joliet Generating Station

Enclosures

cc (via electronic mail and w/o enclosures):

Mayor Bob O'Dekirk
Mayor, City of Joliet

Terry Morris
District 5 Councilman, City of Joliet

Pastor Herbert Brooks
Will County Board Member, District 8 (Joliet)

¹257.96(e) states: The owner or operator must discuss the results of the corrective measures assessment at least 30 days prior to the selection of remedy, in a public meeting with interested and affected parties.

Jennifer Cassel

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September 6, 2019

Denise Winfrey
County Board Speaker, Will County Board Member, District 8 (Joliet)

Rachel Ventura
Will County Board Member, District 9 (Joliet)

Illinois Representative John Conner

Illinois Senator Pat McGuire

Illinois EPA Director John Kim

Kimberly Harris
Water Division, USEPA Region 5

cc (via FedEx and w/o enclosures):

Illinois Governor J.B. Pritzker

U.S. Representative Bill Foster

U.S. Senator Dick Durbin

U.S. Senator Tammy Duckworth

ATTACHMENT 2

Jennifer Cassel
Earthjustice
311 S. Wacker Drive, Suite 1400
Chicago, IL 60606
T: 312-500-2198
jcassel@earthjustice.org

August 23, 2019

NRG Energy, LLC
Mr. Peter O'Day and Mr. William Naglosky
Lincoln Stone Quarry
1800 Channahon Rd
Joliet, IL 60436
William.naglosky@NRG.com
Peter.oday@NRG.com
peter.o'day@nrgenergy.com

RE: Request for public meetings and information about coal ash pollution from Lincoln Stone Quarry

Mr. O'Day and Mr. Naglosky:

Citizens Against Ruining the Environment, Citizens Against Longwall Mining, Clean Power Lake County, Earthjustice, Environmental Law & Policy Center, Faith in Place Action Fund, Prairie Rivers Network, Sierra Club, and Springfield Clean write to request that NRG Energy regularly provide updated information and hold public meetings for residents interested in and impacted by coal ash contamination from the Lincoln Stone Quarry in Joliet, Illinois. As concerned residents of Joliet and other Illinois communities harmed by coal ash, we are very concerned about the groundwater contamination caused by the Lincoln Stone Quarry and its potential to harm local residents' health, environment and economic well-being. In order to achieve a timely and complete cleanup, we would like to have a meaningful role in the assessment of corrective measures (also known as the cleanup plan) and would like to be kept informed about decisions that may affect our health and livelihood. Thus, we are making the following requests to enhance public engagement in the upcoming cleanup process.

Requested Public Meetings

(1) Initial public meeting

Pursuant to the federal Coal Combustion Residuals (CCR) Rule, NRG is required to hold at least one public meeting with affected and concerned residents to discuss the assessment of corrective measures. *See* 40 C.F.R. § 257.96(e).

Community interest in the cleanup of contaminated groundwater at the Lincoln Stone Quarry is significant. NRG's less than two-week notice of its public meeting scheduled for August 27th, 2019, is inadequate. Two weeks notice – merely by word of mouth, with no publication as of the date of this letter – is nowhere near adequate to ensure that interested and affected parties are able to attend the meeting. Moreover, scheduling the meeting from 3-7pm on a Tuesday makes it very challenging for many interested and affected parties to attend.

NRG should schedule a follow-up meeting at one of the following times and locations in order to maximize attendance of all interested and affected residents: on weekday evenings or weekends in October, 2019, at Joliet Junior College – City Center campus (235 N Chicago St, Joliet, IL 60432) or Joliet City Hall. Spanish translation should be provided at the meeting. Once the date, time and location of the public meeting is established, we ask that NRG post a notice of the meeting on its publicly available CCR website in English as well as Spanish and publish the notice in the Joliet Herald-News.

(2) Subsequent public meetings

We ask that bimonthly public meetings with NRG continue thereafter until a final remedy is chosen, and semi-annually after NRG begins implementation of the cleanup plan until completion of the final remedy, with the following specifications for all public meetings:

- NRG representatives at the meeting should include employee(s) with expertise in hydrogeology and toxicology who are well acquainted with the results of completed and ongoing testing, employee(s) with knowledge of the current and planned coal ash pollution containment and cleanup, employee(s) with decision making authority over NRG's cleanup plan, and an employee who will be the designated community liaison and serve as the primary contact with the community.
- NRG should supply hard copies of the cleanup plan to all attendees at the public meeting.
- The format of the meeting should include a formal presentation by NRG that provides the following specific information, at minimum: the proposed methods of removal and/or containment of coal ash; specific results of recent testing for coal ash pollution in drinking water, surface water, and groundwater; specific plans for additional testing of drinking water, surface water, groundwater and other media such as river or lake sediments and soil; and the timing of the proposed cleanup, including its commencement and completion.
- NRG should allot at least forty-five (45) minutes following the presentation to answer questions and hear comments from attendees at the public meeting. In the event that the time allotted for questions and comments is not sufficient or in the event that NRG does not have an answer to a question raised during the public meeting, NRG should provide for the submission of written questions and comments at the meeting and provide answers on its CCR website. If questions or comments are submitted, we ask that NRG develop written responses and post such responses within five (5) days on its CCR website.
- NRG should have a translator at the meeting who can translate the discussion into Spanish simultaneously. NRG should distribute copies of its cleanup plan and all other documents at the meeting in both English and Spanish. Failure to do so could result in a violation of the Civil Rights Act, which prohibits discrimination on the basis of national origin.
- NRG should inform the public about the levels of contamination it found in drinking water (as allowed in light of privacy interests), surface water and groundwater including, at minimum: levels of antimony, arsenic, barium, beryllium, boron, cadmium, chromium, chromium VI, cobalt, fluoride, lead, lithium, mercury, molybdenum, radium 226 and 228 combined, selenium, sulfate and thallium. NRG should share all data concerning levels of coal ash contaminants that occur in groundwater above the EPA standards listed in Table 1 of this letter, as well as any levels of pollutants that exceed Illinois groundwater protection standards. If any groundwater contains pollutants above the listed safe levels, these levels should be clearly disclosed. In addition, NRG should produce a map clearly depicting the coal ash site and the location of any groundwater wells or surface sampling points. Pollutants detected above safe levels should be clearly and specifically indicated on the map.
- NRG should identify all potential sources of coal ash pollution at the Lincoln Stone Quarry. Sources of such coal ash pollution include regulated landfills and surface impoundments as well as disposal areas and coal ash fill sites that may not currently be regulated by the federal CCR Rule. For example, publicly available information makes clear that there are "filled" areas of the Lincoln Stone Quarry – specifically, the "West Filled Area" – where coal ash was also dumped. NRG should identify the volumes of coal ash stored or disposed at each of the identified disposal and fill sites.
- NRG should present at the meeting a draft "Community Involvement Plan" that indicates a proposed schedule of additional public meetings, clear channels of communication with a designated employee of NRG or a designated consultant, and specified future opportunities for public engagement in the cleanup plan and remediation activities.

