ILLINOIS POLLUTION CONTROL BOARD
November 12, 2026

IN THE MATTER OF:	)	
	)	
PETITION OF AMEREN ENERGY MEDINA	)	AS 21-8
VALLEY COGEN, LLC (OLD MEREDOSIA))		(Adjusted Standard - Land)
FOR ADJUSTED STANDARDS FROM 35	)	
ILL. ADM. CODE PART 845	)	

HEARING OFFICER ORDER

The Board plans to ask the following questions at the hearing.

Questions for Ameren

1. Regarding corrective action at Old Meredosia, the Illinois Environmental Protection Agency (Agency) states the Rem Bind 100x permeable reactive barrier (PRB) may be one component of corrective action at the impoundment but there is no source control outside of the existing cover discussed in the Petition. *See* Am. Rec. at 11.

    a. Does Ameren have any information on alternative source control methods that could be applied at Old Meredosia?

    b. If so, would Ameren consider implementing an alternative source control method in addition to the PRB?

    c. If not, without source control is Ameren confident that implementation of PRB would achieve applicable groundwater quality standards by end of December 2031 and going forward after retiring the PRB?

    d. Has Ameren modeled the attenuation of boron without any additional source control to meet the applicable groundwater quality standards with, and without PRB? If so, please submit the relevant modeling study results into the record.

2. On page 13 of the second amended petition, Ameren states that Loureiro Engineering Associates, Inc. (LEA), Ameren's expert, conducted a two-phased treatability study of alternative methods to treat the groundwater, primarily for boron, by comparing two treatment options, an in-situ resin barrier and an in-situ boron precipitation process.

    a. Did LEA produce a treatability study report, including results and supporting data? If so, please submit the report along with any supporting documentation into the record.

    b. Please clarify whether LEA's treatability study was laboratory study or an in situ field study.

c. If the study was conducted in a laboratory, please comment on whether a field study should be performed to evaluate the efficacy of the PRB before full-scale implementation.

d. If not, is Ameren aware of any field studies or full-scale implementation of PRB with RemBind 100x for treating CCR contaminants in groundwater in situ in locations like Old Meredosia?

e. Please provide any available information that demonstrates successful field implementation of PRB with RemBind 100x.

3. LEA's PRB report notes that the PRB will be installed at an approximate depth interval of 30 to 40 feet below the ground surface at Old Meredosia, i.e., 10 feet in height and will extend over a total length of 470 linear feet. Sec. Am. Pet. Exh. 10 at 2-3.

   a. Please clarify as to what would be the thickness of the proposed PRB.

   b. Comment on whether there will be any degeneration of RemBind 100x over time.

   c. If so, would degeneration affect treatment effectiveness? Comment on the half-life of RemBind 100x.

   d. Upon completion of closure and any postclosure requirements, will the PRB be abandoned in place? Comment on any concerns with leaving the PRB in place after completion of closure.

4. LEA's PRB report states that in addition to the ongoing quarterly groundwater monitoring, groundwater samples will be collected from newly installed monitoring wells to evaluate the treatment effectiveness of the PRB. Sec. Am. Pet. Exh. 10 at 2-3.

   a. Please explain whether time-specific benchmarks will be utilized to evaluate the effectiveness of treatment for boron and other constituents.

   b. If not, please explain how Ameren will determine treatment effectiveness.

   c. Also, comment on what actions would be taken if the periodic benchmarks are not met.

5. The PRB is proposed to be installed primarily to treat boron but is also expected to treat other metals from Old Meredosia. Exh. 10 at 1. The PRB treatment is expected to run through December 2031. *Id.* at 5.

   a. Does Ameren expect Old Meredosia to meet all applicable groundwater quality standards by the end of December 2031? If not, does Ameren have anything in

place to address any potential impacts from Old Meredosia after the PRB's retirement?

b. Does Ameren have a plan in the case that compliance with the boron standard takes longer than expected?

c. Please provide treatment effectiveness information for other Part 845 contaminants.

6. On page 12 of its Amended Recommendation, the Agency states that the monitoring wells downgradient of Old Meredosia other than APW-8 "have not consistently provided data" so the overall picture is "incomplete." The downgradient monitoring wells APW-13 and APW-14 were omitted from analysis because the wells are "frequently dry." Exh. 8 at 6. Ameren has expressed the intention to install two wells downgradient of Old Meredosia, one upgradient and one downgradient of the PRB. Exh. 10 at 4.

   a. Please comment on whether Ameren has already installed the additional wells or plan to install them in near future.

   b. Should the installation of the new wells be added to the adjusted standard conditions?

7. On page 18 of the second amended petition, Ameren states, "in consideration of the expectation that the groundwater treatment will successfully treat the groundwater within three years of installation, Ameren is seeking an adjusted standard from requiring an operating permit upon twelve consecutive quarters of groundwater results below the Part 845 standards." Please clarify whether Ameren intends to operate the PRB system for at least 36 months after installation of PRB plus an additional period until the 36-consecutive month period of compliance with groundwater quality standards is demonstrated.

8. Also, on page 18 of the second amended petition Ameren states that while "mobile wildlife" would "likely disperse to adjacent or similar habitats", but "less mobile wildlife" would not be able to do so.

   a. Among the species present at Old Meredosia, which species would be classified as mobile vs. not mobile?

   b. Would the "less mobile" species be able to find replacement habitats at all?

   c. How many of these "less mobile" species would be considered notable or sensitive?