Written Information and Documentation

We request that NRG post the following documents on its publicly available CCR website. We further ask that two (2) copies of the documents be provided in hard copy to the Joliet Public Library (150 N Ottawa St, Joliet, IL 60432) in Joliet, Illinois. We ask that NRG provide existing documents within fourteen (14) days of receipt of this letter, continuously maintain these repositories of information, and update within five (5) days of completion of each new or revised document. All documents should be provided in English as well as Spanish.

Our requested documents from the Lincoln Stone Quarry include, but may not be limited to:

- Assessment of Corrective Measures (drafts and final copies).
- Monthly progress reports to update the public about NRG's progress on developing and implementing its cleanup plan.
- Groundwater monitoring data for both detection and assessment monitoring.
- Information, including location maps, for all new groundwater monitoring wells installed as part of the investigation or remedial action.
- A preliminary report(s) describing the final selected remedy and how the remedy meets the CCR Rule requirements. We request that NRG provide the public with ninety (90) days' notice and an opportunity to comment on the report, on the public record both in writing and orally, before it is finalized.
- After NRG has selected a remedy, reports every six months to update the public on the progress of cleanup until the completion of the cleanup and any post-cleanup or post-closure monitoring period.
- Detailed minutes from all public meetings within five (5) days after a public meeting, and all documents distributed at the meeting in English and Spanish.
- Real-time video stream of all public meetings, thereafter maintained on NRG's CCR website along with all documents distributed at the meeting, as well as two (2) disk copies at the Joliet Public Library (150 N Ottawa St, Joliet, IL 60432) in Joliet, Illinois.
- Notifications of job and job training opportunities related to restoring the environment, protecting public health, and mitigating damage from the Lincoln Stone Quarry. We ask NRG to prioritize hiring from the local community and training of local residents who have been most impacted by coal ash pollution. Our properties values may decline and we may face increasing costs of health care due to coal ash.

All of the requested written communications above are in addition to the federal CCR Rule requirements to publish progress reports every six months to update the public about the design of its cleanup plan and to publish a report describing the final selected remedy and how the remedy meets the CCR Rule requirements. *See* 40 C.F.R. §§ 257.97(a) and 257.99(e).

We ask that, within fourteen (14) days of receipt of this letter, NRG agrees to schedule a follow-up meaningful public meeting, at the times, dates, and locations requested, by responding to us at the above-listed email address and post the existing requested documents on its CCR website for public access and two (2) hard copies of the documents to the Joliet Public Library (150 N Ottawa St, Joliet, IL 60432) in Joliet, Illinois. If NRG fails to do so, we will notify the community, press and elected officials that NRG has refused our request. We also may consider further options available to us under law.

We look forward to NRG prompt cooperation in providing all the documents described above, scheduling a first public meeting, and scheduling public meetings thereafter as requested in this letter. If you have questions regarding this request, please contact Jennifer Cassel, (312) 500-2198, jcassel@earthjustice.org.

Sincerely,



Jennifer Cassel
Earthjustice

Ellen Rendulich
Citizens Against Ruining the Environment

Mary Ellen DeClue
Citizens Against Longwall Mining

Dulce Ortiz
Clean Power Lake County

Jeffrey Hammons
Kiana Courtney
Environmental Law & Policy Center

Celeste Flores
Faith in Place Action Fund

Andrew Rehn
Prairie Rivers Network

Faith Bugel
Sierra Club

Pat Langley
Springfield Clean

cc:

Mayor Bob O'Dekirk
Mayor, City of Joliet

Terry Morris
District 5 Councilman, City of Joliet

Pastor Herbert Brooks
Will County Board Member, District 8 (Joliet)

Denise Williams
Will County Board Member, County Board Speaker, District 8 (Joliet)

Rachel Ventura
Will County Board Member, District 9 (Joliet)

Il. Rep. John Conner

II. Sen. Pat McGuire

Illinois EPA Director John Kim

Illinois Governor J.B. Pritzker

U.S. Rep. Bob Foster

U.S. Sen. Dick Durbin

U.S. Sen. Tammy Duckworth

Kimberly Harris
Water Division, US EPA Region 5

Attachment:

Table: U.S. EPA Health-Based Limits of Coal Ash Pollutants in Drinking Water

Constituent	Health-based Limit
Antimony	6 µg/L
Arsenic	10 µg/L
Barium	2 mg/L
Beryllium	4 µg/L
Boron	3 mg/L
Cadmium	5 µg/L
Chromium	100 µg/L
Chromium IV	50 ug/L*
Cobalt	6 µg/L
Fluoride	4 mg/L
Lead	15 µg/L
Lithium	40 µg/L
Mercury	2 µg/L

Molybdenum 40 µg/L

Radium 5 pCi/L

Selenium 50 µg/L

Sulfate 500 mg/L

Thallium 2 µg/L

* California Department of Public Health Standard (2018)

ATTACHMENT 3

Jennifer Cassel
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Chicago, IL 60606
T: 312-500-2198
jcassel@earthjustice.org

October 4, 2019

NRG Energy, LLC
Mr. William Naglosky
Lincoln Stone Quarry
1800 Channahon Rd
Joliet, IL 60436
William.naglosky@NRG.com

RE: NRG's response to request for public meetings and information about coal ash pollution from Lincoln Stone Quarry

Mr. Naglosky:

Thank you for your response, dated Sept. 6, 2019, to the letter sent to you on August 23, 2019, in which local, state, and national organizations representing communities impacted by coal ash requested additional public meetings and information about coal ash pollution from Lincoln Stone Quarry.

We are pleased that NRG is reviewing community input from the meeting and appreciate receiving a copy of the assessment of corrective measures and groundwater monitoring reports. We also appreciate that NRG has posted a copy of its PowerPoint presentation concerning the assessment of corrective action measures on its CCR website.

However, your response is otherwise unsatisfactory and creates more questions than answers.

Most critically, when and how does NRG propose to respond to the many concerns raised by local residents and representatives of public interest organizations at the August 27, 2019 meeting? Will NRG set up a "questions and answers" website and send updates via regular ("snail") mail and, for those interested, text message and/or email? **Crucially, will NRG promise not to move forward with closure and corrective action at the Lincoln Stone Quarry until it has met again with concerned residents to address their questions?**

Residents' health and safety is paramount in this process and neither they, nor any of the undersigned, can consider NRG a good community partner unless their questions are fully explored and addressed.

More Public Meetings are Essential to Ensuring Public Involvement

In order for those numerous concerns to be addressed in a meaningful way that is understandable and useful to community members, NRG must – as meeting attendees repeatedly requested – commit to additional meetings with and in the community. We are aware that the [Joliet Herald-News has reported that NRG is "committed" to holding another meeting](#), but neither that newspaper article nor your response says anything about when and where that meeting will be held, whether NRG will ensure that the company's staff attending the meeting is prepared to answer residents' questions, what materials will be provided there or whether those materials and/or translation will be provided for Spanish speakers.

NRG should schedule a follow-up meeting at one of the following times and locations in order to maximize attendance of all interested and affected residents: on weekday evenings or weekends in late October or early November, 2019, at Joliet Junior College – City Center campus (235 N Chicago St, Joliet, IL 60432) or Joliet City Hall. Spanish translation should be provided at the meeting. Once the date, time and location of the public meeting is established, we ask that NRG post a notice of the meeting on its publicly available CCR website in English and Spanish, publish the notice in the Joliet Herald-News, send hard copy-notices to residents within a 1 mile radius of the Lincoln Stone Quarry. We further ask that NRG offer residents and concerned attendees the opportunity to be added to an electronic mailing list and/or U.S. mailing list to which notices and updates concerning the Lincoln Stone Quarry coal ash dump will be sent.

Moreover, as requested in our August 23, 2019 letter, we repeat the demand that public meetings with NRG continue every other month thereafter until a final remedy is chosen; once NRG begins implementation of the cleanup plan, public meetings should be held semi-annually until completion of the final remedy. We reiterate our requests that:

- All subsequent meetings include the specifications listed on page 2 of the August 23rd letter; and
- NRG provide hard copies, in English and Spanish, of any updates to, or new, documents specified on page 3 of the August 23rd letter at those meetings.

We look forward to NRG prompt cooperation in providing all the documents described above, scheduling a first public meeting, and scheduling public meetings thereafter as requested in this letter. If you have questions regarding this request, please contact Jennifer Cassel, (312) 500-2198, jcassel@earthjustice.org.

Sincerely,



Jennifer Cassel
Earthjustice

Mary Ellen DeClue
Citizens Against Longwall Mining

Ellen Rendulich
Citizens Against Ruining the Environment

Dulce Ortiz
Clean Power Lake County

Jeff Hammons
Kiana Courtney
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cc:

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Illinois EPA Director John Kim
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Illinois Governor J.B. Pritzker

U.S. Rep. Bob Foster
Hilary.Denk@mail.house.gov

U.S. Sen. Dick Durbin

U.S. Sen. Tammy Duckworth

Kimberly Harris
Water Division, US EPA Region 5
harris.kimberly@epa.gov

ATTACHMENT 4

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Chicago, IL 60606
T: 312-500-2198
jcassel@earthjustice.org

October 4, 2019

NRG Energy, LLC
Mr. William Naglosky
Lincoln Stone Quarry
1800 Channahon Rd
Joliet, IL 60436
William.naglosky@NRG.com

RE: NRG's response to request for public meetings and information about coal ash pollution from Lincoln Stone Quarry; specific follow-up questions

Mr. Naglosky:

Thank you for your September 6, 2019 response to the letter sent to you by numerous local, state, and national organizations on August 23, 2019 concerning the Lincoln Stone Quarry. As detailed in the August 23rd letter and a separate letter dated today, the undersigned are concerned about NRG's failure to make a meaningful effort to inform residents about the company's Aug. 27, 2019 meeting and unwillingness to specify times and dates for follow-up meetings.

We write separately here to make sure NRG has an initial list of the specific questions that residents and representatives of public interest organizations asked at the August 27th meeting. We recognize that many questions were asked that, in NRG representatives own words, NRG was not prepared to answer during the meeting.

To ensure NRG is prepared to provide answers at the follow-up meetings we have requested, we are reiterating those questions here:

Well testing:

- Will NRG ensure that every concerned community member living near the Lincoln Stone Quarry coal ash dump has an opportunity to have their well water tested for coal ash contaminants, at NRG's expense? When and how does NRG propose to offer that opportunity?
- Does NRG plan to offer, at its expense, water testing for residents who signed the sign-up sheet circulated near the end of the August 27th meeting for those who want their water tested? How and when will it follow up with the people on that list?
- How will NRG reach out to community members who (a) left the meeting before NRG offered to take the names of residents interested in water testing, (b) were at the meeting but did not hear of

the opportunity to sign up to get their water tested, or (c) were not informed of or able to attend the August 27 meeting?

- What laboratory will be used for well testing, and what quality control and independent verification will be put in place to ensure the well sampling results are trustworthy?

Halting further spread of contamination if coal ash is abandoned in the Lincoln Stone Quarry:

- How precisely does NRG plan to stop toxic coal ash contaminants from seeping into the groundwater and the connected Boyd's Quarry if the company leaves coal ash in the groundwater? If maintenance of water levels in Lincoln Stone Quarry and Boyd's Quarry is part of NRG's response, who will maintain the water levels in Boyd's Quarry over many years to keep contaminated groundwater out of residential water wells?
- What is the impact of the expansion of the Vulcan Materials Quarry on groundwater flow in the area? Has NRG taken that expansion into account in its plan to cap and abandon the coal ash in the Lincoln Stone Quarry? What, if anything, does NRG plan to do to address the impact of that expansion?

Fair and accurate analysis of how to minimize impacts on the community:

- Why didn't NRG analyze all transportation options (including not only trucks, but also rail and barge options, along with any other feasible options) for moving the toxic coal ash out of the leaking, fractured Quarry to a safer location?
- When will NRG develop a fair comparison of closing the Lincoln Stone Quarry coal ash dump by capping and abandoning the coal ash in the quarry, versus excavating that toxic ash and moving it offsite – a comparison that includes detailed projections, based on sound science, of the environmental impacts (including groundwater contamination) of different closure methods over time? How will it provide that comparison to community members?

We look forward to NRG's prompt cooperation in setting up follow-up public meetings in which the company will be prepared to answer the above, as well as additional, questions concerning the Lincoln Stone Quarry coal ash dump site. Residents' health and safety is paramount in this process and neither they, nor any of the undersigned, can consider NRG a good community partner unless their questions are fully explored and addressed.

If you have questions regarding this request, please contact Jennifer Cassel, (312) 500-2198, jcassel@earthjustice.org.

Sincerely,



Jennifer Cassel
Earthjustice

Mary Ellen DeClue
Citizens Against Longwall Mining

Ellen Rendulich
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U.S. Sen. Dick Durbin

U.S. Sen. Tammy Duckworth

Kimberly Harris
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ATTACHMENT 5

Will County environmental activists want coal ash pollution cleaned up

By ALEX ORTIZ [Email](#) [Follow](#)
Sept. 12, 2019

'We want them to do the right thing'

Local activists say they want to keep up the pressure on an energy company as it tries to remedy coal ash pollution at some of its sites in Will County.



[Eric Ginnard – eginnard@shawmedia.com]

A group of Lockport residents who make up the grassroots organization Citizens Against Ruining the Environment have been working with other environmental activists throughout the state for nearly 25 years. The CARE members live close to the Will County Station, one of the sites owned by the energy company NRG in Will County with coal ash polluted groundwater.



[Eric Ginnard – eginnard@shawmedia.com]

CARE has continued its efforts to hold NRG accountable for pollution at its other sites, especially the old Lincoln Stone Quarry near Joliet.