9. In its response to the Agency, Ameren states that Old Meredosia is not a legacy CCR surface impoundment because it does not contain "free liquids." Ameren Resp. at 1. Additionally, USEPA guidance states that units that receive "periodic rainfall" that does not result in "free liquids" are not legacy CCR surface impoundments. *Id.* at 2. Does Ameren have information on how quickly precipitation infiltrates into Old Meredosia and is "absorbed" by the CCR or if it exists as a "free liquid" at any point in the unit?

10. The groundwater underneath Old Meredosia moves from the east towards the north/northwest in the direction of the Illinois River. Sec. Am. Pet. at 9. Additionally, Ameren states that there is no contact between the groundwater table and Old Meredosia even during major flooding events or extreme groundwater fluctuations. *Id*. at 9-10. However, during "extreme high water events" the groundwater flow may flatten or reverse. *Id.* at 10. Regarding the groundwater flow under Old Meredosia during flood events please provide more information on the following:

    a. How many flood events have been modeled or observed in the evaluation of Old Meredosia?

    b. How often do flood events occur at the Facility?

    c. How likely is it for a flood event to result in a flattening or reverse of groundwater flow?

    d. Is Ameren aware of the average and worst-case velocities of groundwater flows during flood events?

    e. Have the effects of a 100-year flood been evaluated as part of the analysis in this proceeding?

11. In the 2025 Groundwater Monitoring Report for the Closed Fly Ash and Bottom Ash Ponds, it is stated that arsenic and boron were identified as the "primary indicator constituents for coal ash leachate impacts to groundwater". Exh. 8 at 6. Old Meredosia is located upgradient of both units as groundwater at Meredosia Station flows north/northwest. *See* Exh. 8, Fig 1-2; Fig 3-1.

    a. Comment on whether the proposed adjusted standard addresses any potential impacts of the closed Fly Ash and the Bottom Ash Ponds.

    b. Are CCR disposed of in Old Meredosia similar to the CCR disposed of in the Fly and Bottom Ash Ponds?

12. Condition (1)(c) of the proposed adjusted standard exempts Old Meredosia from Section 845.610(c).

    a. Please explain the rationale for exempting Old Meredosia from the groundwater monitoring requirements of Part 845.

    b. In lieu of subsection (c), what groundwater requirements would apply to Old Meredosia under the adjusted standard.

13. Condition (1)(d) of the proposed adjusted standard exempts Old Meredosia from Section 845.610(e)(4)(H), which addresses corrective action.

a. Please comment on whether the proposed alternative closure method could be considered as ongoing corrective action under subsection (e)(4)(H).

b. If so, explain why the adjusted standard should exempt Old Meredosia from Subsection (e)(4)(H).

14. Condition 1(e) of the proposed adjusted standard exempts Old Meredosia from all of Subpart G, including postclosure requirements. Under Part 845, only "closure by removal" option is not subject to postclosure care. See Section 847.780(a)(2).

    a. Please explain the rationale for not requiring postclosure care under the adjusted standard, especially since CCR would be left in place under the proposed closure alternative and Ameren is not proposing any source control.

    b. If postclosure care beyond the proposed 36 consecutive-month period of compliance is required as a part of the adjusted standard, please comment on whether the postclosure care period of 30 years under Section 845.780 is sufficient.

15. Please clarify whether Old Meredosia is subject to the financial assurance requirements under Part 845.

Questions for the Agency

16. On page 8 of the Amended Recommendation, the Agency states that Ameren's Petition "supports a closure design that utilizes seasonal restrictions and other measures to minimize impacts to the environment during closure in accordance with Part 845." Can the Agency provide examples or language of closure methods appropriate for Old Meredosia that are Part 845 compliant but not requiring any disturbance of the existing vegetation cover?

17. In its response to the Agency's Recommendation, Ameren stated that Old Meredosia is not a legacy CCR surface impoundment but even if it was on the Federal level, USEPA has proposed modifications of the performance standards for the closure of CCR surface impoundments like Meredosia that are similar to Ameren's requested relief.

    a. Is the Agency familiar the USEPA's modified closure performance standards for impoundments similar to Meredosia?

    b. If so, please comment on the compatibility of Ameren's requested relief with USEPA's proposed modifications to the performance standards for closure of CCR surface impoundments.

18. The Board requests clarification for the following citations in the Agency's Amended Recommendation.

i. On page 9, the Agency states "35 Ill. Adm. Code 720 requires the closure plan to describe the procedures and closure schedule." Did the Agency mean 35 III. Adm. Code 845.720?

ii. On page 13, the Agency states "35 Ill. Adm. Code 845.780(a)(c) requires a minimum of thirty (30) years of groundwater monitoring." Did the Agency mean Section 845.780(a) through (c)?

iii. Also on page 13, the Agency states "An allowance of demonstrating groundwater has achieved standards based on twelve quarters of data is only possible under Part 845 and 257.102(c)(1)(ii) when closure by removal of all waste has occurred." Did the Agency mean 40 CFR 257.102(c)(1)(ii)?

IT IS SO ORDERED.



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