[Eric Ginnard – eginnard@shawmedia.com]

Last month, several residents living near the site, along with activists and attended a public meeting NRG hosted to learn what the company was going to do with the coal ash.

The unlined site contains about 2.6 million cubic yards of coal ash, and the site had tested for unsafe levels of arsenic, molybdenum, lithium and to the Environmental Law and Policy Center.

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- PINTEREST

- FACEBOOK
- TWITTER
- COMMENTS
- EMAIL
- MORE



[Eric Ginnard file photo – eginnard@shawmedia.com]

There are several residents living near the former quarry who get their water from private wells. While NRG maintains that the coal ash pollution at its site has not negatively impacted those residents and that the polluted water wasn't threatening their drinking water, CARE members are skeptical, to say the least.

The activists said they wanted to know how NRG was able to make that claim unless it tested the well water residents use. NRG said for residents who wanted their water tested, it would help them do so free of charge and collected the information of about 10 residents to do just that.

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- REDDIT
- PINTEREST

f FACEBOOK

Twitter TWITTER

COMMENTS

EMAIL

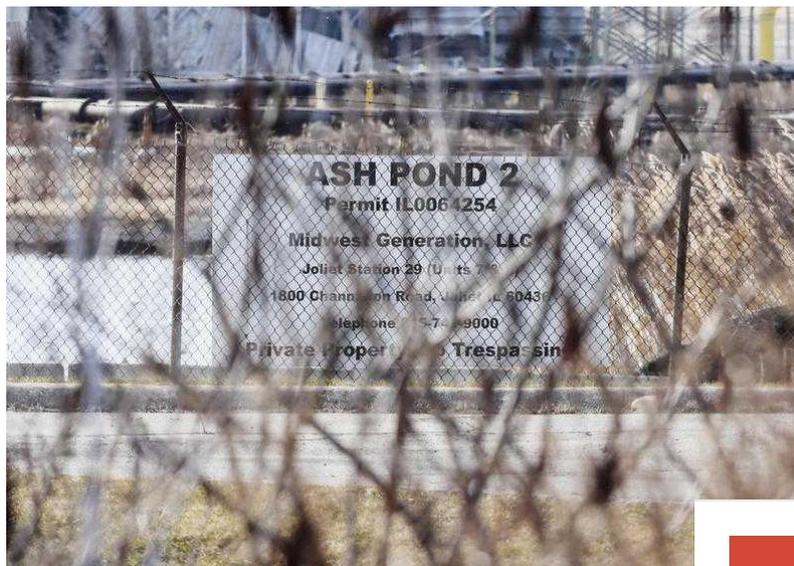
... MORE



[Eric Ginnard – eginnard@shawmedia.com]

Also at the meeting, NRG presented information about what it could do to address the coal ash when it closes the old quarry site. The two main solutions involve covering the site with sand or soil, or removing the coal ash entirely.

NRG said that while no final decision had been made, its preference is to cover the site because removing the coal ash would be a massive effort requiring about 225,000 truckloads and up to 20 years to finish the job.



[Eric Ginnard – eginnard@shawmedia.com]

But the CARE members said the cost of removing it pales in comparison to the polluted environment. They want NRG to remove the coal ash, regardless

Buttons for social media sharing: G+ GOOGLE+, REDDIT, PINTEREST

Buttons for social media and actions: FACEBOOK, TWITTER, COMMENTS, EMAIL, MORE



[Eric Ginnard – eginnard@shawmedia.com]

The CARE members also said NRG should hold another public meeting so the residents living by the old quarry would be able to ask more questions and give their opinions. They also criticized NRG's handling of its last meeting and argued the company was putting its own spin on the issue because, they thought, it didn't want to pay the cost of removing the coal ash.



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REDDIT

PINTEREST

f FACEBOOK

tw TWITTER

COMMENTS

EMAIL

... MORE

"We want them to do the right thing," Burnitz said, to which her CARE partner Ellen Meeks Rendulich added, "And the right thing is to clean it up."



[Eric Ginnard – eginnard@shawmedia.com]

In addition, the Illinois Environmental Protection Agency will be holding a series of listening sessions around the state in "areas of environmental justice concern" to address how coal ash ponds will be closed in areas with the highest risk to public health and the environment. The state agency will be in Joliet on Oct. 8.

The session will take place from 2 to 4 p.m. and from 6 to 8 p.m. at Joliet Junior College's Weitendorf Agriculture Center, located at 17840 Laraway Road in Joliet Township.

- G+ GOOGLE+
- REDDIT
- PINTEREST

ATTACHMENT 6

The Joliet Station has operated the Lincoln Stone Quarry (“LSQ”) for decades and done so responsibly. There are no groundwater impacts to the neighborhood and we will continue to monitor to confirm this in the future.

- The data shows that there is not, and has not been movement of Lincoln Stone Quarry water towards the neighborhood to the northeast.

Purpose of Public Presentation:

As required by the Federal Coal Combustion Residual Regulations, to present the Assessment of Corrective Measures and to present information about the potential remedies examined by Midwest Generation, LLC (“MWG”) for the Lincoln Stone Quarry, used by the Joliet Stations.

Background and Operation



Note: WT – Water Table Well; S – Shallow Zone Well; D – Deep Zone Well

0 450'
APPROXIMATE SCALE



ENVIRONMENTAL CONSULTATION & REMEDIATION



14665 West Lisen Road, Suite 28 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 1599

PERMIT MONITORING WELL LOCATION MAP

LINCOLN STONE QUARRY
JOLIET, ILLINOIS

Scale: 1" = 450' Date: April 4, 2014

KPRG Project No. 12313 FIGURE 1

Background and Operation

- The Joliet Stations are Joliet 9 (one unit) and Joliet 29 (two units). Combined, the Joliet Stations can generate 1360 MW of electricity, enough to power 1,088,000 homes.
- In 2016, the Joliet Stations were converted to natural gas and ceased burning coal. As a result, the Joliet Stations no longer produce ash from power generation.
- The Active Portion of the Lincoln Stone Quarry only received bottom ash from the Joliet Stations.

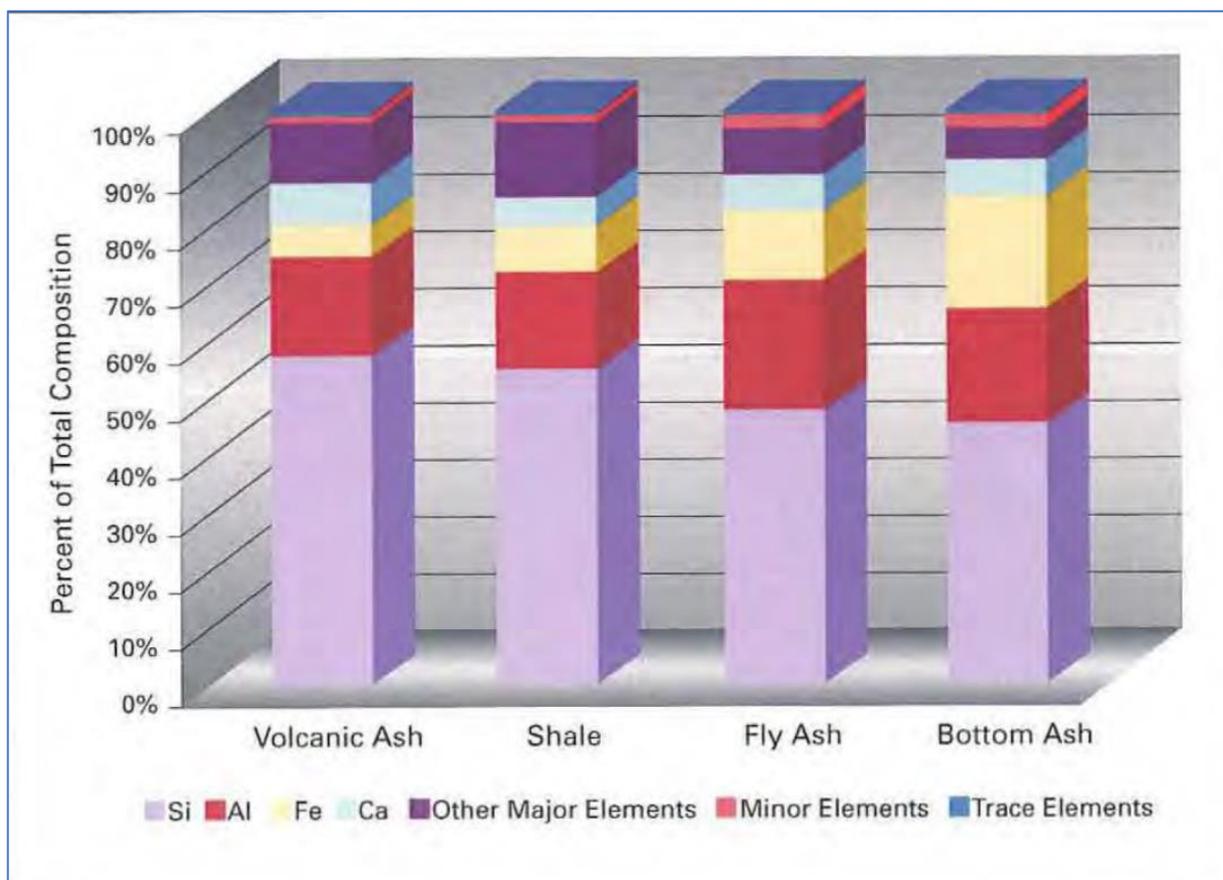
Background and Operation

- The Lincoln Stone Quarry has been operating since approximately 1962, currently by MWG and previously by ComEd, the prior owner of the Joliet Stations.
- The Lincoln Stone Quarry has been permitted by the Illinois EPA since 1976 – the beginning of the environmental permitting and regulations in Illinois.
- As soon as a relatively small amount of remaining ash that is at a location on site at Joliet 29 is deposited in the Lincoln Stone Quarry, then no additional ash will be added to the Lincoln Stone Quarry.

Background and Operation

Bottom Ash

- Bottom ash is a by-product of coal-fired power generation.
- Bottom ash is a non-hazardous waste.
- Bottom ash can be used for beneficial purposes such as making concrete, sand blast media, roofing tiles, and fill material.
- The active portion of the Lincoln Stone Quarry contains 2.6 million cubic yards of ash.

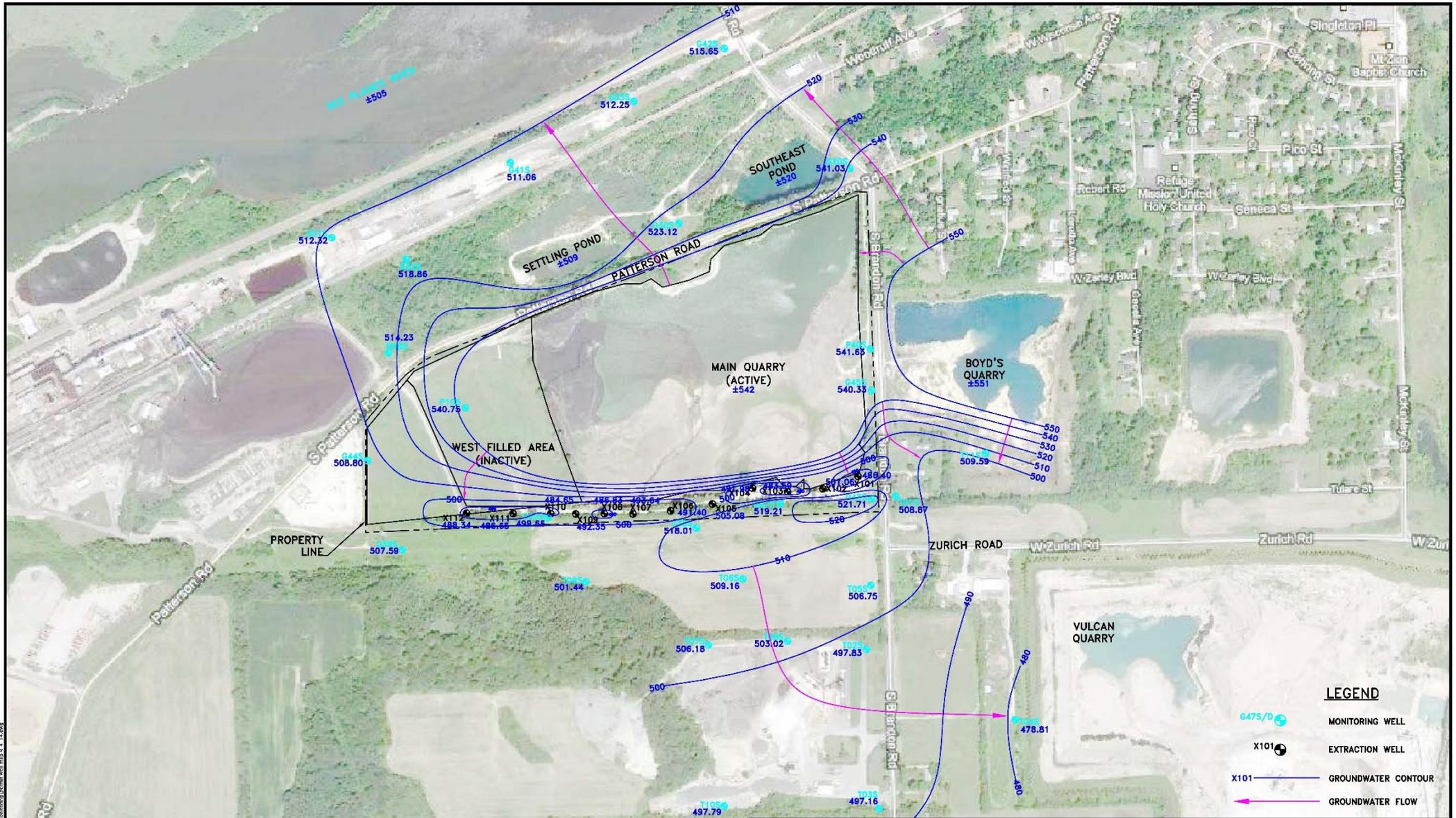


Compliance with the Federal and Illinois Environmental Laws

The Joliet Station has operated the Lincoln Stone Quarry for decades and done so responsibly. There are no groundwater impacts to the neighborhood and we will continue to monitor to confirm this in the future.

- Groundwater is water that flows underground.
- Based on this extensive set of long-term groundwater flow and water quality data and evaluations, **the groundwater flow from the quarry is not, has not, and will not be in the direction of the neighborhood to the northeast of the quarry, and therefore, will not put the water wells at risk.**
- MWG conducted a detailed assessment of the Quarry's conditions and operations and determined that the Lincoln Stone Quarry is safe and continues to be operated and managed in a manner that is fully protective of the public health and the environment.
- For over 40 years, the Lincoln Stone Quarry has been operated under strict permit limits and the oversight of the Illinois EPA.

Compliance with the Federal and Illinois Environmental Laws



Note: WT – Water Table Well; S – Shallow Zone Well; D – Deep Zone Well

0 450'
APPROXIMATE SCALE



ENVIRONMENTAL CONSULTATION & REMEDIATION

K P R G

KPRG and Associates, Inc.

14665 West Lisbon Road, Suite 2B 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

SHALLOW ZONE GROUNDWATER FLOW MAP
2nd QUARTER 2019

LINCOLN STONE QUARRY
JOLIET, ILLINOIS

Scale: 1" = 450' | Date: August 1, 2019

KPRG Project No. 21406.13 | FIGURE 1

W:\projects\industrial\consultation\lincoln\lincoln\msh\msh\g47s\g47s_4_14.dwg

Lincoln Stone Quarry Compliance with Illinois Environmental Laws

- Per the permitting requirements, since 1976, groundwater monitoring wells have been installed around the Lincoln Stone Quarry.
- The landfill permit requires 39 monitoring wells to be sampled on a quarterly basis, but MWG actually samples 46 wells quarterly, more than are required. The samples are analyzed for 25 parameters.
- The groundwater wells have given MWG and the Illinois EPA a comprehensive understanding of the groundwater flow and quality conditions associated with the Lincoln Stone Quarry.
 - We know where the constituents are and where they are going.
 - The data shows that there is not, and has not been movement of Lincoln Stone Quarry water towards the neighborhood to the northeast.

Lincoln Stone Quarry Compliance with Illinois Environmental Laws

- The groundwater data was also used to develop a 3-dimensional mathematical model of the groundwater flow system covering an approximate 4 square mile area.
 - The modeling also shows that there is no movement of Lincoln Stone Quarry water to the neighborhood to the northeast.
 - This model is now used to assist in evaluating engineering solutions to ensure that any work done within Lincoln Stone Quarry does not result in movement of water to the northeast.
- There are other mining operations in the area which MWG does not control. In response to dewatering operations at a neighboring active mining property to the southeast which has drawn water in that direction, MWG installed an extensive extraction well system to create a cone of depression to control/limit the movement of Lincoln Stone Quarry water in that direction.
 - In other words, water moving from Lincoln Stone Quarry is intercepted and pumped back into the quarry while also pulling back some of that water that was pulled in that direction by the active mining operation.

Compliance with the Federal and Illinois Environmental Laws

Sampling Location	pH	Nitrate +Nitrite Nitrogen mg/L	Total Ammonia Nitrogen mg/L	Sulfate mg/L	Total Dissolved Solids mg/L	Total Suspended Solids mg/L	Chloride mg/L	Flouride mg/L	Total Organic Carbon mg/L	Phenol ug/L	Arsenic, Dissolved mg/L
Des Plaines River upstream	7.2	4.43	0.7	80	625	12	180	0.4	5	6	0.002
Zone of Attenuation Wells Average	7.6	0.12	0.93	282*	800	--	97	0.6*	2.5	--	<0.010
Zone of Compliance Wells Average	7.3	0.15	0.47	164*	684	--	76	0.5*	2	--	<0.010
Discharge Pipe~	7.95	<0.10	<0.20	130	--	<5.0	--	0.43	5.7	<5	<0.005
Incidental Recreation Waters Acute Standards	6.5 to 9	NS	15	1524	NS	NS	500	16.2	NS	860,000	0.340
Incidental Recreation Waters Chronic Standards		NS			NS	4.0		NS	0.150		

Sampling Location	Total Barium mg/L	Total Boron mg/L	Cadmium, Dissolved mg/L	Cromium, Dissolved mg/L	Iron, Dissolved mg/L	Lead, Dissolved mg/L	Manganese, Dissolved mg/L	Total Molybdenum mg/L	Total Mercury ug/L	Total Selenium mg/L	Zinc, Dissolved mg/L
Des Plaines River upstream	0.024	0.156	<0.002	<0.004	0.057	<0.002	0.022	--	<0.05	0.013	0.014
Zone of Attenuation Wells Average	0.044	1.957*	<0.002	<0.005^	0.209^	<0.005^	0.039	0.311	<0.2	0.010	<0.020
Zone of Compliance Wells Average	0.072	4.370*	<0.002	--	0.603^	0.0053^	0.013	0.181	<0.2	0.010	<0.020
Discharge Pipe~	0.22	1.6	<0.001	<0.005^	0.88	<0.0025	0.07	0.035	0.0069	<0.005	<0.010
Incidental Recreation Waters Acute Standards	NS	NS	0.024	1.17	1.0	0.195	8.07	NS	0.012	1.0	0.252
Incidental Recreation Waters Chronic Standards	NS	NS	0.002	0.15		0.041	3.43	NS	0.012		0.066

Notes: * - Results are based on dissolved analysis
 ^ - Results are based on total analysis
 ~ - Results are based on maximum daily value from NPDES permit renewal
 NS - No Standard
 -- = Not analyzed for

Sampling Location	pH	Nitrate +Nitrite Nitrogen mg/L	Total Ammonia Nitrogen mg/L	Sulfate mg/L	Total Dissolved Solids mg/L	Total Suspended Solids mg/L	Chloride mg/L	Flouride mg/L	Total Organic Carbon mg/L	Phenol ug/L	Arsenic, Dissolved mg/L
Des Plaines River upstream	7.2	4.43	0.7	80	625	12	180	0.4	4.8	6.0	0.002
Upstream Data Standard Deviation	0.3	1.6	0.3	20.9	161.4	7.7	88.0	0.1	0.9	1.0	0.000
Downstream Wells Contribution	0.0003	0.000005	0.00002	0.0077*	0.0258	--	0.003	0.00002*	0.0001	--	<0.0003

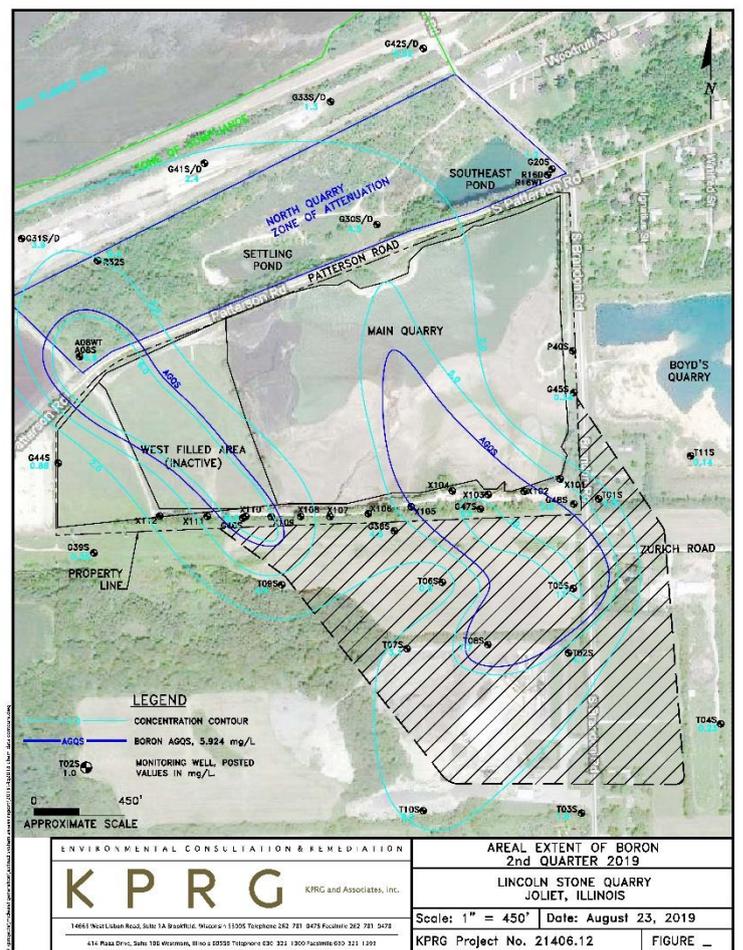
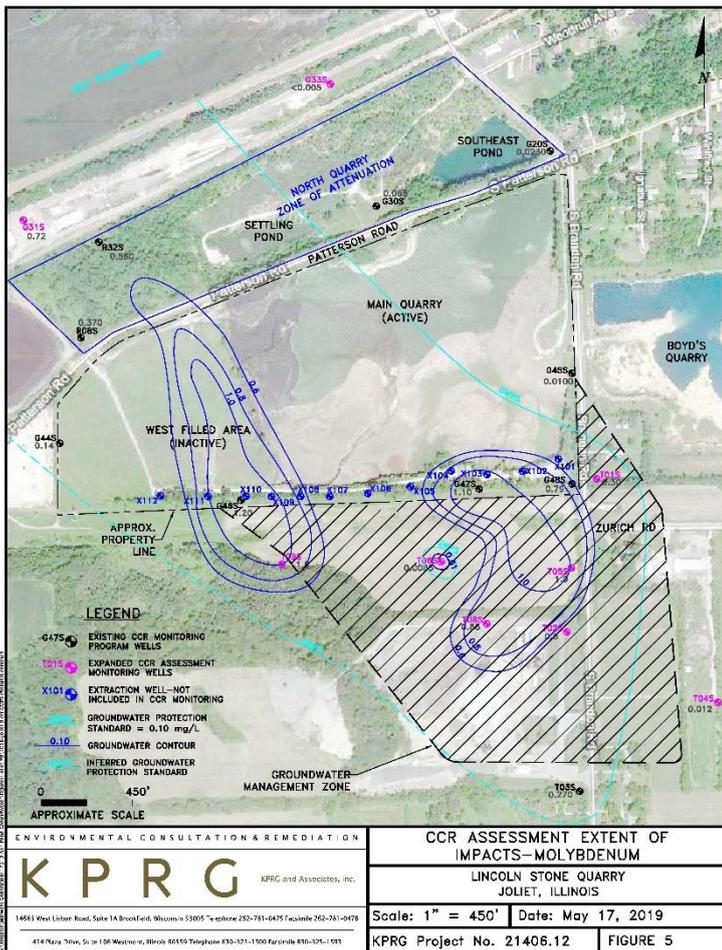
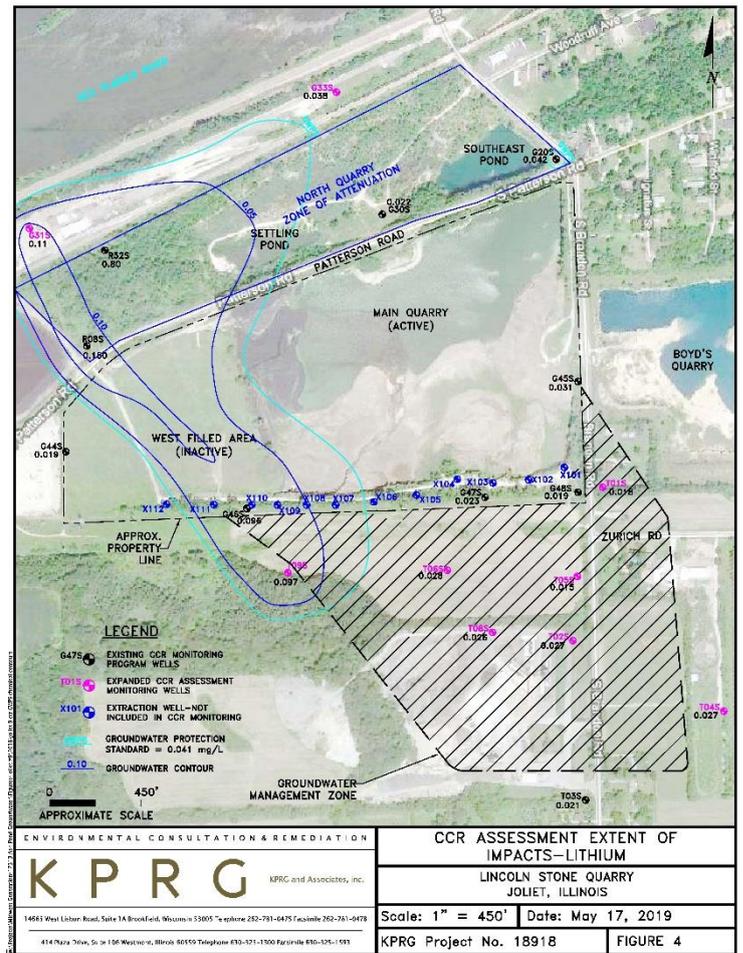
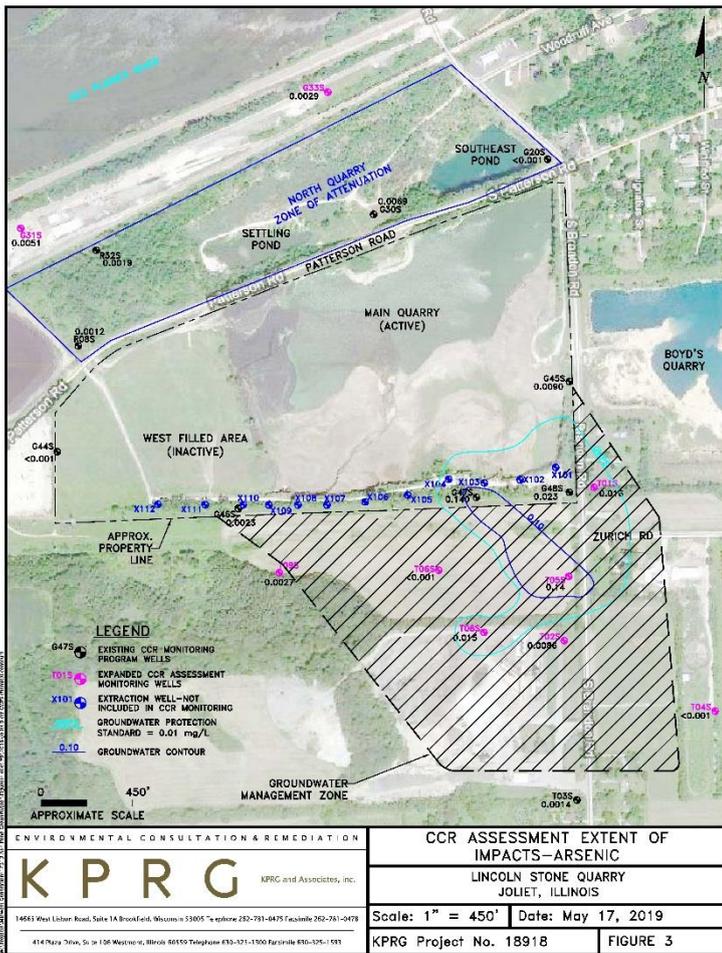
Sampling Location	Total Barium mg/L	Total Boron mg/L	Cadmium, Dissolved mg/L	Cromium, Dissolved mg/L	Iron, Dissolved mg/L	Lead, Dissolved mg/L	Manganese, Dissolved mg/L	Total Molybdenum mg/L	Total Mercury ug/L	Total Selenium mg/L	Zinc, Dissolved mg/L
Des Plaines River upstream	0.024	0.156	<0.002	<0.004	0.057	<0.002	0.022	--	<0.05	0.013	0.014
Upstream Data Standard Deviation	0.000	0.000	0.000	0.000	0.000	0.000	0.000	--	--	0.000	0.0
Downstream Wells Contribution	0.000002	0.00011*	<0.0000001	--	0.0000141^	0.0000002^	0.0000009	0.0000085	<0.00001	0.0000004	0.0000007

Notes:
 * - Results are based on dissolved analysis
 ^ - Results are based on total analysis
 NS - No Standard
 -- = Not analyzed for

Electronic Filing: Received, Clerk's Office 09/10/2020

Compliance with the Federal and Illinois Environmental Laws

Attachment 6



Federal Coal Combustion Residuals Rule

- In 2015, USEPA promulgated rules to regulate coal ash landfills and impoundments – commonly referred to as the Federal Coal Combustion Residuals Rule, or CCR Rule.
- Under the Federal CCR Rule, Lincoln Stone Quarry's Main Quarry has been treated as an impoundment.
- That means that at the state level, Lincoln Stone Quarry's Main Quarry is a landfill and at the Federal level, LSQ is an impoundment. There are differences between State and Federal requirements and Lincoln Stone is in compliance with both sets of rules.
- Under the CCR rules, MWG followed the Federal CCR requirements for determining whether impacts exist.

LSQ Options for Remedy

Dry Closure in Place with the Soil Dry Cover System

- Two-layer system composed of a Geomembrane and Soil
- 50-mil HDPE MicroDrain low permeability layer.
 - HDPE is a thick synthetic membrane layer commonly used for landfill covers.
 - The purpose of the membrane layer is to provide a barrier that is designed to prevent infiltration of water into the quarry and separates the clean soil layer from the ash below.
- Final protective layer = Geotextile + 2 feet of clean soil + 4 inches topsoil + native prairie grass seed.
 - The purpose of the final protective layer is to protect the HDPE liner from any damage.
 - Soil and grass are the final cover historically used for covering landfills.

Geomembrane & Soil Cover



- There will also be an underdrain system in the Main Quarry that will remove a majority of water.
- **Result and Effect of Closure Option**
 - Closure occurs within approximately two years from start of closure
 - **Some Truck Traffic in neighborhood – approximately 13,000 truckloads to deliver the soil cover materials.**
 - Significant reduction of contact between ash and water
 - Minimal disturbance of coal ash

LSQ Options for Remedy

Dry Closure in Place with the ClosureTurf Cover System

- ClosureTurf is a State-of-the-Art two layer cover system that is designed to prevent infiltration of water into the Quarry without requiring soil. It will be placed on top of the ash.
- Bottom Layer is a 50-mil HDPE MicroDrain low permeability layer
- **Final Protective Layer:**

<u>Synthetic Turf</u>	+	<u>Sand Infill</u>
		
<ul style="list-style-type: none"> • UV resistant • Wind & runoff resistant 		<ul style="list-style-type: none"> • Runoff resistant-sized to be held by turf blades

- **There will also be an underdrain system in the Main Quarry that will remove a majority of water:**

<u>ClosureTurf</u>	<u>MicroDrain</u>
	

- **Result and Effect of Closure Option:**
 - Closure occurs within approximately two years from start of closure
 - **Minimal Truck Traffic in neighborhood – approximately 400 truckloads to deliver the Closure Turf materials for cover construction**
 - Significant reduction of contact between ash and water
 - Minimal disturbance of coal ash

LSQ Options for Remedy



Closure by Removal of All Ash

- Closure by Removal would take – best-case - approximately 20 years assuming 50 trucks per day for 240 working days per year.
 - This is a best-case estimate because it assumes that there are no weather delays and that there is sufficient landfill space at some other location to take this material. If not then new landfills(s) will need to be sited, permitted and constructed to provide the space. The new landfill siting, permitting and construction process itself can take 5 to 10 years.
- Removal would disturb the coal ash, re-exposing historic layers of ash to stormwater infiltration over a lengthy construction period and likely resulting in additional release of constituents into the groundwater.



LSQ Options for Remedy

Closure by Removal of all ash

- Lincoln Stone Quarry contains 2.6 million cubic yards but when excavation and transportation begin the volume would swell to 3.4 million cubic yards.
- Removal of 3.4 million cubic yards = 225,000 truckloads
- 50 trucks per day driving to and from the quarry to retrieve a load = 1 truck every 5-10 minutes driving on one of the three roads leading from the LSQ.
- In other words: **1 truck every 5-10 minutes, 5 days per week, for at least 20 years on Laraway Road, Zurich Road, and/or Patterson Road on the way to Route 53.**



LSQ Options for Remedy

